

# Draft Environmental Assessment

Jefferson County Drainage District No. 6  
Borley Heights Relief Project  
EMT-2021-FM-022-0005  
Beaumont, Jefferson County, Texas

*May 2024*

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## LIST OF ACRONYMS

ALERT – Automated Local Evaluation in Real Time  
APE – Area of Potential Effect  
ASTM – American Society for Testing and Materials  
BFE – Base Flood Elevation  
BMP – Best Management Practice  
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act  
CERCLIS – Comprehensive Environmental Response, Compensation, and Liability Information System  
CESQGs – Conditionally Exempt, Small-Quantity Generators  
CFR – Code of Federal Regulations  
CORRACT – Corrective Action  
DRYC – Dry Cleaning  
EA – Environmental Assessment  
EPA – US Environmental Protection Agency  
ERNS – Emergency Response Notification System  
ESA – Endangered Species Act  
FEMA – Federal Emergency Management Agency  
FIRM – Flood Insurance Rate Map  
FM – Farm to Market  
FONSI – Finding of No Significant Impact  
FPPA – Farmland Protection Policy Act  
GLO – General Land Office  
H&H Study – Hydrology and Hydraulics Study  
HEC-1 – Hydrologic Engineering Center – 1 Model  
HECRAS – Hydrologic Engineering Center River Analysis System  
HECHMS – Hydrologic Engineering Center Hydrologic Modeling System  
HMGP – Hazard Mitigation Grant Program  
IH – Interstate Highway  
JCCAD – Jefferson County Central Appraisal District  
JCDD6 – Jefferson County Drainage District No. 6  
LFUN – TCEQ Solid Waste Facilities and Unauthorized and Unpermitted Landfill  
LOMA – Letter of Map Adjustment  
LOMR – Letter of Map Revision  
LNVA – Lower Neches Valley Authority  
LQGs – Large-Quantity Generators  
MSA – Metropolitan Statistical Area  
MSL – Mean Sea Level  
NDD – Natural Diversity Database  
NEPA – National Environmental Policy Act  
NFIP – National Flood Insurance Program  
NFRAP – No Further Remedial Action Planned  
NHPA – National Historic Preservation Act  
NOI – Notice of Intent  
NOx – nitrogen oxides  
NPL – National Priority List  
NPS – National Park Service  
NRCS – Natural Resources Conservation Service  
NRHP – National Register of Historic Places

NWI – National Wetland Inventory  
NWS – National Weather Service  
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  
RCRA – Resource Conservation and Recovery Act  
RCRA-G – RCRA Generators  
RCRA-TSD – RCRA Treatment, Storage, or Disposal  
RCRIS – Resource Conservation and Recovery Information System  
RCT – Railroad Commission of Texas  
RFI – RCRA Facility Investigation  
ROW – right of way  
SALs – State Archeological Landmarks  
SARA – Superfund Amendments and Reauthorization Act  
SH – State Highway  
SHPO – State Historic Preservation Office  
SQGs – Small-Quantity Generators  
SWPPP – Storm Water Pollution Prevention Plan  
TAC – Texas Administrative Code  
TCEQ – Texas Commission on Environmental Quality  
THC – Texas Historical Commission  
TMDL – Total Maximum Daily Load  
TPDES – Texas Pollutant Discharge Elimination System  
TPWD – Texas Parks and Wildlife Department  
TSMASS – Texas State Minimum Archeological Survey Standards  
TWDB – Texas Water Development Board  
TXAST – Texas Aboveground Storage Tank  
TXIOP – Texas Innocent Owner/Operator Program  
TXLF – TCEQ Solid Waste Facilities  
TXLUSTs – Texas Leaking Underground Storage Tanks  
TXSPILL – Hazardous or Potentially Hazardous Substances Spills  
TXSSF – Texas State Superfund database  
TXUSTs – Texas Underground Storage Tanks  
TXVCP – Texas Voluntary Cleanup Program  
USACE – US Army Corps of Engineers  
USDA – US Department of Agriculture  
USFWS – US Fish and Wildlife Service  
UT-BEG – University of Texas Bureau of Economic Geology  
VOC – volatile organic compound

## **1.0 INTRODUCTION**

### **1.1 PROJECT AUTHORITY**

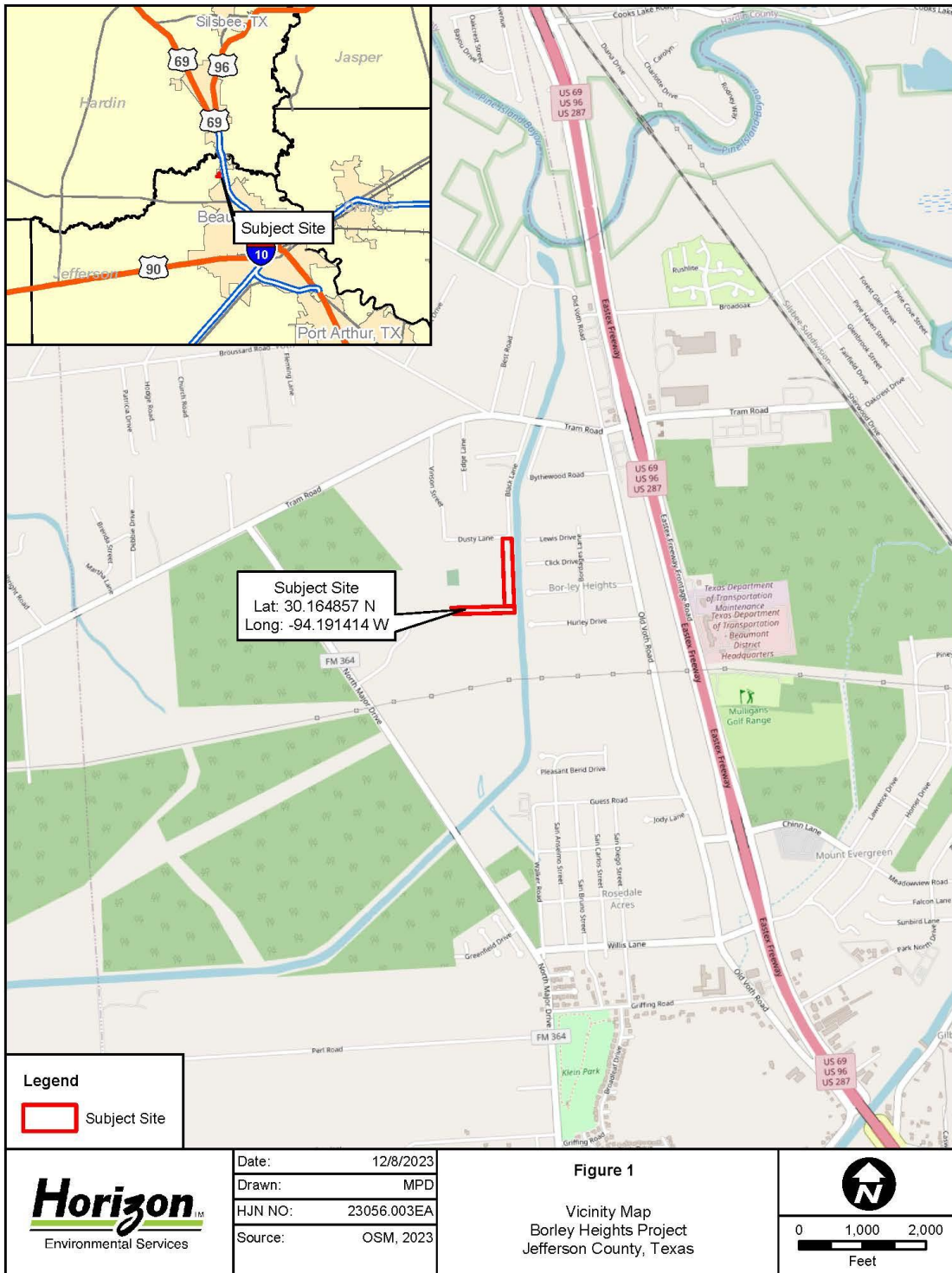
Jefferson County Drainage District No. 6 (JCDD6) (the Applicant) is a conservation and reclamation district and a political subdivision of the State of Texas. JCDD6 was established on 21 January 1920, after a favorable vote by the Texas Legislature on 10 January 1920. The JCDD6 district boundary was extended and enlarged (Vol. 63, P. 478) according to the authority of the 57th Legislature, Chapter 349, and Chapter 7, Title 128, Revised Civil Statutes of Texas, Article 8129. Enlargement came about in 1961 through legislation (HB 1063) that also established JCDD6 as a Conservation and Reclamation District under Section 59, Article XVI, of the Texas Constitution. Containing approximately 450 square miles, JCDD6 lies wholly within Jefferson County, which includes much of the City of Beaumont, and was created primarily to provide drainage for flood-prone areas within the district. JCDD6 is governed by a 5-member Board of Directors appointed by the County Commissioners Court of Jefferson County, Texas (the Commissioners Court).

Funding for the Borley Heights Relief Project is being requested from the Federal Emergency Management Agency (FEMA), through the Texas Water Development Board (TPWD), under the Flood Mitigation Assistance Program (FMA). FEMA's project number is EMT-2021-FM-022-0005. This Environmental Assessment has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the President's Council on Environmental Quality regulations to implement NEPA (40 Code of Federal Regulations Parts 1500-1508), and FEMA's procedures for implementing NEPA (FEMA Instruction 108-1-1). FEMA is required to consider potential environmental impacts before funding or approving actions and projects. The purpose of this EA is to analyze the potential environmental impacts of the proposed project. FEMA will use the findings in this EA to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

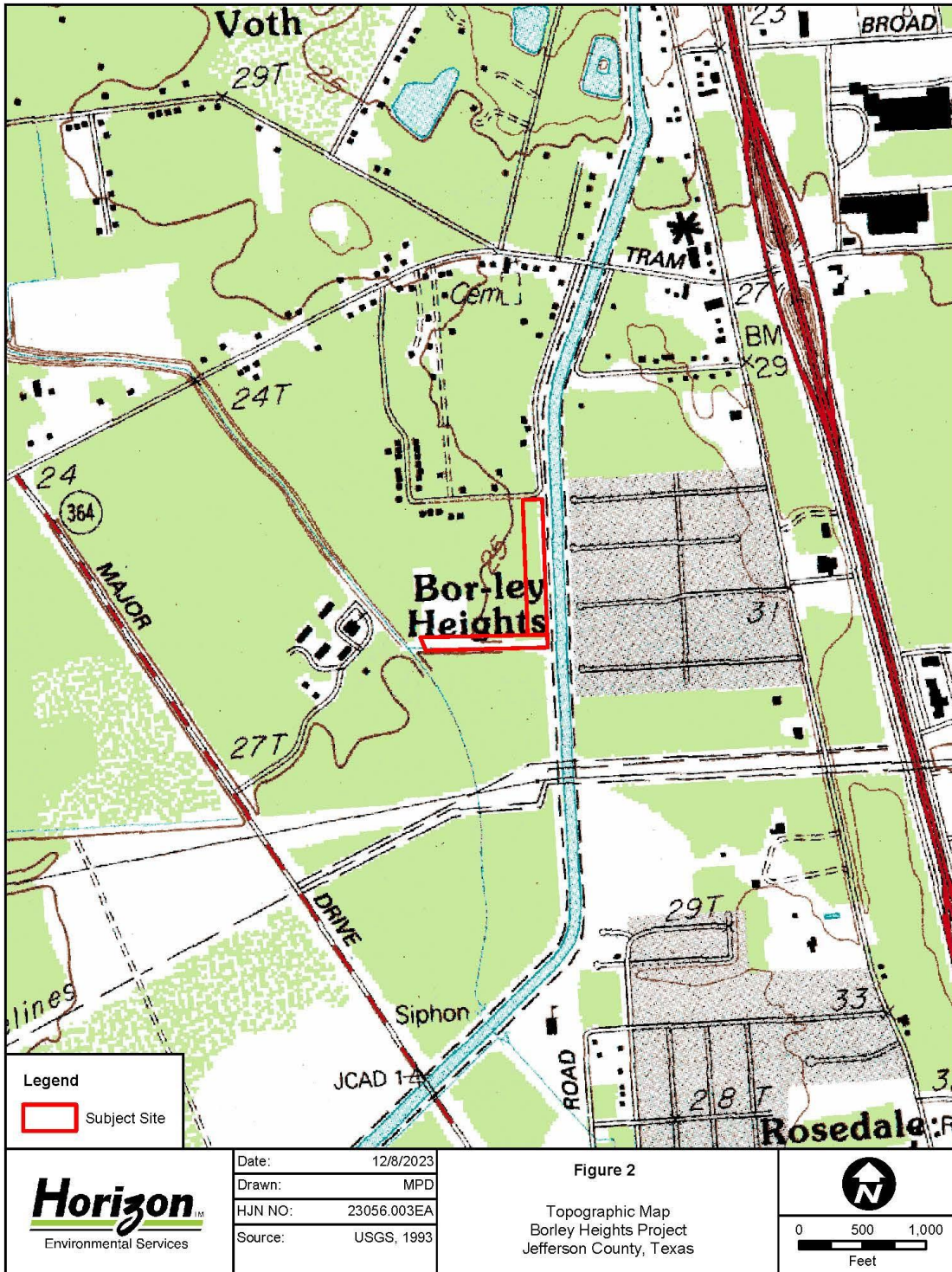
### **1.2 PROJECT LOCATION**

The project is located in and just west of the Borley Heights Addition in the north end of Beaumont, Texas. The addition is residential with 167 homes. The streets involved are Lewis, Click, Scotts, Hurley, Bridges and Voth (Figure 1). Approximate GPS coordinates for the center of the project area are Latitude: 30.164857; Longitude: -94.191414. The adjacent land use surrounding the study area consists of residential development to the north and east with undeveloped land to the west and south.

Major transportation arteries in the area include US 287 and Tram Road. Topography is generally flat with elevations ranging from 20 to 35 feet above mean sea level (msl) (Figure 2). Drainage is generally to the west and northwest to Walker Branch (Griffing Ditch) and Pine Island Bayou.



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### 1.3 PURPOSE AND NEED OF PROJECT

#### 1.3.1 Purpose

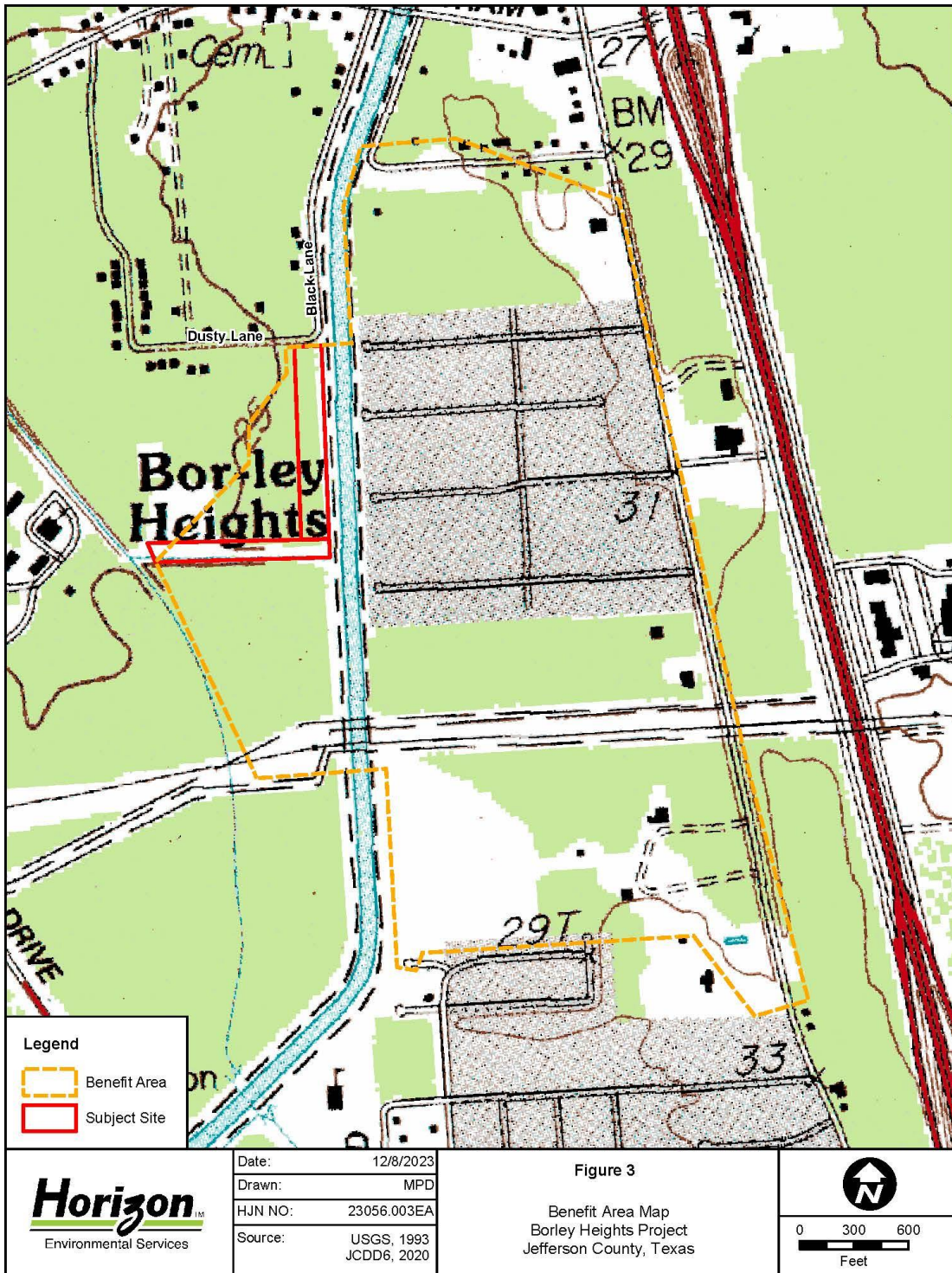
The purpose of the project is to provide improved drainage for the Borley Heights neighborhood south of Tram Road, thus significantly reducing flooding to structures in the Benefit Area (see Figure 3). Through the FMA grant program, FEMA provides funding to states, federally recognized Tribal governments, U.S. territories, and local governments. for flood hazard mitigation projects as well as plan development. The FMA Program is authorized by Section 1366 of the National Flood Insurance Act of 1968, as amended (NFIA), 42 U.S.C. 4104c with the purpose of reducing or eliminating claims under the National Flood Insurance Program (NFIP).

#### 1.3.2 Need

Jefferson County experiences a relatively high level of rainfall. National Weather Service (NWS) statistics currently indicate an average annual rainfall rate at 60 inches. In 2001, Automated Local Evaluation in Real Time (ALERT) stations measured 103 inches of rainfall, and the Applicant's gauges have measured 80 inches of rainfall in various years. The NWS statistics also indicate that a 24-hour rain event with a 100-year recurrence interval is 13 inches, though the highest point rainfall for a 24-hour period recorded by the Applicant is 24 inches, which occurred on 7 June 2001 during Tropical Storm Allison. Other tropical systems have impacted the region in recent years, including Ike, Rita, Gustav, Harvey, and Imelda. The local watershed suffers flooding from a rainfall event that may last only 2 hours.

The problem to be mitigated is repetitive structure flooding. The source of the flooding is an inadequate single culvert to Griffing Ditch under the Lower Neches Valley Authority (LVNA) Beaumont Irrigation Canal (BI Canal). This box culvert is inadequate to convey the flood flows without home flooding occurring. Additionally, the drainage paths from the City streets to the box culverts are much too narrow and unmaintainable to successfully convey the flows at low enough elevations without home flooding. A second cause of flooding on the Addition is back-water flooding from Pine Island Bayou. The previously mentioned Griffing Ditch is a tributary of Pine Island Bayou. Pine Island Bayou has a much larger watershed, 450,000 acres compared to Borley Heights 182 acres. When an extremely heavy and widespread rainfall occurs such as during Harvey which inundated the entire Pine Island Bayou Watershed with 40 plus inches of rain, the Pine Island Bayou will back up Griffing Ditch and into Borley Heights.

The BI Canal levees are constructed 8' above ground level thereby causing blockage to sheet flow out of the Addition. Since there only exists a single outfall culvert, the flood runoff must flow along the canal levee in a small weep ditch from the flooded streets to the outfall.



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The Borley Heights Relief Project will independently solve the problem by replacing one inadequate culvert crossing of the BI Canal with 3 additional culverts that are large enough to safely convey the flow downstream without flooding occurring. The project will bring all of the homes in the benefit area above the 500-year flood elevation. This project will greatly reduce the home flooding in the benefit area by safely removing the stormwater away at an adequate rate, to keep the homes dry. The project will greatly reduce the cost to the citizens in the benefit area by saving them the costs and aggravation that comes with home flooding such as repairs to the home, replacing damaged cabinets, flooring, etc., the expense of temporary housing, as well as the extra expenses incurred with being relocated.

## **2.0 ALTERNATIVES ANALYSIS**

### **2.1 ALTERNATIVE 1: NO-ACTION ALTERNATIVE**

The no-action alternative would not result in the expenditure of grant funds or the described impacts to the project site but would result in the continued frequent and severe structure flooding in the Borley Heights Benefit Area.

### **2.2 ALTERNATIVE 2: BUYOUT ALTERNATIVE**

This alternative would require the buyout of approximately 167 existing homes. The existing homes are those within the Benefit Area map as shown on Figure 3. Based on JCCAD (Jefferson County Central Appraisal District) values plus ancillary fees, it is estimated that it would cost in excess of \$20 million to acquire and demolish the homes and relocate residents for which benefits were calculated. No offer to purchase these homes has been made to date. If this alternative were to be determined the least-damaging practicable alternative and pursued further, it is likely that funding for the buyout would be sought from federal sources and local matches.

### **2.3 ALTERNATIVE 3: PROPOSED ALTERNATIVE**

The scope of work is to construct new BI Canal crossings at each street which will be adequately sized to properly drain the streets under the BI Canal (see Attachment 1). Each of these canal crossings will be fitted with one-way flap gates at the downstream ends of the culverts to prevent backflow.

In order to convey the flood flows from the new culverts successfully into Griffing Ditch, a new channel will be constructed along the west side of the BI Canal at the receiving end of the culverts which will then flow into an existing channel that connects to Griffing Ditch. The existing ditch will also be improved with this project. Right-of-way will be acquired for the new channel and widening of the existing ditch. The project will have no adverse downstream impact because Griffing Ditch, the receiving stream and its crossings, were enlarged with a previous FEMA grant to handle this additional flow. In addition to the new culverts and existing culvert to be fitted with one-way flap gates, the existing culverts at Griffing Ditch will also be fitted with flap gates as part of this project.

Two conveyance channels on the east side of the BI Canal will be enlarged and



concrete lined to convey the floodwaters efficiently to the new culverts constructed. Six-inch reinforced concrete slope paving will be constructed at areas of anticipated high-water velocities for erosion control. Twelve-inch reinforced concrete headwalls will be constructed at the new canal crossings.

Installation of the canal crossings will involve damming of the BI canal with earthen dams with Lower Neches Valley Authority (LNVA) cooperation. The canal levees will be excavated along with the canal bottom for placement of the culverts. All culverts will be backfilled with cement stabilized sand. The canal will be reconstructed over the new culverts by compacting the removed material back in place in lifts to insure proper compaction.

All disturbed areas will be seeded with native grasses. JCDD6 will either utilize excavated soils on-site for fill material, dispose of excess soils at existing permitted landfills or sandpits, or will coordinate with landowners in the project area regarding placement of any excess excavated soils. Excavated soils that are placed on lands outside of the project footprint must be placed outside of wetlands, the 100-year floodplain, and any National Register of Historic Places (NRHP)-listed or eligible historic sites. Soil placement areas must not be graded or otherwise excavated for the sole purpose of placement of fill.

## 2.4 COST COMPARISON OF ALTERNATIVES

### **No-Action Alternative:**

Calculated avoided damages are \$7,735,057.

