

## DEPARTMENT OF THE ARMY PERMIT

Permittee: Saint Martin Parish Government

Permit No.: MVN-2015-01796-WLL

Issuing Office: New Orleans District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Conduct mechanized clearing, snagging, excavation and placement of spoil material along 9-miles of existing channels which have been negatively affected by heavy sediment accretion and woody overgrowth within the Beau Bayou Water Management Unit to restore flow, circulation and water quality IN ACCORDANCE WITH DRAWINGS (44) ATTACHED dated April 2015.

Project Location: In the Beau Bayou Water Management Unit approximately 14 miles downstream from the town of Butte Larose, Township 10S & 11S Range 9E, (30.145 N, -91.595 W) within the Atchafalaya River Basin in St. Martin Parish, Louisiana.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2021**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

**Special Conditions: See Pages 4-5**

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

- (X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
- (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
- ( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).



c. Significant new information surfaces which this office did not consider in reaching the original public interest decision. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

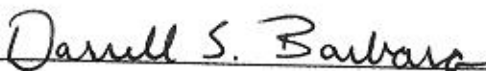
6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

X   
(PERMITEE)

X 1/11/17  
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



1/17/2017  
(DATE)

Darrell S. Barbara, Chief, Western Evaluation Section  
for Michael N. Clancy, District Commander

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(TRANSFEEE)

\_\_\_\_\_  
(DATE)

**SPECIAL CONDITIONS: MVN-2015-01796-WLL**

7. If the project requires any additional work not expressly permitted herein, or impacts any wetlands other than the areas indicated on the attached drawings, the permittee must apply for an amendment to this authorization, prior to commencing that work.
8. The permittee must install and maintain, at his expense, any safety lights and signals prescribed by the US Coast Guard, through regulations or otherwise, on the authorized facilities.
9. The permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.
10. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
11. If the project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.) in the waterway, you are advised to notify the Eighth Coast Guard District so that a Notice to Mariners, if required, may be prepared. Notification with a copy of your permit approval and drawings should be mailed to the Commander (dpw), Eighth Coast Guard District, Hale Boggs Federal Building, 500 Poydras Street, Room 1230, New Orleans, Louisiana 70130, about 1 month before you plan to start work. Telephone inquiries can be directed to the Eighth Coast Guard District, Waterways Management at (504) 671-2107.
12. Many local governing bodies have instituted laws and/or ordinances in order to regulate dredge and/or fill activities in floodplains to assure maintenance of floodwater storage capacity and avoid disruption of drainage patterns that may affect surrounding properties. Your project involves dredging and/or placement of fill, therefore, you must contact the local municipal and/or parish governing body regarding potential impacts to floodplains and compliance of your activities with local floodplain ordinances, regulations or permits.
13. Natural low lying areas such as sloughs, bayous, etc., that currently facilitate water flow and exchange within the project area shall not be blocked or impeded as a result of dredge material or debris deposition.
14. The authorized project is designed for the purpose of improving water quality and aquatic habitat values throughout the Beau Bayou Water Management Unit (BBWMU), by restoring historical beneficial riverine inflows and sheet flows into the BBWMU area and adjacent swamps, thereby increasing water circulation patterns, improving dissolved oxygen levels, and reducing negative sediment accumulation conditions. The permittee shall provide this office with (pre and post) project monitoring reports at 1, 3, and 5 years following project completion. Monitoring information shall include but is not limited to (pre and post) conditions of the BBWMU project benefit area, to include: (1) water quality data and dissolved oxygen levels, (2) water flow and circulation patterns, (3) sedimentation and accretion conditions, (4) sediment accretion rates, (5) scouring conditions, (6) and relevant site specific photographs. As to support the submittal of appropriate and accurate research, observations and data collection shall be conducted in multiple locations throughout the overall BBWMU project benefit zone. The reports and associated information shall be submitted to this office with reference to your subject DA permit number.
15. The permittee is made aware that if implementation of the subject work is determined to have inadvertently induce or otherwise lead to adverse impacts and detriments to adjacent waters and or habitats through sedimentation accretion, erosional effects, or unforeseen degradation of water quality in the area, corrective measure may be required by this office following review and coordination with other pertinent state and federal resource agencies.

**SPECIAL CONDITIONS CON'T: MVN-2015-01796-WLL**

16. Future proposals for maintenance dredging of the waterways will require re-evaluation by this office and a separate DA permit. Authorization of future maintenance dredging activities will be determined based on project related benefits to the aquatic environment, as documented by monitoring data and final outcomes, as stipulated in special condition # 14 above.
17. The Chitimacha Tribe of Louisiana has stated that the project area is part of the aboriginal Chitimacha homelands. If during the course of work at the site, prehistoric and/or historic aboriginal cultural materials are discovered, the permittee will contact the Chitimacha Tribe of Louisiana at Post Office Box 661, Charenton, Louisiana 70523, and the U.S. Army Corps of Engineers, New Orleans District (CEMVN) Regulatory Branch. CEMVN will initiate the required Federal, State, and Tribal coordination to determine the significance of the cultural materials and the need, if applicable, for additional cultural resource investigations.
18. Appropriate erosion and siltation controls must be utilized during construction to prevent sediment runoff into adjacent wetlands and waterways. Sediment control techniques could include but are not limited to the use of secured hay bales, sediment fencing, wooden or vinyl barriers, and/or seeding of disturbed areas. These techniques should be maintained in effective operating condition until a point that sediment runoff from construction activities is controlled.
19. The permittee is made aware that a certified archaeological monitor shall be present onsite at any time that the grubbing of tree roots is performed along the channel banks to assess whether any historic properties were impacted by the disturbance. A monitor shall also be present during the excavation of "Element-7".
20. Issuance of this permit confirms that CEMVN has been provided with written notification from Delta Land Services that the permittee has contracted for **44.3 acres of bottomland hardwoods at The Bayou Fisher Mitigation Bank**. **Delta Land Services** has assumed responsibility for completing the mitigation in accordance with the Bayou Fisher Mitigation Bank Instrument and has recorded the allocation of the mitigation required by this permit in the Regulatory In-lieu Fee & Bank Information Tracking System (RIBITS).
21. The permittee is made aware that bird nesting colonies may exist within one mile of this proposed project and that entry into or disturbance of active breeding colonies is prohibited by the Louisiana Department of Wildlife and Fisheries (LDWF). In addition, LDWF prohibits work within a certain radius of an active nesting colony. If the work activity is to be conducted during the nesting season, then prior to beginning work on this project, the permittee shall coordinate with the LDWF, Natural Heritage Program (225) 765-2357.
22. The permittee is made aware that there have been Bald Eagle nests in the project site vicinity in the past. If a nest is observed within 600 feet of the work area, the permittee shall cease activities and contact the USFWS at (337) 291-3123 C/O Mr. Michael Sealey, for further coordination and consultation. Any consultation with the USFWS shall be coordinated with this office.

CEMVN-OD-SW  
Application MVN-2015-01796-WLL

**MEMORANDUM FOR RECORD**

**SUBJECT:** Department of the Army Environmental Assessment and Statement of Finding for Above-Numbered Permit Application

This document constitutes the Environmental Assessment, 404(b)(1) Guidelines Evaluation, Public Interest Review, and Statement of Findings.

**1. Application as described in the public notice, dated May 30, 2016.**

**APPLICANT:** Saint Martin Parish Government, P.O. Box 9, St. Martinville, LA 70582

**WATERWAY & LOCATION:** Beau Bayou Water Management Unit approximately 14 miles downstream from the town of Butte Larose, Township 10S & 11S Range 9E, (30.145 N, -91.595 W) within the Atchafalaya Basin in St. Martin Parish, Louisiana.

**LATITUDE & LONGITUDE:**

**Latitude North:** 30.145 N  
**Longitude West:** -91.595

**PROJECT PURPOSE:**

**Basic:** Water Conveyance.

**Overall:** Dredge waterbottoms to restore channel dimensions within the Beau Bayou Water Management Unit to improve water circulation and water quality.

**Water Dependency Determination:** The proposed project includes work within a special aquatic site, however, construction activities and/or project implementation do not require access to, proximity to, or siting within the special aquatic site in question to fulfill its basic purpose, and therefore is not water dependent.

**PROPOSED WORK:** Conduct mechanized clearing, snagging, excavation and placement of spoil material along 9 miles of existing channels within the Beau Bayou Water Management Unit. Vegetative debris and excessive overgrowth of woody vegetation and trees will be removed all for the purpose of restoring and opening channels for the purpose of restoring water quality, sheetflow, and circulation within the surrounding swamp and opening existing spoil banks to reduce un-natural ponding.



**Avoidance and Minimization Information:** Project design has been developed to avoid impacts to wetlands by conducting dredging within waterbottoms. Spoil disposal measures included consideration of barging material to non-wet sites and hydraulic spray dredging, both of which were deemed not to be practicable for this project. Clearing of some adjacent forested habitat and placement of some spoil was an unavoidable impact.

**Compensatory Mitigation:** Mitigation requirements were based on the assessment of 29.2 acres of forested wetland impacts. The original impacts were advertised as 51 acres. Following review of our jurisdictional determination and project plans, a portion of those impacts were considered within waters of the U.S. (below the ordinary high water mark). Clearing and snagging within water bottoms were not assessed for mitigation. The 29.2 acres of forested impacts were to Bottomland Hardwoods (BLH), and Cypress Tupelo Swamp (Swamp) with varying percentages of scrub shrub with black willow, and Chinese Tallow. All impacts were assessed as either BLH or Swamp.

The project is composed of 8 elements (worksites). Each element was assessed by utilizing the Louisiana Rapid Assessment Method (LRAM) for either BLH or Swamp and all were given a designation of "secure", "medium habitat condition", "high hydrologic condition" and "low negative influences".

Utilizing the Louisiana Rapid Assessment Method (LRAM), our mitigation database indicated that only two banks were available within the Atchafalaya watershed with a supply of BLH credits. In addition, no bank in the watershed had Swamp credits at that time. The impacts to swamp were assessed and compensated with out of kind BLH credits.

Compensation for the project's unavoidable impacts was achieved through the LRAM's assessment of the mitigation banks' habitat management potential, condition of the proposed project site, including the hydrologic condition, proposed temporal loss of wetland functions, negative influences and quality of habitat at the project sites.

For the unavoidable impacts to 29.2 acres of forested wetlands, 44.3 acres of BLH credits were contracted with Delta Land Services at the Bayou Fisher Mitigation Bank to offset the above project related impacts.

**EXISTING CONDITIONS:** The proposed project is located in the Atchafalaya Basin within the Beau Bayou Water Management Unit (BBWMU) which is 14 miles downstream on the Atchafalaya River from Butte Larose. The BBWMU consists of a 22,000 acre area of Cypress/Tupelo swamp and bottomland hardwood forests which historically received river inflows from the northern and eastern ends of the unit through overbank flooding of the Atchafalaya River and through existing and



man-made channels. Flood waters would enter the unit from the north and discharged from the south through Bayou Darby providing a healthy circulation of oxygen rich water through the area. Over time, a combination of anthropogenic and natural effects on the area has left the unit heavily silted in and without the historic circulation patterns except during the highest of river flood flooding. The causes of these impacts include:

Levee construction and channelization of the Atchafalaya River has increased the river's flow capacity, decreasing overbank flooding and movement of water throughout the river basin.

Sedimentation along the outer banks of the BBWMU and within existing man-made and natural channels has cut off overbank flooding and historical river inflows.

Man-made and natural canal spoil banks within the interior of the BBWMU have impaired north-to-south flow through the unit.

BBWMU's period of inundation has been reduced from lower water stages and accreted floodplains and channels.

During the annual flood pulse, decreased flow and circulation through the BBWMU results in hypoxic, stagnant water ponding throughout the unit. One contributor to water quality degradation is hydraulic damming in which low oxygenated interior water (black water) passing through tributaries is simply too weak in current to continue through larger connecting channels due to the higher pressures which stops the flow into and mixing of the oxygenated and black waters.

In 1982, CEMVN produced the Atchafalaya Basin Floodway System Feasibility Study Main Report and Environmental Impact Statement. In the study, 13 water management units (WMU) were delineated (including the BBWMU) with the following identified needs:

1. Restore as closely as practicable historical overflow patterns.
2. Provide proper water movement throughout the units.
3. Restrict sediment movement and deposition in the units.
4. Supply nutrients and organic matter to the estuarine area and the Gulf of Mexico.

The proposed project contains 8 parts or project elements. The elements chosen for this project were channels that have accreted with sediment. Many of the channels within the project area have become overgrown with woody vegetation which attracts debris, speeds up sediment accumulation and has resulted in severe siltation of many project area channels causing the loss of normal flow and circulation from the seasonal and periodic rises of the Atchafalaya River.

St. Martin Parish Government officials who met with CEMVN, expressed concerns

that many of the commercial fishing and recreational resources within the project area have been in a steady decline due to the silting-in of the bayous and channels within the BBWMU.

**2. Authority.**

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403).**
- Section 404 of the Clean Water Act (33 U.S.C. §1344).**
- Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).**

**3. Scope of Analysis.**

**a. NEPA. (Write an explanation of rationale in each section, as appropriate)**

**(1) Factors.**

- (i) Whether or not the regulated activity comprises "merely a link" in a corridor type project. No.**
- (ii) Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity. No.**
- (iii) The extent to which the entire project will be within the Corps jurisdiction. All**
- (iv) The extent of cumulative Federal control and responsibility. A Department of the Army permit is required for all Section 10 & 404 activities associated with the project.**

**(2) Determined scope.**

- Only within the footprint of the regulated activity within the delineated water and portions of associated non-wet areas within the project footprint.**
- Over entire property.**

**b. NHPA "Permit Area".**

- (1) Tests. Activities outside the waters of the United States are/are not included because all of the following tests are/are not satisfied: Such activity would/would not occur but for the authorization of the work or structures within the waters of the United**

**States; Such activity is/is not integrally related to the work or structures to be authorized within waters of the United States (or, conversely, the work or structures to be authorized must be essential to the completeness of the overall project or program); and Such activity is/is not directly associated (first order impact) with the work or structures to be authorized.**

- (2) **Determined scope. Approximately 9 miles of channels and adjacent spoil sites.** Channel bottoms are proposed to be excavated and returned to historic channel dimensions (excavation of waterbottoms: 13.7 acres; excavation of forested wetlands: 10.9 acres; 16.4 forested acres of fill and 1.9 forested acres of clearing only. The scope includes the entire project excavation and deposition footprint (29.2 acres of fill and excavation impacts in jurisdictional wetlands and 13.7 acres of excavation impacts to jurisdictional waters of the U.S.).

**c. ESA "Action Area".**

- (1) **Action area means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.** The portion of the Atchafalaya Basin known as the Beau Bayou Water Management Unit will be affected by this project and would be considered the ESA action area.

- (2) **Determined scope.** The determined scope would include the channels to be dredged and the adjacent habitat to be cleared and filled.

**d. Public notice comments.  yes**

- (1) **The public also provided comments at public hearing, public meeting, and/or  N/A.** Public comments received during the public notice review period.

**(2) Commentors and issues raised.**

Name	Issue
CEMVN Real Estate	In a memo dated 8/31/2016 the COE Real Estate Division stated that a real estate instrument will not be required for this project.
Gary Snellgrove (private landowner)	On 6/29/16, Mr. Snellgrove provided comments and information by email: "The problem is seasonal or low water periods of restricted or no fresh water ingress / egress and limited boat access to property due to sediment accumulation."

	Mr. Snellgrove is a private landowner with property near Bayou Chene who commented that he was in favor of the project.
EPA	Did not comment.
USFWS	<p>Stated "we do not oppose the construction of that project. However, we do have some concerns about the proposed removal of two plugs from a canal, specifically Elements 5 and 6b. The removal of those plugs could result in most of the water traveling north in Little Bayou de Plomb to begin flowing west and not flow northward towards Bayou LaRose (Element 8) during rising and high river stages, thus circumventing what we believe might be an area targeted for improved water flows/circulation. We respectfully request that the need to remove those plugs be re-examined." Of the two plugs proposed to be removed, the removal of the plug by construction of Element 5 is viewed as possibly causing the greatest loss of flows from Little Bayou de Plomb.</p> <p>Following coordination between USGS, USFWS and the applicant, the USFWS concurred with leaving the project as proposed and rescinded their objection. 11/1/16 USFWS emailed: No objection to the mitigation proposal.</p>
LDWF	<p>In a letter dated May 31, 2016, LDWF requested that the applicant provide a justified need and explain the potential benefit to the BBWMU. If need can be established, a mitigation plan must be provided and approved by LDWF. On 7/27/16, a meeting was attended by LDWF, USFWS, USGS and CEMVN. The meeting was held to discuss project need, benefits and minimization.</p> <p>Following the meeting LDWF agreed with the project design. On 8/22/16, LDWF sent an email stating that the project need and alternatives had been satisfied. On</p>

	<p>11/1/16 LDWF responded by email: LDWF has reviewed and concurs with the mitigation options provided for wetland impacts associated with MVN-2015-01795-WLL.</p>
<p>Atchafalaya Basinkeeper</p>	<p>By undated letter received via email on 10/18/2016, comments were received from the Atchafalaya Basinkeeper after the 20-day comment period, but were reviewed for any additional information regarding the project. The Basinkeepers' comments state that projects involving enlarging cuts to increase river water will most likely silt-up again in a short period of time, making the project "a waste of money". The comments went on to say that the impacts by excavation and fill in wetlands are "worrisome" and that the Atchafalaya has already experienced massive accretion since 1932.</p> <p>The Atchafalaya Basinkeepers comments were considered in our review, however there was little evidence or data provided to justify or verify their particular concerns.</p>
<p>NMFS</p>	<p>On 6/8/2016, gave no objection.</p>
<p>USGS</p>	<p>Comments by USGS mirrored FWS's comments regarding removal of plugs at elements 5 and 6B.</p> <p>Following discussions by the agencies and the applicant's representatives, it was agreed that the best option would be to proceed with the removal of both plugs as originally proposed.</p>

**(3) Site  was/ was not visited by the Corps to obtain information in addition to delineating jurisdiction.**

**(4) Issues identified by the Corps.** 29.2 acres of jurisdictional forested wetlands will be impacted by project construction



**(5) Issues/comments forwarded to the applicant.**  NA/ Yes. By letter dated 7/7/2016, CEMVN forwarded a letter to the applicant with all public notice comments attached. The comments are listed above in d.2.

**(6) Applicant replied/provided views.**  NA/ Yes. Applicant provided a response to the public notice comments by letter to CEMVN on 11/8/2016 which read: In response to LDWF which requested justification and an alternatives analysis. The response stated that on 7/27/16 a meeting was held with LDWF to discuss the project. On 8/11/16 the applicant submitted the additional information in writing to LDWF and CEMVN. On 8/22/16 LDWF provided an email to CEMVN stating that LDWF's comments had been adequately addressed.

In response to USFWS, the applicant stated that coordination with USFWS, CEMVN and USGS was conducted via email beginning 6/21/2016 with USFWS comments regarding the removal of earthen plugs. Following the coordination and explanation of project design on 7/13/16, USFWS and USGS were satisfied with the applicant's proposal and had no further objection.

**(7) The following comments are not discussed further in this document as they are outside the Corps purview.**  NA/ Yes *Explain.*

#### 4. Alternatives Analysis.

**a. Basic and Overall Project Purpose (as stated by applicant and independent definition by Corps).**

Same as Project Purpose in Paragraph 1.

Revised: *Insert revised project purpose here and explain why it was revised.*

**b. Water Dependency Determination:**

Same as in Paragraph 1.

Revised: *Insert revised water dependency determination here if it has changed due to changing project purpose or new information.*

**c. Applicant preferred alternative site and site configuration.**

Same as Project Description in Paragraph 1.

Revised: *Explain any difference from Paragraph 1*

#### Criteria.

Issue	Measurement and/or constraint
<i>e.g. Wetlands</i>	<i>Acres of direct impact</i>
Project will impact 29.2 acres	29.2 total direct impacts:

<p>offorested swamp and bottomland hardwoods, and 13.7 acres of jurisdictional waterbottoms due to dredging, clearing and spoil placement in order to improve water quality and allow circulation within swamp habitats in the BBWMU.</p>	<p>10.9 forested acres of excavation, 16.4 forested acres of fill and clearing and 1.9 forested acres of clearing only.</p> <p>Alternatives were considered but were either logistically impracticable or no less damaging than the preferred design and footprint.</p>

**d. Off-site locations and configuration(s) for each (e.g. alternatives located on property not currently owned by the applicant are not practicable under the Section 404(b)(1) Guidelines:** Since this project is the maintenance dredging of existing channels within the BBWMU with the goal of improving circulation and flow within the unit, alternative sites were not deemed practicable. Alternative project designs and dredging options would incur similar impacts to wetlands since the project areas are basically surrounded by forested wetlands. The proposed dredging areas will incur impacts but portions of those sites are considered existing waterbottoms, which will not impact wetlands.

**Off-site locations and configurations**

Description	Comparison to criteria
N/A	Off-site alternatives were assessed in our review, however, off-site locations would not achieve the project purpose or would, otherwise, incur similar or more impacts than what is proposed.

e.  NA) Site selected for further analysis and why.

f. On-site configurations.

Description	Comparison to criteria
Spray dredging consideration.	Less damaging on-site configuration were assessed in our review. No alternative on-site configurations were found to be practicable to achieve the project purpose. Spray dredging was considered to minimize impacts due to placement of spoil and forested clearing of those spoil areas. It was determined that the spray dredging equipment and barge would not be able to access the proposed sites due to size and

	draft constraints.
Barging spoil to non-wet locations	Were not practicable for the same reasons stated above and would incur extremely high cost impacts and safety & logistics problems.

**g. Other alternatives not requiring a permit, including No Action.**

Description	Comparison to criteria
No Action	Impacts to 29.2 acres of wetlands would be avoided, however, channels would remain silted and circulation/flow improvements would not be achieved. The decreased water quality and low oxygen levels within the BBWMU would remain and continue to silt in waterways which had traditionally been used for fishing resources. Channel dimensions would not be improved. Woody vegetation would continue to take over the channels possibly eliminating access to additional areas currently accessible.

**h. Alternatives not practicable or reasonable.** The project locations are within the Beau Bayou Water Management Unit. The project elements proposed for work activity mostly consist of silted-in natural bayous with connections to man-made oilfield canals. Since the work is proposed within these existing channels, construction of a man made channel to provide river water to the management unit at another location would not be a less damaging alternative. Therefore, the current series of sites is considered the most practicable and least damaging option.

**i. Least environmentally damaging practicable alternative.** The preferred alternative was determined to be the least damaging alternative, for implementing the project.

**5. Evaluation of the 404(b)(1) Guidelines. ( NA)**

**a. Factual determinations.**

Physical Substrate. <input checked="" type="checkbox"/> See Existing Conditions, paragraph 1 <input checked="" type="checkbox"/> The project site is located within the Atchafalaya Basin which is part of the floodplain of the Atchafalaya River. The seasonal flows associated with rising floodwaters contains sediment which falls out in the habitats of the river floodplain. The habitats within the Beau Bayou Water Management Unit are primarily considered Cypress Tupelo Swamps and Bottomland
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Hardwood Forests. The project sites associated with this proposed work are Carville soils (Cr) which are undulating and frequently flooded; and, Dowling soils (Dw), 0 to 1 percent slopes, frequently flooded. The waterbottoms associated with the Bayous and channels within this proposed work are categorized as water (W).

Water circulation, fluctuation, and salinity.

Addressed in the Water Quality Certification.

The project site is located within the Atchafalaya River Basin. The site is composed of swamp and bottomland hardwoods habitat that is situated approximately 18 miles downstream from Butte Larose, LA which is subject to river flows and currents associated with rainfall and seasonal river flooding. Annual floodwaters flow through the project site bringing fresh water and sediment deposits. Traditionally, the many bayous within the BBWMU had enough depth to provide current and flows through the area which helped circulate oxygen through these waterways. Periodic rainfall events would supply flow and circulation depending on precipitation levels. Over time, most of these waterways and channel bottoms have been encroached with woody vegetation and accreting sediments, effectively cutting off most of the circulation to the BBWMU. Following completion of project construction, circulation patterns and water flows are anticipated to improve water quality, enhance habitats and improve fishery resources which are dependent on better dissolved oxygen levels than what presently exists in the project area. Changes in salinity levels are not expected.

Suspended particulate/turbidity.

Turbidity controls in Water Quality Certification.

The nature of a large river floodplain with its seasonal flows and flooding normally experience high levels of turbidity due to sediment content. This project will have no anticipated, long term, negative effects regarding turbidity. Construction activities associated with dredging and spoil placement would contribute to localized suspended sediments and turbidity levels. The presence of naturally filtering emergent vegetation are expected to gradually settle suspended particulates upon project completion. No long-term adverse impacts are anticipated to result from the operation of equipment, construction of the project and related, minor increases in suspended particulate concentrations and/or turbidity levels.

Contaminant availability.

General Condition requires clean fill.

The operation of machinery, dredging and deposition of fill material during construction activities may result in minor impacts to local water quality. This is expected to be temporary in nature. The operation of mechanized equipment may also result in incidental releases of hydrocarbons.

Aquatic ecosystem and organism.

Wetland/wildlife evaluations, paragraphs 5, 6, 7 & 8.



Wetlands at the project site are comprised of primarily Cypress/Tupelo Swamp and Bottomland Hardwoods which provide habitat for many varieties of aquatic species, mammals and migratory birds. The importance of the project area to fisheries productivity of the northern Gulf Coast is also manifested by the tremendous detrital export through the Atchafalaya River Watershed that fuels the estuarine food chain, and the contributions of regional wetlands to offshore water quality by assimilation of excess nutrient loads. The maintenance of channels within the project area, will provide circulation within the surrounding tidal estuary. During project construction, benthic organisms and species having restricted mobility inhabiting the work site will be immediately destroyed by construction activities. Except for sessile and slow moving species, project related mortality of aquatic organisms should be low. Overall, it is anticipated that proposed deposition activities would have short-term minor disturbance to nektonic and benthic resources, with no long-term, notable adverse impacts.

Proposed disposal site.

Public interest, paragraph 7.

In conjunction with the proposed channel dredging, deposition of 102,515 cubic yards of dredged fill will be placed within 16.4 acres of adjacent areas serving as spoil disposal areas. The disposal areas will be placed so as to alternate on either sides of the channels to prevent ponding or impoundment of adjacent habitats.

Cumulative effects on the aquatic ecosystem.

See Paragraph 7.e.

Implementation of the proposed project would contribute to affecting wetland resources via dredge and fill activities. Project construction, even though minimal in size when compared to the extent of wetland resources directly and/or secondarily impacted by previous development activities still contributes cumulatively to wetland alteration and/or loss not only locally but also on a statewide basis. The continued loss of natural wetland habitats and resulting decrease in dependent aquatic resources can impact commercial and non-commercial utilization of these resources.

Cumulatively, since the construction of the Atchafalaya Floodway following the Great Flood of 1927, sedimentation and accretion within the Atchafalaya Basin has claimed many water features and wetlands over time, turning lakes and swamps into bottomland hardwoods and in some cases, uplands.

This project's goal is an effort to counter the accretion process on 10 element waterways within the area called the Beau Bayou Water Management Unit. This project's impact to wetlands are small compared to the losses of habitat due to the heavy accretion experienced within Atchafalaya Basin.



Unfortunately, in the past many accomplishments were realized with little consideration given to project related impacts on the natural environment particularly wetland ecosystems. However, knowledge gained over the years as to the importance of wetlands to both human and fish and wildlife communities has resulted in a more comprehensive evaluation of the need to destroy wetland resources for residential, commercial or industrial developments. With gained knowledge comes technological advancement in less environmentally damaging project design and/or construction methods as well as requirement of mitigation to compensate for all unavoidable project-related impacts so as to meet the nations' goal of no net loss of wetland resources. As with this project, wetlands will continue to be threatened via a progressive society, however, with the understanding of the importance of wetlands to the overall ecology, impacts associated with development activities are thoroughly evaluated as required through the Department of the Army permit program to assure a balance is maintained between development and the environment. Through evaluation of the proposed action impacts on the aquatic environment, impact reduction through avoidance and minimization efforts and requirement of appropriate mitigation to compensate, if deemed necessary, for all unavoidable impacts to wetlands, it was determined that on a long-term and/or cumulative basis, project authorization would not substantially adversely impact the aquatic environment and therefore would not be contrary to the overall public interest.

**Secondary effects on the aquatic ecosystem.**

See Paragraph 7.e.

Construction of project features as proposed would contribute to minor adverse secondary impacts with minimal, adverse cumulative impacts. One negative secondary effect that has been considered, is the possibility of sediments rapidly building up within the newly dredged channels or adjacent wetlands following project construction. While this is a possibility, the removal of the woody vegetation from those channels will help prevent the accelerated trapping of debris and sediments from flowing river water. The permit authorization will be conditioned to include monitoring of secondary impacts associated with un-natural accumulation of sediments and other negative effects. If detrimental impacts persist, the applicant may be required to implement corrective measures. The positive secondary benefits include, land use, recreation, commercial fishing, navigation, increased circulation and flow of fresh river water and improved water quality. The project design is concurrent with the historic characteristics of the waterways prior to accumulation of sediments. Special conditions were included within the DA permit, to help mitigate and avoid potential secondary impacts.

**b. Restrictions on discharges (230.10).**

- (1) It has/has not been demonstrated in paragraph 4 that there are no practicable nor less damaging alternatives which could satisfy the project's basic purpose. The activity is/is not located in a special aquatic site (wetlands, sanctuaries, and refuges, mudflats, vegetated shallows, coral reefs, riffle & pool complexes). The activity does/does not need to be located in a special aquatic site to fulfill its basic purpose.
- (2) The proposed activity does/does not violate applicable State water quality standards or Section 307 prohibitions or effluent standards (based on information from the certifying agency that the Corps could proceed with a provisional determination). The proposed activity does/does not jeopardize the continued existence of federally listed threatened or endangered species or affects their critical habitat. The proposed activity does/does not violate the requirements of a federally designate marine sanctuary.
- (3) The activity will/will not cause or contribute to significant degradation of waters of the United States, including adverse effects on human health; life stages of aquatic organisms' ecosystem diversity, productivity and stability; and recreation, esthetic, and economic values.
- (4) Appropriate and practicable steps have/have not been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (see Paragraph 8 for description of mitigative actions).

6. Public Interest Review: All public interest factors have been reviewed as summarized here. Both cumulative and secondary impacts on the public interest were considered. Public interest factors that have had additional information relevant to the decision are discussed in number 7.

				+ Beneficial effect
				0 Negligible effect
				- Adverse effect
				M Neutral as result of mitigative action
+	0	-	M	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Conservation.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Economics.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Aesthetics.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	General environmental concerns.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Wetlands.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Historic properties.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fish and wildlife values
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flood hazards.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodplain values.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Land use.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Navigation.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Shore erosion and accretion.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recreation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water supply and conservation.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water quality.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Energy needs.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Food and fiber production.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mineral needs.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Considerations of property ownership.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Needs and welfare of the people.

**7. Effects, policies and other laws.**

a.  NA

**Public Interest Factors. (add factors that are relevant to specific project that you checked in number 6 above and add a discussion of that factor)**

Factor	Discussion
Water quality and circulation	Dredging will improve circulation within the BBWMU by returning channels to their historic depths and characteristics.
Needs of the people	The project facilities will serve to provide access and improved recreation for fishing and crawfishing and other outdoor interests.

b. **Endangered Species Act.**  NA Not likely to jeopardize the continued existence of the Western Indian Manatee. USFWS-SLOPES agreement of 22 October 2014- Determination Key conducted on May 27, 2016 resulted in no anticipated impacts to any known T&E Species or their critical habitat.

The proposed project:

(1) Will not affect these threatened or endangered species:

Any/ \_\_\_\_\_. Explain.

(2) May affect, but is not likely to adversely affect:

Species: \_\_\_\_\_ Explain.

(3)  Will/ Will not adversely modify designated critical habitat for the \_\_\_\_\_ . Explain.

(4) Is/Is not likely to jeopardize the continued existence of the \_\_\_\_\_. *Explain.*

(5) The Services concurred/provided a Biological Opinion(s).

- c. **Essential Fish Habitat. Adverse impacts to Essential Fish Habitat** will/will not result from the proposed project. No comment was received from NMFS following the public notice.
- d. **Historic Properties. The proposed project** will/will not have any affect on any sites listed, or eligible for listing, in the National Register of Historic Places, or otherwise of national, state, or local significance based on letter from SHPO. / Based on no objections received from SHPO via Public Notice comments and email correspondence. By letter dated July 25, 2016, LA SHPO commented that they had no concern with the proposed clearing, cutting, chipping and disposal along the channel banks, provided that ground disturbing impacts of the clearing and disposal are limited to the upper foot of the disposal area surface. SHPO stated that their office did have potential concerns for the grubbing of tree roots from the banks of bayous and canals as this effort could result in significant ground disturbance as the tree is removed. If the grubbing can be restricted to the original bayou/ canal channels, then no concerns will remain. In these areas, SHPO recommended either grabbing not occur or that an archaeological monitor be present to assess whether any historic properties were impacted by the disturbance. SHPO specifically requested that an archaeological monitor be present during the excavation of the "virgin cut" on "Element 7".

Following a 30-day tribal review, on 8/26/16, the Alabama Coushatta Tribe responded by stating that following review of the proposed work, "no known impacts to cultural resources of the Alabama-Coushatta Tribe of Texas are anticipated in conjunction with this proposal." "In the event that of the inadvertent discovery of human remains and/or archaeological artifacts, activity in proximity to the location must cease and appropriate authorities, including our office, notified without delay for additional consultation."

- e. **Cumulative & Secondary Impacts. The geographic area for this assessment is the Atchafalaya River Basin.**
- (1) **Baseline. The projection is that authorizations will continue** at the current rate/increase/ because of regional demographic trends. **Natural resource issues of particular concern [from Corps & non-Corps activities]** are on-going sedimentation and accretion, continued conversion of wetlands, fragmentation, loss of wetland habitat, and reduction in stormwater capacity.



- (2) **Context.** The proposed project is typical of /a precedent /very large compared to /similar maintenance dredging projects. Development similar to this proposal have occurred throughout coastal marshland habitats and within the Atchafalaya Basin. Future conditions are expected to promote wetland protection/enhancement projects and maintenance dredging. Besides Corps authorized projects, other activities include local parish projects (i.e. drainage, flood protection). Resulting natural resource changes and stress include approximately 29.2 acres of wetland impacts and 13.7 acres of waterbottom impacts. These resources are also being affected by invasive species overgrowth. A key of concern in this watershed is the heavy sediment accretion within waterways and the conversion of swamps to bottomlands and uplands.
- (3) **Mitigation and Monitoring.** The project affects the following key issue(s): excavation and fill within forested wetlands will impact 29.2 acres of jurisdictional wetlands. Mitigation was required to fully offset impacts. The applicant has acquired 44.3 acres of bottomland hardwoods credits from Bayou Fisher Mitigation Bank to offset and mitigate unavoidable wetland impacts. The DA permit authorization also includes special conditions which require monitoring of water quality, accelerated accretion and unanticipated secondary impacts to surrounding wetlands and waters.

***Expand this section commensurate with the level of impact and appropriate level of existing and reasonably foreseeable watershed stress to aquatic resources.***

- f. **Corps Wetland Policy.** Based on the public interest review herein, the beneficial effects of the project outweigh the detrimental impacts of the project. Project detriments associated with this activity would result in the impacts to 29.2 acres of forested habitat and 13.7 acres of waterbottoms and their associated biological and social benefits.
- g. (NA) **Water Quality Certification under Section 401 of the Clean Water Act** has/has not yet been issued by  /State/Commonwealth. The Louisiana Department of Environmental Quality (LDEQ), Office of Environmental Services, in a letter dated August 11, 2016, issued their Water Quality Certification (WQC 160523-01) The letter stated that the placement of fill material would not violate the water quality standards of Louisiana and, therefore, offered no objection toward permit issuance.
- h. **Coastal Zone Management (CZM) consistency/permit:** Project is located outside of the Louisiana Coastal Zone.  There is no evidence or indication from the CZM that the project is inconsistent with their CZM plan.
- i. **Other authorizations.** St. Martin Parish did not comment as they are the applicant of this project. The Parish President for St. Martin Parish attended



a meeting at the New Orleans District on 9/8/2016 to voice his support for the project.

j.  **NA) Significant Issues of Overriding National Importance. Explain.**

**8. Compensation and other mitigation actions.**

**a. Compensatory Mitigation**

(1) Is compensatory mitigation required?  yes  no [If "no," do not complete the rest of this section]

(2) Is the impact in the service area of an approved mitigation bank?  
 yes  no

(i) Does the mitigation bank have appropriate number and resource type of credits available?  yes  no

(3) Is the impact in the service area of an approved in-lieu fee program?  yes  no

(i) Does the in-lieu fee program have appropriate number and resource type of credits available?  yes  no

(4) Check the selected compensatory mitigation option(s):

- mitigation bank credits
- in-lieu fee program credits
- permittee-responsible mitigation under a watershed approach
- permittee-responsible mitigation, on-site and in-kind
- permittee-responsible mitigation, off-site and out-of-kind

(5) If a selected compensatory mitigation option deviates from the order of the options presented in §332.3(b)(2)-(6), explain why the selected compensatory mitigation option is environmentally preferable. Address the criteria provided in §332.3(a)(1) (i.e., the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project):

(6) **Other Mitigative Actions:** The permit is designed so that spoil material will be placed on alternating sides of the channels to avoid ponding and to protect sheet flow. Woody vegetation will be chipped and broadcasted. A qualified archaeologist will be present to monitor excavation activities and ensure that shoreline activity does not destroy cultural resources. Conditions will be included to protect bird nesting

colonies.

- 9. General evaluation criteria under the public interest review. We considered the following within this document:**
- a. The relative extent of the public and private need for the proposed structure or work.** Public benefits include navigation and improved water quality which is anticipated to provide recreational benefits such as fishing and harvesting crawfish. Private benefits include land use and the same benefits named above.
  - b.  There are no unresolved conflicts as to resource use. ( There are unresolved conflicts as to resource use. One or more of the alternative locations and methods described above are reasonable or practicable to accomplish the objectives of the proposed structure or work but are not being accepted by the applicant.**
  - c. The extent and permanence of the beneficial and/or detrimental effects, which the proposed work is likely to have on the public, and private uses to which the area is suited.  Project detriments associated with this construction are considered long-term and would result in the permanent impact to approximately 29.2 acres of forested habitat and 11 acres of waterbottoms due to the excavation of channels and placement of spoil. Benefits would be realized since the project will improve water quality, circulation and beneficial river flows. Other benefits are in the form of access and navigation and recreational opportunity as a secondary benefit.**

**10. Determinations.**

- a. Public Hearing Request:  NA**  
  
 I have reviewed and evaluated the requests for a public hearing. There is sufficient information available to evaluate the proposed project; therefore, the requests for a public hearing are denied.
- b. Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit will not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons a conformity determination is not required for this permit action.**

**c. Relevant Presidential Executive Orders.**

- (1) **EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians.**  This action has no substantial direct effect on one or more Indian tribes.
- (2) **EO 11988, Floodplain Management.**  Not in a floodplain. ( Alternatives to location within the floodplain, minimization, and compensation of the effects were considered above.)
- (3) **EO 12898, Environmental Justice.** In accordance with Title III of the Civil Right Act of 1964 and Executive Order 12898, it has been determined that the project would not directly or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities.
- (4) **EO 13112, Invasive Species.**
  - There were no invasive species issues involved.
  - The evaluation above included invasive species concerns in the analysis of impacts at the project site and associated compensatory mitigation projects.
  - Through special conditions, the permittee will be required to control the introduction and spread of exotic species.
- (5) **EO 13212 and 13302, Energy Supply and Availability.**
  - The project was not one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety. ( The review was expedited and/or other actions were taken to the extent permitted by law and regulation to accelerate completion of this energy-related (including pipeline safety) project while maintaining safety, public health, and environmental protections.)

**d. Finding of No Significant Impact (FONSI).** Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, I find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.

**e. Compliance with 404(b)(1) guidelines.**  NA

Having completed the evaluation in paragraph 5, I have determined that

CEMVN-OD-SW (Application MVN-2015-01796-WLL)

SUBJECT: Department of the Army Environmental Assessment and Statement of Findings for the Above-Numbered Permit Application

the proposed discharge complies/does not comply with the 404(b)(1) guidelines.

f. Public Interest Determination: I find that issuance of a Department of the Army permit is not/is contrary to the public interest.

PREPARED BY:

  
Project Manager

12/15/16  
Date

REVIEWED BY:

  
Chief, Western Evaluation Section

\_\_\_\_\_  
Date

APPROVED BY:

  
Chief, Regulatory Branch

23 Dec 2016  
Date



**PERMIT**

**PROJECT MANAGER:** Mike Herrmann

**EXT.:** 1954

**PERMIT NO.:** MVN 2015-01796-WLL

**ACTION:** X 404 X 10

**APPLICANT:** Saint Martin Parish Government, P.O. Box 9, St. Martinville, LA 70582

**ENVELOPE ADDRESS:** Saint Martin Parish Government, C/O: Sellers and Associates, Inc., ATTN: Nick Sonnier, 148 Easy Street, Lafayette, LA 70506

**PROJECT DESCRIPTION:** Conduct mechanized clearing, snagging, excavation and placement of spoil material along 9-miles of existing channels which have been negatively affected by heavy sediment accretion and woody overgrowth within the Beau Bayou Water Management Unit to restore flow, circulation and water quality.

**PROJECT LOCATION:** In the Beau Bayou Water Management Unit approximately 14 miles downstream from the town of Butte Larose, Township 10S & 11S Range 9E, (30.145 N, -91.595 W) within the Atchafalaya River Basin in St. Martin Parish, Louisiana.

IN ACCORDANCE WITH DRAWINGS (44) ATTACHED dated April 2015

**EXPIRATION DATE:** 31 December 2021

**FEE:** \$.00

**SPECIAL CONDITIONS:** YES

7. If the project requires any additional work not expressly permitted herein, or impact any wetlands other than the areas indicated on the attached drawings, the permittee must apply for an amendment to this authorization, prior to commencing that work.
8. The permittee must install and maintain, at his expense, any safety lights and signals prescribed by the US Coast Guard, through regulations or otherwise, on the authorized facilities.
9. The permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.
10. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein

authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

11. If the project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.) in the waterway, you are advised to notify the Eighth Coast Guard District so that a Notice to Mariners, if required, may be prepared. Notification with a copy of your permit approval and drawings should be mailed to the Commander (dpw), Eighth Coast Guard District, Hale Boggs Federal Building, 500 Poydras Street, Room 1230, New Orleans, Louisiana 70130, about 1 month before you plan to start work. Telephone inquiries can be directed to the Eighth Coast Guard District, Waterways Management at (504) 671-2107

12. Many local governing bodies have instituted laws and/or ordinances in order to regulate dredge and/or fill activities in floodplains to assure maintenance of floodwater storage capacity and avoid disruption of drainage patterns that may affect surrounding properties. Your project involves dredging and/or placement of fill, therefore, you must contact the local municipal and/or parish governing body regarding potential impacts to floodplains and compliance of your activities with local floodplain ordinances, regulations or permits.

13. Natural low lying areas such as sloughs, canals, bayous, etc., that currently facilitate water flow and exchange within and throughout the project area, shall not be blocked or impeded as a result of dredge material or debris deposition.

14. The authorized project is designed for the purpose of improving water quality and aquatic habitat values throughout the Beau Bayou Water Management Unit (BBWMU), by restoring historical beneficial riverine inflows and sheet flows into the BBWMU area and adjacent swamps, thereby increasing water circulation patterns, improving dissolved oxygen levels, and reducing negative sediment accumulation conditions. The permittee shall provide this office with (pre and post) project monitoring reports **1 year following project completion and at years 3 and 5 following completion.** Monitoring information shall include but is not limited to (pre and post) conditions of the BBWMU project benefit area, to include: (1) water quality data and dissolved oxygen levels, (2) water flow and circulation patterns, (3) sedimentation and accretion conditions, (4) sediment accretion rates, (5) scouring conditions, (6) and relevant site specific photographs. As to support the submittal of appropriate and accurate research, observations and data collection shall be conducted in multiple locations throughout the overall BBWMU project benefit zone. The reports and associated information shall be submitted to this office with reference to your subject DA permit number.

15. The permittee is made aware that if implementation of the subject work is determined to have inadvertently induced or otherwise lead to unnatural impacts and detriments to adjacent waters and/or habitats through sedimentation accretion, erosional effects, or unforeseen degradation of water quality in the area, corrective measures may be required by this office following review and coordination with other pertinent state and federal resource agencies.

16. Future proposals for maintenance dredging of the waterways will require re-evaluation by this office and a separate DA permit review. Authorization of future maintenance dredging activities will be determined based on project related benefits to the aquatic environment, as documented by monitoring data and results, as stipulated within special condition # 14 above.

17. The Chitimacha Tribe of Louisiana has stated that the project area is part of the aboriginal Chitimacha homelands. If during the course of work at the site, prehistoric and/or historic aboriginal cultural materials are discovered, the permittee will contact the Chitimacha Tribe of Louisiana at Post Office Box 661, Charenton, Louisiana 70523, and the U.S. Army Corps of Engineers, New Orleans District (CEMVN) Regulatory Branch. CEMVN will initiate the required Federal, State, and Tribal coordination to determine the significance of the cultural materials and the need, if applicable, for additional cultural resource investigations.

18. Appropriate erosion and siltation controls must be utilized during construction to prevent sediment runoff into adjacent wetlands and waterways. Sediment control techniques could include but are not limited to the use of secured hay bales, sediment fencing, wooden or vinyl barriers, and/or seeding of disturbed areas. These techniques should be maintained in effective operating condition until a point that sediment runoff from construction activities is controlled and maintained.

19. The permittee is made aware that a certified archaeological monitor shall be present onsite at any time that the grubbing of tree roots is performed along the channel banks to assess whether any historic properties were impacted by the disturbance. A monitor shall also be present during the excavation of "Element-7".

20. Issuance of this permit confirms that CEMVN has been provided with written notification from Delta Land Services that the permittee has contracted for **44.3 acres of bottomland hardwoods at The Bayou Fisher Mitigation Bank. Delta Land Services** has assumed responsibility for completing the mitigation in accordance with the Bayou Fisher Mitigation Bank Instrument and has recorded the allocation of the mitigation required by this permit in the Regulatory In-lieu Fee & Bank Information Tracking System (RIBITS).

21. The permittee is made aware that bird nesting colonies may exist within one mile of this proposed project and that entry into or disturbance of active breeding colonies is prohibited by the Louisiana Department of Wildlife and Fisheries (LDWF). In addition, LDWF prohibits work within a certain radius of an active nesting colony. If the work activity is to be conducted during the nesting season, then prior to beginning work on this project, the permittee shall coordinate with the LDWF, Natural Heritage Program (225) 765-2357.

22. The permittee is made aware that there have been known Bald Eagles and nests in the project vicinity, in the past. If a nest is observed within 600 feet of any work area, the permittee shall cease activities and contact the USFWS at (337) 291-3123 C/O: Mr. Michael Sealy, for further coordination and consultation. Any consultation with the USFWS shall be coordinated with this office.



JAN 17 2017

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FILE COPY

Operations Division  
Western Evaluation Section

SUBJECT: MVN-2015-01796-WLL

Saint Martin Parish Government  
Post Office Box 9  
Saint Martinville, Louisiana 70582

Dear Gentlemen:

Enclosed is a permit dated this date, subject as above, authorizing work under the Department of the Army permit program.

You are again reminded that any work not in accordance with the approved plans is subject to removal regardless of the expense and the inconvenience that such removal may involve and regardless of the date when the discrepancy is discovered.

Your attention is directed to all the terms and conditions of the approval. In order to have the work approved in accordance with the issued permit, all terms and conditions of the permit and plans shown on the drawings attached thereto must be rigidly adhered to.

It is necessary that you notify the District Engineer, Attention: Western Evaluation Section, in writing, prior to commencement of work and also upon its completion. The notification must include the permittee's name, as shown on the permit, and the permit number. Please note the expiration date on the permit. Should the project not be completed by that date, you may request a permit time extension. Such requests must be received before, but no sooner than six months before, the permit expiration date and must show the work completed and the reason the project was not finished within the time period granted by the permit.

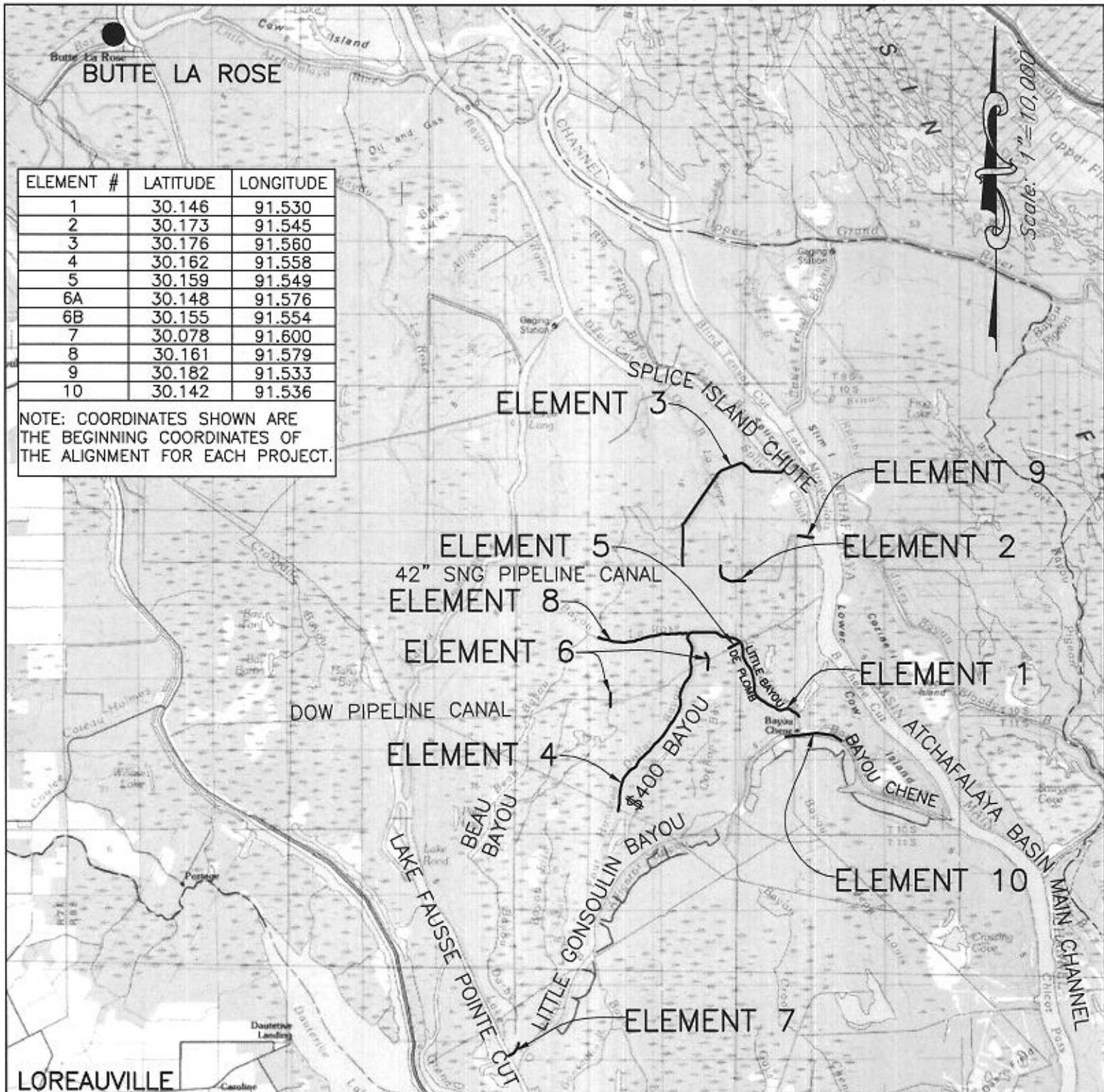
A copy of Page 1 of the permit (ENG Form 1721) must be conspicuously displayed at the project site. Also, you must keep a copy of the signed permit at the project site until the work is completed.

Sincerely,

Darrell S. Barbara  
Chief, Western Evaluation Section

Enclosure

DSB  
D. Barbara  
Chief, OD-SW



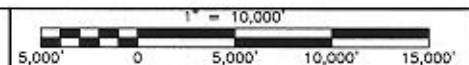
ELEMENT #	LATITUDE	LONGITUDE
1	30.146	91.530
2	30.173	91.545
3	30.176	91.560
4	30.162	91.558
5	30.159	91.549
6A	30.148	91.576
6B	30.155	91.554
7	30.078	91.600
8	30.161	91.579
9	30.182	91.533
10	30.142	91.536

NOTE: COORDINATES SHOWN ARE THE BEGINNING COORDINATES OF THE ALIGNMENT FOR EACH PROJECT.

**GENERAL NOTES:**

1. THE CONTRACTOR SHALL MINIMIZE DISTURBING AREAS TO THE FOOTPRINT NEEDED FOR CONSTRUCTION. ALL AREAS TO BE CLEARED SHALL BE FLAGGED AND INSPECTED PRIOR TO CLEARING OPERATIONS TO INSURE NO DAMAGE TO SIGNIFICANT TREES.
2. UNLESS SPECIFIED OTHERWISE, ALL EXCAVATION SHALL REMAIN WITHIN THE EXISTING CHANNEL TOP BANK. IF THE PROPOSED ALIGNMENT AND TEMPLATE WILL RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE ALIGNMENT OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH OF THE DESIGN TEMPLATE TO REMAIN WITHIN THE EXISTING TOP BANK OF THE CHANNEL.
3. EXISTING FEATURES ARE ESTIMATED FROM LIDAR DATA. EXISTING TOP BANK SHALL BE FIELD DETERMINED AND ADJUSTED ACCORDINGLY.
4. WITHIN AREAS MARKED FOR CLEARING & SPOIL DISPOSAL, ALL TREES AND WOODY VEGETATION NOT MARKED FOR PRESERVATION SHALL BE CUT SO THE REMAINING STUMP EXTENDS NO MORE THAN 12" ABOVE THE GROUND SURFACE. CLEARED MATERIAL SHALL BE STOCKPILED AND COVERED WITH EXCAVATED MATERIAL TO A DEPTH OF AT LEAST 2'.
5. PLACEMENT OF EXCAVATED MATERIAL SHALL BE CONTAINED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS. THE EXCAVATED MATERIAL BERM SHALL SLOPE BACK TO NATURAL GROUND AT A 2H:1V SLOPE, AND SHALL NOT BE CONTINUOUS FOR MORE THAN 400', UNLESS SPECIFIED OTHERWISE. THE EXCAVATED MATERIAL BERM SHALL HAVE GAPS WITH A MINIMUM OPENING OF 50' TO ALLOW THE FREE EXCHANGE OF WATER BETWEEN THE CHANNEL AND ADJACENT SWAMP.

