JOINT PUBLIC NOTICE

September 17, 2018

United States Army
Corps of Engineers
New Orleans District
Regulatory Branch
7400 Leake Ave.
New Orleans, La. 70118

(504) 862-2595/ FAX (504) 862-2289
Jacqueline.R.Farabee@usace.army.mil
Project Manager
Jacqueline Farabee
Permit Application Number
MVN-2017-01356-MR

State of Louisiana
Department of Environmental Quality
Post Office Box 4313
Baton Rouge, La. 70821-4313
Attn: Water Quality Certifications

(225) 219-3225 FAX (225) 325-8250
Elizabeth.Hill@la.gov
Project Manager
Elizabeth Hill
WQC Application Number
WQC # 180913-03

Interested parties are hereby notified that a permit application has been received by the New Orleans District of the U.S. Army Corps of Engineers pursuant to: [ ] Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 USC 403); and/or [X] Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344).

Application has also been made to the Louisiana Department of Environmental Quality, for a Water Quality Certification (WQC) in accordance with statutory authority contained in Louisiana Revised Statutes of 1950, Title 30, Chapter 11, Part IV, Section 2074 A(3) and provisions of Section 401 of the Clean Water Act (P.L.95-17).

SOUTH FORK II COASTAL MITIGATION BANK IN CAMERON PARISH

NAME OF APPLICANT: Delta Land Services, LLC; Attn: Daniel Bollich; 1090 Cinclare Dr.; Port Allen, LA 70767.

LOCATION OF WORK: The 241.8 acre site is located approximately 10 miles to the south of the city of Lake Charles, Louisiana, as shown on attached drawings (Latitude: 30.031007° N, Longitude:–93.174689° W). The Project is located within the Calcasieu Basin, Hydrologic Unit 08080206.

CHARACTER OF WORK: Removal of man-made surface features with the use of on-site material to fill drainage features and borrow pits. Approximately 11.5 acres of other waters will be filled with approximately 4,257 cubic yards of in-situ material and mulching will be performed to remove undesirable woody species and the material used to add organic matter to the site. This work is being done to enhance and restore traditional surface hydrology to the site for the purpose of constructing a mitigation bank with wetland habitats consisting of coastal prairie and fresh to intermediate marsh.

The comment period for the Department of the Army Permit and the Louisiana Department of Environmental Quality WQC will close **30 days** from the date of this joint public notice. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this permit and/or this WQC request and must be mailed so as to be received before or by the last day of the comment period. Letters concerning the Corps of Engineers permit application must reference the

applicant's name and the Permit Application Number, and be mailed to the Corps of Engineers at the address above, ATTENTION: REGULATORY BRANCH. Similar letters concerning the Water Quality Certification must reference the applicant's name and the WQC Application number and be mailed to the Louisiana Department of Environmental Quality at the address above.

The application for this proposed project is on file with the Louisiana Department of Environmental Quality and may be examined during weekdays between 8:00 a.m. and 4:30 p.m. Copies may be obtained upon payment of costs of reproduction.

Corps of Engineers Permit Criteria

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

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

The New Orleans District is unaware of properties listed on the National Register of Historic Places near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, historical sites, or data. Issuance of this public notice solicits input from the State Archeologist and State Historic Preservation Officer regarding potential impacts to cultural resources. After receipt of comments from this public notice the Corps will evaluate potential impacts and consult with the State Historic Preservation Officer and Native American Tribes in accordance with Section 106 of the national Historic Preservation Act, as appropriate.

Our initial finding is that the proposed work would neither affect any species listed as endangered, nor affect any habitat designated as critical to the survival and recovery of any endangered species listed by the U.S. Department of Commerce,

Utilizing Standard Local Operating Procedure for Endangered Species in Louisiana (SLOPES), dated October 22, 2014, between the U.S. Army Corps of Engineers, New Orleans

and U.S. Fish and Wildlife Service, Ecological Services Office, the Corps has determined that the proposed activity would have no effect on any species listed as endangered by the U.S. Department of the Interior.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The applicant's proposal would result in the destruction or alteration of N/A acre(s) of EFH utilized by various life stages of red drum and penaeid shrimp. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries in the Gulf of Mexico. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

If the proposed work involves deposits of dredged or fill material into navigable waters, the evaluation of the probable impacts will include the application of guidelines established by the Administrator of the Environmental Protection Agency. Also, a certification that the proposed activity will not violate applicable water quality standards will be required from the Department of Environmental Quality, before a permit is issued.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

The applicant has certified that the proposed activity described in the application complies with and will be conducted in a manner that is consistent with the Louisiana Coastal Resources Program. The Department of the Army permit will not be issued unless the applicant received approval or a waiver of the Coastal Use Permit by the Department of Natural Resources.

You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have interested in the matter.

Martin S. Mayer
Chief, Regulatory Branch

Enclosure

SOUTH FORK II

COASTAL MITIGATION BANK PROSPECTUS
MVN-2017-01356-SR
CAMERON PARISH, LOUISIANA

Sponsored By: Delta Land Services, LLC
JULY 16, 2018

DELTA LAND SERVICES

Restore & Revitalize

PROSPECTUS FOR THE PROPOSED SOUTH FORK II COASTAL MITIGATION BANK MVN-2017-01356-SR

CAMERON PARISH
LOUISIANA

July 16, 2018

PREPARED BY:

DELTA LAND SERVICES, LLC
1090 CINCLARE DRIVE
PORT ALLEN, LOUISIANA 70767

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1.1 INTRODUCTION

Delta Land Services, LLC (DLS; Sponsor) has prepared this prospectus in accordance with 33 CFR § 332.8(d)(2) to establish and operate the South Fork II Coastal Mitigation Bank (Bank). The Bank is a 241.8-acre proposed mitigation bank to provide compensatory mitigation for unavoidable impacts to "Waters of the United States[1]" authorized through the issuance of Department of the Army (DA) Permits by the U.S. Army Corps of Engineers (USACE) New Orleans District (CEMVN) pursuant to Sections 9 and 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act of 1972. Additionally, the Bank may provide compensatory mitigation for unavoidable impacts to coastal wetland resources under the Louisiana Coastal Resources Program (LCRP)[2] per the provisions of LAC 43:724 and RS 49:214.22 (8)[3]. The Bank is located in Cameron Parish approximately 18 miles north of the Gulf of Mexico and partially lies within the Louisiana Coastal Zone Boundary[4] and the Coastal Conservation Plan Boundary[5] (Figure 1).

1.2 Regional Description, Site Location, and Climate

The Bank is located in the Gulf Coast Prairies (150A) Major Land Resource Area (MLRA) within the Atlantic and Gulf Coast Lowland Forest and Crop Region (LRR T) (NRCS 2006). The Gulf Coast Prairie MLRA is north of the Gulf Coast Marsh MLRA (151) and south of the Western Gulf Coast Flatwoods MLRA (152B), which is a major migration corridor for Nearctic-Neotropical birds (Barrow et al. 2005). With regard to the Ecoregions of Louisiana, the Bank is located in the Northern Humid Gulf Coastal Prairies Level IV Ecoregion (34a) within the Western Gulf Coastal Plain Level III Ecoregion (34) (Daigle et. al 2006). The Bank is located in the Lower Calcasieu watershed as defined by the US Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC) 08080206. According to Light Detection and Ranging Data (LIDAR), the site ranges from above +9 feet to -2 feet North American Vertical Datum 2009 (NAVD 2009) with a majority of the site being below the five-foot contour (Figures 2 and 3)[6]. Elevations occurring greater than 5 feet

[1] 33 CFR § 328 defines waters of the United States as it applies to the jurisdictional limits of the authority of the Corps of Engineers under the Clean Water Act. Waters of the United States include those waters listed in 33 CFR § 328(a). The lateral limits of jurisdiction in those waters may be divided into three categories (i.e., territorial seas, tidal wasters, and non-tidal waters, which are further described in 33 CFR § 328.4 (a), (b), and (c).

[2] The Office of Coastal Management (OCM) of the Louisiana Department of Natural Resources (LDNR) is the agency responsible for implementing the LCRP under the authority of the Louisiana State and Local Coastal Resources Management Act of 1978, as amended (Act 361, La. R.S. 49:214.21 et seq.).

[3] RS 49:214.22 (8) was added by Act 548 of the 2006 Louisiana Legislative Session to "support sustainable development in the coastal zone that accounts for potential impacts from hurricanes and other natural disasters and avoids environmental degradation resulting from damage to infrastructure caused by natural disasters".

[4] The Louisiana Coastal Zone Boundary is the regulatory boundary utilized by the Permits/Mitigation Division of the Louisiana Department of Natural Resources for implementing the Louisiana Coastal Resources Program (LCRP) for regulating development activities and managing the resources of the Coastal Zone through the Coastal Use Permit Program (CUP) (http://dnr.louisiana.gov/).

[5] The Coastal Conservation Plan Boundary is the planning boundary for the 2012 Coastal Master Plan for project development and implementation for sustaining coastal Louisiana's waterways, natural resources, culture, and wetlands (http://www.coastalmasterplan.louisiana.gov/)

[6] All elevations are purported using North American Vertical Datum of 2009 (NAVD)

mean sea level (MSL) are spoil deposits or naturally occurring mima mound formations. The Bank is approximately 15 miles south-southeast of Lake Charles in Cameron Parish, Louisiana in Sections 2, 3, 10, and 11 of Township 12 South, Range 8 West and Sections 26, 27, 34, and 35 of Township 11 South, Range 8 West. The site can be found on the USGS 7.5-minute quadrangle "Lake Charles SW, Louisiana" (Figure 4). The approximate center of the project is located at Latitude 30.031007° North and Longitude 93.174689° West.[7]

The average annual precipitation is 52.4 inches. Of this, nearly 29 inches (55%) usually falls between April and September (Soil Conservation Service 1988). The average winter temperature is 53°F and the average daily minimum temperature is 43°F. The average summer temperature is 81°F with an average daily maximum of 90°F. The growing season is approximately 275 days and is based on ambient low temperature of > 28°F for two out of 10 years. The elevation of Cameron Parish ranges from sea level to approximately 20 feet MSL.

1.3 Sponsorship and Ownership

The Sponsor will construct, operate, monitor, and manage the Bank. The Bank is owned by DLS, which DLS will protect the Bank by granting a perpetual conservation servitude as described in Section 6.4.

1.4 Driving Directions to the Site

From the intersection of Interstate 210 and Louisiana Highway 14 in Lake Charles, proceed south for approximately 2.7 miles to Tom Hebert Road and continue south on Tom Hebert Road for 7.3 miles. Then, continue south on an unimproved farm road for 1.0 miles and arrive at the project site.

2.1 PROJECT GOALS AND OBJECTIVES

The goal of the Bank is to restore[8] (i.e., re-establish[9] and rehabilitate[10]) fresh-intermediate marsh (FIM) and coastal prairie (CP) wetlands, within the Government Ditch-South Fork Black Bayou Watershed (HUC 080802060203) of the Lower Calcasieu Watershed (HUC 08080206) (Table 1). The restoration of FIM and CP will provide additional wetland

[7] The aforementioned and all subsequent geographic coordinates are based on the North American Datum of 1983 (NAD83).

[8] Restoration is defined in 33 CFR §332.2 as the *manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.*

[9] Re-establishment is defined in 33 CFR § 332.2 as *the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions*.

[10] Rehabilitate is defined in 33 CFR § 332.2 as *the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function but does not result in a gain in aquatic resource area.*

functions[11] and values not currently realized under the existing conditions and land use (e.g., chemical sequestration, flood storage, outdoor experiences, Nearctic-Neotropical bird habitat and other aquatic fauna habitat). Currently the land exists as abandoned pasture and man-made surface improvements heavily populated by invasive native and introduced species (Table 1). Localized and downstream water quality will improve by increasing surface-water retention time for vegetative nutrient uptake, reducing stream sediment load, and chemical runoff by increasing flood storage capacity. Habitat will improve for resident wildlife and migrating Nearctic-Neotropical species (e.g., staging, resting, feeding, escape cover, etc.). The Louisiana coastal prairie is a wintering ground for the whooping-crane (*Grus americana*), a federally-listed endangered species (Allain et al. 2000). Specifically, the objectives are to restore and protect the physical, chemical, and biological functions of a severely degraded FIM and CP wetland ecosystem as follows:

- Restoration and protection of historic, self-sustaining surface hydrology within the 241.8-acre Bank through activities such as backfilling artificial drainages and degrading man-made surface features;
- Rehabilitate 102.0 acres of Chinese tallow (*Triadica sebifera*[12]) infested FIM to FIM dominated by native herbaceous species to improve plant and wildlife habitat diversity;
- Re-establish 9.6 acres of FIM through hydrologic reconnection and Chinese tallow abatement to restore a FIM habitat dominated by native herbaceous species to improve plant and wildlife habitat diversity;
- Rehabilitate 98.3 acres of Chinese tallow infested CP to CP dominated by native plant species to improve plant and wildlife habitat diversity;
- Re-establish 20.7 acres of CP by degrading man-made surface features and Chinese tallow abatement to improve plant and wildlife habitat diversity;
- Protect 3.4 acres of mima mound topography within CP and FIM habitats; and
- To provide for the long-term protection through the execution of a perpetual-term conservation servitude and establishment of a long-term fund to cover annual expenditures associated with monitoring, maintenance and management of the Bank.

[11] Wetland function is defined in 33 CFR § 332 *as the physical (i.e., water storage [USGS 1997]), chemical (i.e., nutrient transformation [USGS 1997]), and biological processes (i.e., organic matter production [USGS 1997]) that occur in ecosystems.*

[12] The aforementioned and all scientific plant names in this report are from USDA Plants Database (NRCS 2017).

3.1 ECOLOGICAL SUITABILITY OF THE SITE / BASELINE CONDITIONS[13]

3.2 Land Use

3.1.1 Historical Land Use

The Bank lies within the Great Southwest Prairies region (USGS 2000, Vidrine 2010). This vast region of Louisiana was historically dominated by grasses, graminoides (e.g., grasslike sedges and rushes), and forbes (e.g., broadleafs, composites, legumes). Coastal prairies and fresh-intermediate marshes were juxtaposed within the area recognized as the Louisiana Coastal Zone in Calcasieu, Cameron and Vermilion Parishes. Specifically, the Bank falls within a unit identified on historic cartographic works as the "Calcasieu Prairie" (Newton 1972; Allen 2006; Louisiana Natural Heritage Program [LNHP] 2009). Based on a review of historic aerial photographs, the Bank was a wetland with mima mound[14] topography and broad flats (Figures 5 through 12).

3.1.2 Existing / Current Land Use

Presently, the Bank exists as tallow infested FIM and CP with several man-made features interrupting natural hydrology and displacing native species. Within one mile of the Bank perimeter, the two major land uses are 1) agriculture (50.5%) and 2), conservation areas (36.4%; (Figure 13). The remaining land uses are developed (4.4%), woody wetlands (4.0%), emergent herbaceous wetlands 3.7%, open water (0.5%), shrub/scrub (0.3%), and herbaceous (0.2%).

3.3 Soils

Soils mapped within the Bank are listed as Mowata-Vidrine silt loams (Mt), Judice silty clay (Ju), and Ged mucky clay (GB) (Figure 14). The Mowata-Vidrine association is listed as a partially hydric soil, where the Mowata soils are inter-mound soils and Vidrine soils are mound soils of the mima mound complex common in Southwest Louisiana and Gulf Coastal Plain formations. The Mowata series consists of very deep, poorly drained and very slowly permeable soils, which are nearly level and slopes range from 0 to 1%. Vidrine soils consist of very deep, moderately well-drained to somewhat poorly drained, and slowly permeable, which are narrow to broad mounds with slopes ranging from 0-3%. The Judice series consists of very deep, poorly drained, very slowly permeable soils formed in clayey sediments on terraces of late Pleistocene age. These nearly level soils are in

[13] Site specific data observation of soils, vegetation and hydrology were obtained by DLS biologists on August 24-25, 2017 and are documented in the "Wetland Delineation Report, Vinson Tract, Cameron Parish, LA" prepared by Delta Land Services dated August 31, 2017 and submitted to the CEMVN for review and verification. The CEMVN issued the preliminary jurisdictional determination on August 7, 2017.

[14] Mima mounds (mounds) are a typical, circular to elliptical landforms observed in southwest Louisiana. The mounds range from 10 feet to more than 100 feet in diameter and 2 feet in height. The geologic origin of the mounds is unknown although differential erosion wind and water action from marine influence is a plausible theory. The colloquial term for the mounds is "pimple mounds".

broad slightly depressional areas. Slopes range from 0 to 1 percent. The Ged series consists of very poorly drained and very slowly permeable soils formed in recently deposited clayey alluvium. The Ged series is also a hydric soil typically found in freshwater marshes that border the Gulf Coast Prairies and are frequently flooded and ponded most of the time. Of the eight soil samples taken for the wetland delineation report (DLS 2017), all indicated hydric soils. Indicators observed include depleted matrix (F3) and coast prairie redox (A16). The entire project area was mapped as potentially having hydric components (NRCS 2017[b] and 2017[c]).

3.4 Hydrology

3.1.1 Contributing Watersheds

The location of the Bank is within the Calcasieu-Mermentau Watershed (Watershed; HUC 080802, 8,120 square miles [sq.mi.] Figure 15). This watershed is encompassed to the east and south by Louisiana Highways 82 and 27, to the west by the Cameron-Creole Levee system, and connected hydrologically by the Gulf Intracoastal Waterway (GIWW). In addition, the Watershed is protected by a salt water locking system, which includes Schooner Bayou Lock (1913), Vermilion Lock (1933; Leland Bowman), Calcasieu Lock (1950), Catfish Point Control Structure (1951), and Freshwater Bayou Canal and Lock 1968. Flood water events within or across this Watershed may have similar and extended effects on the marsh and prairie landscape, which is dependent on the rainfall amplitude, duration, frequency, and distribution within the Watershed.

More specifically, the Bank is located within the Government Ditch-South Fork Black Bayou Subwatershed (HUC 080802060203; 55.1 sq.mi.) which originates in Iowa, Louisiana and is a portion of the Lower Calcasieu Subbasin (HUC 08080206; 1,080 sq.mi.). Other Subbasins comprising the Calcasieu-Mermentau Watershed are the West Fork Calcasieu (HUC 08080205; 818 sq.mi.), Whiskey Chitto (HUC 08080204; 885 sq.mi.) Upper Calcasieu (HUC 08080203; 1,550 sq.mi.), Mermentau Headwaters (HUC 08080201; 1,400 sq.mi.), Mermentau (HUC 08080202; 2,390 sq.mi.), Bayou Teche (HUC 08080102; 2,210 sq.mi.) and Vermilion (HUC 08080103; 1,760 sq.mi.).

3.3.2 Historical Hydrology and Drainage Patterns

Historical drainage patterns consisted of uninterrupted sheet flow into South Fork Black Bayou and backwater flooding from South Fork Black Bayou, which subsequently flowed into Calcasieu Lake. In the immediate area of the Bank, land development and light agricultural development began prior to 1940 (Attachment A). Prior to 1953 through 2010, access roads, drainage ditches, and intermittent rice levees were constructed, which interrupted the natural hydrology of this juxtaposed prairie / marsh ecosystem (Figures 6 - 12). The drainage ditches were

likely created as borrow ditches for road construction and to flow water from north to south.

3.3.3 Existing / Current Hydrology and Drainage Patterns

Within the Bank, current drainage patterns are primarily a result of past earth moving activities and access improvements. Most surface water flow on the site is captured by some man-made drainage feature or unimproved. Water flow generally sheet flows from north to south except when the area east of Calcasieu is in flooding conditions (Mermentau Basin) (Figure 12). Except for man-made, soil features, the Bank hydrology supports wetland hydrology, hydrophytic vegetation, and hydric soil indicators. Of the eight data points collected for the preliminary Jurisdictional Determination (PJD;DLS 2017), seven had wetland hydrology indicators which included, Surface Water (A1) Saturation (A3), and Oxidized Rhizospheres along Living roots (C3), while common secondary indicators were Geomorphic Position (D2) and FAC-Neutral Test (D5) (USACE 2010).

3.3.4 Jurisdictional Wetlands

The PJD was issued on April 10, 2018 (MVN-2017-01356-SR) for the Bank (Appendix A). The results of the PJD show approximately 201.6 acres of wetlands, 26.5 acres of non-wetlands, and 11.5 acres of non-wetland waters. This PJD covers the majority of the Bank and all of the proposed re-establishment and acres. The survey plat indicates that 4.7 acres in the South West corner of the Bank were not mapped. This acreage presently exists as disturbed wetlands, and will be considered as FIM Rehabilitation area for the purposes of this Prospectus.

