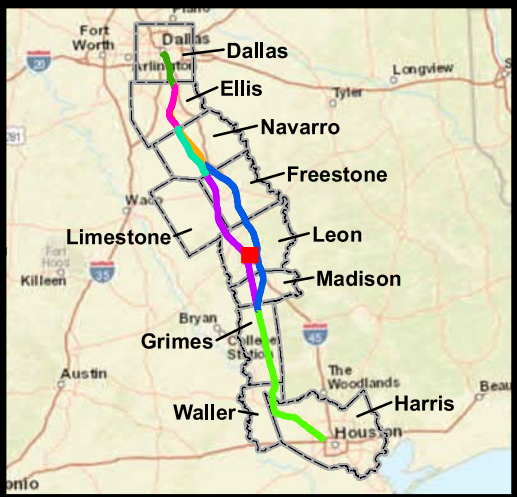
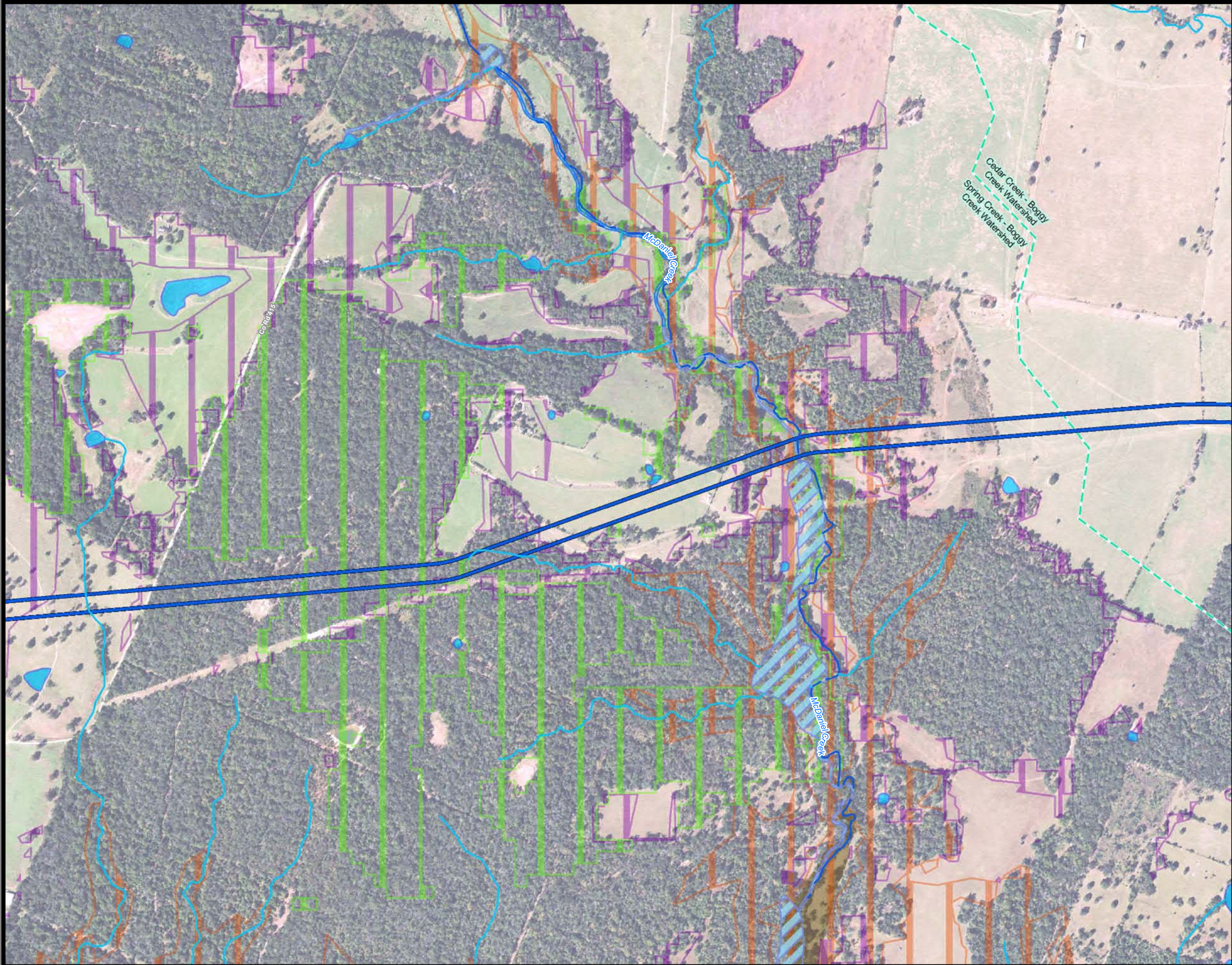


**Dallas to Houston High-Speed Rail
Draft Environmental Impact Statement**

**Appendix D:
Natural Resources
Mapbook Set 3 of 4**



**Federal Railroad
Administration**



**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3C
Sheet 130 of 257**

Legend

Limits of Disturbance

- Segment 1
- Segment 2A
- Segment 2B
- Segment 3A
- Segment 3B
- Segment 3C
- Segment 4
- Segment 5

Track Configuration

- Viaduct
- Embankment
- Cut
- Half Mile Buffer
- City Boundary
- County Boundary
- Railroad
- Municipal Setting Designation (MSD)

Potential Habitat

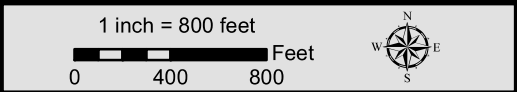
- Houston Toad
- Large-fruited Sand Verbena
- Navasota Ladies'-tresses
- Endangered Species
- Threatened Species
- U.S. Army Corps of Engineers (USACE) Project Area
- Watershed (HUC 12) Boundary
- Public Water Supply
- Groundwater Well

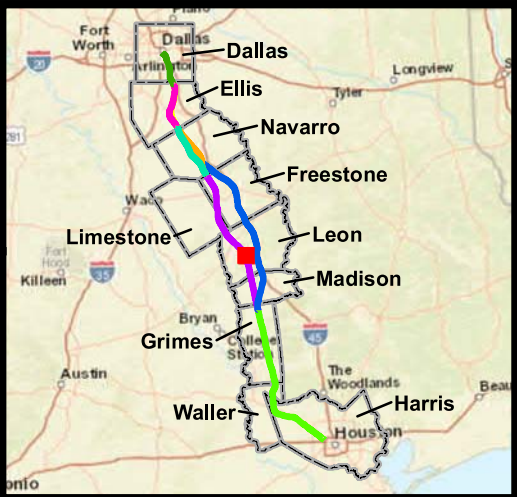
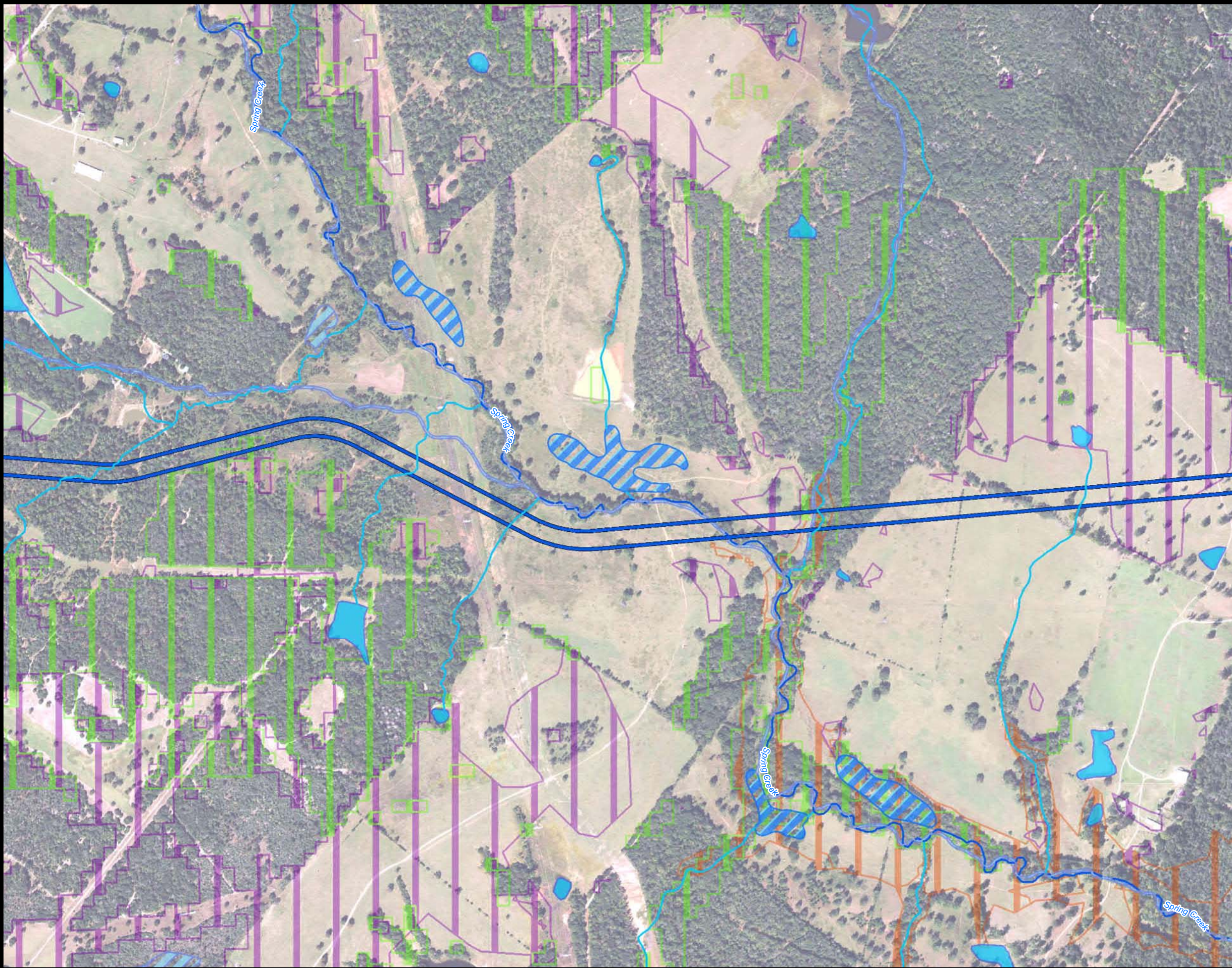
- Impaired Waters with Total Maximum Daily Load (TMDL)
- Impaired Waters
- Federal Emergency Management Agency (FEMA) Flood Zone**
 - A - 1%
 - AE - 1%
 - AO - 1%
 - X - 0.2%
- Field-Collected Data**
 - Perennial Stream/River
 - Intermittent Stream/River
 - Ephemeral Stream/River
 - Other Stream/River
 - Lake/Pond
 - Emergent Wetland
 - Forested Wetland
 - Scrub/Shrub Wetland
- National Hydrography Dataset (NHD)**
 - Perennial Stream/River
 - Intermittent Stream/River
 - Artificial Stream/Canal
 - Lake/Pond
 - Reservoir
 - Swamp/Marsh
- National Wetlands Inventory (NWI)**
 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Other

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Aerial Imagery: USDA NAIP 2014





Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3C
Sheet 131 of 257

- Legend**

Limits of Disturbance

 - Segment 1
 - Segment 2A
 - Segment 2B
 - Segment 3A
 - Segment 3B
 - Segment 3C
 - Segment 4
 - Segment 5

Track Configuration

 - Viaduct
 - Embankment
 - Cut
 - Half Mile Buffer
 - City Boundary
 - County Boundary
 - Railroad
 - Municipal Setting Designation (MSD)

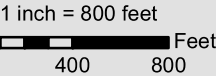
Potential Habitat

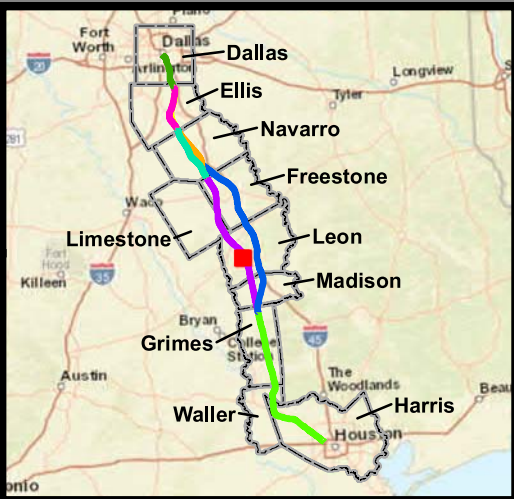
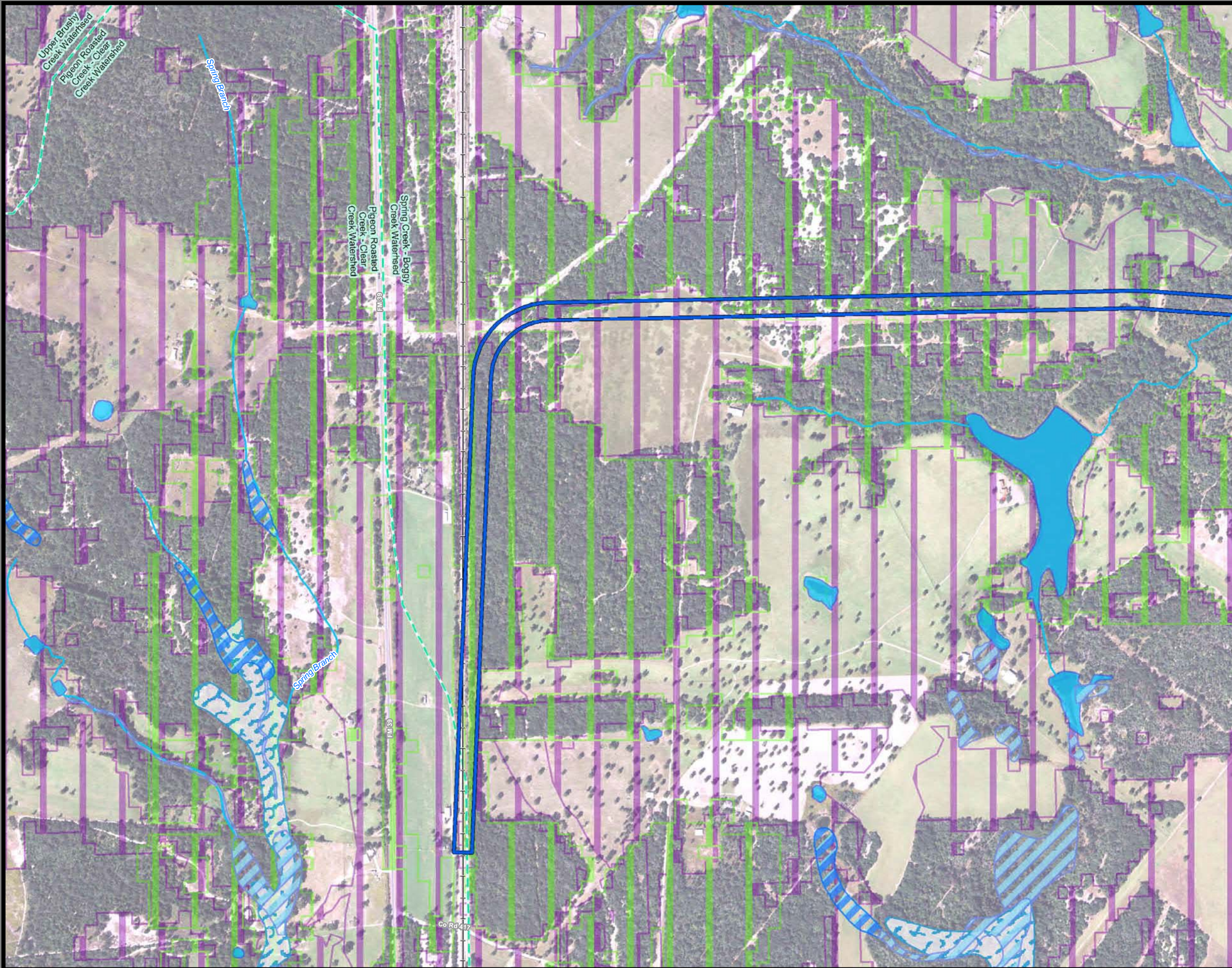
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 - Freshwater Emergent Wetland
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This Sheet only depicts Segment 3C; Segment 4 is also located in this same area and can be referenced on Sheet 182.

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Aerial Imagery: USDA NAIP 2014





**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3C
Sheet 132 of 257**

Legend

- Limits of Disturbance**

 - Segment 1
 - Segment 2A
 - Segment 2B
 - Segment 3A
 - Segment 3B
 - Segment 3C
 - Segment 4
 - Segment 5

Track Configuration

 - Viaduct
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Potential Habitat

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- Impaired Waters with Total Maximum Daily Load (TMDL)

Impaired Waters

Federal Emergency Management Agency (FEMA) Flood Zone

 - A - 1%
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 - AO - 1%
 - X - 0.2%

Field-Collected Data

 - Perennial Stream/River
 - Intermittent Stream/River
 - Ephemeral Stream/River
 - Other Stream/River
 - Lake/Pond
 - Emergent Wetland
 - Forested Wetland
 - Scrub/Shrub Wetland

National Hydrography Dataset (NHD)

 - Perennial Stream/River
 - Intermittent Stream/River
 - Artificial Stream/Canal
 - Lake/Pond
 - Reservoir
 - Swamp/Marsh

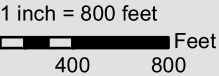
National Wetlands Inventory (NWI)

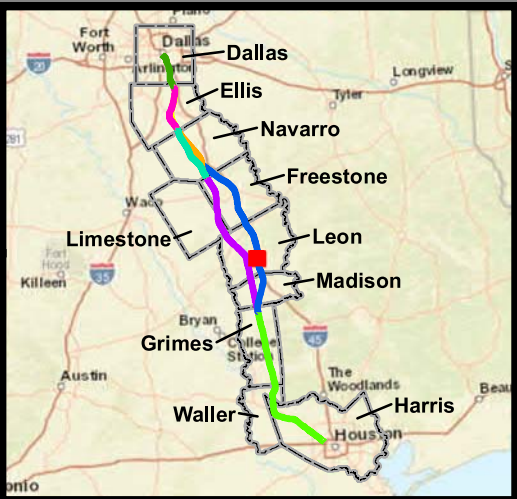
 - Freshwater Emergent Wetland
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Aerial Imagery: USDA NAIP 2014





**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3C
Sheet 133 of 257**

Legend

Limits of Disturbance

- Segment 1
- Segment 2A
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Impaired Waters with Total Maximum Daily Load (TMDL)

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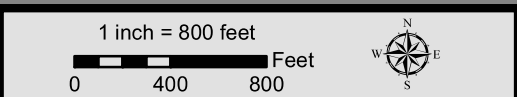
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- Lake/Pond
- Reservoir
- Swamp/Marsh

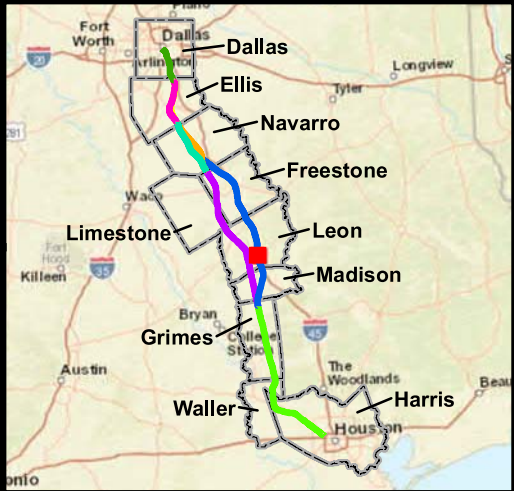
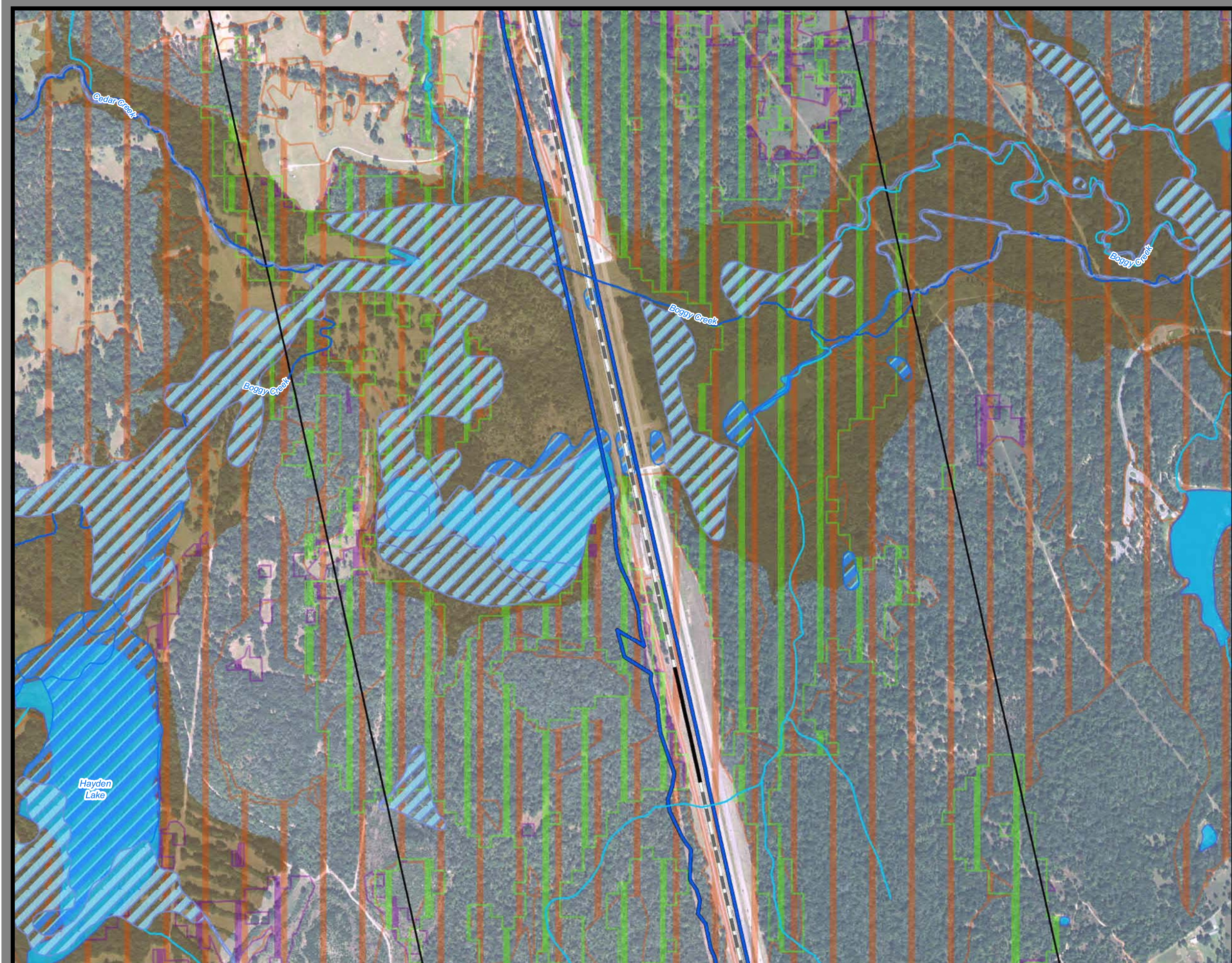
National Wetlands Inventory (NWI)

- Freshwater Emergent Wetland
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- Other

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Aerial Imagery: USDA NAIP 2014





**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3C
Sheet 134 of 257**

Legend

Limits of Disturbance

- Segment 1
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Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters

Federal Emergency Management Agency (FEMA) Flood Zone

- A - 1%
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- X - 0.2%

Field-Collected Data

- Perennial Stream/River
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- Emergent Wetland
- Forested Wetland
- Scrub/Shrub Wetland

National Hydrography Dataset (NHD)

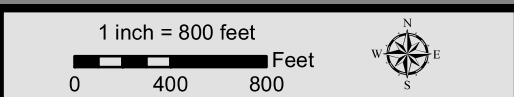
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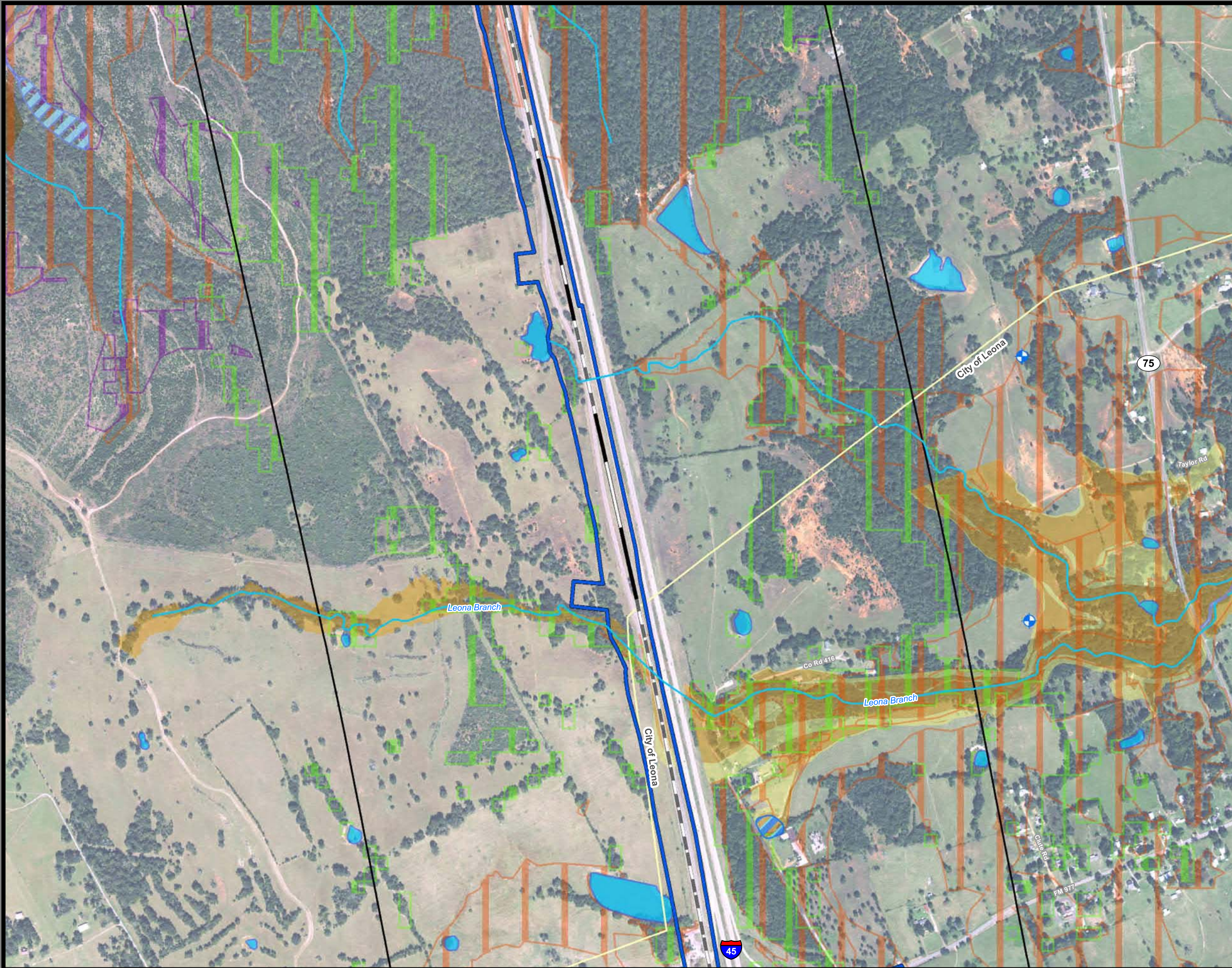
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**Dallas to Houston
High-Speed Rail Project**
Natural Resources
Segment 3C
Sheet 135 of 257

Legend

Limits of Disturbance

- Segment 1
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- Forested Wetland
- Scrub/Shrub Wetland

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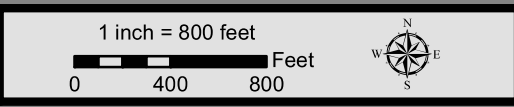
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- Reservoir
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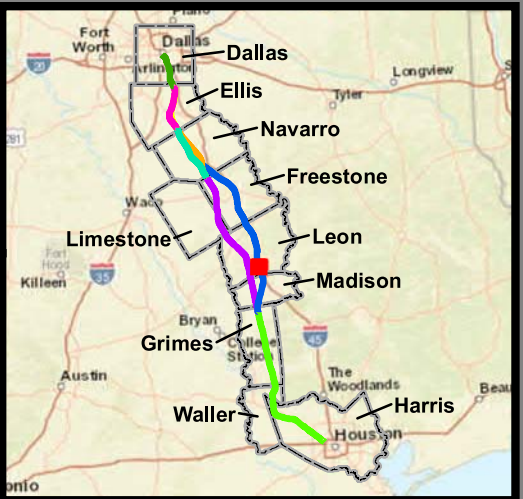
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**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3C
Sheet 136 of 257**

Legend

Limits of Disturbance

- Segment 1
- Segment 2A
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Federal Emergency Management Agency (FEMA) Flood Zone

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- Intermittent Stream/River
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National Hydrography Dataset (NHD)

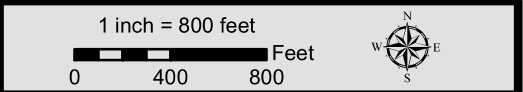
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- Swamp/Marsh

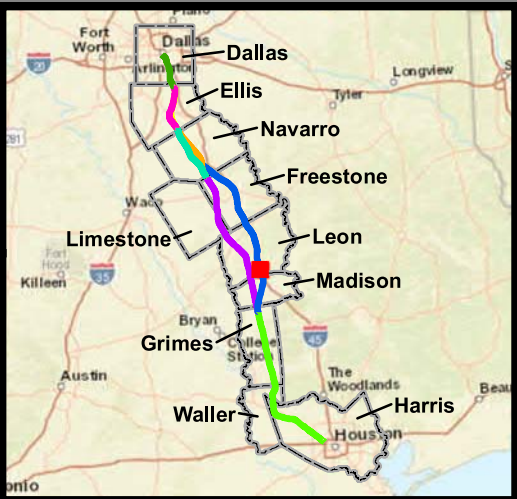
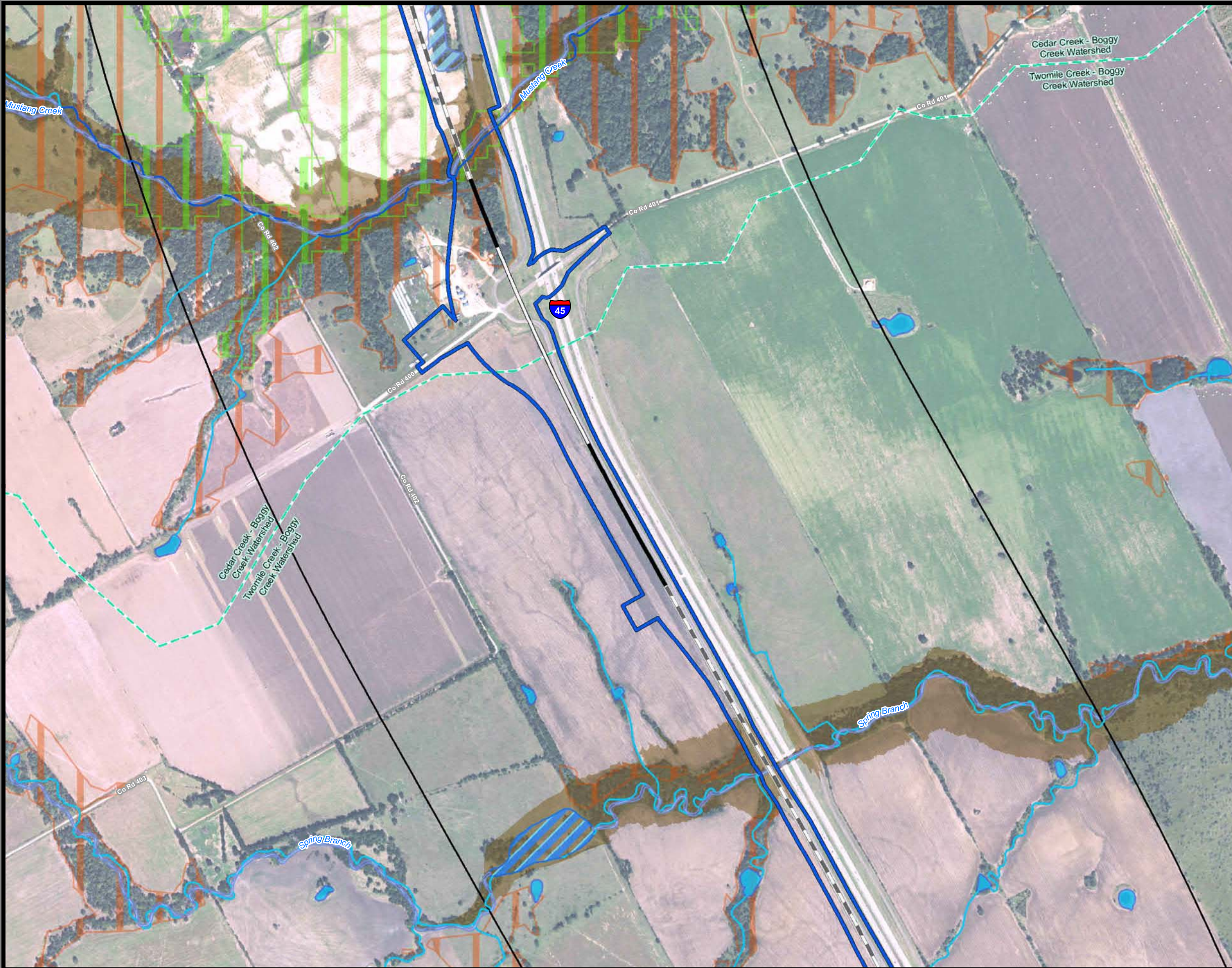
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Aerial Imagery: USDA NAIP 2014