### **Buyout Alternative:**

Buyout of 103 Structures at an average cost of \$172,477 each is over \$17,765,131.

### **Proposed Project Alternative:**

Project Cost – \$4,577,210. FEMA grant funds will be used in part for construction costs. No structures will be acquired or demolished as part of this project.

## 3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

### 3.1 PHYSICAL ENVIRONMENT

#### 3.1.1 Geology, Seismicity, and Soils

Geologic development of the Texas Coastal Plain began approximately 220 million years ago during the early Mesozoic Era with the separation of the North American and European continental plates (*Handbook*, 2011). This Gulfian cycle consisted of several periods of continental extension (rifting) and compression. During the Triassic Period, discontinuous rift basins were formed that were generally oriented parallel to the edge of the developing ocean basin and

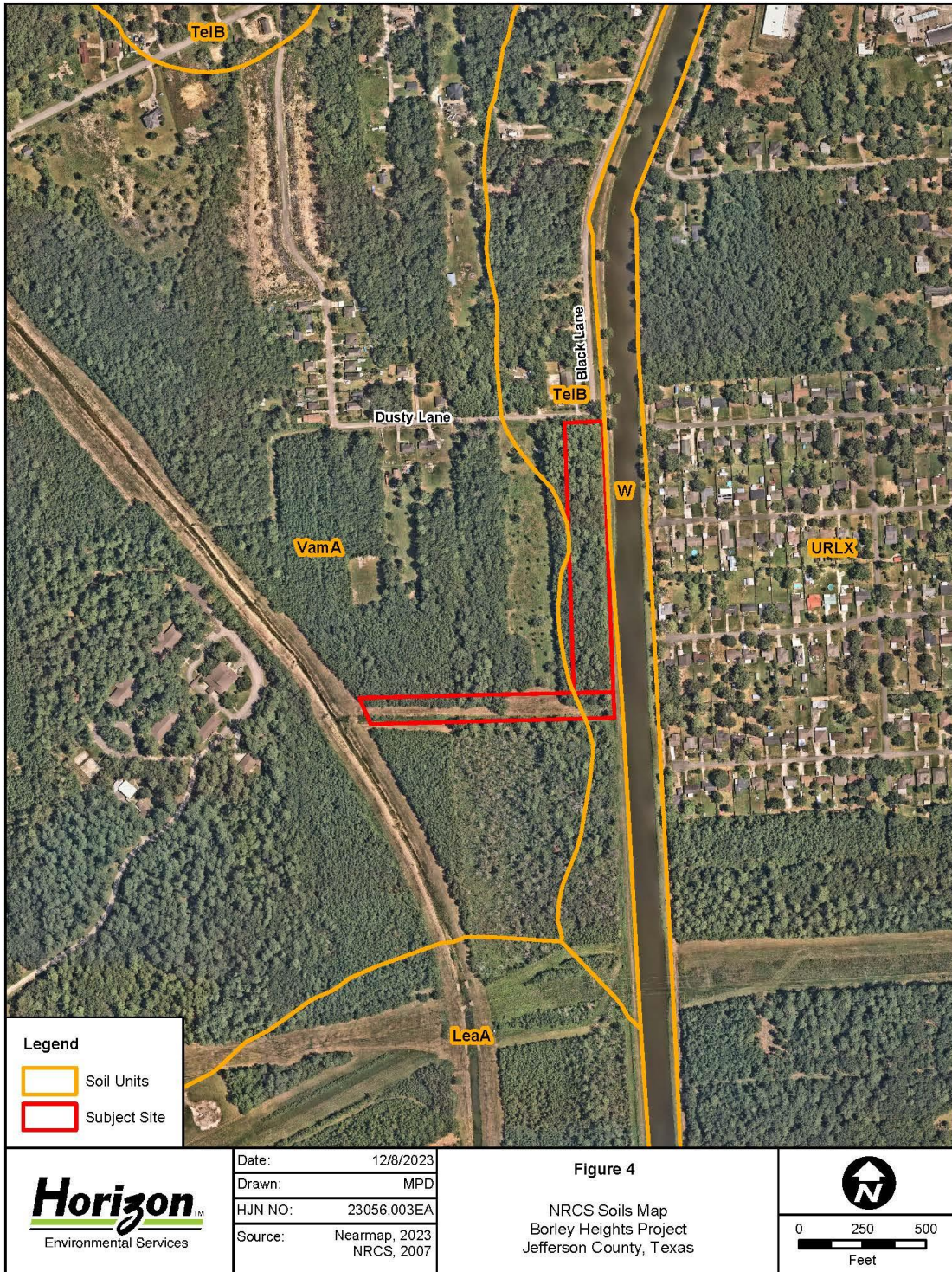
extending from Mexico to Nova Scotia. Later, as continental separation continued, the rift basins in Texas were eventually filled by deposits of marine salt. Subsequent burial by river sediment carried in from the newly emerging Rocky Mountains caused instability and deformation in the buried salt layers. This led to an upward migration of the salt deposits to a lower confining pressure, forming a variety of structures collectively known as salt domes. These structures, which are prominent subsurface features of the Texas Gulf Coast region, formed significant oil and natural gas traps in the sedimentary rocks that immediately surround them. Additionally, rapid deposition of deltaic sands over marine mud resulted in an unstable sediment column, leading to displacement of the sediments by growth faults (large, curved faults that formed during sediment accumulation and continue to grow with increasing depth of burial). Linear zones of growth faults of various ages extend from northeastern Mexico into Louisiana and compose traps for large oil and gas fields.

A review of existing literature indicates that the proposed project is located in an area of outcropping sediments belonging to the Beaumont Formation (UT-BEG, 1992). In the region, the Beaumont Formation consists of varying proportions of clays, silts, and sands originating from primarily stream channel, point-bar, natural levee, backswamp, and, to a lesser extent, coastal marsh and mud-flat depositional systems. Concretions of calcium carbonate, iron oxide, and iron-manganese oxides are common in the weathered zone. The surface topography of the region tends to be characterized by relict river channels shown by meander patterns and pimple mounds on meanderbelt ridges. The majority of the subject site is located within an area of the Beaumont Formation that predominantly consists of clay and mud of low permeability, high water-holding capacity, high compressibility, high to very high shrink-swell potential, poor drainage, level to depressed relief, low shear strength, and high plasticity. Geological units include interdistributary muds, abandoned channel-fill muds, and fluvial overbank muds.

A literature review indicated no known seismic faults on the site or in the nearby area (UT-BEG, 1992). Occasional earthquakes do occur within the Coastal Plain, but these are usually situated between San Antonio and Corpus Christi. Additionally, much seismic activity (earthquakes and subsidence) within the Coastal Plain has been attributed to well injections associated with oil and gas field operations and groundwater pumping. There is a very low probability of structure damage due to the rarity and lack of severity of seismic activity in the project area.

The sediments exposed in Jefferson County are divided into 2 groups: those of Pleistocene origin and those of more recent origin. Recent time began with the withdrawal of large continental ice sheets that were characteristic of Pleistocene times. Generally, soils of the coastal prairie and timberlands are of Pleistocene origin, while those of the floodplains, coastal marshes, and beaches are of more recent origin.

The project site and surrounding vicinity is dominated by the Vamont clay, 0-1% and Texla silt loam, 0-1% (NRCS, 2024) (Figure 4). These clay to silty clay loam soils consist of a parent material of loamey and clayey fluvio-marine deposits derived from igneous, metamorphic, and sedimentary rock and are of late Pleistocene age. These soils are somewhat poorly drained with high runoff, moderate to high shrink-swell potential. These soils contain minor hydric components but are not considered hydric. Neither of these series are not considered prime farmland. (NRCS, 2024).



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### 3.1.1.1 No-Action Alternative

The no-action alternative would not affect geology, seismicity, or soils.

### 3.1.1.2 Buy-out Alternative

Since properties that would be involved with the buyout alternative are already developed and disturbed, this alternative would not affect geology or seismicity. Minor soil disturbance would likely result from demolition of the structures but would not be significant.

### 3.1.1.3 Proposed Alternative

Construction of the improvements will result in the excavation of native soils for channel improvements. The spoils will be deposited in adjoining upland areas. No prime farmland soils were identified within the project footprint. The US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) was contacted to evaluate the proposed project for impacts to prime farmland soils under requirements of the Farmland Protection Policy Act (FPPA). FEMA has determined that the project will have minimal effects and is exempt from provisions of the FPPA.

## 3.1.2 Water Resources and Water Quality

The Chicot Aquifer (in Holocene- and Pleistocene-age sediments) and the Evangeline Aquifer (in Pliocene- and Miocene-age sediments) are the 2 primary sources of fresh (less than 1000 milligrams per liter dissolved solids concentration) groundwater in the Beaumont area and are part of the Gulf Coast aquifer system. The hydrogeologic units are laterally discontinuous fluvial-deltaic deposits of gravel, sand, silt, and clay that dip and thicken from northwest to southeast. Recharge to the aquifers generally occurs through the percolation of fresh water (precipitation, stream flow, lakes, etc.) along the aquifers' area of outcrop at the surface. The aquifers crop out in bands inland from and approximately parallel to the coast and become progressively more deeply buried and confined toward the coast. The Chicot, which comprises the youngest sediments, outcrops nearest to the coast, followed farther inland by the Evangeline outcrop. These outcrop areas are located a number of miles north and west of the project area. Groundwater movement is generally from the area of outcrop toward the southeast (down-dip) but may vary in the vicinity of natural discharge points (along stream banks) or artificial discharge points (groundwater wells).

Horizon Environmental Services (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 no water wells on the project site and three water wells 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 Chicot aquifer system, which yields water at depths greater than 150 feet in the vicinity of the subject site (TWDB, 2023). No evidence of water wells were present on the subject site during the field reconnaissance effort.

The results of this survey do not preclude the existence of an abandoned well. If a water well or casing is encountered during construction, work should be halted near the feature until TCEQ is contacted.

All abandoned wells must be capped or properly abandoned according to the Administrative Rules of the Texas Department of Licensing and Regulation, 16 Texas Administrative Code (TAC), Chapter 76, effective 3 January 1999. A plugging report must be submitted (by a licensed water well driller) to the Texas Department of Licensing and Regulation, Water Well Drillers Program, Austin, Texas. If a well is intended for use, it must comply with rules stipulated in 16 TAC §76.

The receiving stream for the proposed project, Griffing Ditch, is not listed as an impaired water. However, the Pine Island Bayou, into which Griffing Ditch flows approximately 2.65 miles downstream of the project site, is listed as a Category 5b segment with depressed oxygen levels in water by the Texas Commission on Environmental Quality (TCEQ, 2022). The TCEQ is required, under Section 303(d) of the federal Clean Water Act, to identify water bodies for which effluent limitations are not stringent enough to implement water quality standards. Category 5b segment water bodies do not meet applicable water quality standards or are threatened for one or more designated uses by one or more pollutants, and a review of the water quality standards for this water body is conducted before a Total Maximum Daily Load (TMDL) is scheduled. The TCEQ monitors the condition of the state's surface waters and assesses the status of water quality every 2 years. The TCEQ also develops a schedule identifying TMDLs that will be initiated in the next 2 years for priority impaired waters. The TCEQ submits this assessment to the US Environmental Protection Agency (EPA). The report is also published on the TCEQ web site as the Texas Water Quality Inventory and 303(d) List (Inventory and List) (TCEQ, 2022). The Inventory assigns each assessed water body to 1 of 5 categories to provide information to the public, EPA, and internal agency programs about water quality status and management activities.

#### 3.1.2.1 No-Action Alternative

The no-action alternative would not be expected to affect water resources or water quality.

#### 3.1.2.2 Buyout Alternative

The buyout alternative would not be expected to affect water resources or water quality.

#### 3.1.2.3 Proposed Alternative

Water quality in Pine Island Bayou could be slightly reduced due to increased runoff of sediment and nutrients from areas surrounding the proposed drainage improvements. 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, 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

will be conducted on a regular basis as prescribed by the TPDES General Permit. The proposed project will temporarily affect the BI Canal during construction, but no permanent impacts are anticipated.

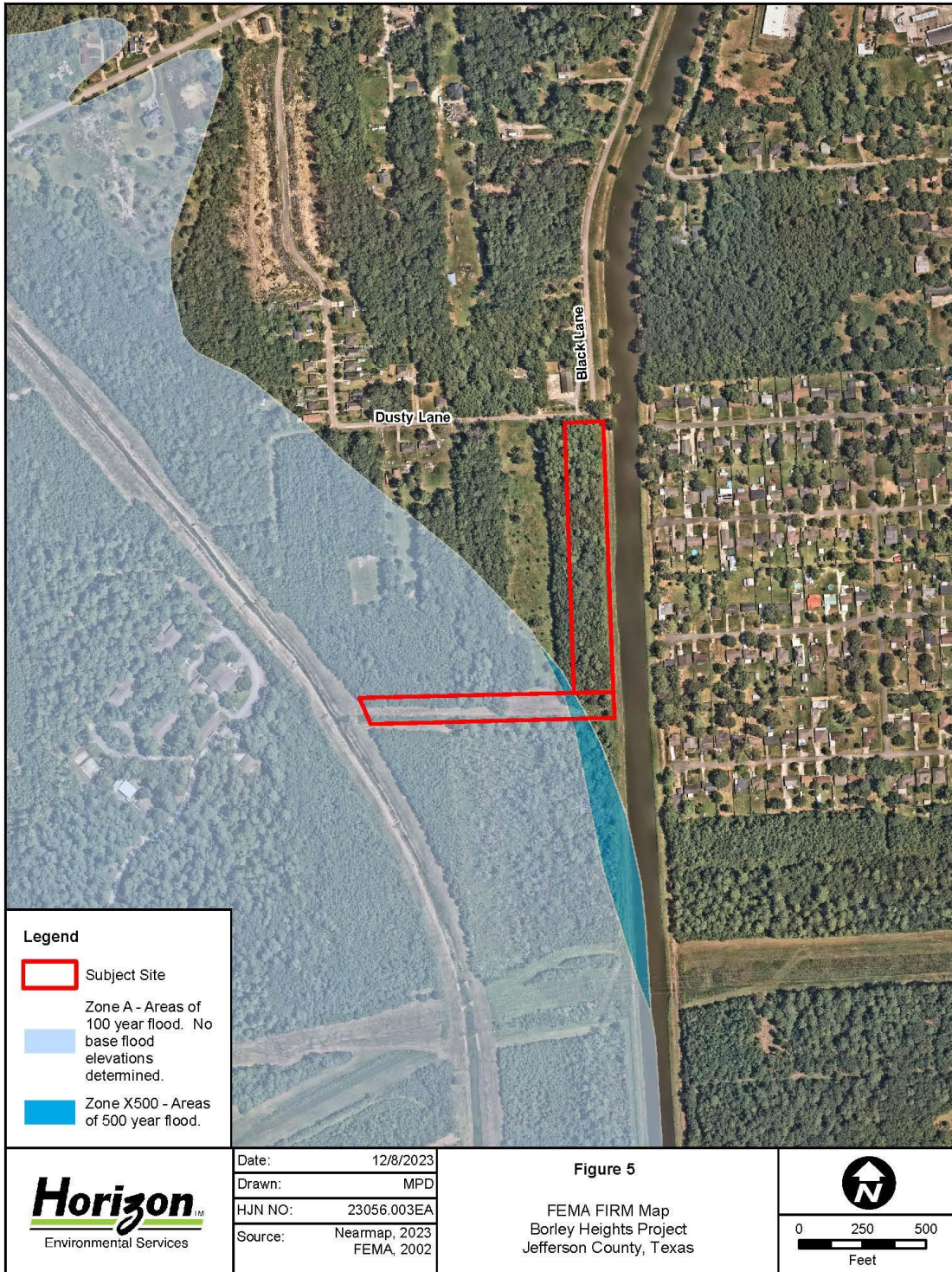
### 3.1.3 Floodplain Management (Executive Order 11988)

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.

Before taking an action, each agency shall determine whether the proposed action will occur in a floodplain. For major federal actions significantly affecting the quality of the human environment, the evaluation would be included in any statement prepared under Section 102(2)(C) of the NEPA. The agency shall make a determination of the location of the floodplain based on the best available information.

There are many flood mitigation activities within areas of Jefferson County. The County of Jefferson has land use, building code, and permit authority over the land within its boundaries, including the authority to regulate development proposed within the special flood hazard areas designated on the county's Flood Insurance Rate Maps (FIRM). The Applicant seeks to obtain a FEMA grant that would help reduce the flooding of existing structures in the Benefit Area.

According to FEMA FIRMs, the north and east portions of the subject site are partially located in Zone X (unshaded), which is an area that is not inundated by 100- or 500-year flooding (Figure 5). The south and west portion of the property is located within A flood zones which are areas that are inundated by 100-year flooding. The project is located on FIRM panel number 4854570045C, dated 6 August 2002. However, significant structure flooding in Borley Heights occurs under moderate to heavy storm events due to the inadequacy of existing drainage conveyances. The proposed project would provide a flood reduction benefit to all residential areas within the Borley Heights drainage area.





### 3.1.3.1 No-Action Alternative

The no-action alternative would not adversely affect the floodplain. However, the purpose of the proposed action to relieve flooding for numerous structures in Borley Heights would not be realized, and repetitive losses would continue to occur.

### 3.1.3.2 Buyout Alternative

This alternative would not adversely affect the 100- or 500-year floodplain. The buyout alternative would not significantly restore any natural or beneficial functions of the floodplain. It would only remove potential repetitive loss structures and infrastructure from areas that are subject to flooding outside of the existing 100-year floodplain.

### 3.1.3.3 Proposed Alternative

As mentioned previously, the Benefit Area suffers from frequent and severe structure flooding due to ponding of local runoff caused by an inadequate drainage system. The project has been carefully designed so that it will not aggravate any downstream flooding situations. The project will provide the greatest benefit to the most severely flooded areas in the local watershed. Frequent flooding presently occurs within the Benefit Area. The proposed improvements and crossings would help evacuate flood water faster and relieve the frequent flooding within the Benefit Area.

The majority of the Benefit Area is residential development. Residential development has not previously been restricted due to flooding issues since Borley Heights is not within the mapped floodplain. The project is not intended to provide for increased development potential in the area, but to reduce flooding hazards that exist for established residential development in the watershed. Therefore, it is not expected that this project will lead to other significant secondary impacts. The 8-step decision-making process for EO 11988 and 44 CFR Part 9 compliance is documented in Attachment 3.

JCDD6 must coordinate with the local floodplain administrator, obtain required permits prior to initiating work, and comply with any conditions of the permit to ensure harm to and from the floodplain is minimized. All coordination pertaining to these activities should be retained as part of the project file in accordance with program instructions.

## 3.1.4 Air Resources and Air Quality

Jefferson County is located in extreme southeastern Texas and exhibits a subtropical climate. Extremely high summer temperatures are rare due to sea breezes from the Gulf of Mexico, and winter cold temperatures are generally moderate due to the county's southern location. Average temperatures range from 53.3 degrees Fahrenheit (°F) in January to 82.9°F in August. Relative humidity is high due to the nearby Gulf of Mexico. Yearly rainfall averages 55.21 inches and is distributed unevenly throughout the year. Heavy rains associated with tropical disturbances



generally strike the area from June through August. Eighty to 100 inches of precipitation have not been uncommon in certain areas over the past several years.

Jefferson County is currently unclassified or in attainment of the National Air Quality Standards for all 6 criteria air pollutants. Therefore, general conformity rules for these standards do not apply. Two 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.

#### 3.1.4.1 No-Action Alternative

This alternative would not be expected to adversely affect ambient air quality.

#### 3.1.4.2 Buyout Alternative

Demolition of purchased structures would be expected to have the same or potentially greater temporary impacts to air quality from fugitive dust and equipment exhaust. This alternative would not have any expected long-term adverse effects on air quality.

#### 3.1.4.3 Proposed Alternative

During construction, if dry weather conditions prevail, 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.

### 3.2 BIOLOGICAL ENVIRONMENT

#### 3.2.1 Terrestrial and Aquatic Environment

The project area is generally characterized as a mixture of residential areas east of the BI Canal and woodlands with interspersed openings to the west along with man-made or improved ditches. Dominant vegetation of the woodlands in the project footprint included water oak (*Quercus nigra*), loblolly pine (*Pinus taeda*), southern red oak (*Quercus falcata*), sweetgum (*Liquidambar styraciflua*), yaupon (*Ilex vomitoria*), willow oak (*Quercus phellos*), Chinese tallow (*Triadica sebifera*) and Chinese ligustrum (*ligustrum sinense*). Open areas were dominated by dewberry (*Rubus trivialis*), trumpet creeper (*Campsis radicans*), sedge (*Carex sp*), spike rush (*Eleocharis cellulosa*), smartweed (*Persicaria punctata*), sesbania (*Sesbania drummondii*) and seedlings of adjacent woodland species.

Limited and temporary aquatic habitat is provided in the existing flood control channel and a few adjacent wetland areas are present within the project area (see Section 3.2.2).

#### 3.2.1.1 No-Action Alternative

The no-action alternative would not adversely affect terrestrial or aquatic habitats.

#### 3.2.1.2 Buyout Alternative

The buyout of existing structures would not adversely affect terrestrial or aquatic habitats.

#### 3.2.1.3 Proposed Alternative

The proposed Borley Heights drainage improvements would involve ground disturbance totaling approximately 7 acres. The disturbed areas will be revegetated with native species following construction.

### 3.2.2 Wetlands (Executive Order 11990)

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. Under the Clean Water Act, the United States Army Corps of Engineers (USACE) is the regulatory authority for the discharge of dredged or fill material into waters of the U.S., including jurisdictional wetlands, pursuant to Section 404 of the Act.

According to the National Wetland Inventory (NWI) map (Figure 6) (USFWS, 2023), nearly the southwest portion of the subject site and portions of the surrounding lands are mapped as palustrine forested wetlands (PFOA1). Griffing Ditch, the BI Canal and the excavated ditch located along the south property boundary are mapped as excavated riverine features.

