

Draft Supplemental Environmental Assessment

Bayou Din Detention Basin HMGP-DR-1780-TX Project #20 Beaumont, Jefferson County, Texas

September 2013

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LIST OF ACRONYMS

- APE – Area of Potential Effect
- ASTM – American Society for Testing and Materials
- BMP – Best Management Practice
- CFR – Code of Federal Regulations
- EA – Environmental Assessment
- SEA - Supplemental Environmental Assessment
- ESA – Endangered Species Act
- FEMA – Federal Emergency Management Agency
- FIRM – Flood Insurance Rate Map
- FONSI – Finding of No Significant Impact

FPPA – Farmland Protection Policy Act
GLO – General Land Office
IH – Interstate Highway
JCDD6 – Jefferson County Drainage District No. 6
LNVA – Lower Neches Valley Authority
LOMR – Letter of Map Revision
NDD – Natural Diversity Database
NEPA – National Environmental Policy Act
NFIP – National Flood Insurance Program
NHPA – National Historic Preservation Act
NOI – Notice of Intent
NOx – nitrogen oxides
NPS – National Park Service
NRCS – Natural Resources Conservation Service
NRHP – National Register of Historic Places
NWI – National Wetland Inventory
PEM1Cd – palustrine, emergent, persistent, seasonally flooded, partly drained/ditched
PFO1Ad – palustrine, forested, broad-leaved deciduous, temporarily flooded, partly drained/ditched
PFO1Cd – palustrine, forested, broad-leaved deciduous, partly drained/ditched
PRPs – Potentially Responsible Parties
PUBHx – palustrine, unconsolidated bottom, permanently flooded, excavated
ROW – right of way
SALs – State Archeological Landmarks
SEA – Supplemental Environmental Assessment
SH – State Highway
SHPO – State Historic Preservation Office
SWPPP – Storm Water Pollution Prevention Plan
TCEQ – Texas Commission on Environmental Quality
THC – Texas Historical Commission
TPDES – Texas Pollutant Discharge Elimination System
TPWD – Texas Parks and Wildlife Department
TSMASS – Texas State Minimum Archeological Survey Standards
TWDB – Texas Water Development Board
USACE – US Army Corps of Engineers
USDA – US Department of Agriculture
USFWS – US Fish and Wildlife Service
VOC – volatile organic compound

1.0 INTRODUCTION

1.1 Background

The Federal Emergency Management Agency (FEMA) previously prepared an Environmental Assessment (EA) in July 2012 addressing the Bayou Din detention basin project. That EA resulted in a Finding of No Significant Impact (FONSI), which was signed in July 2012. This Supplemental Environmental Assessment (SEA) documents revisions made to the final placement of the spoil disposal site. In the 2012 EA, the proposed spoil disposal site was located immediately north of the proposed detention basin with approximate GPS coordinates for the center of the spoil site at Latitude: 30.00490; Longitude: -94.25931. Based on landowner request, the spoil site area is proposed to be moved east of the detention basin on the east side of Boyt Road. This SEA has been prepared to address impacts related to the revised spoil site.

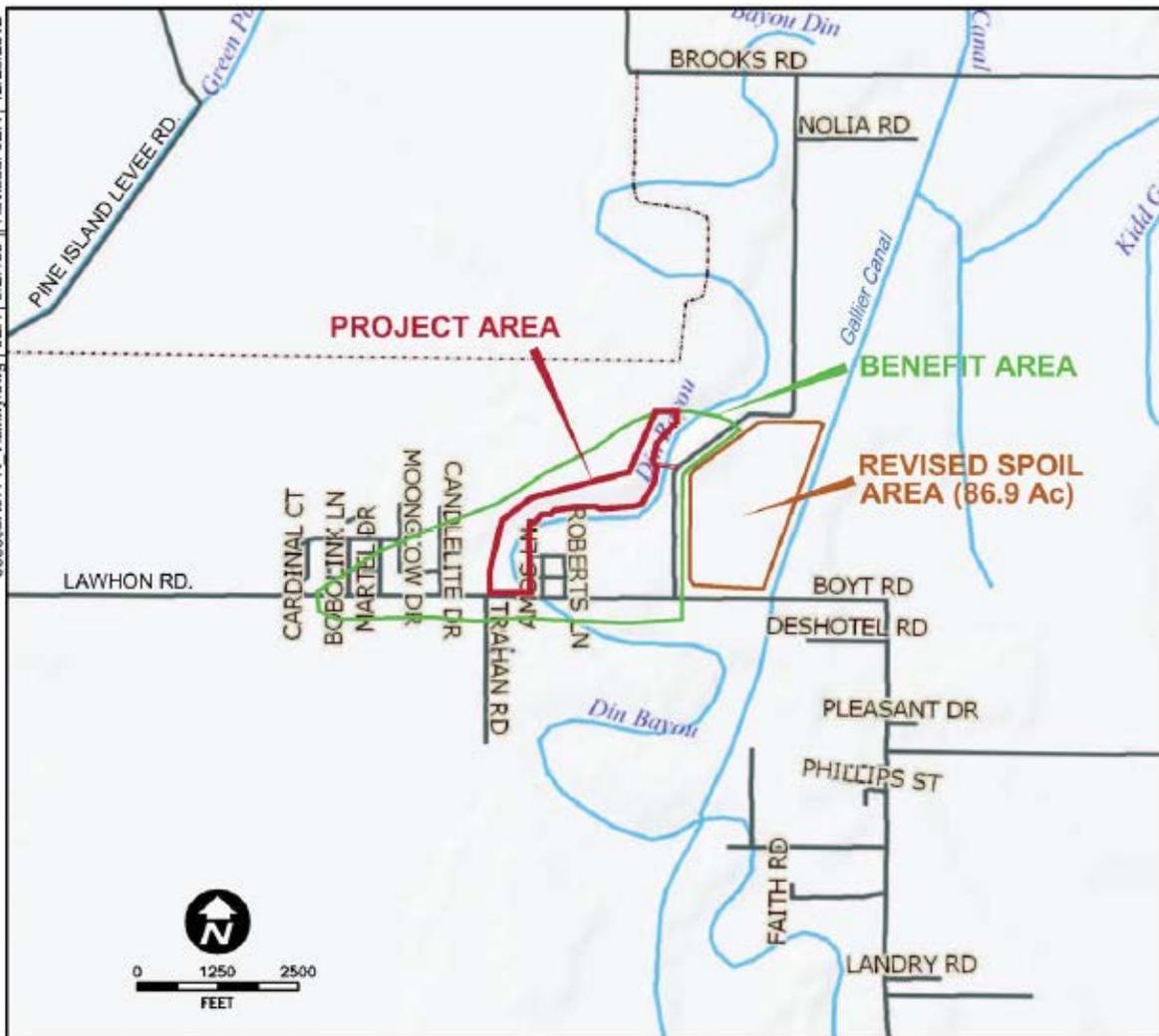
In accordance with 44 Code of Federal Regulations (CFR) for FEMA, Subpart B, Agency Implementing Procedures, Part 10.9, this SEA has been prepared pursuant to Section 102 of the National Environmental Policy Act (NEPA) of 1969, as implemented by the regulations promulgated by the President's Council on Environmental Quality (CEQ; 40 CFR Parts 1500-1508). This SEA hereby incorporates the original July 2012 EA and FONSI by reference, in accordance with 40 CFR Part 1508.28. The purpose of the SEA is to analyze the potential environmental impacts of the proposed action (new spoil disposal site) and to determine whether to prepare an Environmental Impact Statement or issue a FONSI.

This project would comply with FEMA's responsibilities under NEPA, Section 7 of the Endangered Species Act (ESA), and Section 106 of the National Historic Preservation Act (NHPA). This SEA is required for purposes of evaluating the environmental impacts of a project grant application submitted to FEMA by the Applicant. The environmental reviews are required under FEMA regulations 44 CFR Part 10 and the Council on Environmental Quality guidelines 40 CFR Parts 1500 to 1508.

