

Draft Environmental Assessment

Hardin County Lumberton Detention Pond

HMGP-4332-0232-TX

Hardin County, Texas

July 2023



FEMA

U.S. Department of Homeland Security
Federal Emergency Management Agency
Region 6
800 North Loop 288
Denton, TX 76209

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LIST OF ACRONYMS

AJD	Approved Jurisdictional Determination
APE	Area of Potential Effects
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CGP	Construction General Permit
CWA	Clean Water Act
DR	Disaster
EA	Environmental Assessment
EHP	Environmental and Historic Preservation
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FPPA	Farmland Protection Policy Act
FONSI	Finding of No Significant Impact
FIRM	Flood Insurance Rate Map
FM	Farm-to-Market
H&H	Hydrologic and Hydraulic
HMGP	Hazard Mitigation Grant Program
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
RCRA	Resource Conservation and Recovery Act
THC	Texas Historical Commission
TCEQ	Texas Commission on Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System
TXDOT	Texas Department of Transportation
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
WOTUS	Waters of the U.S

1.0 INTRODUCTION

Hardin County has prepared and submitted an application for Federal Emergency Management Agency (FEMA) funding under the Hazard Mitigation Grant Program (HMGP). The City's existing flood and drainage facilities are unable to adequately direct water away from residences, commercial buildings, public schools and infrastructure during major weather events, including Hurricane Harvey. On August 25, 2017, President Donald Trump declared a major disaster as a result of damage due to Hurricane Harvey (DR-4332_TX). FEMA is administering this disaster assistance pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), PL 93-288, as amended. Section 404 of the Stafford Act authorizes FEMA's HMGP to provide funds to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration. Under this application, FEMA is considering funding a flood mitigation project that would construct a 42-acre stormwater detention pond northwest of the intersection of Farm-to-Market (FM) Road 421 and Highway 69 in Lumberton, Texas to reduce the likelihood of future flooding in this area.

This Environmental Assessment (EA) 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 Detention Pond, which is a localized flood risk reduction 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).

This proposed detention pond/drainage project addresses a serious and persistent flooding problem in southeast Hardin County, on the western outskirts of the City of Lumberton. Hardin County and the cities of Lumberton and Rose Hill Acres have suffered repeated severe damages and losses as a result of catastrophic weather events. The existing flood control mechanisms are inadequate, undersized and do not offer a sufficient level of protection from stormwater runoffs. Flooding impacts would be reduced by construction of the proposed detention pond, which will expand an existing 30-acre detention pond to create a 72-acre flood control complex.

1.1 PROJECT AREA

The broader physical setting for the project is an area with significant flooding impact in southeast Texas. It is Hardin County, on the western outskirts of Lumberton near the confluence of the Neches River and Pine Island Bayou. Areas to the north and east are urbanized with residential, commercial, and public facilities. A municipal wastewater treatment facility is situated to the south, and areas to the west are generally undeveloped. The site is located approximately 0.3 miles west of the FM Road 421 and United States (U.S.) Highway 69 intersection in Lumberton, Hardin County, Texas (Lat: 30.244691, Long: -94.216806). The project site itself has been logged multiple times and was reforested in a young pine plantation until logged circa 2013. Currently it is a mix of low scrub brush and wild grass with pockets of small trees.

2.0 PROJECT PURPOSE AND NEED

Through HMGP, FEMA provides grants to states and local governments to implement long-term hazard mitigation measures. The purpose of HMGP is to reduce the loss of life and property due to natural

disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. This purpose of this specific project is to reduce, or mitigate, the impact of flooding events to structures and infrastructure, displacement costs, life-safety factors in Hardin County and surrounding areas.

Hardin County and surrounding cities in the project area have suffered repeated severe damages and losses as a result of catastrophic weather events. The existing flood control mechanisms are inadequate, undersized and do not offer a sufficient level of protection from stormwater runoff. Thus, the residents of Hardin County and surrounding areas need a solution for stormwater capacity/conveyance to reduce the frequency and likelihood of flooding to their properties.

3.0 ALTERNATIVES

Five alternatives, including the No Action Alternative, were considered to address the need for the proposed project. Two alternatives are evaluated in this EA, the No Action Alternative and the Proposed Action Alternative. Three additional alternatives were initially developed and considered but were dismissed from further consideration as discussed below in Section 3.3.

3.1 NO ACTION ALTERNATIVE

The No Action alternative (Alternative 5) would involve making no changes to the current project area or site. The existing drainage facilities (i.e., the storm sewer systems and waterways) are insufficient during significant rainfall events and cause the project area to be vulnerable to flooding. This alternative has no immediate or direct resource area impacts and no direct cost. However, indirectly and over the long-term, avoidable damage costs and resource area impacts could occur. The No Action Alternative would not meet the proposed project's purpose and need. Therefore, No Action was determined to be the least effective alternative since it would not yield significant progress toward eliminating or mitigating the problem.

3.2 PROPOSED ACTION ALTERNATIVE

Alternative 1 (Construct Detention Pond): Alternative 1 involves a 42-acre expansion of an existing 30-acre detention pond. Construction would involve sub-surface disturbance and removal of soil and clearing of approximately 4.5 acres of standing trees. The resulting detention complex would serve as a large-scale 'catch basin', receiving flood water inflows from an adjacent drainage channel, temporarily storing them, and would thereby significantly reduce and slow the amount of flood water discharged into downstream channels and reduce flood water surface elevation for the surrounding area. Excavation of the proposed detention pond would range between 6-18 feet in depth with 3 to 1 embankment slopes utilizing erosion prevention until vegetation is established. This project would mitigate, but not entirely eliminate potential flood impacts in the future. Importantly, this project would significantly reduce potential flood impacts for a waste-water facility directly downstream. Figure 1 provides a site diagram of the proposed detention pond complex.

