US Army Corps of Engineers ®
Fort Worth District

Public Notice

Applicant: Texas Department of Transportation – Bryan District

Project No.: SWF-2013-00126

Date: August 14, 2013

The purpose of this public notice is to inform you of a proposal for work in which you might be interested. It is also to solicit your comments and information to better enable us to make a reasonable decision on factors affecting the public interest. We hope you will participate in this process.

Regulatory Program

Since its early history, the U.S. Army Corps of Engineers has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the U.S. Army Corps of Engineers Regulatory Program.

Section 10

The U.S. Army Corps of Engineers is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate *all work or structures in or affecting the course, condition or capacity of navigable waters of the United States*. The intent of this law is to protect the navigable capacity of waters important to interstate commerce.

Section 404

The U.S. Army Corps of Engineers is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the *discharge of dredged and fill material into all waters of the United States, including wetlands*. The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

Contact

Name: Mr. Frederick Land

Phone Number: (817) 886-1729

PUBLIC NOTICE

U.S. ARMY CORPS OF ENGINEERS, FORT WORTH DISTRICT

SUBJECT: Application for a Department of the Army Permit under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899, to discharge dredged or fill material into waters of the United States and conduct activities in, or affecting, navigable waters of the United States associated with the State Highway (SH) 105 Bridge Replacements Project in Grimes, Brazos, and Washington Counties, near the City of Navasota, Texas.

APPLICANT: Texas Department of Transportation – Bryan District
c/o Tomas Pickering
2591 North Earl Rudder Freeway
Bryan, Texas 77803-5190

APPLICATION NUMBER: SWF-2013-00126

DATE ISSUED: August 14, 2013

LOCATION: The proposed bridge replacement and realignment project would cross Cole Creek, the Brazos River (a Section 10 Navigable Waters of the U.S), the Navasota River, and their associated wetlands, located west of the City of Navasota, within Grimes, Brazos, and Washington Counties (Sheet 1 of 14). The proposed project center would be located approximately at North Latitude 30.35880 and West Longitude -96.15457. The project is located in the Millican, Navasota, Washington, and Courtney, Texas, 7.5-minute USGS quadrangle maps (Sheet 2 of 14) and is within the USGS Hydrologic Units 12070101 and 12070103.

OTHER AGENCY AUTHORIZATIONS: None

PROJECT DESCRIPTION: The applicant proposes to discharge approximately 563 cubic yards of dredged and fill material into 1.09 acres of waters of the United States, including 362 linear feet of stream impacts, and 0.8 acres of emergent wetland impacts in conjunction with the construction of the SH 105 Bridge Replacements Project. The discharge of dredged and fill material into waters of the U.S. would be for roadway fill, bridge approaches, culverts, bridge columns, and temporary coffer dams.

INTRODUCTION: The applicant proposes to construct three new SH 105 bridges at the Navasota River, Brazos River, and Coles Creek, shifting the Brazos River Bridge south approximately 820 feet to the south, and removing the old bridges. The Navasota River and Coles Creek bridges would be constructed using concrete girders while the Brazos River Bridge would be constructed using both concrete and steel girders. The proposed improvements would take place primarily within new right-of-way and would ultimately consist of two 12-foot wide lanes and two 10-foot wide shoulders

in each direction. The realignment would remove 680 feet of roadway length and meets all of the current design criteria. Approximately 89.4 acres of additional right-of-way would be required for the proposed project.

As a result of stream bank instability and channel migration, the applicant suspected the structural integrity of these bridges may have become compromised. Therefore in 2003, the applicant conducted a study to evaluate and assign a safety rating of these structures. Based on their findings, the applicant determined the bridges located within this portion of SH 105 were structurally deficient and required both short-term measures and monitoring, in addition to ultimate replacement to ensure an adequate level of safety for the traveling public.

SH 105 is the only east-west corridor for this region of the state. If this road were to be closed, any detour developed would notably impact the traveling public. Currently, the travel time between Navasota and Brenham is 30 minutes. If SH 105 were to close, the travel time would increase to approximately ninety minutes. Motorists would be detoured through College Station or Hempstead in order to traverse the Brazos River. Because there are three bridges along SH 105 in close proximity (less than 0.8 miles between each) any proposed shift in the Brazos River bridge alignment would need to take in to account the other two bridges.

EXISTING CONDITIONS: Land uses in the project vicinity include undeveloped riparian woodland, as well as pastureland, pecan orchards, and transportation.

Depositional processes of the Navasota and Brazos Rivers and their associated tributary drainages (including Coles Creek) have influenced the main topographic features of the project area. The river channels are deeply incised, while topography in the accompanying floodplain terraces is mostly flat to gently sloping.

The project area is located within the Blackland Prairie and Post Oak Savannah Natural Regions of Texas. According to *The Vegetation Types of Texas,* the vegetation of the project area is mapped as Other Native and/or Introduced Grasses, Crops, and Post Oak Woods, and Forest and Grassland Mosaic vegetation types. Vegetation noted within the project right-of-way during field visits consists of riparian woodland, upland woodland, grassland, and pecan orchards.

Wetland hydrology in the area is influenced by periodic overflow from the Navasota and Brazos Rivers, and Coles Creek, all of which are crossed by the proposed project. Approximately 83% of the project corridor is located within the 100-year FEMA floodplain.

Six waters of the U.S., including two wetlands, were identified within the proposed SH 105 right-of-way during field investigations performed by the applicant in April 2012. A description of waters of the U.S., associated vegetation, and soils at each crossing is included below.

Coles Creek (Crossing 1)

Coles Creek is an intermittent stream that crosses the proposed right-of-way approximately 0.5 mile east of the western project terminus. It is a relatively permanent water that flows into the Brazos River (a Section 10 Navigable Waters of the U.S.) approximately 3,600 feet downstream of the proposed crossing. The average ordinary high water mark (OHWM) at this crossing is approximately 50 foot wide. The tree stratum is dominated by cedar elm (*Ulmus crassifolia*), hackberry (*Celtis laevigata*), Osage orange (*Maclura pomifera*), green ash (*Fraxinus pennsylvanica*), boxelder (*Acer negundo*), and black willow (*Salix nigra*). Dominant species of the sapling/shrub stratum include roughleaf dogwood (*Cornus drummondii*) and cedar elm. The herbaceous stratum is dominated by Virginia wildrye (*Elymus virginicus*) and Indian woodoats (*Chasmanthium latifolium*). The soils at this crossing consist of Brazoria clay, 1-3 percent slopes and Brazoria clay, 0-1 percent slopes. Brazoria clay, 0-1 percent slopes has the potential for hydric inclusions. No wetlands were identified at this crossing. Approximately 80 linear feet (0.1 0 acres) of Coles Creek lie within the proposed right-of-way while approximately 310 linear feet (0.33 acres) lie within the existing right-of-way.

Unnamed Tributary to the Brazos River (Crossing 2)

The unnamed tributary to the Brazos River is an ephemeral stream that intersects the proposed right-of-way between Coles Creek and the Brazos River. It is a relatively permanent water that flows to Coles Creek and then to the Brazos River. The OHWM at the crossing location is approximately 10 feet wide. Dominant species of the tree and sapling/shrub stratums are cedar elm and hackberry. Dominant species in the herbaceous stratum are Virginia wildrye, curly dock (*Rumex crispus*), Johnsongrass (*Sorghum halepense*), and bermudagrass (*Cynodon dactylon*). The soils at this crossing consist of Trinity clay, depressional which is listed as a hydric soil. No jurisdictional wetlands were identified at this crossing. Approximately 215 linear feet (0.05 acres) of this tributary is within the proposed right-of-way.

Wetland 1 (Crossing 3)

Wetland 1 is an emergent wetland located west of the Brazos River within the 100-year floodplain. Based on aerial photography this wetland is hydrologically connected to the Brazos River via a grass-lined swale that continues from the wetland to Coles Creek. There are no woody species within this wetland. Dominant species of the herbaceous stratum include blunt broom sedge (*Carex tribuloides*), rough cocklebur (*Xanthium strumarium*), curly dock, Carolina canarygrass (*Phalaris* caroliniana), and meadow garlic (*Allium canadense*). The soils at this crossing consist of Trinity clay, depressional, which is listed as a hydric soil. Approximately 1.69 acres of this wetland lie within the proposed right-of-way (including approximately 0.65 acres within the wetland mitigation site).

Brazos River (Crossing 5)

The Brazos River is a perennial stream that crosses the proposed right-of-way between Coles Creek and the Navasota River. The Brazos River is a Section 10 navigable water at the location of the proposed crossing. The OHWM at the crossing location is approximately 270 feet wide. The adjacent tree stratum is dominated by American elm (*Ulmus americana*) and eastern cottonwood

(*Populus deltoides*). Dominant species of the sapling/shrub stratum include American elm and roughleaf dogwood. The herbaceous stratum is dominated by Virginia wildrye, Mexican primrose-willow (*Ludwigia octovalvis*), and giant ragweed (*Ambrosia trifida*). In Washington County, the soils at this crossing consist of Brazoria clay, 0-1 percent slopes and Oklared-Norwood complex, occasionally flooded. Brazoria clay, 0-1 percent slopes has the potential for hydric inclusions. In Brazos County, the soils at this crossing consist of Weswood-Yahola complex, frequently flooded. This soil has the potential for hydric inclusions. Wetland 2 lies adjacent to and east of the Brazos River, in Brazos County, at this crossing and is described below. Approximately 315 linear feet (1.91 acres) of the Brazos River lie within the proposed right-of-way.

Wetland 2 (Crossing 4)
Wetland 2 is a forested wetland directly abutting the Brazos River in Brazos County on the east bank of the river. The tree stratum is dominated by American elm and eastern cottonwood. Dominant species of the sapling/shrub stratum include American elm and roughleaf dogwood. The herbaceous stratum is dominated by Virginia wildrye, Mexican primrose-willow, and giant ragweed. The soils at this crossing consist of Weswood-Yahola complex frequently flooded. This soil has the potential for hydric inclusions. Approximately 0.16 acres of this wetland lie within the proposed right-of-way.