1.2 PROJECT LOCATION

The revised location of the new spoil disposal site would be on an approximately 86.9-acre project site located east of the Bayou Din Detention Basin, east of Boyt Road, north of Lawhon Road and west of the Lower Neches Valley Authority (LNVA) fresh water supply canal (Figure 1). Approximate GPS coordinates for the center of the new disposal site are Latitude: 30.00504; Longitude: -94.24982. The proposed spoil disposal site lies in the Kidd Gully watershed and drains northeasterly to a culvert under the LNVA Canal. The adjacent land use surrounding the new spoil disposal area consists of rural residential development to the north, south, and west and undeveloped properties and farmland to the east. One underground pipeline (Sunoco, out of service) and one transmission line Right-of-Way (ROW) bisect the project area (Figure 2).

0900:68A07PA_Vicinity.dwg | JEA | 5/27/09 | Revised: JEA | 12/28/2012



MAP SOURCE: DELORME TOPO USA 8.0 (2009)



MAP SOURCE: DELORME TOPO USA 8.0 (2009)

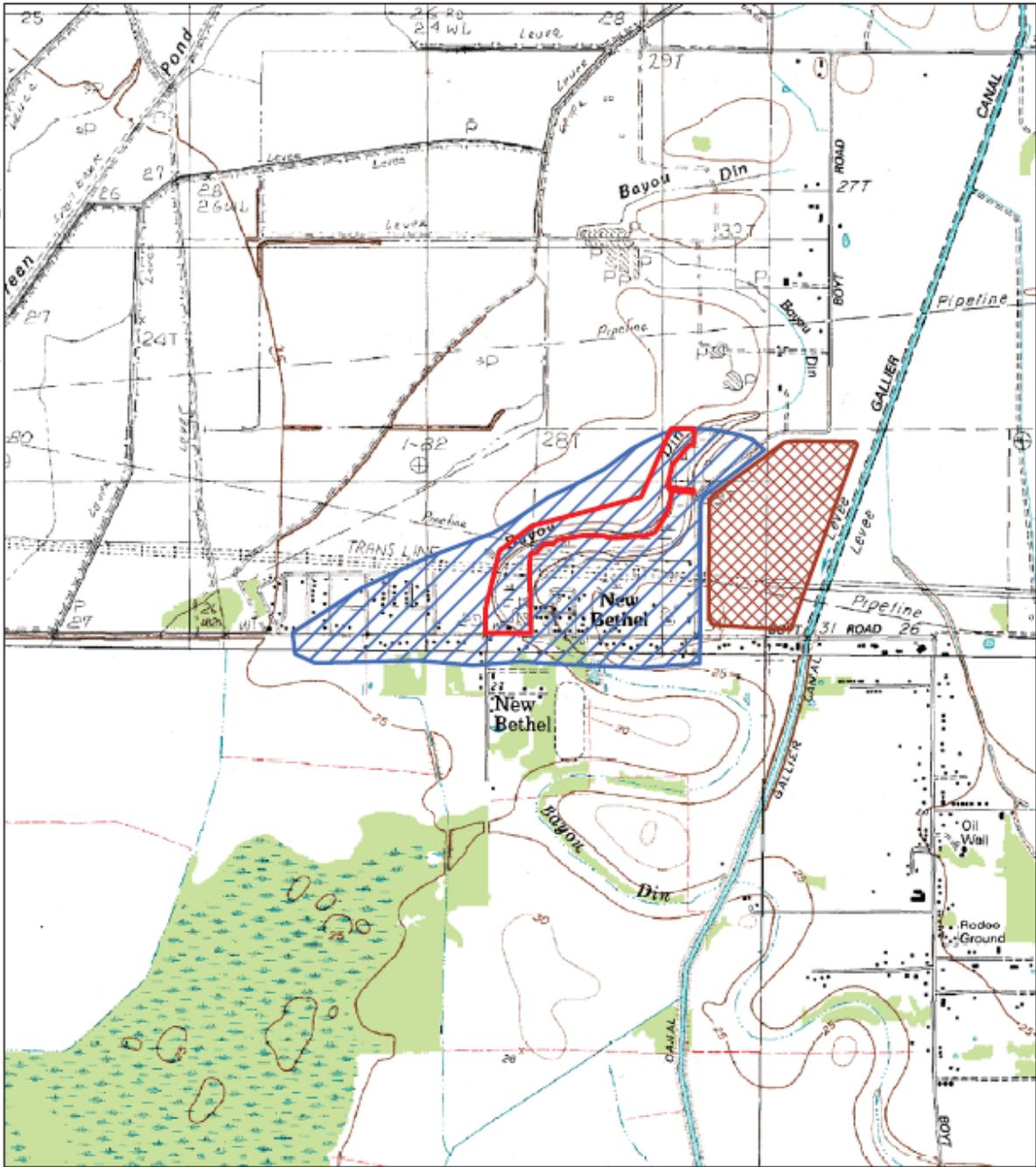


FIGURE 1

VICINITY MAP
BAYOU DIN PROJECT AREA
JEFFERSON COUNTY, TEXAS

Horizon
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Do Not Scale This Drawing



MAP SOURCE:

USGS 7.5-MINUTE SERIES QUAD RANGLE
 BEAUMONT WEST, TEXAS QUAD RANGLE (1974)
 CHINA, TEXAS QUAD RANGLE (1985)
 FANNETT EAST, TEXAS QUAD RANGLE (1994)
 FANNETT WEST, TEXAS QUAD RANGLE (1974)



0 1,000 2,000
 FEET



LEGEND:

- REMSIED SPOIL AREA (86.9 Ac)
- PROJECT AREA
- BENEFITS AREA

FIGURE 2

TOPOGRAPHIC MAP
 BAYOU DIN PROJECT AREA
 JEFFERSON COUNTY, TEXAS

2.0 PURPOSE AND NEED OF PROJECT

2.1 Purpose

Through the Hazard Mitigation Grant Program (HMGP), FEMA provides grants to states and local governments to implement long-term hazard mitigation measures. The purpose of HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act

As stated in Section 1.31 of the July 2012 Final EA and FONSI, the purpose of the detention project is to provide an adequate amount of detention volume to detain floodwaters below natural grade elevation, thus significantly reducing flooding to structures in the Benefit Area. Excavation of the basin is necessary to provide this below-grade storage. The resultant spoil material must be deposited where it will not adversely affect floodplain functions. The revised location of the spoil disposal site would be located east of the detention basin as described in the July 2012 Final EA and FONSI. The Bayou Din Detention Basin project serves the upper Bayou Din watershed. Hydrologic Engineering Center (HEC) calculations indicate the new spoil site to be in the 100-year floodplain of Bayou Din because during the 100-year event, the flood water elevation in Bayou Din peaks above the topographic divide between the watersheds. Once the detention project is complete, the improved 100-year water surface will be lowered below the topographic watershed divide and Bayou Din water will not spill into the Kidd Gully watershed. The placement of spoil in the new location will not displace any flood water and the fill will be shaped to drain away from the detention basin. This is also the most economical solution that is acceptable to the landowner.

2.2 Need

The problem to be mitigated by the entire proposed Bayou Din project is frequent and severe structure flooding within the Benefit Area. The revised spoil disposal site, which is the subject of this SEA, resulted from the landowner's request to change the previously approved location for the disposal site within the project area.

