



P.O. Box 13231, 1700 N. Congress Ave.  
Austin, TX 78711-3231, www.twdb.texas.gov  
Phone (512) 463-7847, Fax (512) 475-2053

## ENVIRONMENTAL DETERMINATION

**TO:** File  
**FROM:** T. Clay Schultz, Ph.D., Director, Regional Water Project Development  
**DATE:** May 1, 2024  
**RE:** City of Ennis, Ellis County, Texas  
TWDB FIF Category 2, Project No. 40185  
Cottonwood Drainage Rehabilitation  
Total Commitment Amount: \$3,455,800  
Loan No. L1001482  
Grant No. G1001483

The environmental review for the Cottonwood Drainage Rehabilitation project proposed by the City of Ennis (City) has been completed consistent with 31 Texas Administrative Code (TAC) §363.14 and 363.16. The City is proposing to use \$3,455,800 in financing from the Flood Infrastructure Fund (FIF) Program to improve channel flow capacity during flood events in and around Cottonwood Creek by removing debris and obstructive vegetation from approximately 7,500 linear feet (LF) of stream channel, stabilizing approximately 9,000 LF of stream bank, and replacing culverts. The Texas Water Development Board (TWDB) committed this financing on May 11, 2022. The City closed the financing on September 20 and 27, 2022.

Based on a detailed environmental review of the planning information, the Environmental Data Form (EDF) received by the TWDB on December 27, 2023, with the supplementary materials submitted to the TWDB on March 7, 2024, the project meets the requirements of 31 TAC §363.14 and 363.16 with the following special and standard environmental conditions:

### Special Environmental Conditions

- Consistent with the Flood Insurance Reform Act of 2004, federal Executive Order 11988, Texas Water Code Section 16.315, and local floodplain development

<b>Our Mission</b>	:	<b>Board Members</b>
Leading the state's efforts in ensuring a secure water future for Texas	:	Brooke T. Paup, Chairwoman   George B. Peyton V, Board Member   L'Oreal Stepney, P.E., Board Member Bryan McMath, Interim Executive Administrator

ordinances, a floodplain development permit will be obtained from the local floodplain administrator prior to construction in a Special Flood Hazard Area.

- Consistent with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899, the proposed project will comply with the terms and conditions of United States Army Corps of Engineers (USACE) Nationwide Permit 3 for Maintenance (USACE No. SWF-2023-00403).
- To avoid potential impacts to waters of the U.S., including wetlands, the one-step (clean) excavation/removal method will be utilized for vegetation clearing within streams; bank stabilization will only occur above the ordinary high water mark; and trenchless methods will be used for pipeline replacement (USACE No. SWF-2023-00403).
- In compliance with the Endangered Species Act of 1973, as amended, if any of the four proposed threatened or endangered species potentially located in the project area, tricolored bat (*Perimyotis subflavus*), alligator snapping turtle (*Macrochelys temminckii*), Texas fawnsfoot (*Truncilla macrodon*), and Texas heelsplitter (*Potamilus amphichaenus*), are listed prior to or during construction, project construction will cease, and the City of Ennis (City) will consult with the United States Fish and Wildlife Service (USFWS) for guidance on avoidance or mitigation measures to implement.
- As per an agreement with the Texas Parks and Wildlife Department (TPWD), Wildlife Habitat Assessment Program (TPWD Project No. 51419), to ensure compliance with Texas Parks and Wildlife Code, chapters 1, 12, 64, 66, and 68, 31 Texas Administrative Code (TAC), chapters 52 and 57, the Endangered Species Act of 1973, as amended, the Migratory Bird Treaty Act, and applicable regulations pertaining to protected and invasive species, the following measures will be implemented:
  - Vegetation clearing and debris removal must be excluded during the general bird nesting season, alligator snapping turtle nesting season, and tricolored bat pupping season, March 15 through September 15, to avoid adverse impacts to these species. If vegetation clearing and debris removal during this time are unavoidable, the area proposed for disturbance will be surveyed by a qualified biologist to identify nests and pupping habitat, not more than five days prior to clearing activities. If occupied nests or bat roosts or hibernacula are observed during surveys, a vegetation buffer area of no less than 100 feet in diameter will remain around the nest or roost until all young have fledged; however, the size of the buffer zone depends on various factors and can be coordinated with the local or regional USFWS office. State and federal regulations as currently interpreted do not permit incidental take.
  - Culverts will be inspected for bats no more than five days prior to construction. If evidence of bats is detected, the contractor will notify the

City and Texas Water Development Board (TWDB), and a qualified biologist and/or TPWD or USFWS will inspect the culvert for protected species and identify avoidance measures.

- The City of will avoid removing trees greater than 10 inches in diameter at breast height.
- Vegetation removal in the stream on banks, and in over bank riparian areas will be limited to that which is necessary to provide access to the channels during project activities. Instream debris removal will be limited to that which is necessary to restore streamflow and reduce flood impacts. Project design and construction will retain some instream microhabitat such as fallen logs, root balls, sandbars, rocks, and pools. Disturbed areas will be permanently revegetated using site-specific native vegetation.
- If wildlife are encountered, the animals will be allowed to leave the area safely. State-listed species will be handled only by persons with authorization obtained through the TPWD.
- The City will coordinate with the TPWD Kills and Spills Team (KAST) for the appropriate permits prior to any work that occurs within streams, including but not limited to debris removal and culvert repair/replacement, and document compliance with resulting mitigation requirements.
- Culverts will be designed in a manner that allows for sediment transport and passage of aquatic-dependent organisms during low flow conditions; and does not impede flow, over-widen the channel, or destabilize the banks. The culverts will be designed so that they do not impound water, thus the bottom of the culvert should match the natural low flow channel of the stream or to be set below grade to allow natural substrate to cover the culvert bottom.
- No hardening materials, such as riprap, will be placed below the ordinary high water mark. Biotechnical streambank stabilization will be used in areas where the hydraulic models indicate stream velocities during the design storm even remain below erosive velocities for the soil in the area.
- Erosion control measures will be installed prior to construction and maintained until disturbed areas are permanently revegetated. For slope stabilization and revegetation, no-till drilling, hydromulching (avoiding plastic ingredients), and/or hydroseeding will be used rather than erosion control blankets or mats, which pose an entanglement hazard to wildlife. If erosion control blankets or mats cannot be avoided, products that contain no netting or loosely woven natural fiber netting will be used, avoiding any type of plastic netting.