**Dallas to Houston
High-Speed Rail Project**
Natural Resources
Segment 3C
Sheet 137 of 257

Legend

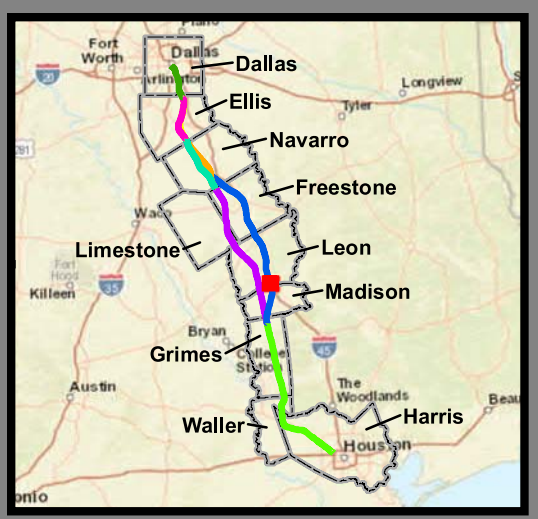
- Limits of Disturbance**
 - Segment 1
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Aerial Imagery: USDA NAIP 2014

1 inch = 800 feet
0 400 800 Feet





**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3C
Sheet 138 of 257**

Legend

Limits of Disturbance

- Segment 1
- Segment 2A
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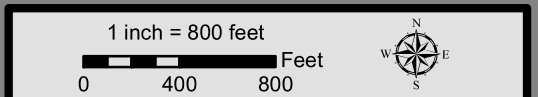
National Hydrography Dataset (NHD)

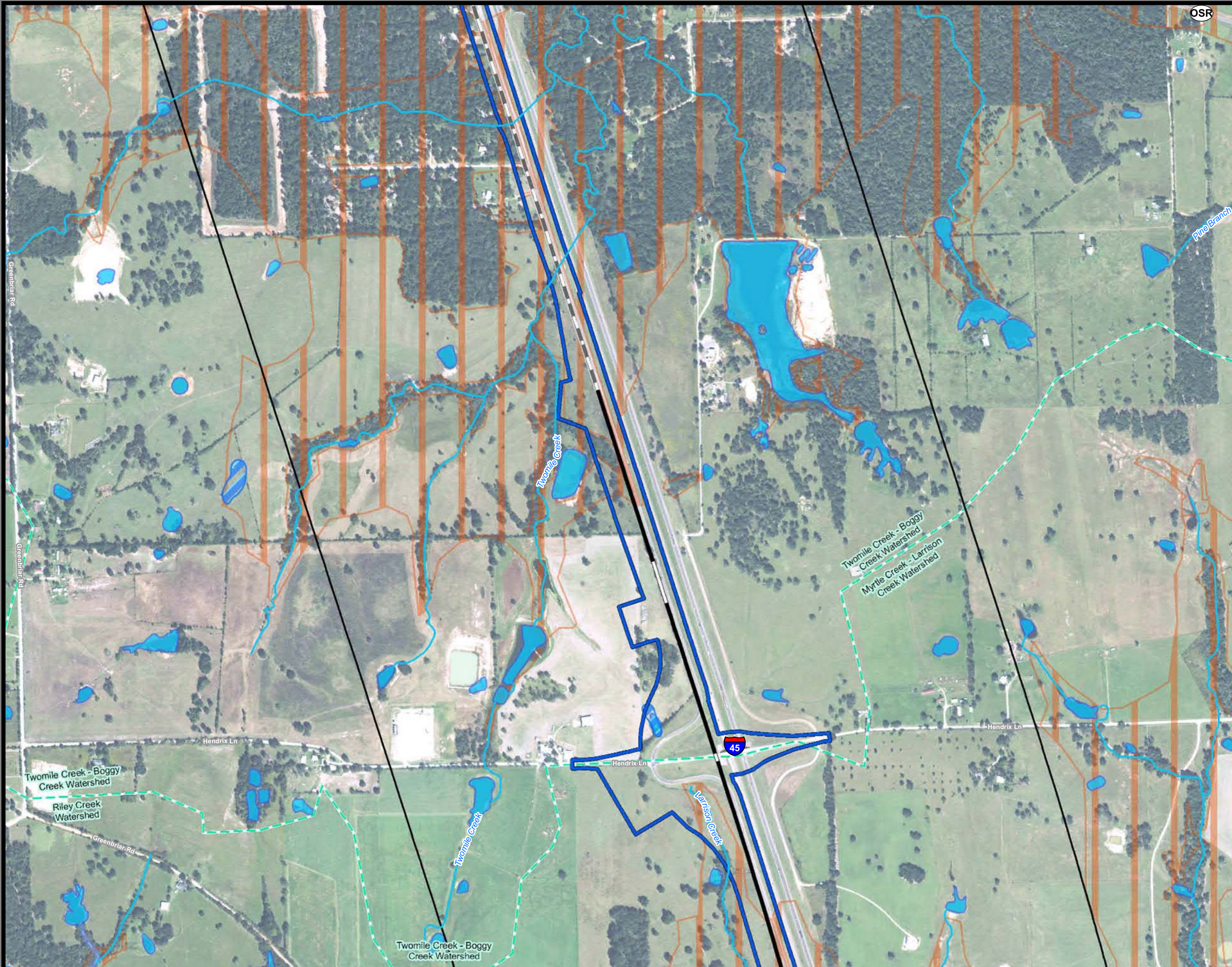
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**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3C
Sheet 139 of 257**

Legend

Limits of Disturbance

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- Endangered Species
- Threatened Species
- U.S. Army Corps of Engineers (USACE) Project Area
- Watershed (HUC 12) Boundary
- Public Water Supply
- Groundwater Well

Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters
- A - 1%
- AE - 1%
- AO - 1%
- X - 0.2%

Federal Emergency Management Agency (FEMA) Flood Zone

- Perennial Stream/River
- Intermittent Stream/River
- Ephemeral Stream/River
- Other Stream/River
- Lake/Pond
- Emergent Wetland
- Forested Wetland
- Scrub/Shrub Wetland

Field-Collected Data

- Perennial Stream/River
- Intermittent Stream/River
- Artificial Stream/Canal
- Lake/Pond
- Reservoir
- Swamp/Marsh

National Hydrography Dataset (NHD)

- Perennial Stream/River
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National Wetlands Inventory (NWI)

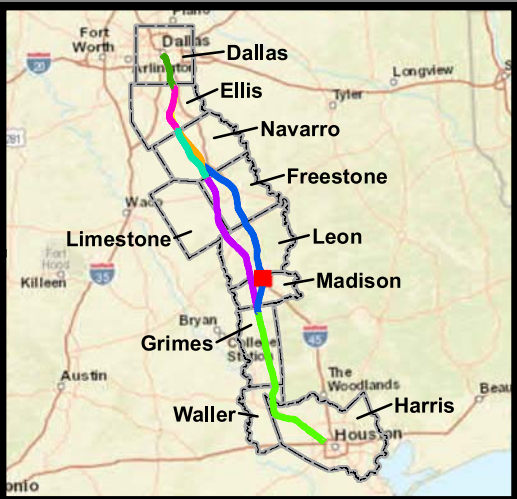
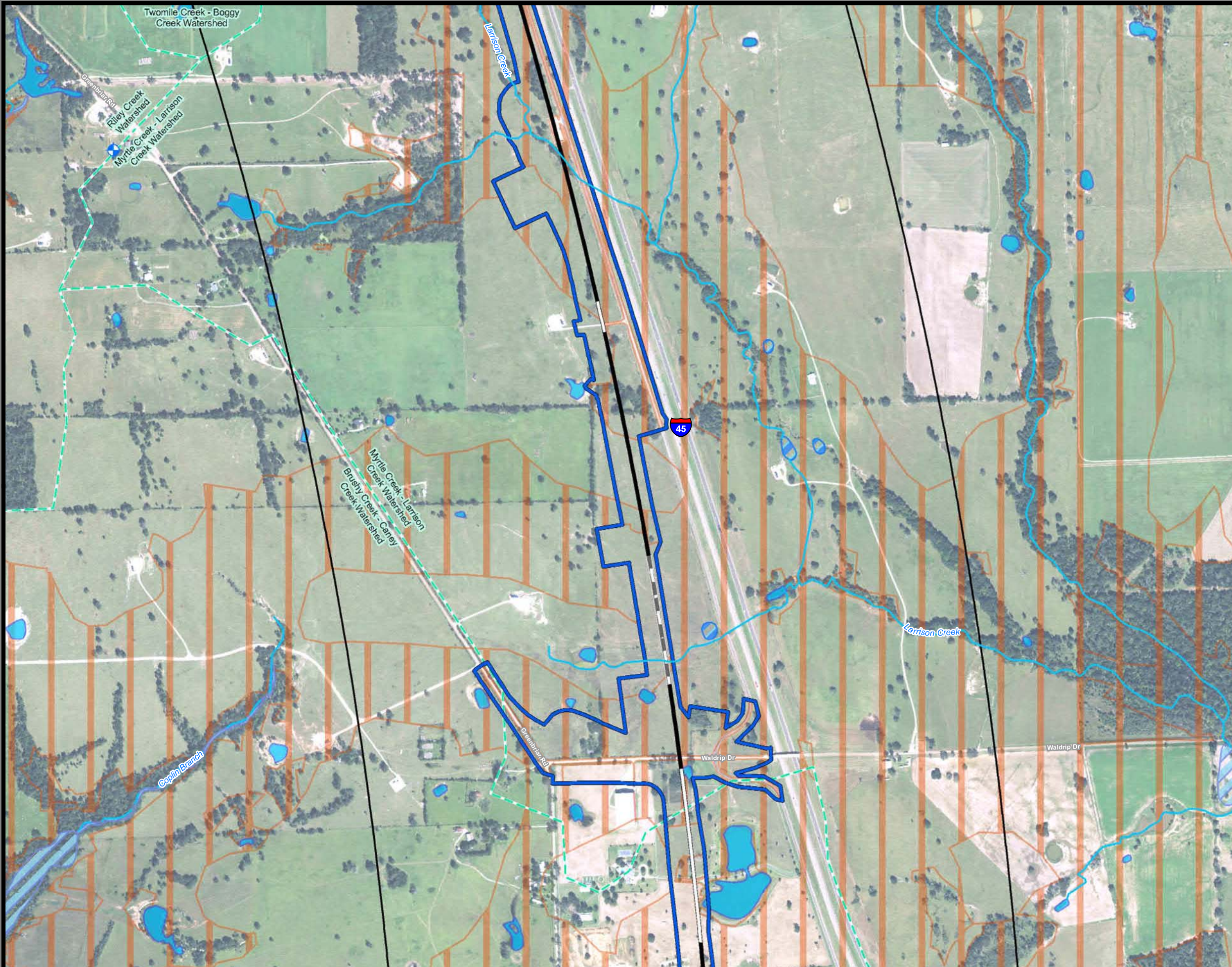
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Aerial Imagery: USDA NAIP 2014





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Legend

Limits of Disturbance

- Segment 1
- Segment 2A
- Segment 2B
- Segment 3A
- Segment 3B
- Segment 3C
- Segment 4
- Segment 5

Track Configuration

- Viaduct
- Embankment
- Cut
- Half Mile Buffer
- City Boundary
- County Boundary
- Railroad
- Municipal Setting Designation (MSD)

Potential Habitat

- Houston Toad
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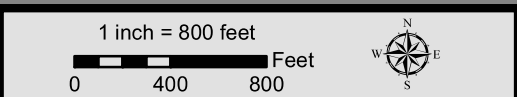
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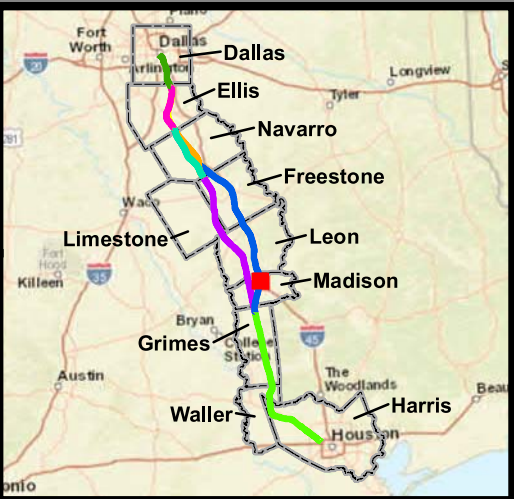
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Segment 3C
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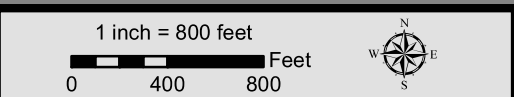
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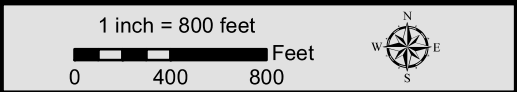
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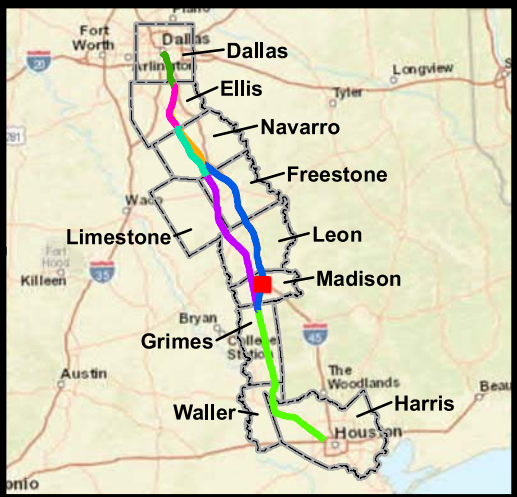
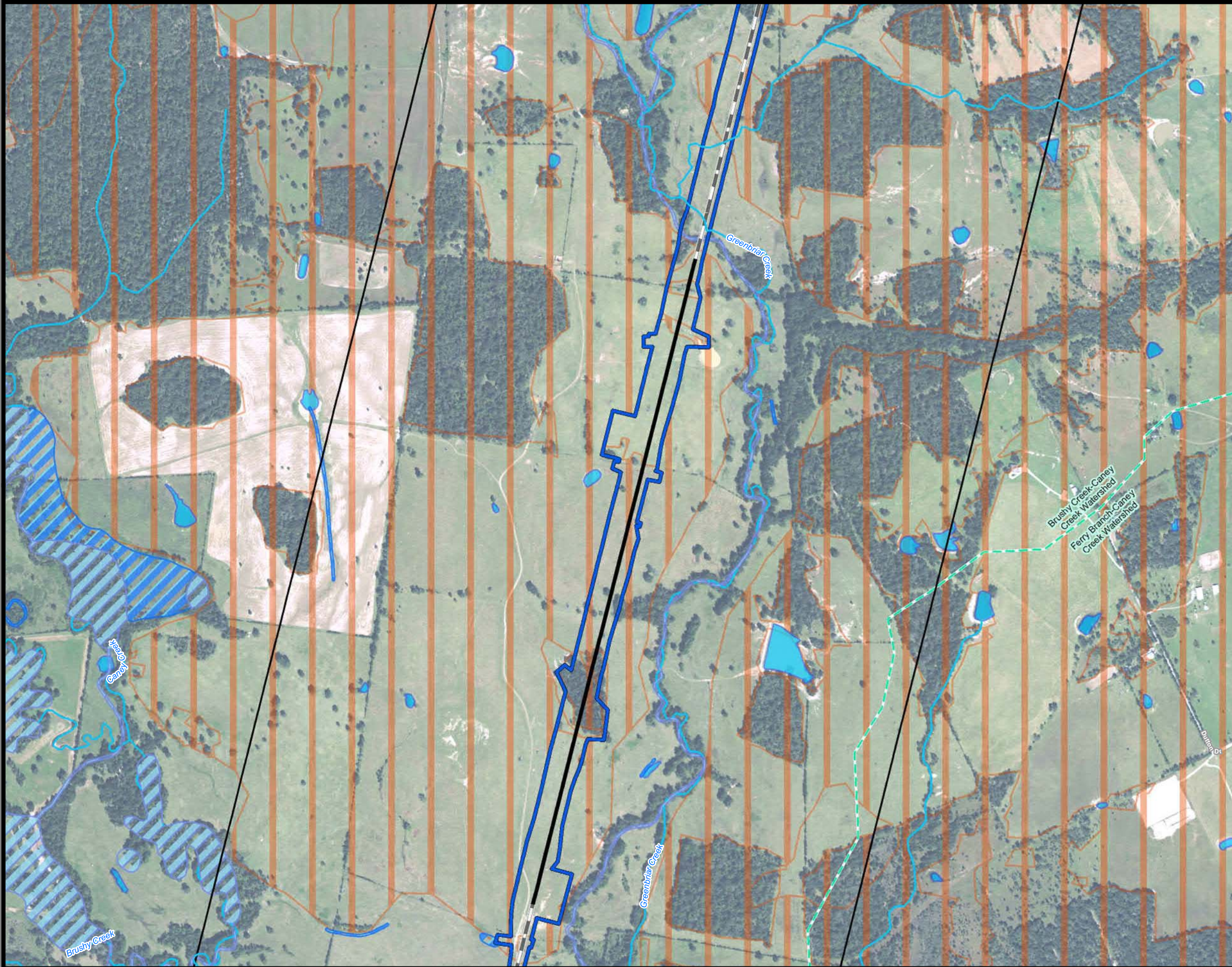
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Segment 3C
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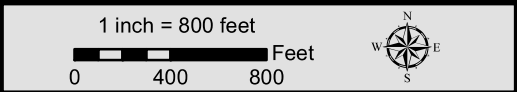
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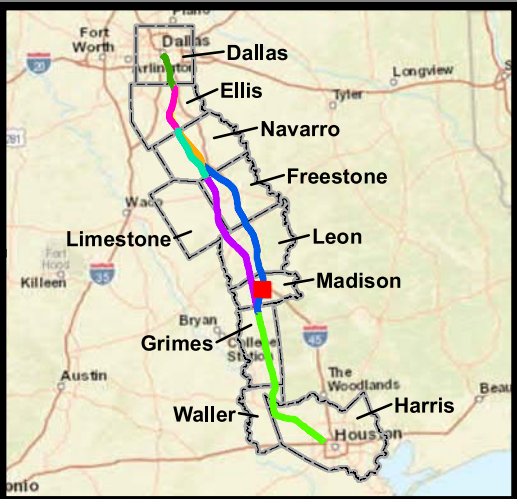
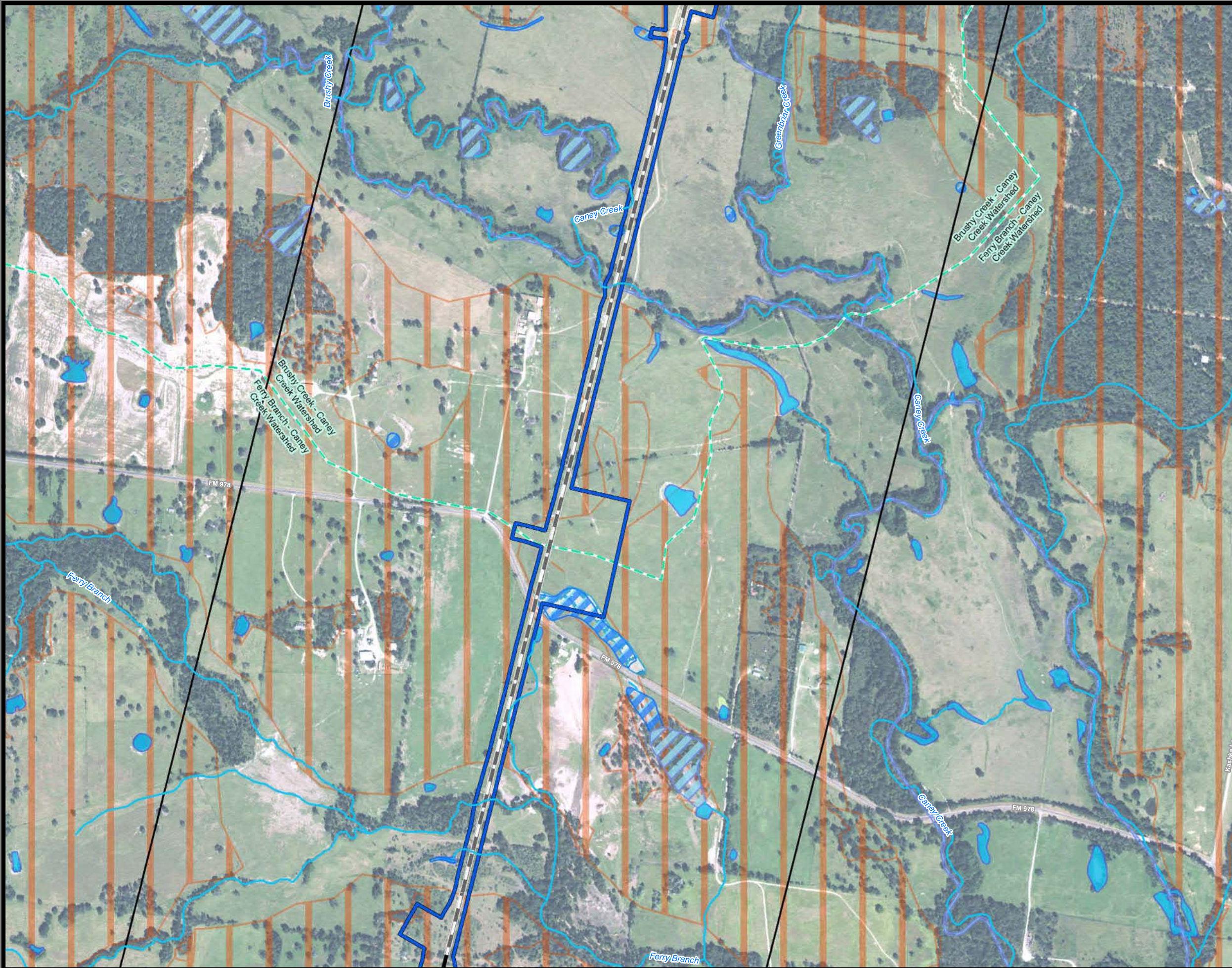
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High-Speed Rail Project
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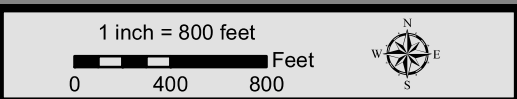
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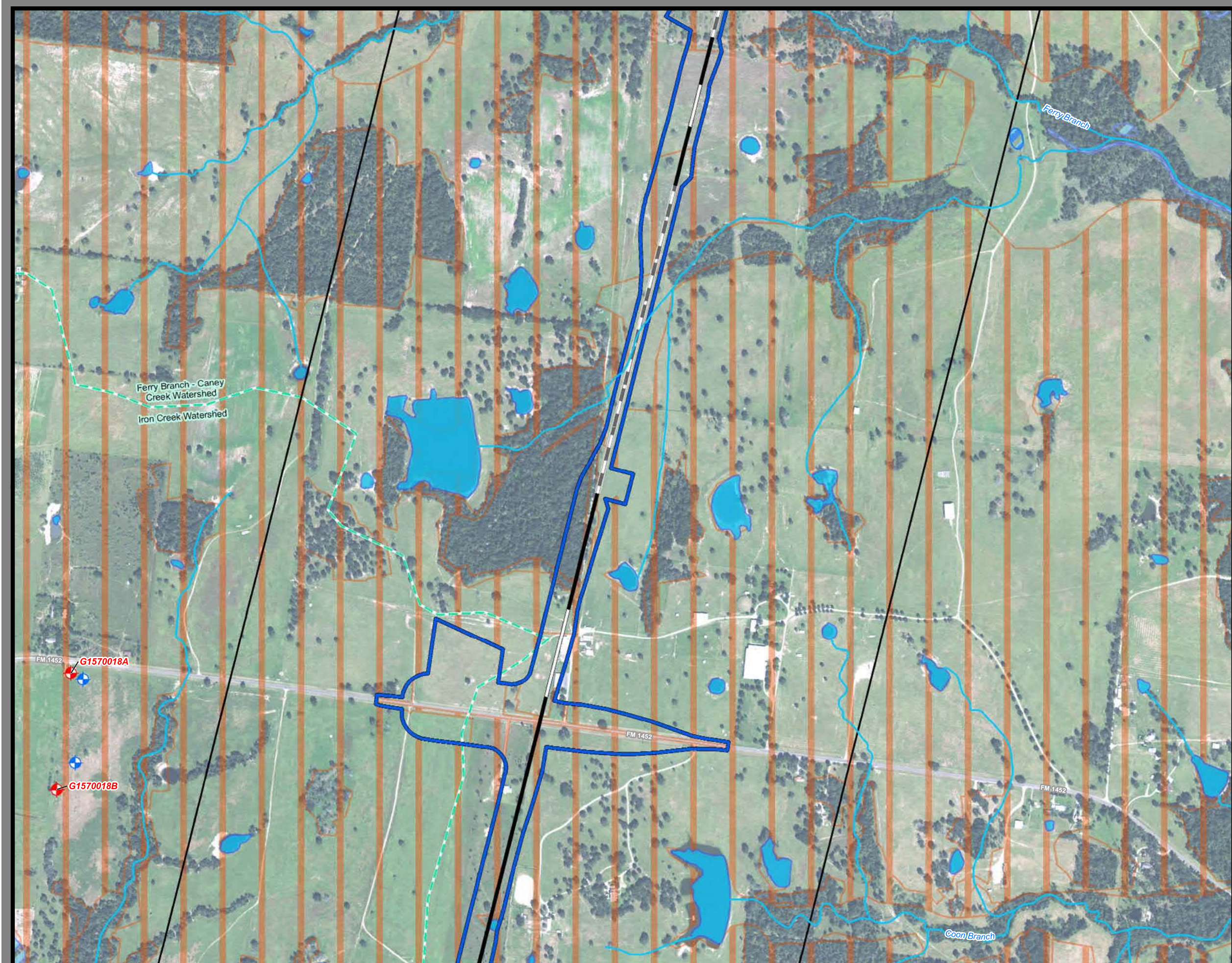
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**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3C
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Legend

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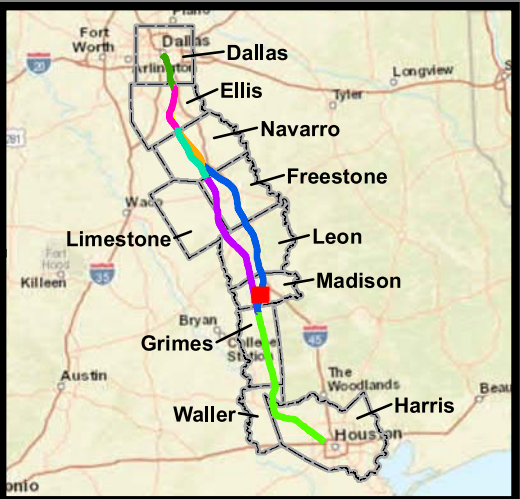
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High-Speed Rail Project**
Natural Resources
Segment 3C
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- Limits of Disturbance**