Navasota River (Crossing 6)
The Navasota River is a perennial stream that crosses the proposed right-of-way approximately 0.7 mile west of the eastern project terminus. It is relatively permanent water that flows into the Brazos River. The OHWM at the crossing location is approximately 90 feet wide. The adjacent tree stratum is dominated by American elm, hackberry, and American sycamore (*Platanus occidentalis*). Dominant species of the sapling/shrub stratum include American elm and green ash. The herbaceous stratum is dominated by Mexican primrose-willow. In Washington County the soils at this crossing consist of Yahola fine sandy loam, 0-1 percent slopes, rarely flooded. In Grimes County the soils at this crossing consist of Brazoria clay, 1-3 percent slopes. Approximately 370 linear feet (0.85 acres) of the Navasota River lie within the proposed right-of-way while approximately 205 linear feet (0.44) acres lie within the existing right-of-way.

ADVERSE IMPACTS: : The applicant proposed to discharge approximately 563 cubic yards of dredged and fill material into 1.09 acres of waters of the United States, including 362 linear feet of stream impacts, and 0.8 acres of wetland impacts in conjunction with the construction of the SH 105 Bridge Replacements Project. Project impacts would include: the permanent impacts to 14 linear feet (0.001 acre) of intermittent stream at Coles Creek; permanent impacts to 120 linear feet (0.03 acre) of ephemeral stream at Stream 2; the loss of 0.8 acre of emergent wetland at Wetland 1; permanent impacts to 15 linear feet (0.03 acre) and temporary impacts to 200 linear feet (0.23 acre) at the Brazos River; and permanent impacts to 28 linear feet (0.002 acre) of the Navasota River. The discharge of dredged and fill material into waters of the U.S. would be for roadway fill, bridge approaches, culverts, bridge columns, and temporary coffer dams.

ALTERNATIVES: Offsite alternatives were evaluated by the applicant; however, none were considered practicable due to the site specific need and purpose of the project. Five action alternatives were considered further for the proposed project. In this case, the number of lanes, median size, shoulders, and right-of-way width are determined by traffic levels, safety, and minimum engineering standards were established as fixed constraints and do not change between the on-site alternatives described below.

ALTERNATIVE A:
In accordance with the National Environmental Policy Act (NEPA), an Environmental Assessment (EA) was prepared by the applicant and Alternative A was chosen. A public hearing to inform the public of this alternative will be held September 12, 2013. Alternative A would fulfill the need and purpose by improving the safety of the traveling public, replacing a structurally deficient bridge caused by the westward migration of the Brazos River, relocating the bridge over the Brazos River to a more stable location, and realigning and replacing structurally obsolete bridges at the Navasota River and Coles Creek. All three existing bridges would be demolished and removed. The existing roadway between Coles Creek and the Brazos River would eventually become a county road. The ultimate disposition of the roadway between the Brazos and Navasota Rivers has not been determined at this time. The existing roadway east of the Navasota River would be removed. The applicant believes Alternative A is the least environmentally damaging practicable alternative when all factors are taken into account. These factors include ecological effects, costs, aesthetics, property acquisition, and efficient use of resources. Alternative A would impact 1.09 acres of waters of the United States, including 362 linear feet of stream impacts, and 0.8 acres of emergent wetland. This alternative replaces all three bridges in one construction event. Temporary right-of-way would not be necessary. This alignment would require relocation of the Brazos River Bridge to the most stable location practicable while maximizing opportunities to avoid houses and other structures. The proposed improvements would take place primarily within new right-of-way and would consist of two 12-foot wide lanes and two 10-foot wide shoulders in each direction. The Navasota River and Coles Creek bridges would be constructed using concrete girders while the Brazos River Bridge would be constructed using both concrete and steel girders. The proposed design shifts the Brazos River Bridge south approximately 820 feet. The realignment removes 680 feet of centerline length from the roadway and meets the current mandatory design criteria. Temporary erosion control measures would include silt fences and rock berms. Permanent erosion control features would include grass-lined ditches and grass filter strips. More than five acres of right-of-way would be disturbed during construction, requiring a storm water pollution prevention plan.

ALTERNATIVE B
Alternative B is situated west of Alternative A until it crosses the Brazos River, at which point Alternative B runs parallel to the existing SH 105 right-of-way and merges with the existing SH 105 right-of-way approximately 1.4 miles beyond (east) of the terminus of Alternative A. This alternative would impact approximately 1.01 acres of waters of the United States, including no less than 362 linear feet of stream impacts, and 0.72 acre of forested (0.29 acre) and emergent wetland (0.43 acre). Alternative B replaces all three bridges at one time. However, among all alternatives considered, Alternative B would require the greatest amount of right-of-way acquisition, in addition

to the removal of nine residential structures. It has a higher construction cost and longest construction timetable of the four options. The applicant does not believe that Alternative B would be a practicable alternative.

ALTERNATIVE C
Alternative C would occur in closer proximity to the existing right-of-way than Alternative A and would replace only two bridges initially; the third at a later date. This alternative would impact approximately 1.34 acres of waters of the United States, including no less than 362 linear feet of stream impacts, and 1.05 acres of emergent wetland. This alternative would allow greater flexibility with funding and shorter individual construction times; however, temporary right-of-way would be required. This alternative is unlikely to affect any residential structures. The alignment is less geometrically practicable and would require two separate construction events. The applicant does not believe that Alternative C would be a practicable alternative.

ALTERNATIVE D
Alternative D provides flexibility with funding. This alternative would impact approximately 1.12 acres of waters of the United States, including no less than 362 linear feet of stream impacts, and 0.83 acres of forested (0.20 acre) and emergent wetland (0.63 acre). The Navasota River and Coles Creek bridges could be replaced as funds become available. The alignment would occur closer to the existing right-of-way than the Alternative A; however, temporary right-of-way would be required. Three residential structures would be adversely impacted and at least two separate construction events would be needed. The alignment is less geometrically practicable. The applicant does not believe that Alternative C would be a practicable alternative.

NO- ACTION ALTERNATIVE
Under the No-Action Alternative the SH 105 bridges would not be replaced. This alternative would not impact waters of the U.S. The bridge over the Brazos River would not be replaced and would continue to deteriorate. The No-Action Alternative would not fulfill the applicant's need and purpose of improving the safety of the traveling public, and replacing a structurally deficient bridge to a more stable location and replacing structurally obsolete structures at the Navasota River and Coles Creek.

MITIGATION: The applicant believes the project has been designed to incorporate all practicable measures to avoid and minimize impacts to waters of the U.S. to the maximum extent practicable. Impacts to high quality forested wetland areas have been entirely avoided and adverse effect to streams have also been minimized. The project site falls outside of the service area of an approved mitigation bank. Therefore, purchase of mitigation bank credits is not a viable alternative. As such, the applicant proposes to compensate for unavoidable impacts to emergent wetlands by expanding and enhancing an existing emergent wetland. The wetland described above as Wetland 1 has a TXRAM (Texas Rapid Assessment Method) wetland score of 52.6. The area proposed for expansion and enhancement currently has a TXRAM wetland score of 47.0. This 0.43 acre mitigation area would be enhanced and expanded to 1.88 acre as determined using the Aquatic Resource Compensation Calculator. To offset adverse impacts associated with effects to 362 linear

feet of stream, the applicant proposed to establish a 1.72–acre riparian buffer adjacent to the Brazos River.

SHEETS

1. Project Location (Road Base Map)
2. Project Location (USGS Topographic Base Map)
3. Crossing 1 – Coles Creek (Plan)
4. Crossing 2 – Unnamed Tributary to the Brazos River (Plan)
5. Crossing 3 – Emergent Wetland in the Brazos River Floodplain (Plan)
6. Crossing 4 – Brazos River; Crossing 5 – Forested Wetland Adjacent to the Brazos River (Plan)
7. Crossing 6 – Navasota River (Plan)
8. Plan and Profile at Crossing 1- Coles Creek
9. Plan and Profile at North End of Coles Creek Bridge
10. Plan and Profile at Crossing 2 – Unnamed Tributary to the Brazos River
11. Plan and Profile at Crossing 3 – Emergent Wetland Adjacent to the Brazos River
12. Plan and Profile at Crossings 3, 4, and 5 – Brazos River and Adjacent Wetlands
13. Plan and Profile at East End of the Brazos River Bridge
14. Plan and Profile at Crossing 6 – Navasota River

PUBLIC INTEREST REVIEW FACTORS: This application will be reviewed in accordance with 33 CFR 320-332, the Regulatory Program of the USACE, and other pertinent laws, regulations, and executive orders. Our evaluation will also follow the guidelines published by the U.S. Environmental Protection Agency pursuant to Section 404 (b)(1) of the CWA. The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impact, of the proposed activity on the public interest. That decision will reflect the national concerns for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including its cumulative effects. Among the factors addressed are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The USACE is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the USACE in determining whether to issue, issue with modifications, or conditions, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to

determine the need for a public hearing and to determine the overall public interest of the proposed activity.

STATE WATER QUALITY CERTIFICATION: This project incorporates the requirements necessary to comply with the Texas Commission on Environmental Quality's (TCEQ) Tier I project criteria. Tier I projects are those that result in a direct impact of three acres or less of waters of the State or 1,500 linear feet of streams (or a combination of the two is below the threshold) for which the applicant has incorporated best management practices (BMPs) and other provisions designed to safeguard water quality. The USACE has received a completed checklist and signed statement fulfilling Tier I criteria for the project. Accordingly, a request for 401 certification is not necessary and there will be no additional TCEQ review.

ENDANGERED AND THREATENED SPECIES: The USACE has reviewed the U.S. Fish and Wildlife Service's latest published version of endangered and threatened species to determine if any may occur in the project area. The proposed project would be located in counties where the Louisiana pine snake (*Pituophis ruthveni*), whooping crane (*Grus americana*), and Navasota ladies'-tresses (*Spiranthes parksii*), are known to occur or may occur as migrants. The whooping crane and Navasota ladies'-tresses are endangered species and the Louisiana pine snake is a candidate for listing. Our initial review indicates that the proposed work would have no effect on federally-listed endangered species. The applicant is preparing an Environmental Assessment and the Federal Highway Administration (FHWA) would be the lead federal agency in regards to any necessary coordination, consultation, or conference in regards to listed species or those proposed for listing under the Endangered Species Act.

NATIONAL REGISTER OF HISTORIC PLACES: The bridges proposed for replacement have been evaluated for their eligibility to the National Register of Historic Places (NRHP). The Navasota River Bridge and the Coles Creek Bridge were reviewed under the National Historic Preservation Act and the Memorandum of Understanding between Texas Department of Transportation and the Texas Historic Commission for their eligibility to the NRHP. Review indicated that neither bridge possessed sufficient design or engineering significance to qualify them for eligibility to the NRHP. Additionally, the bridges were found to not have local or regional historical significance. Survey of the proposed construction area indentified no prehistoric sites.