QUAD MAP SHOWN: U.S.G.S. BATON ROUGE TOPOGRAPHIC MAP (1984) (1:100,000) (USGS REF. CODE:30091-A1-TM-100)



ENGINEER	M. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

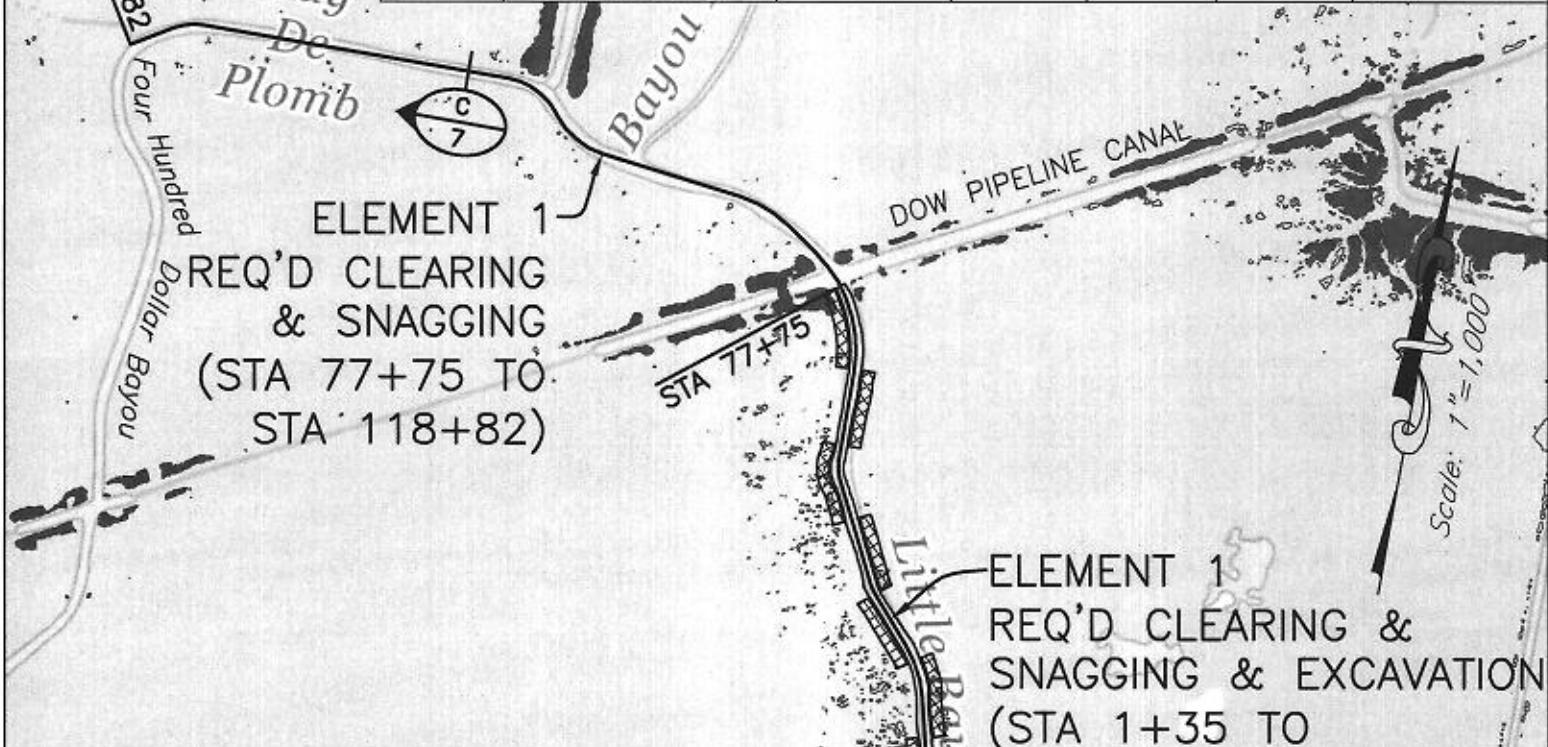
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ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70506 (337) 238-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

VICINITY MAP & GENERAL NOTES

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 1 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
1	CLEARING & EXCAVATION	1+35	77+75	7,640'	30'	VARIES (50'-110')
1	CLEARING & SNAGGING	77+75	118+82	4,107'		VARIES (90'-100')



**ELEMENT 1**  
**REQ'D CLEARING & SNAGGING**  
**(STA 77+75 TO STA 118+82)**

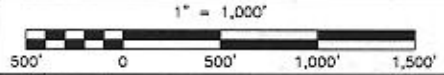
**ELEMENT 1**  
**REQ'D CLEARING & SNAGGING & EXCAVATION**  
**(STA 1+35 TO STA 77+75)**

**CLEARING AND SPOIL DISPOSAL AREAS ALTERNATE BANKS EVERY 400' (400'x60' TYP.)**

- NOTES:**
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN.  
 STA 1+35 TO STA 77+75: ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE EXISTING TOP BANK SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.  
 STA 77+75 TO STA 118+82: ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CHIPPED IN PLACE AS CLOSE TO THE GROUND AS THE CUTTING TOOLS PERMIT.
  2. MATERIAL EXCAVATED FROM ELEMENT 1 SHALL BE PLACED IN THE CLEARING AND SPOIL DISPOSAL AREAS SHOWN ON THIS SHEET, OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. STA 1+35 TO STA 5+00: THE CONTRACTOR SHALL CLEAR & EXCAVATE ACCORDING TO THE ALIGNMENT AND TYPICAL SECTION SHOWN. THE WORK WILL INCLUDE CLEARING & EXCAVATION OUTSIDE OF THE EXISTING CHANNEL.
  4. STA 5+00 TO STA 77+75: THE CONTRACTOR SHALL CLEAR & EXCAVATE ACCORDING TO THE TYPICAL SECTION SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.
  5. PROPOSED WORK WILL INCLUDE OPERATING OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.

LEGEND	
	CLEARING & SPOIL DISPOSAL AREAS
	UPLANDS (EL. > 15.6)

SECTION TITLE  
 SHEET NO. SHOWING SECTION



DESIGNED BY	N. SOMMER
DRAWN BY	J. FAIRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

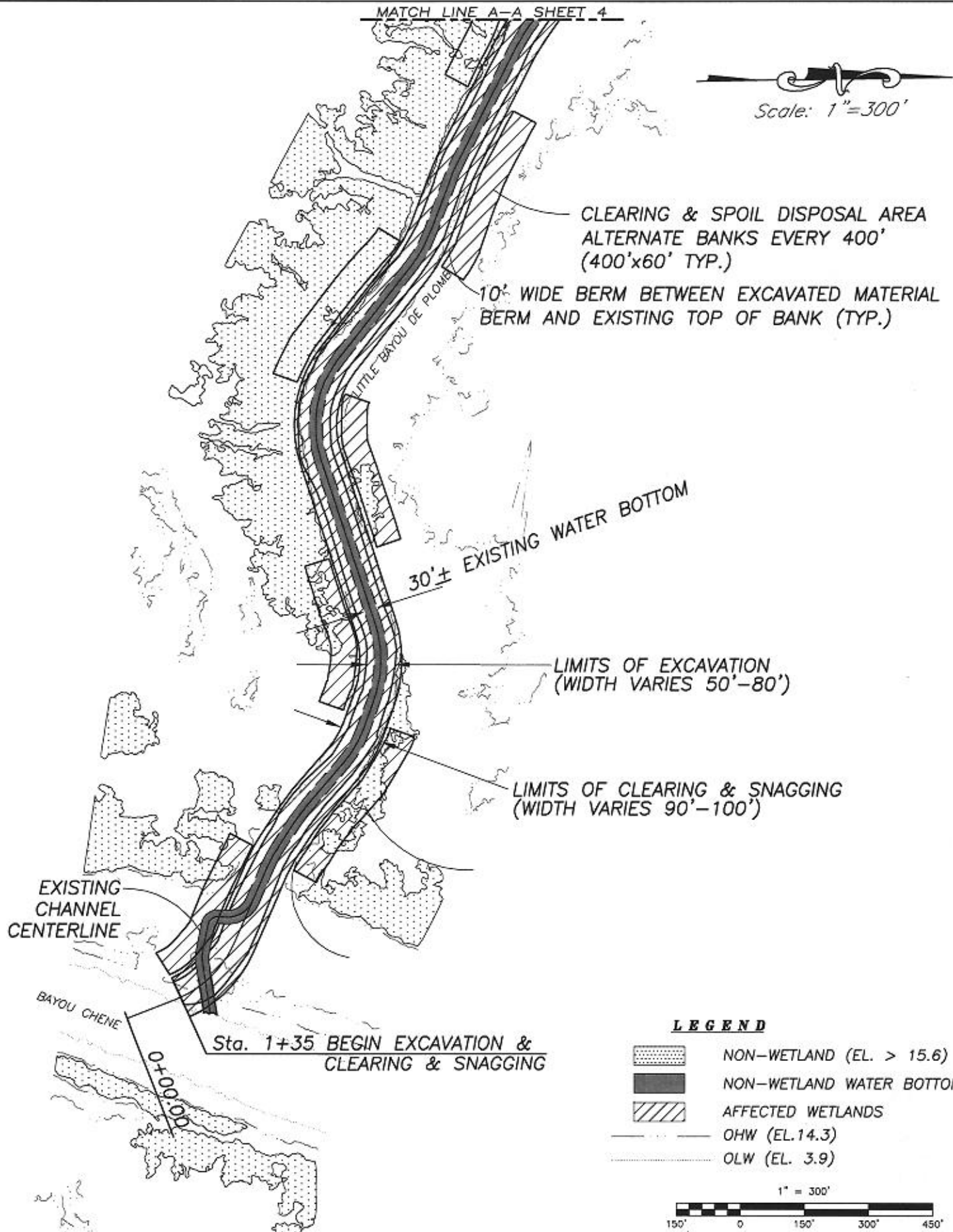
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 148-B Easy Street, Lake Charles, LA 70606 (337) 858-0777

**BEAU BAYOU SWAMP HYDROLOGIC RESTORATION**  
**ELEMENT 1 - OVERALL PLAN VIEW**






CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	2
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

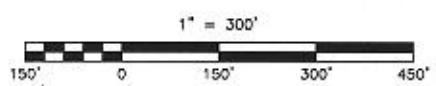
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**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



K:\DATA\B004-07\Ferriss\Berm\Drawings\B004-07 Project 1 Plans.dwg

ENGINEER	N. SCHNER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	B004-07
FILE NO.	OVERALL.DWG



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148-D Bay Street, Lafayette, LA 70508 (507) 252-0777

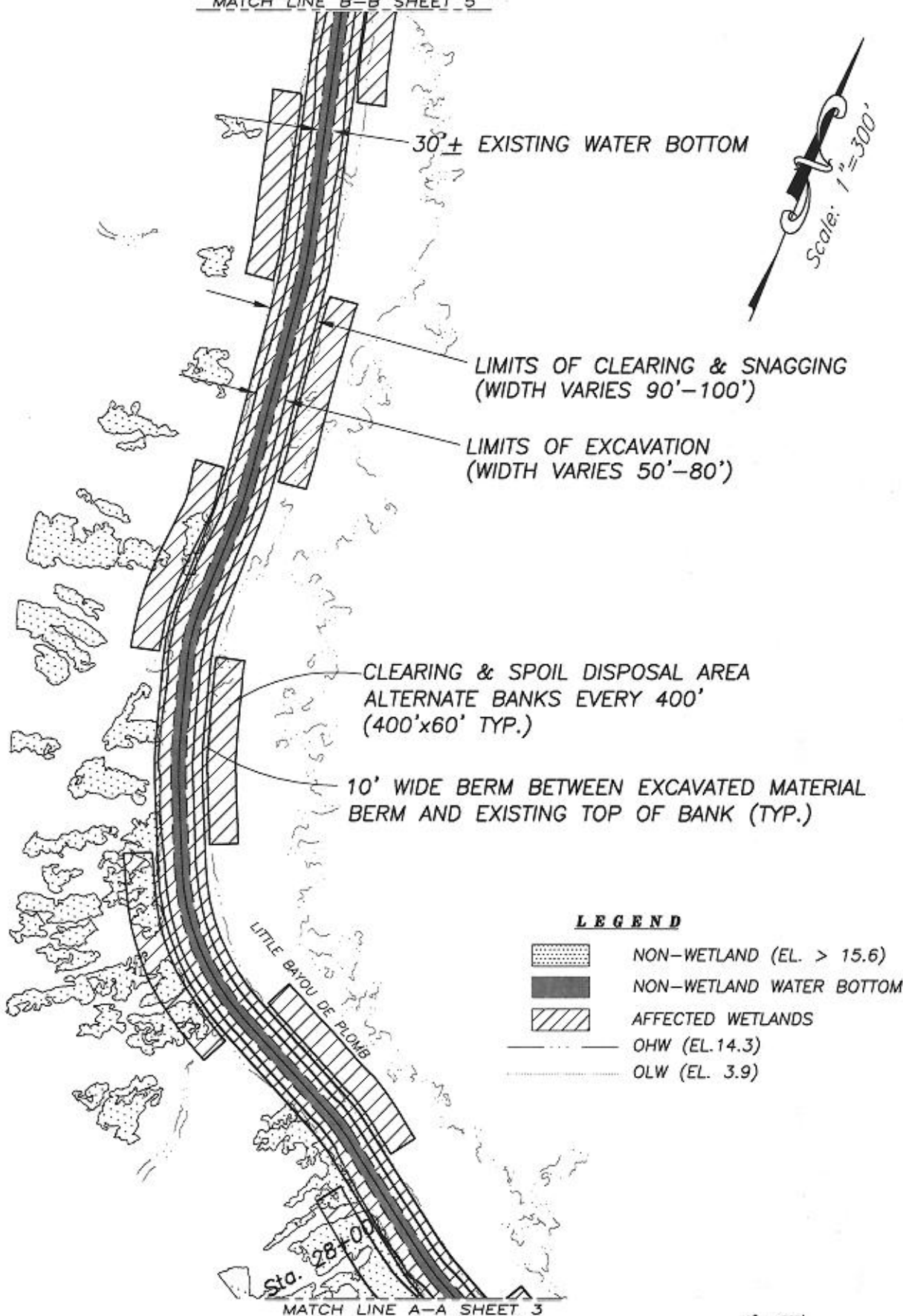
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA



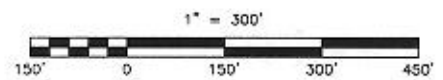
MATCH LINE B-B SHEET 5



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

MATCH LINE A-A SHEET 3



A-1, 04/21/2016, 8:00:4-07, Permits/Permit Drawings/8004-07 Project, J. Plans.dwg

ENGINEER	N. SCHWAB
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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 ENGINEERS SURVEYORS  
 144-II Easy Street, Lafayette, LA 70506 (337) 236-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
**4**  
 OF  
**44**

MATCH LINE C-C SHEET 6

LIMITS OF CLEARING AND SNAGGING  
(WIDTH VARIES 90'-100')

30'± EXISTING WATER BOTTOM

LITTLE BAYOU DE PLOMB

DOW PIPELINE CANAL

Sta. 77+75  
END EXCAVATION  
BEGIN CLEARING &  
SNAGGING ONLY

30'± EXISTING WATER BOTTOM




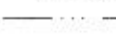

LIMITS OF EXCAVATION  
(WIDTH VARIES 50'-80')

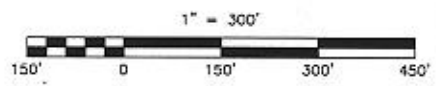
CLEARING & SPOIL DISPOSAL AREA  
ALTERNATE BANKS EVERY 400'  
(400'x60' TYP.)

10' WIDE BERM BETWEEN EXCAVATED MATERIAL BERM  
AND EXISTING TOP OF BANK (TYP.)



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



MATCH LINE B-B SHEET 4

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ENGINEER	N. SCHNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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148-B Bay Street, Lafayette, LA 70508 (337) 288-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
5  
OF  
44

118+82  
END CLEARING  
& SNAGGING

FOUR HUNDRED  
DOLLAR BAYOU






LIMITS OF CLEARING AND SNAGGING  
(WIDTH VARIES 90'-100')

30'± EXISTING WATER BOTTOM

LITTLE BAYOU DE PLOMBS

Scale: 1"=300'

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



MATCH LINE C-C SHEET 5

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DESIGNED BY	M. SCHNIER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



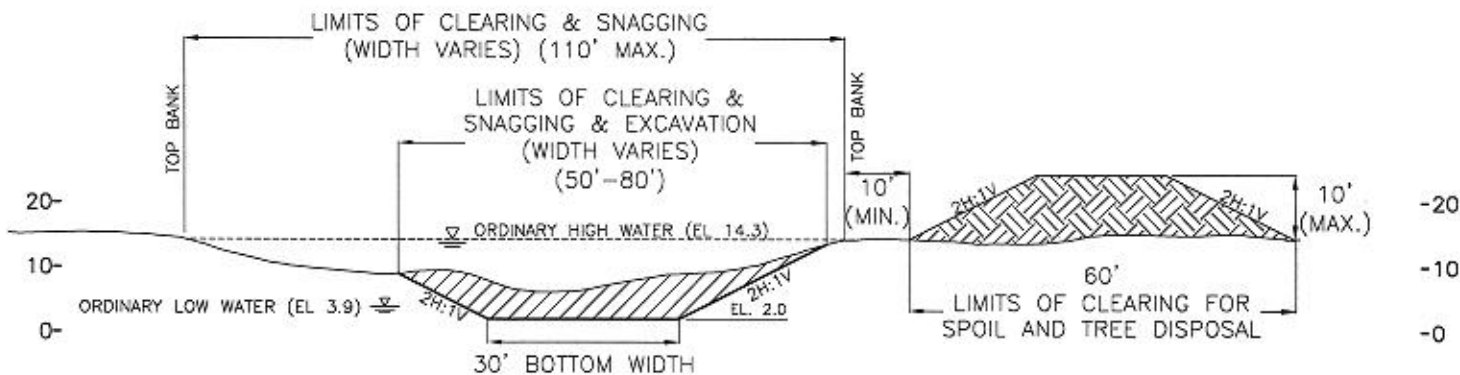
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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

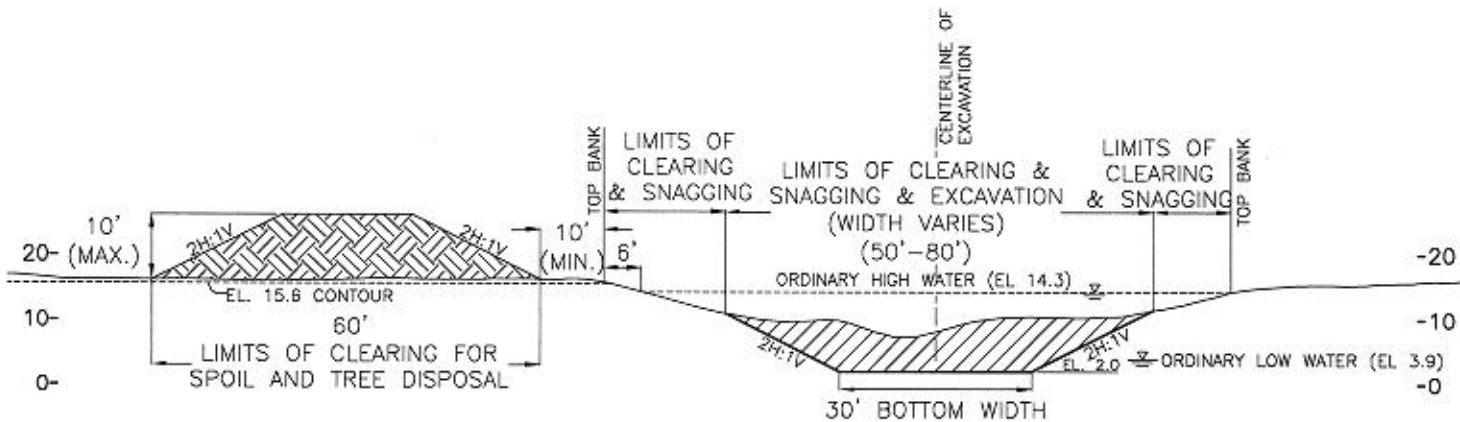
ELEMENT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

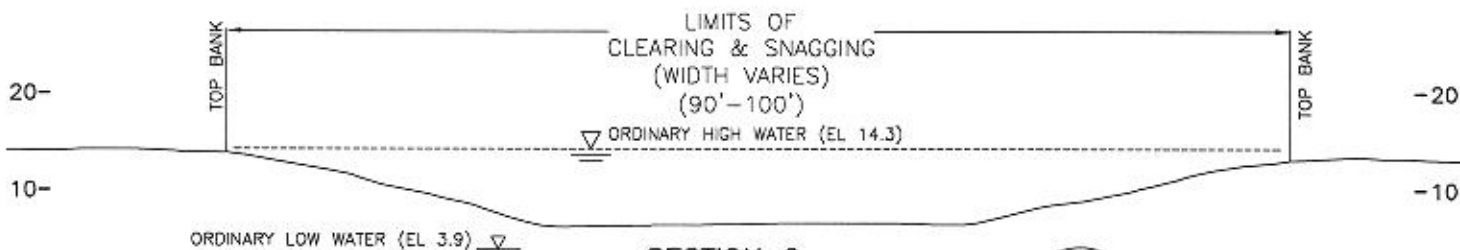
SHEET  
6  
OF  
44



**SECTION A**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 1+35 TO STA 77+75  
 SCALE: 1"=30'



**SECTION B**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 1+35 TO STA 77+75  
 SCALE: 1"=30'



**SECTION C**  
**TYPICAL SECTION-CLEARING & SNAGGING**  
 STA 77+75 TO STA 118+82  
 SCALE: 1"=20'

PROJECT FEATURES	QUANTITY
CHANNEL EXCAVATION (CU. YDS.)	86,670
CLEARING & SNAGGING (LIN. FT.)	11,747
CLEARING (ACRES)	12.3

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

ENGINEER	N. SOMMER
DRAWN BY	N. SOMMER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD



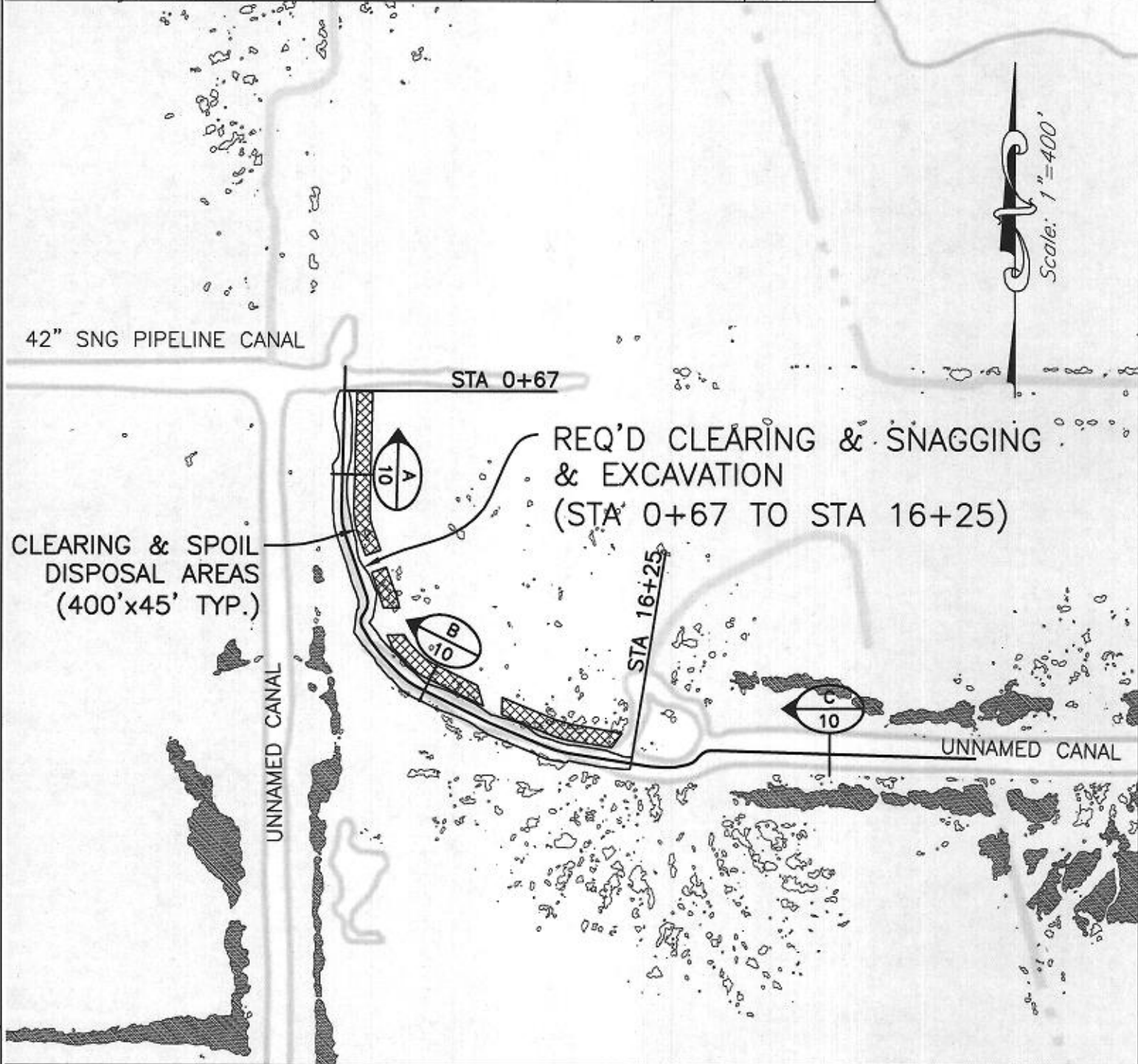
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 1 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 7 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
2	CLEARING & EXCAVATION	0+67	16+25	1,558'	15'	VARIES (25'-55')



**NOTES:**

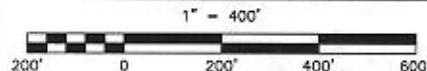
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 2 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE ALIGNMENT AND TYPICAL SECTION SHOWN. SINCE THE EXISTING CHANNEL CENTERLINE MEANDERS, THE PROPOSED ALIGNMENT MAY INVOLVE EXCAVATION OUTSIDE OF THE EXISTING TOP BANK.



**LEGEND**  
 CLEARING & SPOIL DISPOSAL AREAS  
 UPLANDS (EL. > 15.6)



SECTION TITLE  
 SHEET NO. SHOWING SECTION



DESIGNED BY	N. SONMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE



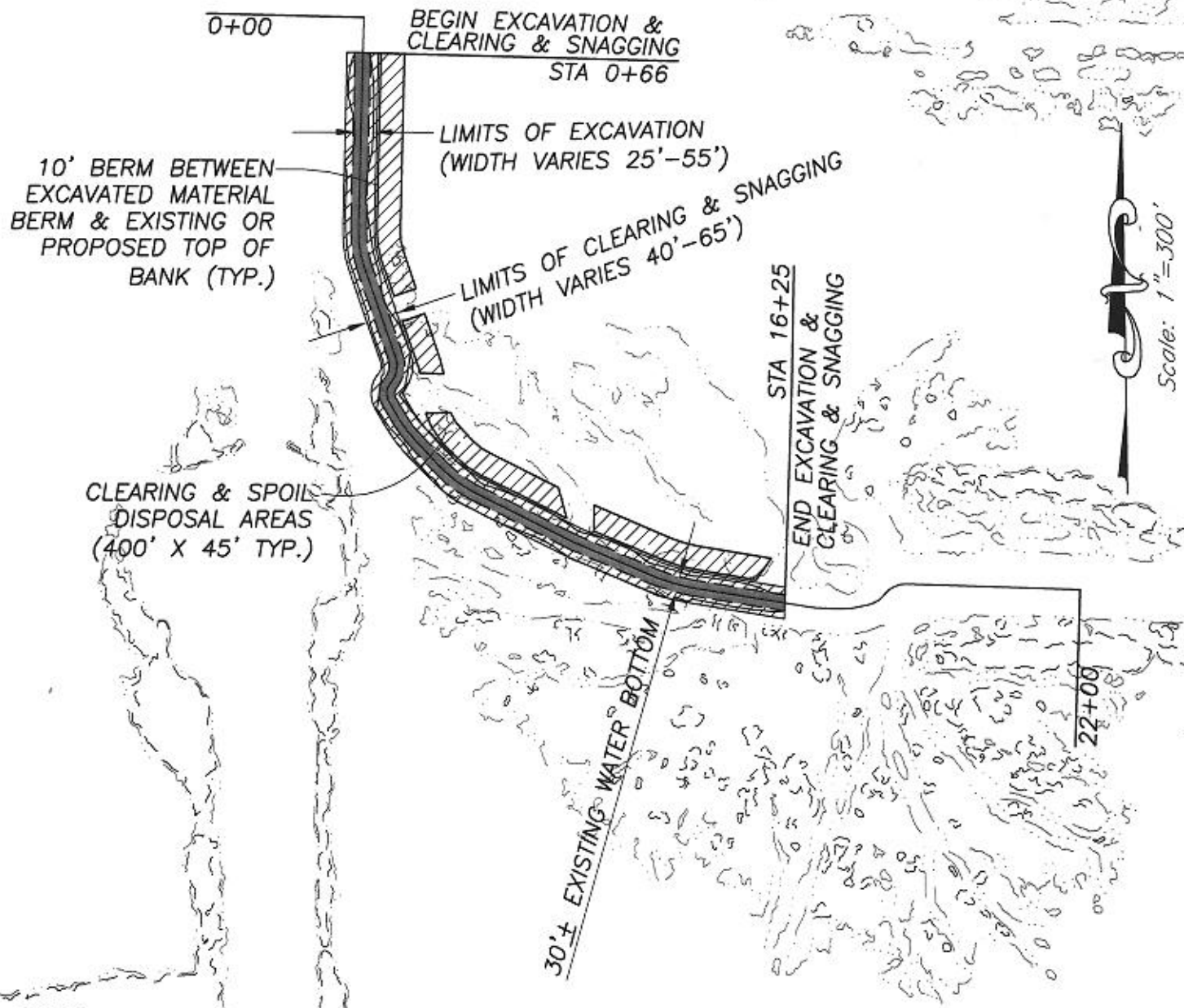
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 2 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	8
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

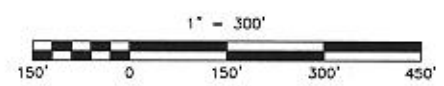
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**LEGEND**

- NON-WETLAND (EL. > 15.6)
- NON-WETLAND WATER BOTTOM
- AFFECTED WETLANDS
- OHW (EL. 14.3)
- OLV (EL. 3.9)



ENGINEER	M. SWANNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	PROJECT2.DWG

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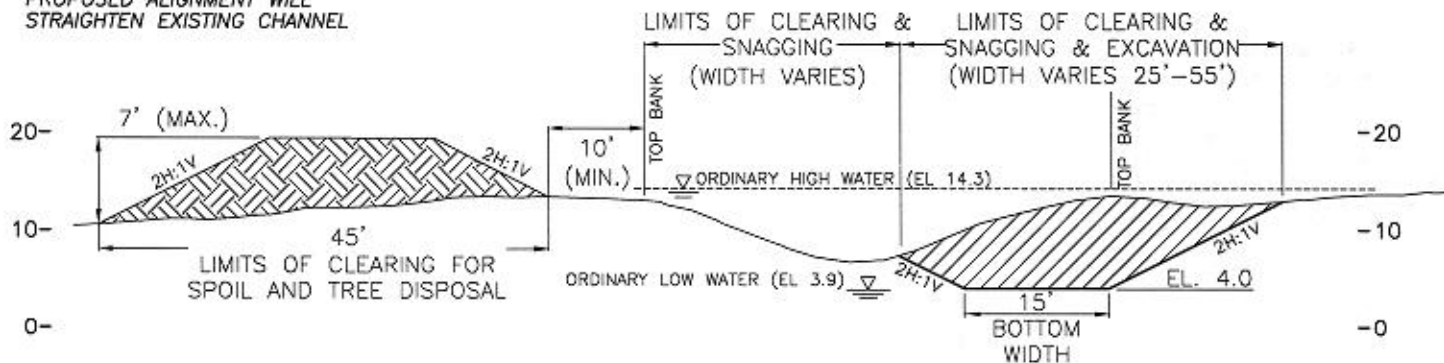
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 2 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
9  
OF  
44

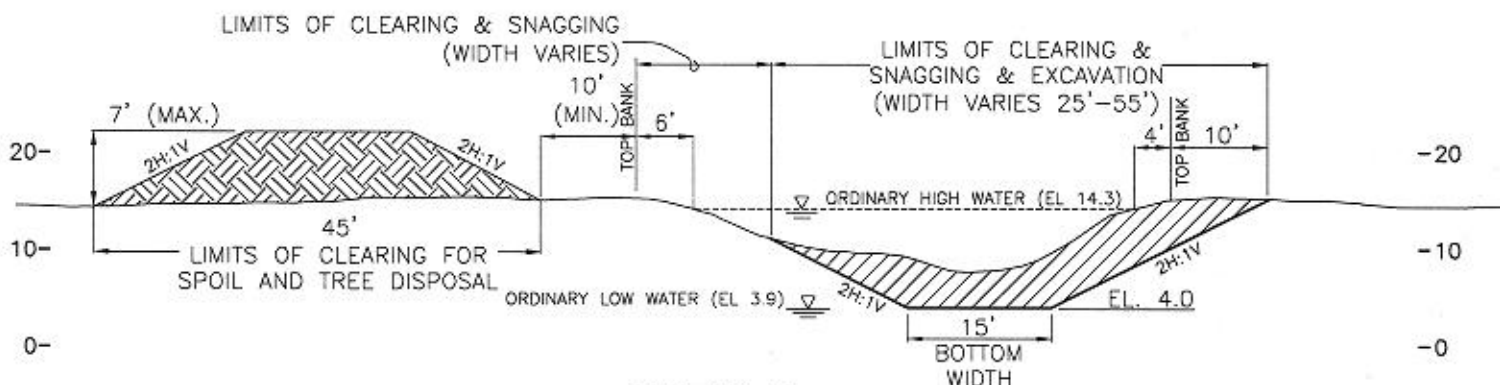
NOTE: EXISTING CHANNEL MEANDERS.  
PROPOSED ALIGNMENT WILL  
STRAIGHTEN EXISTING CHANNEL



SECTION A - EXISTING CHANNEL OFFSET FROM PROPOSED CENTERLINE

TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
STA 0+67 TO STA 16+25  
SCALE: 1"=20'

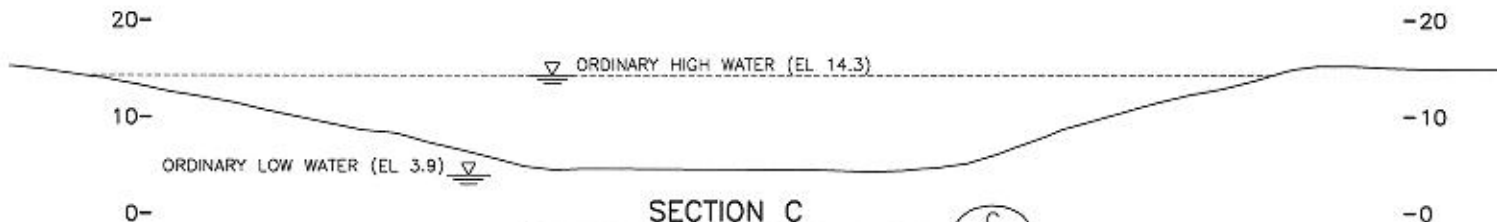
A  
8



SECTION B

TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
STA 0+67 TO STA 16+25  
SCALE: 1"=20'

B  
8

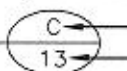
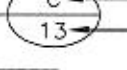




SECTION C

TYPICAL SECTION-NO WORK  
SCALE: 1"=20'

C  
8

LEGEND

-  SECTION TITLE
-  SHEET NO. SHOWING PLAN VIEW
-  EXCAVATED MATERIAL BERM
-  EXCAVATION

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	9,191
CLEARING & SNAGGING (LIN. FT.)	1,558
CLEARING (ACRES)	1.5

ENGINEER	W. SONNIER
DRAWN BY	W. SONNIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\040



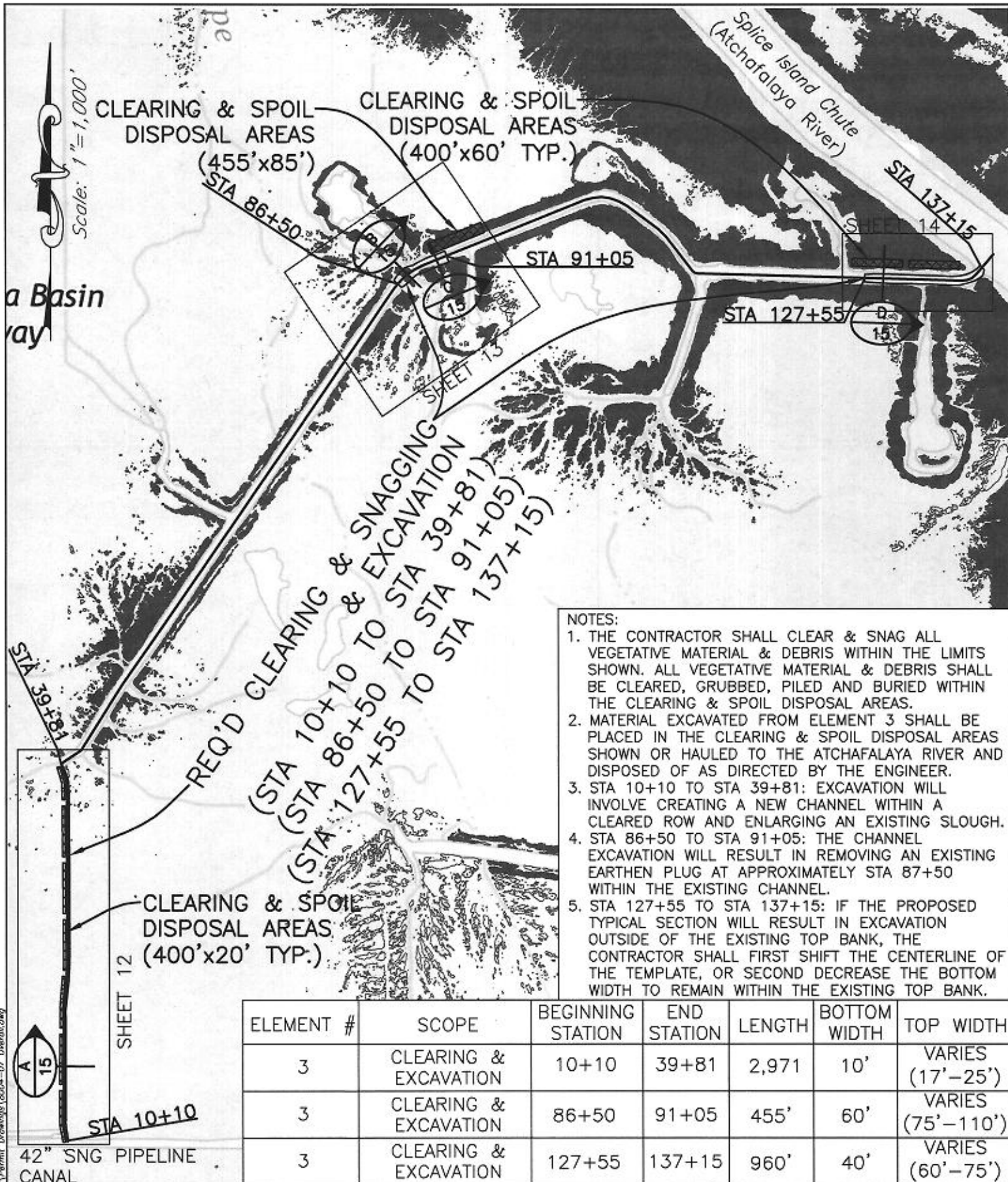
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BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION

ELEMENT 2 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT	HEET	10
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		





- NOTES:**
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 3 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. STA 10+10 TO STA 39+81: EXCAVATION WILL INVOLVE CREATING A NEW CHANNEL WITHIN A CLEARED ROW AND ENLARGING AN EXISTING SLOUGH.
  4. STA 86+50 TO STA 91+05: THE CHANNEL EXCAVATION WILL RESULT IN REMOVING AN EXISTING EARTHEN PLUG AT APPROXIMATELY STA 87+50 WITHIN THE EXISTING CHANNEL.
  5. STA 127+55 TO STA 137+15: IF THE PROPOSED TYPICAL SECTION WILL RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
3	CLEARING & EXCAVATION	10+10	39+81	2,971	10'	VARIES (17'-25')
3	CLEARING & EXCAVATION	86+50	91+05	455'	60'	VARIES (75'-110')
3	CLEARING & EXCAVATION	127+55	137+15	960'	40'	VARIES (60'-75')

**LEGEND**

CLEARING & SPOIL DISPOSAL AREAS

UPLANDS (EL. > 15.6)

**SECTION TITLE**

SHEET NO. SHOWING SECTION

1" = 1,000'

**ENGINEER** N. SOWNER  
**DRAWN BY** J. FABRE  
**DATE** APRIL 2016  
**SCALE** AS SHOWN  
**PROJECT** 8004-07  
**FILE NO.** SEE LEFT SIDE

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248-B Bay Street, Lafayette, LA 70506 (337) 232-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

**ELEMENT 3 - OVERALL PLAN VIEW**

**CLIENT** ST. MARTIN PARISH GOVERNMENT

**PROJECT** BEAU BAYOU SWAMP HYDRO. REST.

**LOCATION** ST. MARTIN PARISH, LOUISIANA

**SHEET** 11  
**OF** 44

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STA 39+81  
 END EXCAVATION & CLEARING & SNAGGING  
 EXISTING CANAL

10' BERM BETWEEN EXCAVATED MATERIAL BERM & EXISTING OR PROPOSED TOP OF BANK (TYP.)

CLEARING & SPOIL DISPOSAL AREAS (400' X 45' TYP.)






30'± EXISTING WATER BOTTOM LIMITS OF CLEARING & SNAGGING (30' MAX.)

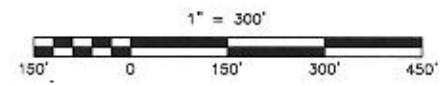
LIMITS OF EXCAVATION (WIDTH VARIES 17'-25')

STA 10+10.00  
 BEGIN EXCAVATION & CLEARING & SNAGGING  
 42" SNG PIPELINE CANAL  
 10+00



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



DESIGNER	N. SONMER
DRAWN BY	J. FABRE
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	B004-07
FILE NO.	OVERALL.DWG



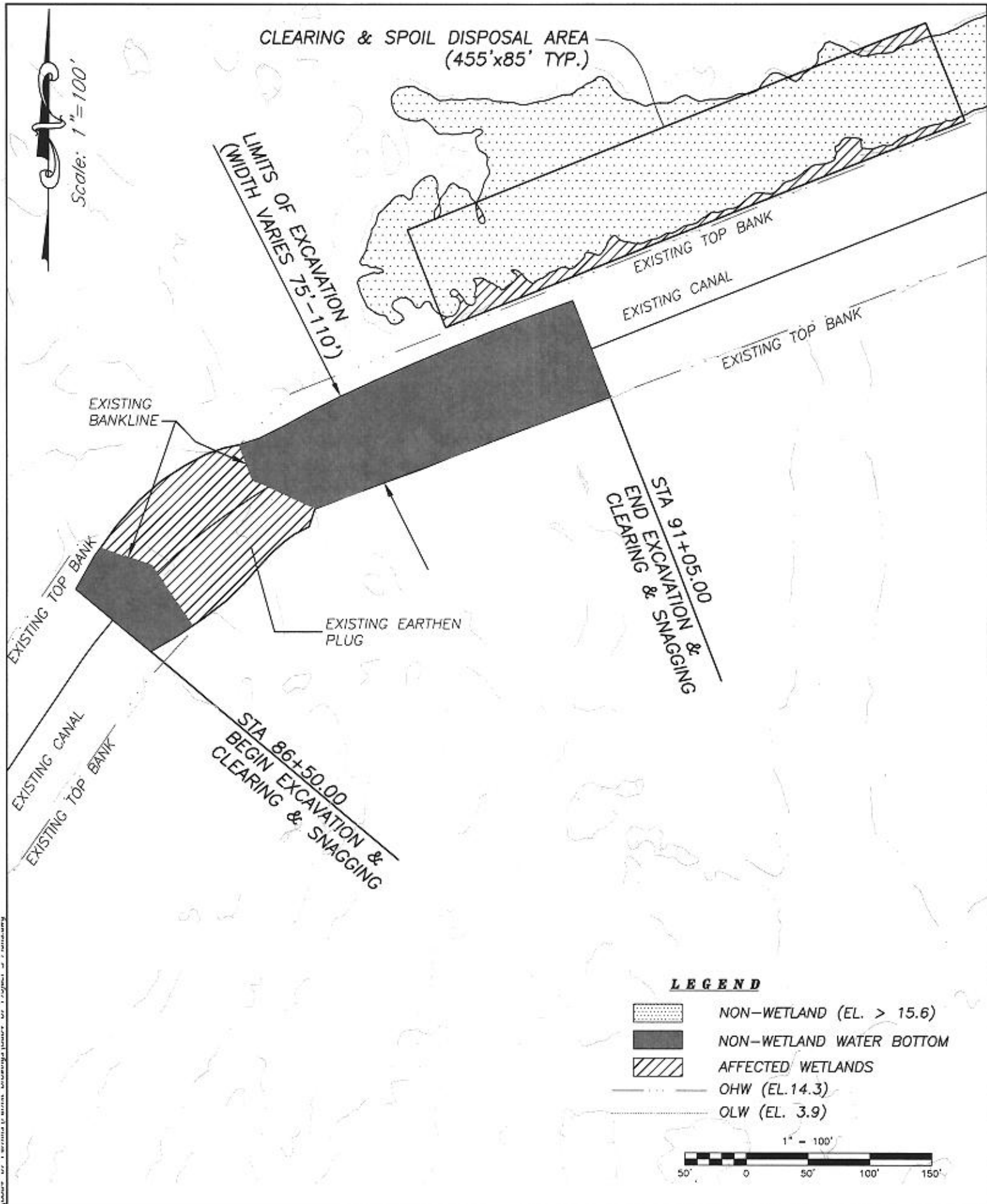
**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Easy Street, Lafayette, LA 70508 (507) 282-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 3 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
 12  
 OF  
 44

11. Lottman, Louisiana, 70508. For a complete list of services, visit our website at www.lottman.com.



Scale: 1"=100'

CLEARING & SPOIL DISPOSAL AREA  
(455'x85' TYP.)

LIMITS OF EXCAVATION  
(WIDTH VARIES 75'-110')

EXISTING TOP BANK

EXISTING CANAL

EXISTING TOP BANK

EXISTING BANKLINE

EXISTING TOP BANK






EXISTING EARTHEN PLUG

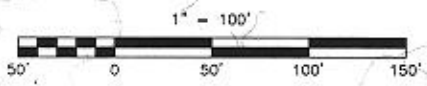
STA 91+05.00  
END EXCAVATION & SNAGGING & CLEARING

EXISTING CANAL

STA 86+50.00  
BEGIN EXCAVATION & CLEARING & SNAGGING

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



ENGINEER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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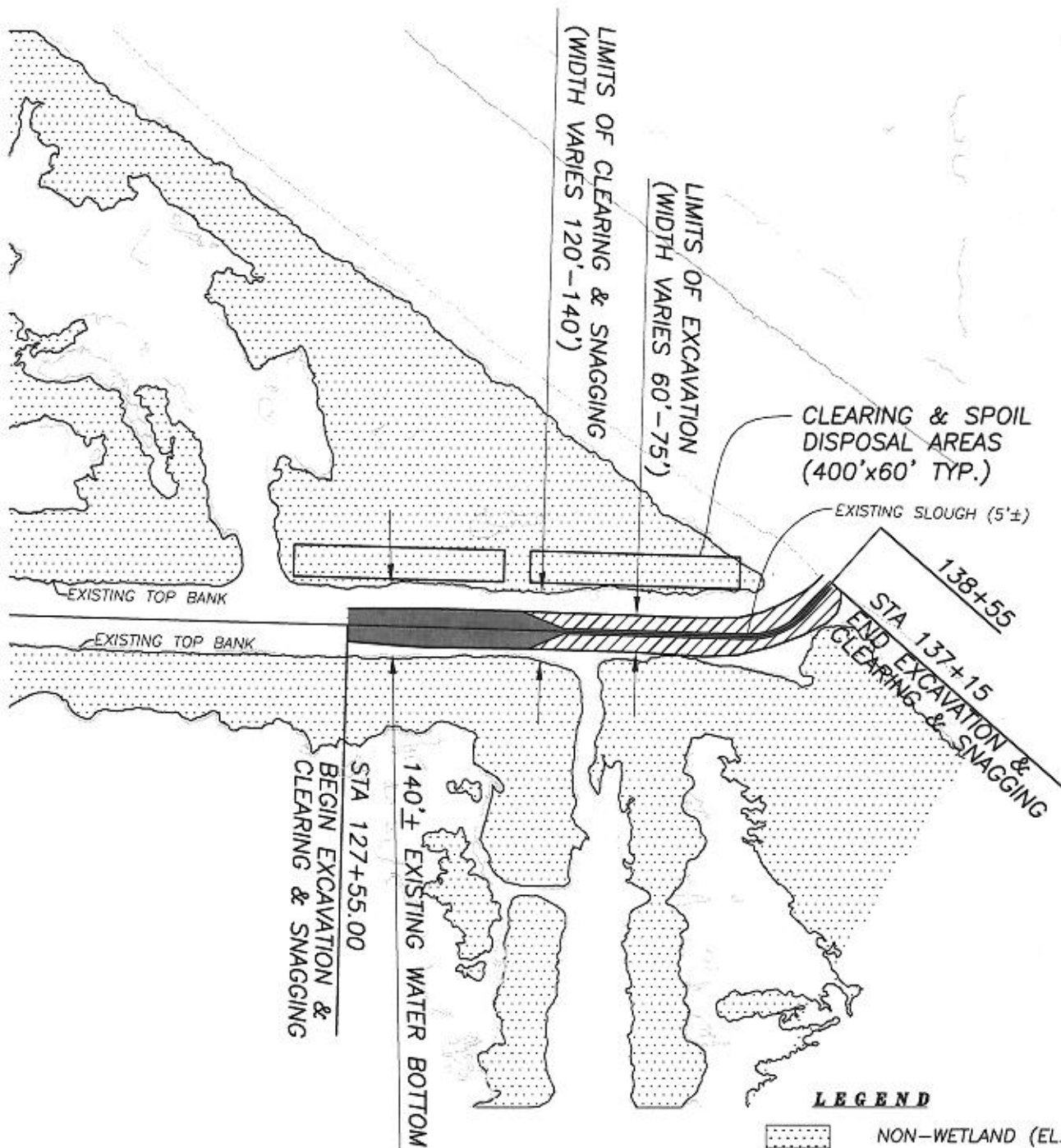
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 3 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA






SHEET  
13  
OF  
44

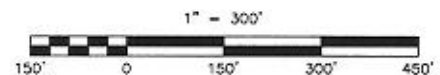
Scale: 1"=300'




NOTE: SEDIMENT HAS BUILT UP WITHIN THE EXISTING CANAL AT THE ATCHAFALAYA RIVER. VEGETATION (MAINLY WILLOW TREES) HAS ALSO GROWN WITHIN THE EXISTING CANAL. THERE IS A SMALL EXISTING SLOUGH (APPROXIMATELY 5' WIDE) AT THE ATCHAFALAYA RIVER THAT OPENS UP TO THE EXISTING CANAL APPROXIMATELY 700' FROM THE ATCHAFALAYA RIVER.