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1 inch = 800 feet

0 400 800 Feet





**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3C
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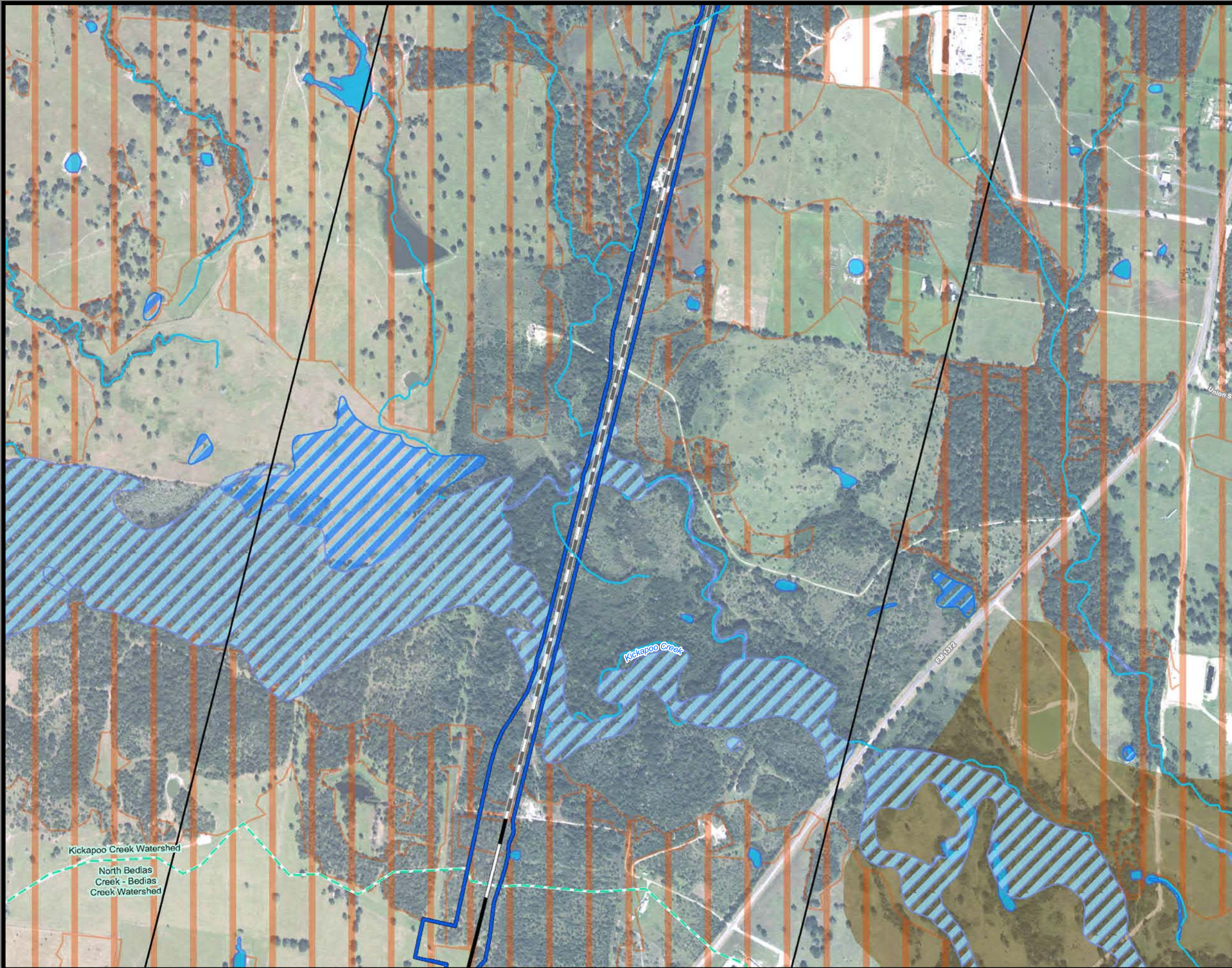
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Natural Resources
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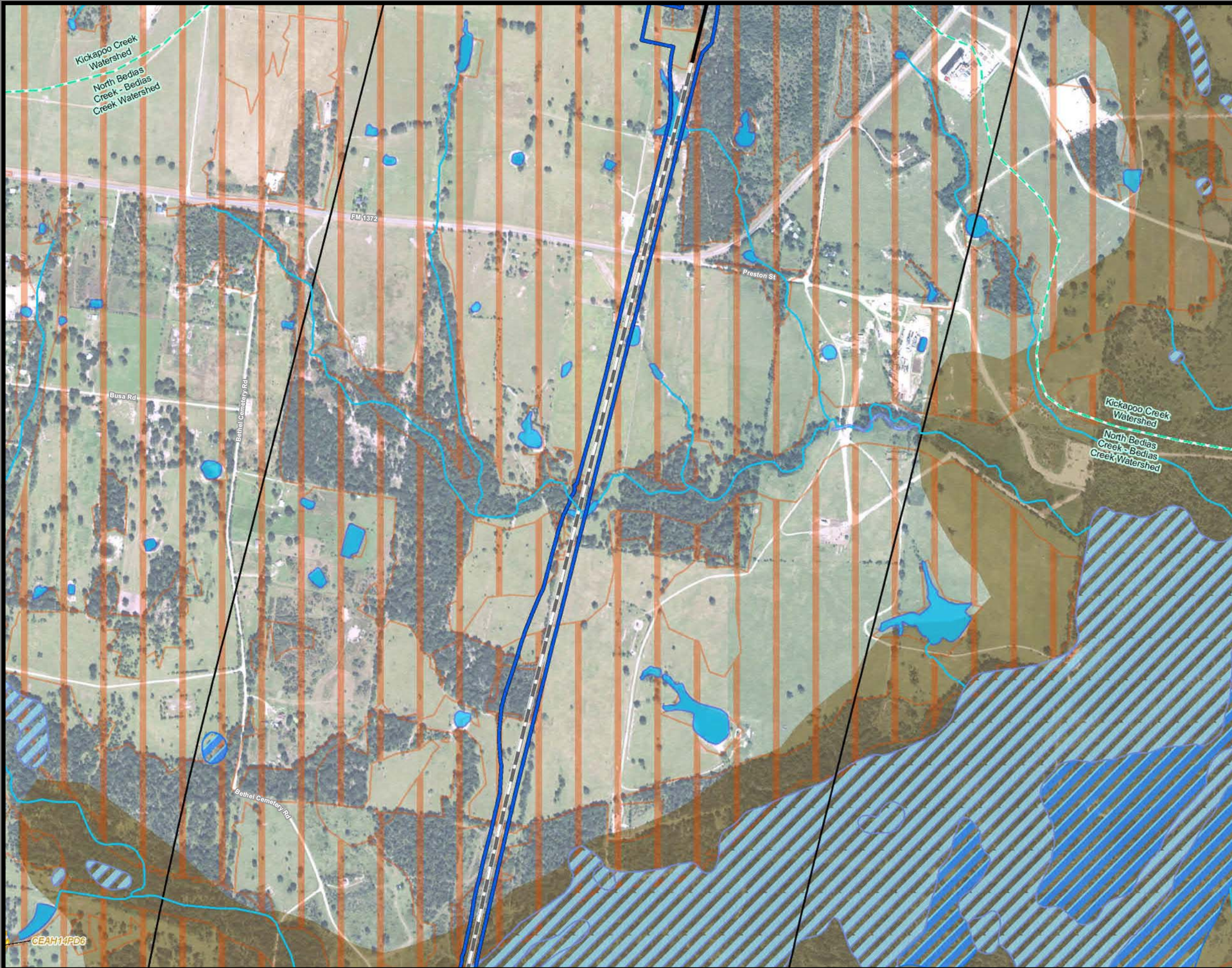
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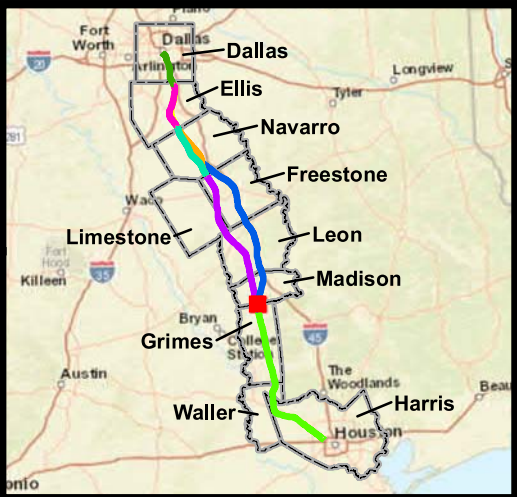
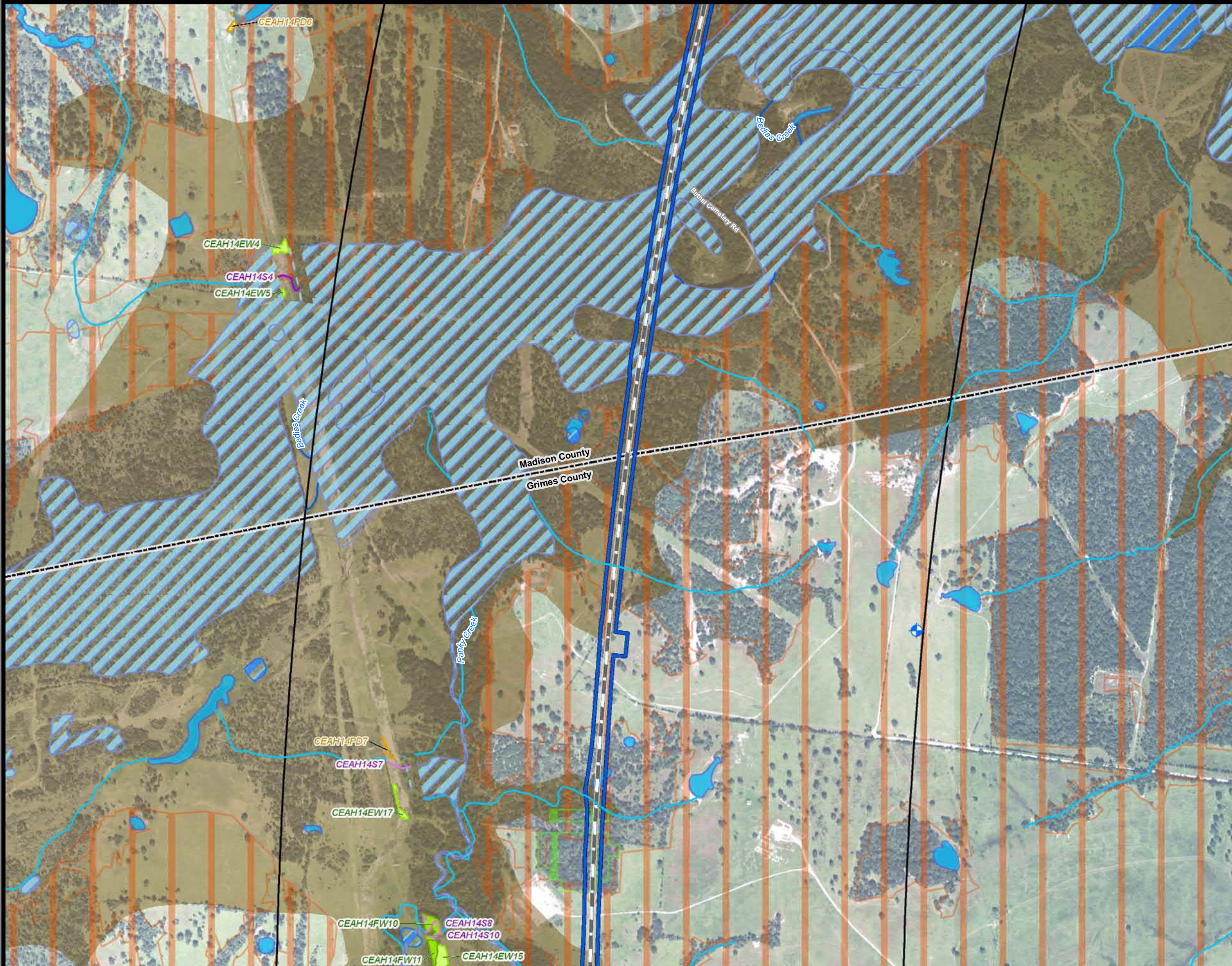
- Limits of Disturbance**
- Segment 1
 - Segment 2A
 - Segment 2B
 - Segment 3A
 - Segment 3B
 - Segment 3C
 - Segment 4
 - Segment 5
- Track Configuration**
- Viaduct
 - Embankment
 - Cut
 - Half Mile Buffer
 - City Boundary
 - County Boundary
 - Railroad
 - Municipal Setting Designation (MSD)
- Potential Habitat**
- Houston Toad
 - Large-fruited Sand Verbena
 - Navasota Ladies'-tresses
 - Endangered Species
 - Threatened Species
 - U.S. Army Corps of Engineers (USACE) Project Area
 - Watershed (HUC 12) Boundary
 - Public Water Supply
 - Groundwater Well
- Impaired Waters with Total Maximum Daily Load (TMDL)**
- Impaired Waters
 - Federal Emergency Management Agency (FEMA) Flood Zone
 - A - 1%
 - AE - 1%
 - AO - 1%
 - X - 0.2%
- Field-Collected Data**
- Perennial Stream/River
 - Intermittent Stream/River
 - Ephemeral Stream/River
 - Other Stream/River
 - Lake/Pond
 - Emergent Wetland
 - Forested Wetland
 - Scrub/Shrub Wetland
- National Hydrography Dataset (NHD)**
- Perennial Stream/River
 - Intermittent Stream/River
 - Artificial Stream/Canal
 - Lake/Pond
 - Reservoir
 - Swamp/Marsh
- National Wetlands Inventory (NWI)**
- Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Other

*Floodplains in Freestone and Madison Counties digitized from U.S. Dept of Housing and Urban Development 1978 and 1991 Flood Hazard Boundary Maps due to lack of digitally mapped FEMA floodplains.

Data Sources: County Boundaries - U.S. Census TIGER 2015; City Boundaries - TxDOT 2013; MSD - TCEQ 2015; USACE Project Areas - USACE 2014; Public Water Supply/Impaired Waters - EPA 2016; Groundwater Wells - TWDB 2015; NHD/HUC12 - USGS 2016; Reservoirs - TWDB 2014; NWI - USFWS 2016; Floodplains - FEMA 2016; Endangered/Threatened Species - TPWD TXNDD Element of Occurrence Records (EOR) 2017; ESRI World Street Map
Aerial Imagery: USDA NAIP 2014

1 inch = 800 feet
0 400 800 Feet





**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3C
Sheet 150 of 257**

Legend

Limits of Disturbance

- Segment 1
- Segment 2A
- Segment 2B
- Segment 3A
- Segment 3B
- Segment 3C
- Segment 4
- Segment 5

Track Configuration

- Viaduct
- Embankment
- Cut
- Half Mile Buffer
- City Boundary
- County Boundary
- Railroad
- Municipal Setting Designation (MSD)

Potential Habitat

- Houston Toad
- Large-fruited Sand Verbena
- Navasota Ladies'-tresses
- Endangered Species
- Threatened Species
- U.S. Army Corps of Engineers (USACE) Project Area
- Watershed (HUC 12) Boundary
- Public Water Supply
- Groundwater Well

Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters

Federal Emergency Management Agency (FEMA) Flood Zone

- A - 1%
- AE - 1%
- AO - 1%
- X - 0.2%

Field-Collected Data

- Perennial Stream/River
- Intermittent Stream/River
- Ephemeral Stream/River
- Other Stream/River
- Lake/Pond
- Emergent Wetland
- Forested Wetland
- Scrub/Shrub Wetland

National Hydrography Dataset (NHD)

- Perennial Stream/River
- Intermittent Stream/River
- Artificial Stream/Canal
- Lake/Pond
- Reservoir
- Swamp/Marsh

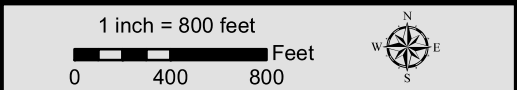
National Wetlands Inventory (NWI)

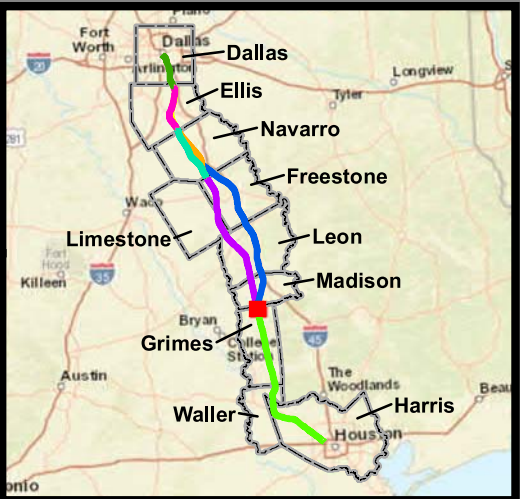
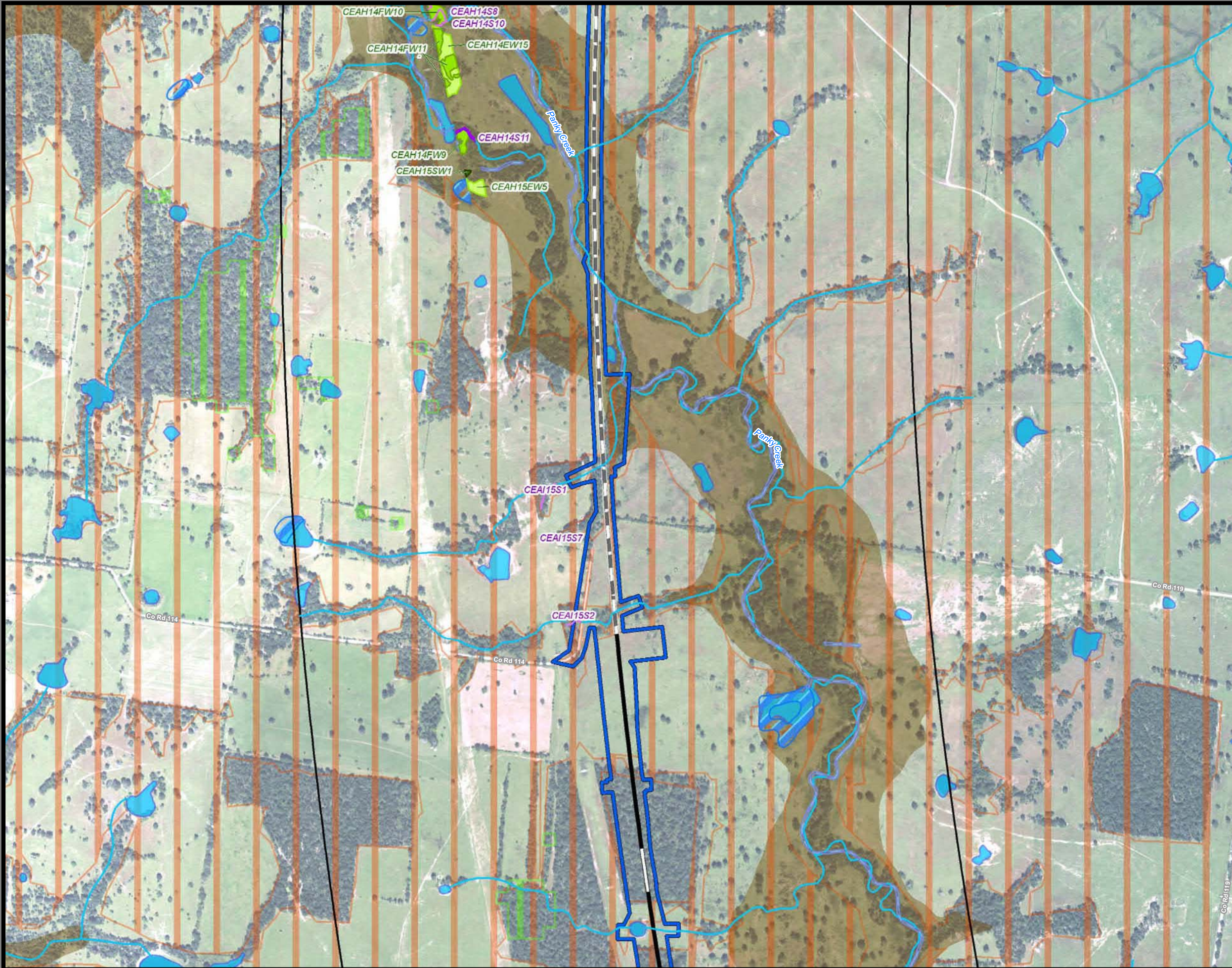
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Other

This Sheet only depicts Segment 3C; Segment 4 is also located in this same area and can be referenced on Sheet 199.

*Floodplains in Freestone and Madison Counties digitized from U.S. Dept of Housing and Urban Development 1978 and 1991 Flood Hazard Boundary Maps due to lack of digitally mapped FEMA floodplains.

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Aerial Imagery: USDA NAIP 2014





**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3C
Sheet 151 of 257**

Legend

Limits of Disturbance

- Segment 1
- Segment 2A
- Segment 2B
- Segment 3A
- Segment 3B
- Segment 3C
- Segment 4
- Segment 5

Track Configuration

- Viaduct
- Embankment
- Cut
- Half Mile Buffer
- City Boundary
- County Boundary
- Railroad
- Municipal Setting Designation (MSD)

Potential Habitat

- Houston Toad
- Large-fruited Sand Verbena
- Navasota Ladies-tresses
- Endangered Species
- Threatened Species
- U.S. Army Corps of Engineers (USACE) Project Area
- Watershed (HUC 12) Boundary
- Public Water Supply
- Groundwater Well

Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters

Federal Emergency Management Agency (FEMA) Flood Zone

- A - 1%
- AE - 1%
- AO - 1%
- X - 0.2%

Field-Collected Data

- Perennial Stream/River
- Intermittent Stream/River
- Ephemeral Stream/River
- Other Stream/River
- Lake/Pond
- Emergent Wetland
- Forested Wetland
- Scrub/Shrub Wetland

National Hydrography Dataset (NHD)

- Perennial Stream/River
- Intermittent Stream/River
- Artificial Stream/Canal
- Lake/Pond
- Reservoir
- Swamp/Marsh

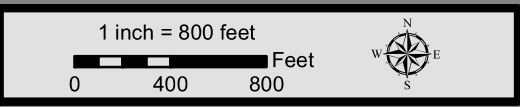
National Wetlands Inventory (NWI)

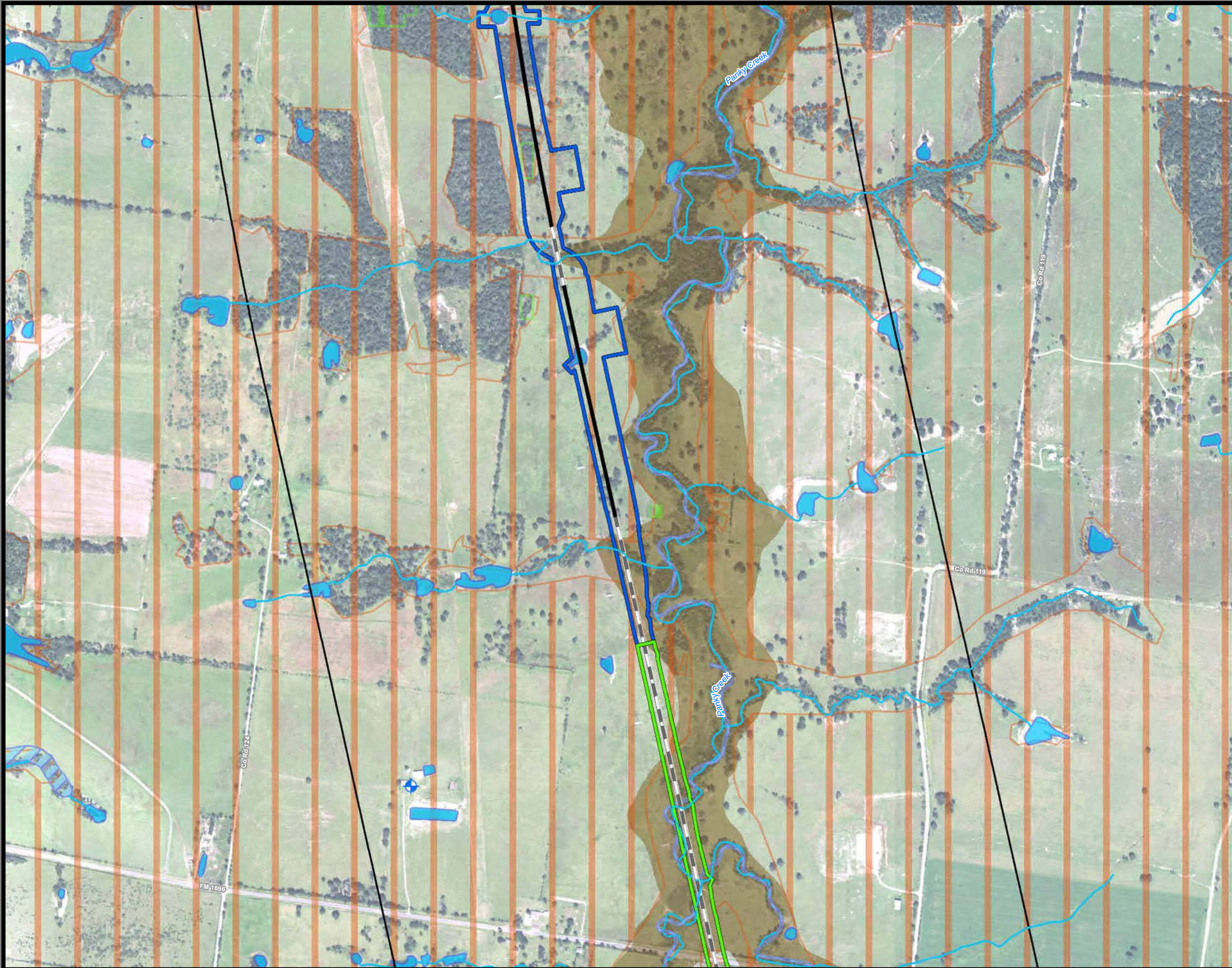
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Other

This Sheet only depicts Segment 3C; Segment 4 is also located in this same area and can be referenced on Sheet 200.

*Floodplains in Freestone and Madison Counties digitized from U.S. Dept of Housing and Urban Development 1978 and 1991 Flood Hazard Boundary Maps due to lack of digitally mapped FEMA floodplains.

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Aerial Imagery: USDA NAIP 2014





**Dallas to Houston
High-Speed Rail Project**
Natural Resources
Segment 3C, 5
Sheet 152 of 257

- Legend**
- Limits of Disturbance**
- Segment 1
 - Segment 2A
 - Segment 2B
 - Segment 3A
 - Segment 3B
 - Segment 3C
 - Segment 4
 - Segment 5
- Track Configuration**
- Viaduct
 - Embankment
 - Cut
 - Half Mile Buffer
 - City Boundary
 - County Boundary
 - Railroad
 - Municipal Setting Designation (MSD)
- Potential Habitat**
- Houston Toad
 - Large-fruited Sand Verbena
 - Navasota Ladies'-tresses
 - Endangered Species
 - Threatened Species
 - U.S. Army Corps of Engineers (USACE) Project Area
 - Watershed (HUC 12) Boundary
 - Public Water Supply
 - Groundwater Well
- Impaired Waters with Total Maximum Daily Load (TMDL)**
- Impaired Waters
 - A - 1%
 - AE - 1%
 - AO - 1%
 - X - 0.2%
- Federal Emergency Management Agency (FEMA) Flood Zone**
- Perennial Stream/River
 - Intermittent Stream/River
 - Ephemeral Stream/River
 - Other Stream/River
 - Lake/Pond
 - Emergent Wetland
 - Forested Wetland
 - Scrub/Shrub Wetland
- Field-Collected Data**
- Perennial Stream/River
 - Intermittent Stream/River
 - Artificial Stream/Canal
 - Lake/Pond
 - Reservoir
 - Swamp/Marsh
- National Hydrography Dataset (NHD)**
- Perennial Stream/River
 - Intermittent Stream/River
 - Artificial Stream/Canal
 - Lake/Pond
 - Reservoir
 - Swamp/Marsh
- National Wetlands Inventory (NWI)**
- Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Other

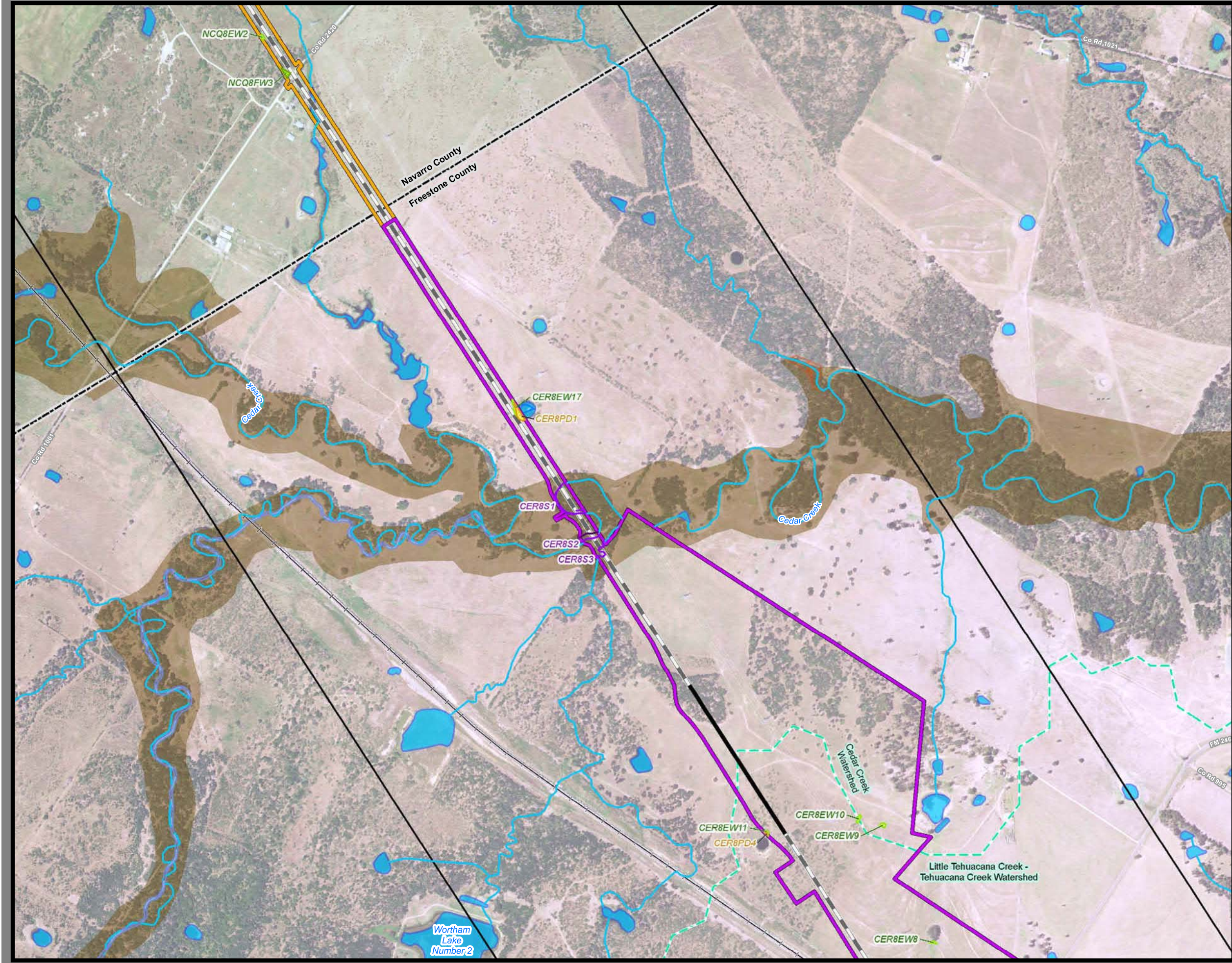
This Sheet only depicts Segments 3C & 5; Segment 4 is also located in this same area and can be referenced on Sheet 201.

*Floodplains in Freestone and Madison Counties digitized from U.S. Dept of Housing and Urban Development 1978 and 1991 Flood Hazard Boundary Maps due to lack of digitally mapped FEMA floodplains.

Data Sources: County Boundaries - U.S. Census TIGER 2015; City Boundaries - TxDOT 2013; MSD - TCEQ 2015; USACE Project Areas - USACE 2014; Public Water Supply/Impaired Waters - EPA 2016; Groundwater Wells - TWDB 2015; NHD/HUC12 - USGS 2016; Reservoirs - TWDB 2014; NWI - USFWS 2016; Floodplains - FEMA 2016; Endangered/Threatened Species - TPWD TXNDD Element of Occurrence Records (EOR) 2017; ESRI World Street Map
Aerial Imagery: USDA NAIP 2014

1 inch = 800 feet
0 400 800 Feet





**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 3B, 4
Sheet 153 of 257**

Legend

Limits of Disturbance

- Segment 1
- Segment 2A
- Segment 2B
- Segment 3A
- Segment 3B
- Segment 3C
- Segment 4
- Segment 5

Track Configuration

- Viaduct
- Embankment
- Cut
- Half Mile Buffer
- City Boundary
- County Boundary
- Railroad
- Municipal Setting Designation (MSD)

Potential Habitat

- Houston Toad
- Large-fruited Sand Verbena
- Navasota Ladies'-tresses
- Endangered Species
- Threatened Species
- U.S. Army Corps of Engineers (USACE) Project Area
- Watershed (HUC 12) Boundary
- Public Water Supply
- Groundwater Well

Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters

Federal Emergency Management Agency (FEMA) Flood Zone

- A - 1%
- AE - 1%
- AO - 1%
- X - 0.2%

Field-Collected Data

- Perennial Stream/River
- Intermittent Stream/River
- Ephemeral Stream/River
- Other Stream/River
- Lake/Pond
- Emergent Wetland
- Forested Wetland
- Scrub/Shrub Wetland

National Hydrography Dataset (NHD)

- Perennial Stream/River
- Intermittent Stream/River
- Artificial Stream/Canal
- Lake/Pond
- Reservoir
- Swamp/Marsh

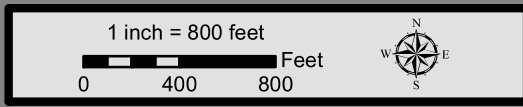
National Wetlands Inventory (NWI)

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Other

This Sheet only depicts Segments 3B & 4; Segment 3A is also located in this same area and can be referenced on Sheet 61.

*Floodplains in Freestone and Madison Counties digitized from U.S. Dept of Housing and Urban Development 1978 and 1991 Flood Hazard Boundary Maps due to lack of digitally mapped FEMA floodplains.

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Aerial Imagery: USDA NAIP 2014





**Dallas to Houston
High-Speed Rail Project**
Natural Resources
Segment 4
Sheet 154 of 257

Legend

Limits of Disturbance

- Segment 1
- Segment 2A
- Segment 2B
- Segment 3A
- Segment 3B
- Segment 3C
- Segment 4
- Segment 5

Track Configuration

- Viaduct
- Embankment
- Cut
- Half Mile Buffer
- City Boundary
- County Boundary
- Railroad
- Municipal Setting Designation (MSD)

Potential Habitat

- Houston Toad
- Verberna
- Navasota Ladies'-tresses
- Endangered Species
- Threatened Species
- U.S. Army Corps of Engineers (USACE) Project Area
- Watershed (HUC 12) Boundary
- Public Water Supply
- Groundwater Well

Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters
- Federal Emergency Management Agency (FEMA) Flood Zone
 - A - 1%
 - AE - 1%
 - AO - 1%
 - X - 0.2%

Field-Collected Data

- Perennial Stream/River
- Intermittent Stream/River
- Ephemeral Stream/River
- Other Stream/River
- Lake/Pond
- Emergent Wetland
- Forested Wetland
- Scrub/Shrub Wetland

National Hydrography Dataset (NHD)

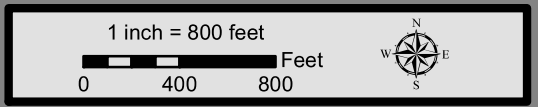
- Perennial Stream/River
- Intermittent Stream/River
- Artificial Stream/Canal
- Lake/Pond
- Reservoir
- Swamp/Marsh

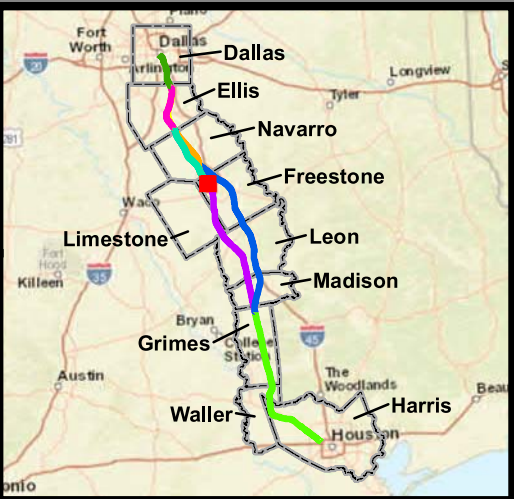
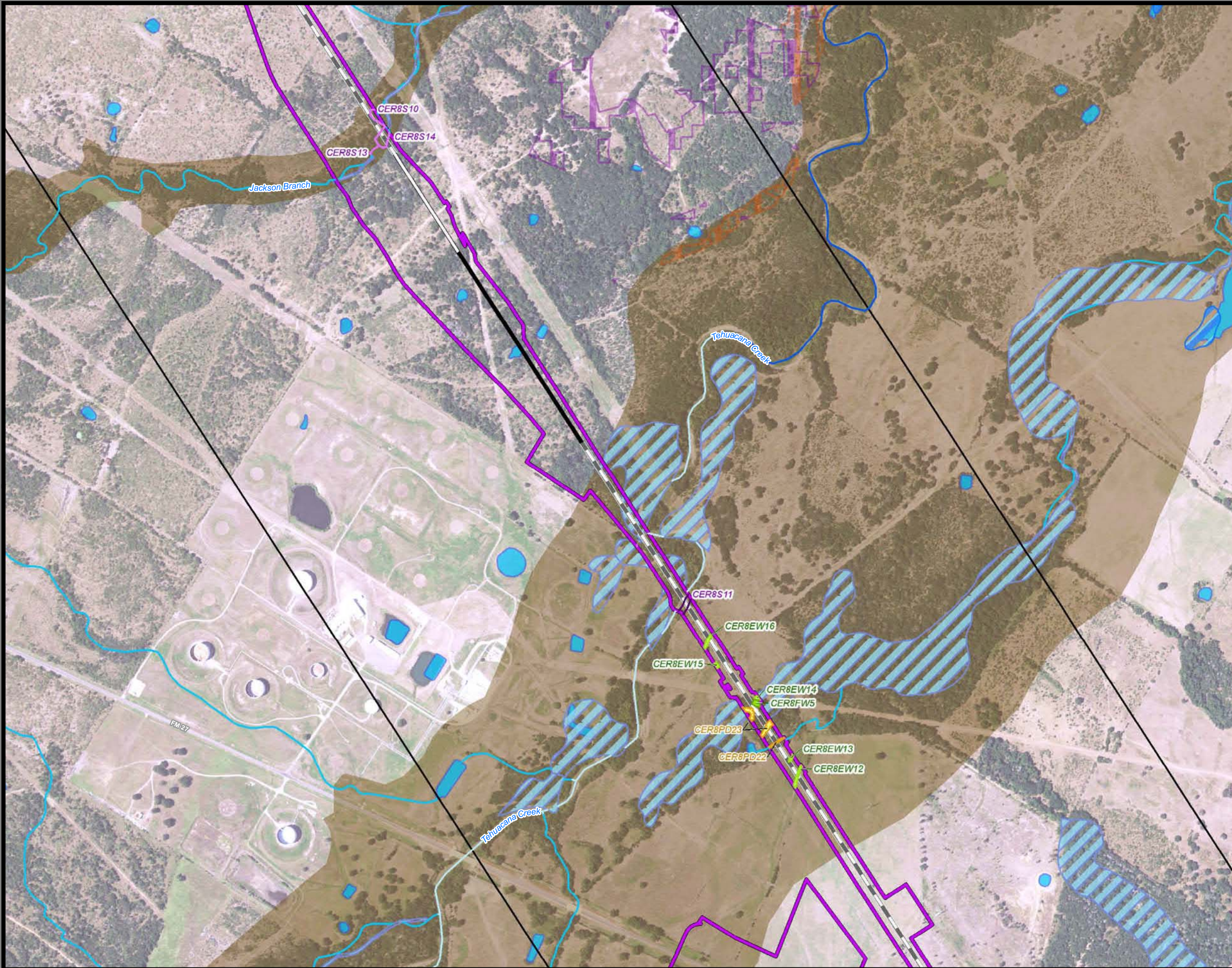
National Wetlands Inventory (NWI)