FLOODPLAIN MANAGEMENT: The USACE is sending a copy of this public notice to the local floodplain administrator. In accordance with 44 CFR part 60 (Flood Plain Management Regulations Criteria for Land Management and Use), the floodplain administrators of participating communities are required to review all proposed development to determine if a floodplain development permit is required and maintain records of such review.

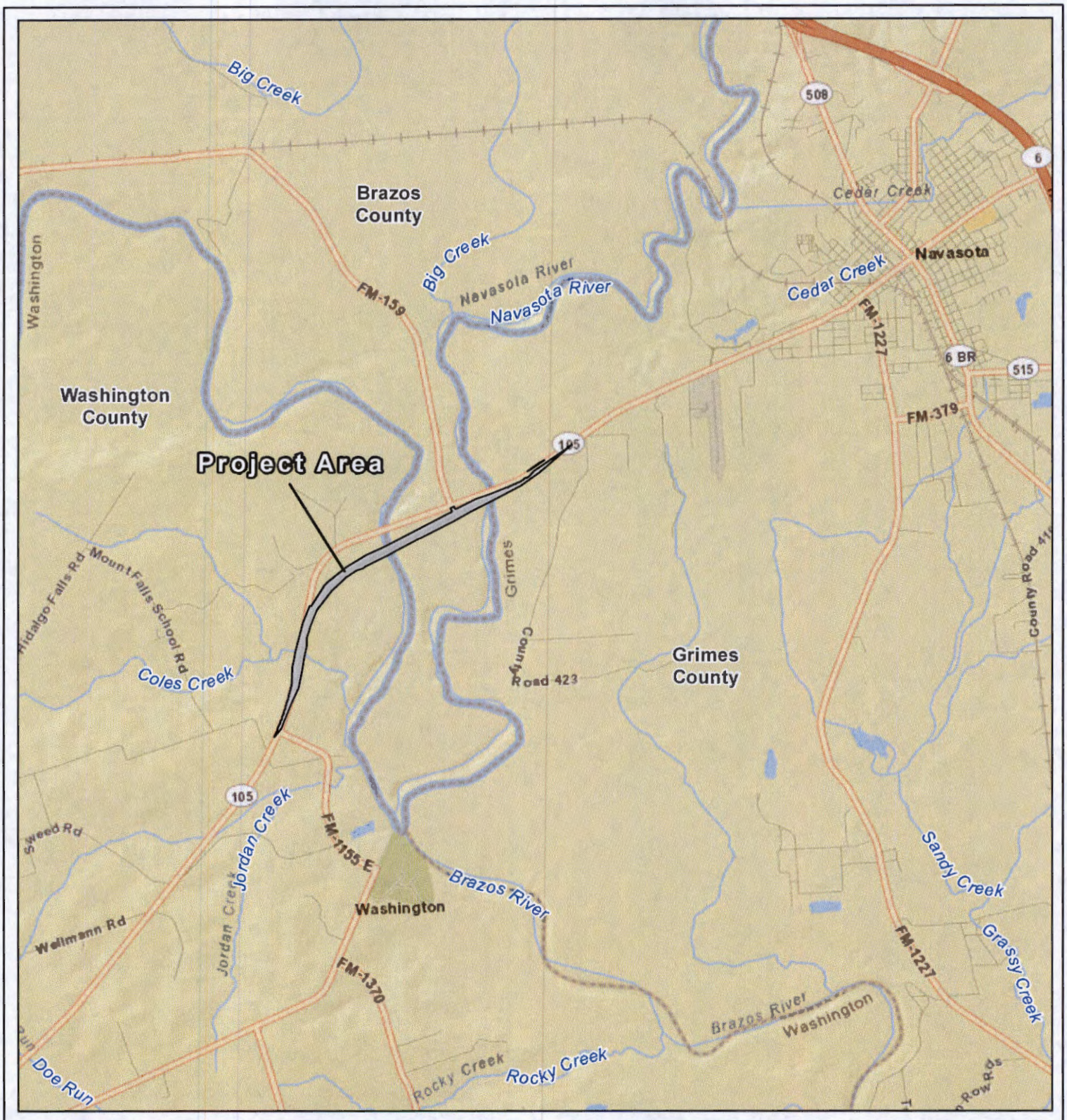
SOLICITATION OF COMMENTS: The public notice is being distributed to all known interested persons in order to assist in developing fact upon which a decision by the USACE may be based. For accuracy and completeness of the record, all data in support of or in opposition to the proposed

work should be submitted in writing setting forth sufficient detail to furnish a clear understanding of the reasons for support or opposition.

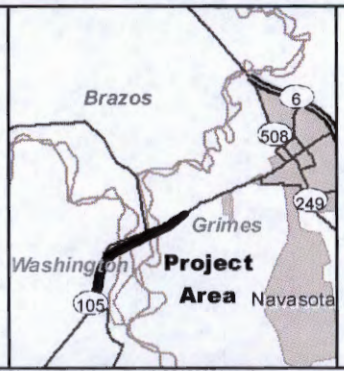
PUBLIC HEARING: Prior to the close of the comment period any person may make a written request for a public hearing setting forth the particular reasons for the request. The District Engineer will determine whether the issues raised are substantial and should be considered in his permit decision. If a public hearing is warranted, all known interested persons will be notified of the time, date, and location.

CLOSE OF COMMENT PERIOD: All comments pertaining to this Public Notice must reach this office on or before September 13, 2013, which is the close of the comment period. Extensions of the comment period may be granted for valid reasons provided a written request is received by the limiting date. If no comments are received by that date, it will be considered that there are no objections. Comments and requests for additional information should be submitted to; Regulatory Branch, CESWF-PER-R; U. S. Army Corps of Engineers; Post Office Box 17300; Fort Worth, Texas 76102-0300. You may visit the Regulatory Branch in Room 3A37 of the Federal Building at 819 Taylor Street in Fort Worth between 8:00 A.M. and 3:30 P.M., Monday through Friday. Telephone inquiries should be directed to (817) 886-1731. Please note that names and addresses of those who submit comments in response to this public notice may be made publicly available.

DISTRICT ENGINEER
FORT WORTH DISTRICT
CORPS OF ENGINEERS



Project Location



0 5,000 Feet
0 2 Kilometers

Sheet 1 of 14

Project Location (Road Base)
SH 105

USACE Project #: SWF-2013-00126
June 3, 2013

Prepared for: TxDOT	1 in = 5,000 feet
Project No.: 017-002-009	Scale: 1:60,000
Prepared by: SL	Date: 6/3/2013

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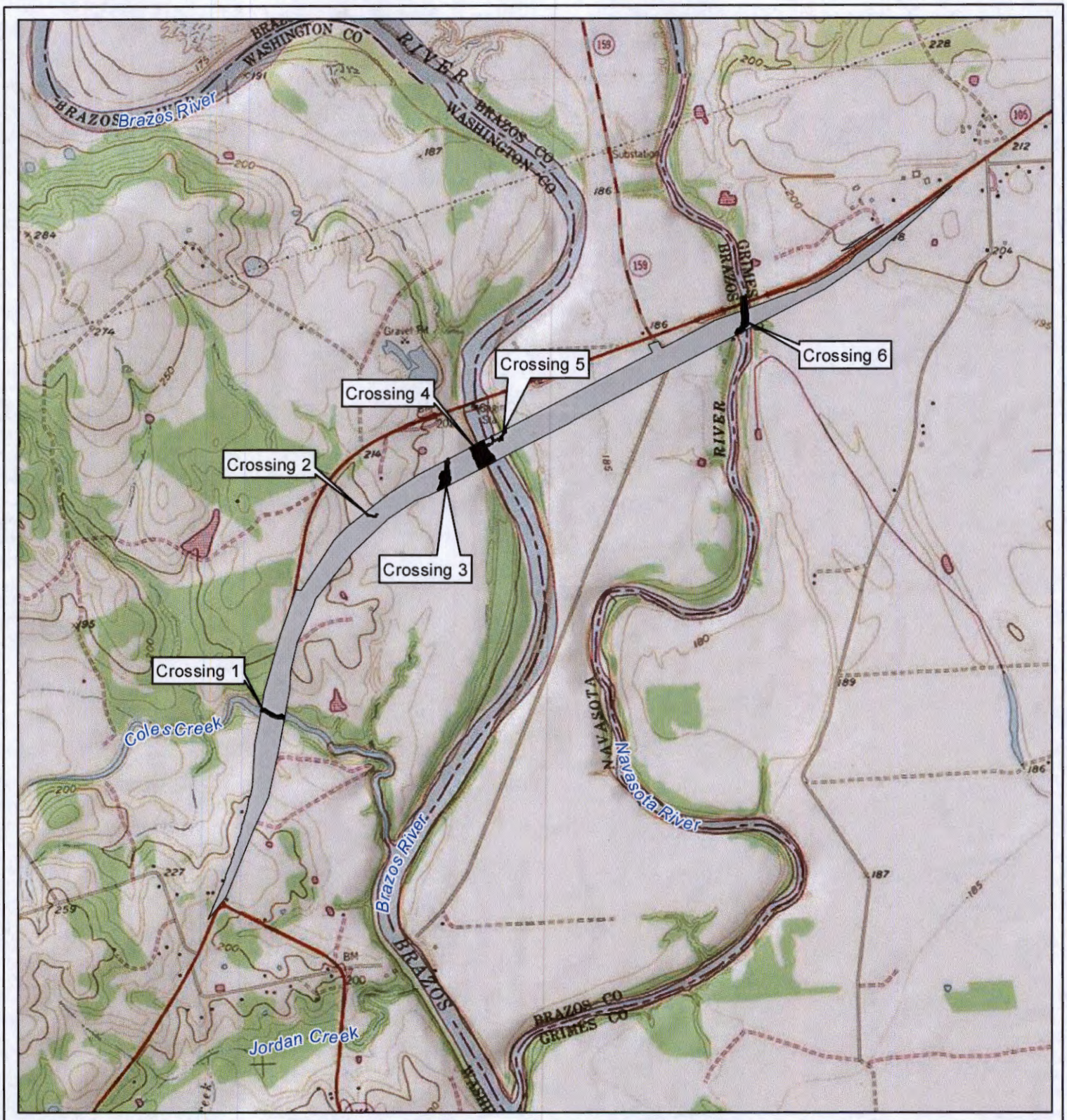
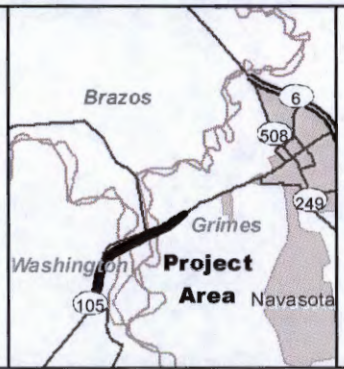


