Waters of the U.S. Delineation Report-Draft

Farm-to-Market Road 741 from U.S. Route 175 to Farm-to-Market Road 548 (CSJ 1092-01-021)

Texas Department of Transportation, Dallas District

July 2022

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

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1.0 Introduction

The Texas Department of Transportation (TxDOT) conducted a waters of the U.S. (WOTUS) delineation for a proposed road project on Farm-to-Market Road (FM) 741 from U.S. Route (US) 175 to FM 548 in the cities of Forney and Crandall, and the unincorporated community of Heartland, Kaufman County, Texas (CSJ 1092-01-021). The delineation was conducted on April 14, 28, and 29, 2022.

The delineation was performed to evaluate the presence of jurisdictional WOTUS and identify their boundaries within the project area. It is anticipated that this waters of the U.S. delineation report (WOTUS DR) will be used in support of the jurisdictional determination process for on-site aquatic resources. If it is determined that jurisdictional resources will be impacted, this WOTUSDR will also support applications for regulatory permits that may be required from the United States Army Corps of Engineers (USACE) for proposed construction activities.

Waterbodies were delineated according to USACE Regulatory Guidance Letter (RGL) 05-05 Ordinary High Water Mark (OHWM) Identification for non-tidal waters and the Mean High Tide (MHT) line for tidal waters. As required under Section 404 of the Clean Water Act (CWA), wetlands were delineated using the routine method described in the USACE 1987 Wetlands Delineation Manual (1987 Manual) and the USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Regional Supplement (Version 2.0) (2010 Regional Supplement). Wetland types and boundaries were determined through initial map review, followed by fieldwork involving the examination of three (3) parameters: hydrology, vegetation, and soils. Delineation criteria and indicators for each of these parameters are outlined in the 1987 Manual and the 2010 Regional Supplement. The 2010 Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Great Plains Region, per the regional supplement. Wetlands were classified according to the Cowardin Classification System used for the United States Fish and Wildlife Service's (USFWS) National Wetlands Inventory (NWI).

This document contains the following five (5) attachments:

- **Attachment 1** – Figures: contains maps of the project area
- **Attachment 2** – Wetland Determination Data Forms: documents the three (3) criteria for wetlands at all sample points
- **Attachment 3** – Historical Aerial Photographs: contains historical aerial imagery, starting with the oldest photographs first
- **Attachment 4** – Site Photographs: contains photographs taken during the site visit(s)
- **Attachment 5** – USACE Antecedent Precipitation Tool Results

2.0 Project Overview

TxDOT is proposing to reconstruct and widen approximately 8.32 miles of FM 741 from US 175 to FM 548 in Kaufman County. An additional 12-foot travel lane is proposed in each direction as well as a raised median, totaling four lanes with a typical section varying from 140 to 180-feet-wide from US 175 to FM 2757 and 120 to 153-feet-wide from FM 2757 to the end of project. No shoulders are proposed, and a 2-foot offset would be included for safety reasons. The project would include the replacement of two bridges and a 10-foot shared-use path on both sides of the roadway. Twelve-foot northbound and/or southbound turn-lanes are proposed at major cross streets. The bridges at the unnamed tributary to Buffalo Creek would be replaced; four 12-foot mainlanes would be separated by an 18-foot median, with 10.5-foot shared-use paths along both sides of the bridge. Roadside drainage will be conveyed through a combination of enclosed storm sewers and grass-lined ditches. There are no proposed easements associated with this project.

Right-of-entry (ROE) was limited at the time of the field investigation, thus limiting the delineation of some water features to only the portions of said water features in the existing right-of-way (ROW). Based upon limited ROE available beyond the limits of the existing ROW, field investigations were limited to 47 of the 174 parcels or approximately 27.01 percent of the proposed ROW. Where ROE was not available, delineations of aquatic features were conducted using observations from adjacent parcels/ROW and a combination of aerial imagery, LiDAR, and desktop resources.

Attachment 1 - Figures contains numbered maps of the project area. **Figure 1** provides a vicinity map that depicts the location of the project area, **Figure 2** is an aerial overview map of the project area, and **Figure 3** is a 7.5-minute series United States Geological Survey (USGS) topographic overview map **Figure 4** depicts the National Wetlands Inventory (NWI) features and the Federal Emergency Management Agency (FEMA) designated 100-year floodplain areas within and around the project area. **Figure 5** depicts the mapped soil units within and around the project area. **Figure 6** shows the project area overlain on a Light Detection and Ranging (LiDAR) base map. **Figure 7** depicts water features identified during the delineation field investigations in April 2022.

3.0 Ecological Site Description

The project area is located within the Southwestern Prairies Cotton and Forage Land Resource Region (LRR J) of the Great Plains and is more specifically located in Major Land Resource Area (MLRA) 86A (Texas Blackland Prairie, Northern Part).

LRR J soils are dominantly Mollisols, Entisols, Alfisols, and Vertisols. The major soil suborders are Paleustalfs, Haplustolls, Haplusterts, and Argiustolls. All of the soils in the region have a thermic soil temperature regime, and most have an ustic soil moisture regime. Grasslands include mixtures of range, pasture, and improved pasture. Nearly all of this area is improved pasture, cropland, or rangeland. Urban development is rapidly increasing adjacent to the major cities. The average annual precipitation is 30 to 46 inches in most of the area, but it is less than 30 inches in the southern tip. Most of the rainfall occurs in spring and fall. The average annual temperature is 63 to 69 degrees F. The freeze-free period averages about 280 days and ranges from 250 to 310 days. The average precipitation during the freeze-free period is about 24 to 26 inches. Average annual temperatures and the length of the freeze-free period increase to the south. (NRCS, 2006).

The dominant soil orders in MLRA 86A are Entisols, Mollisols, and Vertisols. The soils are well drained or moderately well drained and fine textured or medium textured. They have a thermic soil temperature regime, an ustic soil moisture regime, and smectitic, carbonatic, or mixed mineralogy. This area supports mixed tall and mid prairie grasses. Little bluestem (*Schizachyrium scoparium*) is the dominant species. Indiangrass (*Sorghastrum nutans*), big bluestem (*Andropogon gerardii*), switchgrass (*Panicum virgatum*), tall dropseed (*Sporobolus texansu*), silver bluestem (*Bothriochloa saccharoides*), sideoats grama (*Bouteloua curtipendula*), eastern gamagrass (*Tripsacum dactyloides*), and vine mesquite (*Panicum obtusum*) are the major herbaceous species. The plant community has many forbs, such as prairie clover (*Dalea aurea*), western ragweed (*Ambrosia artemisifolia*), Maximilian sunflower (*Helianthus maximiliani*), gayfeather (*Liatris spicata*), rattlesnake master (*Eryngium aquaticum*), and Indian plantain (*Arnoglossum plantagineum*). Areas along the major rivers and streams support savanna vegetation. Oak, elm, cottonwood, hackberry, and pecan trees produce a canopy cover of about 30 percent (NRCS, 2006).

Currently, the project area consists of a mixture of agricultural land (row crop, grazing, and hay production). The northern extent is characterized by low and high intensity urban vegetation communities interspersed with undeveloped tracts of agriculture and disturbance grasslands, and the southern extent is mostly agricultural with limited low intensity urban vegetation communities. Several stands of riparian vegetation are present along FM 741 where creeks and tributaries cross the roadway. Buffalo Creek is the largest water body crossing FM 741; however, several unnamed tributaries are mapped within the project area. Several stock tanks and stormwater detention ponds are located outside the proposed project area, as well as a Soil Conservation Service Site 1 Reservoir.

4.0 Methods

4.1 Map and Database Review

The following information sources were considered and, if applicable, consulted prior to and during the field delineation to assist in the identification of potential waters of the U.S. within the project area.

4.1.1 USGS Topographic Maps

USGS topographic maps illustrate elevation contours, drainage patterns, and hydrography. The Forney South, Texas, USGS Quad map was reviewed to determine the likelihood of the project area containing jurisdictional waterbodies.

4.1.2 USFWS NWI Data

NWI data were reviewed as a contributing resource to help identify potential wetland features located within the project area.

4.1.3 NRCS Soil Survey Data

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) maintains an online Web Soil Survey database. The data provided in the Web Soil Survey provides a good basis for the soil textures and types one can expect to find at a particular delineation area. NRCS-mapped soil types at the project area were reviewed to determine which of the soils exhibit hydric characteristics. NRCS-mapped soil types are assigned a hydric indicator status of “hydric” or “non-hydric” by the National Technical Committee for Hydric Soils.

4.1.4 Aerial Photography

Aerial photography provides good insight to the state and function of land resources. Signs of inundation and vegetative signatures on aerial images indicate whether land might be functioning as a wetland or supporting a stream system. Historic and current aerial photography was reviewed utilizing Google Earth, prior to and during the field delineation, in order to further understand the nature of the project area.

4.1.5 FEMA FIRM

The Federal Emergency Management Agency (FEMA) maintains flood insurance rate maps (FIRMs). The FIRM including the project area was reviewed to determine if the 100-year floodplain is mapped. The USACE utilizes the 100-year floodplain to assist in determining jurisdiction of aquatic features. FEMA FIRM data was reviewed to evaluate the location of any mapped floodplain in relation to aquatic resources located within the project area.

4.1.6 LiDAR

Light detection and ranging (LiDAR) is a remote sensing technique that measures spatial and temporal data. LiDAR information is provided by the TNRIS online database for each USGS Quad. LiDAR data was obtained for the Forney South, Texas, USGS Quad to evaluate elevation changes throughout the project area.

4.2 Waters of the U.S. Delineation

With respect to any non-tidal waterbodies located within the project area, biologists followed the methodology outlined in RGL 05-05. With respect to any tidal waterbodies located within the site, biologists identified the MHT line by observing changes in vegetation, drift deposits of shells and debris, and physical markings or characteristics along the shoreline that may indicate the general height reached by a rising tide.

Data collected for any waterbodies includes average water depth, average width per waterbody, length of linear segments within the project boundary, and water flow classification (i.e., tidal, non-tidal, ephemeral, intermittent, and/or perennial).

Any wetland delineation was conducted based on the 1987 Manual and the 2010 Regional Supplement, as well as the three (3) parameters described within. The three-parameter approach requires investigation of hydrological characteristics, hydrophytic vegetation, and hydric soils at selected sample points within a project area. Sample points are located to ascertain upland/wetland boundaries and to record significant spatial changes in wetland plant communities. All three (3) indicator parameters must be met in order for the area to be classified as a wetland. See subsections on Hydrology, Vegetation, and Soils, below, for indicator-specific information.

Geospatial data was collected utilizing a handheld global navigation satellite system (GNSS) receiver and iPads with ArcGIS Field Maps, to achieve sub-meter accuracy. All geospatial data was collected in accordance with the April 21, 2016, memorandum from the Galveston District of the USACE entitled, "Standard Operating Procedure, Recording Jurisdictional Delineations using GPS."

4.2.1 Hydrology

Wetland hydrology is characterized when, under normal circumstances, the surface is either inundated or the upper horizon(s) of the soil are saturated at a sufficient frequency and duration to create anaerobic conditions. Seasonal and long-term rainfall patterns, local geology and topography, soil type, local water table conditions, and drainage are factors that influence hydrology.

Wetland hydrology indicators include: oxidized rhizospheres along living roots, saturated soils, standing surface water, algal mat, aquatic fauna, high water table, iron deposits, sparsely vegetated concave surface, geomorphic position, moss trim lines, water-stained leaves, crawfish burrows, watermarks, drainage patterns, and surface soil cracks.

During the field survey, these indicators were used to determine if an area exhibited wetland hydrology.

4.2.2 Vegetation

In accordance with the procedure set forth in the 1987 Manual and the 2010 Regional Supplement, the hydrophytic status of vegetation communities was determined by identifying dominant species and, if necessary, calculating a "Prevalence Index," as defined in the 1987 Manual.

Individual plant species were checked against the current National Wetland Plant List (NWPL), and their regional wetland indicator status was determined. Species are classified as follows:

- Obligate Wetland (OBL) if they almost always occur in wetlands (>99 percent of the time)
- Facultative Wetland (FACW) if they usually occur in wetlands (67-99 percent of the time)
- Facultative (FAC) if they are equally likely to occur in wetlands and non-wetlands (34-66 percent of the time)
- Facultative Upland (FACU) if they usually occur in non-wetlands (67-99 percent of the time)
- Obligate Upland (UPL) if they almost always occur in non-wetlands (>99 percent of the time)
- A no indicator (NI) status is recorded for those species for which insufficient information is available to determine an indicator status.

Hydrophytic (wetland) vegetation is considered prevalent where more than 50% of the dominant species in a plant community have an indicator status of OBL, FACW, or FAC. However, in cases where the vegetation community does not meet this hydrophytic threshold, but indicators of hydric soils and wetlands hydrology are present, the prevalence index can be applied. Calculation of this index is based on consideration of both dominant and non-dominant plants in the vegetation community, whereby each indicator status category is given a numeric code and weighted by absolute percent cover. The prevalence index ranges from 1 to 5 and an index of 3.0 or less signifies that hydrophytic vegetation is present. In the current delineation, and as shown on the

wetland determination data forms in **Attachment 2**, a prevalence index was calculated for each sample point's vegetation community.

4.2.3 Soils

Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper horizons. Anaerobic conditions created by repeated or prolonged saturation or flooding result in permanent changes in soil color and chemistry. The changes in soil color are used to differentiate hydric from non-hydric soils.

At each sample point, in areas where the absence of inundation or heavy saturation allowed, a pit was excavated to a depth of at least 16 inches to reveal soil profiles and to determine whether or not positive indicators of hydric soils were present. Hydric soil indicators relate to color, structure, organic content, and the presence of reducing conditions. Color characteristics (Hue, Value, and Chroma) were recorded using Munsell® Charts.

5.0 Results

5.1 Map and Database Review

5.1.1 USGS Topographic Maps

USGS topographic maps were reviewed to ascertain the potential presence of surface waters and wetlands. The project area is generally 430 to 480 feet above sea level according to USGS topographic maps. One named intermittent creek, Buffalo Creek, was identified approximately 0.26 miles east of the intersection of Country Woods Road and FM 741.

5.1.2 USFWS NWI Data

The table below summarizes the NWI features within the project area. Refer to **Figure 4** in **Attachment 1** for an illustration of the NWI features in and surrounding the project area.

Table 1: NWI Features

Classification Code	Code Description	Wetland Type
PFO1C	Palustrine Forested Broad-Leaved Deciduous Seasonally Flooded	Palustrine
R4SBC	Riverine Intermittent Streambed Seasonally Flooded	Riverine
R5UBH	Riverine Unknown Perennial Unconsolidated Bottom Permanently Flooded	Riverine

5.1.3 NRCS Soil Survey Data

The table below summarizes the soil units represented within the project area based on information collected from the Web Soil Survey database. Refer to **Figure 5** in **Attachment 1** for an illustration of the mapped soil units in and surrounding the project area.

Table 2: NRCS Soil Units

Soil Unit	Soil Unit Name	Description	Hydric/Non-hydric
FeD2	Ferris clay, 5 to 12 percent slopes, eroded	The Ferris series consists of deep to mudstone, well drained, very slowly permeable soils that formed in clayey residuum weathered from calcareous mudstone. These gently sloping to moderately steep soils occur on backslopes of side slopes of ridges on dissected plains. Slopes range from 1 to 20 percent.	Non-hydric
FhC	Ferris-Heiden complex, 2 to 5 percent slopes	The Ferris series consists of deep to mudstone, well drained, very slowly permeable soils that formed in clayey residuum weathered from calcareous mudstone. These gently sloping to moderately steep soils occur on backslopes of side slopes of ridges on dissected plains. Slopes range from 1 to 20 percent. The Heiden series consists of deep and very deep to mudstone, well drained, very slowly permeable soils that formed in clayey residuum weathered from mudstone. These nearly level to moderately steep soils occur on footslopes of base slopes, shoulders of interfluves, and backslopes of side slopes of ridges on dissected plains. Slopes range from 0.5 to 20 percent.	Non-hydric
HeC	Heiden clay, 3 to 5 percent slopes	The Heiden series consists of deep and very deep to mudstone, well drained, very slowly permeable soils that formed in clayey residuum weathered from mudstone. These nearly level to moderately steep soils occur on footslopes of base slopes, shoulders of interfluves, and backslopes of side slopes of ridges on dissected plains. Slopes range from 0.5 to 20 percent.	Non-hydric

Table 2: NRCS Soil Units

Soil Unit	Soil Unit Name	Description	Hydric/Non-hydric
HoA	Houston Black clay, 0 to 1 percent slopes	The Houston series consists of moderately well drained, slowly permeable, cyclic soils that formed in alkaline clays and chalk of the Blackland Prairies. These clayey soils have very high shrink-swell potential. Slope ranges from 0 to 8 percent.	Non-hydric
HoB	Houston Black clay, 1 to 3 percent slopes	The Houston series consists of moderately well drained, slowly permeable, cyclic soils that formed in alkaline clays and chalk of the Blackland Prairies. These clayey soils have very high shrink-swell potential. Slope ranges from 0 to 8 percent.	Non-hydric
HoC	Houston Black clay, 3 to 5 percent slopes	The Houston series consists of moderately well drained, slowly permeable, cyclic soils that formed in alkaline clays and chalk of the Blackland Prairies. These clayey soils have very high shrink-swell potential. Slope ranges from 0 to 8 percent.	Non-hydric
Tf	Trinity clay, 0 to 1 percent slopes, frequently flooded	The Trinity series consists of very deep, moderately well drained, very slowly permeable soils that formed in calcareous clayey alluvium derived from mudstone. These nearly level soils occur on flood plains on river valleys and large streams on dissected plains. Slopes are typically less than 1 percent, but the range is 0 to 3 percent.	Hydric

5.1.4 Aerial Photography

Historic aerial imagery for the project and surrounding areas was evaluated using images provided by Google Earth. The table below summarizes observations for the project area for each year reviewed. **Attachment 3** contains copies of the historic aerial photographs reviewed for the project area.

Table 3: Historic Aerial Photography Observations

Year	Observations
2004	Within the project area, all crossings can be observed. Primarily agricultural, residential, commercial properties, and vacant lots occur immediately adjacent to FM 741 and the vicinity around the project area.
2009	Residential developments on the west and east sides adjacent to the project area south of Interstate 20 can be observed in the early stages of development.
2015	No changes are visible within the project area.

5.1.5 FEMA FIRM

A review of FEMA FIRMs indicated a portion of the project area is within the 100-year floodplain associated with an unnamed tributary to Buffalo Creek from the Lower East Fork Lateral Site Number One. The project area is located within two map panels, 48257C0155D (effective July 3, 2012), and 48257C0175D (effective July 3, 2012). Refer to **Figure 4** in **Attachment 1** for an illustration of the FEMA FIRM data within and surrounding the project area.

5.1.6 LiDAR

A review of LiDAR data indicated that the site is approximately 430 to 480 feet above sea level (North American Vertical Datum 1988). LiDAR data is consistent with USGS topographic maps and aerial imagery observations. Refer to **Figure 6** in **Attachment 1** for an illustration of LiDAR data within the project area.

5.2 Waters of the U.S. Delineation

The table below summarizes the waterbodies/wetlands identified within the project area. Refer to **Figure 7** in **Attachment 1** for a depiction of the boundaries of each waterbody/wetland feature, as well as the location within the project area where sample point data were collected. Refer to **Attachment 2**, Wetland Determination Data Forms, for the completed wetland determination data forms for the project. Refer to **Attachment 4**, Representative Site Photos, for one or more photographs of each waterbody/wetland feature observed within the project area.

Table 4: Summary of Waterbody/Wetland Features

Waterbody or Wetland Number	Name	Type	Latitude, Longitude	Acres within project area (all waterbodies and wetlands)	Linear feet within project area (waterbodies only)	Potentially Jurisdictional (Section 404)?	Potentially Navigable (Section 10)?
1	Wetland 1	Palustrine Emergent Wetland	32.636450, -96.466532	0.020	N/A	No	No
2	Wetland 2	Palustrine Emergent Wetland	32.637339, -96.466414	0.003	N/A	No	No
3	Crossing 1a, Wetland 3	Palustrine Emergent Wetland	32.663127, -96.453975	0.024	N/A	Yes	No
4	Crossing 1b, Water 1	Ephemeral Stream	32.663530, -96.454003	0.010	158	Yes	No
5	Crossing 2a, Water 2	Intermittent Stream	32.668111, -96.448227	0.013	107	Yes	No
6	Crossing 2b, Wetland 4	Palustrine Scrub/Shrub Wetland	32.668353, -96.448183	0.027	N/A	Yes	No
7	Crossing 2c, Wetland 5	Palustrine Emergent Wetland	32.668130, -96.447926	0.054	N/A	Yes	No
8	Water 12	Drainage Ditch	32.668259, -96.448371	0.002	87	No	No
9	Water 13	Drainage Ditch	32.668029, -96.448558	0.002	91	No	No
10	Crossing 3a, Water 3	Perennial Stream	32.672136, -96.443524	0.112	321	Yes	No
11	Crossing 3b Water 4	Ephemeral Stream	32.671842, -96.443999	0.007	281	Yes	No

Waterbody or Wetland Number	Name	Type	Latitude, Longitude	Acres within project area (all waterbodies and wetlands)	Linear feet within project area (waterbodies only)	Potentially Jurisdictional (Section 404)?	Potentially Navigable (Section 10)?
12	Crossing 3c, Water 5	Ephemeral Stream	32.672088, -96.443748	0.002	39	Yes	No
13	Crossing 3d, Wetland 6	Palustrine Forested Wetland	32.671563, -96.444412	0.016	N/A	Yes	No
14	Water 14	Drainage Ditch	32.671843, -96.443863	0.005	199	No	No
15	Crossing 4 Wetland 7	Palustrine Emergent Wetland	32.676546, -96.441562	0.015	N/A	Yes	No
16	Crossing 5a Water 3	Perennial Stream	32.677904, -96.442678	0.072	296	Yes	No
17	Crossing 5b Water 6	Ephemeral Stream	32.6779416, -96.442855	0.009	108	Yes	No
18	Crossing 5c Wetland 8	Palustrine Emergent Wetland	32.678293, -96.443276	0.031	N/A	Yes	No
19	Crossing 5d Wetland 9	Palustrine Emergent Wetland	32.678781, -96.443826	0.014	N/A	Yes	No
20	Crossing 6a Water 7	Intermittent Stream	32.681098, -96.446549	0.023	375	Yes	No
21	Crossing 6b Water 8	Ephemeral Stream	32.681764, -96.447226	0.042	921	Yes	No
22	Crossing 6c Wetland 10	Palustrine Scrub/Shrub Wetland	32.681264, -96.446946	0.021	N/A	Yes	No

Waterbody or Wetland Number	Name	Type	Latitude, Longitude	Acres within project area (all waterbodies and wetlands)	Linear feet within project area (waterbodies only)	Potentially Jurisdictional (Section 404)?	Potentially Navigable (Section 10)?
23	Crossing 6d Wetland 12	Palustrine Emergent Wetland	32.683571, -96.450182	0.346	N/A	Yes	No
24	Crossing 6e Wetland 11	Palustrine Scrub/Shrub Wetland	32.682453, -96.448980	0.100	N/A	Yes	No
25	Crossing 6f, Wetland 13	Palustrine Scrub/Shrub Wetland	32.683432, -96.450607	0.010	N/A	Yes	No
26	Crossing 7a, Water 9	Ephemeral Stream	32.689140, -96.457658	0.011	149	Yes	No
27	Crossing 7b, Wetland 14	Palustrine Emergent Wetland	32.689472, -96.457718	0.015	N/A	Yes	No
28	Crossing 7c, Wetland 15	Palustrine Emergent Wetland	32.689320, -96.457917	0.006	N/A	Yes	No
29	Wetland 16	Palustrine Emergent Wetland	32.690492, -96.458927	0.035	N/A	No	No
30	Wetland 17	Palustrine Emergent Wetland	32.691152, -96.459366	0.048	N/A	No	No
31	Wetland 18	Palustrine Emergent Wetland	32.691040, -96.459833	0.005	N/A	No	No
32	Crossing 8a, Water 10	Ephemeral Stream	32.694882, -96.457839	0.006	N/A	Yes	No

Waterbody or Wetland Number	Name	Type	Latitude, Longitude	Acres within project area (all waterbodies and wetlands)	Linear feet within project area (waterbodies only)	Potentially Jurisdictional (Section 404)?	Potentially Navigable (Section 10)?
33	Crossing 8b, Wetland 19	Palustrine Emergent Wetland	32.694996, -96.457813	0.019	N/A	Yes	No
34	Wetland 20	Palustrine Emergent Wetland	32.700843, -96.450411	0.021	N/A	No	No
35	Wetland 21	Palustrine Emergent Wetland	32.701327, -96.449803	0.014	N/A	No	No
36	Wetland 22	Palustrine Emergent Wetland	32.701563, -96.449562	0.006	N/A	No	No
37	Wetland 23	Palustrine Emergent Wetland	32.701881, -96.449470	0.014	N/A	No	No
38	Wetland 24	Palustrine Emergent Wetland	32.702523, -96.448680	0.038	N/A	No	No
39	Wetland 25	Palustrine Emergent Wetland	32.703634, -96.446953	0.010	N/A	No	No
40	Wetland 26	Palustrine Emergent Wetland	32.705093, -96.446463	0.036	N/A	No	No
41	Wetland 27	Palustrine Emergent Wetland	32.716490, -96.447589	0.033	N/A	No	No
42	Crossing 9a, Water 11	Ephemeral Stream	32.689140, -96.457658	0.011	149	Yes	No

Waterbody or Wetland Number	Name	Type	Latitude, Longitude	Acres within project area (all waterbodies and wetlands)	Linear feet within project area (waterbodies only)	Potentially Jurisdictional (Section 404)?	Potentially Navigable (Section 10)?
43	Crossing 9b, Wetland 28	Palustrine Emergent Wetland	32.727737, -96.457090	0.003	N/A	Yes	No
		Total		**1.31**	**3,141**		

5.2.1 Hydrology

To determine the normality of rainfall at the time of the field investigation, the USACE-based Antecedent Precipitations Tool (APT), Version 1.0 was utilized. Based on the data provided by the APT, drier than normal conditions were present during the field investigation on April 14, wetter than normal conditions on April 28, and normal conditions on April 29, 2022. The data is provided in **Attachment 5**.

The table below summarizes wetland hydrological indicators identified within the project area. Refer to the wetland determination data forms in **Attachment 2** to see the specific hydrology recorded at each sample point.

Table 5: Wetland Hydrological Indicators

Wetland Type	Sample Point Name(s)	Primary Wetland Hydrological Indicators	Secondary Wetland Hydrological Indicators
Ephemeral Stream	WDP11	Drift Deposits (B3)	Drainage Patterns (B10)
Palustrine Emergent Wetland	WDP01, WDP03, WDP09, WDP15, WDP23, WDP25, WDP35, WDP38, WDP40, WDP42, WDP44, WDP46, WDP48, WDP50, WDP52, WDP54, WDP56, WDP59, WDP61	Surface Water (A1), High Water Table (A2), Saturation (A3), Sediment Deposits (B2), Drift Deposits (B3), Algal Mat or Crust (B4), Water-Stained Leaves (B9), Aquatic Invertebrates (B13)	Sparsely Vegetated Concave Surface (B8), Drainage Patterns (B10), Crayfish Burrows (C8), Saturation Visible on Aerial Imagery (C9), Geomorphic Position (D2), FAC-Neutral Test (D5)
Palustrine Forested Wetland	WDP19	Surface Water (A1), Water Marks (B1), Algal Mat or Crust (B4), Water-Stained Leaves (B9)	Drainage Patterns (B10), Geomorphic Position (D2)

Wetland Type	Sample Point Name(s)	Primary Wetland Hydrological Indicators	Secondary Wetland Hydrological Indicators
Palustrine Scrub/Shrub Wetland	WDP13, WDP28, WDP30, WPD32, WDP36	Surface Water (A1), High Water Table (A2), Saturation (A3)	Drainage Patterns (B10), Crayfish Burrows (C8), Saturation Visible on Aerial Imagery (C9), Geomorphic Position (D2), FAC-Neutral Test (D5)
Non-Wetland	WDP02, WDP05, WDP06, WDP07, WDP08, WDP12, WDP14, WDP17, WDP18, WDP21, WDP26, WDP27, WDP29, WDP34, WDP41, WDP43, WDP45, WDP49, WDP51, WDP55, WDP57	Surface Water (A1), High Water Table (A2), Saturation (A3)	Drainage Patterns (B10), Crayfish Burrows (C8), Geomorphic Position (D2)

5.2.2 Vegetation

To determine the normality of rainfall at the time of the field investigation, the USACE-based APT, Version 1.0 was utilized. Based on the data provided by the APT, drier than normal conditions were present during the field investigation on April 14, wetter than normal conditions on April 28, and normal conditions on April 29, 2022. The data is provided in Attachment 5.

Representative dominant taxa for each distinct habitat type encountered within the project area are listed in the tables below. Indicator status for each species was obtained from the current NWPL.