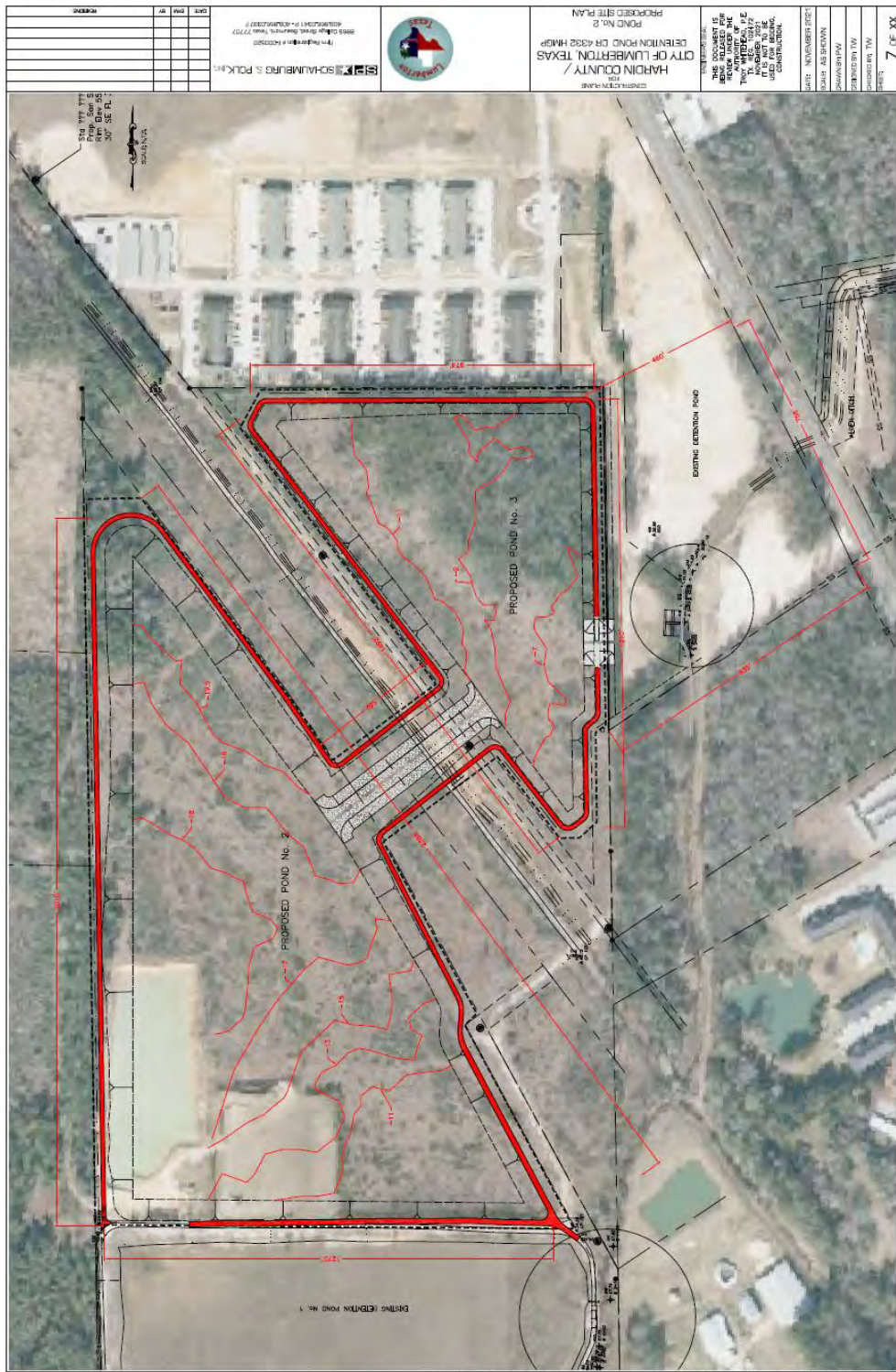


Figure 1: Proposed Detention Pond Complex - Site Diagram

Construction of the Proposed Action would include the following elements:

- Compaction requirements for pond surface include scarifying the soil in place, compacting with tamping roller then blading to leave a smooth surface. Prior to compacting, the moisture content shall be adjusted to within 4% percent of optimum moisture.
- Low flow concrete structures will be constructed to direct flow to the outfall and reduce

maintenance for the life of the project. The top 6 inches of suitable excavated material will be stockpiled for use as topsoil within the limits of the pond. After compaction is completed, stockpiled topsoil shall be evenly spread over the surface of the detention pond and then seeded.

- Erosion control methods shall be installed on detention pond slopes to prevent erosion. Construction fill material shall be clay material with a plasticity index between 10 and 25 compacted to a minimum of 90% of the maximum density as defined by the standard moisture-density relationship (ASTM D-698) with a moisture content within +/- 3% of optimum. All backfilling shall be constructed in layers of not more than 6" thick. An inlet structure will be constructed of Portland cement concrete designed to allow excess run-off from the adjacent drainage channel into the pond. Upstream and downstream ends will consist of reinforced concrete headwall, wing walls, and apron to prevent erosion.
- Conveyance channels will be constructed to direct runoff from Adler ditch through the upper portion of the detention pond to the lower portion of the detention pond. The pond outlet will discharge into the existing detention pond to allow for longer detention. A concrete low flow swale will be constructed to direct runoff to the control structures and minimize erosion.
- In addition to the inlet structure, an existing spillway will be modified to convey high flows into the detention pond area. A second structure, a spillway, will be modified to allow additional runoff to enter the pond. The pond outlet will be modified to adhere to and be in accordance with the findings of the Hydrologic and Hydraulic (H&H) study.
- The detention pond would provide sufficient storage to allow Texas Department of Transportation (TxDOT) to utilize the capacity of existing culverts under Highway 69 that currently convey a portion of the runoff.

Figures 2 and 3 show the construction overview and specifications for the proposed detention pond complex.