Project Location



0 2,000 Feet
0 600 Meters

Sheet 2 of 14

Project Location (Topo Base)
SH 105

USACE Project #: SWF-2013-00126
June 3, 2013
Washington USGS 7.5' Quadrangle

Prepared for: TxDOT	1 in = 2,000 feet
Project No.: 017-002-009	Scale: 1:24,000
Prepared by: SL	Date: 6/3/2013

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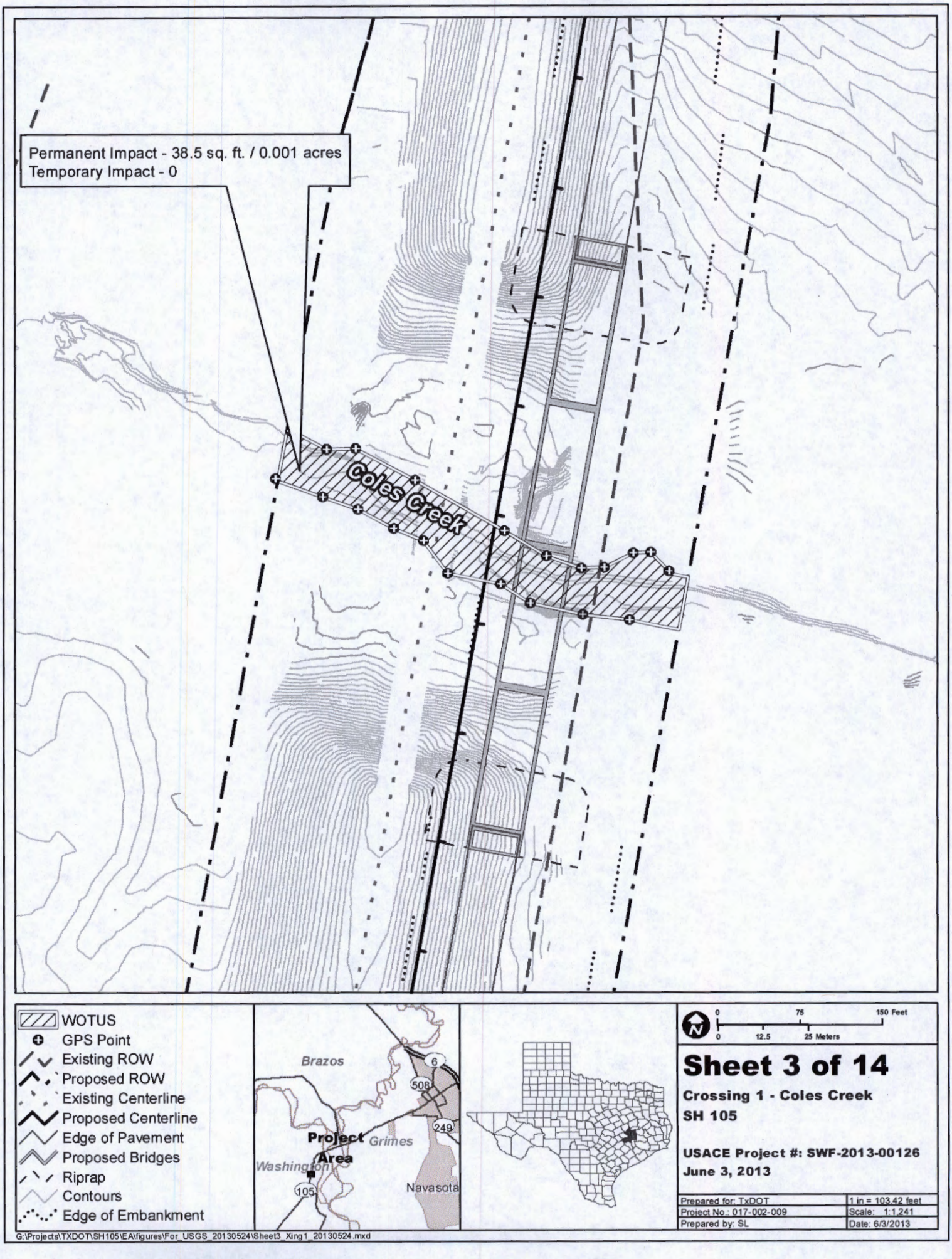
Permanent Impact - 38.5 sq. ft. / 0.001 acres
Temporary Impact - 0
Coles Creek
WOTUS
GPS Point
Existing ROW
Proposed ROW
Existing Centerline
Proposed Centerline
Edge of Pavement
Proposed Bridges
Riprap
Contours
Edge of Embankment
Brazos
Grimes
Washington
Navasota
Project Area
6
508
249
105
0
75
150 Feet
0
12.5
25 Meters
Sheet 3 of 14
Crossing 1 - Coles Creek
SH 105
USACE Project #: SWF-2013-00126
June 3, 2013
Prepared for: TxDOT
Project No.: 017-002-009
Prepared by: SL
1 in = 103.42 feet
Scale: 1:1,241
Date: 6/3/2013
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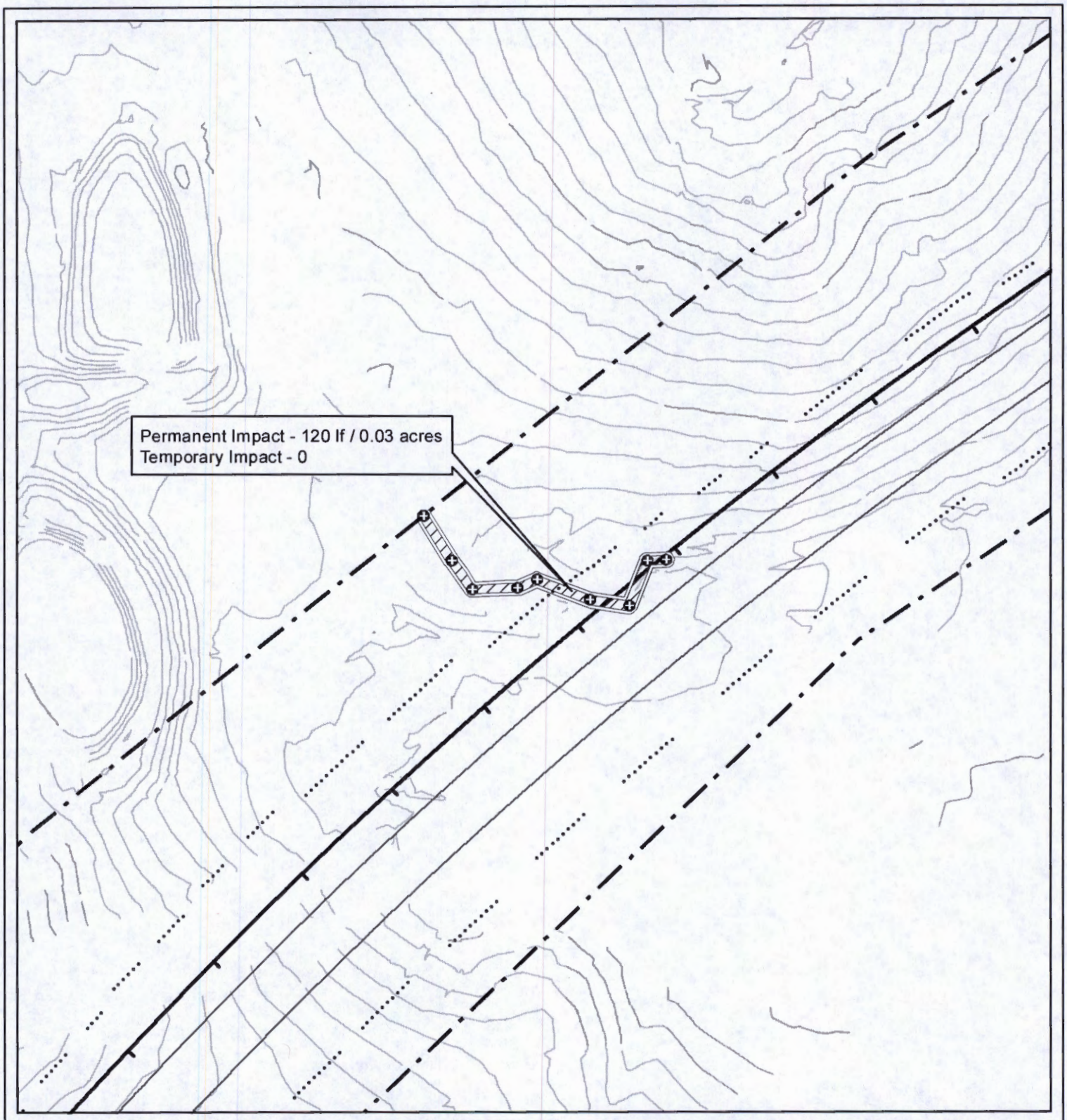
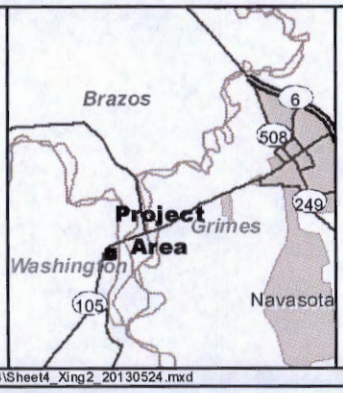


WOTUS
GPS Point
Proposed ROW
Proposed Centerline
Edge of Pavement
Contours
Edge of Embankment



0 75 150 Feet
0 12.5 25 Meters

Sheet 4 of 14

Crossing 2 - Unnamed Tributary to the Brazos River
SH 105
USACE Project #: SWF-2013-00126
June 3, 2013

Prepared for: TxDOT	1 in = 103.42 feet
Project No.: 017-002-009	Scale: 1:1,241
Prepared by: SL	Date: 6/3/2013