#### Standard Environmental Conditions

- No activity which may affect properties listed or properties eligible for listing in the National Register of Historic Places or eligible for designation as a State

Archeological Landmark is authorized until the City has complied with the provisions of the National Historic Preservation Act and the Antiquities Code of Texas.

The City has previously coordinated with the appropriate agencies and impacts to known cultural or archeological deposits have been avoided or mitigated. However, the Contractor may encounter unanticipated cultural or archeological deposits during construction.

If archeological sites or historic structures which may qualify for designation as a State Archeological Landmark according to the criteria in 13 TAC Chapter 26, or that may be eligible for listing on the National Register of Historic Places in accordance with 36 CFR Part 800, are discovered after construction operations are begun, the Contractor shall immediately cease operations in that particular area and notify the City, the TWDB, and the Texas Historical Commission. The Contractor shall take reasonable steps to protect and preserve the discoveries until they have been inspected by the City's representative and the TWDB. The City will promptly coordinate with the State Historic Preservation Officer and any other appropriate agencies to obtain any necessary approvals or permits to enable the work to continue. The Contractor shall not resume work in the area of discovery until authorized to do so by the City.

- No activity is authorized that is likely to jeopardize the continued existence of a threatened or endangered species as listed or proposed for listing under the Federal Endangered Species Act (ESA), and/or the State of Texas Parks and Wildlife Code on Endangered Species, or to destroy or adversely modify the habitat of such species.

If a threatened or endangered species is encountered during construction, the Contractor shall immediately cease work in the area of the encounter and notify the City, who will immediately implement actions in accordance with the ESA and applicable State statutes. These actions shall include reporting the encounter to the TWDB, the USFWS, and the TPWD, obtaining any necessary approvals or permits to enable the work to continue or implement other mitigation actions. The Contractor shall not resume construction in the area of the encounter until authorized to do so by the City.

With the addition of these requirements, design funds may be released once all other requirements are satisfied.

Enclosures

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### Legend

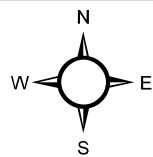
 Project Location

### Project Location Map

Cottonwood Creek Drainage Improvements  
Schaumburg and Polk, Inc.  
Cottonwood Creek Drainage Basin  
Ennis, Texas