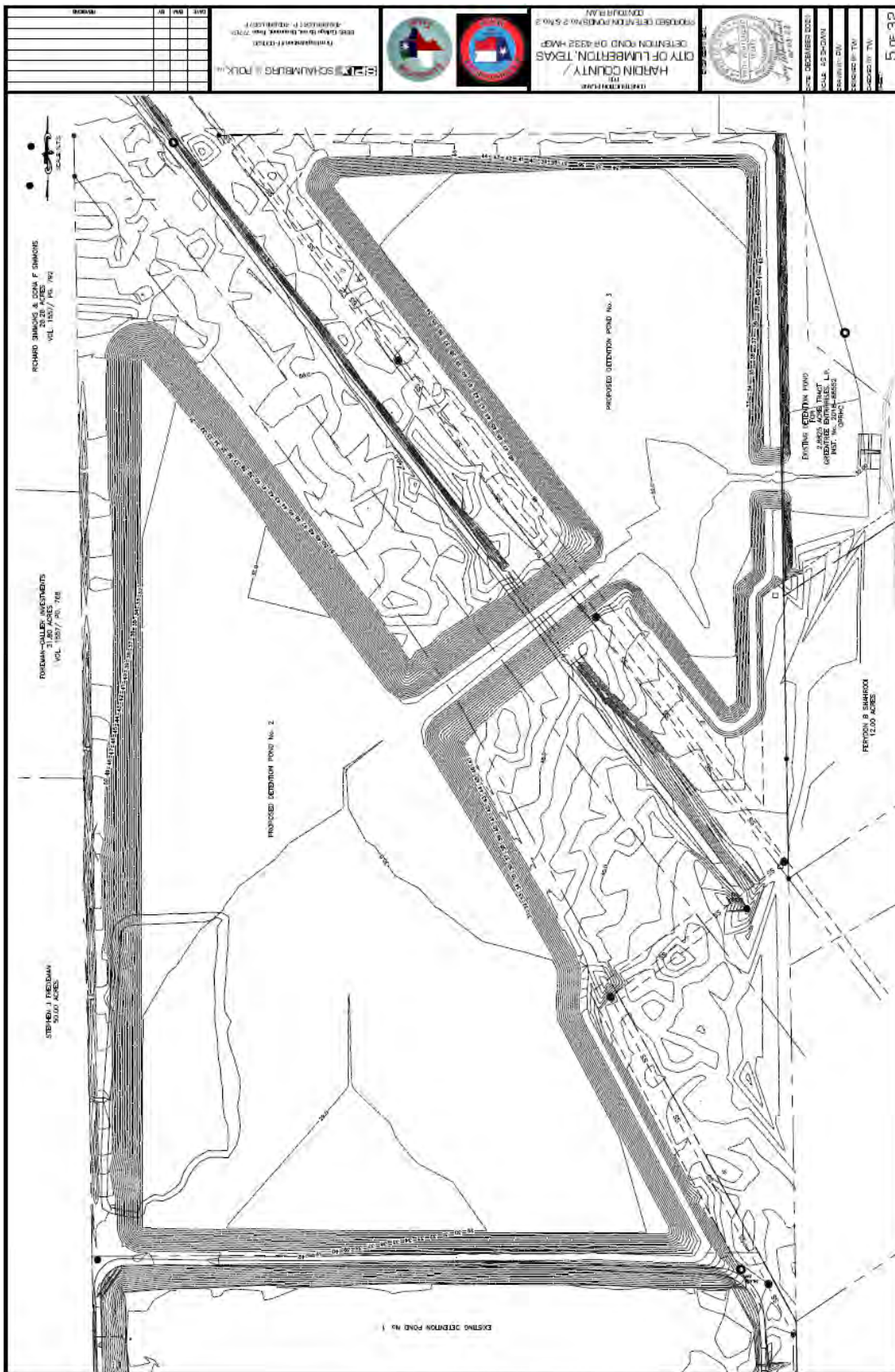


Figure 2: Construction Diagram Overview

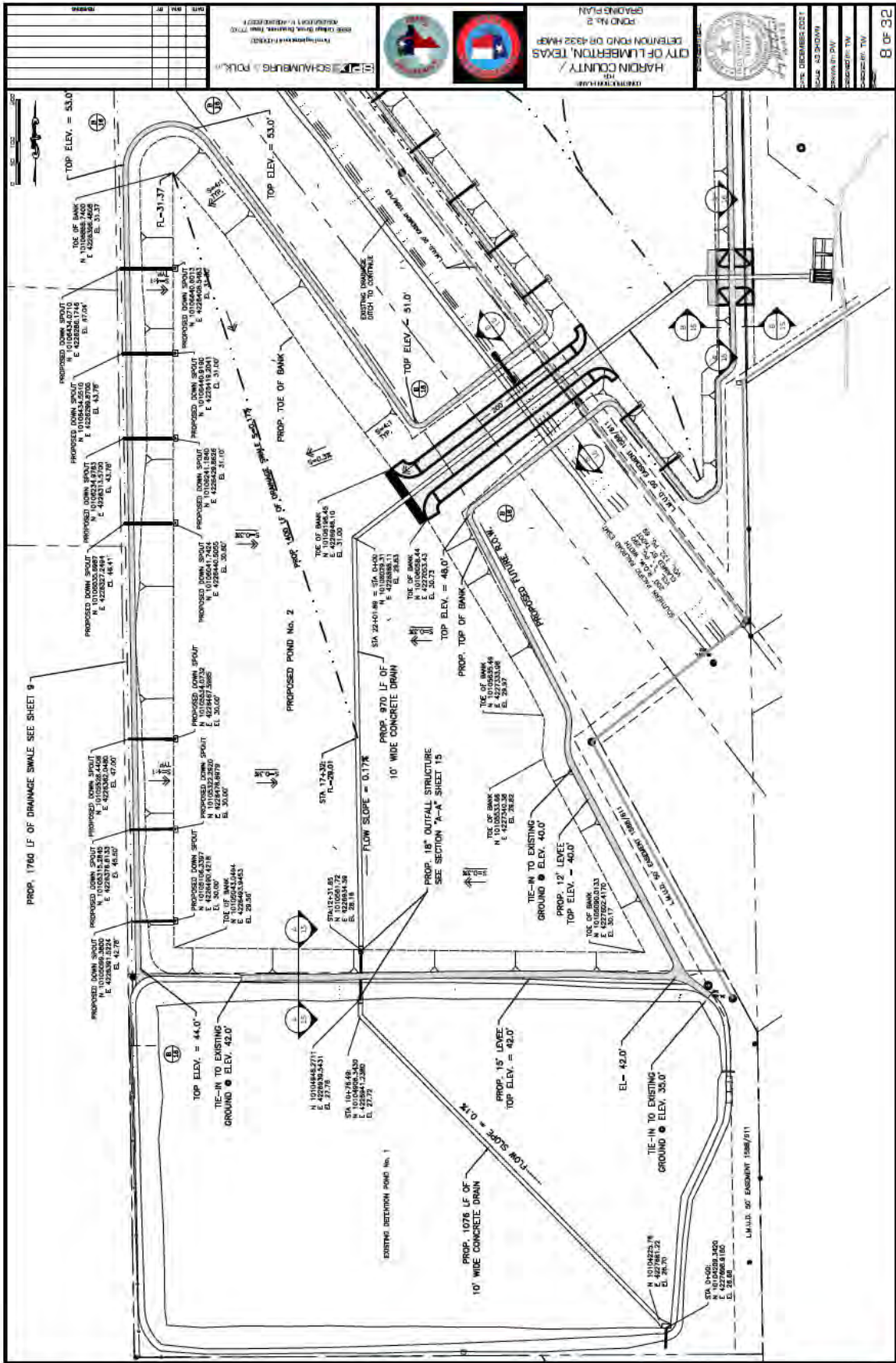


Figure 3: Construction Diagram Specifications

3.3 ALTERNATIVES CONSIDERED BUT DISMISSED

3.3.1 Alternative 2 Analysis (Elevate Homes)

Alternative 2 involves foundation and structural elevation of residences in the surrounding area. This alternative would involve subsurface disturbance of previously developed sites, but trees and vegetation cover, and area water movement would not be significantly affected. Historic preservation mitigation measures are possible but not likely due to the construction age of surrounding development, which is relatively new. While this project type would be partially effective at mitigating structural damage to residences, it would not solve issues of road damage and road loss of function, nor provide protection for **critical** facilities. In addition to being an incomplete solution, it was also found to be a less cost-effective mitigation method as compared to Alternative 1.

3.3.2 Alternative 3 Analysis (Acquisition/Buyout of Homes)

Voluntary acquisition and demolition of properties with flood risk was another alternative considered. Much like home structure elevation, it would involve subsurface disturbance of previously developed sites, but trees and vegetation cover, and area water movement would not be significantly affected. Historic preservation mitigation measures are possible but not likely due to the construction age of surrounding development, which is relatively new. While acquisition and demolition would be very effective at mitigating future damage to residences, it would not resolve issues of road damage and loss of function. In addition to being an incomplete solution, it was also found to be a less cost-effective mitigation method as compared to Alternative 1.

3.3.4 Alternative 4 Analysis (Elevate Roadways)

Alternative 4 is elevation of roadways, and typically involves increasing elevation of the road base, repaving, and placement of culverts or bridge structures. This alternative would involve minor subsurface disturbance of previously developed sites, but trees and vegetation cover would not be significantly affected. Area water movement would likely be affected, though downstream impact analysis and consideration would be required. While this alternative would be effective at mitigating damage to roads and roadway loss of function, it would not solve issues of home damage. In addition to being an incomplete solution, it was also found to be a less cost-effective mitigation method as compared to Alternative 1.

3.4 SUMMARY

Based on results from comparison and analysis of all 5 alternatives considered, the Proposed Action is to move forward with Alternative 1 (Construction of Detention Pond). This alternative yields the most comprehensive solution to the problem, yields the best benefit-cost ratio, has resource area impacts which can be mitigated or prevented, and will produce beneficial floodplain functions.