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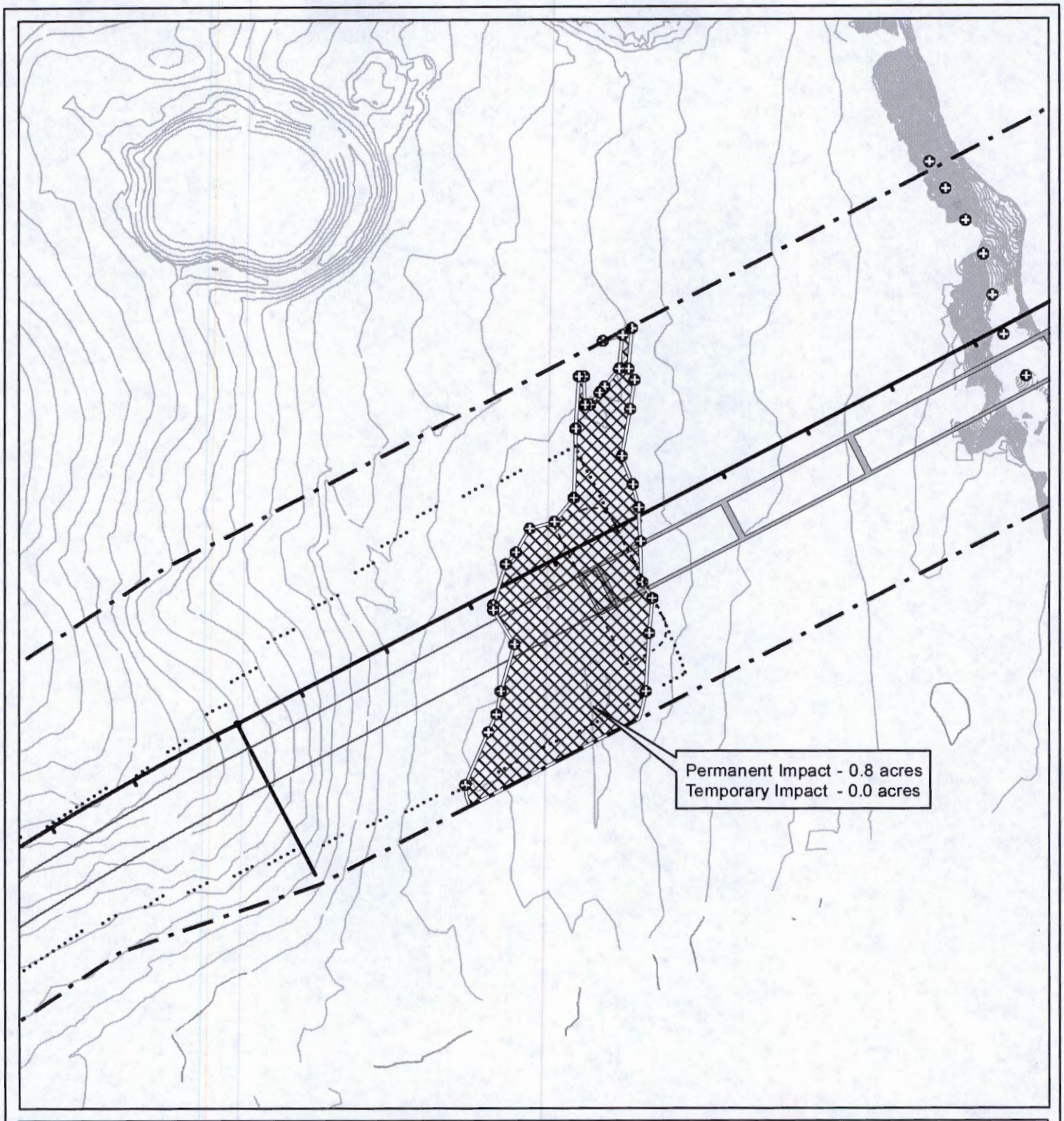
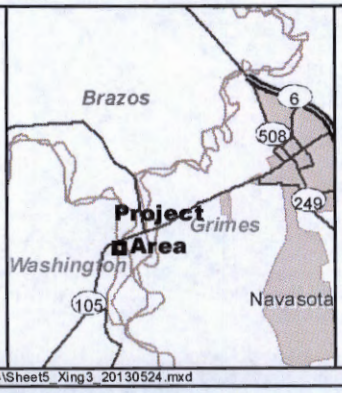
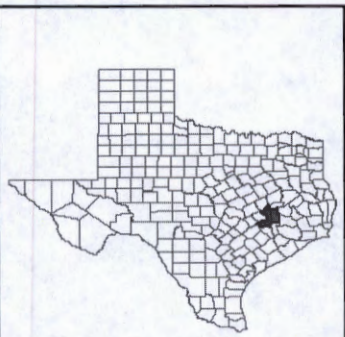


Wetland
GPS Point
Proposed ROW
Proposed Centerline
Edge of Pavement
Proposed Bridges
Riprap
Contours
Edge Of Embankment





0 75 150 Feet
0 12.5 25 Meters

Sheet 5 of 14

Crossing 3 - Emergent Wetland in the Brazos River Floodplain
SH 105
USACE Project #: SWF-2013-00126
June 3, 2013

Prepared for: TxDOT	1 in = 134.5 feet
Project No.: 017-002-009	Scale: 1:1,614
Prepared by: SL	Date: 6/3/2013

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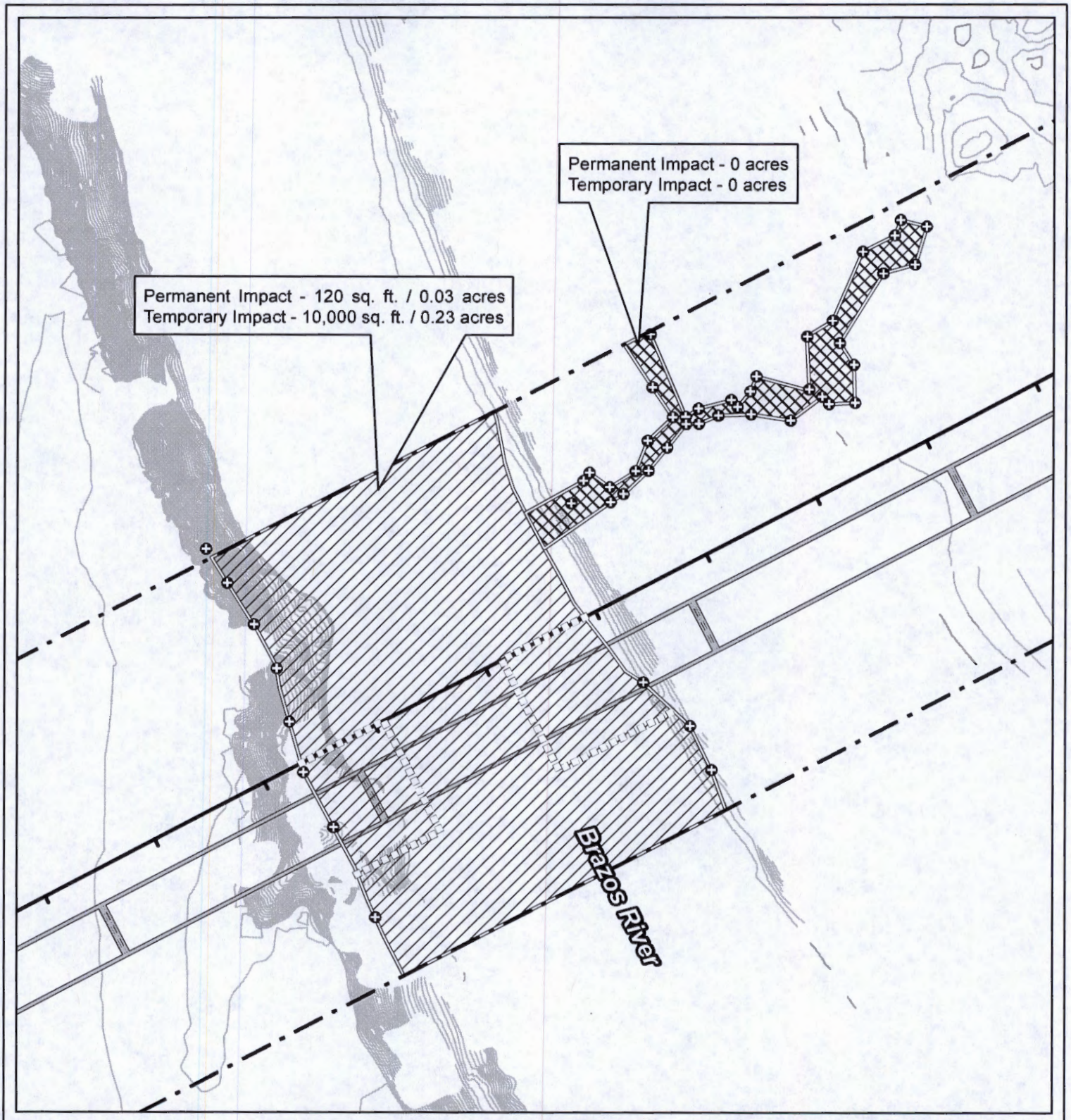
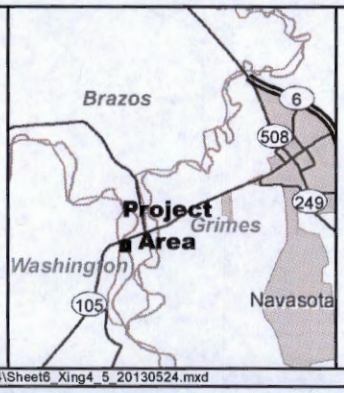


WOTUS
Wetland
GPS Point
Proposed ROW
Proposed Centerline
Proposed Bridges
Contours
Temporary Coffer Dam



0 75 150 Feet
0 12.5 25 Meters

Sheet 6 of 14

Crossing - 4 Brazos River
Crossing 5 - Forested Wetland
Adjacent to the Brazos River
SH 105
USACE Project #: SWF-2013-00126
June 3, 2013

Prepared for: TxDOT	1 in = 103.42 feet
Project No.: 017-002-009	Scale: 1:1,241
Prepared by: SL	Date: 6/3/2013