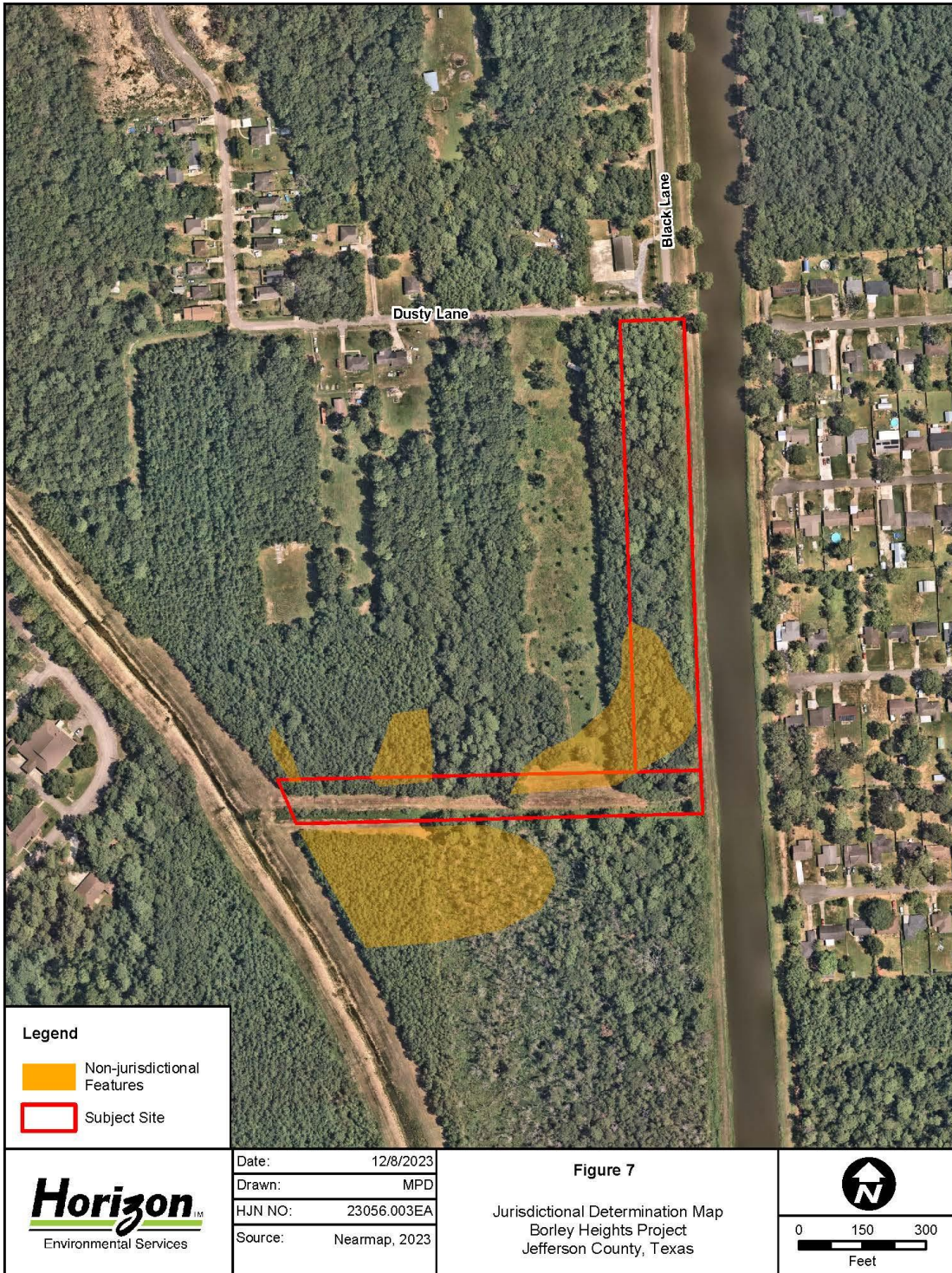
A detailed jurisdictional determination for the project area was conducted by Horizon in October 2020. Adjacent wetland areas were identified based on field observations and historical aerial photography analysis. Based on historical aerial review of topographic maps, Griffing Ditch (Walker Branch) appears to have been a natural tributary of Pine Island Bayou that was extended southward as an agricultural drainage ditch in the early 1900s. The BI Canal that passes along the

west side of the Borley Heights Addition is an industrial water supply canal that does not provide local drainage and is not connected to waters of the US.

The jurisdictional determination identified approximately 1.21 acres of herbaceous and wooded wetlands within the project footprint (Figure 7). In accordance with currently applicable rules and guidance in effect following the U.S. Supreme Court decision in *Sackett v EPA*, none of the identified wetlands within the project site have a continuous surface hydrologic connection to other waters of the US and are therefore not considered jurisdictional under Section 404 of the Clean Water Act. USACE's official jurisdictional determination is pending review. Although, it is not anticipated that the proposed activities will have adverse impacts to wetlands., JCDD6 is responsible for coordinating with and obtaining any required Section 404 Permit(s) from the United States Army Corps of Engineers (USACE) and/or any Section 401/402 Permit(s) from the State prior to initiating work. JCDDC will comply with all conditions of the required permit(s).







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### 3.2.2.1 No-Action Alternative

The no-action alternative would not adversely affect wetlands or other “waters of the US.”

### 3.2.2.2 Buyout Alternative

The buyout of existing structures would not adversely affect wetlands or other “waters of the US.”

### 3.2.2.3 Proposed Alternative

The Proposed Alternative is anticipated to impact wetlands that are presumed to be non-jurisdictional pending USACE’s official determination. Based on these wetlands’ lack of connectivity to other water resources, the proposed Project activities should not be considered adverse impacts.

JCDD6 is responsible for coordinating with and obtaining any required Section 404 Permit(s) from the United States Army Corps of Engineers (USACE) and/or any Section 401/402 Permit(s) from the State prior to initiating work and complying with all permit conditions. However, the proposed drainage improvements will not affect wetlands determined to be jurisdictional under Section 404 of the Clean Water Act. Several non-jurisdictional wetlands within the proposed ROW may be excavated or filled. No permit from the USACE is anticipated to be required. Correspondence has been sent to the USACE requesting verification (Attachment 4). JCDD6 will ensure that best management practices are implemented to prevent erosion and sedimentation to surrounding, nearby or adjacent wetlands. This includes equipment storage and staging of construction to prevent erosion and sedimentation. The 8-step decision-making process for EO 11990 and 44 CFR Part 9 compliance is documented in Attachment 3.

### 3.2.3 Threatened or Endangered Species and Critical Habitat

Section 7 of the Endangered Species Act requires that all federal agencies consult with the U.S. Fish and Wildlife Service (USFWS) to ensure that actions authorized, funded or carried out by such agencies do not jeopardize the continued existence of any listed threatened or endangered species or adversely modify or destroy critical habitat of such species. It is the responsibility of the federal action agency to determine if the proposed project may affect threatened or endangered species.

Federally listed threatened or endangered (T/E) species known to occur in Jefferson County include the eastern black rail (*Laterallus jamaicensis*), piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), whooping crane (*Grus americana*), 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, 2024). The USFWS lists three additional species as proposed for listing or candidate for listing that are of potential occurrence in Jefferson County, including the tricolored bat (*Perimyotis subflavus*), alligator snapping turtle (*Machrochelys temminckii*), and the monarch

butterfly (*Danaus plexipus*). There is no designated critical habitat for any listed species within this portion of Jefferson County.

#### Piping Plover – Red Knot – Eastern Black Rail – Whooping Crane

Piping plover habitat in Texas consists of sandy beaches and lakeshores that provide marine worms, flies, beetles, spiders, crustaceans, mollusks, and other small marine invertebrates during the over-wintering portion of their migration. None have been reported from the project area, and no suitable habitat is present.

The red knot has similar distribution and habitat preferences to the piping plover. The subject site does not contain habitat that would typically be associated with the species; therefore, the species would not be expected to be impacted by the project.

The eastern black rail inhabits fresh and saltwater marshes and wet meadows. The subject site does not contain marshes or wet meadows that would typically be associated with the species; therefore, the species would not be expected to be impacted by the project.

The whooping crane similarly utilizes marshes and agricultural fields along the Texas coast during winter migration. While the whooping crane primarily occurs on the middle Texas coast, it has occasionally been seen in Jefferson County. The subject site does not contain suitable habitat for the whooping crane and it would not be expected to be impacted by the project.

#### Sea Turtles

All 5 federally listed sea turtle species are known to occur sporadically along the Texas Coast in bays and along the Gulf shore. Sea turtles do not occur upstream of saltwater influence and would not be affected by the proposed project.

#### Proposed and Candidate Species

The tricolored bat and alligator snapping turtle are currently listed as proposed and the monarch butterfly is currently listed as a candidate species for listing.

The alligator snapping turtle occurs in deep river systems and lakes. The project site does not contain suitable habitat for the alligator snapping turtle and it would not be expected to be impacted by the project.

The tricolored bat occurs in forests, woodlands, and riparian areas. Most foraging occurs in riparian areas. Caves are important to this species. Roosts probably occur in tree foliage, caves, mines, and rock crevices. Potentially suitable woodland habitat for the tricolored bat was observed on the subject site; however, given the level of development of the surrounding areas, the species is not likely to occur in the vicinity and impacts to the species are not expected to occur.

The monarch butterfly is currently listed as a candidate species and no Section 7 consultations are required for candidate species. However, it should be noted that the preferred forage breeding vegetation species, milkweed (*Asclepias* spp.) was not observed on the subject site during the site reconnaissance, and impacts to the candidate species are not expected to occur with the proposed project.

#### 3.2.3.1 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.

#### 3.2.3.2 Buyout Alternative

No listed species or their supporting habitats are present in the project area; therefore, the buyout alternative would have no effect on listed species.

#### 3.2.3.3 Proposed Alternative

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. The USFWS has been consulted on the proposed project (Attachment 2). The USFWS does not provide written concurrence of no effect determinations; rather, the USFWS has provided an indication that no further consultation is required for this project (Attachment 2).

### 3.2.4 Migratory Birds

The Migratory Bird Treaty Act of 1918 makes it illegal to kill, capture, possess, transport, buy, sell, or trade migratory birds or any migratory bird parts (bones, feathers, etc.), nest, or eggs without prior authorization by the USFWS (USFWS, 2020b). Many birds may nest or roost in trees, brushy areas, and other potential habitat. These areas provide nesting habitat and support rookeries for migratory birds. The USFWS Information for Planning and Consulting website lists 8 migratory species that may have the potential to occur within the study area (USFWS, 2024).

#### 3.2.4.1 No-Action Alternative

Migratory birds are expected to utilize the Project Area for nesting. The No Action Alternative would not result in any impacts to migratory bird species.

#### 3.2.4.2 Buyout Alternative

Migratory birds are expected to utilize the Project Area for nesting. The No Action Alternative would not result in any impacts to migratory bird species.



### 3.2.4.3 *Proposed Alternative*

Vegetation clearing activities related to the proposed project has the potential to affect migratory bird nesting habitat. To minimize impacts to migratory bird species, JCDD6 will limit tree removal work during the peak migratory bird-nesting period of March through August as much as possible to avoid destruction of individuals, nests, or eggs. If tree removal activities must occur during the nesting season, JCDD6 will deploy a qualified biological monitor with experience conducting breeding bird surveys to survey the vegetation management area for nests prior to conducting work. The biologist will determine the appropriate timing of surveys in advance of work activities. If an occupied migratory bird nest is found, work within a buffer zone around the nest will be postponed until the nest is vacated and juveniles have fledged. The biological monitor will determine an appropriate buffering radius based on species present, real-time site conditions, and proposed vegetation management methodology and equipment. For work near an occupied nest, the biological monitor would prepare a report documenting the migratory species present and the rationale for the buffer radius determination and submit that report to FEMA for inclusion in project files.

### 3.2.4 Coastal Zone Management

The project does not lie within the Coastal Zone Management (CZM) boundary of Texas (refer to the response from the General Land Office of Texas, Attachment 2).

### 3.3 HAZARDOUS MATERIALS

Horizon commissioned Environmental Risk Information Services (ERIS) of Austin, Texas, to review state and federal agency records required by ASTM Practice E1527-21. ERIS conducted its data search using minimum search distances outlined in the ASTM standard (ASTM, 2021). ERIS' search results for Standard Environmental Records can be found within its complete Database Report provided in Attachment 5.

ERIS found two facilities records within the ASTM-prescribed search distances from the property. These findings included a Spills Database (SPILLS) listing for a transformer leak of approximately 1 gallon located at 7370 Lewis Drive, approximately 320 feet from the subject site. Groundwater contamination was not found in association with this listing. The report additionally listed the Tri-Stop facility on the Leaking Petroleum Storage Tank (LPST) database located approximately 2,000 feet upgradient to the northeast of the subject site at 7105 Tram Road. The database indicated that the facility discovered a leak in 2021 and had impacted groundwater within 500 feet to ¼ mile to the southwest. Based on distance Horizon does not consider this facility to represent a REC for the subject site

The Railroad Commission of Texas (RRC) records were investigated to determine the presence of active natural gas, crude oil, or refined product pipelines, as well as oil or gas wells that may exist on or within 1,000 feet from the Property. The records reviewed indicated the presence of one dry hole well to the west of the subject site and one dry hole to the southwest of the subject site (RCT, 2020). None of these records indicate any release of contaminants.

### 3.3.1 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.

### 3.3.2 Buyout Alternative

The buyout and demolition of structures in the Benefit Area has the potential to encounter and potentially release asbestos, lead-based paint, and other potentially hazardous household, lawn, or agricultural chemicals that might be stored on these properties into the environment.

### 3.3.3 Proposed Alternative

The proposed alternative would not contribute to potential downstream pollution as a result of any identified sources of pollution in the project area. Unusable equipment, debris and material shall be disposed of in an approved manner and location. In the event significant items (or evidence thereof) are discovered during implementation of the project, applicant shall handle, manage, and dispose of petroleum products, hazardous materials and toxic waste in accordance with the requirements and to the satisfaction of the governing local, state and federal agencies.

## 3.4 SOCIOECONOMICS

U.S. Census Bureau estimates for 2022 indicate a population of 250,830 for Jefferson County. A demographic profile of the area shows that approximately 37.4% of the population is reported as white, 34.5% as black, 23.7% as Hispanic, and 4.4% as other. The project is not expected to affect the population of the area. The county population is the reference population for the Environmental Justice analysis below (Section 3.4.6).

Local employment in Jefferson County is dominated by construction, with retail, industrial, healthcare, and education occupations also being common. The median household income is reported as \$53,613 and is approximately \$15,408 less than the US average.

In 2021, the City of Beaumont had a population of 115,013 with a median household income of \$49,765 (DataUSA, 2024).

### 3.4.1 Zoning and Land Use

The majority of the project site is within the city limits of the City of Beaumont, according to the comprehensive plan dated 14 January 2003 the subject site is within an urban stable area. The proposed project will not adversely affect local zoning or land use. Residential and agricultural land uses are common in the area.

### 3.4.2 Visual Resources

The current project area is predominantly undeveloped land surrounded by residential development north of Beaumont.

### 3.4.3 Noise

The project location is currently predominantly undeveloped land with existing residential development to the north and east. Existing noise is generally generated by traffic on Tram Road, Hwy 69/96/287, and the residential area to the east. The noise level is generally low.

### 3.4.4 Public Services and Utilities

Public services and utilities are provided to residents by the City of Beaumont. Most City services are provided east of the project area. Tram Road is a county-maintained roadway while the residential streets with Borley Heights are maintained by the City.

### 3.4.5 Traffic and Circulation

Major transportation arteries in the area include Tram Road and Hwy 69/96/287. Temporary traffic diversions or congestion may occur on Tram Road during mobilization for the proposed construction.

### 3.4.6 Environmental Justice (Executive Order 12898)

Executive Order 12898, entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," mandates that federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of programs on minority and low-income populations. The EPA's Escreet tool statistics indicate low-income households make up approximately 31 percent of the Project Area, which is less than state (33 percent) average and equal to the national (31 percent) averages (EPA EJScreening Tool, 2024). There are several low-income residences in the immediate vicinity of the project (Borley Heights). However, by necessity, the proposed project is located in the vicinity of the area for which it is designed to provide flood protection. These properties will benefit from the proposed action. The location of the proposed project is the best available, based on environmental, hydrological, and cost analyses.

### 3.4.7 Safety and Security

The property within the project site is privately owned and largely undeveloped. JCDD6 will obtain fee title or an easement for the facilities. Current safety issues in the area include construction traffic entering and exiting the project area from Tram Road during mobilization.

### 3.4.8 No-Action Alternative

The no-action alternative will not provide relief of concerns for property, health, and welfare protection during flood events. Continued flooding of structures in the Benefit Area would continue to place a burden on local, state, and federal flood relief resources and would also continue to depress property values. The no-action alternative has a cost of more than \$10 million in repetitive damages.

#### 3.4.9 Buyout Alternative

The buyout alternative would remove 167 private structures from the local tax rolls with a substantial loss in future tax revenues to local governments and service providers. The buyout alternative would cost in excess of \$20 million.

#### 3.4.10 Proposed Alternative

The project yields \$7,735,057 in benefits (avoided damages). The proposed project alternative has a total cost of nearly \$4,577,210, which yields a benefit-cost ratio of 1.66.

The proposed project would not significantly affect or change current land uses. The area would remain as open, undeveloped land.

Visual resources (aesthetics) are not expected to be materially changed by the proposed drainage improvements except for conversion of forested areas to non-forested.

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 other than occasional mowing. 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.

The proposed project is not expected to impede the access of nearby residents to any public services. There are no anticipated impediments to traffic due to operation of the proposed drainage improvements. There may be short-term traffic congestion due to movement of construction equipment during mobilization on Tram Road. Appropriate construction barricades and signage will be utilized during construction.

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 existing residential properties or structures will be adversely affected by the project.

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

### 3.5 CULTURAL RESOURCES

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. Additionally, since the proposed improvements would be sponsored by a subdivision of the state, the project is also regulated by the Antiquities Code of Texas.

On October 22, 2020, Horizon archeologist Charles E. Bludau, Jr., performed an intensive cultural resources survey of the project area. Jeffrey D. Owens served as Principal Investigator, and the survey was conducted under Texas Antiquities Permit No. 9651. The purpose of the survey was to locate any significant cultural resources that potentially would be impacted by the proposed undertaking. Horizon’s archeologist traversed the project area and thoroughly inspected the modern ground surface for aboriginal and historic-age cultural resources. The project area consists of a moderately dense forested tract covered in mixed pine, oak, yaupon, palmetto, shrubs, grasses, forbs, brambles, vines, and various grasses. Prior construction of a weep ditch along the western side of the BI Canal, artificial berms on the banks of the BI Canal, and artificial berms along the drainage ditch in the southern portion of the project area resulted in extensive existing disturbances within the project area. Ground surface visibility was generally low (<20%) due to dense vegetative ground cover.

#### 3.5.1 Findings

One historic-age object was documented within the project area during the survey. This feature consists of a formed concrete retention basin fitted with standpipes and the remains of water pump equipment. The feature was constructed in the 1950s at the southeastern corner of a larger parcel near the juncture of the BI Canal and the artificial channel that connects the Borley Heights Addition drainage to Griffing Ditch (Walker Branch) to the west. While the landscape within the project area is currently heavily overgrown, the project area was part of an agricultural field in the mid-20th century associated with a small farmstead located to the northwest of the project area. The feature contains numerous channels presumably to direct water to specific pumps that would divert water to different areas. The feature was likely utilized to provide water from the BI Canal for irrigation purposes. No cultural materials aside from the construction materials used in the feature or archeological deposits were observed on the modern ground surface or in any of the shovel tests excavated near the feature. This historic-age object lacks historical associations with any significant periods, events, themes, or persons; architectural distinction; and archeological deposits with the potential to offer meaningful information about the historical past. As such, the resource is recommended as ineligible for inclusion in the NRHP and for designation as an SAL.

A response received from the Texas Historical Commission dated 1 February, 2021, indicate that no historic properties, archaeological sites or other cultural resources are present or

affected by the project as proposed. Should cultural materials or historic properties be discovered during construction, work should cease, and the THC should be contacted for consultation.

### 3.5.2 Native American Cultural/Religious Sites

In accordance with 36 CFR §800.2(c)(2)(i)(B), FEMA conducted tribal consultations with federally recognized Indian tribal governments with interest to exchange information, receive input, and consider their views on actions that have tribal implications. Consultation with the Alabama-Coushatta Tribe of Texas, Jena Band of Choctaw Indians (JBCI), Kiowa Indian Tribe of Oklahoma (Kiowa Tribe), and Tonkawa Tribe of Indians of Oklahoma was conducted per 36 CFR §800.2(c)(2)(i)(B), dated April 15, 2024. Tribes were given 30 days to respond and or identify possible historic properties effected by this Project. The Alabama-Coushatta Tribe of Texas, Jena Band of Choctaw Indians (JBCI), Kiowa Indian Tribe of Oklahoma (Kiowa Tribe), and Tonkawa Tribe of Indians of Oklahoma did not provide comments within 30 days or declined to comment.

### 3.5.3 No-Action Alternative

The no-action alternative would result in no impacts to cultural resources, including historic properties and Native American or Tribal cultural/religious sites.

### 3.5.4 Buyout Alternative

The buyout alternative would not likely affect historic or prehistoric cultural resources since no significant ground disturbance would be involved in previously undisturbed areas. However, the 167 structures to be bought out have not been evaluated for historic significance although most were constructed in the mid to later 20<sup>th</sup> century and are not likely to be deemed significant.

### 3.5.5 Proposed Alternative

The proposed project was coordinated with the State Historic Preservation Office (SHPO). Correspondence documenting coordination activities with the SHPO is included in Attachment 6. On February 1, 2021, the SHPO concluded that the project would not affect historic properties and that the project could proceed as planned.

Based on archival research and correspondence with the SHPO, FEMA has made the determination that there will be no historic properties affected as a result of the proposed project.

Based on tribal coordination and consultation (Attachment 6), FEMA has determined that proposed project will not adversely affect traditional, religious, or culturally significant sites.

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. JCDD6 will inform FEMA immediately, and FEMA

will consult with the 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.

#### **4.0 CUMULATIVE IMPACTS**

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.

Cumulative impacts can result from many different activities, including the introduction of materials into the environment from multiple sources, repeated removal of materials or organisms from the environment, and repeated environmental changes over large areas and long periods. More complicated cumulative effects occur when stresses of different types combine to produce a single effect or accumulation of effects. Large, contiguous habitats can become fragmented, making it difficult for organisms to locate and maintain populations between disjunctive habitat fragments. Cumulative impacts may also occur when the timing of perturbations are so closely spaced that their effects overlap.

##### **4.1 NO-ACTION ALTERNATIVE**

The no-action alternative would not have any additive effects to other regional impacts to environmental resources. However, the continued flooding and cost of responses and damages in the Benefit Area would continue to contribute to regional financial and socio-economic impacts.

##### **4.2 BUYOUT ALTERNATIVE**

The buyout alternative would not have many additive effects to other regional impacts to environmental resources. However, this alternative would temporarily affect regional air quality due to emissions of fugitive dust and equipment exhaust during demolition of purchased residences and outbuildings. The potential also exists for the encounter and release of toxic or harmful materials during the demolition process that could include asbestos, lead-based paint, and other potentially hazardous household or agricultural chemicals. These materials could temporarily affect air or surface water quality. These impacts would generally be short-term in nature.

The only long-term effect that would contribute to regional cumulative effects would be the loss of approximately 167 private properties from the local tax rolls, with a substantial loss in future tax revenues to local governments and service providers.

##### **4.3 PROPOSED ALTERNATIVE**

The primary purpose of the proposed project is to reduce potential future flood damage

to existing structures in the Benefit Area. The project is not intended to provide for increased development potential in the area. Therefore, it is not expected that this project will lead to other significant secondary impacts.

The proposed drainage improvement project will have minimal impacts to natural resources. These impacts include temporary disturbance of approximately 7 acres of undeveloped land. The majority of areas surrounding the project site are residential or grazing pasture. The disturbed area would be revegetated and maintained as open space.

The proposed project does not have any other impacts that are of such significance as to add materially to cumulative impacts in the region. Impacts are summarized in Table 1.

## **5.0 PUBLIC PARTICIPATION**

A Notice of Availability for the Draft Environmental Assessment will be published in the *Beaumont Enterprise* (Attachment 7) and on FEMA's website (<https://www.fema.gov/emergency-managers/practitioners/environmental-historic/nepa-repository>) requesting public comments. The Draft EA will be made available on FEMA's website and upon request electronically or in hard copy from FEMA. The draft EA would also be available for review and comment at Beaumont Public Library located at 801 Pearl Street; at the Jefferson County Drainage District No. 6 Offices located at 6550 Walden Road in Beaumont, Texas; and at the offices of Horizon Environmental Services, located at 1507 South IH 35, Austin, Texas, from 9:00 a.m. to 4:00 p.m. Monday-Friday. The public comment period will last for 30 days upon publication of the initial public notice. FEMA will consider and respond to all public comments in the Final EA. If no substantive comments are received, the Draft EA will become final and a Finding of No Significant Impact (FONSI) will be issued for the project.

## **6.0 AGENCY COORDINATION AND PERMITS**

Consultation responses from resource agencies such as the USFWS, TPWD, TCEQ, TWDB, GLO are provided in Attachment 2, and the SHPO/THC and tribes in Attachment 6.

## **7.0 LIST OF PREPARERS**

C. Lee Sherrod, Senior Project Manager, Horizon Environmental Services, Inc.

Greg Sherrod, Environmental Project Manager, Horizon Environmental Services, Inc.