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Other

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Aerial Imagery: USDA NAIP 2014





**Dallas to Houston
High-Speed Rail Project**
Natural Resources
Segment 4
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Legend

- Limits of Disturbance**

 - Segment 1
 - Segment 2A
 - Segment 2B
 - Segment 3A
 - Segment 3B
 - Segment 3C
 - Segment 4
 - Segment 5

Track Configuration

 - Viaduct
 - Embankment
 - Cut
 - Half Mile Buffer
 - City Boundary
 - County Boundary
 - Railroad
 - Municipal Setting Designation (MSD)

Potential Habitat

 - Houston Toad
 - Large-fruited Sand Verbena
 - Navasota Ladies'-tresses
 - Endangered Species
 - Threatened Species
 - U.S. Army Corps of Engineers (USACE) Project Area
 - Watershed (HUC 12) Boundary
 - Public Water Supply
 - Groundwater Well
- Impaired Waters with Total Maximum Daily Load (TMDL)

Impaired Waters

Federal Emergency Management Agency (FEMA) Flood Zone

 - A - 1%
 - AE - 1%
 - AO - 1%
 - X - 0.2%

Field-Collected Data

 - Perennial Stream/River
 - Intermittent Stream/River
 - Ephemeral Stream/River
 - Other Stream/River
 - Lake/Pond
 - Emergent Wetland
 - Forested Wetland
 - Scrub/Shrub Wetland

National Hydrography Dataset (NHD)

 - Perennial Stream/River
 - Intermittent Stream/River
 - Artificial Stream/Canal
 - Lake/Pond
 - Reservoir
 - Swamp/Marsh

National Wetlands Inventory (NWI)

 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Other

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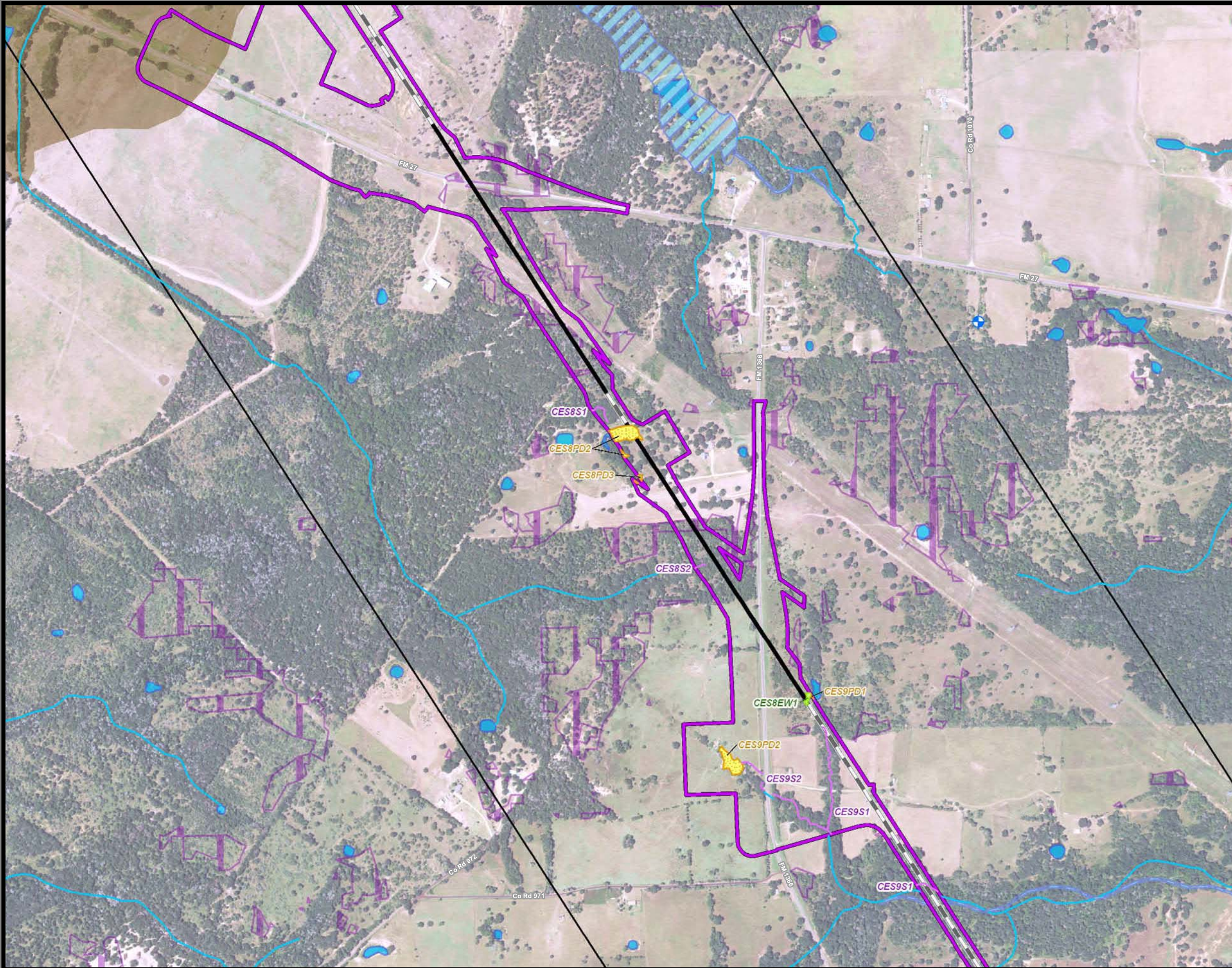
Data Sources: County Boundaries - U.S. Census TIGER 2015; City Boundaries - TxDOT 2013; MSD - TCEQ 2015; USACE Project Areas - USACE 2014; Public Water Supply/Impaired Waters - EPA 2016; Groundwater Wells - TWDB 2015; NHD/HUC12 - USGS 2016; Reservoirs - TWDB 2014; NWI - USFWS 2016; Floodplains - FEMA 2016; Endangered/Threatened Species - TPWD TXNDD Element of Occurrence Records (EOR) 2017; ESRI World Street Map

Aerial Imagery: USDA NAIP 2014

1 inch = 800 feet

0 400 800 Feet





**Dallas to Houston
High-Speed Rail Project**
Natural Resources
Segment 4
Sheet 156 of 257

Legend

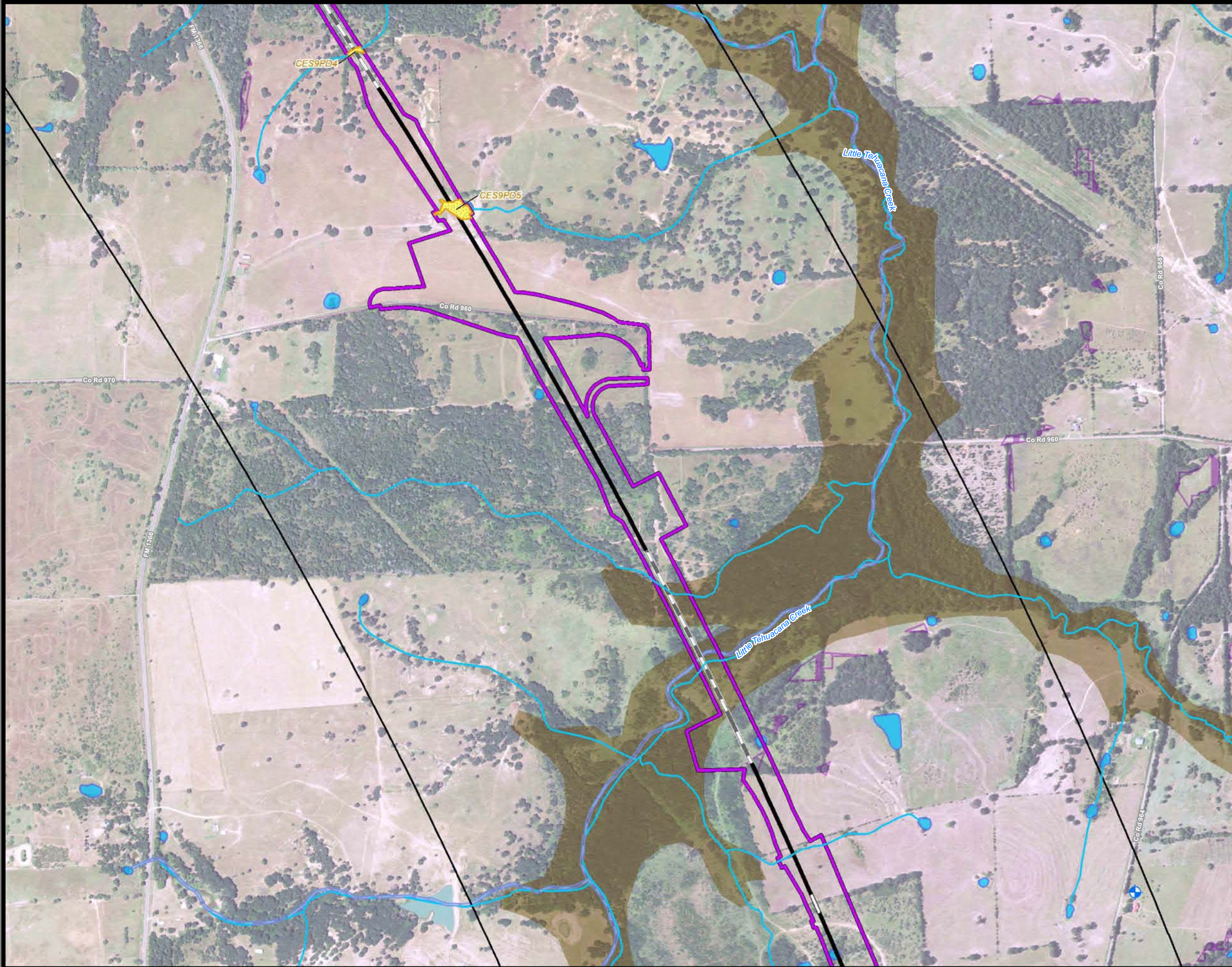
- Limits of Disturbance**
- Segment 1
 - Segment 2A
 - Segment 2B
 - Segment 3A
 - Segment 3B
 - Segment 3C
 - Segment 4
 - Segment 5
- Track Configuration**
- Viaduct
 - Embankment
 - Cut
 - Half Mile Buffer
 - City Boundary
 - County Boundary
 - Railroad
 - Municipal Setting Designation (MSD)
- Potential Habitat**
- Houston Toad
 - Large-fruited Sand Verbena
 - Navasota Ladies'-tresses
 - Endangered Species
 - Threatened Species
 - U.S. Army Corps of Engineers (USACE) Project Area
 - Watershed (HUC 12) Boundary
 - Public Water Supply
 - Groundwater Well
- Impaired Waters with Total Maximum Daily Load (TMDL)**
- Impaired Waters
- Federal Emergency Management Agency (FEMA) Flood Zone**
- A - 1%
 - AE - 1%
 - AO - 1%
 - X - 0.2%
- Field-Collected Data**
- Perennial Stream/River
 - Intermittent Stream/River
 - Ephemeral Stream/River
 - Other Stream/River
 - Lake/Pond
 - Emergent Wetland
 - Forested Wetland
 - Scrub/Shrub Wetland
- National Hydrography Dataset (NHD)**
- Perennial Stream/River
 - Intermittent Stream/River
 - Artificial Stream/Canal
 - Lake/Pond
 - Reservoir
 - Swamp/Marsh
- National Wetlands Inventory (NWI)**
- Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Other

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Aerial Imagery: USDA NAIP 2014

1 inch = 800 feet
0 400 800 Feet





**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 4
Sheet 157 of 257**

Legend

Limits of Disturbance

- Segment 1
- Segment 2A
- Segment 2B
- Segment 3A
- Segment 3B
- Segment 3C
- Segment 4
- Segment 5

Track Configuration

- Viaduct
- Embankment
- Cut
- Half Mile Buffer
- City Boundary
- County Boundary
- Railroad
- Municipal Setting Designation (MSD)

Potential Habitat

- Houston Toad
- Large-fruited Sand Verbena
- Navasota Ladies'-tresses
- Endangered Species
- Threatened Species
- U.S. Army Corps of Engineers (USACE) Project Area
- Watershed (HUC 12) Boundary
- Public Water Supply
- Groundwater Well

Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters

Federal Emergency Management Agency (FEMA) Flood Zone

- A - 1%
- AE - 1%
- AO - 1%
- X - 0.2%

Field-Collected Data

- Perennial Stream/River
- Intermittent Stream/River
- Ephemeral Stream/River
- Other Stream/River
- Lake/Pond
- Emergent Wetland
- Forested Wetland
- Scrub/Shrub Wetland

National Hydrography Dataset (NHD)

- Perennial Stream/River
- Intermittent Stream/River
- Artificial Stream/Canal
- Lake/Pond
- Reservoir
- Swamp/Marsh

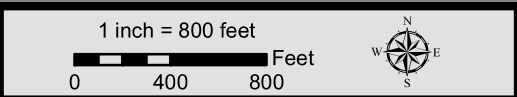
National Wetlands Inventory (NWI)

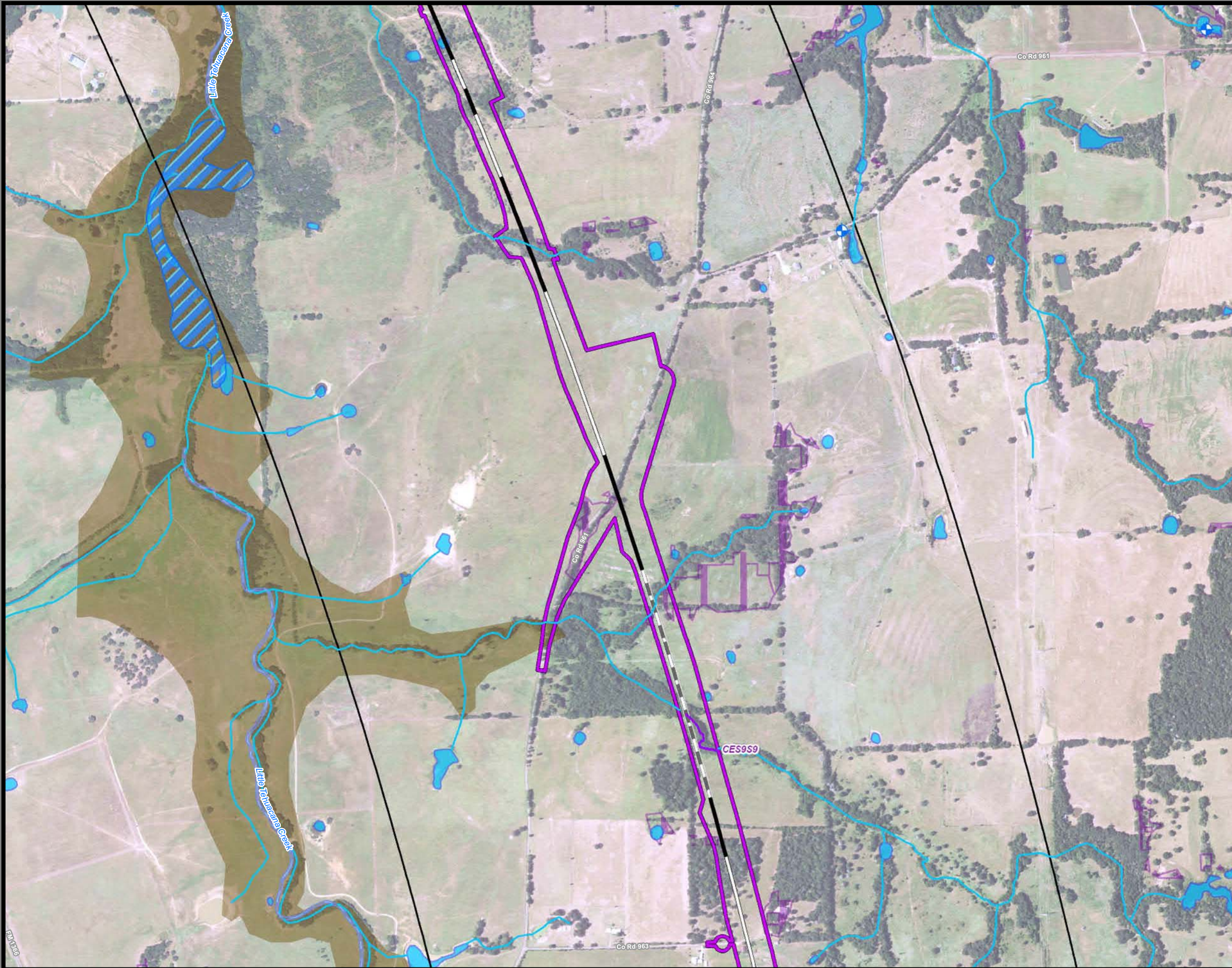
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Other

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Aerial Imagery: USDA NAIP 2014





**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 4
Sheet 158 of 257**

Legend

Limits of Disturbance

- Segment 1
- Segment 2A
- Segment 2B
- Segment 3A
- Segment 3B
- Segment 3C
- Segment 4
- Segment 5

Track Configuration

- Viaduct
- Embankment
- Cut
- Half Mile Buffer
- City Boundary
- County Boundary
- Railroad
- Municipal Setting Designation (MSD)

Potential Habitat

- Houston Toad
- Large-fruited Sand Verbena
- Navasota Ladies'-tresses
- Endangered Species
- Threatened Species
- U.S. Army Corps of Engineers (USACE) Project Area
- Watershed (HUC 12) Boundary
- Public Water Supply
- Groundwater Well

Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters

Federal Emergency Management Agency (FEMA) Flood Zone

- A - 1%
- AE - 1%
- AO - 1%
- X - 0.2%

Field-Collected Data

- Perennial Stream/River
- Intermittent Stream/River
- Ephemeral Stream/River
- Other Stream/River
- Lake/Pond
- Emergent Wetland
- Forested Wetland
- Scrub/Shrub Wetland

National Hydrography Dataset (NHD)

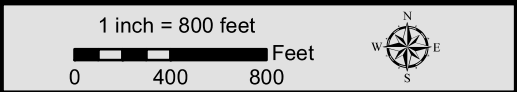
- Perennial Stream/River
- Intermittent Stream/River
- Artificial Stream/Canal
- Lake/Pond
- Reservoir
- Swamp/Marsh

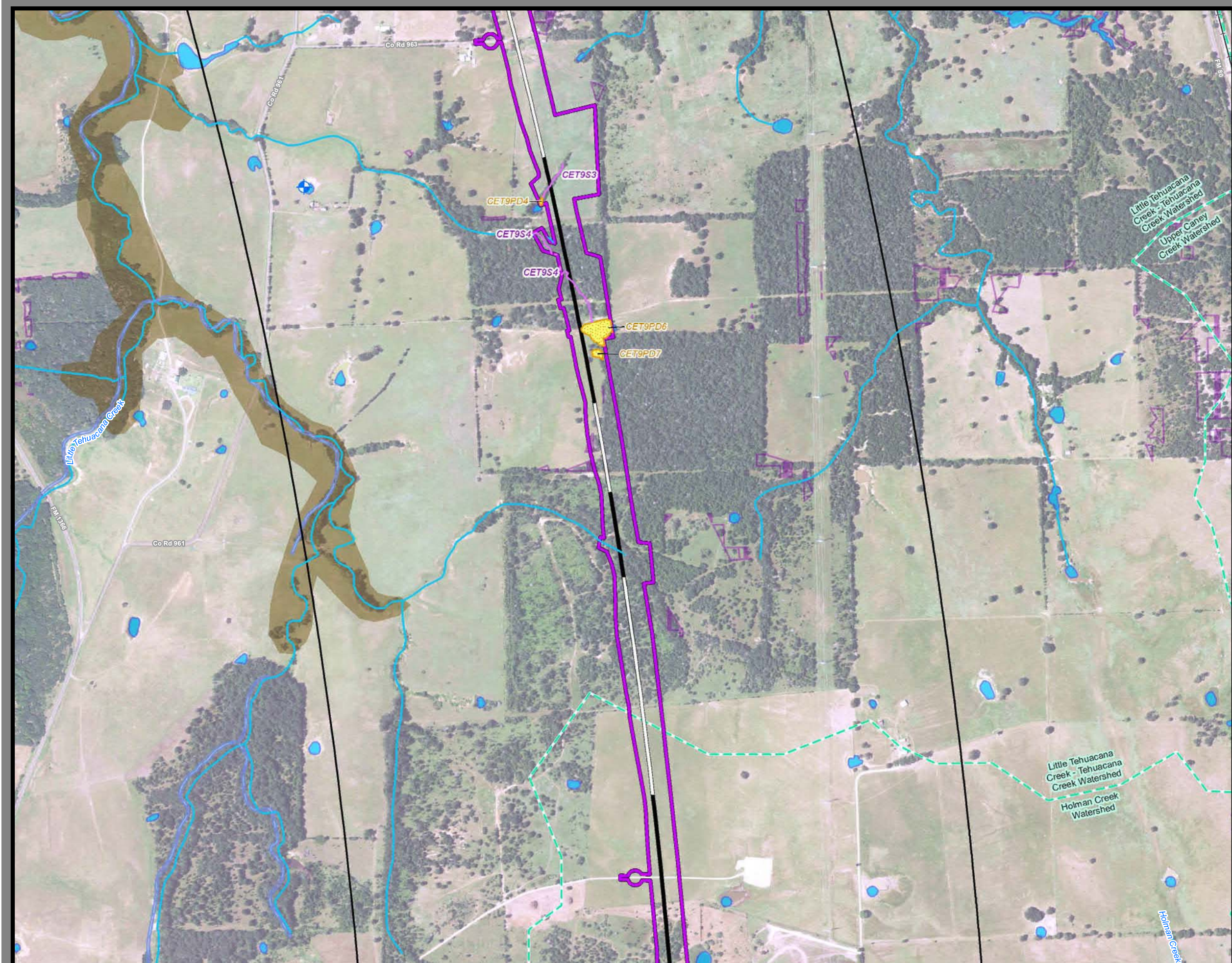
National Wetlands Inventory (NWI)

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Other

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Aerial Imagery: USDA NAIP 2014





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Legend

Limits of Disturbance

- Segment 1
- Segment 2A
- Segment 2B
- Segment 3A
- Segment 3B
- Segment 3C
- Segment 4
- Segment 5

Track Configuration

- Viaduct
- Embankment
- Cut
- Half Mile Buffer
- City Boundary
- County Boundary
- Railroad
- Municipal Setting Designation (MSD)

Potential Habitat

- Houston Toad
- Large-fruited Sand Verbena
- Navasota Ladies'-tresses
- Endangered Species
- Threatened Species
- U.S. Army Corps of Engineers (USACE) Project Area
- Watershed (HUC 12) Boundary
- Public Water Supply
- Groundwater Well

Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters

Federal Emergency Management Agency (FEMA) Flood Zone

- A - 1%
- AE - 1%
- AO - 1%
- X - 0.2%

Field-Collected Data

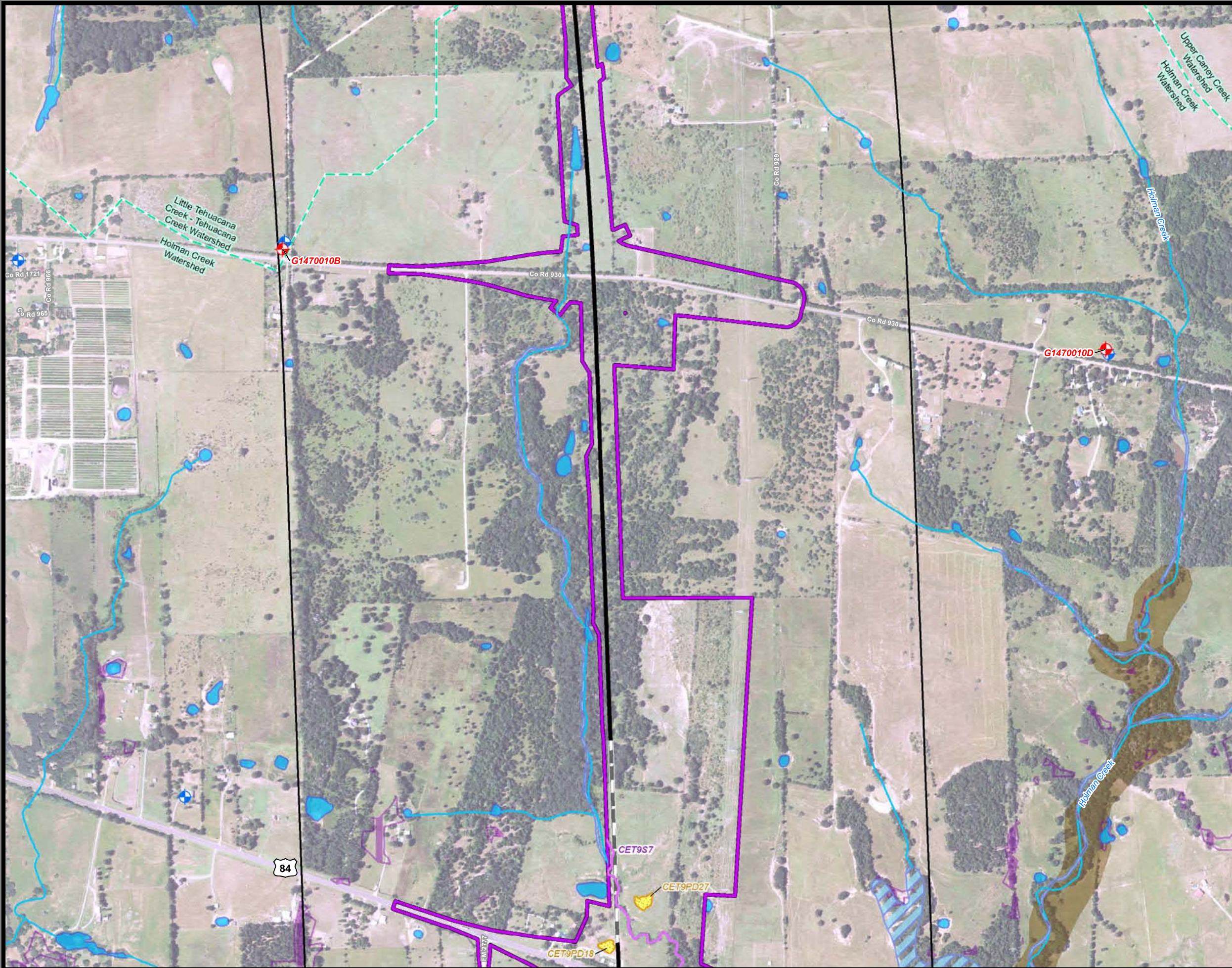
- Perennial Stream/River
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- Other Stream/River
- Lake/Pond
- Emergent Wetland
- Forested Wetland
- Scrub/Shrub Wetland

National Hydrography Dataset (NHD)

- Perennial Stream/River
- Intermittent Stream/River
- Artificial Stream/Canal
- Lake/Pond
- Reservoir
- Swamp/Marsh

National Wetlands Inventory (NWI)

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Other



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High-Speed Rail Project
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Legend

Limits of Disturbance

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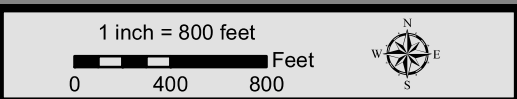
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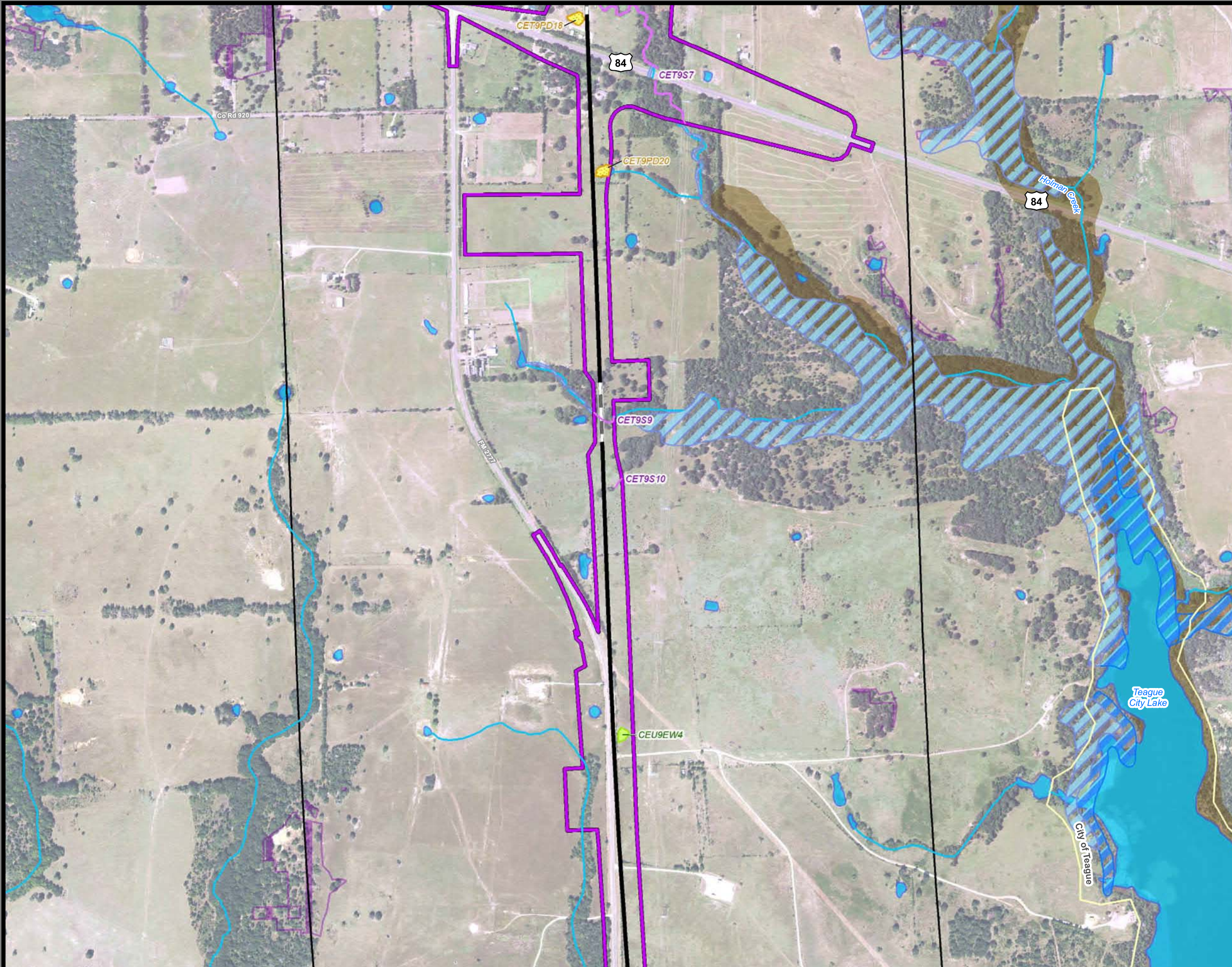
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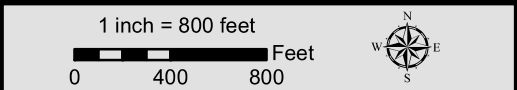
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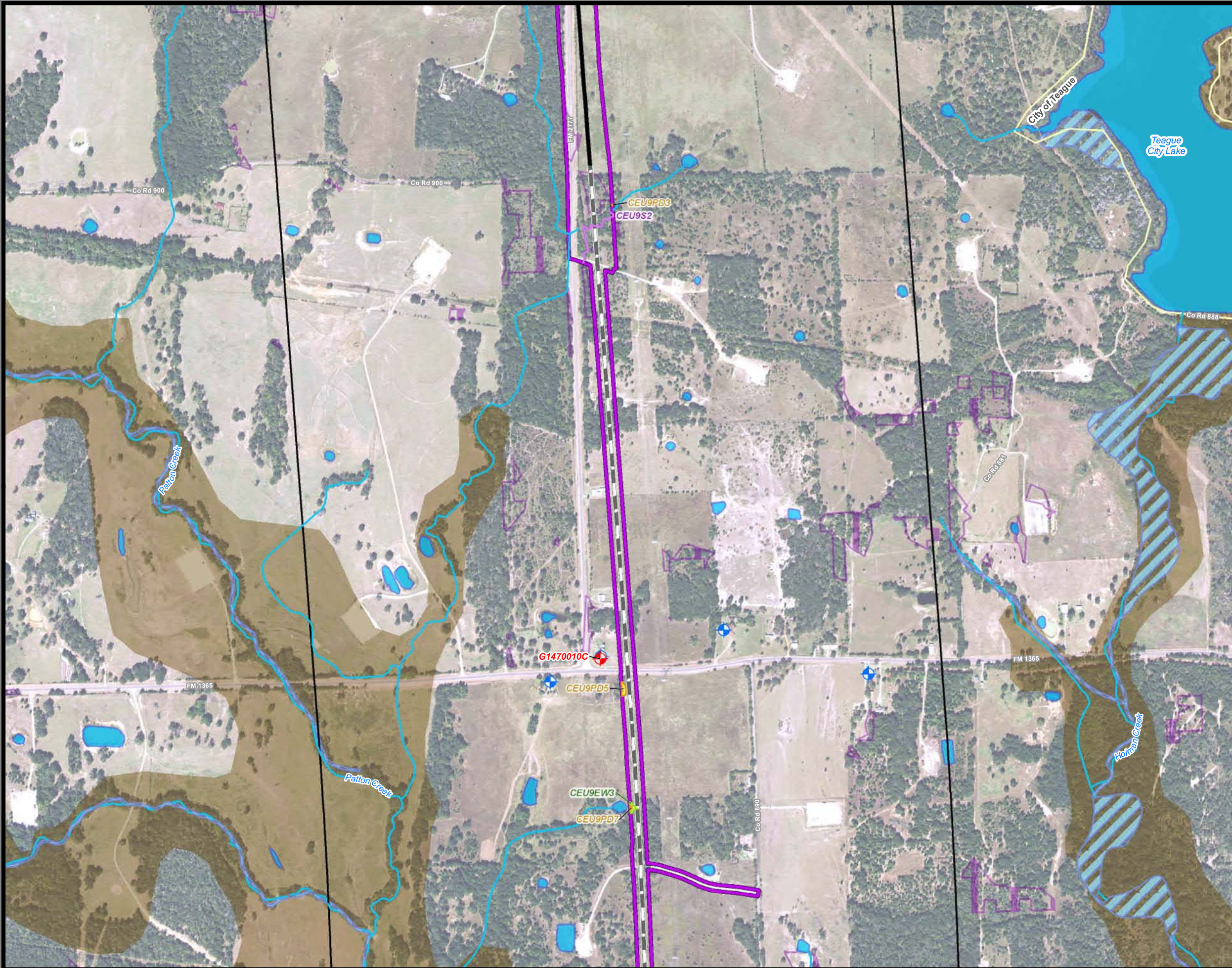
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Legend