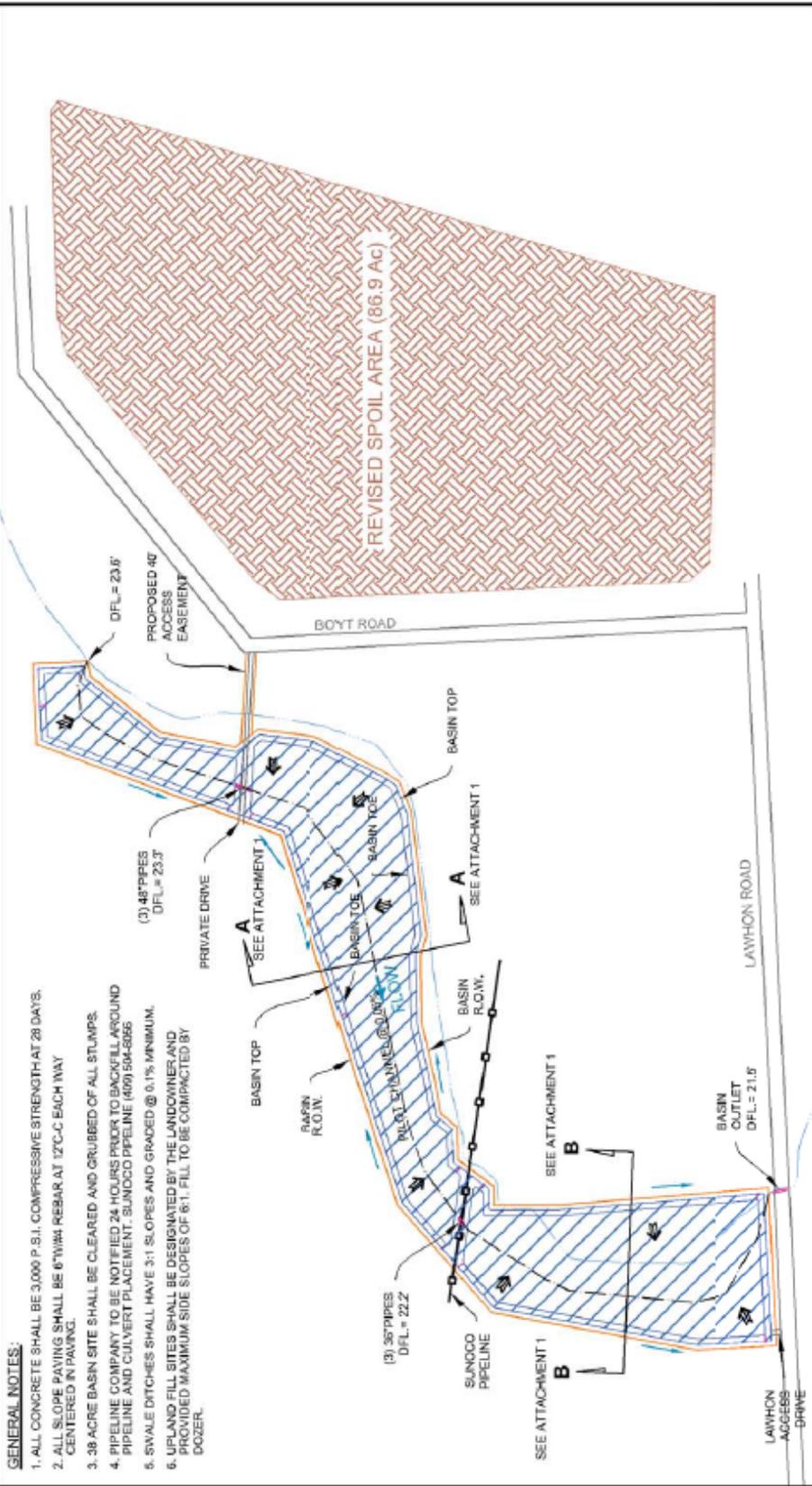
3.0 ALTERNATIVES CONSIDERED

3.1 ALTERNATIVE 1: No-Action Alternative

The no-action alternative would not result in a change of the spoil disposal site. The previously approved site would be utilized against the desires of the landowner, likely resulting in the need for condemnation proceedings.

3.2 ALTERNATIVE 2: Alternative Spoil Site (PROPOSED ALTERNATIVE)

The alternative spoil disposal site would be approximately 86.9 acres located east of the Bayou Din Detention Basin, east of Boyt Road (Figure 3). The spoil disposal site will be on properties owned by Labelle Properties, Inc. The proposed site is currently used as cropland for hay. The spoil area is intended to remain as permanent material that would be spread evenly and shaped to drain away from the detention basin.



GENERAL NOTES:

1. ALL CONCRETE SHALL BE 3,000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS.
2. ALL SLOPE PAVING SHALL BE 6" W/ #4 REBAR AT 12" C-C EACH WAY CENTERED IN PAVING.
3. .38 ACRE BASIN SITE SHALL BE CLEARED AND GRUBBED OF ALL STUMPS.
4. PIPELINE COMPANY TO BE NOTIFIED 24 HOURS PRIOR TO BACKFILL AROUND PIPELINE AND CULVERT PLACEMENT. SUNDGO PIPELINE (409) 504-8066
5. SWALE DITCHES SHALL HAVE 3:1 SLOPES AND GRADED @ 0.1% MINIMUM.
6. UPLAND FILL SITES SHALL BE DESIGNATED BY THE LANDOWNER AND PROVIDED MAXIMUM SIDE SLOPES OF 6:1. FILL TO BE COMPACTED BY DOZER.

MAP SOURCE:
PROVIDED BY CLIENT (FEBRUARY 2012)

LEGEND

- PROJECT AREA
- DETENTION POND
- EXISTING CHANNEL
- NEW CHANNEL
- TYPICAL DOWNSPOUT
- SWALE DITCH FLOW PATTERN
- BASIN BOTTOM SLOPE

FIGURE 3
PROPOSED
DRAINAGE IMPROVEMENTS
BAYOU DIN PROJECT AREA
JEFFERSON COUNTY, TEXAS

Horizon
Environmental Services, Inc.

3.3 Alternatives Considered, But Dismissed From Further Analysis

Several other locations of sufficient size within a half-mile radius were evaluated as possible spoil sites. Those locations, west and north of the detention basin site, were found to contain wetlands and/or would require significant trucking distance on inferior county roads. For these reasons, these sites were determined to be non-practicable and were dismissed from further consideration.

4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

4.1 PHYSICAL ENVIRONMENT

4.1.1 Geology, Seismicity, and Soils

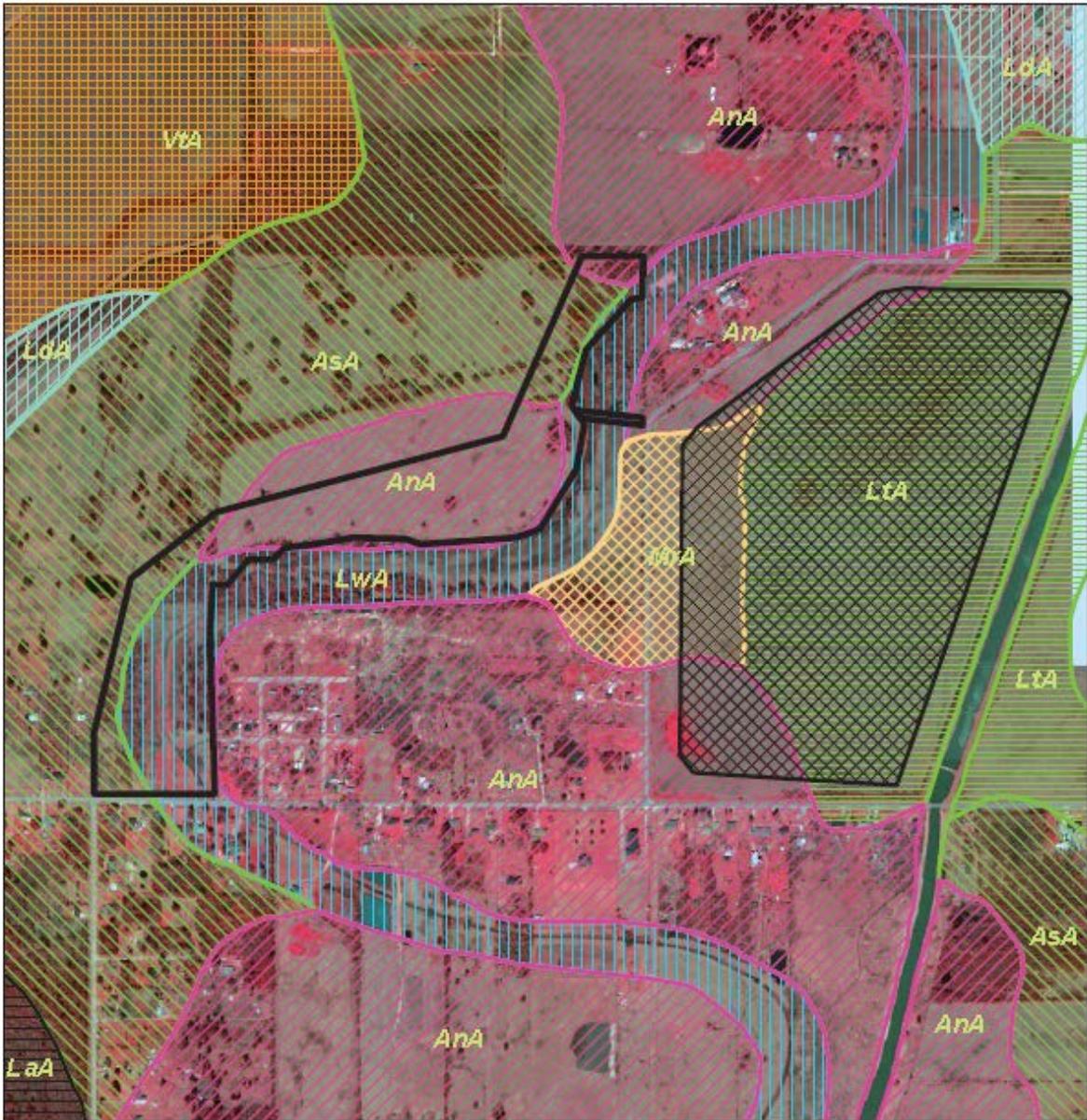
The July 2012 Final EA (Section 4.1) includes a thorough discussion of the geology, seismicity, and soils within the project area. The revised spoil disposal area and surrounding vicinity are dominated by the Anahuac very fine sandy loam, Anahuac-Aris complex, and Lenton loam, ponded series soils (NRCS, 2011a and 2011b) (Figure 4). Anahuac very fine sandy loam series soils consist of a parent material of loamy fluviomarine deposits of late Pleistocene age. This series soil is moderately well drained, with a moderate shrink-swell potential, and a fair plant-soil-moisture relationship. The Anahuac very fine sandy loam series soils are not hydric and do not have hydric inclusions. The climax community in this soil series is treeless with dominant vegetation including most species found within the native tall grass prairie (NRCS, 2011a and 2011b).