Doug Canant, District Engineer, Jefferson County Drainage District No. 6

### ***Government Contributors***

LaToya Leger-Taylor, Regional Environmental Officer, FEMA Region 6

Dorothy Cook, Supervisory Environmental Protection Specialist, FEMA Region 6



Subha Pandey, Environmental Protection Specialist, FEMA Region 6

Angela McComb, Environmental Protection Specialist, FEMA Region 6

**TABLE 1  
SUMMARY OF ENVIRONMENTAL CONSEQUENCES  
AND MITIGATION MEASURES FOR THE  
PROPOSED BORLEY HEIGHTS PROJECT**

<b>RESOURCE</b>	<b>ANTICIPATED EFFECTS</b>	<b>MITIGATION MEASURES</b>
Geology, Seismicity, and Soils	Geology – no impacts. Seismicity – no impacts. Soils – no impacts.	No mitigation measures proposed.
Water Resources and Water Quality	Groundwater – no impacts. Surface water quality – minor, temporary effects. Developed water resources – temporary impacts to the BI Canal.	JCDD6 will comply with conditions of Construction Storm Water General Permit TXR 150000, including preparation of SWPPP and implementing BMPs. The project will be coordinated with the LNVA.
Floodplains	No adverse impacts to the 100-year or 500-year floodplain.	JCDD6 will 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 7 acres of woodland and pasture lands will be temporarily disturbed	Disturbed areas will be revegetated.
Wetlands	No jurisdictional wetlands or "waters of the US" will be adversely affected. Several non-jurisdictional wetlands may be excavated or filled. Other non-jurisdictional wetlands will be avoided to the extent practicable.	JCDD6 will ensure that best management practices are implemented to prevent erosion and sedimentation to surrounding, nearby or adjacent wetlands. This includes equipment storage and staging of construction to prevent erosion and sedimentation.
Threatened or Endangered Species and Critical Habitat	No impacts.	No mitigation measures proposed.
Coastal Zone Management	No Impacts	Project is not within the CMP Boundary
Hazardous Materials	No impacts.	Unusable equipment, debris and material shall be disposed of in an approved manner and location. In the event significant items (or evidence thereof) are discovered during implementation of the project, applicant shall handle, manage, and dispose of petroleum products, hazardous

		materials and toxic waste in accordance to the requirements and to the satisfaction of the governing local, state and federal agencies.
Zoning and Land Use	No impacts	No mitigation measures proposed.
Visual Resources	No impacts.	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 mobilization on Tram Road.	Implement traffic control procedures as needed.
Environmental Justice	No impacts.	No mitigation measures proposed.
Safety and Security	No impacts.	No mitigation measures proposed.
Cultural Resources	No impacts.	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. JCDD6 will inform FEMA immediately, and FEMA will consult with the 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 National Historic Preservation Act (NHPA) and its implementing regulations.

## 8.0 REFERENCES

- (ASTM) American Society for Testing and Materials. ASTM Standards on Environmental Site Assessments for Commercial Real Estate, E1527-21. West Conshohocken, Pennsylvania: ASTM, 2021.
- DATAUSA. Economic profile of Beaumont, Texas. <https://datausa.io/profile/geo/beaumont-tx/#demographics>. Accessed January 2024.
- (EPA) EJScreen: Environmental Justice Screening and Mapping Tool [EJScreen: Environmental Justice Screening and Mapping Tool | US EPA](#). Accessed April 2024.
- (FEMA) Federal Emergency Management Agency. Flood Insurance Rate Map (FIRM) Panel No. 4854570045C , Jefferson County, Texas. 06 August 2002.
- (Handbook) *The Handbook of Texas Online*. "Geology," <<http://www.tsha.utexas.edu/handbook/online/articles/view/GG/swgqz.html>>. Accessed 16 August 2011.
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- (TCEQ) Texas Commission on Environmental Quality. 2022 Texas 303(d) List. [https://www.tceq.texas.gov/assets/public/waterquality/swqm/assess/20txir/2022\\_303d.pdf](https://www.tceq.texas.gov/assets/public/waterquality/swqm/assess/20txir/2022_303d.pdf). 2022.
- (THC) Texas Historical Commission. *Texas Archeological Sites Atlas* restricted database, <<http://www.pedernales.thc.state.tx.us/>>. Accessed May 2009.
- (TWDB) Texas Water Development Board. Water Information Integration and Dissemination System. TWDB Groundwater Database (ArcIMS), <[http://wiid.twdb.state.tx.us/ims/wm\\_drl/viewer.htm?DISCL=1&](http://wiid.twdb.state.tx.us/ims/wm_drl/viewer.htm?DISCL=1&)>. Accessed December 2023.
- (USFWS) US Department of the Interior, Fish and Wildlife Service. National Wetlands Inventory Maps; Voth, Texas quadrangle. Digital Data 2024.
- \_\_\_\_\_. IPac Information for Planning and Consultation, <<https://ecos.fws.gov/ipac/>>. 2024.
- (USGS) US Geological Survey. Voth, Texas 7.5-minute Series Topographic Quadrangle, 1993.
- (UT-BEG) University of Texas Bureau of Economic Geology. *Geologic Atlas of Texas*, Beaumont Sheet. The University of Texas at Austin. Revised 1992.

**ATTACHMENT 1**  
**PROJECT DESCRIPTION**  
**AND**  
**H&H INFORMATION**

**ATTACHMENT 2**  
**AGENCY CONSULTATION/LETTERS OF CONCURRENCE**



**ATTACHMENT 3**  
**8-STEP DOCUMENTATION**

**ATTACHMENT 4**  
**SECTION 404 DETERMINATION INFORMATION**

**ATTACHMENT 5**  
**HAZARDOUS MATERIALS AGENCY DATABASE SEARCH**

**ATTACHMENT 6**  
**CULTURAL RESOURCES CONSULTATION LETTERS**

**ATTACHMENT 7**  
**DRAFT NOTICE OF AVAILABILITY**



**FEMA**

**FINDING OF NO SIGNIFICANT IMPACT  
JEFFERSON COUNTY DRAINAGE DISTRICT NO. 6  
BORLEY HEIGHTS RELIEF PROJECT  
JEFFERSON COUNTY, TEXAS  
EMT-2021-FM-022-0005**

**BACKGROUND**

In accordance with the Federal Emergency Management Agency's (FEMA) Instruction 108-1-1, an Environmental Assessment (EA) 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). The purpose of the Project is to provide flood relief to residents of Borley Heights Community and their homes/personal property in Jefferson County, Texas. This EA informed FEMA's decision on whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

Jefferson County Drainage District No. 6 (JCDD6) has applied through the Texas Water Development Board (TWDB) for FEMA Flood Mitigation Assistance (FMA) funding, project EMT-2021-FM-022-0005, to provide improved drainage for the Borley Heights neighborhood south of Tram Road, thus significantly reducing flooding to structures in the Benefit Area. Through FMA, FEMA provides grants for flood hazard mitigation projects as well as plan development. The FMA Program is authorized by Section 1366 of the National Flood Insurance Act of 1968, as amended (NFIA), 42. U.S.C. 4104c with the purpose of reducing or eliminating claims under the National Flood Insurance Program (NFIP).

Three project alternatives were evaluated in this EA: 1) No Action Alternative; 2) Buyout Alternative and 3) Proposed Action Alternative.

Under the No Action Alternative, the expenditure of grant funds and construction of the proposed project would not take place. Thus, the No Action Alternative would result in the continued frequent and severe structure flooding in the Borley Heights Benefit Area. The No Action Alternative would not meet the purpose and need of the proposed project.

Under the Buyout Alternative, JCDD6 would buyout approximately 167 existing homes within the Benefit Area. Based on JCCAD (Jefferson County Central Appraisal District) values plus ancillary fees, it is estimated that it would cost in excess of \$20 million to acquire and demolish the homes and relocate residents for which benefits were calculated. If this alternative were to be determined the least-damaging practicable alternative and pursued further, it is likely that funding for the buyout would be sought from federal sources and local matches.



Under the Proposed Action Alternative, JCDD6 would construct new canal crossings at each street which will be adequately sized to properly drain the streets under the Beaumont Irrigation Canal (BI Canal). Each of these canal crossings will be fitted with one-way flap gates at the downstream ends of the culverts to prevent backflow. In order to convey the flood flows from the new culverts successfully into Griffing Ditch, a new channel will be constructed along the west side of the BI Canal at the receiving end of the culverts which will then flow into an existing channel that connects to Griffing Ditch. The existing ditch will also be improved with this project. Right-of-way will be acquired for the new channel and widening of the existing ditch. The project will have no adverse downstream impact because Griffing Ditch, the receiving stream and its crossings, were enlarged with a previous FEMA grant to handle this additional flow. In addition to the new culverts and existing culvert to be fitted with one-way flap gates, the existing culverts at Griffing Ditch will also be fitted with flap gates as part of this project.

Two conveyance channels on the east side of the BI Canal will be enlarged and concrete lined to convey the floodwaters efficiently to the new culverts constructed. Six-inch reinforced concrete slope paving will be constructed at areas of anticipated high-water velocities for erosion control. Twelve-inch reinforced concrete headwalls will be constructed at the new canal crossings. Installation of the canal crossings will involve damming of the BI canal with earthen dams with Lower Neches Valley Authority (LNVA) cooperation. The canal levees will be excavated along with the canal bottom for placement of the culverts. All culverts will be backfilled with cement stabilized sand. The canal will be reconstructed over the new culverts by compacting the removed material back in place in lifts to insure proper compaction. All disturbed areas will be seeded with native grasses. Excess material from excavation will be placed and spread on nearby upland areas.

A public notice was posted in the Beaumont Enterprise and on FEMA's website. The draft EA was made available for public comment for 30 days on FEMA's website and upon request in hard or electronic copy from FEMA. No comments were received from the public during the comment period.

## FINDING OF NO SIGNIFICANT IMPACT

The Proposed Action as described in the EA would not significantly impact geology, seismicity, climate change, ground water resources, developed water resources, coastal resources, threatened and endangered species, coastal zone resources, cultural resources, hazardous materials, minority and low-income populations, or public services and utilities. During construction, short-term, minor impacts to soils, air quality, surface water quality, migratory birds, wildlife communities and habitat, noise, and traffic are anticipated. The Proposed Alternative is anticipated to impact wetlands that are presumed to be non-jurisdictional pending USACE's official determination, but the impacts are not significant and should not be considered adverse impacts. The project would result in long term beneficial impacts to hydraulic conditions and public health and safety. No long-term significant adverse impacts are anticipated. All adverse impacts to the proposed project site and surrounding areas would be minimized and/or mitigated through required project conditions.

## CONDITIONS

The following conditions must be met as part of this project. Failure to comply with these conditions may jeopardize the receipt of federal funding.

1. This review does not address all federal, state, and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state and local environmental permits and clearances may jeopardize federal funding.
2. Any change to the approved scope of work will require re-evaluation for compliance with NEPA and other Laws and Executive Orders.
3. JCDD6 will either utilize excavated soils on-site for fill material, dispose of excess soils at existing permitted landfills or sandpits, or will coordinate with landowners in the project area regarding placement of any excess excavated soils. Excavated soils that are placed on lands outside of the project footprint must be placed outside of wetlands, the 100-year floodplain, and any National Register of Historic Places (NRHP)-listed or eligible historic sites. Soil placement areas must not be graded or otherwise excavated for the sole purpose of placement of fill.
4. Contractors will water down construction areas as needed to mitigate excess dust. Vehicle running times on site will be kept to a minimum and engines will be properly maintained.
5. JCDD6 must comply with conditions of Texas Pollutant Discharge Elimination System (TPDES) Construction Storm Water General Permit TXR 150000, including preparation of a Storm Water Pollution Prevention Plan, filing a Notice of Intent (NOI) with the Texas Commission on Environmental Quality (TCEQ) prior to the start of construction. Monitoring and maintenance of emplaced Best Management Practices (BMPs) for storm water management must be conducted on a regular basis as prescribed by the TPDES construction General Permit.
6. JCDD6 will ensure that best management practices are implemented to prevent erosion and sedimentation to surrounding, nearby or adjacent wetlands. This includes equipment storage and staging of construction to prevent erosion and sedimentation.
7. JCDD6 is responsible for coordinating with and obtaining any required Section 404 Permit(s) from the United States Army Corps of Engineers (USACE) and/or any Section 401/402 Permit(s) from the State prior to initiating work. The applicant must comply with all conditions of the required permit(s). All coordination pertaining to these activities should be retained as part of the project file in accordance with the respective grant program instructions.

8. JCDD6 must coordinate with the local floodplain administrator, obtain required permits prior to initiating work, and comply with any conditions of the permit to ensure harm to and from the floodplain is minimized. All coordination pertaining to these activities should be retained as part of the project file in accordance with program instructions.
9. To minimize impacts to migratory bird species, applicant will limit vegetation management work during the peak migratory bird-nesting period of March through August as much as possible to avoid destruction of individuals, nests, or eggs. If vegetation reduction activities must occur during the nesting season, applicant will deploy a qualified biological monitor with experience conducting breeding bird surveys to survey the vegetation management area for nests prior to conducting work. The biologist will determine the appropriate timing of surveys in advance of work activities. If an occupied migratory bird nest is found, work within a buffer zone around the nest will be postponed until the nest is vacated and juveniles have fledged. The biological monitor will determine an appropriate buffering radius based on species present, real-time site conditions, and proposed vegetation management methodology and equipment. For work near an occupied nest, the biological monitor would prepare a report documenting the migratory species present and the rationale for the buffer radius determination and submit that report to FEMA for inclusion in project files.
10. 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. JCDD6 will inform FEMA immediately, and FEMA will consult with the 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 National Historic Preservation Act (NHPA) and its implementing regulations.
11. Unusable equipment, debris and material shall be disposed of in an approved manner and location. In the event significant items (or evidence thereof) are discovered during implementation of the Project, applicant shall handle, manage, and dispose of petroleum products, hazardous materials and toxic waste in accordance to the requirements and to the satisfaction of the governing local, state and federal agencies.
12. To reduce noise levels during construction, 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.
13. JCDD6 will revegetate disturbed areas.
14. If any undocumented utilities, pipelines, cable, or wells are encountered during construction, the applicant would stop activities and report to the appropriate agency.

15. JCDD6 will implement traffic control procedures as needed.

## CONCLUSION

Based on the findings of the EA, coordination with the appropriate agencies, comments from the public, and adherence to the project conditions set forth in this FONSI, FEMA has determined that the proposed project qualifies as a major federal action that will not significantly affect the quality of the natural and human environment, nor does it have the potential for significant cumulative effects. As a result of this FONSI, an EIS will not be prepared (FEMA Instruction 108-1-1) and the proposed project as described in the attached EA may proceed.

## APPROVAL AND ENDORSEMENT

LaToya Leger-Taylor  
Regional Environmental Officer  
FEMA Region 6

Marty Chester  
Hazard Mitigation Assistance Non-Disaster Branch Chief  
FEMA Region 6



Environmental Services, Inc.

6 October 2020

Carlos Villarreal  
Natural Resources Conservation Service  
US Department of Agriculture  
101 South Main  
Temple, Texas 76501-6624

**RE: Proposed Jefferson County Drainage District No. 6 Project:  
Borley Heights Drainage Relief  
Beaumont, Jefferson County, Texas  
HJN 200210-001EA**

Dear Mr. Villarreal:

Jefferson County Drainage District No. 6 (DD6) implements and maintains drainage projects throughout the Districts' 486 square mile area located in Jefferson County and includes the cities of Beaumont, Bevil Oaks, China and Nome, Texas. DD6 also works with other jurisdictions to indentify flood-prone areas, to encourage inclusion of flood-damage avoidance measures in land development. DD6 has applied to the Federal Emergency Management Agency (FEMA) for grant funding to assist with the construction of new ditches to facilitate improved drainage to the Borley Heights subdivision in north Beaumont. Environmental reviews are required under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality Guidelines, 40 CFR Parts 1500 to 1508. This coordination letter is being provided for your agency's' response in conformance with NEPA procedures.

The Borley Heights Relief is a drainage project that will address shallow and moderate home flooding that has and will reoccur in the Borley Heights Addition. The Borley Heights Addition drains into a tributary of Griffing Ditch through a single box culvert under the Lower Neches Valley Authority (LNVA) Beaumont Irrigation Canal (BI Canal). This box culvert is inadequate to convey the flood flows without home flooding occurring. This problem will be eliminated with this project by constructing new canal crossings of the BI Canal at each street which will be adequately sized to properly drain the streets under the BI Canal. Each of these canal crossings will be fitted with one-way flap gates at the downstream ends of the culverts to prevent backflow. In order to convey the flood flows from the new culverts successfully into Griffing Ditch, a new channel will be constructed along the west side of the BI Canal at the receiving end of the culverts which will then flow into an existing channel that connects to Griffing Ditch. The existing ditch will also be improved with this project. Right-of-way will be acquired for the new channel and widening of the existing ditch. The project will have no adverse downstream impact because Griffing Ditch, the receiving stream and its crossings, were enlarged with a previous FEMA grant to handle this additional flow. In addition to the new culverts and existing culvert to be fitted with one-way flap gates, the existing culverts at Griffing Ditch will also be fitted with flap gates as part of this project.

Appendix 1 contains maps depicting the location of the proposed ditch work, including an aerial view of the project area, soils map and a FEMA FIRM map of the project area (Appendix 1).

**CORPORATE HEADQUARTERS**

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*An LJA Company*

Land use of the surrounding areas includes residential and commercial to the north, east, and south, and largely undeveloped land to the west. On-site photographs are provided in Appendix 2.

Soils within the project footprint include Vamont clay, 0-1% and Texla silt loam, 0-1% (Appendix 1). Neither soil is listed as Prime Farmland Soil. On-site photographs are provided in Appendix 2.

Please review the attached figures and information concerning the proposed project to determine if the project is consistent with your agency's environmental regulations or policies. Please respond by letter at your earliest convenience. Your prompt attention to this matter would be greatly appreciated, as your signed concurrence letter is necessary to complete the application for grant funding from FEMA.

Please call me should you have any questions concerning this project or if I can be of any further assistance.

Sincerely,  
For Horizon Environmental Services, Inc.



C. Lee Sherrod  
Senior Project Manager





Environmental Services, Inc.

6 October 2020

Consistency Review Coordinator  
Texas General Land Office  
P. O. Box 12873  
Austin, Texas 78711-2873  
Federal Consistency <Federal.Consistency@GLO.TEXAS.GOV>

**RE: Proposed Jefferson County Drainage District No. 6 Project:  
Borley Heights Drainage Relief  
Beaumont, Jefferson County, Texas  
HJN 200210-001EA**

Dear Sirs:

Jefferson County Drainage District No. 6 (DD6) implements and maintains drainage projects throughout the Districts' 486 square mile area located in Jefferson County and includes the cities of Beaumont, Bevil Oaks, China and Nome, Texas. DD6 also works with other jurisdictions to indentify flood-prone areas, to encourage inclusion of flood-damage avoidance measures in land development. DD6 has applied to the Federal Emergency Management Agency (FEMA) for grant funding to assist with the construction of new ditches to facilitate improved drainage to the Borley Heights subdivision in north Beaumont. Environmental reviews are required under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality Guidelines, 40 CFR Parts 1500 to 1508. This coordination letter is being provided for your agency's' response in conformance with NEPA procedures.

The Borley Heights Relief is a drainage project that will address shallow and moderate home flooding that has and will reoccur in the Borley Heights Addition. The Borley Heights Addition drains into a tributary of Griffing Ditch through a single box culvert under the Lower Neches Valley Authority (LNVA) Beaumont Irrigation Canal (BI Canal). This box culvert is inadequate to convey the flood flows without home flooding occurring. This problem will be eliminated with this project by constructing new canal crossings of the BI Canal at each street which will be adequately sized to properly drain the streets under the BI Canal. Each of these canal crossings will be fitted with one-way flap gates at the downstream ends of the culverts to prevent backflow. In order to convey the flood flows from the new culverts successfully into Griffing Ditch, a new channel will be constructed along the west side of the BI Canal at the receiving end of the culverts which will then flow into an existing channel that connects to Griffing Ditch. The existing ditch will also be improved with this project. Right-of-way will be acquired for the new channel and widening of the existing ditch. The project will have no adverse downstream impact because Griffing Ditch, the receiving stream and its crossings, were enlarged with a previous FEMA grant to handle this additional flow. In addition to the new culverts and existing culvert to be fitted with one-way flap gates, the existing culverts at Griffing Ditch will also be fitted with flap gates as part of this project.

Appendix 1 contains maps depicting the location of the proposed ditch work, including an aerial view of the project area and a FEMA FIRM map of the project area (Appendix 1). Note that the

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*An LJA Company*

project area is not located within the FEMA floodplain. Land use of the surrounding areas includes residential and commercial to the north, east, and south, and largely undeveloped land to the west. On-site photographs are provided in Appendix 2.

The project has been designed to avoid impacts to regulated wetlands and waters of the US. On-site photographs are provided in Appendix 2.

The project is located west and north of the Texas Coastal Zone Management Boundary (Appendix 1).

Please review the attached figures and information concerning the proposed project to determine if the project is consistent with your agency's environmental regulations or policies. Please respond by letter at your earliest convenience. Your prompt attention to this matter would be greatly appreciated, as your signed concurrence letter is necessary to complete the application for grant funding from FEMA.

Please call me should you have any questions concerning this project or if I can be of any further assistance.

Sincerely,  
For Horizon Environmental Services, Inc.



C. Lee Sherrod  
Senior Project Manager



Environmental Services, Inc.

6 October 2020

County Flood Plain Administrator  
County of Jefferson  
1149 Pearl Street, 5<sup>th</sup> Floor  
Beaumont, Texas 77701

**RE: Proposed Jefferson County Drainage District No. 6 Project:  
Borley Heights Drainage Relief  
Beaumont, Jefferson County, Texas  
HJN 200210-001EA**

Dear Sirs:

Jefferson County Drainage District No. 6 (DD6) implements and maintains drainage projects throughout the Districts' 486 square mile area located in Jefferson County and includes the cities of Beaumont, Bevil Oaks, China and Nome, Texas. DD6 also works with other jurisdictions to identify flood-prone areas, to encourage inclusion of flood-damage avoidance measures in land development. DD6 has applied to the Federal Emergency Management Agency (FEMA) for grant funding to assist with the construction of new ditches to facilitate improved drainage to the Borley Heights subdivision in north Beaumont. Environmental reviews are required under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality Guidelines, 40 CFR Parts 1500 to 1508. This coordination letter is being provided for your agency's response in conformance with NEPA procedures.

The Borley Heights Relief is a drainage project that will address shallow and moderate home flooding that has and will reoccur in the Borley Heights Addition. The Borley Heights Addition drains into a tributary of Griffing Ditch through a single box culvert under the Lower Neches Valley Authority (LNVA) Beaumont Irrigation Canal (BI Canal). This box culvert is inadequate to convey the flood flows without home flooding occurring. This problem will be eliminated with this project by constructing new canal crossings of the BI Canal at each street which will be adequately sized to properly drain the streets under the BI Canal. Each of these canal crossings will be fitted with one-way flap gates at the downstream ends of the culverts to prevent backflow. In order to convey the flood flows from the new culverts successfully into Griffing Ditch, a new channel will be constructed along the west side of the BI Canal at the receiving end of the culverts which will then flow into an existing channel that connects to Griffing Ditch. The existing ditch will also be improved with this project. Right-of-way will be acquired for the new channel and widening of the existing ditch. The project will have no adverse downstream impact because Griffing Ditch, the receiving stream and its crossings, were enlarged with a previous FEMA grant to handle this additional flow. In addition to the new culverts and existing culvert to be fitted with one-way flap gates, the existing culverts at Griffing Ditch will also be fitted with flap gates as part of this project.

Appendix 1 contains maps depicting the location of the proposed ditch work, including an aerial view of the project area and a FEMA FIRM map of the project area (Appendix 1). Land use of

**CORPORATE HEADQUARTERS**

1507 South IH 35 ★ Austin, Texas 78741 ★ 512.328.2430 ★ Fax 512.328.1804 ★ [www.horizon-esi.com](http://www.horizon-esi.com)  
*An LJA Company*

the surrounding areas includes residential and commercial to the north, east, and south, and largely undeveloped land to the west. On-site photographs are provided in Appendix 2.

Note that the project area is not located within the FEMA 100-year floodplain. On-site photographs are provided in Appendix 2.