Table 6: Blackland Prairie Disturbance or Tame Grassland Habitat Type Dominant Plant Species

Strata	Scientific Name	Common Name	NWPL Classification
Tree	*Celtis laevigata*	Sugarberry	FAC
	Gleditsia triacanthos	Honeylocust	FACU
	Ulmus americana	American elm	FAC
Sapling/Shrub	*Celtis laevigata*	Sugarberry	FAC
	Gleditsia triacanthos	Honeylocust	FACU
	Fraxinus pennsylvanica	Green ash	FAC
	Rubus trivialis	Southern dewberry	FACU
	Salix nigra	Black willow	FACW
	Ulmus crassifolia	Cedar elm	FAC
Herb	*Carex cherokeensis*	Cherokee sedge	FACW
	Valerianella radiata	Beaked cornsalad	FACW
	Juncus marginatus	Grassleaf rush	FACW
	Tridens albescens	White tridens	FAC
	Geranium dissectum	Cutleaf geranium	NI
	Oenothera speciosa	Pinkladies	NI
	Lolium perenne	Perennial ryegrass	FACU
	Sisyrinchium pallidum	Pale blue-eyed grass	NI
	Geranium carolinianum	Carolina geranium	NI
	Lupinus texensis	Texas lupine	NI
	Anemone berlandieri	Tenpetal thimbleweed	NI
	Eleocharis palustris	Common spikerush	OBL
	Rumex crispus	Curly dock	FAC
	Ambrosia psilostachya	Cuman ragweed	FACU
	Sorghum halepense	Johnsongrass	FACU
	Rapistrum rugosum	Annual bastardcabbage	NI
	Daucus carota	Queen Anne’s lace	UPL
	Alopecurus carolinianus	Carolina foxtail	FACW
	Vicia sativa	Garden vetch	FACU
	Solidago canadensis	Canada goldenrod	FACU
	Bromus arvensis	Field brome	FACU
	Packera tampicana	Great Plains ragwort	FACW
	Cynodon dactylon	Bermudagrass	FACU
	Allium canadense	Meadow garlic	FACU
	Chaerophyllum tainturieri	Hairyfruit chervil	FAC
	Ambrosia artemisiifolia	Annual ragweed	FACU
	Erodium cicutarium ssp. Cicutarium	Redstem stork's bill	NI
	Setaria viridis	Green bristlegrass	NI
Woody Vine	*Smilax bona-nox*	Saw greenbrier	FACU
	Toxicodendron radicans	Eastern poison ivy	FACU

Table 7: Central Texas Riparian Deciduous Shrubland Habitat Type Dominant Plant Species

Strata	Scientific Name	Common Name	NWPL Classification
Tree	*Salix nigra*	Black willow	FACW
	Celtis laevigata	Sugarberry	FAC
	Carya illinoinensis	Pecan	FAC
Sapling/Shrub	*Baccharis neglecta*	Rooseveltweed	FAC
	Salix nigra	Black willow	FACW
	Cornus drummondii	Roughleaf dogwood	FAC
	Celtis laevigata	Sugarberry	FAC
	Ulmus crassifolia	Cedar elm	FAC
	Maclura pomifera	Osage-orange	FACU
	Gleditsia triacanthos	Honeylocust	FACU
Herb	*Ambrosia artemisiifolia*	Annual ragweed	FACU
	Bromus arvensis	Field brome	FACU
	Carex tetrastachya	Britton's sedge	FACW
	Lolium perenne	Perennial ryegrass	FACU
	Typha angustifolia	Narrowleaf cattail	OBL
	Rumx crispus	Curly dock	FAC
	Juncus marginatus	Grassleaf rush	FACW
	Elymus virginicus	Coralberry	FAC
	Sisyrinchium pallidum	Pale blue-eyed grass	FACU
	Eleocharis palustris	Common spikerush	OBL
	Stenotaphrum secundatum	St. Augustine grass	FAC
	Taraxacum officinale	Common dandelion	FACU
	Scirpus pendulus	Rufous bulrush	OBL
	Setaria magna	Giant bristlegrass	FACW
Woody Vine	*Lonicera japonica*	Japanese honeysuckle	FACU
	Toxicodendron radicans	Eastern poison ivy	FACU
	Vitis rotundifolia	Munson's grape	FAC

Table 8: Central Texas Riparian Hardwood Forest Habitat Type Dominant Plant Species

Strata	Scientific Name	Common Name	NWPL Classification
Tree	*Carya illinoinensis*	Pecan	FAC
	Celtis laevigata	Sugarberry	FAC
	Ulmus crassifolia	Cedar elm	FAC
	Ulmus americana	American elm	FAC
	Fraxinus pennsylvanica	Green ash	FAC
	Salix nigra	Black willow	FACW
	Populus deltoides	Eastern cottonwood	FAC
Sapling/Shrub	*Acer negundo*	Boxelder	FAC
	Celtis laevigata	Sugarberry	FAC
	Cornus drummondii	Roughleaf dogwood	FAC
	Diospyros virginiana	Common persimmon	FAC
	Ulmus americana	American elm	FAC
	Symphoricarpos orbiculatus	Coralberry	FACU
	Fraxinus pennsylvanica	Green ash	FAC
Herb	*Allium canadense*	Meadow garlic	FACU
	Bromus arvensis	Field brome	FACU
	Carex planostachys	Cedar sedge	NI
	Chasmanthium latifolium	Indian woodoats	FACU
	Elymus virginicus	Virginia wildrye	FAC
	Lolium perenne	Perennial ryegrass	FACU
	Solidago canadensis	Canada goldenrod	FACU
	Rubus trivialis	Southern dewberry	FACU
	Torilis arvensis	Spreading hedgeparsley	NI
Woody Vine	*Smilax bona-nox*	Saw greenbrier	FACU
	Vitis rotundifolia	Munson's grape	FAC
	Toxicodendron radicans	Eastern poison ivy	FACU

Table 9: Central Texas Riparian Herbaceous Habitat Type Dominant Plant Species

Strata	Scientific Name	Common Name	NWPL Classification
Tree	*Celtis laevigata*	Sugarberry	FAC
Sapling/Shrub	*Salix nigra*	Black willow	FACW
Herb	*Ambrosia trifida*	Great ragweed	FAC
	Bouteloua dactyloides	Buffalograss	FACU
	Carex cherokeensis	Cherokee sedge	FACW
	Cynodon dactylon	Bermudagrass	FACU
	Eleocharis palustris	Common spikerush	OBL
	Juncus effusus	Common rush	OBL
	Juncus marginatus	Grassleaf rush	FACW
	Lolium perenne	Perennial ryegrass	FACU
	Phyla fruticose	Diamondleaf fogfruit	FAC
	Plantago rhodosperma	Redseed plantain	FACU
	Potamogeton nodosus	Longleaf pondweed	OBL
	Ranunculus sardous	Hairy buttercup	FAC
	Rumex crispus	Curly dock	FAC
	Setaria viridis	Green bristlegrass	NI
	Scirpus pendulus	Rufous bulrush	OBL
	Sorghum halepense	Johnsongrass	FACU
	Typha angustifolia	Narrowleaf cattail	OBL

Table 10: Deciduous Woodland Habitat Type Dominant Plant Species

Strata	Scientific Name	Common Name	NWPL Classification
Tree	*Celtis laevigata*	Sugarberry	FAC
	Populus deltoides	Eastern cottonwood	FAC
	Ulmus americana	American elm	FAC
Sapling/Shrub	*Cornus drummondii*	Roughleaf dogwood	FAC
	Fraxinus pennsylvanica	Green ash	FAC
	Ligustrum sinense	Chinese privet	UPL
	Populus deltoides	Eastern cottonwood	FAC
	Salix nigra	Black willow	FACW
	Rubus trivialis	Southern dewberry	FACU
	Zanthoxylum clava-herculis	Hercules' club	FACU
Herb	*Ageratina altissima*	White snakeroot	UPL
	Eleocharis palustris	Common spikerush	OBL
	Lolium perenne	Perennial ryegrass	FACU
	Paspalum dilatatum	Dallisgrass	FAC
	Poa annua	Annual bluegrass	FACU
	Sorghum halepense	Johnsongrass	FACU
Woody Vine	*Parthenocissus quinquefolia*	Virginia creeper	FACU
	Toxicodendron radicans	Eastern poison ivy	FACU

Table 11: Urban Low Intensity Habitat Type Dominant Plant Species

Strata	Scientific Name	Common Name	NWPL Classification
Tree	*Celtis laevigata*	Sugarberry	FAC
	Salix nigra	Black willow	FACW
Sapling/Shrub	*Celtis laevigata*	Sugarberry	FAC
	Juniperus virginiana	Eastern redcedar	UPL
	Maclura pomifera	Osage-orange	FACU
	Rubus trivialis	Southern dewberry	FACU
	Salix nigra	Black willow	FACW
Herb	*Bromus arvensis*	Field brome	FACU
	Cynodon dactylon	Bermudagrass	FACU
	Eleocharis palustris	Common spikerush	OBL
	Erigeron canadensis	Canadian horseweed	FACU
	Erodium cicutarium ssp. cicutarium	Redstem Stork's bill	NI
	Geranium dissectum	Cutleaf geranium	NI
	Houstonia micrantha	Southern bluet	NI
	Juncus marginatus	Grassleaf rush	FACW
	Lolium perenne	Perennial ryegrass	FACU
	Medicago lupulina	Black medick	FACU
	Myosotis macrosperma	Largeseed forget-me-not	FAC
	Oenothera speciosa	Pinkladies	NI
	Panicum virgatum	Switchgrass	FAC
	Phyla fruticose	Diamondleaf fogfruit	FAC
	Pyrrhopappus pauciflorus	Smallflower desert-chicory	NI
	Rumex crispus	Curly dock	FAC
	Setaria viridis	Green bristlegrass	NI
	Sherardia arvensis	Blue fieldmadder	NI
	Sorghum halepense	Johnsongrass	FACU
	Tridens albescens	White tridens	FAC
	Torilis nodosa	Knotted hedgeparsley	NI
	Valerianella radiata	Beaked cornsalad	FACW
	Veronica arvensis	Corn speedwell	FACU
	Vicia sativa	Garden vetch	FACU
Woody Vine	*Smilax bona-nox*	Saw greenbrier	FACU
	Toxicedendron radicans	Eastern poison ivy	FACU

5.2.3 Soils

The table below summarizes hydric soil data identified within the project area. Refer to the wetland determination data forms in **Attachment 2** to see the specific soil data recorded at each sample point.

Wetland Type	Sample Point Name(s)	Hydric Soil Indicator(s)
Palustrine Emergent Wetland	WPD01, WDP03, WDP09, WDP15, WDP23, WDP25, WDP35, WDP38, WDP40, WDP42, WDP44, WDP46, WDP48, WDP50, WDP52, WDP54, WDP56, WDP59, WDP61	Hydrogen Sulfide (A4), Loamy Gleyed Matrix (F2), Depleted Matrix (F3), Redox Dark Surface (F6), Depleted Dark Surface (F7)
Palustrine Forested Wetland	WDP19	Loamy Gleyed Matrix (F2)
Palustrine Scrub/Shrub Wetland	WDP13, WDP28, WDP30, WDP32, WDP36	Loamy Gleyed Matrix (F2), Depleted Matrix (F3), Redox Dark Surface (F6), Depleted Dark Surface (F7)
Non-Wetland	WDP04, WDP06, WDP14, WDP33, WDP34, WDP41, WDP43, WDP47, WDP55	Depleted Matrix (F3), Redox Dark Surface (F6), Depleted Dark Surface (F7)

6.0 Conclusion

A WOTUS delineation was conducted for FM 741 from US 175 to FM 548 in the cities of Forney and Crandall, and the unincorporated community of Heartland, Kaufman County, Texas (CSJ 1092-01-021). The field delineation was conducted on April 14, 28, and 29, 2022. Refer to **Section 5.2**, above, for a table summarizing the aquatic resources (i.e., waterbodies/wetlands) identified within the project area.

Forty-three aquatic features were observed during the April 2022 field investigation. Three aquatic features are preliminarily categorized as drainage ditches (Water 12, Water 13, and Water 14), seven aquatic features are preliminarily categorized as ephemeral streams (Water 1, Water 4, Water 5, Water 6, Water 8, Water 9, and Water 10), three aquatic features are preliminarily categorized as intermittent streams (Water 2, Water 7, and Water 11), one aquatic feature that crosses the project area in two locations is preliminarily categorized as a perennial stream (Water 3), twenty-three aquatic features are preliminarily categorized as palustrine emergent wetlands (Wetland 1-3, Wetland 5, Wetland 7-9, Wetland 12, Wetland 14-28), one aquatic feature is preliminarily categorized as a palustrine forested wetland (Wetland 6), and four aquatic features that are preliminarily categorized as palustrine scrub/shrub wetlands (Wetland 4, Wetland 10, Wetland 11, and Wetland 13).

6.1 Drainage Ditches

Water 12

Water 12 is a drainage ditch that occurs adjacent to the FM 741 corridor. This water feature is not shown on NWI or topographic maps. This feature only conveys ephemeral flows immediately after precipitation events. This feature does not contain a contiguous OHWM. See **Figure 7h** in **Attachment 1**, **Wetland Determination Data Forms 13-14** in **Attachment 3**, and **Photos 013-014** in **Attachment 4**.

Water 13

Water 13 is a drainage ditch that occurs adjacent to the FM 741 corridor. This water feature is not shown on NWI or topographic maps. This feature only conveys ephemeral flows immediately after precipitation events. This feature does not contain a contiguous OHWM. See **Figure 7h** in **Attachment 1**, **Wetland Determination Data Form 12** in **Attachment 3**, and **Photo 012** in **Attachment 4**.

Water 14

Water 14 is a drainage ditch that occurs adjacent to the FM 741 corridor. This water feature is not shown on NWI or topographic maps. This feature only conveys ephemeral flows immediately after precipitation events. This feature does not contain a contiguous OHWM. See **Figure 7h** in **Attachment 1**.

6.2 Ephemeral Streams

Water 1

Water 1 (Crossing 1b) is an unnamed ephemeral stream that is shown on NWI and topographic maps. Water 1 appears to exhibit flows in response to direct or repeated precipitation events. Flowing water is infrequent enough that sustained aquatic life is not anticipated within this water feature. Therefore, Water 1 would be classified as a non-relatively permanent water (NRPW). Water 1 exhibited an observable OHWM and bed and banks with a continuous surface hydrologic connection to a potentially jurisdictional WOTUS (Buffalo Creek), a stream that flows into the Trinity River, a traditionally navigable water (TNW). See **Figure 7g** in **Attachment 1**, **Wetland Determination Data Form 11** in **Attachment 3**, and **Photo 011** in **Attachment 4**.

Water 4

Water 4 (Crossing 3b) is an unnamed ephemeral stream that is shown on NWI and topographic maps. Water 4 appears to exhibit flows in response to direct or repeated precipitation events. Flowing water is infrequent enough that sustained aquatic life is not anticipated within this water feature. Therefore, Water 4 would be classified as a NRPW. Water 4 exhibited an observable OHWM and bed and banks with a continuous surface hydrologic connection to a potentially jurisdictional WOTUS (Buffalo Creek), a stream that flows into the Trinity River, a TNW. See **Figure 7i** in **Attachment 1.**

Water 5

Water 5 (Crossing 3c) is an unnamed ephemeral stream that is shown on NWI and topographic maps. Water 5 appears to exhibit flows in response to direct or repeated precipitation events. Flowing water is infrequent enough that sustained aquatic life is not anticipated within this water feature. Therefore, Water 5 would be classified as a NRPW. Water 5 exhibited an observable OHWM and bed and banks with a continuous surface hydrologic connection to a potentially jurisdictional WOTUS (Buffalo Creek), a stream that flows into the Trinity River, a TNW. See **Figure 7i** in **Attachment 1**, **Wetland Determination Data Form 17** in **Attachment 3**, and **Photo 017** in **Attachment 4**.

Water 6

Water 6 (Crossing 5b) is an unnamed ephemeral stream that is shown on NWI and topographic maps. Water 6 appears to exhibit flows in response to direct or repeated precipitation events. Flowing water is infrequent enough that sustained aquatic life is not anticipated within this water feature. Therefore, Water 6 would be classified as a NRPW. Water 6 exhibited an observable OHWM and bed and banks with a continuous surface hydrologic connection to a potentially jurisdictional WOTUS (Buffalo Creek), a stream that flows into the Trinity River, a TNW. See **Figure 7j & 7k** in **Attachment 1**.

Water 8

Water 8 (Crossing 6b) is an unnamed ephemeral stream that is shown on NWI but is not depicted on topographic maps. Water 8 appears to exhibit flows in response to direct or repeated precipitation events. Flowing water is infrequent enough that sustained aquatic life is not anticipated within this water feature. Therefore, Water 8 would be classified as a NRPW. Water 8 exhibited an observable OHWM and bed and banks with a continuous surface hydrologic connection to a potentially jurisdictional WOTUS (Buffalo Creek), a stream that flows into the Trinity River, a TNW. See **Figure 7l** in **Attachment 1**.

Water 9

Water 9 (Crossing 7a) is an unnamed ephemeral stream that is not depicted on NWI or topographic maps. Water 9 appears to exhibit flows in response to direct or repeated precipitation events. Flowing water is infrequent enough that sustained aquatic life is not anticipated within this water feature. Therefore, Water 9 would be classified as a NRPW. Water 9 exhibited an observable OHWM and bed and banks with a continuous surface hydrologic connection to a potentially jurisdictional WOTUS (Mustang Creek), a stream that flows into the Trinity River, a TNW. See **Figure 7n** in **Attachment 1**.

Water 10

Water 10 (Crossing 8a) is an unnamed ephemeral stream that is depicted on NWI and topographic maps. Water 10 appears to exhibit flows in response to direct or repeated precipitation events. Flowing water is infrequent enough that sustained aquatic life is not anticipated within this water feature. Therefore, Water 10 would be classified as a NRPW. Water 10 exhibited an observable OHWM and bed and banks with a continuous surface hydrologic connection to a potentially jurisdictional WOTUS (Mustang Creek), a stream that flows into the Trinity River, a TNW. See **Figure 7o** in **Attachment 1**, **Wetland Determination Data Form 45** in **Attachment 3**, and **Photo 045** in **Attachment 4**.

6.3 Intermittent Streams

Water 2

Water 2 (Crossing 2a) is an unnamed intermittent stream that is not shown on NWI maps but is depicted on topographic maps. Based on the size of Water 2's watershed and observations made during field investigations, Water 2 would be classified as a relatively permanent water (RPW) with prolonged hydrologic regimes capable of supporting aquatic fauna. Water 2 also exhibited an observable OHWM and bed and banks with a continuous surface hydrologic connection to a potentially jurisdictional WOTUS (Buffalo Creek), a stream that flows into the Trinity River, a TNW. See **Figure 7h** in **Attachment 1**, **Wetland Determination Data Form 12** in **Attachment 3**, and **Photo 012** in **Attachment 4**.

Water 7

Water 7 (Crossing 6a) an unnamed intermittent stream that is depicted on NWI and topographic maps. Based on the size of Water 7's watershed and observations made during field investigations, Water 7 would be classified as a RPW with prolonged hydrologic regimes capable of supporting aquatic fauna. Water 7 also exhibited an observable OHWM and bed and banks with a continuous surface hydrologic connection to a potentially jurisdictional WOTUS (Buffalo Creek), a stream that flows into the Trinity River, a TNW. See **Figure 7k** in **Attachment 1**, **Wetland Determination Data Form 27** in **Attachment 3**, and **Photo 027** in **Attachment 4**.

Water 11

Water 11 (Crossing 9a) is an unnamed intermittent stream that is depicted on NWI and topographic maps. Based on the size of Water 11's watershed and observations made during field investigations, Water 11 would be classified as a RPW with prolonged hydrologic regimes capable of supporting aquatic fauna. Water 11 also exhibited an observable OHWM and bed and banks with a continuous surface hydrologic connection to a potentially jurisdictional WOTUS (Mustang Creek), a stream that flows into the Trinity River, a TNW. See **Figure 7x** in **Attachment 1**.

6.4 Perennial Stream

Water 3

Water 3 (Crossing 3a and Crossing 5a) is a named perennial stream (Buffalo Creek) that is shown on NWI and topographic maps. Based on the size of Water 3's watershed and observations made during field investigations, Water 3 would be classified as a RPW with prolonged hydrologic regimes capable of supporting aquatic fauna. Water 3 also exhibited an observable OHWM and bed and banks with a continuous surface hydrologic connection to a potentially jurisdictional WOTUS (East Fork Trinity River), a stream that flows into the Trinity River, a TNW. See **Figure 7i** & **7j** in **Attachment 1**, **Wetland Determination Data Forms 17-18, 21-22** in **Attachment 3**, and **Photos 017-018, 021-022** in **Attachment 4**.

6.5 Palustrine Emergent Wetlands

Wetland 1

Wetland 1 is a palustrine emergent wetland that is not shown on NWI and topographic maps. Wetland 1 is located high on the landscape and appears to have formed due to a concave depression collecting precipitation as the result of hydrology driven by direct precipitation and overland flow entrapment. This feature does not exhibit an observable hydrological connection to a WOTUS and appears to be isolated. See **Figure 7a** in **Attachment 1**, **Wetland Determination Data Forms 01-02** in **Attachment 3**, and **Photos 01-02** in **Attachment 4**.

Wetland 2

Wetland 2 is a palustrine emergent wetland that is not shown on NWI and topographic maps. Wetland 2 is located high on the landscape and appears to have formed due to a concave depression collecting precipitation as the result of hydrology driven by direct precipitation and overland flow entrapment. This feature does not exhibit an observable hydrological connection to a WOTUS and appears to be isolated. See **Figure 7a** in **Attachment 1**, **Wetland Determination Data Forms 03-04** in **Attachment 3**, and **Photos 03-04** in **Attachment 4**.

Wetland 3

Wetland 3 (Crossing 1a) is a palustrine emergent wetland this is shown on NWI and topographic maps. Wetland 3 is abutting Water 1, an emergent stream that is preliminarily considered a jurisdictional WOTUS. See **Figure 7g** in **Attachment 1**, **Wetland Determination Data Forms 09-10** in **Attachment 3**, and **Photos 09-10** in **Attachment 4**.

Wetland 5

Wetland 5 (Crossing 2c) is a palustrine emergent wetland that is not shown on NWI maps but is depicted on topographic maps. Wetland 5 appears to be an impounded stream features and water exits this feature frequently enough to be hydrologically connected to Water 2, a presumed intermittent stream located within the project area. See **Figure 7h** in **Attachment 1**, **Wetland Determination Data Forms 15** in **Attachment 3**, and **Photo 15** in **Attachment 4**.

Wetland 7

Wetland 7 (Crossing 4) is an unnamed palustrine emergent wetland that is not shown on NWI maps or topographic maps. Wetland 7 appears to be an impounded stream features and water exits this feature frequently enough to be hydrologically connected to Water 3, a presumed perennial stream located within the project area. See **Figure 7j** in **Attachment 1**.

Wetland 8

Wetland 8 (Crossing 5c) is a palustrine emergent wetland that is not shown on NWI maps but is depicted on topographic maps. Wetland 8 appears to be an impounded stream features and water exits this feature frequently enough to be hydrologically connected to Water 3, a presumed perennial stream located within the project area. See **Figure 7j** & **7k** in **Attachment 1**, **Wetland Determination Data Forms 23-24** in **Attachment 3**, and **Photos 23-24** in **Attachment 4**.

Wetland 9

Wetland 9 (Crossing 5d) is a palustrine emergent wetland that is not shown on NWI maps but is depicted on topographic maps. Wetland 9 appears to be an impounded stream feature and water exits this feature frequently enough to be hydrologically connected to Water 3, a presumed perennial stream located within the project area. See **Figure 7k** in **Attachment 1**, **Wetland Determination Data Forms 25-26** in **Attachment 3**, and **Photos 25-26** in **Attachment 4**.

Wetland 12

Wetland 12 (Crossing 6d) is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 12 appears to be a roadside collection facility that exhibits water exiting the feature frequently enough to be hydrologically connected to Water 3, a presumed perennial stream located within the project area. See **Figure 7m** in **Attachment 1**, **Wetland Determination Data Form 35** in **Attachment 3**, and **Photo 35** in **Attachment 4**.

Wetland 14

Wetland 14 (Crossing 7b) is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 14 appears to be a roadside collection facility that exhibits water exiting the feature frequently enough to be hydrologically connected to a potentially jurisdictional WOTUS (Mustang Creek). See **Figure 7n** in **Attachment 1**, **Wetland Determination Data Forms 40-41** in **Attachment 3**, and **Photos 40-41** in **Attachment 4**.

Wetland 15

Wetland 15 (Crossing 7c) is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 15 appears to be a roadside collection facility that exhibits water exiting the feature frequently enough to be hydrologically connected to a potentially jurisdictional WOTUS (Mustang Creek). See **Figure 7m** in **Attachment 1**, **Wetland Determination Data Form 35** in **Attachment 3**, and **Photo 35** in **Attachment 4**.

Wetland 16

Wetland 16 is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 16 appears to be a roadside collection facility that appears to be isolated. See **Figure 7m** in **Attachment 1**, **Wetland Determination Data Forms 42-43** in **Attachment 3**, and **Photos 42-43** in **Attachment 4**.

Wetland 17

Wetland 17 is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 17 appears to be a roadside collection facility that appears to be isolated. See **Figure 7m** in **Attachment 1**, **Wetland Determination Data Forms 43-44** in **Attachment 3**, and **Photos 43-44** in **Attachment 4**.

Wetland 18

Wetland 18 is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 18 appears to be a roadside collection facility that appears to be isolated. See **Figure 7n** & **7o** in **Attachment 1**.

Wetland 19

Wetland 19 is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 19 appears to be a roadside collection facility that appears to be isolated. See **Figure 7n** & **7o** in **Attachment 1**.

Wetland 20

Wetland 20 is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 20 appears to be a roadside collection facility that appears to be isolated. See **Figure 7q** in **Attachment 1**, **Wetland Determination Data Forms 48-49** in **Attachment 3**, and **Photos 48-49** in **Attachment 4**.

Wetland 21

Wetland 21 is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 21 appears to be a roadside collection facility that appears to be isolated. See **Figure 7q** in **Attachment 1**, **Wetland Determination Data Forms 46-47** in **Attachment 3**, and **Photos 46-47** in **Attachment 4**.

Wetland 22

Wetland 22 is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 22 appears to be a roadside collection facility that appears to be isolated. See **Figure 7q** in **Attachment 1**, **Wetland Determination Data Forms 54-55** in **Attachment 3**, and **Photos 54-55** in **Attachment 4**.

Wetland 23

Wetland 23 is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 23 appears to be a roadside collection facility that appears to be isolated. See **Figure 7q** in **Attachment 1**, **Wetland Determination Data Forms 50-51** in **Attachment 3**, and **Photos 50-51** in **Attachment 4**.

Wetland 24

Wetland 24 is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 24 appears to be a roadside collection facility that appears to be isolated. See **Figure 7q** in **Attachment 1**, **Wetland Determination Data Forms 52-53** in **Attachment 3**, and **Photos 52-53** in **Attachment 4**.

Wetland 25

Wetland 25 is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 25 appears to be a roadside collection facility at the base of a cross culvert under FM 741 that appears to be isolated. See **Figure 7q** in **Attachment 1**.

Wetland 26

Wetland 26 is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 26 appears to be a roadside collection facility that appears to be isolated. See **Figure 7r** in **Attachment 1**, **Wetland Determination Data Forms 56-57** in **Attachment 3**, and **Photos 56-57** in **Attachment 4**.

Wetland 27

Wetland 27 is a palustrine emergent wetland that is not depicted on NWI or topographic maps. Wetland 27 appears to be a roadside collection facility that appears to be isolated. See **Figure 7u** in **Attachment 1**, **Wetland Determination Data Forms 59-60** in **Attachment 3**, and **Photos 59-60** in **Attachment 4**.

Wetland 28

Wetland 28 (Crossing 9b) is a palustrine emergent wetland this is shown on NWI and topographic maps. Wetland 3 is abutting Water 11, an intermittent stream that is preliminarily considered a jurisdictional WOTUS. See **Figure 7x** in **Attachment 1**, **Wetland Determination Data Forms 61-62** in **Attachment 3**, and **Photos 61-62** in **Attachment 4**.

6.6 Palustrine Forested Wetland

Wetland 6

Wetland 6 (Crossing 3d) is a palustrine forested wetland that is not shown on NWI maps but is depicted on topographic maps. Wetland 6 appears to be an impounded stream features and water exits this feature frequently enough to be hydrologically connected to Waters 3 and 4, a presumed ephemeral stream located within the project area. See **Figure 7i** in **Attachment 1**, **Wetland Determination Data Forms 19-20** in **Attachment 3**, and **Photos 19-20** in **Attachment 4**.

6.7 Palustrine Scrub/Shrub Wetland

Wetland 4

Wetland 4 (Crossing 2b) is a palustrine scrub/shrub wetland that is not shown on NWI maps but is depicted on topographic maps. Wetland 4 appears to be an impounded stream feature, and water exits this feature frequently enough to be hydrologically connected to Water 2, a presumed intermittent stream located within the project area. See **Figure 7h** in **Attachment 1**, **Wetland Determination Data Form 12** in **Attachment 3**, and **Photo 12** in **Attachment 4**.

Wetland 10

Wetland 10 (Crossing 6c) is a palustrine scrub/shrub wetland that is shown on NWI maps but is not depicted on topographic maps. Wetland 10 appears to be an impounded stream feature and water exits this feature frequently enough to be hydrologically connected to Water 3, a presumed perennial stream located within the project area. See **Figure 7l** in **Attachment 1**, **Wetland Determination Data Forms 28-29** in **Attachment 3**, and **Photos 28-29** in **Attachment 4**.

Wetland 11

Wetland 11 (Crossing 6e) is a palustrine scrub/shrub wetland that is not shown on NWI or topographic maps. Wetland 11 appears to be a roadside collection facility that exhibits water exiting the feature frequently enough to be hydrologically connected to Water 3, a presumed perennial stream located within the project area. See **Figure 7I** in **Attachment 1**, **Wetland Determination Data Forms 30-31** in **Attachment 3**, and **Photos 30-31** in **Attachment 4**.

Wetland 13

Wetland 13 (Crossing 6f) is a palustrine scrub/shrub wetland that is not shown on NWI or topographic maps. Wetland 13 appears to be a roadside collection facility that exhibits water exiting the feature frequently enough to be hydrologically connected to Water 3, a presumed perennial stream located within the project area. See **Figure 7I** in **Attachment 1**, **Wetland Determination Data Forms 32-33** in **Attachment 3**, and **Photos 32-33** in **Attachment 4**.

The professional opinion offered in this report is based on best professional judgement. It should be noted that the USACE makes the final determination on the location of waterbody and wetland boundaries.

7.0 References

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8.0 Attachments

1. Figures
2. Wetland Determination Data Forms
3. Historical Aerial Photographs
4. Site Photographs
5. USACE Antecedent Precipitation Tool Results

Attachment 1 - Figures

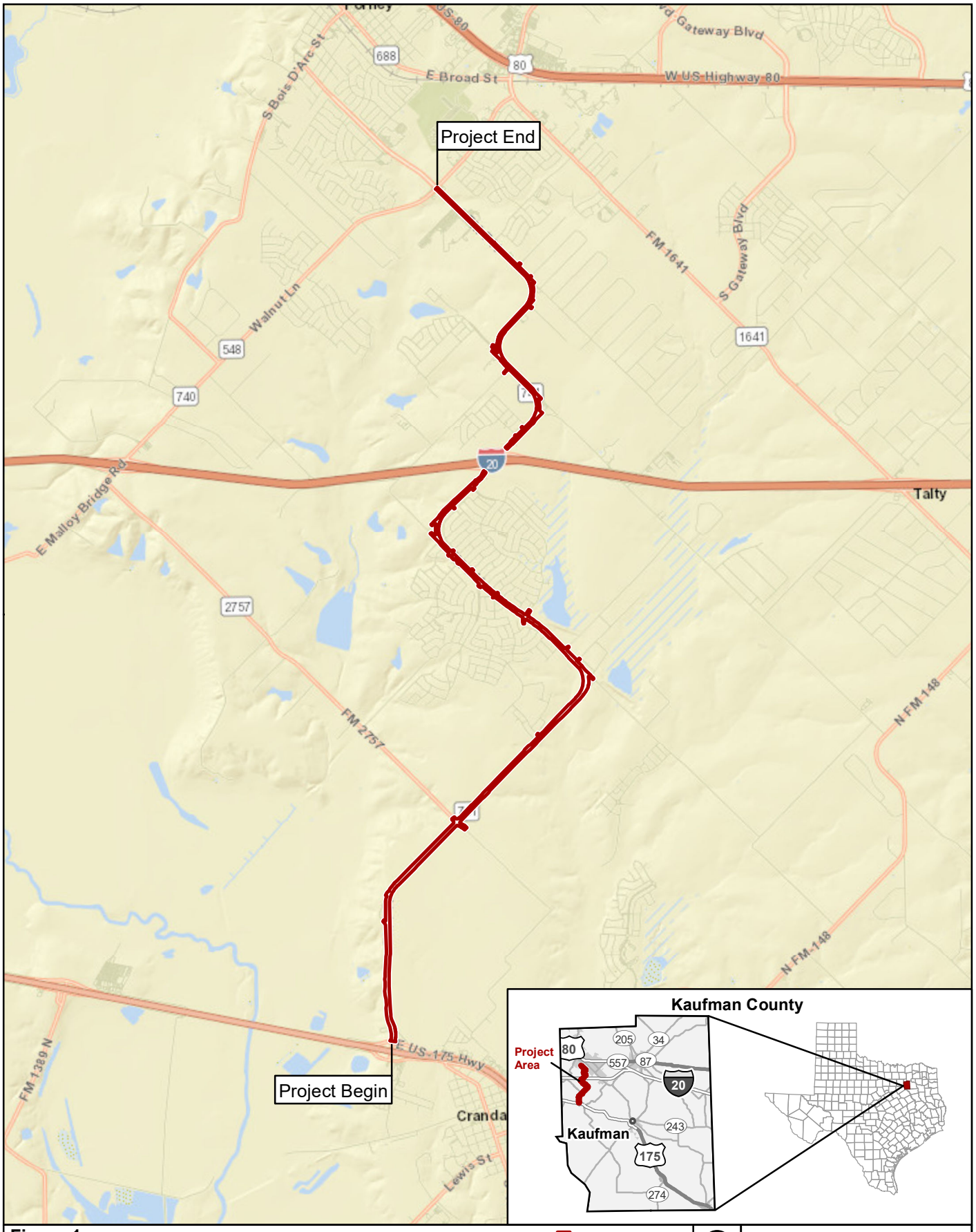

Figure 1.
Project Location (Road Base)

FM 741

Project Location

Basemap Source: Esri (2022)

CSJ: 1092-01-021

0 1 Mile
0 1.5 km

1 in = 1 mile
Scale: 1:63,360
Date: 4/22/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA_all_Figure 1_Project Location_road_20220323_slh.mxd

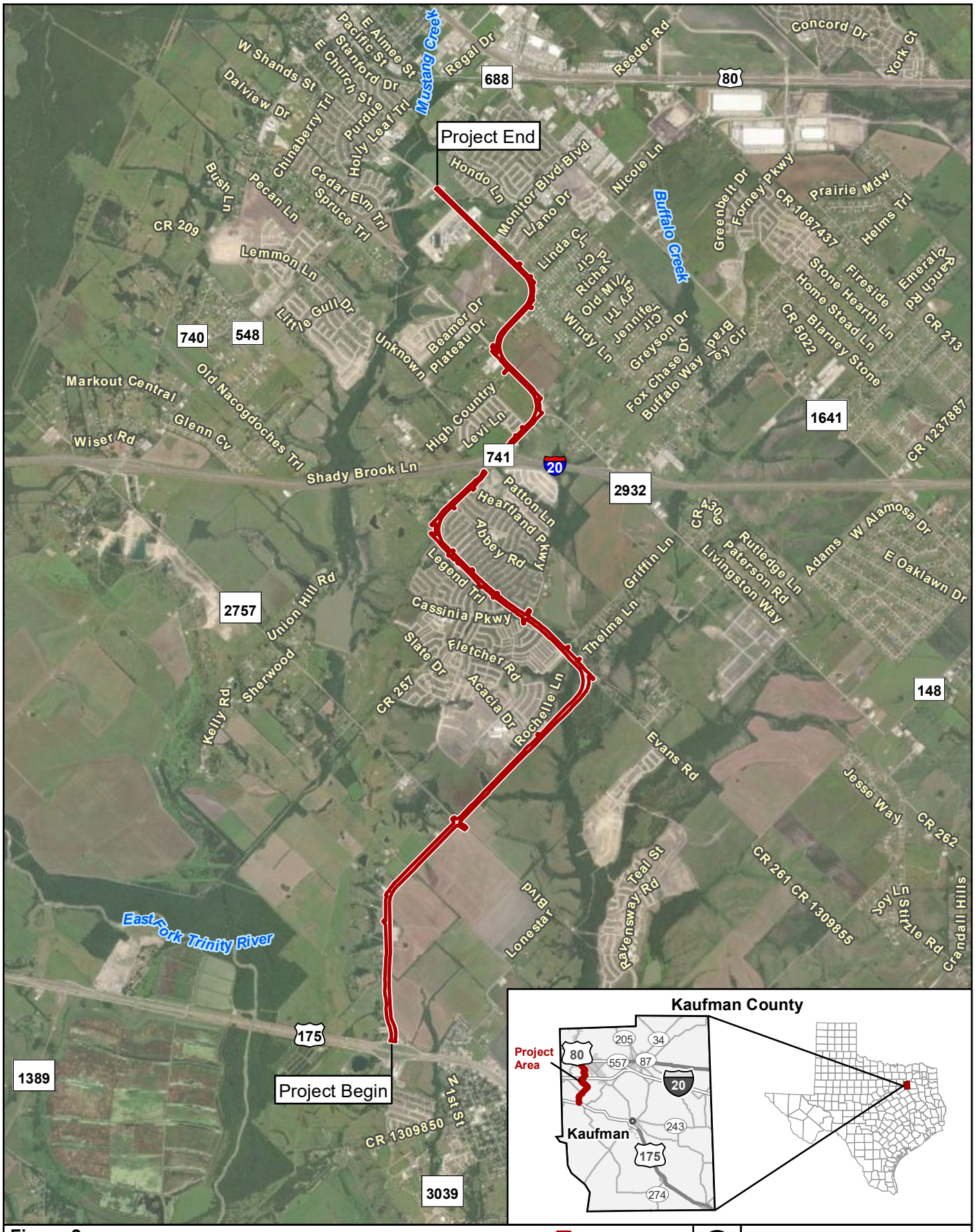

Figure 2.
Project Location (Aerial Base)