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



ENGINEER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

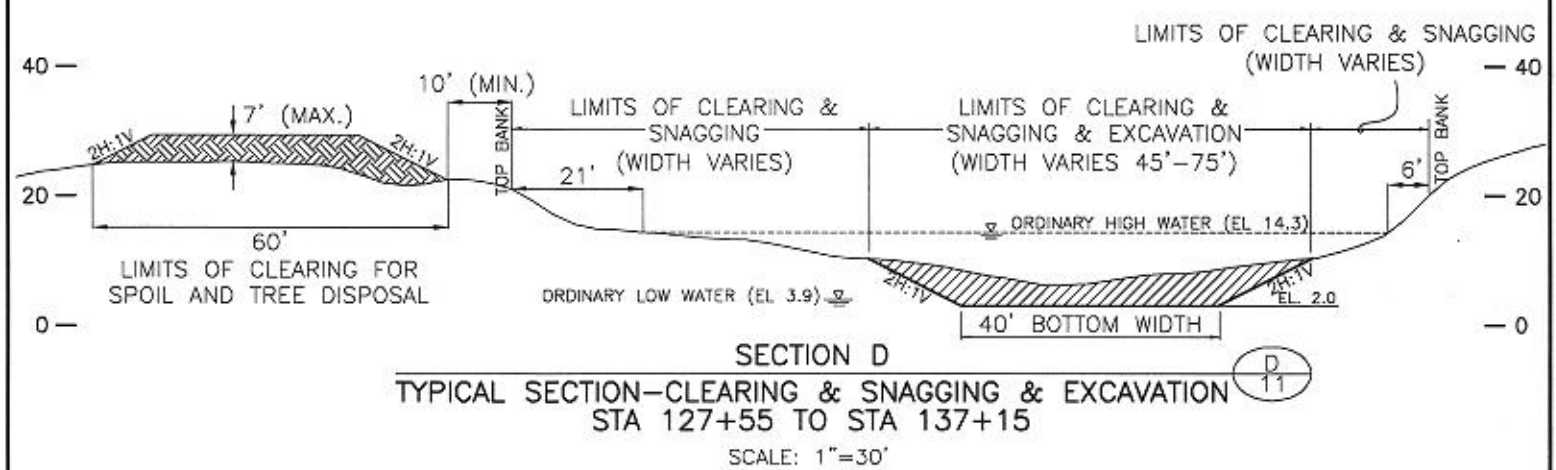
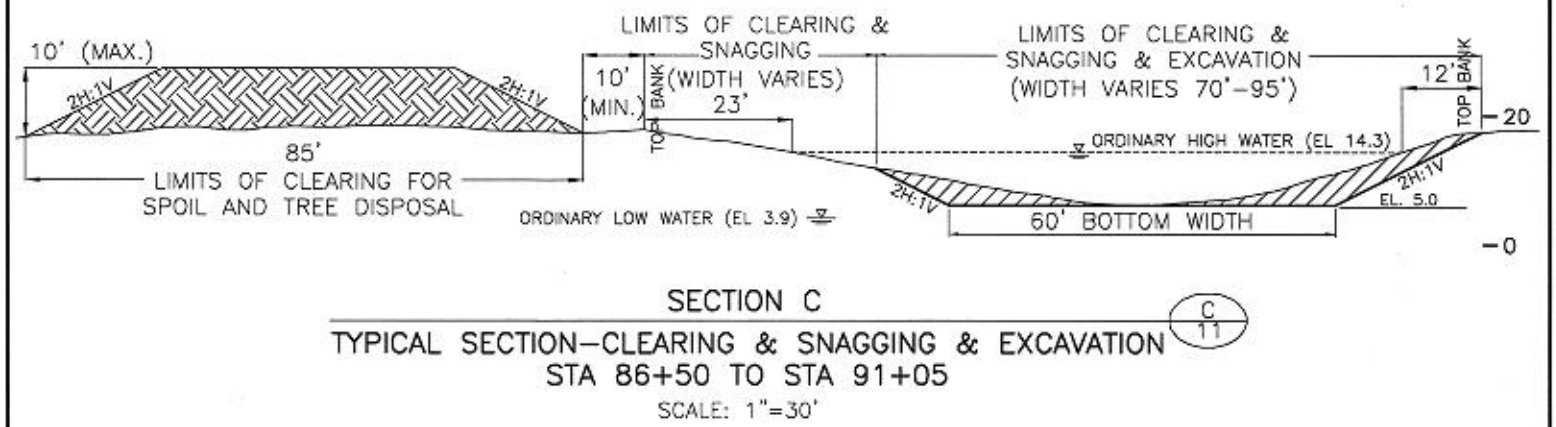
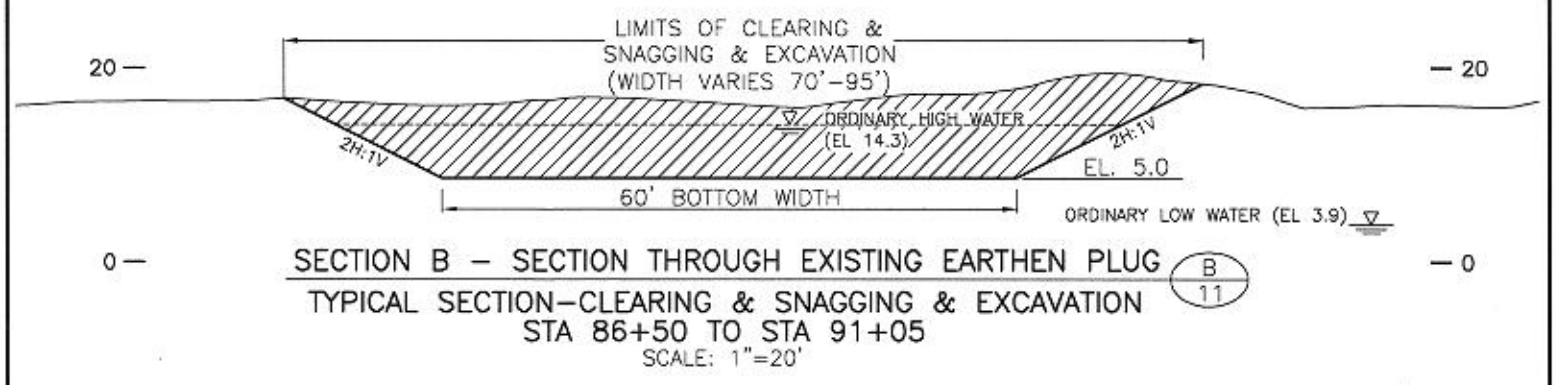
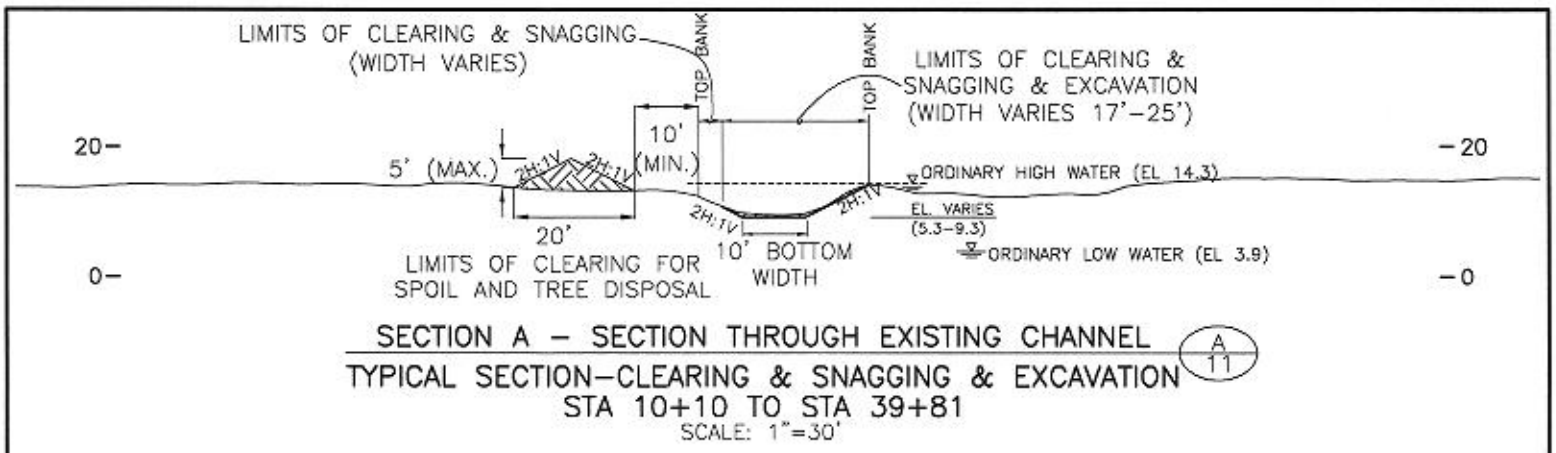


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**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 3 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 14 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



PROJECT FEATURES		QUANTITY
EXCAVATION (CU. YDS.)		19,795
CLEARING & SNAGGING (LIN. FT.)		4,386
CLEARING (ACRES)		3.8

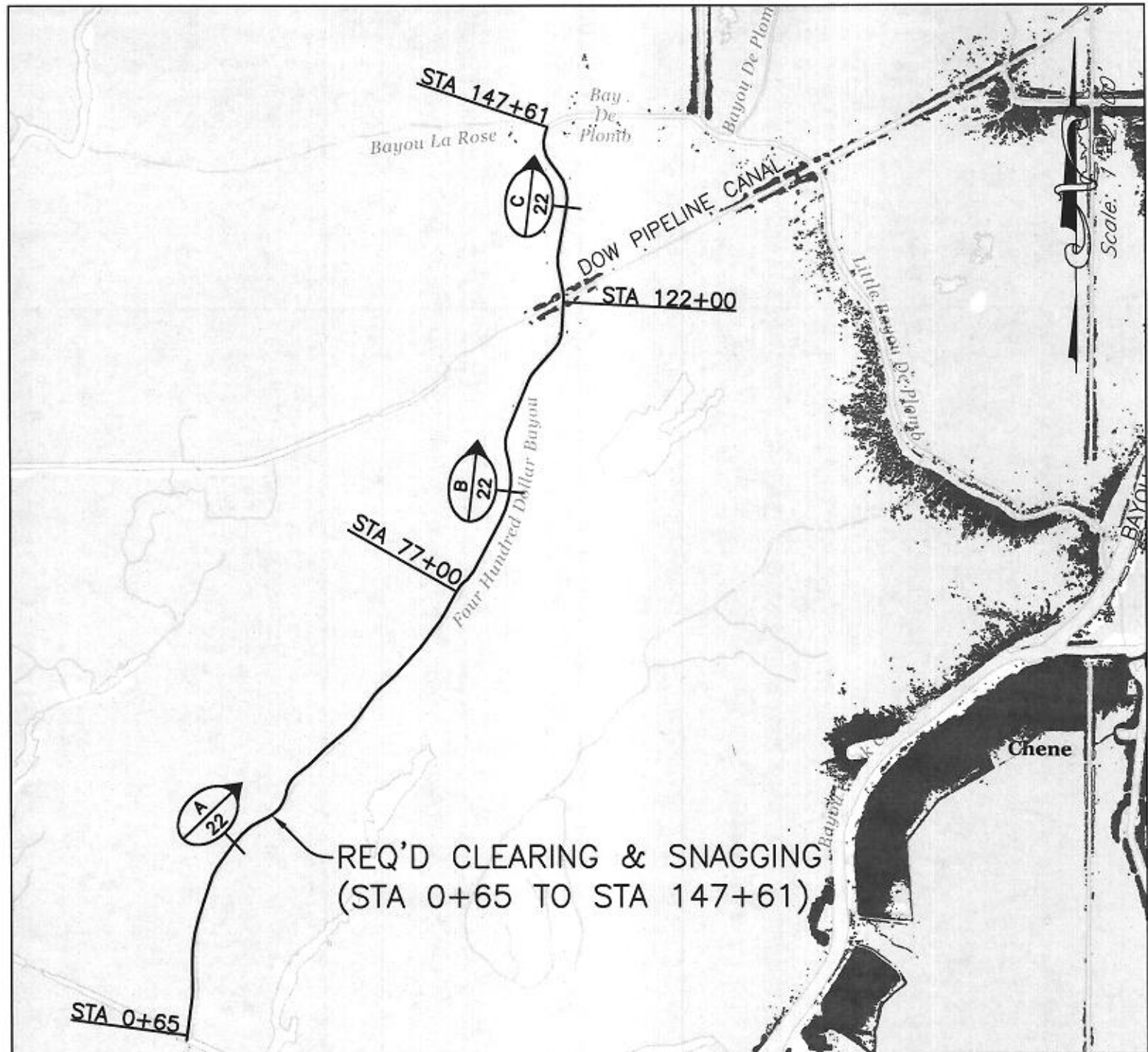
**LEGEND**

C → SECTION TITLE  
 13 → SHEET NO. SHOWING PLAN VIEW

EXCAVATED MATERIAL BERM  
 EXCAVATION

<b>ENGINEER</b> M. SONNIER <b>DRAWN BY</b> M. SONNIER <b>DATE</b> APRIL 2016 <b>SCALE</b> AS SHOWN <b>PROJECT</b> 8004-05 <b>FILE NO.</b> 8004-05\CAD	 <b>Sellers &amp; Associates, Inc.</b> ENGINEERS SURVEYORS 148-B Easy Street, Lafayette, LA 70506 (504) 885-5777	<b>BEAU BAYOU SWAMP</b> <b>HYDROLOGIC RESTORATION</b> <b>ELEMENT 3 - TYPICAL SECTIONS</b>	<b>CLIENT</b> ST. MARTIN PARISH GOVERNMENT <b>PROJECT</b> BEAU BAYOU SWAMP HYDRO. REST. <b>LOCATION</b> ST. MARTIN PARISH, LOUISIANA	<b>SHEET</b> 15 <b>OF</b> 44
--	---	---	--	---------------------------------





REQ'D CLEARING & SNAGGING  
(STA 0+65 TO STA 147+61)

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
4	CLEARING & SNAGGING	0+65	77+00	7,635'		40'
4	CLEARING & SNAGGING	77+00	122+00	4,500'		50'
4	CLEARING & SNAGGING	122+00	147+61	2,561'		60'

NOTES:  
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CHIPPED IN PLACE AS CLOSE TO THE GROUND AS THE CUTTING TOOLS PERMIT.

CLEARING & SPOIL DISPOSAL AREAS	<b>LEGEND</b>	SECTION TITLE	1" = 2,000'
UPLANDS (EL. > 15.6)	SHEET NO. SHOWING SECTION		

DESIGNED BY N. SONNEM  
DRAWN BY J. FABRE  
DATE APRIL 2015  
SCALE AS SHOWN  
PROJECT 8004-07  
FILE NO. SEE LEFT SIDE

**Sellers & Associates, Inc.**  
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148-B Bay Street, Lafayette, LA 70506 (504) 282-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**  
ELEMENT 4 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>16</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

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Scale: 1" = 300'

FOUR HUNDRED DOLLAR BAYOU

20'± EXISTING WATER BOTTOM





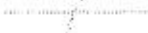
LIMITS OF CLEARING & SNAGGING  
(40' MAX.)

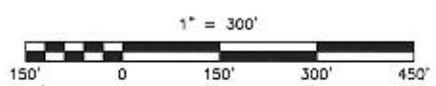
STA 0+65.00  
BEGIN CLEARING & SNAGGING

0+00.00

SORRENTO PIPELINE CANAL

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



ENGINEER	N. SOWNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 17 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

N. SOWNER (337) 232-0777; J. FABRE (337) 232-0777; DATE: APRIL 2016; SCALE: AS SHOWN; PROJECT: 8004-07; FILE NO.: OVERALL.DWG

MATCH LINE B-B SHEET 19








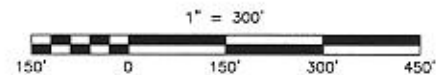
LIMITS OF CLEARING & SNAGGING (40' MAX.)

FOUR HUNDRED DOLLAR BAYOU

20'± EXISTING WATER BOTTOM

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



MATCH LINE A-A SHEET 17

N:\DATA\8004\8004-07 Permits\Permit Drawings\8004-07 Project 4 Plans.dwg

ENGINEER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
18  
OF  
44

MATCH LINE C-C SHEET 20

LIMITS OF CLEARING & SNAGGING  
(50' MAX.)








Scale: 1" = 300'

25' TRANSITION  
(40' TO 50')  
STA 77+00.00  
STA 76+75.00

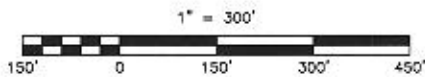
FOUR HUNDRED DOLLAR BAYOU

20'± EXISTING WATER BOTTOM

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

LIMITS OF CLEARING & SNAGGING  
(40' MAX.)



MATCH LINE B-B SHEET 18



X:\07\18004\18004-07\_Permit\Permit\_Drawings\18004-07\_Element\_4\_Plan.dwg

ENGINEER	M. SONNIER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL DMS



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
19  
OF  
44



MATCH LINE D-D SHEET 21






Scale: 1" = 300'

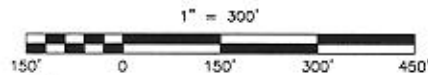
20'± EXISTING WATER BOTTOM

FOUR HUNDRED DOLLAR BAYOU

LIMITS OF CLEARING & SNAGGING (50' MAX.)

LEGEND

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



MATCH LINE C-C SHEET 19

N:\0004\0004\0004-07 Permits\Permit Drawings\0004-07 Project 4 Plans.dwg

DESIGNER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

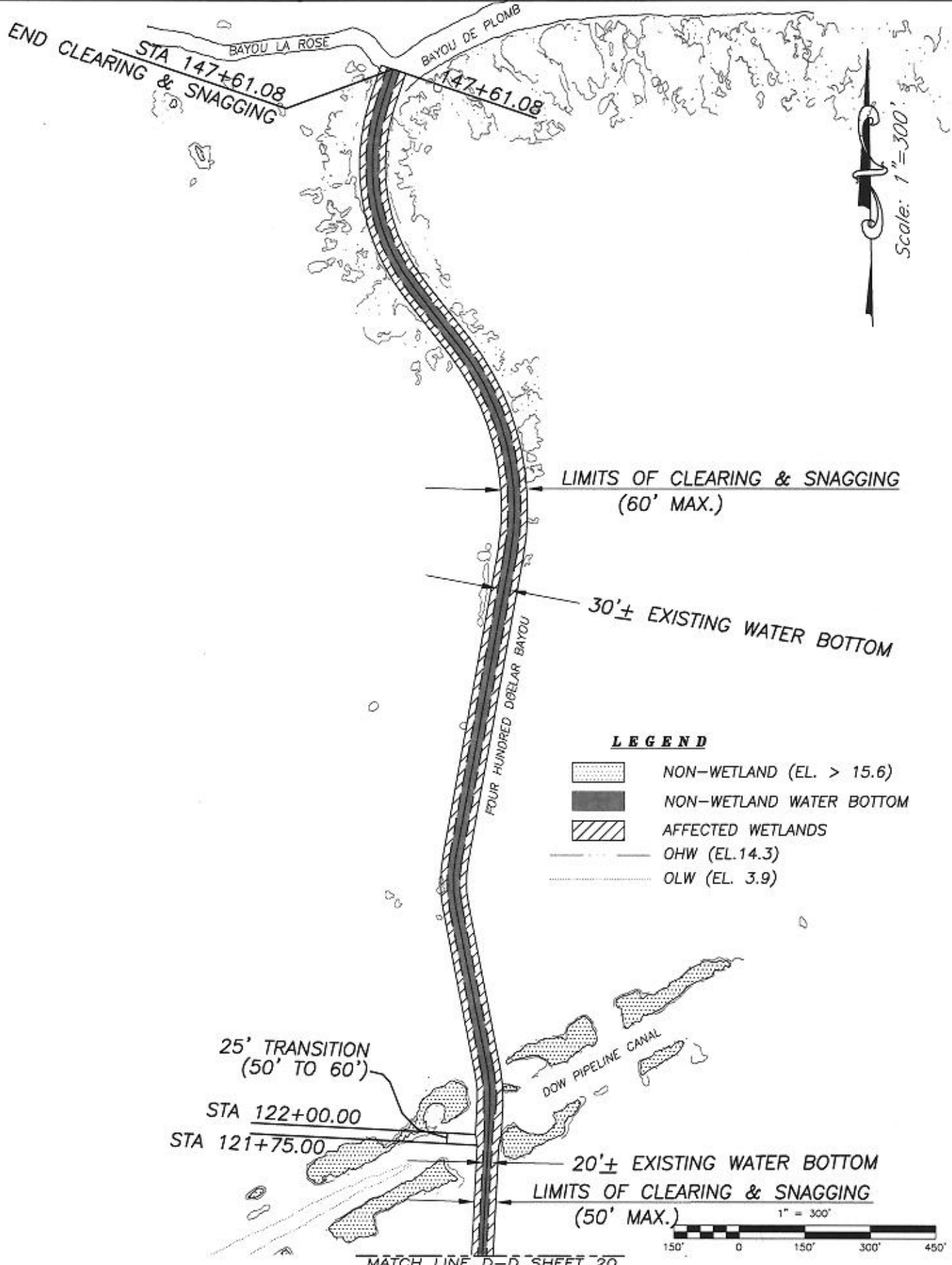


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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 20 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



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ENGINEER	N. SONWER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

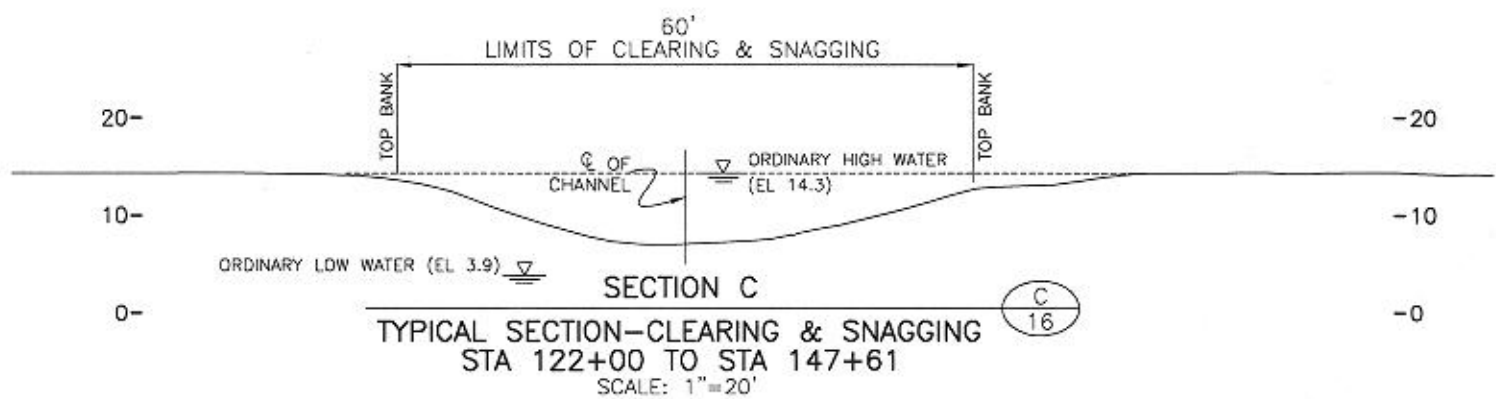
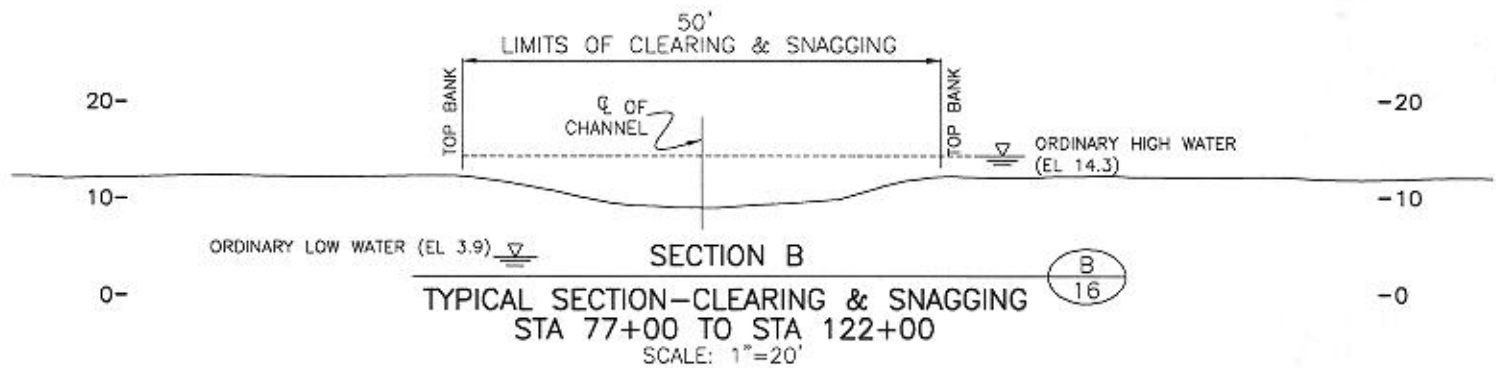
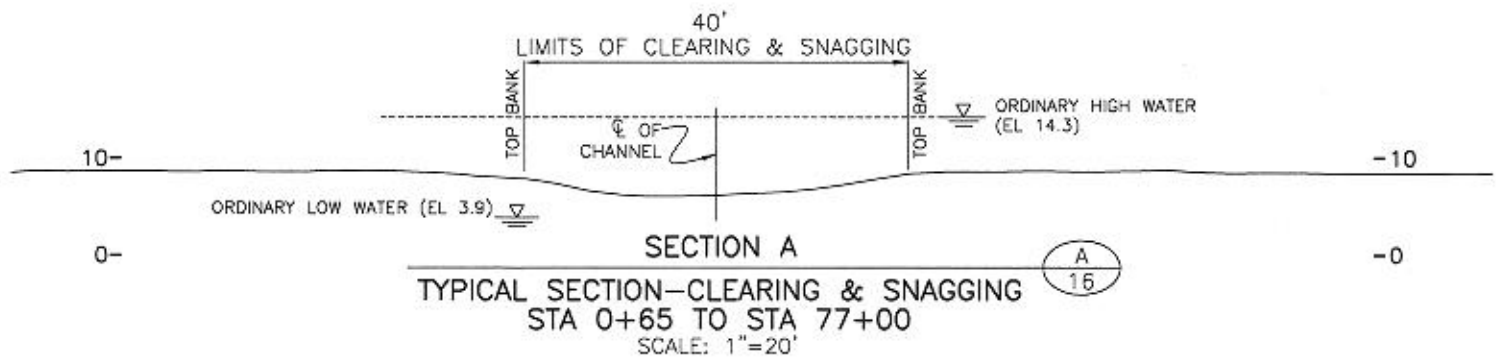


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



**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA



**LEGEND**

-  SECTION TITLE
-  SHEET NO. SHOWING PLAN VIEW
-  EXCAVATED MATERIAL BERM
-  EXCAVATION

PROJECT FEATURES	QUANTITY
CLEARING & SNAGGING (LIN. FT.)	14,696

DESIGNED BY	N. SONNER
DRAWN BY	N. SONNER
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	8004-C5
FILE NO.	8004-C5\CAD



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

**ELEMENT 4 - TYPICAL SECTIONS**

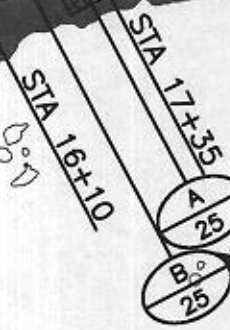
CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	22
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	
LOCATION	ST. MARTIN PARISH, LOUISIANA		44

REQ'D CLEARING & SNAGGING  
& EXCAVATION  
(STA 16+10 TO STA 17+35)

LITTLE BAYOU DE PLOMB




CLEARING & SPOIL  
DISPOSAL AREAS  
(50' WIDE TYP.)

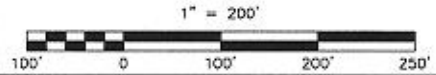
DOW PIPELINE CANAL



ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
5	CLEARING & EXCAVATION	16+10	17+35	125'	40'	VARIES (70'-121')

- NOTES:
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 5 SHALL BE PLACED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN ON THIS SHEET, OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION SHOWN. THE EXCAVATION WILL RESULT IN REMOVING AN EARTHEN PLUG WITHIN THE EXISTING CHANNEL AT APPROXIMATELY STA 16+50. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE ADJACENT CHANNEL TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE TOP BANK OF THE ADJACENT CHANNEL.
  4. PROPOSED WORK WILL INCLUDE EXCAVATION OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.

 CLEARING & SPOIL DISPOSAL AREAS	<b>LEGEND</b>	 SECTION TITLE
 UPLANDS (EL. > 15.6)		 SHEET NO. SHOWING SECTION



DESIGNED BY N. SOMNIER  
DRAWN BY J. FAIRC  
DATE APRIL 2016  
SCALE AS SHOWN  
PROJECT 8004-07  
FILE NO. SEE LEFT SIDE



**Sellers & Associates, Inc.**  
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146-D Bay Street, Lakeyette, LA 70006 (337) 232-0777

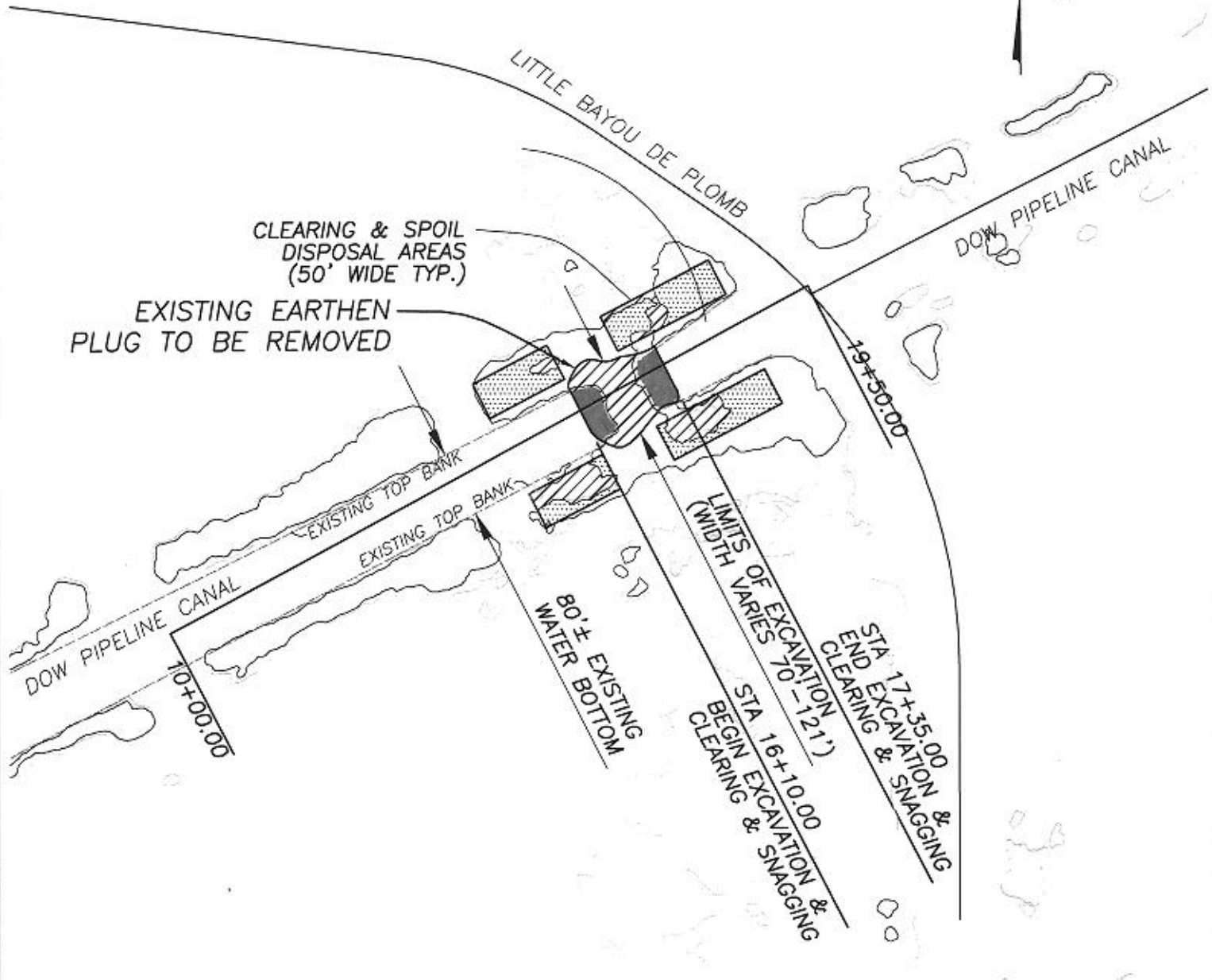
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 5 - OVERALL PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 23 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

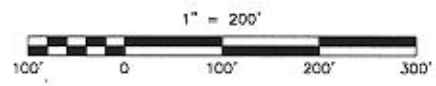
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**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



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ENGINEER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



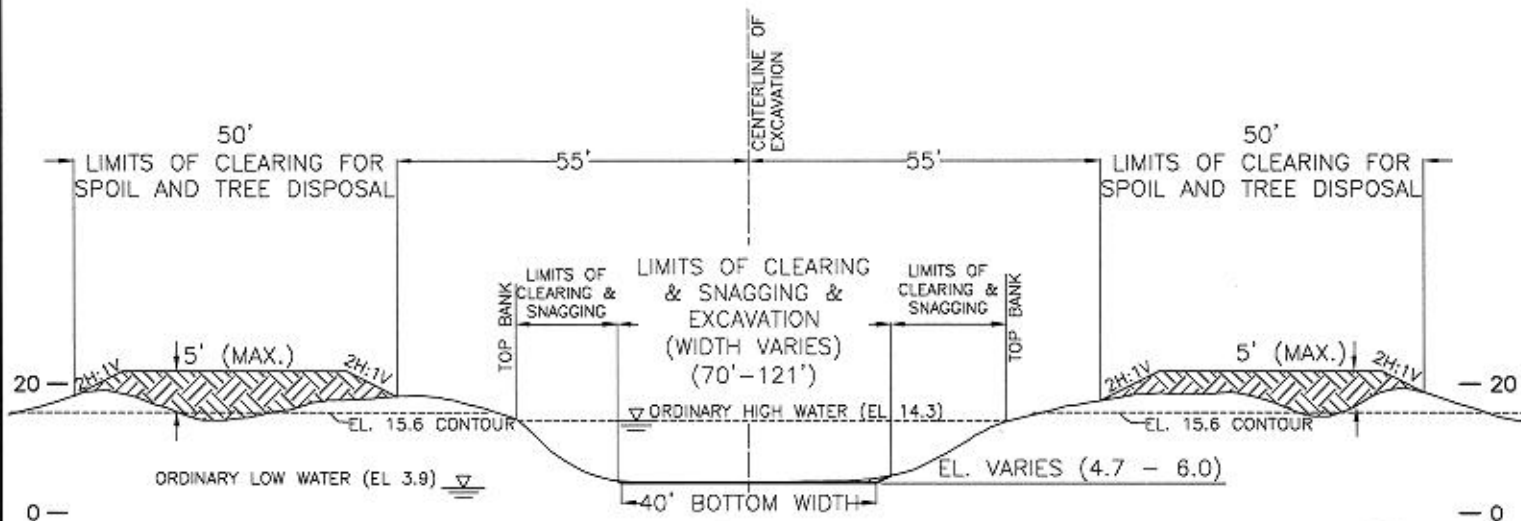
**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
143-D Easy Street, Lafayette, LA 70506 (507) 252-2777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

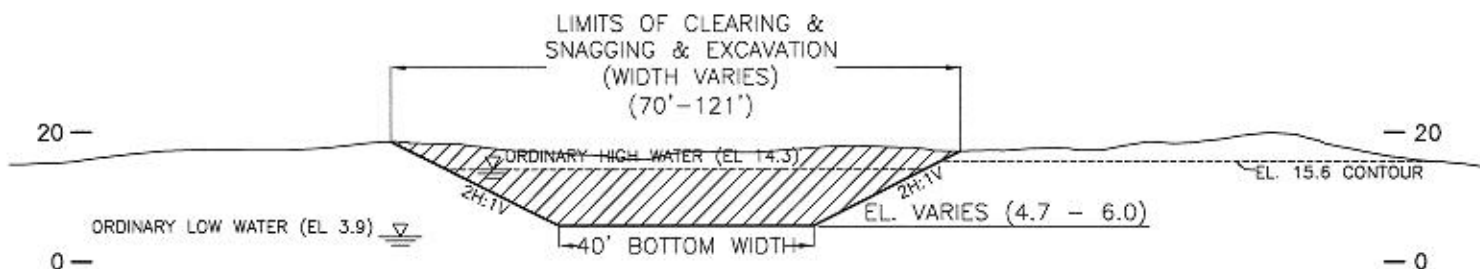
ELEMENT 5 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
24  
OF  
44



**SECTION A**  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION W/ DISPOSAL AREA (A/23)  
 STA 15+00 TO STA 18+50  
 STA 15+00 TO STA 16+10 (NO EXCAVATION)  
 STA 17+35 TO STA 18+50 (NO EXCAVATION)  
 SCALE: 1"=30'



**SECTION B**  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION (B/23)  
 STA 16+10 TO STA 16+90  
 SCALE: 1"=30'

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	2,715
CLEARING & SNAGGING (LIN. FT.)	125
CLEARING (ACRES)	0.7

ENGINEER	N. SCHWIER
DRAWN BY	N. SCHWIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD

**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Bay Street, Lake Charles, LA 70608 (337) 358-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 5 - TYPICAL SECTIONS**





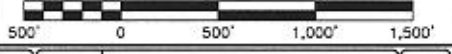
CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 25 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

**ELEMENT 6B**  
**REQ'D CLEARING & SNAGGING & EXCAVATION**  
 (STA 53+00 TO STA 57+60)  
 (STA 58+30 TO STA 61+00)

**ELEMENT 6A**  
**REQ'D CLEARING & SNAGGING & EXCAVATION**  
 (STA 12+00 TO STA 14+70)  
 (STA 15+40 TO STA 18+00)

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
6A	CLEARING & EXCAVATION	12+00	18+00	530'	50'	VARIES (50'-70')
6B	CLEARING & EXCAVATION	53+00	61+00	730'	50'	VARIES (50'-75')

- NOTES:**
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 6 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENTS SHOWN. THE WORK WILL INVOLVE EXCAVATING THROUGH AN EXISTING SPOIL BANK AND VIRGIN CUT THROUGH THE SWAMP.
  4. PROPOSED WORK WILL INCLUDE OPERATING OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.

 CLEARING & SPOIL DISPOSAL AREAS	 UPLANDS (EL. > 15.6)	<b>LEGEND</b>	 SECTION TITLE	1" = 1,000'
			 SHEET NO. SHOWING SECTION	

DESIGNED BY: N. SOMMER  
 DRAWN BY: J. FABRE  
 DATE: APRIL 2016  
 SCALE: AS SHOWN  
 PROJECT: BDD4-07  
 FILE NO.: SEE LEFT SIDE

**Sellers & Associates, Inc.**  
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 146-B Bay Street, Lakeville, LA 70006 (337) 252-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 6 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>26</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

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STA 18+00.00  
END EXCAVATION &  
CLEARING & SNAGGING

LIMITS OF CLEARING & SNAGGING &  
EXCAVATION (WIDTH VARIES 50'-70')

10' BERM (MIN.)

CLEARING AND SOIL DISPOSAL AREA  
(260' X 30')

STA 15+40.00  
END NO WORK ZONE

EXISTING TOP BANK

☐ DOW PIPELINE CANAL  
STA 14+70.00

EXISTING TOP BANK

BEGIN NO WORK ZONE






LIMITS OF CLEARING & SNAGGING &  
EXCAVATION (WIDTH VARIES 50'-70')

CLEARING AND SOIL DISPOSAL AREA  
(270' X 30')

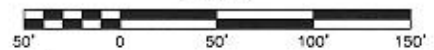
10' BERM (MIN.)

STA 12+00.00  
BEGIN EXCAVATION &  
CLEARING & SNAGGING

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

1" = 100'



K:\L01\21\8004\8004-07 Permit\Permit Drawings\8004-07 Project\_6 Plans.dwg

DESIGNED BY	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 6A — PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
27  
OF  
44



LIMITS OF CLEARING & SNAGGING & EXCAVATION (WIDTH VARIES 50'-75')

STA 61+00.00  
END EXCAVATION & CLEARING & SNAGGING

10' BERM (MIN.)

CLEARING AND SOIL DISPOSAL AREA (270'x45')

STA 58+30  
END NO WORK ZONE & DOW PIPELINE CANAL

EXISTING TOP BANK

EXISTING TOP BANK

STA 57+60  
BEGIN NO WORK ZONE

LIMITS OF CLEARING & SNAGGING & EXCAVATION (WIDTH VARIES 50'-75')






CLEARING AND SOIL DISPOSAL AREA (440'x45')

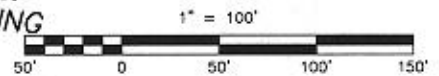
10' BERM (MIN.)

STA 53+00.00  
BEGIN EXCAVATION & CLEARING & SNAGGING

Scale: 1" = 100'

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\04761\0004\0004-07\_Permit\_Drainage\0004-07\_Permit\_5\_Plane.dwg

DESIGNED BY	N. SCHWIER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	0004-07
FILE NO.	OVERALL.DWG



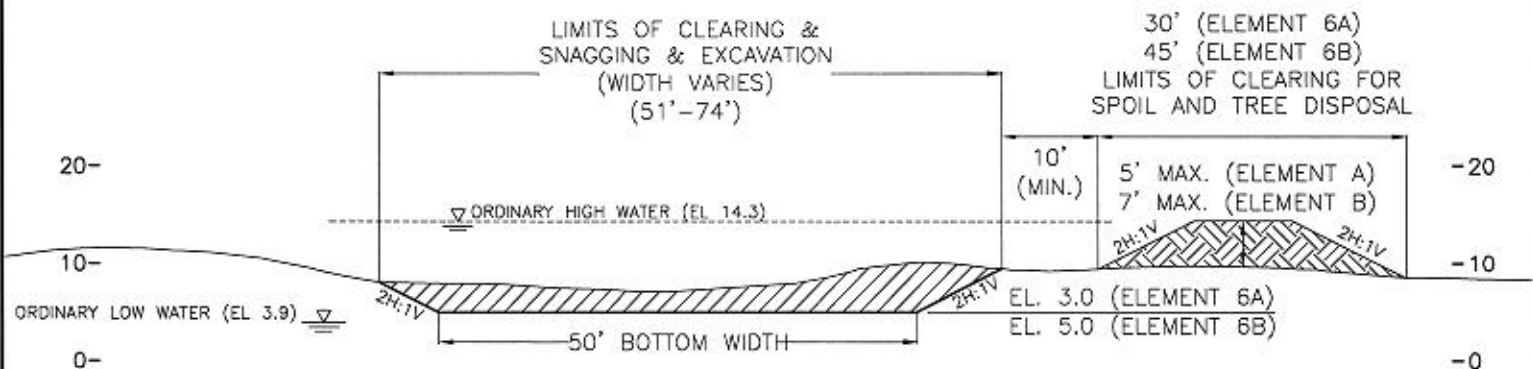
**Sellers & Associates, Inc.**  
ENGINEERS  
148-3 Easy Street, Lafayette, LA 70506 (337) 282-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

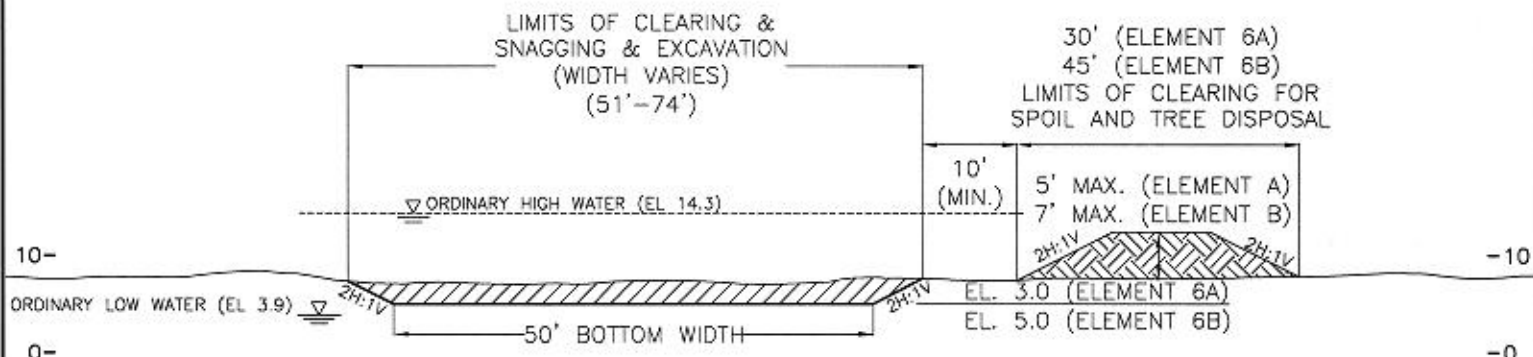
ELEMENT 6B - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
28  
OF  
44



**SECTION A - TYPICAL THROUGH EXISTING BANK** (A/26)  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 12+00 TO STA 18+00 (ELEMENT 6A)  
 STA 53+00 TO STA 61+00 (ELEMENT 6B)  
 SCALE: 1"=20'



**SECTION B - TYPICAL THROUGH EXISTING SWAMP** (B/26)  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 12+00 TO STA 18+00 (ELEMENT 6A)  
 STA 53+00 TO STA 61+00 (ELEMENT 6B)  
 SCALE: 1"=20'

**LEGEND**

- (C/13) SECTION TITLE
- (C/13) SHEET NO. SHOWING PLAN VIEW
- [Hatched Box] EXCAVATED MATERIAL BERM
- [Diagonal Lines Box] EXCAVATION

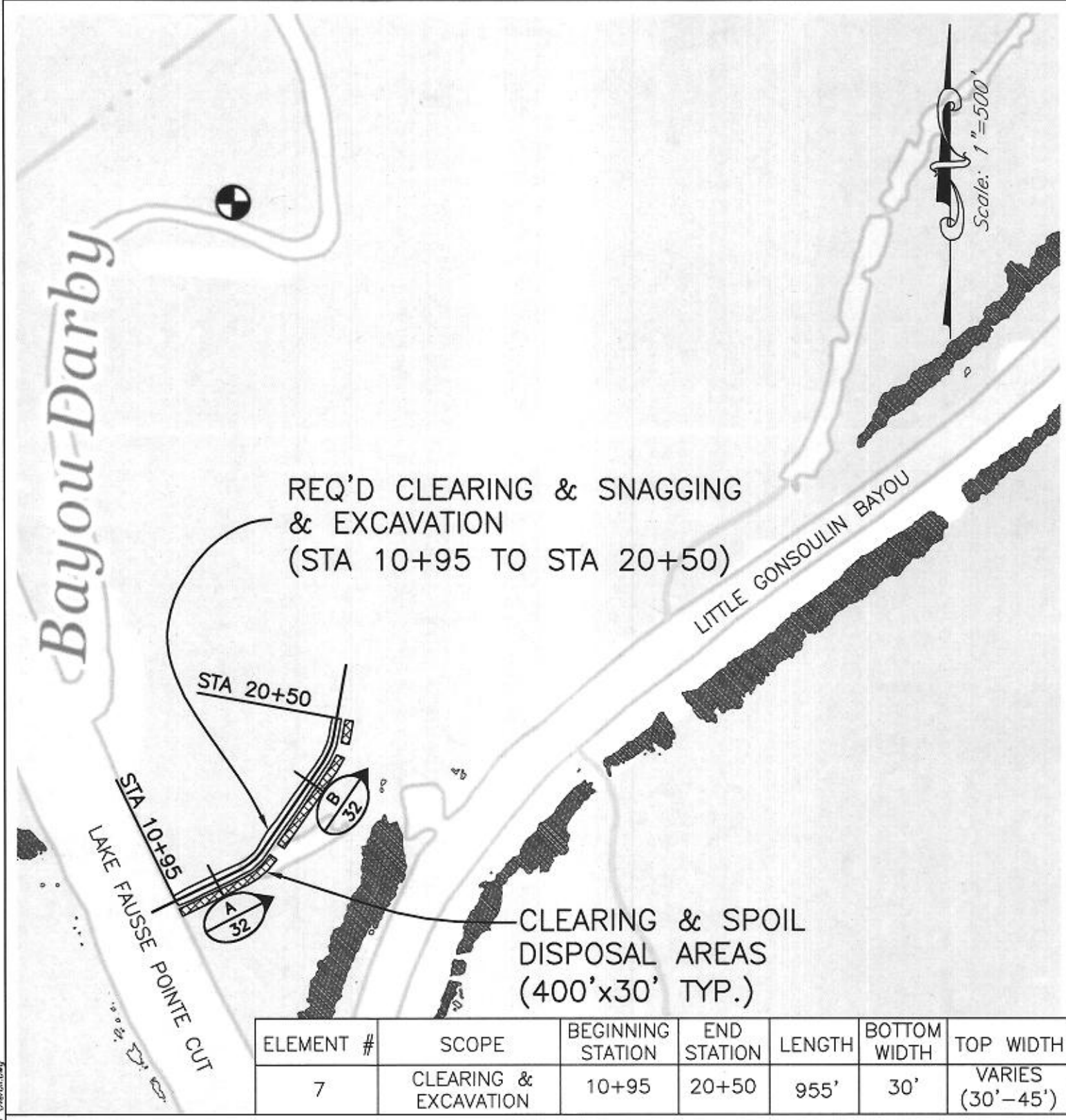
PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	6,029
CLEARING & SNAGGING (LIN. FT.)	1,290
CLEARING (ACRES)	1.4

ENGINEER	N. SOMMER
DRAWN BY	N. SOMMER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\040

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**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 6 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>29</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



REQ'D CLEARING & SNAGGING  
& EXCAVATION  
(STA 10+95 TO STA 20+50)

CLEARING & SPOIL  
DISPOSAL AREAS  
(400'x30' TYP.)

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
7	CLEARING & EXCAVATION	10+95	20+50	955'	30'	VARIES (30'-45')

- NOTES:
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 7 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. THE WORK WILL INVOLVE ENLARGING AN EXISTING SLOUGH AND VIRGIN CUT THROUGH THE SWAMP.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)	<b>LEGEND</b> SECTION TITLE SHEET NO. SHOWING SECTION	1" = 500'	

DESIGNED BY N. SCHNER  
 DRAWN BY J. FAIRET  
 DATE APRIL 2016  
 SCALE AS SHOWN  
 PROJECT B004-07  
 FILE NO. SEE LEFT SIDE

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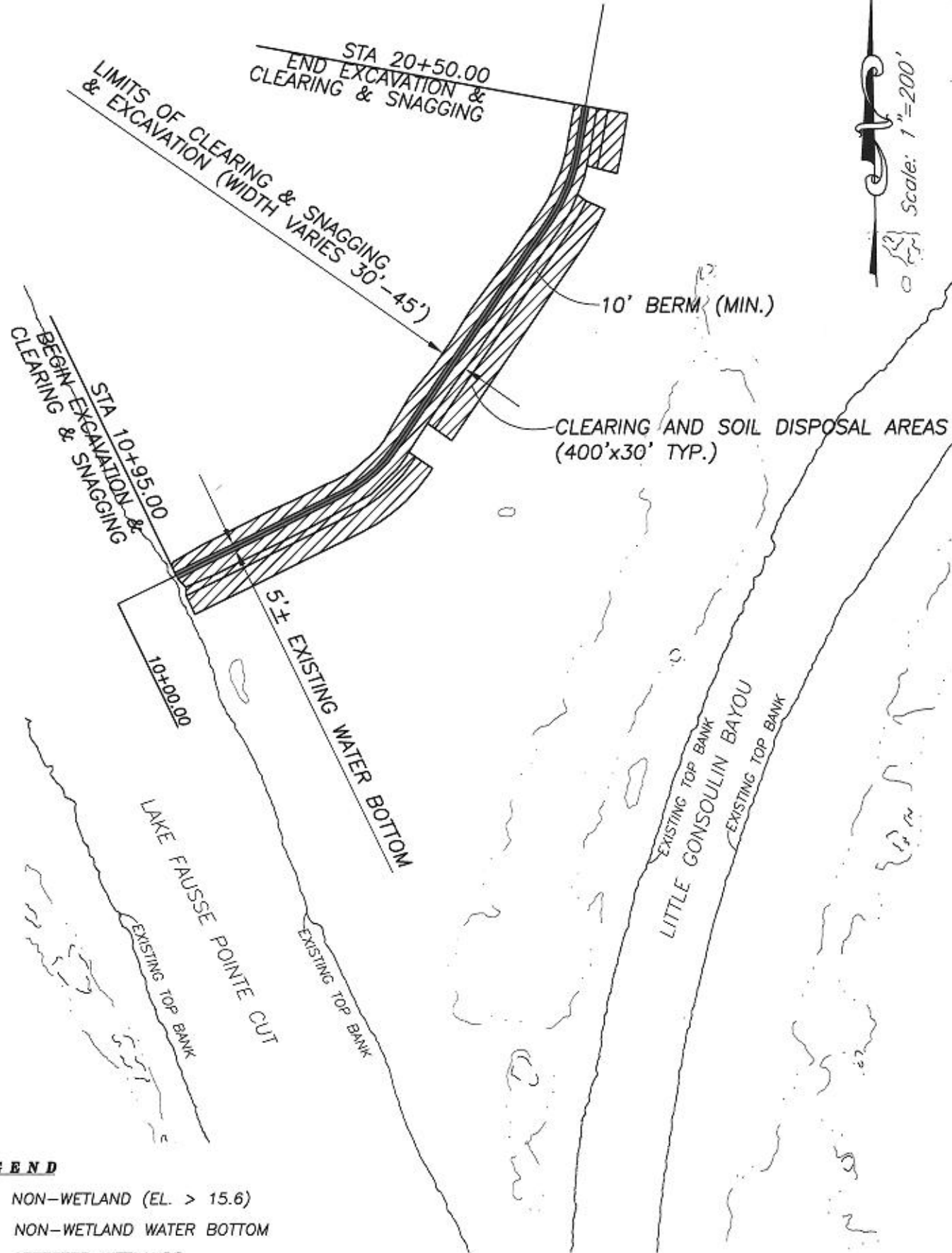
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 7 - OVERALL PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>30</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

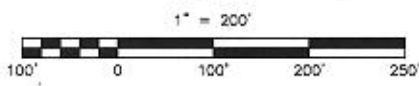
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Scale: 1"=200'



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



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DESIGNER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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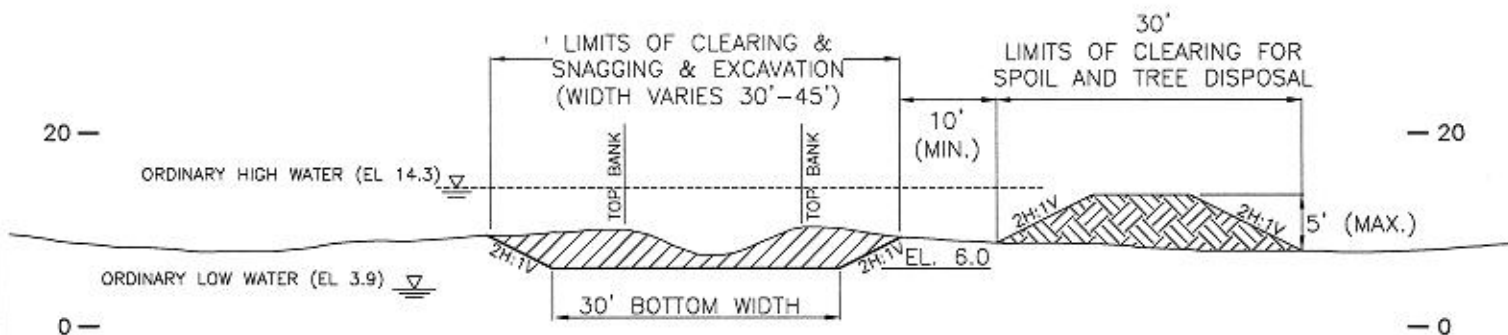
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 7 - PLAN VIEW

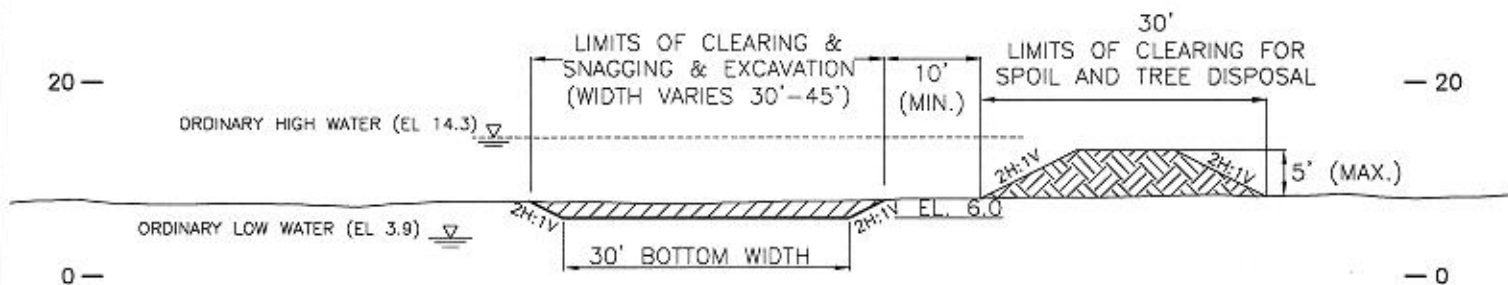
CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

31  
OF  
44





SECTION A - SECTION THROUGH EXISTING CUT  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 10+95 TO STA 20+50  
 SCALE: 1"=20'



SECTION B  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 10+95 TO STA 20+50  
 SCALE: 1"=20'

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	2,510
CLEARING & SNAGGING (LIN. FT.)	955
CLEARING (ACRES)	0.8

DESIGNED BY	N. SONNIER
DRAWN BY	N. SONNIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-GS
FILE NO.	8004-CS\CAD

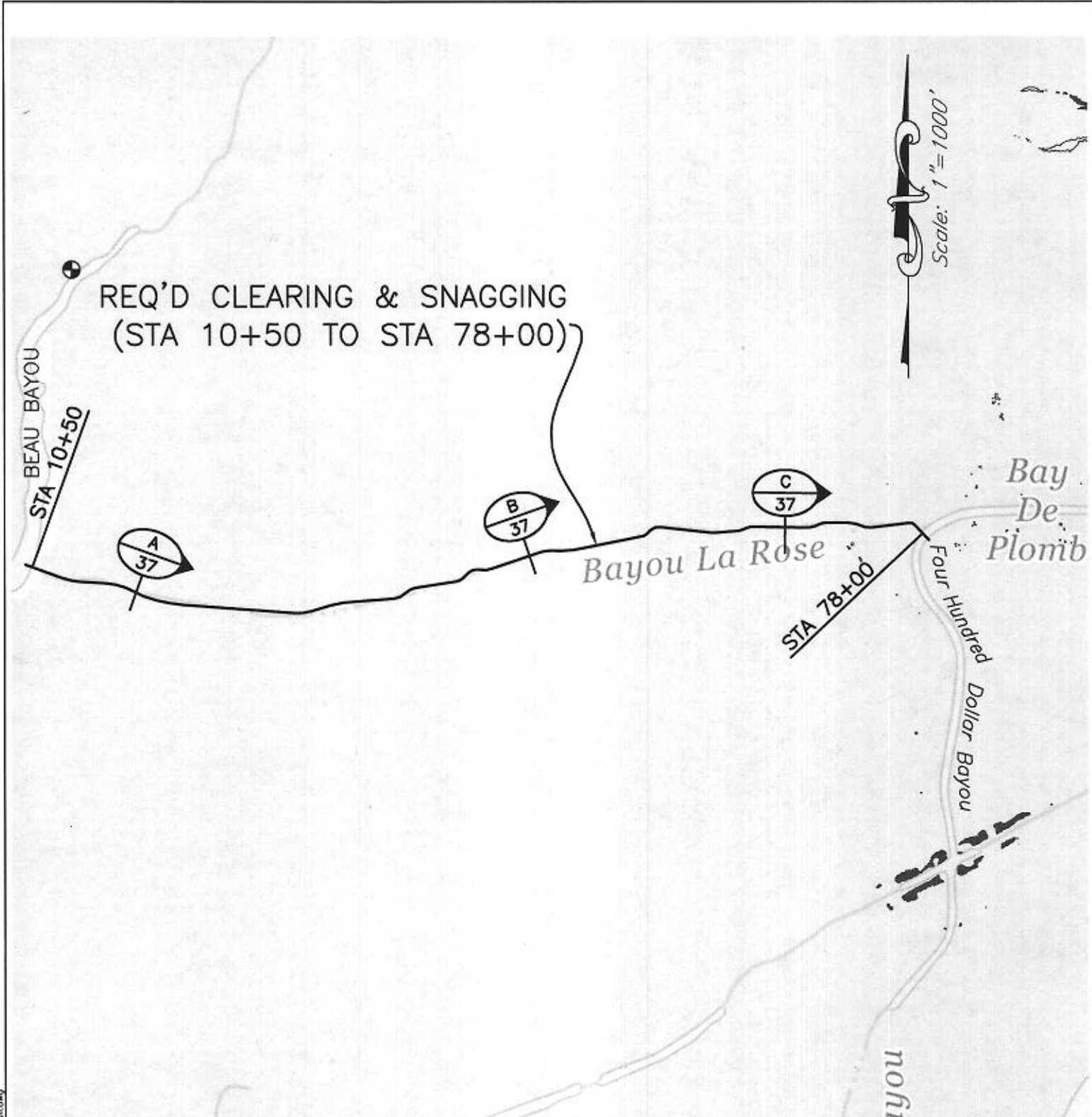
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**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 7 - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
**32**  
 OF  
**44**