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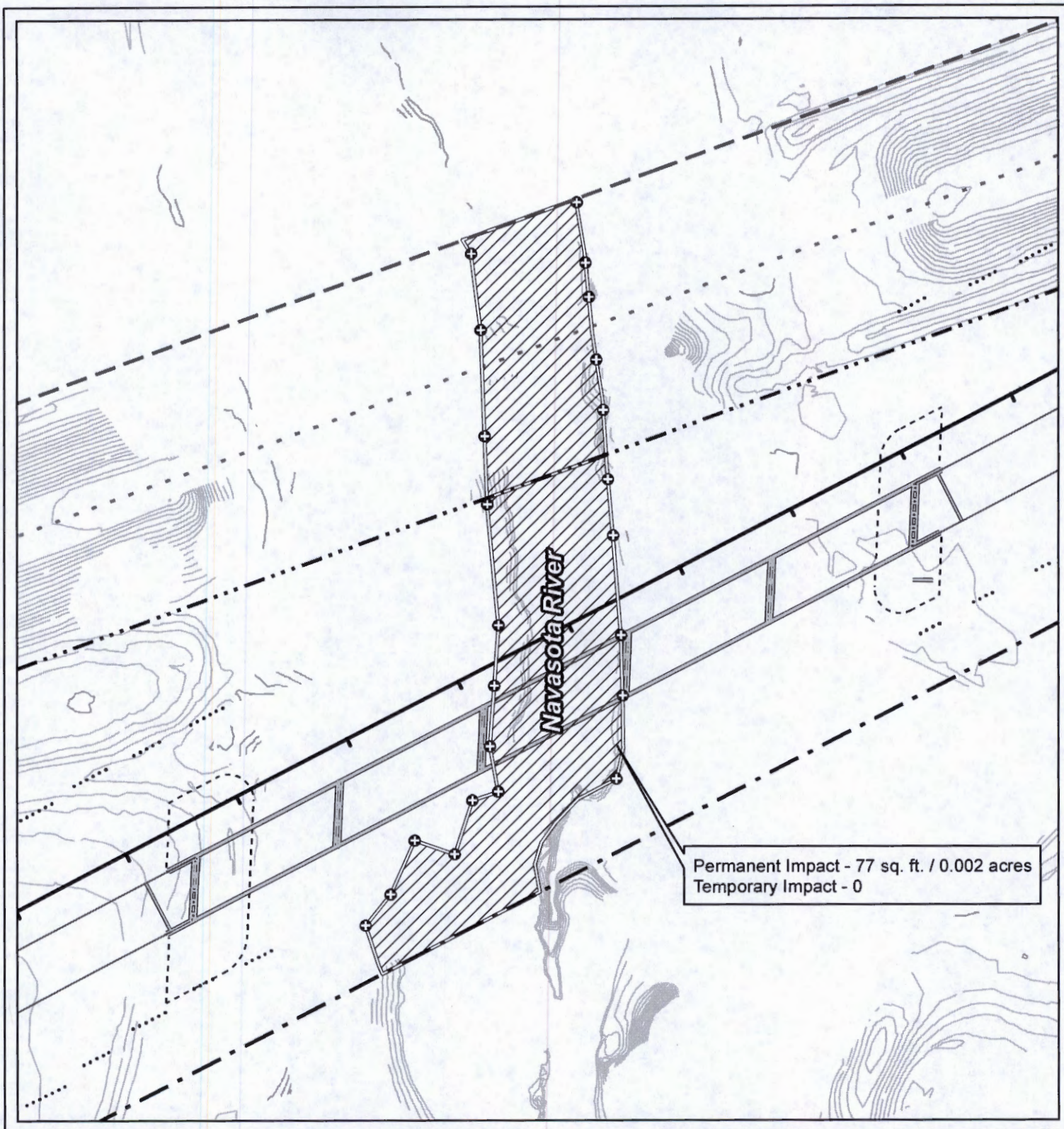
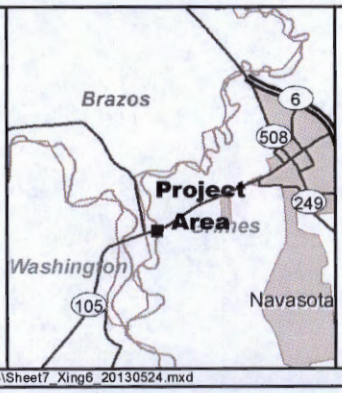


WOTUS
GPS Point
Existing ROW
Proposed ROW
Existing and Proposed ROW
Existing Centerline
Proposed Centerline
Edge of Pavement
Proposed Bridges
Riprap
Contours
Edge of Embankment



0 75 150 Feet
0 12.5 25 Meters

Sheet 7 of 14

Crossing 6 - Navasota River
SH 105

USACE Project #: SWF-2013-00126
June 3, 2013

Prepared for: TxDOT	1 in = 103.42 feet
Project No.: 017-002-009	Scale: 1:1,241
Prepared by: SL	Date: 6/3/2013

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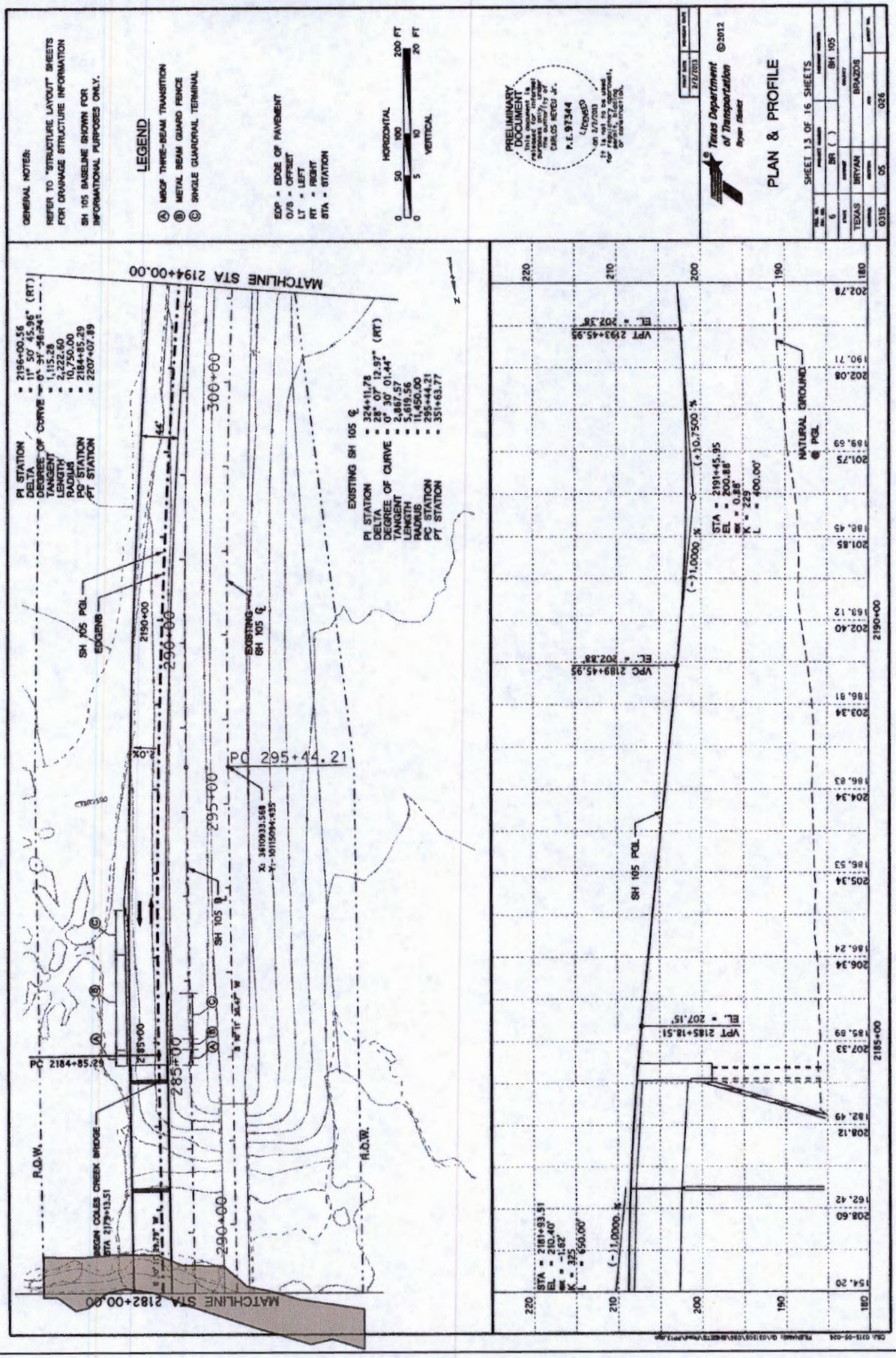

Sheet 8 of 14

Plan and Profile at Crossing 1 - Coles Creek

WOTUS

USACE Project #: SWF-2013-00126

SH 105

Project No.: 017-002-009 June 3, 2013

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Sheet 9 of 14

Plan and Profile at North End of Coles Creek Bridge

USACE Project #: SWF-2013-00126

SH 105

Project No.: 017-002-009

June 3, 2013

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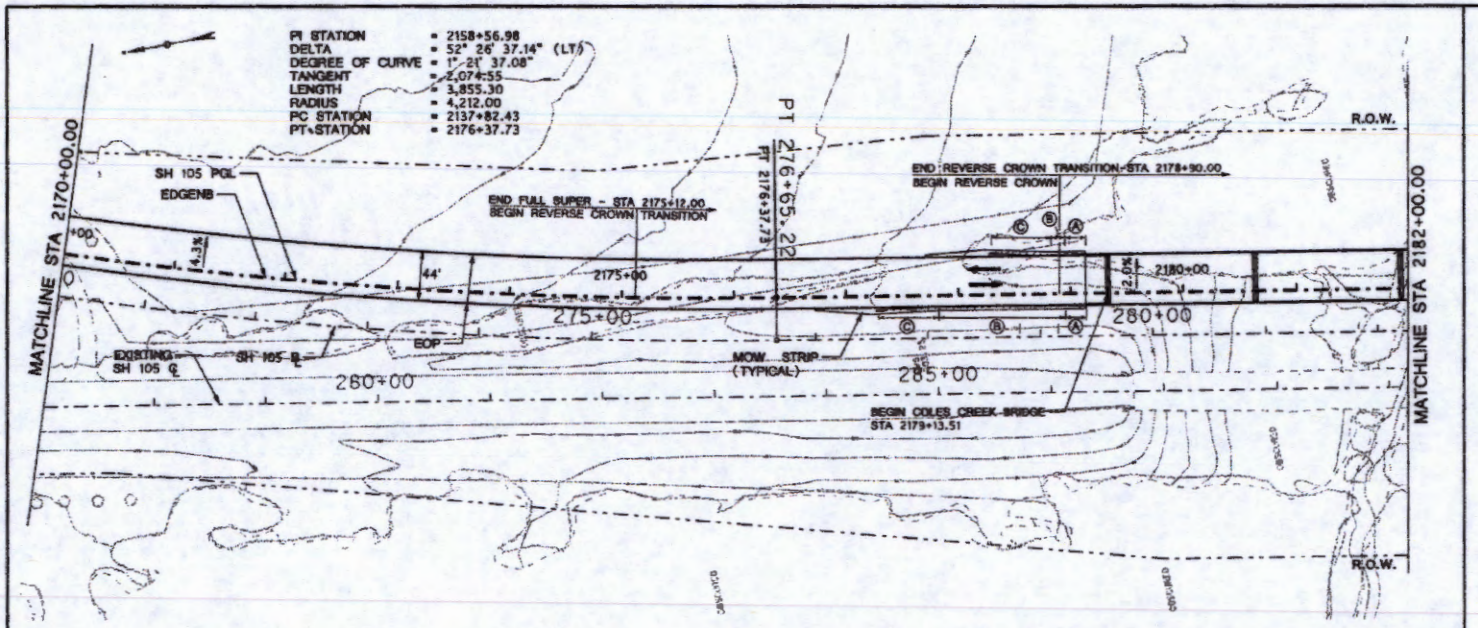