- Limits of Disturbance**

 - Segment 1
 - Segment 2A
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National Wetlands Inventory (NWI)

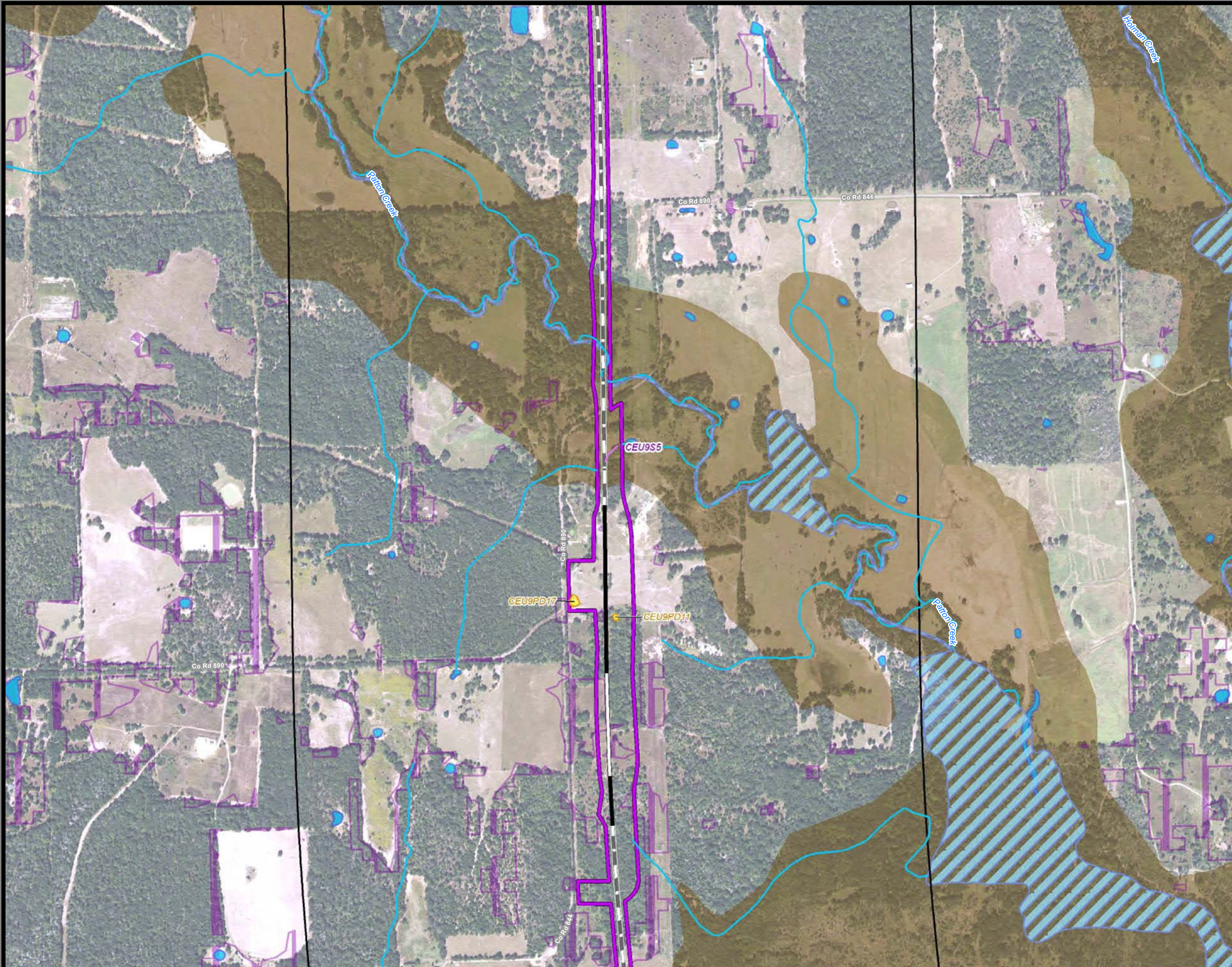
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0 400 800 Feet





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Limits of Disturbance

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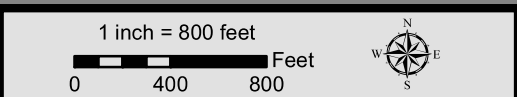
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- Swamp/Marsh

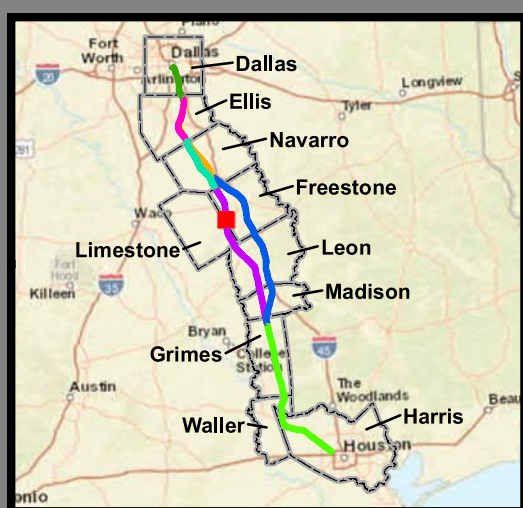
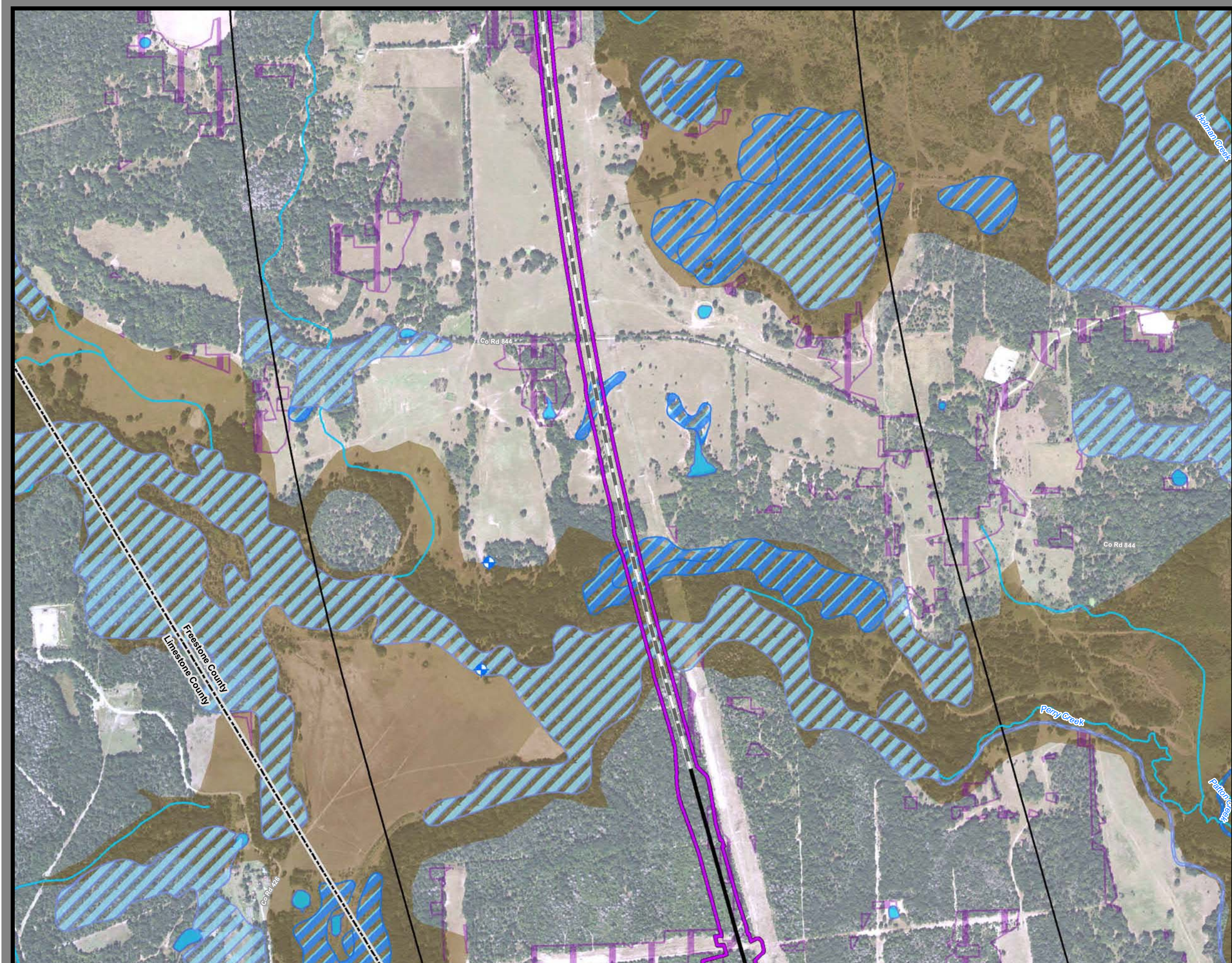
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High-Speed Rail Project
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Legend

Limits of Disturbance

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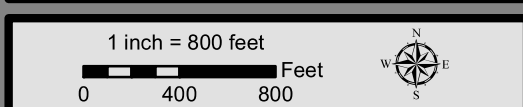
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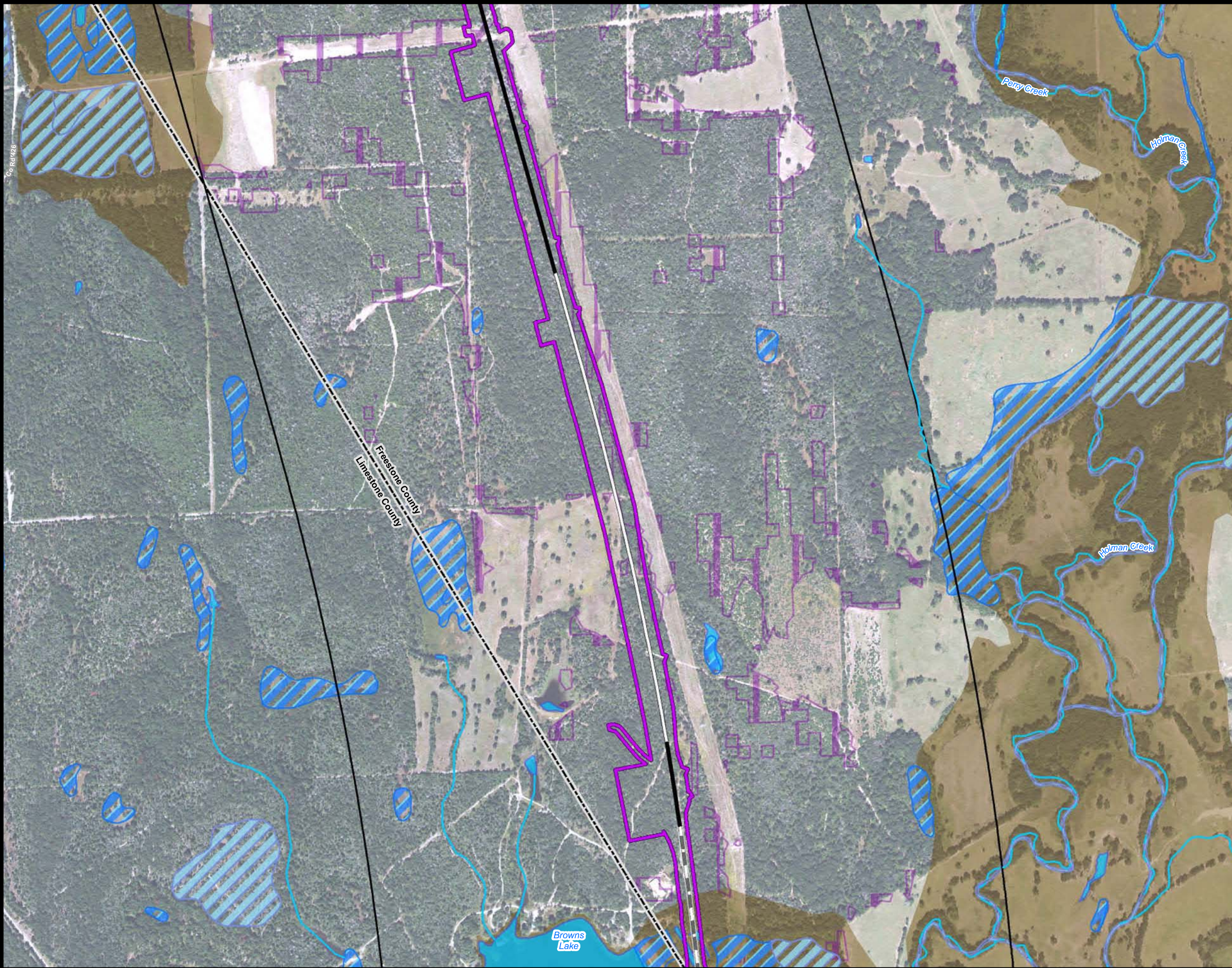
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High-Speed Rail Project**
Natural Resources
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- Limits of Disturbance**

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Potential Habitat

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 - Navasota Ladies'-tresses
 - Endangered Species
 - Threatened Species
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Impaired Waters

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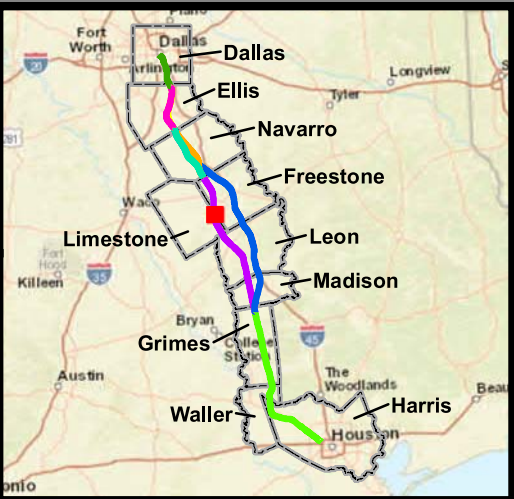
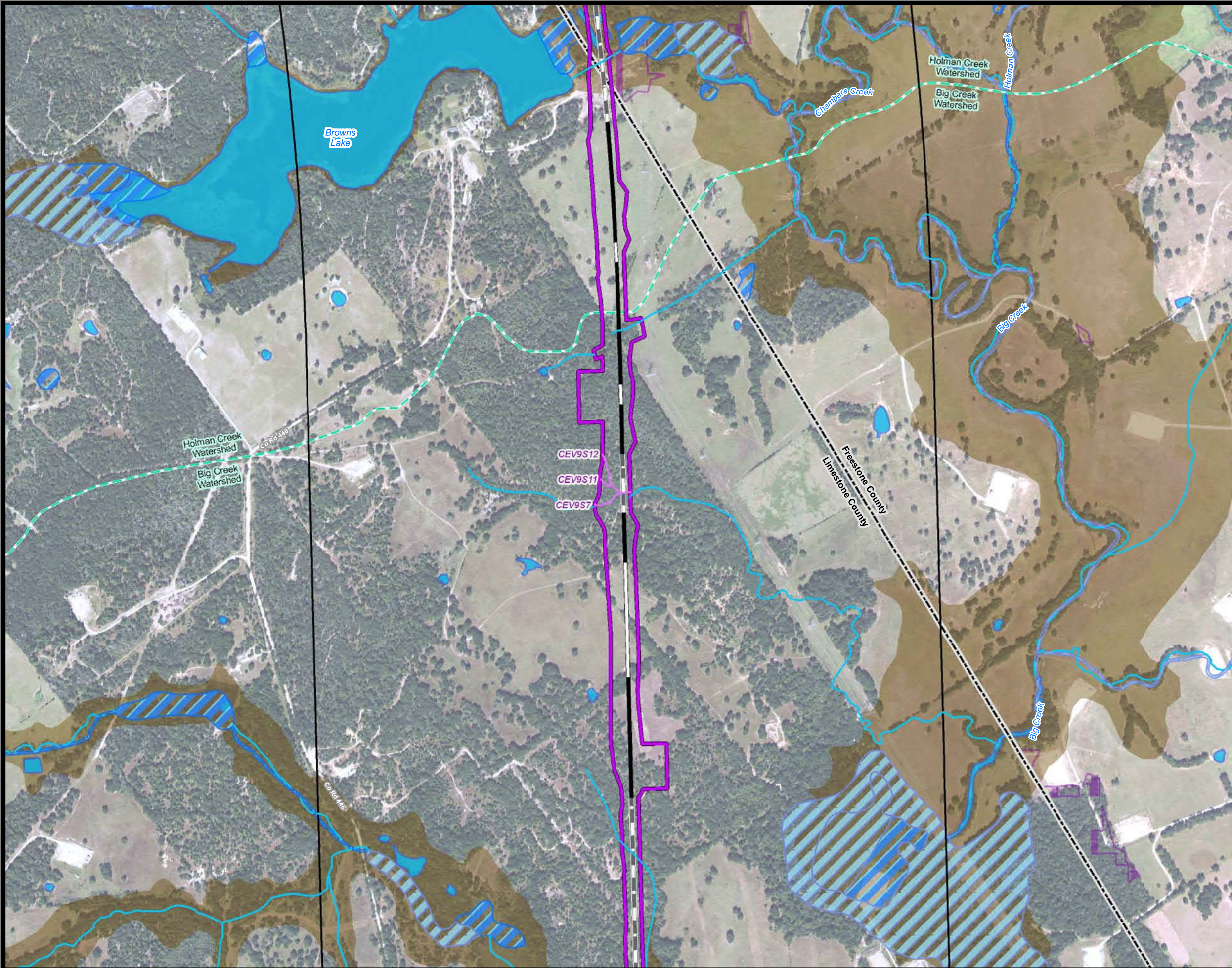
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High-Speed Rail Project
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Legend

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Potential Habitat

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- Verbena
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Impaired Waters with Total Maximum Daily Load (TMDL)

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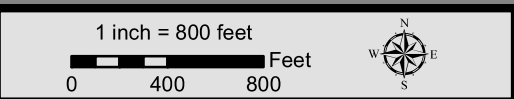
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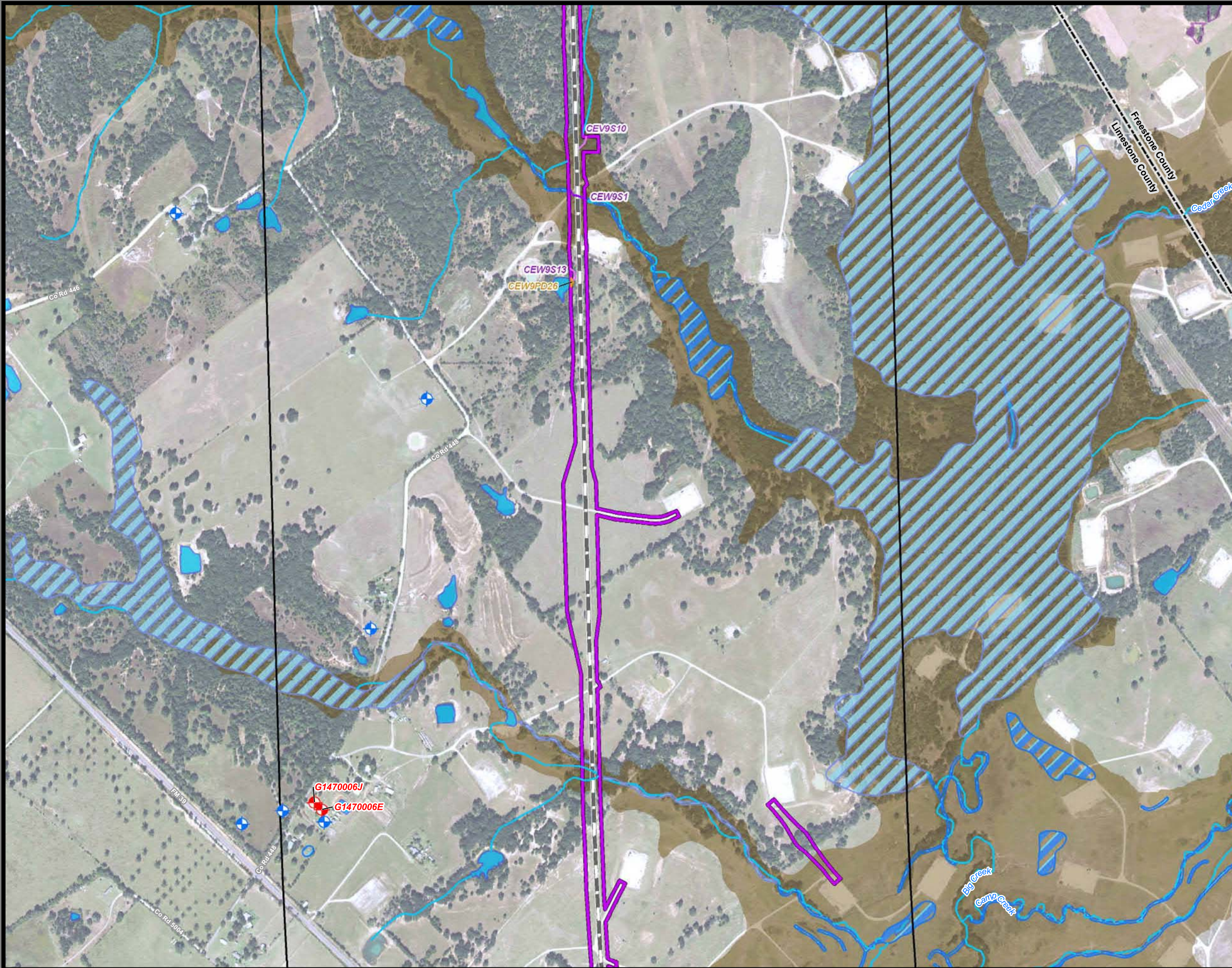
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High-Speed Rail Project
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Legend

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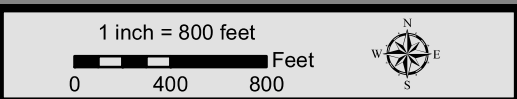
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High-Speed Rail Project
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Legend

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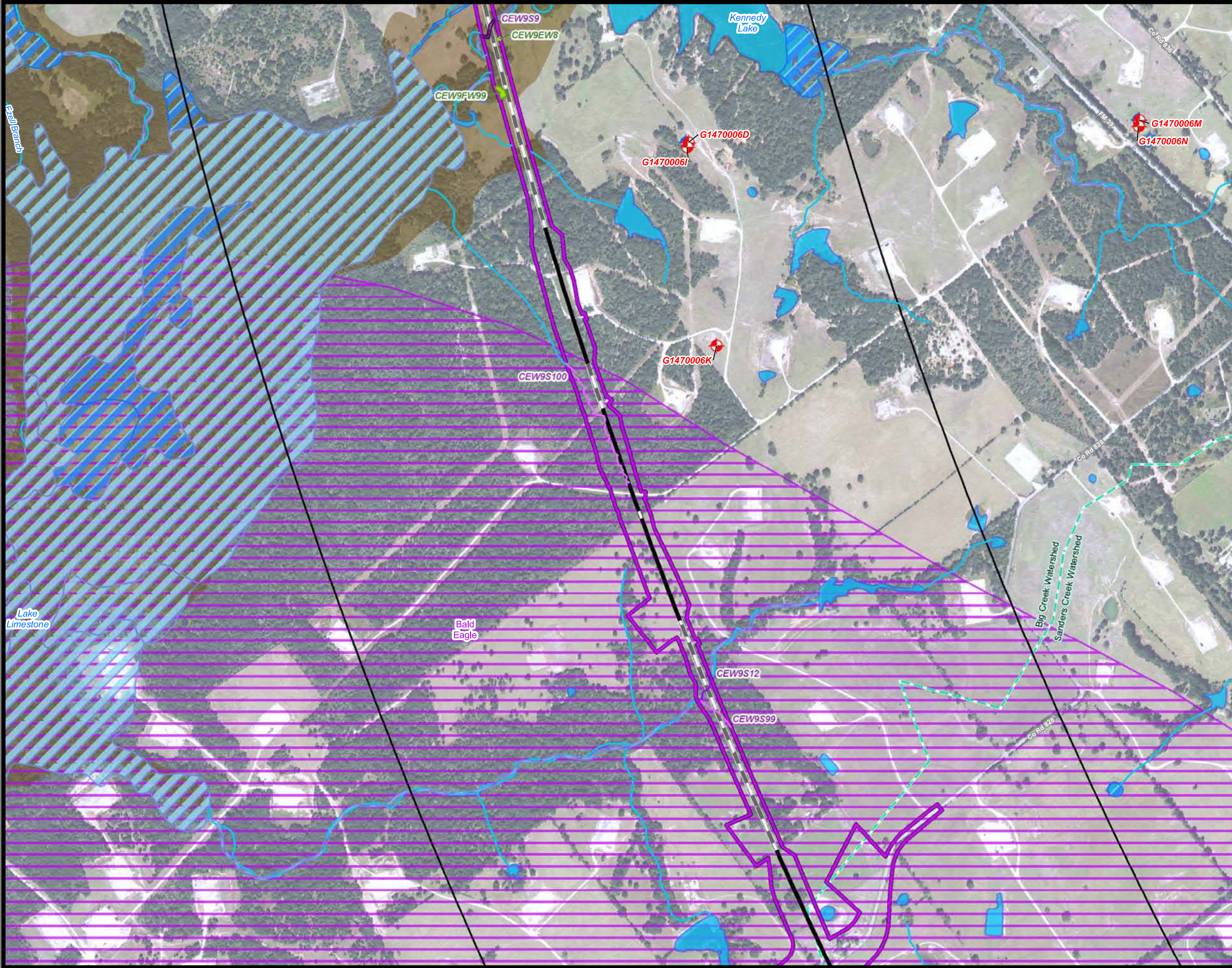
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 - Navasota Ladies'-tresses
 - Endangered Species
 - Threatened Species
 - U.S. Army Corps of Engineers (USACE) Project Area
 - Watershed (HUC 12) Boundary
 - Public Water Supply
 - Groundwater Well
- Impaired Waters with Total Maximum Daily Load (TMDL)**
- Impaired Waters
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- A - 1%
 - AE - 1%
 - AO - 1%
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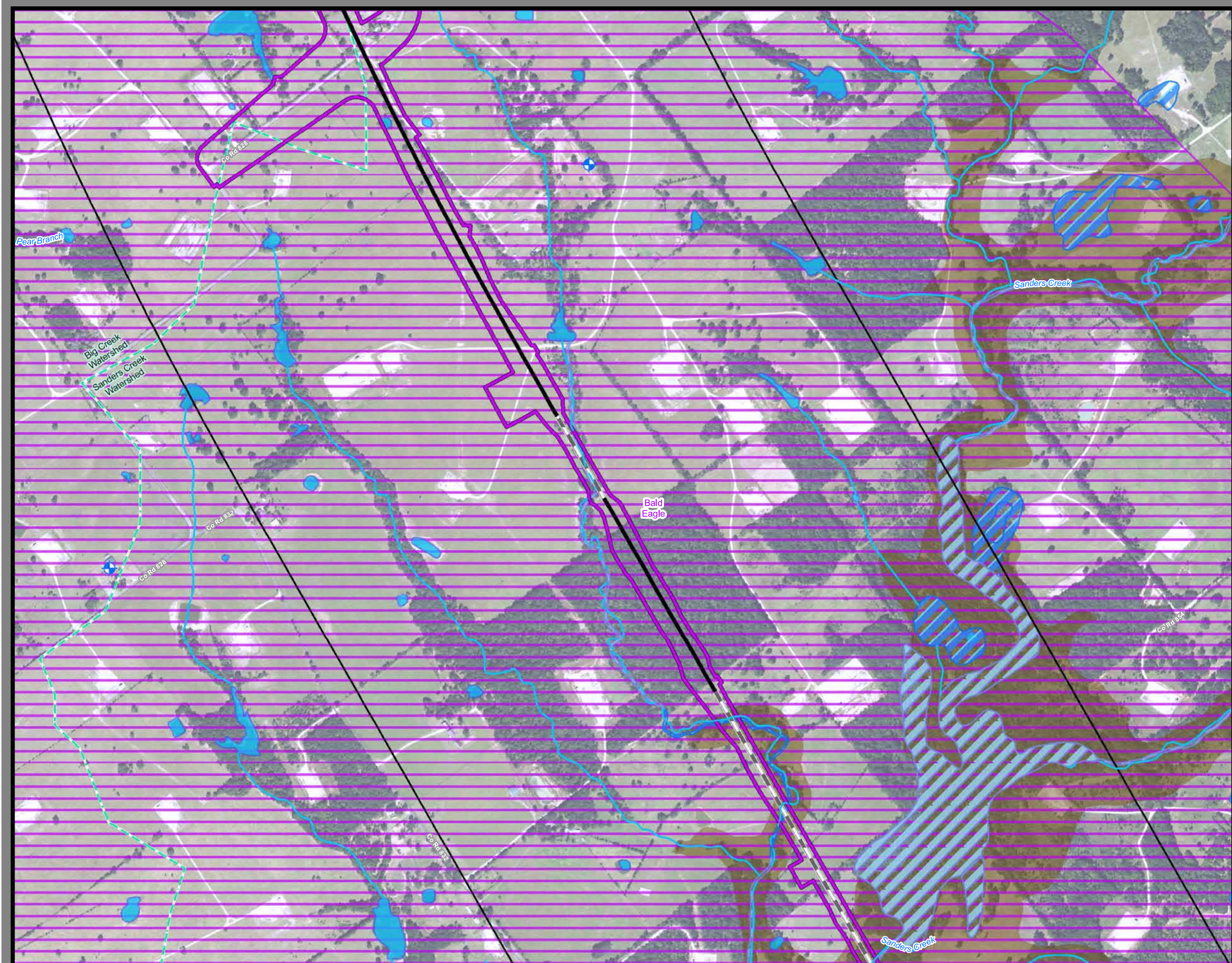
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Aerial Imagery: USDA NAIP 2014

1 inch = 800 feet

0 400 800 Feet





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High-Speed Rail Project
Natural Resources
Segment 4
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Legend

Limits of Disturbance

- Segment 1
- Segment 2A
- Segment 2B
- Segment 3A
- Segment 3B
- Segment 3C
- Segment 4
- Segment 5

Track Configuration

- Viaduct
- Embankment
- Cut
- Half Mile Buffer
- City Boundary
- County Boundary
- Railroad
- Municipal Setting Designation (MSD)