REQ'D CLEARING & SNAGGING  
(STA 10+50 TO STA 78+00)

Scale: 1" = 1000'

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
8	CLEARING & SNAGGING	10+50	78+00	6,750'		40'

NOTES:  
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CHIPPED IN PLACE AS CLOSE TO THE GROUND AS THE CUTTING TOOLS PERMIT.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)	<b>LEGEND</b> SECTION TITLE SHEET NO. SHOWING SECTION	1" = 1,000' 500' 0 500' 1,000' 1,500'
---	---	--

DESIGNED BY	N. SOWNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT FILE NO.	8004-07 SEE LEFT SIDE

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ENGINEERS SURVEYORS  
146-B Bay Street, Lafayette, LA 70506 (337) 238-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 8 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>33</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

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Scale: 1"=300'

LIMITS OF CLEARING & SNAGGING (40' MAX)






20'± EXISTING WATER BOTTOM

BAYOU LA ROSE

BEAU BAYOU

STA 10+50.00  
BEGIN CLEARING  
& SNAGGING  
10+00.00

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

1" = 300'



ENGINEER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 8 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
34  
OF  
44

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MATCH LINE B-B SHEET 36



Scale: 1"=300'






LIMITS OF CLEARING & SNAGGING (40' MAX)

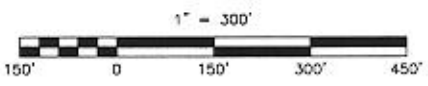
20'± EXISTING WATER BOTTOM

BAYOU LA ROSE

MATCH LINE A-A SHEET 34

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



DESIGNED BY	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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148-B Bay Street, Lafayette, LA 70506 (337) 938-0177

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 8 - PLAN VIEW

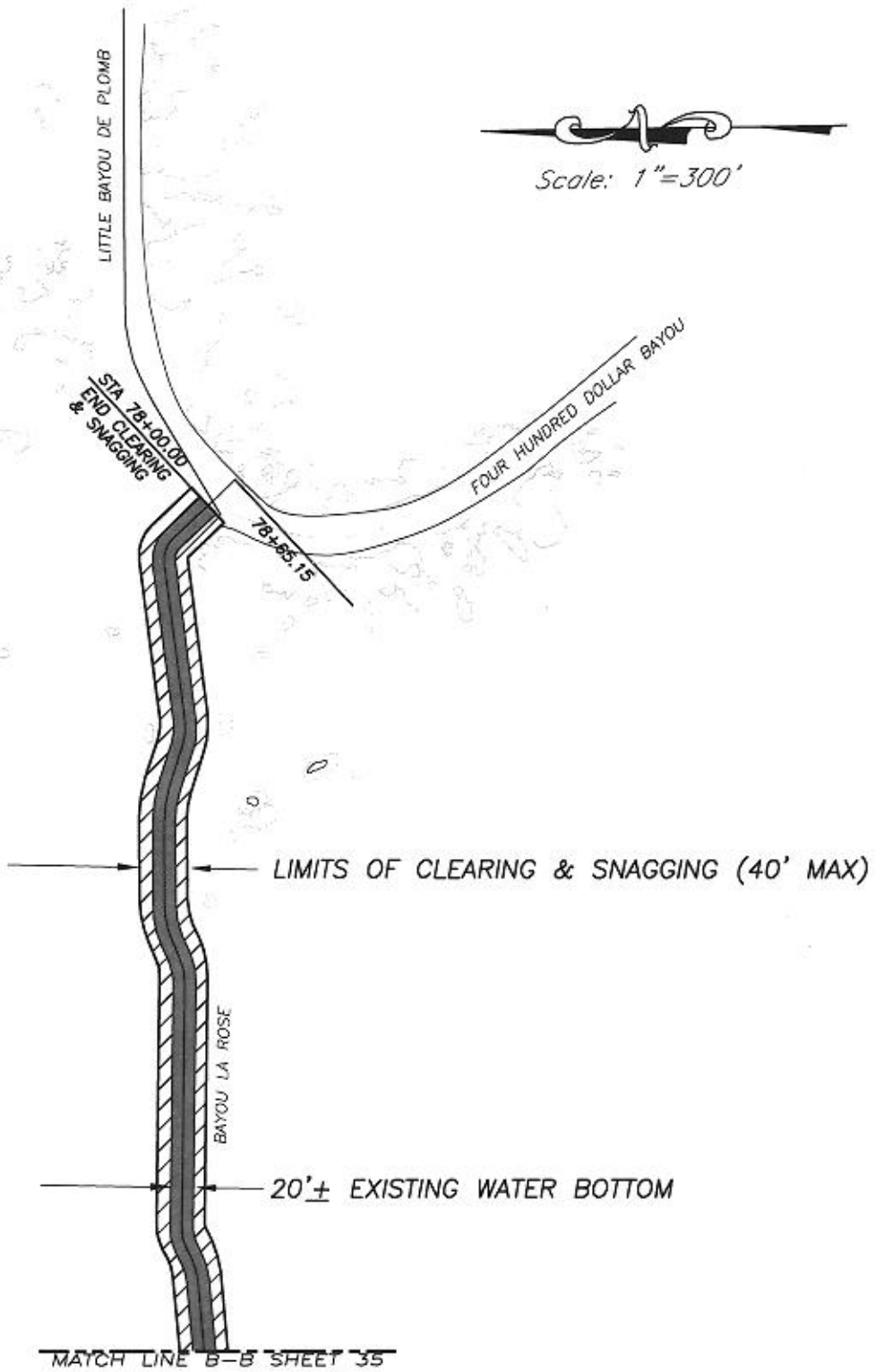
CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
**35**  
OF  
**44**






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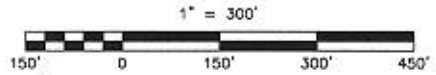


Scale: 1"=300'



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



ENGINEER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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 ENGINEERS SURVEYORS  
 148-B Easy Street, Lafayette, LA 70505 (337) 532-2777

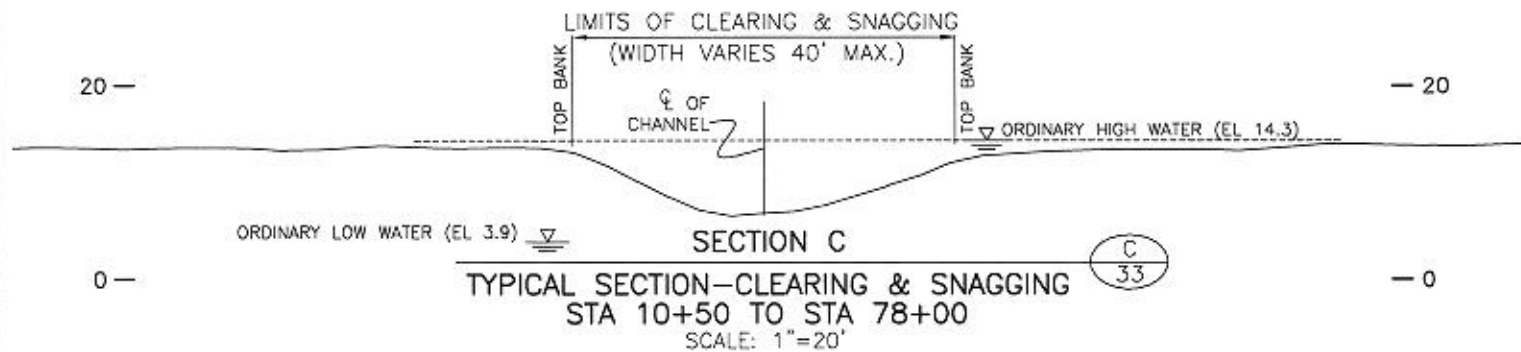
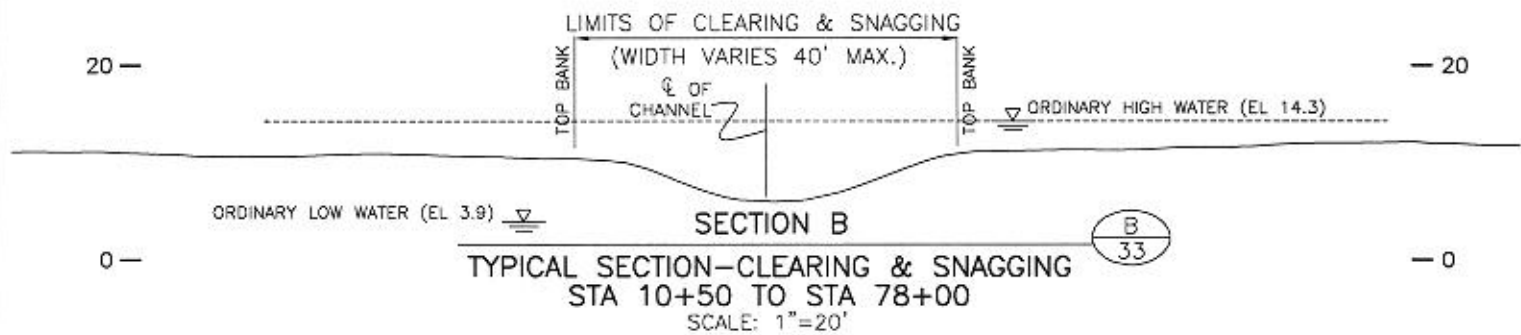
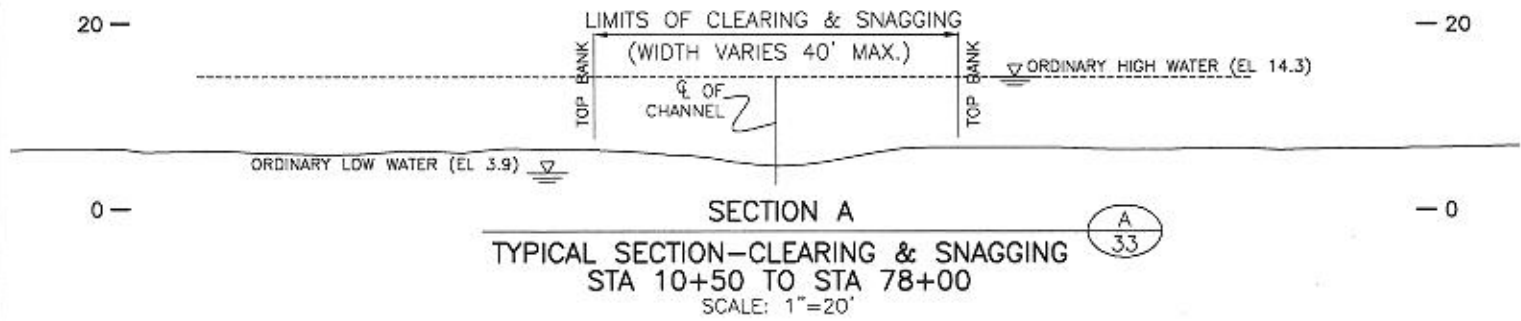
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 8 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
**36**  
 OF  
**44**

C:\Users\jfabre\Documents\8004-07\8004-07.dwg Project: 8004-07

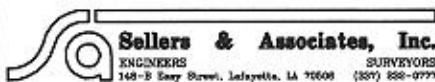


**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
CLEARING & SNAGGING (LIN. FT.)	6,750

DESIGNER	N. SOMMER
DRAWN BY	N. SOMMER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-051.DWG

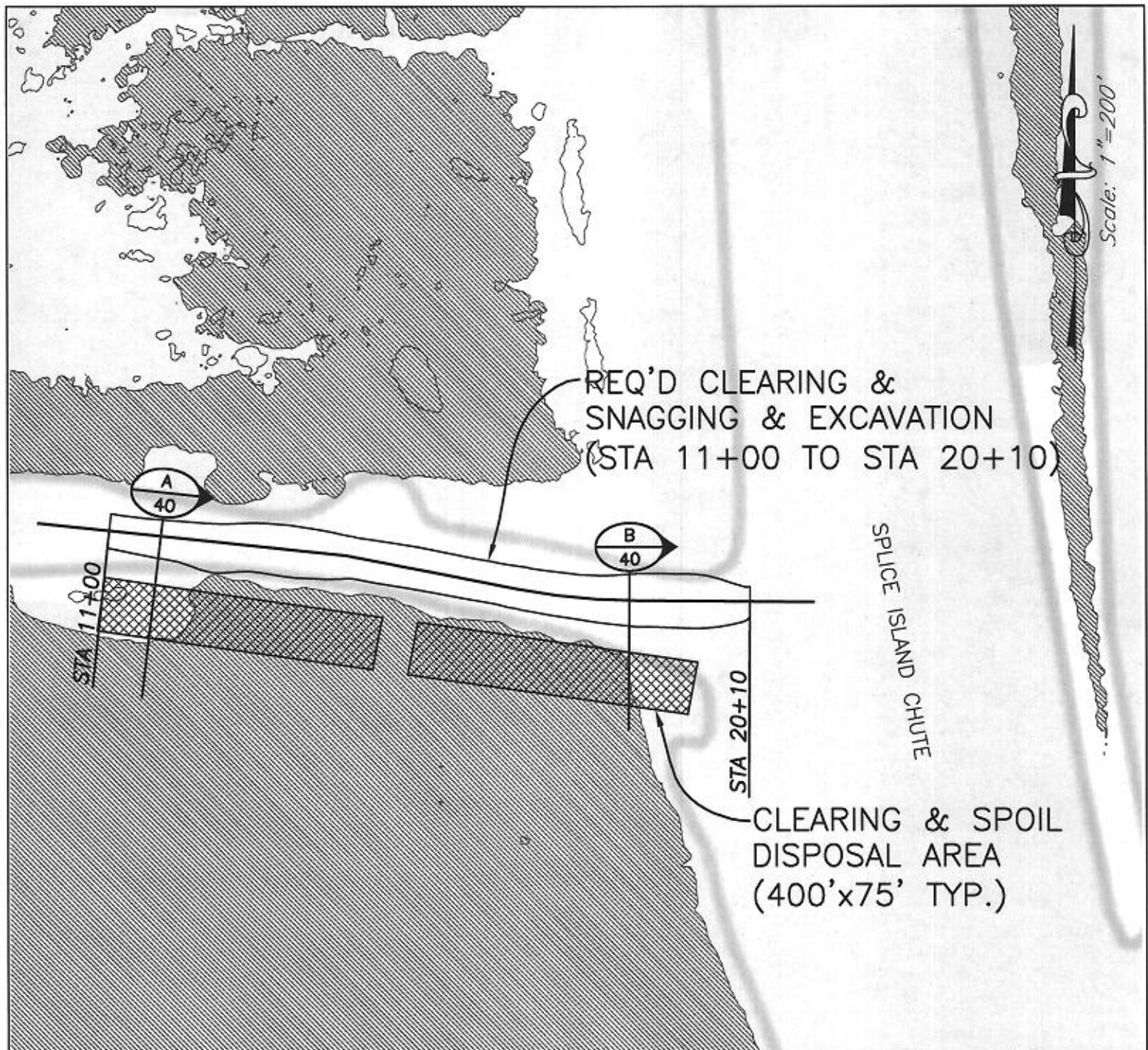


**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

**ELEMENT B - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
37  
OF  
44



REQ'D CLEARING & SNAGGING & EXCAVATION (STA 11+00 TO STA 20+10)

SPICE ISLAND CHUTE

CLEARING & SPOIL DISPOSAL AREA (400'x75' TYP.)

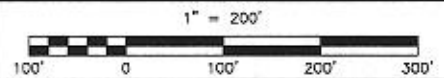
ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
9	CLEARING & EXCAVATION	11+00	20+10	910'	40'	VARIABLE (40'-75')

- NOTES:
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 9 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

CLEARING & SPOIL DISPOSAL AREAS  
 UPLANDS (EL. > 15.6)

**LEGEND**

SECTION TITLE  
 SHEET NO. SHOWING SECTION



SPONSOR: N. SWANER  
 DRAWN BY: J. FABRE  
 DATE: APRIL 2016  
 SCALE: AS SHOWN  
 PROJECT: 8004-07  
 FILE NO.: SEE LEFT SIDE

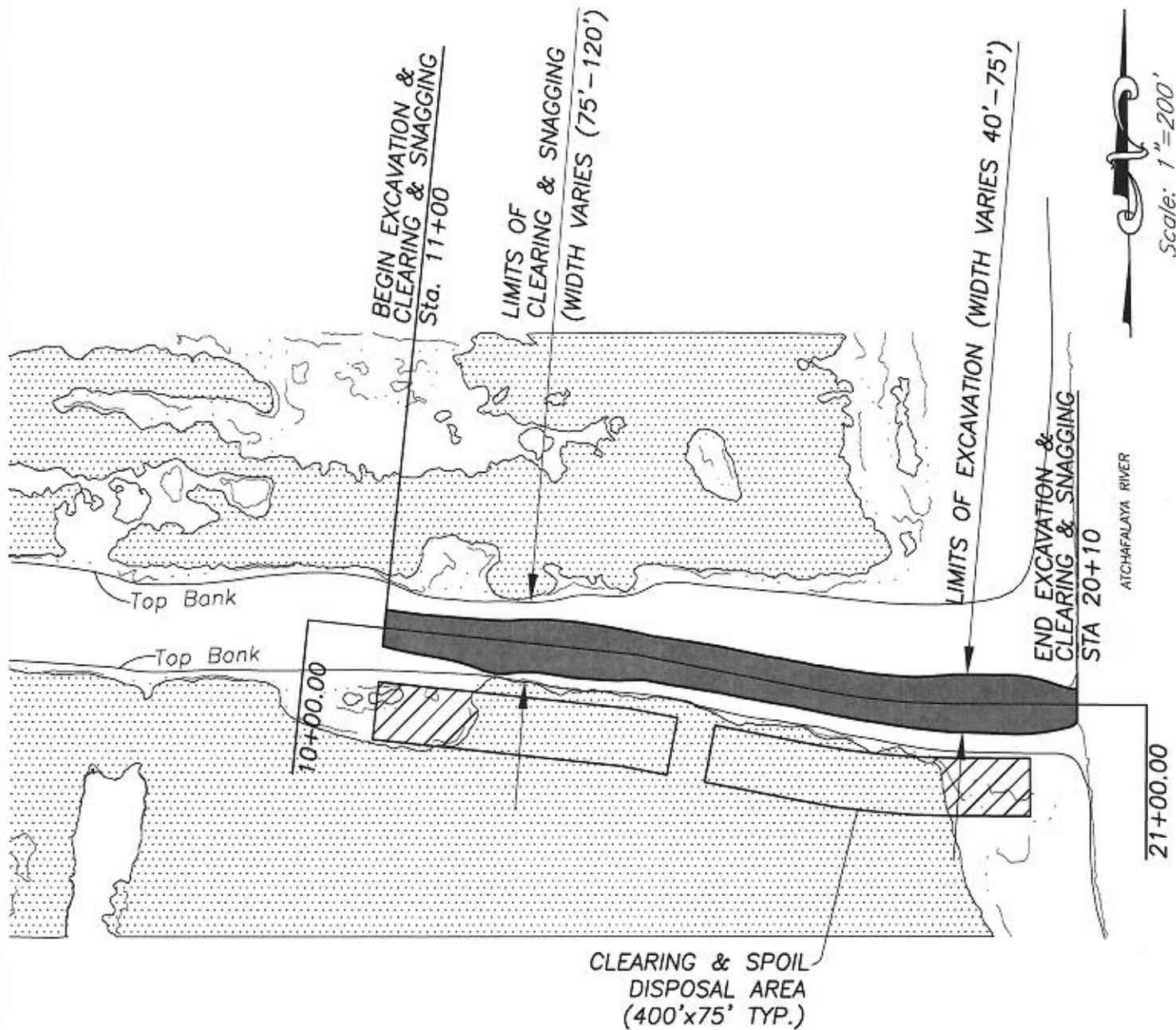
**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-2 Easy Street, Lafayette, LA 70508 (337) 288-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 9 - OVERALL PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	38
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

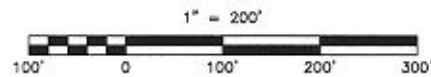
N:\DATA\8004\8004-07 Permits\Drawings\8004-07 Overall.dwg

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**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



ENGINEER	N. SCHNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 548-B Bay Street, Lafayette, LA 70506 (337) 232-0777

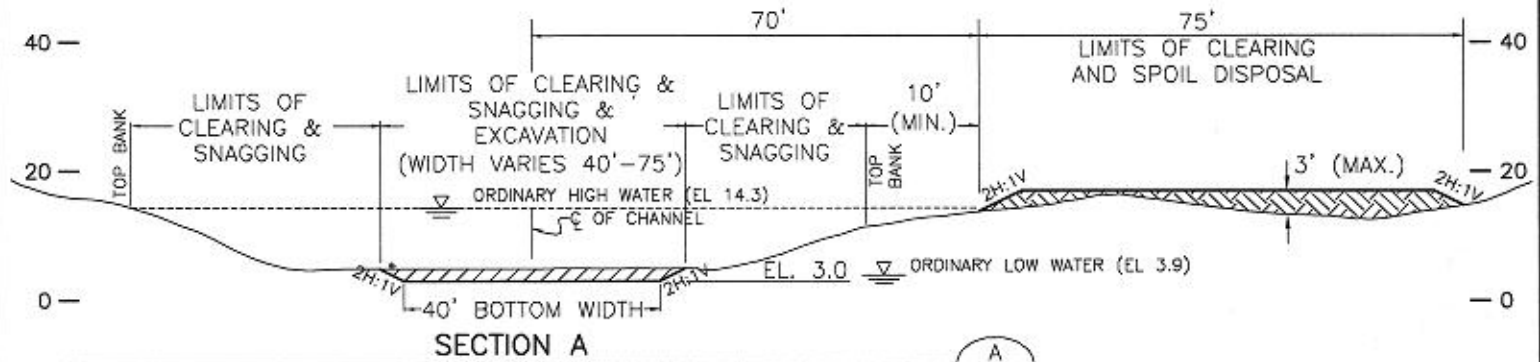
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 9 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

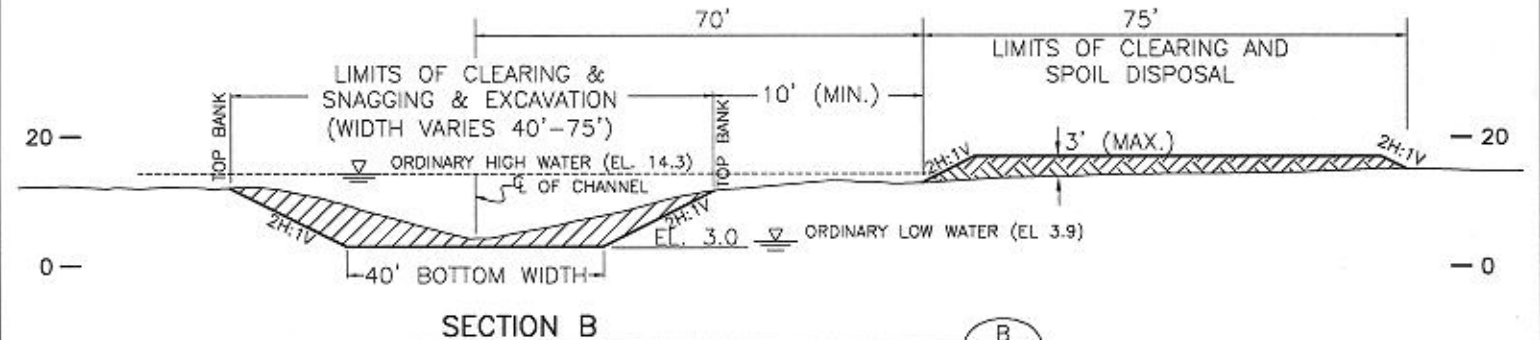
SHEET  
39  
OF  
44





SECTION A  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 11+00 TO STA 20+10  
 SCALE: 1"=30'

A  
38



SECTION B  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 11+00 TO STA 20+10  
 SCALE: 1"=30'

B  
38

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
GENERAL EXCAVATION (CU. YDS)	4,690
CLEARING & SNAGGING (LIN. FT.)	910
CLEARING (ACRES)	1.6

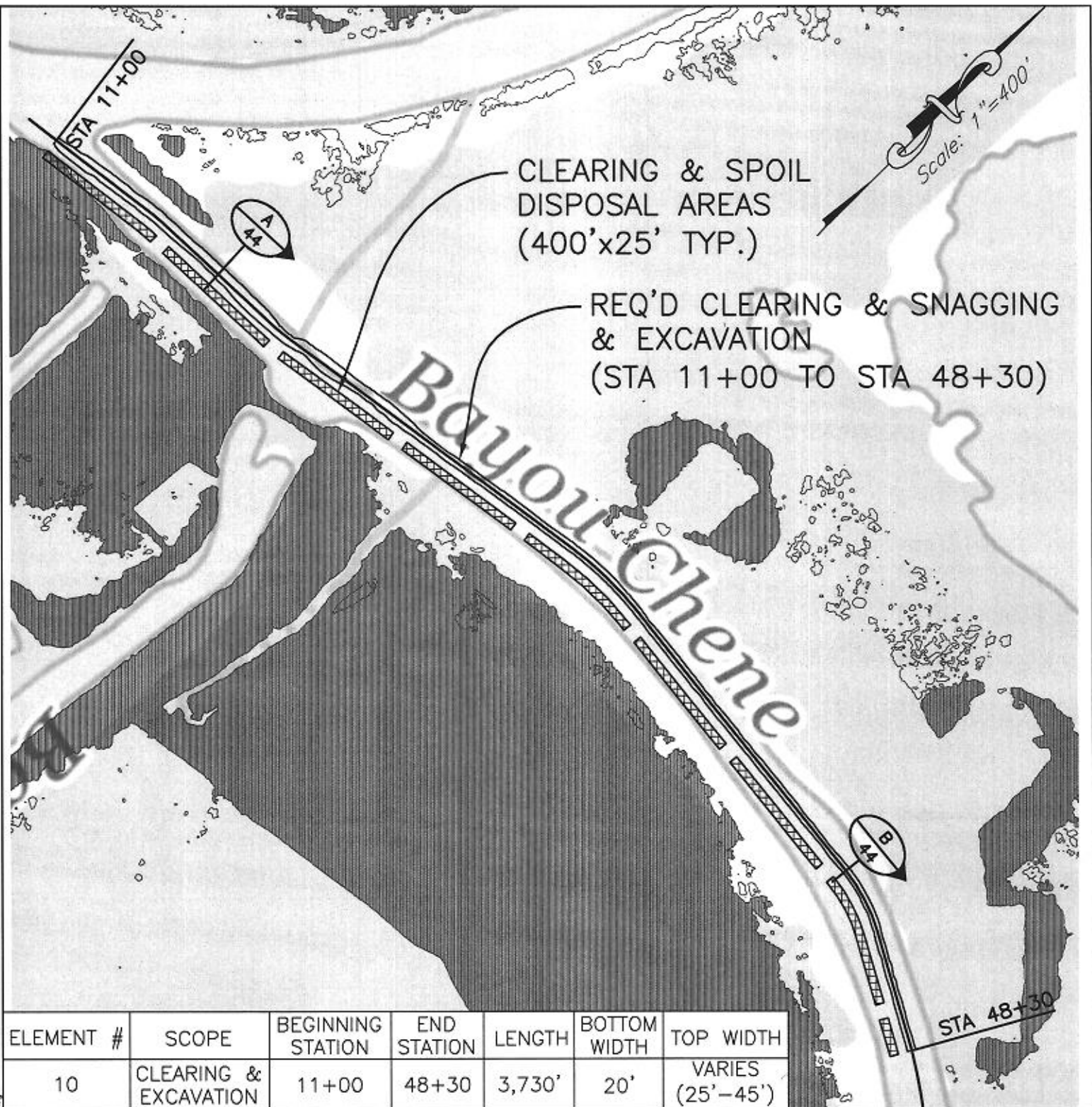
ENGINEER	N. SONNIER
DRAWN BY	N. SONNIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-C5
PLANS	8004-C5\CAD

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 148-B Easy Street, Lafayette, LA 70508 (337) 238-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 9 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	40
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		



ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
10	CLEARING & EXCAVATION	11+00	48+30	3,730'	20'	VARIES (25'-45')

- NOTES:**
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 10 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)	<b>LEGEND</b> SECTION TITLE SHEET NO. SHOWING SECTION	1" = 400' 	
---	---	---------------	--

ENGINEER: M. SONNEY  
 DRAWN BY: J. FABRE  
 DATE: APRIL 2018  
 SCALE: AS SHOWN  
 PROJECT: 8004-07  
 FILE NO.: SEE LEFT SIDE

**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 140-B Bay Street, Lake Charles, LA 70601 (337) 352-0773

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 10 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>41</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

A:\2018\8004\8004-07 Permits\Drawings\8004-07 Overall.dwg

MATCH LINE A-A SHEET 43



LIMITS OF CLEARING & SNAGGING & EXCAVATION (WIDTH VARIES 25'-45')






CLEARING AND SPOIL DISPOSAL AREAS (400' X 25' TYP.)

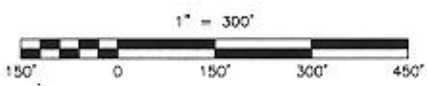
MINIMUM 10' WIDE BERM BETWEEN EXCAVATED MATERIAL BERM & PROPOSED LIMIT OF EXCAVATION (TYP.)

Sta. 11+00.00  
BEGIN EXCAVATION & CLEARING & SNAGGING  
10+00.00

Bayou Chene  
Bayou Chene

**LEGEND**

-  NON-WETLAND (EL.  $\geq$  15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



DESIGNED BY	M. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
149-B Bay Street, Lafayette, LA 70508 (887) 888-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 10 - PLAN VIEW

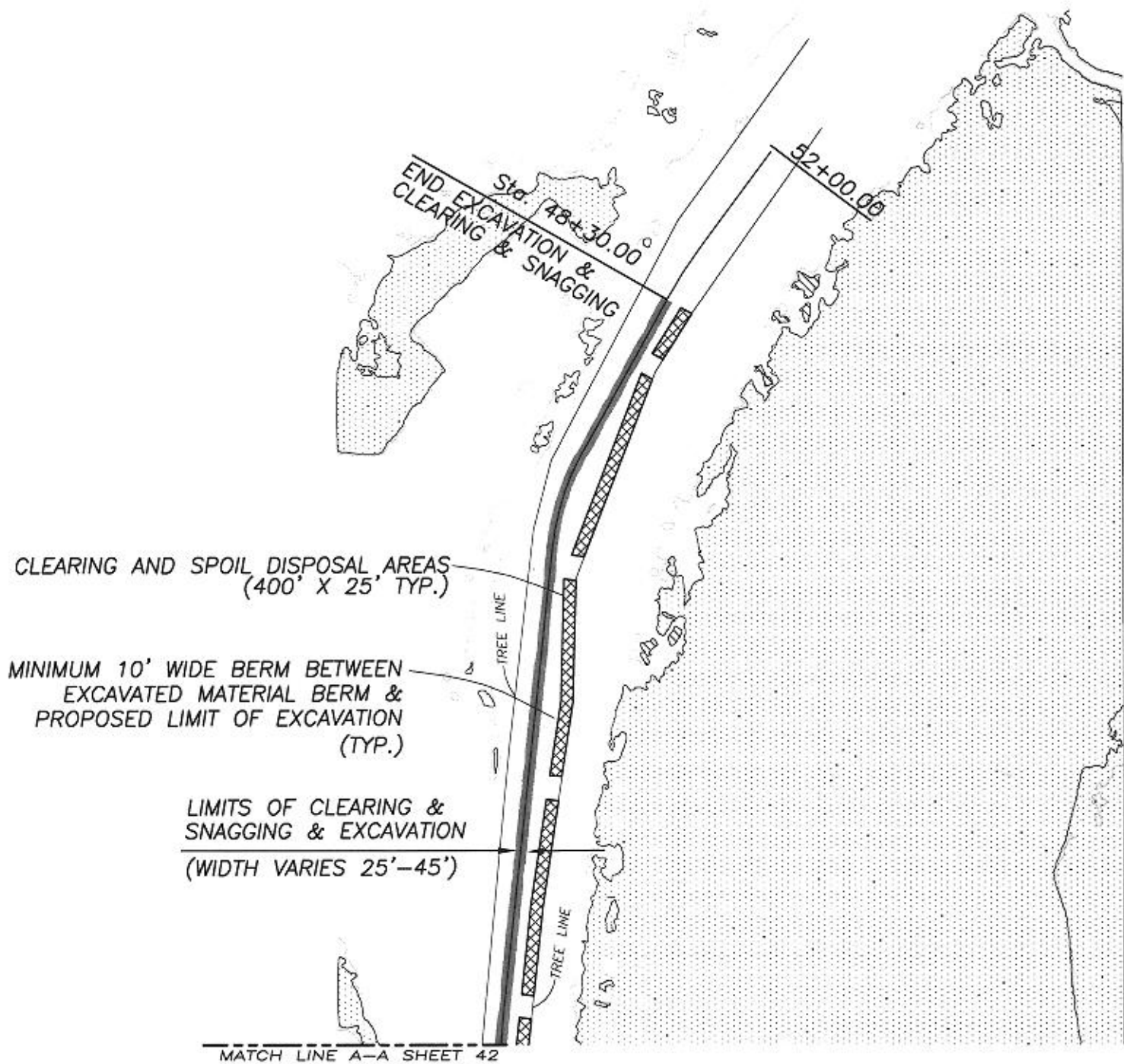
CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
42  
OF  
44






C:\WORK\8004\8004-07\_FINAL\8004-07\_FINAL.dwg 10/15/15 10:00 AM

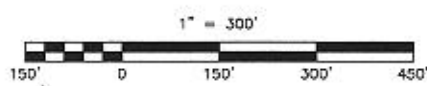


Scale: 1"=300'



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



DESIGNER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



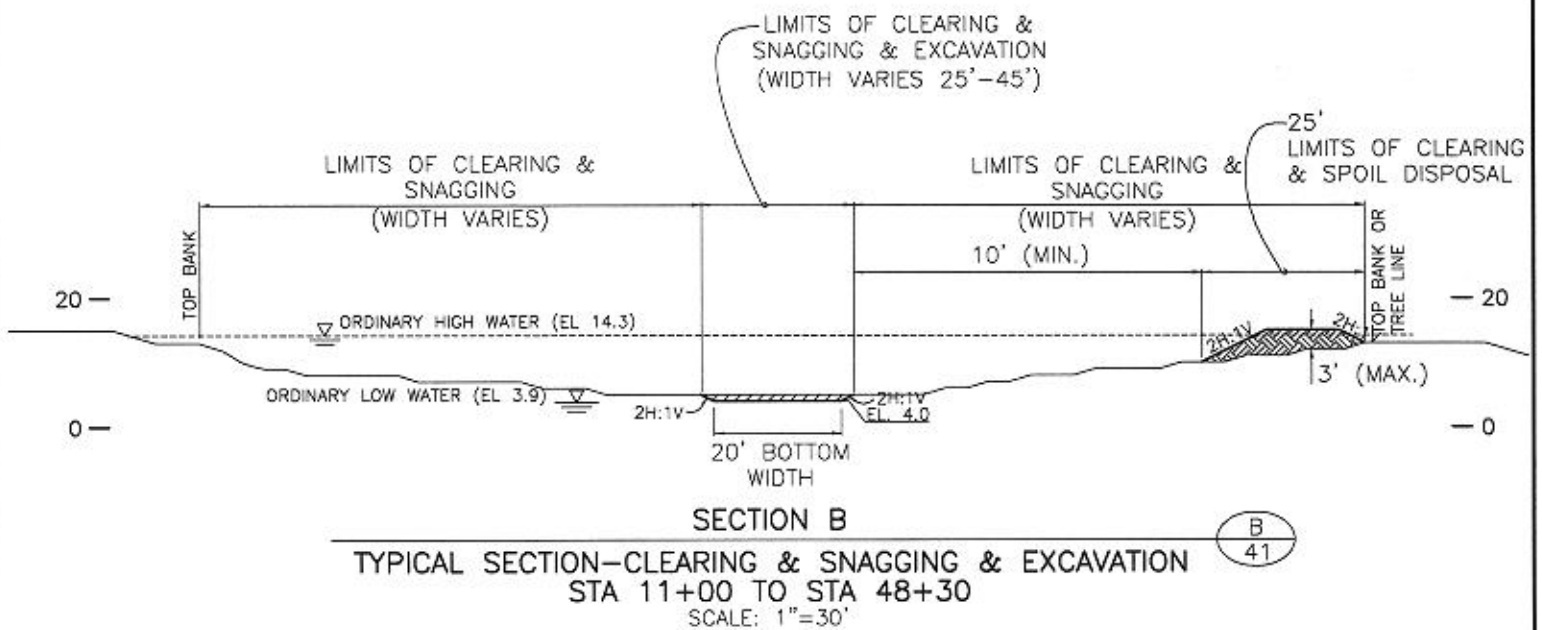
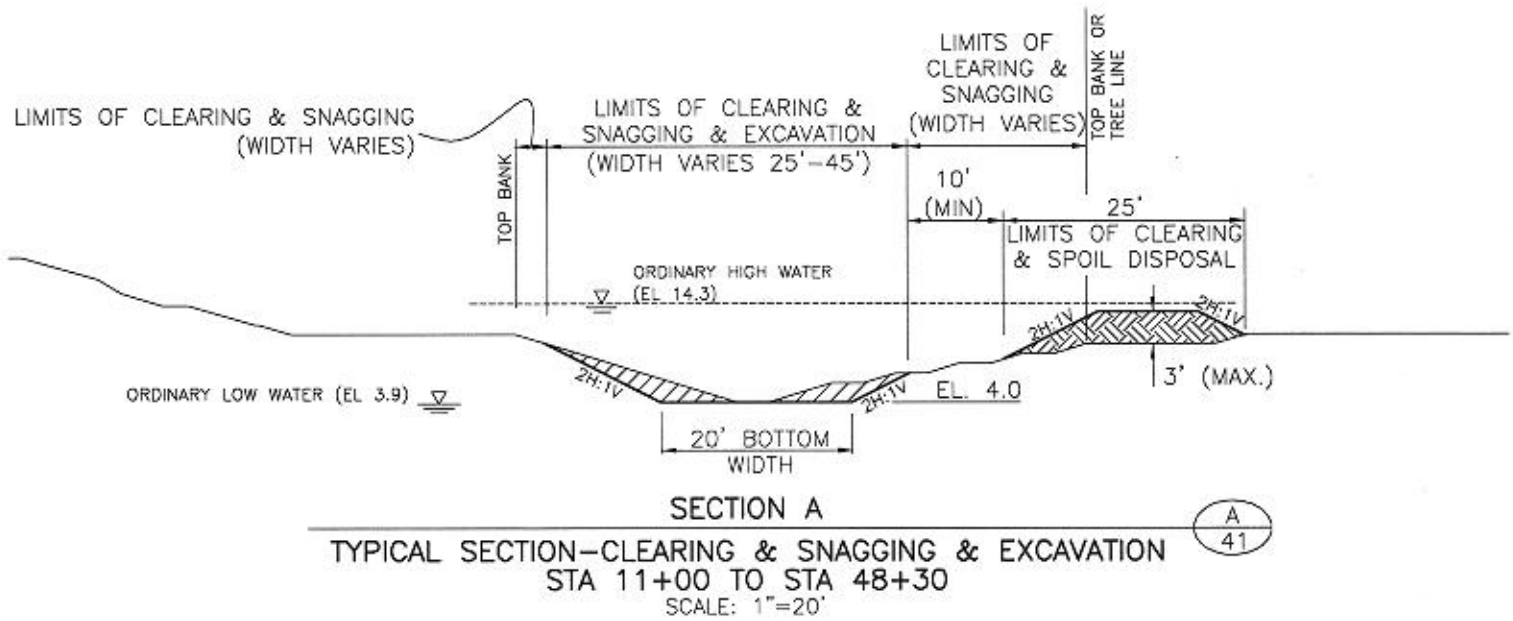
**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Essey Street, Lafayette, LA 70508 (337) 282-2777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 10 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>43</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

D:\Projects\8004-07\8004-07.dwg 10/10/18 10:00 AM

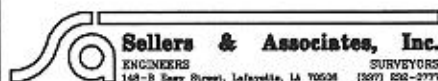


**LEGEND**

- C SECTION TITLE
- 13 SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
GENERAL EXCAVATION (CU. YDS)	4,931
CLEARING & SNAGGING (LIN. FT.)	3,730
CLEARING (ACRES)	0.1

OWNER	N. SOMMER
DRAWN BY	N. SOMMER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\GND



**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

**ELEMENT 10 - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 44 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



FILE COPY

Herrmann/ceg/1924



Operations Division  
Western Evaluation Section

DEC 23 2016

SUBJECT: MVN-2015-01796-WLL

Saint Martin Parish Government  
Post Office Box 9  
Saint Martinville, Louisiana 70582

Dear Gentlemen:

We are forwarding a draft copy of a permit, subject as above, which will authorize work under the Department of the Army permit program, after being signed by a responsible official of this office.

The unsigned, undated copy of the permit is enclosed. You must sign and date the permit, signifying acceptance of the terms and conditions therein, and return the signed permit to this office. RETURN TO: U.S. ARMY CORPS OF ENGINEERS, REGULATORY BRANCH, WESTERN EVALUATION SECTION, 7400 LEAKE AVENUE, NEW ORLEANS, LOUISIANA 70118. Upon receipt of the permit, the permit will be signed by the responsible official and will be returned to you.

YOU ARE ADVISED THAT YOU HAVE NO VALID PERMIT, AND NO WORK MAY BE PERFORMED UNTIL YOU RECEIVE THE ORIGINAL OF THE PERMIT SIGNED BY A RESPONSIBLE OFFICIAL OF THIS OFFICE. A signed copy of the permit will be sent to you upon verification by the project manager that the appropriate compensatory mitigation requirements have been fulfilled and that the credit procurement has been recorded in the Regulatory In-lieu Fee and Bank Information Tracking System (RIBITS) by the appropriate sponsor(s).

Before signing and returning the permit to this office, carefully consider the information contained in the permit. ALSO, CAREFULLY CONSIDER THE INFORMATION CONTAINED IN THE ATTACHED FORM "NOTIFICATION OF APPLICANT OPTION (NAO)" WHICH LISTS THE OPTIONS AVAILABLE TO YOU IN YOUR EVALUATION OF THE ENCLOSED PERMIT.

FILE COPY


-2-


IF YOU CHOOSE TO ACCEPT THE TERMS AND CONDITIONS OF THIS PERMIT, YOU MUST CONFIRM THAT YOUR PROCUREMENT OF APPROPRIATE COMPENSATORY MITIGATION CREDITS HAS BEEN RECORDED IN RIBITS AND SIGN AND RETURN THIS PERMIT WITH THE DRAWINGS WITHIN 60 DAYS OF THE DATE OF THIS LETTER. IF YOU FAIL TO DO SO, WE WILL ASSUME YOU NO LONGER PLAN TO DO THE WORK COVERED BY THE DRAFT PERMIT, AND YOUR APPLICATION WILL BE REMOVED FROM OUR FILES.

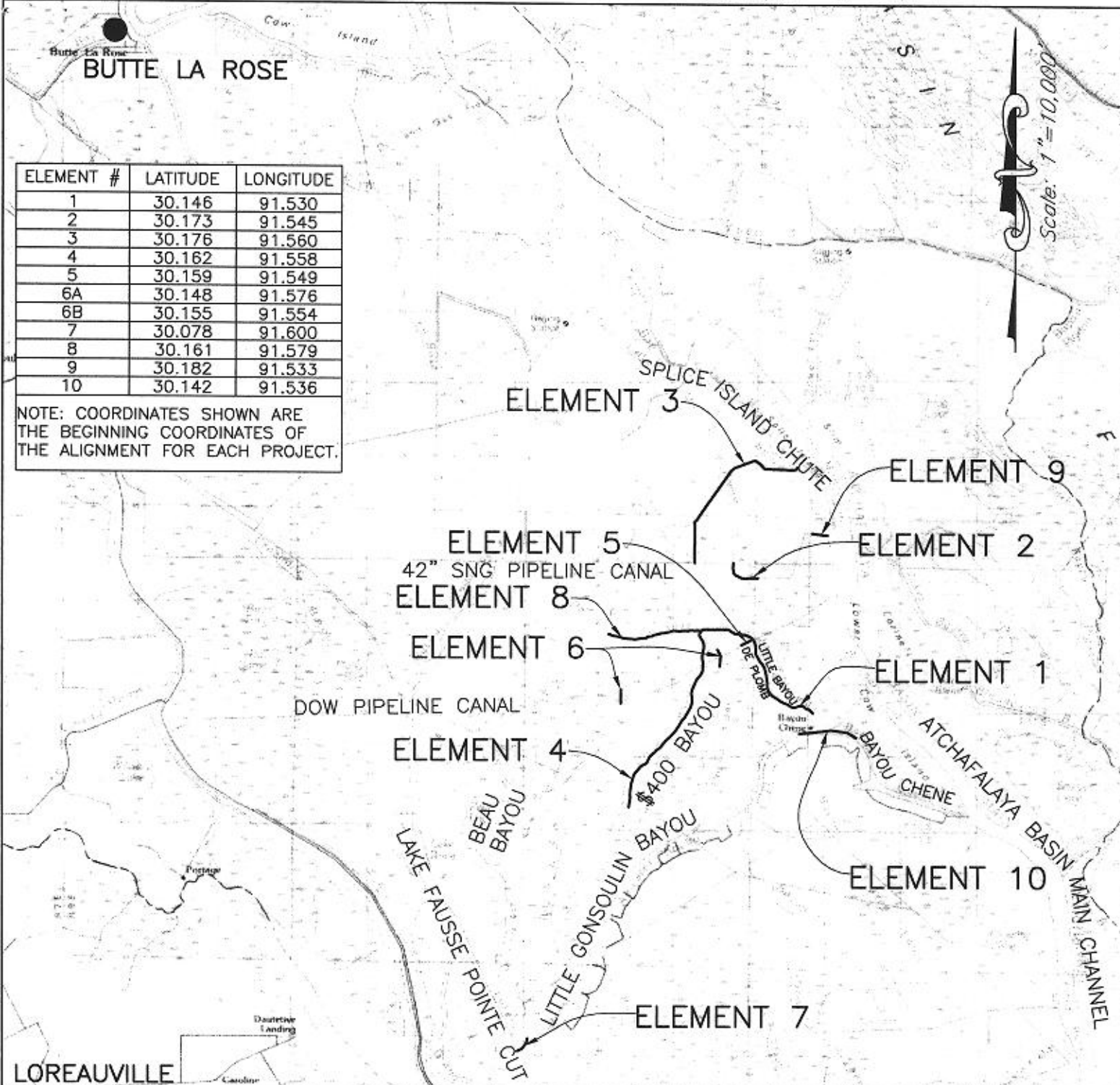
Sincerely,

Martin S. Mayer  
Chief, Regulatory Branch

Enclosure

  
D. Barbara  
OD-SW

  
M. Mayer  
OD-S



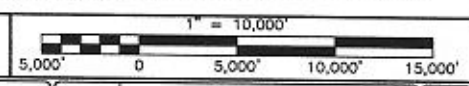
ELEMENT #	LATITUDE	LONGITUDE
1	30.146	91.530
2	30.173	91.545
3	30.176	91.560
4	30.162	91.558
5	30.159	91.549
6A	30.148	91.576
6B	30.155	91.554
7	30.078	91.600
8	30.161	91.579
9	30.182	91.533
10	30.142	91.536

NOTE: COORDINATES SHOWN ARE THE BEGINNING COORDINATES OF THE ALIGNMENT FOR EACH PROJECT.

**GENERAL NOTES:**

1. THE CONTRACTOR SHALL MINIMIZE DISTURBING AREAS TO THE FOOTPRINT NEEDED FOR CONSTRUCTION. ALL AREAS TO BE CLEARED SHALL BE FLAGGED AND INSPECTED PRIOR TO CLEARING OPERATIONS TO INSURE NO DAMAGE TO SIGNIFICANT TREES.
2. UNLESS SPECIFIED OTHERWISE, ALL EXCAVATION SHALL REMAIN WITHIN THE EXISTING CHANNEL TOP BANK. IF THE PROPOSED ALIGNMENT AND TEMPLATE WILL RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE ALIGNMENT OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH OF THE DESIGN TEMPLATE TO REMAIN WITHIN THE EXISTING TOP BANK OF THE CHANNEL.
3. EXISTING FEATURES ARE ESTIMATED FROM LIDAR DATA. EXISTING TOP BANK SHALL BE FIELD DETERMINED AND ADJUSTED ACCORDINGLY.
4. WITHIN AREAS MARKED FOR CLEARING & SPOIL DISPOSAL, ALL TREES AND WOODY VEGETATION NOT MARKED FOR PRESERVATION SHALL BE CUT SO THE REMAINING STUMP EXTENDS NO MORE THAN 12" ABOVE THE GROUND SURFACE. CLEARED MATERIAL SHALL BE STOCKPILED AND COVERED WITH EXCAVATED MATERIAL TO A DEPTH OF AT LEAST 2'.
5. PLACEMENT OF EXCAVATED MATERIAL SHALL BE CONTAINED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS. THE EXCAVATED MATERIAL BERM SHALL SLOPE BACK TO NATURAL GROUND AT A 2H:1V SLOPE, AND SHALL NOT BE CONTINUOUS FOR MORE THAN 400', UNLESS SPECIFIED OTHERWISE. THE EXCAVATED MATERIAL BERM SHALL HAVE GAPS WITH A MINIMUM OPENING OF 50' TO ALLOW THE FREE EXCHANGE OF WATER BETWEEN THE CHANNEL AND ADJACENT SWAMP.

QUAD MAP SHOWN: U.S.G.S. BATON ROUGE TOPOGRAPHIC MAP (1984) (1:100,000) (USGS REF. CODE:30091-A1-TM-100)



ENGINEER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 163-D Easy Street, Lafayette, LA 70506 (337) 258-0777

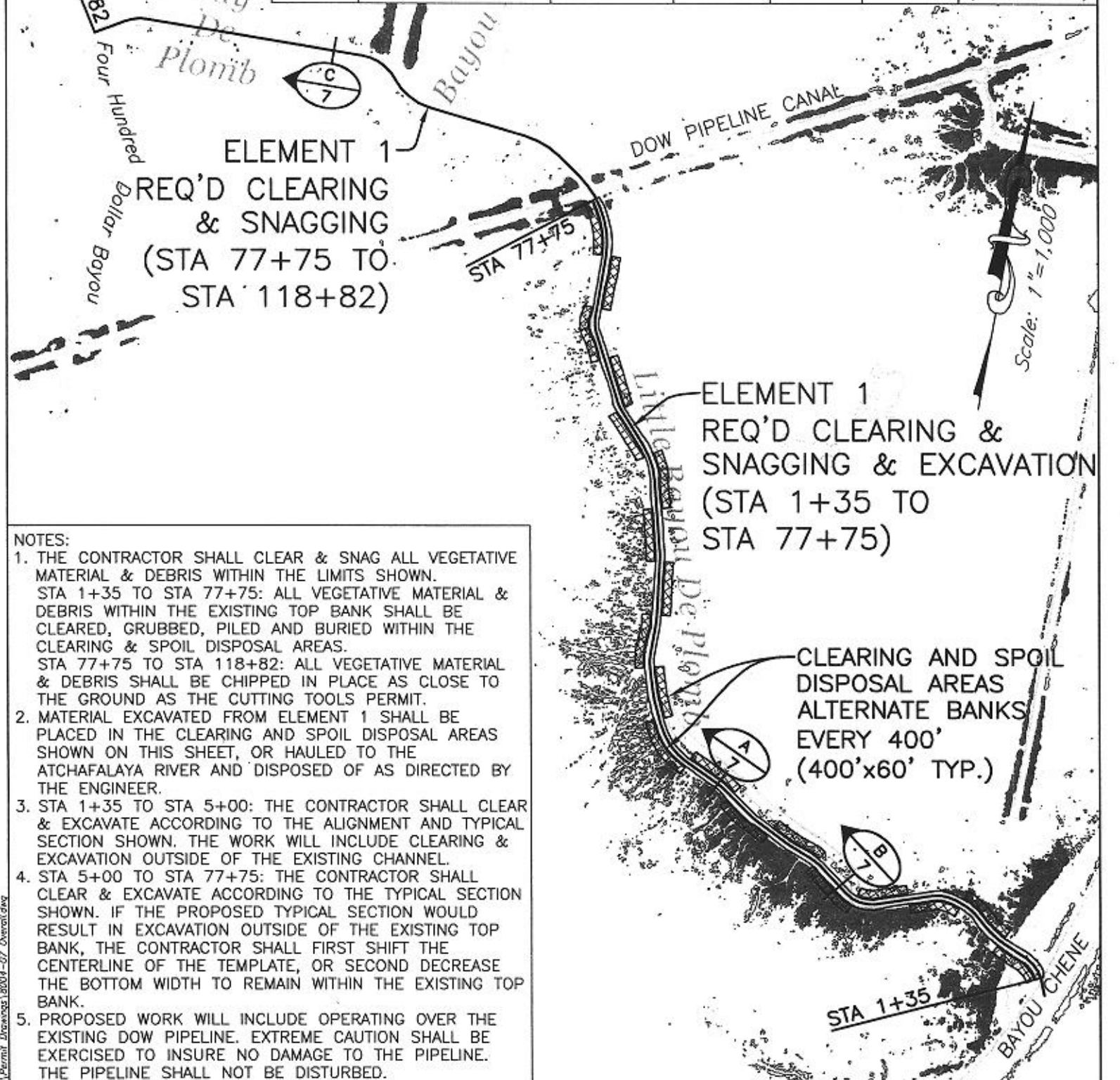
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

VICINITY MAP & GENERAL NOTES

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 1 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

ACI (DATA) 160204 (8004-07 Permit) Drawing 8004-07 Drowell.dwg

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
1	CLEARING & EXCAVATION	1+35	77+75	7,640'	30'	VARIES (50'-110')
1	CLEARING & SNAGGING	77+75	118+82	4,107'		VARIES (90'-100')



- NOTES:**
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN.  
 STA 1+35 TO STA 77+75: ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE EXISTING TOP BANK SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.  
 STA 77+75 TO STA 118+82: ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CHIPPED IN PLACE AS CLOSE TO THE GROUND AS THE CUTTING TOOLS PERMIT.
  2. MATERIAL EXCAVATED FROM ELEMENT 1 SHALL BE PLACED IN THE CLEARING AND SPOIL DISPOSAL AREAS SHOWN ON THIS SHEET, OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. STA 1+35 TO STA 5+00: THE CONTRACTOR SHALL CLEAR & EXCAVATE ACCORDING TO THE ALIGNMENT AND TYPICAL SECTION SHOWN. THE WORK WILL INCLUDE CLEARING & EXCAVATION OUTSIDE OF THE EXISTING CHANNEL.
  4. STA 5+00 TO STA 77+75: THE CONTRACTOR SHALL CLEAR & EXCAVATE ACCORDING TO THE TYPICAL SECTION SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.
  5. PROPOSED WORK WILL INCLUDE OPERATING OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.