Please review the attached figures and information concerning the proposed project to determine if the project is consistent with your agency's environmental regulations or policies. Please respond by letter at your earliest convenience. Your prompt attention to this matter would be greatly appreciated, as your signed concurrence letter is necessary to complete the application for grant funding from FEMA.

Please call me should you have any questions concerning this project or if I can be of any further assistance.

Sincerely,  
For Horizon Environmental Services, Inc.



C. Lee Sherrod  
Senior Project Manager



Environmental Services, Inc.

6 October 2020

Intergovernmental Relations Division  
Texas Commission on Environmental Quality  
12100 Park 35 Circle  
Austin, Texas 78753

**RE: Proposed Jefferson County Drainage District No. 6 Project:  
Borley Heights Drainage Relief  
Beaumont, Jefferson County, Texas  
HJN 200210-001EA**

Dear Sirs:

Jefferson County Drainage District No. 6 (DD6) implements and maintains drainage projects throughout the Districts' 486 square mile area located in Jefferson County and includes the cities of Beaumont, Bevil Oaks, China and Nome, Texas. DD6 also works with other jurisdictions to indentify flood-prone areas, to encourage inclusion of flood-damage avoidance measures in land development. DD6 has applied to the Federal Emergency Management Agency (FEMA) for grant funding to assist with the construction of new ditches to facilitate improved drainage to the Borley Heights subdivision in north Beaumont. Environmental reviews are required under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality Guidelines, 40 CFR Parts 1500 to 1508. This coordination letter is being provided for your agency's' response in conformance with NEPA procedures.

The Borley Heights Relief is a drainage project that will address shallow and moderate home flooding that has and will reoccur in the Borley Heights Addition. The Borley Heights Addition drains into a tributary of Griffing Ditch through a single box culvert under the Lower Neches Valley Authority (LNVA) Beaumont Irrigation Canal (BI Canal). This box culvert is inadequate to convey the flood flows without home flooding occurring. This problem will be eliminated with this project by constructing new canal crossings of the BI Canal at each street which will be adequately sized to properly drain the streets under the BI Canal. Each of these canal crossings will be fitted with one-way flap gates at the downstream ends of the culverts to prevent backflow. In order to convey the flood flows from the new culverts successfully into Griffing Ditch, a new channel will be constructed along the west side of the BI Canal at the receiving end of the culverts which will then flow into an existing channel that connects to Griffing Ditch. The existing ditch will also be improved with this project. Right-of-way will be acquired for the new channel and widening of the existing ditch. The project will have no adverse downstream impact because Griffing Ditch, the receiving stream and its crossings, were enlarged with a previous FEMA grant to handle this additional flow. In addition to the new culverts and existing culvert to be fitted with one-way flap gates, the existing culverts at Griffing Ditch will also be fitted with flap gates as part of this project.

Appendix 1 contains maps depicting the location of the proposed ditch work, including an aerial view of the project area and a FEMA FIRM map of the project area (Appendix 1). Note that the project area is not located within the FEMA floodplain. Land use of the surrounding areas

**CORPORATE HEADQUARTERS**

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*An LJA Company*

includes residential and commercial to the north, east, and south, and largely undeveloped land to the west. On-site photographs are provided in Appendix 2.

Minimal and temporary diesel emissions and fugitive dust emissions from equipment during construction are possible. Once construction is complete there will be no motorized equipment associated with this project. Best management practices for temporary erosion and sedimentation control will be implemented during project construction.

Please review the attached figures and information concerning the proposed project to determine if the project is consistent with your agency's environmental regulations or policies. Please respond by letter at your earliest convenience. Your prompt attention to this matter would be greatly appreciated, as your signed concurrence letter is necessary to complete the application for grant funding from FEMA.

Please call me should you have any questions concerning this project or if I can be of any further assistance.

Sincerely,  
For Horizon Environmental Services, Inc.



C. Lee Sherrod  
Senior Project Manager





Environmental Services, Inc.

9 October 2020

Texas Parks and Wildlife Department  
Wildlife Habitat Assessment Program  
4200 Smith School Road  
Austin, Texas 78744

**RE: Proposed Jefferson County Drainage District No. 6 Project:  
Borley Heights Drainage Relief  
Beaumont, Jefferson County, Texas  
HJN 200210-001EA**

Dear Sirs:

Jefferson County Drainage District No. 6 (DD6) implements and maintains drainage projects throughout the Districts' 486 square mile area located in Jefferson County and includes the cities of Beaumont, Bevil Oaks, China and Nome, Texas. DD6 also works with other jurisdictions to identify flood-prone areas, to encourage inclusion of flood-damage avoidance measures in land development. DD6 has applied to the Federal Emergency Management Agency (FEMA) for grant funding to assist with the construction of new ditches to facilitate improved drainage to the Borley Heights subdivision in north Beaumont. Environmental reviews are required under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality Guidelines, 40 CFR Parts 1500 to 1508. This coordination letter is being provided for your agency's response in conformance with NEPA procedures.

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*An LJA Company*

includes residential and commercial to the north, east, and south, and largely undeveloped land to the west.

The site is generally characterized as woodland with associated open grassland. Trees and shrubs within the woodland include loblolly pine (*Pinus taeda*), sugarberry (*Celtis laevigata*), sweetgum (*Liquidambar styraciflua*), Chinese tallow (*Triadica sebifera*), water oak (*Quercus nigra*), and yaupon (*Ilex vomitoria*). Common species in the grassland include *Paspalum*, goldenrod (*Solidago sempervirens*), dewberry (*Rubus trivialis*), baccharis (*Baccharis* sp.), Brazilian vervain (*Verbena brasiliensis*), sumpweed (*Iva annua*), and ragweed (*Ambrosia* spp) with scattered tallow and water oak. On-site photographs are provided in Appendix 2.

Federally listed threatened or endangered (T/E) species known to occur in Jefferson County include piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), West Indian manatee (*Trichechus manatus*), 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*) (IPAC, 2020 – Appendix 3). No federally designated critical habitat is present in the project area. Horizon observed no federally listed T/E species or potential habitats on or within the immediate vicinity of the project area. We believe that a "No Effect" finding is appropriate for this project.

Please review the attached figures and information concerning the proposed project to determine if the project is consistent with your agency's environmental regulations or policies. Please respond by letter at your earliest convenience. Your prompt attention to this matter would be greatly appreciated, as your signed concurrence letter is necessary to complete the application for grant funding from FEMA.

Please call me should you have any questions concerning this project or if I can be of any further assistance.

Sincerely,  
For Horizon Environmental Services, Inc.



C. Lee Sherrod  
Senior Project Manager



Environmental Services, Inc.

6 October 2020

NFIP State Coordinator  
Texas Water Development Board  
P. O. Box 13231  
Austin, Texas 78711-3231

**RE: Proposed Jefferson County Drainage District No. 6 Project:  
Borley Heights Drainage Relief  
Beaumont, Jefferson County, Texas  
HJN 200210-001EA**

Dear Sirs:

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includes residential and commercial to the north, east, and south, and largely undeveloped land to the west. On-site photographs are provided in Appendix 2.

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Please call me should you have any questions concerning this project or if I can be of any further assistance.

Sincerely,  
For Horizon Environmental Services, Inc.



C. Lee Sherrod  
Senior Project Manager



Environmental Services, Inc.

9 October 2020

US Fish and Wildlife Service  
Ecological Services Field Office – Clear Lake  
17629 El Camino Real, Suite 211  
Houston, Texas 77058-3051

**RE: Proposed Jefferson County Drainage District No. 6 Project:  
Borley Heights Drainage Relief  
Beaumont, Jefferson County, Texas  
IPAC Consultation Code 02ETTX00-2021-SLI-0083  
HJN 200210-001EA**

Dear Sirs:

Jefferson County Drainage District No. 6 (DD6) implements and maintains drainage projects throughout the Districts' 486 square mile area located in Jefferson County and includes the cities of Beaumont, Bevil Oaks, China and Nome, Texas. DD6 also works with other jurisdictions to identify flood-prone areas, to encourage inclusion of flood-damage avoidance measures in land development. DD6 has applied to the Federal Emergency Management Agency (FEMA) for grant funding to assist with the construction of new ditches to facilitate improved drainage to the Borley Heights subdivision in north Beaumont. Environmental reviews are required under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality Guidelines, 40 CFR Parts 1500 to 1508. This coordination letter is being provided for your agency's response in conformance with NEPA procedures.

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*An LJA Company*

project area is not located within the FEMA floodplain. Land use of the surrounding areas includes residential and commercial to the north, east, and south, and largely undeveloped land to the west.

The site is generally characterized as woodland with associated open grassland. Trees and shrubs within the woodland include loblolly pine (*Pinus taeda*), sugarberry (*Celtis laevigata*), sweetgum (*Liquidambar styraciflua*), Chinese tallow (*Triadica sebifera*), water oak (*Quercus nigra*), and yaupon (*Ilex vomitoria*). Common species in the grassland include *Paspalum*, goldenrod (*Solidago sempervirens*), dewberry (*Rubus trivialis*), baccharis (*Baccharis* sp.), Brazilian vervain (*Verbena brasiliensis*), sumpweed (*Iva annua*), and ragweed (*Ambrosia* spp) with scattered tallow and water oak. On-site photographs are provided in Appendix 2.

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We believe that a "No Effect" finding is appropriate for this project. We understand that the Service does not reply in writing to No Effect determinations. Therefore, we are requesting herein whether your office has any additional information on the potential occurrence of listed T/E species in the project vicinity that we should consider in making a findings recommendation to FEMA.

Please review the attached figures and information concerning the proposed project to determine if the project is consistent with your agency's environmental regulations or policies. Please respond by letter at your earliest convenience. Your prompt attention to this matter would be greatly appreciated, as your signed concurrence letter is necessary to complete the application for grant funding from FEMA.

Please call me should you have any questions concerning this project or if I can be of any further assistance.

Sincerely,  
For Horizon Environmental Services, Inc.



C. Lee Sherrod  
Senior Project Manager





TEXAS GENERAL LAND OFFICE  
GEORGE P. BUSH, COMMISSIONER

October 12, 2020

Horizon Environmental Services, Inc.  
1507 South IH 35  
Austin, Texas 78741  
ATTN: C. Lee Sherrod

**Re: Jefferson County Drainage District No. 6  
Borley Heights Drainage Relief  
Beaumont, Jefferson County, Texas  
CMP#: 21-1045-F5**

Dear Mr. Sherrod:

It has been determined that the project referenced above is outside the Texas Coastal Management Program (CMP) boundary. Therefore, it is not subject to consistency review under the Texas CMP.

Thank you for the opportunity to comment.

If you have any questions or concerns, please contact me at (409) 741-4057 or at [federal.consistency@glo.texas.gov](mailto:federal.consistency@glo.texas.gov)

Sincerely,

Allison Buchtien  
Coastal Management Program  
Texas General Land Office

Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Toby Baker, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

December 18, 2020

Lee Sherrod  
Project Manager  
Horizon Environmental Services  
1507 South IH 35  
Austin, Texas 78741

Via: E-mail

Re: TCEQ NEPA Request #2020-258. Improved Drainage Project. Jefferson County.

Dear Ms. Fields,

The Texas Commission on Environmental Quality (TCEQ) has reviewed the above-referenced project and offers the following comments:

In accordance with the general conformity regulations in 40 CFR Part 93, this proposed action was reviewed for air quality impact. The proposed action is located in Jefferson County, which is currently designated as attainment/unclassifiable for the National Ambient Air Quality Standards for all six criteria air pollutants. The TCEQ is evaluating the South Coast Air Quality Management District v. EPA, No. 15-1115 (D.C. Cir. 2018), which may reinstate general conformity requirements for Jefferson County as part of the Beaumont-Port Arthur maintenance area for the 1997 eight-hour ozone NAAQS.

Volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) are precursor pollutants that lead to the formation of ozone. A general conformity demonstration may be required when the total projected direct and indirect VOC or NO<sub>x</sub> emissions from an applicable action are equal to or exceed the *de minimis* emissions level, which is 100 tons per year (tpy) for ozone NAAQS maintenance areas. Please consult with the lead federal agency associated with this project for National Environmental Policy Act compliance and/or with the United States Environmental Protection Agency to determine whether this proposed action is subject to federal general conformity regulations.

We recommend the environmental assessment address actions that will be taken to prevent surface and groundwater contamination.

Any debris or waste disposal should be at an appropriately authorized disposal facility.

Thank you for the opportunity to review this project. If you have any questions, please contact the agency NEPA coordinator at (512) 239-0010 or [NEPA@tceq.texas.gov](mailto:NEPA@tceq.texas.gov)

Sincerely,

A handwritten signature in black ink, appearing to read "R. Vise".

Ryan Vise,  
Division Director  
External Relations

November 13, 2020

Mr. C. Lee Sherrod  
Horizon Environmental Services, Inc.  
1507 South IH 35  
Austin TX 78741

RE: Proposed Jefferson County Drainage District No. 6 Project: Borley Heights  
Drainage Relief, HJN 200210-001 EA; Jefferson County, Texas

Dear Mr. Sherrod:

Texas Parks and Wildlife Department (TPWD) received the request for review of the proposed work referenced above for rare, threatened and endangered species.

**Project Description**

Jefferson County Drainage District No. 6 (DD6) has applied to the Federal Emergency Management Agency (FEMA) for grant funding to assist with the construction of new ditches to facilitate improved drainage to the Borley Heights subdivision in north Beaumont. DD6 proposes to construct new canal crossings of the BI Canal at each street which will drain the streets under the BI Canal. Each of these canal crossings will be fitted with one-way flap gates at the downstream ends of the culverts to prevent backflow. To convey the flood flows into Grilling Ditch, a new channel will be constructed along the west side of the BI Canal at the receiving end of the culverts which will then flow into an existing channel that connects to Grilling Ditch. The existing ditch will also be improved with this project. Right-of-way (ROW) will be acquired for the new channel and widening of the existing ditch. Grilling Ditch was enlarged with a previous FEMA grant to handle this additional flow. In addition to the new culverts and existing culvert to be fitted with one-way flap gates, the existing culverts at Grilling Ditch will also be fitted with flap gates.

The project site is located primarily within undeveloped land on the west side of a residential area. Forested land will be cleared to develop the new ROW.

TPWD, as the state agency with primary responsibility for protecting the state's fish and wildlife resources and in accordance with the authority granted by Parks and Wildlife Code §12.0011, hereby provides the following recommendations to minimize the adverse impacts to the state's fish and wildlife resources in the construction and operation of the proposed drainage facilities.

## **Construction Recommendations**

### *General Construction Recommendations*

**Recommendation:** TPWD recommends the judicious use and placement of sediment control fence to exclude wildlife from the construction area. In many cases, sediment control fence placement for the purposes of controlling erosion and protecting water quality can be modified minimally to also provide the benefit of excluding wildlife access to construction areas. The exclusion fence should be buried at least six inches and be at least 24 inches high. The exclusion fence should be maintained for the life of the project and only removed after the construction is completed and the disturbed site has been revegetated. Construction personnel should be encouraged to examine the inside of the exclusion area daily to determine if any wildlife species have been trapped inside the area of impact and provide safe egress opportunities prior to initiation of construction activities.

**Recommendation:** For soil stabilization and/or revegetation of disturbed areas within the proposed project area, TPWD recommends erosion and seed/mulch stabilization materials that avoid entanglement hazards to snakes and other wildlife species. Because the mesh found in many erosion control blankets or mats pose an entanglement hazard to wildlife, TPWD recommends the use of no-till drilling, hydromulching and/or hydroseeding rather than erosion control blankets or mats due to a reduced risk to wildlife. If erosion control blankets or mats will be used, the product should contain no netting or contain loosely woven, natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic mesh matting and hydromulch containing microplastics should be avoided.

**Recommendation:** During construction, operation, and maintenance of the proposed facility, TPWD recommends observing slow (25 miles per hour, or less) speed limits within the project site. Reduced speed limits would allow personnel to see wildlife in the vehicle path and avoid harming them.

### *Federal Law: Migratory Bird Treaty Act*

The Migratory Bird Treaty Act (MBTA) prohibits direct and affirmative purposeful action that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control, except when specifically authorized by the Department of the Interior. This protection applies to most native bird species, including ground nesting species. The U.S. Fish and Wildlife Service (USFWS) Migratory Bird Office can be contacted at (505) 248-7882 for more information on potential impacts to migratory birds.

Within the project area, potential impacts to migratory birds may occur during site preparation and grading activities through the disturbance of existing vegetation and bare ground that may harbor active bird nests, including nests that may occur in grass, shrubs and trees and on bare ground.

**Recommendation:** TPWD recommends any vegetation clearing be scheduled outside of the general bird nesting season of March 15th to September 15th; however, if

clearing must occur during nesting season, nest surveys should be conducted prior to clearing. Nest surveys should be conducted no more than five days prior to scheduled clearing to maximize detection of active nests. If nests are observed during surveys, a vegetation buffer area of no less than 150-feet in diameter should remain around the nest until all young have fledged.

*State Law: Parks and Wildlife Code – Chapter 64, Birds*

Texas Parks and Wildlife (TPW) Code Section 64.002, regarding protection of nongame birds, provides that no person may catch, kill, injure, pursue, or possess a bird that is not a game bird. TPW Code Section 64.003, regarding destroying nests or eggs, provides that no person may destroy or take the nests, eggs, or young and any wild game bird, wild bird, or wild fowl.

**Recommendation:** Please review the *Federal Law: Migratory Bird Treaty Act* section above for recommendations as they are also applicable for Chapter 64 of the TPW Code compliance.

*Species of Concern/Special Features*

In addition to state and federally protected species, TPWD tracks special features, natural communities, and rare species that are not listed as threatened or endangered but are considered to be species of greatest conservation need (SGCN). TPWD actively promotes their conservation and considers it important to evaluate and, if necessary, minimize impacts to rare species and their habitat to reduce the likelihood of endangerment and preclude the need to list. These species and communities are tracked in the Texas Natural Diversity Database (TXNDD).

**Recommendation:** The applicant should review the TPWD county list of rare and protected species for Jefferson County because SGCN could be present within the project area depending upon habitat availability. TPWD Annotated County lists are available online using the TPWD Rare, Threatened, and Endangered Species of Texas (RTEST) web application. The USFWS should be contacted for species occurrence data, guidance, permitting, survey protocols, and mitigation for federally listed species.

Determining the actual presence of a species in a given area depends on many variables including daily and seasonal activity cycles, environmental activity cues, preferred habitat, transiency and population density (both wildlife and human). The absence of a species can be demonstrated only with great difficulty and then only with repeated negative observations, taking into account all the variable factors contributing to the lack of detectable presence. If encountered during construction, measures should be taken to avoid impacting all wildlife, regardless of listing status.

**Recommendation:** If during construction, the project area is found to contain rare species, natural plant communities, or special features, TPWD recommends that precautions be taken to avoid impacts to them.

**Recommendation:** Implementation of the *General Construction Recommendations*, discussed above, would serve to minimize risk to many SGCN and other species of

C. Lee Sherrod  
Page 4  
November 13, 2020

wildlife.

### **Data Reporting and the Texas Natural Diversity Database**

TPWD maintains records of occurrence for SGCN within the TXNDD and these data are publicly available by request. The TXNDD is intended to assist users in avoiding harm to SGCN or significant ecological features. The TXNDD is updated continuously, and relies partially on information submitted by private parties, such as developers or their consultants. Given the small proportion of public versus private land in Texas, the TXNDD does not include a comprehensive inventory of rare resources in the state.

**Recommendation:** To aid in the scientific knowledge of a species' status and current range, TPWD encourages reporting encounters of protected and rare species to the TXNDD according to the data submittal instructions found at the TPWD Texas Natural Diversity Database: Submit Data webpage.

Thank you for considering project impacts to Texas' fish, wildlife, and plant resources. If you have any questions, please contact me at Rachel.Lange@tpwd.texas.gov or (979)732-4213.

Sincerely,

A handwritten signature in black ink that reads "Rachel Lange". The signature is written in a cursive, flowing style.

Rachel Lange  
Wildlife Habitat Assessment Program  
Wildlife Division

RAL/45466



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

October 15, 2020

C. Lee Sherrod  
Senior Project Manager  
Horizon Environmental Services, Inc.  
1507 S IH-35  
Austin, TX 78741

Dear Mr. C. Lee Sherrod:

This is in response to your permit application from October 6, regarding the Borley Heights Drainage Relief in the Jefferson County Drainage District No. 6.

After review of the information provided for possible activity in a floodplain, our findings indicate that Jefferson County, as a participant in the National Flood Insurance Program (NFIP), has authority for projects within its jurisdiction. Please ensure all project activities are in accordance with the local flood damage prevention ordinance requirements in the community mentioned, as well as any other communities participating in the NFIP your project may occur within.

Thank you for bringing this matter to our attention. Please feel free to contact Sephra Thomas of our Community Assistance Program at 281-838-2160 or [sephra.thomas@twdb.texas.gov](mailto:sephra.thomas@twdb.texas.gov) if you have questions or need further information.

Sincerely,

Yi Ling Chan  
State Coordinator, National Flood Insurance Program

**Our Mission**

Leading the state's efforts in ensuring a secure water future for Texas and its citizens

**Board Members**

Peter M. Lake, Chairman | Kathleen Jackson, Board Member | Brooke T. Paup, Board Member  
Jeff Walker, Executive Administrator



## APPENDIX D

### JEFFERSON COUNTY DRAINAGE DISTRICT NO. 6 BORLEY HEIGHTS RELIEF PROJECT EXECUTIVE ORDER 11988/11990 FLOODPLAIN MANAGEMENT/WETLANDS 8-STEP DECISION MAKING PROCESS (44 CFR PART 9)

Executive Order 11988 (Floodplain Management) requires federal agencies “to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of the floodplain and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.” Executive Order (EO) 11990 Protection of Wetlands directs federal agencies to avoid long and short-term adverse impacts associated with the destruction or modification of wetlands; avoid direct or indirect support of new construction in wetlands; minimize the destruction, loss, or degradation of wetlands; preserve and enhance the natural and beneficial values served by wetlands; and (5) involve the public throughout the wetlands protection decision-making process. FEMA’s implementing regulations for both Executive Orders are at 44 CFR Part 9, which includes an eight-step decision-making process for compliance with this part. This eight-step process is applied to the proposed Borley Heights Relief Project. The project is located within the 100-year floodplain and wetlands. The steps in the decision-making process are as follows:

#### ***Step 1 Determine if the proposed action is located in the Base Floodplain and/or Wetland.***

The proposed Borley Heights Relief is a drainage project that will address shallow and moderate home flooding that has and will reoccur in the Borley Heights Addition. The Borley Heights Addition drains into a tributary of Griffing Ditch through a single box culvert under the Lower Neches Valley Authority (LNVA) Beaumont Irrigation Canal (BI Canal). This box culvert is inadequate to convey the flood flows without home flooding occurring. This problem will be eliminated with this project by constructing new canal crossings of the BI Canal at each street which will be adequately sized to properly drain the streets under the BI Canal. Each of these canal crossings will be fitted with one-way flap gates at the downstream ends of the culverts to prevent backflow. In order to convey the flood flows from the new culverts successfully into Griffing Ditch, a new channel will be constructed along the west side of the BI Canal at the receiving end of the culverts which will then flow into an existing channel that connects to Griffing Ditch. The existing ditch will also be improved with this project. Right-of-way will be acquired for the new channel and widening of the existing ditch. The project will have no adverse downstream impact because Griffing Ditch, the receiving stream and its crossings, were enlarged with a previous FEMA grant to handle this additional flow. In addition to the new culverts and existing culvert to be fitted with one-way flap gates, the existing culverts at Griffing Ditch will also be fitted with flap gates as part of this project.

According to the FEMA Flood Insurance Rate Map (FIRM) panel 4854570045C, dated 6 August 2002, portions of the proposed Borley Heights Relief Project are located within Zone AE, area of 100-year floodplain with “Base flood elevations determined”.