FM 741

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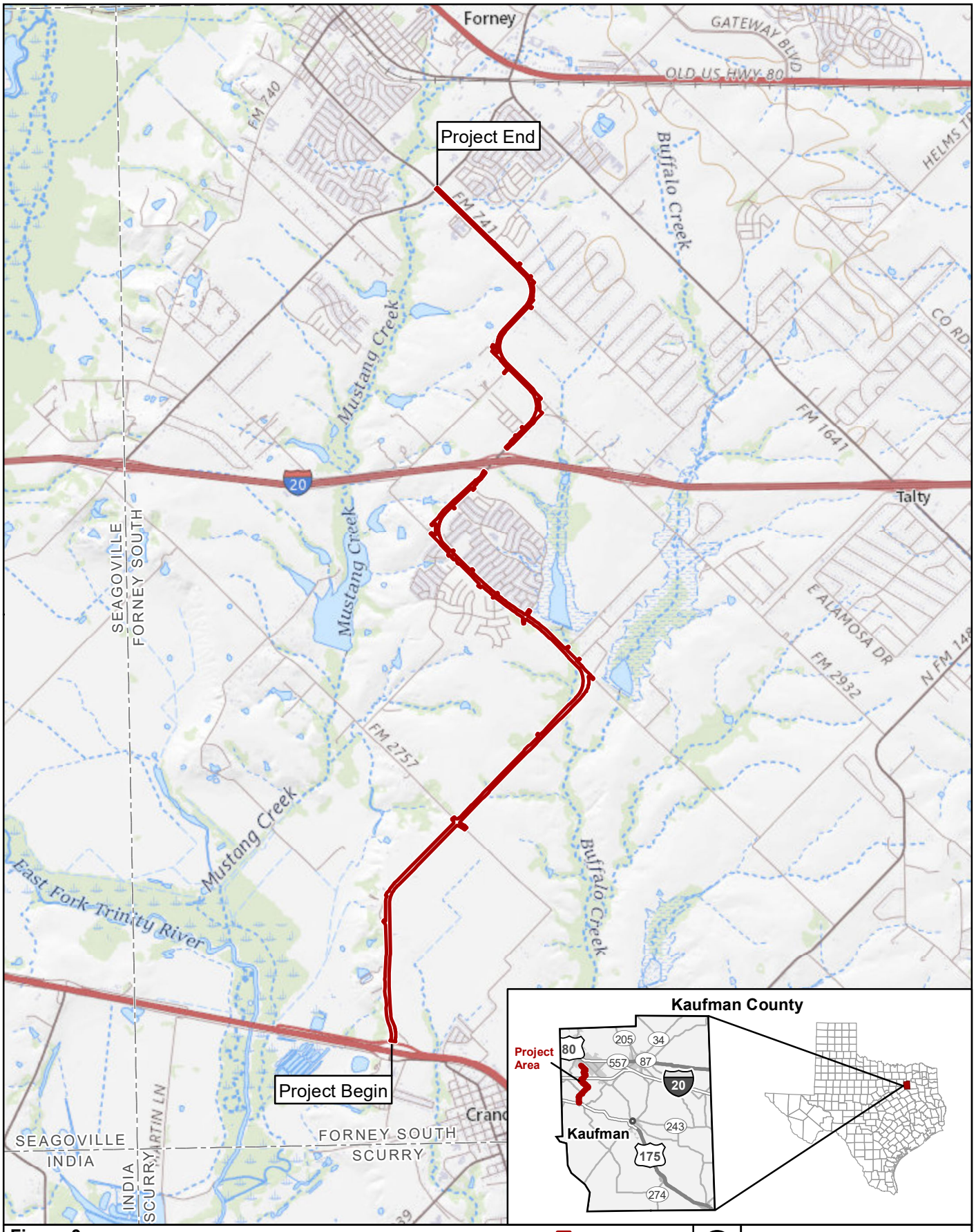

Figure 3.
Project Location (Topographic Base)

Project Location

Topographic Source: USGS (2021)
USGS 7.5' Quadrangles: Seagoville, India, Forney South Scurry

CSJ: 1092-01-021

0 1 Mile
0 1.5 km

1 in = 1 mile
Scale: 1:63,360
Date: 4/22/2022

FM 741

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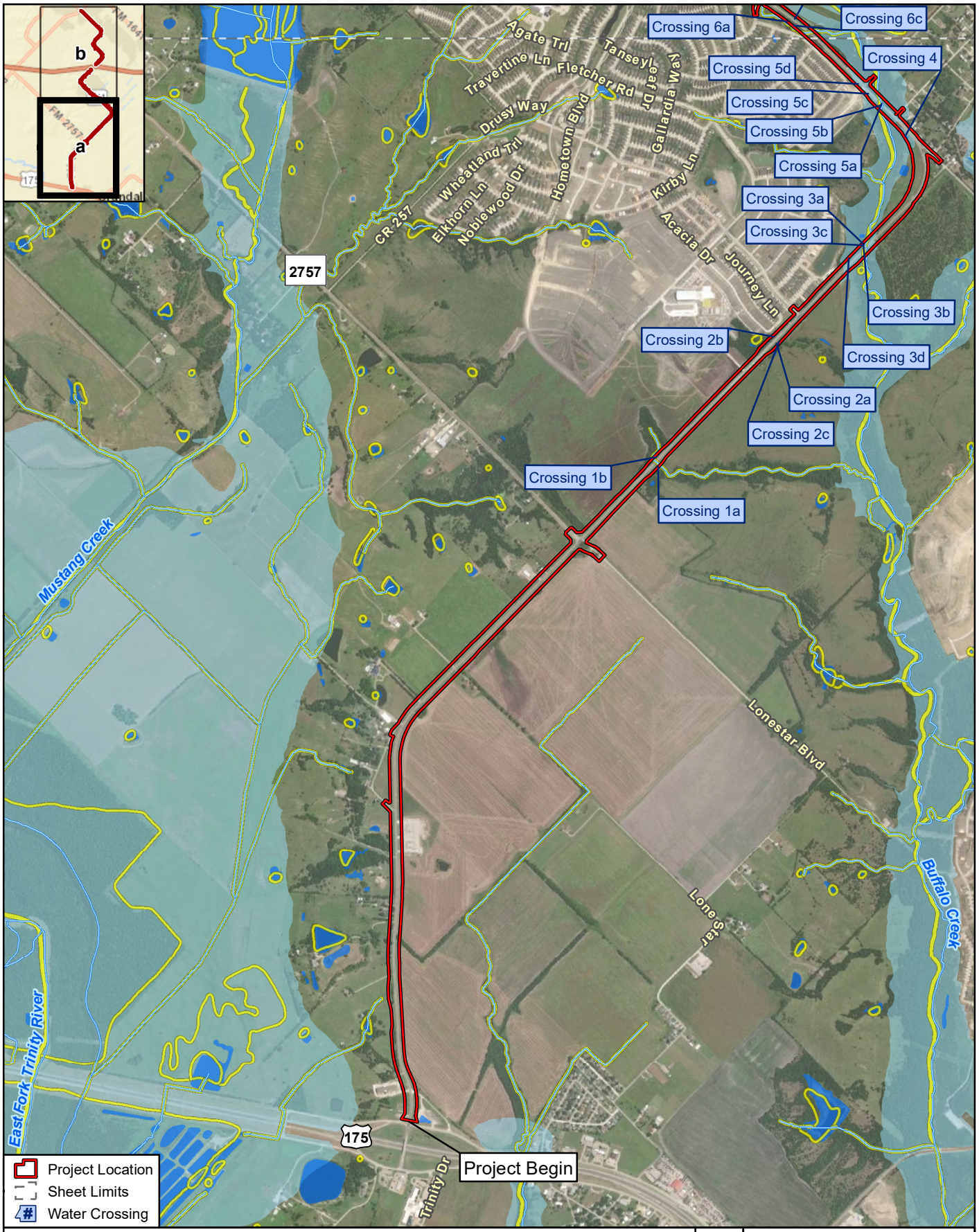

Figure 4a.
Water Resources

FM 741

Data Sources: NHD (2022), NWI (2020), FEMA NFHL (2022), Stantec (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 2,000 Feet
0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 5/11/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 4_Water_Resources_20220511_LG.mxd

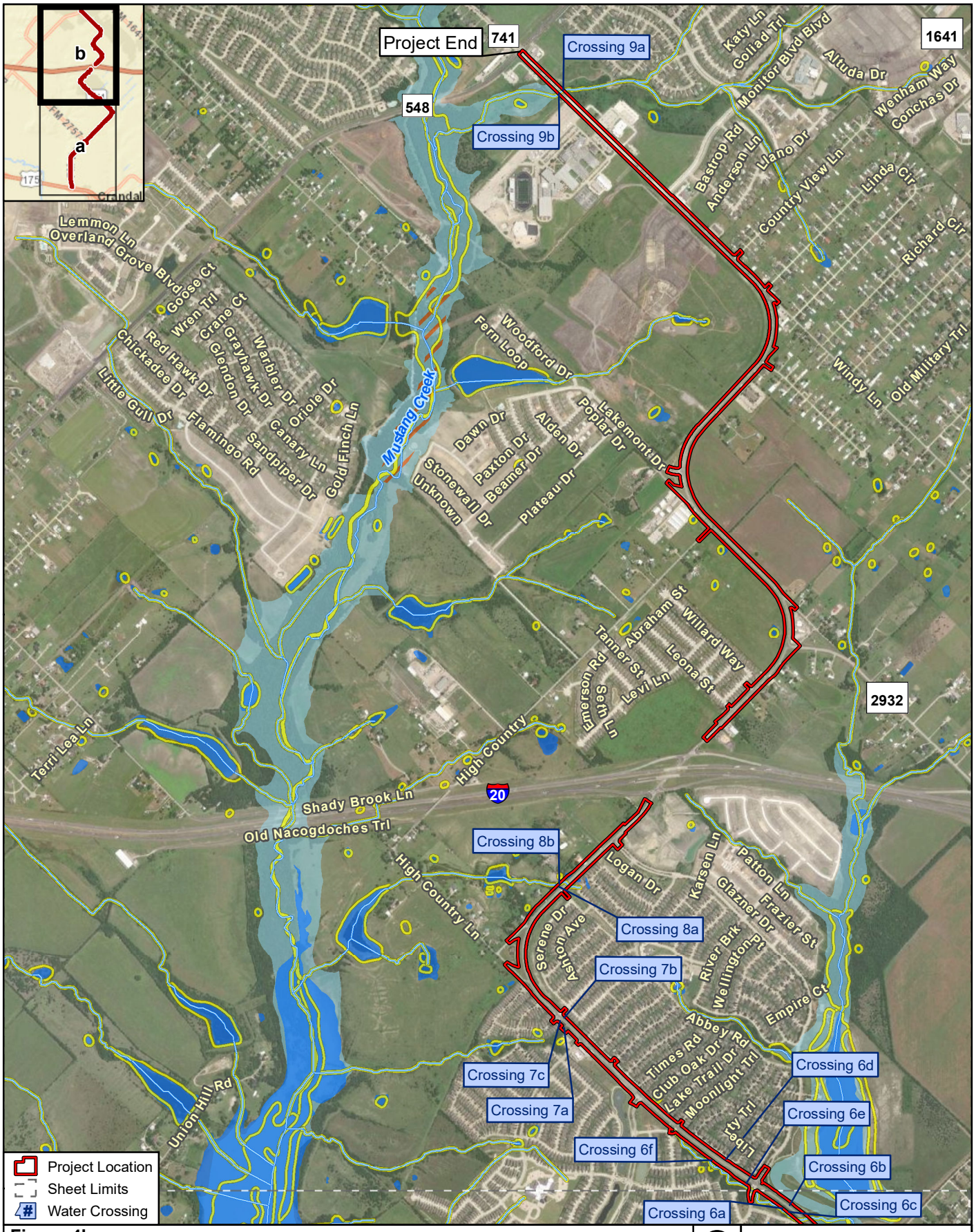

Figure 4b.
Water Resources

FM 741

Data Sources: NHD (2022), NWI (2020), FEMA NFHL (2022), Stantec (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 2,000 Feet
0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 5/11/2022

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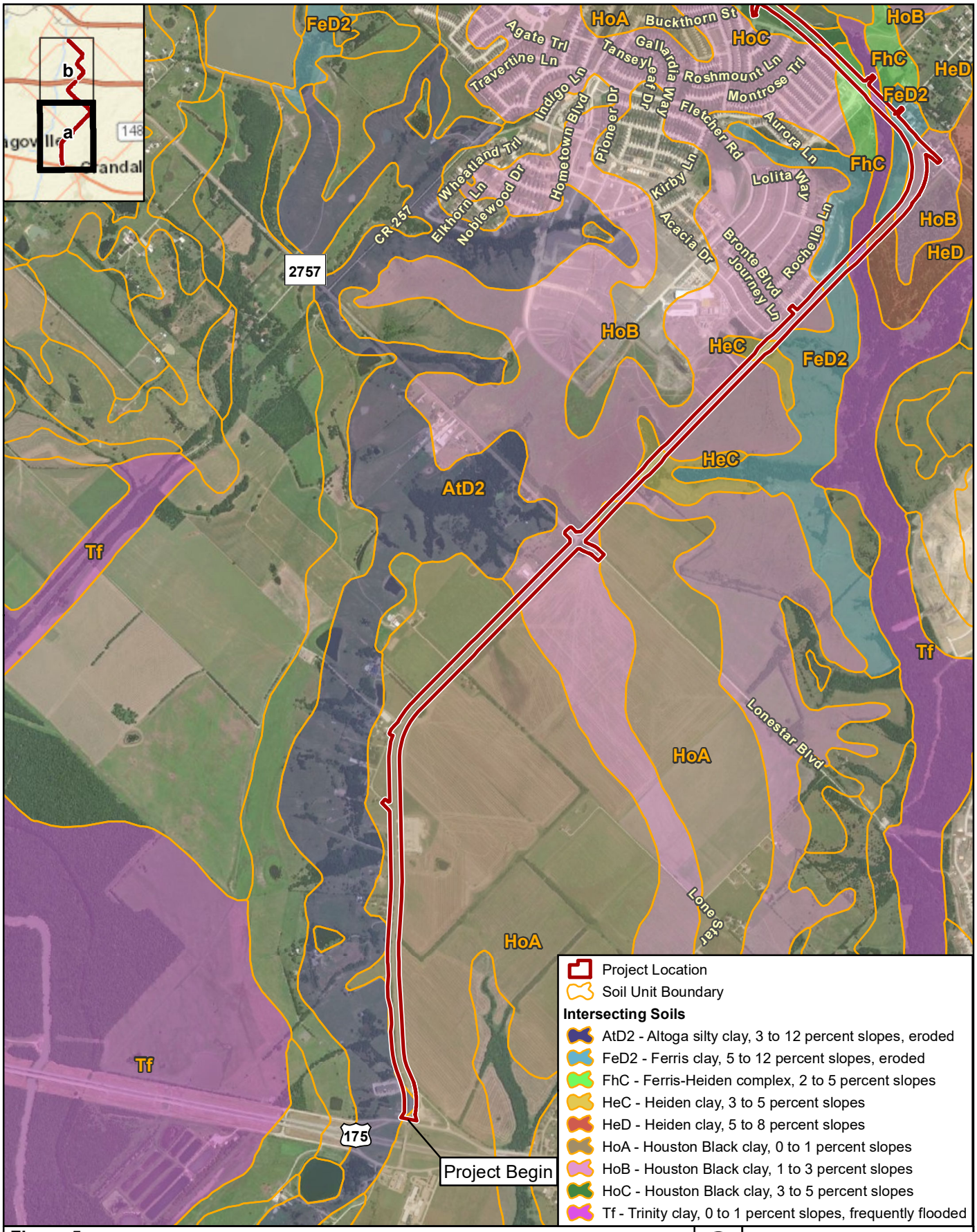

Figure 5a.
Project Area Soils

FM 741

CSJ: 1092-01-021

Data Source: NRCS (2021)
Aerial Source: Maxar (2021)

0 2,000 Feet
0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 5/11/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 5_Soils_20220506_LG.mxd

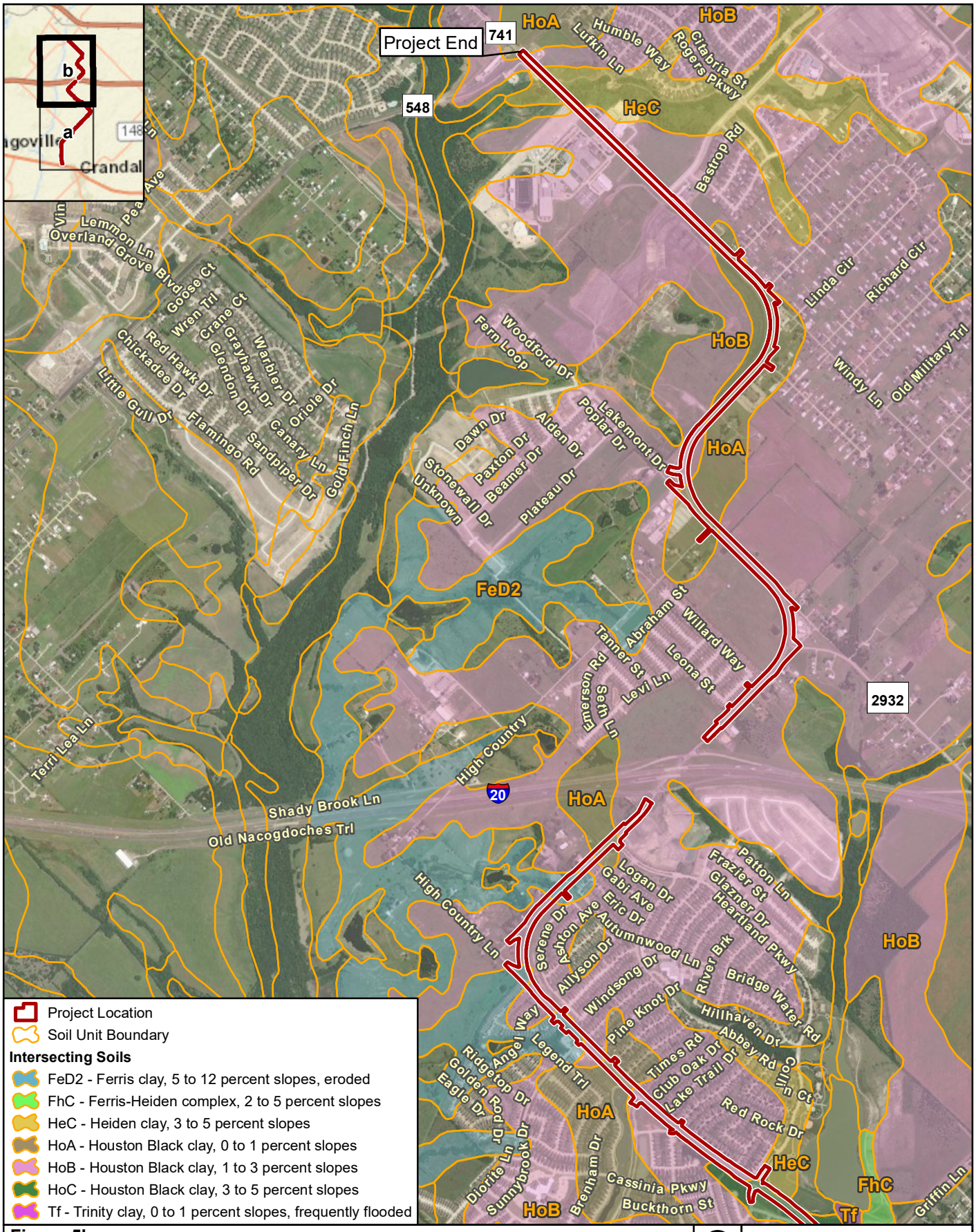

Figure 5b.
Project Area Soils

FM 741

CSJ: 1092-01-021

Data Source: NRCS (2021)
Aerial Source: Maxar (2021)

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0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 5/11/2022

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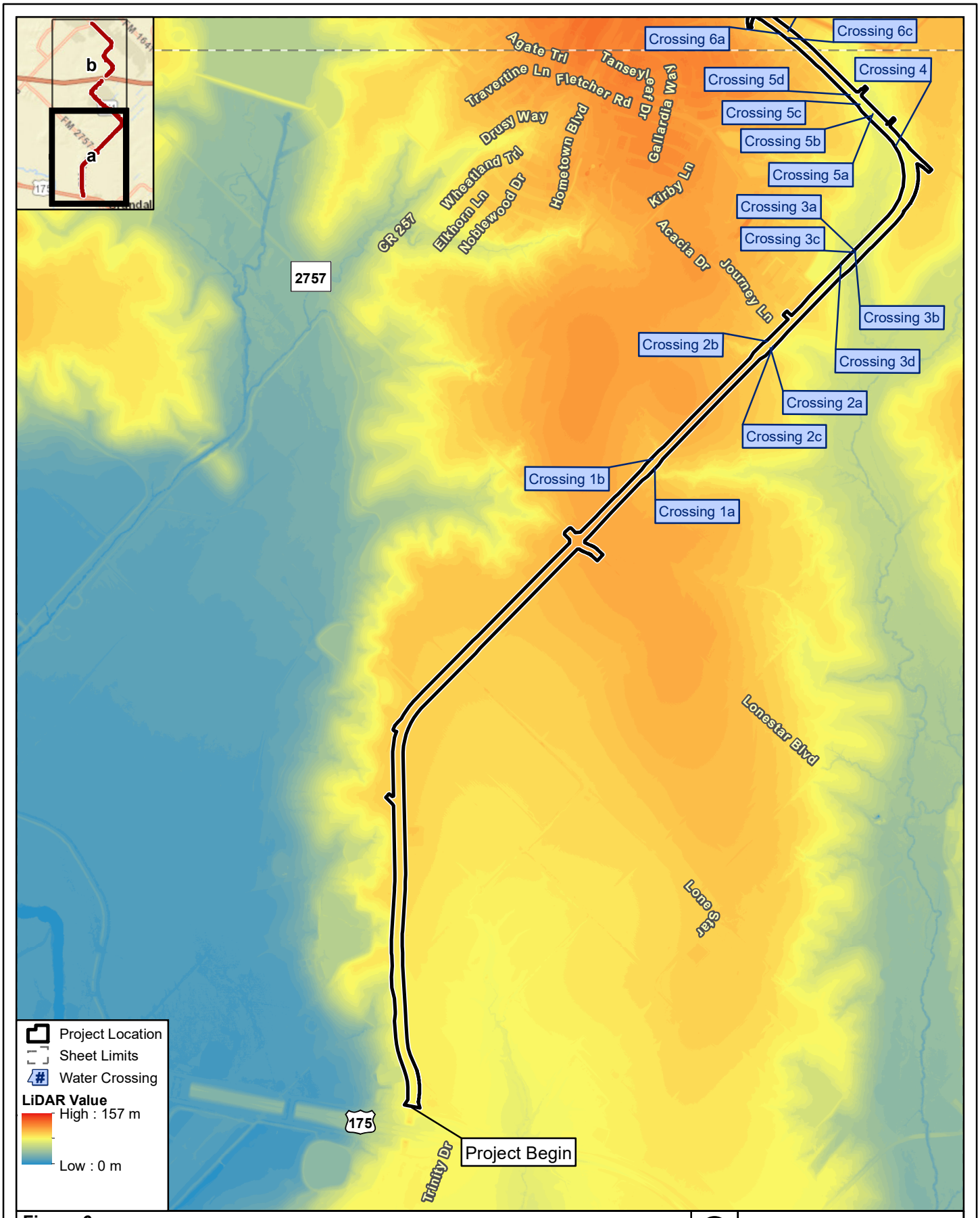

Figure 6a.
LiDAR

FM 741

Data Source: Stantec (2022)
LiDAR Source: USGS (2019)

CSJ: 1092-01-021

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0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 5/11/2022

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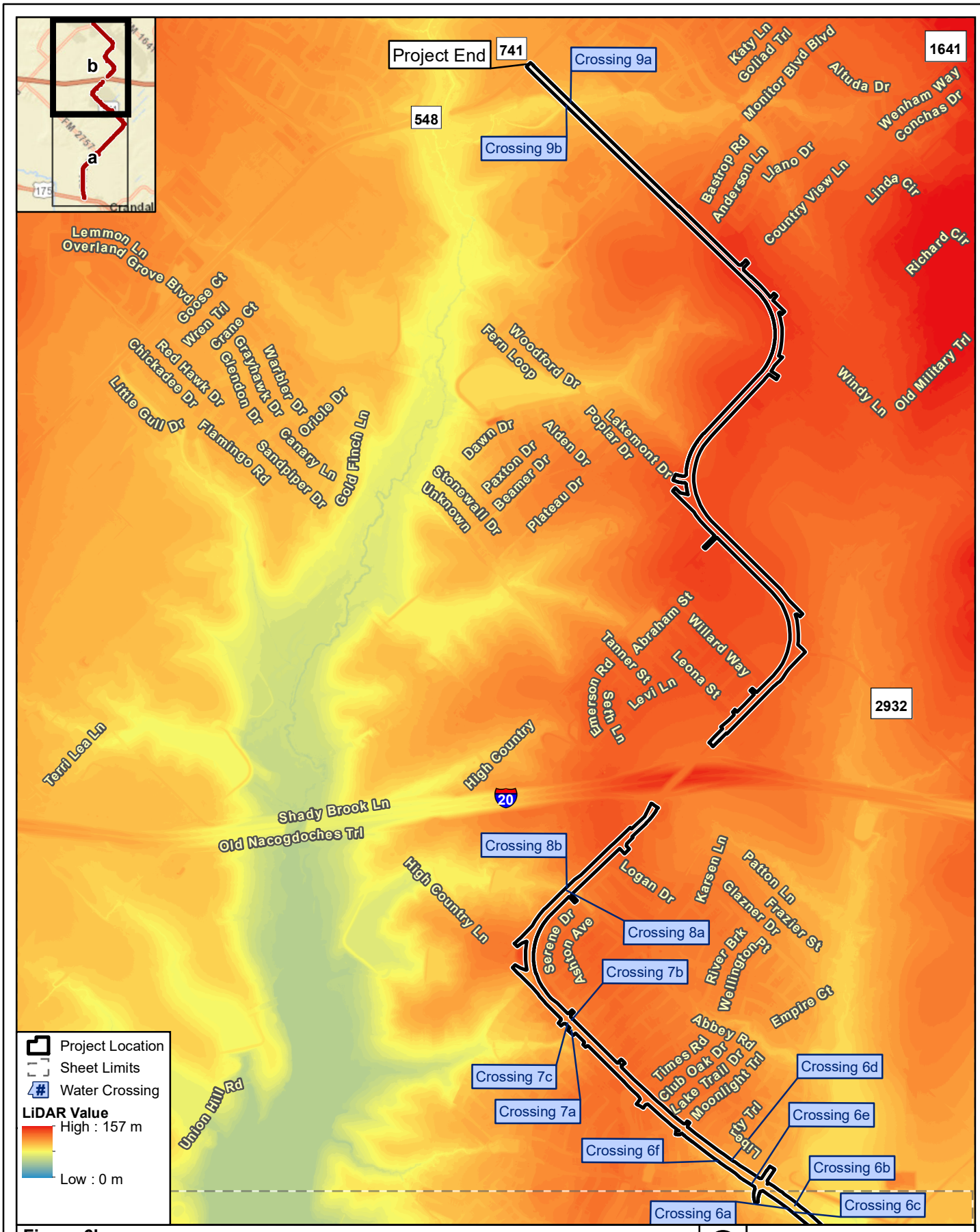

Figure 6b.
LiDAR

FM 741

Data Source: Stantec (2022)
LiDAR Source: USGS (2019)

CSJ: 1092-01-021

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0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 5/11/2022

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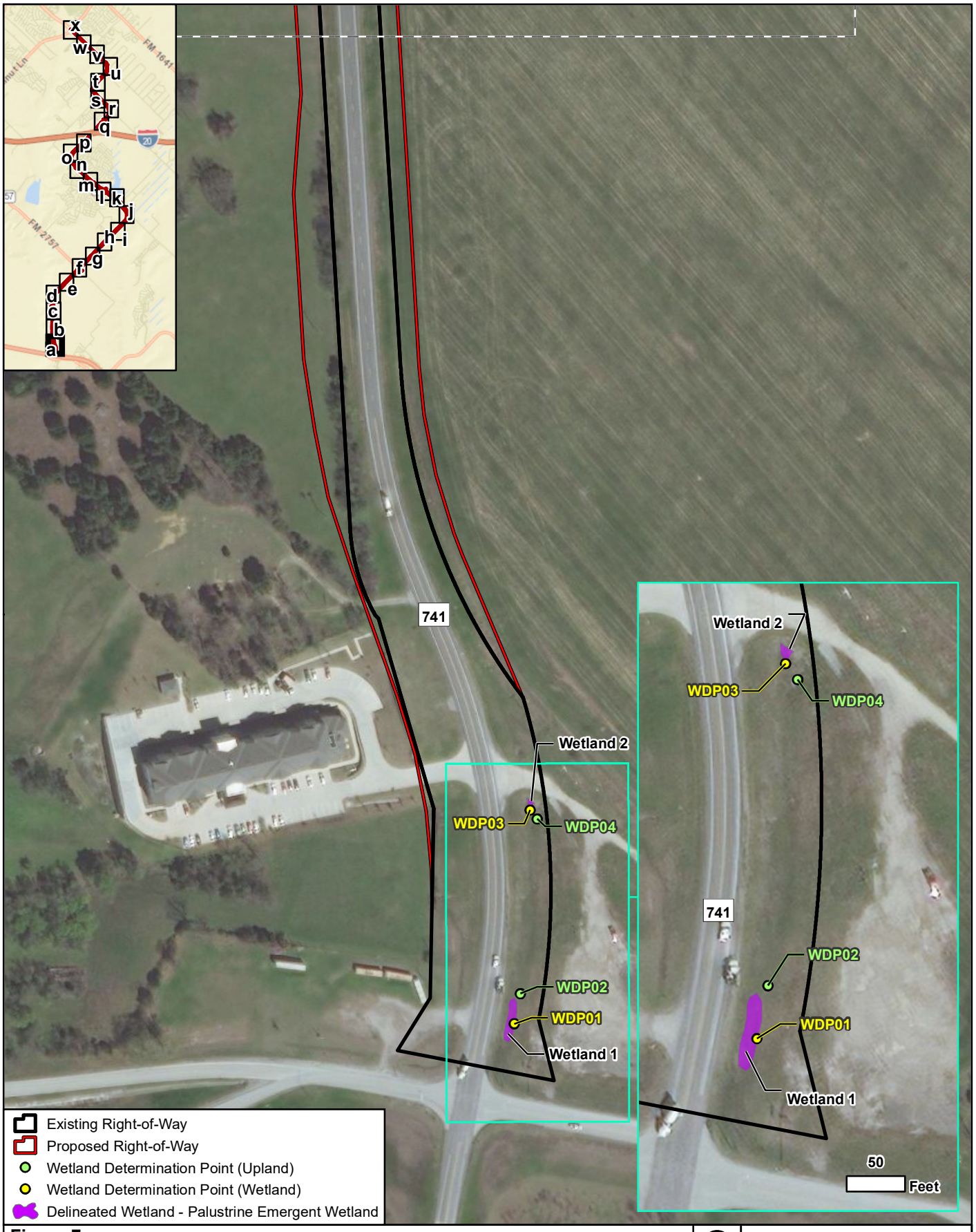

Figure 7a.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 6/1/2022

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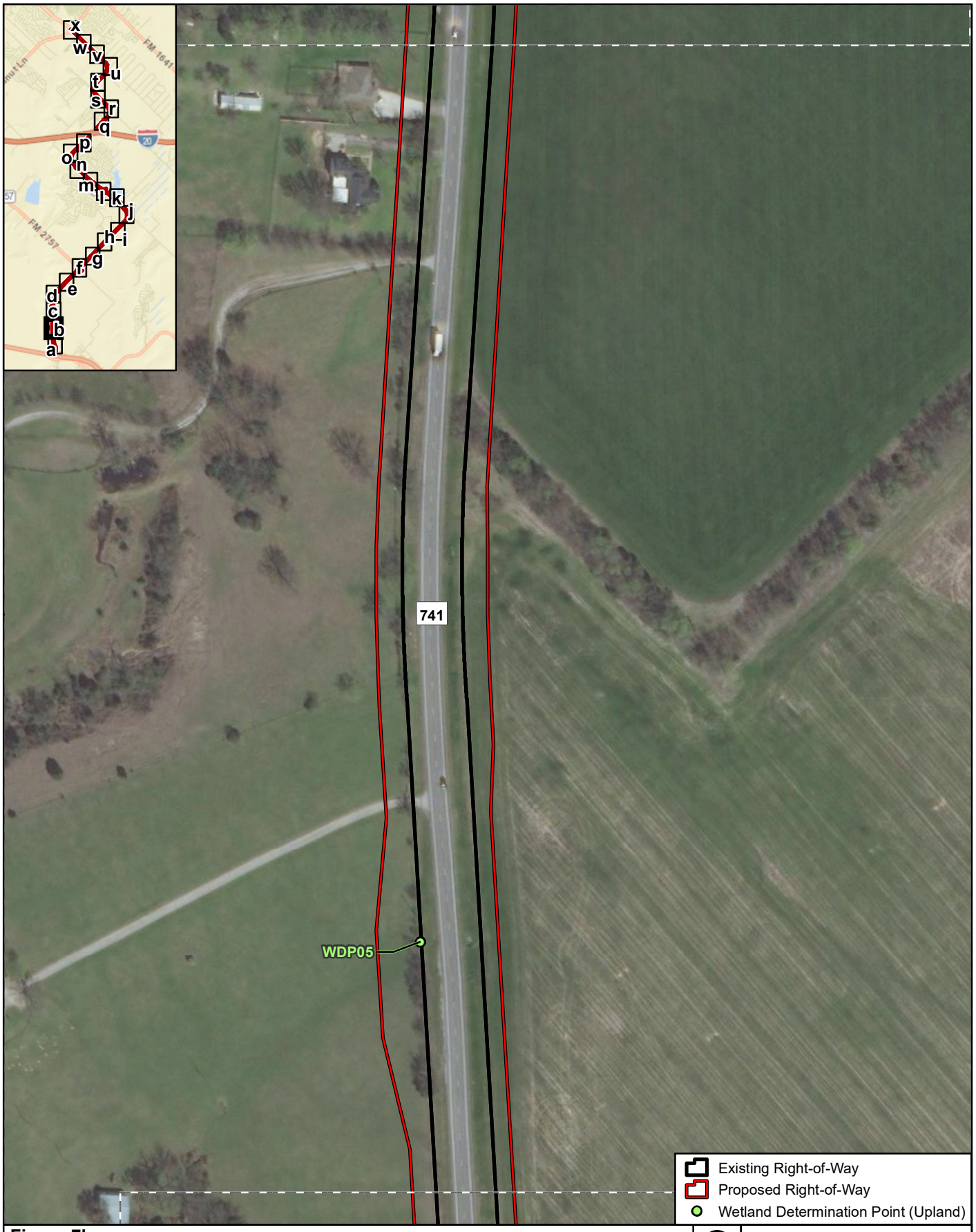