Drawn  
**MP**  
Designed  
**MP**  
Approved  
**JS**

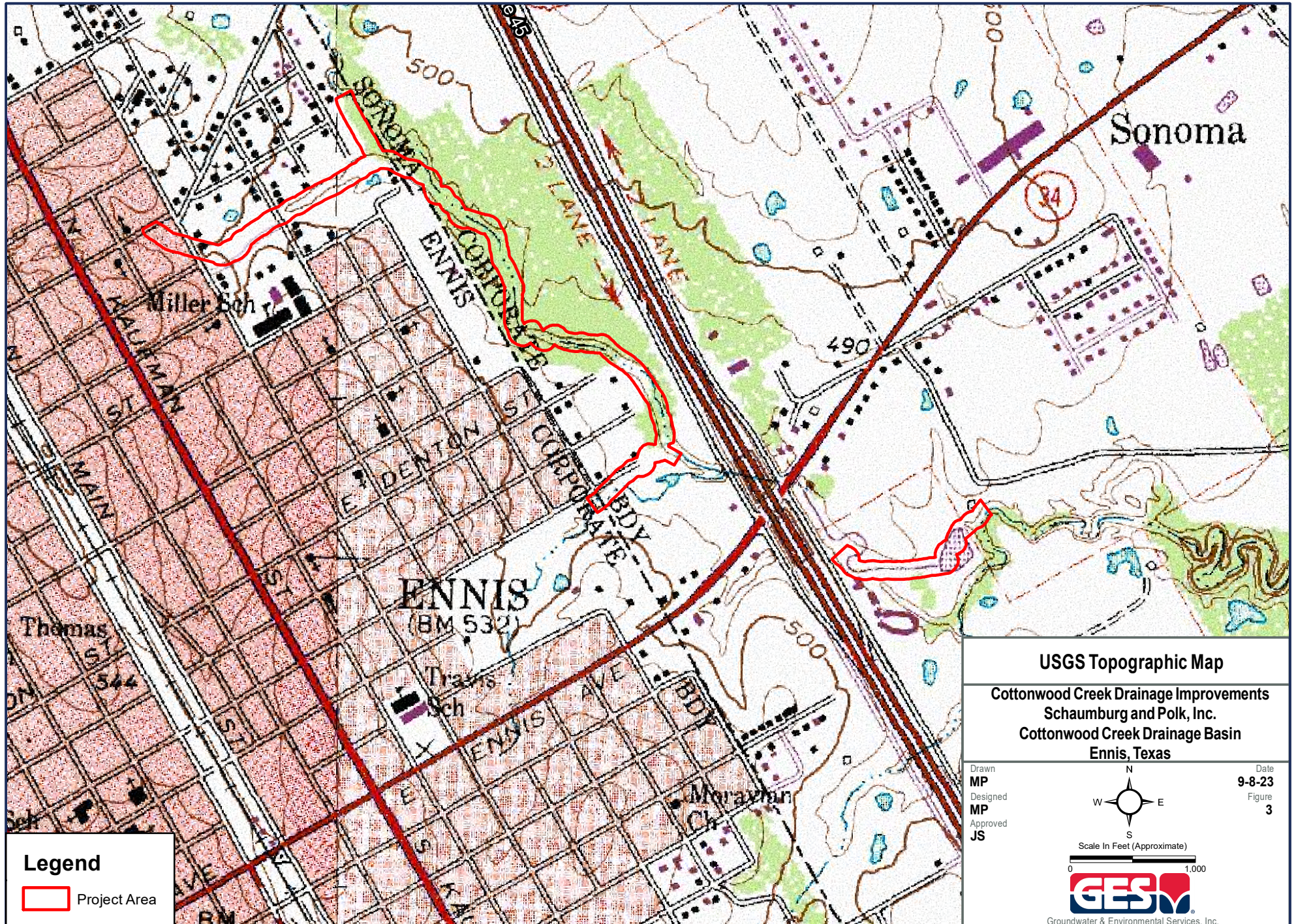
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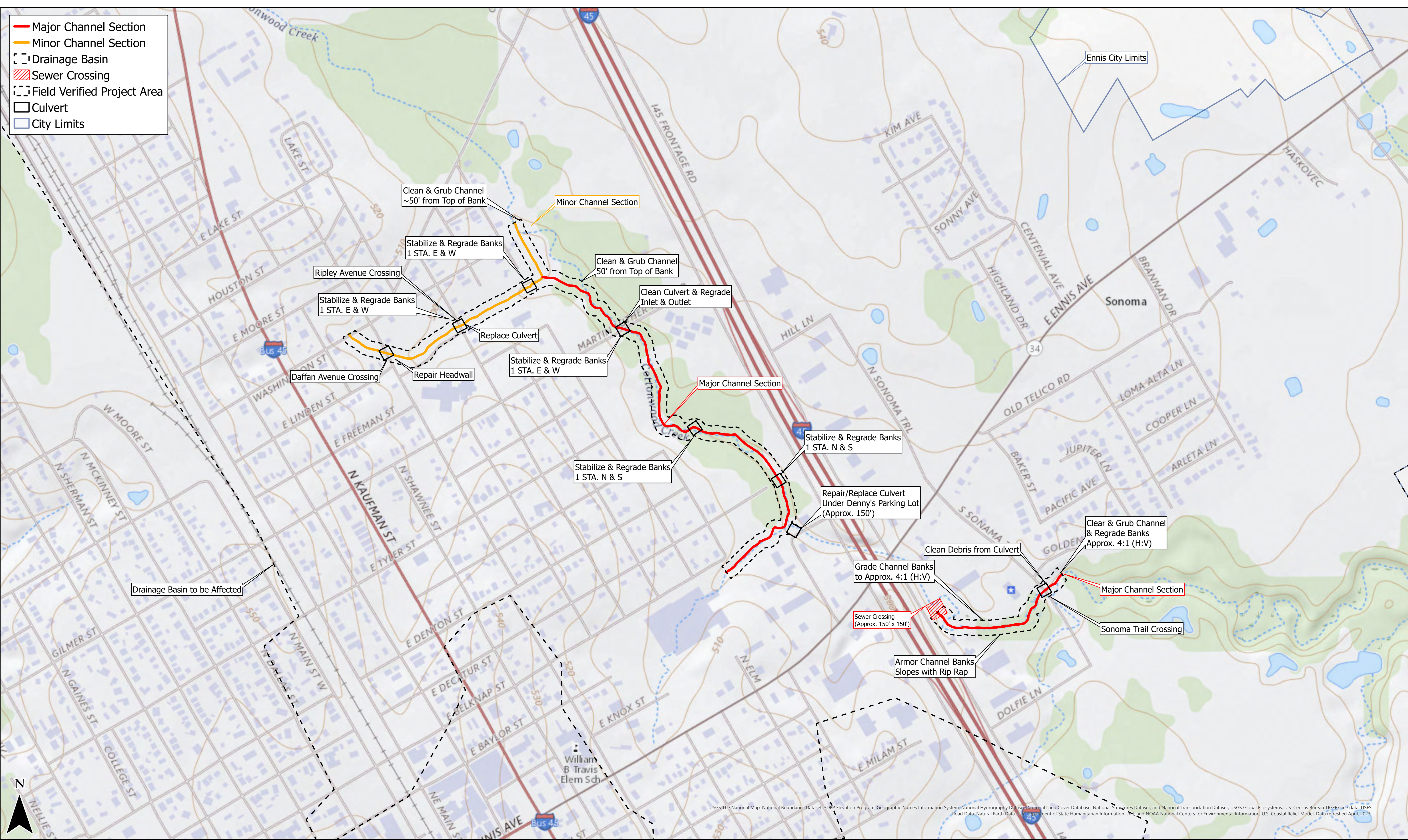
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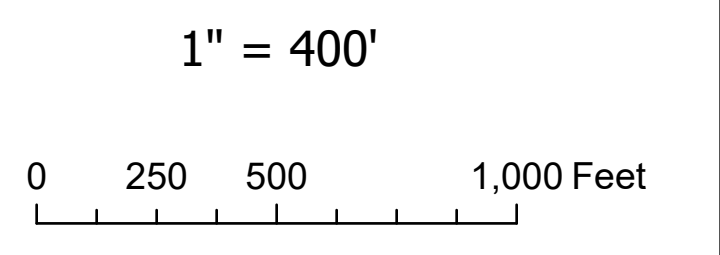
Groundwater & Environmental Services, Inc.



- Major Channel Section
- Minor Channel Section
- Drainage Basin
- Sewer Crossing
- Field Verified Project Area
- Culvert
- City Limits