3.5 Vegetation

3.1.1 Historical Plant Community

The Bank lies within the Great Southwest Prairies region. This vast region of Louisiana was historically dominated by grasses, graminoids (e.g., grasslike, sedges and rushes), and forbs (e.g., broadleafs, composites, legumes) species. With this conversion and fire abatement, less than 100 acres of remnant prairie exists and coastal prairie is listed as critically imperiled (S1[15]) and vulnerable to extirpation within the state of Louisiana (LNHP 2009). Based on a review of

[15] The LNHP (2009) has designated coastal prairie as S1 given five (5) or fewer extant populations are known or environmental and anthropogenic factors make this habitat especially vulnerable to extirpation.

historical aerial photographs, the site was a wetland with mima mound topography that was impacted by a change of land use practice (Figures 5 through 12).

3.4.2 Existing Plant Community

The Bank consists almost entirely of Chinese tallow / scrub wetlands along with man-made deposition features and open water ponds (borrow pits) (Table 1; Figure 18). Dominant emergent species include but are not limited to saltmeadow cordgrass (*Spartina patens*), squarestem spikerush (*Eleocharis quadrangulata*), jointed flatsedge (*Cyperus articulatus*), maidencane (*Panicum hemitomon*) dotted smartweed (*Persicaria punctata*), and narrowleaf arrowhead *(Sagittaria longiloba*). The most prevalent species in the forested/scrub areas were Chinese tallowtree, wax myrtle (*Morella cerifera*), black willow (*Salix nigra*), eastern baccharis (*Baccharis halimifolia*), and yaupon (*Ilex vomitoria)*.

3.6 General Need for the Project in this Area

The primary factors for the general need of the Bank are listed below:

- the Bank will reduce runoff and improve the quality of water flowing into the Calcasieu River Estuary within the Louisiana Coastal Zone Boundary;
- the Bank has documented presence of wetland indicators (i.e., hydric soils, hydrology, and hydrophytic vegetation);
- historic aerial photography indicates the potential of a historic coastal prairie landscape with mima mound topography prior to conversion; and
- the restoration of CP and tidal FIM habitat within this watershed will benefit native plants, native wildlife, migrating Nearctic-Neotropical species, and the Whooping Crane (*Grus americana*).

The Bank is within 18 miles of the Gulf of Mexico coastline, is located in an undeveloped area, and is a strategic area for Nearctic-neotropical staging and fallout habitat. Within a 25-mile radius of the Bank, approximately 29.8% is emergent herbaceous wetlands, 28.4% is agriculture, 21.1% is open water, 9.0% is developed, 7.4% is woody wetlands, 2.5% is evergreen forest, 1.7% is mixed forest, and 0.1% is deciduous forest (Figure 19).

Below the Bank, in the southern half of the 18-mile radius, is the most strategic, migration zone for Nearctic-Neotropicals. Whether staging to migrate south or recovering (fallout shelter) from the trans-Gulf migration, only 1.5% of this area provides forested-shrub habitat for migrating birds. It is estimated that 80,000 birds per mile of migration front arrive on the Louisiana coastline each day during peak spring migration, which places a tremendous strain on available food sources. In terms of species diversity, more than half of the 160 species of North American Nearctic-Neotropicals migrate through the Louisiana Cheniers (Barrow and Fontenot 2006). Both the number of migrating birds and species diversity adds

considerable value for the restoration and long-term management of the project area (Barrow et al. 2005).

The restored CP and FIM communities will reduce surface runoff and increase soil infiltration (Richardson et al. 2001). Organic matter deposition will increase, soil bulk density will decrease, hydraulic conductivity will increase, soil saturation potential will increase, and the formation of redoximorphic features will be enhanced (Collins and Kuehl 2001). Soil organic carbon is critical to soil reduction and the formation of low chroma colors will increase as soil organic material increases from the deposition of leaf litter, coarse woody debris, and decaying root material (Collins and Kuehl 2001). Borsari and Shirley (1993) revealed noticeable increase to soil organic matter at the Cajun Prairie Restoration Project three years after restoration began.

4.1 ESTABLISHMENT OF THE MITIGATION BANK

4.2 Site Restoration Plan

4.1.1 Soils / Hydrologic Work

Per the PJD, areas determined as jurisdictional wetlands will be rehabilitated and areas determined as non-wetlands will be re-established (USACE 2012). FIM and CP habitats will be restored in a juxtaposed manner whereas the CP lies along the inland boundary of the FIM, which the FIM is adjacent to South Fork Black Bayou. Hydrologic restoration will allow the ebb and flow of flood and sheet surface water, increase the retention time of surface water for hydric soil development, the reduction of non-point source runoff, and an increase of water quality through increased nutrient uptake by vegetation.

The proposed mitigation work plan involves the cessation of cattle grazing, removal and / or leveling of man-made surface uses, restoration of sheet flow and back flooding hydrology, restoration of the natural plant community restoration, and implementing effective short and long-term management strategies. Establishment of the Bank will re-establish 9.6 acres of FIM and 20.7 acres of CP and rehabilitate 102.0 acres of FIM and 98.3 acres of CP (Figure 20).

Site preparation is anticipated to begin in the summer or fall of 2019, which will be accomplished by leveling man-made surface features, replacing spoil into drainage improvements and borrow pits, and the application of herbicide and mulching treatments to Chinese tallow and other encroaching native tree / shrub species. Approximately 11.5 acres of other waters will be filled to grade or slightly subgrade with approximately 4,257 cubic yards of adjacent *in-situ* earthen material and spoil with the potential of creating CP and FIM potholes (Figure 20; Appendix B). To restore historic sheet flow, approximately 16,345 linear feet of artificial drains will be returned to natural grade, utilizing approximately 118,609 cubic yards of *in situ* earthen fill material from relict drainage ditch spoil and existing access

roads (Appendix B). The main access road will be degraded and restored as native habitat to not impede surface water flow. All elevated interior access trails will be leveled to grade and allowed to revegetate. No fill material will be required from offsite and the Sponsor anticipates that all material excavated will be redeposited on-site in a beneficial manner; therefore, no offsite disposal of excess material will be required.

4.1.2 Vegetative Work

Restoration activities will include site preparation followed by transplanting on bare soil surfaces and natural regeneration where native plant materials exist. Site preparation may include herbicide treatment, mulching, blading, surface tillage, and shallow ripping to reduce compaction. FIM and CP establishment and long-term maintanance will require prescribed fire applications on a one to three year rotation.

Re-established FIM and CP will require soil surface restoration (degrading of spoil areas and linear drainage features) to re-establish the surface hydrologic connection with South Fork Black Bayou. Once soil grading is completed and woody invasives are removed, herbaceous cover in the FIM and CP will naturally regenerate.

Rehabilitated FIM and CP will require herbicide applications and mulching to remove the Chinese tallow, scrub-shrub canopy. With minimal soil disturbance (without blading), the rotting, treated stems will be mulched, which will add much needed organic matter to begin reconstructing the top soils of the FIM and CP. Because native herbaceous species exist under the canopy and on adjacent lands, an on-site and watershed seed bank does exist.

The initial fall / winter burn will be conducted by the end of Year 2 or beginning of Year 3, or once the herbaceous canopy has produced enough fuel to carry a fire through the FIM and CPin order to remove Chinese tallow, eastern baccharis, and southern wax myrtle seedlings / stems. Viable stems remaining after the prescribed fire will be spot, herbicide treated. For establishment and long-term management, fire will be used to maintain the FIM and CP as herbaceous communities. Fire, as a woody invasive species control technique, also mineralizes plant nutrients, increases light penetration for photosynthesis, and selects for higher quality conservation species (Grace 1998, Allain et al. 1999, Allain et al. 2000, Allain and Grace 2001, Vidrine 2010).

Thereafter, prescribed fire will be conducted on a rotational schedule of one to three years. Most controlled burns are expected to occur in the winter season when weather conditions are favorable (i.e., wind direction, speed, and humidity for smoke management). However, growing season burns will be implemented when possible as these burns may enhance species diversity by selecting for broadleaf species (Allain et al. 1999, Allain et al. 2000). Fire breaks will be

established along the west perimeter to contain fires within the Bank area. Firebreaks will not be established on the northern and eastern perimeters as prescribed fire will be applied to the adjacent PRM and Bank as the same time. DLS anticipates that weedy annuals will predominate freshly-bared soils in the first few years of restoration; however, as succession progresses, more desirable perennial species will steadily increase and eventually dominate the ecosystem (Allain et al. 1999, Allain et al. 2000).

4.3 Technical Feasibility

The construction work required to restore the Bank is practical and technically feasible. Observations of adjacent / local conservation areas in the early stages of re-establishment and rehabilitation indicate a high potential for success (e.g., Sasol Permittee Responsible Mitigation Area and South Fork Coastal Mitigation Bank). The construction work will consist of 1) filling artificial drains, 2) leveling spoil deposits, 3) degrading unimproved roads, 4) re-establishing historic FIM and CP topography by leveling other man-made surface features, 5) herbicide applications, 6) mulching, 7) transplanting, and 8) natural plant regeneration. In addition, sufficient hydrology through abundant rainfall, sheet flow, annual backwater flooding, high water table, location within the lower reaches of the watershed, and adjacency to South Fork Black Bayou indicate a high probability for successful wetland restoration.

4.4 Current Site Risks

The Sponsor does not foresee any adverse impacts to the Bank resulting from the continued existence and operation of the neighboring land uses. Land use and cover type surrounding the Bank consist of restored wetlands protected by conservation easements. Adjacent landownership and management will not affect the establishment and long-term success of the Bank. There are no existing hydrological disturbances on the Bank that the Sponsor / Owner does not control.

4.5 Long-Term Sustainability of the Site

Long-term viability and sustainability of the Bank will be ensured through active and adaptive management including, but not limited to, prescribed fire, invasive species control, appropriate monitoring, and long-term maintenance. No long-term structural management will be required as natural hydrological influences will be restored. A long-term management plan will be included with the mitigation banking instrument (MBI), which will detail long-term management needs and costs, and identify a funding mechanism in accordance with 33 CFR § 332.7 (d).

With regard to water rights, Article 490 of the Louisiana Civil Code treats water resources under the theory of absolute ownership and rule of capture provided that such capture does not result in harm to neighboring properties. The Bank will depend primarily on precipitation, shallow ground water, surface water flow, and

backwater flooding. As such, long-term hydrology maintenance will not depend on the utilization of water captured from irrigation wells or diverted state water sources and sufficient water rights are ensured for such purposes. The Sponsor / Owner does not foresee any adverse impacts on neighboring properties as a result of this project.

5.0 PROPOSED SERVICE AREA

The service area for FIM consists of the Lower Calcasieu Subbasin (HUC 08080206), Mermentau Subbasin (HUC 08080202), and a portion of the Vermillion Subbasin (HUC 08080103) (Figure 16).

The service area for CP uses an ecoregion approach consisting of the geographical area encompassing the historic range of the coastal prairie of Louisiana also known as the "Tall Grass Prairie, Cajun Prairie, Great Southwest Prairie, Eastern Coastal Prairie, and Gulf Cordgrass Prairie" (Allain et al. 2000) . The primary service area for coastal prairie is the Lower Calcasieu Subregion (HUC 08080206) (Figure 17). The secondary service area consists of the watersheds contained within the Western Gulf Coastal Plain Level III Ecoregion. Watersheds comprising the secondary service consists of portions of the Upper Calcasieu (HUC 08080203), Mermentau Headwaters (HUC 08080201), Bayou Teche (HUC 08080102), Vermilion (HUC 8080103), and the entirety of the Mermentau (HUC 08080202).

6.1 OPERATION OF THE MITIGATION BANK

DLS (Sponsor / Owner) will comply with all conditions of Sponsorship required by the CEMVN. The Bank will be established and operated through mitigation bank procedures outlined in 33 CFR § 332.8. This includes, but is not limited to, review process, modifications, permit coordination, project implementation, financial assurance determination and mechanisms, credit determination, accounting procedures, credit withdrawals, and the use of credits. Details on the operation of the Bank will be further described in the Draft MBI per 33 CFR § 332.8 (6).

6.2 Project Representatives

Sponsor:	Delta Land Services, LLC 1090 Cinclare Drive1008 Port Allen, LA 70767 Attn: George Guerin Phone: 225-343-3900 Electronic Mail: george@deltaland-services.com
Landowner:	Delta Land Services, LLC 1090 Cinclare Drive1008 Port Allen, LA 70767

Attn: D. Winship Songy
Phone: 225-343-3900
Electronic Mail: win@deltaland-services.com

6.3 Qualifications of The Sponsor

Per 33 CFR § 332.8(d) (2) (vi.), this section describes the Sponsor's qualifications to successfully complete all work associated with establishment and operation of the proposed Bank. DLS will serve as the Sponsor and is a land management and restoration company whose technical staff includes Certified Wildlife Biologists, Professional Wetland Scientists, and Certified Foresters. In addition, DLS has construction specialists experienced in wetland construction activities such as heavy equipment operation, vegetation establishment, herbicide application, and contractor management. The biographies of DLS personnel are available at www.deltaland-services.com.

DLS currently operates 18 approved wetland and/or stream mitigation banks within the CEMVN, CEMVK, CESWG and CESWF totaling 8,349.0 acres. These are the Bayou Conway Mitigation Bank (MVN-2010-01111), Roseland Refuge Mitigation Bank (MVK-2010-01423), Oak Land Mitigation Bank (MVK-2011-00308), Bayou Choupique Mitigation Bank (MVN-2011-00824), Ponderosa Ranch of Pointe Coupee Mitigation Bank (MVN-2011-03213), Ponderosa Ranch of Pointe Coupee Mitigation Bank Amendment One (MVN-2015-00393), Danza del Rio Mitigation Bank (SWG-2011-00566), Moss Lake Mitigation Bank (MVN-2012-02652), Phillips Creek Mitigation Bank (SWF-2012-00417), Graham Creek Mitigation Bank (SWF-2011-00309), Bayou Fisher Mitigation Bank (MVN-2013-02342), Bayou Fisher Mitigation Bank Amendment One (MVN-2014-02764), Little Bayou Pierre Mitigation Bank (MVK-2012-00555), Laurel Valley Coastal Mitigation Bank (MVN-2013-02798), Laurel Valley Coastal Mitigation Bank Amendment One (MVN-2015-0149), Belle Pointe Coastal Mitigation Bank (MVN-2014-02764), and South Fork Coastal Mitigation Bank (MVN-2014-01888). DLS currently has 6 pending mitigation banks that are under review with the CEMVN, CEMVK and CESWG totaling 3,020.9 acres. These include the proposed Bayou Maringouin Mitigation Bank (MVN-2015-01994), Long Island Cove Mitigation Bank (SWG-2014-00210), Crooked Bayou Mitigation Bank (MVK-2015-00527), Cane River Mitigation Bank (MVK-2015-00472), and the Bayou La Carpe Coastal Mitigation Bank (MVN-2016-00147). In addition to mitigation banking, DLS serves as the responsible party for the establishment and maintenance of 3,936.6 acres of approved Permittee-Responsible Mitigation (PRM) wetland and stream projects.

6.4 Proposed Long-Term Ownership and Management Representatives

DLS owns the Bank and will be the long-term manager but may appoint a Long-term Steward in accordance with 33 CFR § 332.7 (d) and approval from the CEMVN.

6.5 Site Protection

In order to provide for such protection, DLS shall execute a perpetual conservation servitude (pursuant to the Louisiana Conservation Servitude Act, R.S. 9:1271 *et seq*.) on all acreage identified as the Bank and record it in the Mortgage and Conveyances Records Office of Cameron Parish. DLS will utilize a not-for-profit conservation group as the entity that will hold the servitude.

6.6 Long-Term Strategy

Long-term management will consist of monitoring, prescribed burning, invasive species control, boundary maintenance, site protection, and the funding of such activities. Invasive species control will include control of nuisance plant and wildlife species such as Chinese tallow and feral hogs (*Sus scrofa*), respectively. The FIM and CP will be managed to maintain or increase the biological, chemical and physical wetland functions at the site and to achieve and maintain the desired conditions which will provide habitat capable of supporting populations for priority wildlife species such as the Whooping Crane. A long-term management plan will be included with the DMBI which will detail long-term management needs, costs and identify a funding mechanism in accordance with 33 CFR § 332.7 (d). The Sponsor (or Long-term Steward) and the Owner (or its heirs, assigns or purchasers) shall be responsible for protecting lands contained within the Bank in perpetuity.

7.0 REFERENCES

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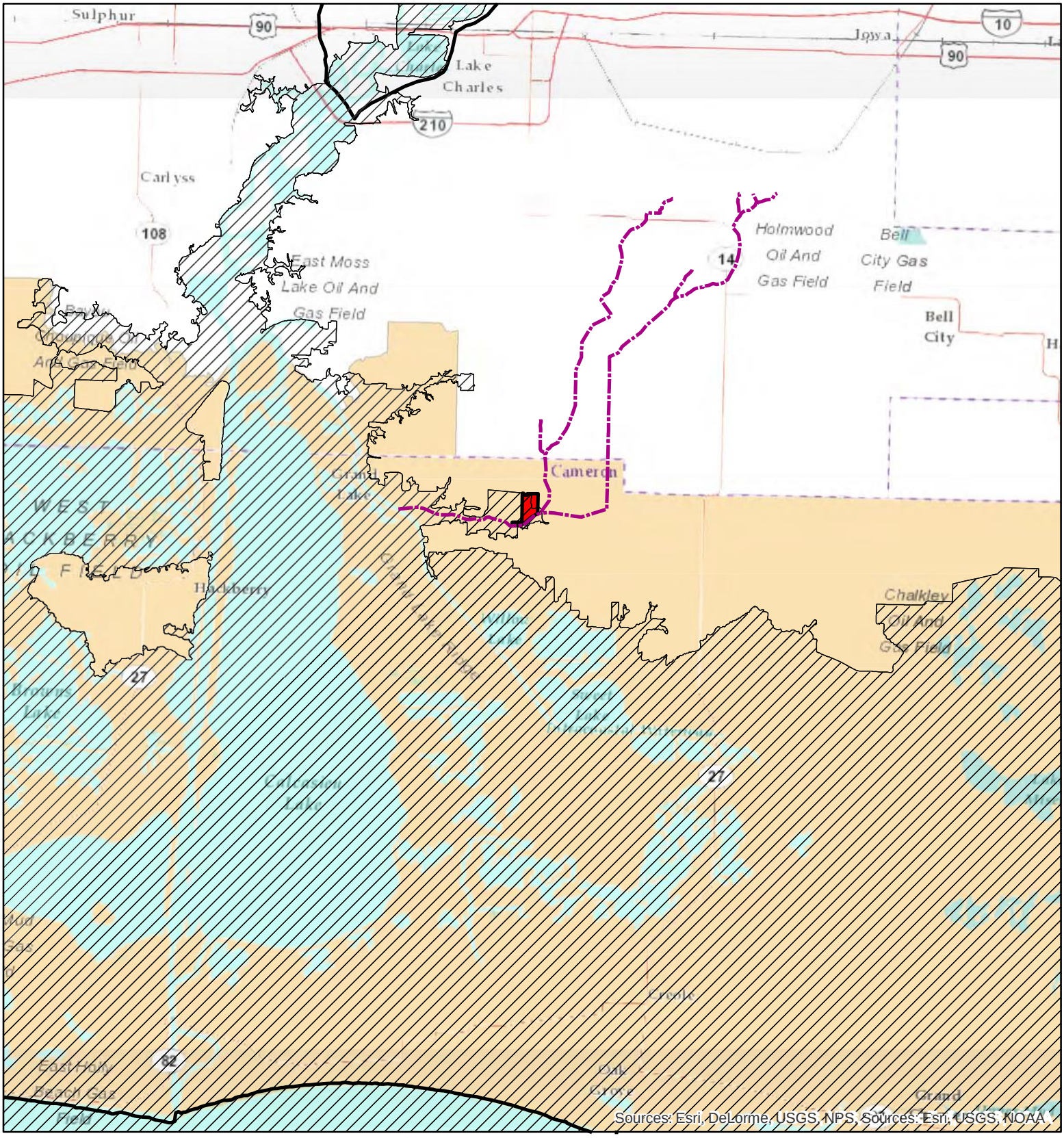
TABLES

Table 1. Pre-Restoration Condition and Post-Restoration Mitigation Habitat Types at the Proposed South Fork II Coastal Mitigation Bank in Cameron Parish, Louisiana.