Figure 7b.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 5/10/2022

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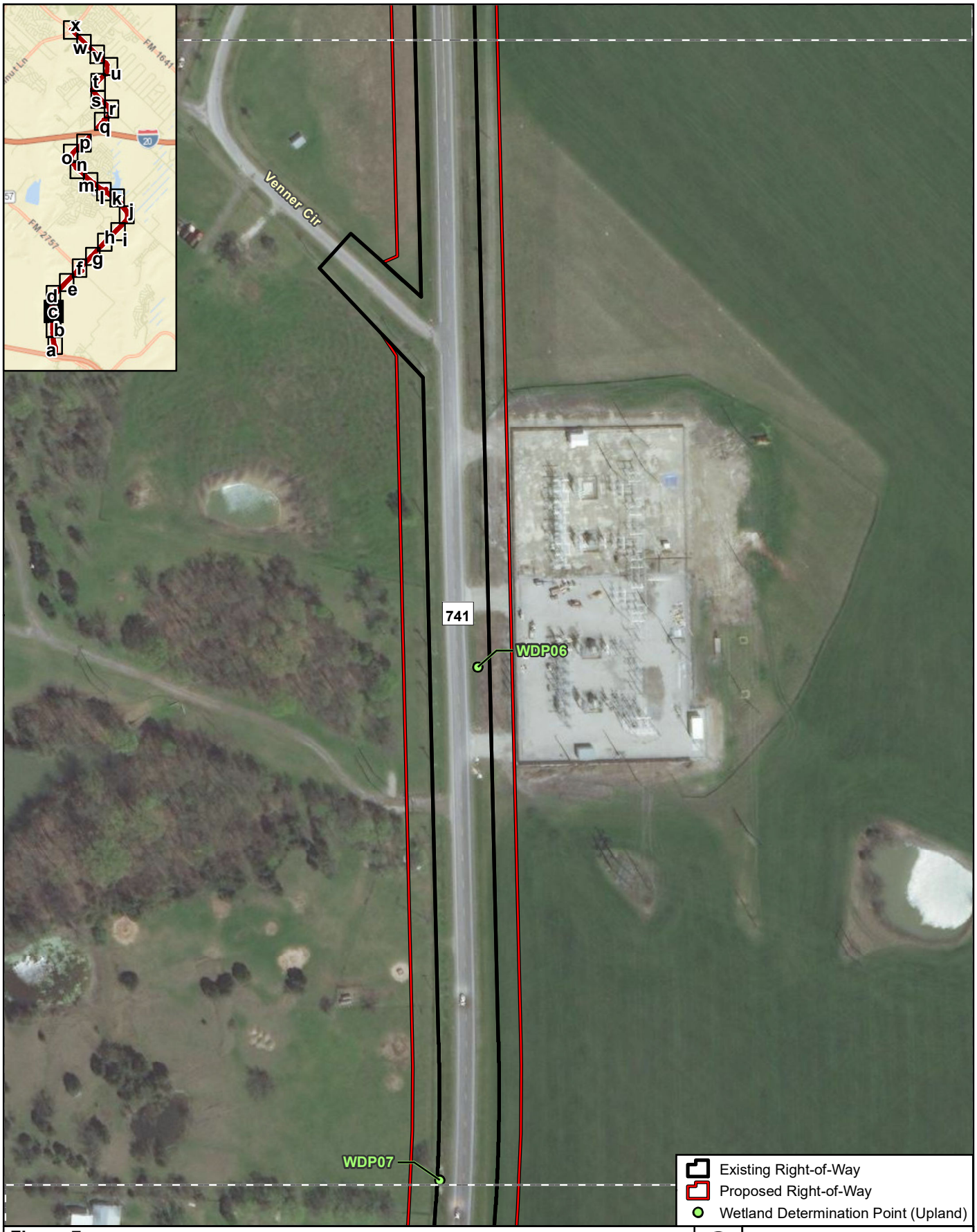

Figure 7c.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 5/10/2022

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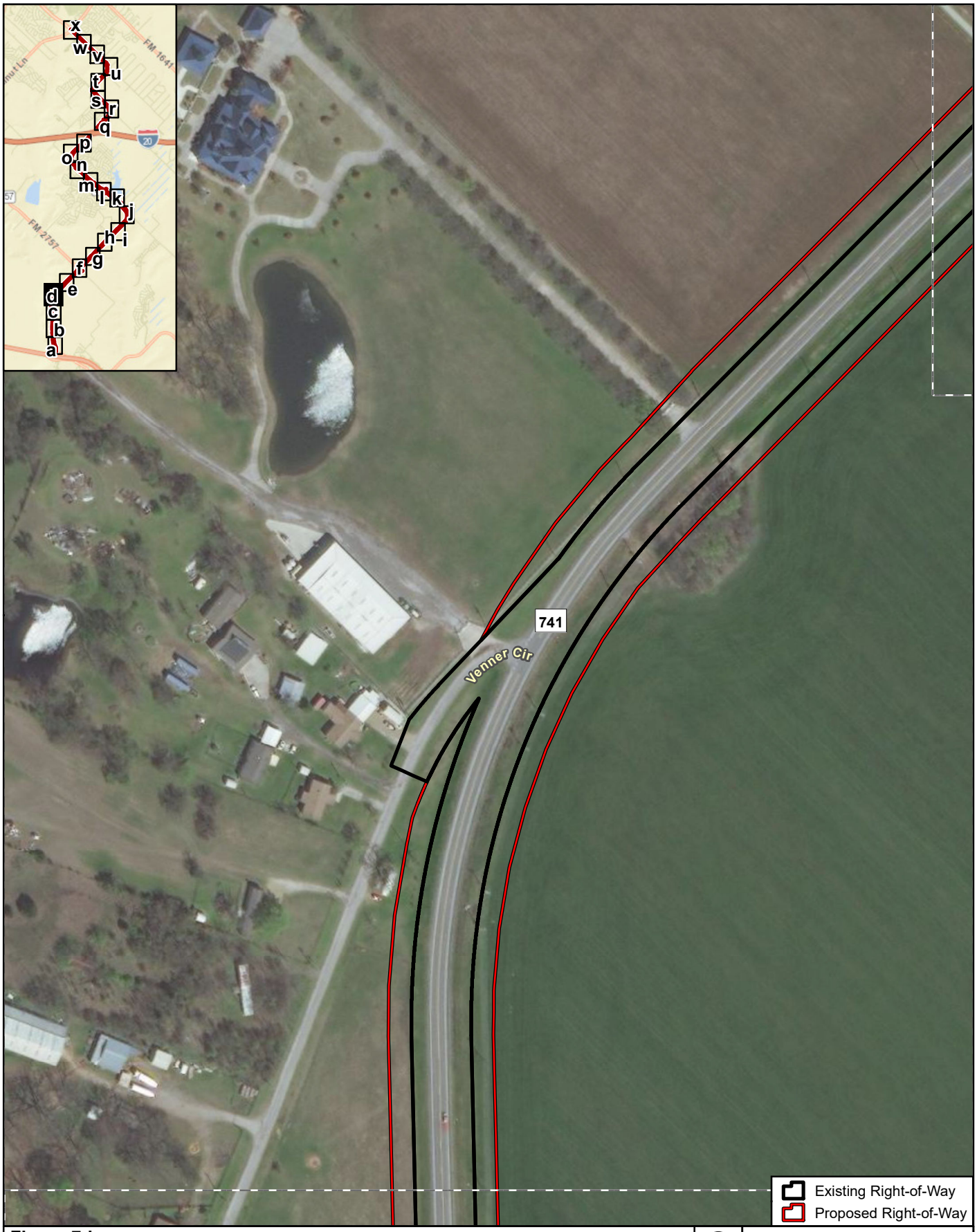

Figure 7d.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 5/10/2022

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Figure 7e.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 5/10/2022

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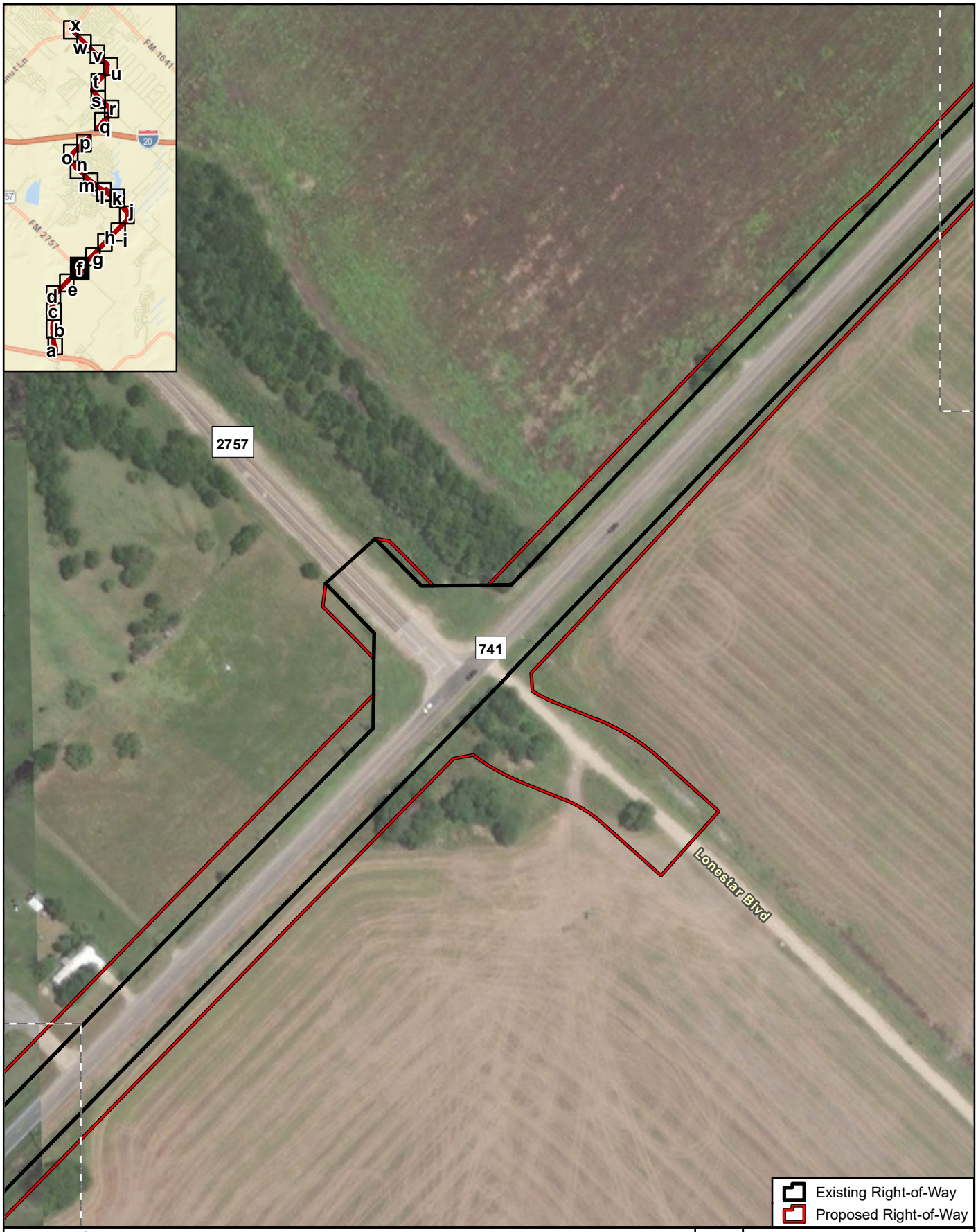

Figure 7f.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 5/10/2022

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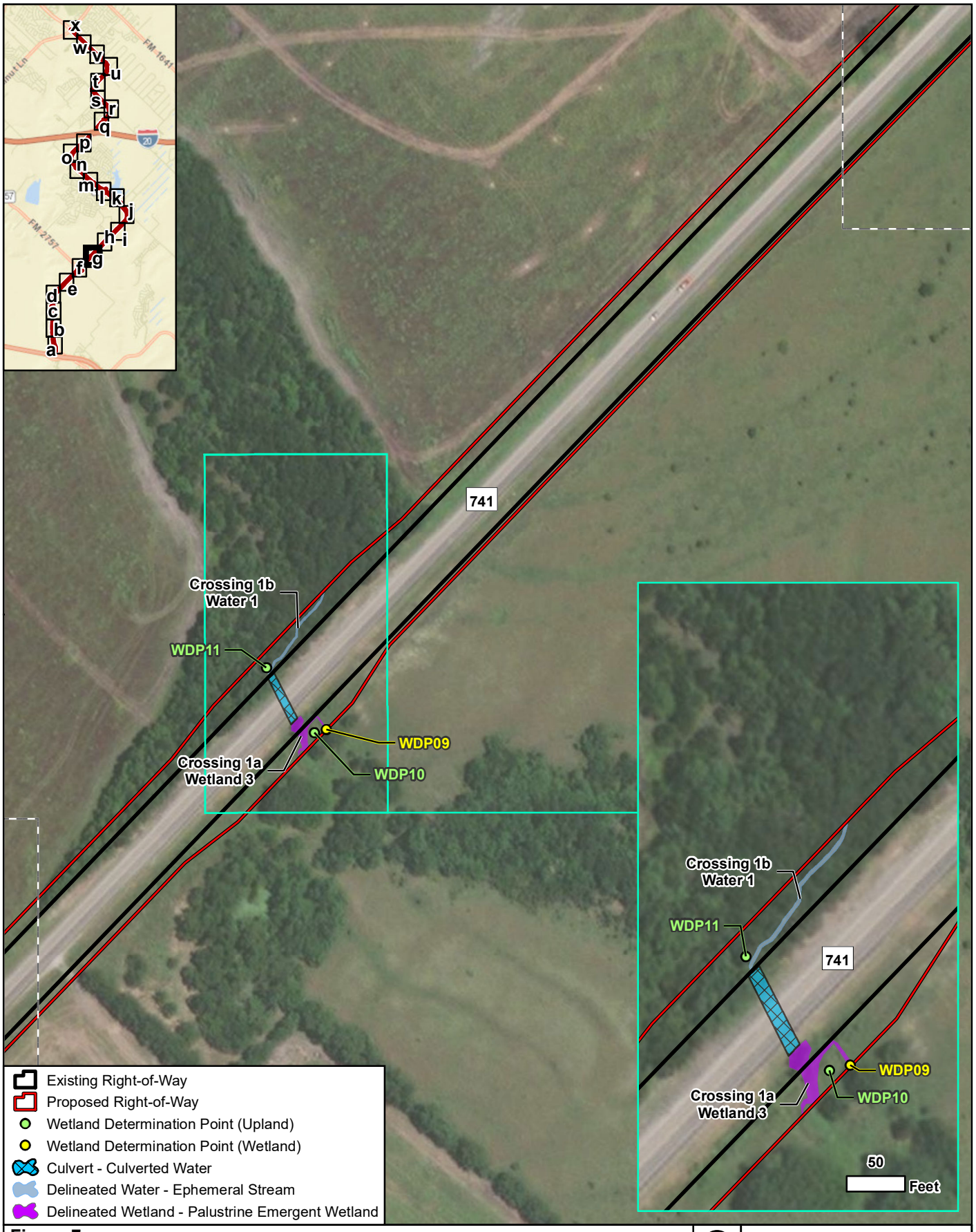

Figure 7g.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 6/1/2022

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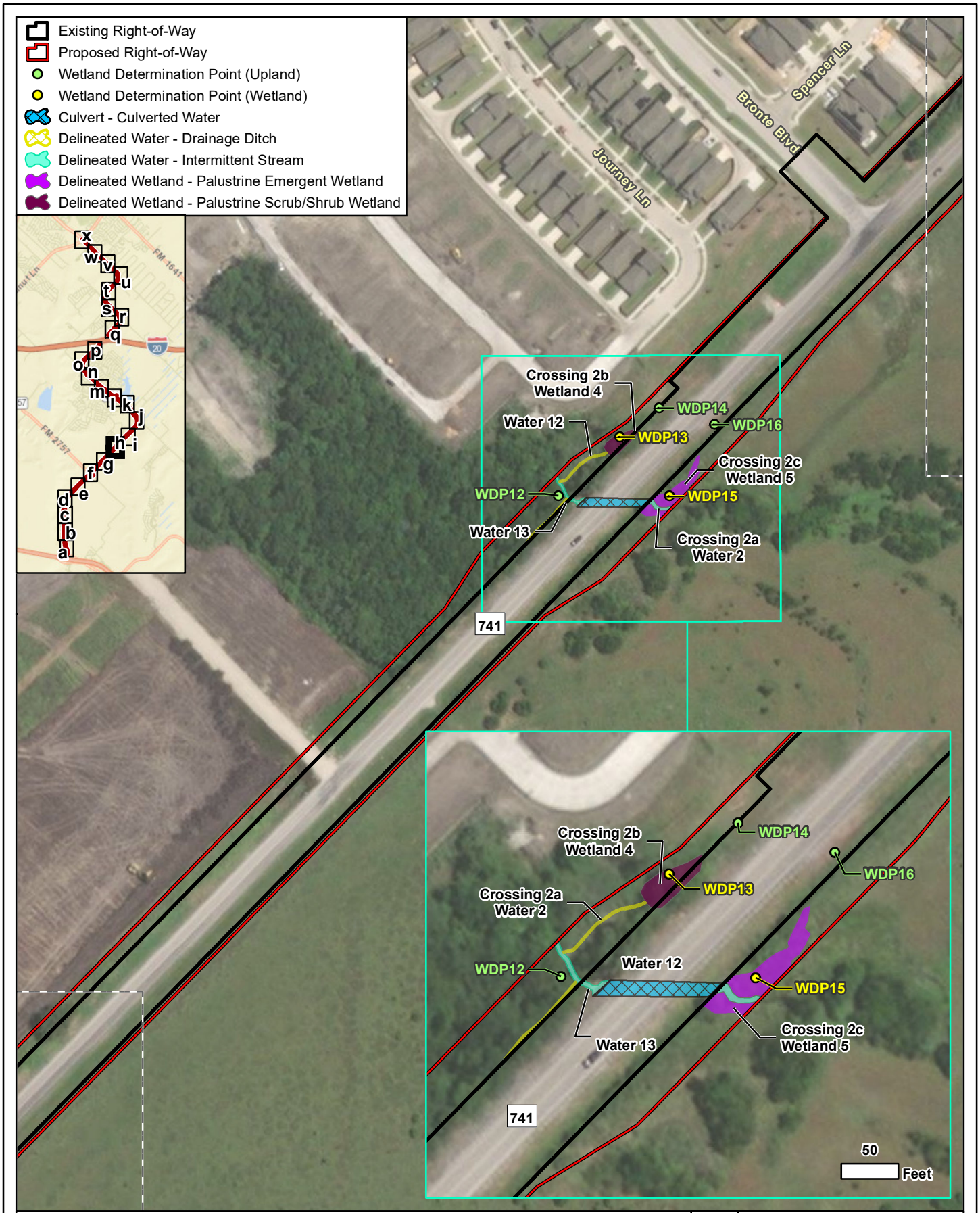

Figure 7h.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 6/1/2022

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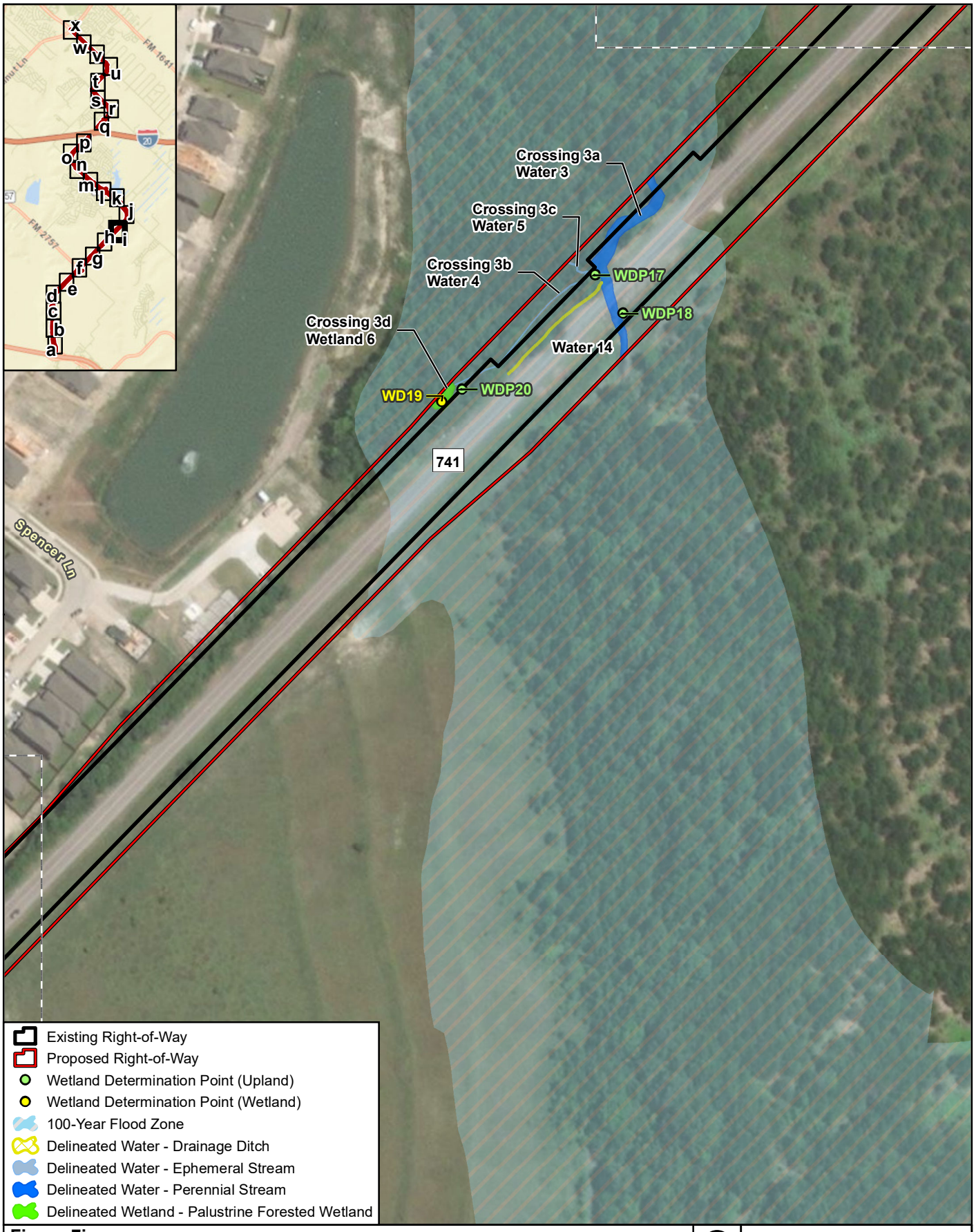

Figure 7i.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 6/1/2022

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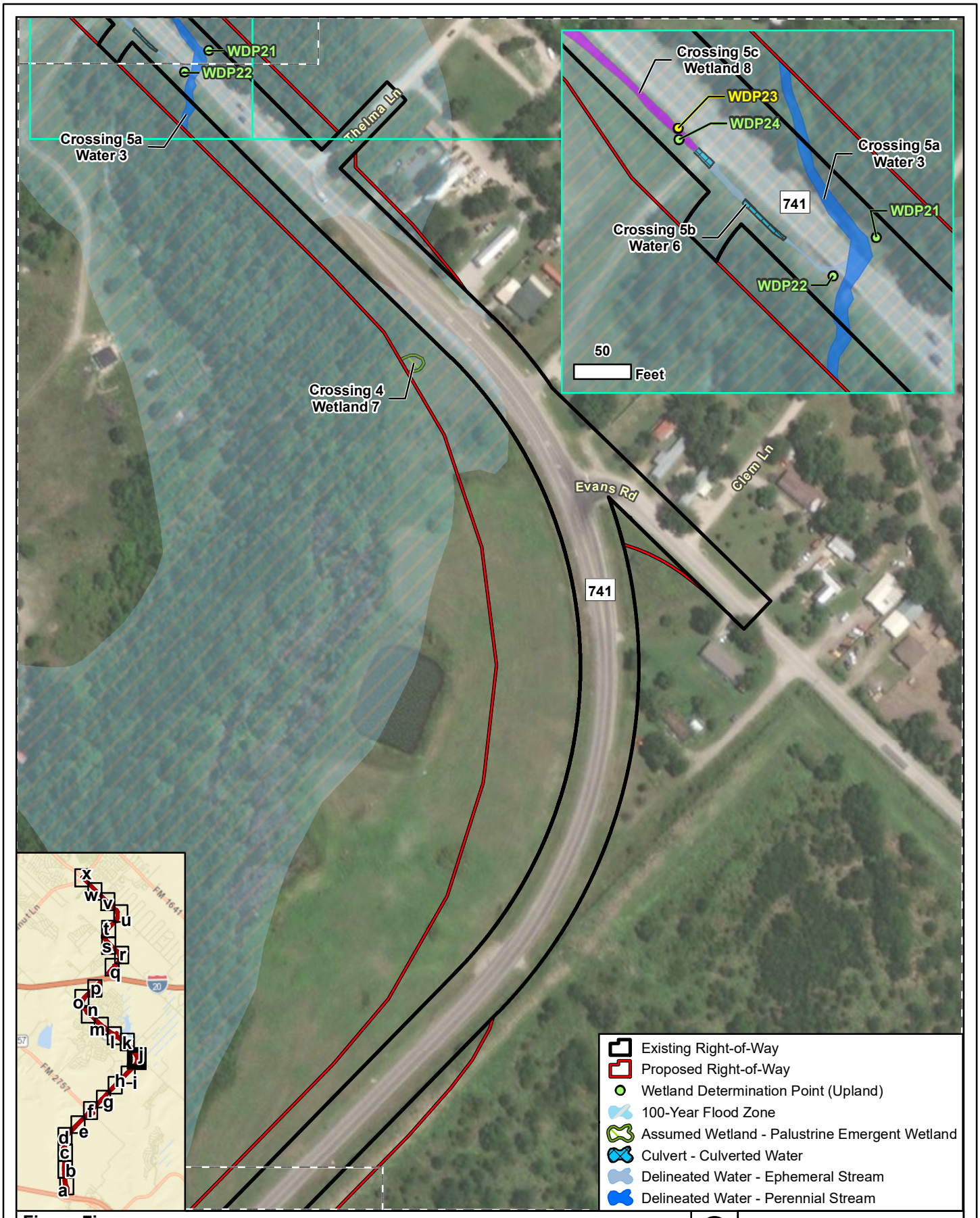

Figure 7j.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 6/1/2022

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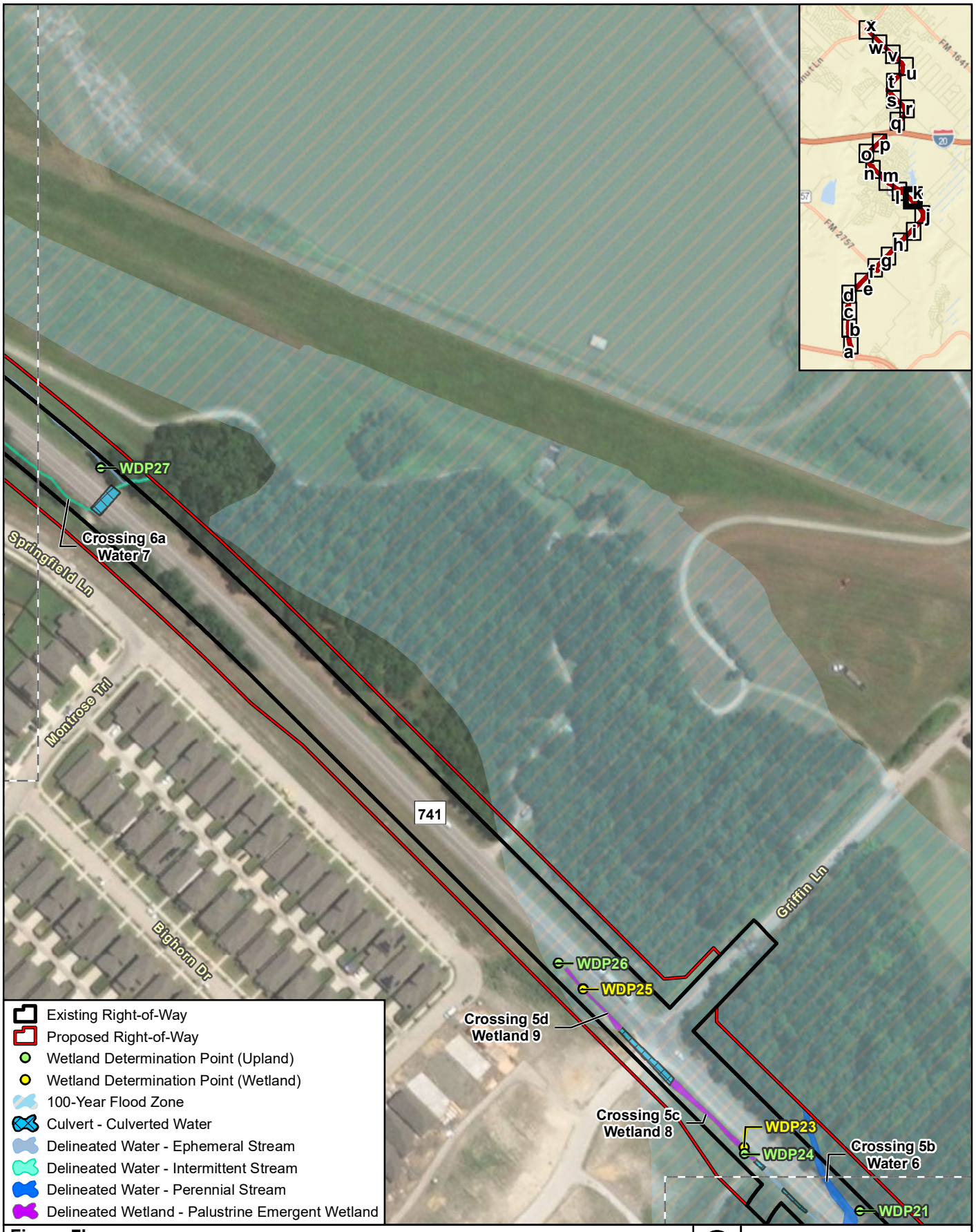