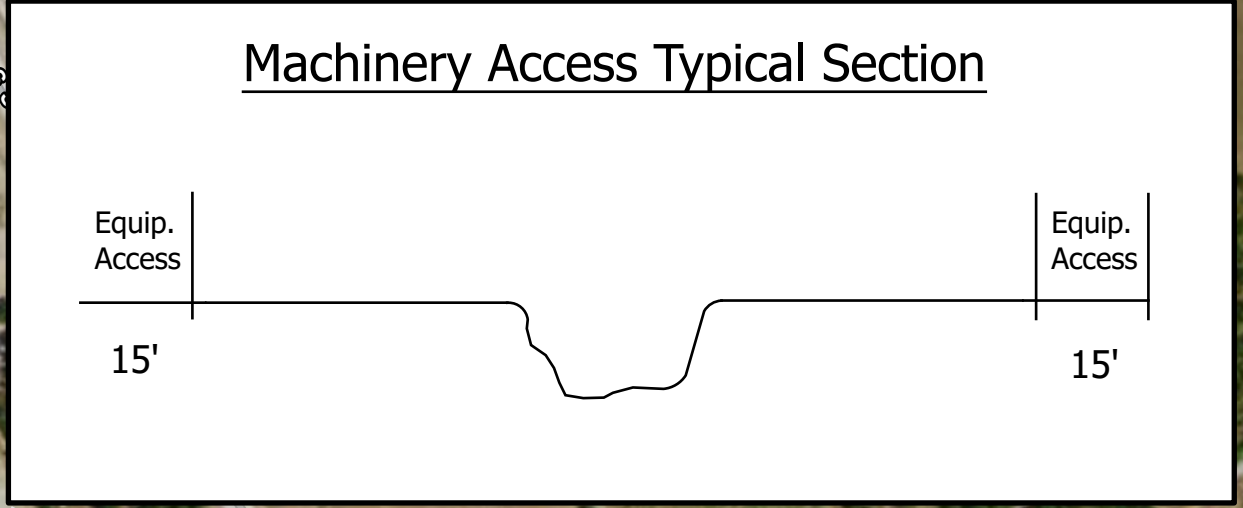
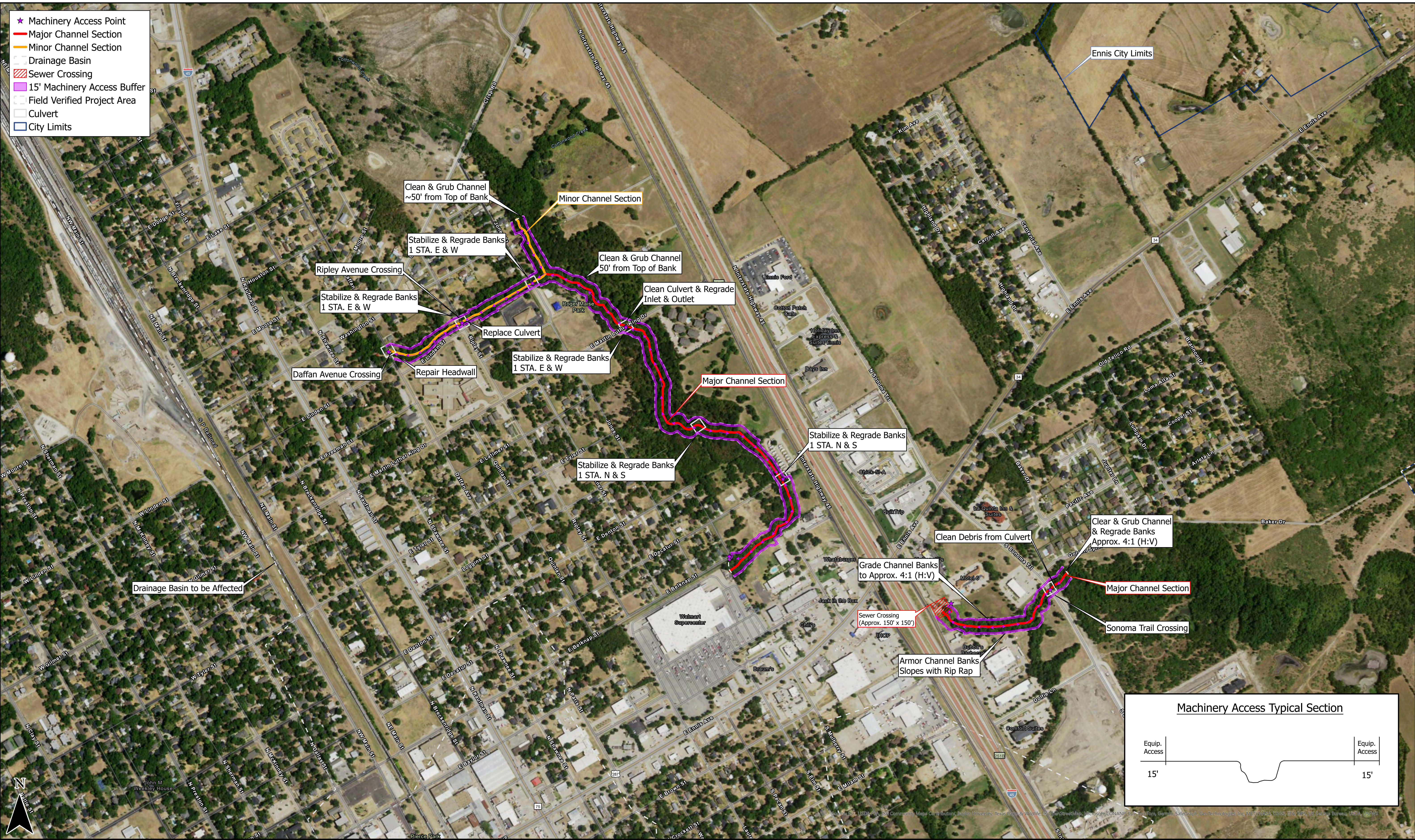


**City of Ennis**  
**Cottonwood Creek Drainage Rehabilitation**  
**Proposed Construction Projects Map**



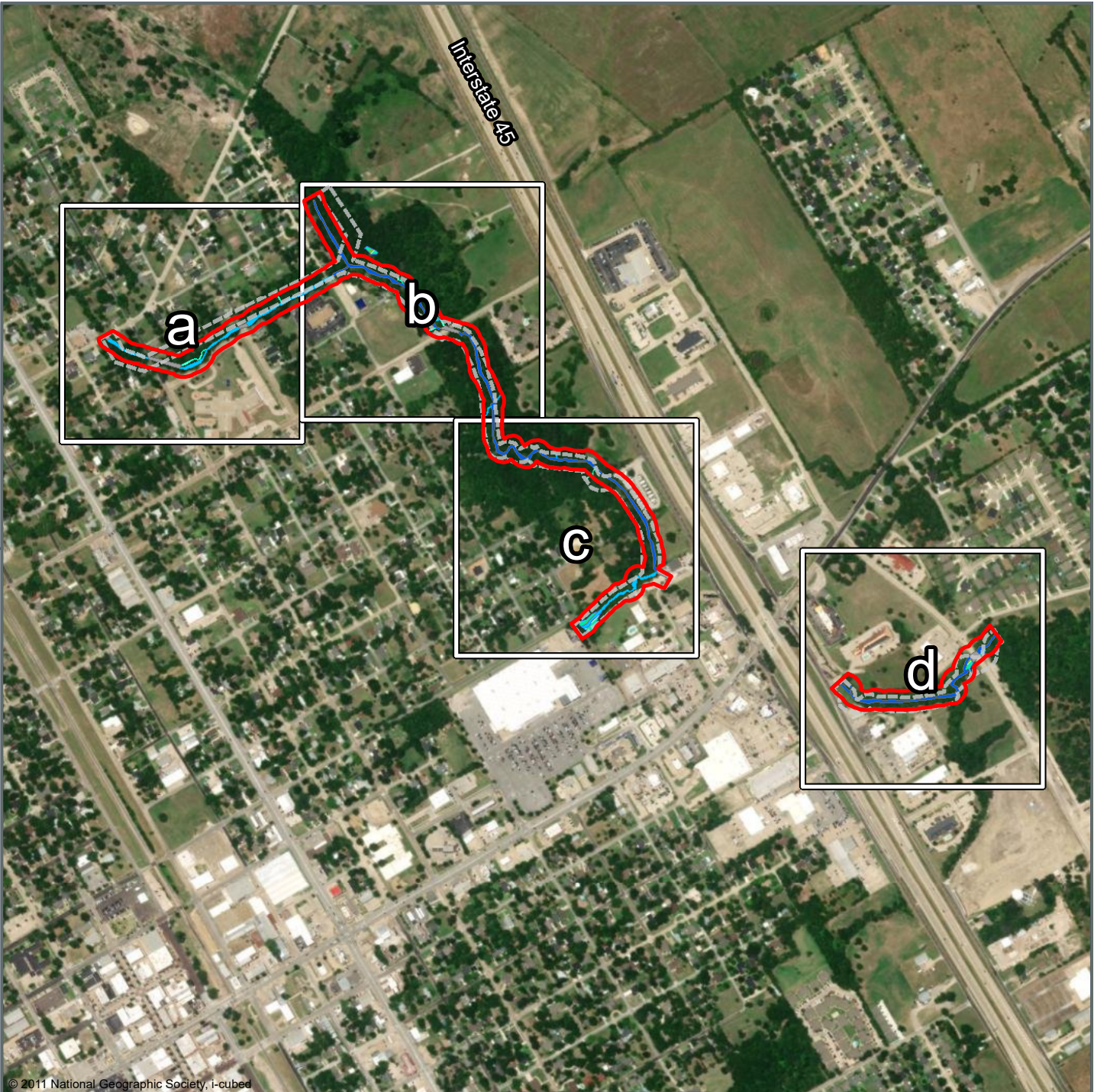
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information; and NOAA National Centers for Environmental Information; U.S. Coastal Relief Model. Data refreshed April, 2023.