Baseline Condition	Proposed Post-Restoration Habitat Type	Acres
Chinese Tallow Infested Spoil / Other Waters	Fresh-intermediate Marsh Re-establishment	9.6
Chinese Tallow Infested Wetlands	Fresh-intermediate Marsh Rehabilitation	102
Chinese Tallow Infested Spoil / Other Waters	Coastal Prairie Re-establishment	20.7
Chinese Tallow Infested Wetlands	Coastal Prairie Rehabilitation	98.3
Total Direct Mitigation Credit Acreage		***230.6***
Mima Mounds	Upland Buffer	3.4
Herbaceous Riparian Shoreline	Upland Buffer	2.4
Total Indirect Mitigation Credit Acreage		***5.8***
Chinese Tallow Infested Spoil / Wetlands	Fire Lane	5.2
Non-Wetland Waters	Non-Wetland Waters	0.2
Total Non-Mitigation Feature Acreage		***5.4***
Total Project Area		***241.80***

[1] Wetland and Other Waters baseline conditions were determined per a preliminary jurisdictional determination issued by CEMVN to DLS on August 7, 2017 (MVN-2017-01356-SR).

FIGURES



South Fork Black Bayou

Coastal Conservation Plan Boundary

Project Area (241.8 ac)

Western Gulf Coastal Plains Ecoregion (Level III)

Coastal Zone Boundary

4 2 0 4

Miles

South Fork II Coastal Mitigation Bank

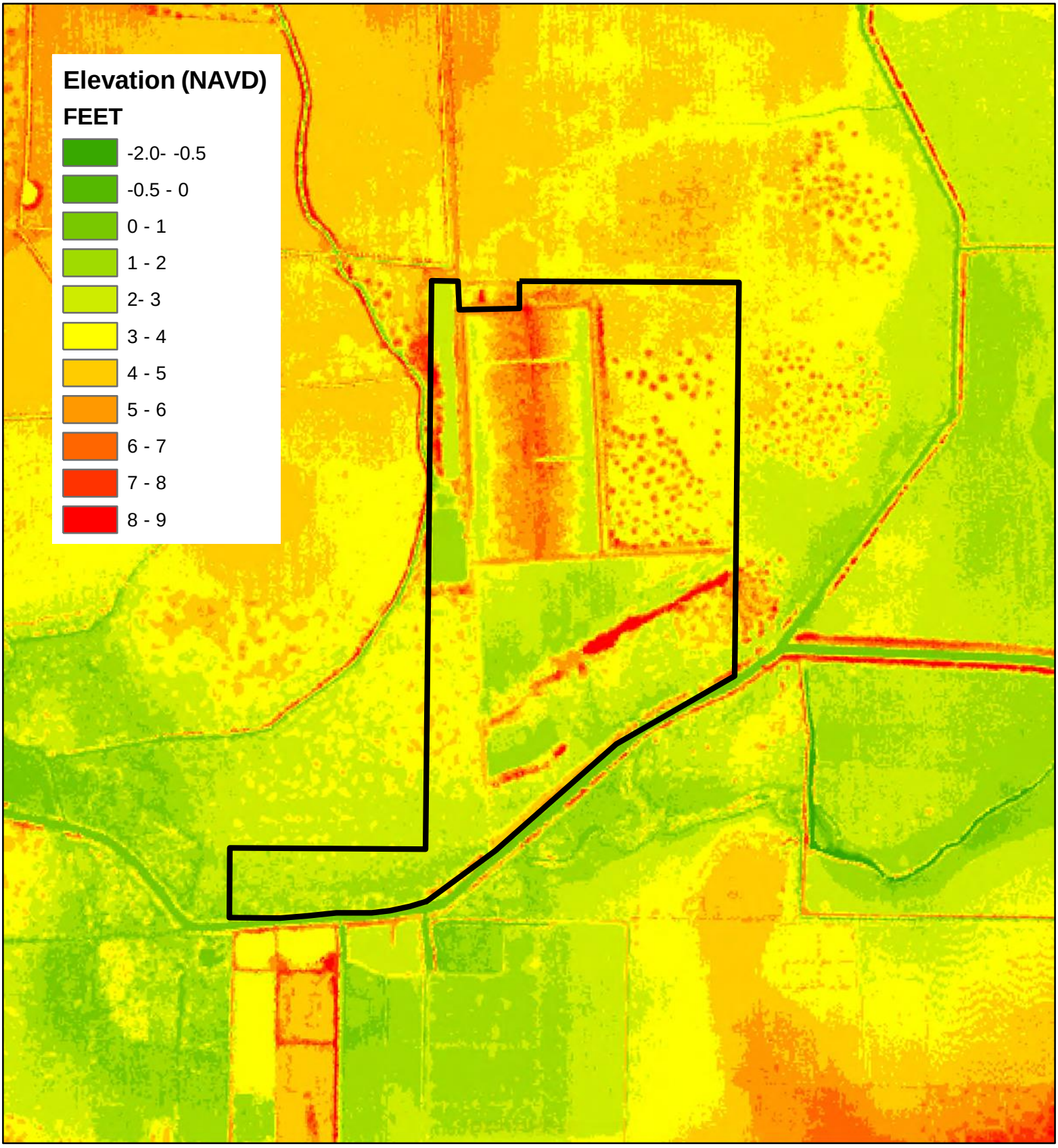
VICINITY, COASTAL ZONE, AND COASTAL CONSERVATION PLAN MAP

Cameron and Calcasieu Parishes, La

Created :TSC/ArcView10	
Approved :BWD	
Date :10/30/2017	
Map # :F01_VicinityandCoastalMap.mxd	

DELTA LAND SERVICES

FIGURE 1



Project Area (241.8 ac)

1,000 500 0 1,000

Feet

South Fork II Coastal Mitigation Bank

LIDAR ELEVATIONS

Cameron Parish, LA

Created : TSC/ArcView10	
Approved : BWD	
Date :8/21/2017	
Map # :F03lidarMap.mxd	

FIGURE 2

Project Area (241.8 ac)
<5 Feet NAVD
>5 Feet NAVD

800 400 0 800

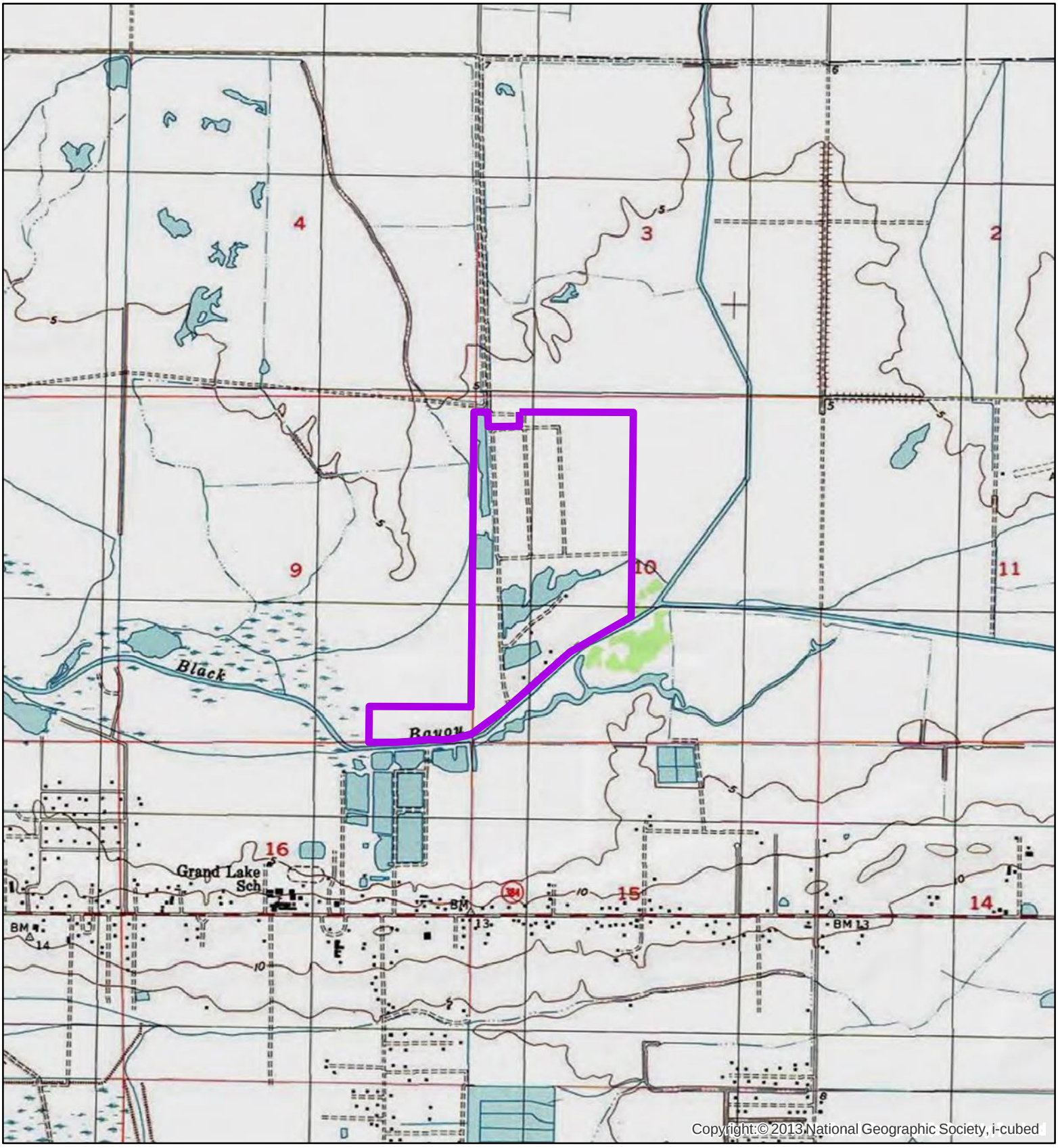
Feet

South Fork II Coastal Mitigation Bank
LIDAR ELEVATIONS BELOW
5-FOOT CONTOUR
1940 AERIAL OVERLAY
Cameron Parish, LA

Created : TSC/ArcView10	
Approved : BWD	
Date :8/21/2017	
Map # :F03_lidar5ftMap.mxd	

DELTA LAND SERVICES

FIGURE 3



Project Area (241.8 ac)

800 0 800

Feet

South Fork II Coastal Mitigation Bank

USGS 7.5-MINUTE QUADRANGLE

Cameron Parish, LA

Created : TSC/ArcView10	
Approved : BWD	
Date :8/21/2017	
Map # :F04_QuadMap.mxd	

DELTA LAND SERVICES

FIGURE 4

Project Area (241.8 ac)

800 400 0 800

Feet

South Fork II Coastal Mitigation Bank

1940 AERIAL PHOTOGRAPH

Cameron Parish, LA

Created : TSC/ArcView10	
Approved : BWD	
Date :8/30/2017	
Map # :F05_1940.mxd	

DELTA LAND SERVICES

FIGURE 5

Project Area (241.8 ac)

800 400 0 800

Feet

South Fork II Coastal Mitigation Bank

1953 AERIAL PHOTOGRAPH

Cameron Parish, LA

Created : TSC/ArcView10	DELTA LAND SERVICES
Approved : BWD	
Date :8/30/2017	
Map # :F06_1953.mxd	

FIGURE 6

Project Area (241.8 ac)

800 400 0 800

Feet

South Fork II Coastal Mitigation Bank

1957 AERIAL PHOTOGRAPH

Cameron Parish, LA

Created : TSC/ArcView10	
Approved : BWD	
Date :8/30/2017	
Map # :F05_1940.mxd	

DELTA LAND SERVICES

FIGURE 7

Project Area (241.8 ac)

800 400 0 800

Feet

South Fork II Coastal Mitigation Bank

1963 AERIAL PHOTOGRAPH

Cameron Parish, LA

Created : TSC/ArcView10	DELTA LAND SERVICES
Approved : BWD	
Date :8/30/2017	
Map # :F08_1963.mxd	

FIGURE 8

Project Area (241.8 ac)

800 400 0 800

Feet

South Fork II Coastal Mitigation Bank

1968 AERIAL PHOTOGRAPH

Cameron Parish, LA

Created : TSC/ArcView10	DELTA LAND SERVICES
Approved : BWD	
Date :8/30/2017	
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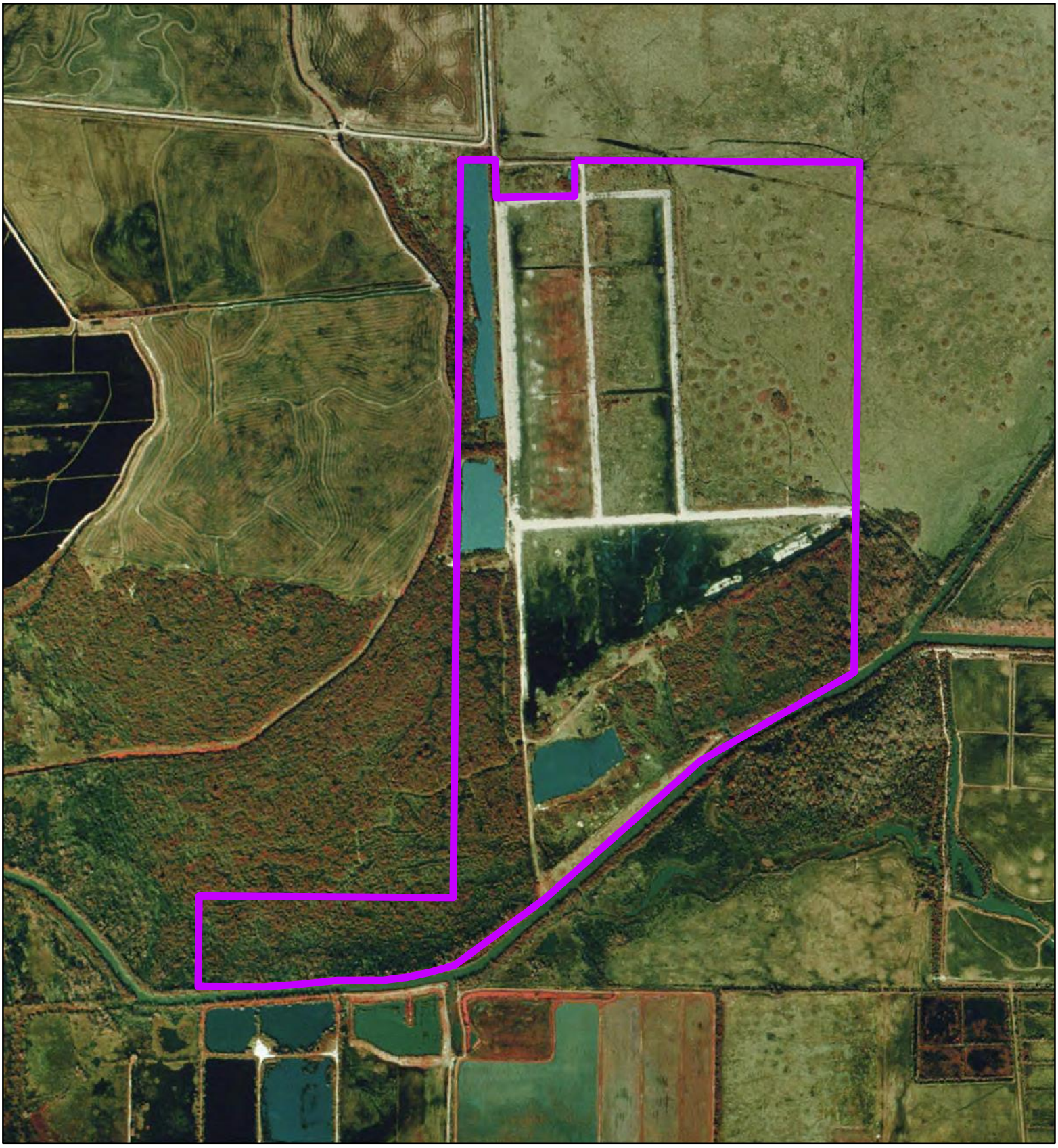
FIGURE 9



Project Area (241.8 ac)

800 400 0 800

Feet

South Fork II Coastal Mitigation Bank

1998 AERIAL PHOTOGRAPH

Cameron Parish, LA

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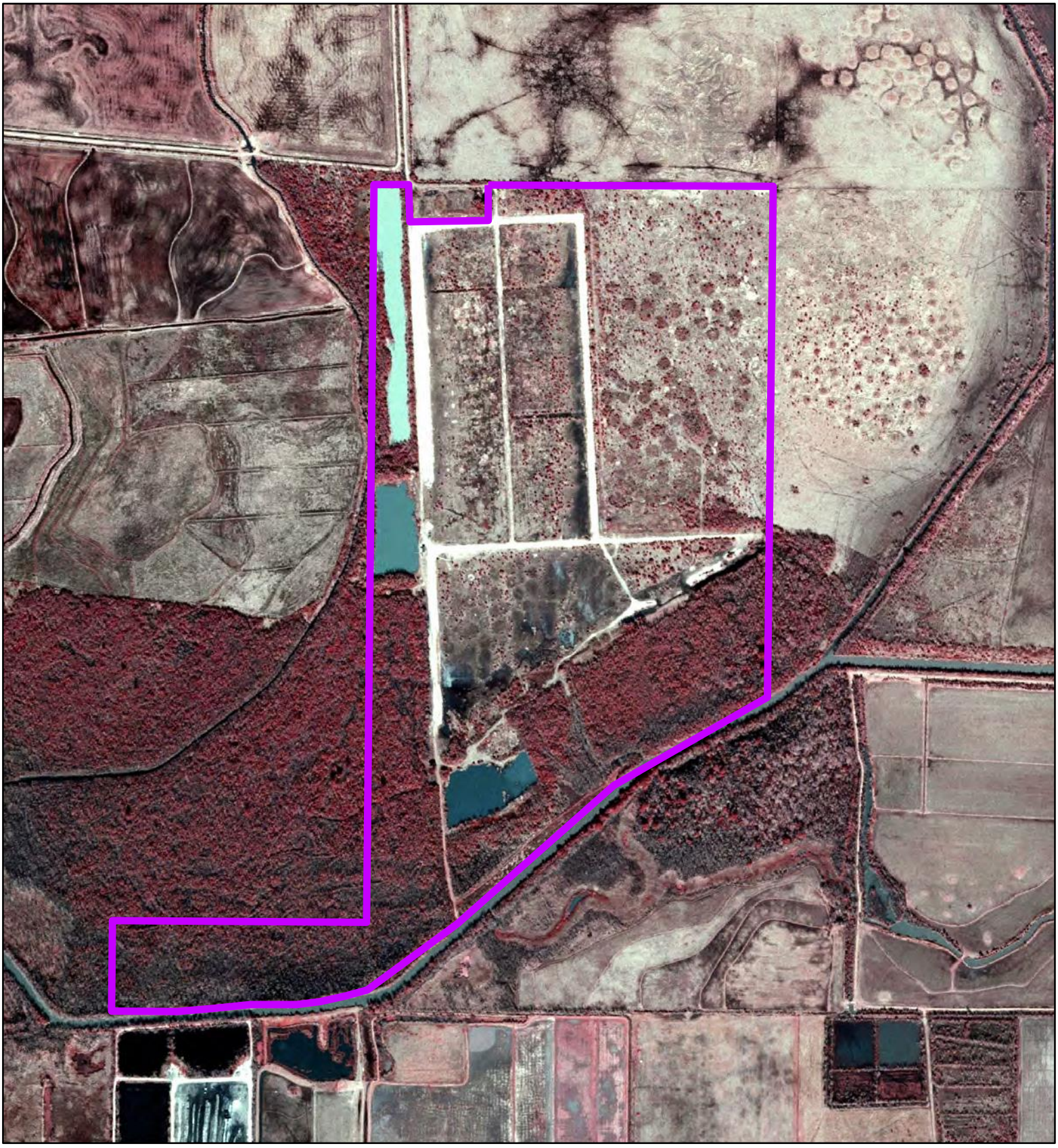
Approved : BWD	
Date :4/30/2018	
Map # :F10_1998.mxd	

DELTA LAND SERVICES

FIGURE 10



Project Area (241.8 ac)