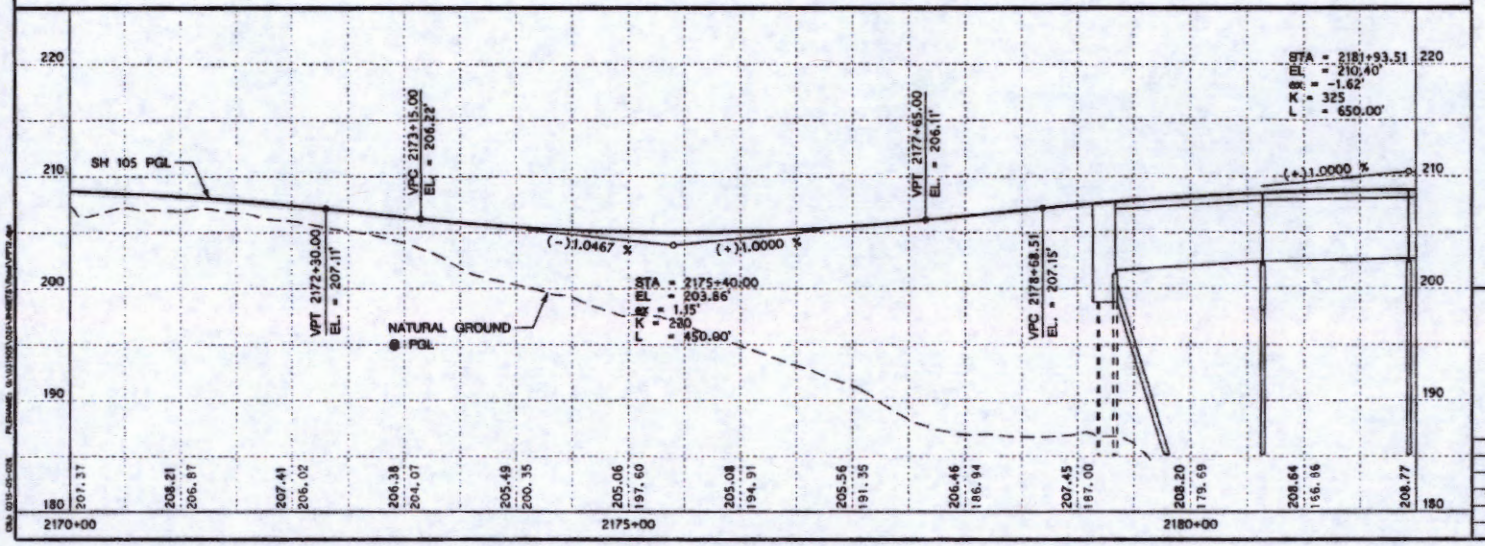

GENERAL NOTES:

REFER TO "STRUCTURE LAYOUT" SHEETS FOR DRAINAGE STRUCTURE INFORMATION

SH 105 BASELINE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

LEGEND

- (A) MBGF THRIE-BEAM TRANSITION
- (B) METAL BEAM GUARD FENCE
- (C) SINGLE GUARDRAIL TERMINAL

EOP = EDGE OF PAVEMENT
O/S = OFFSET
LT = LEFT
RT = RIGHT
STA = STATION

HORIZONTAL
0 50 100 200 FT
0 5 10 20 FT
VERTICAL

PRELIMINARY DOCUMENT
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PLAN & PROFILE

SHEET 12 OF 16 SHEETS

DIST.	COUNTY	HIGHWAY
6	BR ( )	SH 105
STATE	DISTRICT	COUNTY
TEXAS	BRYAN	BRAZOS
CONTROL	SECTION	JOB
0315	05	026

Sheet 10 of 14

Plan and Profile at Crossing 2 - Unnamed Tributary to the Brazos River

WOTUS

USACE Project #: SWF-2013-00126

SH 105

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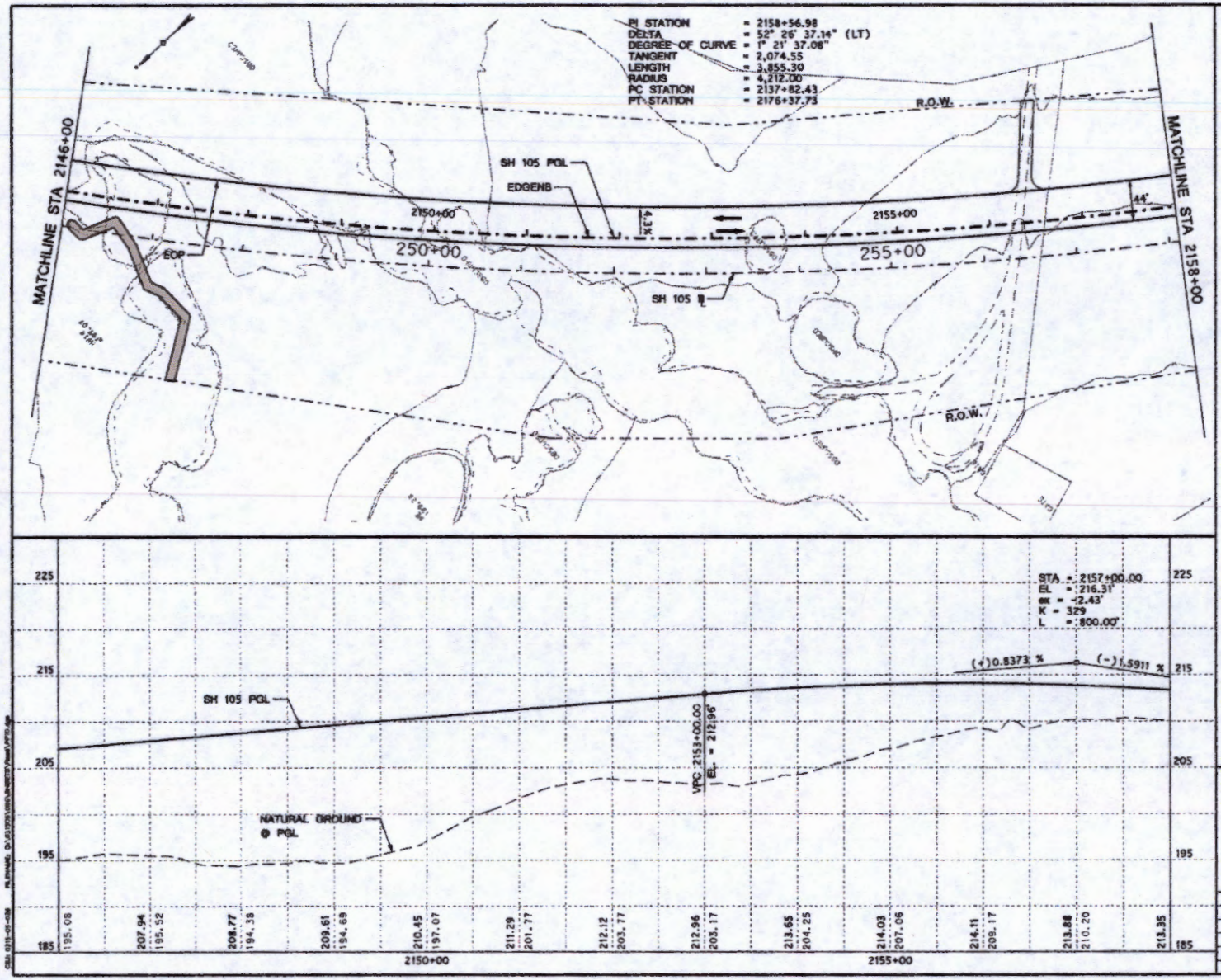
Project No.: 017-002-009 June 3, 2013



GENERAL NOTES:

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LEGEND

- (A) MBGF THRIE-BEAM TRANSITION
- (B) METAL BEAM GUARD FENCE
- (C) SINGLE GUARDRAIL TERMINAL

EOP = EDGE OF PAVEMENT
O/S = OFFSET
LT = LEFT
RT = RIGHT
STA = STATION

HORIZONTAL
0 50 100 200 FT
0 5 10 20 FT
VERTICAL

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SHEET 10 OF 16 SHEETS

FED. RD. DIV. NO.	PROJECT NUMBER	HIGHWAY NUMBER
6	SH ( )	SH 105
STATE	DISTRICT	COUNTY
TEXAS	BRYAN	BRAZOS
CONTROL	SECTION	JOB
0315	05	026