Potential Habitat

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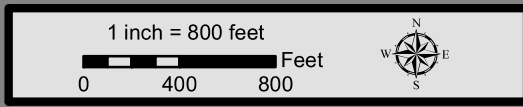
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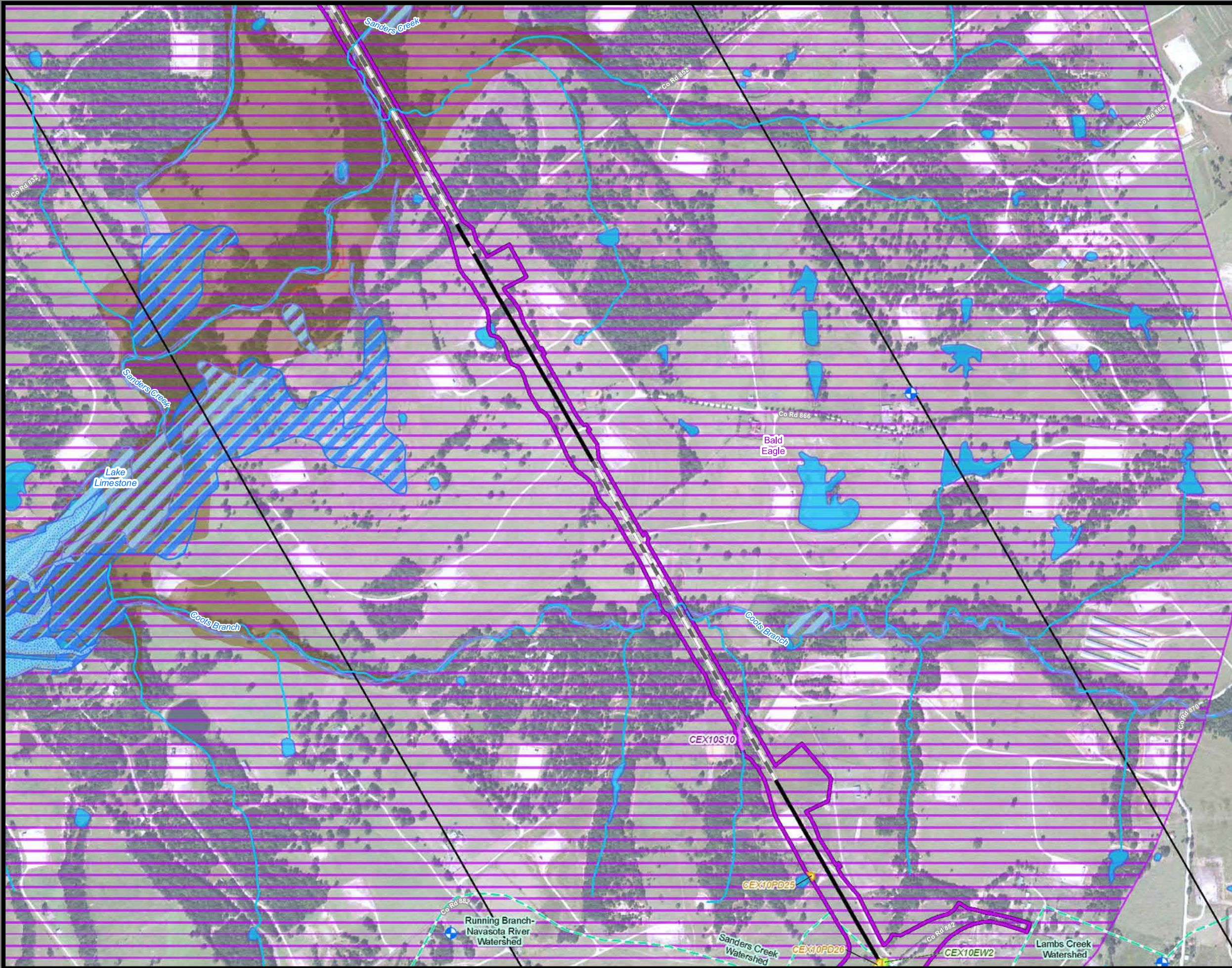
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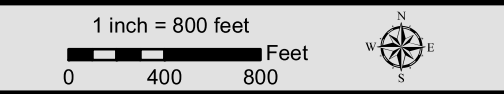
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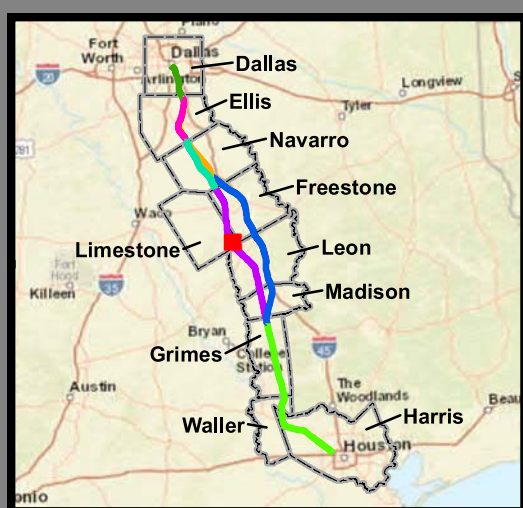
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High-Speed Rail Project
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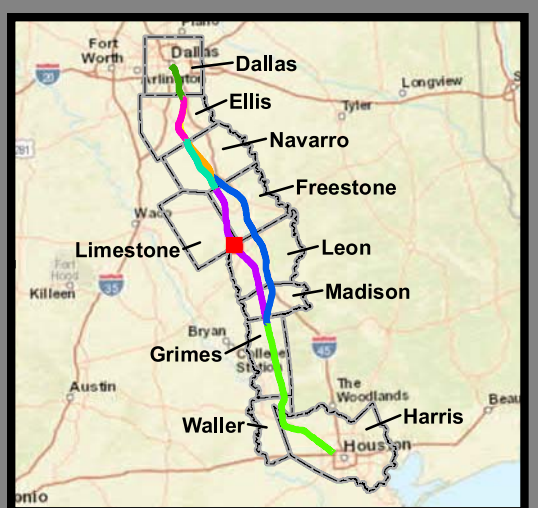
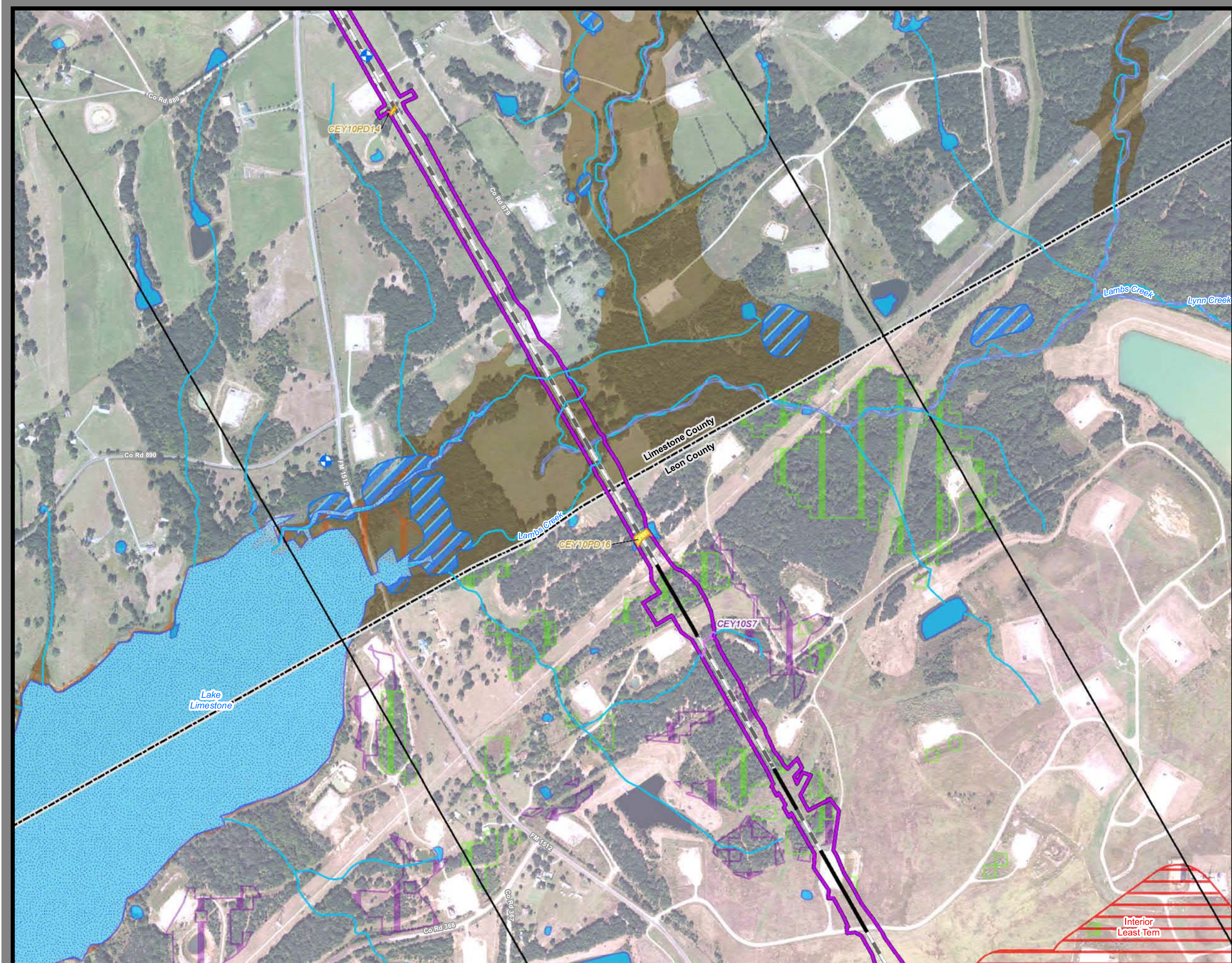
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0 400 800 Feet

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**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 4
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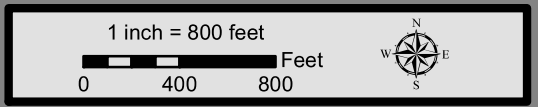
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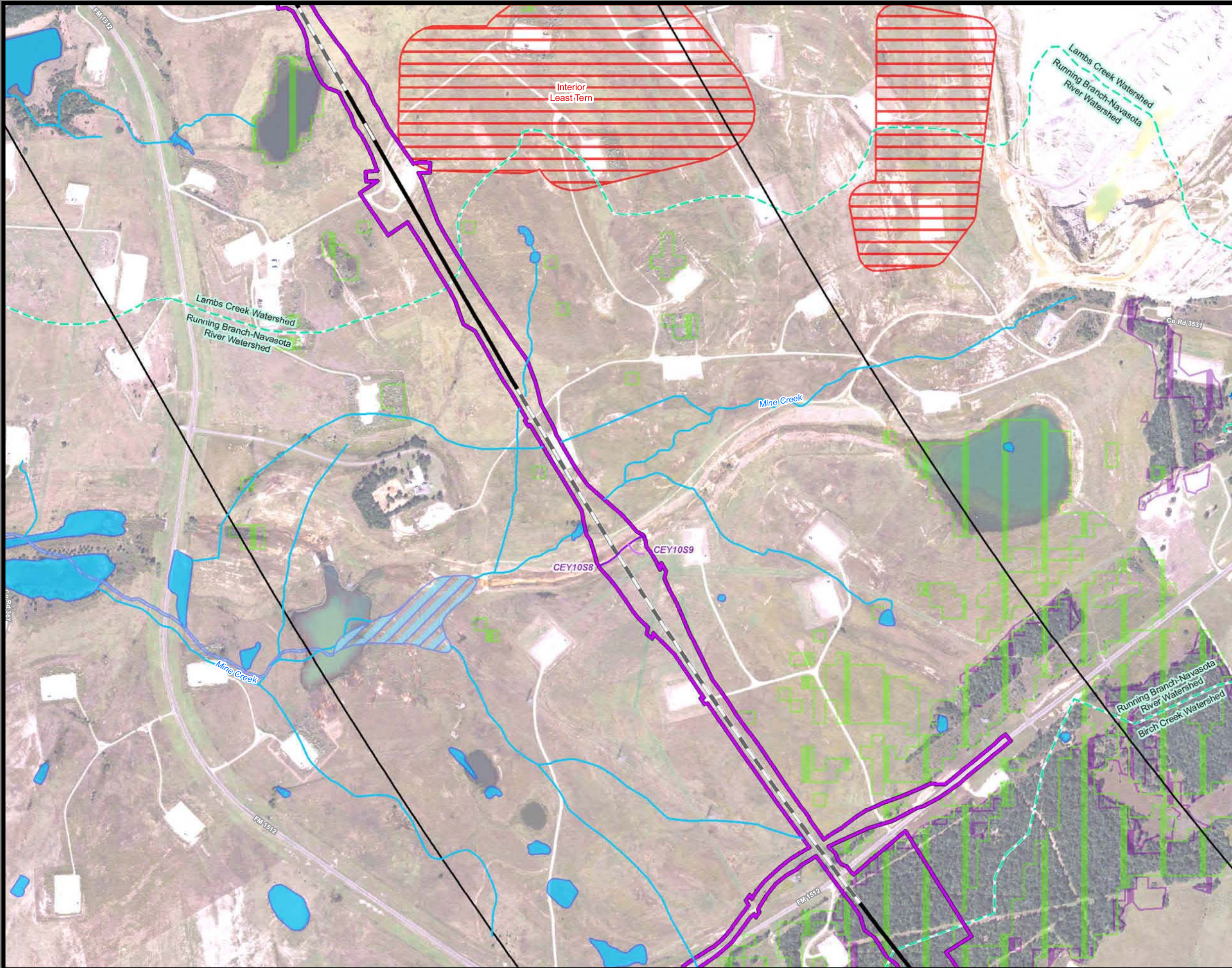
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**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 4
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- Legend**
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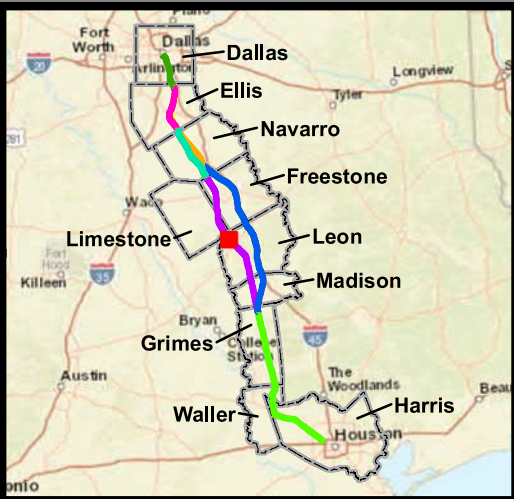
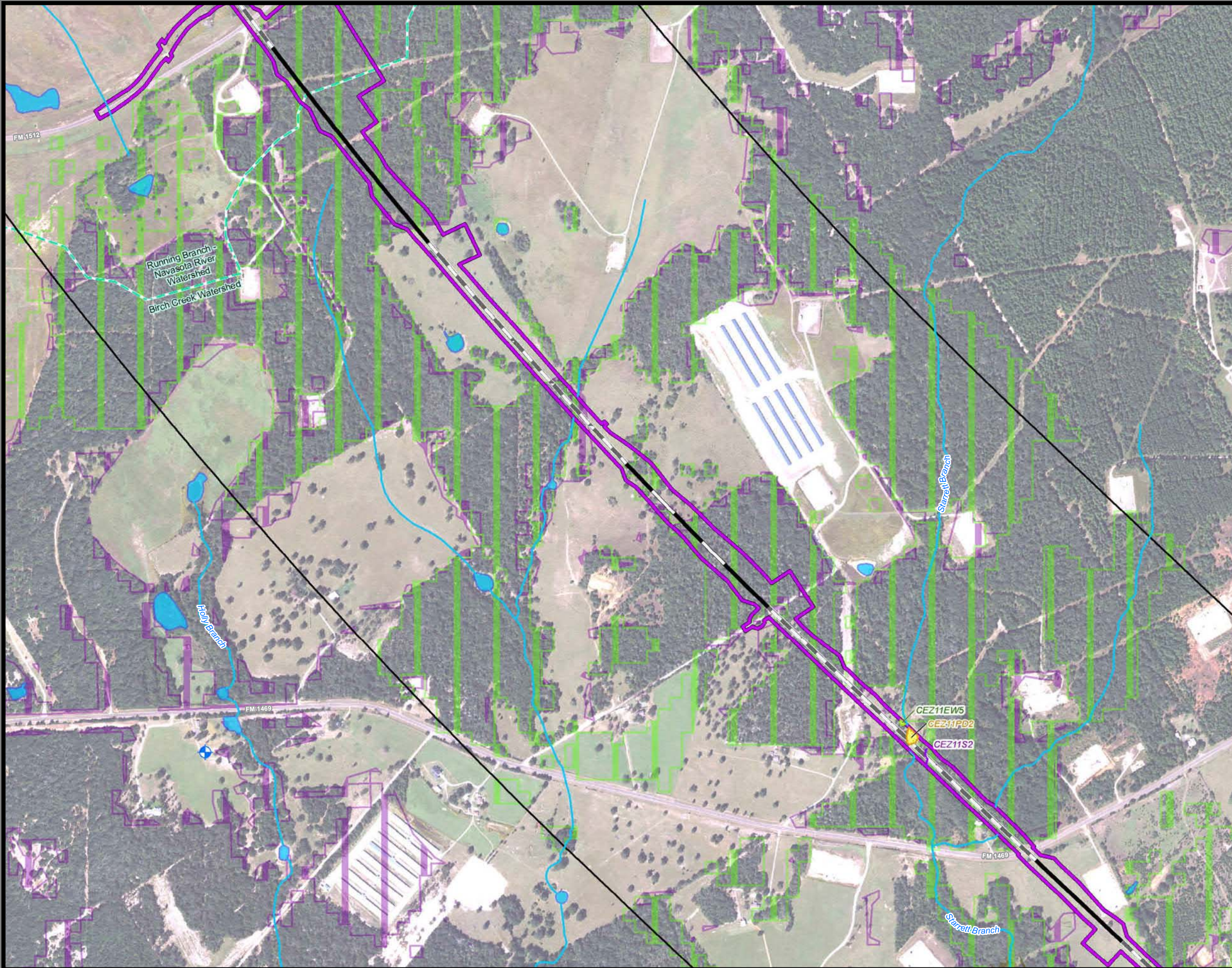
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**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 4
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Legend

- Limits of Disturbance**

 - Segment 1
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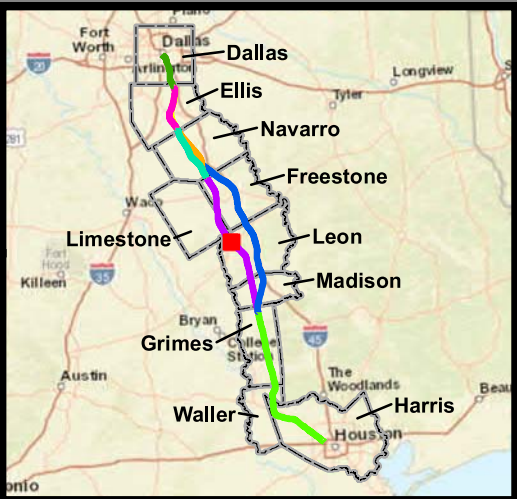
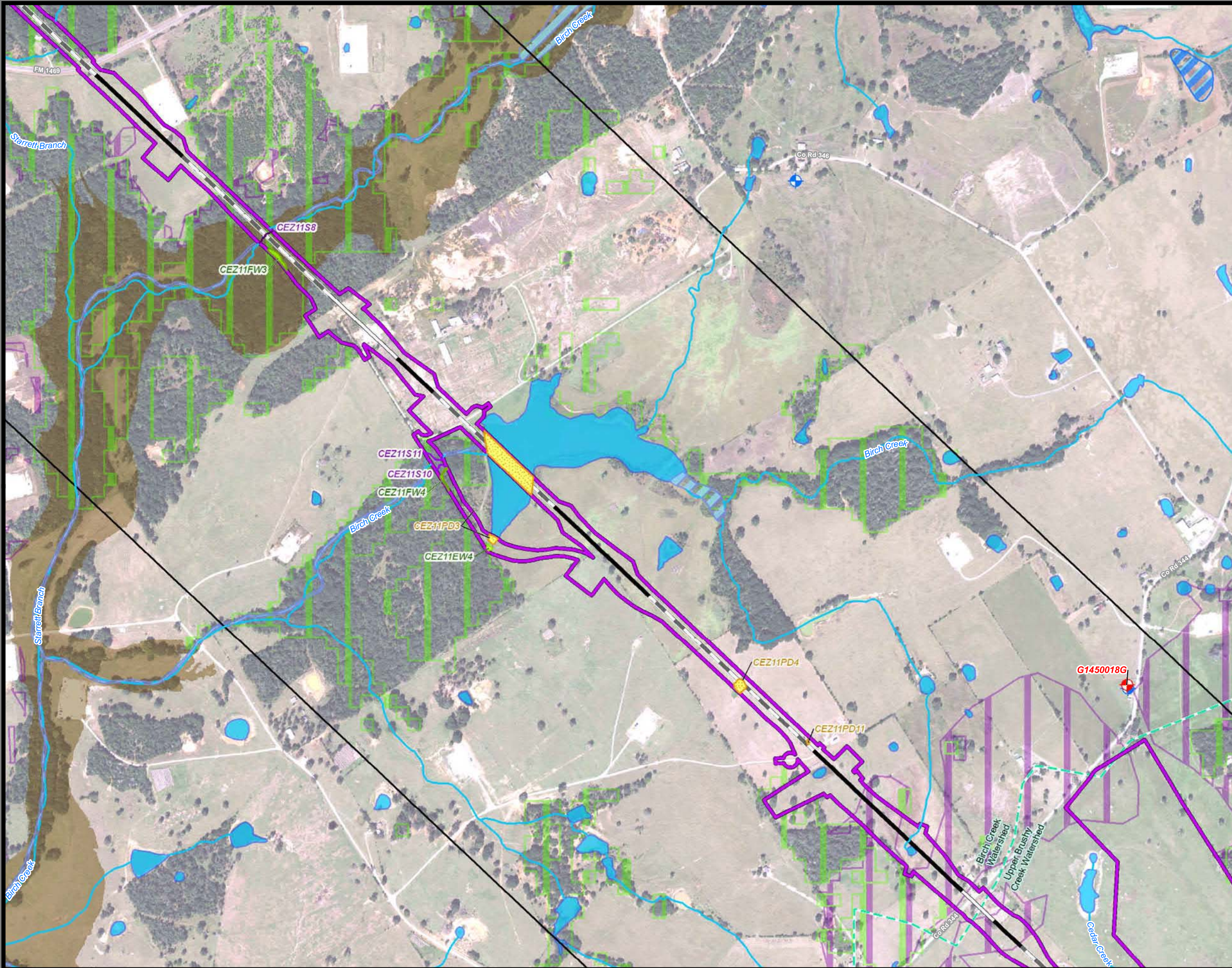
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**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 4
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Legend

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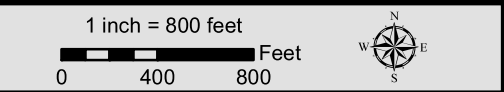
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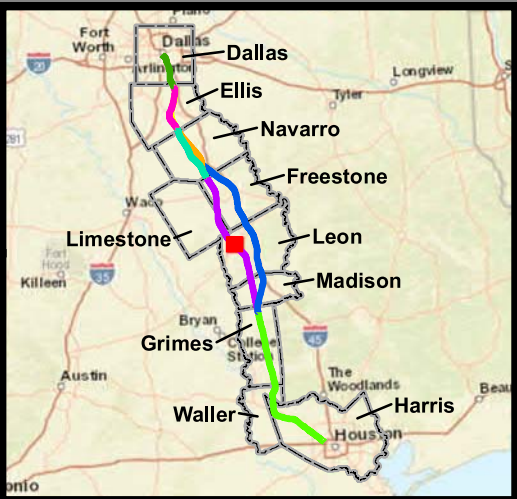
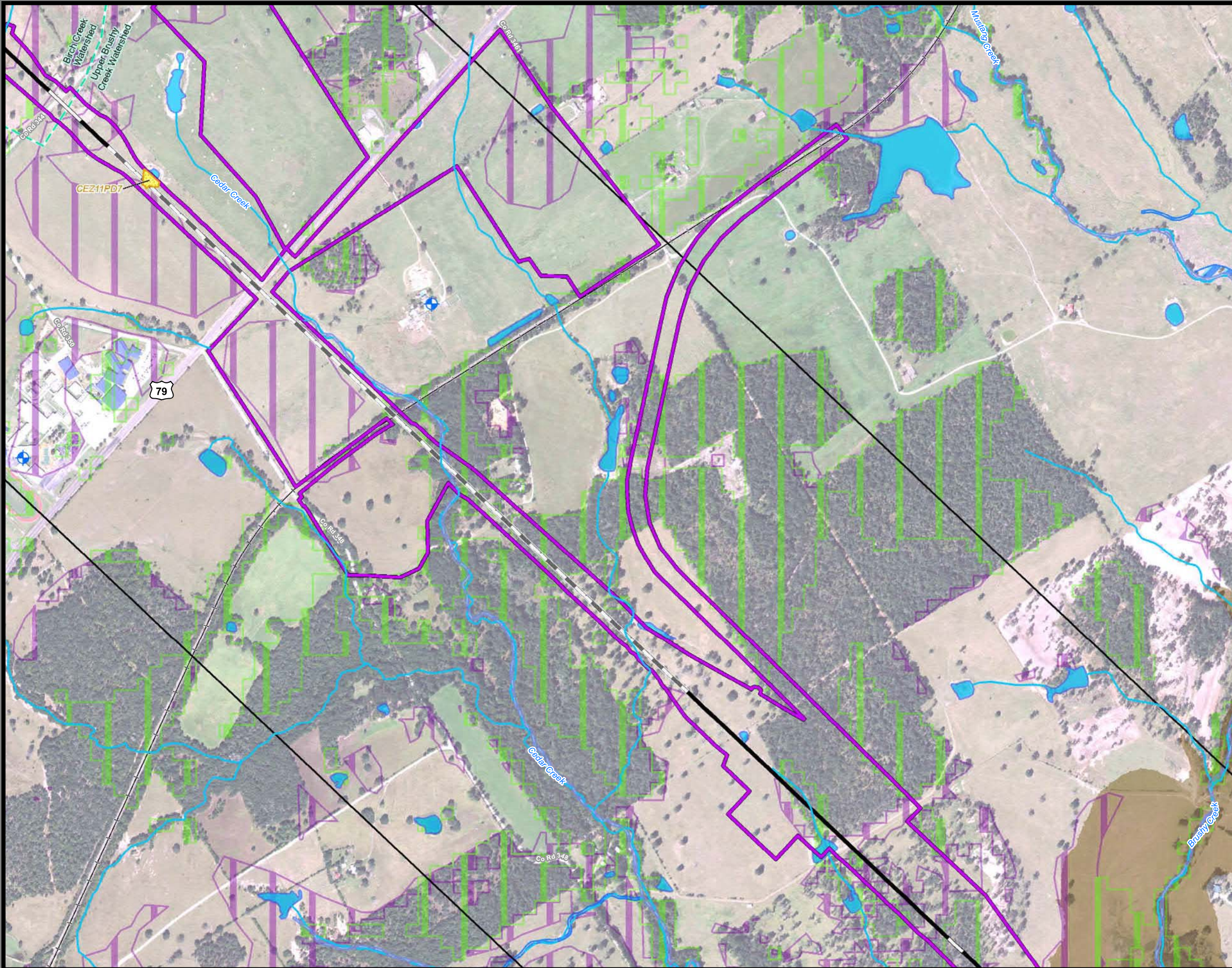
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**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 4
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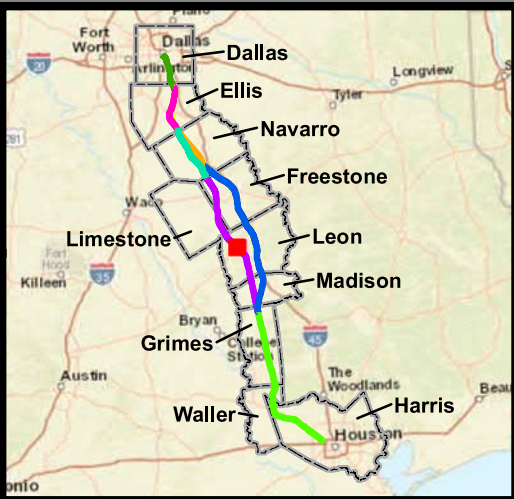
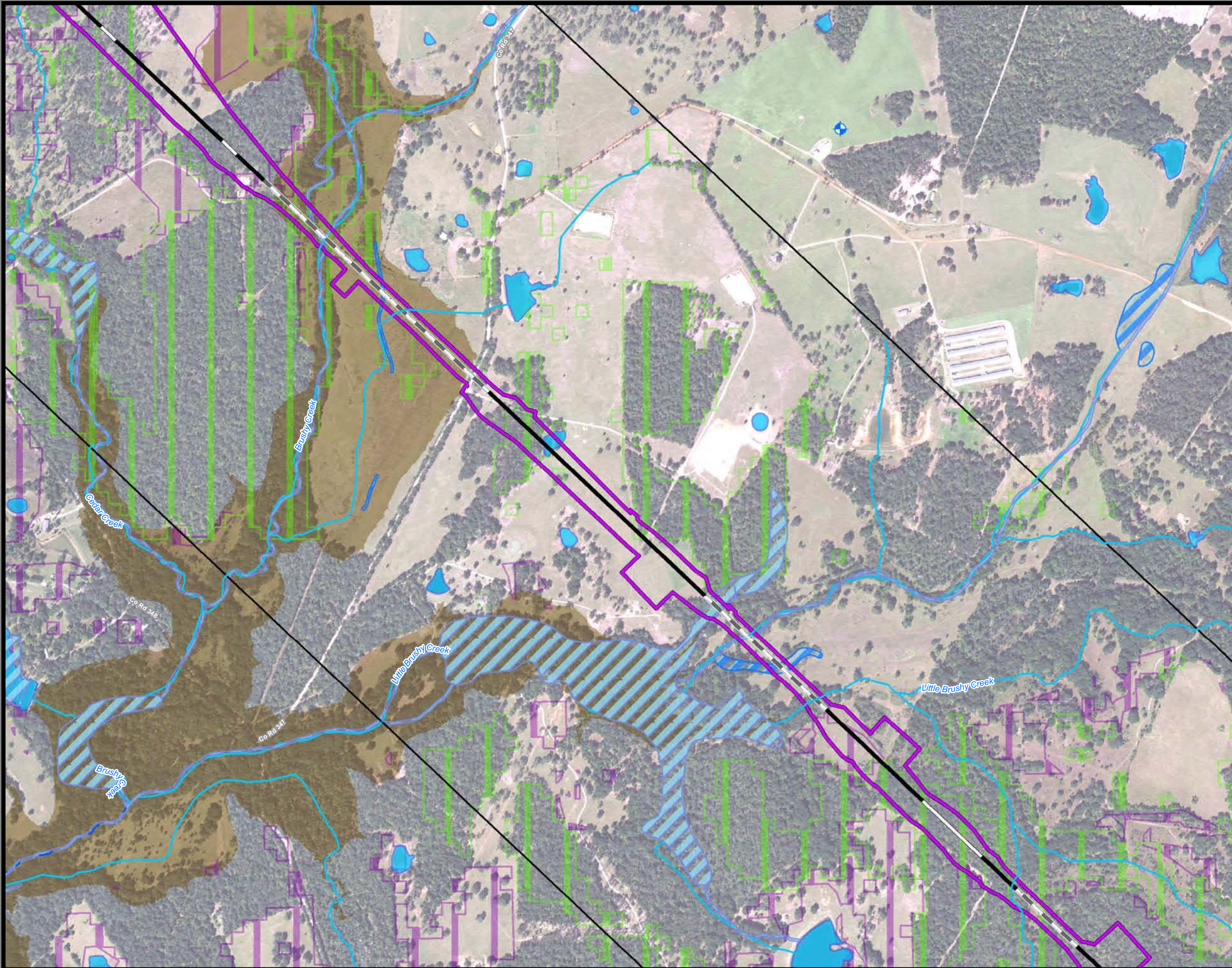
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High-Speed Rail Project
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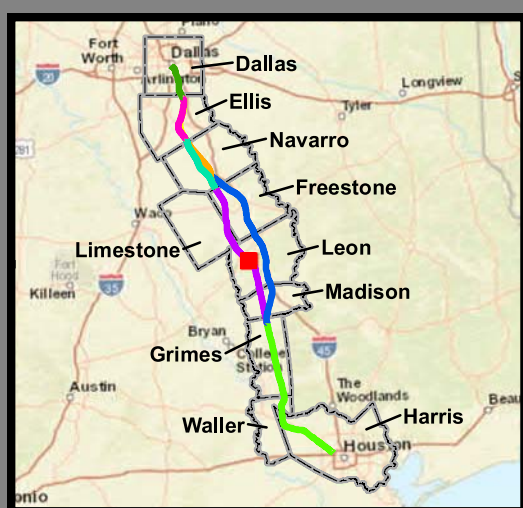
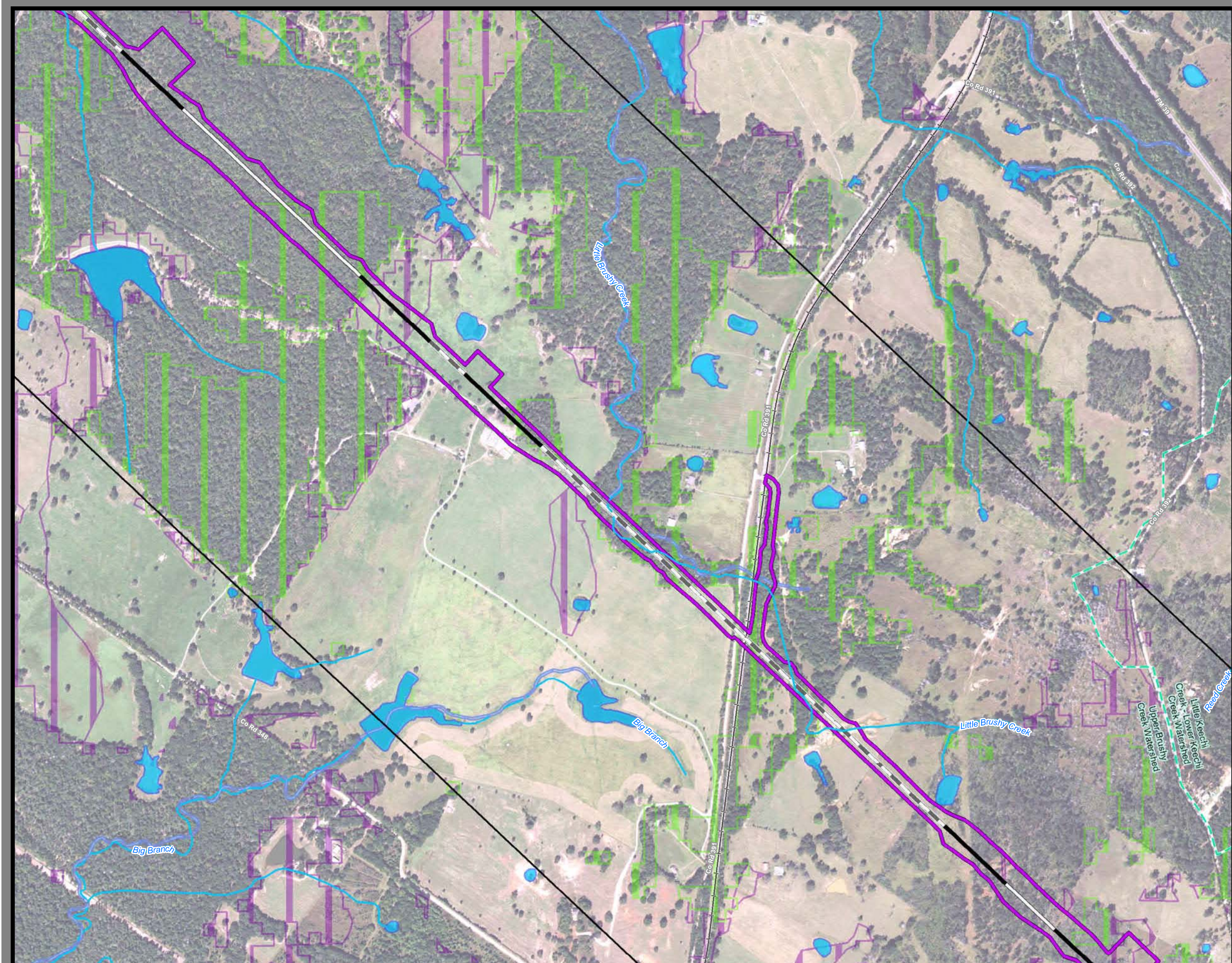
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Aerial Imagery: USDA NAIP 2014