4.0 AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS

As required under NEPA, a description of the affected environments and potential impacts for resources that may be affected by the proposed project is provided below. The following Environmental and Historic Preservation (EHP)-related resources/areas of concern must be discussed in every FEMA EA: wetlands, floodplains, threatened and endangered species and critical habitat, cultural resources, and environmental justice.

All other EHP-related resources/areas of concern are addressed only when the proposed action and/or alternatives have the potential to affect that resource/area of concern. Resources on which there is no potential to affect include: geology, seismicity, climate change, coastal resources, aesthetics and visual resources, infrastructure, utilities, transportation and waste management, land use planning and zoning, community facilities and services.

4.1 *PHYSICAL RESOURCES*

This section provides an overview of the affected area and potential environmental effects of the no action and proposed action alternatives on physical resources, including soils and climate change.

4.1.1 **Soils**

Project site and surrounding area is on low and flat terrain 40-50 feet above sea level, with no notable geologic features or promontories. There are no mapped tectonic faults and is considered an area of low seismic risk. The U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS) provides information about soils with respect to water table depth, drainage class, farmland classification, and erosion potential. The USDA is primarily responsible for implementing federal farmland policy. Guiding farmland policy is the goal of the Farmland Protection Policy Act of 1981 (FPPA). For the purpose of implementing the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. The USDA-NRCS National Soil Survey Handbook defines prime farmland as land with soils that are conducive to agriculture (USDA-NRCS 2018).

Per review of the Natural Resources Conservation Service (NRCS) Web Soil Survey, predominant soil types in the project are Kirbyville fine loam and Otanya very fine sandy loam, which is technically considered prime agricultural soil. During consultation with NRCS, the project was evaluated as required by the Farmland Protection Policy Act (FPPA). NRCS determined that the proposed site may involve areas of Prime Farmland; however, the location is considered to be exempted from provisions of FPPA due to the project area being deemed land committed to urban development. As such, no further consideration from protection is necessary for the proposed project. The USDA-NRCS consultation package is attached for review and reference on Appendix C.

