JMB Land Co., LP

April 6, 2016

Sam Watson
U.S. Army Corps of Engineers
Galveston District
Regulatory Branch
PO Box 1229
Galveston, Texas 77553-1229

Dear Mr. Watson:

Please find attached a Final Draft Prospectus for Bastrop Bayou Mitigation Bank (BBMB). On August 18, 2015 JMB Land Co., LP (JMB) had previously submitted a Draft prospectus for the proposed Bastrop Bayou Mitigation Bank (BBMB) located in Brazoria County, Texas and the IRT had a site visit on November 5, 2015. During that visit they also visited a reference site on the Brazoria National Wildlife Refuge.

Based on comments received during the IRT visit and afterward in writing, JMB made the following changes to the Prospectus;

- Stream component has been removed
- Bottomland hard wood component has been removed
- Instead of breaching the levee around the 72.8 acre reservoir it will be completely degraded

Additionally JMB has decided to add a ~200 acre cattle pasture that is located east, adjacent to the original property.

Also, per discussions at the IRT site visit, Herbaceous Prairie Wetland was the only habitat the IRT proposed for BBMB. Due to this consensus JMB is proposing to use the Ratio Method to measure credits. The reasoning for using the Ratio Method is that there is currently not an iHGM that properly measures Herbaceous Prairie Wetland.

Should you have any questions or comments please do not hesitate to contact us.

Sincerely,

Aaron Landry

Final Draft Prospectus for the Proposed Bastrop Bayou Mitigation Bank

Brazoria County, Texas

April 6, 2016

Sponsor:
JMB Land Co., LP
2205 W. Pinhook, Suite 200
Lafayette, Louisiana 70508

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1.0 INTRODUCTION

JMB Land Co., LP (JMB and or Sponsor), submits this Prospectus to the U.S. Army Corps of Engineers - Galveston District (CESWG) and the CESWG Mitigation Banking Interagency Review Team (IRT) in sponsorship of establishing Bastrop Bayou Mitigation Bank (BBMB and or Bank). The Sponsor has prepared this prospectus in accordance with 33 CFR § 332.8(d) (2) to establish and operate the proposed BBMB. BBMB is intended to provide compensatory mitigation for wetland impacts within its BBMB will provide PEM mitigation credits in the form of Herbaceous Prairie Wetland to HUC 12040205 Austin – Oyster and to HUCs 12040204, 12070104 (portion within West Gulf Coastal Plains Level III Ecoregion), 12090401, and 12090402 (Attachment A: Figure 14).

BBMB is currently comprised of approximately 455.4 acres of wet cattle pasture fields, 66.5 acres of sod farm, 74.1 acres of scrub tallow forest, 23.3 acres of roads and levees, 72.8 acres of remnant agricultural water reservoir, 7.8 acres of internal drainage, and 4.6 acres of ditches. The area within the project boundary has potential to be restored to high quality Herbaceous Prairie Wetlands, through the implementation of restoration and enhancement mitigation types as defined in the Ratio Method, the Sponsor will restore a total of 699.9 acres of wetlands. BBMB will have long term protection through financial assurances with long-term escrow accounts and the institution of a conservation servitude.

1.1 Site Location

The bank is located in HUC 12040205 Austin-Oyster. Named water ways in the direct vicinity of the bank are Bastrop Bayou, Little Slough, and Big Slough. The US EPA describes the Ecoregion III that the BBMB is located in at the Western Gulf Coastal Plains region which is largely coastal prairie with wooded areas and adjacent rivers. Topography in and surrounding the bank is a Ridge-Swale Landscape, which is created by meandering bayous that change their course multiple times over thousands of years. Some of higher ridges are forested while most of the swales are herbaceous. Over the last two hundred years the prairie of Brazoria County has been converted to cattle pastures and cropland. The bank and surrounding properties were not immune to the conversion of the original prairie.

Current land use of the property consists primarily of cattle pasture, sod farm, a water reservoir, and three scrub shrub areas, two that are mainly Chinese Tallow (Triadica sebifera) (see Table 1, and Attachment A: Figure 3). Adjacent land use consists primarily of cattle pasture to the east and west, and a landfill to the south. Bastrop Bayou Mitigation Bank (BBMB) would provide very similar habitat for the same species that Brazoria National Wildlife Refuge (BNWR) is striving to protect and preserve.

BBMB is located approximately 5.5 miles southeast of Angleton, Texas. BNWR is located 2.5 miles to the east of the property. The bank is located at Northing 3,222,345m and Easting 271,441m NAD83 UTM zone 15N (approximate center point) in Brazoria County, Texas.

1.2 Driving Directions

To reach the Property from Angleton, Texas, drive south on S. Velasco Street (Highway 288) for 2.2 miles; turn left onto Coale Road (Highway 220); continue on Coale Road for 2.2 miles; turn right onto FM523 S.; continue on FM523 S. for 2.0 miles; turn left onto Fairway Drive; continue on Fairway Drive for 1.4 miles; and the property will be on the right (see Attachment A: Figure 2).

2.0 PROJECT GOALS AND OBJECTIVES

The goal of the bank is to re-establish and restore 699.9 acres of herbaceous prairie wetlands habitat. The remaining 4.6 acres of non-mitigation features will consist of Waters of the U.S. In doing so, the bank will be returned to its previous prairie wetland habitat that can be seen in the 1938 Ariel photography.

Table: 1 Current Habitat Types and Land Use

Current land Use	Wetland Determination	Proposed Habitat Type	Acreage
Cattle Pasture	Wetland	PEM	342.9
Cattle Pasture	Non-Wetland	PEM	112.5
Sod Farm	Wetland	PEM	66.5
Scrub Shrub	Wetland	PEM	33.4
Invasive Chinese Tallow	Wetland	PEM	40.7
Roads/Levee	Non-Wetland	PEM	23.3
Reservoir	Non-Jurisdictional	PEM	72.8
Isolated Drainage	Non-Jurisdictional	PEM	7.8
Ditch	Wetland	Internal Drainage	4.6
		Total	704.5

The Sponsor proposes to restore the hydrology of the site as well as removing noxious species, and re-vegetating the site. Hydrologic restoration will be completed by returning spoil into drainages and contouring into sloughs. The old spoil and roads currently impede the natural movement of flood waters flow across the site. This includes the removal of the levee around the 72.8 acre reservoir. The levee will be pushed into the borrow area inside of the reservoir. The Sponsor will also remove the site from agricultural use and re-vegetate the site with an assemblage of species indicative of herbaceous prairie wetlands in this area. Noxious species such as Chinese Tallow (*Triadica sebifera*) and Phragmites (*Phragmites australis*) will be eliminated by the Sponsor through aerial application and spot spraying of herbicides. The proposed bank restoration will prove to be a valuable asset to water quality and wildlife within its Western Gulf Coastal Plains Eco-region III.

The objectives of this bank are as follows:

- Remove interior fencing to allow uninhibited wildlife access to BBMB.
- Remove cattle from the project area.

- Remove noxious species (Chinese Tallow (*Triadica sebifera*) and Phragmites (*Phragmites australis*)) through aerial application and spot spraying of herbicides

- Restore natural hydrologic cycling, sheet flow, and water storage of BBMB by topographic restoration.

- Recruitment of indigenous Herbaceous Prairie Wetlands species

- Improve water quality through the restoration of BBMB's topography and vegetative habitats

- Improve biotic conditions and create habitat for a multitude of mammals, reptiles, insects, and hundreds of migratory birds.

- Insuring the quality of BBMB habitat through annual vegetation monitoring, noxious invasive species control, and adaptive management if necessary.

- Provide long term protection through financial assurances with long-term escrow accounts and the instituting of conservation servitude.

The goals and objectives of the sponsor will ensure that the region (BNWR, Bastrop Bayou, HUC 12040205, and the Western Gulf Coastal Plain) will see substantial added value in terms of hydrology, ecology, and overall habitat. Currently land use is aimed at cattle production and sod farming, both of which add little value to the overall landscape. In reaching the goals of the bank, land use will pivot away from marginal land and towards herbaceous prairie wetland, enveloping the goals of not only BBMB but the Brazoria National Wildlife Refuge as well (Sanchez 2012).

3.0 ECOLOGICAL SUITABILITY OF SITE

3.1 Historical Ecological Characteristics of the Site

The Coastal Prairie of Texas consisted of 9 million acres in the early 1800's. Since that time, this acreage has been greatly reduced due to cropland, livestock, and urban sprawl. Brazoria County has been affected by all three of these land altering activities (Smeins 1991). Bastrop Bayou Mitigation Bank site is no exception; prior to 1970 aerial photography shows the site was cleared and mowed for rice farming. At that time the 72.4 acre reservoir on the property was constructed for water storage for rice farming. Soon thereafter rice farming was abandoned and the site was then utilized for livestock grazing and sod farming. Prior to these changes, the site is seen in it's historically prairie form in 1930 and 1944 aerial photography (Attachment A: Figures 5 & 6).

When reviewing the historic aerial photography neither Mima mounds nor ponds are evident therefor no depressional or mound restoration is proposed. It is easy to see the remnant stream bed contours that run west to east across the site. This micro-topography not only provides wildlife with areas of refuge and feeding, they will act as drainage ways for the property once they are reconnected and restored.

3.2 Current Ecological Characteristics of the Site

3.2.1 EPA Ecoregion

BBMB is in the EPA's Level III Ecoregion 34 which is the Western Gulf Coastal Plain. This region is located on the gulf coast of Texas and ranges from 50 to 90 miles wide. What sets this region apart from others is its flat topography and natural grassland vegetation. BBMB is set within the Level IV ecoregion 34a Northern Humid Gulf Coastal Prairies. Generally the level IV Ecoregion has poorly draining soils and wet for parts of the year due to the clay sublayers of the soil. The prominent grasses in this ecoregion are Little Bluestem, Yellow Indiangrass, Gulf Muhly, and Switchgrass. Challenges to keeping this region as natural as possible are tallow trees, farming and grazing, drainage canals, and urban sprawl

3.2.2 Current Site Vegetation

Although the site does show signs that it has been affected by the spread of invasive species, there are also signs that it was previously a thriving prairie with the current inhabitancy of remnant prairie species. The vegetation on BBMB is currently being managed for cattle grazing. The manipulation of the sites topography has also affected the vegetation making some areas on site drier and others wetter than normal.

The non-wet areas consist of sod field, pasture, levee, and roads. The pasture and sod field do not have wetland vegetation due to the canalization and diching of the land. The levees and roads have been built up so that they are not affected by the water on the site. The vegetation in these areas consist of St. Augustine Grass (Stenotaphrum secundatum) and Angelton Bluestem (Dichanthium aristatum).

The wet areas on the property consist of pasture, scrub shrub, waters of the U.S., and Chinese Tallow. The pasture area has the remnant prairie species in it. Areas that were not well managed have large swaths of Chinese Tallow (Triadica sebifera). The Scrub shrub area consists of Baccharis (Baccharis halimifolia), Hackberry(Celtis laevigata), and Elm(Ulmus Americana). Some of the wet spaces are affected by ponding due to the roads and levees.

Table: 2 Current Vegetation Species List

Scientific Name	Common Name (USDA)	Wetland Indicator Status Atlantic and Gulf Coastal Plain (USDA)
Current vegetation within cleared cow pasture		
Spartina patens	Cordgrass	FACW
Dichanthelium scoparium	Velvet Panicum	FACW
Stenotaphrum secundatum	St. Augustine Grass	FAC
Eleocharis acicularis	Needle Spikerush	OBL
Symphyotrichum tenuifolium var. aphyllum	Saltmarsh Aster	OBL
Current vegetation within scrub/forested areas		
Baccharis halimifolia	Eastern Baccharis	FAC
Sabal minor	Saw Palmetto	FACW
Ulmus Americana	American Elm	FAC
Celtis laevigata	Hackberry	FACW
Triadica sebifera	Chinese Tallow	FAC
Current vegetation within cleared sod fields		
Dichanthium aristatum	Angleton Bluestem	FACU
Stenotaphrum secundatum	St. Augustine Grass	FAC

3.2.3 Current Site Hydrology

The bank site is located in the Austin-Oyster watershed (12040205), specifically within the Lower Oyster Creek (120402050400) drainage area. This region is dominated with ridge swell topography; natural ridges being only two to three feet higher than the swells. This is evident within the bank as well. This unique topography gives way to drainage patterns in which water is moved through the sloughs down elevation. Currently the site, with its former use aimed at agricultural purposes has construed the topography to fit agricultural goals of efficient drainage. The site drains into Bastrop Bayou via man-made agricultural drains. Elevated roads, levees, and spoil banks impound water on the site and prevent overbank flooding, hydrologically isolating the site (Attachment A: Figure 15).

Currently, wetlands and unnamed drainageways on-site are hydrologically isolated due to spoil banks, elevated roads, and levees. Wetland hydrology on-site is currently driven by direct precipitation and runoff from adjacent properties – spoil banks have been minimally gapped to allow some of the excessive precipitation to flow from the site as runoff. Proposed drainage patterns are discussed in section 4.2.1 and in Attachment A: Figure 16.

The BBMB project area drains into Bastrop Bayou, which as of 2015 met all water quality requirements except nutrient levels which are considered deteriorating according to TCEQ. Bastrop Bayou subsequently flows into Bastrop Bay and Oyster Lake, which are currently impaired for fecal coliform. By removing cattle BBMB is eliminating a source of fecal coliform, also by allowing adjacent area runoff we will continue to filter drainage water and decrease fecal coliform in Bastrop Bayou. The cessation of agricultural activities along with degrading spoil banks, roads, levees, will aid in meeting

the current and future Total Maximum Daily Loads through the resulting water quality improvements due to increased filtration and plant uptake (i.e., nonpoint source pollution prevention).

3.2.4 Existing Soils

The Brazoria County Soil Survey maps BBMB soils as: Francitas clay, zero (0) to one (1) percent slopes, somewhat poorly drained and Lake Charles clay, zero (0) to one (1) percent slopes, rarely flooded. All of these soil types are listed as hydric soils of Brazoria County on the USDA NRCS National List of Hydric Soils; All States (2014). A wetland delineation conducted in January 2015 confirmed that these soils present hydric indicators and are wetland soils in areas other than the sod field which had been contoured to drain. Figure 11 presents the current soils within the project area.

Table: 3 Existing Soils

Soil Name	Soil Code (NRCS)	Acreage of Soil on BBMB	Percent of Soil on BBMB
Lake Charles clay	24	466.5	66.23%
Francitas clay	17	118.4	16.81%
Water	W	77.3	10.97%
Surfside clay	39	42.2	5.99%

According to the Brazoria County Soil Survey and the USDA Web Soil Survey the following soils are found to occur on the bank, their descriptions are:

- Lake Charles clay (24) is a nearly level soil with slops at 0.1 percent. This soil is very dark gray to a depth of about 50 inches and is slighty acidic in this upper part. It is somewhat poorly drained and the water table in the winter is above the depth of two feet. Surface runoff is very slow and permeability is very slow.

- Francitas clay (17) is a nearly level, slightly saline soil with slopes at 0.3 percent. This soil surface is mildly alkaline and very dark clay about 18 inches thick. The soil is poorly drained and the surface runoff is very slow. The soil has a perched water table above the depth of two feet during the winter.

- Surfside clay (39) is a nearly level, saline soil with slopes at 0.2 percent. This soil is in marshes. This soil surface is mildly alkaline and very dark gray clay about 14 inches thick. The soil is poorly drained and the surface runoff is very slow, and permeability is very slow. The soil has a water table above the depth of two feet during the winter.

3.2.5 Jurisdictional Determination

The jurisdictional determination (JD) request was submitted on April 16, 2015. On January 22, 2016 an amended JD was submitted. The reference number is SWG 2015-00305.

3.3 General Bank Need

BBMB is proposed to provide compensatory mitigation for CESWG approved projects within the Lower Oyster Creek watershed, which encompasses approximately 294 square miles (617 square miles for 12040205). Set within the Lower Oyster Creek watershed is Brazoria County, one of the fastest growing areas in Texas. All economic indicators are pointing up for Brazoria County with a 29.41% sales tax increase and a 24.15% hotel tax increase over the past year (Attachment C, Exhibit 1). This growth is due to the investment of large petro-chemical companies. In the next 10 years Brazoria County is expecting $21 billion of industrial investment (Ryan 2014). With this boost in the economy, the watershed has seen a high demand for PEM mitigation.

Due to development of petro-chemical industry, housing for their workforce, agriculture, and the expansion of the invasive species, Chinese Tallow (Triadica sebifera) there is little natural prairie left in this watershed. Due to the conversion form PEM to PSS this area provides limited habitat for migratory birds and terrestrial wildlife (Griffith 2004). The restoration of this site will provide 699.9 acres of much needed natural prairie habitat (PEM) for many species of concern. BBMB will also improve the water quality in the receiving waters downstream of this site. Also downstream of the bank is Brazoria National Wildlife Refuge (BNWR). The bank will provide a buffer to future development around the refuge and add to the habitat range for the species, especially the species of concern, which BNWR protects (Attachment D:Exibits 1, 2, 3, and 4).

Table: 4 Endangered and Threatened Species of Concern at BBMB

Common Name	Scientific Name	State Status (TPW)	Federal Status (FWS)
Whooping Crane	*Grus americana*	Endangered	Endangered
Wood Stork	*Mycteria americana*	Threatened	-
White-faced Ibis	*Plegadis chihi*	Threatened	-
Swallow-tailed Kite	*Elanoides forficatus*	Threatened	-
Bald Eagle	*Haliaeetus leucocephalus*	Threatened	-

3.4 Technical Feasibility

The BBMB will restore and enhance 699.9 acres of PEM wetlands. These lands will be protected and maintained by conservation servitude.

The site is underlain by hydric soils, according to the NRCS soil survey and verified by field investigations. Despite hydrologic modification of bank lands, the hydric soil indicators have persisted.

The site is bisected and bordered by agricultural drains, which flow into Bastrop Bayou. Following hydrologic restoration (i.e., removal of spoil banks, elevated roads, and levees), storm-water runoff in the agricultural drains will spread over bank lands, providing temporary storage and nutrient uptake.

4.0 ESTABLISHMENT OF THE MITIGATION BANK

4.1 Site Restoration Plan

Table: 5 Site Restoration Plan and Timeline

Activities to be Completed	Timing	Reasoning
Execution of MBI and Conservation Servitude	Start Date	
Dirt Work	Upon Execution of MBI	
Establishment of Monitoring Transects	First Summer	Establishment of Monitoring Transects
Spray Tallow Trees and Phargmites	First Summer	Tallow Trees Need to be Leafed Out
Grub Dead Tallow	270 Days After Spraying	
Prescribe Burn	First Winter	6 Months After Spray
Recruit and Seed Native Vegetation	Spring	
Monitor	Every 6 Months for 5 Years	
Prescribed Burn	Every 2-4 Years	

At a minimum, monitoring reports shall be completed in the spring (when new growth makes identification practicable) of Years 1, 2, 3, 4, 6, 9, 12, 15, 18, and prior to and following the first thinning operation. Reports will be submitted by December 31 of each monitoring year.