<b>LEGEND</b> CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)		SECTION TITLE SHEET NO. SHOWING SECTION	1" = 1,000' 
ENGINEER: N. SCHWIER DRAWN BY: J. FAHRE DATE: APRIL 2016 SCALE: AS SHOWN PROJECT: 8004-07 FILE NO.: SEE LEFT SIDE	<b>Sellers &amp; Associates, Inc.</b> ENGINEERS SURVEYORS 148-B Bay Street, Lafayette, LA 70506 (337) 288-0777	<b>BEAU BAYOU SWAMP          HYDROLOGIC RESTORATION</b> ELEMENT 1 - OVERALL PLAN VIEW	CLIENT: ST. MARTIN PARISH GOVERNMENT PROJECT: BEAU BAYOU SWAMP HYDRO. REST. LOCATION: ST. MARTIN PARISH, LOUISIANA

H:\0021\8004\8004-07 Permits\Drawings\8004-07 Overall.dwg



Scale: 1"=300'

CLEARING & SPOIL DISPOSAL AREA  
ALTERNATE BANKS EVERY 400'  
(400'x60' TYP.)

10' WIDE BERM BETWEEN EXCAVATED MATERIAL  
BERM AND EXISTING TOP OF BANK (TYP.)

30'± EXISTING WATER BOTTOM

LIMITS OF EXCAVATION  
(WIDTH VARIES 50'-80')

LIMITS OF CLEARING & SNAGGING  
(WIDTH VARIES 90'-100')






EXISTING  
CHANNEL  
CENTERLINE

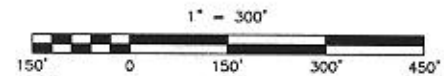
BAYOU CHEVE

Sta. 1+35 BEGIN EXCAVATION &  
CLEARING & SNAGGING

0+000

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\DATA\8004\8004-07 Permits\Permit Drawings\8004-07 Project 1 Plans.dwg

DESIGNED BY	N. SCHNER
DRAWN BY	J. FABRE
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70506 (337) 282-0777

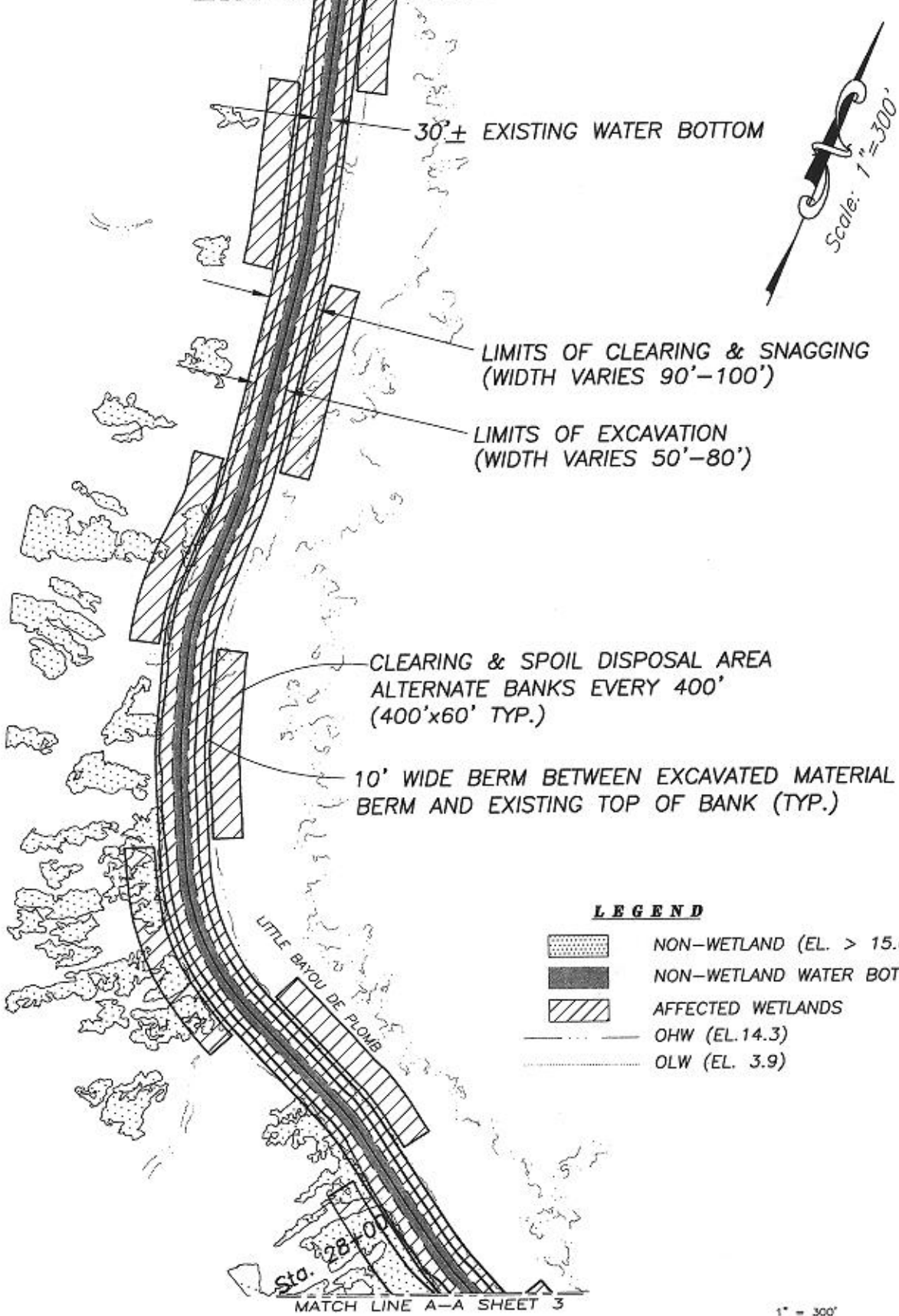
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

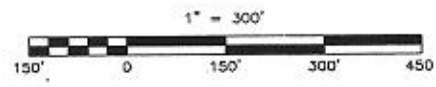
SHEET  
3  
OF  
44

MATCH LINE B-B SHEET 5



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



MATCH LINE A-A SHEET 3

R:\01021\0004\0004-07 Permits\Permit Drawings\0004-07 Project 1 Plans.dwg

ENGINEER	M. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	0004-07
FILENO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
142-B Easy Street, Lafayette, LA 70506 (337) 288-0199

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	DWG	4
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	4
LOCATION	ST. MARTIN PARISH, LOUISIANA		

MATCH LINE C-C SHEET 6

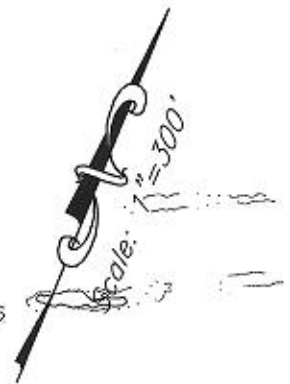
LIMITS OF CLEARING AND SNAGGING  
(WIDTH VARIES 90'-100')

30'± EXISTING WATER BOTTOM

LITTLE BAYOU DE PLOMB

DOW PIPELINE CANAL

DOW PIPELINE CANAL



Sta. 77+75  
END EXCAVATION  
BEGIN CLEARING  
&  
SNAGGING ONLY

LITTLE BAYOU DE PLOMB






30'± EXISTING WATER BOTTOM

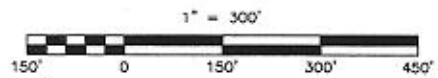
LIMITS OF EXCAVATION  
(WIDTH VARIES 50'-80')

CLEARING & SPOIL DISPOSAL AREA  
ALTERNATE BANKS EVERY 400'  
(400'x60' TYP.)

10' WIDE BERM BETWEEN EXCAVATED MATERIAL BERM  
AND EXISTING TOP OF BANK (TYP.)

**LEGEND**


-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLV (EL. 3.9)



MATCH LINE B-B SHEET 4

N:\DATA\8004\8004-07 Permits\Permit\_Drainage\8004-07 Project 1 Plans.dwg

ENGINEER	N. SOMNIER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70508 (337) 522-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
5  
OF  
44

118+82  
END CLEARING  
& SNAGGING

FOUR HUNDRED  
DOLLAR BAYOU




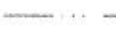

LIMITS OF CLEARING AND SNAGGING  
(WIDTH VARIES 90'-100')

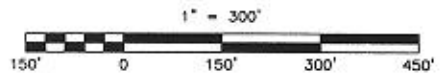
30'± EXISTING WATER BOTTOM

LITTLE BAYOU DE PLOMB

Scale: 1"=300'

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



MATCH LINE C-C SHEET 5

N:\DATA\8004\8004-07 Permits\Permits Drawings\8004-07 Project 1 Plans.dwg

DESIGNED BY	N. SONWER
DRAWN BY	J. FAIRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



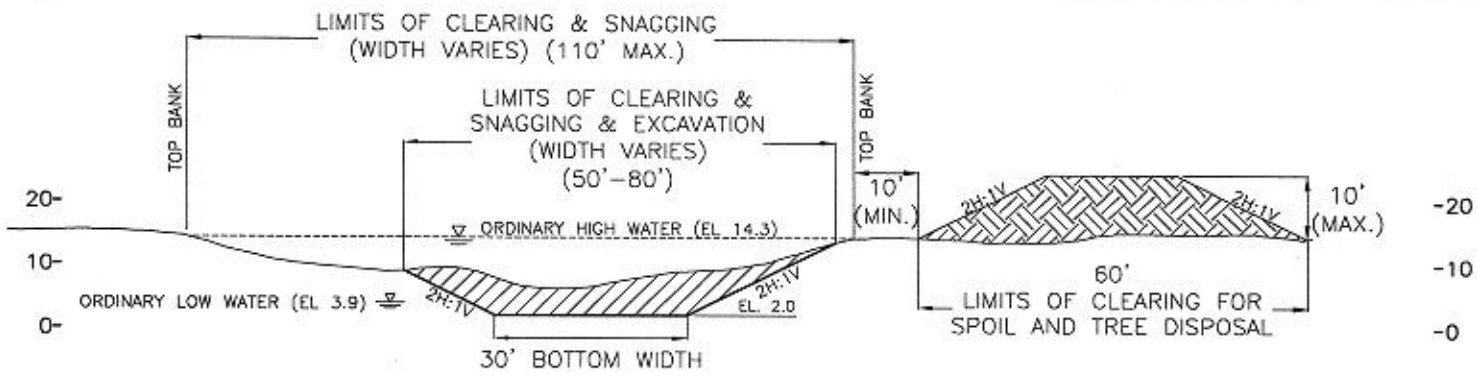
**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70506 (887) 232-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

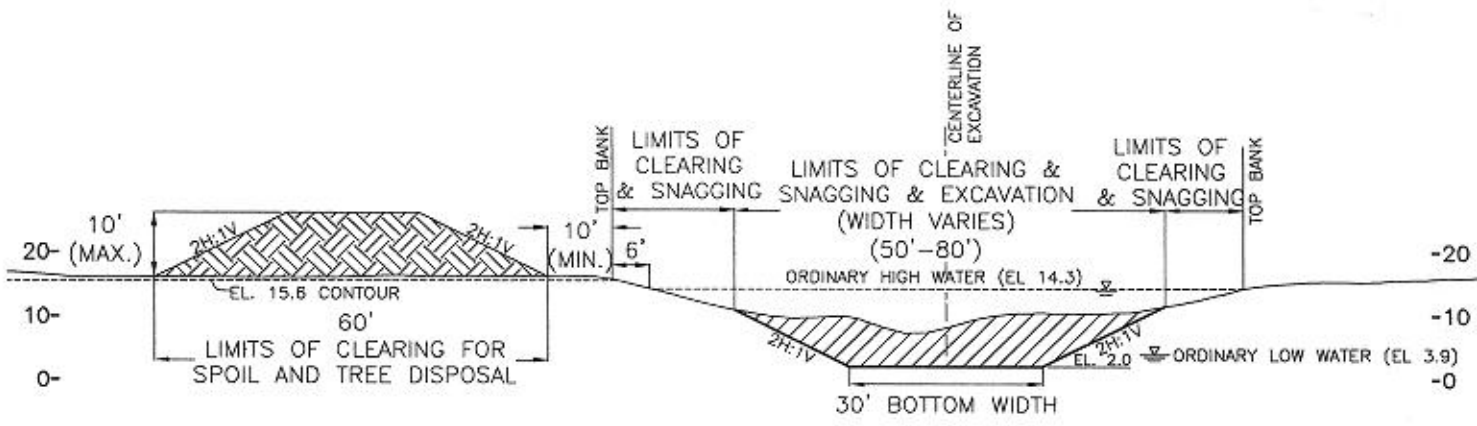
ELEMENT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>6</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

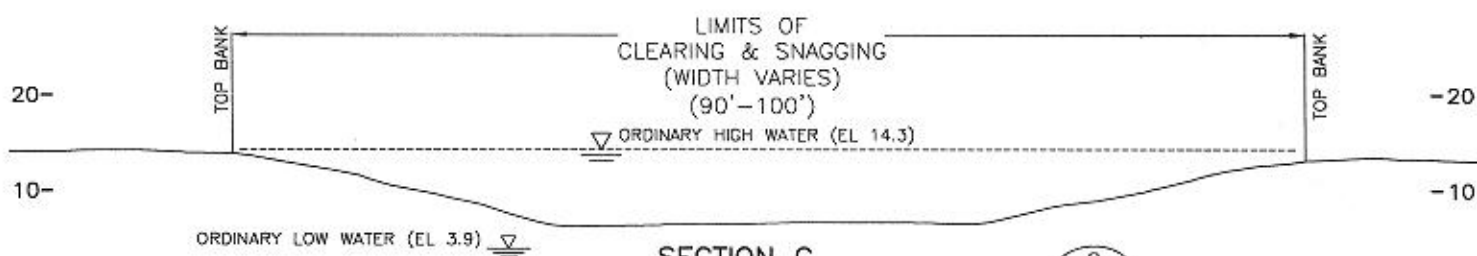




**SECTION A**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 1+35 TO STA 77+75  
 SCALE: 1"=30'



**SECTION B**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 1+35 TO STA 77+75  
 SCALE: 1"=30'



**SECTION C**  
**TYPICAL SECTION-CLEARING & SNAGGING**  
 STA 77+75 TO STA 118+82  
 SCALE: 1"=20'

PROJECT FEATURES	QUANTITY
CHANNEL EXCAVATION (CU. YDS.)	86,670
CLEARING & SNAGGING (LIN. FT.)	11,747
CLEARING (ACRES)	12.3

**LEGEND**

SECTION TITLE  
 SHEET NO. SHOWING PLAN VIEW  
 EXCAVATED MATERIAL BERM  
 EXCAVATION

DESIGNED BY	W. SONNIER
DRAWN BY	W. SONNIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05/CAD

**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Bay Street, Lafayette, LA 70506 (337) 238-0779

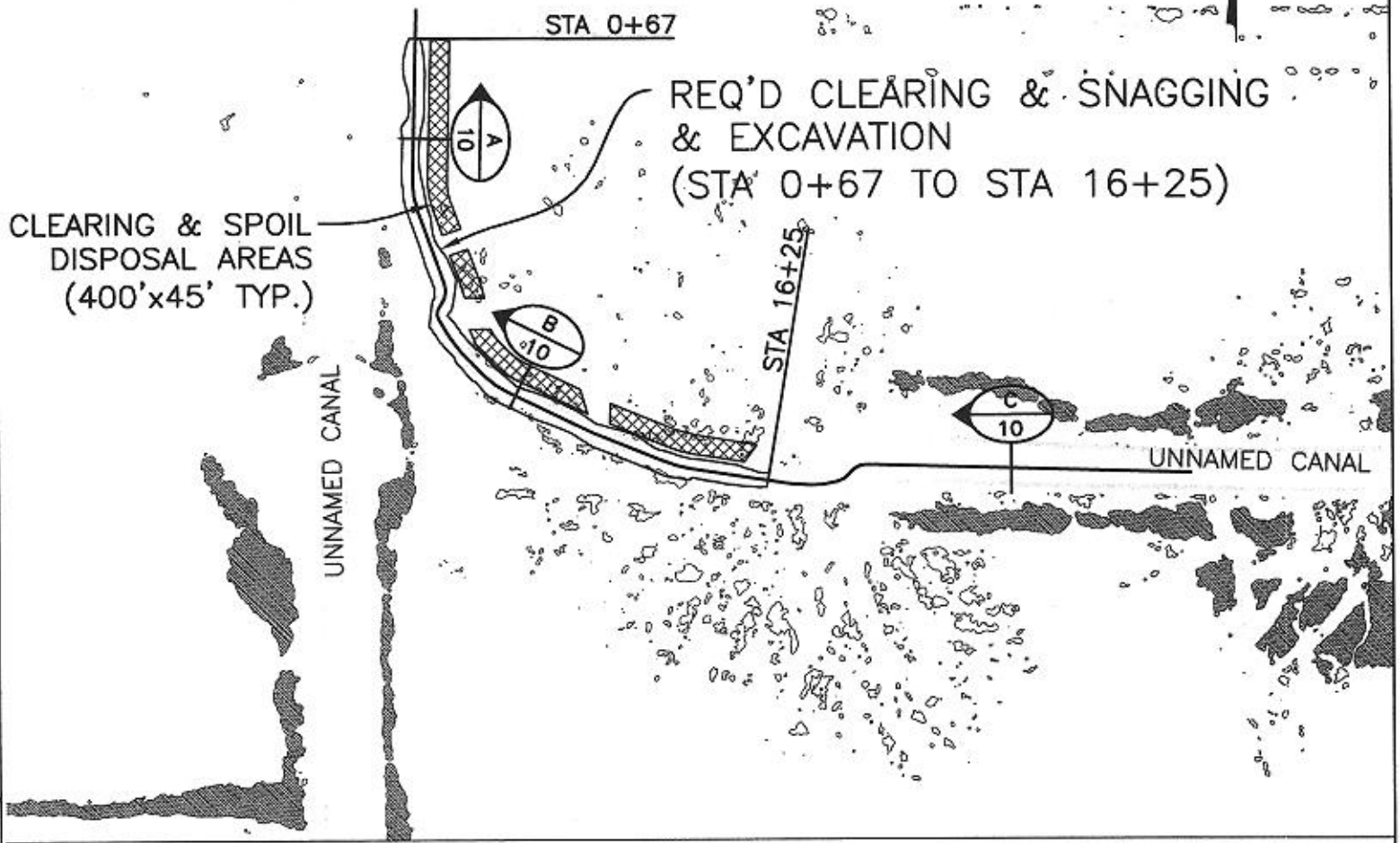
**BEAU BAYOU SWAMP**  
**HYDROLOGIC RESTORATION**  
 ELEMENT 1 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 7 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
2	CLEARING & EXCAVATION	0+67	16+25	1,558'	15'	VARIES (25'-55')



42" SNG PIPELINE CANAL



- NOTES:**
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 2 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE ALIGNMENT AND TYPICAL SECTION SHOWN. SINCE THE EXISTING CHANNEL CENTERLINE MEANDERS, THE PROPOSED ALIGNMENT MAY INVOLVE EXCAVATION OUTSIDE OF THE EXISTING TOP BANK.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)	<b>LEGEND</b>	SECTION TITLE SHEET NO. SHOWING SECTION	1" = 400' 
---	---------------	--	---------------

ENGINEER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2010
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Bay Street, Lafayette, LA 70508 (337) 232-0777

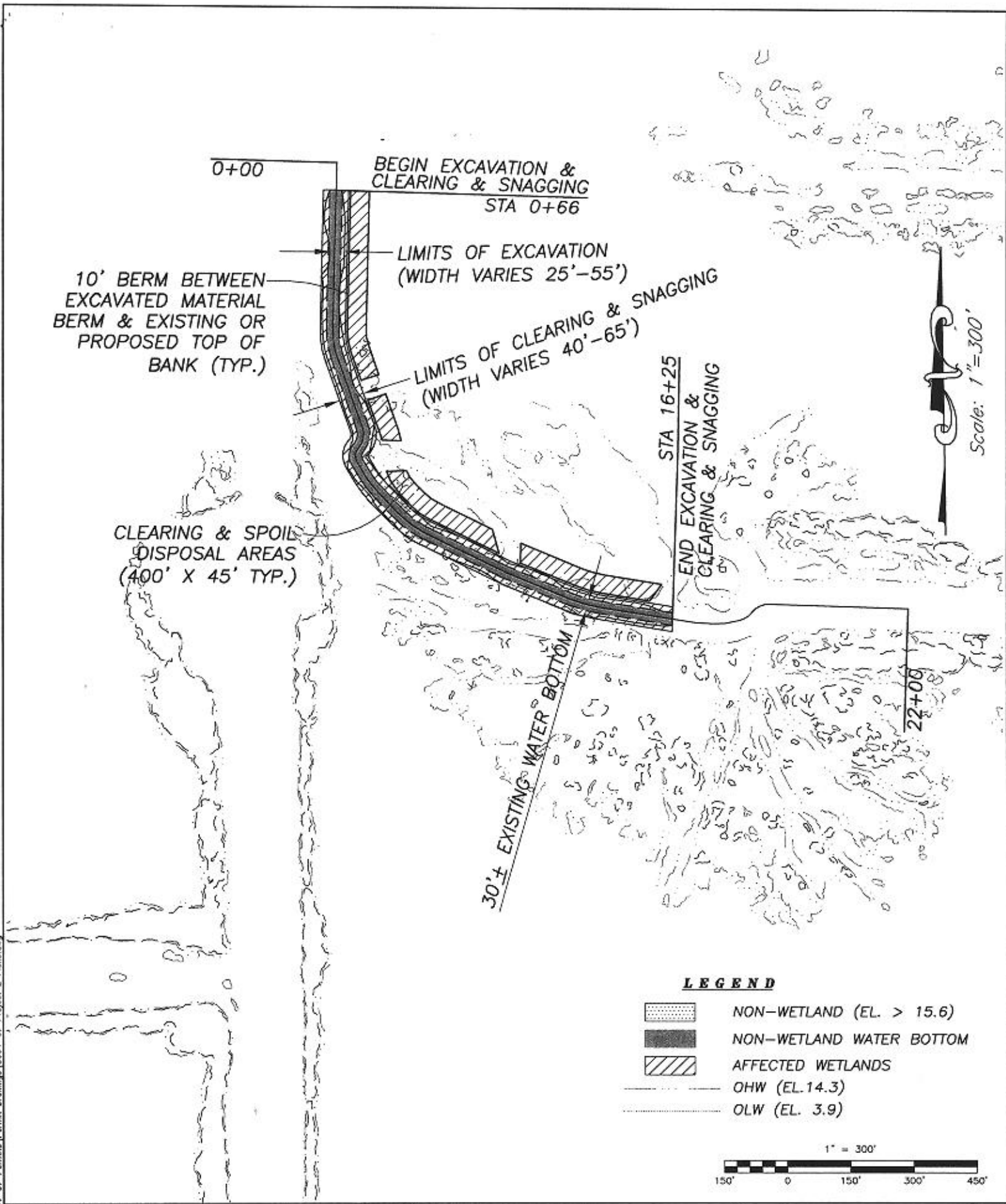
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 2 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>8</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

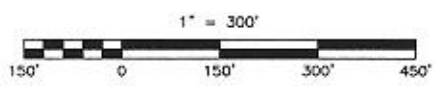
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A:\DATA\2004\2004-07 Permits\Permit Drawings\2004-07 Project 2 Plans.dwg



**LEGEND**

- NON-WETLAND (EL. > 15.6)
- NON-WETLAND WATER BOTTOM
- AFFECTED WETLANDS
- OHW (EL. 14.3)
- OLW (EL. 3.9)



ENGINEER	N. SONNIER
DRAWN BY	J. FABRE
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	PROJECT2.DWG

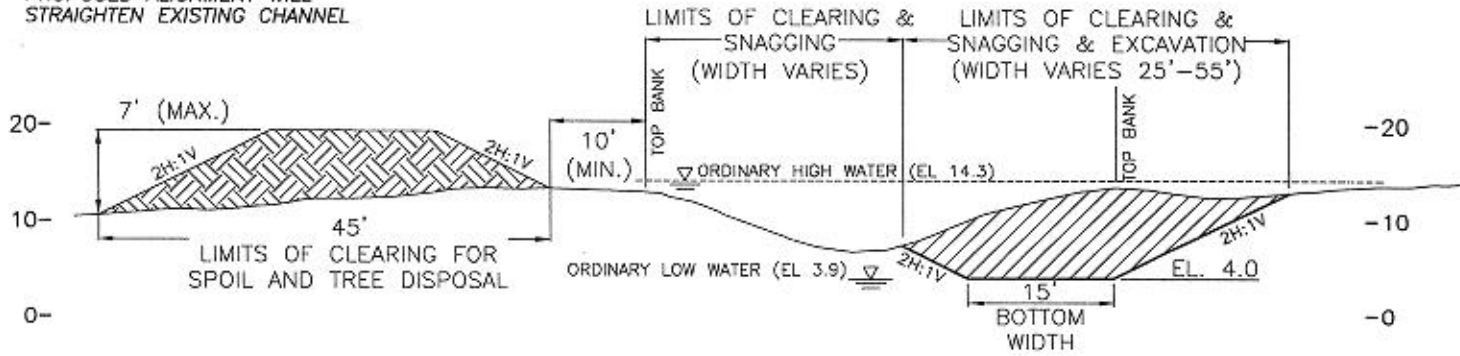
**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 248-B Bay Street, Lafayette, LA 70508 (337) 532-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 2 - PLAN VIEW**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>9</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

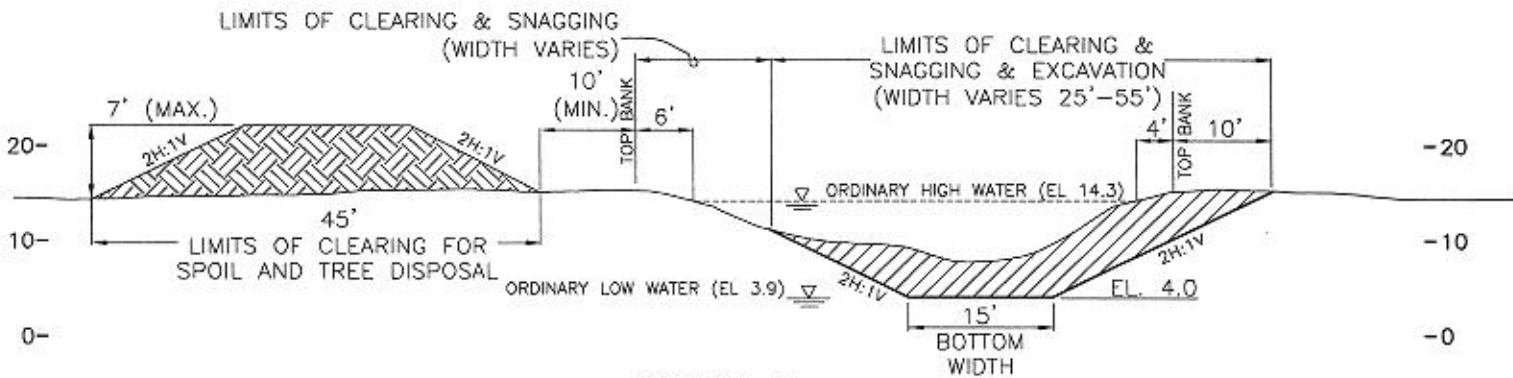
NOTE: EXISTING CHANNEL MEANDERS.  
PROPOSED ALIGNMENT WILL  
STRAIGHTEN EXISTING CHANNEL



SECTION A - EXISTING CHANNEL OFFSET FROM PROPOSED CENTERLINE

TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
STA 0+67 TO STA 16+25  
SCALE: 1"=20'

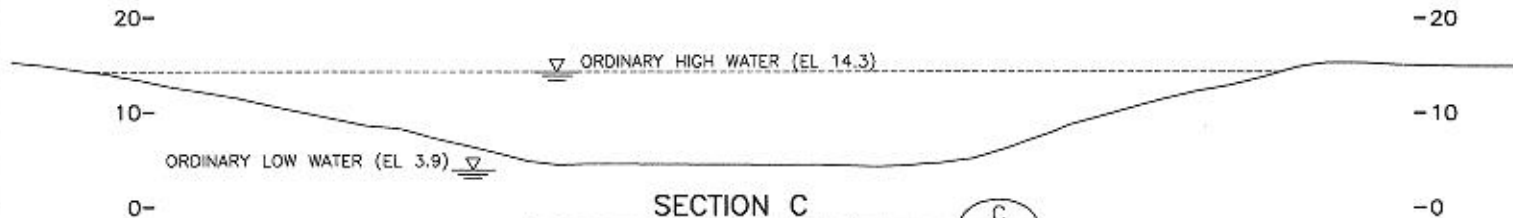
A  
8



SECTION B

TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
STA 0+67 TO STA 16+25  
SCALE: 1"=20'

B  
8



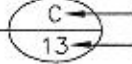
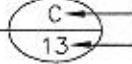


SECTION C

TYPICAL SECTION-NO WORK  
SCALE: 1"=20'

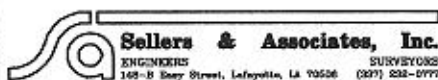
C  
8

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	9,191
CLEARING & SNAGGING (LIN. FT.)	1,558
CLEARING (ACRES)	1.5

LEGEND

-  SECTION TITLE
-  SHEET NO. SHOWING PLAN VIEW
-  EXCAVATED MATERIAL BERM
-  EXCAVATION

ENGINEER	N. SCHWIER
CHECKED BY	M. SOMMER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05(CAD)

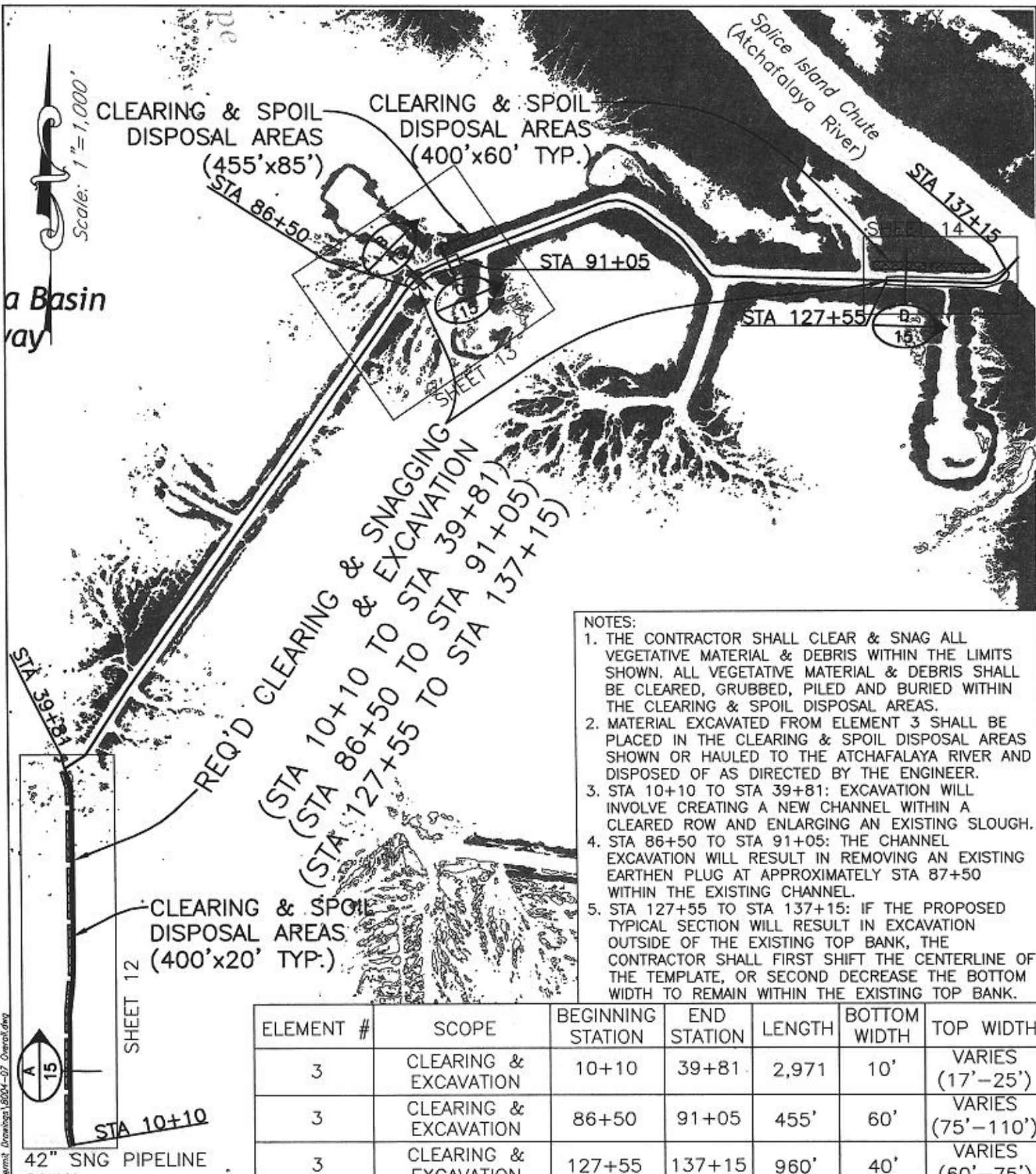


BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION

ELEMENT 2 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 10 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	





- NOTES:
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 3 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. STA 10+10 TO STA 39+81: EXCAVATION WILL INVOLVE CREATING A NEW CHANNEL WITHIN A CLEARED ROW AND ENLARGING AN EXISTING SLOUGH.
  4. STA 86+50 TO STA 91+05: THE CHANNEL EXCAVATION WILL RESULT IN REMOVING AN EXISTING EARTHEN PLUG AT APPROXIMATELY STA 87+50 WITHIN THE EXISTING CHANNEL.
  5. STA 127+55 TO STA 137+15: IF THE PROPOSED TYPICAL SECTION WILL RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
3	CLEARING & EXCAVATION	10+10	39+81	2,971	10'	VARIES (17'-25')
3	CLEARING & EXCAVATION	86+50	91+05	455'	60'	VARIES (75'-110')
3	CLEARING & EXCAVATION	127+55	137+15	960'	40'	VARIES (60'-75')

**LEGEND**

CLEARING & SPOIL DISPOSAL AREAS

UPLANDS (EL. > 15.6)

**SECTION TITLE**

SHEET NO. SHOWING SECTION

1" = 1,000'

OWNER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
PLANS	SEE LEFT SIDE

**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70508 (337) 233-0777

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	11
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

**BEAU BAYOU SWAMP HYDROLOGIC RESTORATION**

ELEMENT 3 - OVERALL PLAN VIEW

N:\1\01\01\8004\8004-07 Permits\Permit Drawings\8004-07 Overall.dwg



STA 39+81  
 END EXCAVATION & CLEARING & SNAGGING  
 EXISTING CANAL

10' BERM BETWEEN EXCAVATED MATERIAL BERM & EXISTING OR PROPOSED TOP OF BANK (TYP.)

CLEARING & SPOIL DISPOSAL AREAS (400' X 45' TYP.)






30'± EXISTING WATER BOTTOM LIMITS OF CLEARING & SNAGGING (30' MAX.)

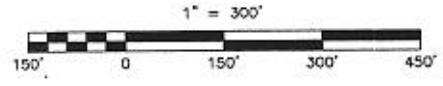
LIMITS OF EXCAVATION (WIDTH VARIES 17'-25')

STA 10+10.00  
 BEGIN EXCAVATION & CLEARING & SNAGGING  
 42" SNG PIPELINE  
 10+00



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



ENGINEER	N. SONNIER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Esau Street, Lafayette, LA 70508 (337) 232-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 3 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 12 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

10/20/2016 10:00 AM 10/20/2016 10:00 AM 10/20/2016 10:00 AM 10/20/2016 10:00 AM 10/20/2016 10:00 AM

Scale: 1" = 100'

CLEARING & SPOIL DISPOSAL AREA  
(455'x85' TYP.)

LIMITS OF EXCAVATION  
(WIDTH VARIES 75'-110')

EXISTING TOP BANK  
EXISTING CANAL  
EXISTING TOP BANK

EXISTING BANKLINE






STA 91+05.00  
END EXCAVATION & SNAGGING & CLEARING

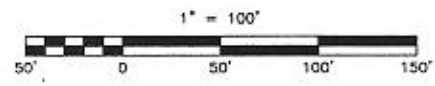
EXISTING EARTHEN PLUG

STA 86+50.00  
BEGIN EXCAVATION & SNAGGING & CLEARING

EXISTING TOP BANK  
EXISTING CANAL  
EXISTING TOP BANK

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



DESIGNED BY	N. SONMER
DRAWN BY	J. FAHRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.CWG



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-D Eazy Street, Lakeville, LA 70006 (504) 232-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

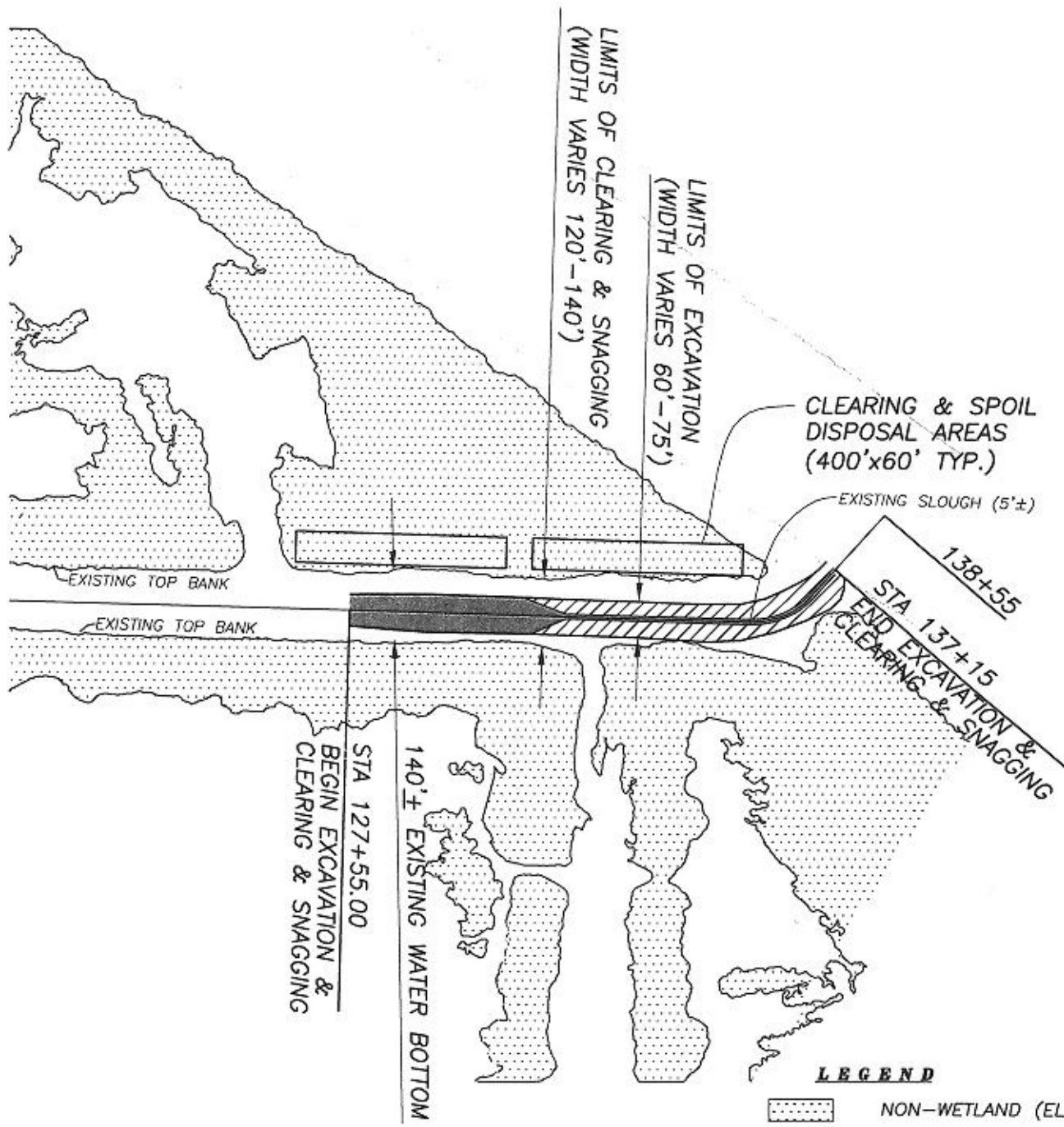
ELEMENT 3 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
13  
OF  
44

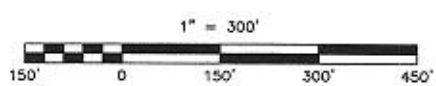
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Scale: 1"=300'



NOTE: SEDIMENT HAS BUILT UP WITHIN THE EXISTING CANAL AT THE ATCHAFALAYA RIVER. VEGETATION (MAINLY WILLOW TREES) HAS ALSO GROWN WITHIN THE EXISTING CANAL. THERE IS A SMALL EXISTING SLOUGH (APPROXIMATELY 5' WIDE) AT THE ATCHAFALAYA RIVER THAT OPENS UP TO THE EXISTING CANAL APPROXIMATELY 700' FROM THE ATCHAFALAYA RIVER.

- LEGEND**
- NON-WETLAND (EL. > 15.6)
  - NON-WETLAND WATER BOTTOM
  - AFFECTED WETLANDS
  - OHW (EL. 14.3)
  - OLW (EL. 3.9)



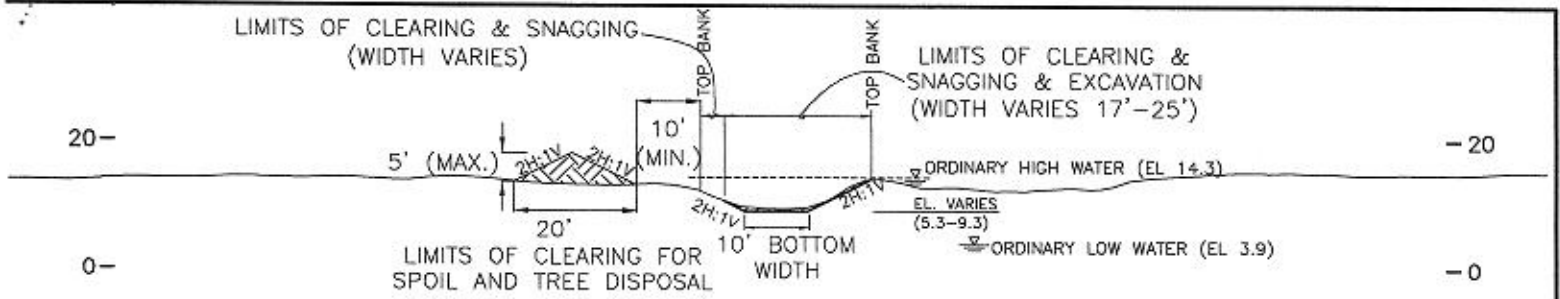
ENGINEER	M. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 149-B Sazy Street, Lafayette, LA 70506 (337) 832-0777

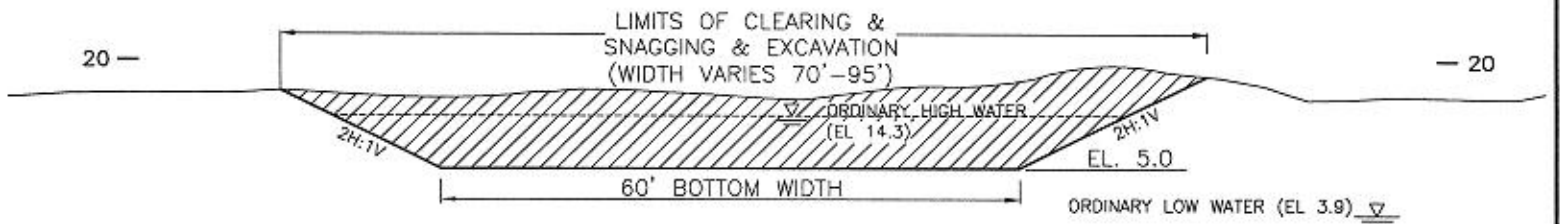
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 3 - PLAN VIEW

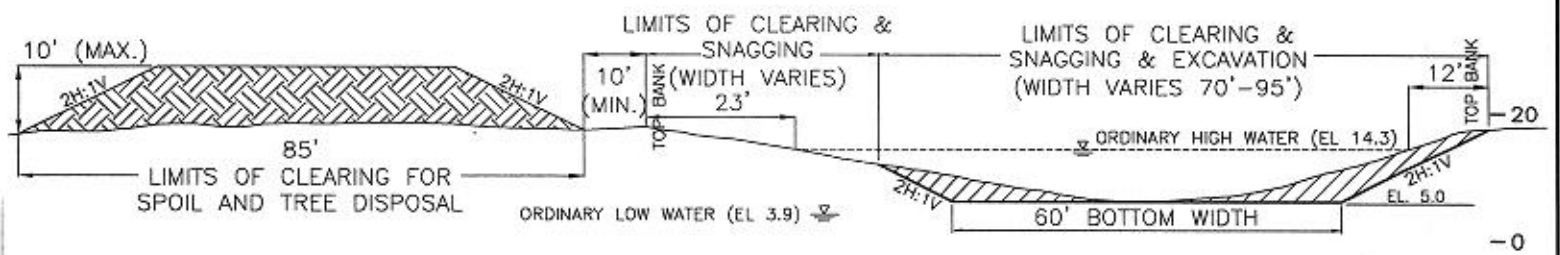
CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>14</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



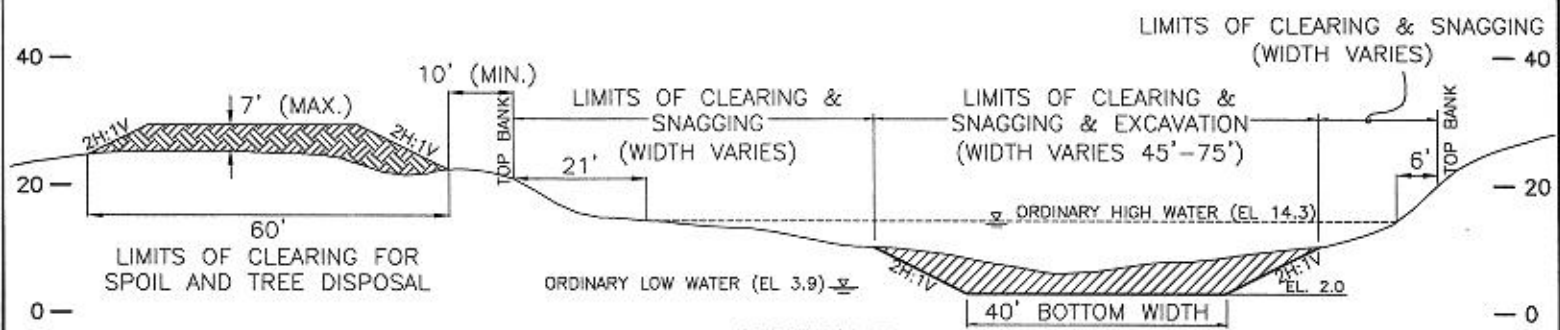
**SECTION A - SECTION THROUGH EXISTING CHANNEL** (A/11)  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 10+10 TO STA 39+81  
 SCALE: 1"=30'



**SECTION B - SECTION THROUGH EXISTING EARTHEN PLUG** (B/11)  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 86+50 TO STA 91+05  
 SCALE: 1"=20'



**SECTION C** (C/11)  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 86+50 TO STA 91+05  
 SCALE: 1"=30'



**SECTION D** (D/11)  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 127+55 TO STA 137+15  
 SCALE: 1"=30'

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	19,795
CLEARING & SNAGGING (LIN. FT.)	4,386
CLEARING (ACRES)	3.8

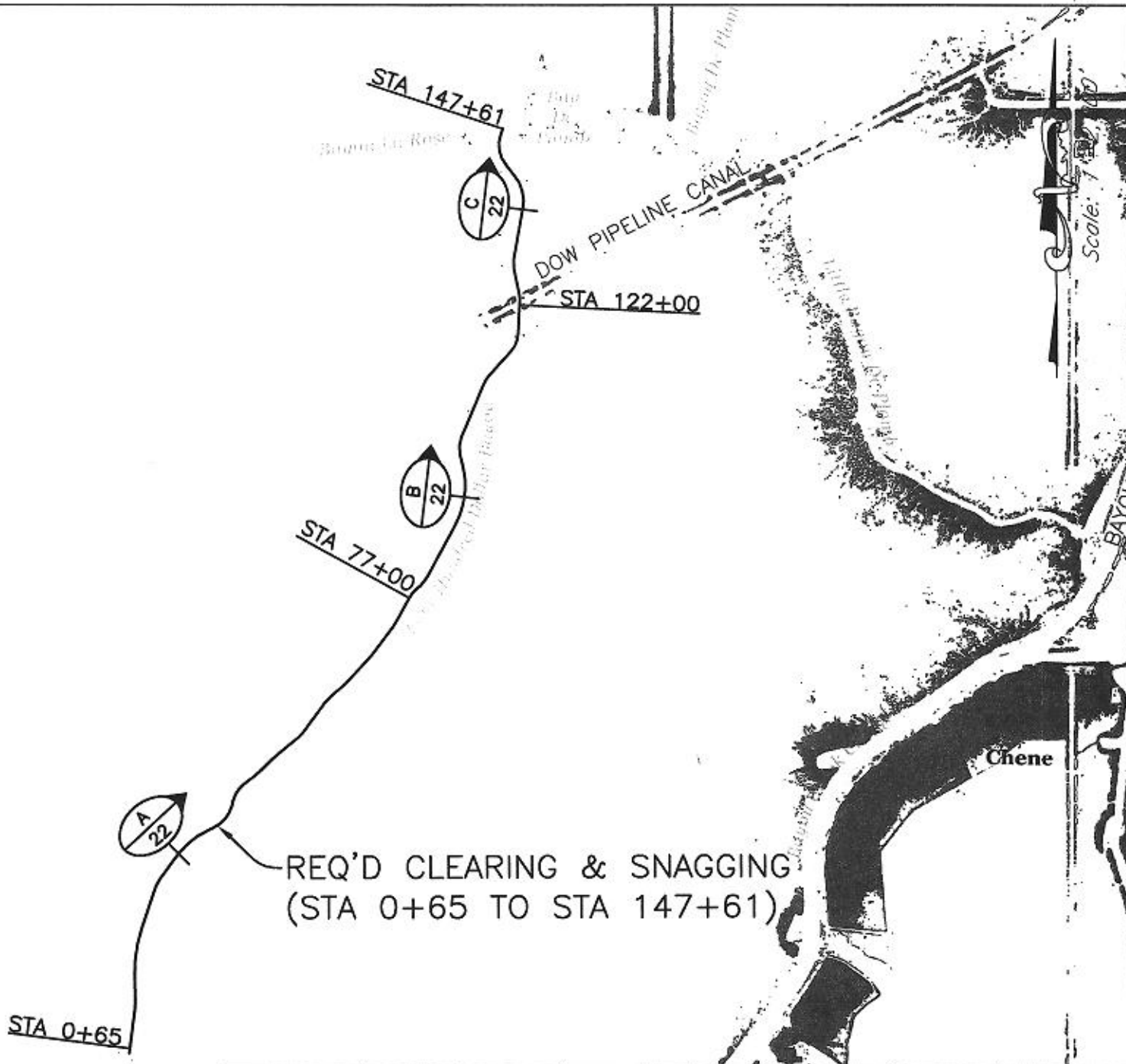
**LEGEND**

(C/11) SECTION TITLE  
 13 SHEET NO. SHOWING PLAN VIEW

Excavated Material Berm (hatched pattern)  
 Excavation (diagonal lines)

ENGINEER: M. SONNIER DRAWN BY: M. SONNIER DATE: APRIL 2016 SCALE: AS SHOWN PROJECT: 8004-05 PLAN NO.: 8004-05/C40	<b>Sellers &amp; Associates, Inc.</b> ENGINEERS SURVEYORS 148-B Bay Street, Lafayette, LA 70506 (337) 286-0777	<b>BEAU BAYOU SWAMP          HYDROLOGIC RESTORATION</b> ELEMENT 3 - TYPICAL SECTIONS	CLIENT: ST. MARTIN PARISH GOVERNMENT PROJECT: BEAU BAYOU SWAMP HYDRO. REST. LOCATION: ST. MARTIN PARISH, LOUISIANA	SHEET <b>15</b> OF <b>44</b>
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REQ'D CLEARING & SNAGGING  
(STA 0+65 TO STA 147+61)

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
4	CLEARING & SNAGGING	0+65	77+00	7,635'		40'
4	CLEARING & SNAGGING	77+00	122+00	4,500'		50'
4	CLEARING & SNAGGING	122+00	147+61	2,561'		60'

**NOTES:**  
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CHIPPED IN PLACE AS CLOSE TO THE GROUND AS THE CUTTING TOOLS PERMIT.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)		<b>LEGEND</b> SECTION TITLE SHEET NO. SHOWING SECTION		1" = 2,000' 	
OWNER: N. SOMMER DRAWN BY: J. FAURE DATE: APRIL 2016 SCALE: AS SHOWN PROJECT: 8004-07 FILE NO.: SEE LEFT SIDE	<b>Sellers &amp; Associates, Inc.</b> ENGINEERS SURVEYORS 146-B Easy Street, Lafayette, LA 70508 (337) 288-0777		<b>BEAU BAYOU SWAMP HYDROLOGIC RESTORATION</b> CLIENT: ST. MARTIN PARISH GOVERNMENT PROJECT: BEAU BAYOU SWAMP HYDRO. REST. LOCATION: ST. MARTIN PARISH, LOUISIANA		SHEET: 16 OF: 44
<b>ELEMENT 4 - OVERALL PLAN VIEW</b>					

A:\DATA\8004\8004-07 Permits\Permit Drawings\8004-07 Overall.dwg

Scale: 1"=300'

FOUR HUNDRED DOLLAR BAYOU

20'± EXISTING WATER BOTTOM






LIMITS OF CLEARING & SNAGGING  
(40' MAX.)

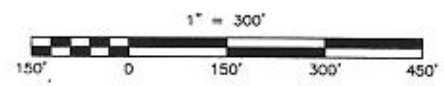
STA 0+65.00  
BEGIN CLEARING & SNAGGING

0+00.00

SORRENTO PIPELINE CANAL

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N. SONNER ENGINEER, J. FABRE SURVEYOR, APRIL 2016, AS SHOWN, 8004-07, OVERALL, ONG

DESIGNER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.ONG



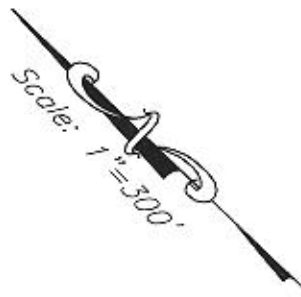
**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70506 (337) 232-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	DRAWN BY	17
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	DATE	OF
LOCATION	ST. MARTIN PARISH, LOUISIANA	FILE NO.	44

MATCH LINE B-B SHEET 19








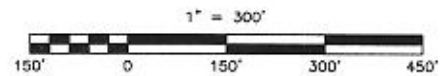
LIMITS OF CLEARING & SNAGGING (40' MAX.)

FOUR HUNDRED DOLLAR BAYOU

20'± EXISTING WATER BOTTOM

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLV (EL. 3.9)



MATCH LINE A-A SHEET 17

N:\DATA\8004\8004-07 Permits\Permit\_Dominant\8004-07 Project & Plans.dwg

ENGINEER	N. SCHNER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

**ELEMENT 4 - PLAN VIEW**

CITY	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET 18 OF 44

MATCH LINE C-C SHEET 20

LIMITS OF CLEARING & SNAGGING  
(50' MAX.)








25' TRANSITION  
(40' TO 50')

STA 77+00.00  
STA 76+75.00

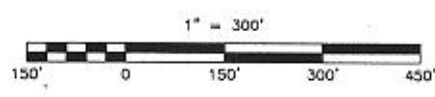
FOUR HUNDRED DOLLAR BAYOU

20'± EXISTING WATER BOTTOM

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

LIMITS OF CLEARING & SNAGGING  
(40' MAX.)