4.1.1.1 *Impacts of No Action Alternative*

Under the No Action Alternative, FEMA would not provide funding to mitigate flooding in the project area; therefore, no actions would be taken that directly impact soils or geology in the project area. However, future conditions of soils in the project area would include continued soil erosion during instances of high velocity water flow along drainage canals. Soil loss would be expected both within the existing channel and over the channel banks. Continued flooding and associated channel erosion could degrade soil stability. Degraded soil stability and soil erosion into the drainage canals would increase sediment deposits in the channels and basins, reducing water storage and flow capacities over time.

4.1.1.2 *Impacts of Proposed Action Alternative*

The Proposed Action Alternative would directly impact 21.5 acres of soils during construction of the detention basins and drainage improvements. Temporary, minor, indirect impacts caused by wind and water erosion would be expected during construction.

Best management practices to reduce soil erosion during construction will be employed. Silt fences/hay bales will be installed to reduce sedimentation. Area soils will be covered and/or wetted during

construction. If fill is stored on site as part of unit installation or removal, the contractor will be required to appropriately cover it. The construction contractor will be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit and implement stormwater pollution prevention plan. The Texas Commission on Environmental Quality (TCEQ) has stormwater general permits for construction areas equal to or greater than one acre. All precautions should be observed to control nonpoint source pollution from construction activities.

4.2 WATER RESOURCES

This section provides an overview of the affected area and potential environmental effects of the no action and proposed action alternatives on water resources, including water quality, streams, wetlands, and floodplains. Water resources, such as lakes, rivers, streams, canals, and drainage ditches, make up the surface hydrology of a given watershed. Federal statutes, Executive Orders (EOs), and other regulations and directives protect water quality and the beneficial uses of water resources. EO 11988 (Floodplain Management) and EO 11990 (Protection of Wetlands) mandate the control of activities that indirectly influence water quality.

4.2.1 Water Quality

The Clean Water Act (CWA), as amended, is the primary federal law in the United States regulating water pollution (Public Law 92-500, 33 U.S. Code §1251). The CWA regulates the quality of water discharged into “waters of the United States.” Sections 303(d) and 305(b) of the Clean Water Act (CWA) require all states to identify and characterize waters that do not meet, or are not expected to meet, water quality standards (U.S.C. 1313(d) and 1315(b)). The TCEQ is the regulatory agency responsible for compliance with water quality standards in Texas. The TCEQ's 2022 Integrated Report for CWA Sections 303(d) and 305(b) characterize the quality of Texas surface waters and identify those waters that do not meet water quality standards on the 303(d) list, an inventory of impaired waters (TCEQ 2022). Streams are classified by segment within their respective basin.

The proposed project site does not contain creeks, streams, ponds, lakes or other water bodies except for a small tributary on the southeast corner of the project area. In the surrounding area and region, surface water quality is generally turbid with a high proportion of dissolved sediment and relatively high temperature. A review of the TCEQ surface water quality segment viewer indicates that the Boggy Creek tributary in the project area has been determined by the Texas Commission on Environmental Quality (TCEQ) to not be an impaired water or a tidally-influenced water.

4.2.1.1 *Impacts of No Action Alternative*

Under the No Action Alternative, the construction of the proposed detention areas would not take place, thus, the No Action Alternative would not affect water resources or water quality in any way. The project area's water quality would presumably remain the same as would water quality in the downstream receiving waterbodies.

4.2.1.2 *Impacts of Proposed Action Alternative*

Temporary, minor impacts to water quality (e.g., total suspended solids) from soil erosion are expected during construction. Long-term beneficial impacts from the Proposed Action Alternative would include reducing suspended sediment in stormwater by slowing the water velocity and holding stormwater in the channels and detention basins in the project area. Maintenance would be required throughout the life of the detention basins and channels to remove settled sediments from the basins to maintain storage

capacity and to remove debris from culverts and channels to reduce the likelihood of channel erosion and over bank flooding.

As a mitigation measure for potential impacts to water quality during construction, Hardin County and the contractor would be required to prepare, implement, inspect, and maintain a Storm Water Pollution Prevention Plan (SWPPP). The Texas Pollutant Discharge Elimination System (TPDES) program implements the National Pollutant Discharge Elimination System program. The TCEQ administers storm water permits for construction projects disturbing at least one acre of land, thereby requiring the preparation of a SWPPP prior to the commencement of proposed construction activities. In addition, because the proposed project would disturb more than five acres, a Notice of Intent (NOI) for coverage under the TPDES Construction General Permit (CGP) would also be required. Hardin County and the construction contractor would apply for coverage under the CGP. Preparation of the SWPPP and implementation of Best Management Practices (BMPs) would minimize the introduction of pollutants (primarily sediment) in storm water runoff from entering waters of the United States, namely the tributary. Once construction has been completed, a Notice of Termination would be filed per permit requirements.

The Contractor shall remove and dispose of trees, stumps, brush, vegetation, logs, rubbish and other objectionable/deleterious matter from within the project site, unless otherwise noted. Contractor shall dispose of all material in accordance with all federal, state and local regulations. The above-mentioned mitigation measures will mitigate any soil loss, erosion, sedimentation or siltation that may occur in heavy rains during the construction period. Upon completion of construction, exposed soil surfaces will be reseeded with grass in order to stabilize soil conditions and avoid sedimentation into nearby waterways.

4.2.2. Wetlands

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the U.S.(WOTUS), including wetlands, pursuant to §§ 401 and 404 of the Clean Water Act (CWA). Executive Order (EO) 11990 (Protection of Wetlands) directs federal agencies to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the values of wetlands for federally-funded projects. FEMA regulations in 44 Code of Federal Regulations 9, Floodplain Management and Protection of Wetlands, set forth the policy, procedures, and responsibilities to implement and enforce EO 11990, which prohibits FEMA from funding construction in a wetland unless no practicable alternatives are available.

U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping indicates that the area is not located within, nor does it affect a designated wetland. In alignment with the NWI mapper, Hardin County received an Approved Jurisdictional Determination (AJD) letter from the USACE on July 18, 2022, informing that there are no jurisdictional wetlands within the project area other than a small section of approximately 30-foot-long unnamed Boggy Creek tributary which is located outside the project limits. A copy of the AJD letter is provided in Appendix B.