The degrading of spoil banks, roads, and levees into their respective barrows will restore sheet-flow and the hydrologic connection to Bastrop Bayou. In doing so, water moving through the property will flow at a slower rate, more closely relating to the historic hydrology of the site. This allows for runoff from adjacent properties to spread overbank and temporarily inundate the property therefore increasing the hydroperiod of the water on site. (Attachment A: Figure 16). Returning hydrology to historic conditions will aid in the restoration of the site, as well as impact surrounding areas in increased water quality as described below in section 4.2.

Water that is currently flowing through the property (from adjacent properties) via agricultural drains will be allowed to spread overbank and temporarily inundate the property (Attachment A: Figure 16).

4.2 Hydrologic Restoration

During the process of conversion and management from historical natural prairie habitat to agricultural crop land, certain hydrologic modifications were put in place to control site hydrology such as man-made ditches and levees. In order to restore the area to a natural hydrologic state and meet the objectives of BBMB, these modifications must be removed. The Sponsor anticipates no long-term structural management requirements will be needed to assure and sustain hydrology.

The site historically drained into Bastrop Bayou about two miles to the east of the site. Land owner manipulation and roads in between the site and this connection have impeded the flow of water through this drainage way. Today there is a drain into Bastrop Bayou on the east side of the reservoir which has an easement on it, this protected drainage way will serve as BBMB's connection to Bastrop Bayou.

Currently, overbank flooding is impeded by spoil banks, elevated roads, and levees. During flood stages sufficient to overtop these impediments, flood waters become impounded behind them. Removal of these impediments will contribute to the ability of flood waters on the site to rise and recede in a more natural regime.

Spoil bank material excavated during restoration will either be backfilled into the canals that they were dug from or will be removed from site, so as not to significantly alter topography. The remnant stream bed contours will be returned to their historic grades to act as the drainages ways for the site. Cross sections of all internal drainages to be filled are shown in the Doyle & Wachtstetter Survey (Attachment B, Exhibit 1). The levee surrounding the reservoir will be completely degraded. The Doyle & Wachtstetter Survey (Attachment B, Exhibit 1) shows that is inside of the reservoir is at the same elevation of the land outside the reservoir. Therefor the sponsor believes that the reservoir can be returned to prairie wetland (PEM). The sponsor will use the material from the levees to add into a barrow area adjacent to the levee inside the reservoir.

Through BBMBs return to natural hydrologic conditions the soils hydric conditions will also be increasing. This is due to the increase of hydraulic conductivity, increasing soil organic matter, increasing soil saturation potential, and increasing of formation of redoximorphic features(Collins 2001).

4.3 Vegetative Plantings

Vegetative recruitment will be used to restore natural vegetation throughout the property. The restoration of the hydroperiod across the property as well as vegetative recruitment will create wildlife habitat as well as benefit water quality as described in Section 3.2.3. Proposed herbaceous prairie wetland restoration areas will be prepared by applying herbicides and, if necessary, tilling soil to remove invasive species prior to recruitment. The herbaceous prairie wetland plants will be recruited from local habitats or will be seeded. If necessary, JMB will seed areas that are not showing signs of successful prairie wetland plant recruitment. Herbaceous prairie wetland habitat will be maintained by prescribed burning on a 2-4 year cycle (Allain 1999). Escrow or bond sum release rates and monitoring requirements will be consistent with other recently implemented CESWG approved mitigation banks. Proposed herbaceous prairie species that will be planted on site are listed in Table 6.

Table: 6 Potential PEM Planting List

Scientific Name	Common Name (USDA)	Wetland Indicator Status Atlantic and Gulf Coastal Plain (USDA)
Andropogon gerardii	Big Bluestem	FAC
Andropogon virginicus	broomsedge bluestem	FAC
Andropogon glomeratus	Bushy Bluestem	FACW
Chasmanthium latifolium	Inland Seaoats	FAC
Coreopsis tinctoria	Golden tickseed	FAC
Cyperus esculentus	Yellow nutsedge	FAC
Dichanthelium scoparium	Velvet Panic Grass	FACW
Eleocharis acicularis	Needle Spikerush	OBL
Eleocharis quadrangulata	squarestem spikerush	OBL
Elionurus tripsacoides	Pan American balsamscale	FACW
Elymus canadensis	Canada wildrye	FAC
Eryngium yuccifolium	Rattlesnake Master	FAC
Hyptis alata	Clustered bushmint	OBL
Juncus effusus	Common rush	OBL
Panicum hemitomon	Maidencane	OBL
Paspalum floridanum	Florida paspalum	FACW
Paspalum hartwegianum	Hartweg's Paspalum	FACW
Polygonum pensylvanicum	Pennsylvania smartweed	FACW
Muhlenbergia filipes	Gulfhairawn muhly	OBL
Schizachyrium scoparium	Little Bluestem	FAC
Sagittaria papillosa	Nipplebract Arrowhead	OBL
Solidago sempervirens	Seaside Goldenrod	FACW
Spartina patens	Cordgrass	FACW
Sporobolus airoides	Alkali Sacaton	FAC
Sporobolus silveanus	Silveus' dropseed	FAC

Symphyotrichum tenuifolium	Saltmarsh Aster	OBL
Tridens strictus	longspike tridens	FAC
Tripsacum dactyloides	Eastern Gamma	FAC

4.3.1 Noxious Plant Control

Invasive plant species such as Chinese Tallow (*Triadica sebifera*) and Phragmites (*Phragmites australis*) will be removed by herbicidal treatment prior to initial monitoring. The Chinese tallow will be grubbed after a successful mortality rates are observed. Phragmites will be sprayed with an herbicide prior to dirt work beginning on the reservoir. The percent cover of invasive plants will be monitored during long-term and short-term success monitoring. If invasive species are found on the site then appropriate action will be taken to eliminate the species.

4.4 Current Site Risk

While there is no immediate threat of conversion to a more intensive land use for this site, it was previously considered to be subdivided for residential use but lots were never sold. Bastrop Bayou Mitigation Bank has continually been used for agricultural purposes; if it remains in cattle pasture its runoff would further degrade the water quality of the receiving water bodies and would provide limited benefit to wildlife habitat. With the urban sprawl of the Greater Houston Metro Area JMB will make this site a natural habitat for the plant, and animal community around it.

BBMB is free of encumbrances, with the exception of a lien which will be released prior to Bank approval. There are three pipelines that cross the property each has a ROW associated with it. The mowing of the pipeline ROW resembles our proposed Herbaceous Wetland Prairie habitat and does not detract from the value of the mitigation adjacent to the ROW. BBMB and adjacent properties are within unincorporated land and are absent of zoning regulations.

4.5 Long-Term Sustainability of the Site

BBMB will be self-sustaining, requiring minimal maintenance after the final success criteria are met. No structures are proposed or would be necessary to assure hydrologic or vegetative restoration. Within the mitigation banking instrument a long-term management plan will detail costs associated with the plan and will identify a funding mechanism in accordance with 33 CFR 332.7(d).

5.0 PROPOSED SERVICE AREA

BBMB is located in the Hydrologic Unit Code (HUC) 12040205 and the West Gulf Coastal Plain Level III Ecoregion. BBMB will provide Herbaceous Prairie Wetland

mitigation credits to the HUC 12040205 Austin - Oyster area and to HUCs 12040204, 12070104 (portion within West Gulf Coastal Plain Level III Ecoregion), 12090401, and 12090402 (Attachment A: Figure 14). JMB decided to end the service area boundary to the north at U.S. 90 Alt. The purpose of this is to not include areas that are outside of the West Gulf Coastal Plain Level III Ecoregion. The Sponsor will be able to sell credits to all habitats that were historically PEM habitats but are now colonized with invasive species such as PSS with that has Chinese Tallow. This proposed service areas are consistent with other CESWG approved mitigation banks within this region.

6.0 OPERATION OF THE MITIGATION BANK

The Bank will be established and operated by the sponsor in accordance with all rules and regulations of 33 CFR § 332.8. Operation details of the Bank will be further described in the Draft MBI per the rules outlined in 33 CFR § 332.8. CGMB will also be protected by a Conservational Servitude. This servitude will forbid activities harmful to the long term survival of the mitigation bank.

6.1 Project Representatives

Bank Sponsor:
JMB Land Co., LP
2205 W. Pinhook,
Suite 200
Lafayette, Louisiana 70508
Phone: 337-347-8900
Fax: 337-282-7732

Bank Contact:
Aaron Landry
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Lafayette, Louisiana 70508
Phone: 337-205-6285
Fax: 337-282-7732
aaron@jmbcompanies.com

Property Owners:
Mark R. Adams
10911 FM523
Angelton, Texas 77515
Phone: 979-239-8040
&
Bob Peltier
1805 E Mulberry St,
Angleton, TX 77515
Phone: 979-265-123

6.2 Qualifications of the Sponsor

JMB Land Co., LP (JMB) is a wholly owned subsidiary of The JM Burguieres Co. Limited, which is a family legacy partnership established in 1877. The Sponsor has 113 years of land management experience in Louisiana, including raising sugarcane and cattle ranching. JMB also has an established mitigation banking business and is currently managing six mitigation banks in Louisiana: Cypremort-Teche Mitigation Bank, Cypress Creek Mitigation Bank, Bee Bayou Mitigation Bank, Kilgore Plantation Mitigation Bank, Nabours “No Hope” Farms Mitigation Bank, and Marine Bayou Mitigation Bank. JMB currently has a staff of qualified scientists that each have multiple years’ experience in wetland science and land management. An essential element of the family vision is rehabilitating and preserving its land holdings, as practicable, in first- class condition. Mitigation banking fits this vision.

6.3 Proposed Long-Term Ownership and Management Representatives

The long-term owner of the bank is proposed to be JMB Land Co., LP, and the long-term management of the bank is proposed to be conducted by JMB Land Co., LP.

6.4 Site Protection

BBMB will be protected in perpetuity by a conservation easement pursuant to Texas Natural Resources Code Sections 183.001-183.005. The easement will be held by, a conservation-oriented 501(c)(3) organization. The conservation servitude will be binding to and run with the property title.

The servitude will prohibit activities, such as clear cutting, fill discharges, cattle grazing, or other commercial surface development that would diminish the quality or quantity of restored wetlands.

6.5 Long-Term Strategy

A long-term maintenance and protection escrow account will provide funding for long-term boundary maintenance and site protection, into perpetuity. These long-term maintenance and site protection activities will be conducted by the Sponsor. The conservation easement will protect the site from any activities that would diminish the quality of restored wetlands on the site. No structures are proposed or would be necessary to assure hydrologic or vegetative restoration.

7.0 REFERENCES

Code of Federal Regulations, Title 33, Parts 325 and 332 and Title 40, Part 230, as published on pages 19594-19704 in the Federal Register dated 10 April 2008.

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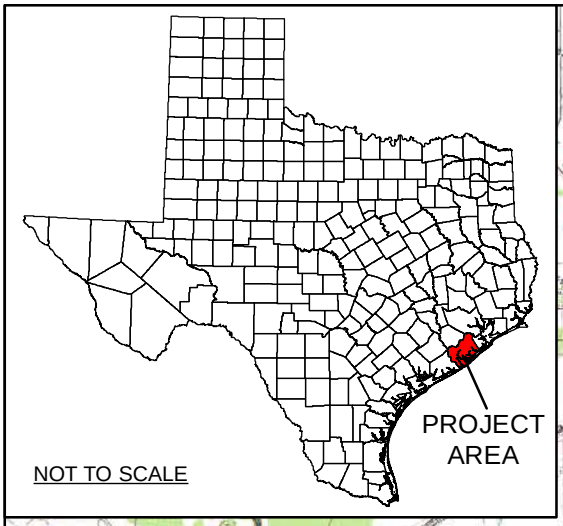
Attachment A: Maps and Figures



Approximately 5.5 miles southeast of Angleton, Texas

Legend

BBMB Boundary

0 0.75 1.5 2.25 3

Miles

N

PROPOSED BASTROP BAYOU MITIGATION BANK

VICINITY EXHIBIT

BRAZORIA COUNTY, TEXAS

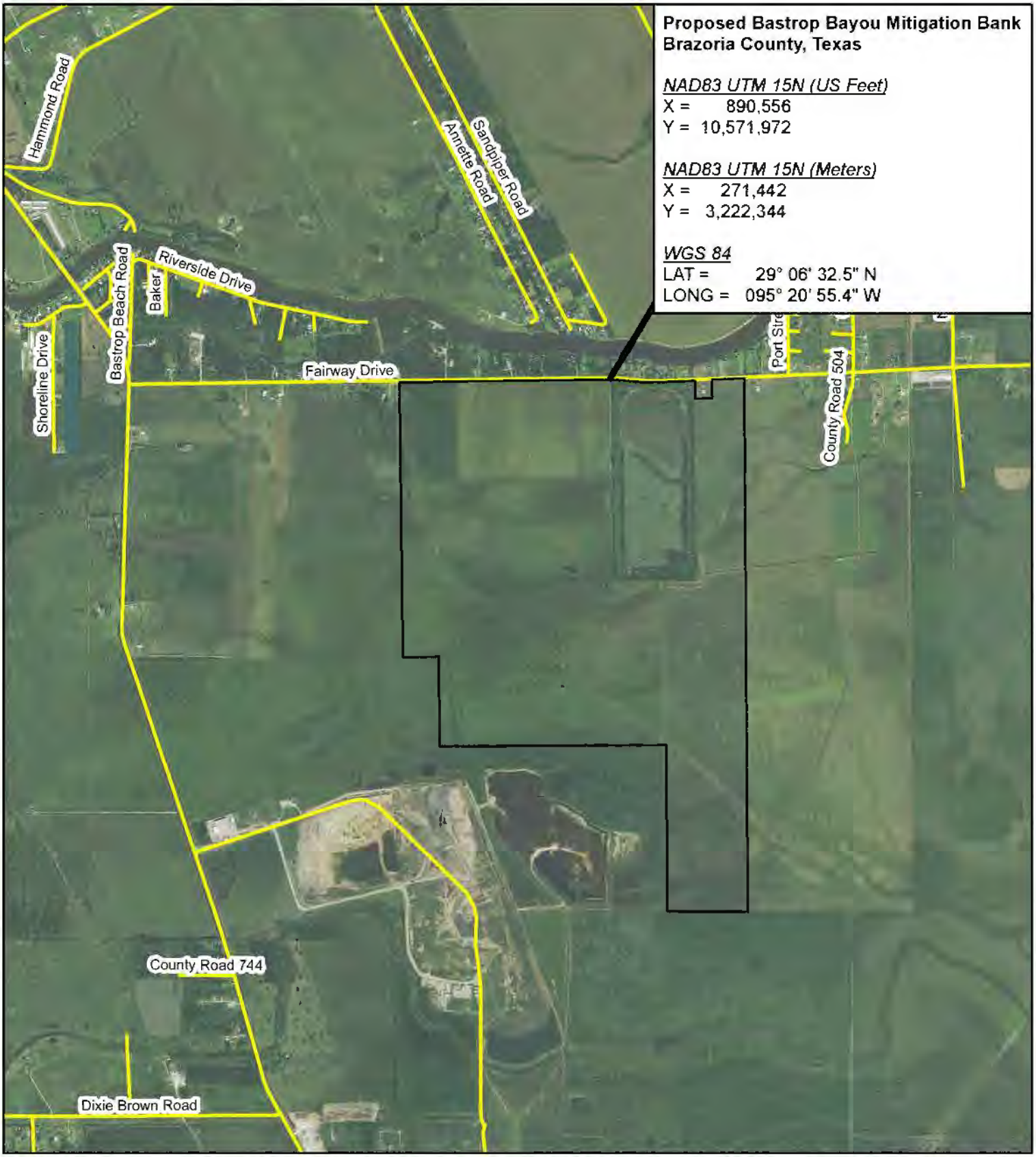
Drawing No.:

Date: 01/18/16 Author: BDS

FIGURE 1

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_1_BBMB_Vicinity.mxd



Legend

- BBMB Boundary
- Brazoria County Roads

0 1,000 2,000 3,000 4,000

Feet

N

PROPOSED BASTROP BAYOU MITIGATION BANK

BOUNDARY W/ 2014 AERIAL IMAGERY EXHIBIT

BRAZORIA COUNTY, TEXAS

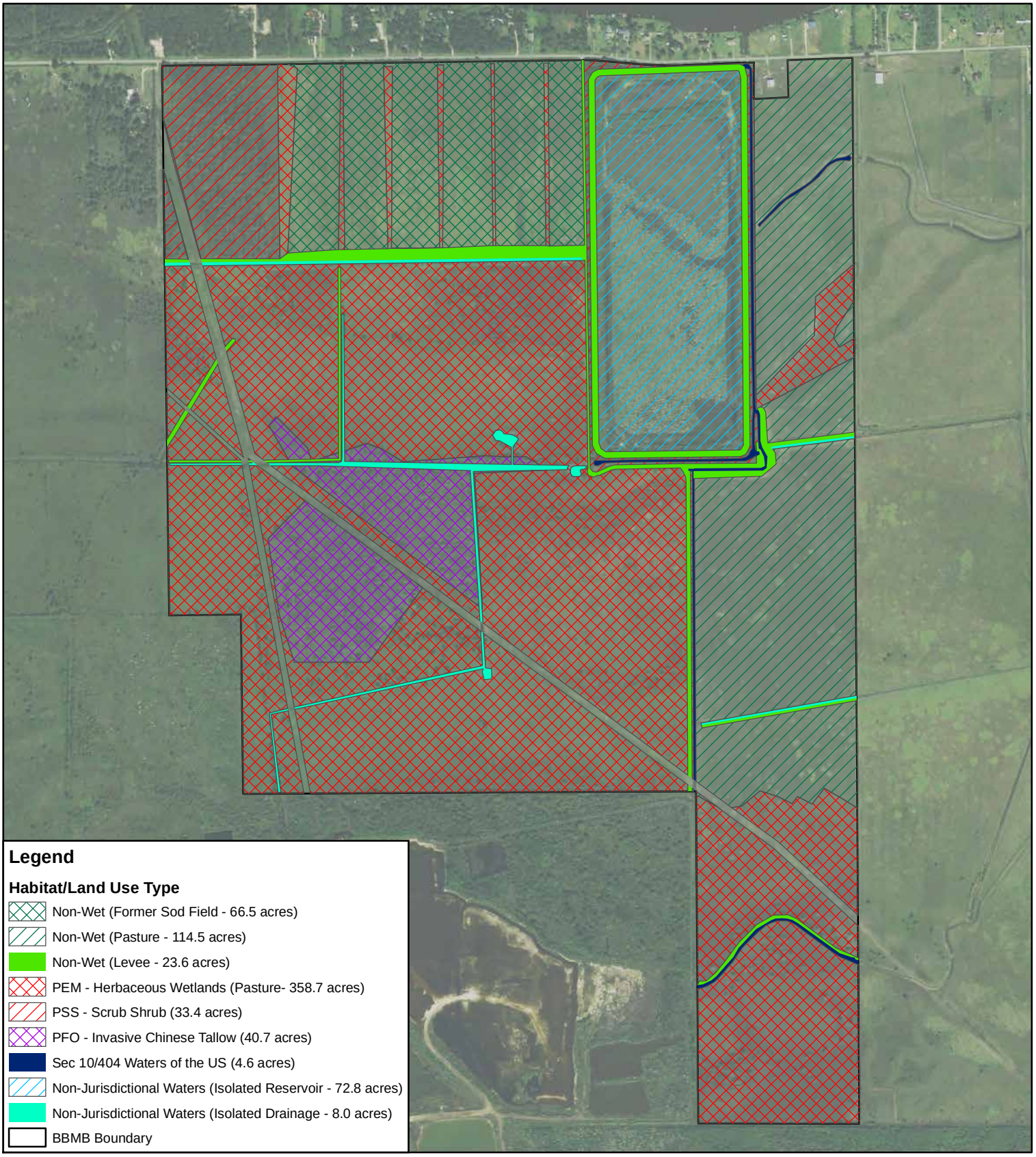
Drawing No.