According to the Beaumont, Texas National Wetland Inventory (NWI) map (Figure 6) (USFWS, 2023), nearly the southwest portion of the subject site and portions of the surrounding lands are mapped as palustrine forested wetlands (PFOA1). Griffing Ditch, the BI Canal and the excavated ditch located along the south property boundary are mapped as excavated riverine features. Per the detailed jurisdictional determination for the project area conducted by Horizon in October 2020, approximately 1.21 acres of herbaceous and wooded wetlands were identified within the project footprint.

### ***Step 2 Early public notice (Preliminary Notice).***

An initial public notice regarding the project was posted on JCDD6 website <https://dd6.org/departments/projects/grant-projects/> (Accessed 04/09/24).

### ***Step 3 Identify and evaluate alternatives to locating in the base floodplain and wetland.***

Avoiding work in the floodplain and wetlands (No Action Alternative) would mean that no work would be carried out in floodplain and wetlands. No practicable alternative is available outside of the floodplain and wetland that would adequately and effectively mitigate the floodplain risk in the project area.

For an alternative Action (Buyout Alternative), JCDD6 would buyout approximately 167 existing homes within the Benefit Area. Based on JCCAD (Jefferson County Central Appraisal District) values plus ancillary fees, it is estimated that it would cost in excess of \$20 million to acquire and demolish the homes and relocate residents for which benefits were calculated. If this alternative were to be determined the least-damaging practicable alternative and pursued further, it is likely that funding for the buyout would be sought from federal sources and local matches.

### ***Step 4 Identify impacts of proposed action associated with occupancy or modification of the floodplain and wetland.***

Per 44 CFR 9.10 FEMA must consider whether the proposed action will result in an increase in the useful life of any structure or facility in question, maintain the investment at risk and exposure of lives to the flood hazard, or forego an opportunity to restore the natural and beneficial values served by floodplains or wetlands. FEMA should specifically consider and evaluate impacts associated with modification of floodplains; additional impacts which may occur when certain types of actions may support subsequent action which have additional impacts of their own; adverse impacts of the proposed actions on lives and property and on natural and beneficial floodplain values; and these three categories of factors: flood hazard-related factors, natural values-related factors, and factors relevant to a proposed action's effects on the survival and quality of wetlands.

Per 44 CFR, natural values-related factors include water resource values (natural moderation of floods, water quality maintenance, and ground water recharge); living resource values (fish and

wildlife and biological productivity); cultural resource values (archaeological and historic sites, and open space recreation and green belts); and agricultural, aqua cultural and forestry resource values. Factors relevant to a proposed action's effects on the survival and quality of wetlands include public health, safety, and welfare, including water supply, quality, recharge and discharge; pollution; flood and storm hazards; and sediment and erosion; maintenance of natural systems, including conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and food and fiber resources; and other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

The Borley Heights Relief Project will not negatively affect the functions and values of floodplains and wetlands. The proposed project will provide flood relief to all residential areas located within the Borley Heights drainage area through improved drainage. Despite the Project Area sitting within a mapped floodplain, the proposed project would provide a flood reduction benefit to all residential areas within the Borley Heights drainage area. Although the proposed action would reduce the risk to structures in the project areas, the proposed project would not promote future development within floodplains and wetlands beyond the current conditions. The proposed drainage improvements overall will create additional flood mitigation and will not negatively affect the 100-year floodplain. The proposed improvements are anticipated to extend the useful life of the surrounding communities' infrastructure.

Some wetlands are likely to be impacted by the proposed project. The wetland impacts are likely to have de minimis effects to water quality. In accordance with currently applicable rules and guidance in effect following the U.S. Supreme Court decision in *Sackett v EPA*, none of the identified wetlands within the project site have a continuous surface hydrologic connection to other waters of the US, and are therefore not considered jurisdictional under Section 404 of the Clean Water Act. The identified wetlands appear to have been created and/or altered several times as agricultural drainage ditch based on historical aerial images. No hydrologic connectivity was identified between the wetlands and a WOTUS. Due to the lack of connectivity to other water resources, and given proposed minimization measures provided in Step 5, the modification of these wetlands is not anticipated to affect public health significantly adversely, safety, welfare, water supply, recharge, pollution, water quality, productivity of natural flora and fauna, species and habitat diversity, hydrologic utility, timber/food/fiber, or public uses. The project as a whole will have beneficial impacts due to reduction in flooding risk.

Best management practices (BMPs) will be in place during construction to limit sedimentation into water bodies in the area. The project will not facilitate development in the 100-year floodplain and will not facilitate development (including critical facilities such as hospitals, emergency services, fire stations, etc.) in the 500-year floodplain to any greater degree than in non-floodplain areas of the community. Compliance with applicable ordinances and building codes will be required of any new development within floodplains and wetlands. Completing this project as described will reduce and minimize impacts to the floodplain and wetlands to the most practicable extent possible.

The function of the floodplain and wetlands is to provide flood storage and conveyance, filter nutrients and impurities from runoff, reduce flood velocities, reduce flood peaks, moderate temperature of water, reduce sedimentation, promote infiltration and aquifer recharge, and reduce

frequency and duration of low surface flows. Construction of detention pond will bring positive impacts to these services provided by the floodplain and wetlands. The proposed project will not impact groundwater recharge. The project is not anticipated to have any adverse effects to water resources or water quality. Water quality may be impacted during the construction phase due to sedimentation and run-off. These impacts are considered to be minor and temporary effects to water quality that would be at or below water quality standards or criteria. The proposed action would not cause or contribute to the exceedance of current water quality standards on a short-term or prolonged basis.

No prime farmland soils will be affected, and the project is exempt from FPPA consideration.

Floodplains and wetlands also provide services in the form of providing fish and wildlife habitat, breeding, and feeding grounds. These floodplain and wetland values will not be adversely impacted, and the overall integrity of the ecosystem will not be impacted. FEMA has determined the project will have no effect on threatened and endangered species and will not adversely modify or otherwise affect critical habitat. There is no potential habitat, or Designated Critical Habitat within the Project Area, therefore the project alternatives would not adversely modify any potential habitat or Designated Critical Habitat for federally listed species. Native wildlife may be disturbed by construction noise, light, and earth moving activities. Wildlife can temporarily relocate to other areas during construction activities, thereby decreasing species diversity and abundance within the Project Area. However, wildlife is expected to recolonize the area after construction is completed.

The potential for adverse impacts to migratory bird species would be avoided either by conducting the work during the fall and winter seasons when migratory species are not breeding or by deploying a biological monitor. The proposed action will not adversely affect the societal and recreational benefits provided by floodplains and wetlands. Open space and recreational uses in project area will not be affected by the proposed action.

***Step 5 Design or modify the proposed action to minimize threats to life and property and preserve its natural and beneficial floodplain and wetland values.***

Implementation of the Best management practices (BMPs) identified in the EA is a requirement of the EA's Finding of No Significant Impact (FONSI). As explained above, construction of the proposed drainage improvements is not expected to result in an increased base discharge, nor will it increase flood hazard to other structures or encourage further development in the floodplain and wetlands. The project is expected to contribute in general to floodplain and wetland functions, improving the drainage in the benefit area during heavy rain events and mitigating flooding in the project area.

- In order to reduce the impacts identified in Step 4, JCDD6 must coordinate with the local floodplain administrator, obtain required permits prior to initiating work, and comply with any conditions of the permit to ensure harm to and from the floodplain is minimized. All coordination pertaining to these activities should be retained as part of the project file in accordance with HMGP instructions.

- Excavated soils that are placed on private lands must be placed outside of wetlands, the 100-year floodplain, and any National Register of Historic Places (NRHP)-listed or eligible historic sites. Soil placement areas must not be graded or otherwise excavated for the sole purpose of placement of fill.
- The applicant must comply with conditions of Texas Pollutant Discharge Elimination System (TPDES) Construction Storm Water General Permit TXR 150000, including preparation of a Storm Water Pollution Prevention Plan, filing a Notice of Intent (NOI) with the Texas Commission on Environmental Quality (TCEQ) prior to the start of construction. Monitoring and maintenance of emplaced Best Management Practices (BMPs) for storm water management must be conducted on a regular basis as prescribed by the TPDES construction General Permit.
- Best management practices (BMPs) will be implemented to prevent erosion and sedimentation to surrounding, nearby, or adjacent non-jurisdictional wetlands. This includes equipment storage and staging of construction to prevent erosion and sedimentation.
- To minimize impacts to migratory bird species, applicant will limit vegetation management work during the peak migratory bird-nesting period of March through August as much as possible to avoid destruction of individuals, nests, or eggs. If vegetation reduction activities must occur during the nesting season, applicant will deploy a qualified biological monitor with experience conducting breeding bird surveys to survey the vegetation management area for nests prior to conducting work. The biologist will determine the appropriate timing of surveys in advance of work activities. If an occupied migratory bird nest is found, work within a buffer zone around the nest will be postponed until the nest is vacated and juveniles have fledged. The biological monitor will determine an appropriate buffering radius based on species present, real-time site conditions, and proposed vegetation management methodology and equipment. For work near an occupied nest, the biological monitor would prepare a report documenting the migratory species present and the rationale for the buffer radius determination and submit that report to FEMA for inclusion in project files.

***Step 6 Re-evaluate the proposed action.***

FEMA maintains that the proposed action alternative is the only practicable alternative to meet the purpose and need of the project.

***Step 7 Final Notification.***

In accordance with 44 CFR Part 9.8(b)(2), a final public notice will be published together with the Notice of Availability of the draft EA for public review. A public notice concerning the proposed project and on the availability of the draft Environmental Assessment will be published in the Beaumont Enterprise, and on FEMA's website (<https://www.fema.gov/emergency-managers/practitioners/environmental-historic/nepa-repository>). Public comment on the proposed project and draft Environmental Assessment will be open for 30 calendar days. The notice will include the name, proposed locations and description of the activities, and an indication that portions of the action are in the floodplain.

***Step 8 Implement the action.***

The proposed project will be conducted in accordance with applicable floodplain and wetland development requirements and any applicable permit conditions. Jefferson County Drainage District No. 6 will adhere to the grant conditions outlined in the Finding of No Significant Impact issued for the EA for the proposed action. Failure to comply with conditions enumerated in the Record of Environmental Consideration may jeopardize federal funding.



**Environmental Services, Inc.**

9 March 2021

US Army Corps of Engineers  
Galveston District  
Compliance Section  
PO Box 1229  
Galveston, TX 77553-1229

**RE: Proposed Jefferson County Drainage District No. 6 Project:  
Borley Heights Drainage Improvements  
Beaumont, Jefferson County, Texas  
HJN 200210-001EA**

Dear Sirs:

Jefferson County Drainage District No. 6 (DD6) implements and maintains drainage projects throughout the Districts' 486 square mile area located in Jefferson County and includes the cities of Beaumont, Bevil Oaks, China and Nome, Texas. DD6 also works with other jurisdictions to indentify flood-prone areas, to encourage inclusion of flood-damage avoidance measures in land development. DD6 has applied to the Federal Emergency Management Agency (FEMA) for grant funding to assist with drainage improvements to the existing Borley Heights Addition of Beaumont, Jefferson County. Environmental reviews are required under the National Environmental Policy Act (NEPA) and the Council on Environmental Quality Guidelines, 40 CFR Parts 1500 to 1508. This coordination letter is being provided for your agency's' response in conformance with NEPA procedures.

The Borley Heights Relief is a drainage project that will address shallow and moderate home flooding that has and will reoccur in the Borley Heights Addition. The Borley Heights Addition drains to Walker Branch (also known as Griffing Ditch) through a single box culvert under the Lower Neches Valley Authority (LNVA) Beaumont Irrigation Canal (BI Canal). This box culvert is inadequate to convey the flood flows without home flooding occurring. This problem will be eliminated with this project by constructing new canal crossings of the BI Canal at each street which will be adequately sized to properly drain the streets under the BI Canal. Each of these canal crossings will be fitted with one-way flap gates at the downstream ends of the culverts to prevent backflow. In order to convey the flood flows from the new culverts successfully into Griffing Ditch, a new channel will be constructed along the west side of the BI Canal at the receiving end of the culverts which will then flow into an existing channel that connects to Griffing Ditch. The existing ditch will also be improved with this project. Right-of-way will be acquired for the new channel and widening of the existing ditch. The project will have no adverse downstream impact because Griffing Ditch and its crossings downstream were enlarged with a previous FEMA grant to handle this additional flow. In addition to the new culverts and existing culvert to be fitted with one-way flap gates, the existing culverts at Griffing Ditch will also be fitted with flap gates as part of this project.

**CORPORATE HEADQUARTERS**

1507 South IH 35 ★ Austin, Texas 78741 ★ 512.328.2430 ★ Fax 512.328.1804 ★ [www.horizon-esi.com](http://www.horizon-esi.com)  
*An LJA Company*



Appendix 1 contains maps depicting the location of the proposed project, including an aerial view of the project area and a FEMA FIRM map of the project area (Appendix 1). Note that the project area is not located within the FEMA floodplain. Land use of the surrounding areas includes residential and commercial to the north, east, and south, and largely undeveloped land with scattered residential to the west.

Horizon has conducted a preliminary Section 404 jurisdictional analysis for the project site. The preliminary jurisdictional analysis was conducted by review of existing map sources and a field investigation conducted in accordance with the 1987 USACE *Wetlands Delineation Manual* and Regional Supplement: Atlantic and Gulf Coastal Plain Region (Version 2.0) (November 2010); USACE Regulatory Guidance Letter (RGL) No. 05-05 (7 December 2005); and the 2020 Clean Water Act (CWA) Navigable Waters Protection Rule (NWPR).

The project area is generally characterized as a mixture of residential areas east of the BI Canal and woodlands with interspersed openings to the west along with man-made or improved ditches. Dominant vegetation of the woodlands in the project footprint included water oak (*Quercus nigra*), loblolly pine (*Pinus taeda*), southern red oak (*Quercus falcata*), sweetgum (*Liquidambar styraciflua*), yaupon (*Ilex vomitoria*), and Chinese ligustrum (*ligustrum sinense*). Open areas were dominated by dewberry (*Rubus trivialis*), trumpet creeper (*Campsis radicans*), sedge (*Carex* sp), and seedlings of adjacent woodland species.

Several areas within the project footprint meeting hydric characteristics were noted. Dominant hydric vegetation within wooded areas included willow oak (*Quercus phellos*), Chinese tallow (*Triadica sebifera*), water oak, sweetgum, and occasional yaupon. Open hydric areas were dominated by spike rush (*Eleocharis cellulose*), smartweed (*Persicaria punctata*), sesbania (*Sesbania drummondii*), trumpet creeper, and willow oak seedlings. Hydrology indicators in the hydric areas included wet soils, stained leaf litter, sediment deposits, oxidized rhizospheres, crayfish krotovinas, and slight to moderate buttressing on tree bases.

Soils on the subject site include Texla silt loam and Vamont clay (Soils map, Appendix 1). These soils are listed as hydric or contain hydric inclusions.

A delineation of hydric and non-hydric areas within the project footprint is included in Appendix 1. On-site photographs are provided in Appendix 2. Representative data sheets are provided in Appendix 3.

### **Jurisdictional Determination**

Based on 1914 and 1920 topo and drainage maps, as well as 1938 aerial imagery of the area (see Appendix 1), Walker Branch appears to have been a historically natural tributary of Trahan Gully and Pine Island Bayou to a point just north of Tram Road, north of the project site. It was likely extended southward as an agricultural drainage ditch in the early 1900s. The man-made drainage ditch that currently drains the Borley Heights Addition appears to have originally been constructed as an agricultural drainage ditch in the early 1900s that drained rice fields to Walker

Branch. It was improved and extended eastward under the BI Canal in the 1950s with the construction of the Borley Heights Addition. Therefore, we conclude that Walker Branch (Griffing Ditch) in the vicinity of the project, as well as the existing Borley Heights drainage ditch are man-made upland-cut drainage ditches not subject to Section 404 jurisdiction.

The identified wetland areas in the project footprint are not located in the FEMA 100-year floodplain; therefore, would not be inundated by a typical year event from downstream WOTUS. Additionally, these wetlands are separated from Walker Branch and the Borley Heights Drainage ditch by berms. Therefore, we would conclude that any wetland areas in the project vicinity would also not be jurisdictional under the 2020 NWPR.

Based on the on-site jurisdictional analysis conducted by Horizon, it is our opinion that none of the identified wetlands or ditches within the project footprint are considered waters of the US subject to regulation under Section 404 of the Clean Water Act. We are herein requesting an Approved Jurisdictional Determination. A NWPR AJD Form is attached.

Please respond by letter at your earliest convenience. Your prompt attention to this matter would be greatly appreciated, as your signed concurrence letter is necessary to complete the application for grant funding from FEMA.

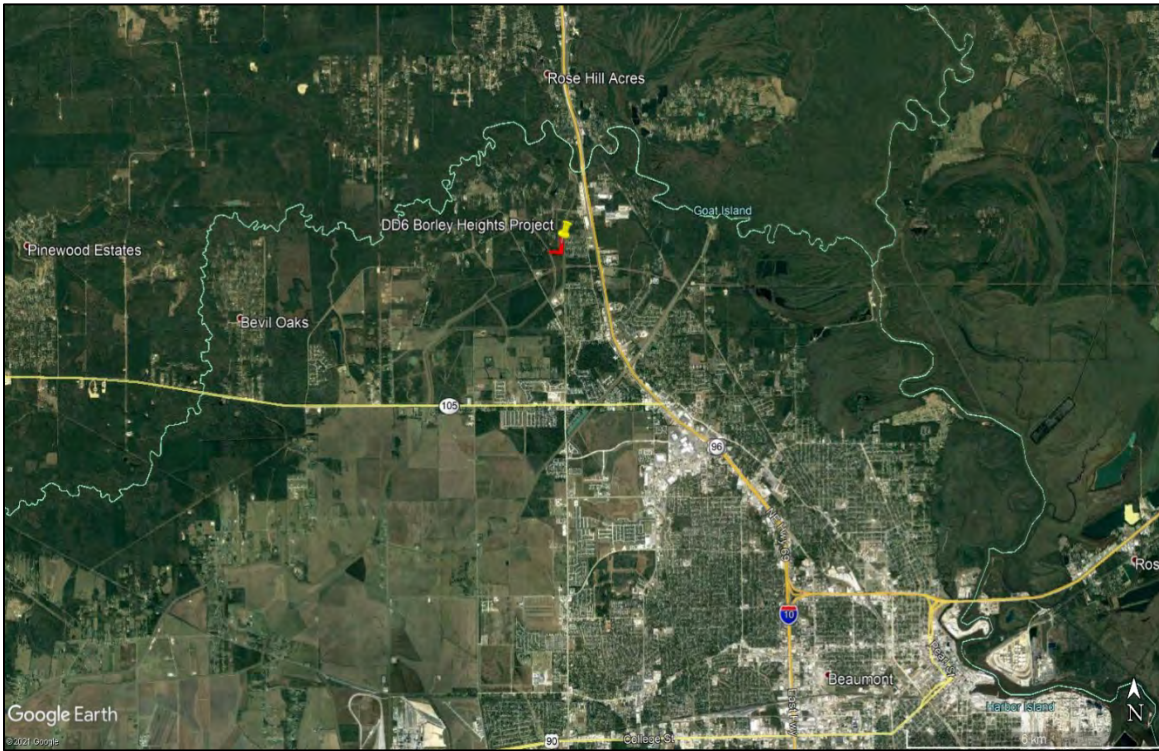
Please call me should you have any questions concerning this project or if I can be of any further assistance.

Sincerely,  
For Horizon Environmental Services, Inc.