Anahuac-Aris complex series soils consist of a parent material of loamy fluviomarine deposits of late Pleistocene age. This series soil is moderately well (Anahuac) and poorly (Aris) drained, with a moderate (Anahuac) and high (Aris) shrink-swell potential, and a fair plant-soil-moisture relationship. The Anahuac-Aris complex series soils are (Aris) and are not (Anahuac) hydric. The climax community in the Anahuac portion of this complex is treeless with dominant vegetation including most species found within the native tall grass prairie, while the Aris soil series is indigenously a wet prairie ecosystem (NRCS, 2011a and 2011b).

League Clay is common in coastal plains within flats and consists of a parent material of clayey sediments of the Beaumont formation. This series of soil is somewhat poorly drained with slopes of 0 to 1%. This soil complex is commonly used for crops, but some native vegetation may include big bluestem, little bluestem, yellow Indiangrass, eastern gamagrass, and switchgrass.

Morey-Levac complex is common in coastal plains within meander scrolls and consists of a parent material of loamy and clayey sediments of the Beaumont formation. This series is somewhat poorly drained with 0 to 1% slopes. Historically this complex was within coastal prairies, but now is primarily used as cropland and pasture. This soil complex is commonly used for crops, but some native vegetation may include big bluestem, little bluestem, yellow Indiangrass, eastern gamagrass, and switchgrass.

The Anahuac very fine sandy loam and Anahuac-Aris complex series soils on the project area are listed as prime farmland soils (NRCS, 2011a and 2011b).



MAP SOURCE:

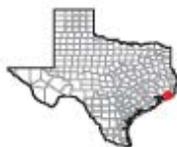
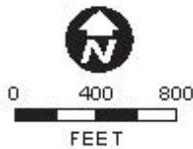
1. NATIONAL AGRICULTURAL IMAGERY PROGRAM (NAIP); CHINA, TEXAS QUADRANGLE (2005)
2. SSURGO SOIL DATA FOR JEFFERSON COUNTY, TEXAS (1996)

LEGEND

- PROJECT AREA
- REVISED SPOIL AREA (86.9 Ac)

SOIL TYPES

- AnA
- AsA
- LaA
- LdA
- LtA
- LwA
- MxA
- VxA



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FIGURE 4
SOILS MAP
WETLAND DELINEATION
BAYOU DIN PROJECT AREA
JEFFERSON COUNTY, TEXAS

4.1.1.1 No-Action Alternative

The no-action alternative would have no additional effects on geology, seismicity, or soils beyond those described in the original EA.

4.1.1.2 Alternative Spoil Site

The spoil placed on the revised disposal site would be evenly shaped to drain away from the detention basin. This alternative would not adversely affect geology or seismicity. Approximately 28 acres of prime farmland soils would be affected. The US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) has been contacted to evaluate the proposed project for impacts to prime farmland soils under requirements of the Farmland Protection Policy Act (FPPA). The NRCS has rated the farmland soils to be converted at 164 out of a possible 260 points (Attachment 1). The FPPA recommends that sites receiving scores totaling 160 or more be given increasingly higher levels of consideration, including consideration of alternative sites. FEMA has considered alternative sites for the soil disposal location. The original soil disposal site also contained some prime farmland. Several other locations of sufficient size within a half-mile radius were evaluated as possible spoil sites. Those locations, west and north of the detention basin site, were found to contain wetlands and/or would require significant trucking distance on inferior county roads. For these reasons, these sites were determined to be non-practicable and were dismissed from further consideration. Per the FPPA, after consideration of effects and alternatives, the federal agency may proceed with the project, including notification to the NRCS of the site selection.

4.1.2 Water Resources and Water Quality

The July 2012 Final EA (Section 4.1) includes a thorough discussion of water resources and water quality within the project area. Horizon Environmental Services, Inc. (Horizon) conducted an online search of water well records at both the Texas Water Development Board (TWDB) and the Texas Commission on Environmental Quality (TCEQ) for water wells located on and within a 0.5-mile radius from the subject site. The records indicated the presence of one water well within a 0.5-mile radius of the subject site. Based on water well drillers' records, water wells in the region draw water from the Gulf Coast aquifer system, which yields water at depths greater than 60 feet in the vicinity of the subject site (TWDB, 2011). No evidence of water wells was present on the subject site during the field reconnaissance effort.

4.1.2.1 No-Action Alternative

The no-action alternative would not result in any additional effects to water resources or water quality beyond those described in the original EA.

4.1.2.2 Alternative Spoil Site

The revised spoil site would not be expected to affect water resources or water quality within the project area because the spoil disposal area is located on uplands.

As more than 5 acres of land disturbance will occur, the project will be subject to requirements of the Texas Pollutant Discharge Elimination System (TPDES), Construction Storm Water General Permit (TXR 150000). As such, Jefferson County Drainage District No. 6 (JCDD6) will prepare a Storm Water Pollution Prevention Plan (SWPPP) and will file a Notice of Intent (NOI) with the TCEQ at least 48 hours prior to start of construction. Monitoring and maintenance of emplaced Best Management Practices (BMPs) for storm water management would be conducted on a regular basis as prescribed by the TPDES General Permit.

4.1.3. Floodplain Management (Executive Order 11988)

The July 2012 Final EA (Section 4.1) includes a thorough discussion of floodplain management related to this project. Executive Order 11988 mandates that all federal agencies shall provide leadership and take action to reduce the risk of flood loss; to minimize the impact of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains in carrying out their responsibilities for (1) acquiring, managing, and disposing of federal lands and facilities; (2) providing federally undertaken, financed, or assisted construction and improvements; and (3) conducting federal activities and programs affecting land use, including, but not limited to, water and related land resources planning, regulating, and licensing activities.

4.1.3.1 No-Action Alternative

The no-action alternative would have no additional effects on floodplains beyond those described in the original EA.

4.1.3.2 Alternative Spoil Site

In compliance with FEMA regulations implementing Executive Order 11988, Floodplain Management, FEMA is required to carry out the 8-step decision-making process for actions that are proposed in the floodplain per 44 CFR Section 9.6.