Date: 01/15/16 Author: BDS

FIGURE 2

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigation Bank\Mapping\GIS Projects (MXD)\Prospectus_Amend_2016\Figure_2_BBMB_Boundary.mxd



0 500 1,000 1,500 2,000

Feet

N

PROPOSED BASTROP BAYOU MITIGATION BANK

CURRENT HABITAT/LAND USE EXHIBIT

BRAZORIA COUNTY, TEXAS

Drawing No.:

Date: 01/26/16 Author: BDS

FIGURE 3

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_3_BBMB_Habitat_LandUse.mxd

0 500 1,000 1,500 2,000

Feet

N

PROPOSED BASTROP BAYOU MITIGATION BANK

2014 NATURAL COLOR IMAGERY

BRAZORIA COUNTY, TEXAS

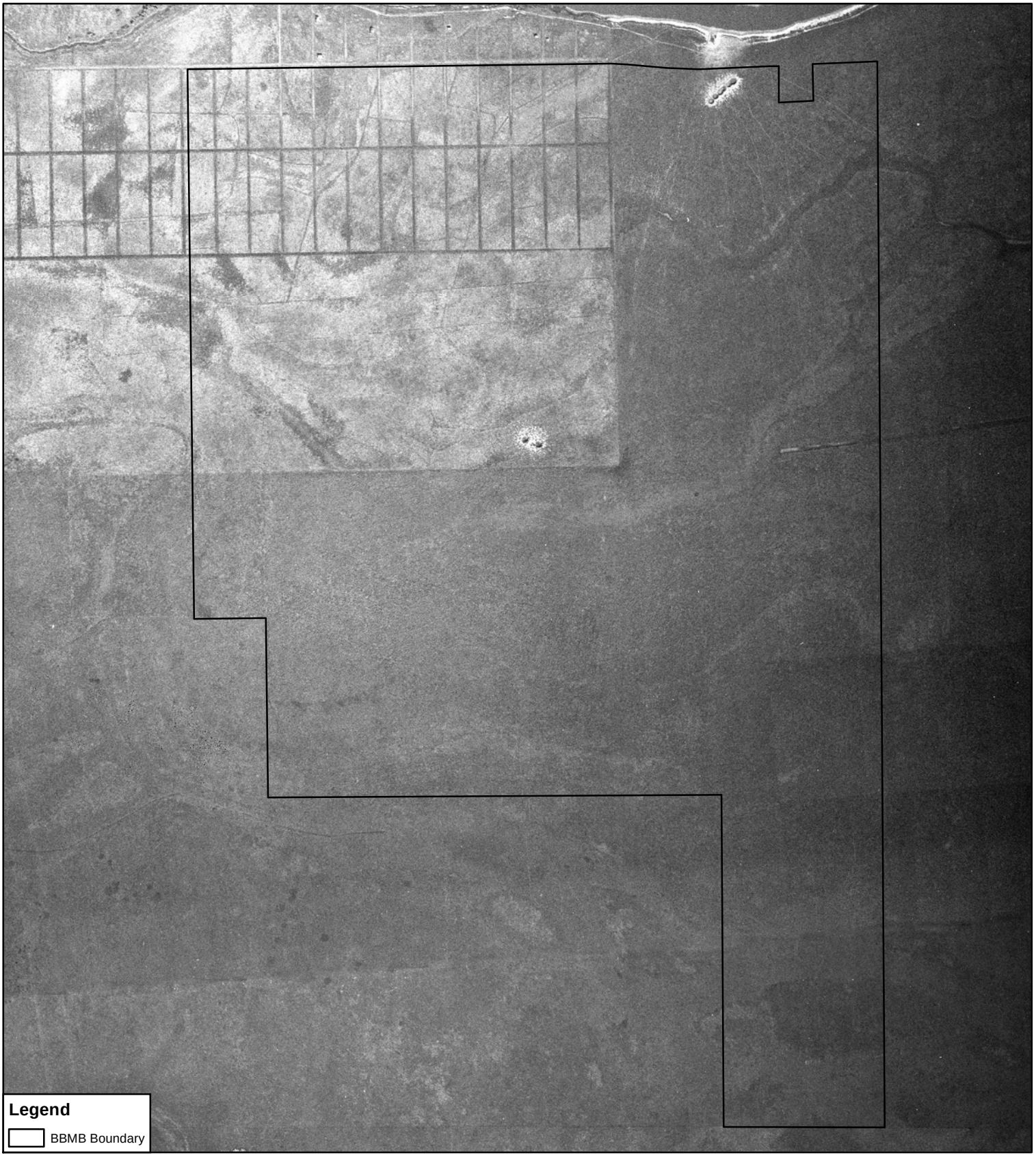
Drawing No.:

Date: 02/17/16 Author: JKP

FIGURE 4

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_4_BBMB_2014_NCAerial.mxd



0 500 1,000 1,500 2,000

Feet

N

PROPOSED BASTROP BAYOU MITIGATION BANK

1930 AERIAL IMAGERY EXHIBIT

BRAZORIA COUNTY, TEXAS

Drawing No.:

Date: 01/26/16 Author: BDS

FIGURE 5

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_5_BBMB_1930_Aerial.mxd

0 500 1,000 1,500 2,000
Feet

N

PROPOSED BASTROP BAYOU MITIGATION BANK

1944 AERIAL IMAGERY EXHIBIT

BRAZORIA COUNTY, TEXAS

Drawing No.:

Date: 01/26/16 Author: BDS

FIGURE 6

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_6_BBMB_1944_Aerial.mxd

0 500 1,000 1,500 2,000

Feet

N

PROPOSED BASTROP BAYOU MITIGATION BANK

2014 AERIAL IMAGERY

BRAZORIA COUNTY, TEXAS

Drawing No.:

Date: 01/26/16 Author: BDS

FIGURE 7

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_7_BBMB_2014_Aerial.mxd

0 500 1,000 1,500 2,000

Feet

N

PROPOSED BASTROP BAYOU MITIGATION BANK

2009 CIR IMAGERY

BRAZORIA COUNTY, TEXAS

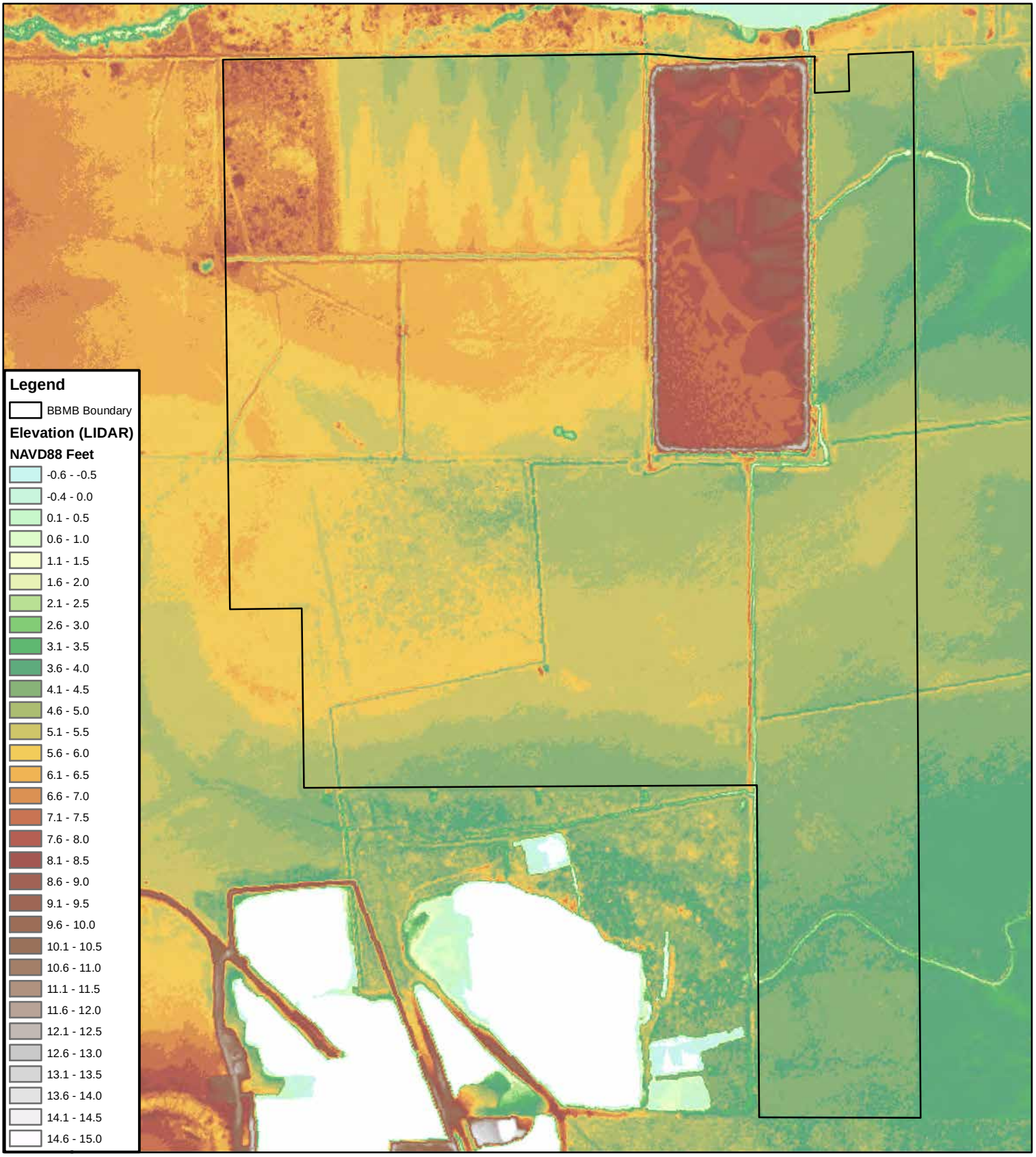
Drawing No.:

Date: 01/26/16 Author: BDS

FIGURE 8

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_8_BBMB_2009_CIRAerial.mxd



0 500 1,000 1,500 2,000

Feet

N

PROPOSED BASTROP BAYOU MITIGATION BANK

ELEVATION/LIDAR EXHIBIT

BRAZORIA COUNTY, TEXAS

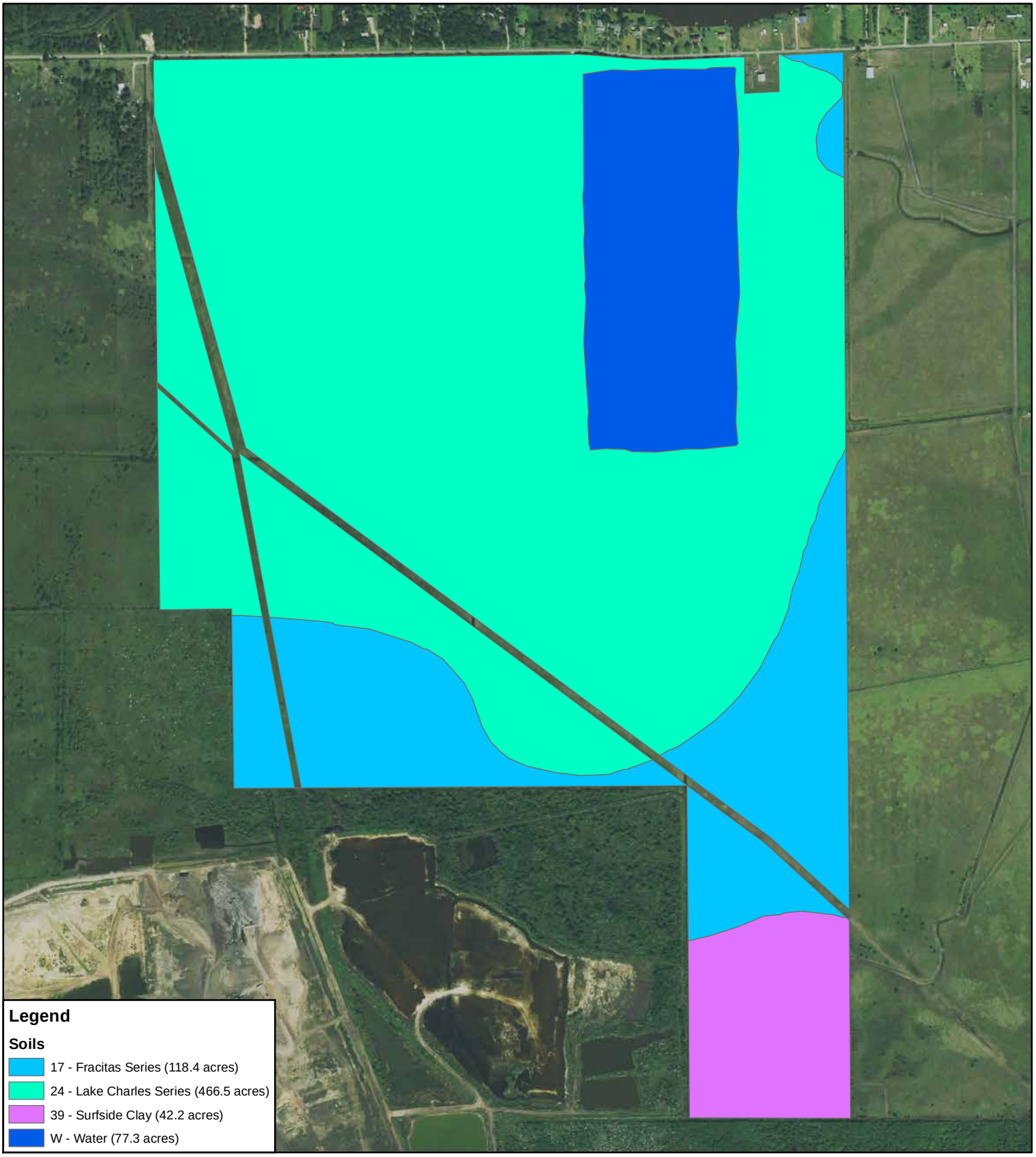
Drawing No.:

Date: 01/15/16 Author: BDS

FIGURE 10

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_10_BBMB_LIDAR.mxd



0 500 1,000 1,500 2,000

Feet

N

PROPOSED BASTROP BAYOU MITIGATION BANK

NRCS SOILS EXHIBIT

BRAZORIA COUNTY, TEXAS

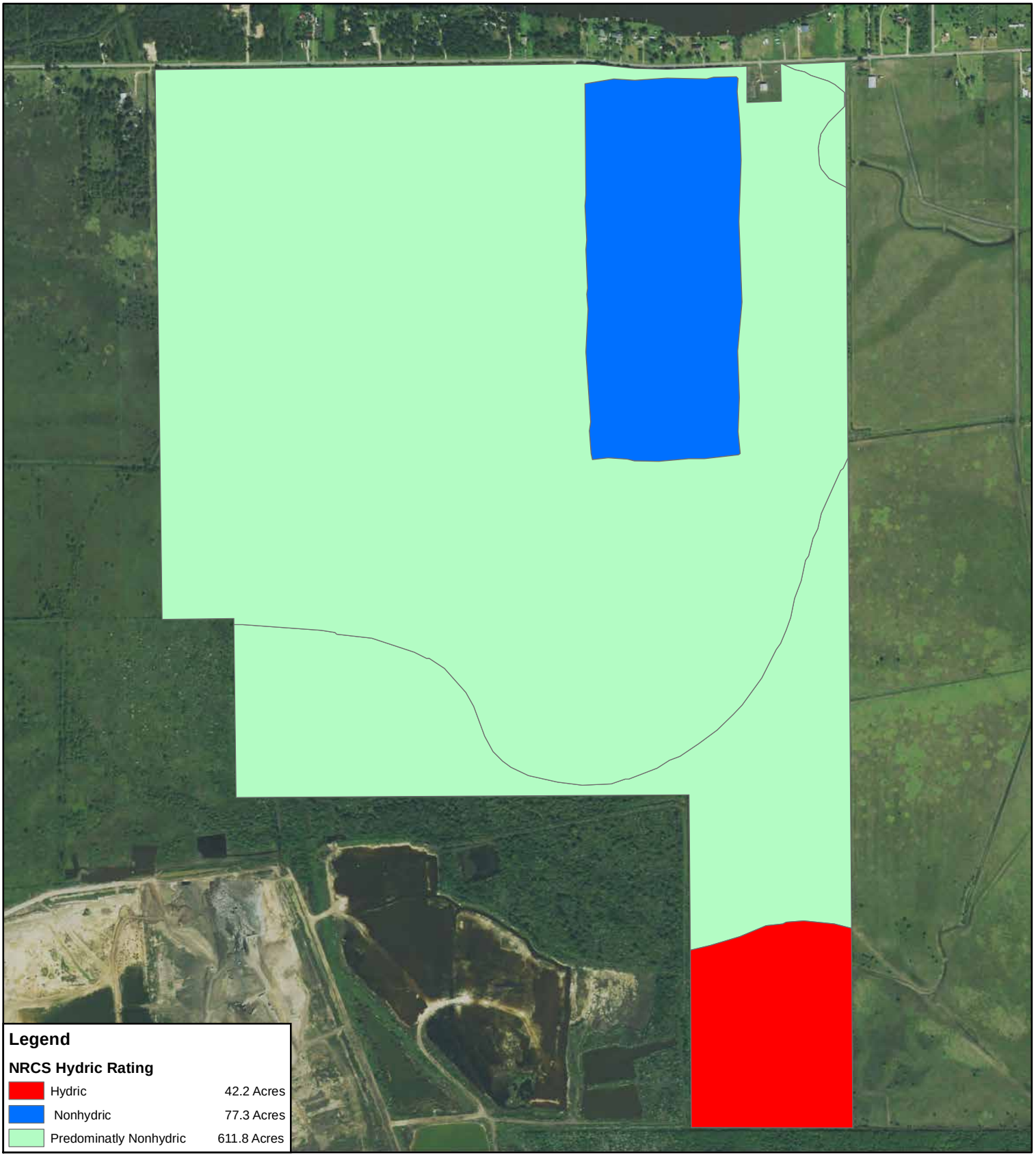
Drawing No.:

Date: 01/15/16 Author: BDS

FIGURE 11

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_11_BBMB_Soils.mxd



0 500 1,000 1,500 2,000

Feet

N

PROPOSED BASTROP BAYOU MITIGATION BANK

NRCS HYDRIC SOIL RATING EXHIBIT

BRAZORIA COUNTY, TEXAS

Drawing No.:

Date: 01/26/16 Author: BDS

FIGURE 12

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_12_BBMB_Hydric_Rating.mxd

0 500 1,000 1,500 2,000

Feet

N

PROPOSED BASTROP BAYOU MITIGATION BANK

FLOOD INSURANCE RATE MAP EXHIBIT

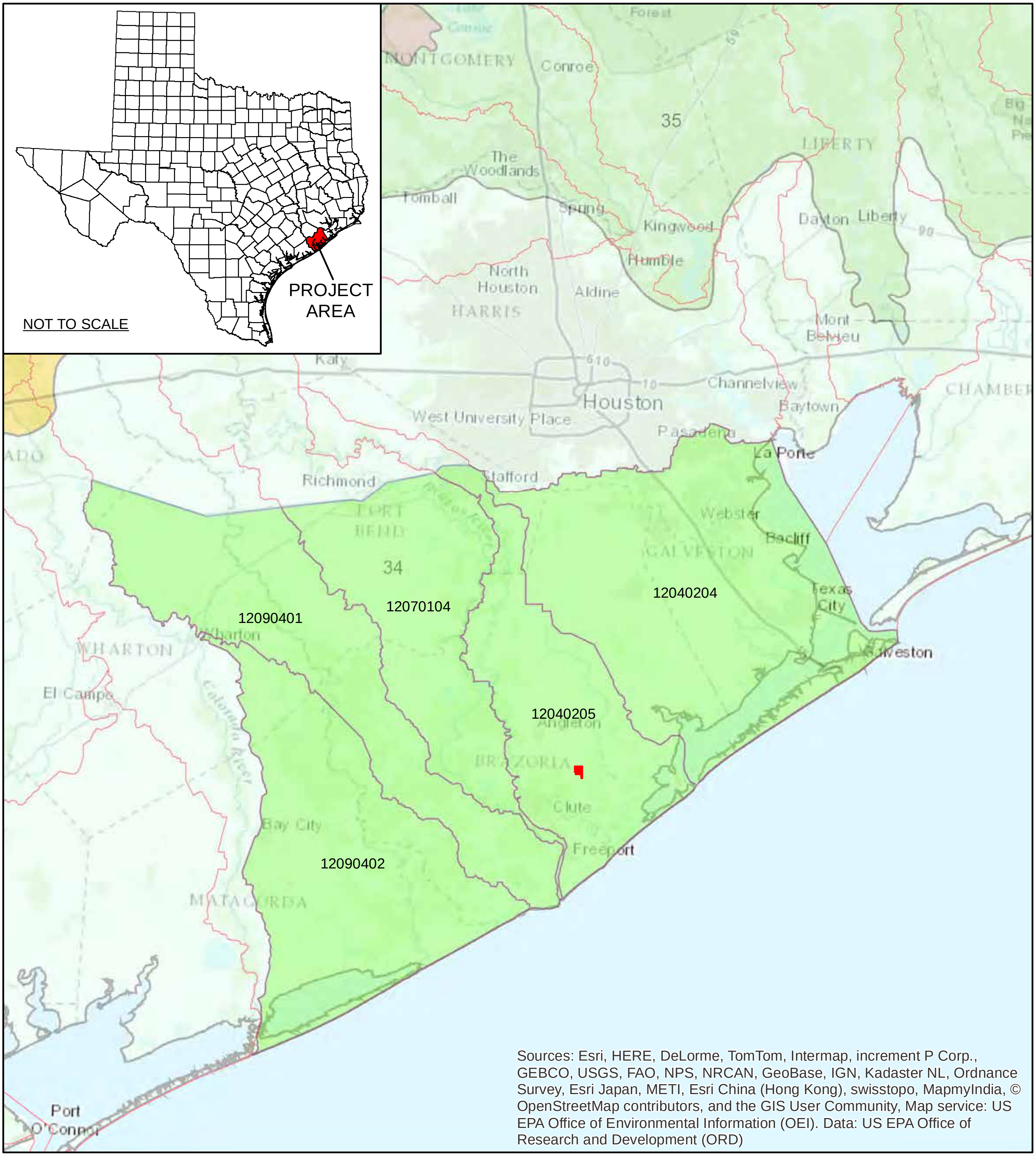
BRAZORIA COUNTY, TEXAS

Date: 01/15/16 Author: BDS

FIGURE 13

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_13_BBMB_FIRM.mxd



Legend

- BBMB Boundary
- BBMB Service Area

0 7.5 15 22.5 30

Miles

N

PROPOSED BASTROP BAYOU MITIGATION BANK

SERVICE AREA

BRAZORIA COUNTY, TEXAS

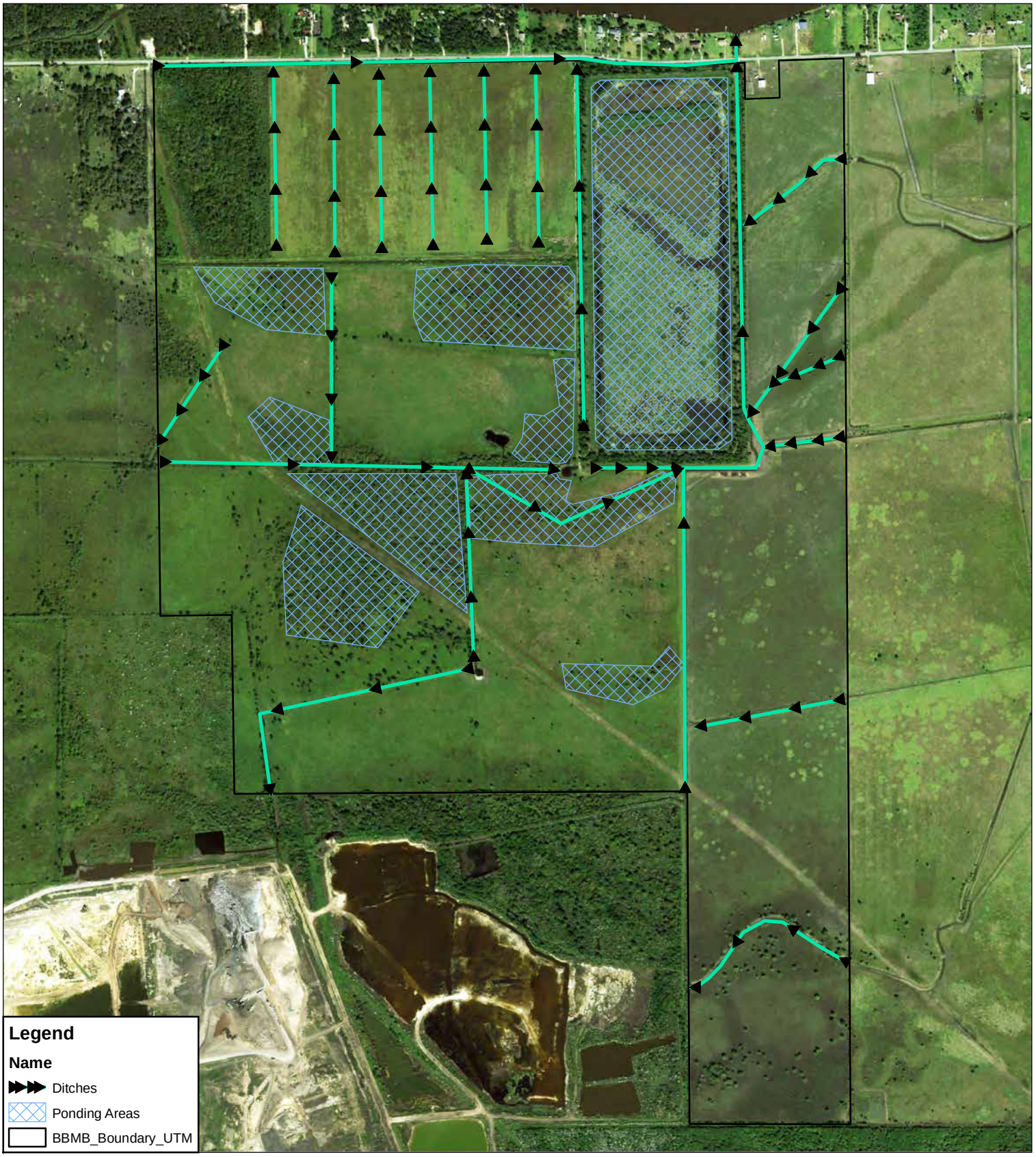
Drawing No.:

Date: 3/2/2015 Author: JKP

FIGURE 14

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_14_BBMB_ServiceArea.mxd



0 500 1,000 1,500 2,000

Feet

N

CURRENT HYDROLOGY

BASTROP BAYOU MITIGATION BANK

BRAZORIA COUNTY, TEXAS

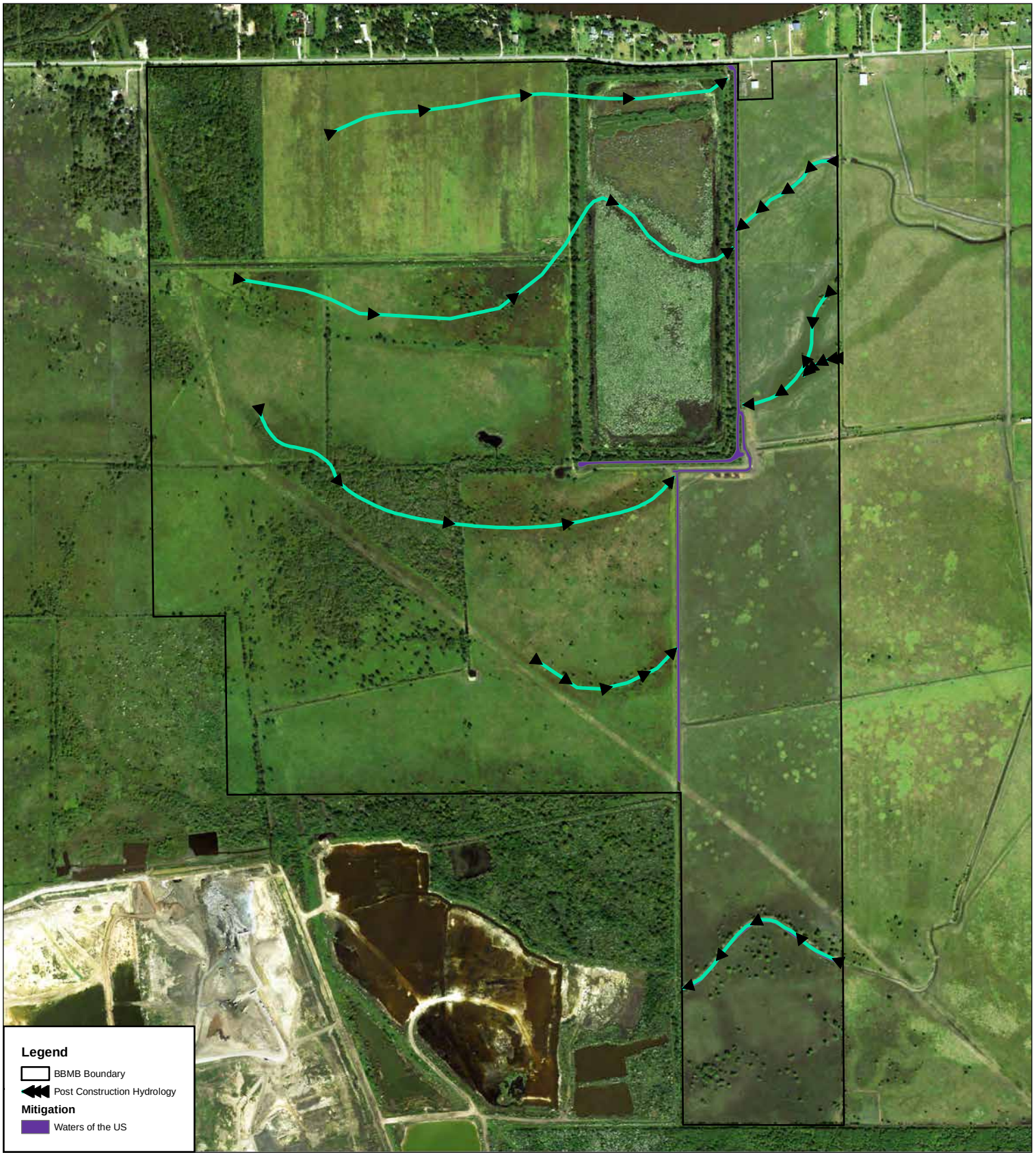
Drawing No.:

Date: 01/26/16 Author: JKP

FIGURE 15

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_15_BBMB_Current_Hyodrology.mxd



0 500 1,000 1,500 2,000

Feet

N

BASTROP BAYOU MITIGATION BANK
BRAZORIA COUNTY, TEXAS

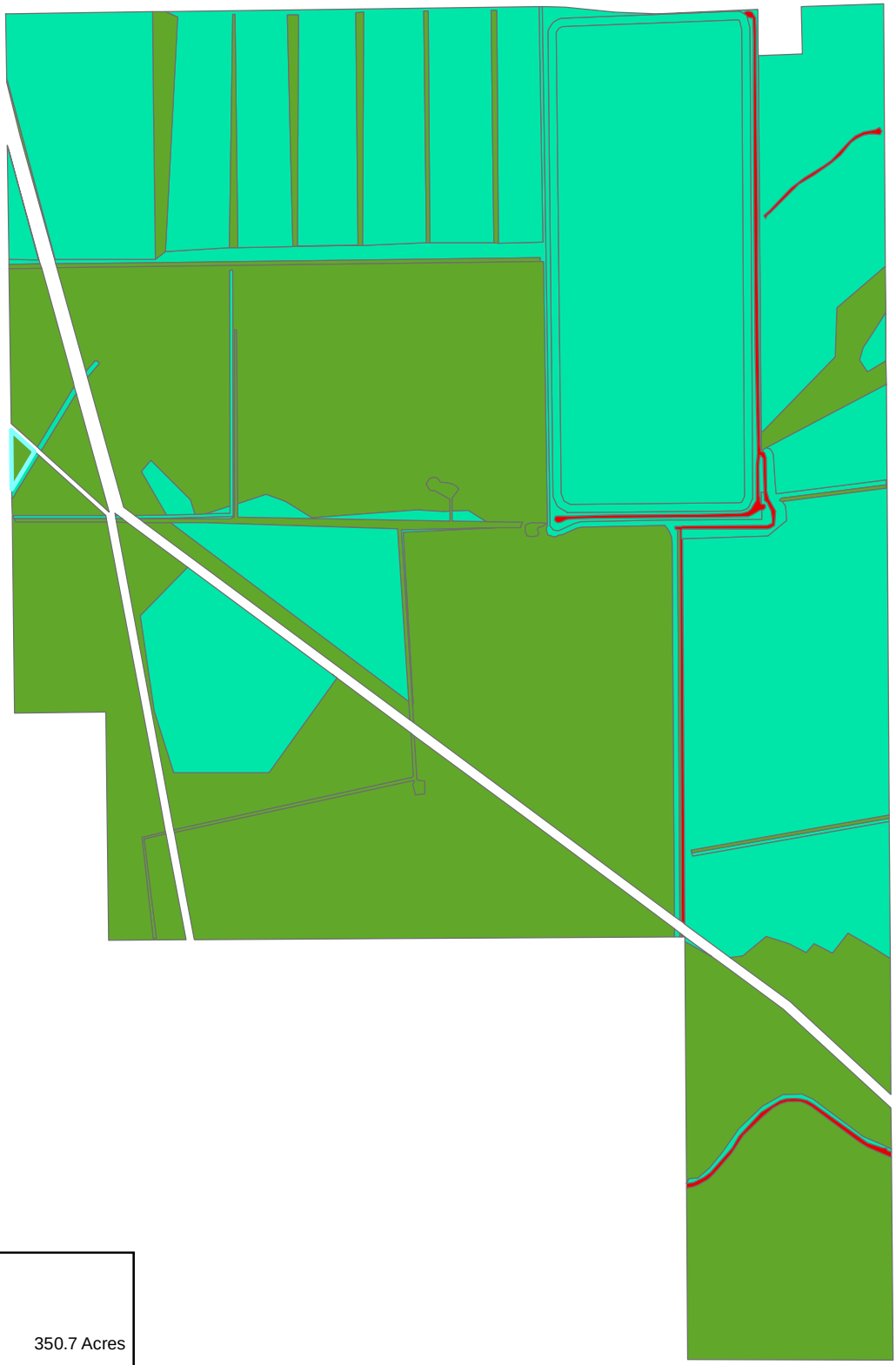
Drawing No.:

Date: 01/26/16 Author: JKP

FIGURE 16

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_16_BBMB_Post_Hyodrology.mxd