MATCH LINE B-B SHEET 18



N:\L\2016\2004\2004-07\_Permit\Permit\_0004-07\_Project\_4\_Plans.dwg

DESIGNER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
19  
OF  
44

MATCH LINE D-D SHEET 21








Scale: 1" = 300'

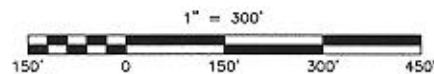
20'± EXISTING WATER BOTTOM

FOUR HUNDRED DOLLAR BAYOU

LIMITS OF CLEARING & SNAGGING  
(50' MAX.)

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



MATCH LINE C-C SHEET 19

N:\04\21\8004\8004-07 Permits\Permit Drawings\8004-07 Project 4 Plans.dwg

DESIGNER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 20 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



END CLEARING & SNAGGING  
 STA 147+61.08

BAYOU LA ROSE  
 BAYOU DE PLOMB

147+61.08






Scale: 1" = 300'

LIMITS OF CLEARING & SNAGGING  
 (60' MAX.)

30'± EXISTING WATER BOTTOM

FOUR HUNDRED DOBELAR BAYOU

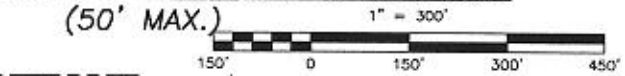
**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

25' TRANSITION  
 (50' TO 60')

STA 122+00.00  
 STA 121+75.00


20'± EXISTING WATER BOTTOM  
 LIMITS OF CLEARING & SNAGGING  
 (50' MAX.)



MATCH LINE D-D SHEET 20

X:\DATA\8004\8004-07 Permits\Permit Drawings\8004-07 Project 4 Plans.dwg

DESIGNED BY	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

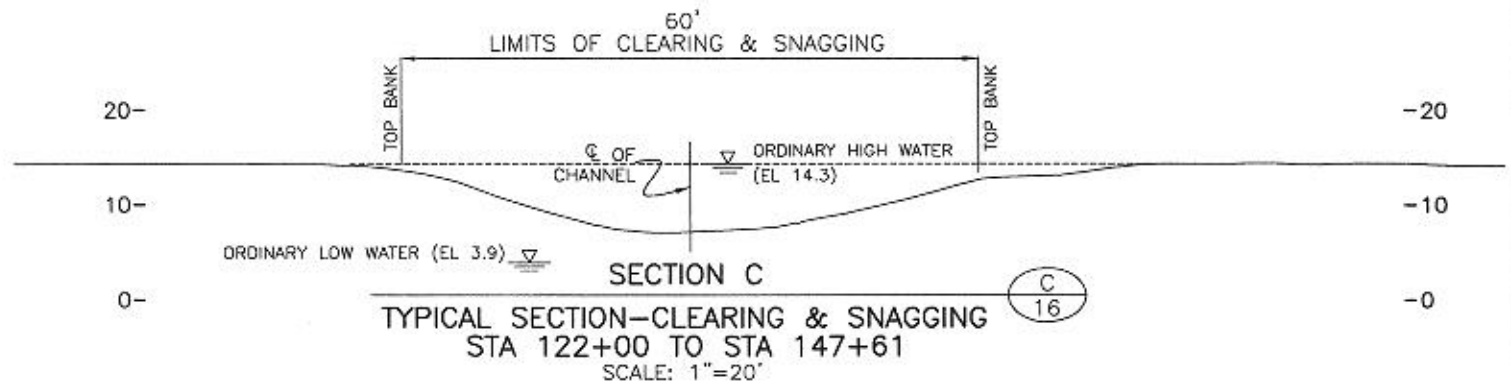
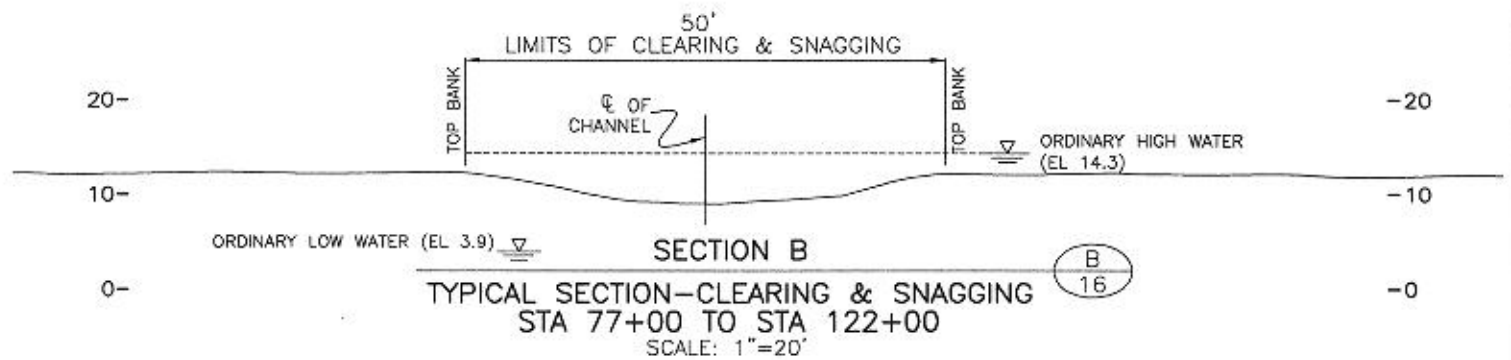
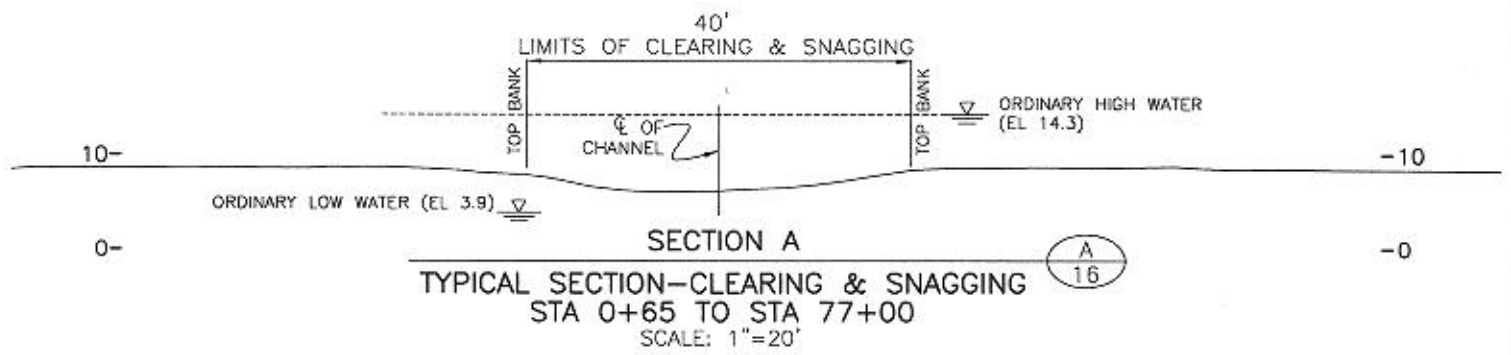


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 145-B Easy Street, Lafayette, LA 70508 (807) 888-0977





**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	21
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

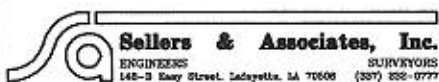


**LEGEND**

-  SECTION TITLE
-  SHEET NO. SHOWING PLAN VIEW
-  EXCAVATED MATERIAL BERM
-  EXCAVATION

PROJECT FEATURES	QUANTITY
CLEARING & SNAGGING (LIN. FT.)	14,696

ENGINEER	H. SONNIER
DRAWN BY	H. SONNIER
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	B004-05
FILE NO.	B004-05/CAD



**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

**ELEMENT 4 — TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
22  
OF  
44

REQ'D CLEARING & SNAGGING  
& EXCAVATION  
(STA 16+10 TO STA 17+35)

LITTLE BAYOU DE PLOMB

CLEARING & SPOIL  
DISPOSAL AREAS  
(50' WIDE TYP.)

DOW PIPELINE CANAL

STA 16+10

STA 17+35

A  
25

B  
25

Scale: 1"=200'

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
5	CLEARING & EXCAVATION	16+10	17+35	125'	40'	VARIES (70'-121')

- NOTES:
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 5 SHALL BE PLACED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN ON THIS SHEET, OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION SHOWN. THE EXCAVATION WILL RESULT IN REMOVING AN EARTHEN PLUG WITHIN THE EXISTING CHANNEL AT APPROXIMATELY STA 16+50. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE ADJACENT CHANNEL TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE TOP BANK OF THE ADJACENT CHANNEL.
  4. PROPOSED WORK WILL INCLUDE EXCAVATION OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.



CLEARING & SPOIL  
DISPOSAL AREAS  
UPLANDS (EL. > 15.6)

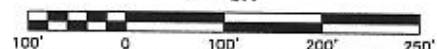
LEGEND



SECTION TITLE

SHEET NO. SHOWING SECTION

1" = 200'



DESIGNED BY	N. SONMEYER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
PLAT NO.	SEE LEFT SIDE

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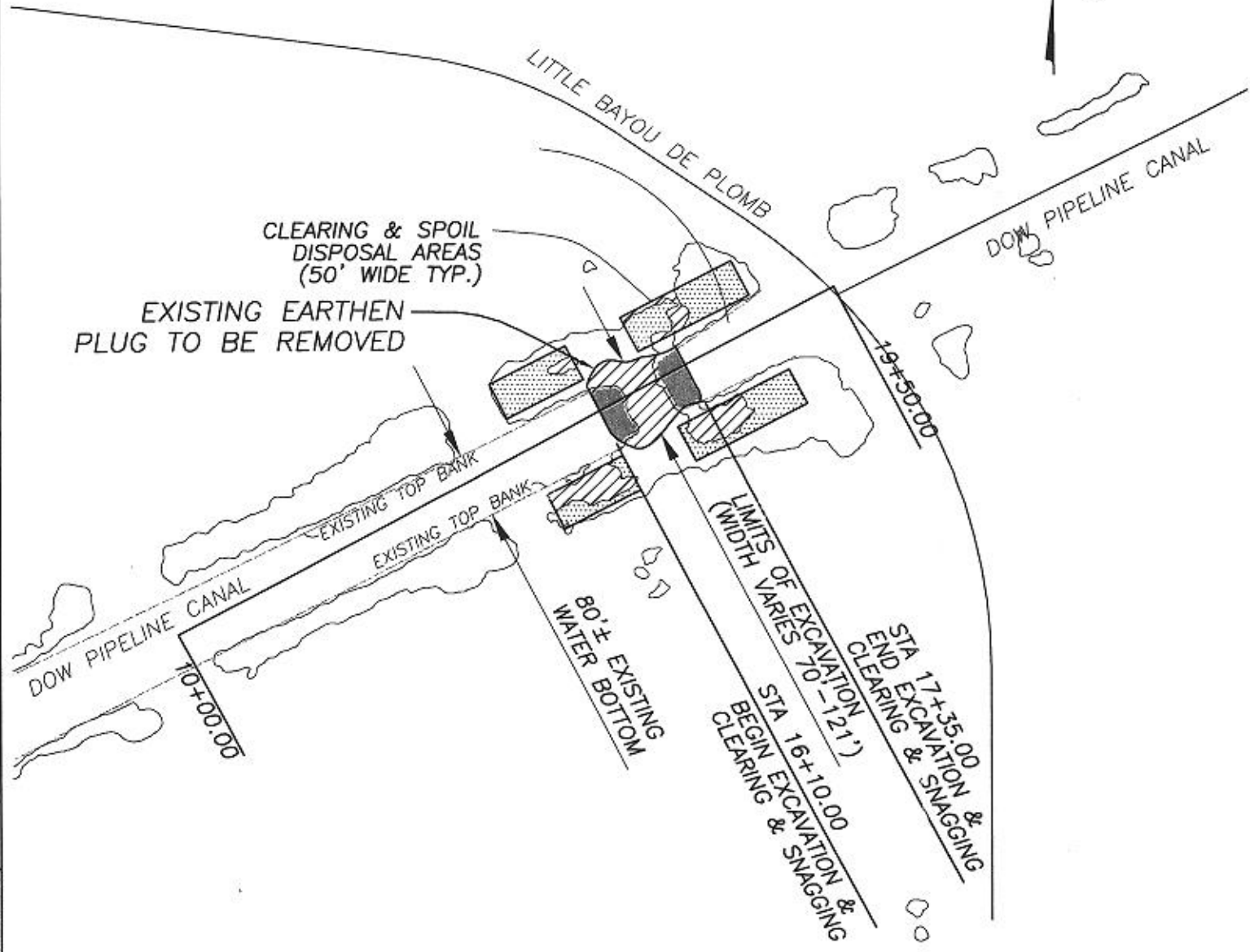
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 5 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

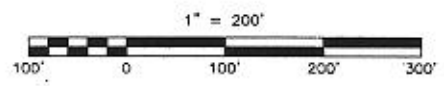
SHEET  
23  
OF  
44

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**LEGEND**

- NON-WETLAND (EL. > 15.6)
- NON-WETLAND WATER BOTTOM
- AFFECTED WETLANDS
- OHW (EL. 14.3)
- OLW (EL. 3.9)



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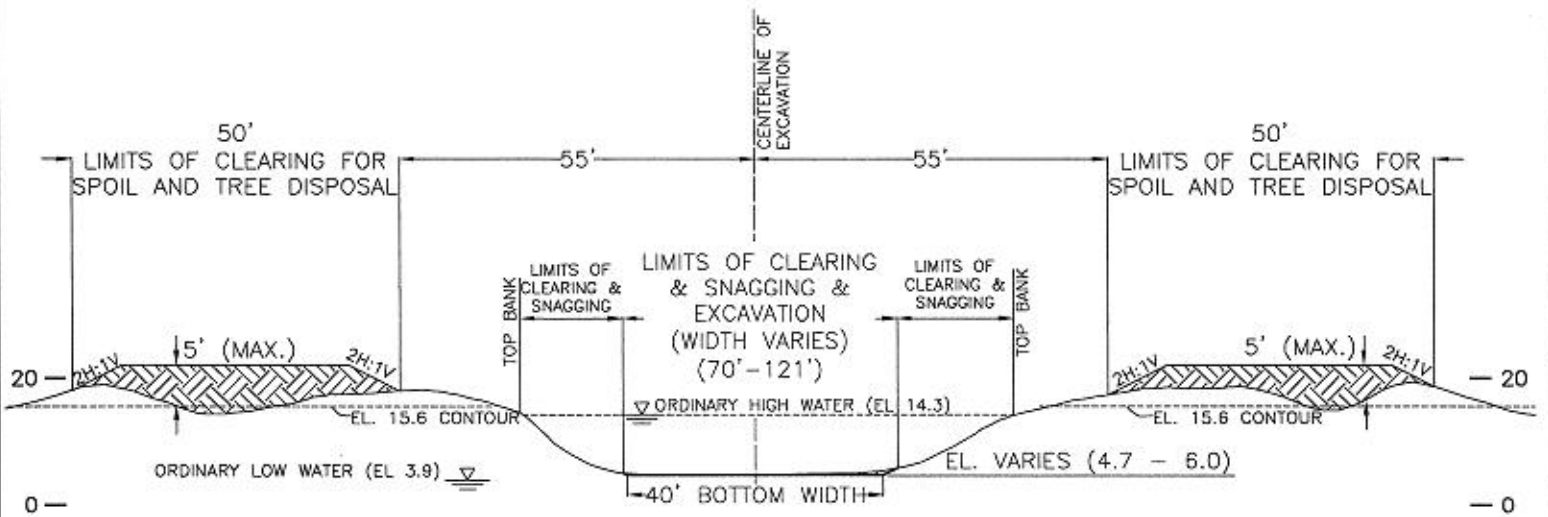
ENGINEER	N. SCHWIER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	16004-07
FILE NO.	OVERALL OWS

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148-B Essey Street, Lafayette, LA 70506 (337) 232-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 5 - PLAN VIEW

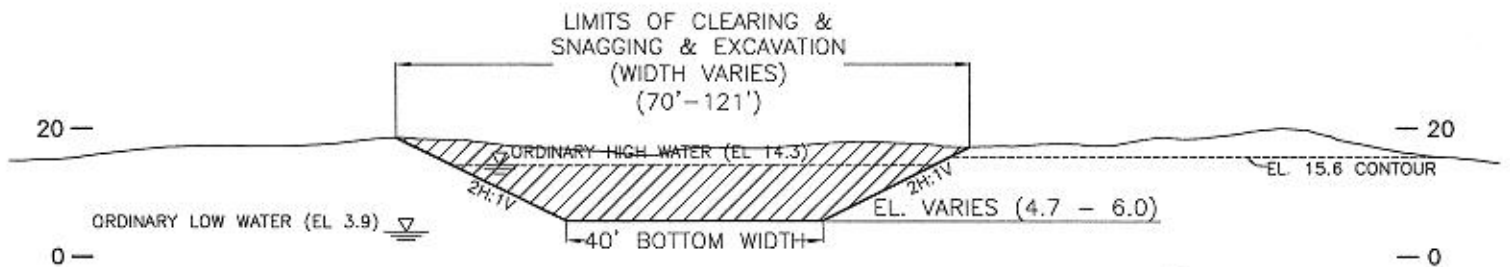
CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>24</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



SECTION A  
TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION W/ DISPOSAL AREA

A  
23

STA 15+00 TO STA 18+50  
STA 15+00 TO STA 16+10 (NO EXCAVATION)  
STA 17+35 TO STA 18+50 (NO EXCAVATION)  
SCALE: 1"=30'

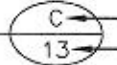
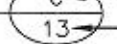




SECTION B  
TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION

B  
23

STA 16+10 TO STA 16+90  
SCALE: 1"=30'

LEGEND

-  SECTION TITLE
-  SHEET NO. SHOWING PLAN VIEW
-  EXCAVATED MATERIAL BERM
-  EXCAVATION

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	2,715
CLEARING & SNAGGING (LIN. FT.)	125
CLEARING (ACRES)	0.7

DESIGNED BY	N. SONNER
DRAWN BY	N. SONNER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD

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143-D Easy Street, Lafayette, LA 70508 (337) 232-0777

BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION

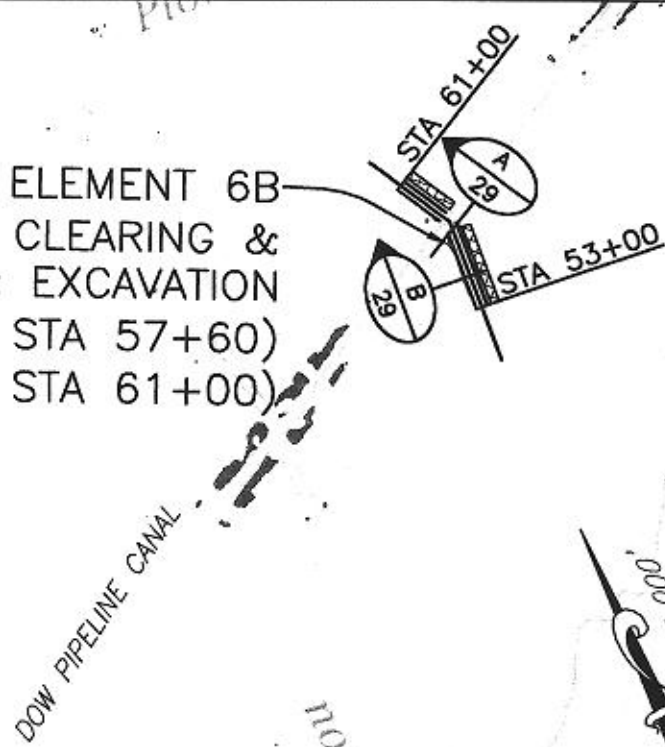
ELEMENT 5 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	25
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

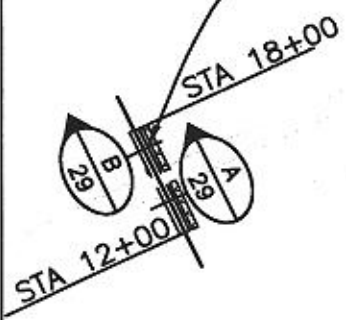


Bayou La Rose

**ELEMENT 6B**  
**REQ'D CLEARING & SNAGGING & EXCAVATION**  
 (STA 53+00 TO STA 57+60)  
 (STA 58+30 TO STA 61+00)



**ELEMENT 6A**  
**REQ'D CLEARING & SNAGGING & EXCAVATION**  
 (STA 12+00 TO STA 14+70)  
 (STA 15+40 TO STA 18+00)



ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
6A	CLEARING & EXCAVATION	12+00	18+00	530'	50'	VARIES (50'-70')
6B	CLEARING & EXCAVATION	53+00	61+00	730'	50'	VARIES (50'-75')

**NOTES:**

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 6 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENTS SHOWN. THE WORK WILL INVOLVE EXCAVATING THROUGH AN EXISTING SPOIL BANK AND VIRGIN CUT THROUGH THE SWAMP.
4. PROPOSED WORK WILL INCLUDE OPERATING OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.

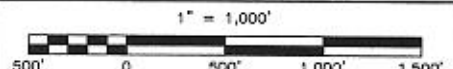


**CLEARING & SPOIL DISPOSAL AREAS**  
 UPLANDS (EL. > 15.6)

**LEGEND**



**SECTION TITLE**  
 SHEET NO. SHOWING SECTION



ENGINEER	N. SONNER
DRAWN BY	J. FARRÉ
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-D7
PLAN NO.	SEE LEFT SIDE

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**BEAU BAYOU SWAMP HYDROLOGIC RESTORATION**  
**ELEMENT 6 - OVERALL PLAN VIEW**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	26
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

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STA 18+00.00  
END EXCAVATION &  
CLEARING & SNAGGING

LIMITS OF CLEARING & SNAGGING &  
EXCAVATION (WIDTH VARIES 50'-70')

10' BERM (MIN.)

CLEARING AND SOIL DISPOSAL AREA  
(260' X 30')

STA 15+40.00  
END NO WORK ZONE

EXISTING TOP BANK

☒ DOW PIPELINE CANAL  
STA 14+70.00

EXISTING TOP BANK

BEGIN NO WORK ZONE






LIMITS OF CLEARING & SNAGGING &  
EXCAVATION (WIDTH VARIES 50'-70')

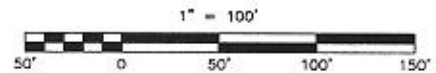
CLEARING AND SOIL DISPOSAL AREA  
(270' X 30')

10' BERM (MIN.)

STA 12+00.00  
BEGIN EXCAVATION &  
CLEARING & SNAGGING

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



ENGINEER	N. SCHWIER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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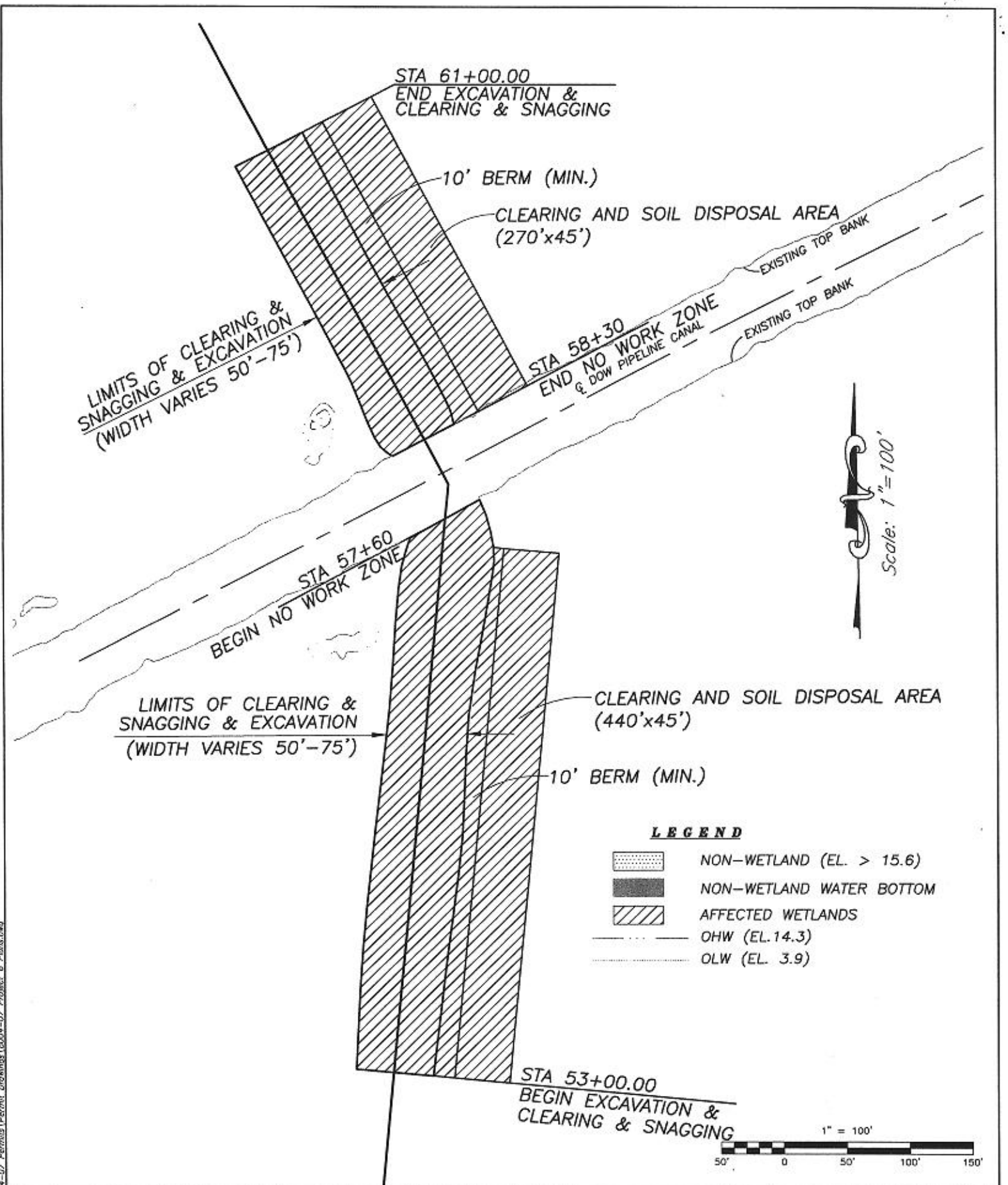
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

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ELEMENT 6A - PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>27</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

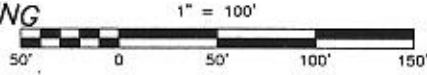
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Scale: 1" = 100'

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



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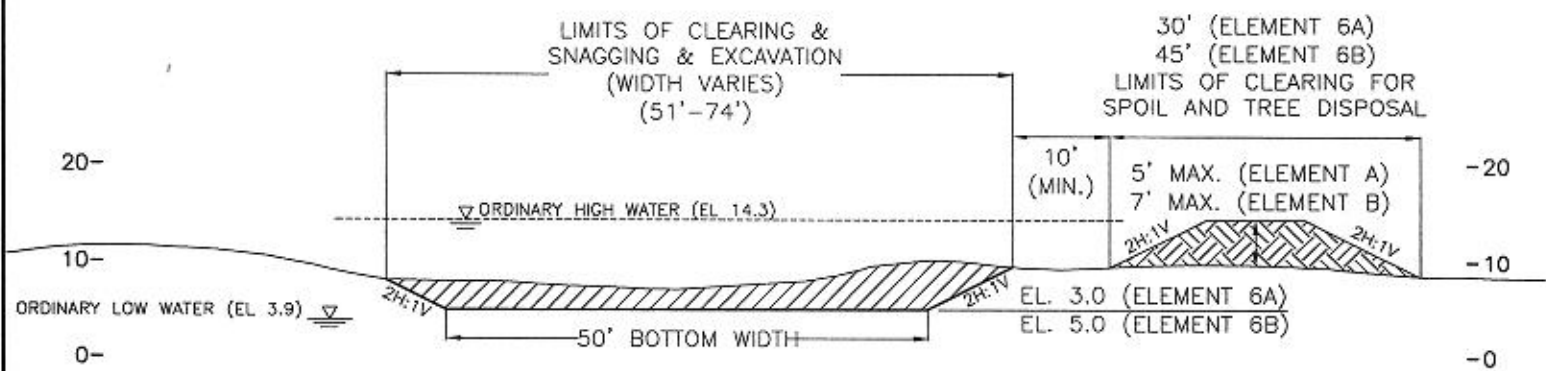
DESIGNED BY	H. SONNIER
DRAWN BY	J. FAHNE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT FILE NO.	8004-07 OVERALL.DWG



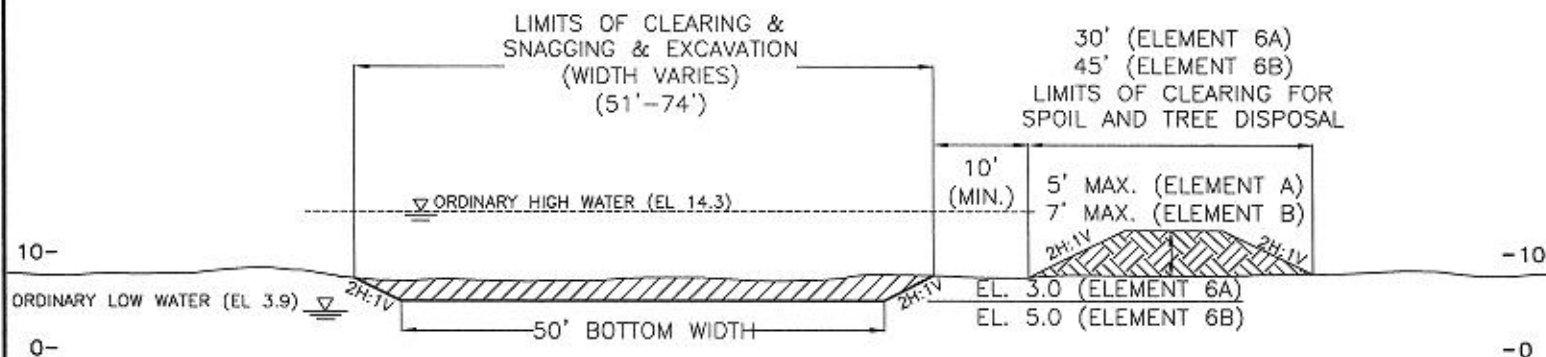
**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 140-B Easy Street, Lafayette, LA 70506 (507) 532-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 6B - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	28
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		



**SECTION A - TYPICAL THROUGH EXISTING BANK** (A/26)  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 12+00 TO STA 18+00 (ELEMENT 6A)  
 STA 53+00 TO STA 61+00 (ELEMENT 6B)  
 SCALE: 1"=20'



**SECTION B - TYPICAL THROUGH EXISTING SWAMP** (B/26)  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 12+00 TO STA 18+00 (ELEMENT 6A)  
 STA 53+00 TO STA 61+00 (ELEMENT 6B)  
 SCALE: 1"=20'

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	6,029
CLEARING & SNAGGING (LIN. FT.)	1,290
CLEARING (ACRES)	1.4

**LEGEND**

- (C) SECTION TITLE
- (1.3) SHEET NO. SHOWING PLAN VIEW
- [Hatched Box] EXCAVATED MATERIAL BERM
- [Diagonal Lines Box] EXCAVATION

DESIGNED BY	N. SONNIER
DRAWN BY	N. SONNIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CA0

**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Bay Street, Lafayette, LA 70506 (337) 335-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 6 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	29
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

Bayou Darby



Scale: 1"=500'

REQ'D CLEARING & SNAGGING  
& EXCAVATION  
(STA 10+95 TO STA 20+50)

LITTLE GONSOULIN BAYOU

STA 20+50  
STA 10+95  
LAKE FAUSE POINTE CUT

CLEARING & SPOIL  
DISPOSAL AREAS  
(400'x30' TYP.)

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
7	CLEARING & EXCAVATION	10+95	20+50	955'	30'	VARIES (30'-45')

NOTES:

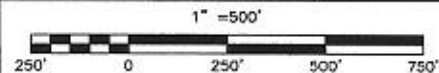
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 7 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. THE WORK WILL INVOLVE ENLARGING AN EXISTING SLOUGH AND VIRGIN CUT THROUGH THE SWAMP.

CLEARING & SPOIL DISPOSAL AREAS  
 UPLANDS (EL. > 15.6)

LEGEND



SECTION TITLE  
SHEET NO. SHOWING SECTION



DESIGNED BY	N. SCHWIER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	BD04-07
FILE NO.	SEE LEFT SIDE

**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Easy Street, Lafayette, LA 70506 (337) 232-0777

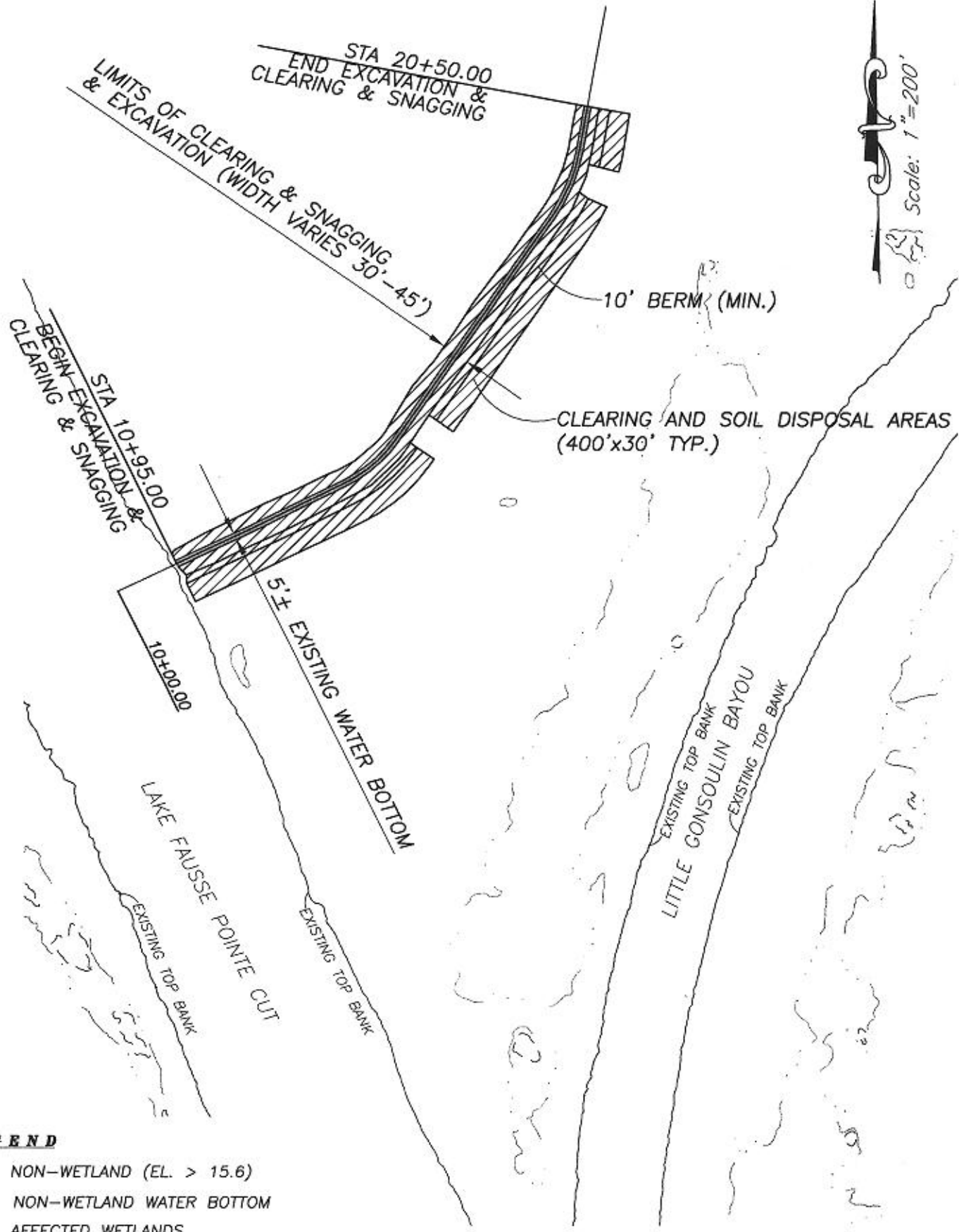
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**  
ELEMENT 7 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	30
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		






N:\DATA\BD04-07 Permits\Permit Drawings\BD04-07 Overall.dwg

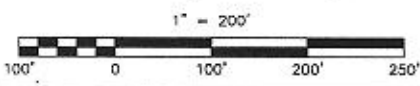


Scale: 1" = 200'



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\0804\8004\8004-07 Permits\Permit Drawings\8004-07 Project 7 Plans.dwg

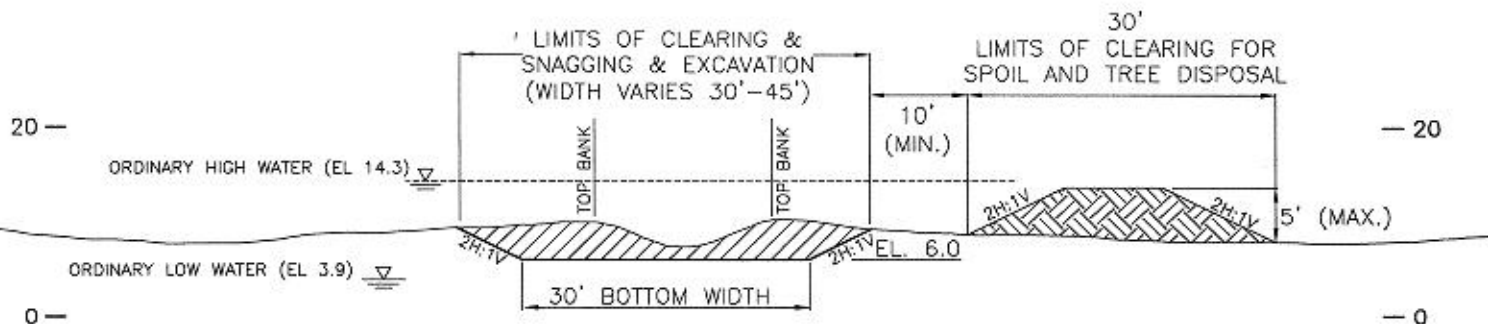
DESIGNER	M. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
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 149-B Bay Street, Lake Charles, LA 70606 (337) 632-0777

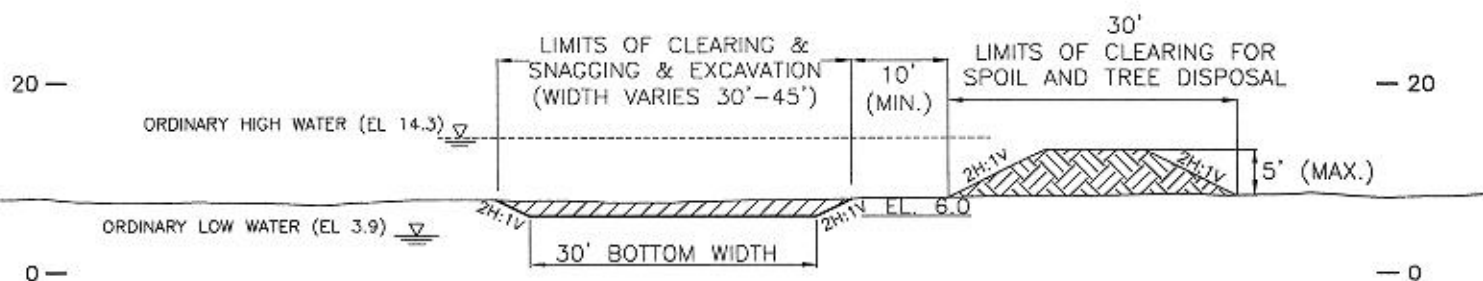
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 7 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>31</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



SECTION A - SECTION THROUGH EXISTING CUT  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 10+95 TO STA 20+50  
 SCALE: 1"=20'

A  
30



SECTION B  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 10+95 TO STA 20+50  
 SCALE: 1"=20'

B  
30

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	2,510
CLEARING & SNAGGING (LIN. FT.)	955
CLEARING (ACRES)	0.8

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

DESIGNED BY	M. SOMMER
DRAWN BY	M. SOMMER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD

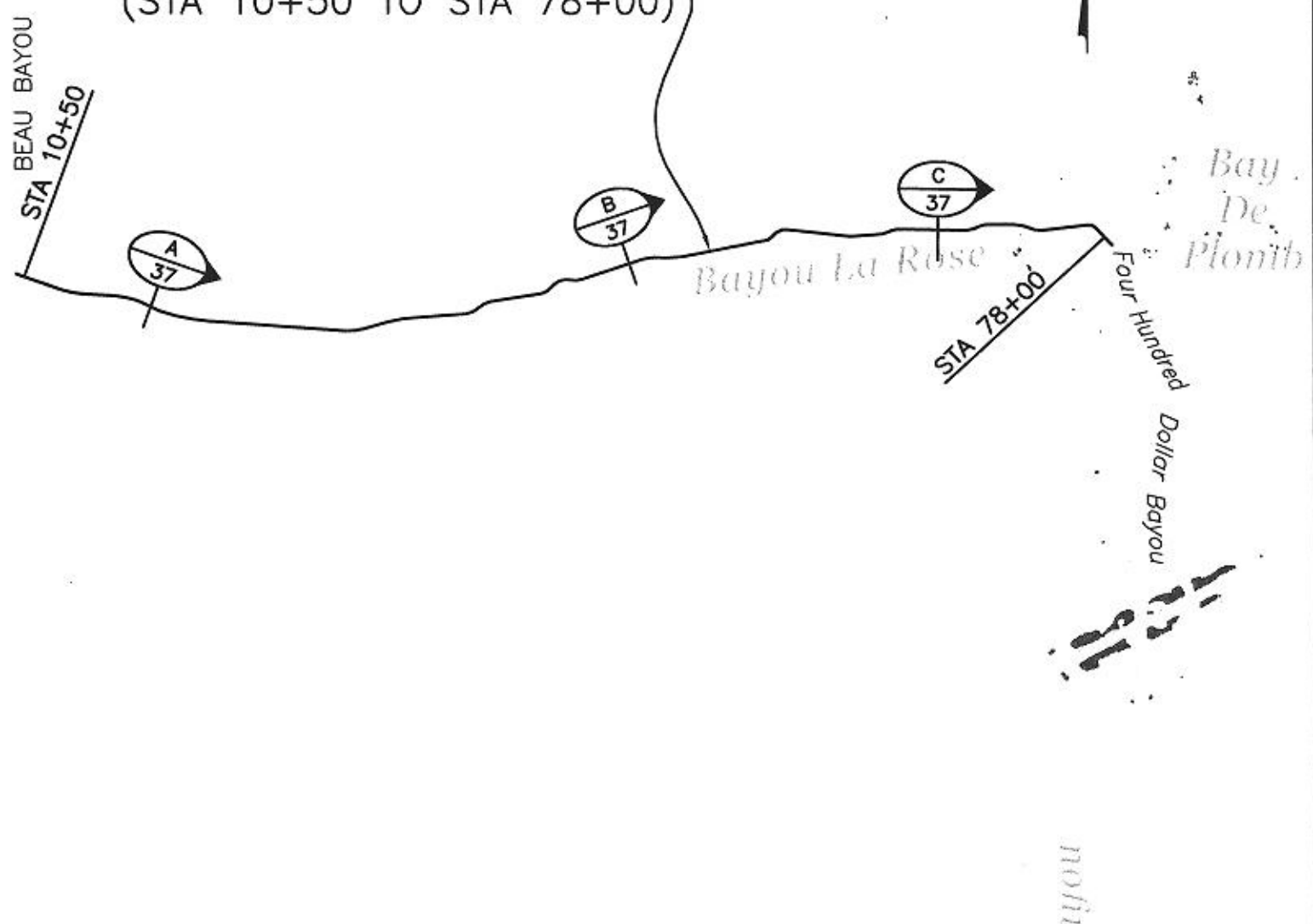


**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 7 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 32 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

REQ'D CLEARING & SNAGGING  
(STA 10+50 TO STA 78+00)



ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
8	CLEARING & SNAGGING	10+50	78+00	6,750'		40'

NOTES:  
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CHIPPED IN PLACE AS CLOSE TO THE GROUND AS THE CUTTING TOOLS PERMIT.

<p>CLEARING &amp; SPOIL DISPOSAL AREAS UPLANDS (EL. &gt; 15.6)</p>	<p><b>LEGEND</b></p> <p>SECTION TITLE SHEET NO. SHOWING SECTION</p>	<p>1" = 1,000'</p>	CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 33 OF 44
			PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
<p>ENGINEER: N. SCHNER DRAWN BY: J. FAURE</p> <p>DATE: APRIL 2016 SCALE: AS SHOWN</p> <p>PROJECT: B004-07 FILE NO: SEE LEFT SIDE</p>	<p><b>Sellers &amp; Associates, Inc.</b> ENGINEERS SURVEYORS</p>		<p><b>BEAU BAYOU SWAMP HYDROLOGIC RESTORATION</b></p> <p>ELEMENT 8 - OVERALL PLAN VIEW</p>		

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Scale: 1"=300'

LIMITS OF CLEARING & SNAGGING (40' MAX)




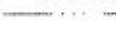

20'± EXISTING WATER BOTTOM

BAYOU LA ROSE

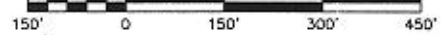
BEAU BAYOU

STA 10+50.00  
BEGIN CLEARING & SNAGGING  
10+00.00

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLV (EL. 3.9)

1" = 300'



ENGINEER	N. SONMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
162-B Easy Street, Lafayette, LA 70506 (337) 288-0117

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 8 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	34
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

15. 10/14/16 10:00 AM 10/14/16 10:00 AM 10/14/16 10:00 AM 10/14/16 10:00 AM 10/14/16 10:00 AM

MATCH LINE B-B SHEET 36








Scale: 1"=300'

LIMITS OF CLEARING  
& SNAGGING (40' MAX)

BAYOU LA ROSE

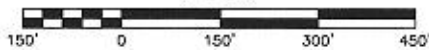
20'± EXISTING WATER BOTTOM

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

MATCH LINE A-A SHEET 34

1" = 300'



ENGINEER	M. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALLDWG



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ENGINEERS SURVEYORS  
148-B Bay Street, Lake Charles, LA 70608 (807) 282-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

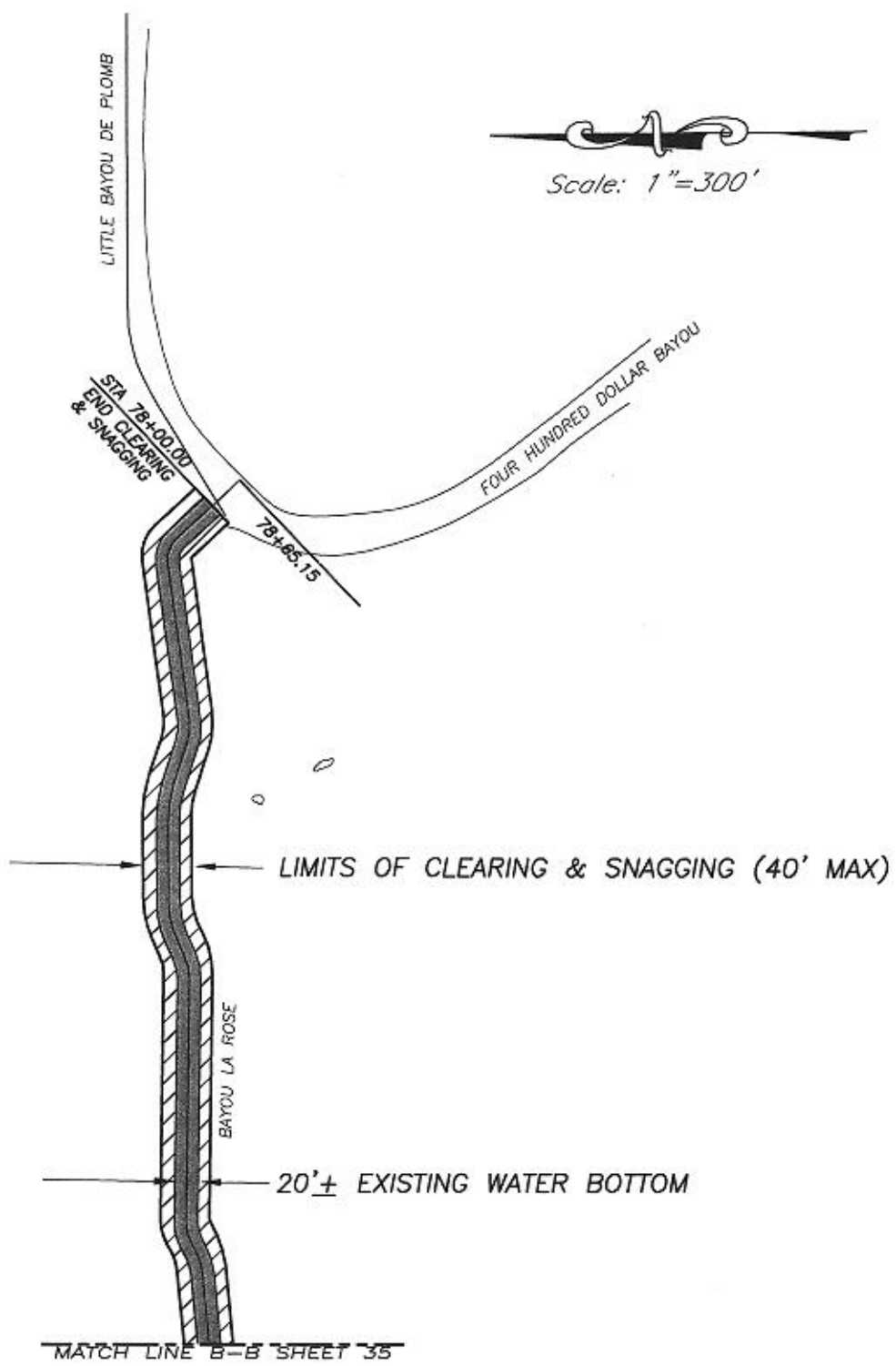
ELEMENT 8 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	35
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		






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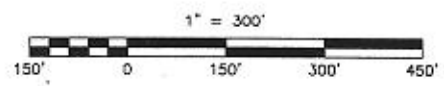


Scale: 1"=300'



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



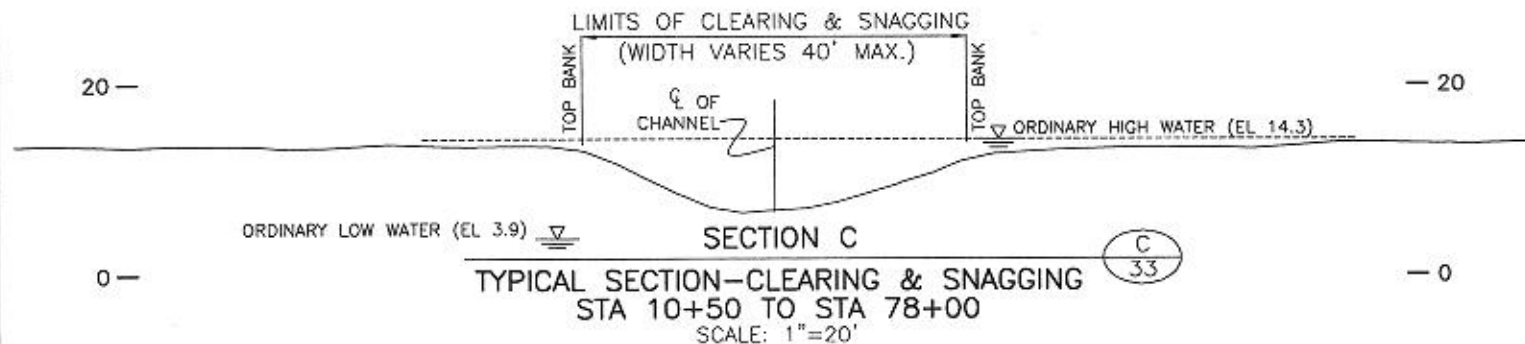
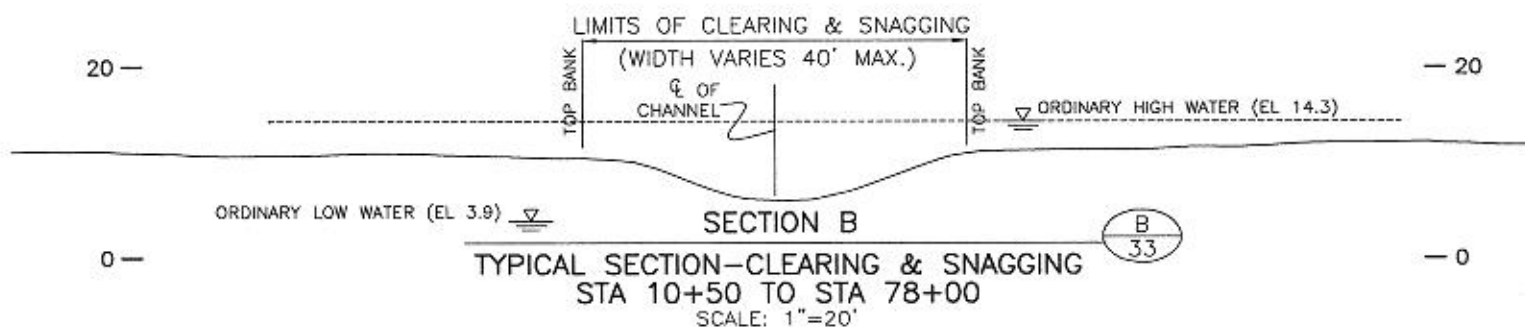
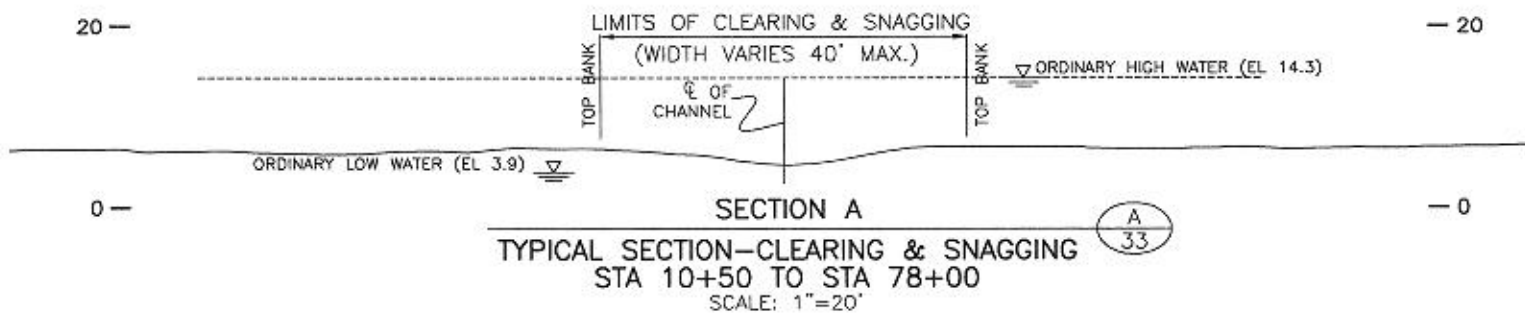
DESIGNED BY	M. SONNER
DRAWN BY	J. FAURE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



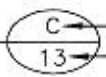
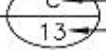


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148-B Easy Street, Lafayette, LA 70508 (337) 852-9777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**  
ELEMENT 8 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>36</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	




**LEGEND**

-  SECTION TITLE
-  SHEET NO. SHOWING PLAN VIEW
-  EXCAVATED MATERIAL BERM
-  EXCAVATION

PROJECT FEATURES	QUANTITY
CLEARING & SNAGGING (LIN. FT.)	6,750

DESIGNED BY	M. SONNIER
CHECKED BY	M. SONNIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD



**Sellers & Associates, Inc.**  
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148-2 Easy Street, Lafayette, LA 70508 (504) 882-2777

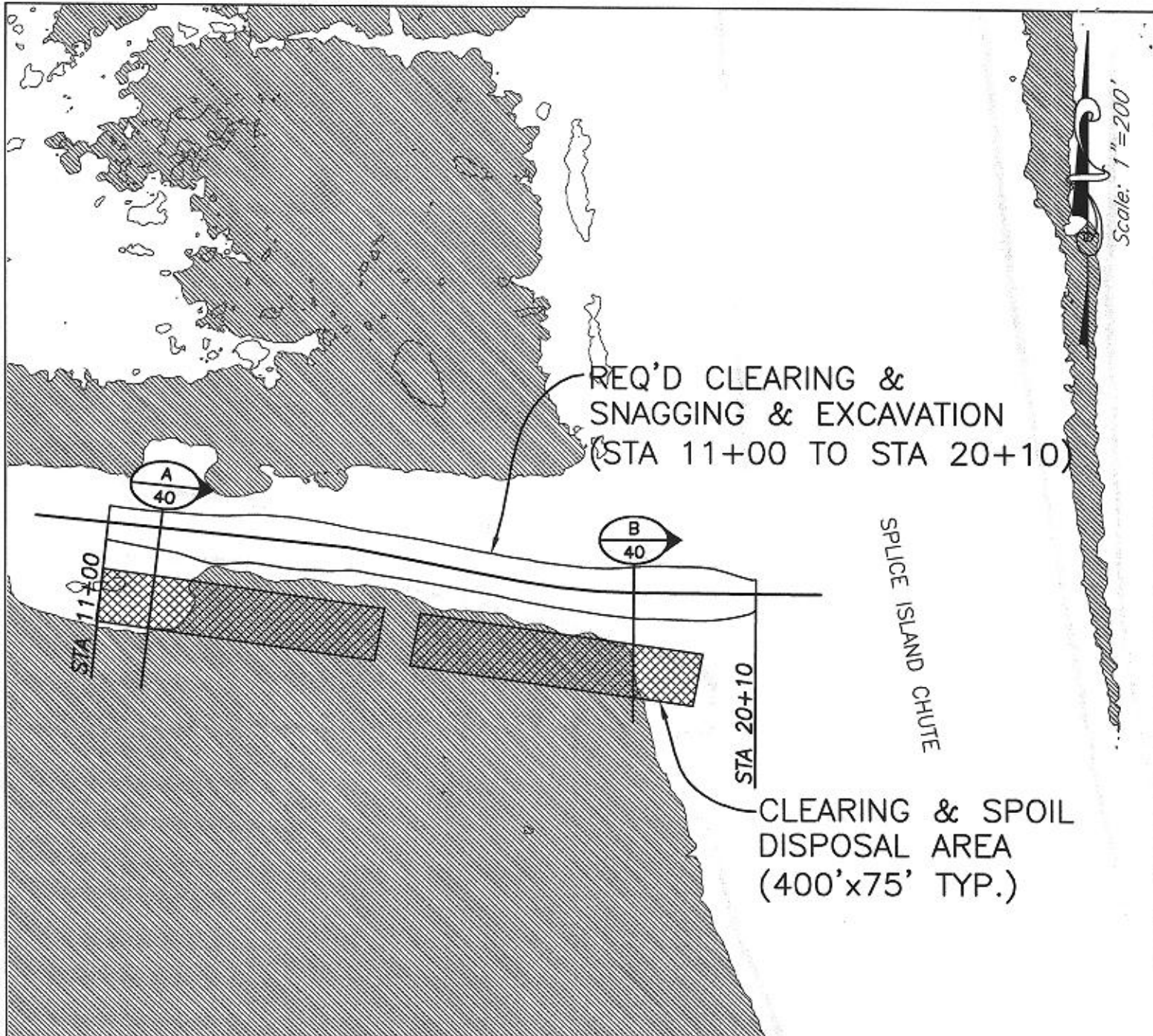
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 8 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET	37
OF	44

Scale: 1"=200'



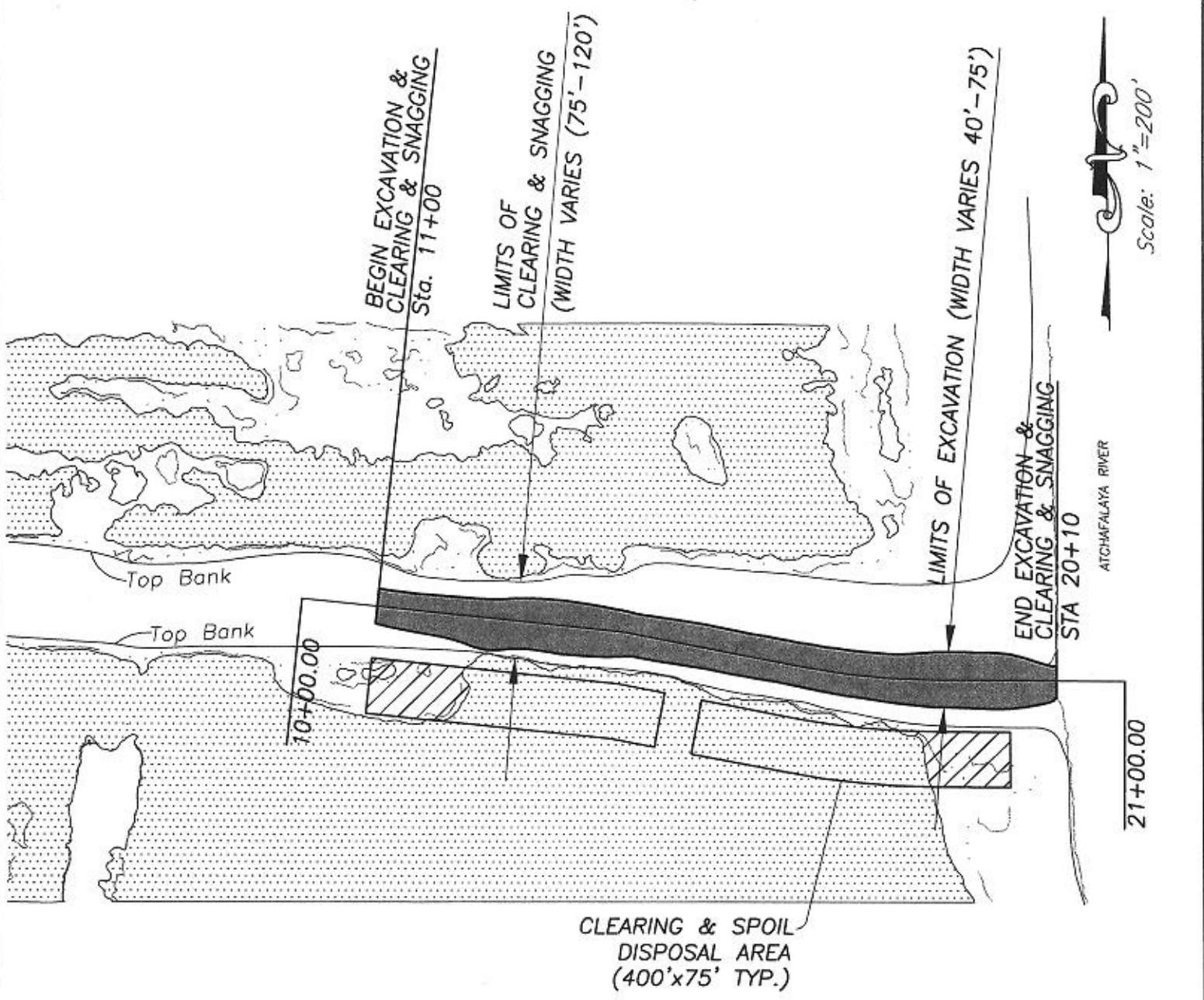
ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
9	CLEARING & EXCAVATION	11+00	20+10	910'	40'	VARIES (40'-75')

- NOTES:
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 9 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.