Step 1 of the 8-step decision making process is to determine if the proposed action is located in the base floodplain. According to FEMA Flood Insurance Rate Maps (FIRMs), the proposed spoil disposal site is located in Zone AE, which is an area that is inundated by 100-year flooding and base flood elevations have been determined (Figure 5). The project is located on FIRM panel number 4803850120C and 4803850140D, dated 6 August 2002. FEMA FIRMs indicate the new spoil site to be in the 100-year floodplain of Bayou Din because, during the 100-year event, the floodwater elevation in Bayou Din peaks above the topographic divide between the watersheds.

Step 2 is early public notice. Early notice will be incorporated into the notice of availability for this draft SEA.

Step 3 is to identify and evaluate alternatives to locating in the base floodplain. The original soil disposal site that was reviewed in the July 2012 Final EA was also located within Zone

AE as indicated on FEMA FIRM 4803850120C. Several other locations of sufficient size within a half-mile radius were evaluated as possible spoil sites. Those locations, west and north of the detention basin site, were found to contain wetlands and/or would require significant trucking distance on inferior county roads. For these reasons, these sites were determined to be non-practicable and were dismissed from further consideration. In addition, upon completion of the flood mitigation project, the proposed new spoils site will no longer be located in the regulatory floodplain (see Figure 6). A Letter of Map Revision (LOMR) will be submitted to have the FIRM revised.

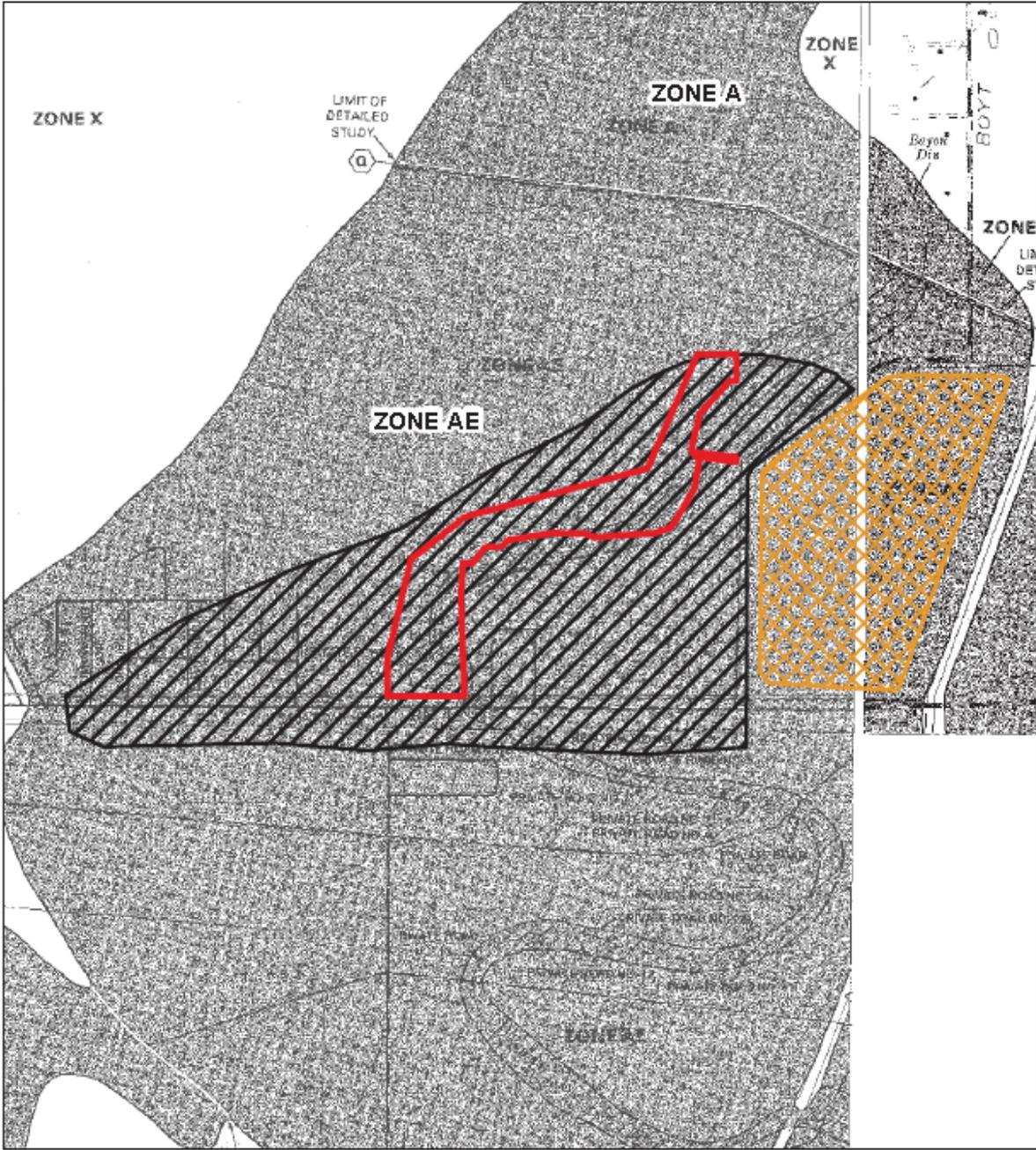
Step 4 is to identify impacts of the proposed action associated with occupancy or modification of the floodplain. While there may be short term impacts associated with the placement of fill in the floodplain during the construction phase, once the detention basin is complete, the proposed spoils site will no longer be located within the 100-year floodplain (Figure 6). The detention project will have a beneficial effect on flood-prone areas, since the proposed detention facility will enlarge the hydraulic capacity of the floodplain and significantly reduce flooding of structures within the upper Bayou Din watershed as well as reduce downstream flooding. Once the detention project is complete, the 100-year water surface elevation will be lowered below the topographic watershed divide and Bayou Din water will not spill into the Kidd Gully watershed. The placement of spoil in the new location will not displace any floodwater after the project is completed, and the fill will be shaped to drain away from the detention basin. The spoil placement will not affect the Kidd Gully floodplain. The applicant has coordinated with the Jefferson County Floodplain Administrator on the proposed relocation of the spoils site. In a letter dated January 2, 2013, he stated "I understand that the land owners of the detention basin property have requested that the excavation be placed across Boyt Rd. from the detention basin in their hay field. Since the shallow flooding that occurs in the hay field will be eliminated by the project and the placement of this material will not occupy future floodplain and the placement of the material does not change the net water surface improvements, I am in approval of the revised disposal area. As Floodplain Administrator for Jefferson County, Texas, I am in full support of this project."

Step 5 is to design or modify the proposed action to minimize threats to life and property and preserve natural and beneficial floodplain values. The fill at the proposed new spoils site will be shaped to drain away from the detention basin. The overall detention project, of which the proposed spoils site is a part, would have beneficial effects to the floodplain by providing increased hydraulic volume (detention) in the floodplain. The applicant must coordinate with the local floodplain administrator and obtain required permits prior to initiating work. All coordination pertaining to these activities and applicant compliance with any conditions should be documented and copies forwarded to the state and FEMA for inclusion in the permanent project files.

Step 6 is to re-evaluate the proposed action. The proposed action of locating the spoils site at the new 89 acre parcel remains practicable because no other alternatives exist outside of the 100-year floodplain and because the proposed spoils site will not occupy the regulatory floodplain upon completion of the detention project which is being funded under this HMGP grant (Figure 6).

Step 7 includes findings and public explanation (final notification). In accordance with 44 CFR Section 9.12, the applicant must prepare and provide a final public notice issued 15 days prior to the start of construction of any final decision where the proposed floodplain or wetland project is the only practicable alternative.

Step 8 includes implementing the action. This step is integrated into the NEPA process and FEMA project management and oversight functions.