4.2.2.1 Impacts of No Action Alternative

Under the No Action Alternative, the construction of the detention pond would not take place. Thus, the No Action Alternative would have no immediate impacts to wetlands. However, over time, the No Action Alternative may change wetlands in the project area due to fill from siltation or scour.

4.2.2.2 Impacts of Preferred Action Alternative

Similar to the No Action Alternative, the Proposed Alternative is not anticipated to impact wetlands or other WOTUS since there are no wetlands or WOTUS located within the Project Area. Hardin County shall 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 to ensure that wetlands are not adversely impacted per the Clean Water Act and Executive Order 11990.

4.2.3. Floodplains

EO 11988, Floodplain Management, requires federal agencies to take actions to minimize occupancy of and modifications to floodplains. FEMA regulations in 44 Code of Federal Regulations (CFR) Part 9, Floodplain Management and Protection of Wetlands, set forth the policy, procedures, and responsibilities to implement and enforce EO 11988 and prohibit FEMA from funding activities in the 100-year floodplain unless no practicable alternative is available. FEMA regulations for complying with EO 11990 are found in 44 CFR Part 9, Floodplain Management and Protection of Wetlands. In compliance with FEMA regulations implementing EO 11988, FEMA is required to apply the eight-step decision-making process for actions that would impact floodplain. The eight-step process is applied to the proposed detention pond project and an eight steps analysis of the decision-making process for floodplains is provided in Appendix A.

FEMA Flood Insurance Rate Map (FIRM) panel 48199C0530F, dated 10/06/2010, illustrates that a small far southeast corner of the project area is located within Zone A, area of 100-year floodplain associated with the unnamed Boggy Creek tributary. The remaining majority portion of the project area is located within an unshaded Zone X, areas determined to be outside the 500-year floodplain.

4.2.3.1 Impacts of No Action Alternative

The No-Action Alternative would not involve any impacts to floodplains within the project area.

4.2.1.1 Impacts of proposed Action Alternative

Although portions of the proposed action are located within the 100-year floodplain, no adverse impacts to the floodplain are anticipated. Refer to Appendix A, 8-Step Decision-making process, for details of impacts associated with proposed action. The project is expected to contribute in general to floodplain functions, acting as a stormwater storage facility during heavy rain events and mitigating flooding in the project area.

Hardin County 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.

4.3. BIOLOGICAL RESOURCES

Biological resources are animals and plants that inhabit an area, including threatened or endangered species, and the habitats supporting these resources. In general, biological resources include native and introduced plants that comprise the various habitats, animals present in such habitats, and natural features that support these plant and wildlife populations.

The Endangered Species Act (ESA) was enacted into federal law by Congress in 1973. The purpose of the ESA is to protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the U.S. Fish and Wildlife Service (USFWS) and the Commerce Department's National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon.

4.3.1. Threatened and Endangered Species and Critical Habitat

The project area was evaluated for the potential occurrence of federally listed threatened and endangered species. Section 7 of the ESA prohibits the taking of listed threatened and endangered species unless specifically authorized by permit from the USFWS or the NMFS. As defined by the USFWS, “An ‘endangered’ species is one that is in danger of extinction throughout all or a significant portion of its range. A ‘threatened’ species is one that is likely to become endangered in the foreseeable future.” The ESA requires any federal agency that funds, authorizes, or carries out an action to ensure that the action is not likely to jeopardize the continued existence of any endangered or threatened species (including plant species) or result in the destruction or adverse modification of designated critical habitats.

According to the USFWS Endangered Species Program website (USFWS 2023), species listed on the Federal List of Endangered and Threatened Species that are known to occur or are believed to occur in Hardin County are presented in Table 1. The project area was reviewed to assess whether habitat suitable for supporting the listed species is present.

Table 1: Federal List of Endangered and Threatened Species in Hardin County

Common Name	Scientific Name	Status	Suitable Habitat	Suitable Habitat in Project Area
Birds				
Piping Plover	<i>Charadrius melodus</i>	Threatened	Wide, flat, open, sandy beaches with very little grass or other vegetation, nesting territories often include small creeks or wetlands	No
Red Knot	<i>Calidris canutus rufa</i>	Threatened	Intertidal, marine habitats near coastal inlets, estuaries, and bays	No
Red-cockaded Woodpecker	<i>Picoides borealis</i>	Endangered	Mature pine forests in the southeastern United States	No
Reptiles				
Alligator Snapping Turtle	<i>Macrochelys temminckii</i>	Proposed Threatened	Eggs found near shore areas; hatchlings and juveniles tend to occupy shallower water; and Juveniles/adults are found in deeper water (usually large rivers, major tributaries, bayous, canals, swamps, lakes, ponds, and oxbows);	No
Plants				
Texas Prairie Dawn-Flower	<i>Hymenoxys texana</i>	Endangered	Barren stretches of saline sandy soil at the base of mima mounds	No

Source: USFWS Information for Planning and Consultation 2023

The proposed project area does not contain suitable habitat for federally listed threatened or endangered species potentially occurring in Hardin County.

4.3.1.1 Impacts of No Action Alternative

The No Action Alternative would not affect the listed threatened or endangered species.

4.3.1.2 Impacts of Proposed Action Alternative

Adverse effects to the listed threatened or endangered species resulting from implementation of the proposed project is not anticipated due to the lack of suitable habitat. The area is previously impacted multiple times by logging and there are no critical habitats identified within the project area.

4.3.2. Wildlife, Including Migratory Birds and Bald and Golden Eagles

The Migratory Bird Treaty Act (MBTA) protects all migratory birds and their parts. Under the MBTA, it is unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory birds, including feathers or other parts, nests, or eggs. Nearly all native North American bird species are protected by the MBTA. The skies above Hardin County are listed as part of the North American Flyway, specifically the Central Flyway. This flyway is used by neo-tropical birds passing over Hardin County annually on their migration southward to warmer climates. These birds are protected by the MBTA.