Figure 7k.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 6/1/2022

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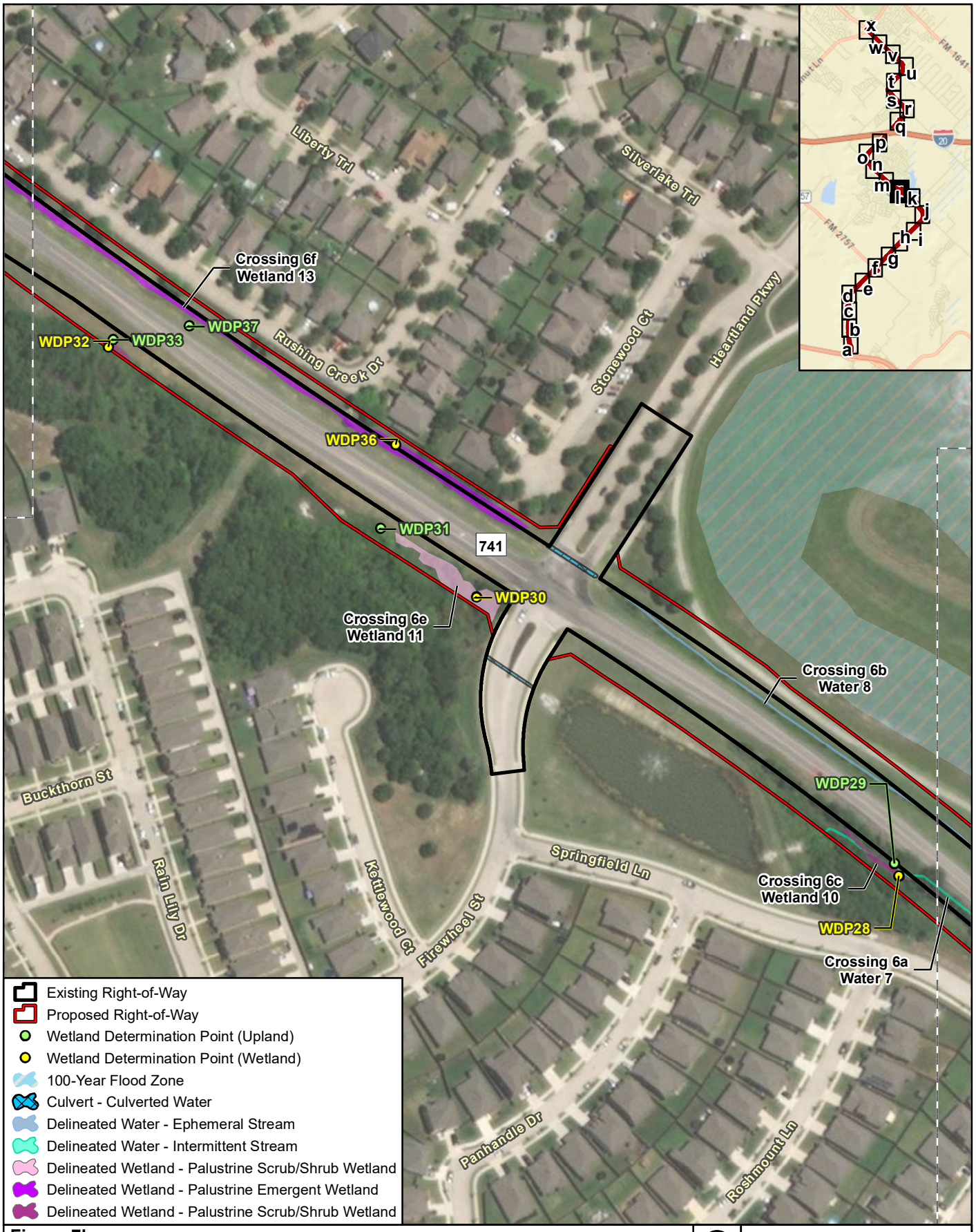

Figure 7l.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 6/1/2022

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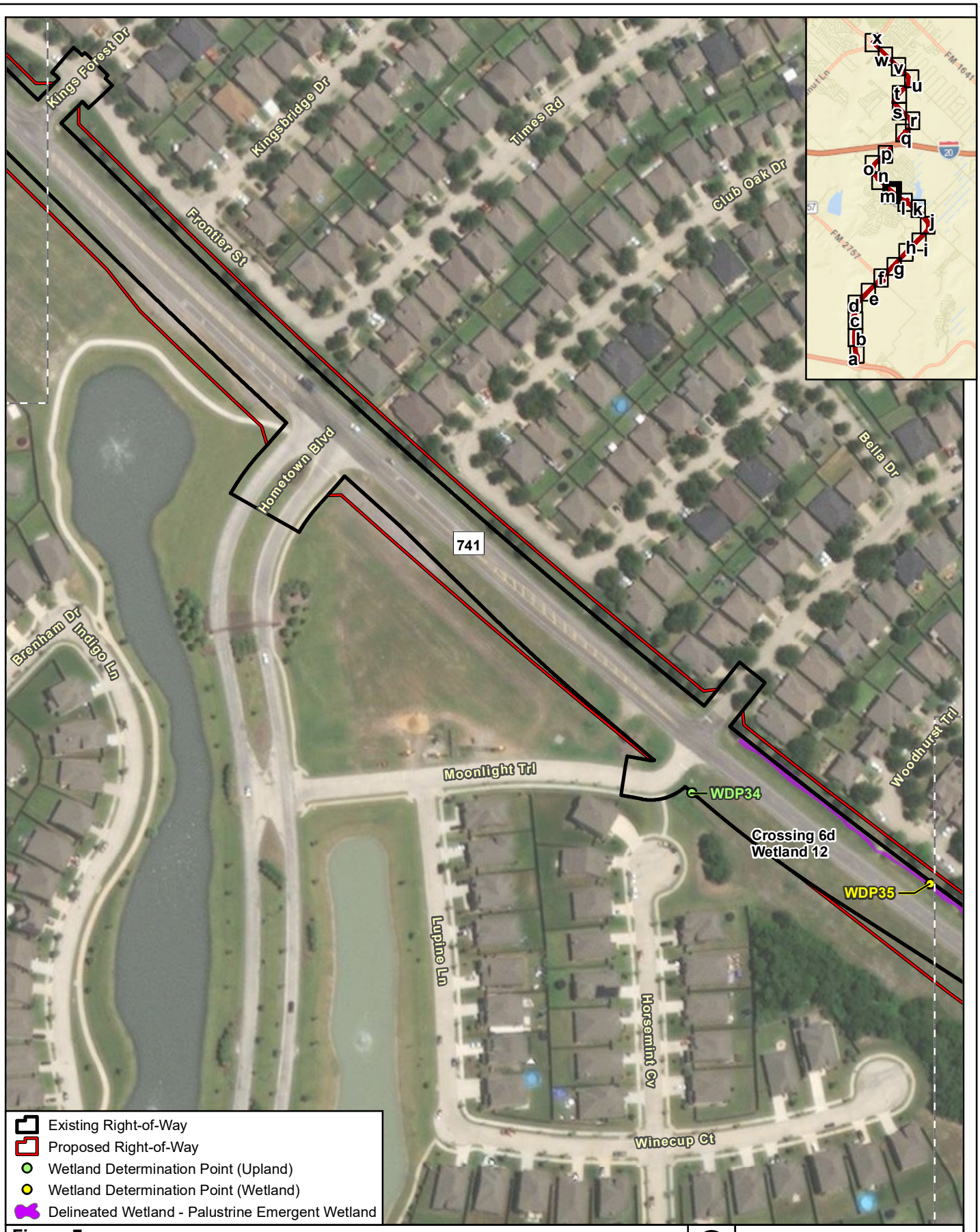


Figure 7m.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 5/11/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 7_Potential WOUS_20220509_LG.mxd

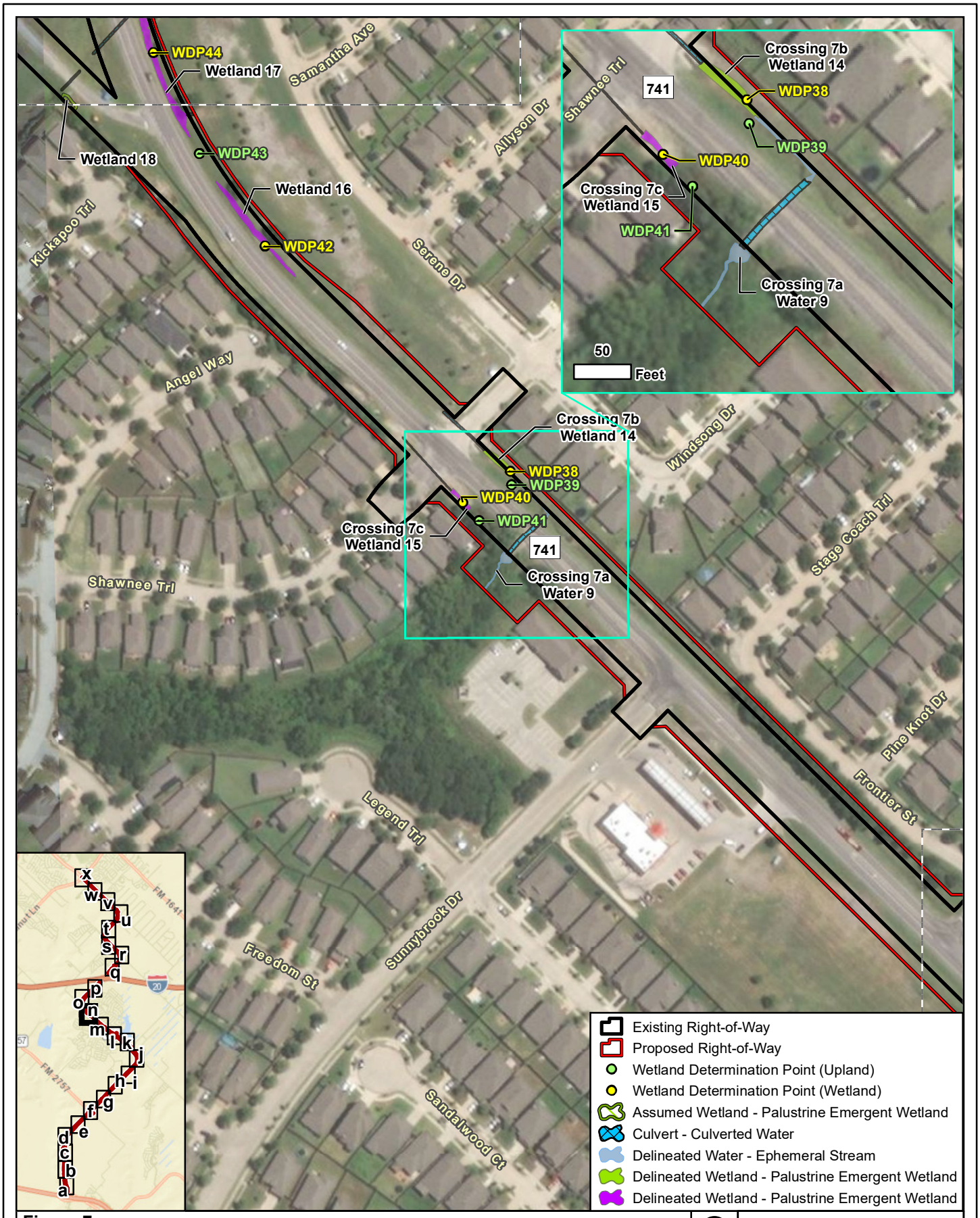


Figure 7n.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 6/1/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 7n_Potential WOUS_20220511_LG.mxd

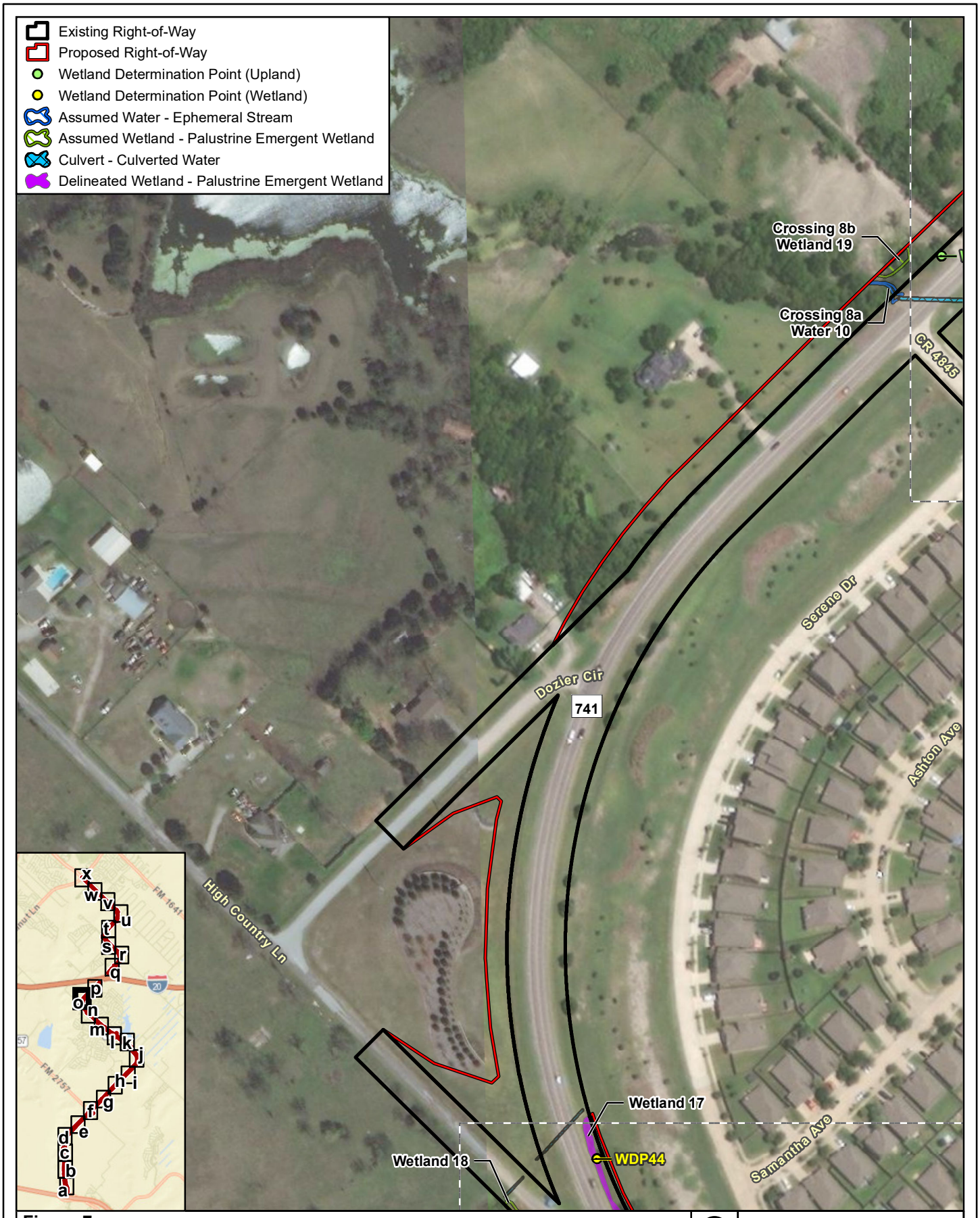


Figure 7o.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 6/1/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 7_Potential WOUS_20220509_LG.mxd

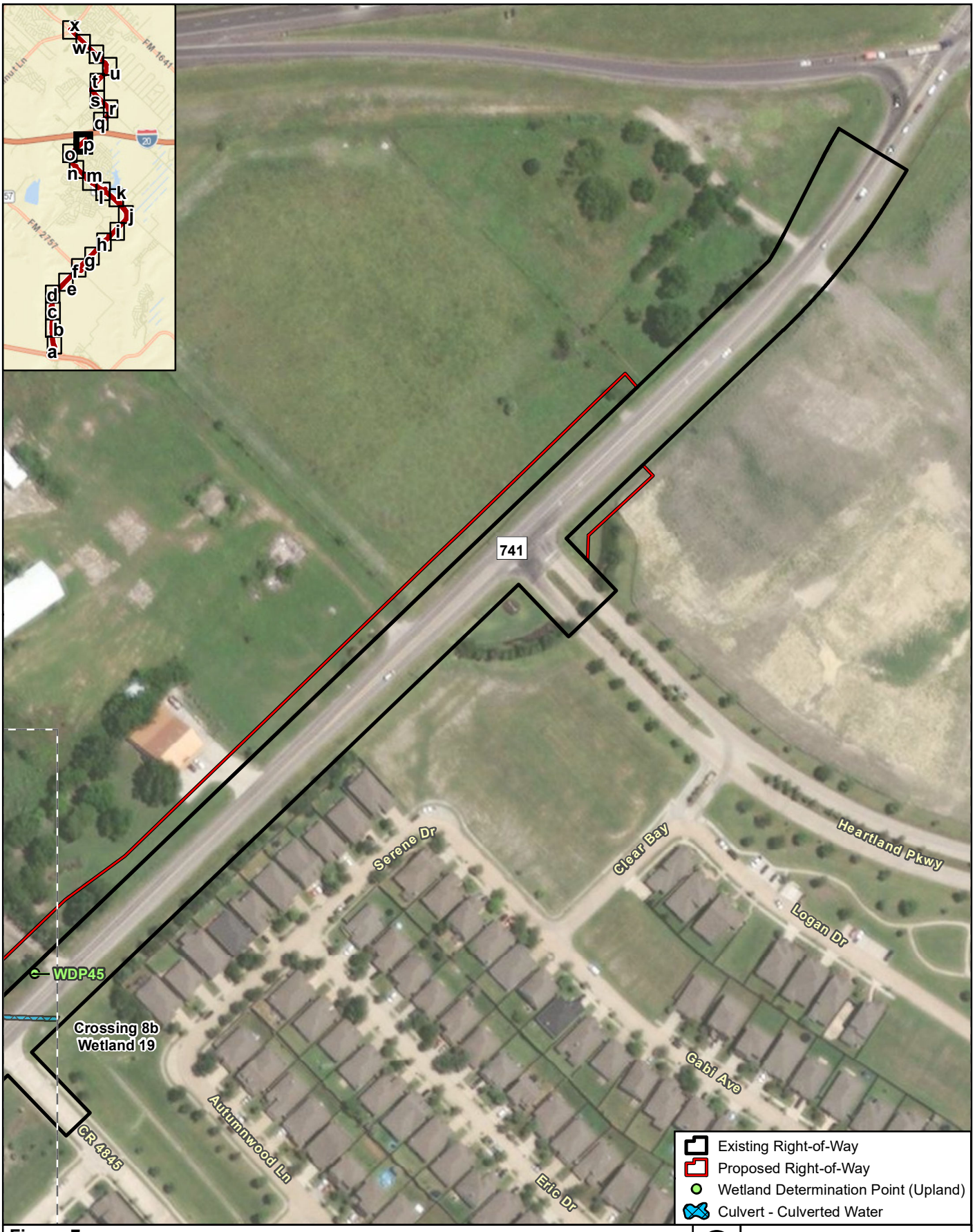


Figure 7p.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 5/11/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 7_Potential WOUS_20220509_LG.mxd

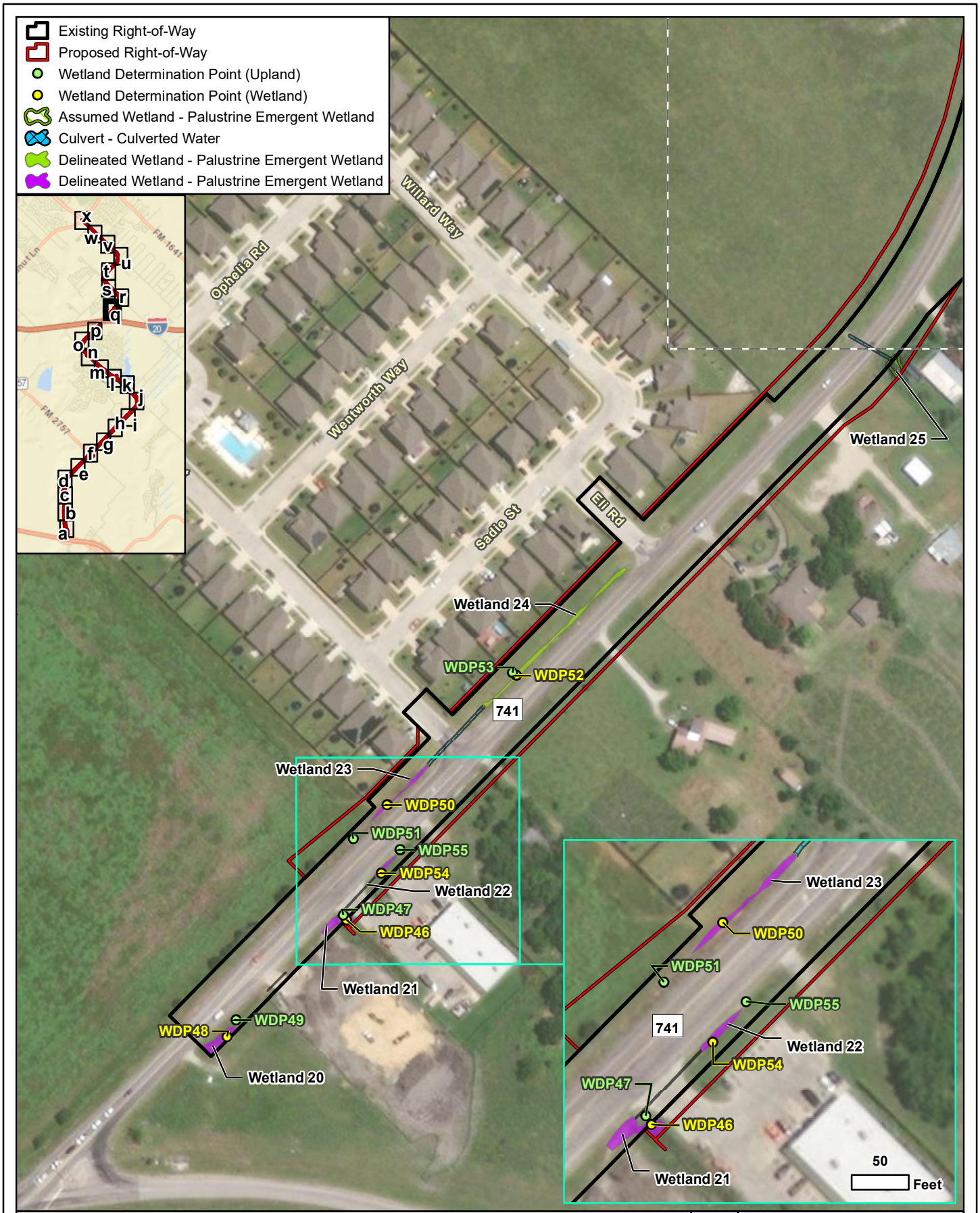


Figure 7q.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 6/1/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 7q_Potential WOUS_20220511_LG.mxd

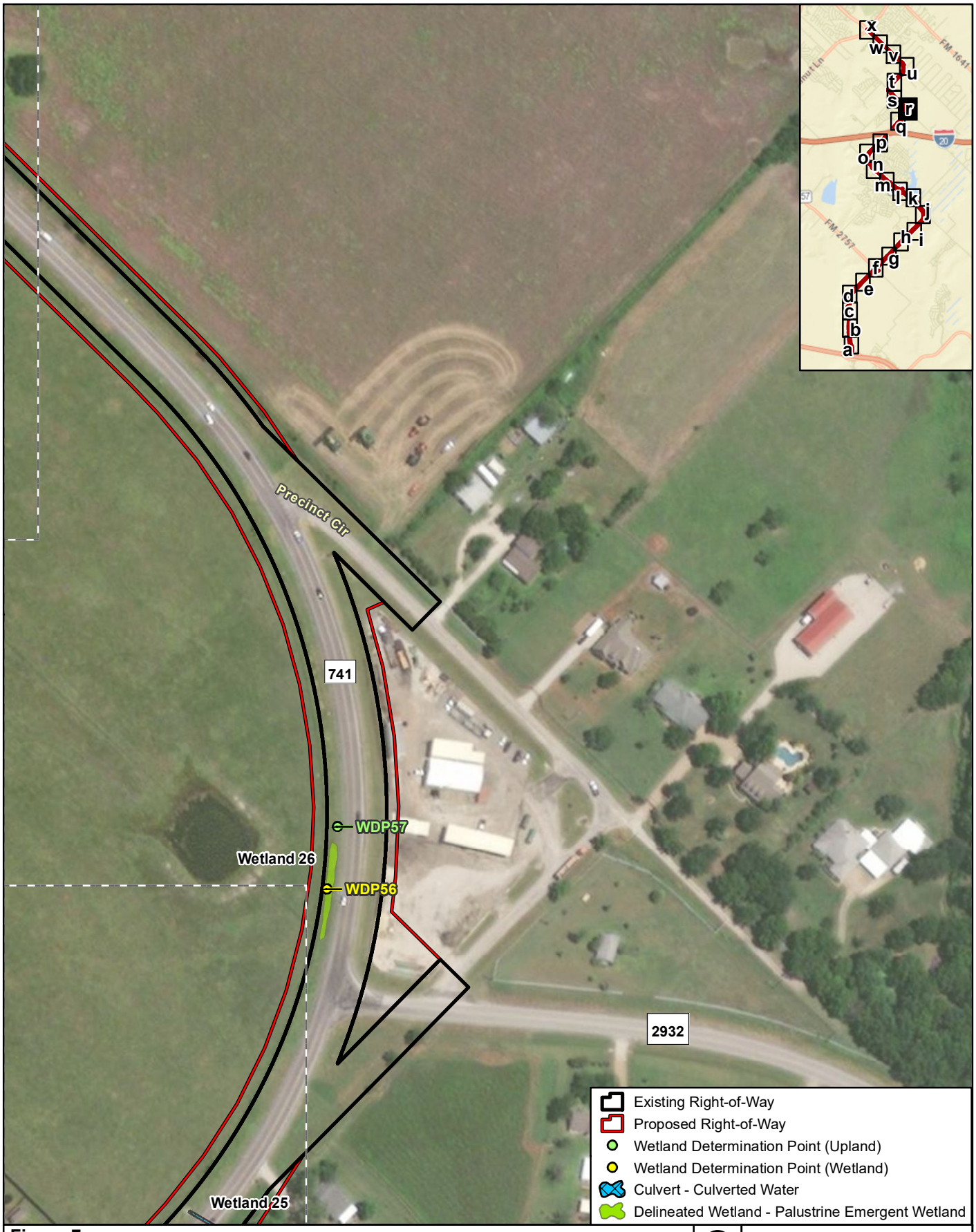


Figure 7r.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 5/11/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 7_Potential WOUS_20220509_LG.mxd

Figure 7s.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 5/11/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 7_Potential WOUS_20220509_LG.mxd

Figure 7t.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 5/11/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 7_Potential WOUS_20220509_LG.mxd

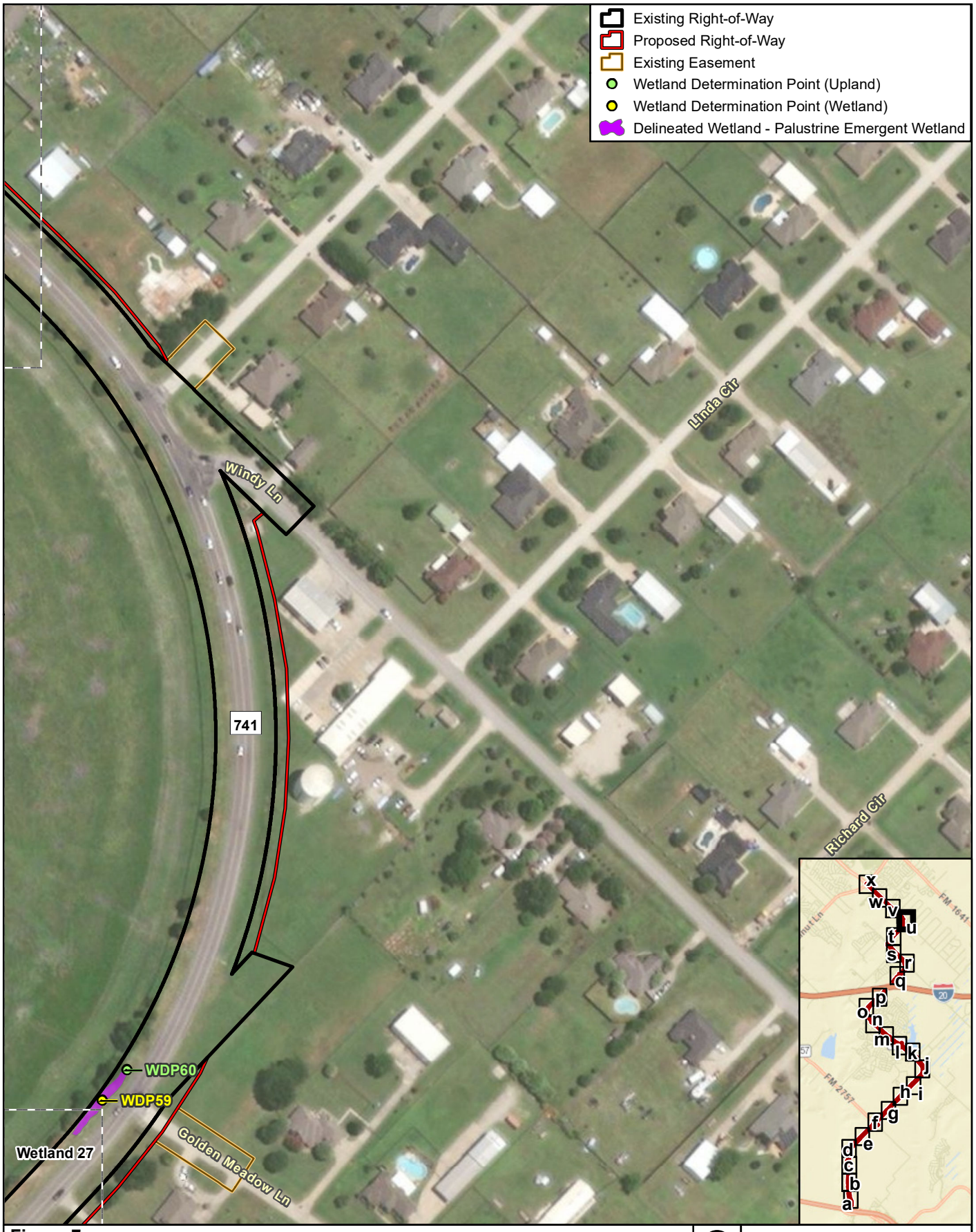


Figure 7u.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 5/11/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 7_Potential WOUS_20220509_LG.mxd

Figure 7v.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet
0 60 Meters

1 in = 200 feet
Scale: 1:2,400
Date: 5/11/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 7_Potential WOUS_20220509_LG.mxd

Figure 7w.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet	1 in = 200 feet
0 60 Meters	Scale: 1:2,400
	Date: 5/11/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 7_Potential WOUS_20220509_LG.mxd

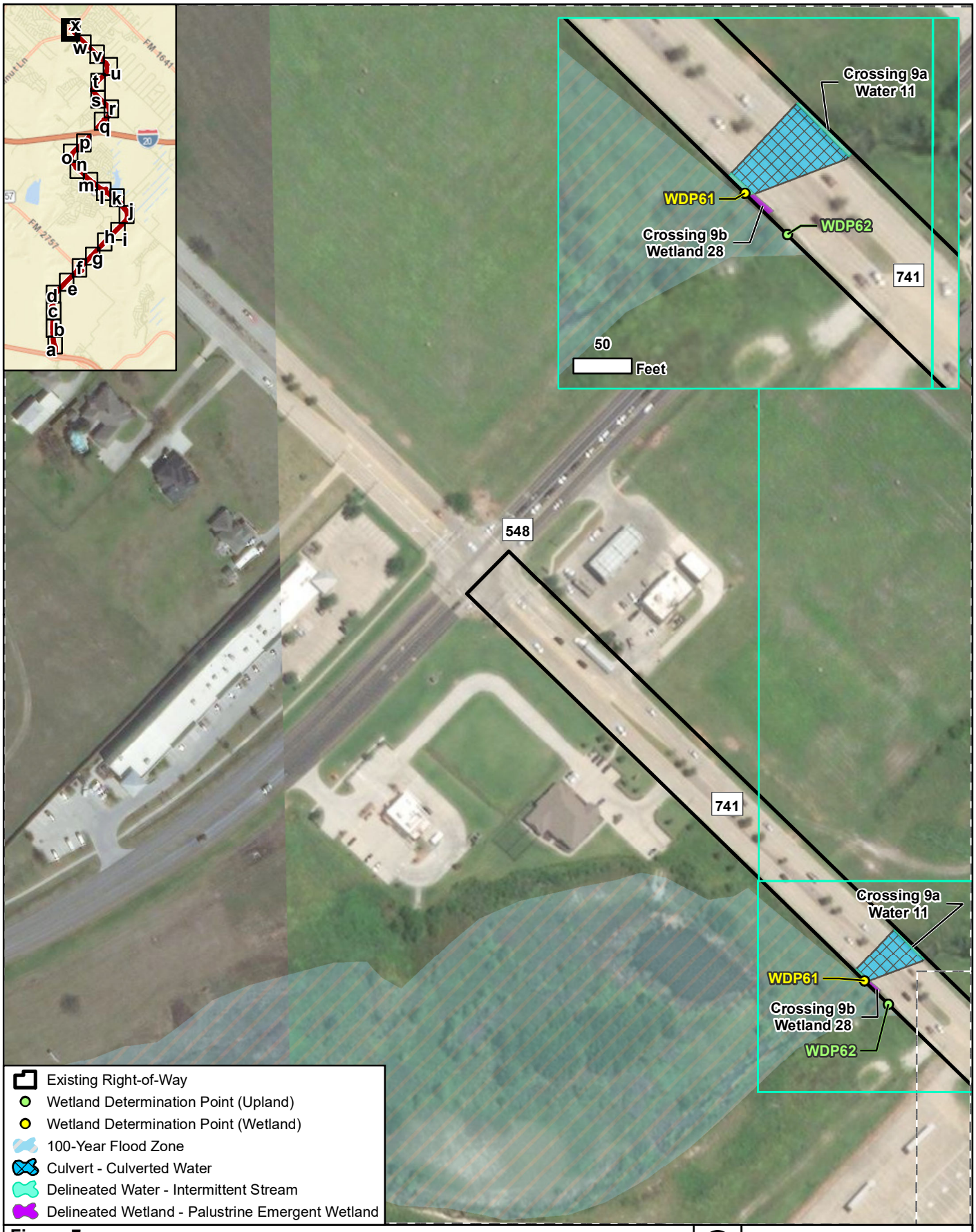


Figure 7x.
Potential Waters of the U.S.