800 400 0 800

Feet

South Fork II Coastal Mitigation Bank

2004 AERIAL PHOTOGRAPH

Cameron Parish, LA

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Approved : BWD	
Date :4/30/2018	
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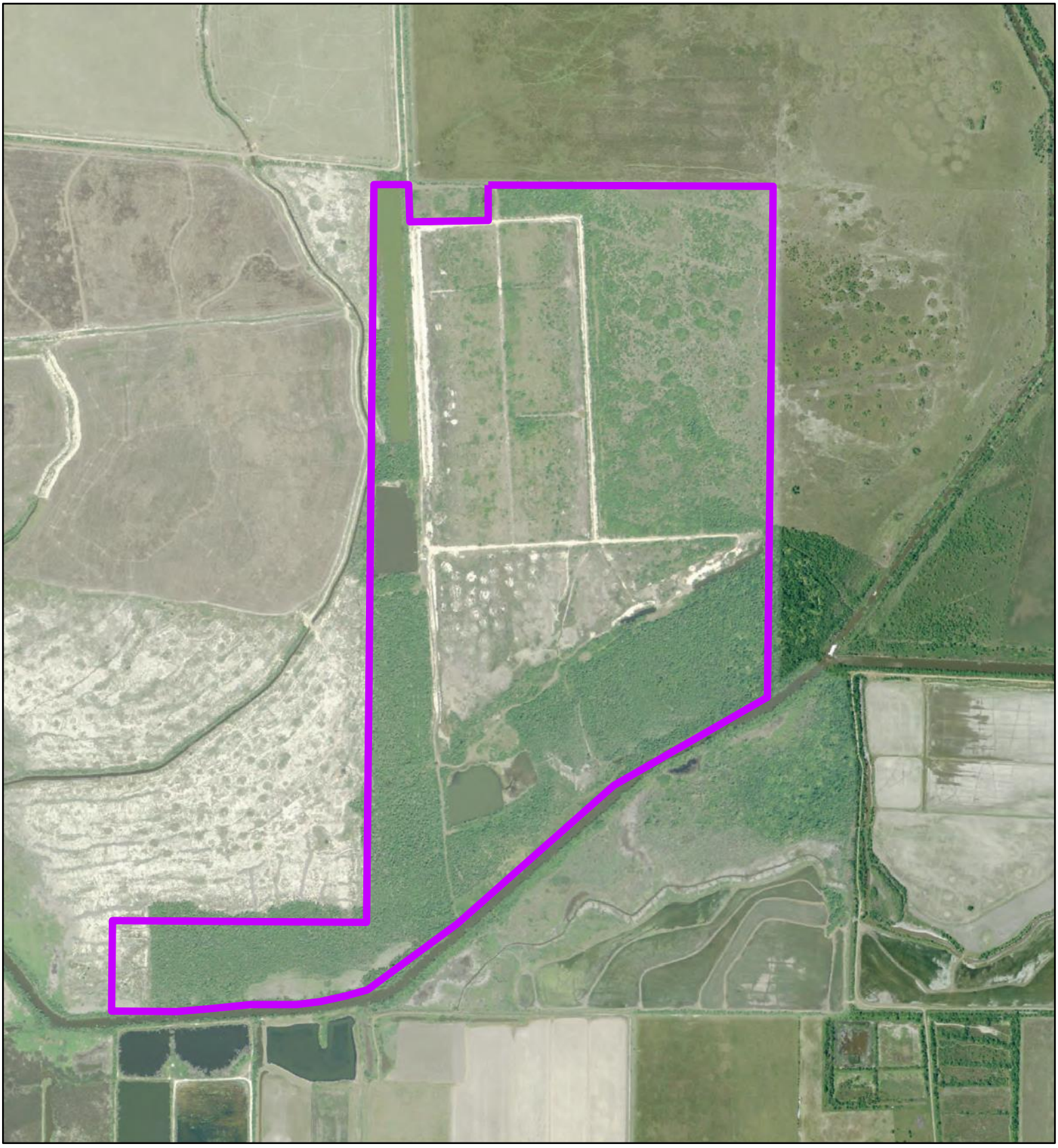
DELTA LAND SERVICES

FIGURE 11



Project Area (241.8 ac)

800 400 0 800

Feet

South Fork II Coastal Mitigation Bank

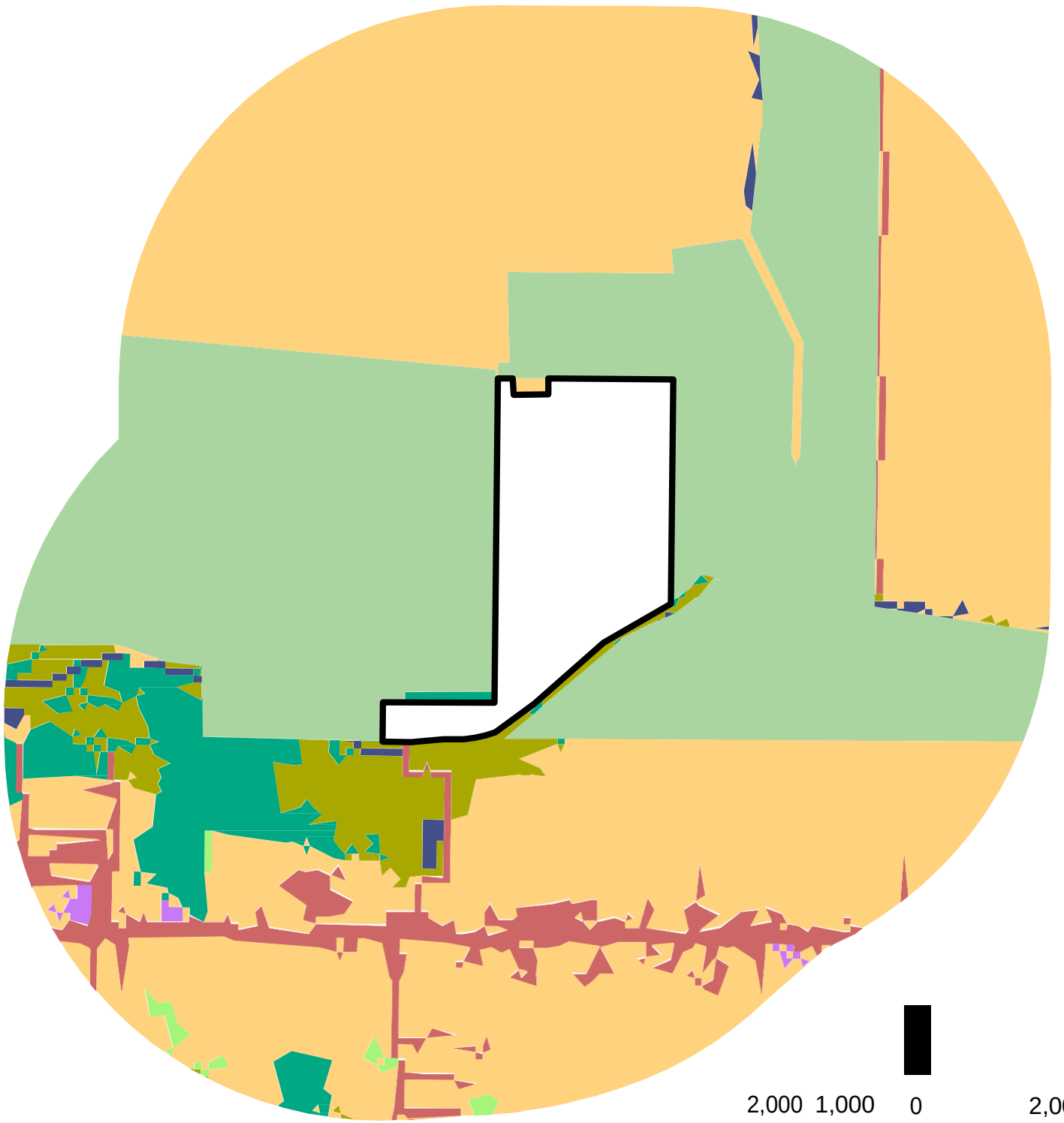
2010 AERIAL PHOTOGRAPH

Cameron Parish, LA

Created : TSC/ArcView10	
Approved : BWD	
Date :8/30/2017	
Map # :F12_2010.mxd	

DELTA LAND SERVICES

FIGURE 12



- Project Area (241.8 ac)
- Agriculture (50.5%)
- Conservation Area (36.4%)
- Developed (4.4%)
- Woody Wetlands (4.0%)
- Emergent Herbaceous Wetlands (3.7%)
- Open Water (0.5%)
- Shrub/Scrub (0.3%)
- Herbaceous (0.2%)

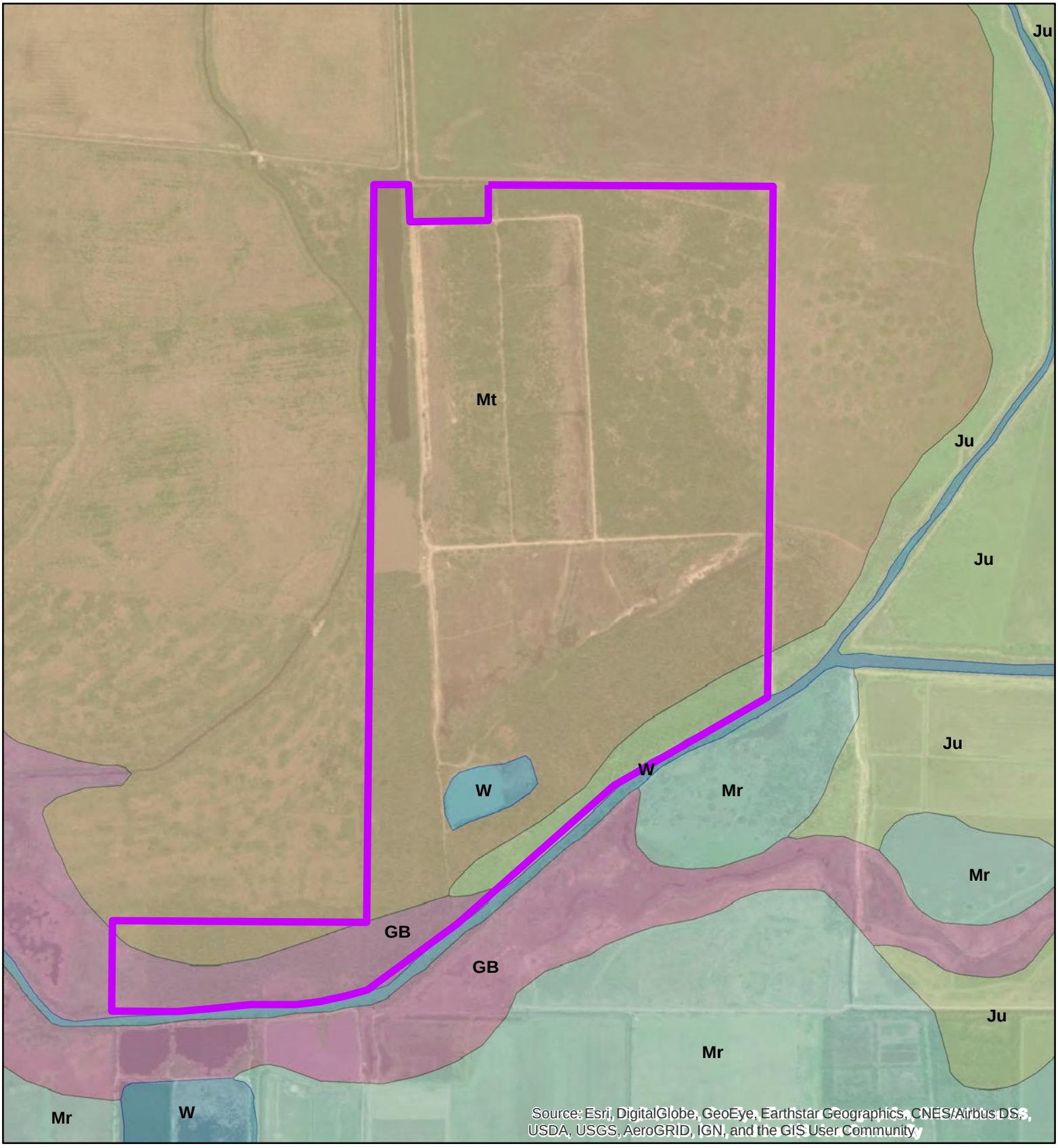
South Fork II Coastal Mitigation Bank

SURROUNDING LAND USE WITHIN ONE MILE RADIUS

Cameron Parish, LA

Created : TSC/ArcView10	
Approved : BWD	
Date :8/30/2017	
Map # :F16_LULC1.mxd	

FIGURE 13



Project Area (241.8 ac)
GB: Ged mucky clay
Ju: Judice silty clay
Mr: Morey silt loam
Mt: Mowata-Vidrine silt loams
W: Water

800 400 0 800

Feet

South Fork II Coastal Mitigation Bank

SOILS

Cameron Parish, LA

Created : TSC/ArcView10	
Approved : BWD	
Date :8/30/2017	
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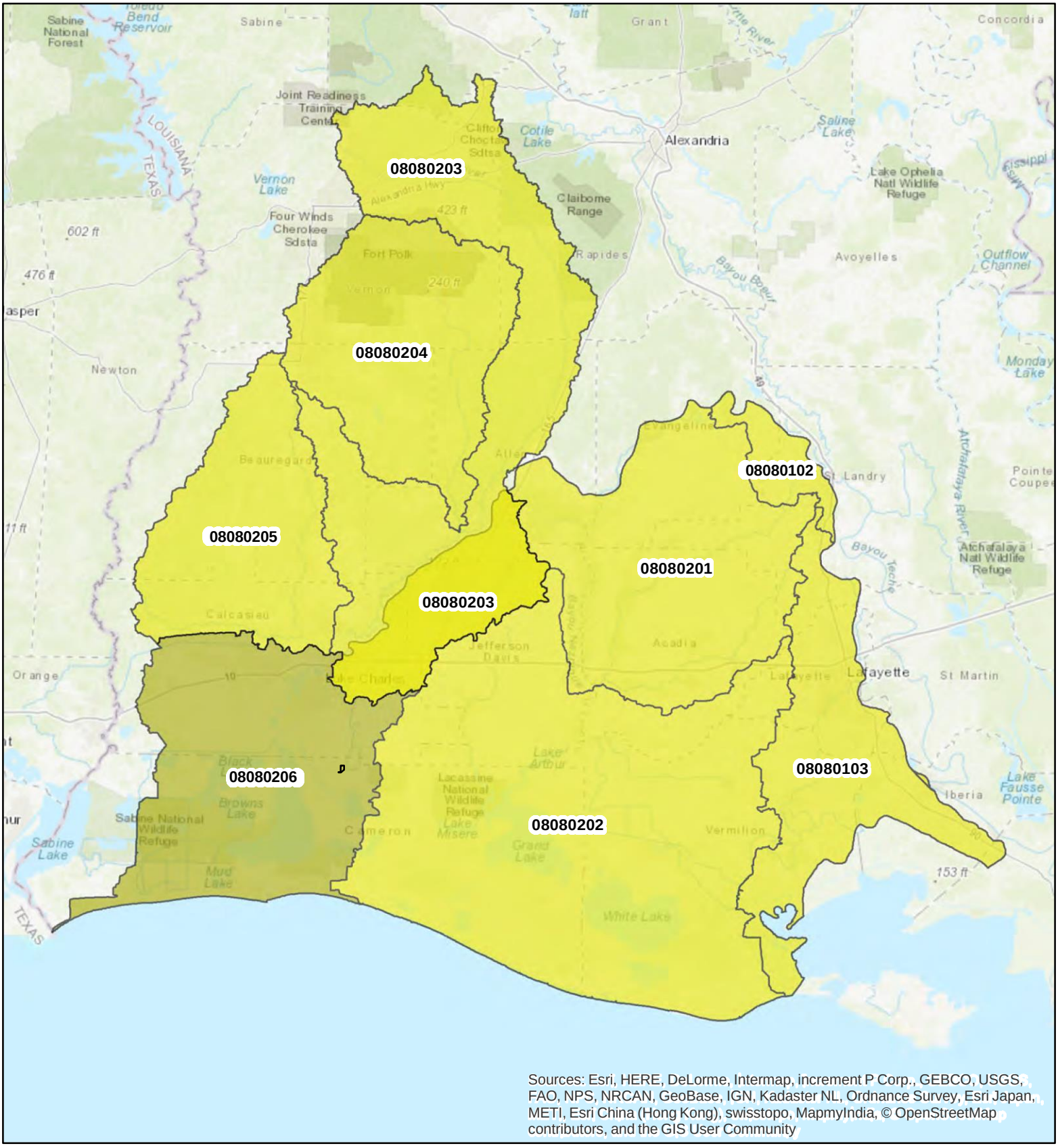
DELTA LAND SERVICES

FIGURE 14



Project Area (241.8 ac)
Primary
Secondary

18 9 0 18
Miles

South Fork II Coastal Mitigation Bank

CONTRIBUTING WATERSHEDS

Cameron Parish, LA

Approved : BWD	
Date :8/30/2017	
Map # :F18_ServiceArea.mxd	

DELTA LAND SERVICES

FIGURE 15

Project Area (241.8 ac)

Primary Service Area

20 10 0 20

Miles

South Fork II Coastal Mitigation Bank

FRESH-INTERMEDIATE MARSH SERVICE AREA

Cameron and Calcasieu Parishes, La

Approved :	BWD
Date :	10/30/2017
Map # :	F2_MarshSA.mxd

FIGURE 16

Project Area (241.8 ac)

Primary

Secondary

20 10 0 20

Miles

South Fork II Coastal Mitigation Bank

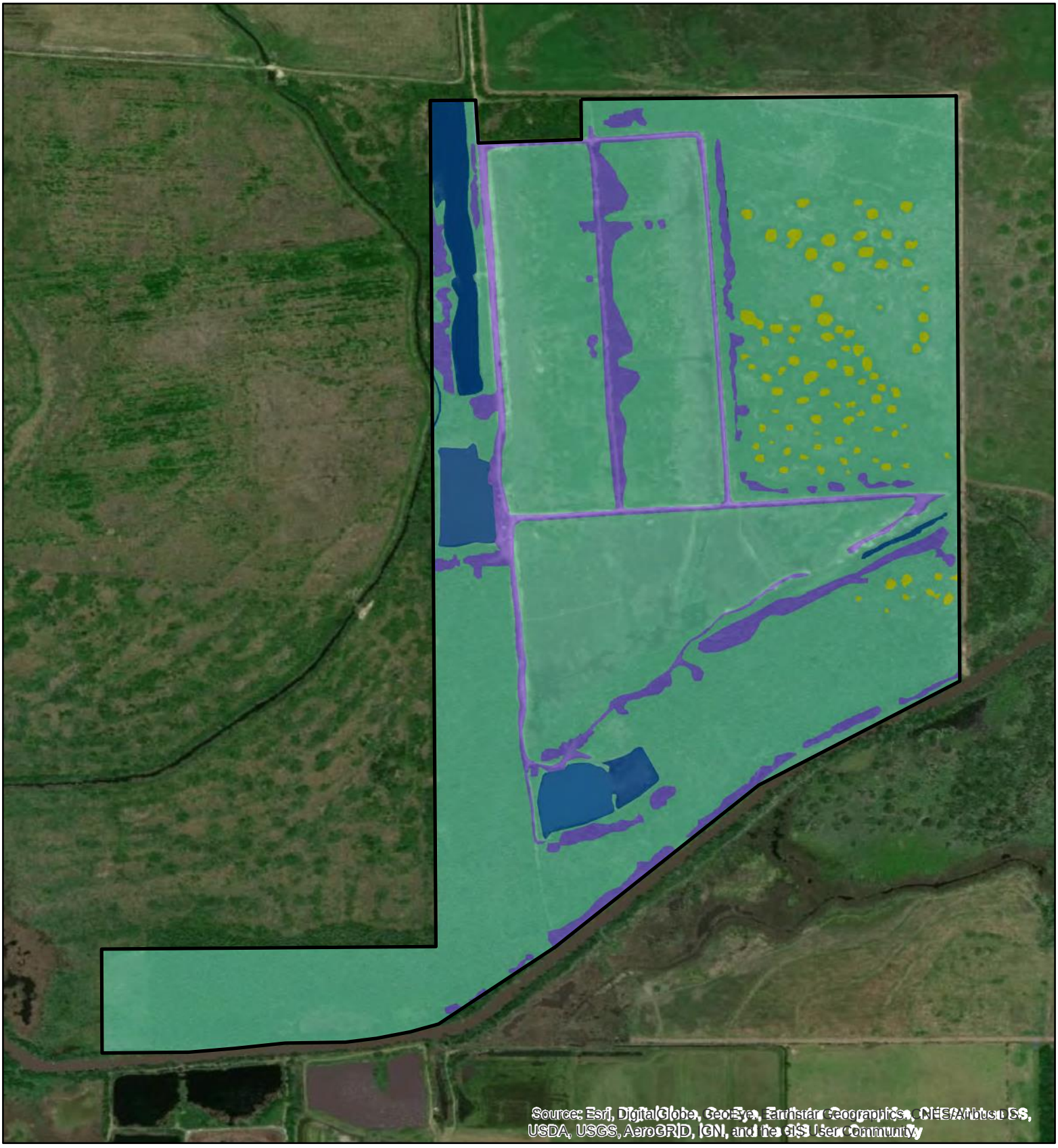
COASTAL PRAIRIE SERVICE AREA

Cameron and Calcasieu Parishes, La

Approved :	BWD
Date :	10/30/2017
Map # :	F3_CPSA.mxd

DELTA LAND SERVICES

FIGURE 17



Project Area (241.8 ac)

Disturbed Wetlands (204.4 ac)

Nonwetland Spoil / Roads (22.4 ac)

Mima Mound Nonwetlands (3.4 ac)