Legend

Type of Mitigation

Enhancement	350.7 Acres
Restoration	349.2 Acres
Waters of the US	4.6 Acres

0 500 1,000 1,500 2,000

Feet

N

HERBACEOUS PRAIRIE WETLAND MITIGATION

TYPE OF MITIGATION

BRAZORIA COUNTY, TEXAS

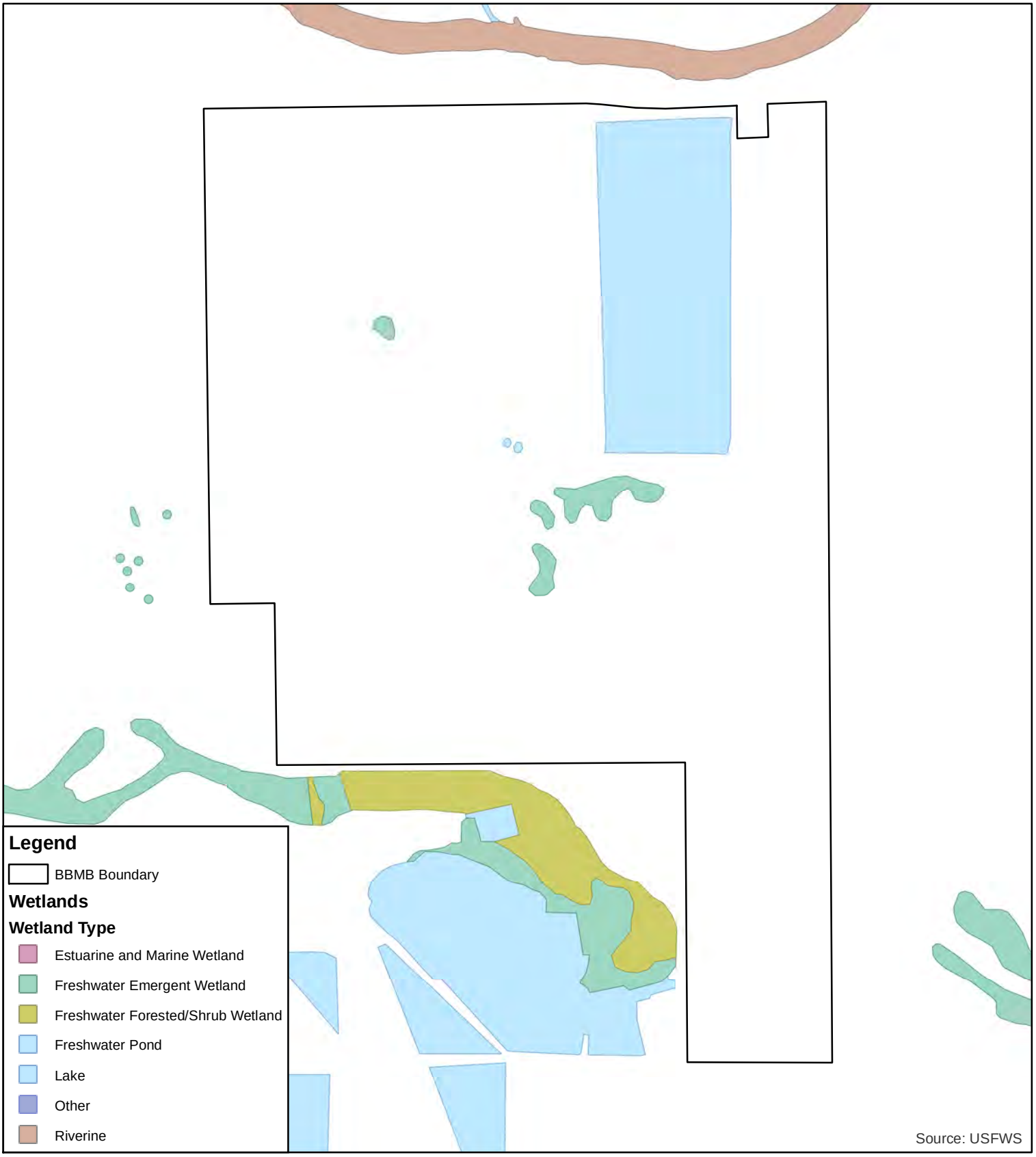
Drawing No.:

Date: 01/26/16 Author: JKP

FIGURE 17

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_17_BBMB_MitigationType.mxd



0 560 1,120 1,680 2,240

Feet

N

PROPOSED BASTROP BAYOU MITIGATION BANK

NATIONAL WETLAND INVENTORY EXHIBIT

BRAZORIA COUNTY, TEXAS

Date: 01/15/16 Author: BDS

FIGURE 9

J.M. Burguières Co., LTD

Document Path: N:\Mitigation Banks\Texas\Bastrop Bayou Mitigaiton Bank\Mapping\GIS Projects (.MXD)\Prospectus_Amend_2016\Figure_9_BBMB_NWI.mxd

Attachment B: Survey

SHEET 1 OF 10

APPLICATION BY:

J.M. BURGUIÈRES CO., LTD FOR
THE BASTROP BAYOU MITIGATION BANK SITE
BRAZORIA COUNTY, TEXAS

NOTES:

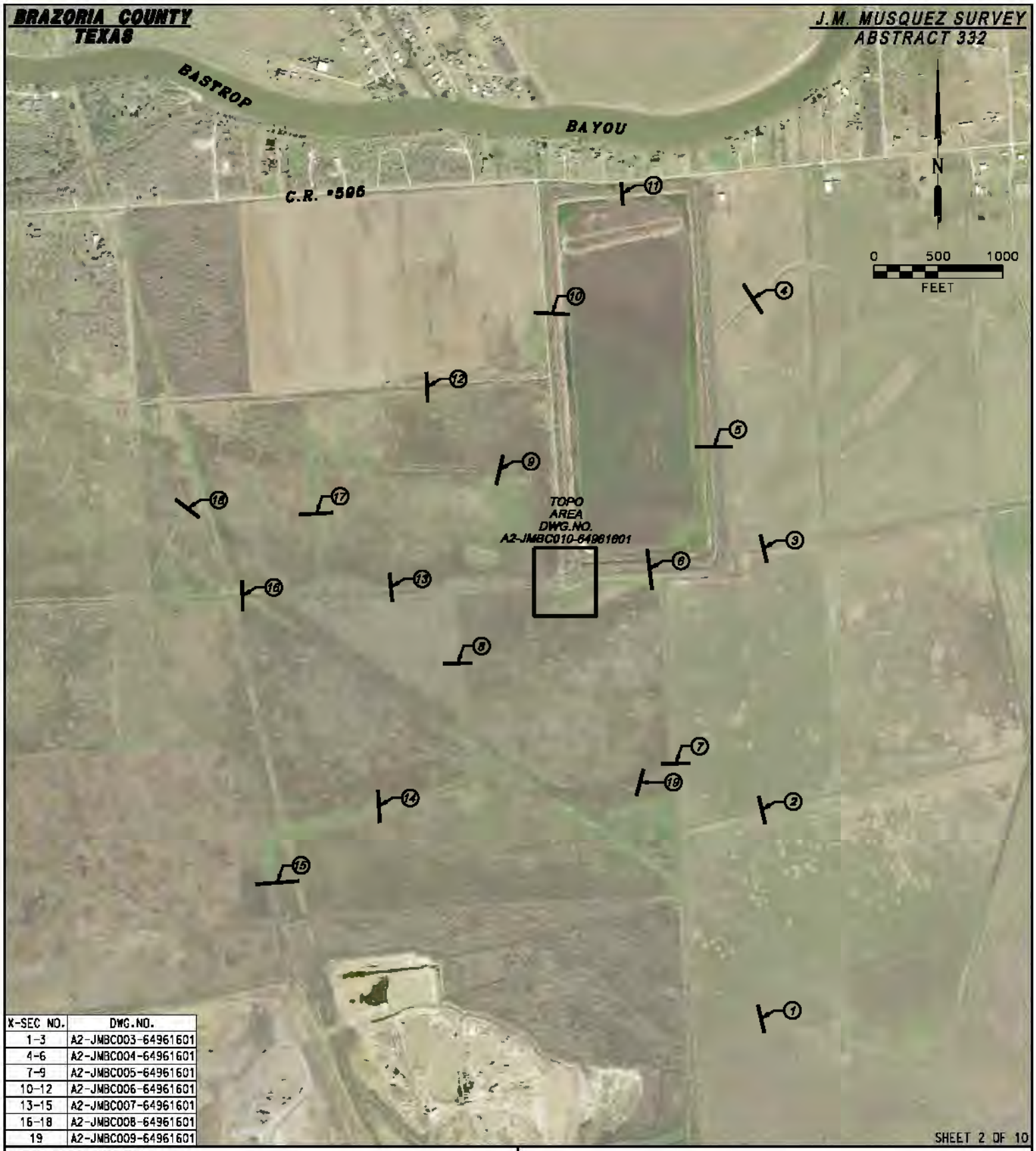
1. COORDINATES ARE RELATIVE TO THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, (NAD 83).
2. ALL ELEVATIONS SHOWN ARE NORTH AMERICAN VERTICAL DATUM (NAVD88) AND ARE BASED ON NGS MONUMENT "PLANT B 2" AT ELEVATION 4.80 FEET.
3. ALL DISTANCES SHOWN ARE HORIZONTAL SURFACE DISTANCES, (SF= 0.9998754131).

DATE: 2/24/2016 TIME: 12:50:16 PM USER: Untitled Workspace
G:\DGN\JM Burgueres Co\Evans Lake Topo\Sht01_V8.dgn

J.M. BURGUIÈRES CO., LTD

Doyle & Wachtstetter, Inc.
Surveying and Mapping GPS/GIS
131 COMMERCE STREET, CLUTE, TEXAS 77531
OFFICE: 979.265.3622 FAX: 979.265.9940

	BY	DATE		
DRAWN:	HG	2/19/16	JOB NO.	PERMIT NO.
CHKD.	KTD/WPD	2/19/16	6496-16-01	A2-JMBC001-64961601
APPD.				



K-SEC NO.	DWG.NO.
1-3	A2-JMBC003-64961601
4-6	A2-JMBC004-64961601
7-9	A2-JMBC005-64961601
10-12	A2-JMBC006-64961601
13-15	A2-JMBC007-64961601
16-18	A2-JMBC008-64961601
19	A2-JMBC009-64961601

SHEET 2 OF 10

APPLICATION BY:

J.M. BURGUIÈRES CO., LTD FOR
THE BASTROP BAYOU MITIGATION BANK SITE
BRAZORIA COUNTY, TEXAS

NOTES:

1. COORDINATES ARE RELATIVE TO THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, (NAD 83).
2. ALL ELEVATIONS SHOWN ARE NORTH AMERICAN VERTICAL DATUM (NAVD88) AND ARE BASED ON NGS MONUMENT "PLANT B 2" AT ELEVATION 4.80 FEET.
3. ALL DISTANCES SHOWN ARE HORIZONTAL SURFACE DISTANCES, (SF= 0.9998754131).

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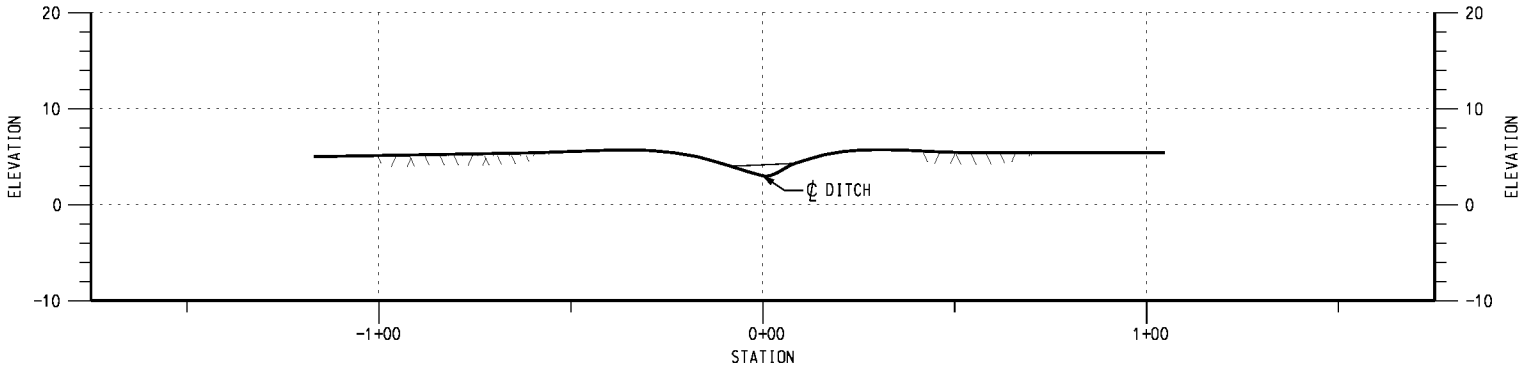
J.M. BURGUIÈRES CO., LTD

Doyle & Wachtstetter, Inc.
Surveying and Mapping GPS/GIS
131 COMMERCE STREET, CLUTE, TEXAS 77531
OFFICE: 979.265.3622 FAX: 979.265.9940

	BY	DATE		
DRAWN:	HG	2/19/16	JOB NO.	PERMIT NO.
CHKD.	KTD/WPD	2/19/16	6496-16-01	A2-JMBC002-64961601
APPD.				



CROSS SECTION 3 LOOKING NORTHEAST

REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

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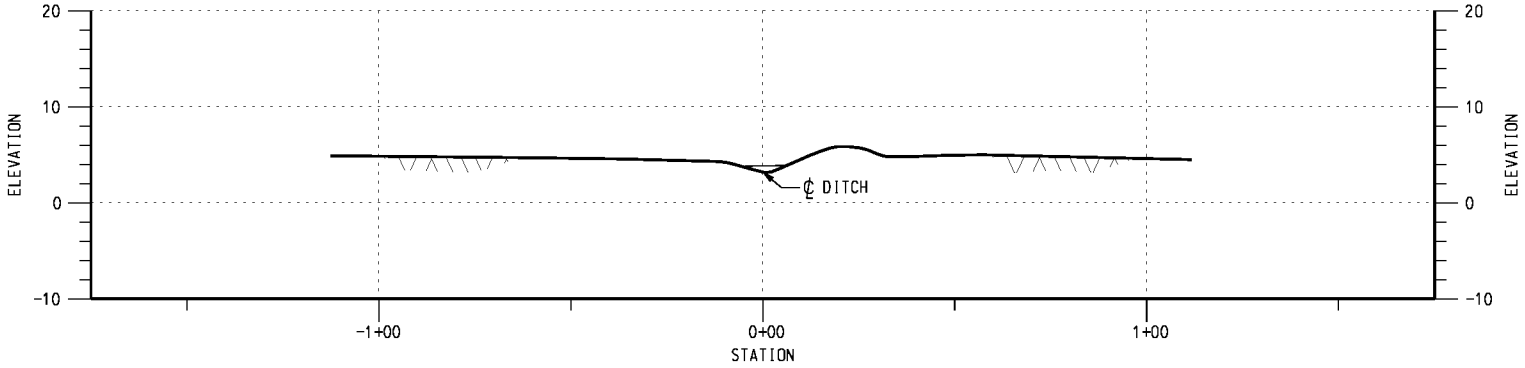
V: 1"= 20'



CROSS SECTION 2 LOOKING NORTHEAST

REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

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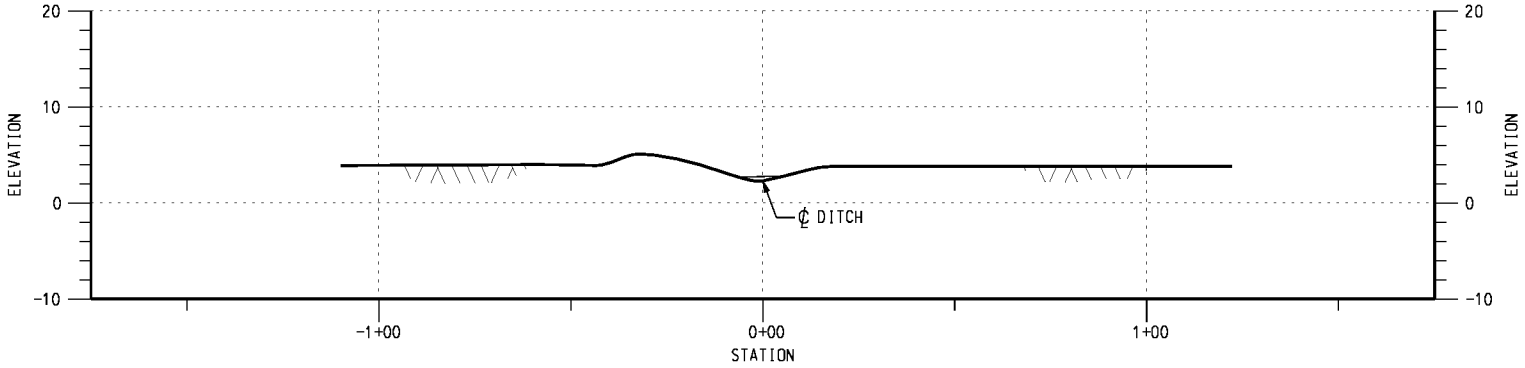
V: 1"= 20'



CROSS SECTION 1 LOOKING NORTHEAST

REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

H: 1"= 50'
V: 1"= 20'

APPLICATION BY:

J.M. BURGUIÈRES CO., LTD FOR
THE BASTROP BAYOU MITIGATION BANK SITE
BRAZORIA COUNTY, TEXAS

NOTES:

1. COORDINATES ARE RELATIVE TO THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, (NAD 83).
2. ALL ELEVATIONS SHOWN ARE NORTH AMERICAN VERTICAL DATUM (NAVD88) AND ARE BASED ON NGS MONUMENT "PLANT B 2" AT ELEVATION 4.80 FEET.
3. ALL DISTANCES SHOWN ARE HORIZONTAL SURFACE DISTANCES, (SF= 0.999875413).

DATE: 2/24/2016 TIME: 1:00:50 PM USER: Untitled Workspace
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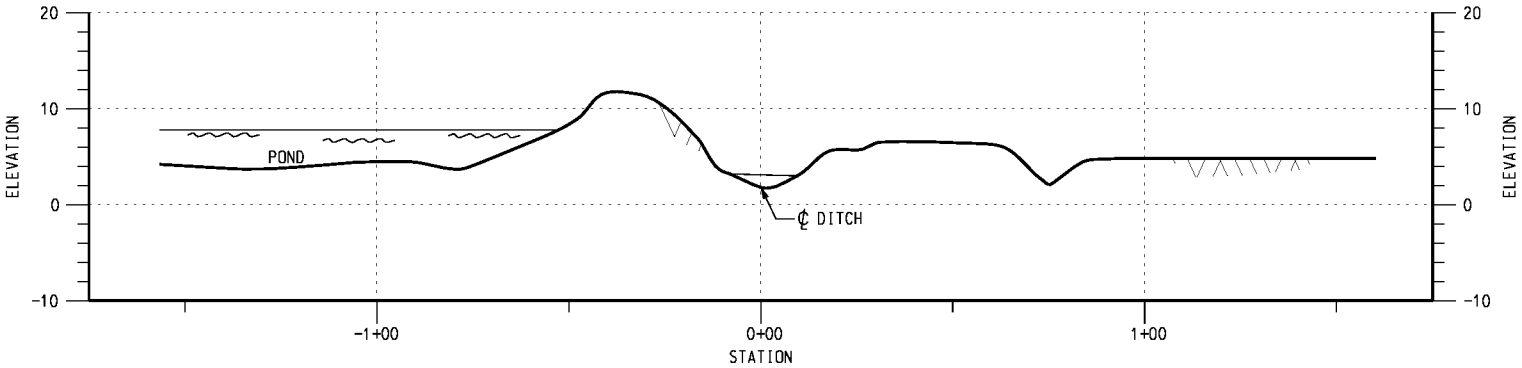
J.M. BURGUIÈRES CO., LTD

Doyle & Wachtstetter, Inc.
Surveying and Mapping GPS/GIS
131 COMMERCE STREET, CLUTE, TEXAS 77531
OFFICE: 979.265.3622 FAX: 979.265.9940

	BY	DATE		
DRAWN:	HG	2/19/16	JOB NO.	PERMIT NO.
CHKD.	KTD/WPD	2/19/16	6496-16-01	A2-JMBC003-64961601
APPD.				