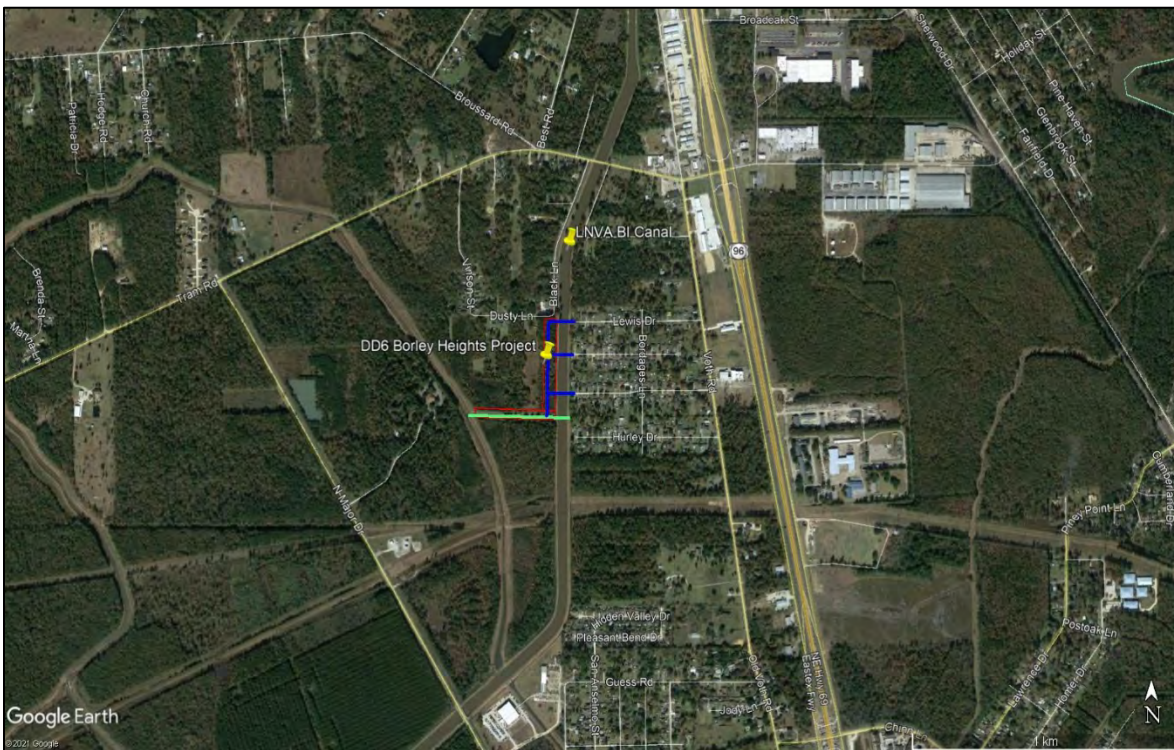


C. Lee Sherrod  
Senior Project Manager

**APPENDIX 1**  
**PROJECT FIGURES**



**FIGURE 1  
LOCATION**

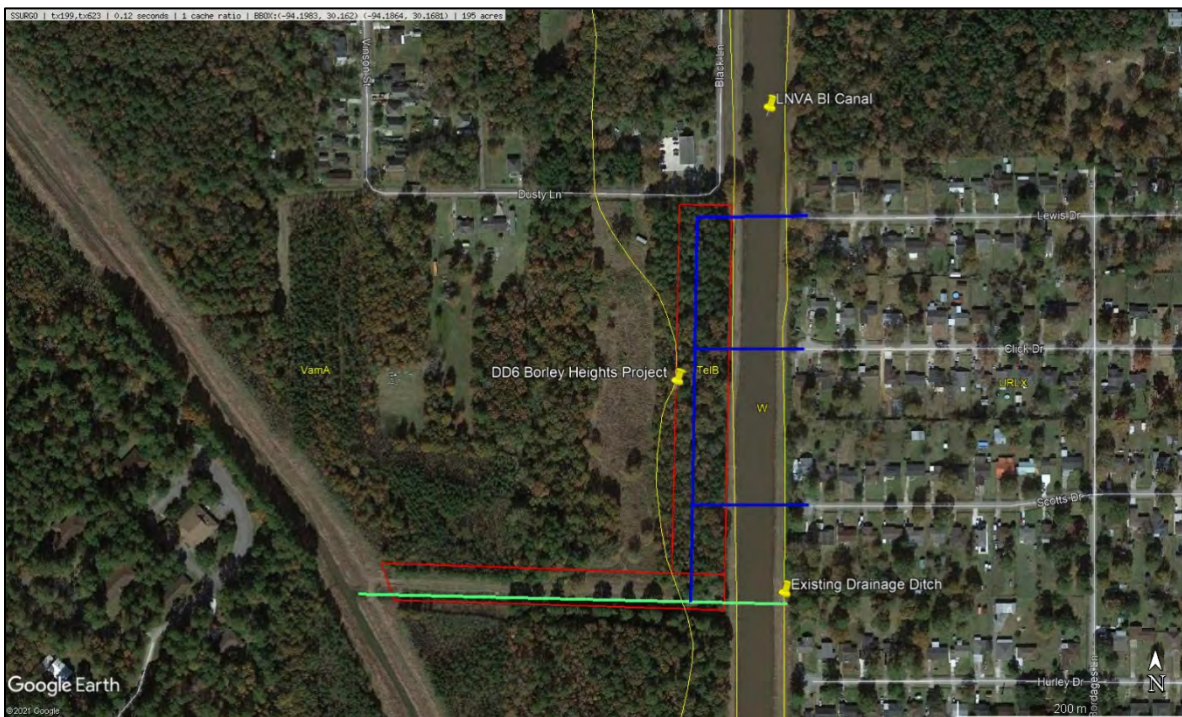


**FIGURE 2  
CURRENT AERIAL**



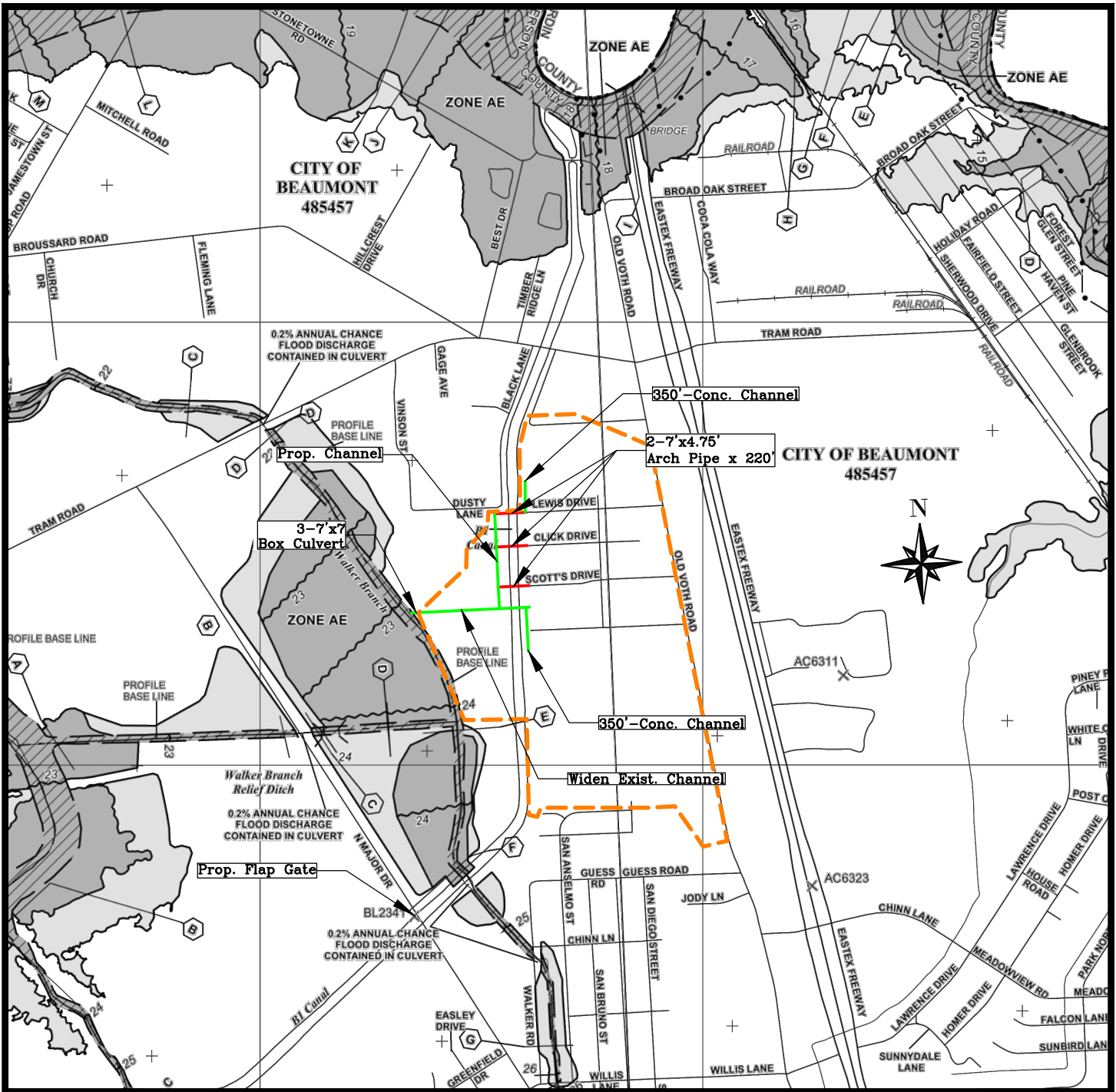


**FIGURE 3  
USGS TOPO**



**FIGURE 4  
SOILS**





**NFIP** PANEL 0040F

**FIRM**  
FLOOD INSURANCE RATE MAP  
JEFFERSON COUNTY,  
TEXAS  
(AND INCORPORATED AREAS)

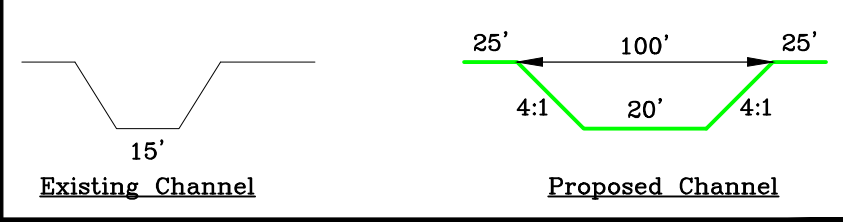
PANEL 40 OF 675  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:  
COMMUNITY NUMBER PANEL SUFFIX  
BEAUMONT, CITY OF 485457 0040 F  
JEFFERSON COUNTY 480263 0040 F

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
48245C0040F  
**EFFECTIVE DATE**

Federal Emergency Management Agency



**Legend:**

- Proposed Culvert Improvements
- Proposed Channel Improvements
- Benefit Area

**JEFFERSON COUNTY DRAINAGE DISTRICT NO. 6**

Jefferson County Drainage District No. 6  
Borley Heights Relief  
DD6 Borley Heights with FIRM (Flood Insurance Rate Map)

**NFIP** PANEL 0045F

**FIRM**  
FLOOD INSURANCE RATE MAP  
JEFFERSON COUNTY,  
TEXAS  
(AND INCORPORATED AREAS)

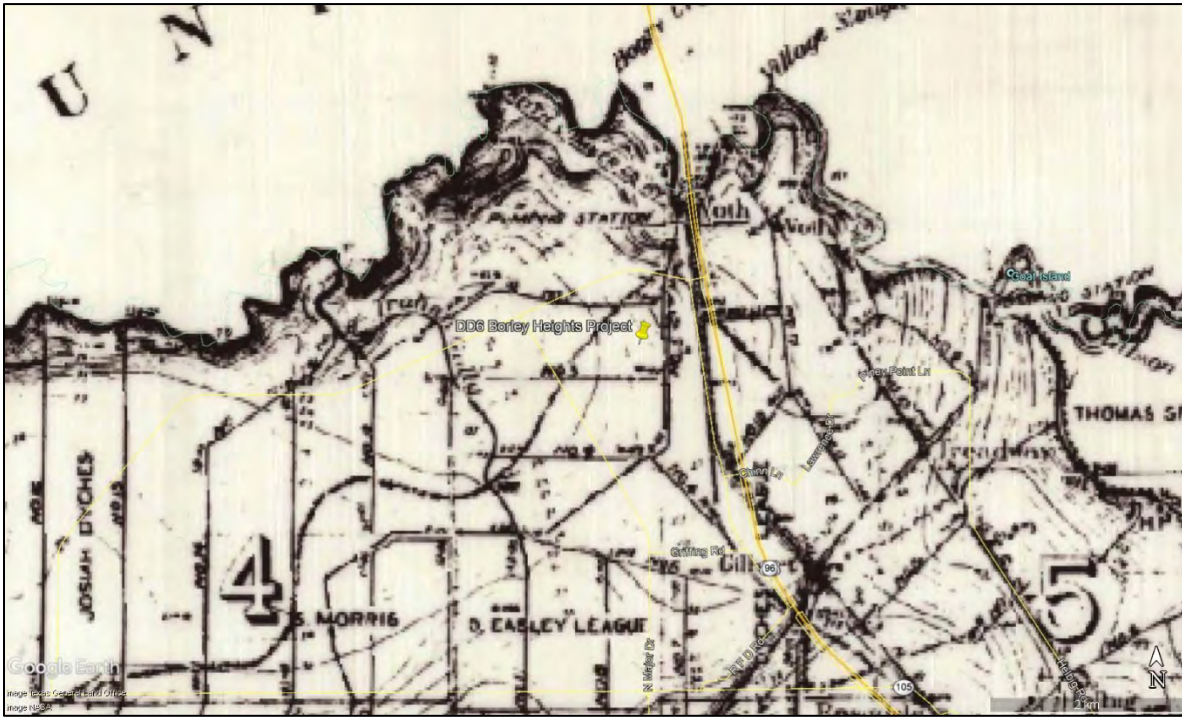
PANEL 45 OF 675  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:  
COMMUNITY NUMBER PANEL SUFFIX  
BEAUMONT, CITY OF 485457 0045 F  
JEFFERSON COUNTY 480263 0045 F

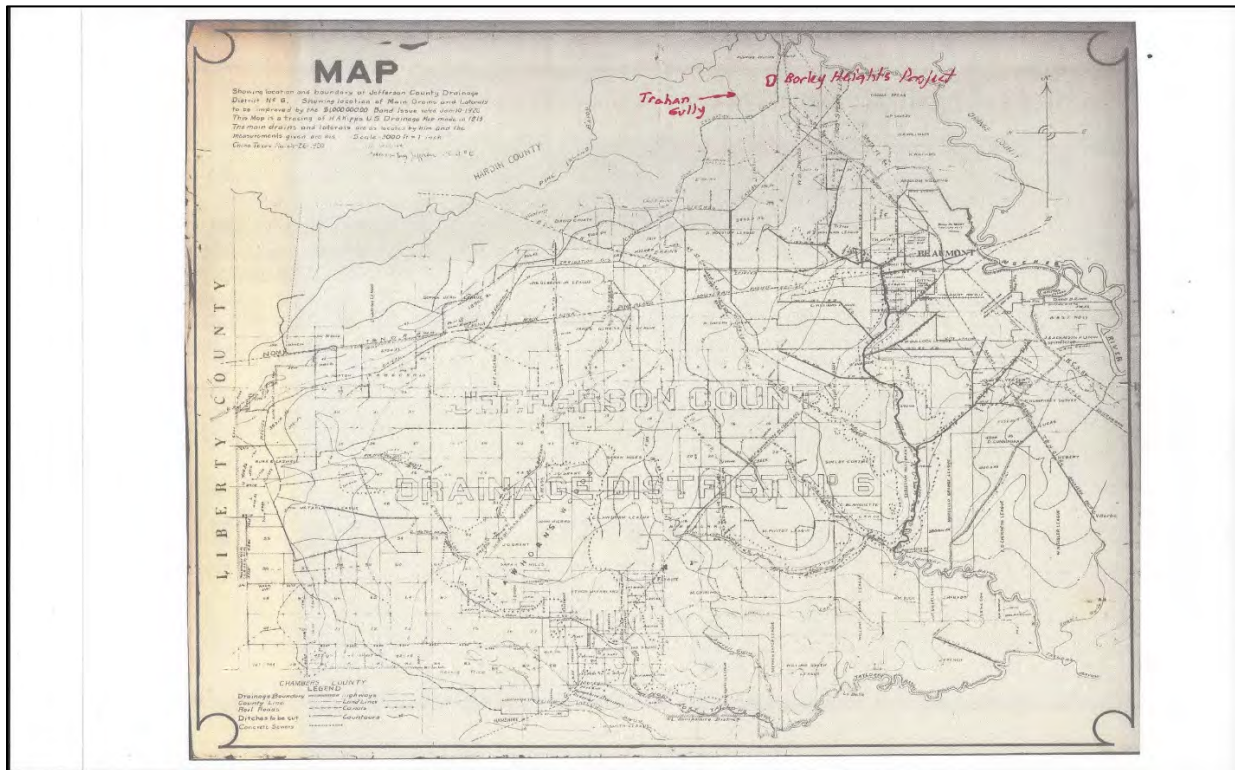
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
48245C0045F  
**EFFECTIVE DATE**

Federal Emergency Management Agency



**FIGURE 6**  
**1914 TOPO AND DRAINAGE MAP**



**FIGURE 7**  
**1920 DRAINAGE MAP**





**FIGURE 8  
1938 AERIAL PHOTO**



**FIGURE 9  
WETLAND DELINEATION**

**APPENDIX 2**  
**PROJECT AREA PHOTOGRAPHS**





**PHOTO 1**  
**Borley Heights Benefit Area**



**PHOTO 2**  
**Borley Heights Benefit Area**





**PHOTO 3**  
**Existing Weep Ditch Along East Side of BI Canal**



**PHOTO 4**  
**Existing Culvert Under BI Canal**





**PHOTO 5**  
**Borley Heights Drainage Ditch West of BI Canal**



**PHOTO 6**  
**Walker Branch (Griffing Ditch)**





**PHOTO 7**  
**Upland Wooded Project Area West of BI Canal**



**PHOTO 8**  
**Wetland Wooded Project Area West of BI Canal**

**APPENDIX 3**

**DATA SHEETS**

A copy of the Wetland Delineation Data Forms can be provided upon request from Subha Pandey, FEMA Region 6, at [subha.pandey@fema.dhs.gov](mailto:subha.pandey@fema.dhs.gov).



DATABASE REPORT

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**Project Property:** *Borley Heights Project  
 Dusty Lane  
 Beaumont TX  
 23053.003EA*  
**Project No:** *23053.003EA*  
**Report Type:** *Database Report*  
**Order No:** *23121200157*  
**Requested by:** *Horizon Environmental Services*  
**Date Completed:** *December 14, 2023*

**Notice: IMPORTANT LIMITATIONS and YOUR LIABILITY**

**Reliance on information in Report:** This report DOES NOT replace a full Phase I Environmental Site Assessment but is solely intended to be used as database review of environmental records.

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Executive Summary

Executive Summary: Report Summary

**Property Information:**

**Project Property:** *Borley Heights Project  
 Dusty Lane Beaumont TX*  
**Project No:** *23053.003EA*  
**Coordinates:**  
 Latitude: *30.1642468*  
 Longitude: *-94.19186709*  
 UTM Northing: *3,337,585.32*  
 UTM Easting: *385,232.82*  
 UTM Zone: *15R*  
**Elevation:** *26 FT*

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
<b>Standard Environmental Records</b>								
<b>Federal</b>								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	0	-
SEMS	Y	0.5	0	0	0	0	0	-
SEMS ARCHIVE	Y	0.5	0	0	0	0	0	-
ODI	Y	0.5	0	0	0	0	0	-
CERCLIS	Y	0.5	0	0	0	0	0	-
IODI	Y	0.5	0	0	0	0	0	-
CERCLIS NFRAP	Y	0.5	0	0	0	0	0	-
CERCLIS LIENS	Y	PO	00	-	-	-	-	-
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	0	0	-
RCRA LQG	Y	0.25	0	0	0	0	0	0
RCRA SQG	Y	0.25	0	0	0	0	0	0
RCRA VSQG	Y	0.25	0	0	0	0	0	0
RCRA NON GEN	Y	0.25	0	0	0	0	0	0
RCRA CONTROLS	Y	0.5	0	0	0	0	0	-
FED ENG	Y	0.5	0	0	0	0	0	-
FED INST	Y	0.5	0	0	0	0	0	-
LUCIS	Y	0.5	0	0	0	0	0	-
NPL IC	Y	0.5	0	0	0	0	0	-
ERNS 1982 TO 1986	Y	PO	00	-	-	-	-	-
ERNS 1987 TO 1989	Y	PO	00	-	-	-	-	-
ERNS	Y	PO	00	-	-	-	-	-
FED BROWNFIELDS	Y	0.5	0	0	0	0	0	-
FEMA UST	Y	0.25	0	0	0	0	0	0
FRP	Y	0.25	0	0	0	0	0	0

**Order Information:**

**Order No:** *23121200157*  
**Date Requested:** *December 12, 2023*  
**Requested by:** *Horizon Environmental Services*  
**Report Type:** *Database Report*

**Historicals/Products:**

**Aerial Photographs** *Historical Aerials (with Project Boundaries)*  
**ERIS Xplorer** *ERIS Xplorer*  
**Excel Add-On** *Excel Add-On*  
**Topographic Map** *Topographic Maps*





Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
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No records found in the selected databases for the project property.

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	SPILLS	GULF STATES UTILITIES	7370 LEWIS DRIVE, BEAUMONT TX	NE	0.06 / 321.33	1	17
2	LPST	TRI-STOP	7105 TRAM RD BEAUMONT TX 77713	NE	0.39 / 2,077.41	2	17

LPST ID: 121338  
Closure Date | Corrective Action Status: 12/31/3000 | 1 - RELEASE DETERMINATION

Executive Summary: Summary by Data Source

**Standard**

**State**

**LPST - Leaking Petroleum Storage Tank Database**

A search of the LPST database, dated Aug 28, 2023 has found that there are 1 LPST site(s) within approximately 0.50miles of the project property.

**Equal/Higher Elevation**

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
2	LPST	TRI-STOP	7105 TRAM RD BEAUMONT TX 77713	NE	0.39 / 2,077.41	2	17

LPST ID: 121338  
Closure Date | Corrective Action Status: 12/31/3000 | 1 - RELEASE DETERMINATION

**Non Standard**

**State**

**SPILLS - Spills Database**

A search of the SPILLS database, dated Oct 30, 2023 has found that there are 1 SPILLS site(s) within approximately 0.12miles of the project property.

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	SPILLS	GULF STATES UTILITIES	7370 LEWIS DRIVE, BEAUMONT TX	NE	0.06 / 321.33	1	17

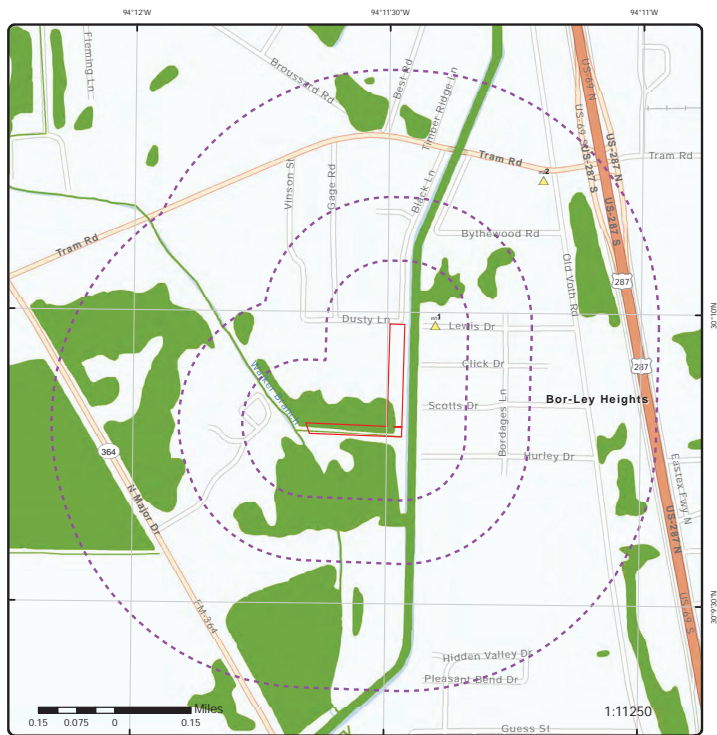
Incident No | Incident Status: 6/7/88007 |



**Map: 1.0 Mile Radius**  
Order Number: 23121200157  
Address: Dusty Lane, Beaumont, TX

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)





**Map: 0.5 Mile Radius**  
 Order Number: 23121200157  
 Address: Dusty Lane, Beaumont, TX

**Legend:**

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways: Highways
- Traffic Circle: Ramp
- Major & Minor Arterial
- Traffic Circle: Ramp
- Local Road
- Rail
- State
- County
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Deleted, Proposed, Institutional Control)

Source: © 2021 ESRI StreetMap Premium © ERIS Information Inc.

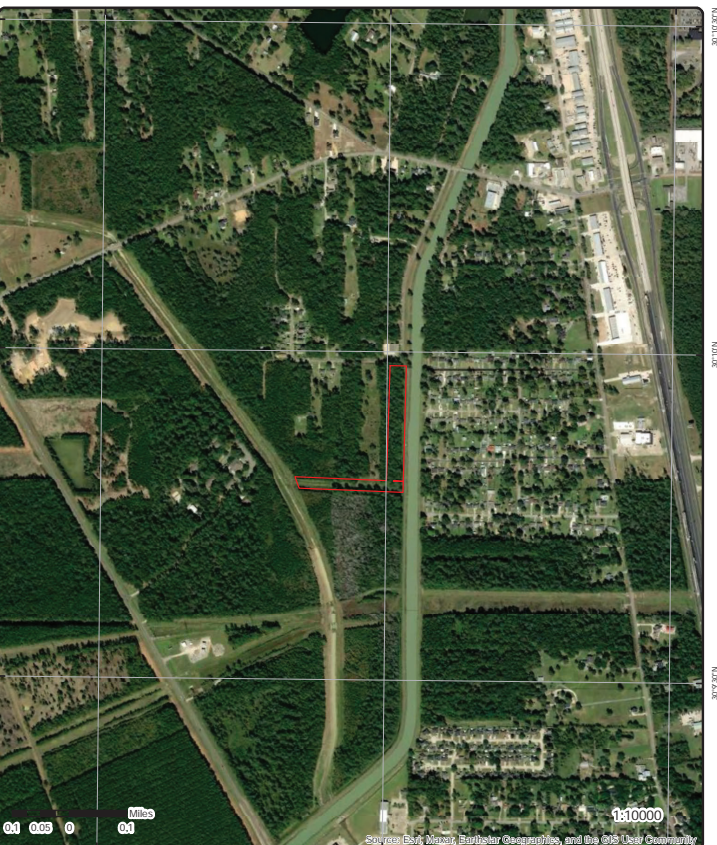


**Map: 0.25 Mile Radius**  
 Order Number: 23121200157  
 Address: Dusty Lane, Beaumont, TX

**Legend:**

- Project Property
- Buffer Outline
- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways: Highways
- Traffic Circle: Ramp
- Major & Minor Arterial
- Traffic Circle: Ramp
- Local Road
- Rail
- State
- County
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Deleted, Proposed, Institutional Control)

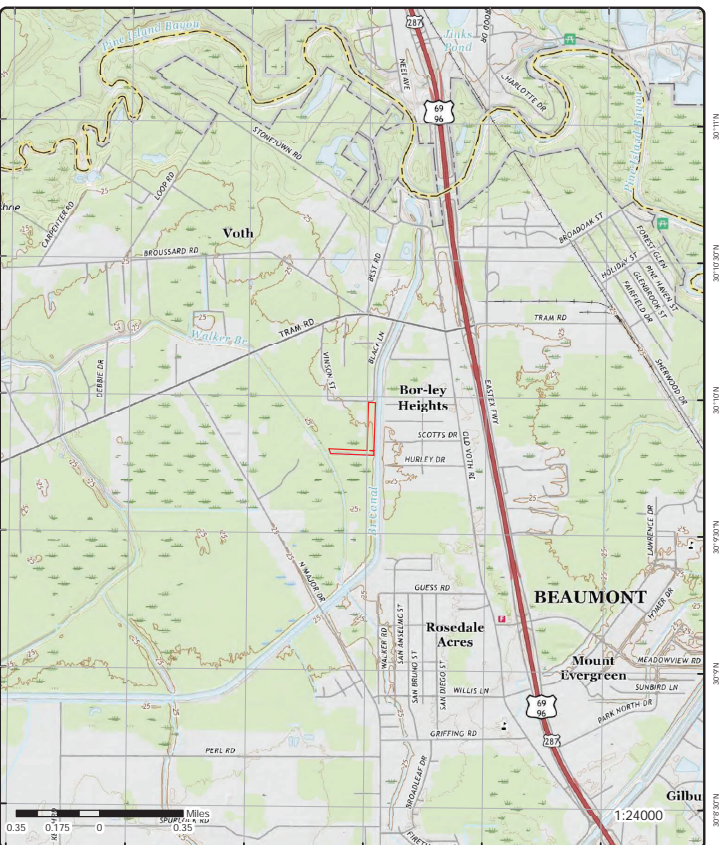
Source: © 2021 ESRI StreetMap Premium © ERIS Information Inc.