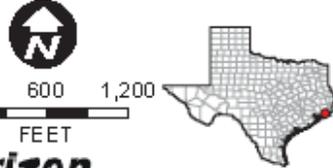
MAP SOURCE:

- 1. NATIONAL AGRICULTURAL IMAGERY PROGRAM (NAIP); CHINA, TEXAS QUAD RANGE (2005)
- 2. FEMA FLOOD HAZARD MAPS (2002)

LEGEND

-  PROJECT AREA
-  BENEFITS AREA
-  REMERSED SPOIL AREA (86.9 Ac)

0 600 1,200
FEET



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FIGURE 5
FEMA FLOOD MAP
BAYOU DIN PROJECT AREA
JEFFERSON COUNTY, TEXAS

MAP SOURCE:
PROVIDED BY CLIENT (JULY 2013)

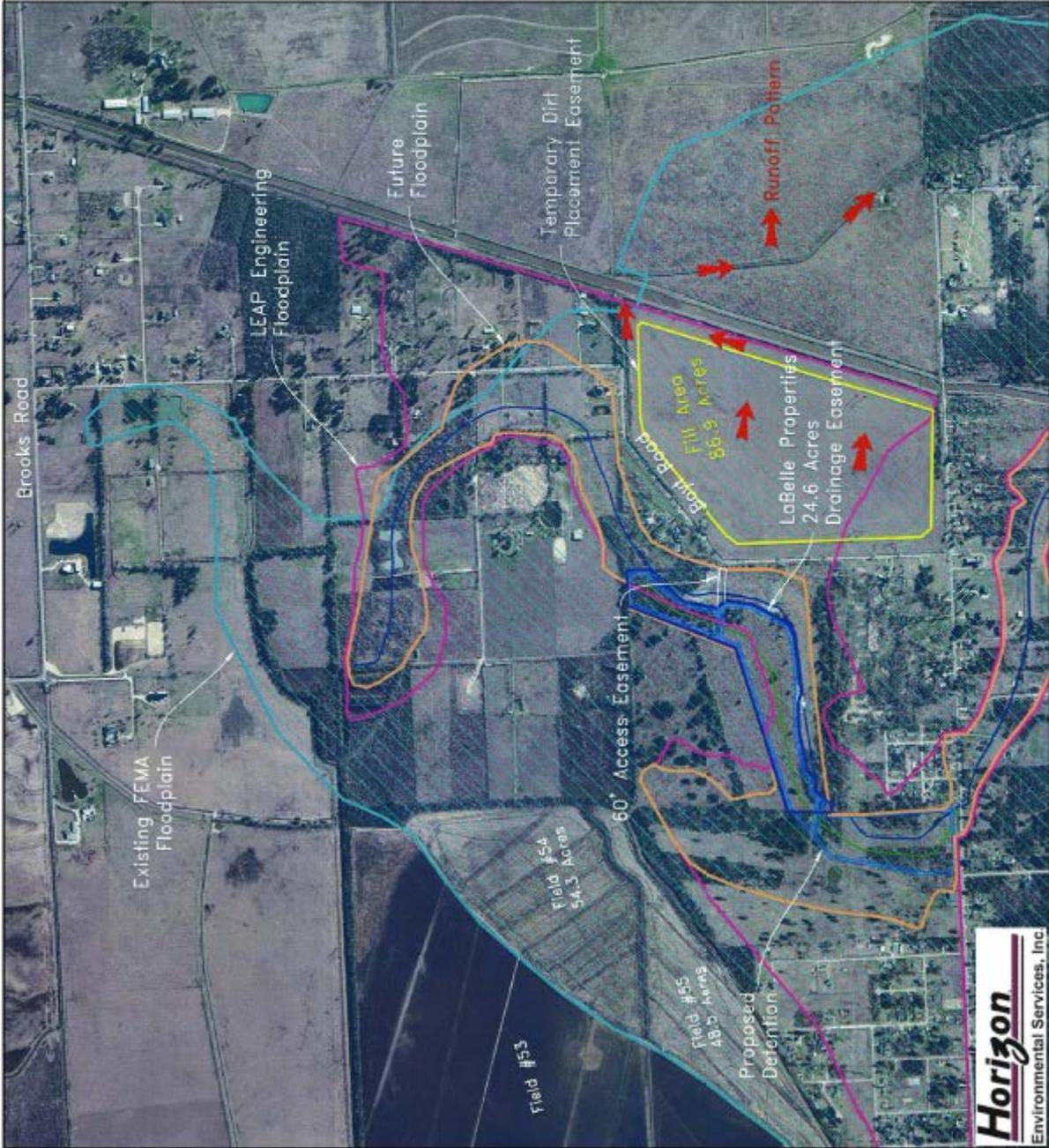


FIGURE 6

POST CONSTRUCTION
FLOOD PLAIN
BAYOU DIN PROJECT AREA
JEFFERSON COUNTY, TEXAS



4.1.4 Air Resources and Air Quality

The July 2012 Final EA (Section 4.1) includes a thorough discussion of air quality related to this project. Jefferson County is currently classified as a maintenance ozone area. The 2 criteria pollutants of concern as precursors to ozone formation are volatile organic compounds (VOCs) and nitrogen oxides (NOx). An increase of 100 tons per year for VOCs or NOx, resulting from the proposed project, could trigger general conformity analysis. However, the proposed project would be expected to be well below the 100 tons per year significance level.

4.1.4.1 No-Action Alternative

The no-action alternative would not result in any additional effects to ambient air quality beyond those described in the original EA.

4.1.4.2 Alternative Spoil Site

During construction, if dry weather conditions prevailed, fugitive dust emissions could occur from equipment movements and earth-moving activities. Additionally, some minor and temporary exhaust emissions from equipment during construction could also occur, but the proposed project would have no long-term adverse effect on air quality. To reduce the temporary impacts, contractors will be required to water down construction areas as needed in order to mitigate excess dust. To reduce emissions, vehicle running times on site will be kept to a minimum and engines will be properly maintained. This alternative would not be expected to materially increase impacts to ambient air quality beyond those described in the original EA.

4.2 BIOLOGICAL ENVIRONMENT

4.2.1 Terrestrial and Aquatic Environment

The July 2012 Final EA (Section 4.2) includes a thorough discussion of terrestrial and aquatic habitat within the project area.

4.2.1.1 No-Action Alternative

The no-action alternative would not result in any additional effects to terrestrial or aquatic habitats beyond those described in the original EA.

4.2.1.2 Alternative Spoil Site

The proposed spoil disposal site would involve ground disturbance of approximately 86.9 acres of undeveloped cropland consisting of managed bahiagrass (*Paspalum notatum*). Attachment 3 provides representative on-site photographs of the project area.

4.2.2 Wetlands (Executive Order 11990)

The July 2012 Final EA (Section 4.2) includes a thorough discussion of wetlands within the project area. Executive Order 11990 provides that, in order to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative, all federal agencies shall provide leadership and shall take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing, and disposing of federal lands and facilities; (2) providing federally undertaken, financed, or assisted construction and improvements; and (3) conducting federal activities and programs affecting land use, including, but not limited to, water and related land resources planning, regulating, and licensing activities. This Order does not apply to the issuance by federal agencies of permits, licenses, or allocations to private parties for activities involving wetlands on non-federal property.

4.2.2.1 No-Action Alternative

The no-action alternative would not result in any additional effects to jurisdictional wetlands or other waters of the US beyond those described in the original EA.

4.2.2.2 Alternative Spoil Site

According to the Beaumont West National Wetland Inventory (NWI) map (USFWS, 2011a) (Figure 7), no areas designated as wetlands are located within the revised spoil disposal area.