FM 741

Data Sources: Stantec (2022), FEMA (2022)
Aerial Source: Maxar (2021)

CSJ: 1092-01-021

0 200 Feet	1 in = 200 feet
0 60 Meters	Scale: 1:2,400
	Date: 6/1/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_Figure 7x_Potential WOUS_20220511_LG.mxd

Attachment 2 - Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP01
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.6364599 | Long: -96.46652119 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 0 to 1 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Three of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Carex cherokeensis*	25	Yes	FACW
2. *Valerianella radiata*	25	Yes	FACW
3. *Juncus marginatus*	15	No	FACW
4. *Tridens albescens*	10	No	FAC
5. *Geranium dissectum*	5	No	NI
6. *Packera tampicana*	5	No	FACW
7.			
8.			
9.			
10.			
	85	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 15

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	5	x 5 =	25
Column Totals:	85 (A)		195 (B)

Prevalence Index = B/A = 2.29

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP01

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	90	10YR 8/1	10	D	M	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- X Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches):	2	
Water Table Present?	Yes X	No ___	Depth (inches):	12	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	12	**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP02
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): roadside depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.63659537 | Long: -96.46644228 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 0 to 1 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x 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		No	X	
Hydric Soil Present?	Yes		No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes		No	X	**within a Wetland?** Yes ____ No X

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Oenothera speciosa*	40	Yes	NI
2. *Lolium perenne*	15	Yes	FACU
3. *Sisyrinchium pallidum*	15	Yes	NI
4. *Geranium carolinianum*	10	No	NI
5. *Lupinus texensis*	10	No	NI
6. *Anemone berlandieri*	10	No	NI
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 100

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	85	x 5 =	425
Column Totals:	100 (A)		485 (B)

Prevalence Index = B/A = 4.85

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP02

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					Clay	fill material/gravel present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP03
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.63733966 | Long: -96.46639772 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 0 to 1 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Three of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Fraxinus pennsylvanica*	5	Yes	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	40	Yes	OBL
2. *Valerianella radiata*	30	Yes	FACW
3. *Rumex crispus*	15	No	FAC
4. *Ambrosia psilostachya*	15	No	FACU
5. *Geranium carolinianum*	10	No	NI
6.			
7.			
8.			
9.			
10.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	30	x 2 =	60
FAC species	20	x 3 =	60
FACU species	15	x 4 =	60
UPL species	10	x 5 =	50
Column Totals:	115 (A)		270 (B)

Prevalence Index = B/A = 2.35

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP03

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	90	10YR 8/1	10	D	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- X Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches):	2	
Water Table Present?	Yes X	No ___	Depth (inches):	12	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	12	**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP04
Investigator(s): CW and CMP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): hillslope | Local relief (concave, convex, none): convex | Slope (%): 2-3
Subregion (LRR): LRR J MLRA 86A | Lat: 32.63732869 | Long: -96.46636132 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 0 to 1 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X

Remarks: One of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Lupinus texensis*	50	Yes	NI
2. *Lolium perenne*	25	Yes	FACU
3. *Sorghum halepense*	10	No	FACU
4. *Rapistrum rugosum*	10	No	NI
5. *Daucus carota*	5	No	UPL
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	35	x 4 =	140
UPL species	65	x 5 =	325
Column Totals:	100 (A)		465 (B)

Prevalence Index = B/A = 4.65

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP04

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	85	10YR 8/1	15	D	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- X Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP05
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): depression | Local relief (concave, convex, none): concave | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.64173694 | Long: -96.46741078 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 0 to 1 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____		
Hydric Soil Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes X	No ____		

Remarks: Two of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Celtis laevigata*	10	Yes	FAC
2.			
3.			
4.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Salix nigra*	10	Yes	FACW
2. *Rubus trivialis*	10	Yes	FACU
3. *Zanthoxylum clava-herculis*	5	Yes	FACU
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	30	Yes	OBL
2. *Lolium perenne*	15	Yes	FACU
3. *Verbena bonariensis*	10	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	55	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Toxicodendron radicans*	20	Yes	FACU
2.			
	20	= Total Cover	

% Bare Ground in Herb Stratum 45

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 7 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	20	x 2 =	40
FAC species	10	x 3 =	30
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	110 (A)		300 (B)

Prevalence Index = B/A = 2.73

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP05

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes	X	No	___	Depth (inches): 1
Water Table Present?	Yes	X	No	___	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes	X	No	___	Depth (inches): 12

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP06
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.64777848 | Long: -96.4669718 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 0 to 1 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes X	No ____		

Remarks: Two of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Lolium perenne*	80	Yes	FACU
2. *Geranium carolinianum*	10	No	NI
3. *Valerianella radiata*	10	No	FACW
4. *Rumex crispus*	2	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	102	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	2	x 3 =	6
FACU species	80	x 4 =	320
UPL species	10	x 5 =	50
Column Totals:	102 (A)		396 (B)

Prevalence Index = B/A = 3.88

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP06

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	95	10YR 8/1	5	D	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- X Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches):	1	
Water Table Present?	Yes X	No ___	Depth (inches):	12	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	12	

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP07
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.64561287 | Long: -96.46722929 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 0 to 1 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x 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		No	X	
Hydric Soil Present?	Yes		No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes	X	No		**within a Wetland?** Yes ____ No X

Remarks: One of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Alopecurus carolinianus*	30	Yes	FACW
2. *Lolium perenne*	30	Yes	FACU
3. *Rumex crispus*	15	Yes	FAC
4. *Vicia sativa*	10	No	FACU
5. *Juncus marginatus*	10	No	FACW
6.			
7.			
8.			
9.			
10.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	15	x 3 =	45
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	95 (A)		285 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP07

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes	X	No	___	Depth (inches): 3
Water Table Present?	Yes	X	No	___	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes	X	No	___	Depth (inches): 12

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP08
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.65495096 | Long: -96.46384227 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 0 to 1 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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		No	X	
Hydric Soil Present?	Yes		No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes	X	No		**within a Wetland?** Yes ____ No X

Remarks: One of the three wetland indicators was present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Rubus trivialis*	20	Yes	FACU
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Rumex crispus*	30	Yes	FAC
2. *Lolium perenne*	10	No	FACU
3. *Solidago canadensis*	10	No	FACU
4. *Veronica peregrina ssp. xalapensis*	5	No	NI
5.			
6.			
7.			
8.			
9.			
10.			
	55	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 45

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	40	x 4 =	160
UPL species	5	x 5 =	25
Column Totals:	75 (A)		275 (B)

Prevalence Index = B/A = 3.67

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP08

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ___ No X

Remarks: Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes	X	No	Depth (inches):	2
Water Table Present?	Yes	X	No	Depth (inches):	12
Saturation Present? (includes capillary fringe)	Yes	X	No	Depth (inches):	12

Wetland Hydrology Present? Yes X No ___

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

Remarks: Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP09
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): linear depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.66312057 | Long: -96.45382684 | Datum: NAD 83
Soil Map Unit Name: Heiden clay, 3 to 5 percent slopes | NWI classification: R4SBC
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Three of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Gleditsia triacanthos*	5	Yes	FACU
2. *Ulmus americana*	5	Yes	FAC
3.			
4.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	60	Yes	OBL
2. *Rumex crispus*	20	Yes	FAC
3. *Xanthium strumarium*	10	No	FAC
4. *Valerianella radiata*	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	10	x 2 =	20
FAC species	35	x 3 =	105
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	110 (A)		205 (B)

Prevalence Index = B/A = 1.86

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP09

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	90	10YR 7/2	10	D	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- X Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes	X	No ___	Depth (inches):	1
Water Table Present?	Yes	X	No ___	Depth (inches):	12
Saturation Present? (includes capillary fringe)	Yes	X	No ___	Depth (inches):	12

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP10
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): flatland | Local relief (concave, convex, none): none | Slope (%): 0
Subregion (LRR): LRR J MLRA 86A | Lat: | Long: | Datum: NAD 83
Soil Map Unit Name: Heiden clay, 3 to 5 percent slopes | NWI classification: R4SBC
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x 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 X	No ____		
Hydric Soil Present?	Yes ____	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X

Remarks: One of the three wetland indicators was present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Maclura pomifera*	10	Yes	FACU
2. *Ulmus crassifolia*	10	Yes	FAC
3. *Salix nigra*	10	Yes	FACW
4.			
	30	= Total Cover	

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 30' radius)			
1. *Juncus marginatus*	15	Yes	FACW
2. *Sisyrinchium pallidum*	15	Yes	NI
3. *Bromus arvensis*	15	Yes	FACU
4. *Ambrosia psilostachya*	15	Yes	FACU
5. *Eleocharis palustris*	15	Yes	OBL
6. *Valerianella radiata*	15	Yes	FACW
7. *Xanthium strumarium*	10	No	FAC
8.			
9.			
10.			
	100	= Total Cover	

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 9 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 55.6 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	40	x 2 =	80
FAC species	20	x 3 =	60
FACU species	40	x 4 =	160
UPL species	15	x 5 =	75
Column Totals:	130 (A)		390 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP10

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP11
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): wooded hillslope | Local relief (concave, convex, none): convex | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.66345118 | Long: -96.45415351 | Datum: NAD 83
Soil Map Unit Name: Heiden clay, 3 to 5 percent slopes | NWI classification: R4SBC
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes ____	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

Area highly disturbed by nearby construction. Highly eroaded.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus crassifolia*	60	Yes	FAC
2. *Fraxinus pennsylvanica*	20	Yes	FAC
3.			
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Symphoricarpos orbiculatus*	15	Yes	FACU
2. *Fraxinus pennsylvanica*	10	Yes	FAC
3.			
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Lolium perenne*	45	Yes	FACU
2. *Torilis arvensis*	15	Yes	NI
3. *Ambrosia trifida*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 35

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	95	x 3 =	285
FACU species	60	x 4 =	240
UPL species	15	x 5 =	75
Column Totals:	170 (A)		600 (B)

Prevalence Index = B/A = 3.53

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP11

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

Hydric soil indicators are present. Thin layer or eroded clay from nearby construction on surface.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Hydrology indicators are not present.. Area highly disturbed by upstream construction.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP12
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): terrace | Local relief (concave, convex, none): convex | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.66813173 | Long: -96.44843932 | Datum: NAD 83
Soil Map Unit Name: Heiden clay, 3 to 5 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	No X	**Is the Sampled Area within a Wetland?**	Yes	No X
Hydric Soil Present?	Yes	No X			
Wetland Hydrology Present?	Yes	No X			

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	15	Yes	FAC
2. *Celtis laevigata*	15	Yes	FAC
3.			
4.			
	30	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Cornus drummondii*	35	Yes	FAC
2. *Ligustrum sinense*	10	Yes	UPL
3.			
4.			
5.			
	45	= Total Cover	

Herb Stratum (Plot size: 30' radius)			
1. *Ageratina altissima*	15	Yes	UPL
2. *Paspalum dilatatum*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	25	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. *Parthenocissus quinquefolia*	15	Yes	FACU
2. *Toxicodendron radicans*	15	Yes	FACU
	30	= Total Cover	

% Bare Ground in Herb Stratum 75

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 8 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	75	x 3 =	225
FACU species	30	x 4 =	120
UPL species	25	x 5 =	125
Column Totals:	130 (A)		470 (B)

Prevalence Index = B/A = 3.62

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP12

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP13
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.66841645 | Long: -96.44815482 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	15	Yes	FAC
2. *Celtis laevigata*	10	Yes	FAC
3. *Populus deltoides*	10	Yes	FAC
4.			
	35	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Populus deltoides*	25	Yes	FAC
2. *Salix nigra*	15	Yes	FACW
3. *Fraxinus pennsylvanica*	10	Yes	FAC
4.			
5.			
	50	= Total Cover	

Herb Stratum (Plot size: 30' radius)			
1. *Poa annua*	30	Yes	FACU
2. *Sorghum halepense*	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	45	= Total Cover	

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 55

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)
Total Number of Dominant Species Across All Strata: 8 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	70	x 3 =	210
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column Totals:	130 (A)		420 (B)

Prevalence Index = B/A = 3.23

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP13

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	85	10YR 7/2	15	D	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- X Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

Hydric soil indicators are present. Eroded soil material is entering from nearby construction.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches):	2	
Water Table Present?	Yes X	No ___	Depth (inches):	12	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	12	**Wetland Hydrology Present?** Yes X No ___

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

Remarks:

Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP14
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): roadside swale | Local relief (concave, convex, none): concave | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.66854883 | Long: -96.44795428 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____		
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X

Remarks: Two of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Salix nigra*	10	Yes	FACW
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Lolium perenne*	30	Yes	FACU
2. *Sorghum halepense*	20	Yes	FACU
3. *Phyla fruticosa*	20	Yes	FAC
4. *Myosotis macrosperma*	20	Yes	FAC
5. *Vicia sativa*	10	No	FACU
6. *Packera tampicana*	10	No	FACW
7.			
8.			
9.			
10.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	40	x 3 =	120
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	120 (A)		400 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP14

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	90	10YR 3/4	10	C	M	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks: Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP15
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.66814541 | Long: -96.44796467 | Datum: NAD 83
Soil Map Unit Name: Ferris clay, 5 to 12 percent slopes, eroded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Salix nigra*	15	Yes	FACW
2. *Fraxinus pennsylvanica*	10	Yes	FAC
3. *Ulmus crassifolia*	10	Yes	FAC
4. *Populus deltoides*	5	No	FAC
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	80	Yes	OBL
2. *Phyla fruticosa*	10	No	FAC
3. *Rumex crispus*	10	No	FAC
4. *Ambrosia psilostachya*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	105	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	15	x 2 =	30
FAC species	45	x 3 =	135
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	145 (A)		265 (B)

Prevalence Index = B/A = 1.83

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP15

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	85	10YR 8/1	15	D	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- X Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP16
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): hillslope | Local relief (concave, convex, none): convex | Slope (%): 3-5
Subregion (LRR): LRR J MLRA 86A | Lat: 32.66843774 | Long: -96.44768604 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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		No	X	
Hydric Soil Present?	Yes		No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes		No	X	**within a Wetland?** Yes ____ No X

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Celtis laevigata*	15	Yes	FAC
2. *Gleditsia triacanthos*	10	Yes	FACU
3. *Prunus mexicana*	5	No	NI
4.			
5.			
	30	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Bromus arvensis*	50	Yes	FACU
2. *Oenothera speciosa*	30	Yes	NI
3. *Lolium perenne*	20	No	FACU
4. *Lactuca serriola*	20	No	FAC
5. *Polytaenia texana*	20	No	NI
6.			
7.			
8.			
9.			
10.			
	140	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Toxicodendron radicans*	15	No	FACU
2.			
	15	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	35	x 3 =	105
FACU species	95	x 4 =	380
UPL species	55	x 5 =	275
Column Totals:	185 (A)		760 (B)

Prevalence Index = B/A = 4.11

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP16

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP17
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): terrace | Local relief (concave, convex, none): convex | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.6720962 | Long: -96.44369245 | Datum: NAD 83
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, frequently flooded | NWI classification: PFO1C
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____		
Hydric Soil Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X		

Remarks: One of the three wetland indicators was present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	15	Yes	FAC
2. *Fraxinus pennsylvanica*	15	Yes	FAC
3. *Salix nigra*	10	Yes	FACW
4. *Carya illinoinensis*	5	No	FAC
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Ulmus americana*	15	Yes	FAC
2. *Acer negundo*	10	Yes	FAC
3. *Gleditsia triacanthos*	5	No	FACU
4. *Celtis laevigata*	5	No	FAC
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Chasmanthium latifolium*	25	Yes	FACU
2. *Solidago canadensis*	20	Yes	FACU
3. *Rubus trivialis*	15	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Smilax rotundifolia*	20	Yes	FAC
2. *Vitis rotundifolia*	15	Yes	FAC
	35	= Total Cover	

% Bare Ground in Herb Stratum 40

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)
Total Number of Dominant Species Across All Strata: 11 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 63.6 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	100	x 3 =	300
FACU species	90	x 4 =	360
UPL species	10	x 5 =	50
Column Totals:	210 (A)		730 (B)

Prevalence Index = B/A = 3.48

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP17

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP18
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): terrace | Local relief (concave, convex, none): convex | Slope (%): 2-3
Subregion (LRR): LRR J MLRA 86A | Lat: 32.6719247 | Long: -96.44354059 | Datum: NAD 83
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, frequently flooded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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		No	X	
Hydric Soil Present?	Yes		No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes		No	X	**within a Wetland?** Yes ____ No X

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Rubus trivialis*	15	Yes	FACU
2. *Ulmus crassifolia*	15	Yes	FAC
3. *Ulmus americana*	10	No	FAC
4. *Carya illinoinensis*	7	No	FAC
5. *Acer negundo*	5	No	FAC
	52	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Lolium perenne*	20	Yes	FACU
2. *Bromus arvensis*	20	Yes	FACU
3. *Solidago canadensis*	20	Yes	FACU
4. *Vicia sativa*	15	No	FACU
5. *Carex planostachys*	15	No	NI
6. *Sorghum halepense*	10	No	FACU
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Smilax bona-nox*	10	Yes	FACU
2.			
	10	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	37	x 3 =	111
FACU species	110	x 4 =	440
UPL species	15	x 5 =	75
Column Totals:	162 (A)		626 (B)

Prevalence Index = B/A = 3.86

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP18

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP19
Investigator(s): | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): forested depression | Local relief (concave, convex, none): concave | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.67161382 | Long: -96.44441963 | Datum: NAD 83
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, frequently flooded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	20	Yes	FACW
2. *Celtis laevigata*	15	Yes	FAC
3. *Populus deltoides*	15	Yes	FAC
4. *Fraxinus pennsylvanica*	12	No	FAC
	62	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Ulmus americana*	25	Yes	FAC
2. *Acer negundo*	10	Yes	FAC
3.			
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Toxicodendron radicans*	20	Yes	FACU
2.			
	20	= Total Cover	

% Bare Ground in Herb Stratum 100

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	77	x 3 =	231
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	117 (A)		351 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP19

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	N 4/	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:

Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/14/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP20
Investigator(s): CW and CP | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): flat woodland | Local relief (concave, convex, none): none | Slope (%): 0
Subregion (LRR): LRR J MLRA 86A | Lat: 32.67163403 | Long: -96.44431846 | Datum: NAD 83
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, frequently flooded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No x (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X	

Remarks: One of the three wetland indicators was present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 9, indicating conditions during the site investigations were drier than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	20	Yes	FACW
2. *Fraxinus pennsylvanica*	20	Yes	FAC
3. *Celtis laevigata*	15	Yes	FAC
4.			
	55	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Ulmus americana*	15	Yes	FAC
2. *Symphoricarpos orbiculatus*	10	Yes	FACU
3. *Celtis laevigata*	10	Yes	FAC
4. *Acer negundo*	10	Yes	FAC
5.			
	45	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Carex planostachys*	20	Yes	NI
2. *Chasmanthium latifolium*	20	Yes	FACU
3. *Solidago canadensis*	20	Yes	FACU
4. *Elymus virginicus*	20	Yes	FAC
5. *Symphyotrichum ericoides*	10	No	FACU
6.			
7.			
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Smilax bona-nox*	20	Yes	FACU
2. *Vitis rotundifolia*	10	Yes	FAC
	30	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)
Total Number of Dominant Species Across All Strata: 13 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 61.5 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	100	x 3 =	300
FACU species	80	x 4 =	320
UPL species	20	x 5 =	100
Column Totals:	220 (A)		760 (B)

Prevalence Index = B/A = 3.45

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP20

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:

Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP21
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Streamside | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.67789812 | Long: -96.44257426 | Datum: NAD 83
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, frequently flooded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	X	No		
Hydric Soil Present?	Yes		No	X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Wetland Hydrology Present?	Yes		No	X	

Remarks: One of the three wetland indicators was present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 15 indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus crassifolia*	15	Yes	FAC
2. *Ulmus americana*	15	Yes	FAC
3. *Celtis laevigata*	10	Yes	FAC
4. *Carya illinoinensis*	10	Yes	FAC
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Fraxinus pennsylvanica*	10	Yes	FAC
2. *Celtis laevigata*	10	Yes	FAC
3. *Ulmus americana*	10	Yes	FAC
4. *Diospyros virginiana*	10	Yes	FAC
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Oenothera speciosa*	25	Yes	NI
2. *Lolium perenne*	25	Yes	FACU
3. *Allium canadense*	25	Yes	FACU
4. *Ambrosia trifida*	15	No	FAC
5. *Solidago canadensis*	10	No	FACU
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)
Total Number of Dominant Species Across All Strata: 11 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 72.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	105	x 3 =	315
FACU species	60	x 4 =	240
UPL species	25	x 5 =	125
Column Totals:	190 (A)		680 (B)

Prevalence Index = B/A = 3.58

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP21

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

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

Remarks:

Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP22
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Terrace | Local relief (concave, convex, none): convex | Slope (%): 2-3
Subregion (LRR): LRR J MLRA 86A | Lat: 32.67779938 | Long: -96.44269512 | Datum: NAD 83
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, frequently flooded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X		

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Acer negundo*	25	Yes	FAC
2. *Cornus drummondii*	15	Yes	FAC
3. *Carya illinoinensis*	10	Yes	FAC
4.			
5.			
	50	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Bromus arvensis*	30	Yes	FACU
2. *Lolium perenne*	30	Yes	FACU
3. *Allium canadense*	20	No	FACU
4. *Plantago rhodosperma*	15	No	FACU
5. *Geranium dissectum*	10	No	NI
6. *Ambrosia trifida*	10	No	FAC
7.			
8.			
9.			
10.			
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Smilax bona-nox*	10	Yes	FACU
2.			
	10	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	60	x 3 =	180
FACU species	105	x 4 =	420
UPL species	10	x 5 =	50
Column Totals:	175 (A)		650 (B)

Prevalence Index = B/A = 3.71

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP22

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1						Clay Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP23
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.67817042 | Long: -96.44310532 | Datum: NAD 83
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, frequently flooded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	50	Yes	OBL
2. *Potamogeton nodosus*	30	Yes	OBL
3. *Typha angustifolia*	20	No	OBL
4. *Rumex crispus*	15	No	FAC
5. *Juncus marginatus*	15	No	FACW
6.			
7.			
8.			
9.			
10.			
	130	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	100	x 1 =	100
FACW species	15	x 2 =	30
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	130 (A)		175 (B)

Prevalence Index = B/A = 1.35

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP23

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	N 3/	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes	X	No ___	Depth (inches):	2
Water Table Present?	Yes	X	No ___	Depth (inches):	12
Saturation Present? (includes capillary fringe)	Yes	X	No ___	Depth (inches):	12

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP24
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Terrace | Local relief (concave, convex, none): convex | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.67818036 | Long: -96.44311328 | Datum: NAD 83
Soil Map Unit Name: Trinity clay, 0 to 1 percent slopes, frequently flooded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes ____	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Cynodon dactylon*	40	Yes	FACU
2. *Sorghum halepense*	35	Yes	FACU
3. *Rumex crispus*	20	No	FAC
4. *Ambrosia trifida*	15	No	FAC
5. *Geranium dissectum*	15	No	NI
6. *Lolium perenne*	10	No	FACU
7.			
8.			
9.			
10.			
	135	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	35	x 3 =	105
FACU species	85	x 4 =	340
UPL species	15	x 5 =	75
Column Totals:	135 (A)		520 (B)

Prevalence Index = B/A = 3.85

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP24

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP25
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Ditch | Local relief (concave, convex, none): concave | Slope (%): 3-5
Subregion (LRR): LRR J MLRA 86A | Lat: 32.67887042 | Long: -96.44386485 | Datum: NAD 83
Soil Map Unit Name: Ferris-Heiden complex, 2 to 5 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
NA
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Juncus effusus*	20	Yes	OBL
2. *Juncus marginatus*	20	Yes	FACW
3. *Rumex crispus*	15	Yes	FAC
4. *Eleocharis palustris*	10	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
	65	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 35

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	20	x 2 =	40
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	65 (A)		115 (B)

Prevalence Index = B/A = 1.77

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP25

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10Y 6/1	90	2.5Y 7/3	10	C	M,PL	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Hardpan clay

Depth (inches): 6

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- X Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP26
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Roadside dip | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.67897088 | Long: -96.44399334 | Datum: NAD 83
Soil Map Unit Name: Ferris-Heiden complex, 2 to 5 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X		

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Lolium perenne*	50	Yes	FACU
2. *Cynodon dactylon*	30	Yes	FACU
3. *Geranium carolinianum*	15	No	NI
4. *Valerianella radiata*	10	No	FACW
5. *Lactuca serriola*	10	No	FAC
6.			
7.			
8.			
9.			
10.			
	115	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	10	x 3 =	30
FACU species	80	x 4 =	320
UPL species	15	x 5 =	75
Column Totals:	115 (A)		445 (B)

Prevalence Index = B/A = 3.87

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP26

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP27
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Terrace | Local relief (concave, convex, none): convex | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68106766 | Long: -96.44618874 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 3 to 5 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	____	No	X	
Hydric Soil Present?	Yes	____	No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes	____	No	X	**within a Wetland?** Yes ____ No X

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Salix nigra*	20	Yes	FACW
2. *Cornus drummondii*	20	Yes	FAC
3. *Celtis laevigata*	20	Yes	FAC
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Bromus arvensis*	50	Yes	FACU
2. *Lolium perenne*	20	Yes	FACU
3. *Eleocharis palustris*	15	No	OBL
4. *Geranium carolinianum*	10	No	NI
5.			
6.			
7.			
8.			
9.			
10.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Toxicodendron radicans*	20	Yes	FACU
2.			
	20	= Total Cover	

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	20	x 2 =	40
FAC species	40	x 3 =	120
FACU species	90	x 4 =	360
UPL species	10	x 5 =	50
Column Totals:	175 (A)		585 (B)

Prevalence Index = B/A = 3.34

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP27

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	100					Clay Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP28
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68122574 | Long: -96.44689415 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 3 to 5 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	20	Yes	FACW
2. *Celtis laevigata*	20	Yes	FAC
3.			
4.			
	40	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Celtis laevigata*	40	Yes	FAC
2. *Salix nigra*	20	Yes	FACW
3. *Ulmus crassifolia*	15	No	FAC
4. *Amorpha fruticosa*	10	No	FACW
5.			
	85	= Total Cover	

Herb Stratum (Plot size: 30' radius)			
1. *Carex tetrastachya*	25	Yes	FACW
2. *Typha angustifolia*	20	Yes	OBL
3. *Rumex crispus*	20	Yes	FAC
4. *Juncus marginatus*	20	Yes	FACW
5. *Solidago canadensis*	15	No	FACU
6. *Ambrosia trifida*	15	No	FAC
7.			
8.			
9.			
10.			
	115	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. *Toxicodendron radicans*	60	Yes	FACU
2.			
	60	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)
Total Number of Dominant Species Across All Strata: 9 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 88.9 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	95	x 2 =	190
FAC species	110	x 3 =	330
FACU species	75	x 4 =	300
UPL species	0	x 5 =	0
Column Totals:	300 (A)		840 (B)

Prevalence Index = B/A = 2.8

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP28

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	90	10YR 3/4	10	C	M	Silty Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes	X	No ___	Depth (inches):	1
Water Table Present?	Yes	X	No ___	Depth (inches):	12
Saturation Present? (includes capillary fringe)	Yes	X	No ___	Depth (inches):	12

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP29
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Terrace | Local relief (concave, convex, none): none | Slope (%): 0
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68128258 | Long: -96.44689648 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 3 to 5 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	X	No		
Hydric Soil Present?	Yes		No	X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Wetland Hydrology Present?	Yes		No	X	

Remarks: One of the three wetland indicators waspresent. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Celtis laevigata*	60	Yes	FAC
2. *Carya illinoinensis*	20	Yes	FAC
3. *Salix nigra*	20	Yes	FACW
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Ulmus crassifolia*	30	Yes	FAC
2. *Celtis laevigata*	25	Yes	FAC
3. *Salix nigra*	15	Yes	FACW
4.			
5.			
	70	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Elymus virginicus*	45	Yes	FAC
2. *Symphoricarpos orbiculatus*	25	Yes	FACU
3. *Allium canadense*	20	No	FACU
4. *Ambrosia trifida*	15	No	FAC
5. *Carex planostachys*	15	No	NI
6. *Valerianella radiata*	10	No	FACW
7. *Symphyotrichum ericoides*	10	No	FACU
8.			
9.			
10.			
	140	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Toxicodendron radicans*	45	Yes	FACU
2.			
	45	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)
Total Number of Dominant Species Across All Strata: 9 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 77.8 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	45	x 2 =	90
FAC species	195	x 3 =	585
FACU species	100	x 4 =	400
UPL species	15	x 5 =	75
Column Totals:	355 (A)		1150 (B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP29

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	100					Clay Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP30
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 1-3
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68238743 | Long: -96.44889376 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 3 to 5 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	20	Yes	FACW
2.			
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Salix nigra*	50	Yes	FACW
2. *Ulmus crassifolia*	10	No	FAC
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	40	Yes	OBL
2. *Typha angustifolia*	40	Yes	OBL
3. *Solidago canadensis*	15	No	FACU
4. *Symphyotrichum lanceolatum*	10	No	FACW
5. *Rubus trivialis*	10	No	FACU
6.			
7.			
8.			
9.			
10.			
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Vitis rotundifolia*	10	Yes	FAC
2.			
	10	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	80	x 2 =	160
FAC species	20	x 3 =	60
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	205 (A)		400 (B)

Prevalence Index = B/A = 1.95

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP30

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	N 4/	90	10YR 3/6	10	C	PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	___	
Water Table Present?	Yes X	No ___	Depth (inches):	6	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	6	**Wetland Hydrology Present?** Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP31
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Hillsope | Local relief (concave, convex, none): convex | Slope (%): 2-3
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68271724 | Long: -96.44934445 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes ____	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X

Remarks:
None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Maclura pomifera*	30	Yes	FACU
2. *Gleditsia triacanthos*	25	Yes	FACU
3.			
4.			
5.			
	55	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Ambrosia artemisiifolia*	80	Yes	FACU
2. *Solidago canadensis*	15	No	FACU
3. *Valerianella radiata*	5	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	150	x 4 =	600
UPL species	0	x 5 =	0
Column Totals:	155 (A)		610 (B)

Prevalence Index = B/A = 3.94

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydric soil indicators are not present.