**Aerial** Year: 2022  
 Address: Dusty Lane, Beaumont, TX

Order Number: 23121200157

Source: ESRI World Imagery © ERIS Information Inc.



**Topographic Map** Year: 2019  
 Address: Dusty Lane, TX  
 Quadrangle(s): Voth TX

Order Number: 23121200157

Source: USGS Topographic Map © ERIS Information Inc.

## Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
<u>1</u>	1 of 1	NE	0.06 / 321.33	26.95 / 1	GULF STATES UTILITIES 7370 LEWIS DRIVE, BEAUMONT TX	SPILLS

**Incident No:** 6/7/88007  
**Reg Entity No:**  
**Incident Type:**  
**Incident Status:**  
**Incident Priority:**  
**Start Date:** 06/07/88  
**End Date:**  
**Received Date:**  
**Status Date:**  
**Nature:**  
**Disp Status:**  
**Disp Date:**  
**Physical Location:**

**No Complaining:**  
**Frequency:**  
**Receiving Water:**  
**Air Text:**  
**Tceq Region:**  
**Nearest City:** JEFFERSON  
**County:**  
**Zip Plus 4 CD:**  
**State:**  
**Latitude:**  
**Longitude:**

### Spill Detail

**Epa No:**  
**Permit Reg:**  
**Origin:**  
**Cause:**  
**Cleanup Ad:**  
**Rec Water:** NONE  
**Amt in H2O:** NONE  
**Bas Name:** NECHES  
**Basin Code:** 0608  
**Clean Adeq:** YES  
**Verify:**  
**Unloc:**  
**Media Name:**  
**Effect:**  
**Air Text:**  
**Comments:**

**Mat Spill:** TRANSFORMER OIL  
**Amt Spill:** <1 GAL  
**Class:**  
**Codes:**  
**Seq No:**  
**Mat Code:**  
**Phone:**  
**Inspect By:**  
**Interim:**  
**Final:**  
**Coordinator:**  
**Notify Tim:**  
**Occurrence:**  
**Start Date:**  
**Stat Date:**

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
<u>2</u>	1 of 1	NE	0.39 / 2,077.41	28.11 / 2	TRI-STOP 7105 TRAM RD BEAUMONT TX 77713	LPST

**LPST ID:** 121338  
**PST ID:**  
**Facility ID:** 8056  
**Site Name:** TRI-STOP  
**Site Address:** 7105 TRAM RD  
**City Name:** BEAUMONT  
**ZIP Code:** 77713  
**County Name:** JEFFERSON  
**Addr Desc (Map):**

**Nearest City:** BEAUMONT  
**Site Name (Map):** TRI-STOP  
**Phys Addr (Map):** 7105 TRAM RD  
**City (Map):** BEAUMONT  
**County (Map):** JEFFERSON  
**ZIP Code (Map):** 77713  
**Lat DD (Map):** 30.17062498  
**Long DD (Map):** -94.18679447

**Source:** TCEQ LPST Report; TCEQ Map Data  
**Note:** Documents related to facilities in Texas can be searched on TCEQ Records Online Central File Room (CFR): [https://records.tceq.texas.gov/csl/cgi?tdcsService=TCEQ\\_SEARCH](https://records.tceq.texas.gov/csl/cgi?tdcsService=TCEQ_SEARCH)  
 Basic information, including RN numbers, for facilities in TX can be searched on the TCEQ Central Registry: <https://www15.tceq.texas.gov/crpub/>  
 Information about how to use these resources can be found here: <https://www.tceq.texas.gov/assets/public/agency/How-to-Use-Central-File-Room-Online.pdf>

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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### TCEQ LPST Report

**Ref No:** RN102433505  
**Closure Date:** 12/31/3000  
**Discovered Date:** 07/12/2021  
**Rem Program:** LPST  
**Program:** 1 - RPR  
**Corrective Action Status:** 1 - RELEASE DETERMINATION  
**Priority Status:** 3.2 - IMPACTED GW W/IN 500FT-0.25MI TO SW USED BY HUMANENENGR SPEC

**Reported Date:** 07/15/2021  
**Entered Date:** 12/29/2021  
**TCEQ Region:** REGION 10 - BEAUMONT  
**Project Manager:** APIRANI

### TCEQ Map Data

**Region:** REGION 10 - BEAUMONT  
**X:** -94.186794468  
**Y:** 30.170624984  
**Horz Ref:** PST\_TANK  
**Horz Date:** 20211229

**Horz Meth:** DOQ  
**Horz Acc:** 5  
**Horz Org:** TCEQ  
**Horz Datum:** NAD83  
**Horz Desc:**

## Jesse Owens

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**From:**  
**Sent:** Monday, February 1, 2021 9:23 AM  
**To:** Jesse Owens; reviews@thc.state.tx.us  
**Subject:** Section 106 Submission

[EXTERNAL EMAIL]



**TEXAS HISTORICAL COMMISSION**  
*real places telling real stories*

Re: Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas  
**THC Tracking #202104604**

Borley Heights Drainage Improvements Project  
East of Intersection of Tram Road & N. Major Drive  
Beaumont, TX 77713

**Description:** Intensive cultural resources survey of the Borley Heights Drainage Improvements Project in Jefferson County, Texas.

Dear Jeffrey D. Owens:

Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act and the Antiquities Code of Texas.

The review staff, led by Marie Archambeault, Caitlin Brashear, has completed its review and has made the following determinations based on the information submitted for review:

### **Above-Ground Resources**

- No historic properties are present or affected by the project as proposed. However, if historic properties are discovered or unanticipated effects on historic properties are found, work should cease in the immediate area; work can continue where no historic properties are present. Please contact the THC's History Programs Division at 512-463-5853 to consult on further actions that may be necessary to protect historic properties.

### **Archeology Comments**

- No identified historic properties, archeological sites, or other cultural resources are present or affected. However, if cultural materials are encountered during project activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.
- This draft report is acceptable. Please submit a final report: one restricted version with any site location information (if applicable), and one public version with all site location information redacted. To facilitate review and make project information and final reports available through the Texas Archeological Sites Atlas, we appreciate submitting abstracts online at <http://xapps.thc.state.tx.us/Abstract> and e-mailing survey area

shapefiles to [archeological\\_projects@thc.texas.gov](mailto:archeological_projects@thc.texas.gov) if this has not already occurred. Please note that these steps are required for projects conducted under a Texas Antiquities Permit.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: [marie.archambeault@thc.texas.gov](mailto:marie.archambeault@thc.texas.gov), [caitlin.brashear@thc.texas.gov](mailto:caitlin.brashear@thc.texas.gov).

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit <http://thc.texas.gov/etrac-system>.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Wolfe", written in a cursive style.

for Mark Wolfe, State Historic Preservation Officer  
Executive Director, Texas Historical Commission

**Please do not respond to this email.**

**[EXTERNAL EMAIL]** Exercise caution. Do not open attachments or click links from unknown senders or unexpected email





April 15, 2024

RE: Section 106 Review Consultation,  
EMT-2021-FM-022-0005  
Drainage District 6: Borley Heights Drainage Project  
(Lat.: 30.162780, Long.: -94.190830)

To: Representatives of Federally recognized Tribes with Interest in this Project Area

Through FEMA's Flood Mitigation Assistance program, FEMA proposes to fund the Jefferson County Drainage District No. 6's (Applicant) construction of new canal crossings, new drainage channels, enlargement of existing channels, and installation of flap gates (Undertaking). FEMA is initiating Section 106 review for the above referenced project based on your Tribe's ancestral interest in the project area.

The Applicant proposes to install new canal crossings over BI Canal and construct new drainage channels in the neighborhood of Borley Heights, Beaumont, Jefferson County, Texas. New canal crossings to carry storm water across BI Canal will be constructed at the terminus of each of three streets, with flap gates. Additionally, two new channels will be constructed parallel to BI Canal, to connect the canal crossing culverts to an existing drainage ditch. Flap gates will be installed at existing culverts in Griffin Ditch.

The canal crossings will consist of arch pipe culverts fitted with one way flap gates with 12 in. reinforced concrete headwalls. Installation of the canal crossings will involve the construction of earthen dams, excavation of canal levees and bottom for placement of the culverts, and the reconstruction of the canal by compacting removed soil in place and seeding with natural grasses.

Two channels will be each approximately 350 ft. long, running parallel to BI Channel along the eastern bank, and will expand existing drainage facilities. A third channel will be excavated along the western bank of BI Channel, approximately 1,170 ft. long. A fourth channel will be expanding, running perpendicular to the BI Channel and draining into Griffin Ditch. The expansion of the channel will include fitting existing culverts with flap gates. Six in. reinforced concrete slope paving will be constructed in select areas to prevent erosion. Excess material from excavation will be placed and spread on nearby upland areas.

Portions of the mitigation work will take place in undisturbed ground.

FEMA has determined that the Area of Potential Effect (APE) for the proposed Undertaking shall include the footprint of the project based on the scale and nature of the undertaking, as well as the area reasonably required to stage materials. The APE is discontinuous, with the majority of the project work located adjacent to BI Channel in Borley Heights, with additional work to install a flap gate at the intersection of BI Channel and N Major Drive, approximately 0.59 miles south.

We are writing to request your comments on historic properties of cultural or religious significance to your Tribe that may be affected by the proposed Undertaking. Any comments you may have on FEMA's findings and recommendations should also be provided.

On April 10, 2024, a FEMA Historic Preservation Specialist Angela McComb performed a cultural records search using the Texas Historical Commission Archaeological Sites Atlas database and associated site files, photographs, and maps to identify historic properties within the APE. The records search revealed no historic properties or previously recorded archaeological sites within the APE.

On behalf of the Applicant, Horizon Environmental Services submitted an archaeological survey, titled, "Intensive Cultural Resources Survey of the Borley Heights Drainage Improvements Project, Jefferson County, Texas," (TAP 9651) which examined the APE for significant cultural resources. Horizon archaeologists performed a walkover survey and shovel tests in October 2020. One historic-era object was observed, consisting of a formed concrete retention basin fitted with standpipes and the remains of water pump equipment dating to the 1950s. This feature lacks significance and was recommended as Ineligible for listing in the National Register of Historic Places. Based on the findings of the survey, Horizon recommended a finding of No Historic Properties Affected and no additional work to be performed in connection with the Undertaking. THC concurred with this finding on February 1, 2021.

Based on the available information gathered to date through this review process, there are no previously recorded archeological sites within the project area, and it is unlikely that the Undertaking would impact any intact archeological deposits, if present. FEMA has determined that there will be **No Historic Properties Affected** as a result of the Undertaking.

Please provide your comments within 30 days of receipt of this letter. If you concur with FEMA's determination, please sign below. If you notify us that your review identifies cultural properties within the APE, or project work discloses the presence of archeological deposits, FEMA will contact your Tribe to continue consultation.



An aerial view, a topographic map, photos showing the project location and APE, and archaeological report are attached. Your prompt review of this project is greatly appreciated. Should you need additional information please contact Robert Scoggin, EHP Tribal Liaison at [Robert.w.scoggin@fema.dhs.gov](mailto:Robert.w.scoggin@fema.dhs.gov) (202) 716-4139.

Sincerely,

LaToya Leger-Taylor  
Regional Environmental Officer  
FEMA Region 6

\_\_\_\_\_  
Concurrence by:

\_\_\_\_\_  
Date:

\_\_\_\_\_  
Tribe

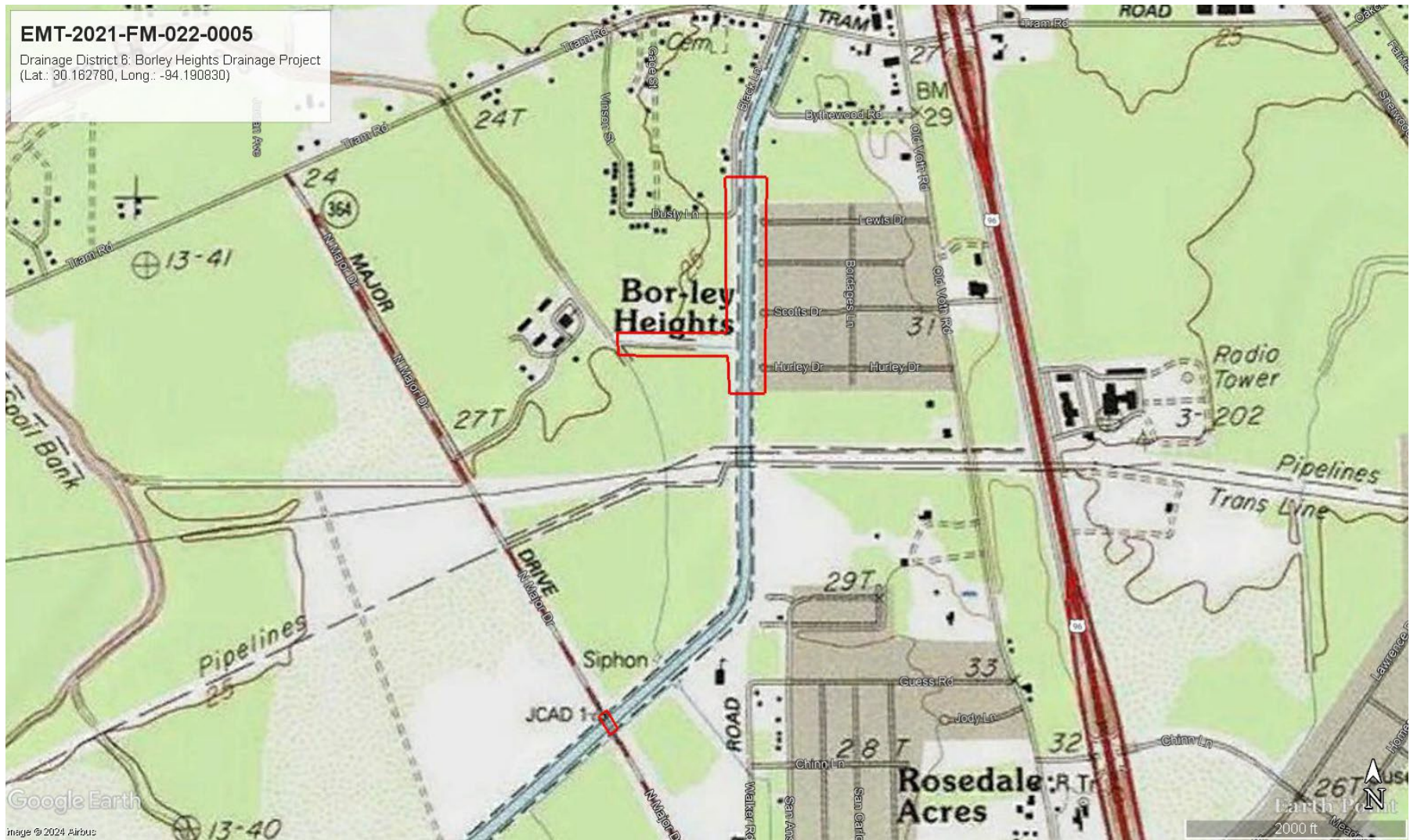
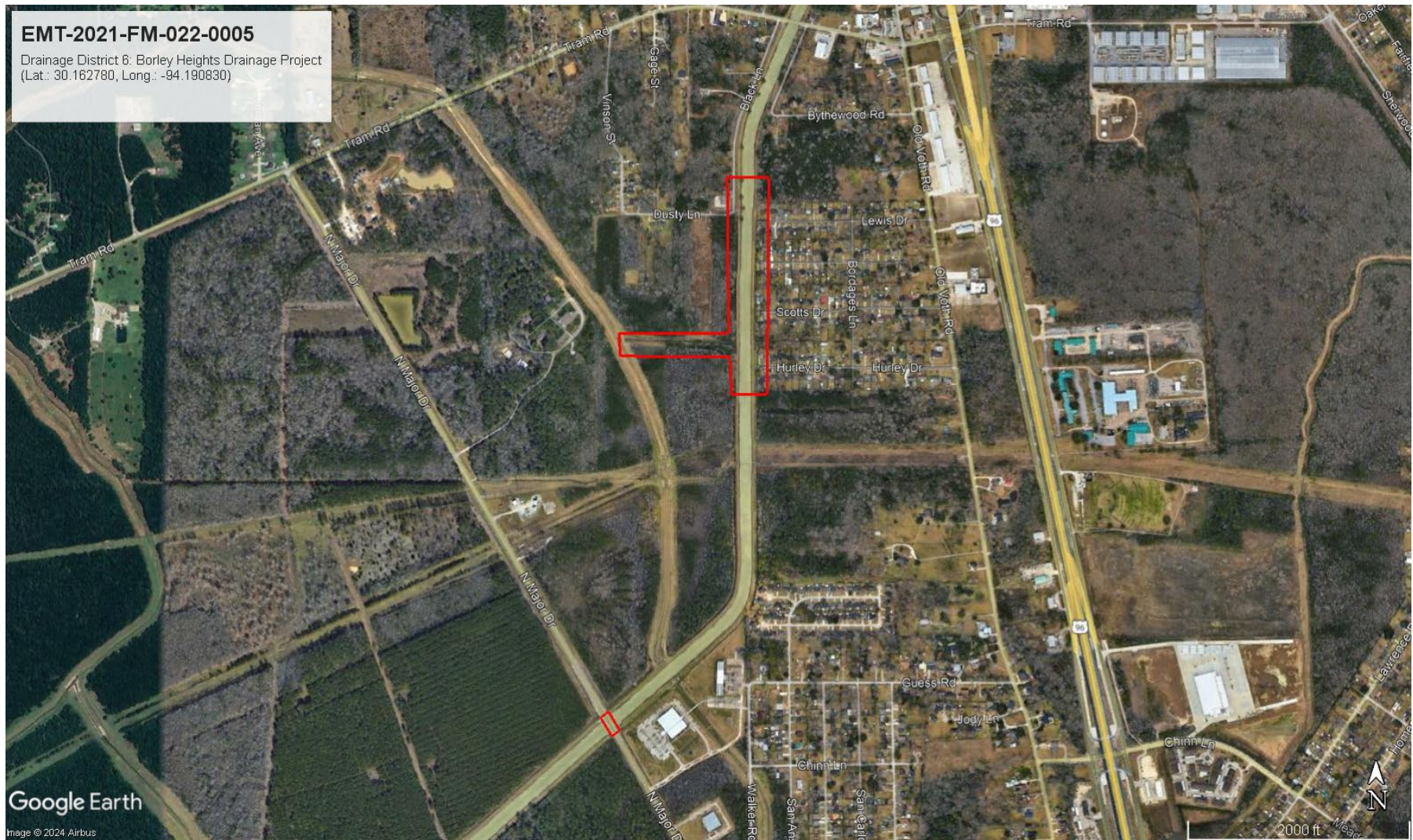


Figure 1: Topographic map showing APE (red box). Image via Google Earth, 2024.





**Figure 2:** Aerial image showing APE (red box). Image via Google Earth, 2024.

**FEMA PUBLIC NOTICE OF AVAILABILITY  
JEFFERSON COUNTY DRAINAGE DISTRICT NO. 6  
BORLEY HEIGHTS DRAINAGE RELIEF PROJECT  
JEFFERSON COUNTY, TEXAS  
EMT-2021-FM-022-0005**

Interested persons are hereby notified that the Jefferson County Drainage District No. 6 (JCDD6) has applied to the Federal Emergency Management Agency (FEMA) for Flood Mitigation Assistance (FMA) Program funding through the Texas Water Development Board (TWDB). Through FMA, FEMA provides grants for flood hazard mitigation projects as well as plan development. The FMA Program is authorized by Section 1366 of the National Flood Insurance Act of 1968, as amended (NFIA), 42. U.S.C. 4104c with the purpose of reducing or eliminating claims under the National Flood Insurance Program (NFIP). This notice also serves as FEMA's final notice in compliance with Executive Orders 11988 Floodplain Management and 11990 for the Protection of Wetlands (44 CFR Part 9).

FEMA proposes to provide funding to JCDD6 for drainage improvements to address shallow and moderate home flooding that has and will reoccur in the Borley Heights Addition, Jefferson County, Texas. The Borley Heights Addition drains into a tributary of Griffing Ditch through a single box culvert under the Lower Neches Valley Authority (LNVA) Beaumont Irrigation Canal (BI Canal). This box culvert is inadequate to convey the flood flows without home flooding occurring. This problem will be eliminated with this project by constructing new canal crossings of the BI Canal at each street which will be adequately sized to properly drain the streets under the BI Canal. Each of these canal crossings will be fitted with one-way flap gates at the downstream ends of the culverts to prevent backflow. In order to convey the flood flows from the new culverts successfully into Griffing Ditch, a new channel will be constructed along the west side of the BI Canal at the receiving end of the culverts which will then flow into an existing channel that connects to Griffing Ditch. The existing ditch will also be improved with this project. Right-of-way will be acquired for the new channel and widening of the existing ditch. The project will have no adverse downstream impact because Griffing Ditch, the receiving stream and its crossings, were enlarged with a previous FEMA grant to handle this additional flow. In addition to the new culverts and existing culvert to be fitted with one-way flap gates, the existing culverts at Griffing Ditch will also be fitted with flap gates as part of this project.

A draft Environmental Assessment (EA) has been prepared to assess the potential impacts of the proposed action and alternatives on the human and natural environment in accordance with the National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500 – 1508), FEMA's Instruction 108-1-1 for implementing NEPA, the National Historic Preservation Act, Executive Order 11988, Executive Order 11990, and 44 CFR Part 9. The draft EA evaluates alternatives that provide for compliance with applicable environmental laws. The alternatives evaluated include (1) No Action; (2) buy-out of flood prone properties; and (3) the Proposed Action described above.

The draft EA is available for review and comment at Beaumont Public Library located at 801 Pearl Street; at the Jefferson County Drainage District No. 6 Offices located at 6550 Walden Road in Beaumont, Texas; and at the offices of Horizon Environmental Services, located at 1507

South IH 35, Austin, Texas, from 9:00 a.m. to 4:00 p.m. Monday-Friday. An electronic version of the draft EA can also be requested from Subha Pandey, FEMA Region 6, at [subha.pandey@fema.dhs.gov](mailto:subha.pandey@fema.dhs.gov), or viewed on FEMA's website at <https://www.fema.gov/bn/emergency-managers/practitioners/environmental-historic/nepa-repository>

The comment period will begin on April 7, 2024, and end 30 days later by close of business May 7, 2024. Written comments on the draft EA can be mailed or emailed to Subha Pandey, Environmental Protection Specialist, FEMA Region 6, 800 N Loop 288, Denton, TX 76209, [subha.pandey@fema.dhs.gov](mailto:subha.pandey@fema.dhs.gov). If no substantive comments are received, the draft EA will become final and a Finding of No Significant Impact (FONSI) will be issued for the project. Substantive comments will be addressed as appropriate in the final documents.

All other questions regarding disaster assistance should be directed to FEMA's Helpline at 1-800-621-3362 or visit [www.DisasterAssistance.gov](http://www.DisasterAssistance.gov).