Sheet 11 of 14

Plan and Profile at Crossing 3 - Emergent Wetland Adjacent to the Brazos River

Wetland

USACE Project #: SWF-2013-00126

SH 105

Project No.: 017-002-009 June 3, 2013

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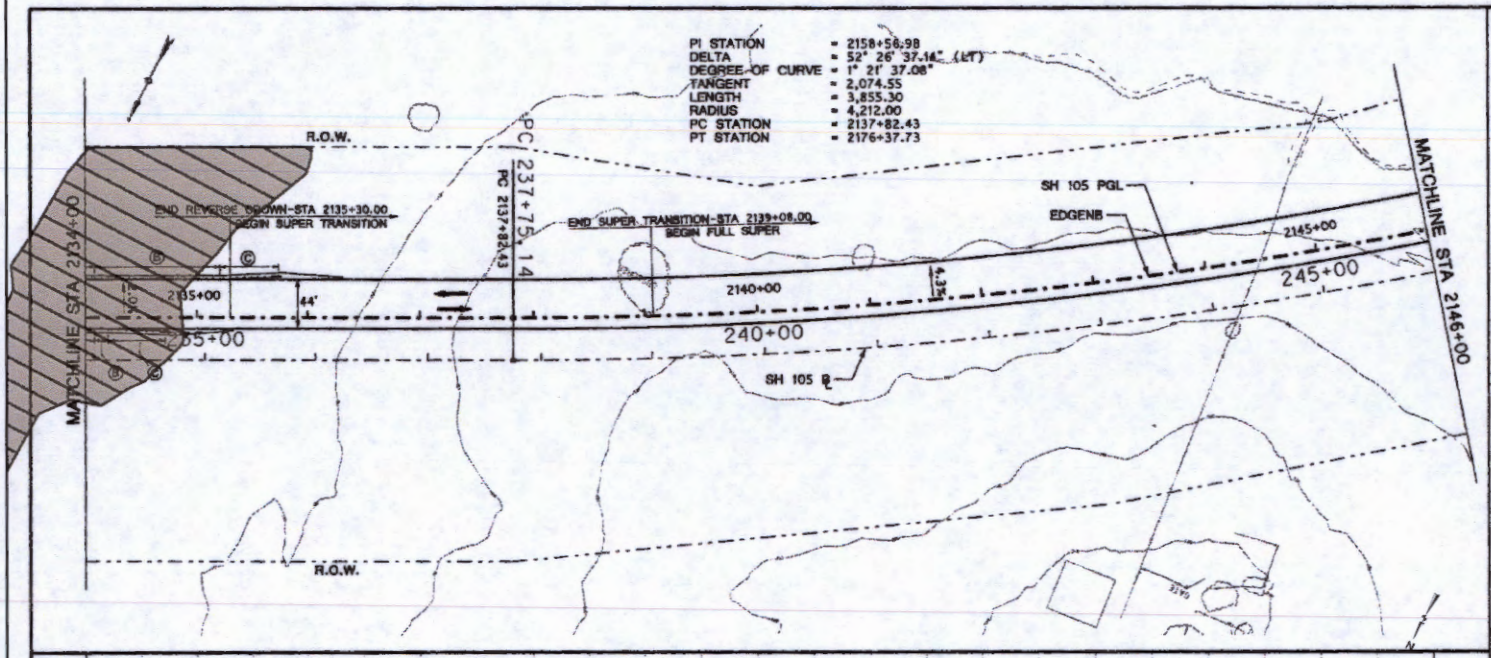

GENERAL NOTES:

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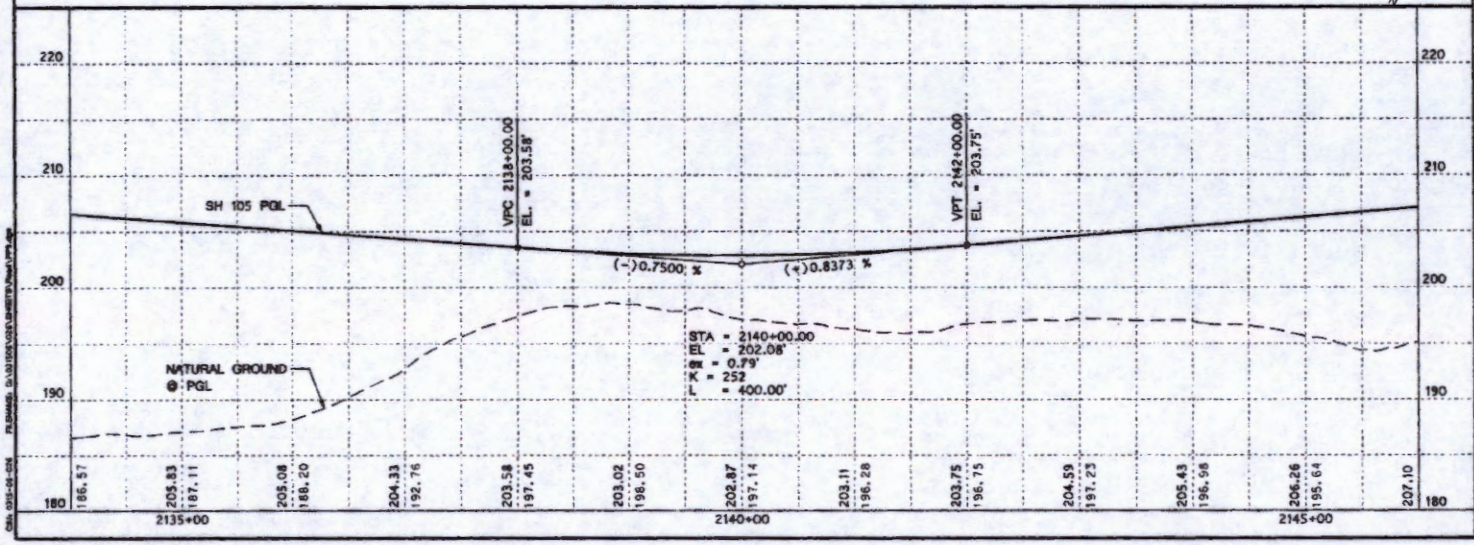
SH 105 BASELINE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

LEGEND

- Ⓐ MBGF THRIE-BEAM TRANSITION
- Ⓑ METAL BEAM GUARD FENCE
- Ⓒ SINGLE GUARDRAIL TERMINAL

EOP = EDGE OF PAVEMENT
O/S = OFFSET
LT = LEFT
RT = RIGHT
STA = STATION

HORIZONTAL
0 50 100 200 FT
0 5 10 20 FT
VERTICAL



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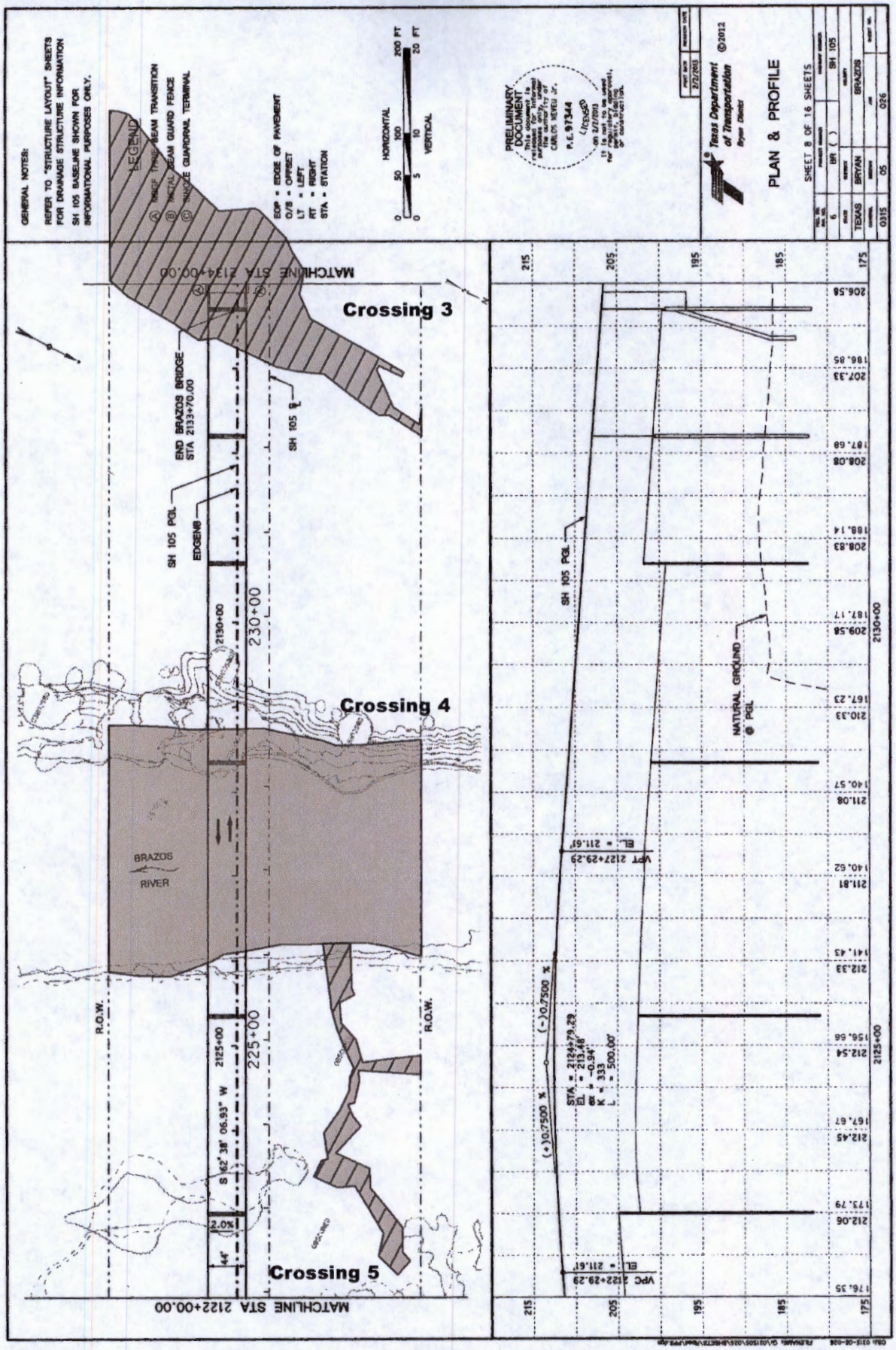
PLAN & PROFILE

SHEET 9 OF 16 SHEETS

FED. RD. DIV. NO.	PROJECT NUMBER	HIGHWAY NUMBER
6	BR ( )	SH 105
STATE	DISTRICT	COUNTY
TEXAS	BRYAN	BRAZOS
CONTROL	SECTION	JOB	SHEET NO.
0315	05	026	



Sheet 12 of 14

WOTUS Wetland

USACE Project #: SWF-2013-00126

SH 105

Plan and Profile at Crossings 3, 4, and 5 - Brazos River and Adjacent Wetlands

Project No.: 017-002-009 June 3, 2013

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Sheet 13 of 14

Plan and Profile at the East End of the Brazos River Bridge

USACE Project #: SWF-2013-00126

SH 105

Project No.: 017-002-009 June 3, 2013

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Sheet 14 of 14

Plan and Profile at Crossing 6 - Navasota River

WOTUS

USACE Project #: SWF-2013-00126

SH 105

Project No.: 017-002-009 June 3, 2013

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