Other Waters (11.6 ac)

700 350 0 700

Feet

South Fork II Coastal Mitigation Bank

EXISTING CONDITIONS

Cameron Parish, LA

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Approved : BWD	
Date :8/30/2017	
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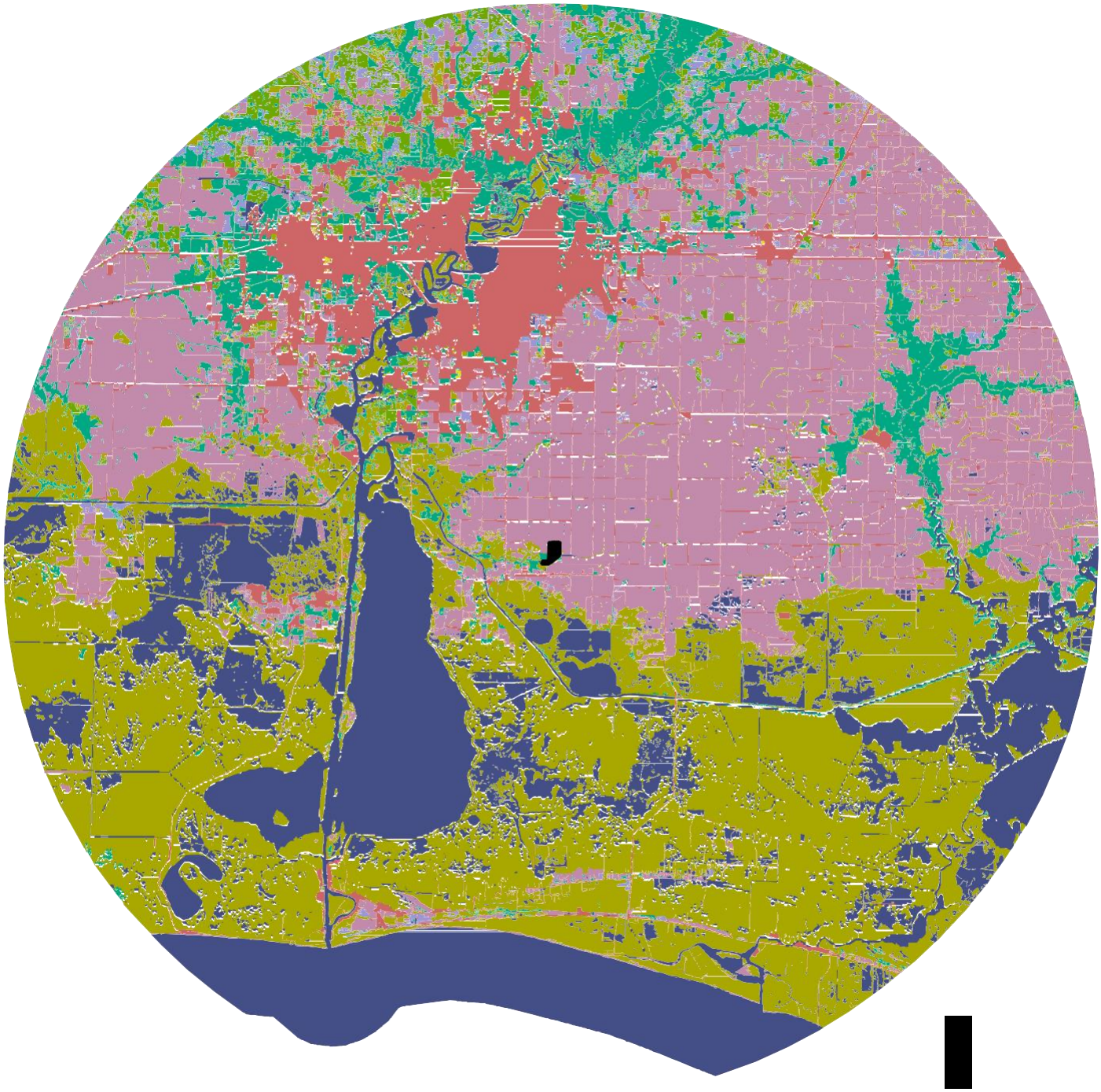
DELTA LAND SERVICES

FIGURE 18



- Project Area (241.8 ac)
- Emergent Herbaceous Wetlands (29.8%)
- Agriculture (28.4%)
- Open Water (21.1%)
- Developed (9.0%)
- Woody Wetlands (7.4%)
- Evergreen Forest (2.5%)
- Mixed Forest (1.7%)
- Deciduous Forest (0.1%)

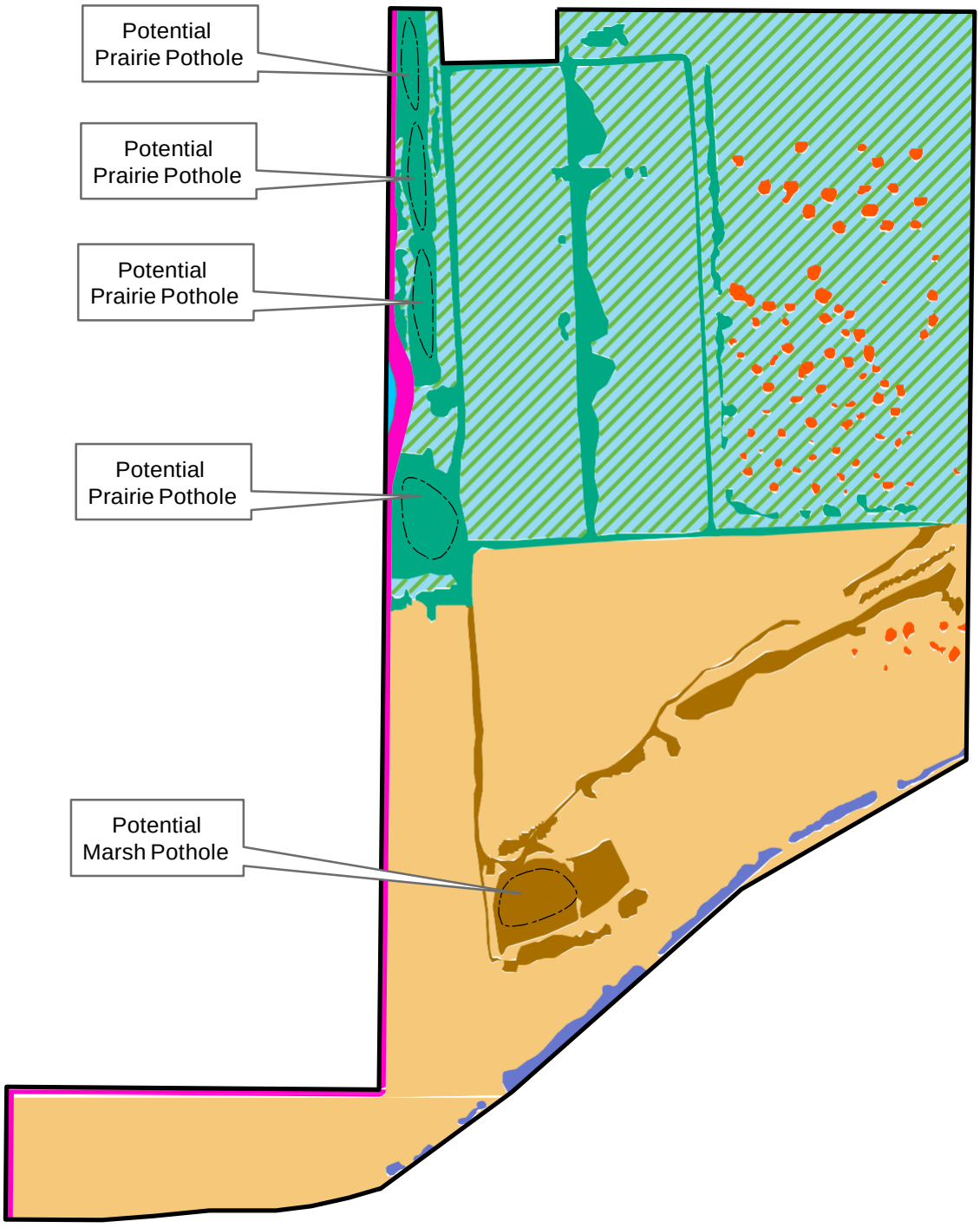
South Fork II Coastal Mitigation Bank
SURROUNDING LAND USE
WITHIN 25-MILE RADIUS

Cameron Parish, LA

Created : TSC/ArcView10	
Approved : BWD	
Date :8/30/2017	
Map # :F15_LULC25.mxd	

DELTA LAND SERVICES

FIGURE 19



Project Area (241.8 ac)
CP Rehabilitation (98.3 ac)
CP Re-establishment (20.7 ac)
FIM Rehabilitation (102.0 ac)
FIM Re-establishment (9.6 ac)
Herbaceous Riparian Shoreline (Upland Buffer) (2.4 ac)
Mima Mounds (Upland Buffer) (3.4 ac)
Fire Lane (5.2 ac)
Non-Wetland Waters (0.2 ac)

700 350 0 700

Feet

South Fork II Coastal Mitigation Bank

MITIGATION FEATURES MAP

Cameron Parish, LA

Created : TSC/ArcView10	
Approved : BWD	
Date :06/25/2018	
Map # :F20_MitFeatures.mxd	

DELTA LAND SERVICES

FIGURE 20

APPENDICES

Appendix A: Site Photographs

Southern borrow pit to be filled in to create Potential Marsh Pothole, Proposed South Fork II Coastal Mitigation Bank (photo taken March 26, 2015).

Middle borrow pit to be filled in to create Potential Prairie Pothole, Proposed South Fork II Coastal Mitigation Bank (photo taken March 26, 2015).

Slough north of diagonal spoil bank, to be restored to Potential Marsh Pothole, Proposed South Fork II Coastal Mitigation Bank (photo taken March 26, 2015).

East to West road to be degraded, North side to be restored to Coastal Prairie, South side to be restored to Fresh Intermediate Marsh, Proposed South Fork II Coastal Mitigation Bank (photo taken March 26, 2015).

Inside of disposal site, proposed Fresh Intermediate Marsh Re-establishment / Rehabilitation, Proposed South Fork II Coastal Mitigation Bank (photo taken March 26, 2015).

East access road to be degraded to Coastal Prairie Re-establishment, Proposed South Fork II Coastal Mitigation Bank (photo taken March 26, 2015).

North borrow pit along main access road to be filled to create Potential Prairie Pothole, Proposed South Fork II Coastal Mitigation Bank (Photo taken March 26, 2015).

North access road to be degraded to Coastal Prairie, Proposed South Fork II Coastal Mitigation Bank (Photo taken March 26, 2015).

Middle North to South access road to be degraded to coastal Prairie Re-establishment (Photo taken March 26, 2015).

Appendix B: Preliminary Jurisdictional Determination

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVENUE
NEW ORLEANS, LOUISIANA 70118-03651

REPLY TO ATTENTION OF

April 20, 2018

Operations Division
Surveillance and Enforcement Section

Mr. Jace Jarreau
Delta Land Services, LLC
1090 Cinclare Dr
Port Allen, Louisiana 70767

Dear Mr. Jarreau:

Reference is made to your request for a U.S. Army Corps of Engineers' (Corps) jurisdictional determination on property located in Sections 9 and 10, Township 12 South, Range 8 West, Cameron Parish, Louisiana (enclosed map). Specifically, this property is identified as the 239.6 acre Vinson Tract on and North of South Fork Black Bayou.

Based on review of recent maps, aerial photography, soils data, and the information provided with your request, we have determined that part of the property is wetland and may be subject to Corps' jurisdiction. The approximate limits of the wetland are designated in red on the map. A Department of the Army (DA) permit under Section 404 of the Clean Water Act will be required prior to the deposition or redistribution of dredged or fill material into wetlands that are waters of the U.S. Additionally, a DA permit will be required if you propose to deposit dredged or fill material into non-wetland waters subject to Corps' jurisdiction. Non-wetland waters that may be subject to Corps' jurisdiction are designated in blue on the map.

You are advised that this preliminary jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision prior to the expiration date. Additionally, this determination is valid for the identified requestor's project only and is not to be used in decision-making for any other project.

Please be advised that this property is in the Louisiana Coastal Zone and a Coastal Use Permit may be required prior to initiation of any activities on this site. For additional information, contact Ms. Christine Charrier, Office of Coastal Management, Louisiana Department of Natural Resources at (225) 342-7953.

Should there be any questions concerning these matters, please contact Dr. Rosie Schwamenfeld at (337) 291-3045 and reference our Account No. MVN-2017-01356-SR. If you have specific questions regarding the permit process or permit applications, please contact our Western Evaluation Section at (504) 862-2261.

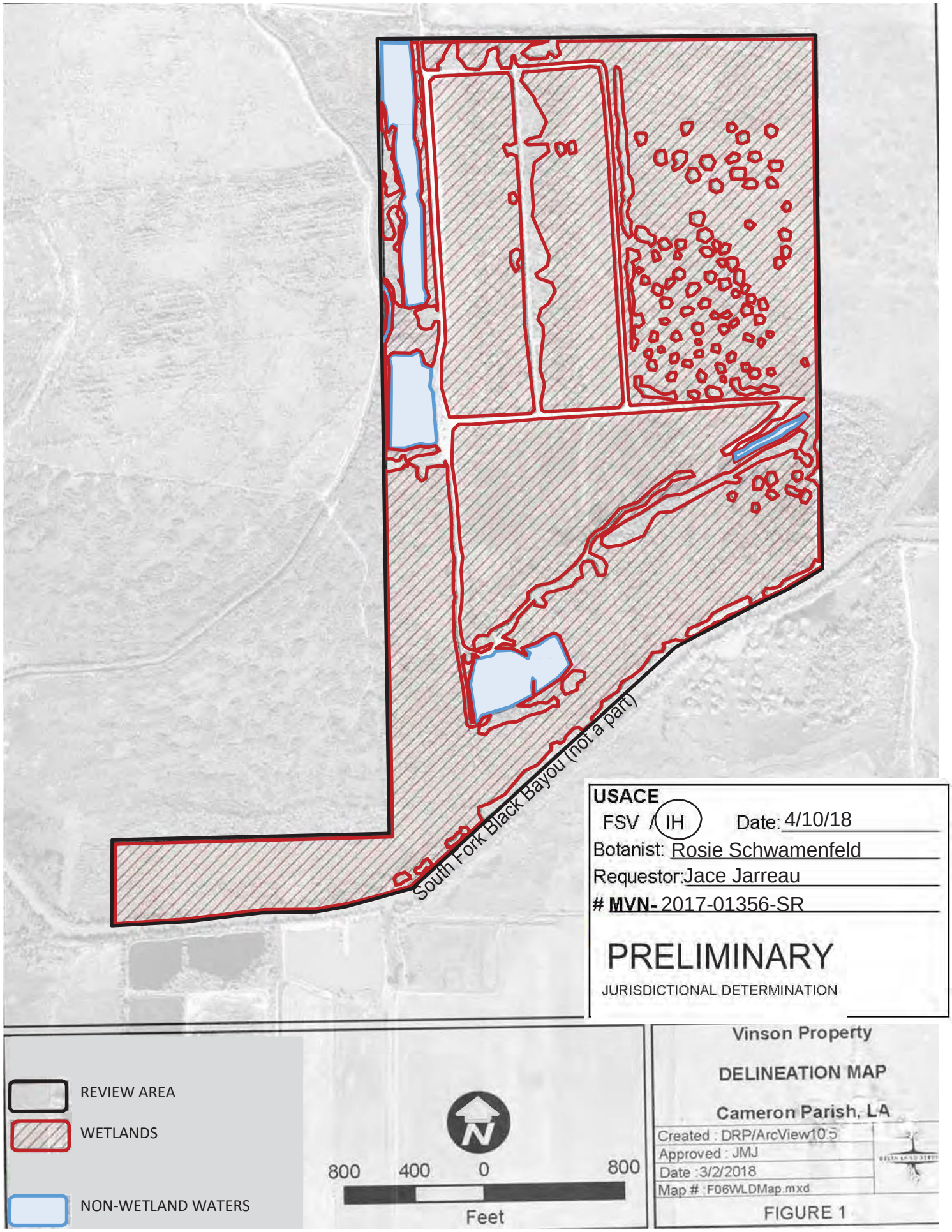
Sincerely,

GUARISCO.BRAD.ANTHONY.1376421941

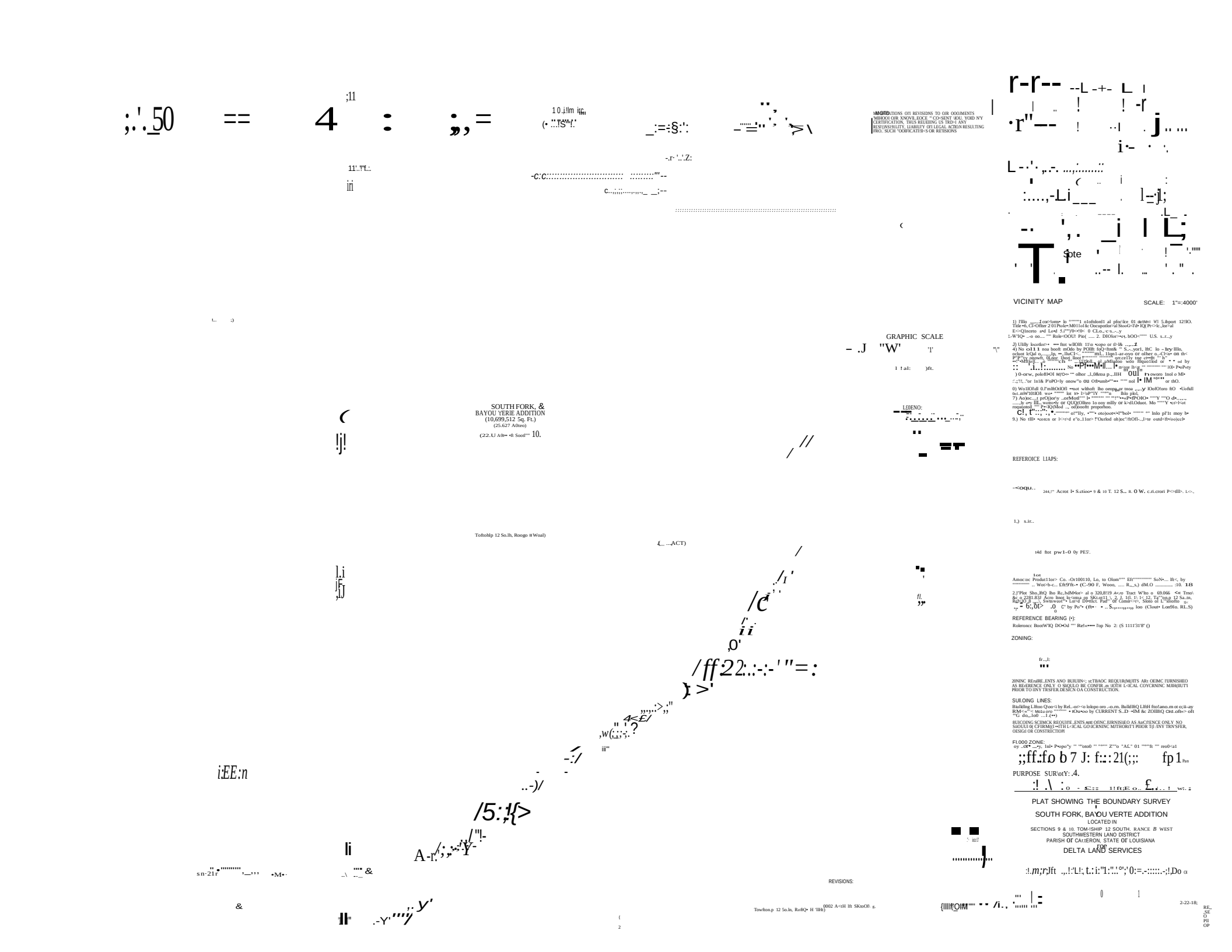
Digitally signed by GUARISCO.BRAD.ANTHONY.1376421941
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=GUARISCO.BRAD.ANTHONY.1376421941
Date: 2018.04.20 16:00:50 -05'00'

for Martin S. Mayer
Chief, Regulatory Branch

Enclosures


South Fork Black Bayou (not a part)
USACE
FSV / IH
Date: 4/10/18
Botanist: Rosie Schwamenfeld
Requestor: Jace Jarreau
MVN- 2017-01356-SR
PRELIMINARY
JURISDICTIONAL DETERMINATION
REVIEW AREA
WETLANDS
NON-WETLAND WATERS
N
800 400 0 800
Feet
Vinson Property
DELINEATION MAP
Cameron Parish, LA
Created : DRP/ArcView10.5
Approved : JMJ
Date :3/2/2018
Map # :F06WLDMap.mxd
FIGURE 1

Appendix C: Property Ownership Survey Plat


VICINITY MAP
SCALE: 1"=:4000'
GRAPHIC SCALE
SOUTH FORK, &
BAYOU 'YERIE ADDITION
(10,699,512 5q. Ft.)
(25.627 A0teo)
REFEROICE LIAPS:
REFERENCE BEARING (•):
ZONING:
SUILOING LINES:
PURPOSE SUR\otY: .4.
PLAT SHOWING THE BOUNDARY SURVEY
SOUTH FORK, BA'OU VERTE ADDITION
LOCATED IN
SECTIONS 9 & 10. TOM-!SHIP 12 SOUTH. RANCE B WEST
SOUTHWESTERN LANO DISTRICT
PARISH OI' CAr.tERON. STATE OI' LOUISIANA
DELTA LAND SERVICES
REVISIONS:

ERTY "R OES'GIATIONS. RE'lscD 0EARINCS
PROPERTY UNQS.