CROSS SECTION 6 LOOKING NORTHEAST

REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

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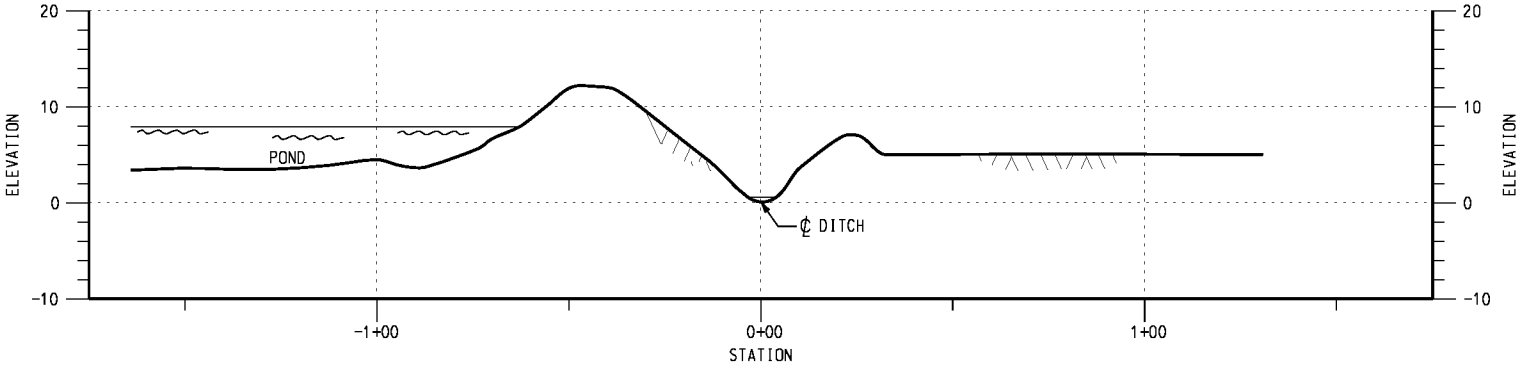
V: 1"= 20'



CROSS SECTION 5 LOOKING NORTH

REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

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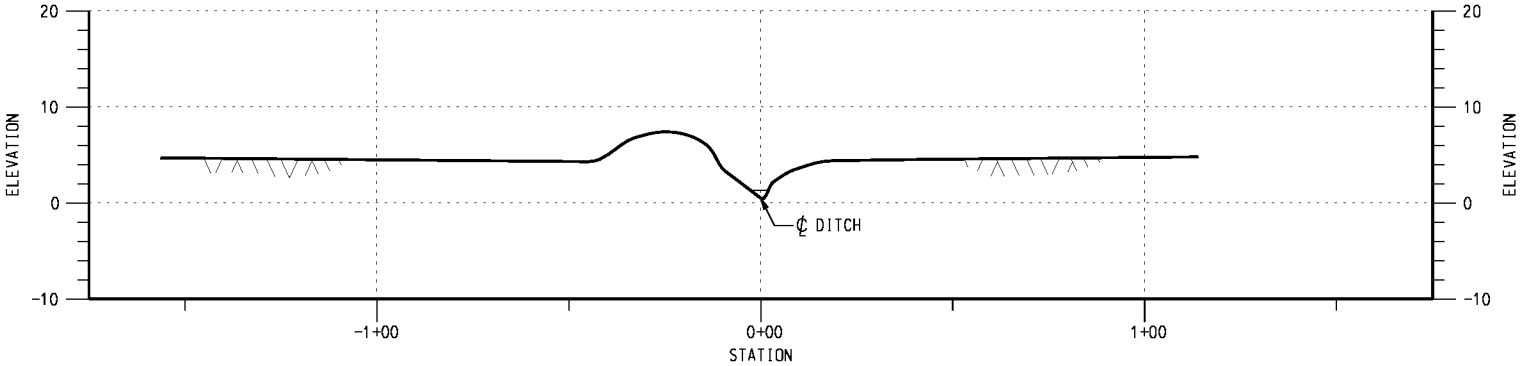
V: 1"= 20'



CROSS SECTION 4 LOOKING NORTHEAST

REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

H: 1"= 50'
V: 1"= 20'

APPLICATION BY:

J.M. BURGUIÈRES CO., LTD FOR
THE BASTROP BAYOU MITIGATION BANK SITE
BRAZORIA COUNTY, TEXAS

NOTES:

1. COORDINATES ARE RELATIVE TO THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, (NAD 83).
2. ALL ELEVATIONS SHOWN ARE NORTH AMERICAN VERTICAL DATUM (NAVD88) AND ARE BASED ON NGS MONUMENT "PLANT B 2" AT ELEVATION 4.80 FEET.
3. ALL DISTANCES SHOWN ARE HORIZONTAL SURFACE DISTANCES. (SF= 0.999875413).

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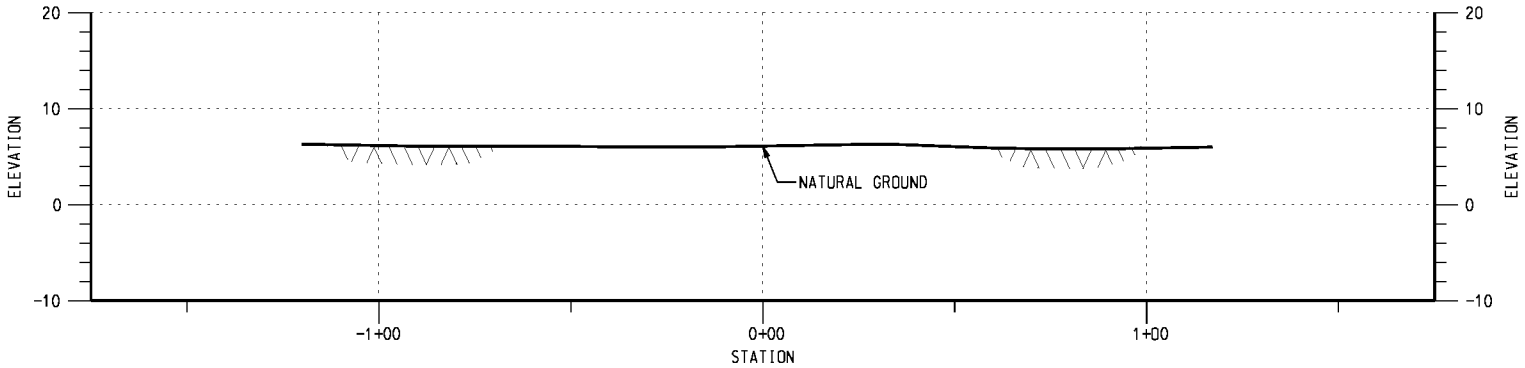
J.M. BURGUIÈRES CO., LTD

Doyle & Wachtstetter, Inc.
Surveying and Mapping GPS/GIS
131 COMMERCE STREET, CLUTE, TEXAS 77531
OFFICE: 979.265.3622 FAX: 979.265.9940

	BY	DATE		
DRAWN:	HG	2/19/16	JOB NO.	PERMIT NO.
CHKD.	KTD/WPD	2/19/16	6496-16-01	A2-JMBC004-64961601
APPD.				



CROSS SECTION 9 LOOKING NORTHWEST

REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

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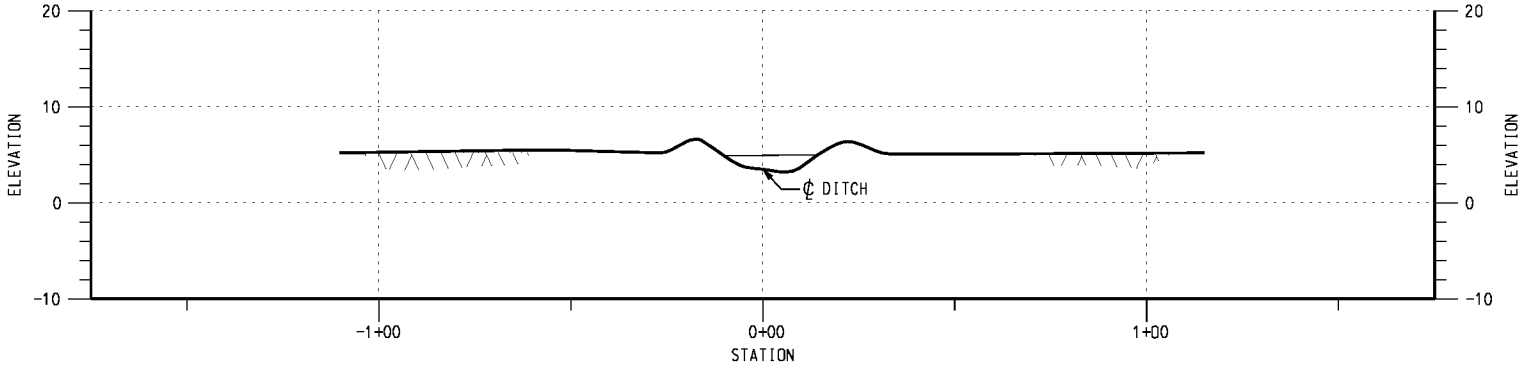
V: 1"= 20'



CROSS SECTION 8 LOOKING NORTH

REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

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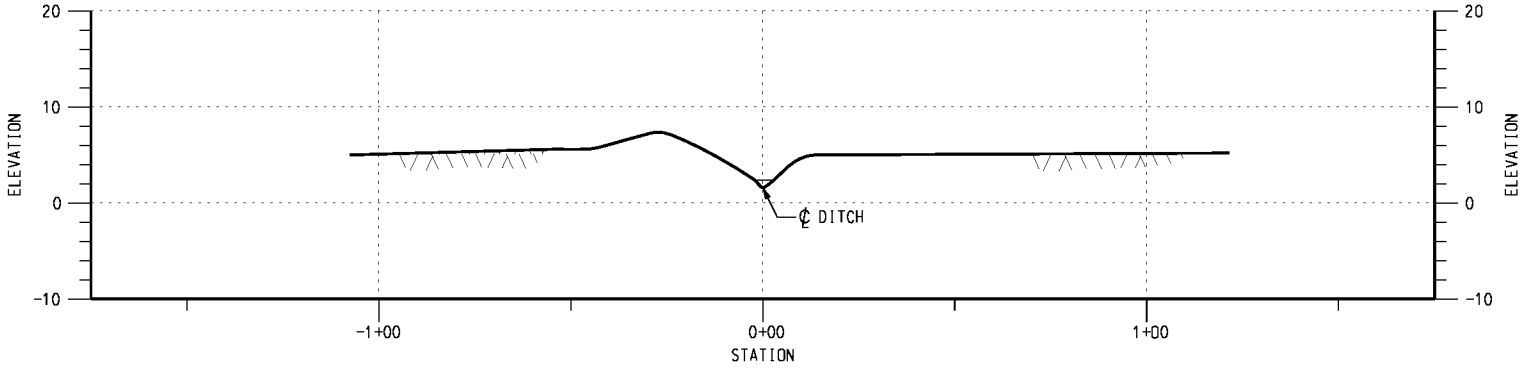
V: 1"= 20'



CROSS SECTION 7 LOOKING NORTH

REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

H: 1"= 50'
V: 1"= 20'

APPLICATION BY:

J.M. BURGUIÈRES CO., LTD FOR
THE BASTROP BAYOU MITIGATION BANK SITE
BRAZORIA COUNTY, TEXAS

NOTES:

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3. ALL DISTANCES SHOWN ARE HORIZONTAL SURFACE DISTANCES, (SF= 0.999875413).

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J.M. BURGUIÈRES CO., LTD

Doyle & Wachtstetter, Inc.
Surveying and Mapping GPS/GIS
131 COMMERCE STREET, CLUTE, TEXAS 77531
OFFICE: 979.265.3622 FAX: 979.265.9940

	BY	DATE		
DRAWN:	HG	2/19/16	JOB NO.	PERMIT NO.
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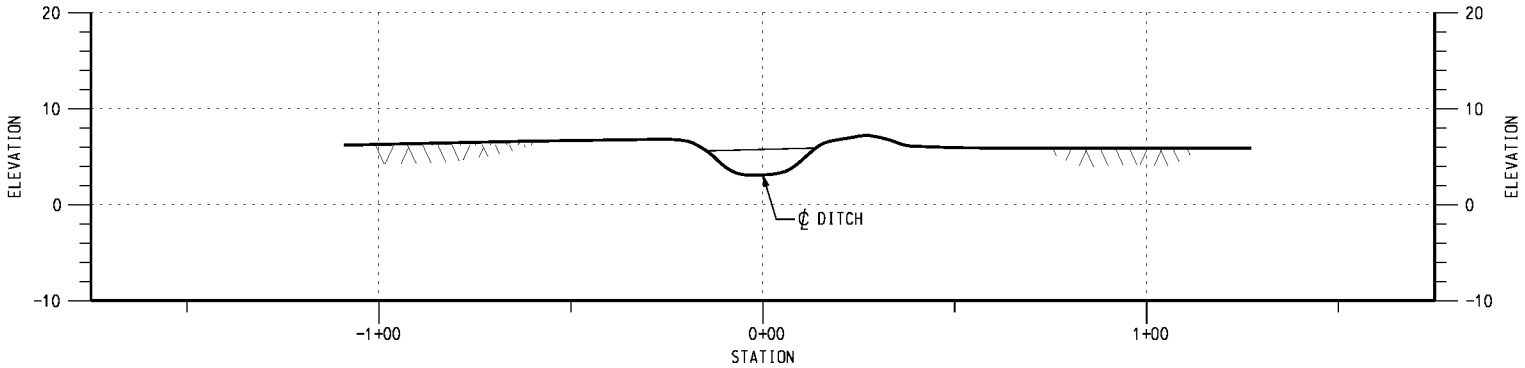
APPD.				



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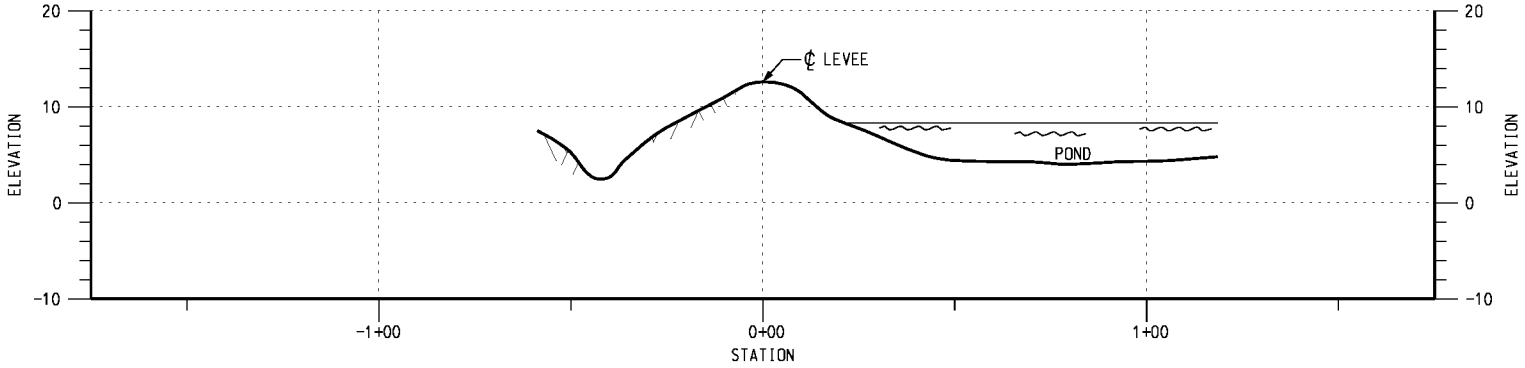

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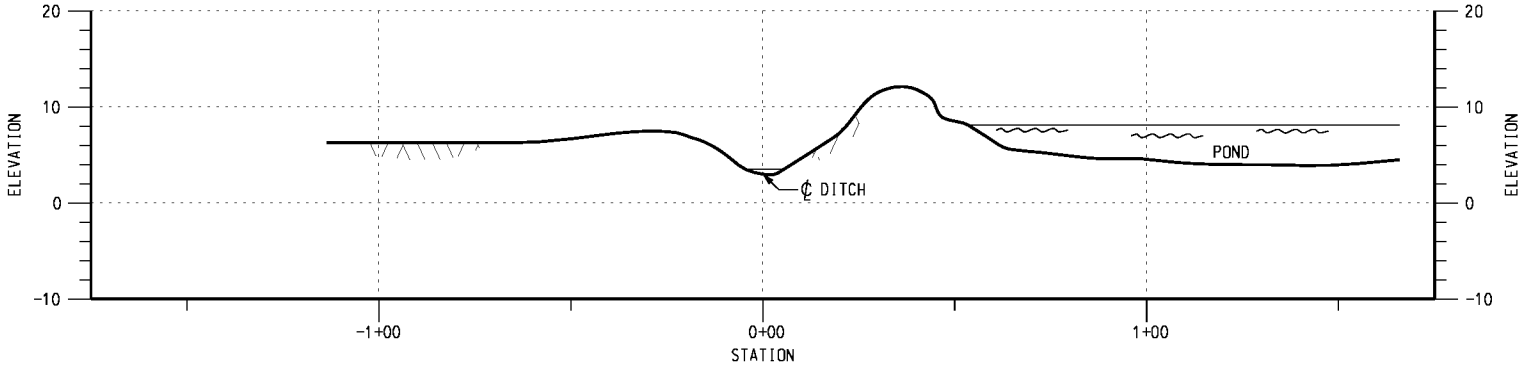

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REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

H: 1"= 50'
V: 1"= 20'