<p><b>CLEARING &amp; SPOIL DISPOSAL AREAS</b> <b>UPLANDS (EL. &gt; 15.6)</b></p>	<p><b>LEGEND</b></p> <p> SECTION TITLE  SHEET NO. SHOWING SECTION</p>	<p>1" = 200'</p>	
		<p><b>OWNER</b> N. SONNER <b>DESIGNED BY</b> J. FAIRE</p>	<p><b>DATE</b> APRIL 2016 <b>SCALE</b> AS SHOWN</p>
<p><b>PROJECT</b> B004-07 <b>FILE NO.</b> SEE LEFT SIDE</p>	<p><b>Sellers &amp; Associates, Inc.</b> ENGINEERS SURVEYORS 148-B East Street, Lafayette, LA 70506 (337) 232-0777</p>	<p><b>PROJECT</b> BEAU BAYOU SWAMP HYDRO. REST.</p>	<p><b>OF</b> 44</p>
<p><b>BEAU BAYOU SWAMP HYDROLOGIC RESTORATION</b></p>		<p><b>LOCATION</b> ST. MARTIN PARISH, LOUISIANA</p>	
<p><b>ELEMENT 9 - OVERALL PLAN VIEW</b></p>			

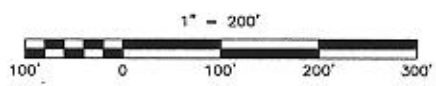
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**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



ENGINEER	N. SOMMER
DRAWN BY	J. FABRI
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

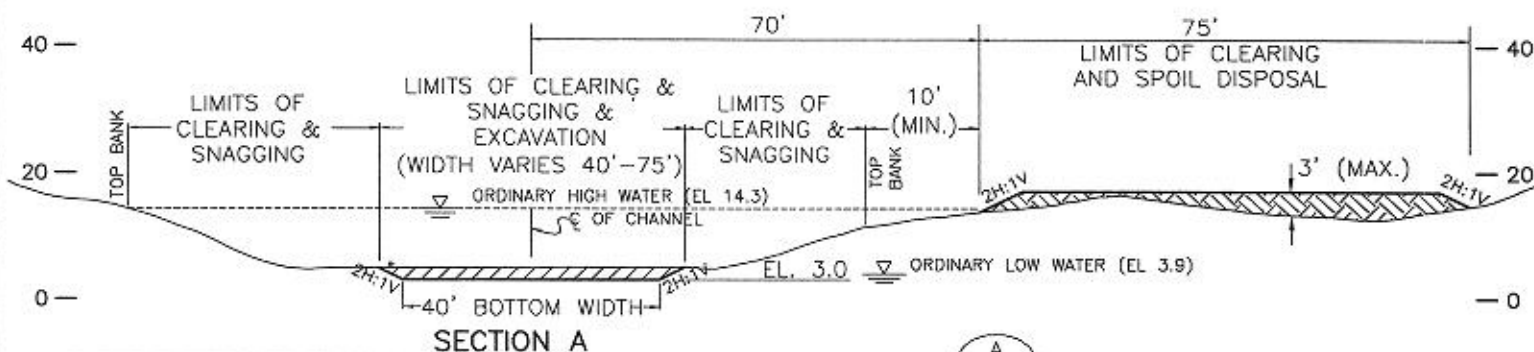


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ENGINEERS SURVEYORS  
148-B Esau Street, Lafayette, LA 70508 (337) 832-0777

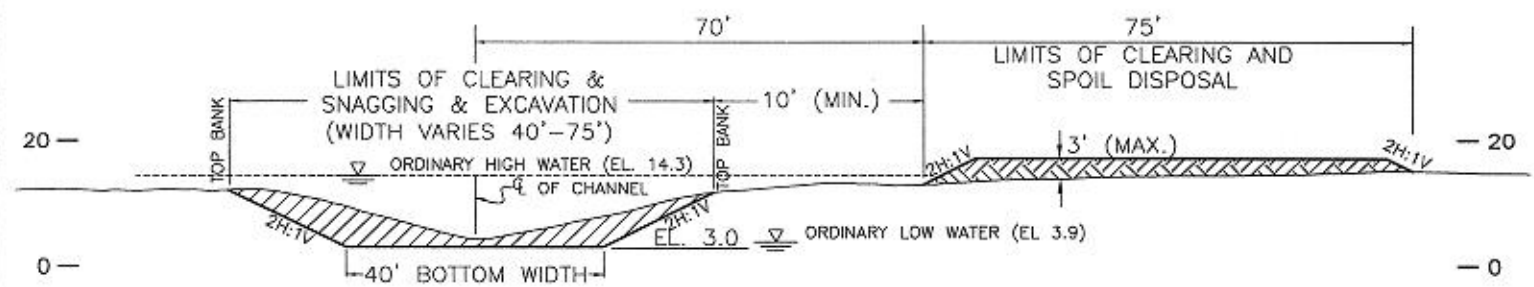
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 9 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>39</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



**SECTION A**  
 TYPICAL SECTION—CLEARING & SNAGGING & EXCAVATION  
 STA 11+00 TO STA 20+10  
 SCALE: 1"=30'



**SECTION B**  
 TYPICAL SECTION—CLEARING & SNAGGING & EXCAVATION  
 STA 11+00 TO STA 20+10  
 SCALE: 1"=30'

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
GENERAL EXCAVATION (CU. YDS)	4,690
CLEARING & SNAGGING (LIN. FT.)	910
CLEARING (ACRES)	1.6

ENGINEER: N. SOMMER  
 DESIGNER: N. SOMMER  
 DATE: APRIL 2016  
 SCALE: AS SHOWN  
 PROJECT: 8004-05  
 FILE NO.: 8004-05/CAD

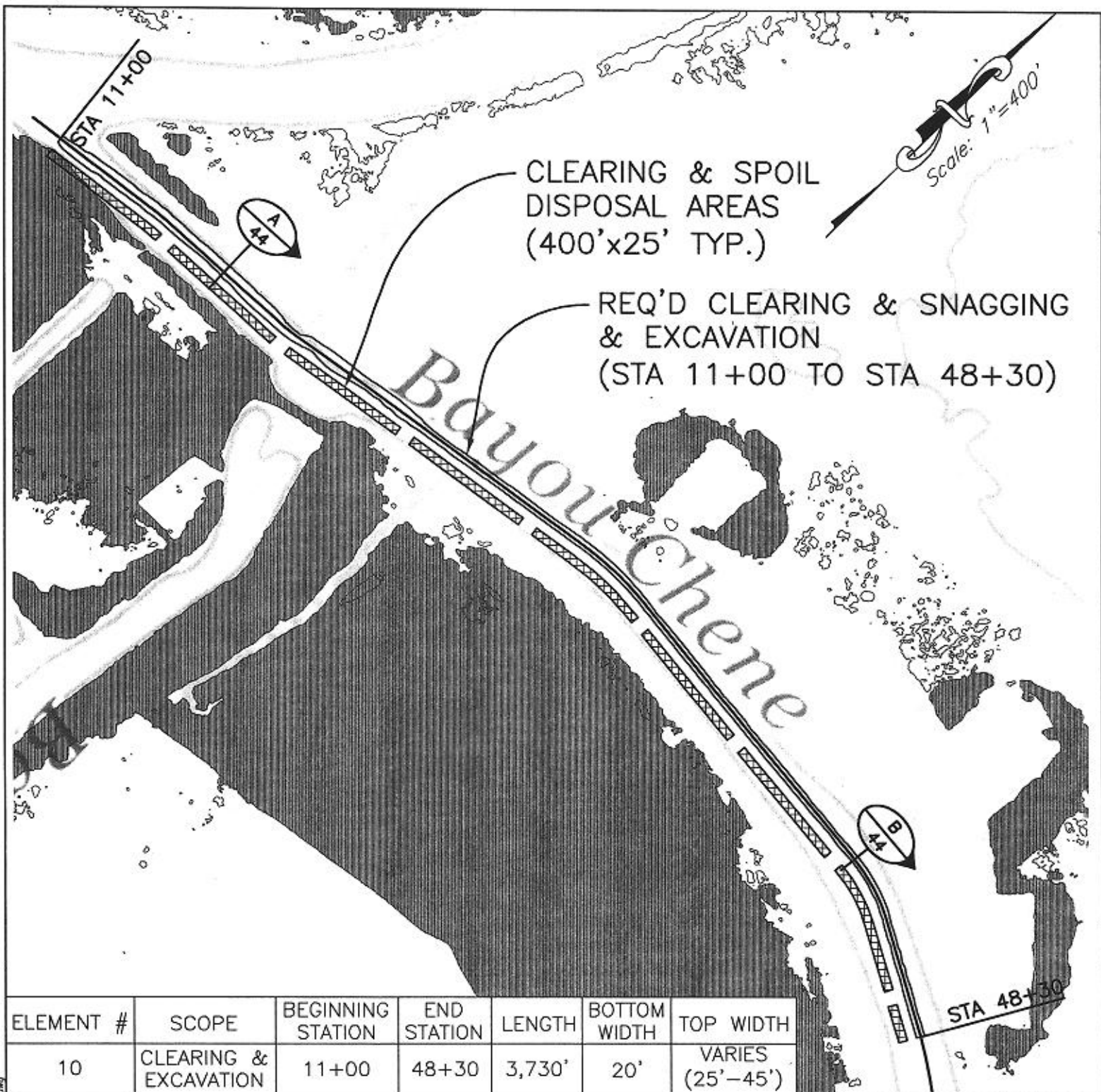


**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 9 - TYPICAL SECTIONS

CLIENT: ST. MARTIN PARISH GOVERNMENT  
 PROJECT: BEAU BAYOU SWAMP HYDRO. REST.  
 LOCATION: ST. MARTIN PARISH, LOUISIANA

SHEET  
 40  
 OF  
 44





ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
10	CLEARING & EXCAVATION	11+00	48+30	3,730'	20'	VARIES (25'-45')

- NOTES:
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 10 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)		<b>LEGEND</b> SECTION TITLE SHEET NO. SHOWING SECTION		1" = 400' 	
DRAWN BY: N. SONWIER J. FABRE DATE: APRIL 2016 SCALE: AS SHOWN PROJECT: 8004-07 REVISION: SEE LEFT SIDE	<b>Sellers &amp; Associates, Inc.</b> ENGINEERS SURVEYORS 140-B Easy Street, Lake Charles, LA 70606 (337) 232-0777			<b>BEAU BAYOU SWAMP HYDROLOGIC RESTORATION</b> CLIENT: ST. MARTIN PARISH GOVERNMENT PROJECT: BEAU BAYOU SWAMP HYDRO. REST. LOCATION: ST. MARTIN PARISH, LOUISIANA	
<b>ELEMENT 10 - OVERALL PLAN VIEW</b>				SHEET 41 OF 44	

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LIMITS OF CLEARING & SNAGGING & EXCAVATION (WIDTH VARIES 25'-45')

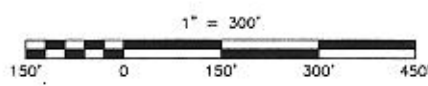
CLEARING AND SPOIL DISPOSAL AREAS (400' X 25' TYP.)

MINIMUM 10' WIDE BERM BETWEEN EXCAVATED MATERIAL BERM & PROPOSED LIMIT OF EXCAVATION (TYP.)

Sta. 11+00.00  
BEGIN EXCAVATION & CLEARING & SNAGGING  
Bayou Crook Chene  
10+00.00

**LEGEND**

-  NON-WETLAND (EL.  $\geq$  15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



ENGINEER	N. SONNIER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILENAME	OVERALL.DWG



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
145-B Bay Street, Lafayette, LA 70506 (337) 282-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

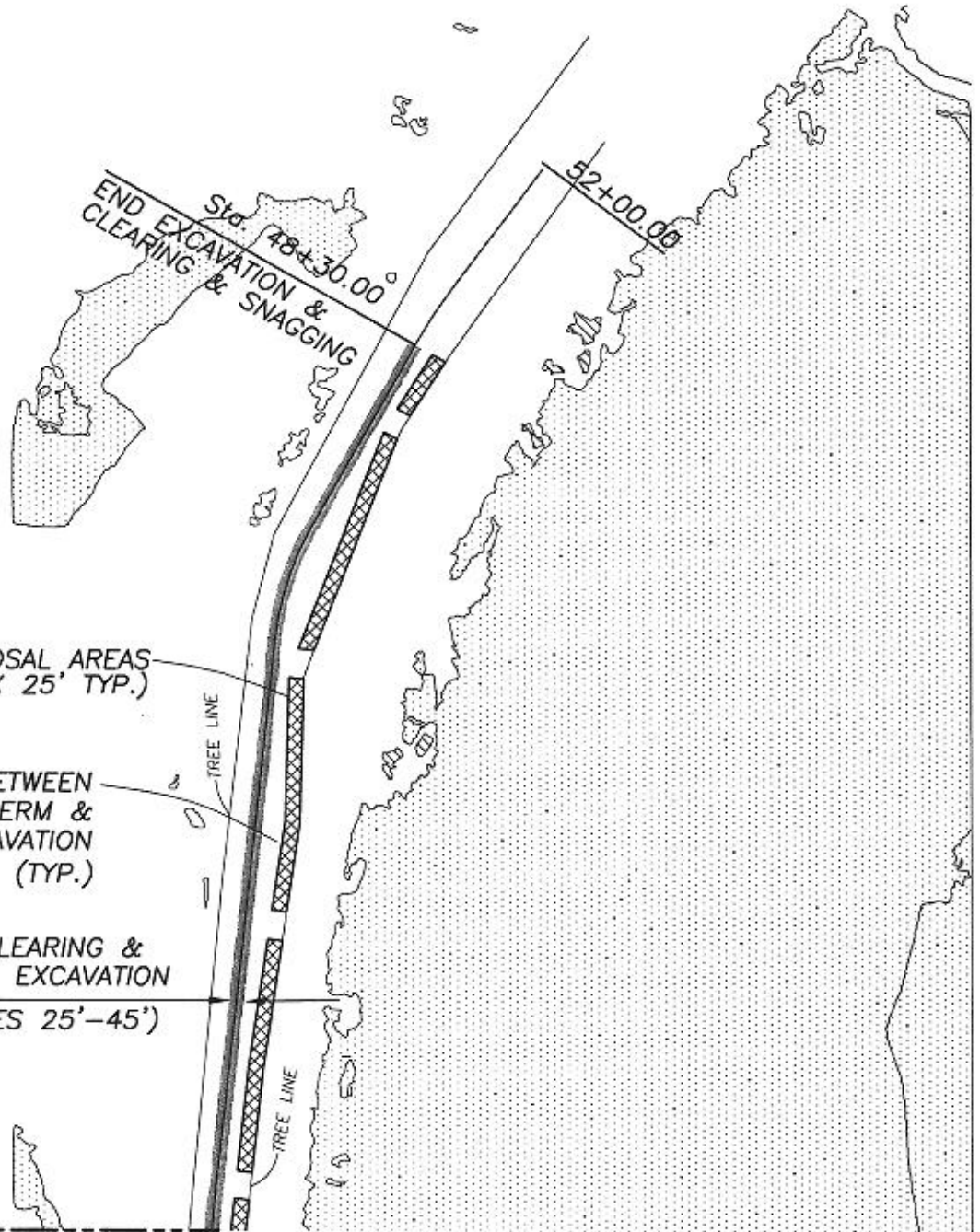
ELEMENT 10 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>42</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	






C:\Users\jfabre\OneDrive\Documents\8004-07\PROJECT 10\_FINAL.DWG

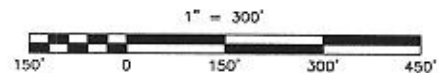


Scale: 1"=300'



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N. SONNIER, J. FAGRE, APRIL 2016, AS SHOWN, 0004-07, OVERALL.DWG

DESIGNED BY	N. SONNIER
DRAWN BY	J. FAGRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	0004-07
FILE NO.	OVERALL.DWG

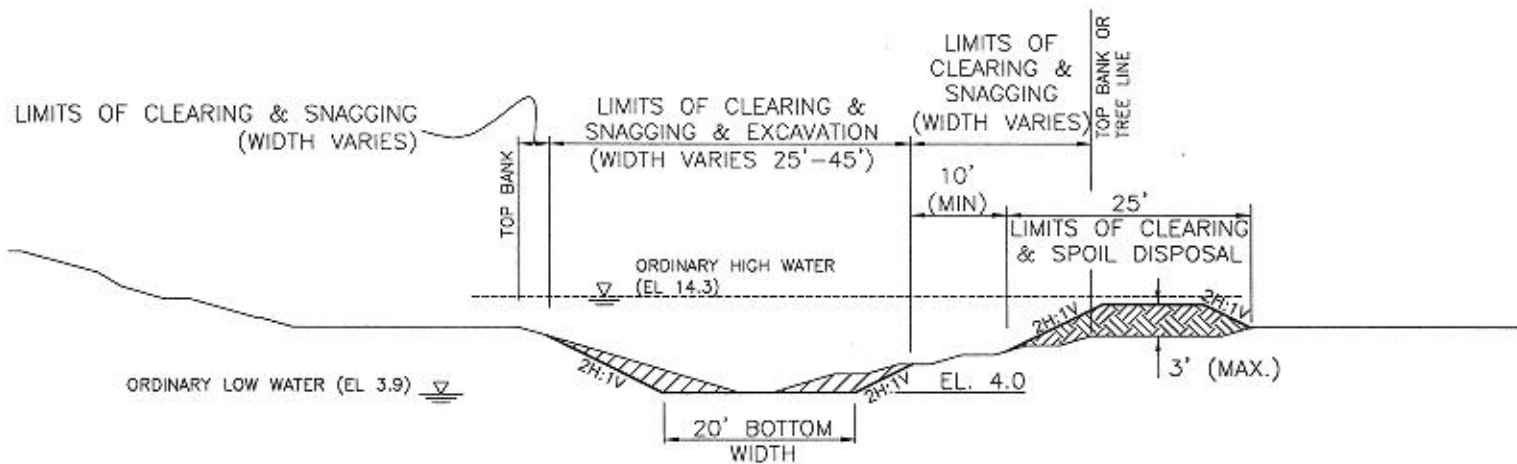


**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70508 (507) 282-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

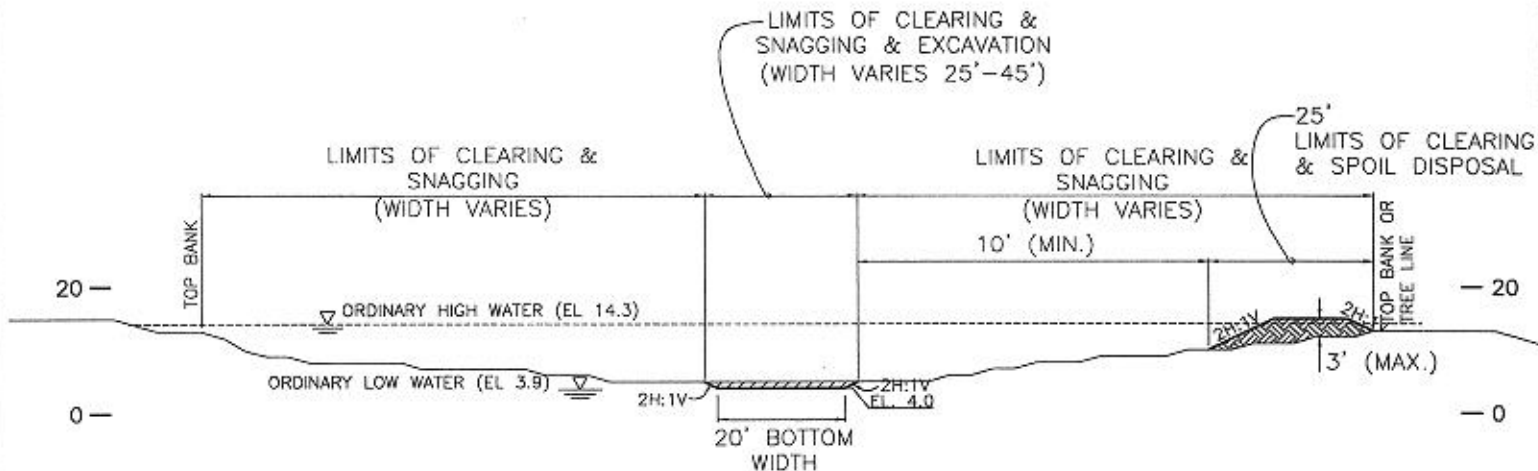
ELEMENT 10 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>43</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



SECTION A  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 11+00 TO STA 48+30  
 SCALE: 1"=20'

A  
41



SECTION B  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 11+00 TO STA 48+30  
 SCALE: 1"=30'

B  
41

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
GENERAL EXCAVATION (CU. YDS)	4,931
CLEARING & SNAGGING (LIN. FT.)	3,730
CLEARING (ACRES)	0.1

DESIGNED BY	N. SONNIER
CHECKED BY	N. SONNIER
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	0004-05
FILE NO.	0004-05/040

**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 118-B Bay Street, Lafayette, LA 70501 (337) 232-2777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 10 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 44 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	





JAN 09 2017

January 4, 2017

US ARMY CORPS OF ENGINEERS  
REGULATORY BRANCH  
WESTERN EVALUATION SECTION  
ATTN: MR. MICHAEL HERRMANN, JR.  
7400 Leake Ave.  
New Orleans, LA 70118

Re: St. Martin Parish Government  
Beau Bayou Swamp Hydrologic  
Restoration Project  
St. Martin Parish - Atchafalaya Basin  
Permit No. MVN-2015-01796-WLL  
DA Permit

Dear Mr. Herrmann,

Please find attached for your processing the signed Department of the Army Permit for the Beau Bayou Swamp Hydrologic Restoration Project (MVN-2015-01796-WLL).

Sincerely,

ST. MARTIN PARISH GOVERNMENT

GUY CORMIER  
PARISH PRESIDENT

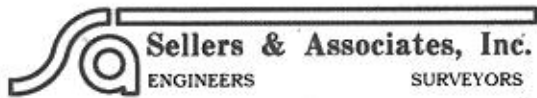
Attachments

N:\DATA\8004\8004-07 Permits\Ltr USACE 2017-01-04.wpd  
c: Mr. Nick Sonnier, Sellers & Associates, Inc.

Guy Cormier  
Parish President

Post Office Box 9  
301 West Port Street  
St. Martinville  
Louisiana, 70582  
337.394.2200  
Fax 394.2203





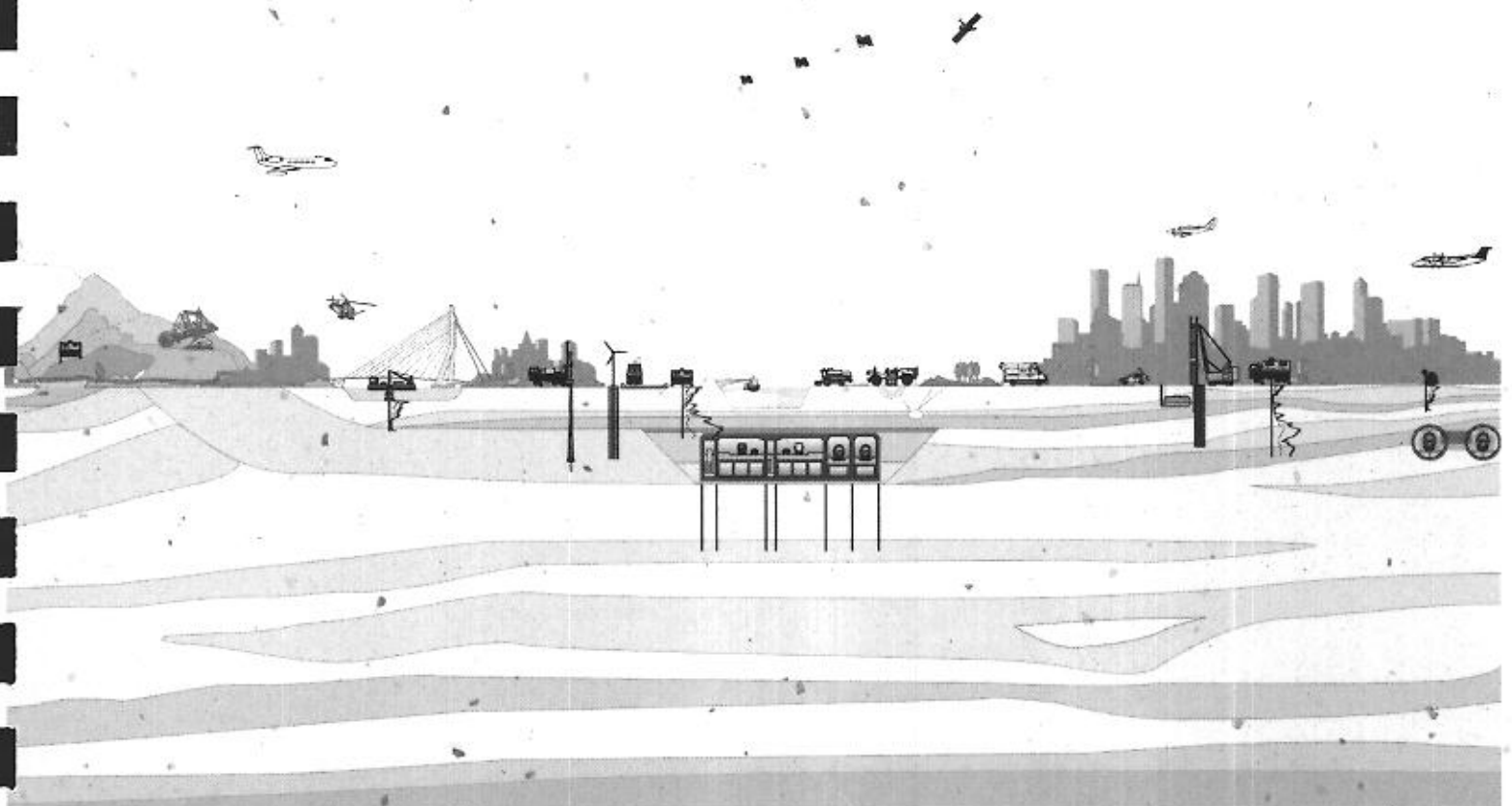
**Sellers & Associates, Inc.**  
**Beau Bayou Water Management Unit**  
**Hydrologic Restoration Project**

April 28, 2016

**Submitted to:**  
Nick A. Sonnier, P.E.  
Sellers & Associates, Inc.  
148B Easy Street  
Lafayette, Louisiana 70506

**Submitted by:**  
John Chance Land Surveys, Inc.  
200 Dulles Drive  
Lafayette, Louisiana 70506

JCLS Job No. 20160002





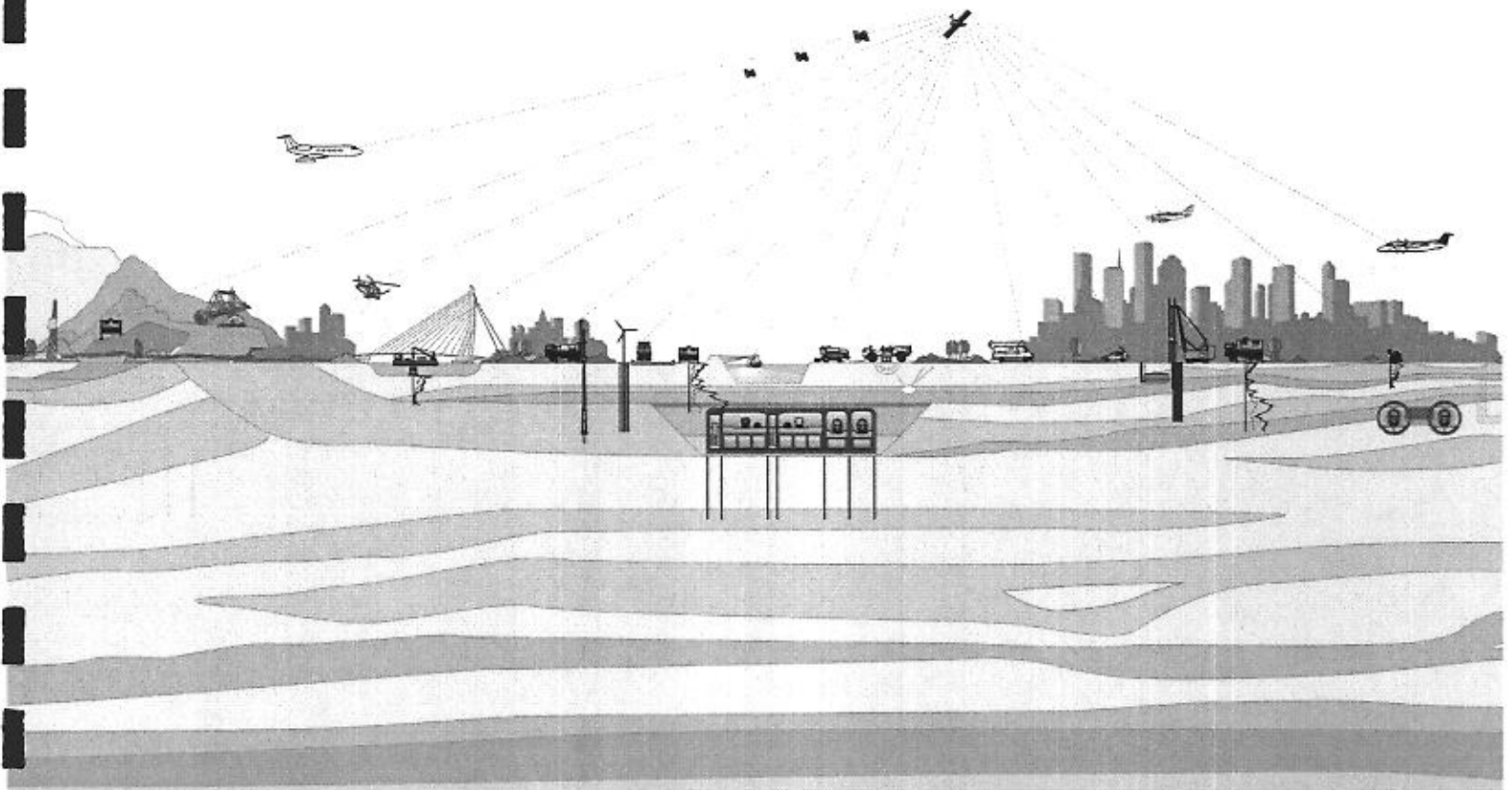
**Sellers & Associates, Inc.**  
**Beau Bayou Water Management Unit**  
**Hydrologic Restoration Project**

April 28, 2016

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Lafayette, Louisiana 70506

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John Chance Land Surveys, Inc.  
200 Dulles Drive  
Lafayette, Louisiana 70506

JCLS Job No. 20160002





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**Field Data Collection for Projects Associated with the  
Hydrologic Restoration  
Of the Beau Bayou/Atchafalaya Basin Water Management Unit**

**Introduction**

St. Martin Parish secured the engineering and surveying services of Sellers & Associates, Inc. to address the lack of river inflows and blockage/impairment of sheet flow in the west-central portions of the Mid-Atchafalaya Basin Floodway. Extensive channelization, pipeline rights-of-way, the accumulation of fallen large woody debris, and tree species growing in small drainages have resulted in decreased flow/velocity, thereby leading to sediment build-up perpetuating a higher likelihood of a positive feedback response resulting in more trees growing in drainages, further reduced velocity, and decreased net primary productivity. *productivity of what*

Upon completion of the Beau Bayou Hydrologic Restoration Project, water flow through the area will increase which will lead to a healthier system. Dissolved oxygen levels will increase leading to a healthier environment for fin fish and crawfish. Restored hydrology will also flush out non-rooted aquatic vegetation, increase navigable access, and assist in the restoration of the area's hydrogeomorphology. Gapping of artificially high spoil banks will reduce the wetland hydroperiod to promote new seedling recruitment.

**Location & Boundaries**

Project work is located within the west-central portion of the Mid-Atchafalaya Basin Water Management Unit. The Unit is bordered on the northwest and west by Lake Long and Bayou L'Embaras, on the southwest by Grand Bayou, on the southeast by Lake Fausse Pointe Cut, Bayou Gonsoulin, Alligator Bayou, and Bayou Chene, and on the east and northeast by Bayou Chene Cut, Splice Island Chute, Tensas Bay and Devil's Cut.

**Methods**

In January of 2016 Sellers & Associates, Inc. secured the services of John Chance Land Surveys, Inc. (Fugro) ecological staff to evaluate habitat condition measures such as species richness, stratum composition, exotic species presence, and overall structure of the habitat throughout the project area and to assess the Hydrologic Condition and Negative Influences of the Unit.

Over the course of two (2) months, the total length of each project location was assessed via the use of a small outboard, pirogue, and on foot. A GPS-enabled camera, handheld Trimble and Garmin GPS units, binoculars, 10X hand held loop, and field notebooks were used to document and evaluate pertinent findings.

**Findings**

Extensive channelization and landform fragmentation in the area have resulted in greatly reduced water velocity and flushing of backwater areas of the Basin causing heavy sediment buildup within small naturally occurring bayous and sloughs. During periods of low water/drought, these drainages are prime areas for fast growing Black Willow (*S. nigra*) and Chinese tallow (*T. sebifera*) trees to become

---



established and out-compete more desirable native species for limited resources such as sunlight and nutrients (Kroes and Kraemer 2013, Hup et al. 2008). In addition to tree species, many scrub-shrub species have taken advantage of high-light conditions in drainages without a tree canopy. Once established in the drainages the stems further slow water movement which allows additional sediment build-up (T. Doyle and R. Day, personal communication). This phenomenon is apparent in many of the project work areas. In addition to the occluded drainages, spoil banks higher than normal tidal reach increase hydro period in adjacent wetlands. Research by Faulkner et al., 2009, suggests that <6% of cypress-tupelo forest in the Lower Atchafalaya Basin Floodway is capable of naturally regenerating due to continuous and long-term increases in depth and extent of hydroperiod. Inability to naturally regenerate in standing water also applies, to a larger degree, to native Bottomland Hardwood species.

### **Conclusion**

Anthropogenic influences such as oil & gas pipelines, rights-of-way and constructed channels disrupt the Atchafalaya Basin's natural movement and flow of water and thus altered sediment deposition within the wetlands. Disrupted hydrology in the area of the Beau Bayou Swamp Water Management Unit (BBWMU) is also slowly changing the middle region of the Basin from a historically cypress-tupelo swamp to a habitat conducive to a Bottomland Hardwood forested community (Piazza, 2014). Additionally, large expanses with decreased flow result in poor water quality and degraded forest health.

Proposed work in the BBWMU will address issues related to maintaining, restoring and enhancement of the mid-basin wetland habitats. Activities necessary for completion of the project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of the Beau Bayou Restoration Project.

The evaluation and identification of plant and tree species took place during the dormant season, just prior to full leaf-out of the tree species encountered. Identification was based on bark characteristics, growth form and bud arrangement, senesced plant structures, location of their rooted bases and familiarity of native plant species of the Atchafalaya Basin and South Louisiana.

The determination of ecological system classifications, functions, values and boundaries is an inexact science and different individuals may reach different conclusions. With regard to wetlands, the final determination of boundaries for regulatory purposes is the responsibility of the resource agencies that regulate wetland activities. We cannot guarantee the outcome of such agency determinations. Therefore, the conclusions of this report should be reviewed by the appropriate regulatory agencies prior to construction activities.

The field work was completed and this report has been prepared in accordance with and through the guidance of the USACE 2016 Louisiana Wetland Rapid Assessment Method Version 1.0 Guidelines. Maps, shape files of project locations and other location data were supplied by the engineering and surveying firm of Sellers & Associates, Inc. John Chance Land Surveys Inc. warrants that the work performed conforms to the accepted industry standards and that the data contained in this report conform to current technical State and Federal guidelines. This report is for the exclusive use of Sellers & Associates, Inc. who may use and share with State and Federal agencies as appropriate for the completion of the Beau Bayou Hydrologic Restoration Project. No other persons or agencies may rely on the information, analysis or conclusions contained without permission from Sellers & Associates, Inc.



### **Project 1**

Project 1 begins at Bayou Chene (30.146°, 91.530°), running in a NNE direction through Little Bayou DePlomb, terminating at Four hundred Dollar Bayou (30.160°, 91.546°). Area assessed via pirogue (04MAR'16) included the Total length of Project 1, approximately 11,747 feet in length, a bottom width of 30 feet between the top banks of the existing channel, and a variable top width of 50-110 feet. Project 1 area measures a total of 38.0 acres, of which 27.7 acres are bottomland hardwood forested wetlands (BLH), 8.1 acres are water bottom, and 2.2 acres are non-wetlands.

#### **A. Wetland Status:**

Secure; Difficult to replace due to connectivity.

#### **B. Habitat Condition:**

Tree stratum contains approximately 40% absolute cover, which includes invasive Chinese tallow (*Triadica sebifera*) and nuisance Black willow (*Salix nigra*) tree species. The Shrub stratum contains approximately 60% absolute cover, and is contiguous from NE bank, through drainage, to the SW bank throughout most of length of the project area.

Cumulatively, the tree species observed contained predominately bottomland hardwood tree species and 20% exotic/nuisance species. Also encountered were small clumps of senesced cutgrass (*Zizaniopsis miliacea*), which is also considered a nuisance species because of its monospecific growth habit and its propensity to invade shallow waters and limit species diversity.

#### Tree Stratum

Red maple <sup>1</sup>	<i>Acer rubrum</i>
Box elder <sup>2</sup>	<i>Acer negundo</i>
Sugarberry <sup>3</sup>	<i>Celtis laevigata</i>
Black willow (nuisance)	<i>Salix nigra</i>
Chinese tallow (invasive)	<i>Triadica sebifera</i>

LRAM listed BLH tree species<sup>1-3</sup>

#### Shrub Stratum

Swamp privet <sup>1</sup>	<i>Forestiera acuminata</i>
Button bush <sup>2</sup>	<i>Cephalanthus occidentalis</i>
Water elm	<i>Planera aquatica</i>
Swamp dogwood	<i>Cornus foemina</i>

LRAM listed BLH shrub species<sup>1-2</sup>

#### **C. Hydrologic Condition:**

Local hydrology is impaired by anthropogenic disturbances (channelization and a pipeline right-of-way) such that full functional recovery would not occur through natural processes. The anthropogenic influences to the existing channel include a pipeline right-of-way at (30.152, -91.543 [photo #22]), and spoil banks along the canal that appear to be of height and width that will impede sheet flow during normal high water events, thus negatively affect hydroperiod in





nearby wooded areas. Note that this project 1 has an impaired hydrologic condition due to high number of shrubs and large woody debris throughout the stretch of the project length and width.

**D. Negative Influences:**

The project site receives more than minimal static negative effects from extensive channelization throughout the area, and a maintained pipeline right-of-way transecting the project area.

**E. Impact type:**

Partial / Temporary

**Conclusion**

Project 1 of the Beau Bayou Swamp Hydrologic Restoration will take place within an Atchafalaya Basin Bottomland Hardwood Forested Habitat, classified as **Secure** / difficult to replace due to connectivity of similar wetland habitats >500 acres in size, by the Louisiana Natural Heritage Program (LNHP, 2009).

Fallen large woody debris and tree species growing in this drainage decreases flow/velocity which leads to sediment buildup within the existing channel, perpetuating a higher likelihood of a positive feedback response resulting in more trees growing in drainage, further reduced velocity, and decreased net primary productivity.

Upon completion of this portion of the Beau Bayou Project, velocity through the area will increase which will lead to a healthier system in that dissolved oxygen levels will increase leading to a healthier environment for fin fish and crawfish in the immediate vicinity. Furthermore, increased flow through the drainage will flush out non-rooted aquatic vegetation and increase the usefulness of this once navigable water way.

**A. Wetland Status: (f) value\_ 2.0 \_Secure**

Bottomland Hardwood (BLH) is classified as Secure (**RID** due to connectivity) by *The Natural Communities of Louisiana*, (LNHP, 2009).

**B. Habitat Condition: (f) value\_ 2.0 \_Medium**

Tree stratum is comprised of <50% absolute cover of listed BLH tree stratum species, and consists of exotic, nuisance, and native BLH species; the shrub stratum is > 50% absolute cover.

**C. Hydrologic Condition: (f) value\_ 2.0 \_Medium**

Anthropogenic factors, including extensive channelization and pipeline right-of-ways occurring in the area negatively affect the hydrologic condition of this project worksite.

**D. Negative Influences: (f) value\_ -0.5 \_High**

Pipeline ROW negatively influences natural hydrologic regime.



E. Impact Type: *(i)* value\_ 0.5 \_Partial/Temporary Loss

Activities necessary for completion of project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of project.





Project #1, #17, @ 30°9'37.36", 91°32'46.55"



Project #1, #18, @ 30°9'31.54", 91°32'44.28"



Project #1, #19, @ 30°9'26.23", 91°32'43.61"



Project #1, #20, @ 30°9'21.13", 91°32'41.03"



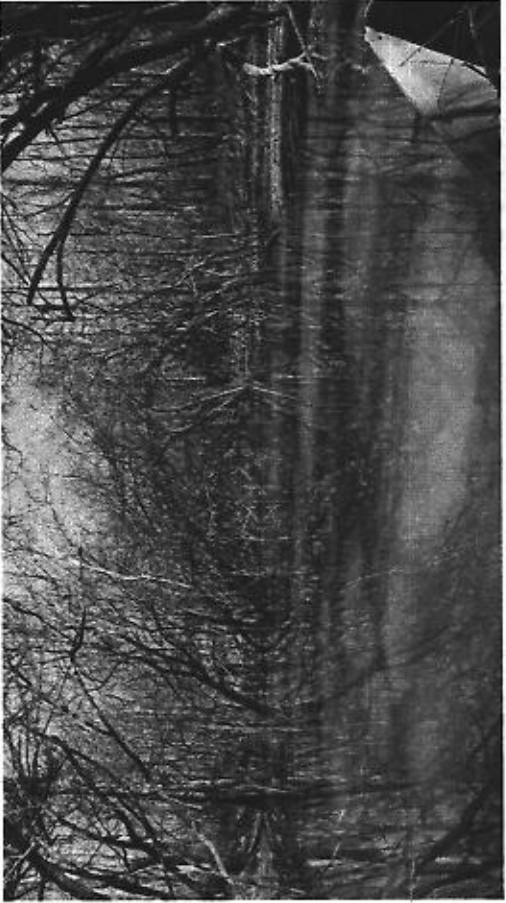
Project #1, #21, @ 30°9'12.31", 91°32'36.60"



Project #1, #22, @ 30°9'7.13", 91°32'34.64"



Project #1, #50, @ 30°8'55.70", 91°32'27.02"



Project #1, #51, @ 30°8'52.73", 91°32'22.04"





Project #1, #52, @ 30°8'49.33", 91°32'15.89"



Project #1, #53, @ 30°8'49.51", 91°32'15.92"



Project #1, #59, @ 30°8'50.65", 91°32'7.86"



Project #1, #60, @ 30°8'49.89", 91°32'5.53"



Project #1, #62, @ 30°8'46.36", 91°31'59.80"



Project #1, #61, @ 30°8'47.85", 91°32'1.87"



Project #1, #63, @ 30°8'46.27", 91°31'57.66"



Google earth

Imagery Date: 1/24/2015 lat 30.152777° lon -91.538067° elev 0 ft eye alt 6742 ft

© 2016 Google

Tour Guide



## Project 2

Project 2 involves excavation and clearing operations in an un-named canal starting at (30.173°, -91.545°), ending at (30.175°, -91.550°). Area assessed via pirogue (03MAR'16) included the Total length of Project 2, approximately 1,558 linear feet, a variable top width of 25' - 55' for clearing and excavation, and a 15' bottom width. On-site survey revealed that mature bald cypress (average DBH= 17.1") were growing almost exclusively inside the width of the un-named canal from (30.174°, -91.550°\_to\_ 30.172°, -91.548°), and nearly absent lateral from centerline of project area. Project area measures a total of 3.5 acres, of which 2.4 acres are Bald cypress / Tupelo forested wetlands, and 1.1 acres are water bottom.

### A. Wetland Status:

Secure; Difficult to Replace due to connectivity.

### B. Habitat Condition:

Tree stratum contains approximately 40% absolute cover, which includes nuisance Black willow (*Salix nigra*), and invasive Chinese tallow (*Triadica sebifera*) tree species. The documented bald cypress stratum appeared to be rooted entirely within the top width of the project area. Moving lateral from centerline, typical BLH species were observed. The Shrub stratum contains roughly 40% absolute cover. Also noted were a significant number of standing dead trees (snags) which were mostly black willow (*S. nigra*); roughly 20% of surveyed area was bare ground; project work area contained approximately 10% exotic/nuisance species.

Non-woody vegetation encountered included butterweed (*Packera glabella*), marsh fern (*Thelypteris thelypteroides*) and Japanese climbing fern (*Lygodium japonicum*).

#### Tree Stratum

Bald cypress <sup>1</sup>	<i>Taxodium distichum</i>
Box elder	<i>Acer negundo</i>
Black willow (nuisance)	<i>Salix nigra</i>
Chinese tallow (invasive)	<i>Triadica sebifera</i>
Nuttall Oak	<i>Quercus texana</i>
Swamp dogwood	<i>Cornus foemina</i>
American sycamore	<i>Plantanus occidentalis</i>
Cottonwood	<i>Populus deltoides</i>

LRAM Listed Cypress/Tupelo Tree Stratum Species<sup>1</sup>

#### Shrub Stratum

Swamp privet	<i>Forestiera acuminata</i>
Button bush <sup>1</sup>	<i>Cephalanthus occidentalis</i>
Possumhaw	<i>Ilex decidua</i>

LRAM Listed Cypress/Tupelo Shrub Stratum Species<sup>1</sup>





**C. Hydrologic Condition:**

Local hydrology is impaired by anthropogenic disturbances (channelization and a pipeline right-of-way) such that full functional recovery would not occur through natural processes.

**D. Negative Influences:**

The project site receives more than minimal static negative effects from extensive channelization throughout the area.

**E. Impact type:**

Partial / Temporary

**Conclusion**

Project 2 of the Beau Bayou Swamp Hydrologic Restoration will take place within an Atchafalaya Basin Cypress/Tupelo Forested Habitat, classified as **Secure** / Difficult to Replace due to connectivity of similar wetland habitats >500 acres in size (LNHP, 2009).

Upon completion of this portion of the Beau Bayou Project, velocity through the area will increase which will stabilize dissolved oxygen levels; increased water flow through the canal will also flush out non-rooted aquatic vegetation.

**A. Wetland Status: (i) value\_ 2.0 \_Secure**

Baldcypress/Tupelo swamp habitat is classified as **Secure** / Difficult to Replace by *The Natural Communities of Louisiana* (LNHP, 2009).

**B. Habitat Condition: (i) value\_ 2.0 \_Medium**

Tree stratum contains <50% absolute cover of one or a mixture of both tree stratum species for Bald cypress / Tupelo swamp.

**C. Hydrologic Condition: (i) value\_ 2.0 \_Medium**

Anthropogenic factors, including extensive channelization and pipeline right-of-ways occurring in the area affect the hydrologic condition of this project worksite.

**D. Negative Influences: (i) value\_ -0.5 \_High**

Pipeline ROW and access canals negatively influence the natural hydrologic regime.

**E. Impact Type: (i) value\_ 0.5 \_Partial/Temporary Loss**

Activities necessary for completion of project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of project.