CERTIfICATION: *Li.*

E SJ

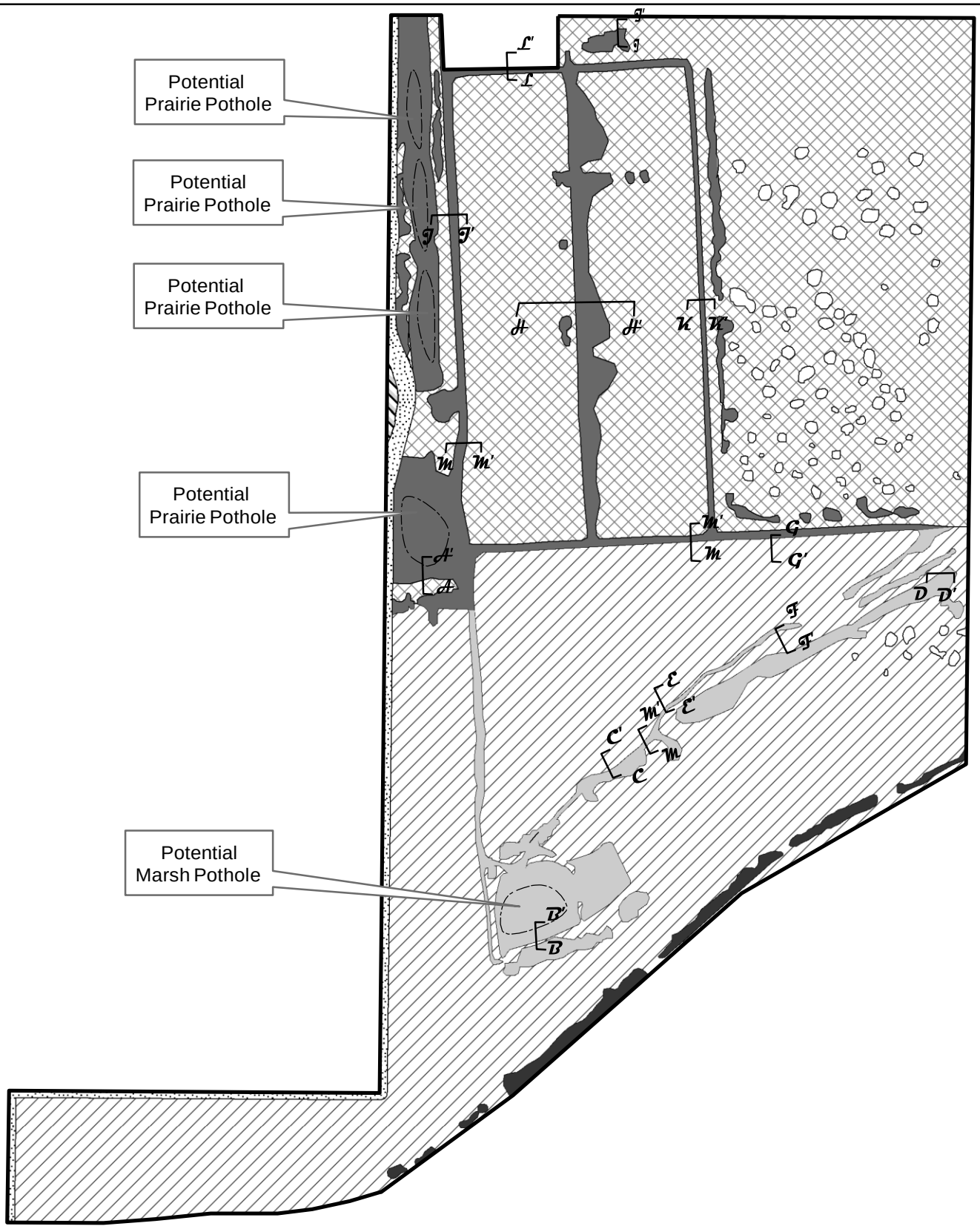
1111 HOSPITAL ROAD,

PATIN ENGINEERS
& SURVEYORS
INCORrORATED

SUITE D
NEW ROADS, LA 70760
OFFICE: (225) .387-2167

JOB No
17-106

Appendix D: Hydrology Restoration Typical Drawings



- Project Area (241.8 ac)
- CP Rehabilitation (98.3 ac)
- CP Re-establishment (20.7 ac)
- FIM Rehabilitation (102.0 ac)
- FIM Re-establishment (9.6 ac)
- Herbaceous Riparian Shoreline (Upland Buffer) (2.4 ac)
- Mima Mounds (Upland Buffer) (3.4 ac)
- Fire Lane (5.2 ac)
- Non-Wetland Waters (0.2 ac)

700 350 0 700

Feet

South Fork II Coastal Mitigation Bank

PLAN VIEW MAP

Cameron Parish, LA

Created : TSC/ArcView10	
Approved : BWD	
Date :4/30/2018	
Map # :F21_PlanView.mxd	

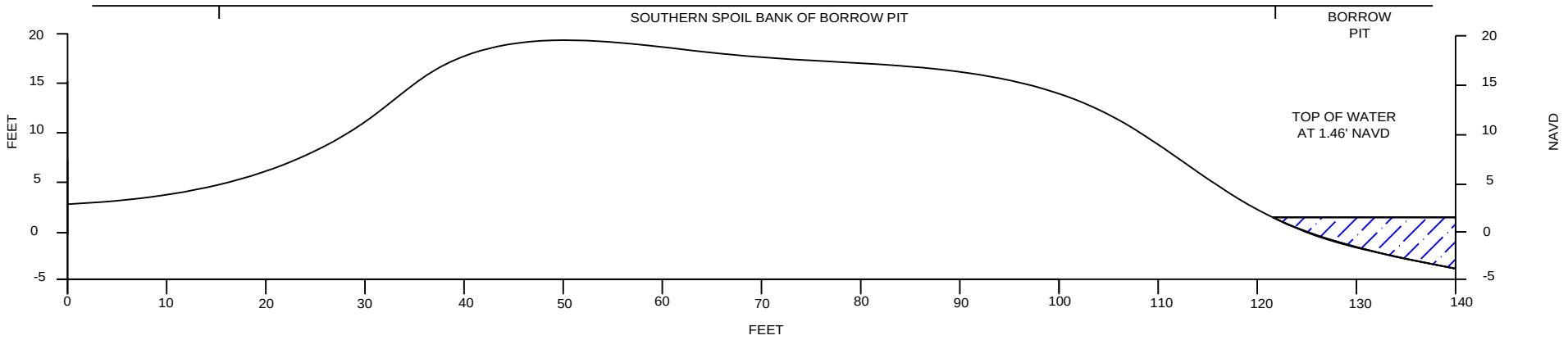
DELTA LAND SERVICES

FIGURE 21

A

A'

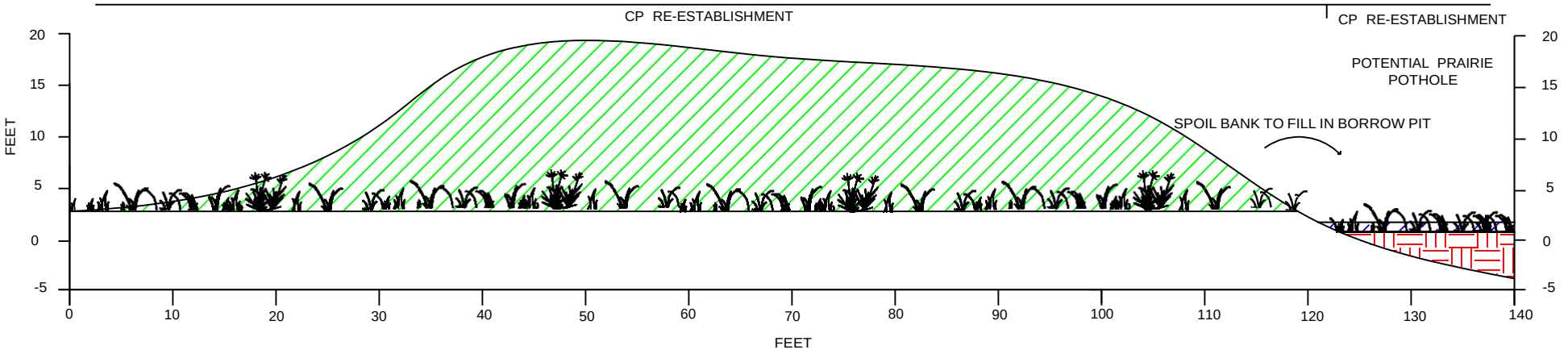
EXISTING CROSS-SECTION A



A

A'

PROPOSED CROSS-SECTION A



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

EXISTING WATER

South Fork II Coastal Mitigation Bank

CROSS-SECTION A

CAMERON PARISH, LA

Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

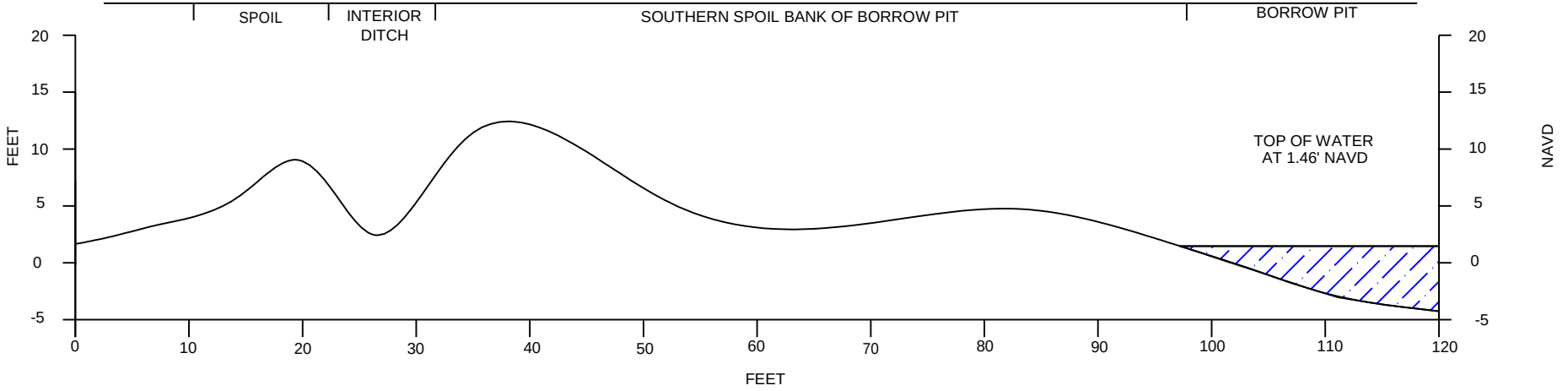
DELTA LAND SERVICES

FIGURE 21-A

B

B'

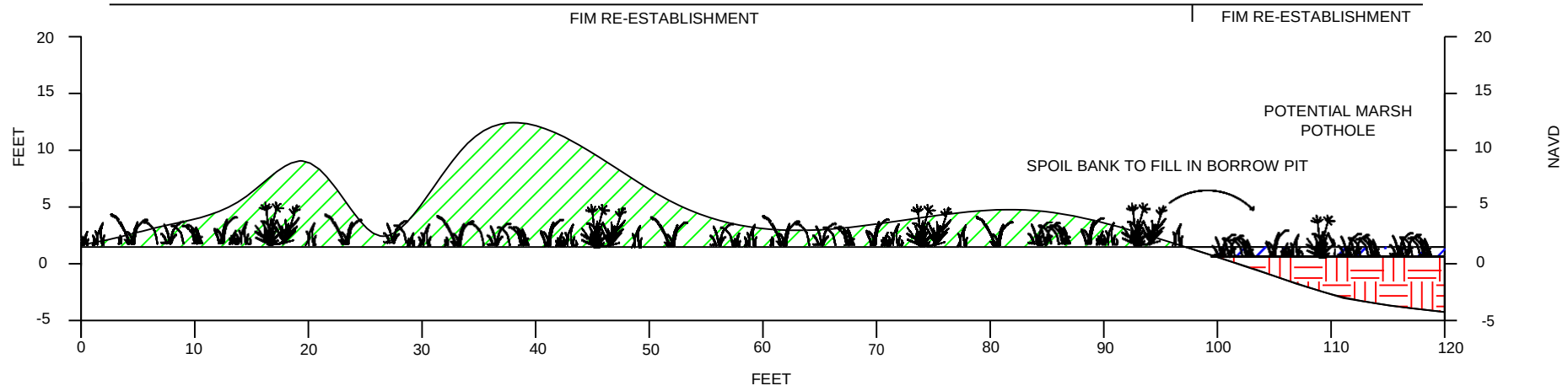
EXISTING CROSS-SECTION B



B

B'

PROPOSED CROSS-SECTION B



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

EXISTING WATER

South Fork II Coastal Mitigation Bank

CROSS-SECTION B

CAMERON PARISH, LA

Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

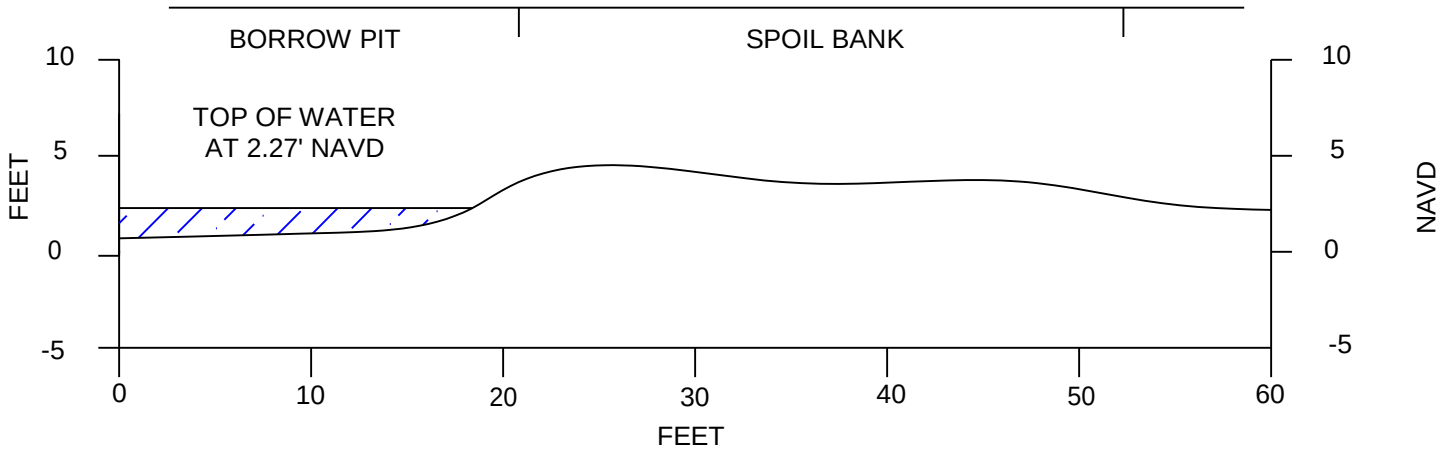
DELTA LAND SERVICES

FIGURE 21-B

C'

C

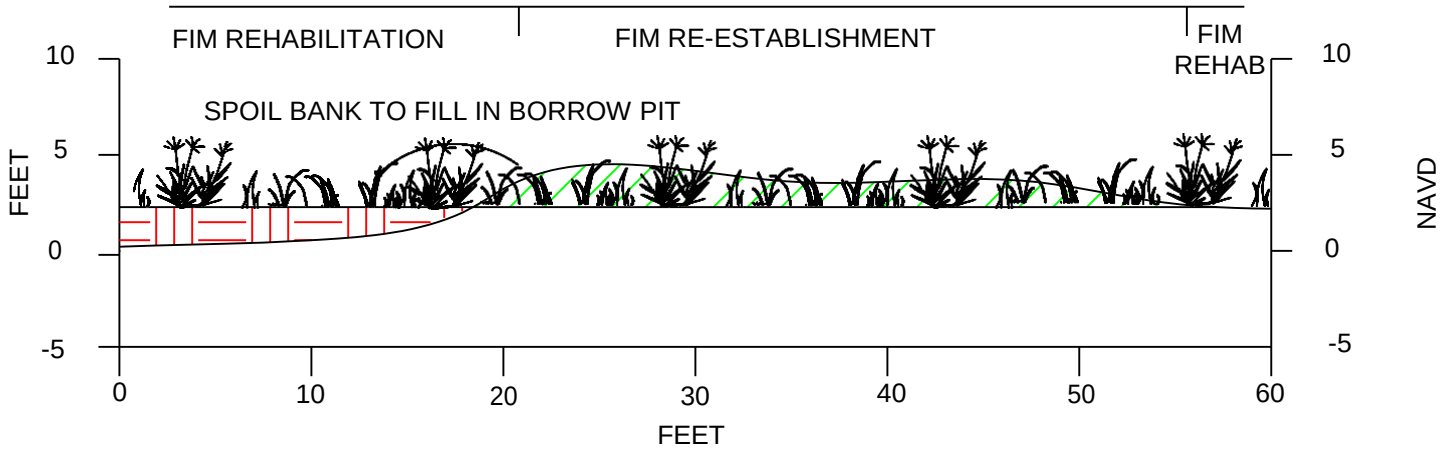
EXISTING CROSS-SECTION C



C'

C

PROPOSED CROSS-SECTION C



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

EXISTING WATER

South Fork II Coastal Mitigation Bank

CROSS-SECTION C

CAMERON PARISH, LA

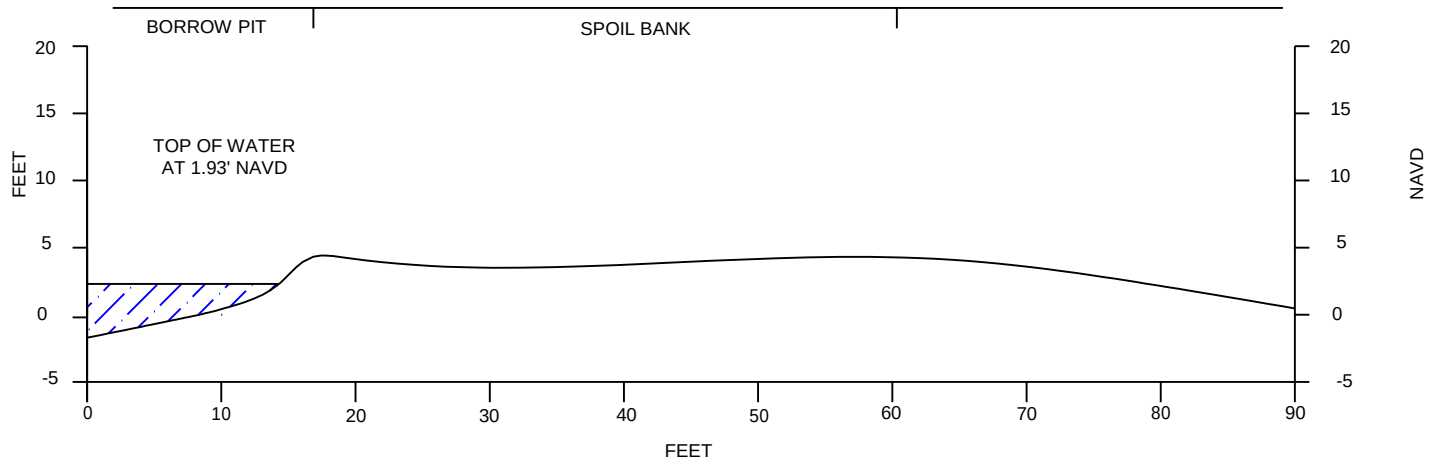
Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