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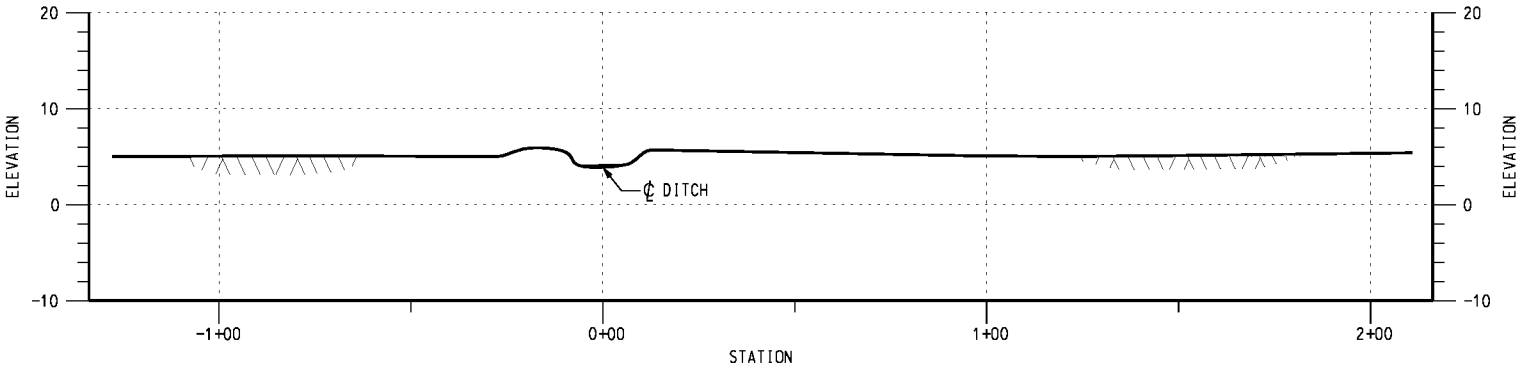

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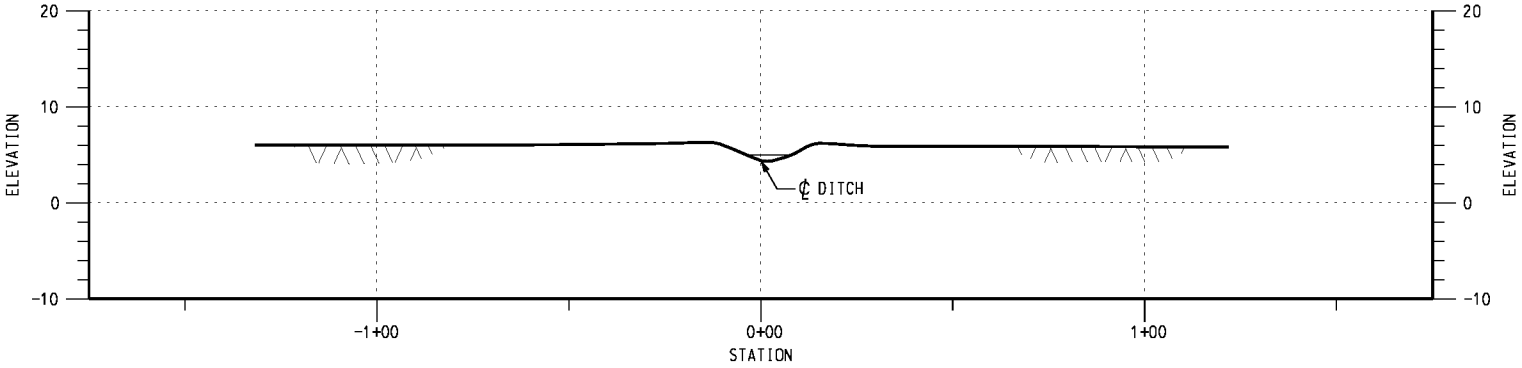

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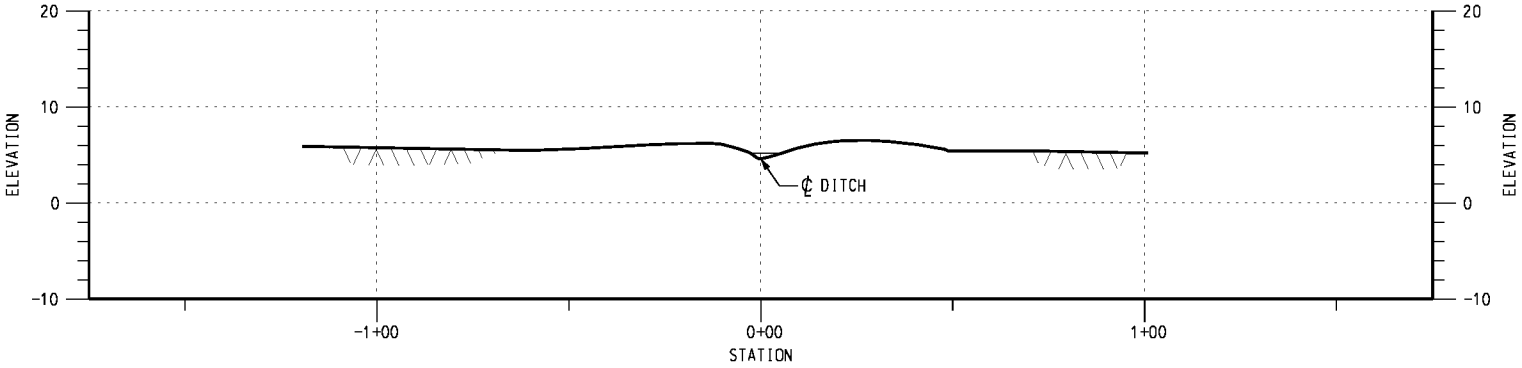

CROSS SECTION 13 LOOKING EAST

REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

H: 1"= 50'
V: 1"= 20'

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CHKD.	KTD/WPD	2/19/16	6496-16-01	A2-JMBC007-64961601
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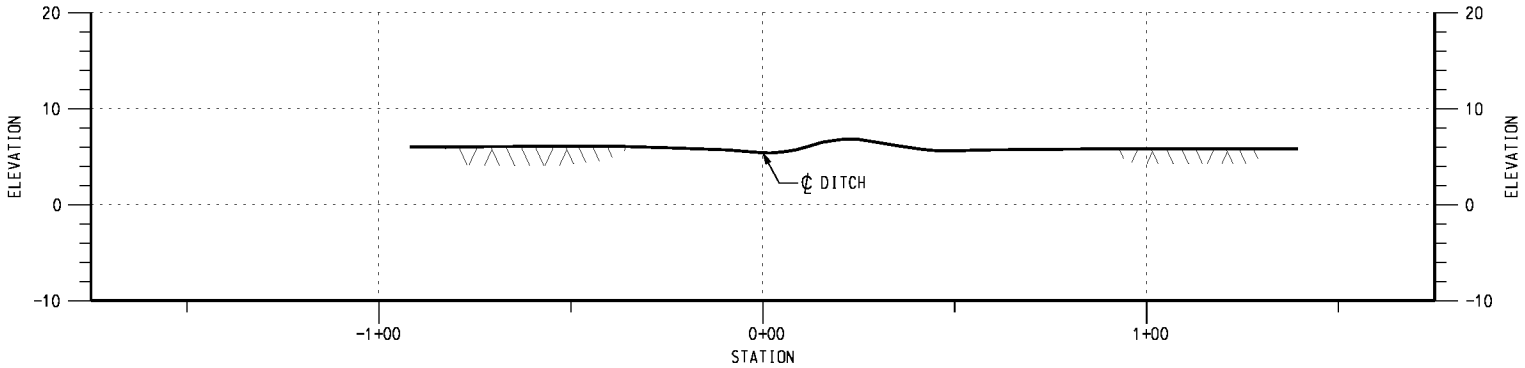

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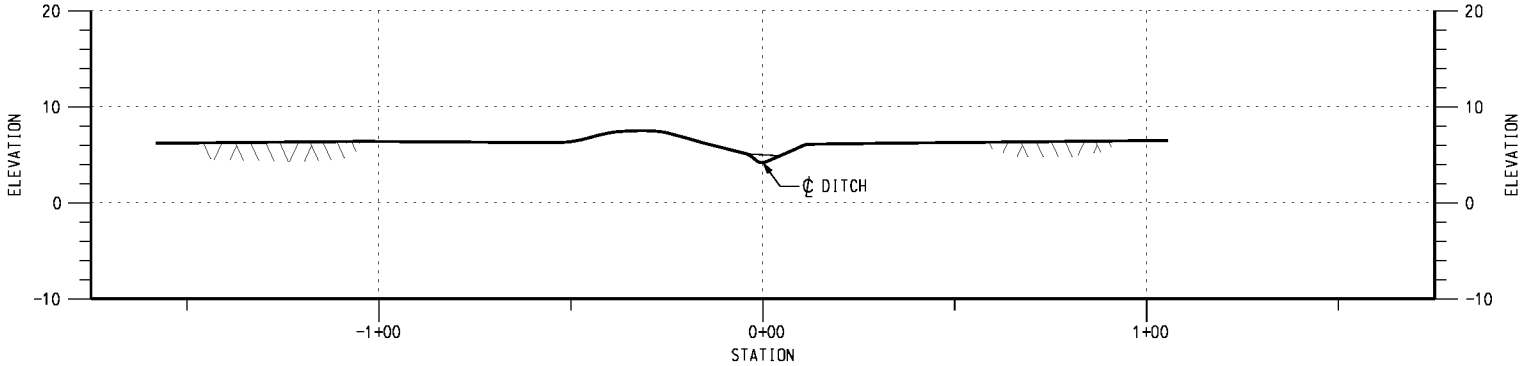

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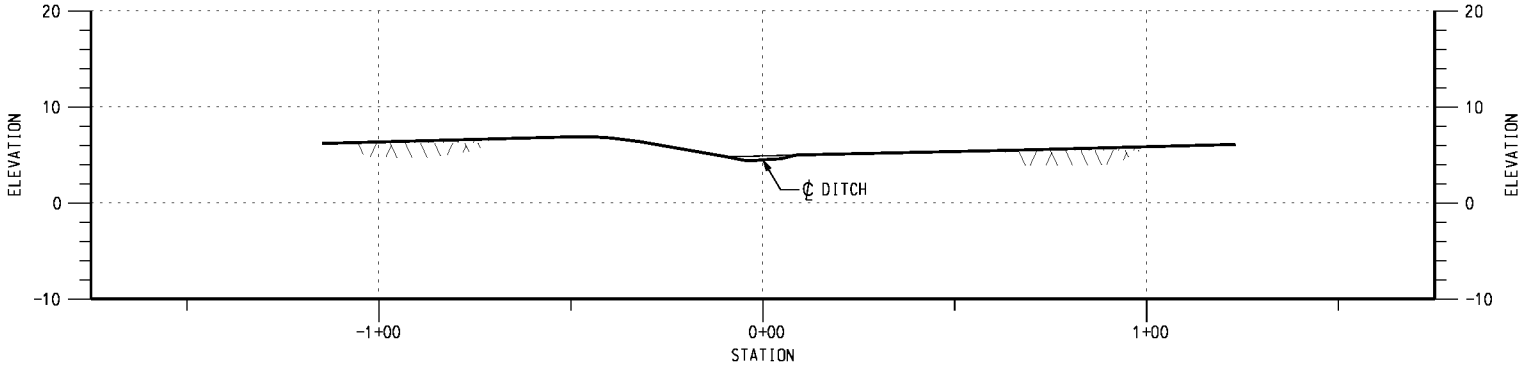

CROSS SECTION 16 LOOKING EAST

REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

H: 1"= 50'
V: 1"= 20'

APPLICATION BY:

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BRAZORIA COUNTY, TEXAS

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CHKD.	KTD/WPD	2/19/16	6496-16-01	A2-JMBC008-64961601
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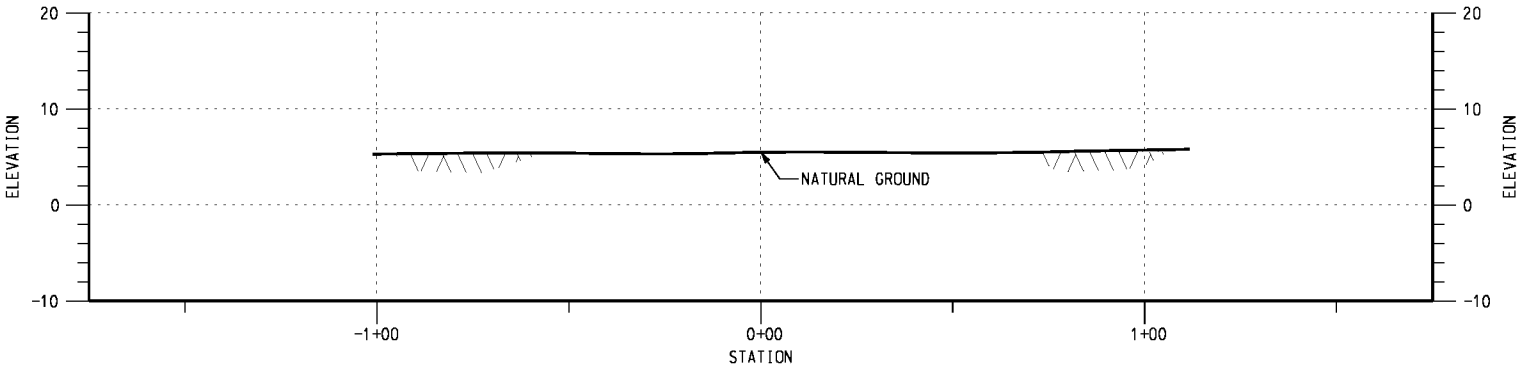

CROSS SECTION 19 LOOKING NORTHWEST

REFER TO SHEET 2 OF 10 DWG NO. A2-JMB002-64961601

H: 1"= 50'
V: 1"= 20'

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DRAWN:	HG	2/19/16	JOB NO.	PERMIT NO.
CHKD.	KTD/WPD	2/19/16	6496-16-01	A2-JMBC009-64961601
APPD.				

BRAZORIA COUNTY
TEXAS

J.M. MUSQUEZ SURVEY
ABSTRACT 332

LEGEND

- TOP OF BANK
- TOE OF SLOPE
- EDGE OF WATER
- 5 MAJOR CONTOUR
- 4 MINOR CONTOUR

SHEET 10 OF 10

APPLICATION BY:

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CHKD.	KTD/WPD	2/19/16	6496-16-01	AZ-JMBC010-64961601
APPD.				

Attachment C: Regional Economics

BRAZORIA COUNTY
January 2015 • Volume 9 • Number 1

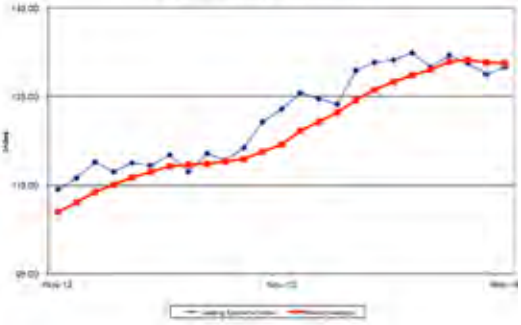
ECONOMIC INDICATORS

BRAZOSPORT COLLEGE ECONOMIC FORECASTING CENTER

ECONOMIC GROWTH DRIVES RECORD SETTING EMPLOYMENT

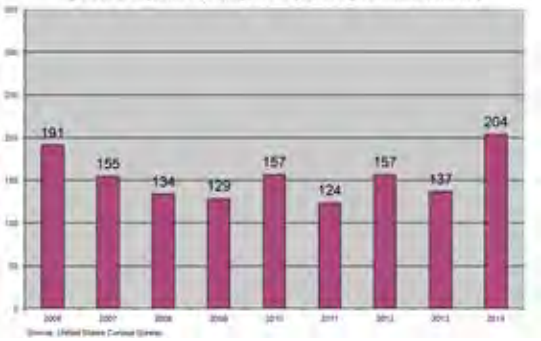
The Brazoria County Index of Leading Economic Indicators increased in November to 129.93, which is 0.95 percent above the previous month's index and 3.45 percent above November 2013. The Leading Economic Index, which is designed to forecast the economic performance of the county over the next three to six months, fell below the six month moving average in September. The leading index has been slightly below the six month moving average for the last three months. This is significant because if the leading economic index is consistently below the six month moving average the county is likely entering into or currently experiencing a period of slow economic growth (Figure 1).

Figure 1: Leading Economic Index



Two of the three leading economic indicators increased over the last year. The largest increase in the index was in New Single Family Building Permits, which increased 48.91 percent over the last year (Figure 2). The Brazoria County Stock Index, which is made up of the eight largest publicly traded companies in the county, increased 2.47 percent over the last year. By comparison the Dow Jones Industrial Average increased 10.82 percent over that same time period. Houston-Baytown-Sugarland Average Weekly Manufacturing Hours preliminary figure for November 2014 is 46.40 hours per week compared to 48.20 hours per week in the same month last year, which represents a decrease of 3.73 percent.

Figure 2: Unadjusted New Single Family Building Permits (November)



CURRENT ECONOMIC INDICATORS

The Brazoria County Index of Current Economic Indicators, which is designed to provide information about the current status of the economy, increased to 184.90 in November, which is 0.96 percent above the previous month and 6.41 percent above November 2013. Brazoria County Employment increased 3.50 percent over the last year to 155,809, which represents the highest number of individuals ever employed in the county (Figure 3). Sales Tax Receipts increased 29.41 percent over the last year to $2,008,770, which is the highest amount ever recorded in the month of November. Consumer Confidence posted an increase of 14.93 percent over the last year, while Hotel/Motel Tax Receipts increased 24.15 percent over the last year to $4,277,074. The Brazoria County Current Economic Index has been above the six-month moving average for the eight months. This is significant because if the current economic index is consistently above the six month moving average then the county is likely experiencing a period of economic growth (Figure 4).

Figure 3: Brazoria County Employment (November)

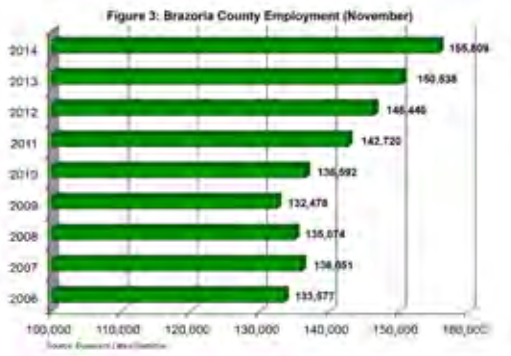


Figure 4: Current Economic Index

LAGGING ECONOMIC INDICATORS

The Brazoria County Index of Lagging Economic Indicators is used to confirm the growth or slowdown in the economy. The lagging economic index increased to 125.84, which is 0.68 percent above the previous month and 9.61 percent above November 2013. The Brazoria County Unemployment Rate and Foreclosure Notices both decreased significantly over the last year, while the prime rate remained unchanged. The unemployment rate decreased from 6.20 percent to 4.90 percent over the last year (Figure 5). Foreclosure notices decreased 25.25 percent over the last year from 99 notices in November 2013 to 74 in November 2014. The lagging economic index has been above the six-month moving average for over twelve consecutive months, which indicates the economy has been experiencing a period of economic growth (Figure 6).