- ★ Machinery Access Point
- Major Channel Section
- Minor Channel Section
- Drainage Basin
- ▨ Sewer Crossing
- ▭ 15' Machinery Access Buffer
- ▭ Field Verified Project Area
- ▭ Culvert
- ▭ City Limits





L:\Projects\GES\Projects\SPI Engineering\SPI Cottonwood Creek - 4323049\GIS\MXDs\Pre-App Meeting\Figure 6. Jurisdictional Waters Map Cover.mxd - Scale 1:13,200 - 9/8/2023 3:28:55 PM - mpeters - WGS 1984 World Mercator



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**Legend**

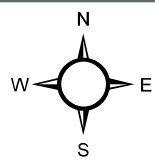
- Field Verified Project Area
- Provided Project Area
- Plot Points
- Transects
- Potential Waters of the U.S.**
- Culverted Stream
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- Forested Wetland

**Potentially Jurisdictional Waters Map**

**Cottonwood Creek Drainage Improvements**  
**Schaumburg and Polk, Inc.**  
**Cottonwood Creek Drainage Basin**  
**Ennis, Texas**

Drawn  
**EW**  
 Designed  
**MP**  
 Approved  
**JS**

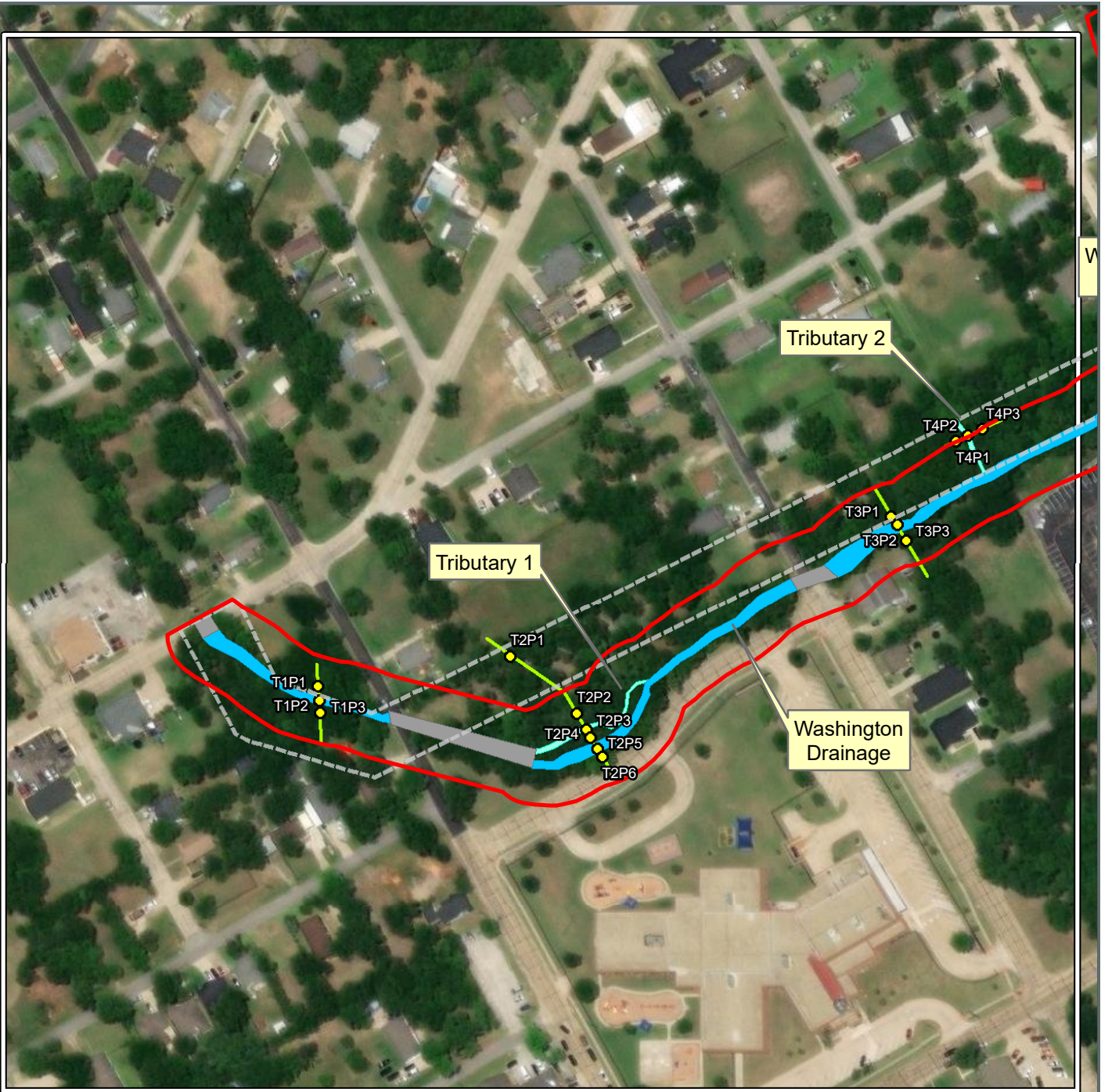
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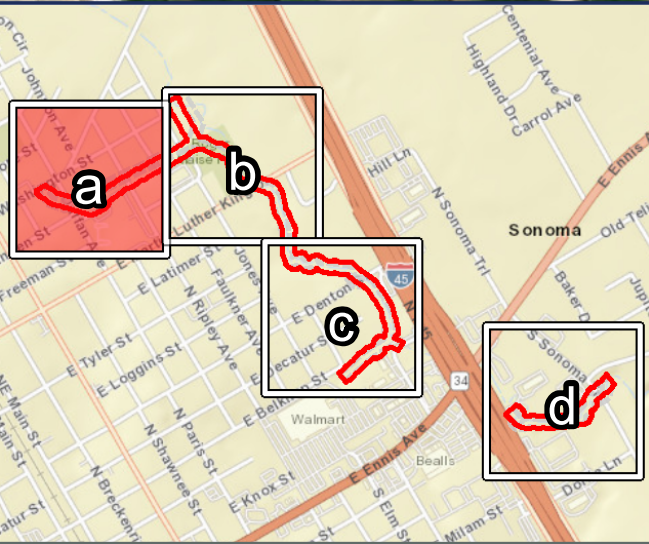
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L:\Projects\GES\Projects\SPI Engineering\SPI Cottonwood Creek - 4323049\GIS\MXDs\Pre-App Meeting\Figure 6. Jurisdictional Waters Map.mxd - Scale 1:3,024 - 9/8/2023 3:26:31 PM - mpetters - WGS 1984 World Mercator