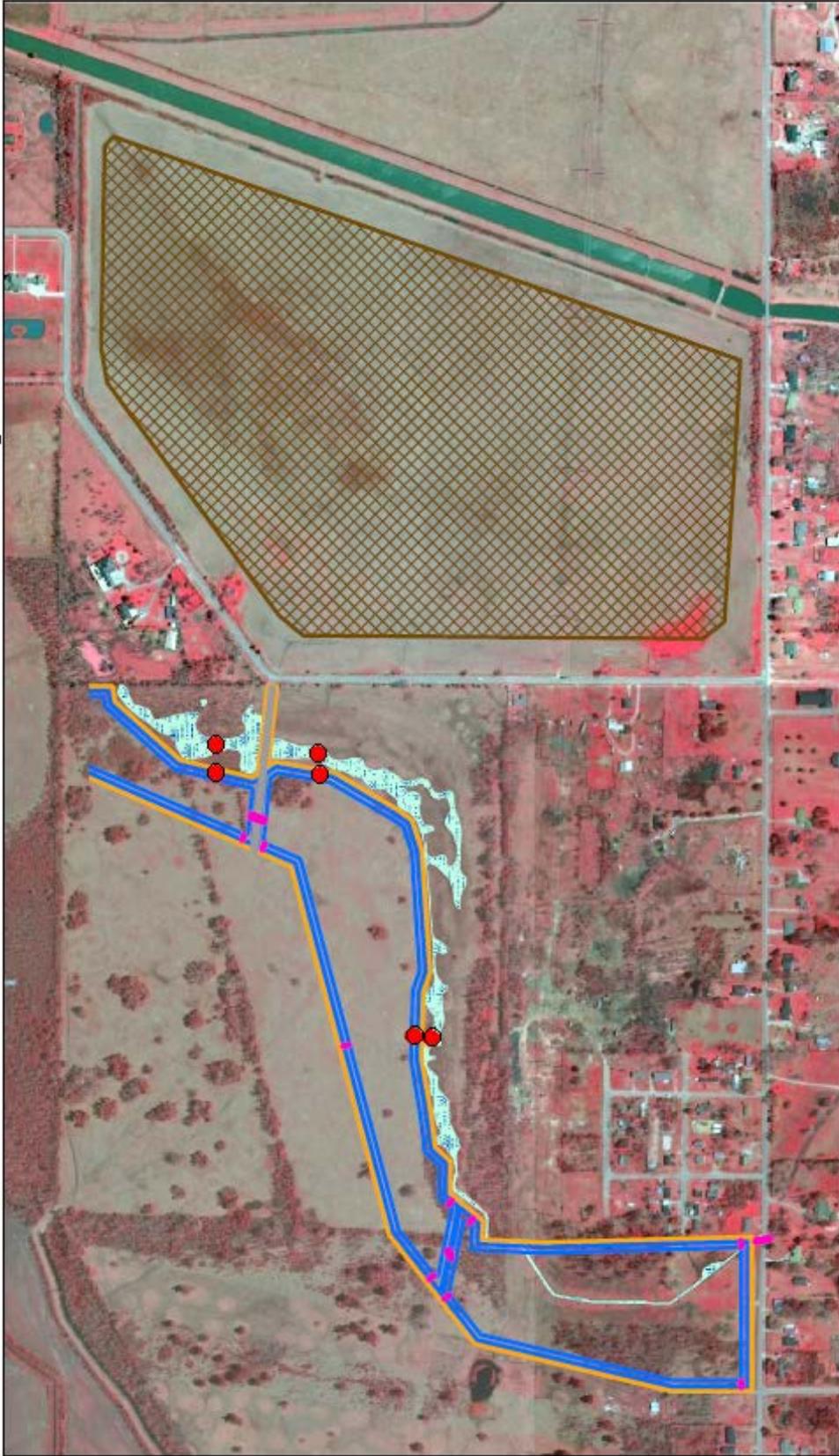
The field reconnaissance effort also confirmed the absence of areas classified as wetlands or waters of the US on the project site (Figure 8). The placement of spoil materials on the proposed site will not affect any wetlands or waters of the US. No permit from the US Army Corps of Engineers would be required for the proposed action.

4.2.3 Threatened or Endangered Species and Critical Habitat

As stated in the July 2012 Final EA (Section 4.2), federally listed threatened or endangered (T/E) species known to occur in Jefferson County include the piping plover (*Charadrius melodus*), green sea turtle (*Chelonia mydas*), Atlantic hawksbill sea turtle (*Eretmochelys imbricata*), Kemp's ridley sea turtle (*Lepidochelys kempii*), leatherback sea turtle (*Dermochelys coriacea*), and loggerhead sea turtle (*Caretta caretta*) (USFWS, 2011b). There is no designated critical habitat for any listed species within Jefferson County.

4.2.3.1 No-Action Alternative

No listed species or their supporting habitats are present in the project area; therefore, the no-action alternative would not affect listed species.



MAP SOURCE:
 1. NATIONAL AGRICULTURAL IMAGERY PROGRAM (NAIP);
 CHINA, TEXAS (AD RANGLO CD03)
 2. DETAILS PROVIDED BY CLIENT (2-2012)



Horizon
 Environmental Services, Inc.

LEGEND

- PROJECT AREA
- REVISED SPOIL AREA (88.9 Ac)
- WATERS OF THE U.S.
- CULVERTS
- DETENTION POND
- DATA POINTS
- ROAD

FIGURE 8

JURISDICTIONAL
 DETERMINATION MAP
 BAYOU DIN PROJECT AREA
 JEFFERSON COUNTY, TEXAS



4.2.3.2 Alternative Spoil Site

Based on a review of the species, habitat requirements, and the scope of the proposed project, FEMA has determined that the proposed alternative will have no effect on listed species. Critical habitat is not present within the project area; therefore, the proposed alternative will not adversely modify any critical habitat.

4.3 HAZARDOUS MATERIALS

The July 2012 Final EA (Section 4.3) includes a thorough discussion of hazardous materials within the project area.

4.3.1 No-Action Alternative

The no-action alternative would not contribute to potential downstream pollution as a result of any identified sources of pollution in the project area.

4.3.2 Alternative Spoil Site

Horizon previously commissioned TelALL Phase I Support Services, Inc. (TelALL) to provide an environmental database review of selected state and federal agency records. TelALL conducted the database search for the subject site using minimum search distances outlined in the American Society for Testing and Materials (ASTM) Standards E-1527-05 (ASTM, 2006). The proposed spoil site is within the area of previous assessment. The field reconnaissance did not reveal the presence of any recognized environmental conditions on the site.

The details of the agency database search and the field reconnaissance indicate the project site has a low probability for the occurrence of any contamination or recognized environmental conditions. Any hazardous or potentially hazardous materials discovered, generated, or used during construction/excavation of the project would be disposed of and handled by the Applicant in accordance with applicable local, state, and federal regulations.

The proposed alternative would not contribute to potential downstream pollution as a result of any identified sources of pollution in the project area.

4.4 SOCIOECONOMICS

The July 2012 Final EA (Section 4.4) includes a thorough discussion of socioeconomics within the project area. EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) requires federal agencies to identify and correct programs, policies, and activities that have disproportionately high and adverse human health or environmental effects on minority and low-income populations.

4.4.1 No-Action Alternative

The no-action alternative would not result in any additional effects to socioeconomics or minority and low-income populations beyond those described in the original EA.

4.4.2 Alternative Spoil Site

The proposed alternative spoil site would not significantly affect or change current land uses in the area. Approximately 86.9 acres of undeveloped cropland would remain as undeveloped open space and would remain capable of supporting the same land use following construction.

Visual resources (aesthetics) are not expected to change as a result of the project because the project area is currently managed as undeveloped cropland and will retain that same appearance following construction.

The only anticipated significant noises associated with the project would be due to heavy equipment operation during the construction phase. Following construction activities, there would be no noise-generating activities at the site. To reduce noise levels during construction, construction activities will take place during normal business hours. No equipment or machinery will be installed at the proposed project site.

There may be minimal short-term traffic interference due to movement of construction equipment crossing Boyt Road to the alternate spoil site during construction. JCDD6 will utilize appropriate traffic control procedures during the construction period. There would be no long-term effects to traffic

The proposed project is not expected to have adverse or disproportionate impacts on minority or low-income populations. The benefits of the proposed project are expected to be proportional to all residents in the benefit area.

No significant safety or security issues are expected with the proposed project. The appropriate signage and barriers will be in place prior to construction activities to alert pedestrians and motorists of project activities.

4.5 CULTURAL RESOURCES

The July 2012 Final EA (Section 4.5) includes a thorough discussion of cultural resources within the project area. Section 106 of the National Historic Preservation Act of 1966, as amended, requires federal agencies “to take into account” the “effect” that an undertaking would have on historic properties. Historic properties are those included in or eligible for inclusion in the National Register of Historic Places (NRHP) and may include archeological sites, buildings, structures, sites, objects, and districts. In accordance with the Advisory Council on Historic Preservation regulations pertaining to the protection of historic properties (36 CFR 800.4), federal agencies are required to identify and evaluate historic resources for NRHP eligibility and assess the effects that the undertaking would have on historic properties.