While no longer listed as a threatened or endangered species, the bald eagle is protected under the MBTA and the Bald and Golden Eagle Protection Act (BGEPA) of 1940. The BGEPA provides for the protection of the bald eagle and the golden eagle by prohibiting the take, possession, sale, purchase, barter, offer to sell, transport, and export or import of any bald or golden eagle, alive or dead, including any part, nest, or egg. Per USFWS, Bald Eagle might be present in Hardin County and the project area.

The Fish and Wildlife Coordination Act (FWCA) was enacted to protect fish and wildlife when federal actions result in the modification of natural streams or bodies of water. Coordination with the USFWS would be required if a natural stream or water body modification is included in a proposed project. The proposed project would not modify any natural streams and bodies of water.

4.4.2.1 Impacts of No Action Alternative

Under the No Action Alternative, wildlife and migratory birds would not be impacted.

4.4.2.2 Impacts of the Proposed Action Alternative

To comply with the MBTA, Hardin County will limit vegetation 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 vegetation removal activities must occur during the nesting season, applicant will deploy a qualified biological monitor with experience conducting breeding bird surveys to survey the vegetation removal 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 removal 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.

The loss of marginal habitat in the project area from clearing and excavation would result in the displacement of some local wildlife including noise from construction equipment, or the presence of humans. Many of these species that are adapted to human disturbance would vacate the habitat during construction, populating similar habitat in the area, and would likely return after habitat has been reestablished.

4.4. CULTURAL RESOURCES

The Federal government is required to take into account the impact of federally-sponsored actions on human health and the natural environment via NEPA, which requires corresponding efforts to take into consideration those effects to cultural resources under Section 106 of the National Historic Preservation Act (NHPA), as amended, and implemented by 36 CFR Part 800. Section 106 requires that activities occurring on federal land, or those actions that require federal permits or use federal funds, undergo a process to consider historic properties that are or may be eligible for listing on the National Register of Historic Places (NRHP). Historic properties are archaeological sites, buildings, structures, objects or districts included in or eligible for listing. The federal agency must review the effects of its action, or “undertaking”, on the historic properties. The Area of Potential Effects (APE) of a federal undertaking is the geographical area or areas within which an undertaking may directly or indirectly effect the defining character or use of historic properties. If there is potential to effect historic properties, adversely or otherwise, the agency must consider alternatives to avoid, minimize or mitigate the effect.

4.4.1. Historic Properties

On behalf of FEMA, Hardin County initiated Section 106 consultation with the Texas Historical Commission (THC) on December 15, 2021. THC responded with a determination of No Historic Properties Affected on January 13, 2022, stating that no above- or below-ground historic properties are present within the project APE. During construction, applicant will monitor ground disturbance and if any potential archeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA. Consultation materials submitted to THC are attached for reference Appendix D.

4.4.2. American Indian/Native Hawaiian/Native Alaskan Cultural/Religious Sites

The NHPA requires that federal agencies consult with Tribal groups with a designated interest in the undertaking as consulting parties to the Section 106 process, whether or not the undertaking is on Tribal land. FEMA initiated Section 106 consultation per 36 CFR§800.2(c)(2)(i)(B), with the Alabama-Coushatta Tribe of Texas, Comanche Nation, Jena Band of Choctaw Indians, Kiowa Tribe, Tonkawa Tribe of Indians of Oklahoma. The Tribes did not provide comments within 30 days or declined to comment. FEMA has determined that the proposed project will not adversely affect traditional, religious, or culturally significant sites. Consultation materials submitted for Tribal consultation are attached for reference, see Appendix D.

4.4.2.1 Impacts of No Action Alternative

No known historic properties are present within the APE, therefore, under the No Action Alternative, no impacts are anticipated.

4.4.2.1 Impacts of Proposed Action Alternative

No known historic properties are present within the APE. Ground disturbing work is anticipated to extend to a maximum depth of 11 to 18 feet. Under the Proposed Action Alternative, no impacts are anticipated to historic properties. Applicant will monitor ground disturbance activity and if any potential archeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA. This requirement will be specified in construction contract terms and conditions.

4.5. SOCIOECONOMIC RESOURCES

4.5.1. Environmental Justice

In 1994, President Bill Clinton issued EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations), which mandates that federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations.

A review of the U.S. Environmental Protection Agency's (EPA's) Environmental Justice Screening and Mapping Tool (EPA 2023) and of the NEPAssist tool (EPA 2023) for the project area identified no minority or low-income populations within or near the project area due to project type and available census block group data.

4.5.1.1 Impacts of No Action Alternative

Under the No Action Alternative, no disproportionately high and adverse impacts to minority or low-income populations would occur. Flooding risks would continue for residents and business owners within the project area.

4.5.1.2 Impacts of Proposed Action Alternative

No disproportionately high and adverse impacts on minority or low-income portions of the population or impacts to community cohesion are anticipated. The proposed project will reduce flooding risks in the project area and is expected to produce positive socioeconomic effects, most importantly for minority and low-income populations with limited resources. Flood losses to properties will be reduced or eliminated, and the lives of those affected by flooding events will be protected. Additionally, by preventing further flood damage and/or loss in the project area, flood insurance disbursements (for damage claims through low-cost NFIP policies covering areas outside of floodplains but prone to flooding) is anticipated to decrease. This will lessen the exposure to financial liability for the NFIP and allow the program to continue to offer affordable flood insurance policies to the community in the project area. All citizens who live and/or work in the project area, or travel through it, will benefit from the implementation of the Proposed Action, and the design and construction of the proposed project will create temporary jobs.