SOIL

Sampling Point: WDP31

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP32
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68348008 | Long: -96.45067297 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Salix nigra*	40	Yes	FACW
2. *Ulmus americana*	10	No	FAC
3. *Celtis laevigata*	10	No	FAC
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	60	Yes	OBL
2. *Typha angustifolia*	25	Yes	OBL
3. *Rumex crispus*	15	No	FAC
4. *Solidago canadensis*	10	No	FACU
5. *Carex tetrastachya*	10	No	FACW
6. *Ambrosia psilostachya*	10	No	FACU
7. *Verbena bonariensis*	10	No	FACW
8.			
9.			
10.			
	140	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Toxicodendron radicans*	25	Yes	FACU
2.			
	25	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0 (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:	
OBL species	85	x 1 =	85	
FACW species	60	x 2 =	120	
FAC species	35	x 3 =	105	
FACU species	45	x 4 =	180	
UPL species	0	x 5 =	0	
Column Totals:	225	(A)	490	(B)

Prevalence Index = B/A = 2.18

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP32

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/1	80	10YR 7/6	20	D	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	___	
Water Table Present?	Yes X	No ___	Depth (inches):	12	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	12	

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP33
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Hillslope | Local relief (concave, convex, none): convex | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68353751 | Long: -96.45063359 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	____	No	X	
Hydric Soil Present?	Yes	X	No	____	**Is the Sampled Area**
Wetland Hydrology Present?	Yes	____	No	X	**within a Wetland?** Yes ____ No X

Remarks: One of the three wetland indicators was present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Cynodon dactylon*	90	Yes	FACU
2. *Plantago rhodosperma*	5	No	FACU
3. *Rumex crispus*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	95	x 4 =	380
UPL species	0	x 5 =	0
Column Totals:	100 (A)		395 (B)

Prevalence Index = B/A = 3.95

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP33

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	85	10YR 7/2	15	D	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP34
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68462717 | Long: -96.45233585 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: R4SBC
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X		

Remarks: One of the three wetland indicators was present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	20	Yes	OBL
2. *Houstonia micrantha*	20	Yes	NI
3. *Geranium dissectum*	20	Yes	NI
4. *Sorghum halepense*	15	No	FACU
5. *Plantago rhodosperma*	15	No	FACU
6. *Rumex crispus*	10	No	FAC
7. *Oxalis corniculata*	10	No	FACU
8. *Ambrosia artemisiifolia*	10	No	FACU
9.			
10.			
	120	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	50	x 4 =	200
UPL species	40	x 5 =	200
Column Totals:	120 (A)		450 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP34

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	90	10YR 7/2	10	D	M	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP35
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.684193 | Long: -96.45118195 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	85	Yes	OBL
2. *Ludwigia peploides*	10	No	OBL
3. *Rumex crispus*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:
OBL species	95	x 1 =	95
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		110 (B)

Prevalence Index = B/A = 1.1

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP35

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/1	90	10YR 6/3	10	C	M	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches):	1	
Water Table Present?	Yes X	No ___	Depth (inches):	12	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	12	**Wetland Hydrology Present?** Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP36
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68304608 | Long: -96.44924434 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NATh
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	70	Yes	OBL
2. *Phyla fruticosa*	40	Yes	FAC
3. *Rumex crispus*	10	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	120	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

	Total % Cover of:		Multiply by:
OBL species	70	x 1 =	70
FACW species	0	x 2 =	0
FAC species	50	x 3 =	150
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	120 (A)		220 (B)

Prevalence Index = B/A = 1.83

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP36

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/1	90	10YR 3/6	10	C	PL	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/28/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP37
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Hillslope | Local relief (concave, convex, none): convex | Slope (%): 3-5
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68355193 | Long: -96.45027213 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X	**Is the Sampled Area**		
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X			

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 15, indicating conditions during the site investigations were wetter than normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Cynodon dactylon*	60	Yes	FACU
2. *Veronica arvensis*	20	Yes	FACU
3. *Paspalum dilatatum*	10	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	90 (A)		350 (B)

Prevalence Index = B/A = 3.89

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP37

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP38
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 2-3
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68949111 | Long: -96.45767373 | Datum: NAD 83
Soil Map Unit Name: Ferris clay, 5 to 12 percent slopes, eroded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 12 indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	60	Yes	OBL
2. *Rumex crispus*	15	No	FAC
3. *Plantago major*	15	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	90 (A)		150 (B)

Prevalence Index = B/A = 1.67

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP38

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	90	10YR 3/6	10	C	PL	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Hardpan clay

Depth (inches): 10

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- X Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 2

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP39
Investigator(s): Cw and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Terrace | Local relief (concave, convex, none): convex | Slope (%): 2-3
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68942293 | Long: -96.45766875 | Datum: NAD 83
Soil Map Unit Name: Ferris clay, 5 to 12 percent slopes, eroded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X	**Is the Sampled Area**		
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X			

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Sherardia arvensis*	50	Yes	NI
2. *Setaria viridis*	20	Yes	NI
3. *Medicago lupulina*	20	Yes	FACU
4. *Torilis nodosa*	10	No	NI
5. *Sorghum halepense*	10	No	FACU
6.			
7.			
8.			
9.			
10.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	80	x 5 =	400
Column Totals:	110 (A)		520 (B)

Prevalence Index = B/A = 4.73

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP39

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP40
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Swale | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68935133 | Long: -96.45789402 | Datum: NAD 83
Soil Map Unit Name: Ferris clay, 5 to 12 percent slopes, eroded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	50	Yes	OBL
2. *Erigeron canadensis*	20	Yes	FACU
3. *Torilis nodosa*	10	No	NI
4. *Setaria viridis*	10	No	NI
5.			
6.			
7.			
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	20	x 4 =	80
UPL species	20	x 5 =	100
Column Totals:	90 (A)		230 (B)

Prevalence Index = B/A = 2.56

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP40

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	80	10YR 7/6	20	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Hardpan clay

Depth (inches): 12

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP41
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Swale | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.68924937 | Long: -96.45783168 | Datum: NAD 83
Soil Map Unit Name: Ferris clay, 5 to 12 percent slopes, eroded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes X	No ____		

Remarks: Two of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Stenotaphrum secundatum*	40	Yes	FAC
2. *Taraxacum officinale*	40	Yes	FACU
3. *Bromus arvensis*	10	No	FACU
4. *Solidago canadensis*	10	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Toxicodendron radicans*	15	Yes	FACU
2. *Lonicera japonica*	15	Yes	FACU
	30	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	130 (A)		480 (B)

Prevalence Index = B/A = 3.69

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP41

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	90	10YR 3/4	10	C	PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP42
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.6904565 | Long: -96.45885716 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	70	Yes	OBL
2. *Carex cherokeensis*	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	20	x 2 =	40
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	90 (A)		110 (B)

Prevalence Index = B/A = 1.22

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP42

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	95	10YR 7/2	5	D	M	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 2

Water Table Present? Yes X No ___ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP43
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Roadside swale | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.69083652 | Long: -96.45918177 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X		

Remarks: One of the three wetland indicators waspresent. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Setaria viridis*	34	Yes	NI
2. *Cynodon dactylon*	33	Yes	FACU
3. *Bouteloua dactyloides*	33	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	66	x 4 =	264
UPL species	34	x 5 =	170
Column Totals:	100 (A)		434 (B)

Prevalence Index = B/A = 4.34

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP43

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	95	10YR 7/2	5	D	M	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP44
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.69126817 | Long: -96.45938449 | Datum: NAD 83
Soil Map Unit Name: Ferris clay, 5 to 12 percent slopes, eroded | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	95	Yes	OBL
2. *Carex cherokeensis*	5	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	95	x 1 =	95
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		105 (B)

Prevalence Index = B/A = 1.05

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP44

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	80	10YR 6/3	20	D	M	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	___	
Water Table Present?	Yes X	No ___	Depth (inches):	12	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches):	12	**Wetland Hydrology Present?** Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP45
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Roadside hill slope | Local relief (concave, convex, none): convex | Slope (%): 2-3
Subregion (LRR): LRR J MLRA 86A | Lat: 32.69506745 | Long: -96.45759083 | Datum: NAD 83
Soil Map Unit Name: Ferris clay, 5 to 12 percent slopes, eroded | NWI classification: R4SBC
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes ____	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Celtis laevigata*	25	Yes	FAC
2. *Gleditsia triacanthos*	5	No	FACU
3.			
4.			
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Maclura pomifera*	15	Yes	FACU
2. *Juniperus virginiana*	15	Yes	UPL
3. *Celtis laevigata*	10	Yes	FAC
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Bromus arvensis*	15	Yes	FACU
2. *Valerianella radiata*	15	Yes	FACW
3. *Erodium cicutarium ssp. cicutarium*	10	No	NI
4. *Plantago major*	10	No	FAC
5. *Oxalis corniculata*	10	No	FACU
6.			
7.			
8.			
9.			
10.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Smilax bona-nox*	15	Yes	FACU
2.			
	15	= Total Cover	

% Bare Ground in Herb Stratum 55

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 7 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	45	x 3 =	135
FACU species	60	x 4 =	240
UPL species	25	x 5 =	125
Column Totals:	145 (A)		530 (B)

Prevalence Index = B/A = 3.66

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP45

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	100					Clay Loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP46
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.7013724 | Long: -96.44974185 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Salix nigra*	30	Yes	FACW
2. *Baccharis neglecta*	10	Yes	FAC
3.			
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Typha angustifolia*	25	Yes	OBL
2. *Scirpus pendulus*	20	Yes	OBL
3. *Setaria magna*	15	Yes	FACW
4. *Ludwigia hirtella*	10	No	OBL
5. *Valerianella radiata*	10	No	FACW
6. *Andropogon glomeratus*	10	No	FACW
7. *Eleocharis palustris*	10	No	OBL
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	65	x 1 =	65
FACW species	65	x 2 =	130
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	140 (A)		225 (B)

Prevalence Index = B/A = 1.61

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP46

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 5/3	90	10YR 3/6	10	C	M,PL	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present?	Yes	X	No	Depth (inches):	2
Water Table Present?	Yes	X	No	Depth (inches):	8
Saturation Present? (includes capillary fringe)	Yes	X	No	Depth (inches):	8

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP47
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Vegetated flat | Local relief (concave, convex, none): none | Slope (%): 0
Subregion (LRR): LRR J MLRA 86A | Lat: 32.70139625 | Long: -96.44978191 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X		

Remarks: One of the three wetland indicators waspresent. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Medicago lupulina*	20	Yes	FACU
2. *Cynodon dactylon*	20	Yes	FACU
3. *Oenothera speciosa*	20	Yes	NI
4. *Pyrrhopappus pauciflorus*	20	Yes	NI
5. *Mimosa strigillosa*	15	No	FAC
6. *Oplismenus hirtellus*	10	No	FACU
7.			
8.			
9.			
10.			
	105	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	50	x 4 =	200
UPL species	40	x 5 =	200
Column Totals:	105 (A)		445 (B)

Prevalence Index = B/A = 4.24

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP47

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 5/3	90	10YR 7/2	10	C	M	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP48
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.70088789 | Long: -96.45037975 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Panicum virgatum*	25	Yes	FAC
2. *Tridens albescens*	25	Yes	FAC
3. *Juncus marginatus*	25	Yes	FACW
4. *Phyla fruticosa*	10	No	FAC
5. *Packera tampicana*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	60	x 3 =	180
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	90 (A)		240 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP48

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	90	10YR 6/3	10	D	M	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 0.5

Water Table Present? Yes X No ___ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP49
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Roadside vegetated flat | Local relief (concave, convex, none): none | Slope (%): 0
Subregion (LRR): LRR J MLRA 86A | Lat: 32.70096653 | Long: -96.45033787 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	____	No	X	
Hydric Soil Present?	Yes	____	No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes	____	No	X	**within a Wetland?** Yes ____ No X

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Erodium cicutarium ssp. cicutarium*	15	Yes	NI
2. *Bromus arvensis*	15	Yes	FACU
3. *Sherardia arvensis*	15	Yes	NI
4. *Vicia sativa*	15	Yes	FACU
5. *Panicum virgatum*	15	Yes	FAC
6. *Tridens albescens*	15	Yes	FAC
7. *Valerianella radiata*	15	Yes	FACW
8.			
9.			
10.			
	105	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 7 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	30	x 3 =	90
FACU species	30	x 4 =	120
UPL species	30	x 5 =	150
Column Totals:	105 (A)		390 (B)

Prevalence Index = B/A = 3.71

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP49

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP50
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Roadside ditch | Local relief (concave, convex, none): concave | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.70185009 | Long: -96.44955631 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	80	Yes	OBL
2. *Valerianella radiata*	10	No	FACW
3. *Veronica peregrina ssp. xalapensis*	10	No	NI
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	10	x 5 =	50
Column Totals:	100 (A)		150 (B)

Prevalence Index = B/A = 1.5

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP50

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/1	90	10YR 6/3	10	D	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1

Water Table Present? Yes X No ___ Depth (inches): 8

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP51
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Ditch | Local relief (concave, convex, none): concave | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.70173547 | Long: -96.44971448 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X			
Hydric Soil Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?**	Yes ____	No X
Wetland Hydrology Present?	Yes X	No ____			

Remarks: One of the three wetland indicators was present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Lolium perenne*	60	Yes	FACU
2. *Plantago rhodosperma*	25	Yes	FACU
3. *Vicia sativa*	10	No	FACU
4. *Pyrrhopappus pauciflorus*	10	No	NI
5. *Tetraneuris linearifolia*	5	No	NI
6. *Packera tampicana*	5	No	FACW
7.			
8.			
9.			
10.			
	115	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	95	x 4 =	380
UPL species	15	x 5 =	75
Column Totals:	115 (A)		465 (B)

Prevalence Index = B/A = 4.04

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP51

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? Yes ___ No X Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP52
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Ditch | Local relief (concave, convex, none): concave | Slope (%): 1-2
Subregion (LRR): LRR J MLRA 86A | Lat: 32.70240221 | Long: -96.44888316 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	80	Yes	OBL
2. *Packera tampicana*	10	No	FACW
3. *Taraxacum officinale*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	100 (A)		140 (B)

Prevalence Index = B/A = 1.4

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP52

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/1	95	10YR 7/2	5	D	M	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP53
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Terrace | Local relief (concave, convex, none): none | Slope (%): 0
Subregion (LRR): LRR J MLRA 86A | Lat: 32.7024162 | Long: -96.44889523 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X		
Hydric Soil Present?	Yes ____	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Cynodon dactylon*	80	Yes	FACU
2. *Sherardia arvensis*	10	No	NI
3. *Taraxacum officinale*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	10	x 5 =	50
Column Totals:	100 (A)		410 (B)

Prevalence Index = B/A = 4.1

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP53

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP54
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Ditch | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.70157231 | Long: -96.4495977 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	80	Yes	OBL
2. *Pyrrhopappus pauciflorus*	10	No	NI
3. *Erodium cicutarium ssp. cicutarium*	10	No	NI
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	20	x 5 =	100
Column Totals:	100 (A)		180 (B)

Prevalence Index = B/A = 1.8

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP54

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/1	90	10YR 6/3	10	C	PL	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes X No ___ Depth (inches): 1

Water Table Present? Yes X No ___ Depth (inches): 8

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP55
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Ditch | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.70166421 | Long: -96.44948276 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	____	No	X	
Hydric Soil Present?	Yes	X	No	____	**Is the Sampled Area**
Wetland Hydrology Present?	Yes	____	No	X	**within a Wetland?** Yes ____ No X

Remarks: One of the three wetland indicators was present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Lolium perenne*	25	Yes	FACU
2. *Eleocharis palustris*	25	Yes	OBL
3. *Pyrrhopappus pauciflorus*	20	Yes	NI
4. *Medicago lupulina*	20	Yes	FACU
5. *Erodium cicutarium ssp. cicutarium*	5	No	NI
6. *Valerianella radiata*	5	No	FACW
7.			
8.			
9.			
10.			
	100	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	45	x 4 =	180
UPL species	25	x 5 =	125
Column Totals:	100 (A)		340 (B)

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP55

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/1	90	10YR 3/6	10	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Gravel pack

Depth (inches): 6

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP56
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.70511669 | Long: -96.44647177 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	50	Yes	OBL
2. *Scirpus pendulus*	20	Yes	OBL
3. *Phyla fruticosa*	10	No	FAC
4. *Packera tampicana*	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	10	x 2 =	20
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	90 (A)		120 (B)

Prevalence Index = B/A = 1.33

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP56

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	80	10YR 7/2	10	D	M	Clay	
			10YR 3/6	10	C	PL	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 8

Saturation Present? Yes X No ___ Depth (inches): 8

(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP57
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Ditch | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.70538432 | Long: -96.44642006 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 1 to 3 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X	**Is the Sampled Area**		
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X			

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Packera tampicana*	15	Yes	FACW
2. *Cynodon dactylon*	15	Yes	FACU
3. *Allium canadense*	15	Yes	FACU
4. *Lolium perenne*	15	Yes	FACU
5. *Valerianella radiata*	15	Yes	FACW
6. *Chaerophyllum tainturieri*	15	Yes	FAC
7. *Ambrosia artemisiifolia*	15	Yes	FACU
8.			
9.			
10.			
	105	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 7 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	15	x 3 =	45
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	105 (A)		345 (B)

Prevalence Index = B/A = 3.29

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP57

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	100						

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes ___ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP58
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Vegetated flat | Local relief (concave, convex, none): none | Slope (%): 0
Subregion (LRR): LRR J MLRA 86A | Lat: 32.71017097 | Long: -96.45073079 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 0 to 1 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	____	No	X	
Hydric Soil Present?	Yes	____	No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes	____	No	X	**within a Wetland?** Yes ____ No X

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Bromus arvensis*	25	Yes	FACU
2. *Erodium cicutarium ssp. cicutarium*	25	Yes	NI
3. *Setaria viridis*	25	Yes	NI
4. *Lolium perenne*	25	Yes	FACU
5. *Sorghum halepense*	10	No	FACU
6.			
7.			
8.			
9.			
10.			
	110	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	60	x 4 =	240
UPL species	50	x 5 =	250
Column Totals:	110 (A)		490 (B)

Prevalence Index = B/A = 4.45

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP58

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP59
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Depression | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.71655249 | Long: -96.44759176 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 0 to 1 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Celtis laevigata*	15	Yes	FAC
2.			
3.			
4.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Eleocharis palustris*	40	Yes	OBL
2. *Ambrosia trifida*	20	Yes	FAC
3. *Scirpus pendulus*	10	No	OBL
4. *Setaria viridis*	5	No	NI
5.			
6.			
7.			
8.			
9.			
10.			
	75	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 25

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	0	x 2 =	0
FAC species	35	x 3 =	105
FACU species	0	x 4 =	0
UPL species	5	x 5 =	25
Column Totals:	90 (A)		180 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP59

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/1	90	10YR 6/3	10	D	M	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP60
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Vegetated flat | Local relief (concave, convex, none): none | Slope (%): 0
Subregion (LRR): LRR J MLRA 86A | Lat: 32.71666158 | Long: -96.44748259 | Datum: NAD 83
Soil Map Unit Name: Houston Black clay, 0 to 1 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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	____	No	X	
Hydric Soil Present?	Yes	____	No	X	**Is the Sampled Area**
Wetland Hydrology Present?	Yes	____	No	X	**within a Wetland?** Yes ____ No X

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Celtis laevigata*	15	Yes	FAC
2.			
3.			
4.			
	15	= Total Cover	

Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 30' radius)			
1. *Lolium perenne*	75	Yes	FACU
2. *Bromus arvensis*	15	No	FACU
3. *Erodium cicutarium ssp. cicutarium*	15	No	NI
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	105	= Total Cover	

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	90	x 4 =	360
UPL species	15	x 5 =	75
Column Totals:	120 (A)		480 (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP60

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	100					Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

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

Remarks:
Hydrology indicators are not present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP61
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Stream terrace | Local relief (concave, convex, none): concave | Slope (%): 0-1
Subregion (LRR): LRR J MLRA 86A | Lat: 32.72779938 | Long: -96.45715265 | Datum: NAD 83
Soil Map Unit Name: Heiden clay, 3 to 5 percent slopes | NWI classification: R4SBC
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	
Hydric Soil Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Wetland Hydrology Present?	Yes X	No ____	

Remarks: All of the three wetland indicators were present. This point is located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Salix nigra*	10	Yes	FACW
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Typha angustifolia*	40	Yes	OBL
2. *Ranunculus sardous*	15	Yes	FAC
3. *Rumex crispus*	15	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	70	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Ipomoea cordatotriloba*	20	Yes	FAC
2.			
	20	= Total Cover	

% Bare Ground in Herb Stratum 30

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	10	x 2 =	20
FAC species	50	x 3 =	150
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		210 (B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
X 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Hydrophytic vegetation is present.

SOIL

Sampling Point: WDP61

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	90	10YR 3/6	10	C	PL	Clay	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No ___

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

Remarks:
Hydrology indicators are present.

WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: FM 741 EA | City/County: Kaufman County | Sampling Date: 04/29/2022
Applicant/Owner: Texas Department of Transportation | State: Texas | Sampling Point: WDP62
Investigator(s): CW and JK | Section, Township, Range: N/A
Landform (hillslope, terrace, etc): Hillslope | Local relief (concave, convex, none): convex | Slope (%): 3-5
Subregion (LRR): LRR J MLRA 86A | Lat: 32.72768968 | Long: -96.45700053 | Datum: NAD 83
Soil Map Unit Name: Heiden clay, 3 to 5 percent slopes | NWI classification: NA
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 ____	No X	**Is the Sampled Area**		
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X			

Remarks: None of the three wetland indicators were present. This point is not located within a wetland. The Antecedent Precipitation Tool scored a 12, indicating conditions during the site investigations were normal.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	15	Yes	FACW
2.			
3.			
4.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. *Rubus trivialis*	25	Yes	FACU
2.			
3.			
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 30' radius)			
1. *Sorghum halepense*	40	Yes	FACU
2. *Rumex crispus*	30	Yes	FAC
3. *Torilis nodosa*	25	Yes	NI
4. *Erigeron canadensis*	10	No	FACU
5. *Bromus arvensis*	10	No	FACU
6.			
7.			
8.			
9.			
10.			
	115	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *Toxicodendron radicans*	25	Yes	FACU
2.			
	25	= Total Cover	

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	30	x 3 =	90
FACU species	110	x 4 =	440
UPL species	25	x 5 =	125
Column Totals:	180 (A)		685 (B)

Prevalence Index = B/A = 3.81

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Hydrophytic vegetation is not present.

SOIL

Sampling Point: WDP62

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/4	100					Clay Loam	Gravel present on surface

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR F)**
- ___ 1 cm Muck (A9) **(LRR F, G, H)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR F)**
- ___ Sandy Gleyed Marix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ High Plains Depressions (F16) **(MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR I, J)**
- ___ Coast Prairie Redox (A16) **(LRR F, G, H)**
- ___ Dark Surface (S7) **(LRR G)**
- ___ High Plains Depressions (F16) **(LRR H outside of MLRA 72 & 73)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Cement

Depth (inches): 10

Hydric Soil Present? Yes ___ No X

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Oxidized Rhizospheres along Living Roots (C3) **(where not tilled)**
- ___ Presence of Reduced Iron (C4)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Oxidized Rhizospheres on Living Roots (C3) **(where tilled)**
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)
- ___ Frost-Heave Hummocks (D7) **(LRR F)**

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

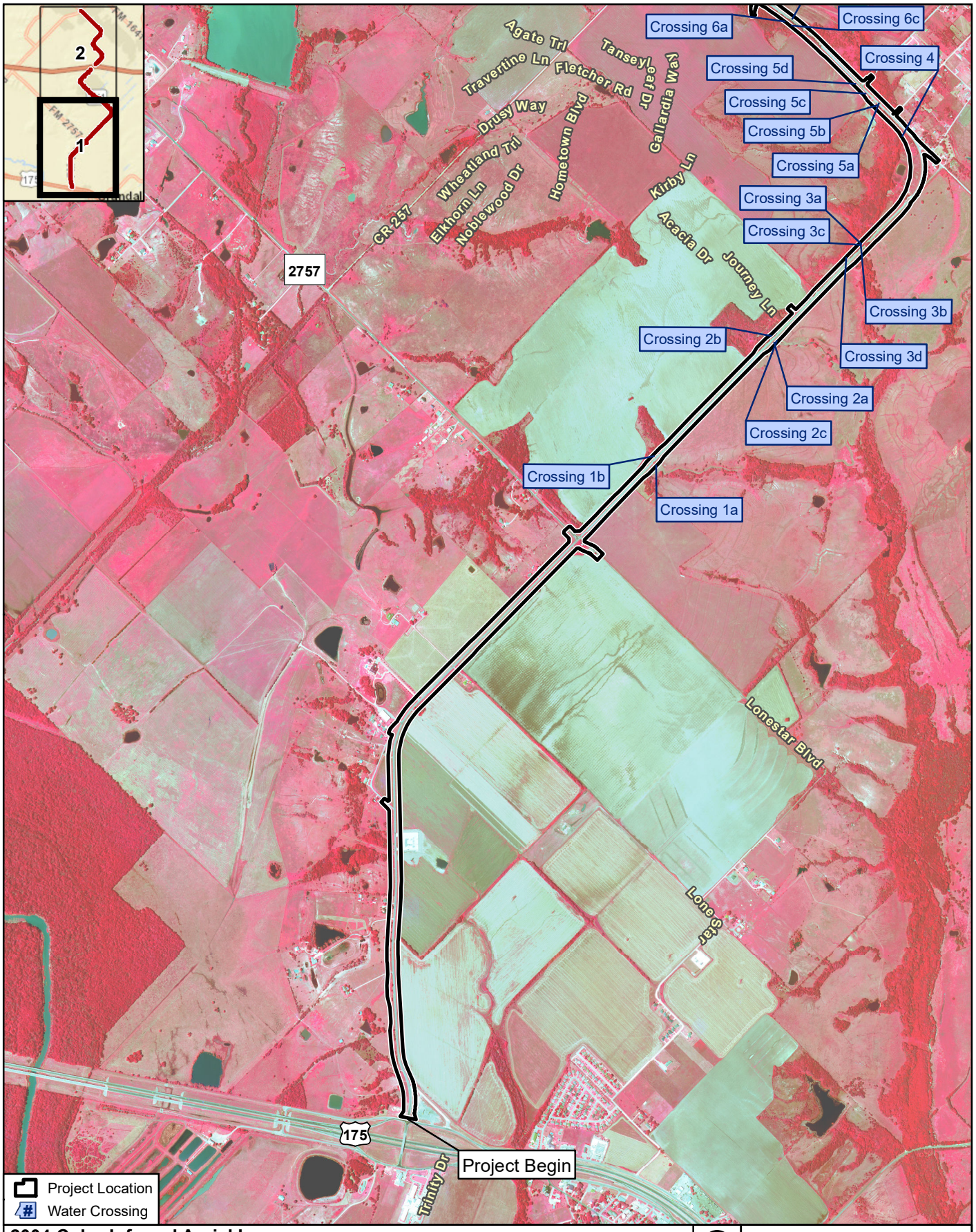
Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? Yes ___ No X

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

Remarks:
Hydrology indicators are not present.

Attachment 3 – Historical Aerial Photographs



2004 Color Infrared Aerial Imagery
Sheet 1 of 2

FM 741

Data Source: Stantec (2022)
Aerial Source: NAIP (2004)

CSJ: 1092-01-021

0 2,000 Feet
0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 5/11/2022

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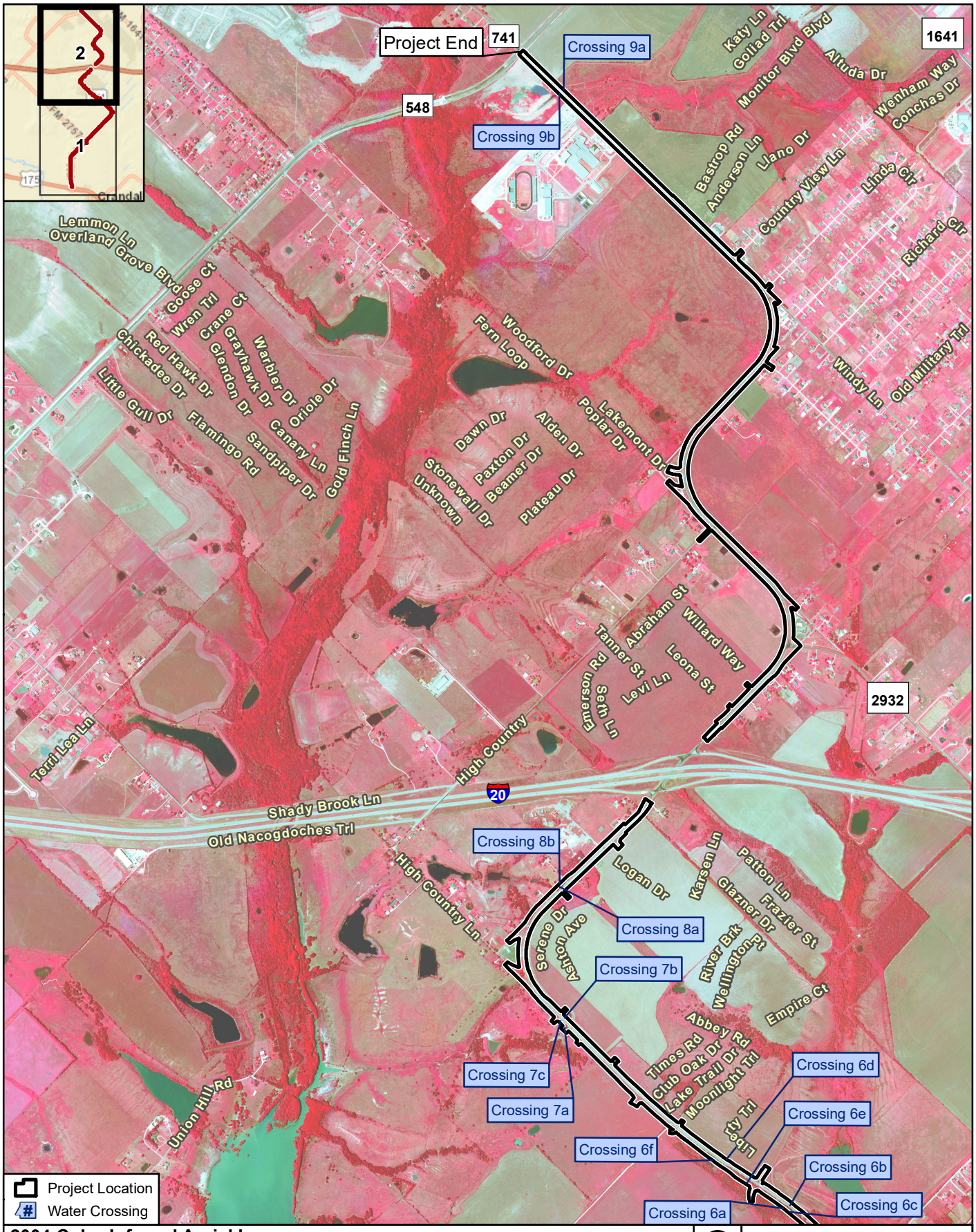

2004 Color Infrared Aerial Imagery
Sheet 2 of 2

FM 741

CSJ: 1092-01-021

Data Source: Stantec (2022)
Aerial Source: NAIP (2004)

0 2,000 Feet
0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 5/11/2022

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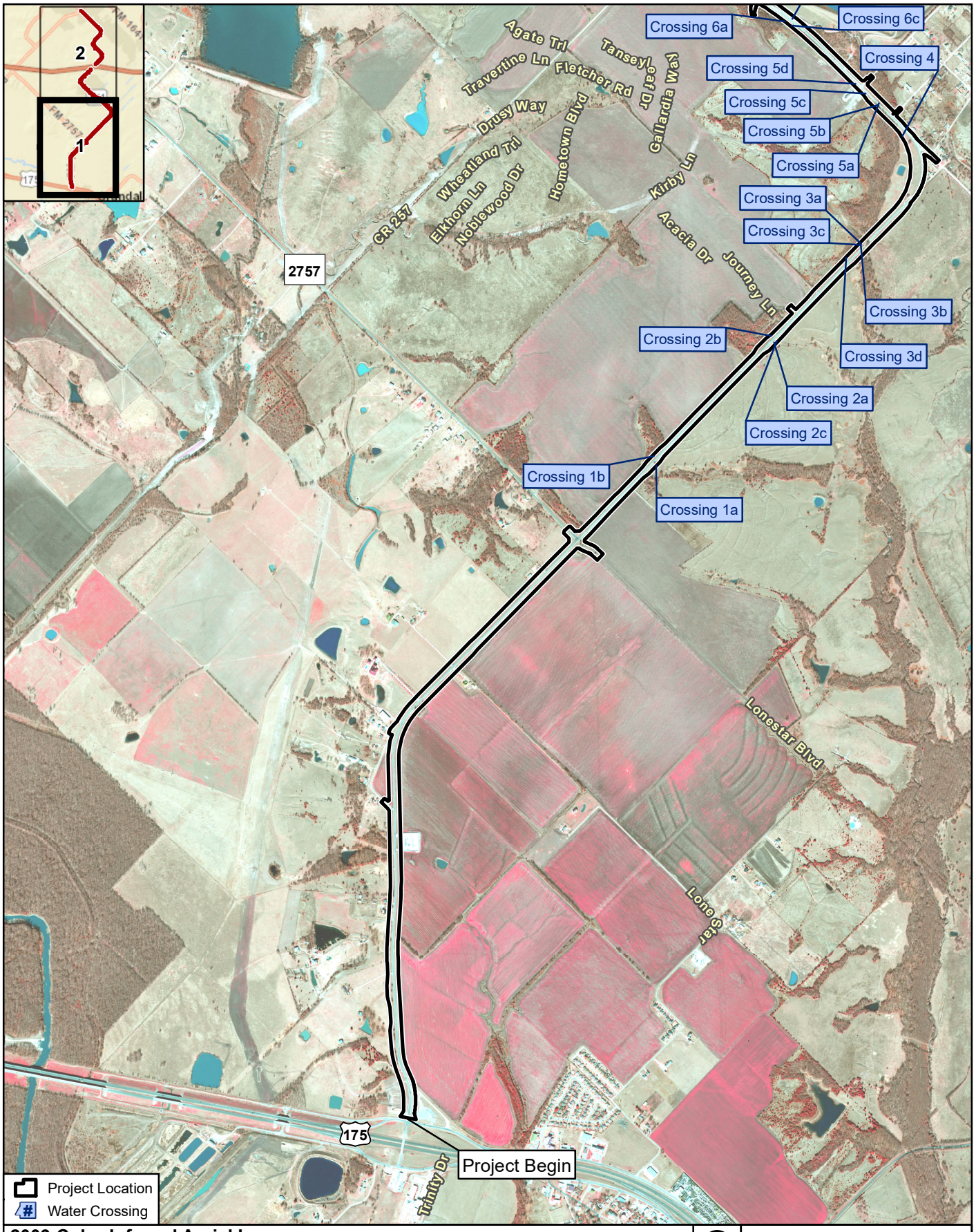

2009 Color Infrared Aerial Imagery
Sheet 1 of 2

FM 741

Data Source: Stantec (2022)
Aerial Source: TOP (2009)