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### Legend

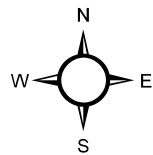
- Field Verified Project Area
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### Potentially Jurisdictional Waters Map

**Cottonwood Creek Drainage Improvements**  
**Schaumburg and Polk, Inc.**  
**Cottonwood Creek Drainage Basin**  
**Ennis, Texas**

Drawn  
**EW**  
 Designed  
**MP**  
 Approved  
**JS**

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**9-8-23**  
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**6a**

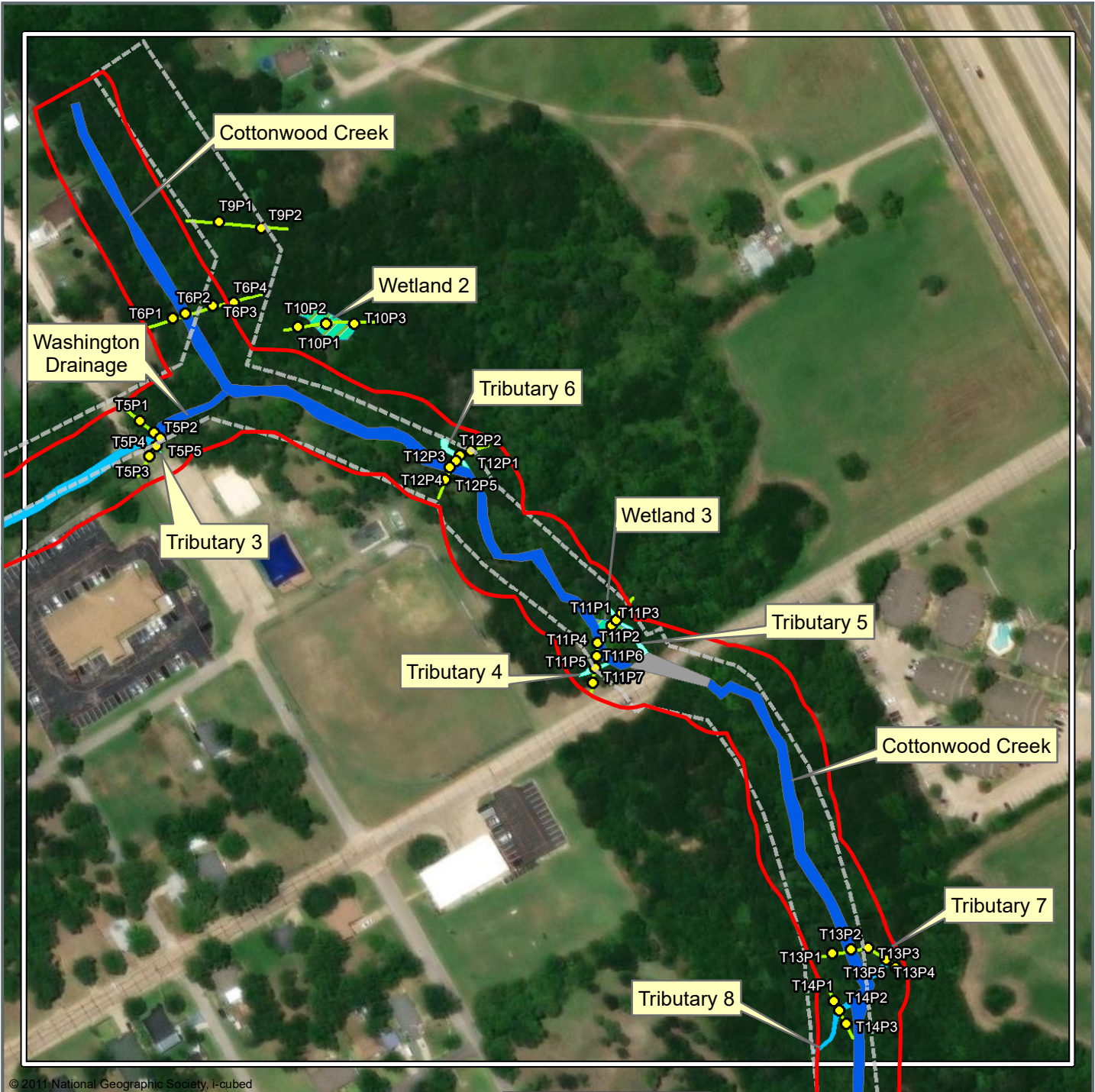


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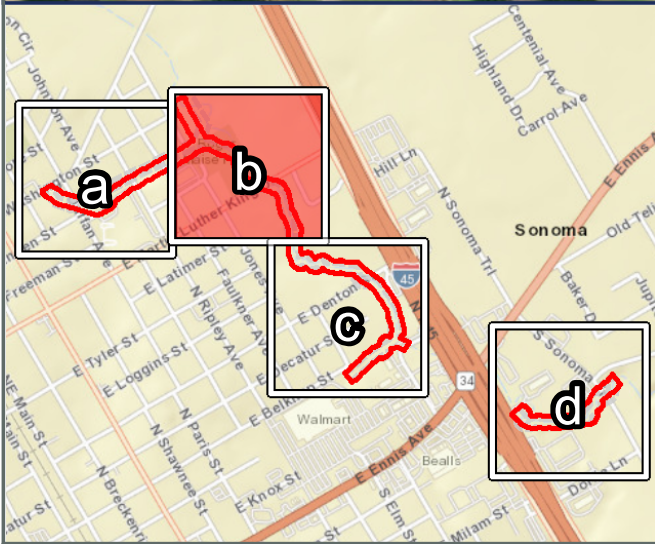


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**Legend**