4.6 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table 2: Summary Table

Resource	Impacts	Mitigation Measures
Geology, Seismicity, and Soils	Geology – no impacts. Seismicity – no impacts. Soils – Conversion of prime farmland soils.	Project is exempt from FPPA. No mitigation measures proposed.
Climate Change	No impacts; potential reduction of climate change effects via reduction of flooding.	No mitigation measures proposed.
Water Resources and Water Quality	Groundwater – no anticipated impacts. Surface water quality – temporary, minor impacts; potential improvements post-construction. Developed water resources – no impacts.	Hardin County comply with conditions of Construction Storm Water General Permit TXR 150000, including preparation of SWPPP and implementing BMPs.
Wetlands	No jurisdictional impacts are anticipated to occur during construction.	A SWPPP will be prepared, and BMPs for storm water management will be implemented to minimize detrimental effects to water quality of the water bodies in the project area during construction.
Floodplains	No adverse impacts to the 100-year or 500-year floodplain.	Coordination with the local Floodplain Administrator will be performed prior to construction.
Coastal Resources	No impacts: Project is not within the Coastal Zone Boundary.	No mitigation measures proposed.
Threatened or Endangered Species and Critical Habitat	No impacts.	No mitigation measures proposed.
Migratory Birds	Minor vegetation clearing activities would reduce available habitat; adverse impacts are not anticipated.	To minimize impacts to migratory bird species, Hardin County will limit tree removal work during the peak migratory bird-nesting period of March through August as much as possible. Otherwise, Hardin County will deploy a qualified biological monitor.
Wildlife Communities and Habitat	Land clearing activities might temporarily reduce available habitat; adverse impacts are not anticipated.	Any impact would be temporary and minor.
Cultural Resources	No anticipated impacts. SHPO letter dated January 13, 2022 (Appendix D).	In the event that archeological deposits, including any buried cultural resources 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, and access to the sensitive area will be restricted. The applicant will inform FEMA immediately, and FEMA will consult with the SHPO. Work in sensitive areas shall not

Resource	Impacts	Mitigation Measures
		resume until consultation is completed and until FEMA determines that the appropriate measures have been taken to ensure complete project compliance with the NHPA.
Environmental Justice	No disproportionately high and adverse impacts on minority or low-income portions of the population are anticipated.	No mitigation measures proposed.
Hazardous Materials	Contaminated soil and groundwater might be encountered during construction activities.	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.
Noise	Temporary equipment and machinery noise during construction; no long-term impacts anticipated.	Construction activities will take place during normal business hours. Machinery operating at the proposed Project Area will meet all local, state, and federal noise regulations.
Traffic	Potential, temporary traffic interruptions during construction; no long-term impacts anticipated.	Traffic control measures will be implemented during construction as needed.
Public Services and Utilities	Public services – no impacts. Utilities – no impacts	No mitigation measures proposed. If any undocumented utilities or pipelines are uncovered during construction activities would cease and the proper entities (e.g., TCEQ or RRC) would be contacted.
Public Health and Safety	No adverse impacts; improvements to public health and safety as a result of decreased flooding.	The appropriate signage and barriers will be in place prior to construction activities to alert pedestrians and motorists of Project activities.
Zoning and Land Use	No impacts.	No mitigation measures proposed.

4.7 CUMULATIVE IMPACTS

According to the Council on Environmental Quality (CEQ) regulations, cumulative impacts represent the “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time (40 CFR 1508.7)”. In accordance with NEPA, and to the extent reasonable and practical, this EA considered the combined effect of the Proposed Action and other actions occurring or proposed near the project site.

The Proposed Action will have permanent impacts considered positive for the general public. They will

collectively contribute to the overall flooding mitigation efforts designed to aid the community affected by severe rainfall events. The project is also expected to improve water quality in riparian zones overtime. The project site is also transected by a highway right-of-way. If this transportation route is built in the future, this parcel and detention pond improvements will serve as a beneficial spatial and sound buffer for the highway while further providing aesthetic value along the corridor.

The construction of the Proposed Action might have temporary impacts on air quality and noise, by increasing criteria pollutants during construction activities, and by traffic. No other cumulative impacts are anticipated. The construction of the proposed project will have little or no negative cumulative impact on the surrounding community and environment.

5.0 AGENCY COORDINATION, TRIBAL CONSULTATION, PUBLIC INVOLVEMENT

5.1 AGENCY COORDINATION

- Floodplain Determination: Hardin County Floodplain Administration Office (HC-FAO) was consulted with regard to permitting requirements for the proposed project.
- State Historic Preservation Office: Texas Historical Commission / SHPO was consulted with regard to permissions, comments or conditions with regard to the project. A copy of this consultation request is attached in Appendices.
- Farmlands Protection: The NRCS was consulted with regard to soils impacts of the proposed project. Findings of the NRCS is that the project may proceed. A copy of this consultation request and response is attached in Appendices.
- U.S. Army Corps of Engineers: USACE was consulted with regard to jurisdictional determination. A copy of this consultation request is attached in Appendices.
- FEMA initiated Section 106 consultation per 36 CFR§800.2(c)(2)(i)(B), with the following tribes. The Tribes did not provide comments within 30 days or declined to comment.
 - Alabama-Coushatta Tribe of Texas
 - Comanche Nation
 - Jena Band of Choctaw Indians
 - Kiowa Tribe
 - Tonkawa Tribe of Indians of Oklahoma.

5.2 PUBLIC INVOLVEMENT

The public will be invited to review and comment on the proposed project and the Draft EA. A notice of availability to review the Draft EA will be posted in newspapers circulated in the region, and on FEMA's website (<https://www.fema.gov/emergency-managers/practitioners/environmental-historic/region/6>). FEMA will consider the comments received and respond in the Final EA. If no substantive comments are received, the Draft EA will become final and a FONSI will be issued for the project

5.3 PERMITS

The following are permits that would be required to implement the proposed project:

- The construction contractor will be required to coordinate with the TCEQ for coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) and prepare and implement stormwater pollution prevention plan Preparation (SWPPP) to construct the proposed project.
- Coordination with local floodplain administrator regarding the proposed project.

6.0 REFERENCES

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7.0 LIST OF PREPARERS

The following individuals contributed to or reviewed portions of this EA.

Name and Role	Affiliation
Gregg J. Wobble	Hardin County
Subha Pandey, Environmental Specialist	FEMA
Dorothy Cook, Acting Regional Environmental Officer	FEMA
Angela McComb, Historic Preservation Specialist	FEMA

APPENDICES