CSJ: 1092-01-021

0 2,000 Feet
0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 5/11/2022

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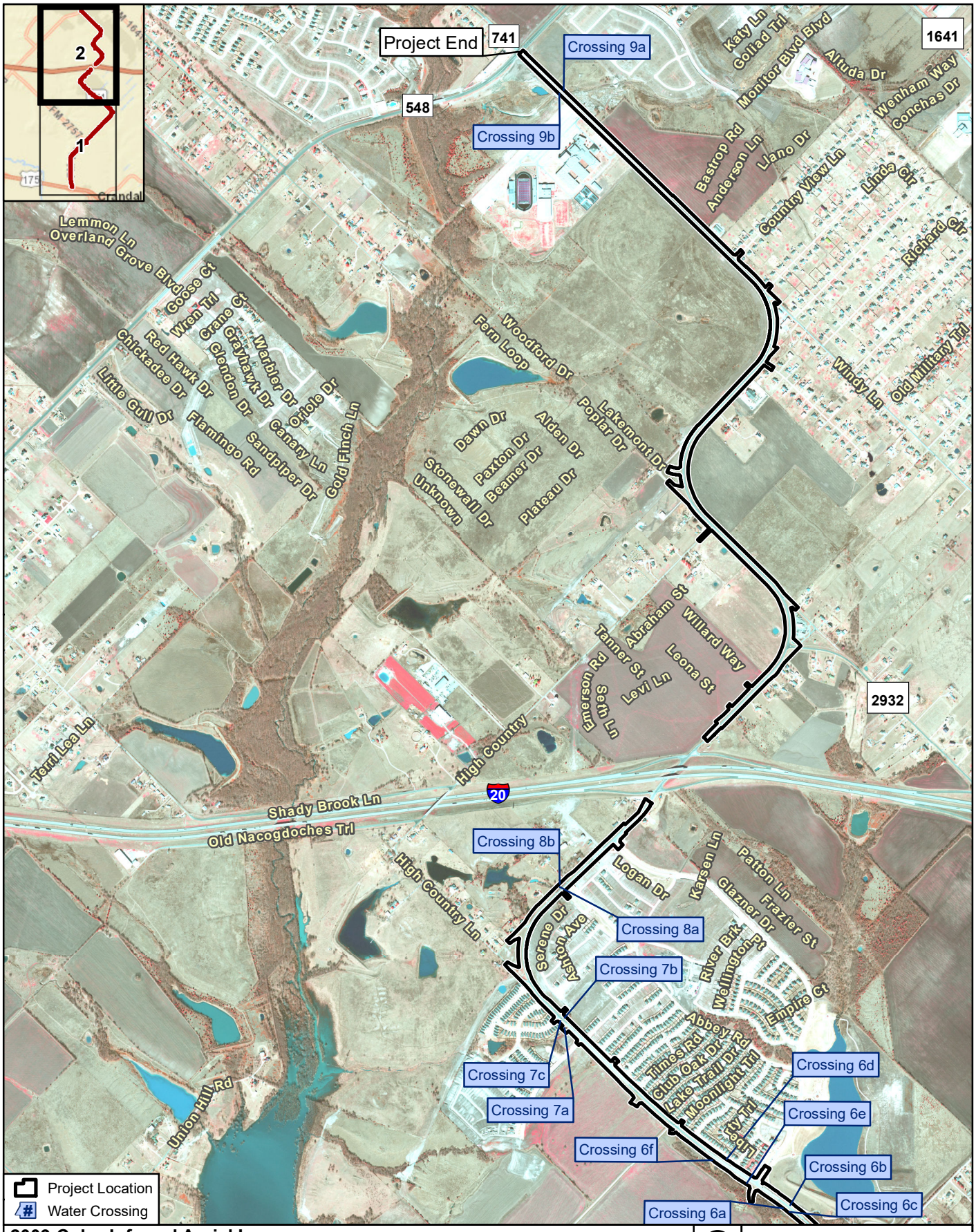
Project End
741
548
1641
2932
20
Crossing 9a
Crossing 9b
Crossing 8a
Crossing 8b
Crossing 7a
Crossing 7b
Crossing 7c
Crossing 6a
Crossing 6b
Crossing 6c
Crossing 6d
Crossing 6e
Crossing 6f
Project Location
Water Crossing
Crandall
Lemmon Ln
Overland Grove Blvd
Goose Ct
Wren Trl
Crane Ct
Red Hawk Dr
Chickadee Dr
Little Gull Dr
Glendon Dr
Grayhawk Dr
Warbler Dr
Oriole Dr
Flamingo Rd
Canary Ln
Sandpiper Dr
Gold Finch Ln
Fern Loop
Woodford Dr
Dawn Dr
Paxton Dr
Beamer Dr
Stonewall Dr
Unknown
Alden Dr
Poplar Dr
Lakemont Dr
Plateau Dr
Bastrop Rd
Anderson Ln
Llano Dr
Country View Ln
Linda Ct
Richard Cir
Windy Ln
Old Military Trl
Katy Ln
Goliad Trl
Monitor Blvd Blvd
Altuda Dr
Wenham Way
Conchas Dr
Abraham St
Willard Way
Tanner St
Leona St
Emerson Rd
Seth Ln
Levi Ln
Terri Lea Ln
High Country
Shady Brook Ln
Old Nacogdoches Trl
High Country Ln
Logan Dr
Karsen Ln
Patton Ln
Glazner Dr
Frazier St
Serene Dr
Ashton Ave
River Brk
Wellington Pt
Empire Ct
Abbey Rd
Times Rd
Club Oak Dr
Lake Trail Dr
Moonlight Trl
Union Hill Rd
2009 Color Infrared Aerial Imagery
Sheet 2 of 2
FM 741
Data Source: Stantec (2022)
Aerial Source: TOP (2009)
CSJ: 1092-01-021
0 2,000 Feet
0 600 Meters
1 in = 2,000 feet
Scale: 1:24,000
Date: 5/11/2022
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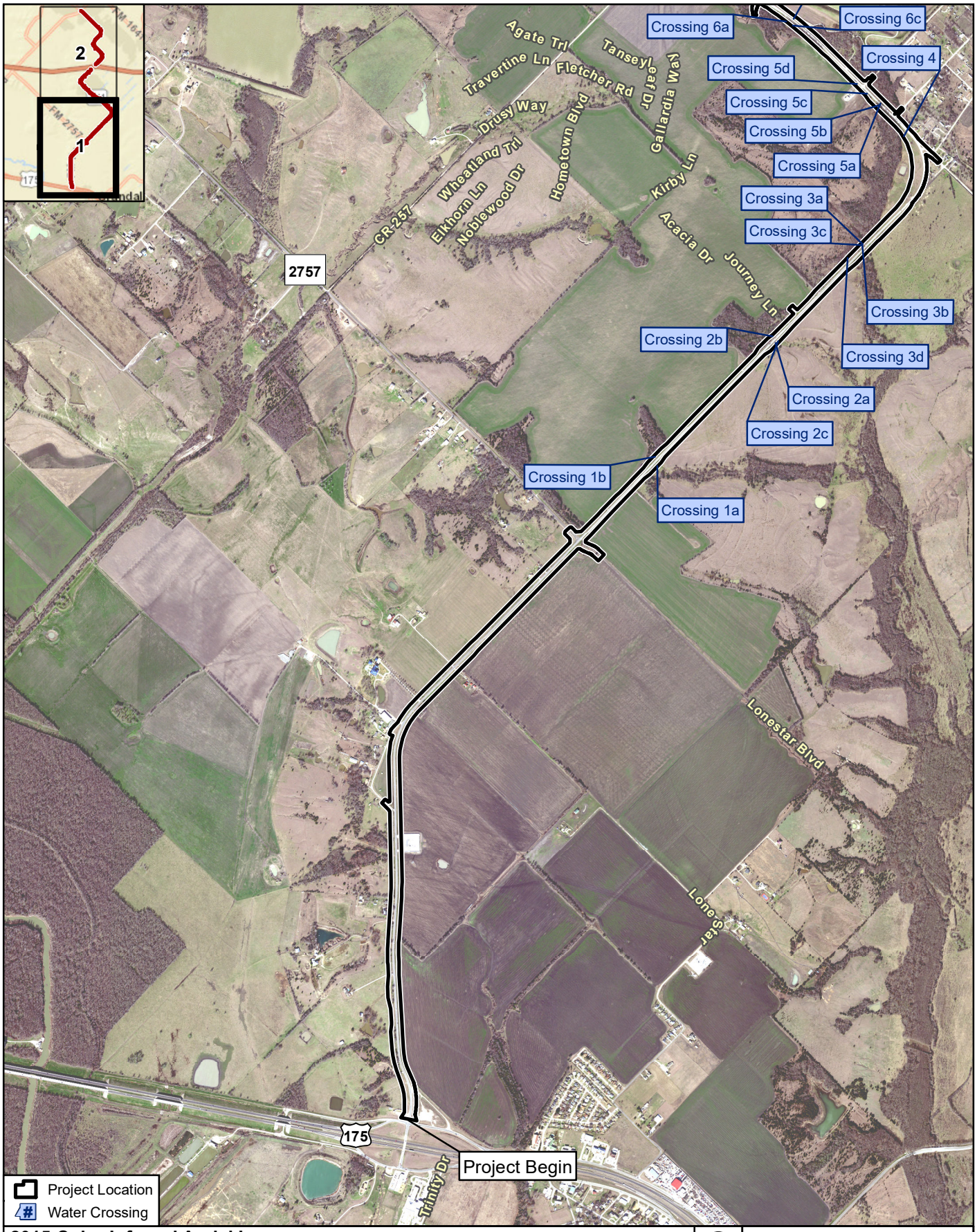

2015 Color Infrared Aerial Imagery
Sheet 1 of 2

FM 741

Data Source: Stantec (2022)
Aerial Source: TOP (2015)

CSJ: 1092-01-021

0 2,000 Feet
0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 5/11/2022

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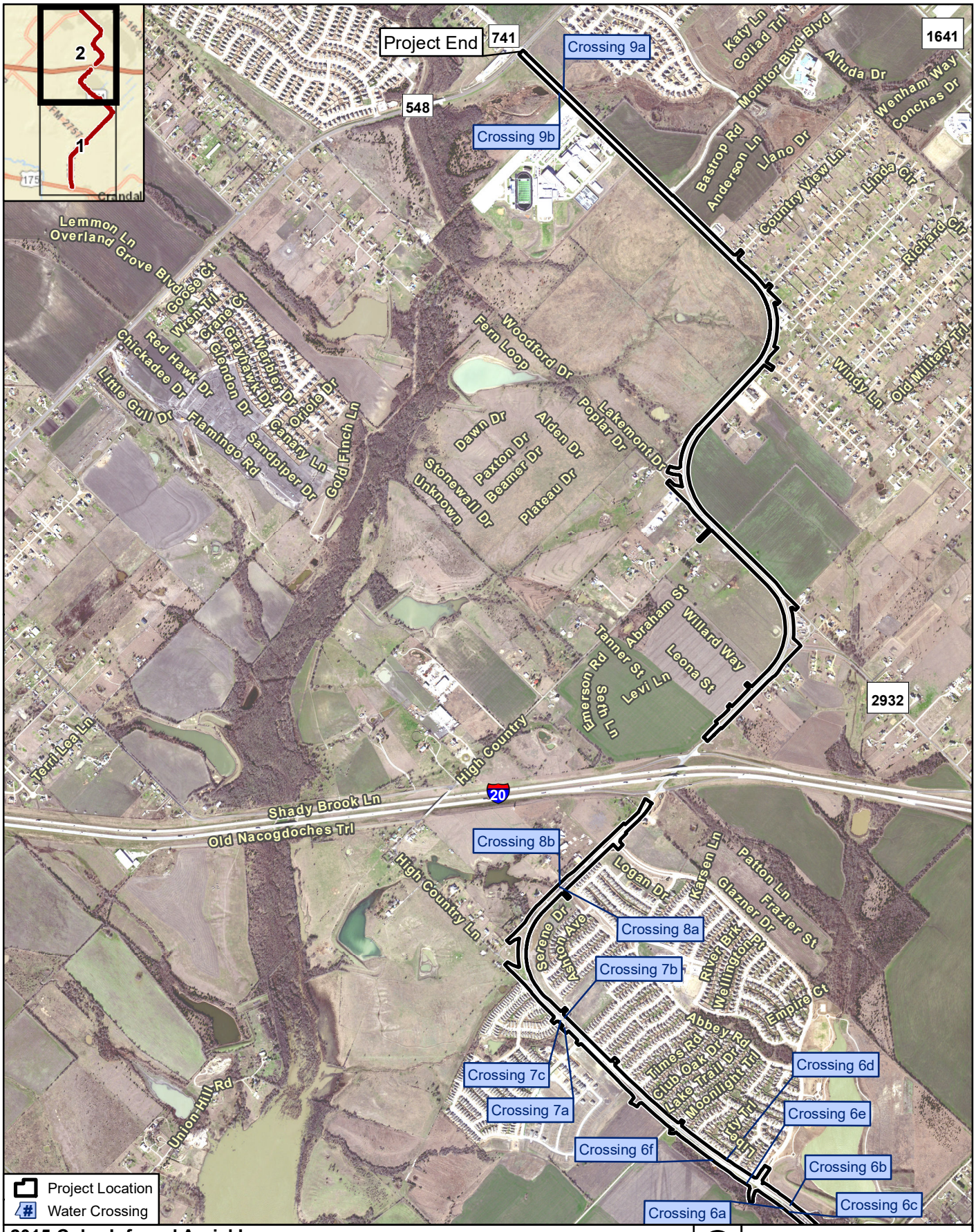


2015 Color Infrared Aerial Imagery
Sheet 2 of 2

FM 741

Data Source: Stantec (2022)
Aerial Source: TOP (2015)

CSJ: 1092-01-021

0 2,000 Feet
0 600 Meters

1 in = 2,000 feet
Scale: 1:24,000
Date: 5/11/2022

G:\Projects\TXDOT\FM741_EA\FM741_EA JD_IR_Imagery_20220509_LG.mxd

Attachment 4 - Site Photographs

Photo 001: Wetland determination data point (WDP) 01 (Wetland)

Photo 002: WDP02 (Upland)

Photo 003: WDP03 (Wetland)

Photo 004: WDP04 (Upland)

Photo 005: WDP05 (Upland)

Photo 006: WDP06 (Upland)

Photo 007: WDP07 (Upland)

Photo 008: WDP08 (Upland)

Photo 009: WDP09 (Wetland)

Photo 010: WDP10 (Upland)

Photo 011: WDP11 (Upland)

Photo 012: WDP12 (Upland)

Photo 013: WDP13 (Wetland)

Photo 014: WDP14 (Upland)

Photo 015: WDP15 (Wetland)

Photo 016: WDP16 (Upland)

Photo 017: WDP17 (Upland)

Photo 018: WDP18 (Upland)

Photo 019: WDP19 (Wetland)

Photo 020: WDP20 (Upland)

Photo 021: WDP21 (Upland)

Photo 022: WDP22 (Upland)

Photo 023: WDP23 (Wetland)

Photo 024: WDP24 (Upland)

Photo 025: WDP25 (Wetland)

Photo 026: WDP26 (Upland)

Photo 027: WDP27 (Upland)

Photo 028: WDP28 (Wetland)

Photo 029: WDP29 (Upland)

Photo 030: WDP30 (Wetland)

Photo 031: WDP31 (Upland)

Photo 032: WDP32 (Wetland)

Photo 033: WDP33 (Upland)

Photo 034: WDP34 (Upland)

Photo 035: WDP35 (Wetland)

Photo 036: WDP36 (Wetland)

Photo 037: WDP37 (Upland)

Photo 038: WDP38 (Wetland)

Photo 039: WDP39 (Upland)

Photo 040: WDP40 (Wetland)

Photo 041: WDP41 (Upland)

Photo 042: WDP42 (Wetland)

Photo 043: WDP43 (Upland)

Photo 044: WDP44 (Wetland)

Photo 045: WDP45 (Upland)

Photo 046: WDP46 (Wetland)

Photo 047: WDP47 (Upland)

Photo 048: WDP48 (Wetland)

Photo 049: WDP49 (Upland)

Photo 050: WDP50 (Wetland)

Photo 051: WDP51 (Upland)

Photo 052: WDP52 (Wetland)

Photo 053: WDP53 (Upland)

Photo 054: WDP54 (Wetland)

Photo 055: WDP55 (Upland)

Photo 056: WDP56 (Wetland)

Photo 057: WDP57 (Upland)

Photo 058: WDP58 (Upland)

Photo 059: WDP59 (Wetland)

Photo 060: WDP60 (Upland)

Photo 061: WDP61 (Wetland)

Photo 062: WDP62 (Upland)

Photo 063: Wetland 1 – Palustrine emergent wetland.

Photo 064: Wetland 2 – Palustrine emergent wetland.

Photo 065: Wetland 3 – Palustrine emergent wetland.

Photo 066: Upstream view of Water 1 – Ephemeral stream.

Photo 067: Downstream view of Water 1 – Ephemeral stream.

Photo 068: Upstream view of Water 2 – Intermittent stream.

Photo 069: Downstream view of Water 2 – Intermittent stream.

Photo 070: Wetland 4 – Palustrine scrub/shrub wetland.

Photo 071: Wetland 5 – Palustrine emergent wetland.

Photo 072: Upstream view of Water 3 (Unnamed tributary to Buffalo Creek) – Perennial stream.

Photo 073: Water 3 (Unnamed tributary to Buffalo Creek) at the FM 741 bridge – Perennial stream.

Photo 074: Downstream view of Water 3 (Unnamed tributary to Buffalo Creek) – Perennial stream.

Photo 075: Upstream view of Water 4 – Ephemeral stream.

Photo 076: Downstream view of Water 4 – Ephemeral stream.

Photo 077: Upstream view of Water 5 – Ephemeral stream.

Photo 078: Downstream view of Water 5 – Ephemeral stream.

Photo 079: Wetland 6 – Palustrine forested wetland.

Photo 080: Wetland 7 – Assumed palustrine emergent wetland. No right-of-entry was granted to delineate this feature.

Photo 081: Upstream view of Water 3 (Unnamed tributary to Buffalo Creek) at a second location along the FM 741 roadway – Perennial stream.

Photo 082: Downstream view of Water 3 (Unnamed tributary to Buffalo Creek) at a second location along the FM 741 roadway – Perennial stream.

Photo 083: Upstream view of Water 6 – Ephemeral stream.

Photo 084: Downstream view of Water 6 – Ephemeral stream.

Photo 085: Wetland 8 – Palustrine emergent wetland.

Photo 086: Wetland 9 – Palustrine emergent wetland.

Photo 087: Upstream view of Water 7 – Intermittent stream.

Photo 088: Downstream view of Water 7 – Intermittent stream.

Photo 089: Upstream view of Water 7 – Intermittent stream.

Photo 090: Downstream view of Water 7 – Intermittent stream.

Photo 091: Offsite source of hydrology to Water 7.

Photo 092: Pond outlet - offsite source of hydrology to Water 7.

Photo 093: Upstream view of Water 8 – Ephemeral stream.

Photo 094: Downstream view of Water 8 – Ephemeral stream.

Photo 095: Wetland 10 – Palustrine scrub-shrub wetland.

Photo 096: Wetland 11 – Palustrine scrub-shrub wetland.

Photo 097: Wetland 12 – Palustrine emergent wetland.

Photo 098: Another view of Wetland 12 – Palustrine emergent wetland.

Photo 099: Wetland 13 – Palustrine scrub-shrub wetland.

Photo 100: Upstream view of Water 9 – Ephemeral stream.

Photo 101: Downstream view of Water 9 – Ephemeral stream.

Photo 102: Wetland 14 – Palustrine emergent wetland.

Photo 103: Wetland 15 – Palustrine emergent wetland.

Photo 104: Wetland 16 – Palustrine emergent wetland.

Photo 105: Wetland 17 – Palustrine emergent wetland.

Photo 106: Wetland 18 – Assumed palustrine emergent wetland. No right-of-entry was granted to delineate this feature.

Photo 107: Downstream view of Water 10 – Ephemeral stream.

Photo 108: Upstream view of Water 10 (offsite channelized stream) – Ephemeral stream.

Photo 109: Wetland 19 – Assumed palustrine emergent wetland. No right-of-entry was granted to delineate this feature.

Photo 110: Wetland 20 – Palustrine emergent wetland.

Photo 111: Wetland 21 – Palustrine emergent wetland.

Photo 112: Wetland 22 – Palustrine emergent wetland.

Photo 113: Wetland 23 – Palustrine emergent wetland.

Photo 114: Wetland 24 – Palustrine emergent wetland.

Photo 115: Wetland 25 – Assumed palustrine emergent wetland. Feature could not be delineated due to aggressive dog.

Photo 116: Wetland 26 – Palustrine emergent wetland.

Photo 117: Wetland 27 – Palustrine emergent wetland.

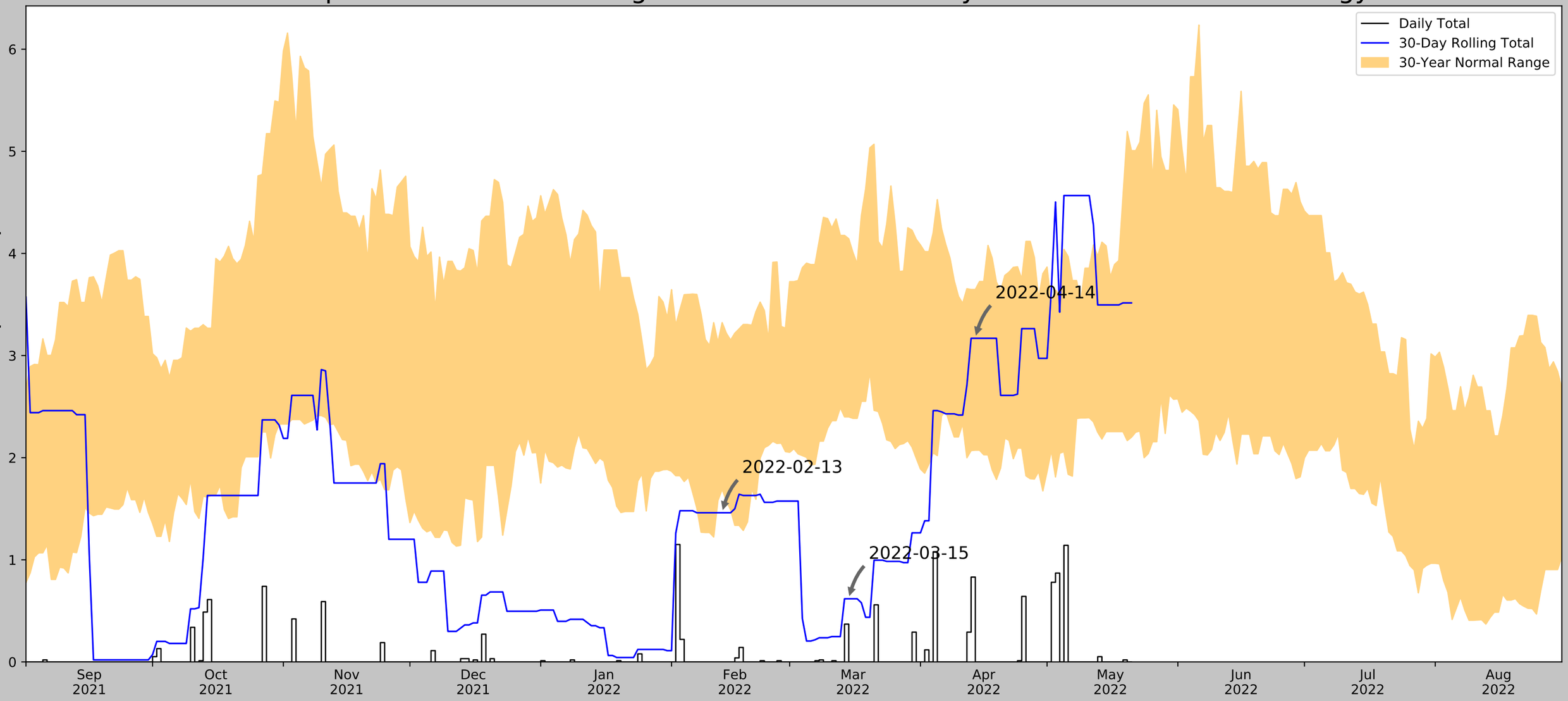
Photo 118: Upstream view of Water 11 – Intermittent stream.

Photo 119: Downstream view of Water 11 – Intermittent stream.

Photo 120: Wetland 28 – Palustrine emergent wetland.

Attachment 5 – USACE Antecedent Precipitation Tool Results

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.67818036, -96.44311328
Observation Date	2022-04-14
Elevation (ft)	420.4
Drought Index (PDSI)	Severe drought
WebWIMP H_2O Balance	Wet Season

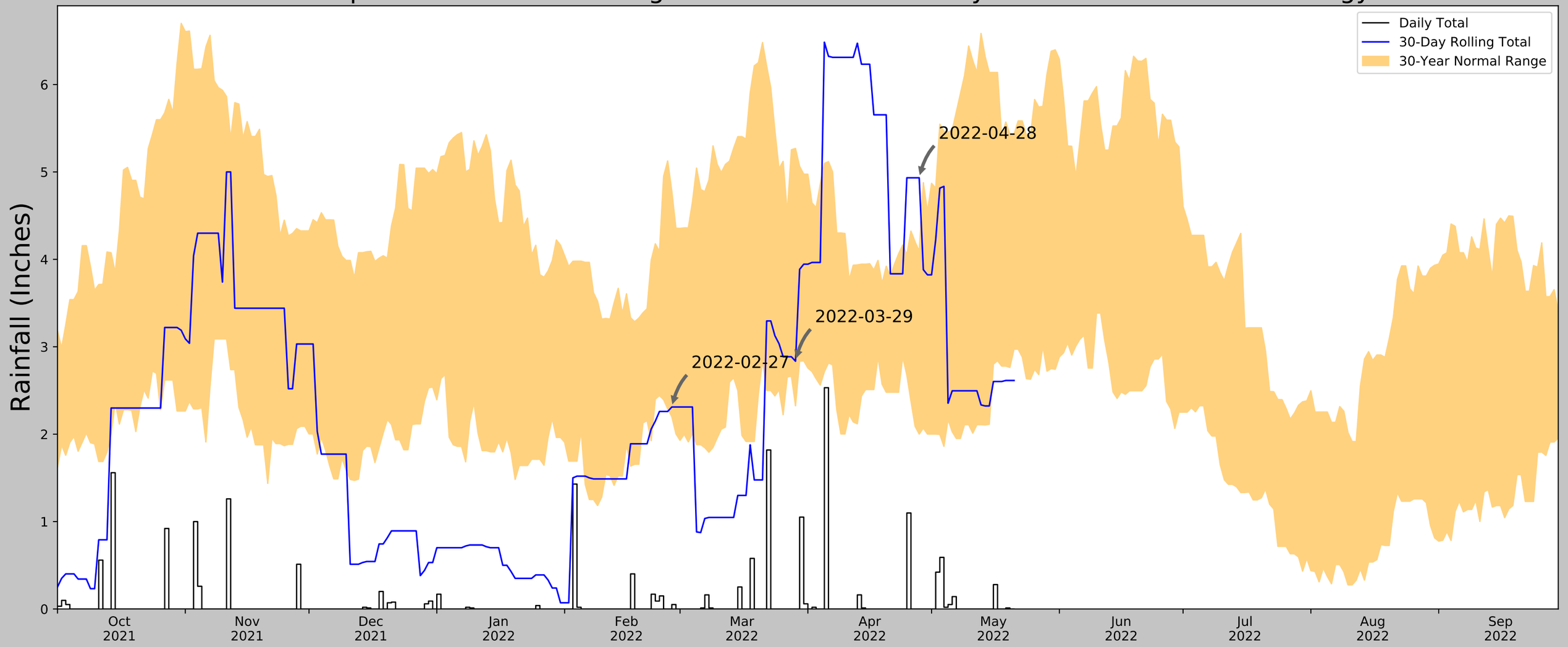
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2022-04-14	2.073228	3.646851	3.169291	Normal	2	3	6
2022-03-15	2.399606	4.144095	0.61811	Dry	1	2	2
2022-02-13	1.690945	3.322835	1.46063	Dry	1	1	1
Result							Drier than Normal - 9

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
TERRELL MUNI AP	32.71, -96.2672	475.066	10.462	54.666	5.28	8553	90
TERRELL 1.3 NNE	32.7494, -96.2833	538.058	2.879	62.992	1.477	5	0
TERRELL	32.7336, -96.3225	495.079	3.604	20.013	1.694	2786	0
TERRELL 1.8 NW	32.7524, -96.3348	512.139	4.901	37.073	2.387	1	0
TERRELL 8.2 SSW	32.6276, -96.3586	429.134	7.789	45.932	3.863	3	0
KAUFMAN 3 SE	32.5589, -96.2725	419.948	10.445	55.118	5.276	5	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.67818036, -96.44311328
Observation Date	2022-04-28
Elevation (ft)	420.4
Drought Index (PDSI)	Severe drought
WebWIMP H_2O Balance	Wet Season

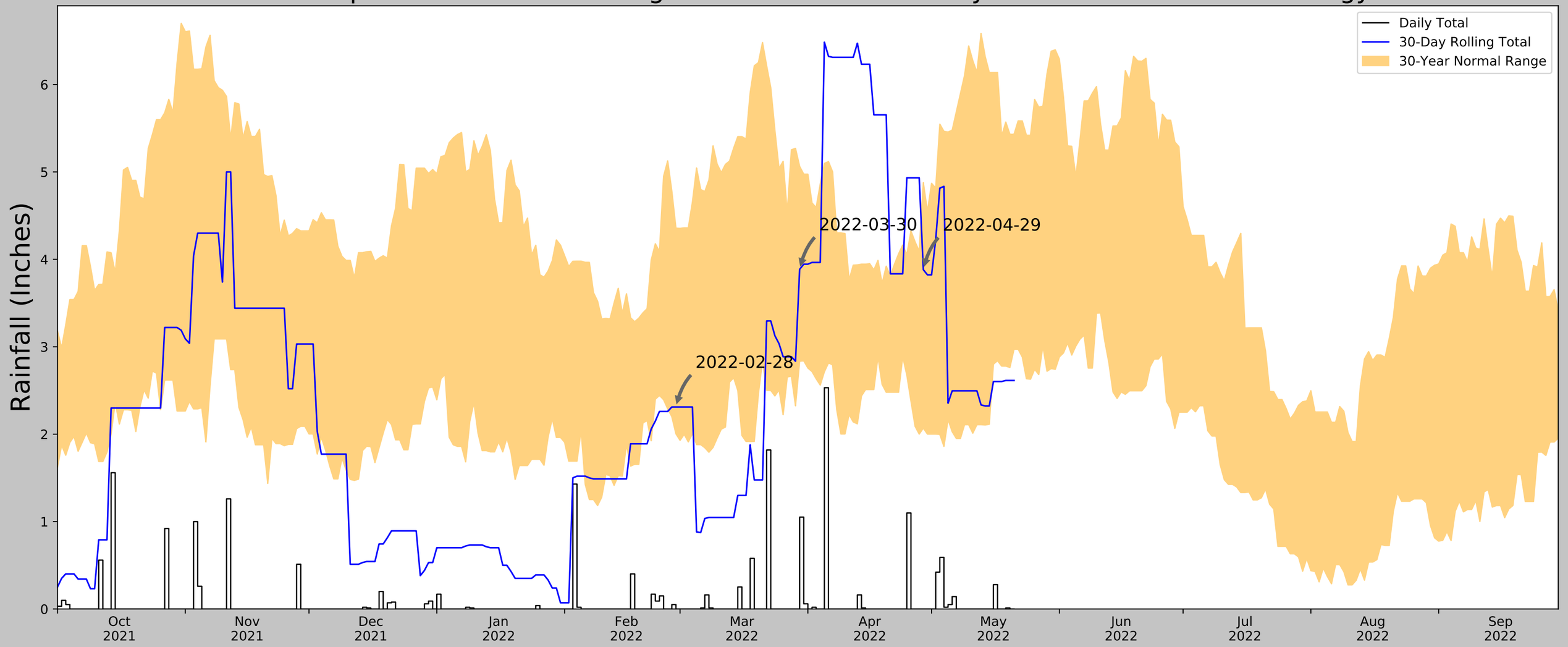
Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PLANO 1.8 SE	33.0306, -96.7211	643.045	29.21	222.645	19.648	712	0
LUCAS 3.7 E	33.108, -96.515	532.152	29.989	111.752	16.846	164	0
WYLIE 2.6 SW	33.0171, -96.5463	550.853	24.171	130.453	14.03	394	0
WYLIE 2.9 SW	32.9887, -96.553	499.016	22.383	78.616	11.832	1262	0
RICHARDSON 2.2 NW	32.9921, -96.7397	666.995	27.693	246.595	19.291	2457	88
PLANO 2.3 SSE	33.0148, -96.7352	666.995	28.782	246.595	20.049	51	1
MURPHY 0.9 SSW	33.0005, -96.6116	563.976	24.323	143.576	14.438	246	0
WYLIE 0.9 S	33.0297, -96.5163	530.84	24.656	110.44	13.818	2	0
LAVON 0.7 NNW	33.0359, -96.441	546.916	24.716	126.516	14.249	21	1
PLANO 4.5 ESE	33.025, -96.6724	610.892	27.411	190.492	17.557	1	0
DALLAS 3.7 E	32.7998, -96.7012	532.152	17.193	111.752	9.658	380	0
RICHARDSON 2.4 WSW	32.9573, -96.7469	623.032	26.136	202.632	17.057	7	0
ROWLETT 2.3 NW	32.9321, -96.5769	541.011	19.188	120.611	10.949	12	0
UNIVERSITY PARK 3.1 WNW	32.863, -96.845	521.982	26.612	101.582	14.679	368	0
MESQUITE 2.4 W	32.7709, -96.6409	518.045	13.161	97.645	7.208	3	0
WAXAHACHIE 2.6 ENE	32.4225, -96.8108	568.898	27.76	148.498	16.614	2	0
CRANDALL	32.6297, -96.4581	430.118	3.461	9.718	1.591	857	0
CANTON 5 W	32.5669, -95.9578	484.908	29.27	64.508	15.06	3040	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	32.67818036, -96.44311328
Observation Date	2022-04-29
Elevation (ft)	420.4
Drought Index (PDSI)	Severe drought
WebWIMP H_2O Balance	Wet Season

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PLANO 1.8 SE	33.0306, -96.7211	643.045	29.21	222.645	19.648	712	0
LUCAS 3.7 E	33.108, -96.515	532.152	29.989	111.752	16.846	164	0
WYLIE 2.6 SW	33.0171, -96.5463	550.853	24.171	130.453	14.03	394	0
WYLIE 2.9 SW	32.9887, -96.553	499.016	22.383	78.616	11.832	1262	0
RICHARDSON 2.2 NW	32.9921, -96.7397	666.995	27.693	246.595	19.291	2457	88
PLANO 2.3 SSE	33.0148, -96.7352	666.995	28.782	246.595	20.049	51	1
MURPHY 0.9 SSW	33.0005, -96.6116	563.976	24.323	143.576	14.438	246	0
WYLIE 0.9 S	33.0297, -96.5163	530.84	24.656	110.44	13.818	2	0
LAVON 0.7 NNW	33.0359, -96.441	546.916	24.716	126.516	14.249	21	1
PLANO 4.5 ESE	33.025, -96.6724	610.892	27.411	190.492	17.557	1	0
DALLAS 3.7 E	32.7998, -96.7012	532.152	17.193	111.752	9.658	380	0
RICHARDSON 2.4 WSW	32.9573, -96.7469	623.032	26.136	202.632	17.057	7	0
ROWLETT 2.3 NW	32.9321, -96.5769	541.011	19.188	120.611	10.949	12	0
UNIVERSITY PARK 3.1 WNW	32.863, -96.845	521.982	26.612	101.582	14.679	368	0
MESQUITE 2.4 W	32.7709, -96.6409	518.045	13.161	97.645	7.208	3	0
WAXAHACHIE 2.6 ENE	32.4225, -96.8108	568.898	27.76	148.498	16.614	2	0
CRANDALL	32.6297, -96.4581	430.118	3.461	9.718	1.591	857	0
CANTON 5 W	32.5669, -95.9578	484.908	29.27	64.508	15.06	3040	0