1 inch = 800 feet
0 400 800 Feet





**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 4
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Legend

Limits of Disturbance

- Segment 1
- Segment 2A
- Segment 2B
- Segment 3A
- Segment 3B
- Segment 3C
- Segment 4
- Segment 5

Track Configuration

- Viaduct
- Embankment
- Cut
- Half Mile Buffer
- City Boundary
- County Boundary
- Railroad
- Municipal Setting Designation (MSD)

Potential Habitat

- Houston Toad
- Large-fruited Sand Verbena
- Navasota Ladies'-tresses
- Endangered Species
- Threatened Species
- U.S. Army Corps of Engineers (USACE) Project Area
- Watershed (HUC 12) Boundary
- Public Water Supply
- Groundwater Well

Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters
- A - 1%
- AE - 1%
- AO - 1%
- X - 0.2%

Federal Emergency Management Agency (FEMA) Flood Zone

- Perennial Stream/River
- Intermittent Stream/River
- Ephemeral Stream/River
- Other Stream/River
- Lake/Pond
- Emergent Wetland
- Forested Wetland
- Scrub/Shrub Wetland

Field-Collected Data

- Perennial Stream/River
- Intermittent Stream/River
- Artificial Stream/Canal
- Lake/Pond
- Reservoir
- Swamp/Marsh

National Hydrography Dataset (NHD)

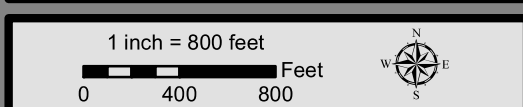
- Perennial Stream/River
- Intermittent Stream/River
- Artificial Stream/Canal
- Lake/Pond
- Reservoir
- Swamp/Marsh

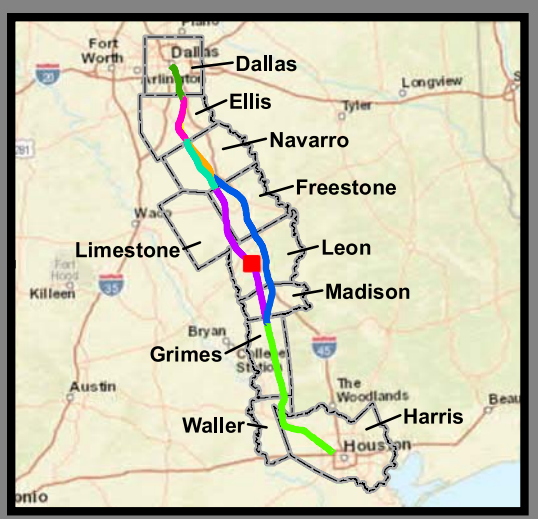
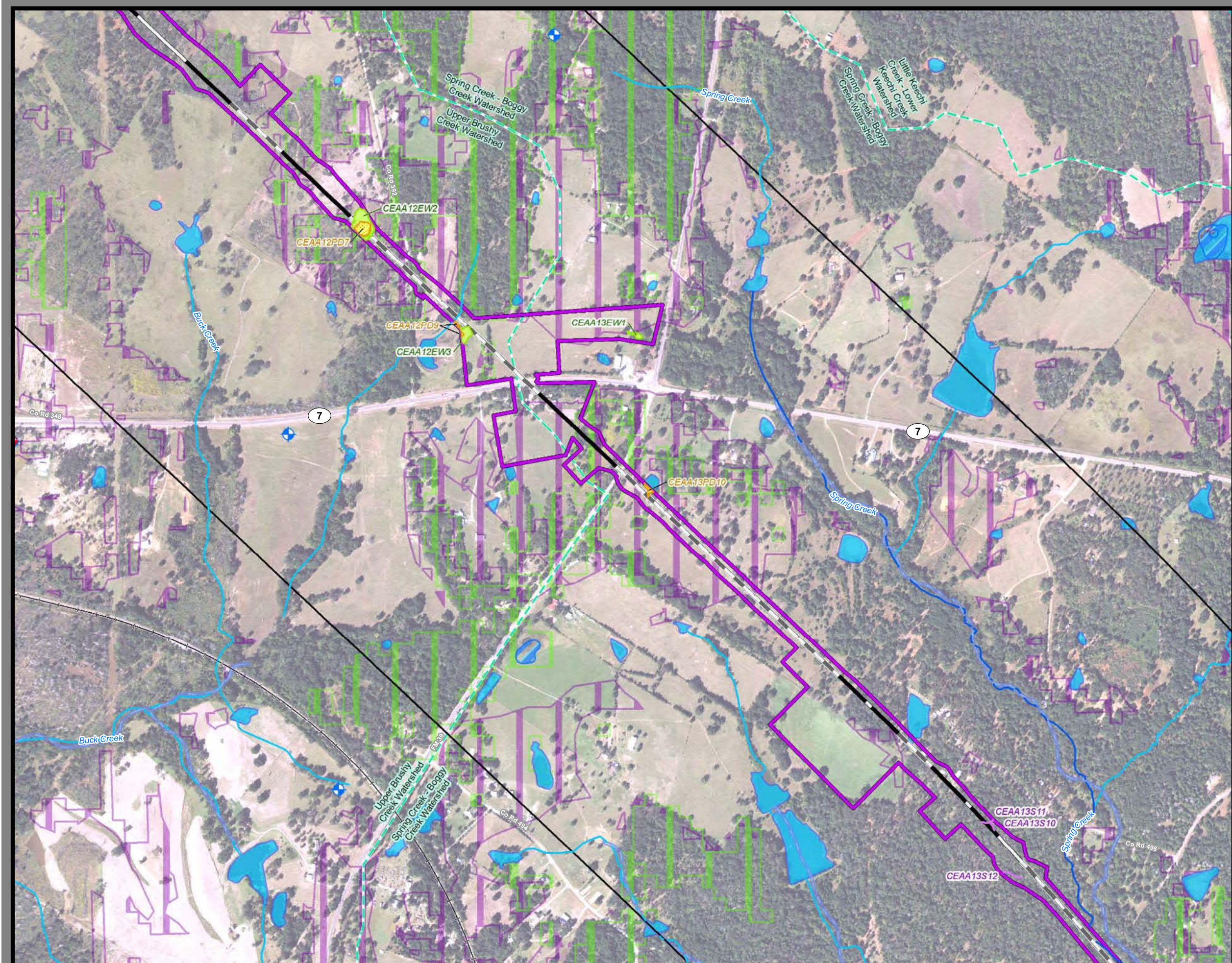
National Wetlands Inventory (NWI)

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Other

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Legend

Limits of Disturbance

- Segment 1
- Segment 2A
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Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters

Federal Emergency Management Agency (FEMA) Flood Zone

- A - 1%
- AE - 1%
- AO - 1%
- X - 0.2%

Field-Collected Data

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- Ephemeral Stream/River
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- Forested Wetland
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National Hydrography Dataset (NHD)

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- Intermittent Stream/River
- Artificial Stream/Canal
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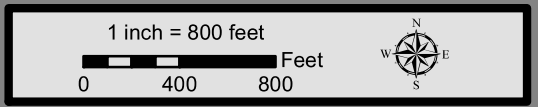
National Wetlands Inventory (NWI)

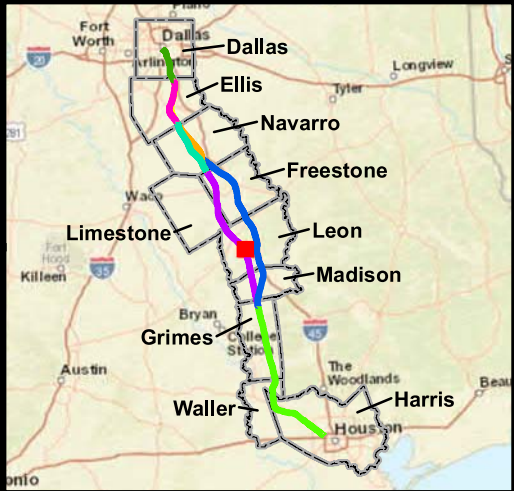
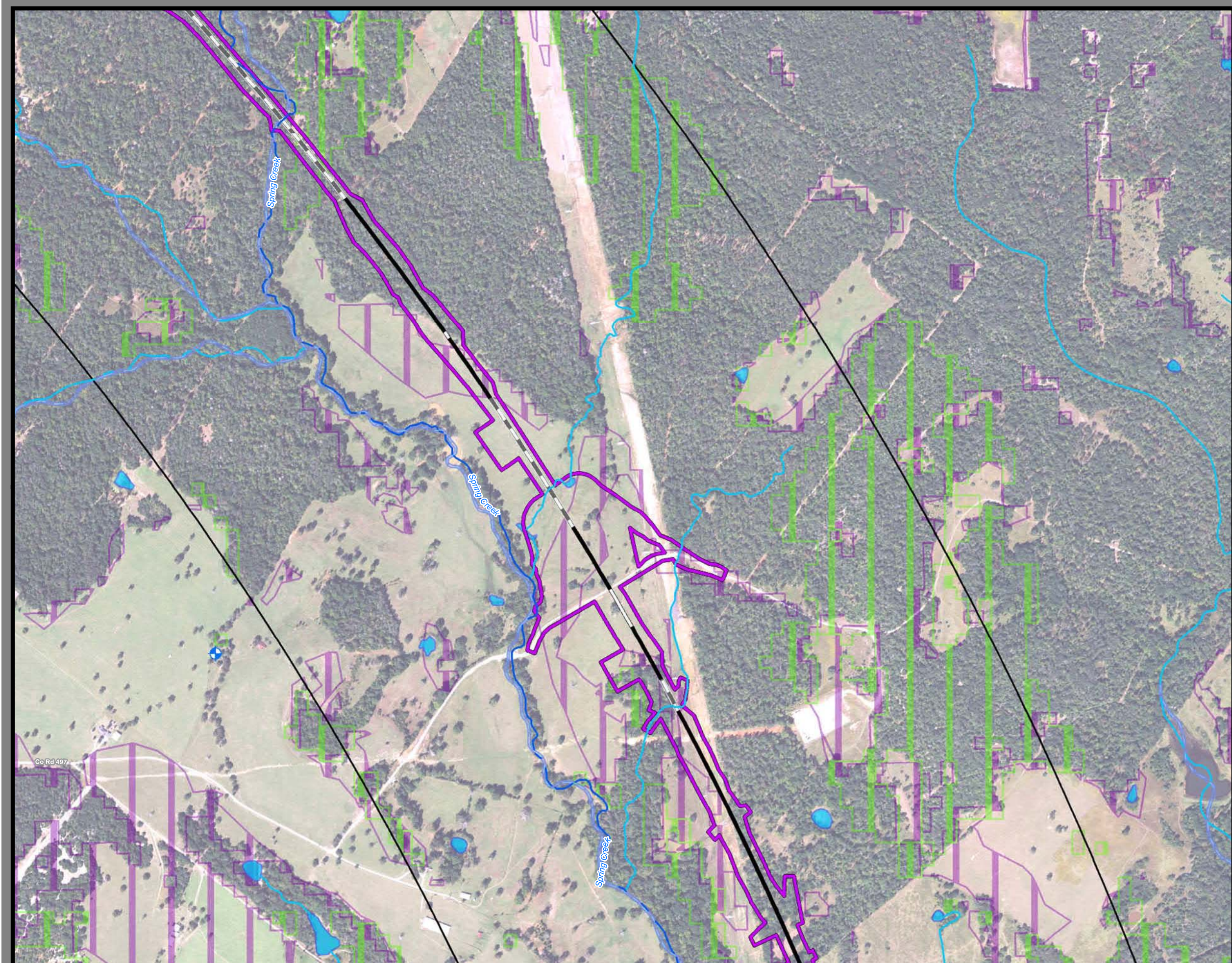
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High-Speed Rail Project
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Legend

Limits of Disturbance

- Segment 1
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Impaired Waters with Total Maximum Daily Load (TMDL)

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National Hydrography Dataset (NHD)

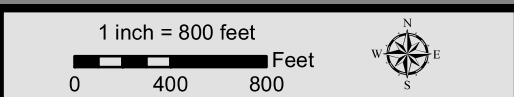
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- Lake/Pond
- Reservoir
- Swamp/Marsh

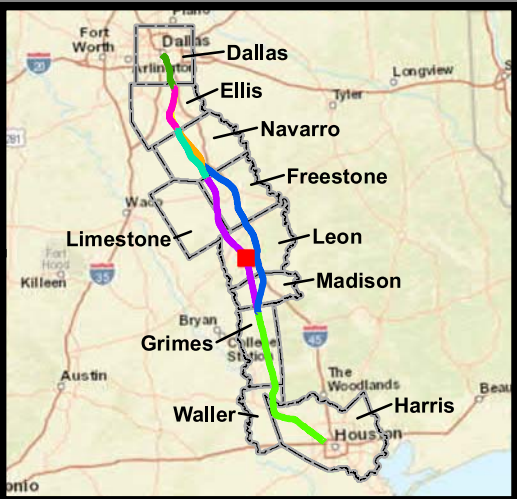
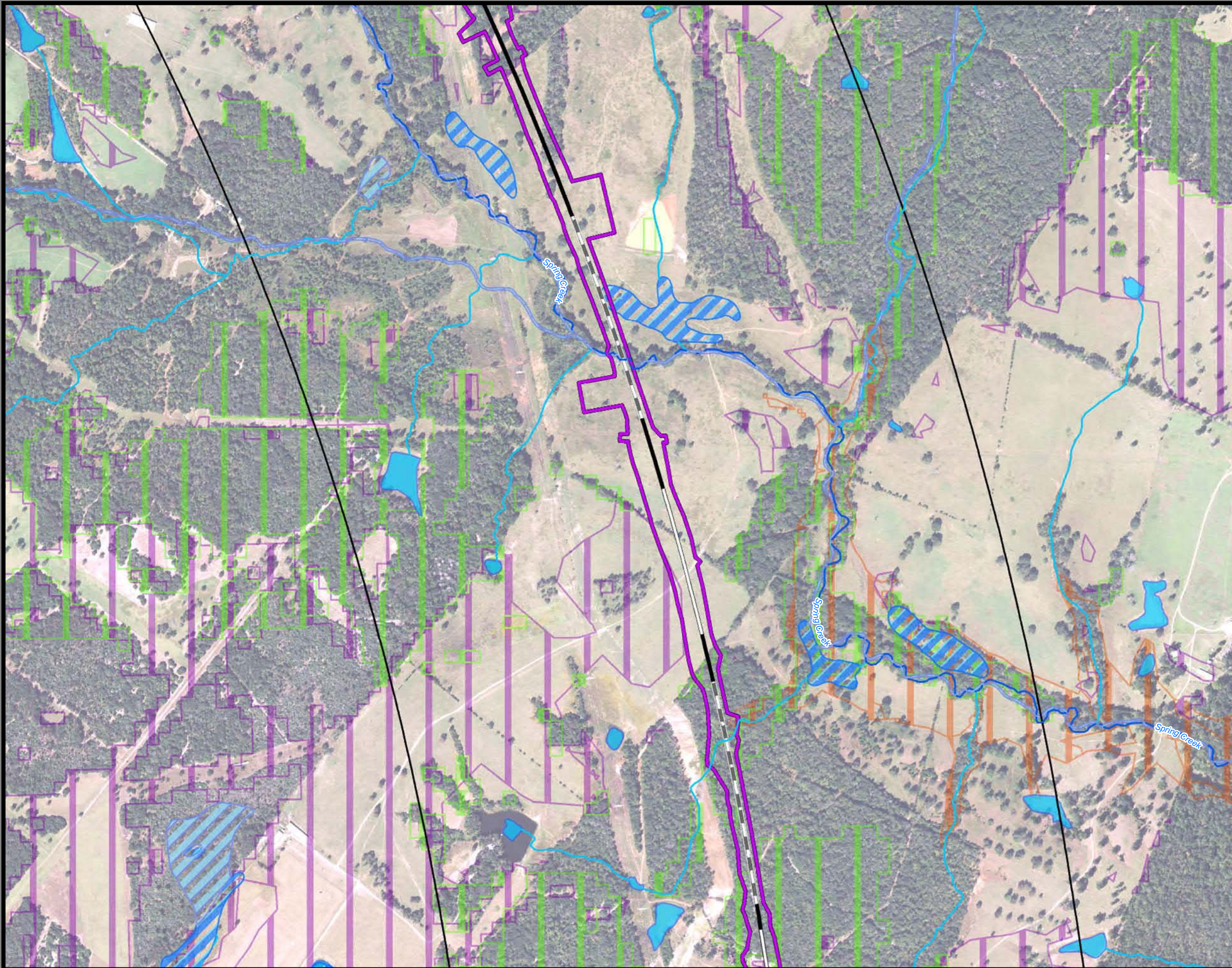
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High-Speed Rail Project
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Segment 4
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Legend

- Limits of Disturbance**

 - Segment 1
 - Segment 2A
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Impaired Waters

Federal Emergency Management Agency (FEMA) Flood Zone

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National Hydrography Dataset (NHD)

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 - Swamp/Marsh

National Wetlands Inventory (NWI)

 - Freshwater Emergent Wetland
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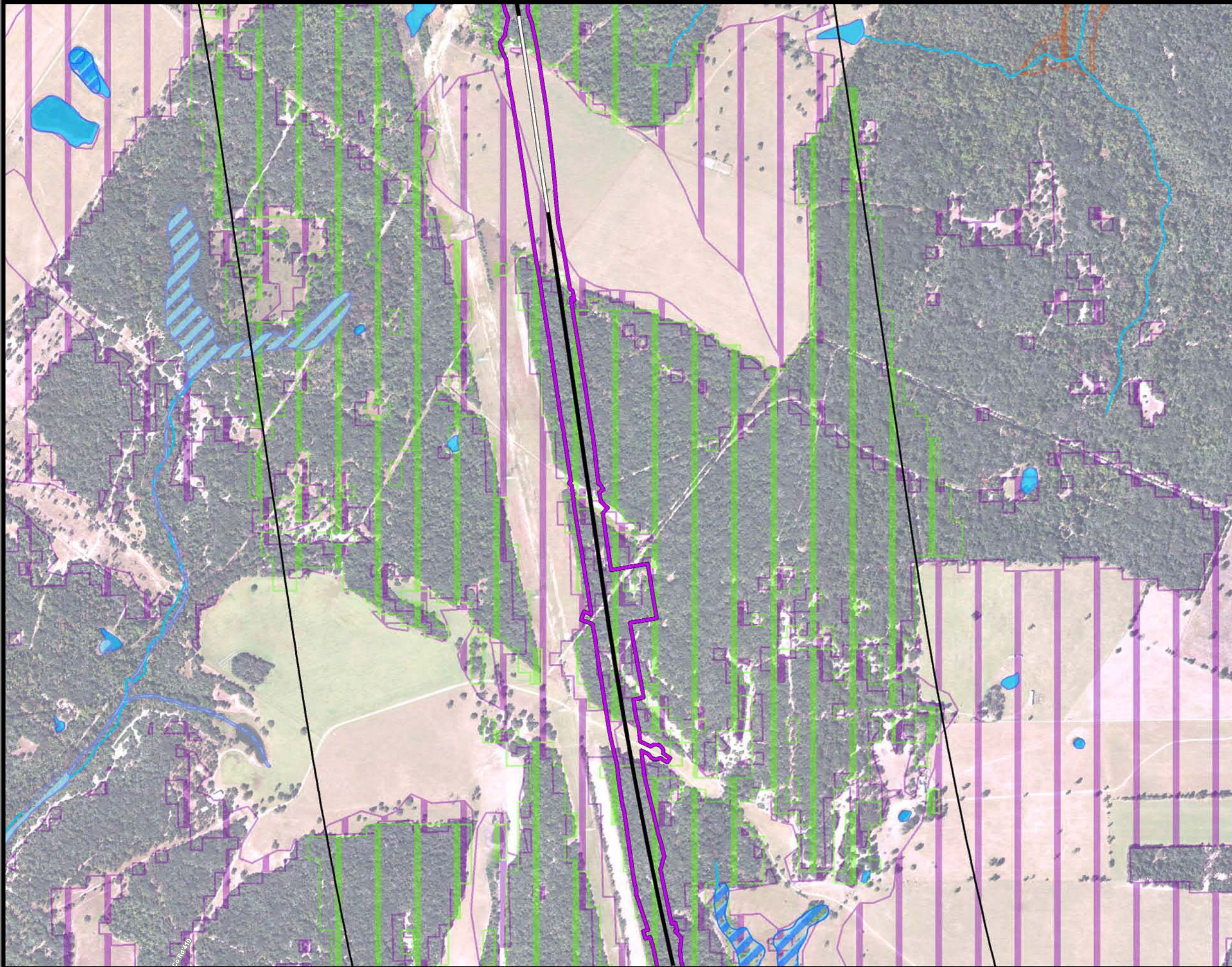
This Sheet only depicts Segment 4; Segment 3C is also located in this same area and can be referenced on Sheet 131.

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0 400 800 Feet





**Dallas to Houston
High-Speed Rail Project**
Natural Resources
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Legend

Limits of Disturbance

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National Hydrography Dataset (NHD)

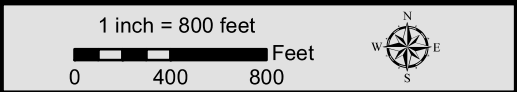
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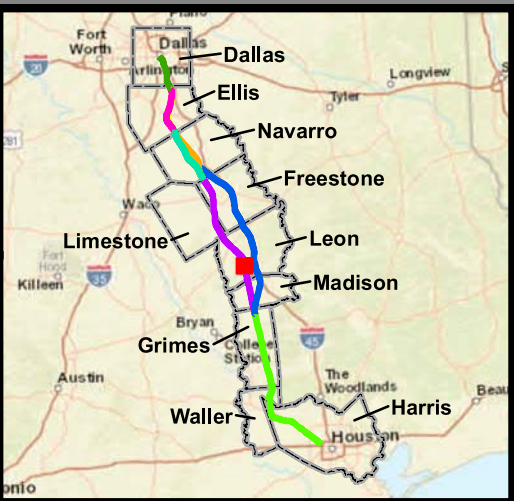
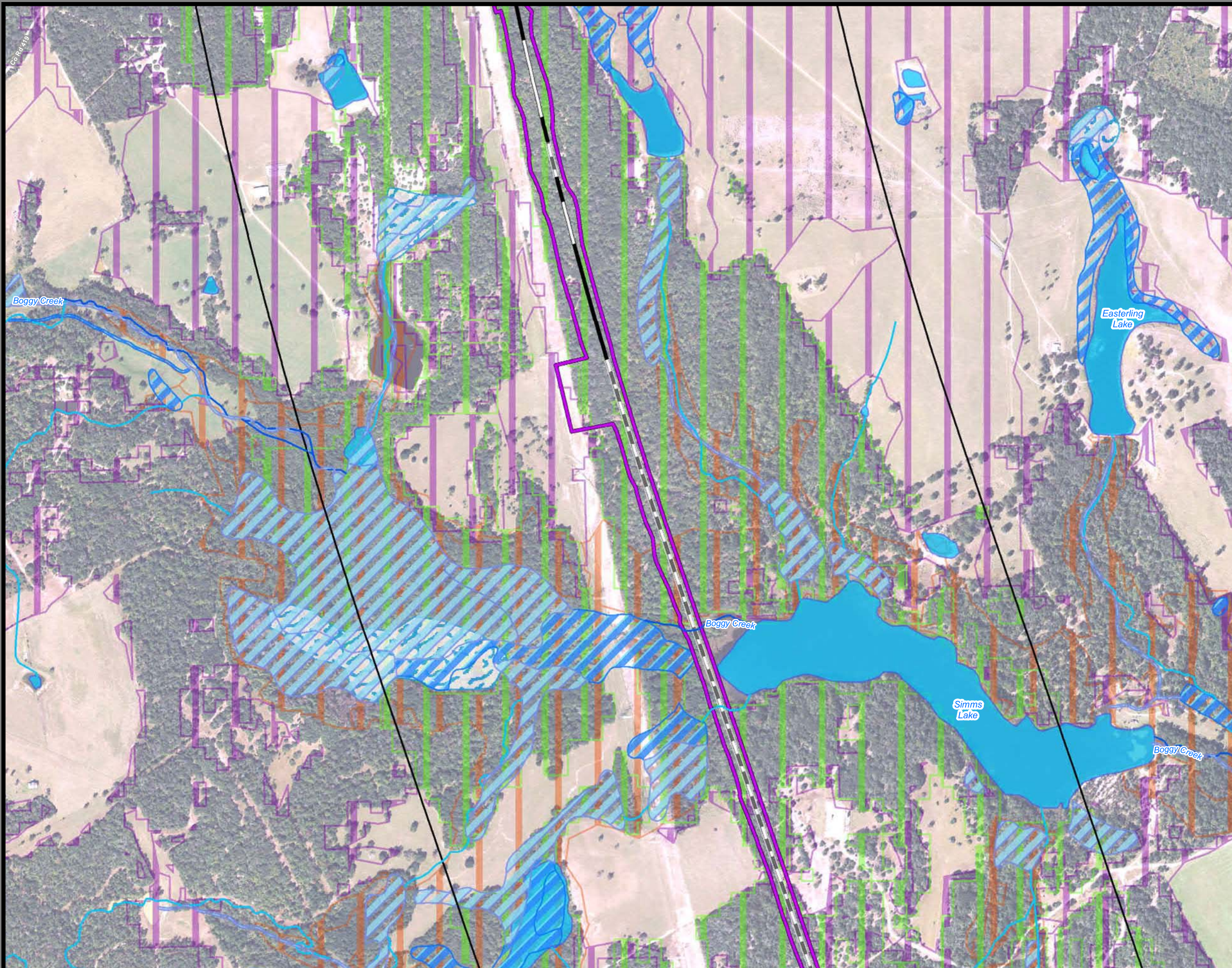
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**Dallas to Houston
High-Speed Rail Project
Natural Resources
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Legend

Limits of Disturbance

- Segment 1
- Segment 2A
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Potential Habitat

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Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters

Federal Emergency Management Agency (FEMA) Flood Zone

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Field-Collected Data

- Perennial Stream/River
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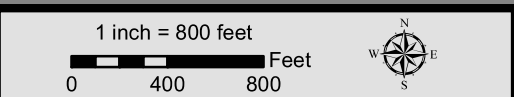
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- Reservoir
- Swamp/Marsh

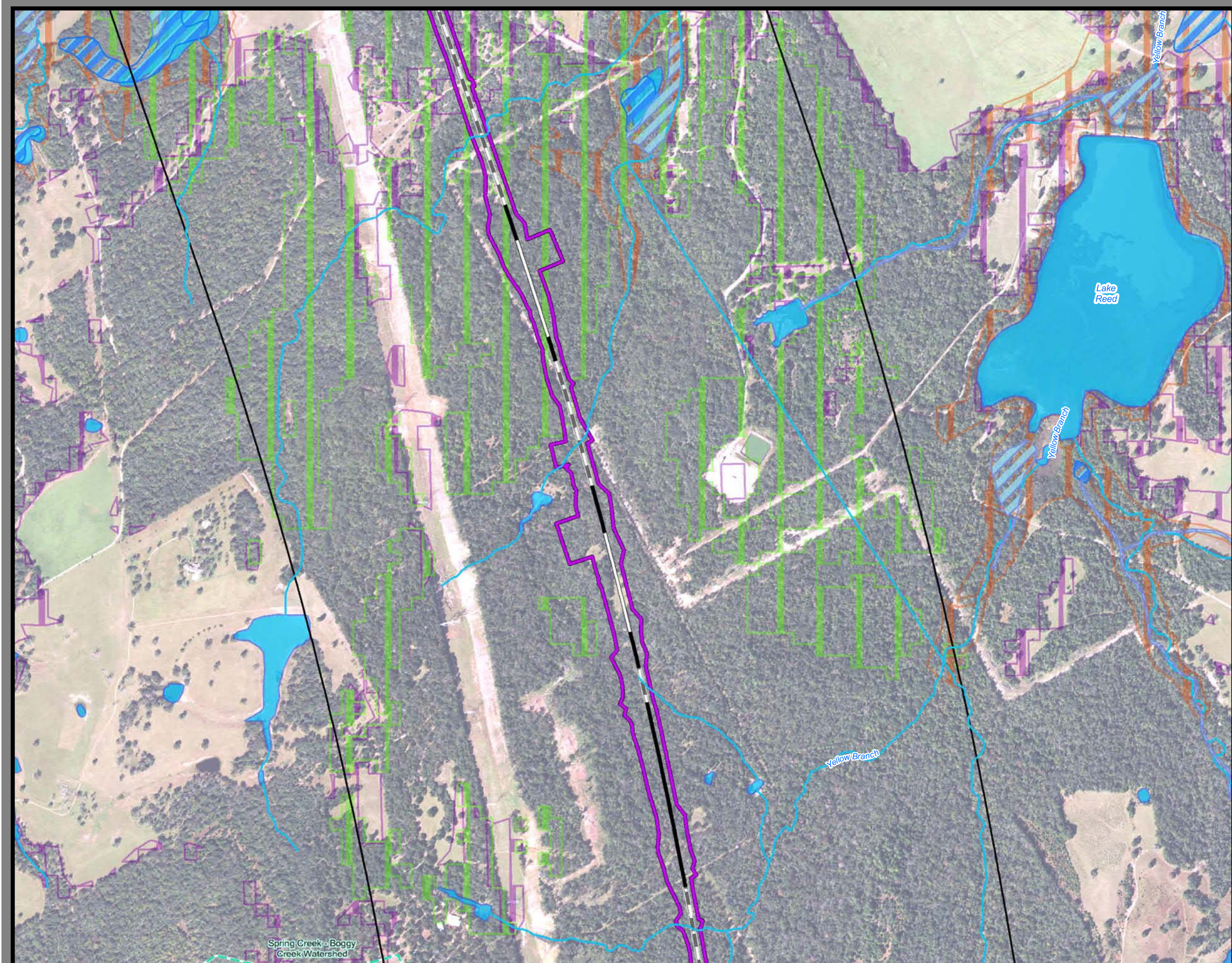
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**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 4
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Legend