Figure 5: Brazoria County Unemployment Rate

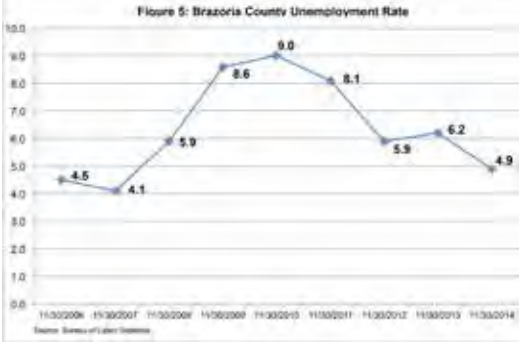


Figure 6: Lagging Economic Index

BRAZORIA COUNTY, TEXAS BUSINESS CYCLE INDICATORS

JANUARY 2015

Brazoria County Economic Indices:	Nov 2014	Oct 2014	Sep 2014	Aug 2014	Jul 2014
Leading Economic Index (2003 = 100)	129.93	128.70	130.70	131.96	129.98
Current Economic Index (2003=100)	184.90	183.15	181.15	178.68	176.61
Lagging Economic Index (2003 = 100)	125.84	125.00	123.66	122.90	121.98

Brazoria County Leading Economic Index*	Nov 2014	Oct 2014	Nov 2013	Oct-2014 to Nov-2014	Nov-2013 to Nov-2014
Leading Economic Index (2003 = 100)	129.93	128.70	125.60	0.95%	3.45%
Components:					
Brazoria County Stock Index (12/31/2003 = 100)	196.20	196.33	191.48	-0.07%	2.47%
New Single Family Building Permits (Seasonally Adjusted)	208	199	164	4.70%	27.17%
New Single Family Building Permits (Unadjusted)	*204*	*227*	*137*	*-10.13%*	*48.91%*
Houston-Baytown-Sugarland Avg. Weekly Manufacturing Hrs. (Seasonally Adjusted)	*46.32*	*46.30*	*46.91*	*0.03%*	*-1.27%*
Houston-Baytown-Sugarland Avg. Weekly Manufacturing Hrs. (Unadjusted)	*46.40*	*46.20*	*48.20*	*0.43%*	*-3.73%*

*(Data for the Leading Index is one month behind due to the lag in obtaining building permits)

Brazoria County Current Economic Index**	Nov 2014	Oct 2014	Nov 2013	Oct-2014 to Nov-2014	Nov-2013 to Nov-2014
Current Economic Index (2003 = 100)	184.90	183.15	173.76	0.96%	6.41%
Components:					
Sales Tax Receipts (Constant 1982-1984 $'s, Seasonally Adjusted)	934,039	915,665	854,564	2.01%	9.30%
Sales Tax Receipts (Current $'s, Unadjusted)	*2,008,770*	*1,916,231*	*1,552,235*	*4.83%*	*29.41%*
Household Employment (Seasonally Adjusted)	153,091	152,595	148,193	0.33%	3.31%
Household Employment (Unadjusted)	*155,809*	*155,425*	*150,538*	*0.25%*	*3.50%*
West South Central Consumer Confidence (Present Situation)	125.19	124.64	108.92	0.44%	14.93%
Hotel/Motel Tax Receipts (Constant 1982-1984 $'s, Seasonally Adjusted)	2,148,090	2,118,629	2,086,229	1.39%	2.97%
Hotel/Motel Tax Receipts (Current $'s, Unadjusted)	*4,277,074*	*4,880,092*	*3,445,153*	*-12.36%*	*24.15%*

**(Data for the Current Index is one month behind due to the lag in obtaining the data for hotel/motel tax receipts)

Brazoria County Lagging Economic Index***	Nov 2014	Oct 2014	Nov 2013	Oct-2014 to Nov-2014	Nov-2013 to Nov-2014
Lagging Economic Index (2003 = 100)	125.84	125.00	114.81	0.68%	9.61%
Components:					
Brazoria County Foreclosure Notices (Seasonally Adjusted)	87	90	130	-3.17%	-33.12%
Brazoria County Foreclosure Notices (Unadjusted)	*74*	*68*	99	8.82%	-25.25%
Prime Rate Charged By Banks	3.25	3.25	3.25	0.00%	0.00%
Unemployment Rate (Adjusted)	4.90%	5.00%	6.20%	-2.00%	-20.97%
Unemployment Rate (Unadjusted)	*4.90%*	*4.90%*	*6.20%*	*0.00%*	*-20.97%*

*** (Data is one month behind due to lag in obtaining unemployment data)

BRAZOSPORT COLLEGE ECONOMIC FORECASTING CENTER
Donald Payne, Brazosport College, Department of Economics

Attachment D: Impacted Species

U.S. Fish & Wildlife Service

Butterflies and Dragonflies

Texas Mid-coast National Wildlife Refuge Complex


Tiger Swallowtail

The following butterflies' and dragonflies' ranges are expected to include Brazoria County and the refuges.

ORDER LEPIDOPTERA
BUTTERFLIES

FAMILY PAPILIONIDAE
(Swallowtails)
- Pipe-vine Swallowtail
- Black Swallowtail
- Giant Swallowtail
- Tiger Swallowtail
- Spicebush Swallowtail
- Palamedes Swallowtail

FAMILY PIERIDAE
(Whites and Sulphurs)
- Checkered White
- Cabbage White
- Great Southern White
- Falcate Orangetip
- Orange Sulphur
- White Angled Sulphur
- Yellow Angled Sulphur
- Dog Face
- Cloudless Sulphur
- Orange-barred Sulphur
- Large Orange Sulphur
- Little Yellow
- Mexican Yellow
- Sleepy Orange
- Dainty Sulphur

FAMILY LYCAENIDAE
(Gossamer-winged)
- Harvester
- Great Purple Hairstreak
- Soapberry Hairstreak
- Eastern Pine Elfin
- Banded Hairstreak
- Striped Hairstreak
- Northern Hairstreak
- Red Banded Hairstreak
- Dusky-blue Hairstreak
- Olive Hairstreak
- Henry's Elfin
- White-m Hairstreak
- Gray Hairstreak
- Western Pigmy Blue
- Cassius Blue
- Marine Blue
- Ceraunus Blue
- Reakirt's Blue
- Eastern Tailed Blue
- Spring Azure

FAMILY LIBYTHEIDAE
(Snout Butterflies)
- Snout Butterfly

FAMILY HELICONIIDAE
(Longwings)
- Gulf Fritillary
- Julia
- Zebra

FAMILY NYMPHALIDAE
(Nymphalids)
- Variegated Fritillary
- Bordered Patch
- Silvery Checkerspot
- Texan Crescent
- Phaon Crescent
- Pearl Crescent
- Question Mark
- Mourning Cloak
- Red Admiral
- American Painted Lady
- Painted Lady
- Buckeye
- Red-spotted Purple


Queen

Viceroy
Common Mestra
Goatweed Leafwing
Hackberry Emperor
Tawny Emperor

FAMILY SATYRIDAE
(Satyrs & Wood Nymphs)
Southern Pearly Eye
Gemmed Satyr
Carolina Satyr
Little Wood Satyr
Common Wood Nymph

FAMILY DANAIDAE
(Milkweed Butterflies)
Monarch
Queen

FAMILY HESPERIIDAE
(Skippers)
Silver-spotted Skipper
White-striped Longtail
Long-tailed Skipper
Dorantes Longtail
Northern Cloudywing
Southern Cloudywing
Confused Cloudywing
Southern Scalloped Sootywing
Sickle-winged Skipper
Sleepy Duskywing
Juvenal's Duskywing
Horace's Duskywing
Funereal Duskywing
Wild Indigo Duskywing
Common Checkered Skipper
Tropical Checkered Skipper
Turk's Cap Skipper
Hayhurst's Scallopwing
Mazans Scallopwing
Common Sootywing
Swarthy Skipper
Neamathla Skipper
Julia's Skipper
Clouded Skipper
Least Skipper
Orange Skipperling
Southern Skipperling
Fiery Skipper
Meske's Skipper
Whirlabout
Southern Broken Dash
Northern Broken Dash
Little Glassywing
Sachem
Broad-winged Skipper
Yehl Skipper
Dun Skipper
Lace-winged Roadside Skipper
Celia's Roadside Skipper
Common Roadside Skipper
Eufala Skipper
Twin-spot Skipper
Brazilian Skipper
Salt Marsh Skipper
Obscure Skipper
Ocola Skipper
Polydamas Swallowtail
Mexican Silverspot
White Peacock

ORDER ODONATA
DRAGONFLIES

FAMILY AESHNIDAE (Darners)
Common Green Darner
Comet Darner
Regal Darner
Swamp Darner

FAMILY GOMPHIDAE (Clubtails)
Clubtail spp.

FAMILY MACROMIIDAE (Cruisers)
Royal River Cruiser

FAMILY CORDULIIDAE (Emeralds)
Common Baskettail
Prince Baskettail

FAMILY LIBELLUIDAE
(Skimmers)
Four-spotter Pennant
Halloween Pennant
Banded Pennant
Calico Pennant
Eastern Pondhawk
Great Pondhawk
Band-winged Dragonlet
Seaside Dragonlet
Slaty Skimmer
Common Whitetail
Needham's Skimmer
Great Blue Skimmer
Widow Skimmer
Greater Hyacinth Glider
Roseate Skimmer
Blue Dasher
Wandering Glider
Spot-winged Glider
Eastern Amberwing
Carolina Saddle Bags
Black-mantled Glider
Red-mantled Glider

Texas Mid-Coast National
Wildlife Refuge Complex
2547 CR316
Brazoria, TX 77422
Phone 979-964-4011
Fax 979-964-4021

U.S. Fish & Wildlife Service

Fish

Texas Mid-coast National Wildlife Refuge Complex


Bastrop Bayou Fishing Pier

The following 127 fish ranges are expected to include Brazoria County and the refuges.

Spotted gar
Longnose gar
Alligator gar
American eel
Inshore lizard fish
Least puffer
Bowfin
Skipjack herring
Gizzard shad
Gulf Menhaden
Threadfin Shad
Bay anchovy
Goldeye
Grass pickerel
Central stoneroller
Grass carp
Goldfish
Red shiner
Blacktail shiner
Common carp
Mississippi silvery minnow
Plains minnow
Ribbon shiner
Shoal chub
Silver chub
Golden shiner
Blackspot shiner
Smalleye shiner
Ghost shiner
Sharpnose shiner
Chub shiner
Silverband shiner
Sand shiner
Mimic shiner
Pugnose minnow
Suckermouth minnow
Fathead Minnow
Bullhead minnow
Creek chub
River carpsucker
Blue sucker
Lake chubsucker
Smallmouth buffalo
Black buffalo
Spotted sucker
Gray redhorse
Family Mugilidae
Striped mullet
White mullet
Lady fish
Gulf pipefish
Chain pipefish
Black bullhead
Yellow bullhead
Blue catfish
Channel catfish
Tadpole madtom
Freckled madtom
Flathead catfish
Sea catfishes
Hardhead catfish
Gafftopsail catfish
Gulf toadfish
Atlantic midshipman
Pirate perch
Brook silverside
Inland silverside
Atlantic needlefish
Western mosquitofish
Sailfin molly
Western starhead topminnow
Golden topminnow
Gulf killifish

Diamond killifish
Blackstripe topminnow
Bayou topminnow
Longnose killifish
Plains killifish
Rainwater killifish
Sheepshead minnow
White bass
Crevalle jack
Flier
Redbreast sunfish
Green sunfish
Warmouth
Orangespotted sunfish
Bluegill
Dollar sunfish
Longear sunfish
Redear sunfish
Spotted sunfish
Bantam sunfish
Spotted bass
Largemouth bass
White crappie
Black crappie
Banded pygmy sunfish
Western sand darter
Scaly sand darter
Slough darter


Slop Bowl Aerial Photo

Dusky darter
Spotfin mojarra
Silver jenny
Tidewater mojarra
Flagfin mojara
Pigfish
Freshwater Drum
Black Drum
Red Drum
Gulf Kingfish
Sand Seatrout

Silver Seatrout
Spotted Seatrout
Spot
Atlantic croaker
Silver perch
Sheepshead
Pinfish
Southern Flounder
Fringed flounder
Bay whiff
Hogchoker
Lined sole
Blackcheek tonguefish
Southern stingray
Atlantic stingray
Naked goby
Clown goby
Darter goby


Cedar Lake Creek Boat Ramp

Texas Mid-Coast National
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2547 CR316
Brazoria, TX 77422
Phone 979-964-4011
Fax 979-964-4021

U.S. Fish & Wildlife Service

Mammals

Texas Mid-coast National Wildlife Refuge Complex


Raccoon

The following 52 mammals' ranges are expected to include Brazoria County and the refuges.

MAMMALS

ORDER DIDELPHIMORPHA
MARSUPIALS

FAMILY DIDELPHIDAE
Virginia Opposum

ORDER XENARTHRA
EDENTATES

FAMILY DASYPODIDAE
Nine-banded Armadillo

ORDER INSECTIVORA
INSECTIVORES

FAMILY SORICIDAE
Short-tailed Shrew
Least Shrew

FAMILY TALPIDAE
Eastern Mole

ORDER CHIROPTERA
BATS

FAMILY VESPERTILIONIDAE
Big Brown Bat
Eastern Pipestrelle
Eastern Red Bat
Evening Bat
Hoary Bat
Brazilian Free-tailed Bat

ORDER CARNIVORA
CARNIVORES

FAMILY CANIDAE
Coyote
Gray Fox
Red Fox

FAMILY FELIDAE
Bobcat
Cougar

FAMILY MUSTELIDAE
Long-tailed Weasel
American Mink
Northern River Otter
Spotted Skunk
Striped Skunk

FAMILY PROCYONIDAE
Raccoon
Ringtail

ORDER ARTIODACTYLA
UNGULATES

FAMILY SUIDAE
*Pig (feral)


Coyote


Bobcat

FAMILY CERVIDAE
White-tailed Deer

ORDER RODENTIA
RODENTS

FAMILY SCIURIDAE
Eastern Fox Squirrel
Eastern Gray Squirrel
Southern Flying Squirrel

FAMILY GEOMYIDAE
Attwater's Packet Gopher
Baird's Pocket Gopher

FAMILY CASTORIDAE
American Beaver

FAMILY MURIDAE
Deer Mouse
Eastern Woodrat
Eastern Harvest Mouse
Fulvous Harvest Mouse
Hispid Pocket Mouse
House Mouse
Roof Rat
Hispid Cotton Rat
Marsh Rice Rat
Northern Pygmy Mouse
*Norway Rat
White-footed Mouse

FAMILY CRICETIDAE
Muskrat

FAMILY MYOCASTORIDAE
*Nutria

ORDER LAGOMORPHA
LAGOMORPHS

FAMILY LEPORIDAE
Eastern Cottontail
Swamp Rabbit
California Jackrabbit

* *denotes an invasive species*

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White-Tailed Deer

U.S. Fish & Wildlife Service

Reptiles and Amphibians

Texas Mid-coast National Wildlife Refuge Complex


American Alligator

The following 100 reptiles' ranges are expected to include Brazoria County and the refuges.

Amphibians

ORDER CAUDATA
SALAMANDERS

FAMILY SIRENIDAE
- Western Lesser Siren

FAMILY SALAMANDRIDAE
- Central Newt

FAMILY AMBYSTOMATIDAE
- Marbled Salamander
- Small-mouthed Salamander

ORDER ANURA
FROGS & TOADS

FAMILY SCAPHIOPODIDAE
- Hurters Spadefoot

FAMILY ANAXYRUS
- Dwarf American Toad
- Woodhouse's Toad
- Gulf Coast Toad

FAMILY HYLIDAE
- Blanchard's Cricket Frog
- Cope's Gray Treefrog
- Green Treefrog
- Northern Spring Peeper
- Eastern Gray Treefrog
- Squirrel Treefrog
- Spotted Chorus Frog
- Strecker's Chorus Frog
- Upland Chorus Frog

FAMILY MICROHYLIDAE
- E. Narrow-mouthed Toad
- Great Plains Narrow-mouth Toad

FAMILY RANIDAE
- S. Crawfish Frog
- Bullfrog
- Bronze Frog
- Southern Leopard Frog

Reptiles

ORDER TESTUDINES
TORTOISES & TURTLES

FAMILY KINOSTERNIDAE
- Mississippi Mud Turtle
- Common Musk Turtle
- Yellow Mud Turtle

FAMILY CHELYDRIDAE
- Common Snapping Turtle

FAMILY EMYDIDAE
- Mississippi Map Turtle
- Ornate Box Turtle


Skink Photograph by Pete


Green Treefrog

Red-eared Slider
Texas Diamondback Terrapin
Texas River Cooter
Three-toed Box Turtle
Western Chicken Turtle

FAMILY TESTUDINIDAE
Texas Tortoise

FAMILY TRIONYCHIDAE
Midland Smooth Softshell
Pallid Spiny Softshell

FAMILY CHELONIIDAE
Loggerhead Sea Turtle
Green Sea Turtle
Atlantic Hawksbill Sea Turtle
Kemp's Ridley Sea Turtle

FAMILY DERMOCHELIDAE
Leatherback Sea Turtle

ORDER SQUAMATA
SNAKES & LIZARDS

FAMILY IGUANIDAE
Green Anole

FAMILY PHRYNOSOMATIDAE
Northern Fence Lizard
Texas Horned Lizard
Texas Spiny Lizard

FAMILY TEIIDAE
Six-lined Racerunner
Texas Spotted Whiptail

FAMILY SCINCIDAE
Southern Prairie Skink
Five-lined Skink
Broadhead Skink
Ground Skink

FAMILY ANGUIDAE
W. Slender Glass Lizard

FAMILY COLUBRIDAE
Mississippi Ring-necked Snake
Texas Rat Snake
Southwestern Rat Snake
Western Mud Snake
Eastern Hog-nosed Snake
Dusty Hog-nosed Snake
Speckled Kingsnake
Prairie Kingsnake
Louisiana Milk Snake
Western Coachwhip
Rough Green Snake
Marsh Brown Snake
Blotched Water Snake
Broad-banded Water Snake
Gulf Salt Marsh Snake


Diamondback Rattlesnake

Diamondback Water Snake
Graham's Crayfish Snake
Gulf Crawfish Snake
Flat-headed Snake
Gulf Coast Ribbon Snake
Checkered Garter Snake
Rough Earth Snake
Eastern Garter Snake
Plains Blind Snake
Texas Night Snake
W. Smooth Green Snake
E. Yellow-bellied Racer


Red-Eared Slider

Texas Glossy Snake
Texas Scarlet Snake

FAMILY ELAPIDAE
Texas Coral Snake

FAMILY VIPERIDAE
Southern Copperhead
Western Cottonmouth
Canebrake Rattlesnake
Western Pigmy Rattlesnake
Western Massasauga
Western Diamondback

ORDER CROCODYLIDAE
TRUE CROCODILES

FAMILY CROCODYLIDAE
American Alligator

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