- Field Verified Project Area
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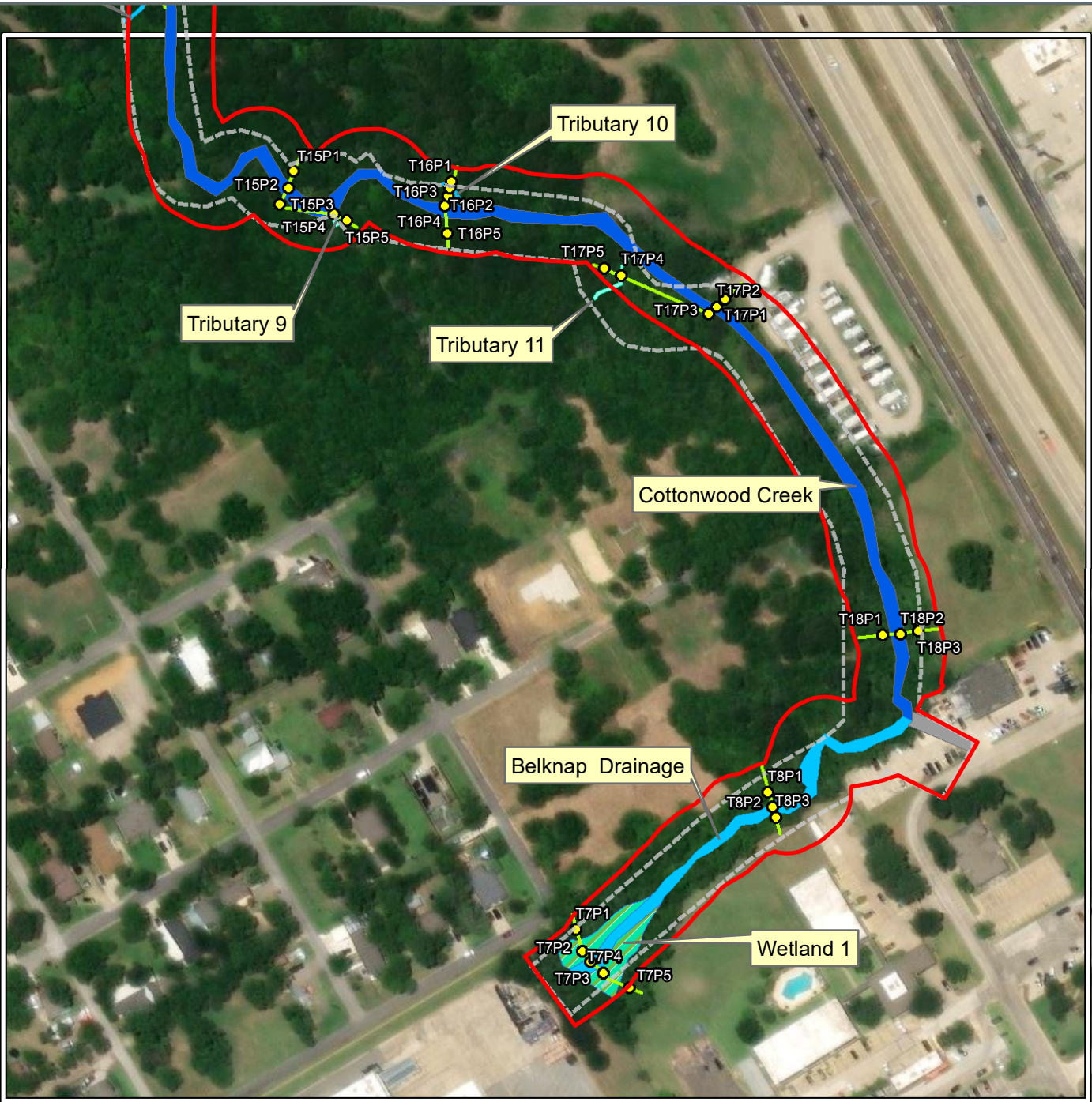
**Potential Waters of the U.S.**

**Potentially Jurisdictional Waters Map**

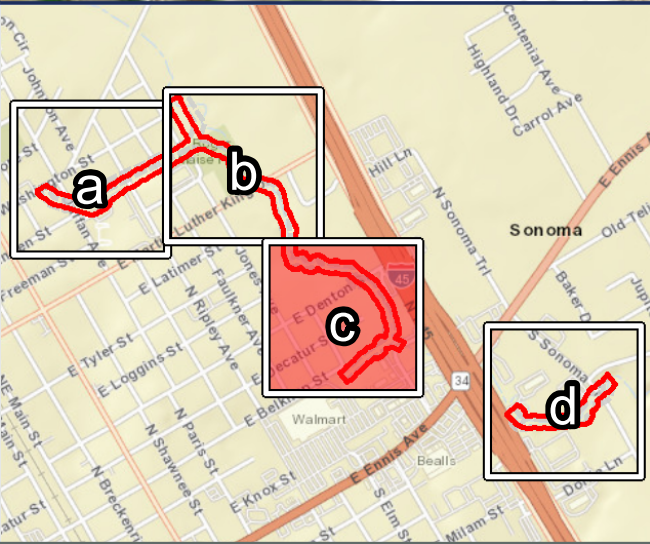
**Cottonwood Creek Drainage Improvements**  
**Schaumburg and Polk, Inc.**  
**Cottonwood Creek Drainage Basin**  
**Ennis, Texas**

Drawn <b>EW</b> Designed <b>MP</b> Approved <b>JS</b>	<p>Scale In Feet (Approximate)</p>	Date <b>9-8-23</b> Figure <b>6b</b>
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### Legend

- Field Verified Project Area
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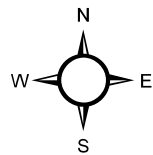
### Potential Waters of the U.S.