Limits of Disturbance

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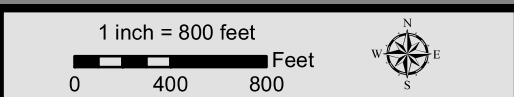
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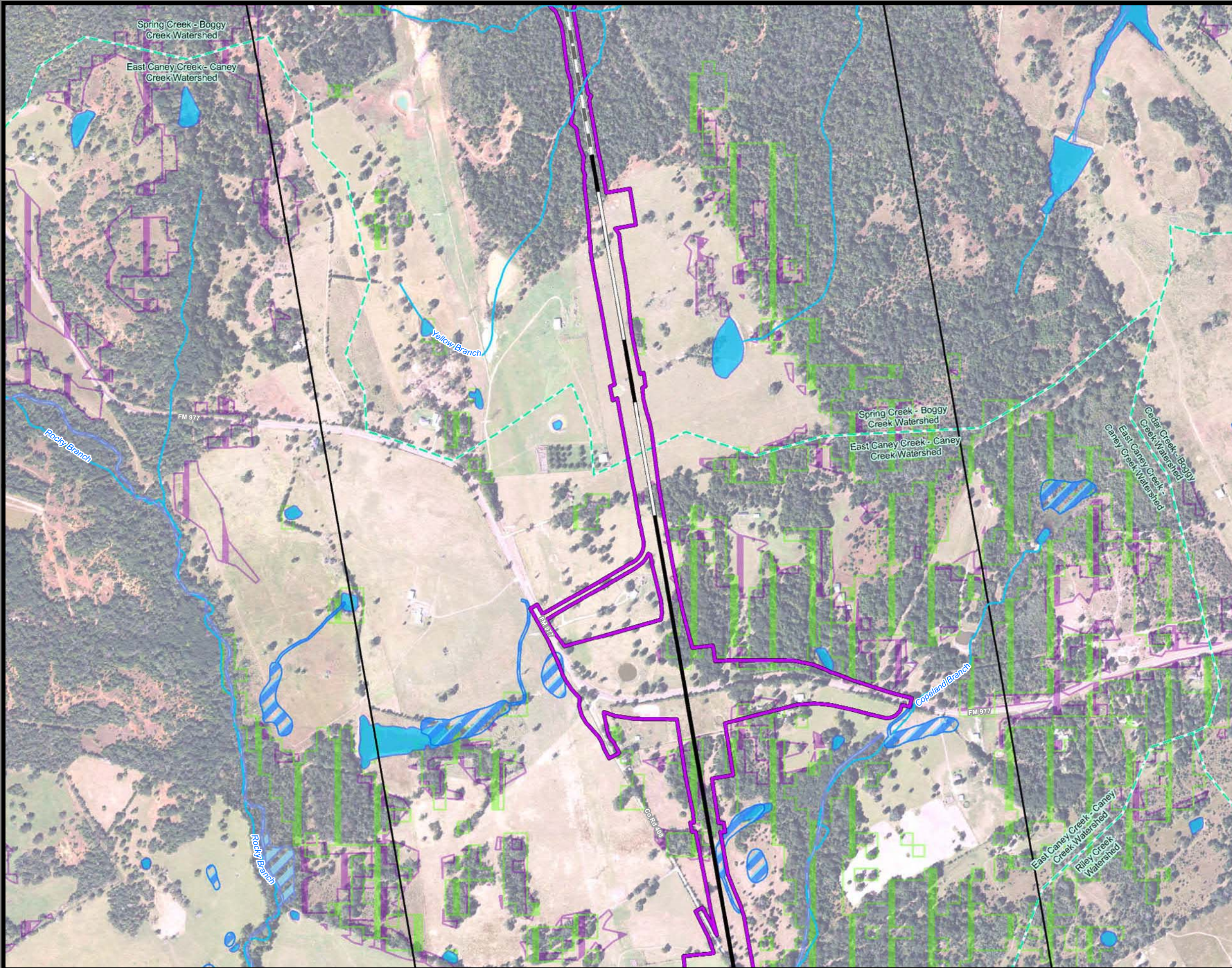
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**Dallas to Houston
High-Speed Rail Project
Natural Resources
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- Legend**
- Limits of Disturbance**
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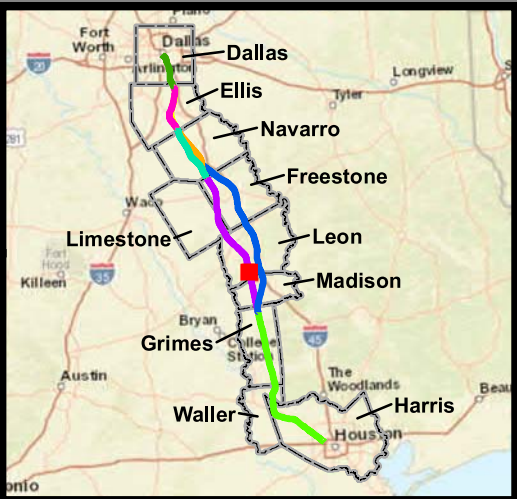
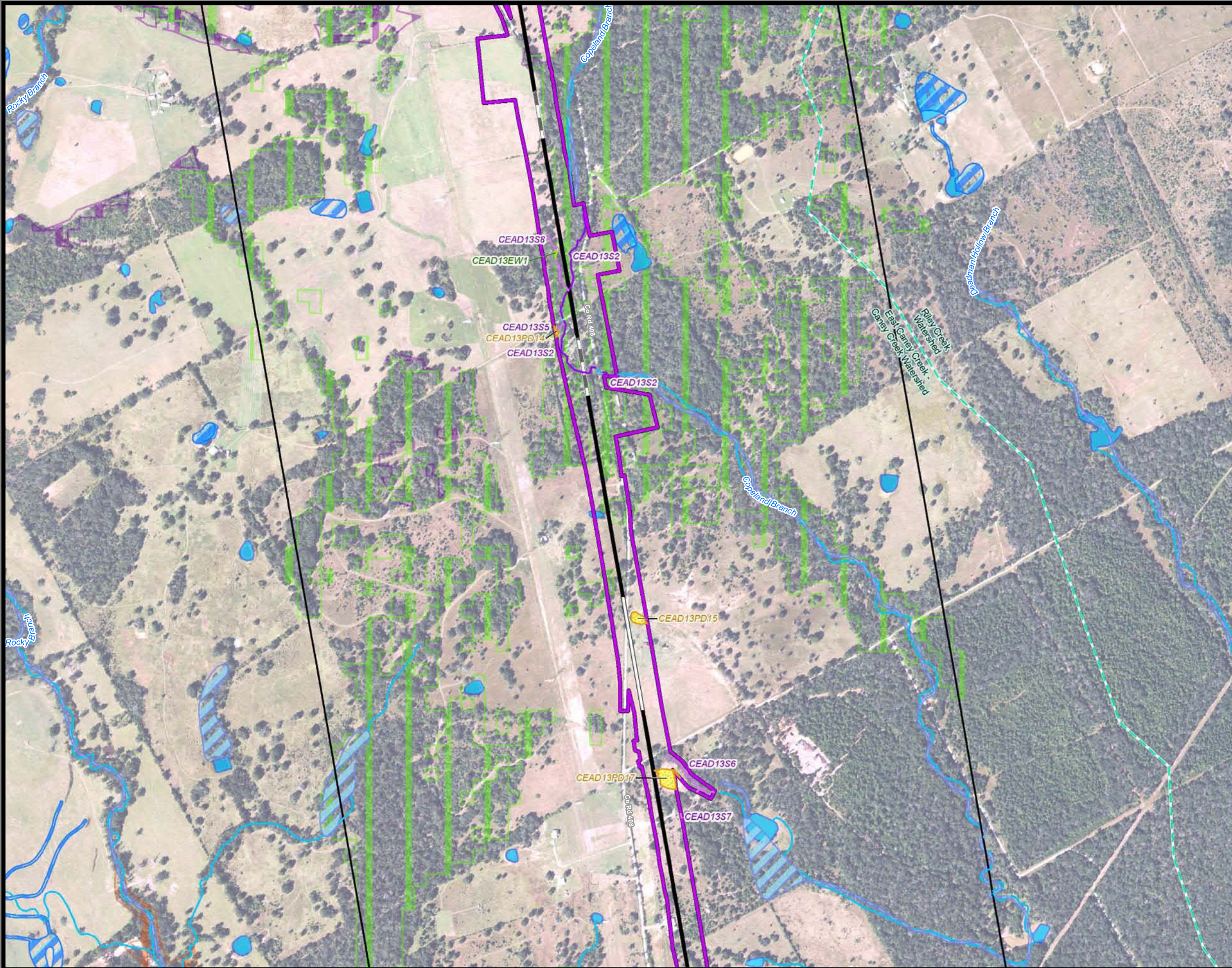
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**Dallas to Houston
High-Speed Rail Project
Natural Resources
Segment 4
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Legend

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National Hydrography Dataset (NHD)

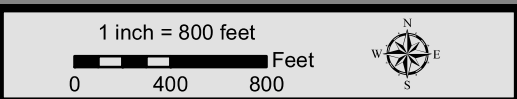
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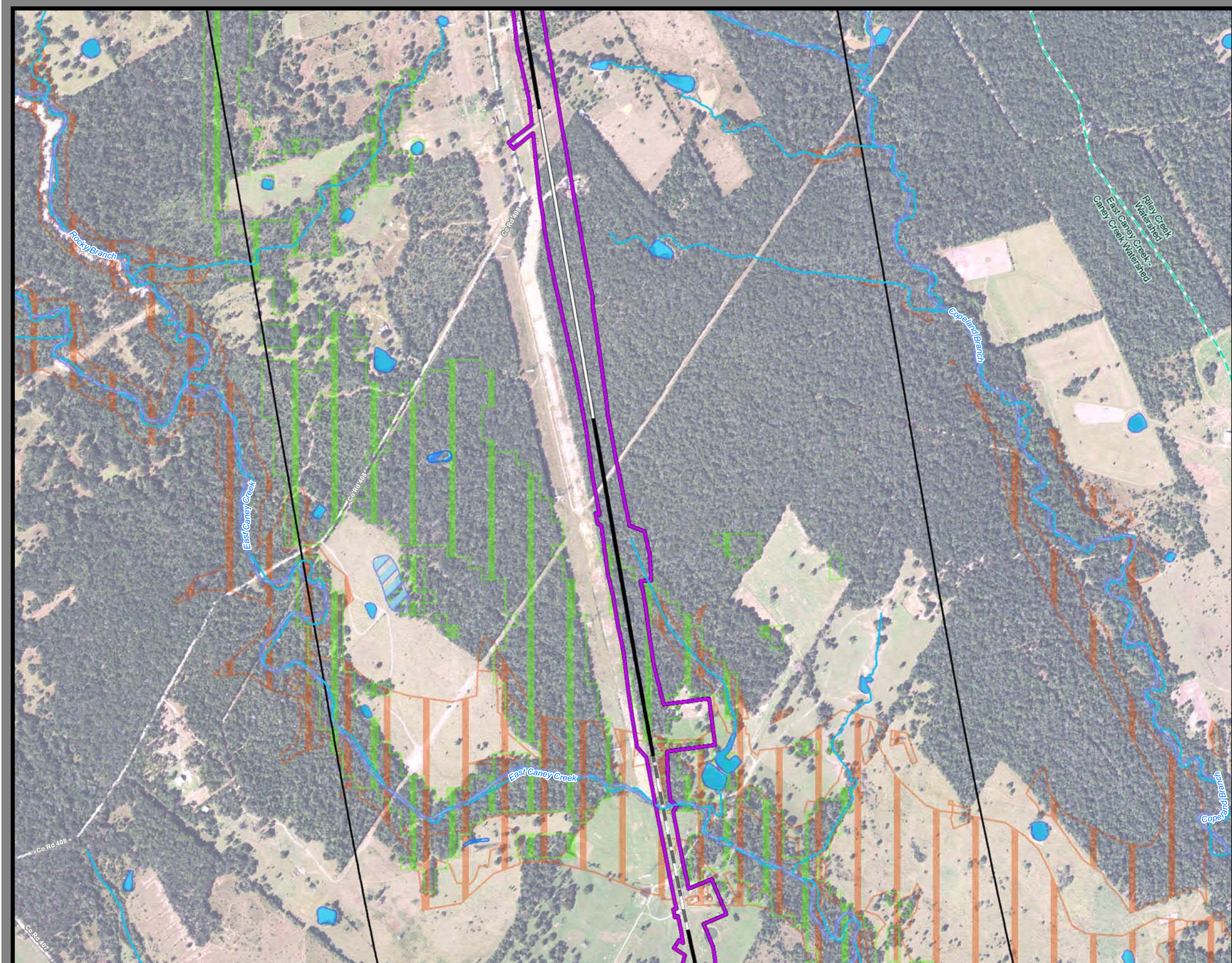
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**Dallas to Houston
High-Speed Rail Project
Natural Resources
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Legend

Limits of Disturbance

- Segment 1
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- Segment 5

Track Configuration

- Viaduct
- Embankment
- Cut
- Half Mile Buffer
- City Boundary
- County Boundary
- Railroad
- Municipal Setting Designation (MSD)

Potential Habitat

- Houston Toad
- Large-fruited Sand Verbena
- Navasota Ladies'-tresses
- Endangered Species
- Threatened Species
- U.S. Army Corps of Engineers (USACE) Project Area
- Watershed (HUC 12) Boundary
- Public Water Supply
- Groundwater Well

Impaired Waters with Total Maximum Daily Load (TMDL)

- Impaired Waters
- A - 1%
- AE - 1%
- AO - 1%
- X - 0.2%

Federal Emergency Management Agency (FEMA) Flood Zone

- Perennial Stream/River
- Intermittent Stream/River
- Ephemeral Stream/River
- Other Stream/River
- Lake/Pond
- Emergent Wetland
- Forested Wetland
- Scrub/Shrub Wetland

Field-Collected Data

- Perennial Stream/River
- Intermittent Stream/River
- Artificial Stream/Canal
- Lake/Pond
- Reservoir
- Swamp/Marsh

National Hydrography Dataset (NHD)

- Perennial Stream/River
- Intermittent Stream/River
- Artificial Stream/Canal
- Lake/Pond
- Reservoir
- Swamp/Marsh

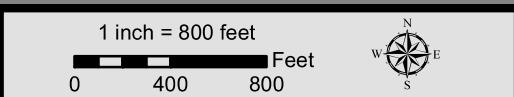
National Wetlands Inventory (NWI)

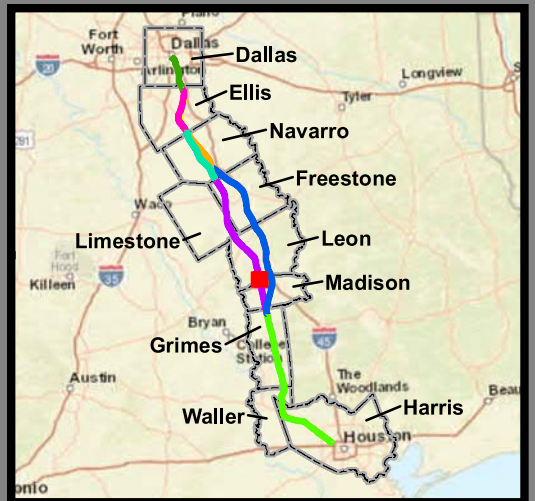
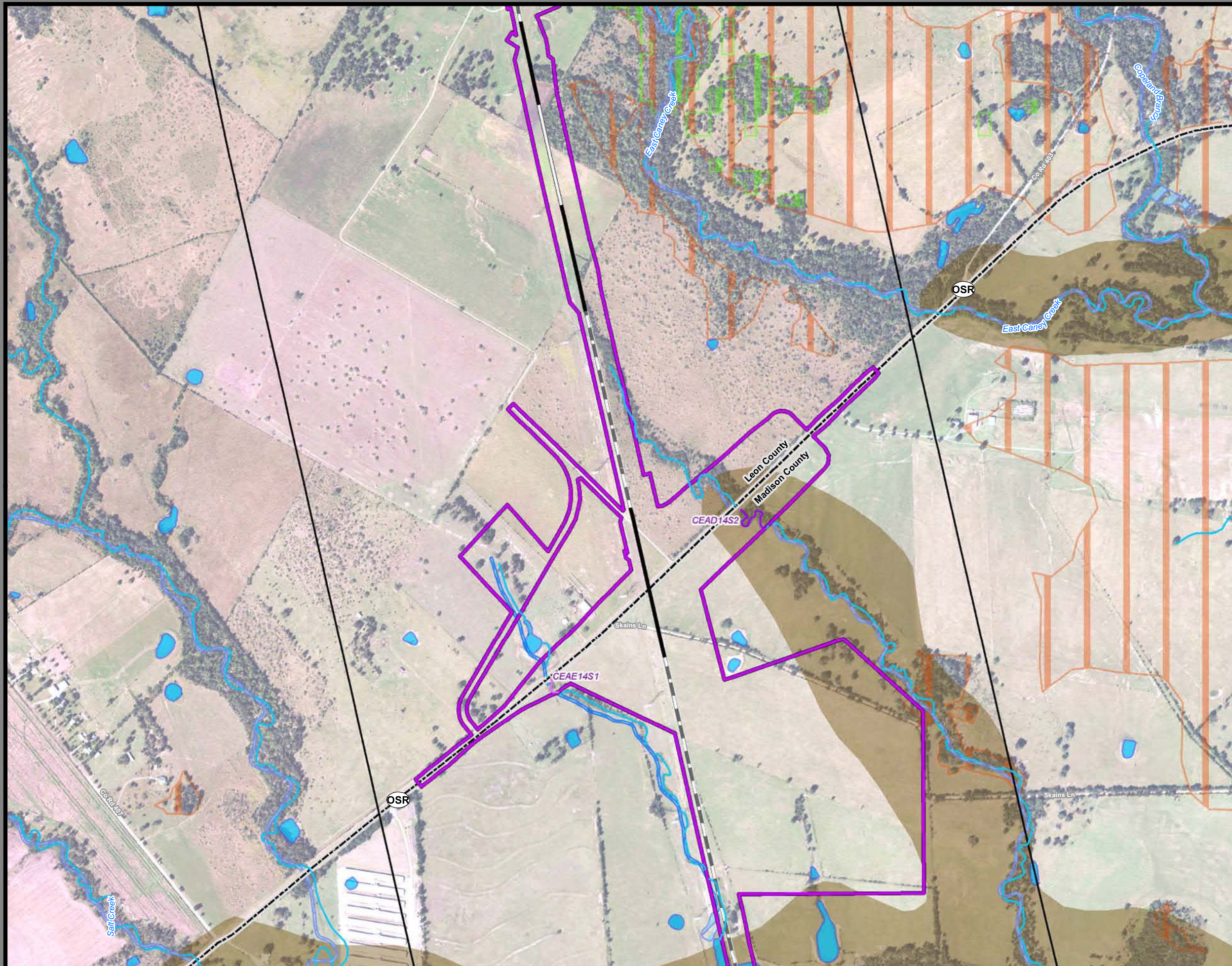
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Other

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Aerial Imagery: USDA NAIP 2014





**Dallas to Houston
High-Speed Rail Project**
Natural Resources
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Legend

- Limits of Disturbance**

 - Segment 1
 - Segment 2A
 - Segment 2B
 - Segment 3A
 - Segment 3B
 - Segment 3C
 - Segment 4
 - Segment 5

Track Configuration

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Impaired Waters

 - Maximum Daily Load (TMDL)

Federal Emergency Management Agency (FEMA) Flood Zone

 - A - 1%
 - AE - 1%
 - AO - 1%
 - X - 0.2%

Field-Collected Data

 - Perennial Stream/River
 - Intermittent Stream/River
 - Ephemeral Stream/River
 - Other Stream/River
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 - Emergent Wetland
 - Forested Wetland
 - Scrub/Shrub Wetland

National Hydrography Dataset (NHD)

 - Perennial Stream/River
 - Intermittent Stream/River
 - Artificial Stream/Canal
 - Lake/Pond
 - Reservoir
 - Swamp/Marsh

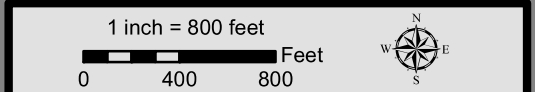
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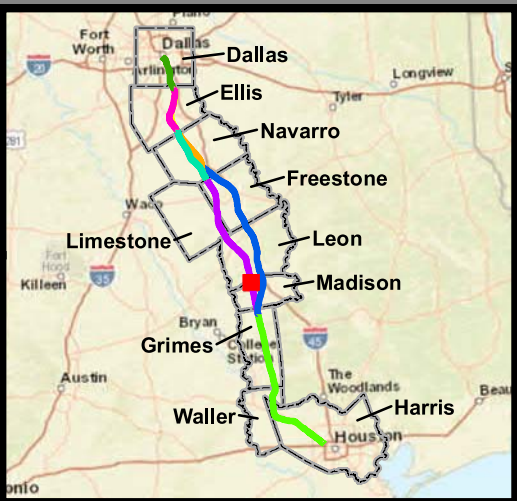
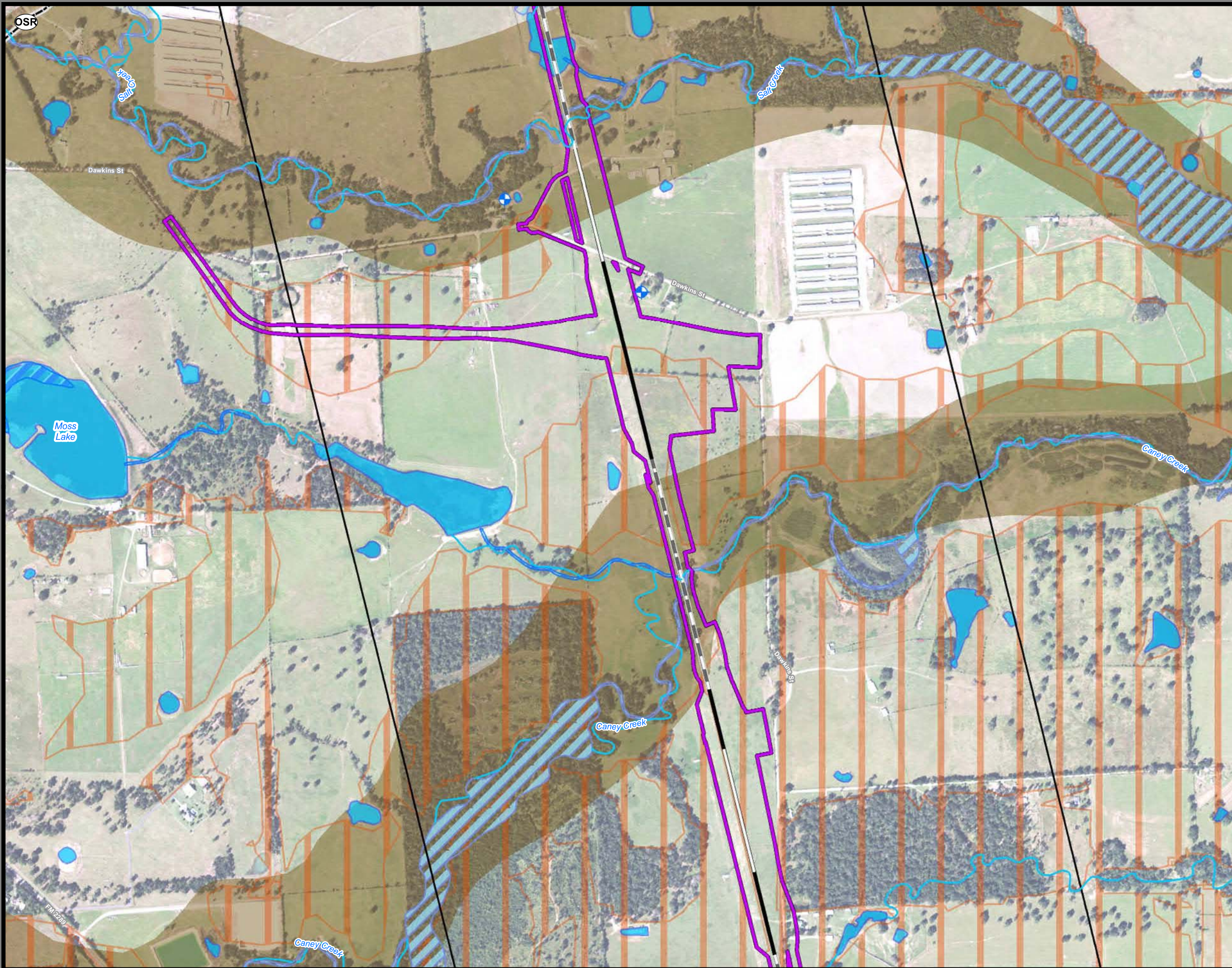
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High-Speed Rail Project**
Natural Resources
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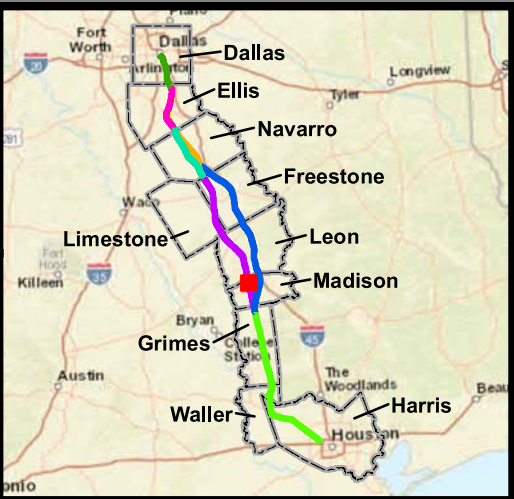
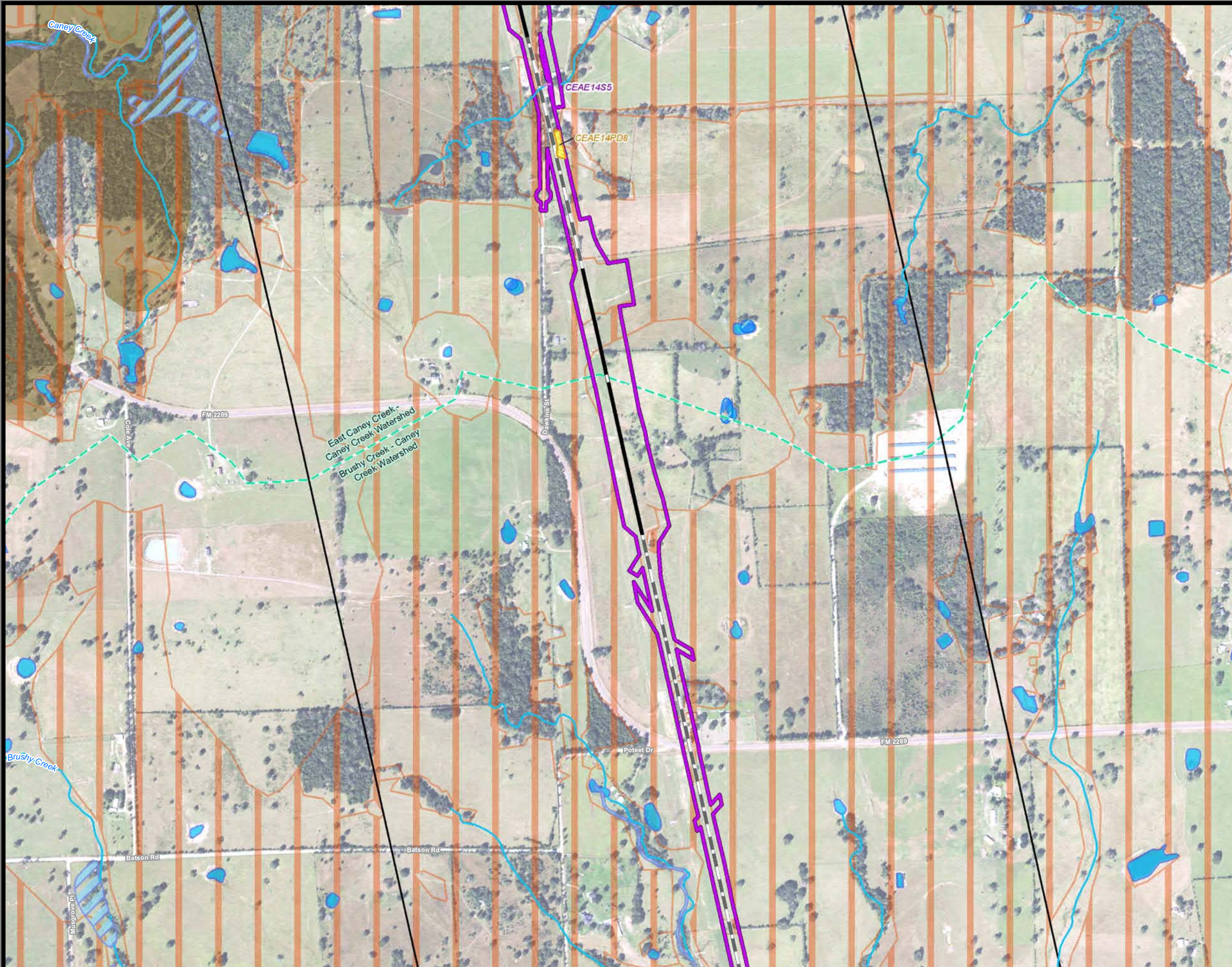
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1 inch = 800 feet
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High-Speed Rail Project
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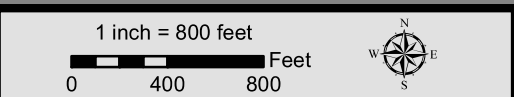
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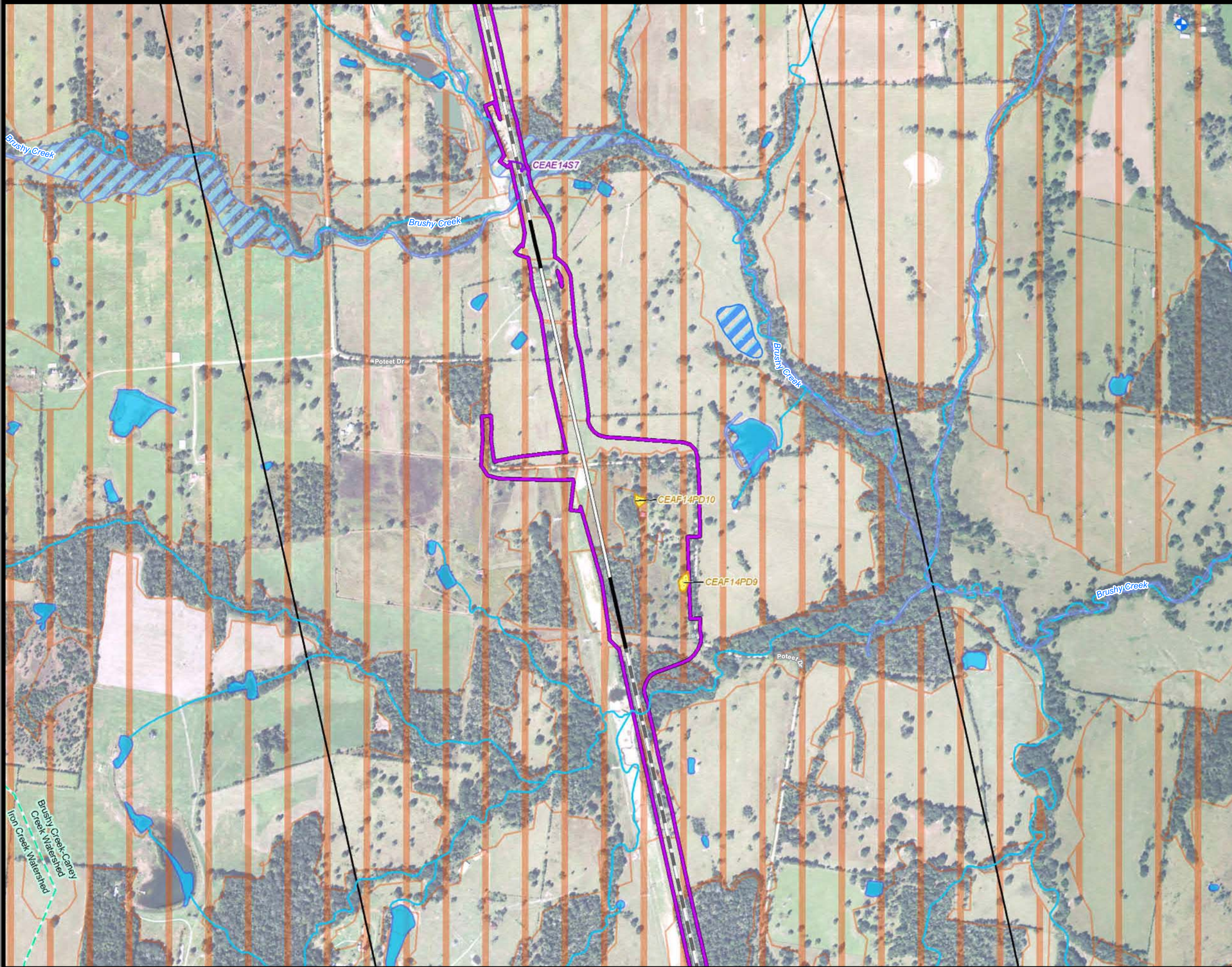
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High-Speed Rail Project
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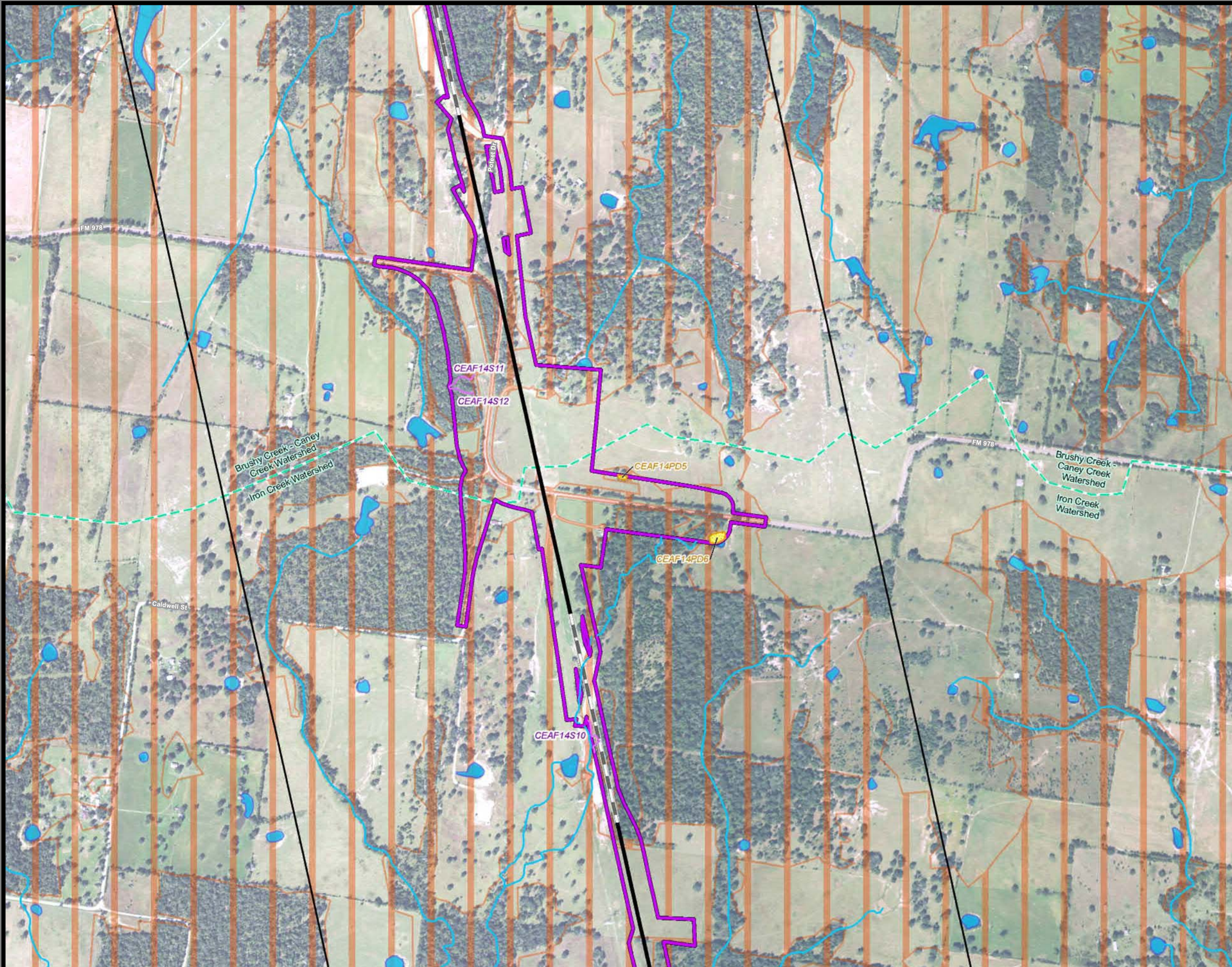
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