DELTA LAND SERVICES

FIGURE 21-C

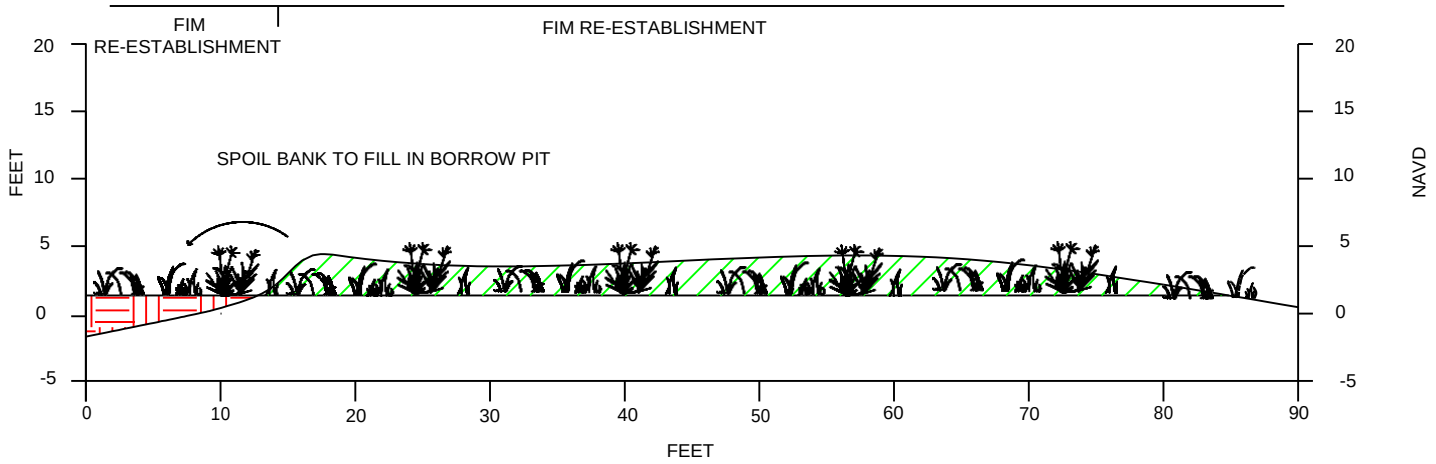
D D'

EXISTING CROSS-SECTION D



D D'

PROPOSED CROSS-SECTION D



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

EXISTING WATER

South Fork II Coastal Mitigation Bank

CROSS-SECTION D

CAMERON PARISH, LA

Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

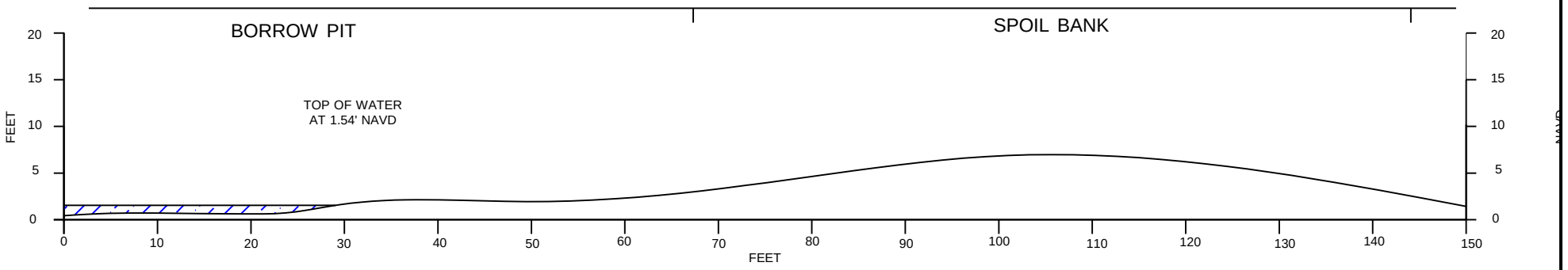
DELTA LAND SERVICES

FIGURE 21-D

E

E'

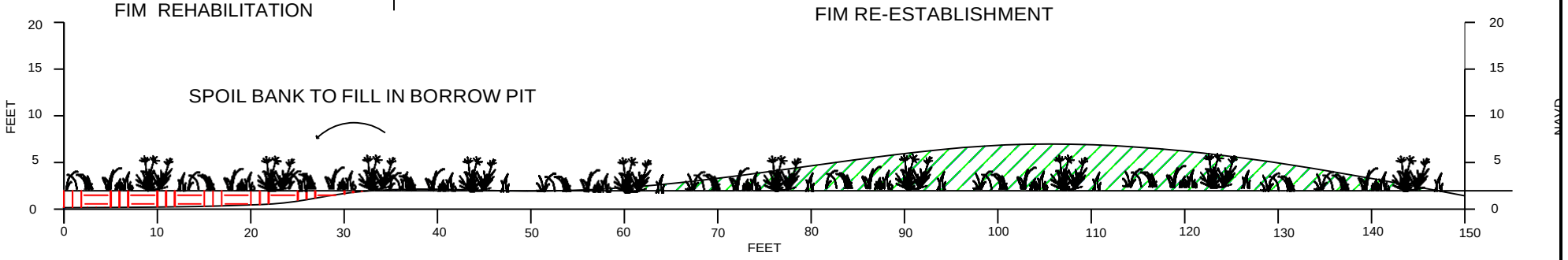
EXISTING CROSS-SECTION E



E

E'

PROPOSED CROSS-SECTION E



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

EXISTING WATER

South Fork II Coastal Mitigation Bank

CROSS-SECTION E

CAMERON PARISH, LA

Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

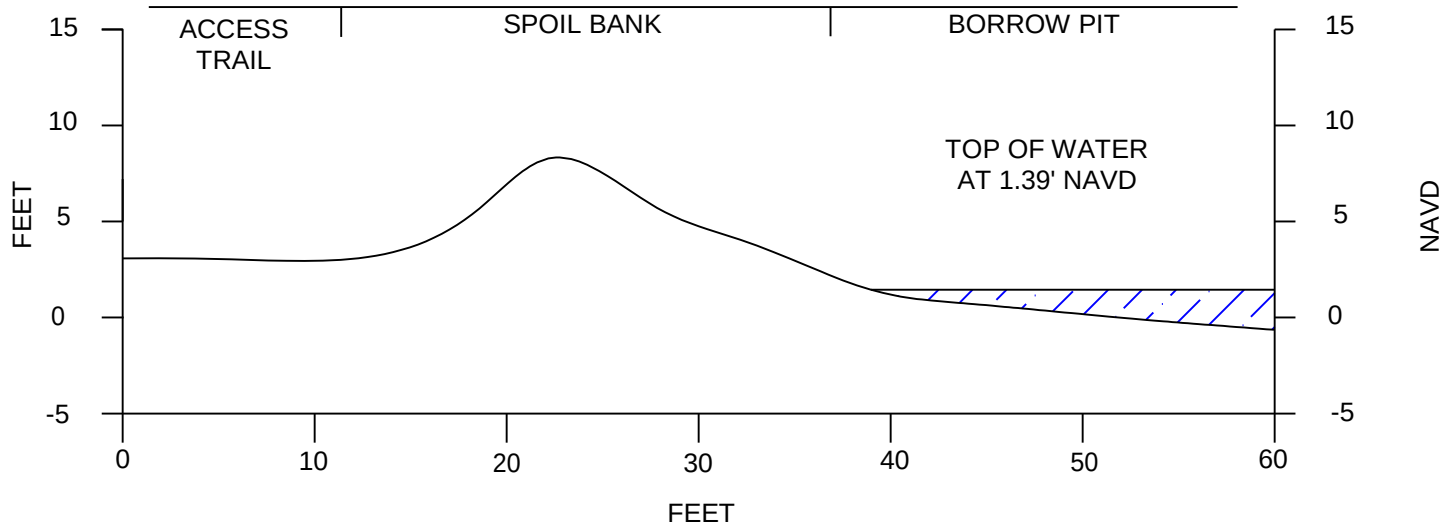
DELTA LAND SERVICES

FIGURE 21-E

F

EXISTING CROSS-SECTION F

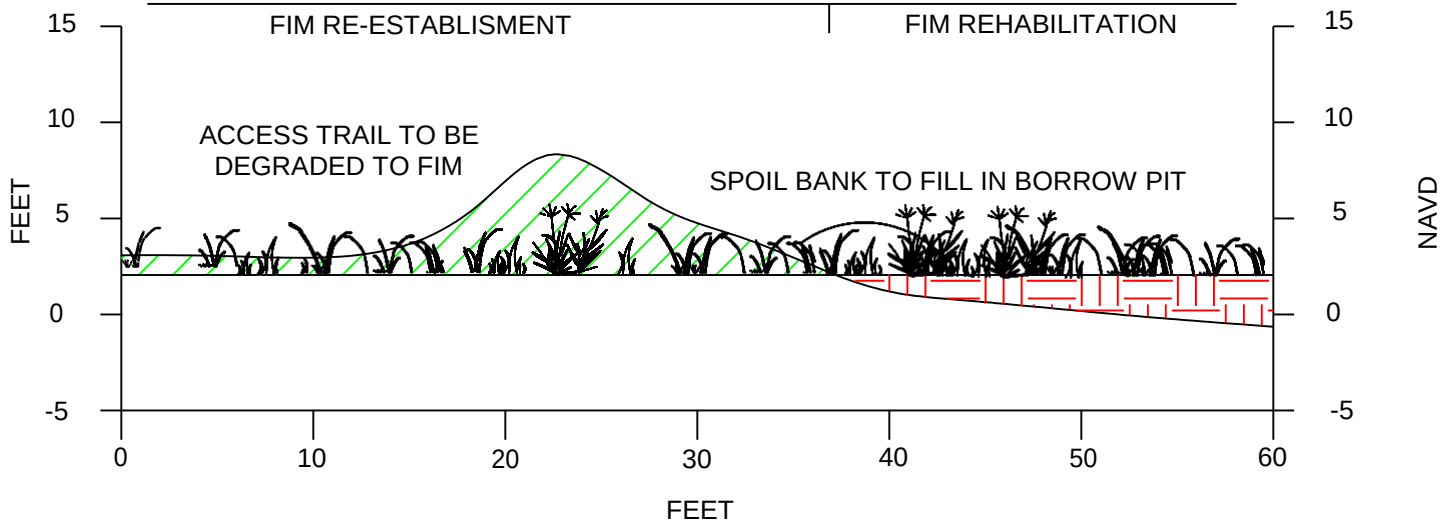
F'



F

PROPOSED CROSS-SECTION F

F'



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

EXISTING WATER

South Fork II Coastal Mitigation Bank

CROSS-SECTION F

CAMERON PARISH, LA

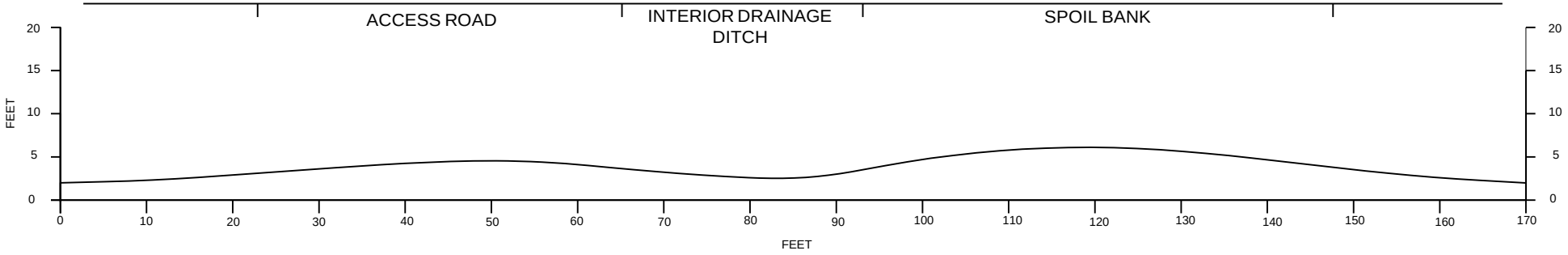
Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

DELTA LAND SERVICES

FIGURE 21-F

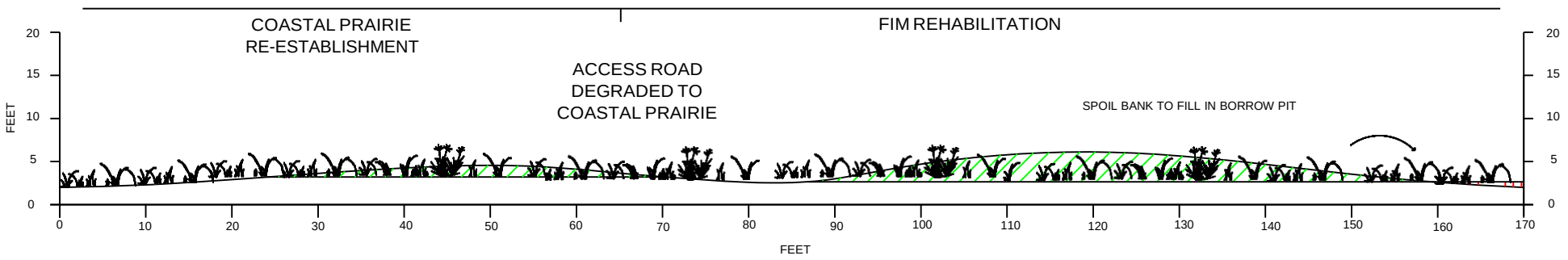
G G'

EXISTING CROSS-SECTION G



G G'

PROPOSED CROSS-SECTION G



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

South Fork II Coastal Mitigation Bank

CROSS-SECTION G

CAMERON PARISH, LA

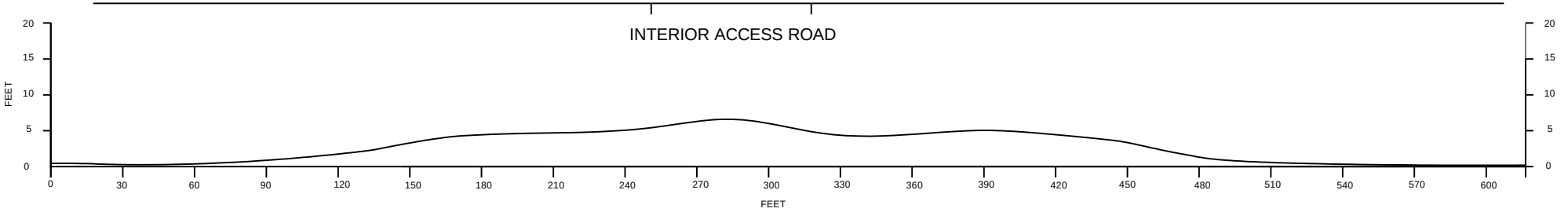
Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

DELTA LAND SERVICES

FIGURE 21-G

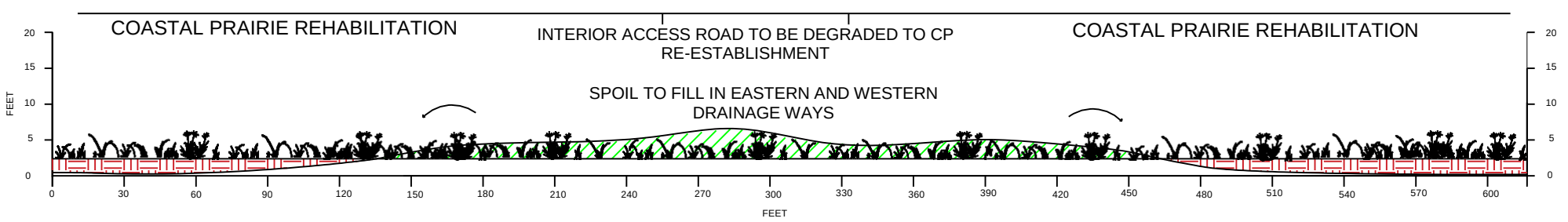
H H'

EXISTING CROSS-SECTION H



H H'

PROPOSED CROSS-SECTION H



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

South Fork II Coastal Mitigation Bank

CROSS-SECTION H

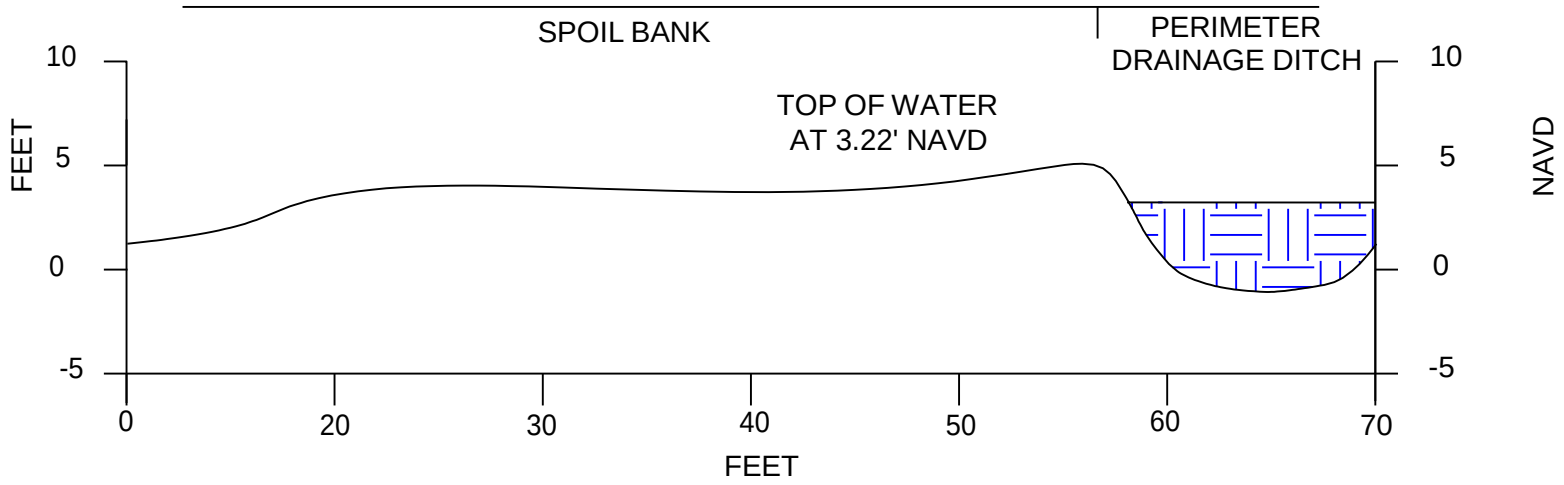
CAMERON PARISH, LA

Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

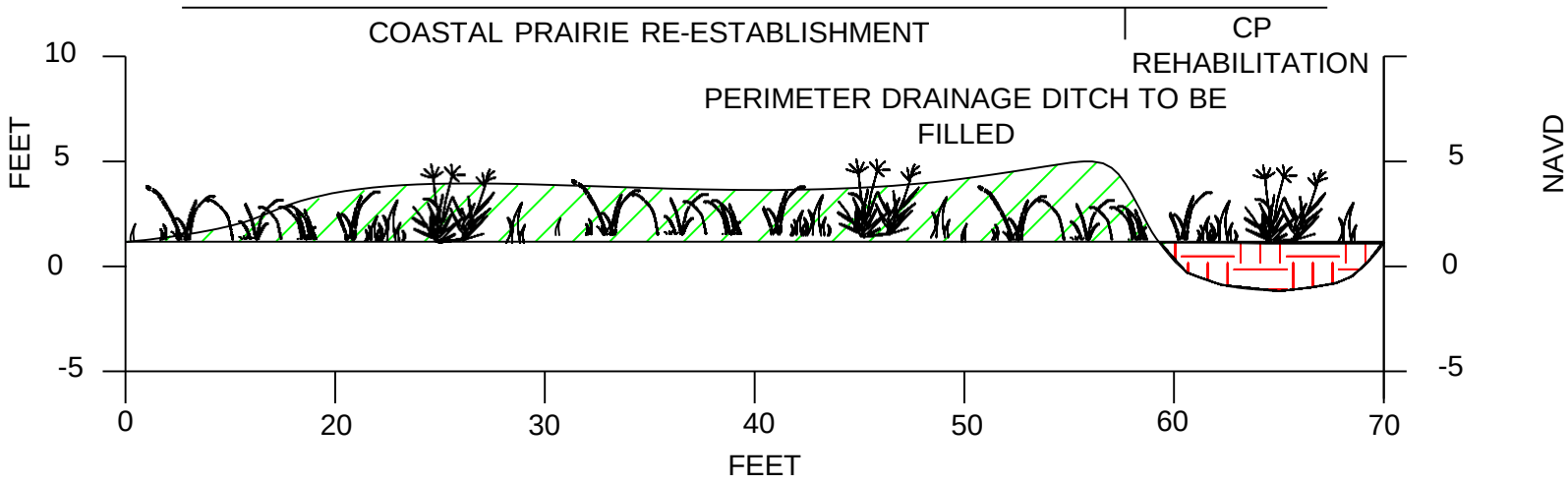
DELTA LAND SERVICES

FIGURE 21-H

EXISTING CROSS-SECTION I



PROPOSED CROSS-SECTION I



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

EXISTING WATER

South Fork II Coastal Mitigation Bank

CROSS-SECTION I

CAMERON PARISH, LA

Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

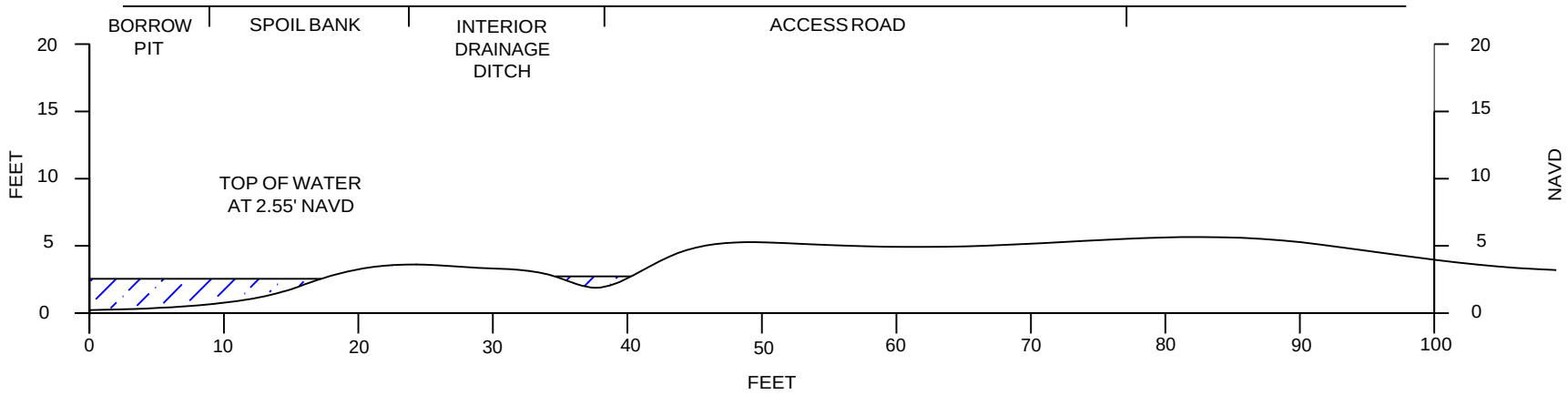
DELTA LAND SERVICES

FIGURE 21-I

J

J'