### Potentially Jurisdictional Waters Map

**Cottonwood Creek Drainage Improvements**  
**Schaumburg and Polk, Inc.**  
**Cottonwood Creek Drainage Basin**  
**Ennis, Texas**

Drawn  
**EW**  
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**MP**  
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Date  
**9-8-23**  
 Figure  
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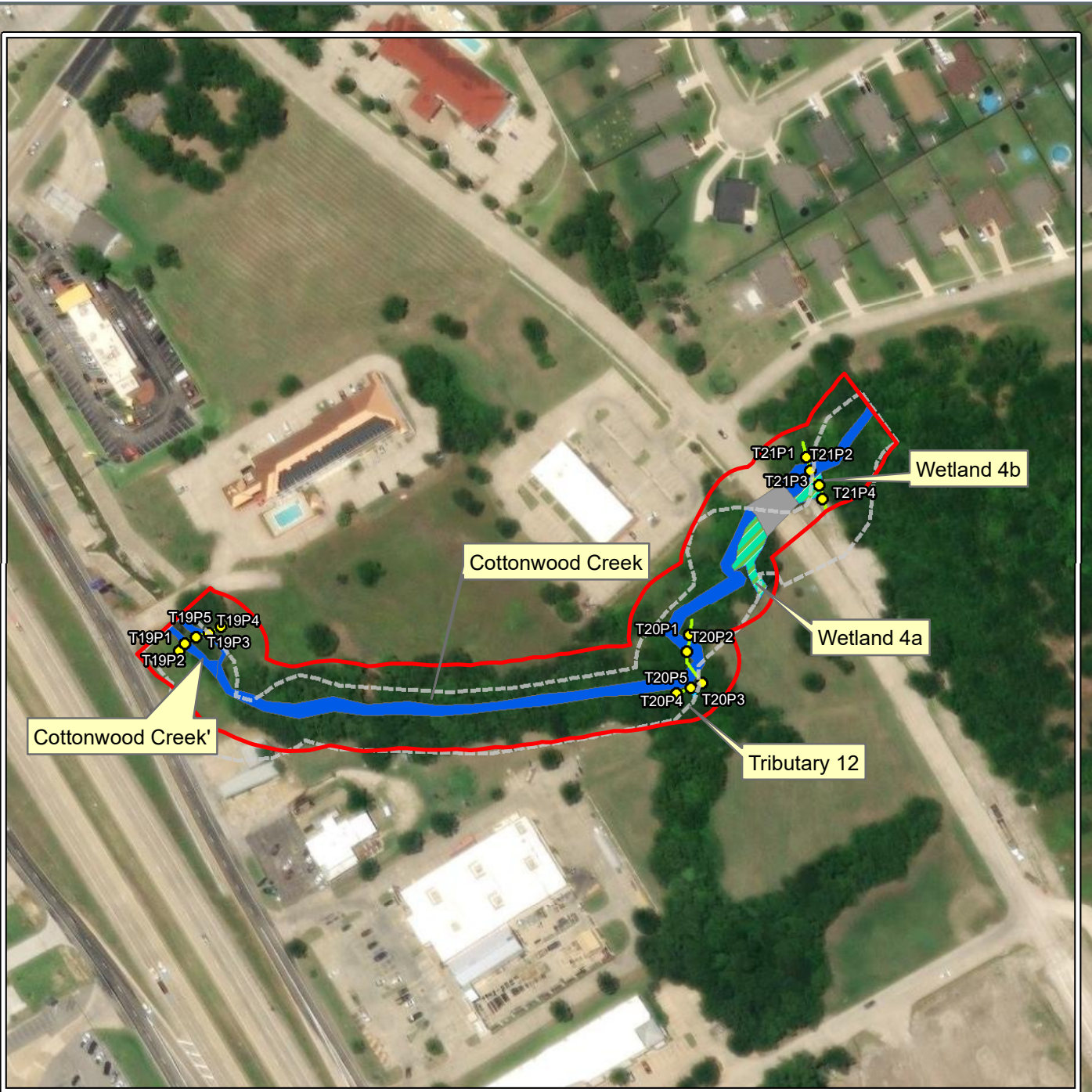


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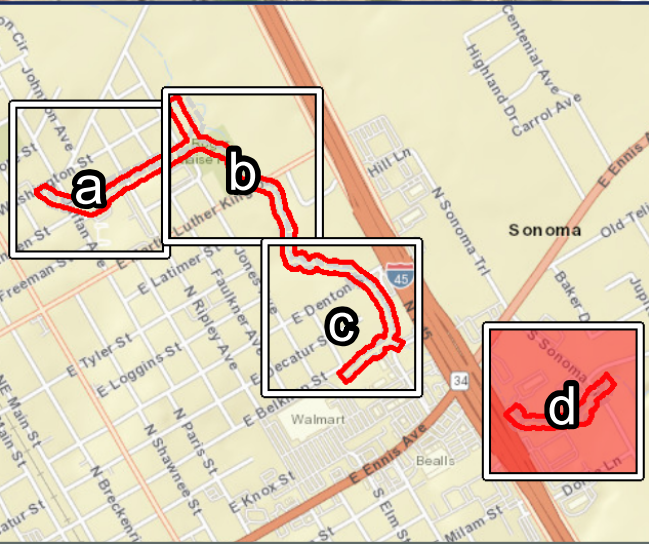


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### Legend

- Field Verified Project Area
- Provided Project Area
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- Transects

### Potential Waters of the U.S.

- Culverted Stream
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- Intermittent Stream
- Perennial Stream
- Forested Wetland

### Potentially Jurisdictional Waters Map

**Cottonwood Creek Drainage Improvements**  
**Schaumburg and Polk, Inc.**  
**Cottonwood Creek Drainage Basin**  
**Ennis, Texas**

Drawn: **EW**  
 Designed: **MP**  
 Approved: **JS**

Date: **9-8-23**  
 Figure: **6d**

Scale In Feet (Approximate)  
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