4.5.1 Findings

Archival research conducted via the Internet at the Texas Historical Commission's (THC) *Texas Archeological Sites Atlas* (Atlas) web site indicated that no previously recorded archeological sites have been recorded in the vicinity of the APE (THC, 2013). A review of the National Park Service's (NPS) National Register of Historic Places (NRHP) Google Earth map layer indicated the presence of no historic properties listed on the NRHP within the review perimeter (NPS, 2013). No documented cultural resources, including any listed or considered eligible for listing on the NRHP, are located within or immediately adjacent to the project area. Based on the Atlas data, the project area has not been previously assessed for cultural resources.

4.5.2 No-Action Alternative

The no-action alternative would not result in effects to cultural resources, including historic properties.

4.5.3 Alternative Spoil Site

The proposed alternative spoil site is in immediate proximity to the previously approved detention basin and spoil site that were previously determined not to contain cultural resources. Since the proposed spoil site is in the same geophysical setting and has additionally been plowed for many years, it is unlikely that significant or intact cultural deposits are present. The State Historic Preservation Officer, Texas Historical Commission has reviewed information regarding the alternative spoils site and concurred that no further investigations are necessary and that the project may proceed (Attachment 4). In the event that archeological deposits, including any Native American pottery, stone tools, bones, or human remains, are uncovered, the project shall be halted and the Applicant shall stop all work immediately in the vicinity of the discovery and take all reasonable measures to avoid or minimize harm to the finds. All archeological findings will be secured by JCDD6, and access to the sensitive area will be restricted by JCDD6. The applicant will inform FEMA immediately, and FEMA will consult with the State Historic Preservation Office (SHPO). Work in sensitive areas shall not resume until consultation is completed and until FEMA determines that the appropriate measures have been taken to ensure complete project compliance with the NHPA and its implementing regulations.

5.0 CUMULATIVE IMPACTS

In accordance with NEPA and to the extent reasonable and practical, this SEA considered the combined effect of the alternative spoil site and the other actions occurring or proposed in the vicinity of the proposed project site. No significant cumulative impacts were identified.

An assessment of cumulative impacts takes into consideration the consequences that past, present, and reasonably foreseeable future projects have had, have, or will have on an ecosystem. Every project must be considered on its own merits. However, its impacts on the environment must be assessed in light of historical activity, along with anticipated future activities in the area. Although a particular project may constitute a minor impact in itself, the cumulative impacts that result from a large number of such projects could cause significant impairment of natural resources.

5.1 No-Action Alternative

The no-action alternative would not alter the previous determination of no significant cumulative impacts to environmental resources.

5.2 Alternative Spoil Site

Approximately 28 acres of prime farmland soils would be affected. The US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) has been contacted to evaluate the proposed project for impacts to prime farmland soils under requirements of the Farmland Protection Policy Act (FPPA) and determined that the effect on prime farmland soils is not significant. The proposed project does not have any other impacts that are of such significance as to add materially to cumulative impacts in the region.

The following table summarizes the potential impacts of the alternative spoil site and conditions or mitigation measures to offset those impacts.

Table 1 Summary of Environmental Consequences and Mitigation Measures

RESOURCE	ANTICIPATED EFFECTS	MITIGATION MEASURES
Geology, Seismicity, and Soils	Geology – no impacts. Seismicity – no impacts. Soils – Conversion of 28 acres of prime farmland soils.	No mitigation measures proposed.
Water Resources and Water Quality	Groundwater – no impacts. Surface water quality – no impacts. Developed water resources – no impacts.	JCDD6 will comply with conditions of Construction Storm Water General Permit TXR 150000, including preparation of a Storm Water Pollution Prevention Plan (SWPPP) and implementing Best Management Practices (BMPs).
Floodplains	The spoil disposal site will be removed from the calculated floodplain by the proposed project, and no adverse effects to the floodplain will occur.	JCDD6 must coordinate with the local floodplain administrator and obtain required permits prior to initiating work.
Air Quality	Temporary increase of fugitive dust and exhaust emissions during construction. No post-construction effects.	Contractors will be required to water down construction areas as needed in order to mitigate excess dust. Vehicle running times on site will be kept to a minimum and engines will be properly maintained.
Terrestrial and Aquatic Environment	Approximately 86.9 acres of undeveloped pastureland to be temporarily converted to spoil disposal. The site will be capable of supporting the same land cover following construction.	No mitigation measures proposed.

RESOURCE	ANTICIPATED EFFECTS	MITIGATION MEASURES
Wetlands	No wetlands or "waters of the US" will be adversely affected.	JCDD6 will ensure that best management practices are implemented to prevent erosion and sedimentation to surrounding, nearby, or downstream wetlands. This includes equipment storage and staging of construction to prevent erosion and sedimentation to ensure that wetlands are not adversely impacted per the Clean Water Act and Executive Order 11990.
Threatened or Endangered Species and Critical Habitat	No impacts.	No mitigation measures proposed.
Hazardous Materials	No impacts.	No mitigation measures proposed.
Zoning and Land Use	86.9 acres of undeveloped pastureland temporarily converted spoil disposal. The site will be capable of supporting the same land use following construction.	No mitigation measures proposed.
Visual Resources	Undeveloped open space will be converted to temporary spoil disposal, but will remain as open space following construction.	No mitigation measures proposed.
Noise	Temporary construction equipment noise.	Construction activities will take place during normal business hours. Machinery operating at the proposed project site will meet all local, state, and federal noise regulations.
Public Services/Utilities	Public services – no impacts. Utilities – no impacts. Pipelines – no impacts.	No mitigation measures proposed.
Traffic and Circulation	Possible short-duration traffic interruptions during construction on Boyt Road.	Implement traffic control procedures as needed.
Environmental Justice	No impacts.	No mitigation measures proposed.
Safety and Security	No impacts.	The appropriate signage and barriers will be in place prior to construction activities to alert pedestrians and motorists of project activities.

RESOURCE	ANTICIPATED EFFECTS	MITIGATION MEASURES
Cultural Resources	No impacts anticipated.	<p>In the event that archeological deposits, including any Native American pottery, stone tools, bones, or human remains, are uncovered, the project shall be halted and the Applicant shall stop all work immediately in the vicinity of the discovery and take all reasonable measures to avoid or minimize harm to the finds. All archeological findings will be secured by JCDD6, and access to the sensitive area will be restricted by JCDD6. The applicant will inform FEMA immediately, and FEMA will consult with the State Historic Preservation Office (SHPO). Work in sensitive areas shall not resume until consultation is completed and until FEMA determines that the appropriate measures have been taken to ensure complete project compliance with the NHPA and its implementing regulations.</p>

6.0 PUBLIC PARTICIPATION

As discussed in the July 2012 Final EA and FONSI, a Notice of Availability of the original Draft Environmental Assessment was published in the *Beaumont Enterprise* and on FEMA's website requesting public comments. Additionally, the Draft EA was made available for review for a period of 30 days at a physical location in the project area. No comments were received on the original EA. The Draft EA received a Finding of No Significant Impact (FONSI) for the project. This draft SEA will be made available for a 15-day public review and comment period. FEMA will consider and respond to all public comments in the Final SEA. If no substantive comments are received, the Draft SEA will become final and a Finding of No Significant Impact (FONSI) will be issued for the entire revised project.

7.0 AGENCY COORDINATION AND PERMITS

Consultation letters and responses from resource agencies such as the US Fish and Wildlife Service (USFWS), Texas Parks and Wildlife Department (TPWD), TCEQ, TWDB, General Land Office (GLO), and NRCS are provided in Attachment 2, and the THC consultation is provided in Attachment 4.

8.0 CONCLUSIONS

The project description and components listed in the original EA and FONSI dated July 2012 remain the same except for spoil site relocation. The impacts of the proposed alternative spoil site are generally either the same or minimally greater than the previously approved spoil site. However, as shown in Table 1, no significant adverse effects are expected as a result of the revised spoil disposal site.

8.1 Mitigation and Stipulations

Mitigation actions and stipulations are listed in Table 1.

9.0 LIST OF PREPARERS

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