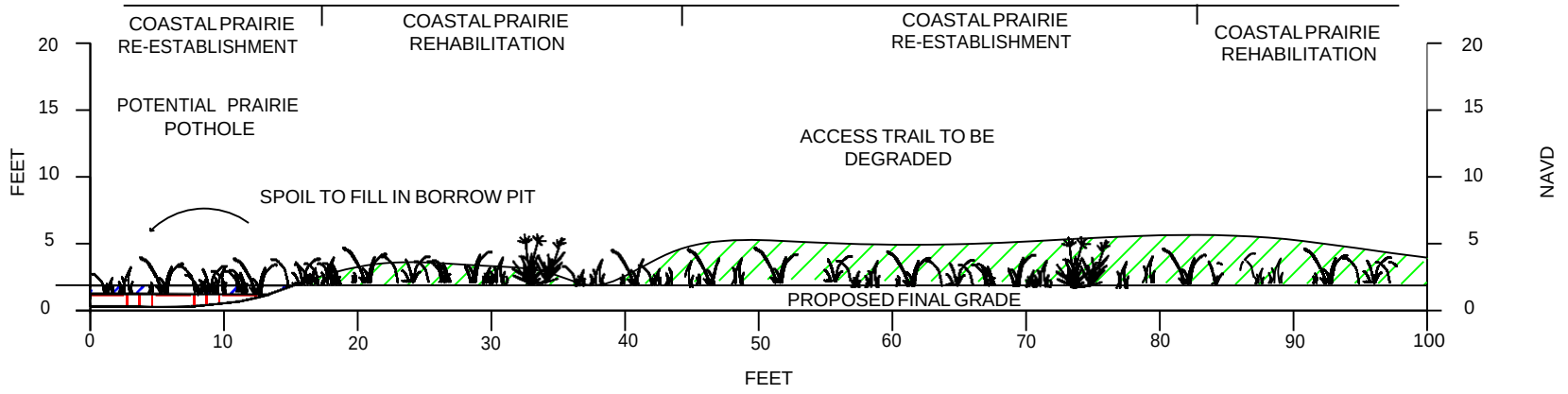
EXISTING CROSS-SECTION J



J

J'

PROPOSED CROSS-SECTION J



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

EXISTING WATER

South Fork II Coastal Mitigation Bank

CROSS-SECTION J

CAMERON PARISH, LA

Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

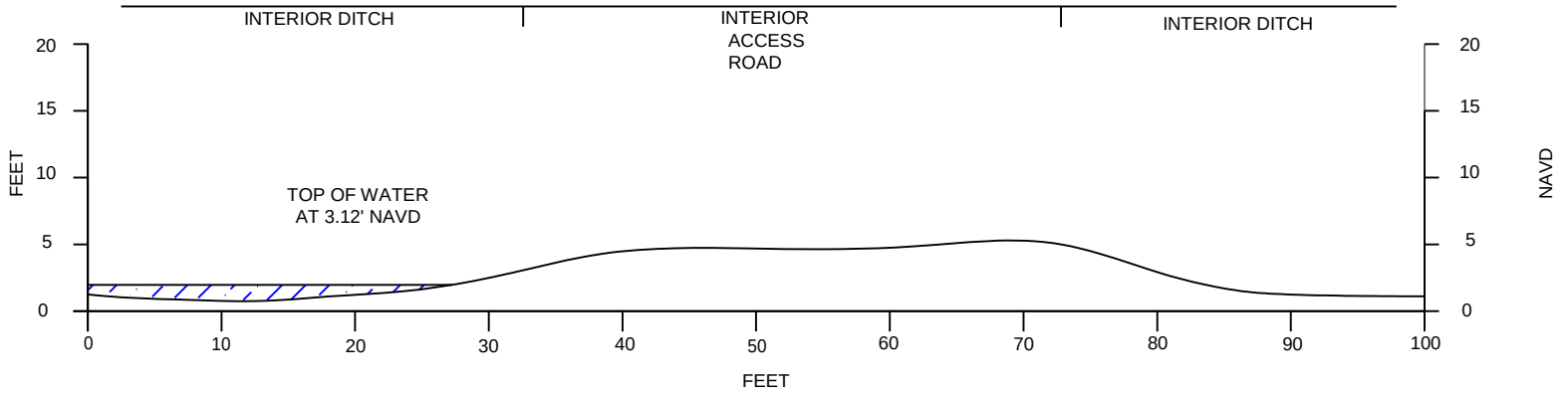
DELTA LAND SERVICES

FIGURE 21-J

K

K'

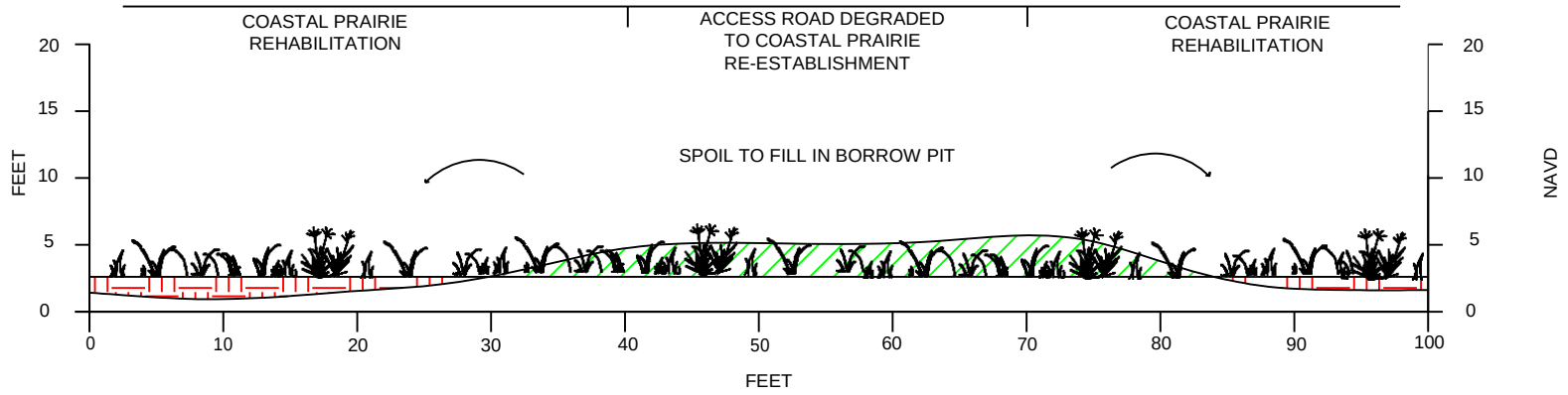
EXISTING CROSS-SECTION K



K

K'

PROPOSED CROSS-SECTION K



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

EXISTING WATER

South Fork II Coastal Mitigation Bank

CROSS-SECTION K

CAMERON PARISH, LA

Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

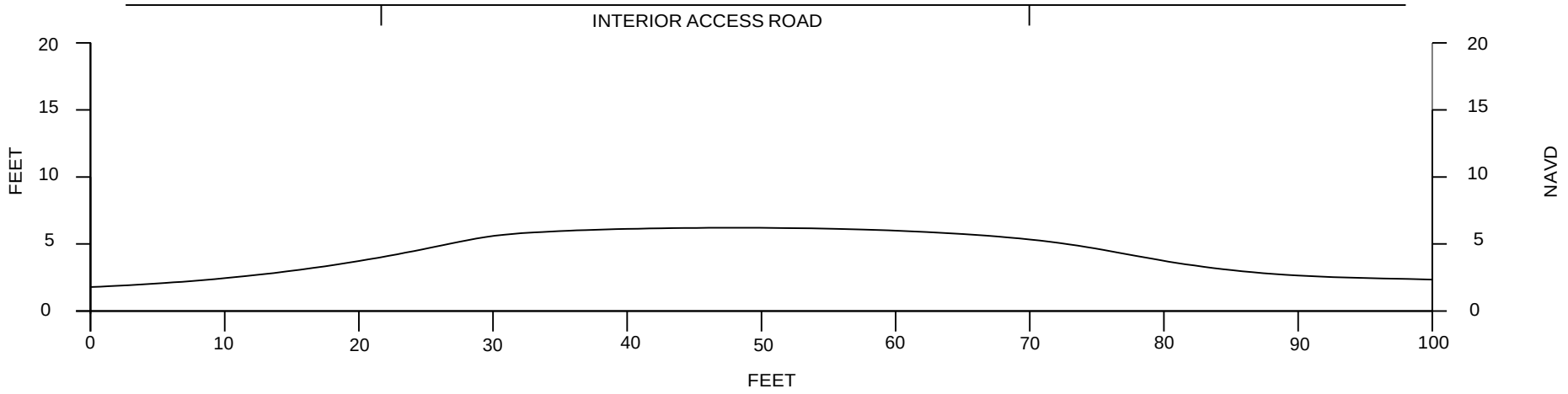
DELTA LAND SERVICES

FIGURE 21-K

L

L'

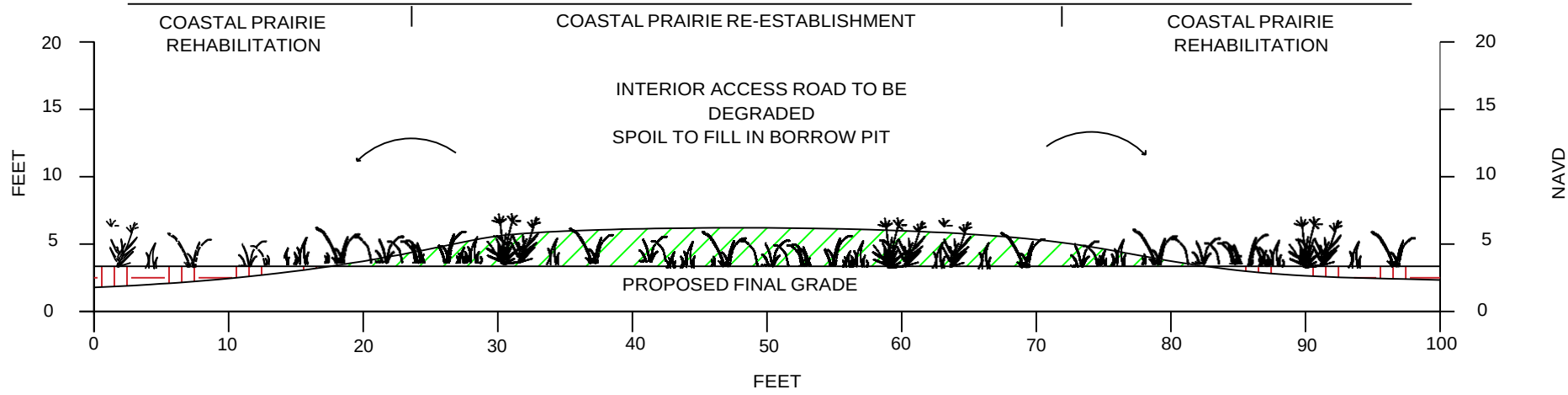
EXISTING CROSS-SECTION L



L

L'

PROPOSED CROSS-SECTION L



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

EXISTING WATER

South Fork II Coastal Mitigation Bank

CROSS-SECTION L

CAMERON PARISH, LA

Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

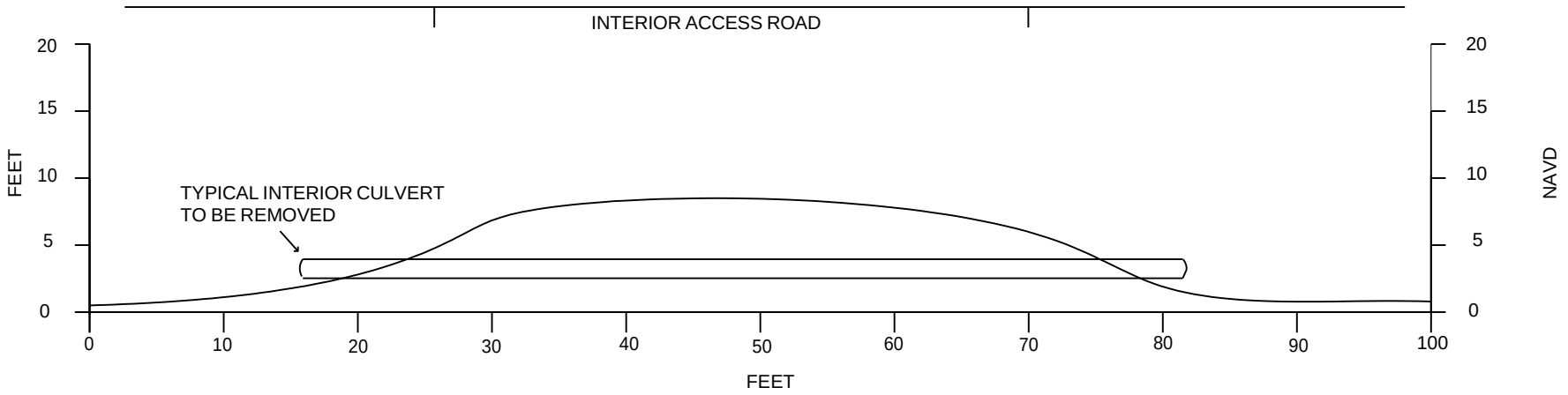
DELTA LAND SERVICES

FIGURE 21-L

M

M'

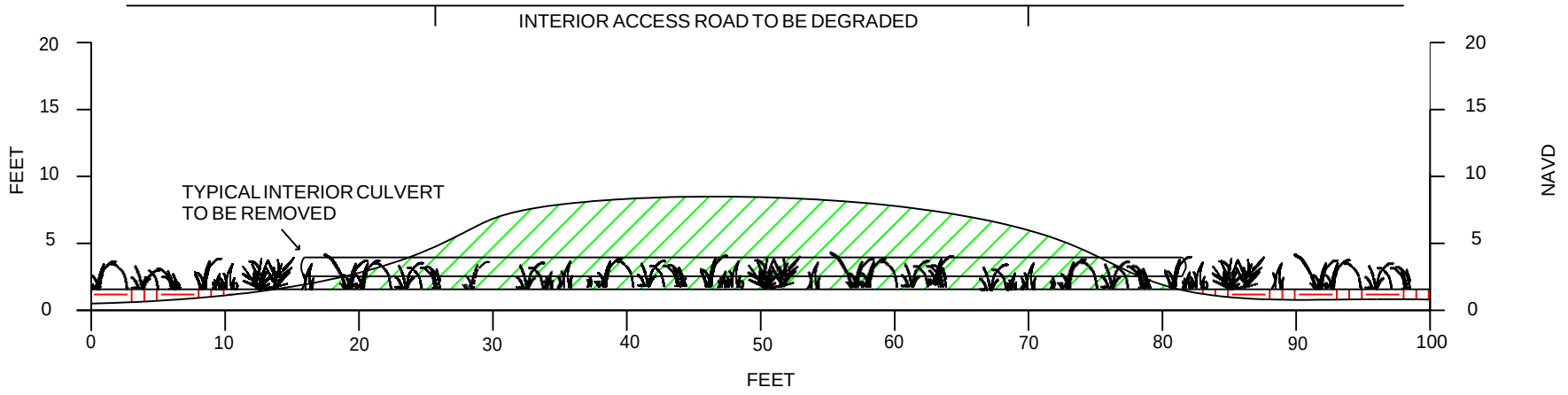
EXISTING CROSS-SECTION M



M

M'

PROPOSED CROSS-SECTION M



PROPOSED EXCAVATION

PROPOSED EARTHEN FILL

EXISTING WATER

South Fork II Coastal Mitigation Bank

CROSS-SECTION M

CAMERON PARISH, LA

Created:	HJS/AutoCAD
Approved:	MW
Date:	12/13/2017
Dwg. No.:	SouthForkII_xsections.dwg

DELTA LAND SERVICES

FIGURE 21-M

Appendix E: Preliminary Louisiana Rapid Assessment Method (LRAM) Calculations

LOUISIANA WETLAND RAPID ASSESSMENT METHOD (LRAM) 2.0

CEMVN Acct #		MVN-2017-01356			Bank Name				
Acres Mitigation		125.2			South Fork II Coastal Mitigation Bank				
Watershed Basin		Calcasieu							
		Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
Mitigation Factors	Mitigation Type	Re-Est	Rehab	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		6.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
	Management	None	None	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Negative Influences	None	None	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Size	>500	>500	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
	Buffer / Upland	Pick Here	Inclusion	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Sum:	6.5	5.7	0.0	0.0	0.0	0.0	0.0	0.0
	Area:	20.7	101.4						
	Sum x Area Affected:	134.6	578.0	0.0	0.0	0.0	0.0	0.0	0.0

∑ Mitigation: 712.5

Mitigation Potential: 5.7

COMMENTS

Mitigation Type	Coastal Prairie mitigaiton area accounts for 125.2 acres of the 241.8 acre South Fork II Coastal Mitigation Bank.
Management	
Negative Influences	
Size	The Bank is surrounded by mitigation areas under conservation servitudes(South Fork, Sasol, Petite Bois), justifying for the >500 size classification.
Buffer/Upland	The Bank has natural Mima Mounds existing in the Coastal Prairie Rehabilitation areas.

LOUISIANA WETLAND RAPID ASSESSMENT METHOD (LRAM) 2.0

CEMVN Acct #		MVN-2017-01356			Bank Name				
Acres Mitigation		116.6			South Fork II Coastal Mitigation Bank				
Watershed Basin		Calcasieu							
		Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
Mitigation Factors	Mitigation Type	Re-Est	Rehab	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		6.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
	Management	None	None	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Negative Influences	None	None	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Size	>500	>500	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0
	Buffer / Upland	Pick Here	Inclusion	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
		0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Sum:	6.5	5.7	0.0	0.0	0.0	0.0	0.0	0.0
	Area:	9.6	104.6						
	Sum x Area Affected:	62.4	596.2	0.0	0.0	0.0	0.0	0.0	0.0

∑ Mitigation: 658.6

Mitigation Potential: 5.6

COMMENTS

Mitigation Type	Fresh Intermediate Marsh mitigation area accounts for 116.6 acres of the 241.8 acre South Fork II Coastal Mitigation Bank.
Management	
Negative Influences	
Size	The Bank is surrounded by mitigation areas under conservation servitudes(South Fork, Sasol, Petite Bois), justifying for the >500 size classification.
Buffer/Upland	The Bank has natural Mima Mounds and Relic Spoil existing in the Fresh Intermediate Marsh Rehabilitation areas.