Proj.#2, #13, @ 30°10'28.26", 91°33'3.2"



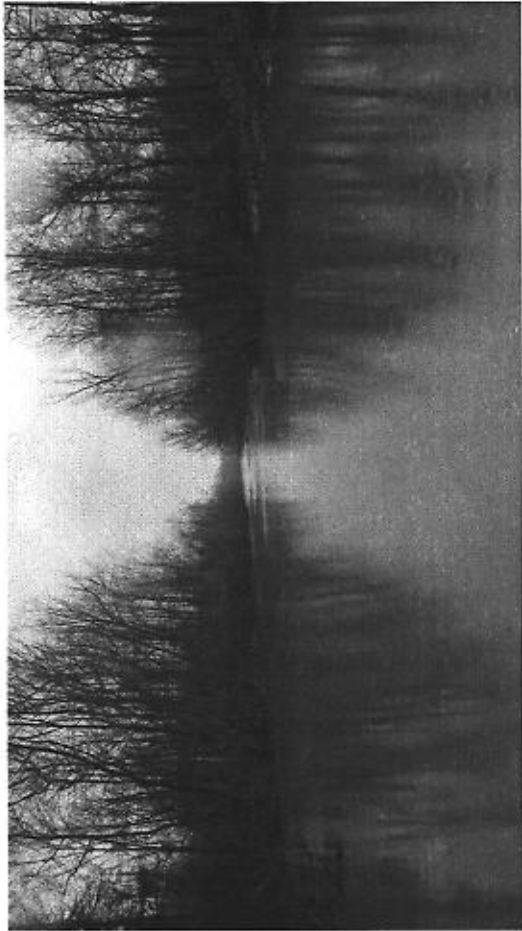
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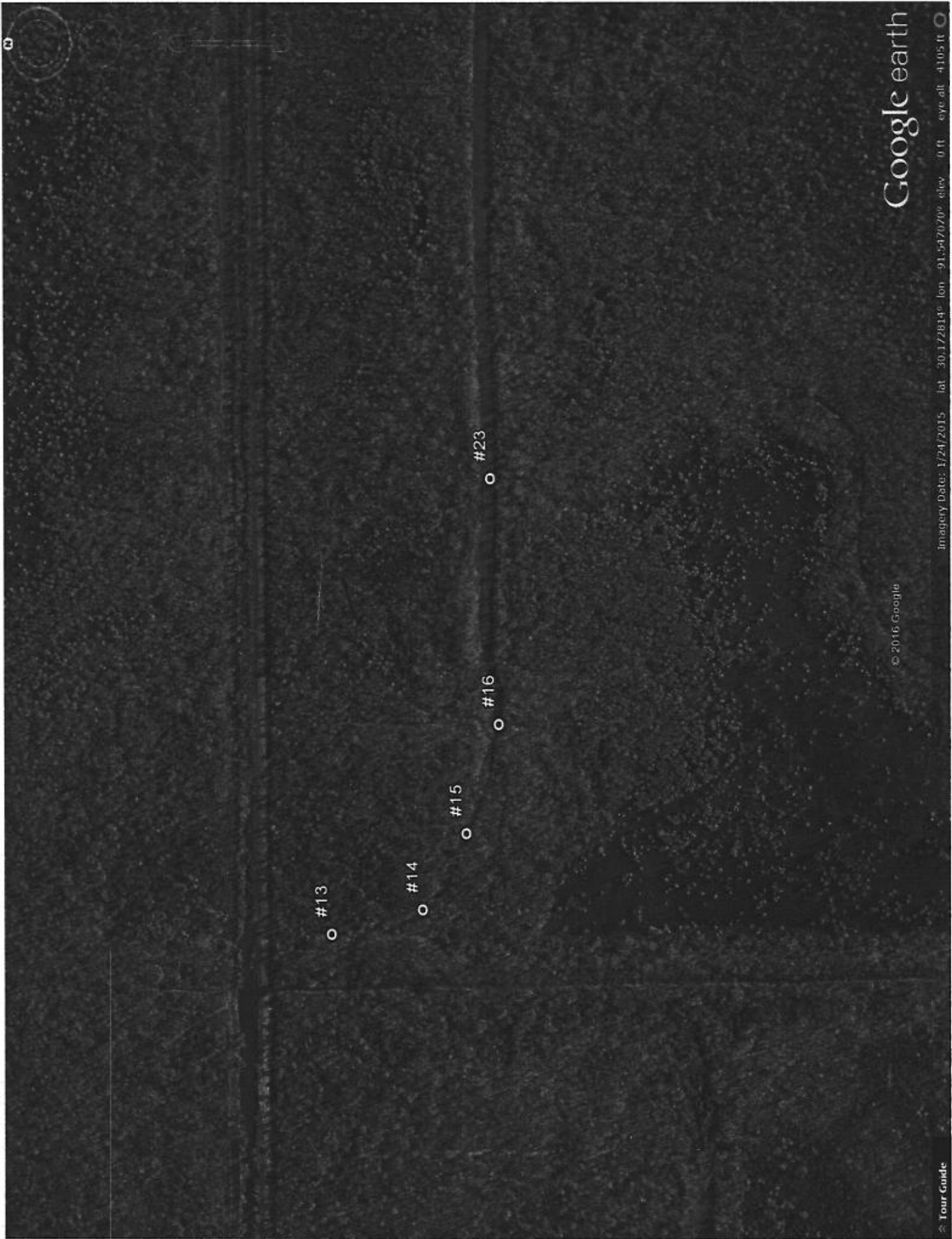
Proj.#2, #15, @ 30°10'22.78", 91°32'58.44"



Proj.#2, #16, @ 30°10'22.62", 91°32'58.49"



Proj.#2, #23, @ 30°10'21.45", 91°32'43.08"



#13

#14

#15

#16

#23

© 2016 Google

Google earth

Imagery Date: 1/24/2015 lat 30.172814e lon -91.547070e elev 0 ft eye alt 4105 ft



### **Project 3**

Project 3 involves excavation, clearing and snagging operations in an un-named canal branching off of the Atchafalaya River Splice Island Chute, starting at (30.176°, -91.560°), ending at (30.175°, -91.550°). Area assessed via pirogue (03MAR'16) included the Total length of Project 3, approximately 4,386 linear feet , a variable top width of 17' - 110' for clearing and excavation, and a variable bottom width of 10' - 60'. Project area measures a total of 9.6 acres, of which 4.3 acres are Bottomland Hardwood forest, 3.3 acres are water bottom and 2.0 acres are non-wetland.

#### **A. Wetland Status:**

Secure; Difficult to Replace due to connectivity

#### **B. Habitat Condition:**

Tree stratum contains <50% absolute cover of listed BLH tree species, as well as invasive Chinese tallow (*Triadica sebifera*) and nuisance Black willow (*Salix nigra*) tree species. The Shrub stratum contains >50% absolute cover. Collectively, nuisance/invasive species accounted for 30% of all woody vegetation. Non-woody vegetation encountered included marsh fern (*Thelypteris thelypteroides*), Japanese climbing fern (*Lygodium japonicum*), alligator weed (*Alternanthera philoxeroides*), and butterweed (*Packera glabella*). Also found on existing earthen plug (30.195°, -91.551°) was a small stand of Japanese bamboo (*Phyllostachys bambusoides*).

#### Tree Stratum

Black willow (nuisance)	<i>Salix nigra</i>
Box elder <sup>1</sup>	<i>Acer negundo</i>
Swamp dogwood <sup>2</sup>	<i>Cornus foemina</i>
American sycamore <sup>3</sup>	<i>Plantanus occidentalis</i>
Cottonwood <sup>4</sup>	<i>Populus deltoides</i>
Bald cypress	<i>Taxodium distichum</i>
Chinese tallow (invasive)	<i>Triadica sebifera</i>

LRAM Listed BLH Tree Stratum Species<sup>1-4</sup>

#### Shrub Stratum

Swamp privet <sup>1</sup>	<i>Forestiera acuminata</i>
Button bush <sup>2</sup>	<i>Cephalanthus occidentalis</i>
Possumhaw <sup>3</sup>	<i>Ilex decidua</i>
Japanese bamboo	<i>Phyllostachys bambusoides</i>
Wax myrtle	<i>Morella cerifera</i>

LRAM Listed BLH Shrub Stratum Species<sup>1-3</sup>





**C. Hydrologic Condition:**

Local hydrology is impaired by anthropogenic disturbances such that full functional recovery would not occur through natural processes.

**D. Negative Influences:**

The project site receives more than minimal static negative effects from extensive channelization throughout the area.

**E. Impact type:**

Partial / Temporary

**Conclusion**

Project 3 of the Beau Bayou Swamp Hydrologic Restoration will take place within an Atchafalaya Basin Bottomland Hardwood Forested Habitat, classified as **Secure** (RID due to connectivity) by *The Natural Communities of Louisiana*, (LNHP, 2009).

Upon completion of this portion of the Beau Bayou Project, velocity through the area will increase which will stabilize dissolved oxygen levels; increased water flow through the canal will also flush out non-rooted aquatic vegetation.

**A. Wetland Status: (i) value\_ 2.0 \_Secure**

Bottomland Hardwood (BLH) is classified as Secure (Difficult to Replace) by *The Natural Communities of Louisiana* (LNHP, 2009).

**B. Habitat Condition: (i) value\_ 2.0 \_Medium**

Tree stratum contains <50% absolute cover of one or a mixture of both tree stratum species for BLH. Shrub stratum exceeds 50% absolute cover.

**C. Hydrologic Condition: (i) value\_ 2.0 \_Medium**

Anthropogenic factors, including extensive channelization and pipeline right-of-ways occurring in the area, affect the hydrologic condition of this project worksite.

**D. Negative Influences: (i) value\_ -0.5 \_High**

Pipeline ROW and access canals negatively influence the natural hydrologic regime.

**E. Impact Type: (i) value\_ 0.5 \_Partial/Temporary Loss**

Activities necessary for completion of project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of project.





Project #3, East, @ 30.194°, -91.551°



Project #3, West, @ 30.194°, -91.551°



Project #3, #3, @ 30.194°, -91.550°



Project #3, #4, @ 30.195°, -91.547°



Project #3, #5, @ 30.195°, -91.545°



Project #3, #6, @ 30.195°, -91.545°

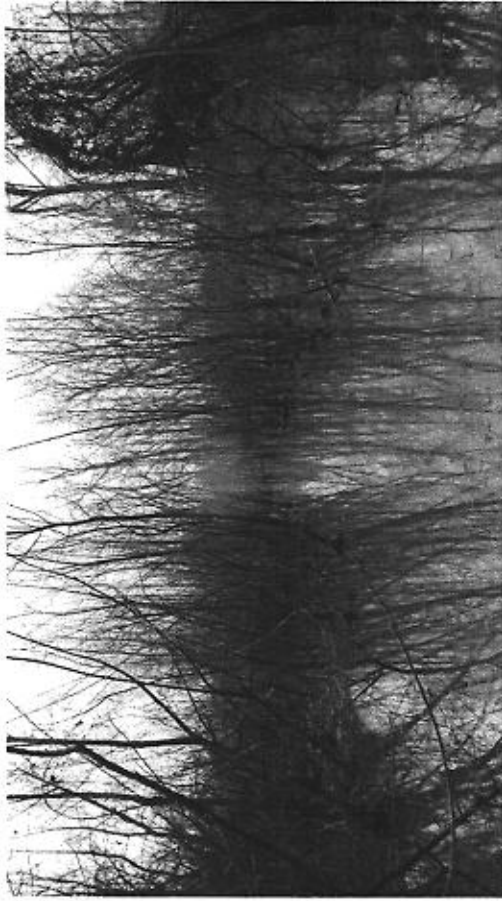


Project #3, #7, @ 30.194°, -91.542°

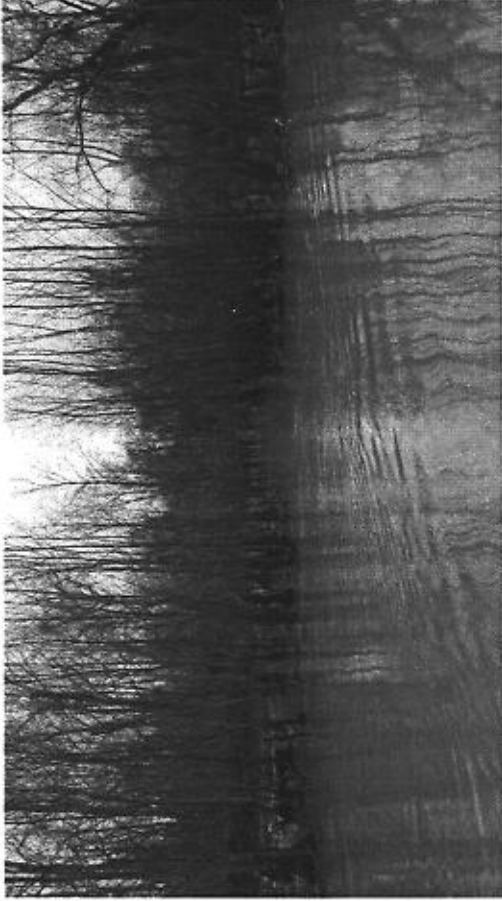


Project #3, #8, @ 30.194°, -91.540°

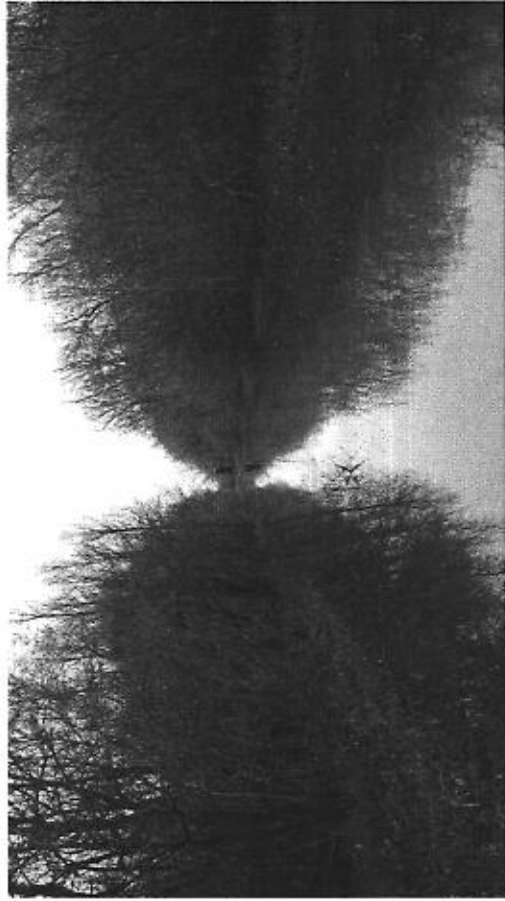




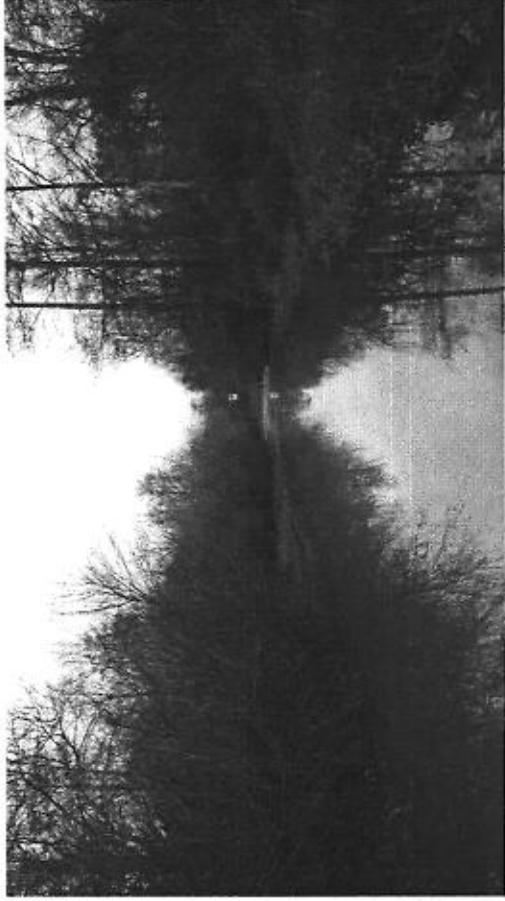
Project #3, #9, @ 30.194°, -91.537°



Project #3, #10, @ 30.194°, -91.536°

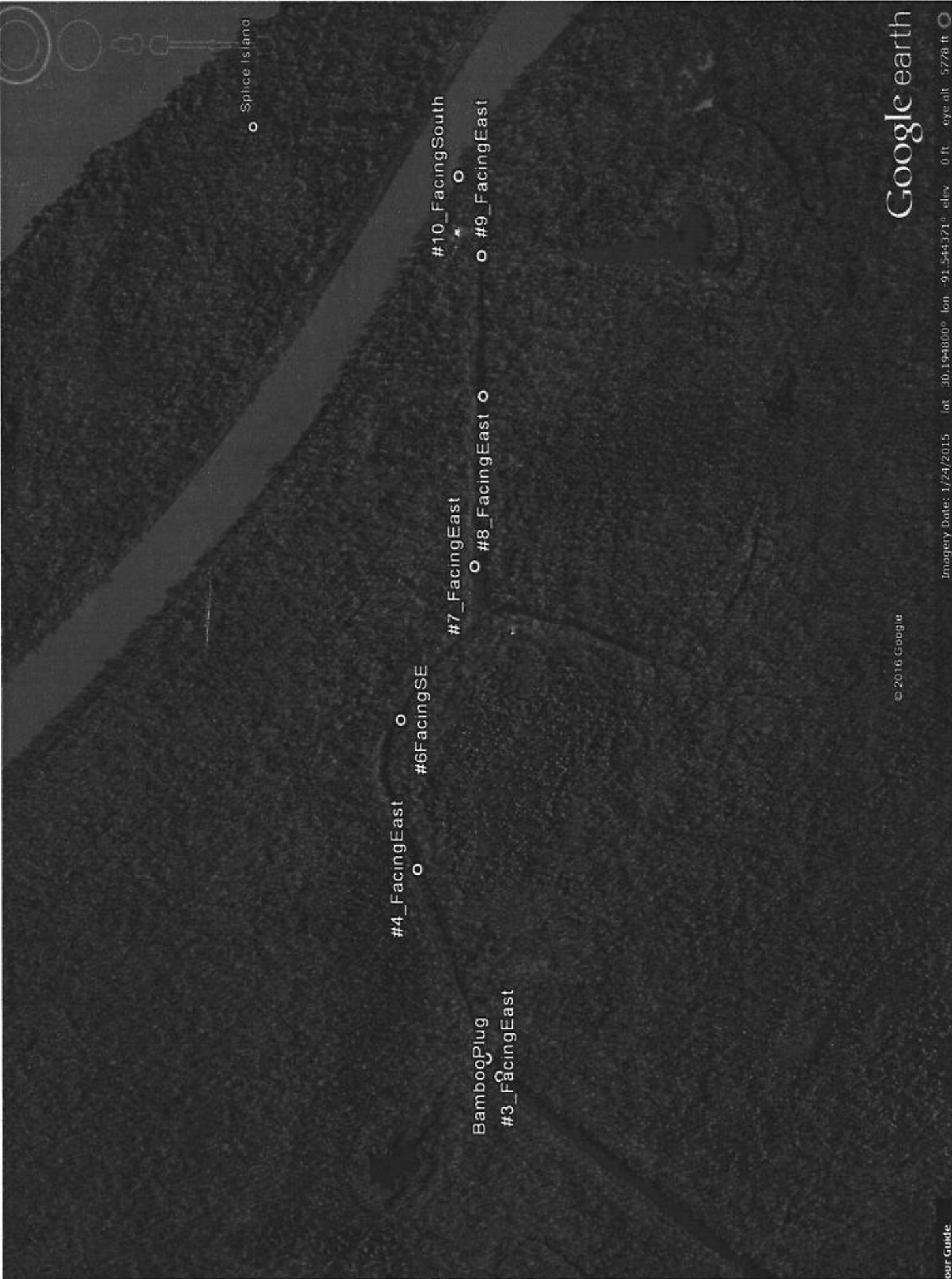


Project #3, #11, @ 30.177°, -91.559°



Project #3, #12, @ 30.177°, -91.559°





Spice Island

#4\_FacingEast

#6FacingSE

#7\_FacingEast

BambooPlug  
#3\_FacingEast

#10\_FacingSouth

#9\_FacingEast

#8\_FacingEast

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Google earth

our Guide

Imagery Date: 1/24/2015 lat: 30.194800° lon: -91.544371° elev: 0 ft eye alt: 578 ft



**Project 4**

Project 4 involves clearing operations in Four Hundred Dollar Bayou, starting at Sorrento pipeline canal (30.126°, -91.574°), ending at Bayou LaRose (30.162°, -91.558°). Area assessed via pirogue (15MAR'16) included the Total length of Project 4, approximately 14,696 linear feet, with a variable top width of 40' - 60' for clearing. Project area measures a total of 15.8 acres, of which 4.2 acres are Bottomland Hardwood forest, 4.2 acres are Cypress/Tupelo, and 7.4 acres are water bottom.

**A. Wetland Status:**

Secure; Difficult to replace due to connectivity.

**B. Habitat Condition:**

1. **BLH Tree stratum** contains >50% absolute cover of listed BLH species. The Shrub stratum contains roughly 40% absolute cover.
2. **Cypress/Tupelo** habitat encountered between (30.136°, -91.569°) & (30.127°, -91.574°) where water levels at the time were above the natural banks, and no defined channel was appreciable. The Cypress/Tupelo habitat spanned a distance of ~ 0.78 miles and contained <50% absolute cover of Tree Stratum. The Shrub Stratum contains <50% absolute cover.

Non-woody vegetation encountered included cutgrass (*Zizaniopsis miliacea*), wild rice (*Zyzania aquatica*), alligator weed (*Alternanthera philoxeroides*), butterweed (*Packera glabella*) and horsetail rush (*Equisetum hyemale*).

Tree Stratum

Water locust <sup>1</sup>	<i>Gleditsia aquatica</i>
American elm <sup>2</sup>	<i>Ulmus Americana</i>
Green ash <sup>3</sup>	<i>Fraxinus pennsylvanica</i>
Red maple <sup>4</sup>	<i>Acer rubrum</i>
Box elder <sup>5</sup>	<i>Acer negundo</i>
Roughleaf dogwood <sup>6</sup>	<i>Cornus drummondii</i>
Sugarberry <sup>7</sup>	<i>Celtis laevigata</i>
American sycamore <sup>8</sup>	<i>Plantanus occidentalis</i>
Cottonwood <sup>9</sup>	<i>Populus deltoides</i>
Bald cypress <sup>a</sup>	<i>Taxodium distichum</i>
Water tupelo <sup>b</sup>	<i>Nyssa aquatica</i>
Black willow (nuisance)	<i>Salix nigra</i>

LRAM Listed BLH Tree Stratum species<sup>1-9</sup>; LRAM Listed Cypress/Tupelo species<sup>a&b</sup>

Shrub Stratum

Swamp privet <sup>1</sup>	<i>Forestiera acuminata</i>
Button bush <sup>2&amp;a</sup>	<i>Cephalanthus occidentalis</i>
Possumhaw <sup>3</sup>	<i>Ilex decidua</i>



Water elm <sup>b</sup>	<i>Planera aquatica</i>
Water locust <sup>c</sup>	<i>Gleditsia aquatica</i>

BLH Shrub Stratum species<sup>1-3</sup>; LRAM Listed Cypress/Tupelo Shrub Stratum species<sup>a-c</sup>

**C. Hydrologic Condition:**

Local hydrology is impaired by anthropogenic disturbances (channelization and a pipeline right-of-way) such that full functional recovery would not occur through natural processes.

**D. Negative Influences:**

The project site receives more than minimal static negative effects from extensive channelization throughout the area, including pipeline canal bisecting Proj.#4 at (30.155°, -91.557°), Photo #8.

**E. Impact type:**

Partial / Temporary

**Conclusion**

Project 4 of the Beau Bayou Swamp Hydrologic Restoration will take place within an Atchafalaya Basin Bottomland Hardwood and Cypress/Tupelo forested habitat, both of which are classified as **Secure / Difficult to Replace** due to connectivity of similar wetland habitats >500 acres in size (LNHP, 2009).

Upon completion of this portion of the Beau Bayou Project, velocity through the area will increase which will stabilize dissolved oxygen levels; increased water flow through the canal will also flush out non-rooted aquatic vegetation.

**A. Wetland Status: (i) value\_ 2.0 \_Secure**

1. Bottomland Hardwood is classified as **Secure / RID** due to connectivity by *The Natural Communities of Louisiana* (LNHP, 2009).
2. Bald cypress/Tupelo swamp is classified as **Secure / RID** due to connectivity by *The Natural Communities of Louisiana* (LNHP, 2009).

**B. Habitat Condition: BLH = (i) value\_ 3.0 \_High; Cypress/Tupelo = (i) value\_2.0\_Medium**

1. BLH Tree stratum contains >50% absolute cover of listed BLH species. The Shrub stratum contains <50% absolute cover.
2. Cypress/Tupelo Tree Stratum contains <50% absolute cove. The Shrub Stratum contains <50% absolute cover.

**C. Hydrologic Condition: (i) value\_ 2.0 \_Medium**

Anthropogenic factors, including extensive channelization and pipeline right-of-ways occurring in the area affect the hydrologic condition of this project worksite.



D. Negative Influences: (f) **value\_ -0.5 \_High**

Multiple pipeline ROW and access canals negatively influence the natural hydrologic regime.

E. Impact Type: (f) **value\_ 0.5 \_Partial/Temporary Loss**

Activities necessary for completion of project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of project.







Project #4, #1, @ (30.162°, -91.558°)



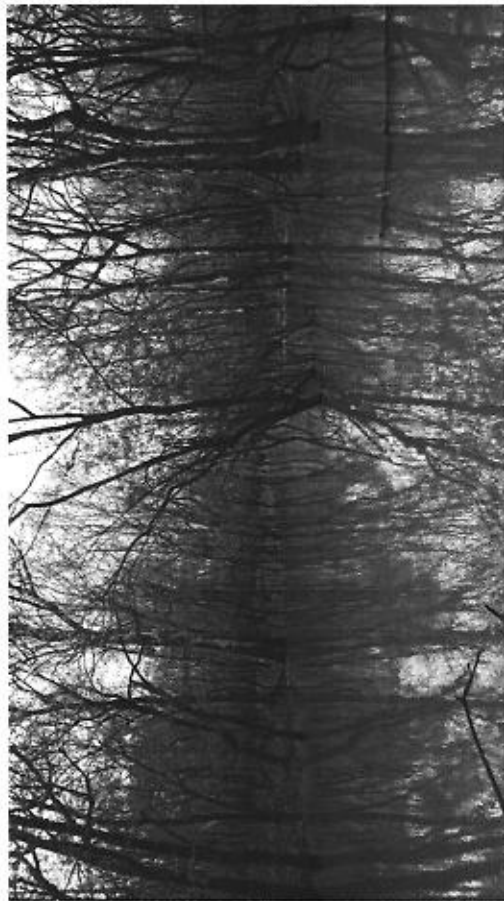
Project #4, #2, @ (30.168°, -91.558°)



Project #4, #3, @ (30.159°, -91.557°)



Project #4, #4, @ (30.158°, -91.557°)



Project #4, #5, @ (30.158°, -91.557°)



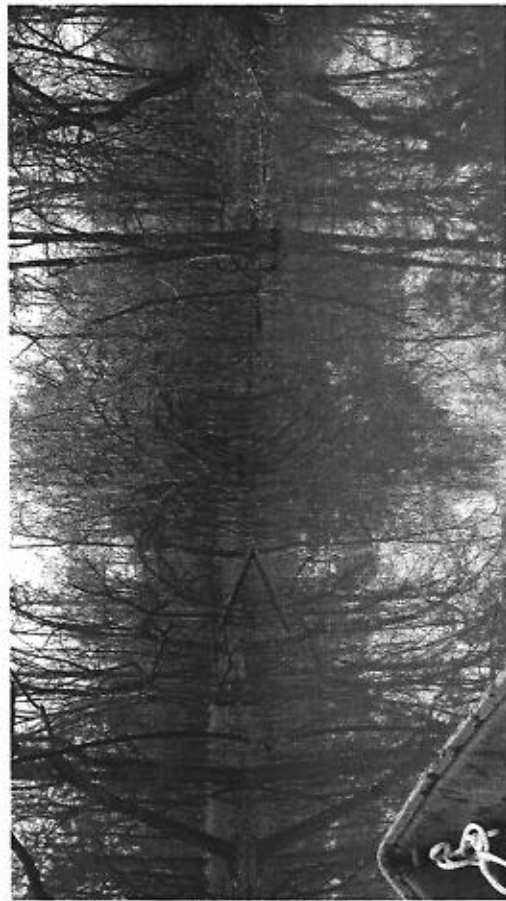
Project #4, #6, @ (30.157°, -91.557°)



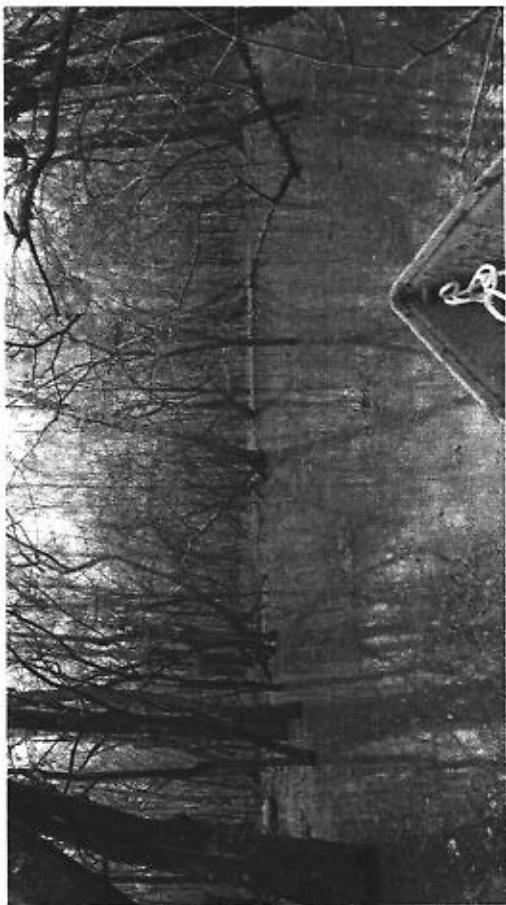
Project #4, #7, @ (30.156°, -91.557°)



Project #4, #8, @ (30.155°, -91.557°)



Project #4, #9, @ (30.154°, -91.557°)



Project #4, #10, @ (30.152°, -91.558°)



Project #4, #11, @ (30.152°, -91.559°)



Project #4, #12, @ (30.151°, -91.559°)





Project #4, #13, @ (30.148°, -91.559°)



Project #4, #14, @ (30.147°, -91.560°)



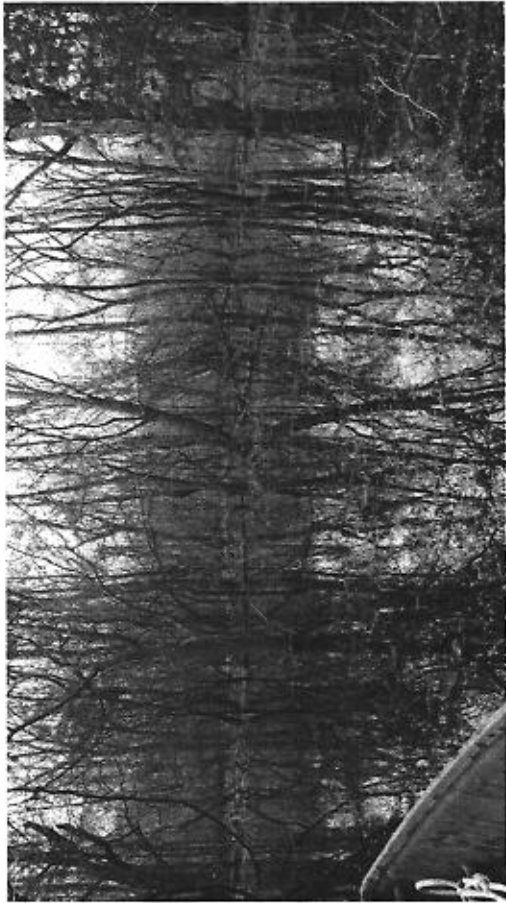
Project #4, #15, @ (30.145°, -91.561°)



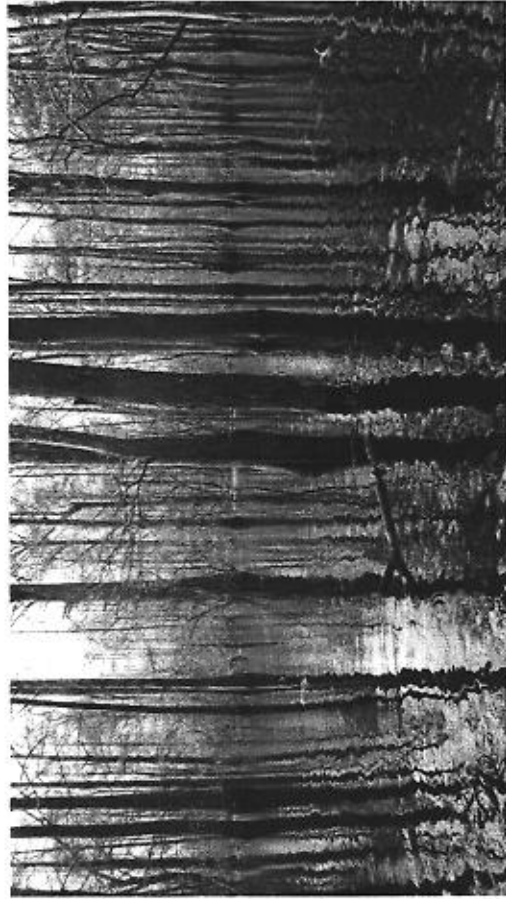
Project #4, #16, @ (30.141°, -91.564°)



Project #4, #19, @ (30.140°, -91.565°)



Project #4, #20, @ (30.137°, -91.569°)

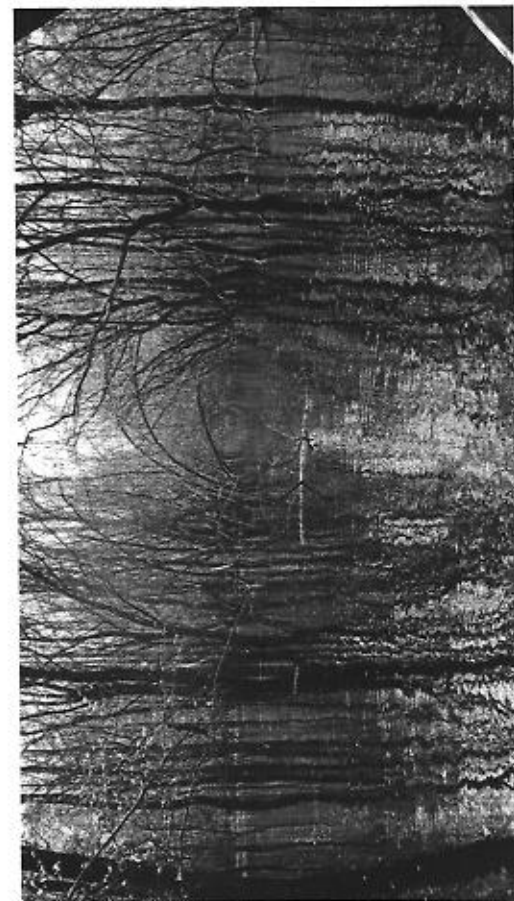


Project #4, #21, @ (30.135°, -91.569°)



Project #4, #22, @ (30.134°, -91.572°)





Project #4, #23, @ (30.131°, -91.573°)



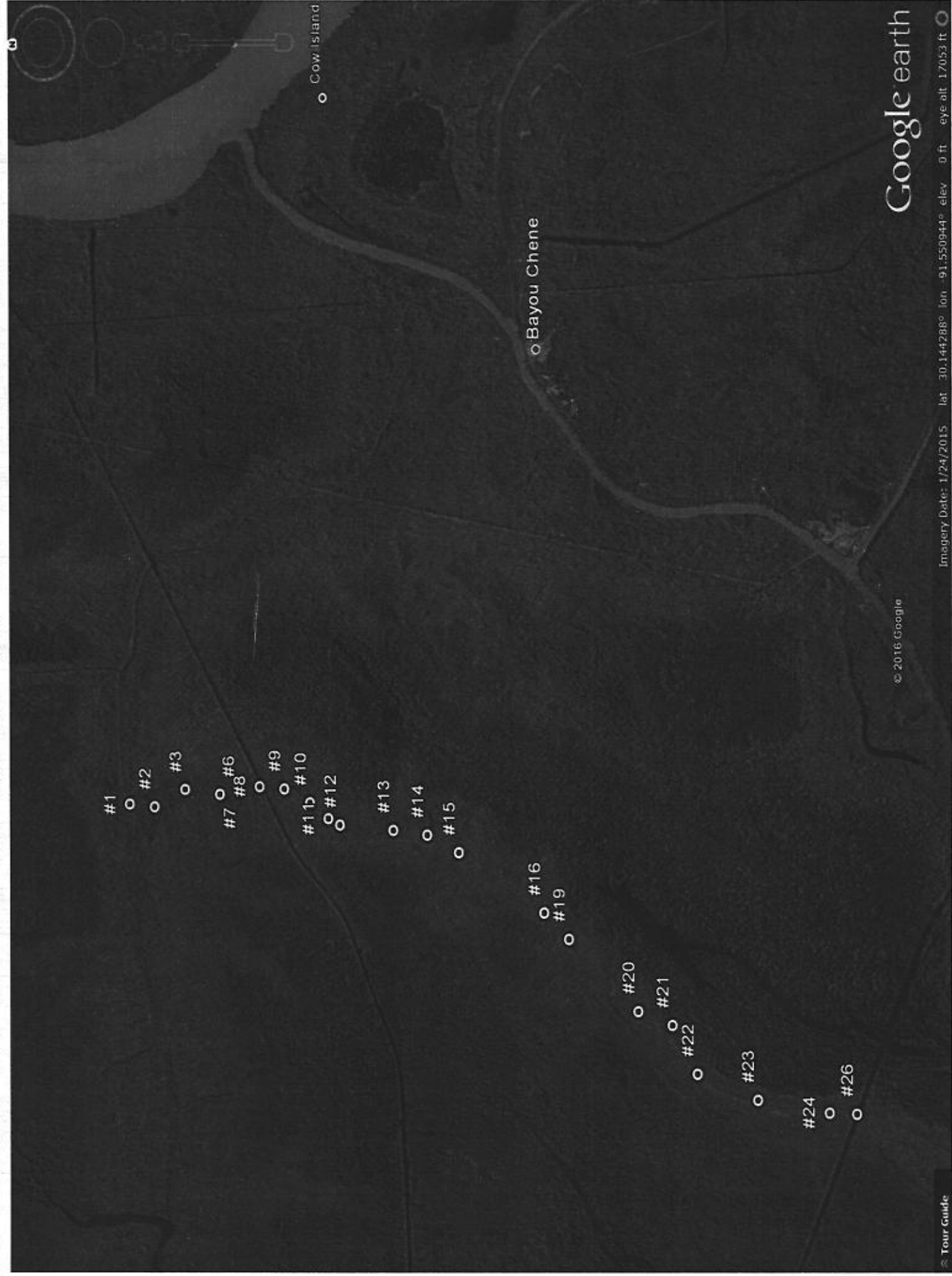
Project #4, #24, @ (30.128°, -91.574°)



Project #4, #25, @ (30.126°, -91.574°)



Project #4, #26, @ (30.126°, -91.574°)



Cow Island

Bayou Chene

Google earth

© 2016 Google

Imagery Date: 1/24/2015 lat: 30.144288° lon: -91.550944° elev: 0 ft eye alt: 17053 ft

- #1
- #2
- #3
- #7
- #8
- #9
- #10
- #11
- #12
- #13
- #14
- #15
- #16
- #19
- #20
- #21
- #22
- #23
- #24
- #26



### **Project 5**

Project 5 involves the excavation and clearing of an earthen plug in the Dow Pipeline Canal at (30.160°, -91.547°). Area assessed via pirogue (16MAR'16), and traversed by foot the entire project area of approximately 6,000ft<sup>2</sup>. Project area measures a total of 1.0 acres, of which 0.4 acres are Bottomland Hardwood forest, 0.1 acres are water bottom and 0.5 acres are non-wetland.

#### **A. Wetland Status:**

Secure; Difficult to replace due to connectivity.

#### **B. Habitat Condition:**

Habitat consists of a man made earthen plug with typical pioneer herbaceous ground cover and a **BLH** Tree stratum containing <50% absolute cover of listed BLH species including Chinese tallow (*T. sebifera*). The Shrub stratum also contains multiple small tallow stems, and roughly 30% other exotic plant species.

Non-woody vegetation growing included marsh fern (*Thelypteris thelypteroides*), ragweed (*Ambrosia trifida*), poison ivy (*Toxicodendron radicans*), butterweed (*Packera glabella*), elderberry (*Sambucus canadensis*), Chinese privet (*Ligustrum sinense*) Japanese honeysuckle (*Lonicera japonica*), nettle (*Urtica dioica*), Japanese climbing fern (*Lygodium japonicum*) and blackberry brambles (*Rubus* sp.).

#### Tree Stratum

Red maple <sup>1</sup>	<i>Acer rubrum</i>
Box elder <sup>2</sup>	<i>Acer negundo</i>
Roughleaf dogwood <sup>3</sup>	<i>Cornus drummondii</i>
Sugarberry <sup>4</sup>	<i>Celtis laevigata</i>
Water oak <sup>5</sup>	<i>Quercus nigra</i>
Winged elm	<i>Ulmus alata</i>
Black willow (nuisance)	<i>Salix nigra</i>

LRAM Listed BLH Tree Stratum Species<sup>1-5</sup>

#### Shrub Stratum

Swamp privet	<i>Forestiera acuminata</i>
Possumhaw	<i>Ilex decidua</i>
Water elm	<i>Planera aquatica</i>

#### **C. Hydrologic Condition:**

Local hydrology is impaired by this earthen plug and other anthropogenic disturbances (channelization and a pipeline right-of-way) such that full functional recovery would not occur through natural processes.



**D. Negative Influences:**

This project site represents a chief anthropogenic negative influence of the Atchafalaya Basin, as well as extensive channelization throughout the area, including pipeline ROW's and access canals.

**E. Impact type:**

Permanent

**Conclusion**

Project 5 of the Beau Bayou Swamp Hydrologic Restoration will take place within an Atchafalaya Basin BLH forested habitat, which is considered **Secure**/Difficult to Replace (LNHP, 2009) due to connectivity, however this earthen plug is manmade and represents a significant impediment to the local hydrology.

Upon completion of this portion of the Beau Bayou Project, water movement through the area will be restored which will stabilize dissolved oxygen levels; water flowing through the canal will also flush out non-rooted aquatic vegetation.

**A. Wetland Status: (i) value\_ 2.0 \_Secure**

Bottomland Hardwood habitat is classified as **Secure** / RID due to connectivity by *The Natural Communities of Louisiana* (LNHP, 2009).

**B. Habitat Condition: (i) value\_ 1.0 \_ Low**

Tree stratum contains <50% absolute cover of listed BLH species. Shrub stratum contains roughly 30% other exotic plant species.

**C. Hydrologic Condition: (i) value\_ 1.0 \_Low**

Anthropogenic factors, including extensive channelization and pipeline right-of-ways occurring in the area affect the local hydrologic condition.

**D. Negative Influences: (i) value\_ -0.5 \_High**

Multiple pipeline ROW and access canals negatively influence the natural hydrologic regime.

**E. Impact Type: (i) value\_ 3.0 \_Permanent**

Improved local hydrology will be achieved by the permanent removal of this earthen plug. Favorable conditions will be observed shortly after completion of project.







Project #5, #1, @ (30.160235°, -91.547119°)



Project #5, #2, @ (30.160030°, -91.546888°)



Project #5, #3, @ (30.160111°, -91.547100°)



Project #5, #4, @ (30.160088°, -91.547100°)





**Project 6A**

Project 6A involves clearing, snagging and excavation operations perpendicular to the Dow Pipeline Canal at (30.148°, -91.576°). Area assessed via pirogue (15MAR'16) included the length of Proj. #6A, approximately 600 linear feet, with a variable top width of 50' - 70', and bottom width of 50'. Project area measures a total of 1.2 acres, of which 1.2 acres are Bottomland Hardwood forest.

**A. Wetland Status:**

Secure; Difficult to replace due to connectivity.

**B. Habitat Condition:**

Habitat consists of a Bottomland Hardwood forest with Tree stratum of <50% absolute cover. The Shrub stratum contains >50% absolute cover.

At time of inspection, there was very little water movement within the footprint of project area. Encountered large amounts of non-rooted floating vegetation, including *Salvinia* sp., water hyacinth (*Eichhornia crassipes*) and *Spirodela* sp. Most abundant tree species were both large and small diameter nuisance black willow (*Salix nigra*).

Tree Stratum

Red maple <sup>1</sup>	<i>Acer rubrum</i>
Planer tree <sup>2</sup>	<i>Planera aquatica</i>
Sugarberry <sup>3</sup>	<i>Celtis laevigata</i>
Bald cypress	<i>Taxodium distichum</i>
Black willow (nuisance)	<i>Salix nigra</i>

LRAM Listed BLH Tree Stratum Species<sup>1-3</sup>

Shrub Stratum

Button bush	<i>Cephalanthus occidentalis</i>
Swamp privet	<i>Forestiera acuminata</i>
Possumhaw	<i>Ilex decidua</i>

LRAM Listed BLH Shrub Stratum Species

**C. Hydrologic Condition:**

Local hydrology is impaired by anthropogenic disturbances such that full functional recovery would not occur through natural processes.

**D. Negative Influences:**

The project site receives more than minimal static negative effects from extensive channelization throughout the area, including the pipeline canal which bisects the Project area.

**E. Impact type:**

Partial / Temporary



## Conclusion

Project 6A of the Beau Bayou Swamp Hydrologic Restoration will take place within an Atchafalaya Basin BLH forested habitat, which is considered **Difficult to Replace** (LNHP, 2009) due to connectivity.

Upon completion of this portion of the Beau Bayou Project, water movement through the area will be improved which will stabilize dissolved oxygen levels; hydroperiod in adjacent swamp will be decreased which will improve tree seedling survival; decreased water stagnation will promote the movement of non-rooted aquatic vegetation.

A. Wetland Status: (*i*) **value\_ 2.0 \_Secure**

Bottomland Hardwood habitat is classified as **Secure** / Difficult to Replace due to connectivity of similar wetland habitats >500 acres in size (LNHP, 2009).

B. Habitat Condition: (*i*) **value\_ 2.0 \_Medium**

Tree stratum contains <50% absolute cover of listed BLH species, most of which were the nuisance black willow (*S. nigra*) species. Shrub stratum contains roughly 70% absolute cover of Listed BLH shrub species.

C. Hydrologic Condition: (*i*) **value\_ 2.0 \_Medium**

Anthropogenic factors, including extensive channelization and pipeline right-of-ways occurring in the area affect the local hydrologic condition.

D. Negative Influences: (*i*) **value\_ -0.5 \_High**

Pipeline ROW and access canals within the surrounding landscape negatively influence the natural hydrologic regime.

E. Impact Type: (*i*) **value\_ 0.5 \_Partial/Temporary Loss**

Activities necessary for completion of project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of project.



Louisiana Wetland Rapid Assessment Method (LRAM)

CEM/VN Acct # MVN-2015-1796-WLL  
 Acres Impacted 1.2  
 Watershed Basin Atchafalaya

Habitat: BLH (Proj#6A)

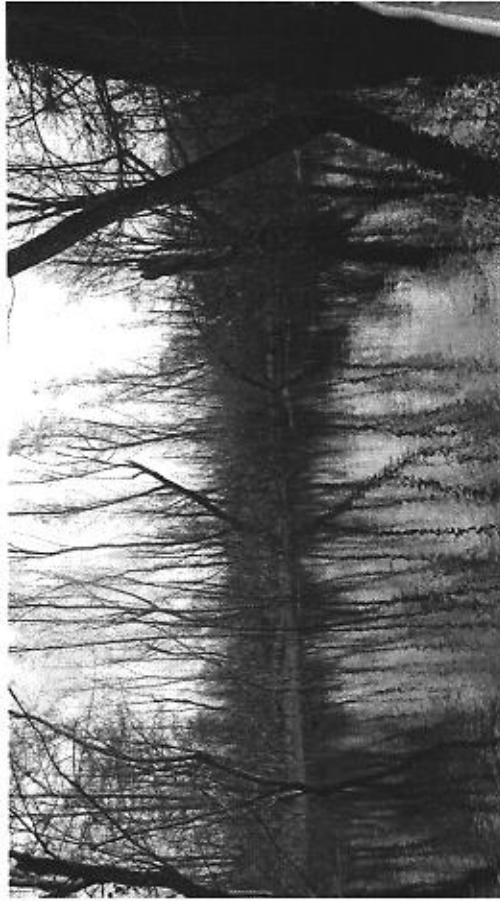
	Imp 1	Imp 2	Imp 3	Imp 4	Imp 5	Imp 6	Imp 7	Imp 8
Wetland Status	Secure	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Habitat Condition	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrologic Condition	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Negative Influences	High	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Impact Type	Partial/Temp	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sum:	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Area:	1.2							
Sum x Area Affected:	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Σ Impacts: 7.2

	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7	Bank 8
Select Bank:	Bayou/Fisher BLH	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
Mitigation Potential:	6.5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Acres Required:	1.1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Bank Mit





Project #6A, #38, @ (30.148750°, -91.576503°)



Project #6A, #39, @ (30.148569°, -91.576502°)



Project #6A, #40, @ (30.148258°, -91.576521°)



Project #6A, #41, @ (30.148127°, -91.576492°)



Project #6A, #42, @ (30.148953°, -91.576403°)



Project #6A, #43, @ (30.149199°, -91.576320°)



Project #6A, #44, @ (30.149453°, -91.576183°)



Project #6A, #45, @ (30.149663°, -91.576286°)

8

6A#45

6A#44

6A#43

6A#42

6A#38

6A#39

6A#40

6A#41

Google earth

Imagery Date: 1/24/2015 lat 30.148884° lon -91.576177° elev 0 ft eye alt 743 ft

Tour Guide





**Project 6B**

Project 6B involves clearing, snagging and excavation operations perpendicular to the Dow Pipeline Canal at (30.157°, -91.553°). Area assessed via pirogue (15MAR'16) included the length of Proj. #6B, approximately 800 linear feet, with a variable top width of 50' - 75', and bottom width of 50 feet. Project area measures a total of 1.9 acres, of which 1.9 acres are BaldCypress/Tupelo swamp.

**A. Wetland Status:**

Secure; Difficult to replace due to connectivity.

**B. Habitat Condition:**

Habitat consists of a BaldCypress/Tupelo swamp with a Tree stratum of <50% absolute cover. The Shrub stratum contains >50% absolute cover.

At time of inspection, there was very little water movement within the footprint of project area. Encountered moderate amounts of non-rooted floating vegetation, including small duckweed (*L. minor*), *Salvinia* sp. and water hyacinth (*Eichhornia crassipes*). Most abundant tree species were both large and small diameter nuisance black willow (*Salix nigra*); Cypress trees within project area looked to be large/medium diameter specimens.

Tree Stratum

Bald cypress <sup>1</sup>	<i>Taxodium distichum</i>
Red maple	<i>Acer rubrum</i>
Box elder	<i>Acer negundo</i>
Sugarberry	<i>Celtis laevigata</i>
Black willow (nuisance)	<i>Salix nigra</i>
Chinese tallow (invasive)	<i>Triadica sebifera</i>

LRAM Listed BaldCypress/Tupelo Tree Stratum Species<sup>1</sup>

Shrub Stratum

Button bush	<i>Cephalanthus occidentalis</i>
Water elm <sup>1</sup>	<i>Planera aquatica</i>
Swamp privet	<i>Forestiera acuminata</i>
Possumhaw	<i>Ilex decidua</i>

LRAM Listed BaldCypress/Tupelo Shrub Stratum Species<sup>1</sup>

**C. Hydrologic Condition:**

Local hydrology is impaired by anthropogenic disturbances (channelization and spoil banks higher than tidal reach) such that full functional recovery would not occur through natural processes.



**D. Negative Influences:**

The project site receives more than minimal static negative effects from extensive channelization throughout the area, including the pipeline canal which bisects the Project area.

**E. Impact type:**

Partial / Temporary

**Conclusion**

Project 6B of the Beau Bayou Swamp Hydrologic Restoration will take place within an Atchafalaya Basin BaldCypress/Tupelo swamp habitat, which is classified as **Secure / Difficult** to Replace due to connectivity of similar wetland habitats >500 acres in size (LNHP, 2009). Upon completion of this portion of the Beau Bayou Project, hydroperiod in adjacent swamp will be decreased which will improve tree seedling survival; decreased water stagnation and flushing of non-rooted aquatic vegetation will also stabilize dissolved oxygen levels.

**A. Wetland Status: (f) value\_ 2.0 \_Secure**

BaldCypress/Tupelo swamp habitat is classified as **Secure / RID** due to connectivity by *The Natural Communities of Louisiana* (LNHP, 2009).

**B. Habitat Condition: (f) value\_ 2.0 \_Medium**

Tree stratum contains <50% absolute cover of listed BaldCypress/Tupelo species. Most of tree stratum were nuisance black willow (*S. nigra*) species. Shrub stratum contains >50% absolute cover of Listed Cypress/Tupelo Shrub species.

**C. Hydrologic Condition: (f) value\_ 2.0 \_Medium**

Anthropogenic factors, including extensive channelization and pipeline right-of-ways occurring in the area affect the local hydrologic condition.

**D. Negative Influences: (f) value\_ -0.5 \_High**

Pipeline ROW and access canals within the surrounding landscape negatively influence the natural hydrologic regime.

**E. Impact Type: (f) value\_ 0.5 \_Partial/Temporary Loss**

Activities necessary for completion of project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of project.



Louisiana Wetland Rapid Assessment Method (LRAM)

CEM/N Acct #	MVN-2015-1796-WLL
Acres Impacted	1.9
Watershed Basin	Atchafalaya
Habitat:	Cypress/Tupelo (Proj#6B)

	Imp 1	Imp 2	Imp 3	Imp 4	Imp 5	Imp 6	Imp 7	Imp 8
Wetland Status	Secure	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Habitat Condition	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrologic Condition	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Negative Influences	High	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Impact Type	Partial/Temp	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sum:	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Area:	1.9							
Sum x Area Affected:	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Σ Impacts: 11.4

	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7	Bank 8
Select Bank:	Bayou/Fisher SW	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
Mitigation Potential:	6.5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Acres Required:	1.8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Bank Mit



Project #6B, #27, @ (30.154911°, -91.554010°)



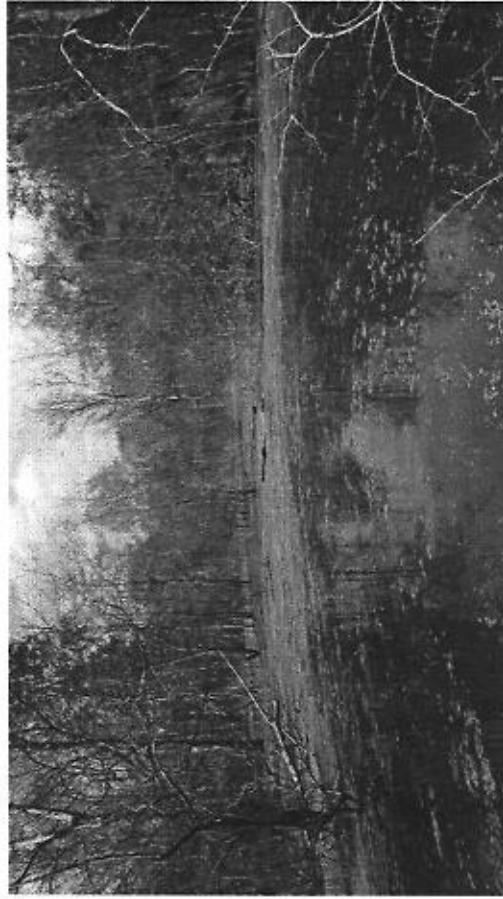
Project #6B, #28, @ (30.155420°, -91.553730°)



Project #6B, #29, @ (30.155949°, -91.553646°)



Project #6B, #30, @ (30.156276°, -91.553736°)



Project #6B, #31, @ (30.156652°, -91.553662°)



Project #6B, #32, @ (30.157274°, -91.553649°)



Project #6B, #33, @ (30.157402°, -91.553695°)



Project #6B, #34, @ (30.157583°, -91.553911°)



Project #6B, #35, @ (30.157895°, -91.553997°)

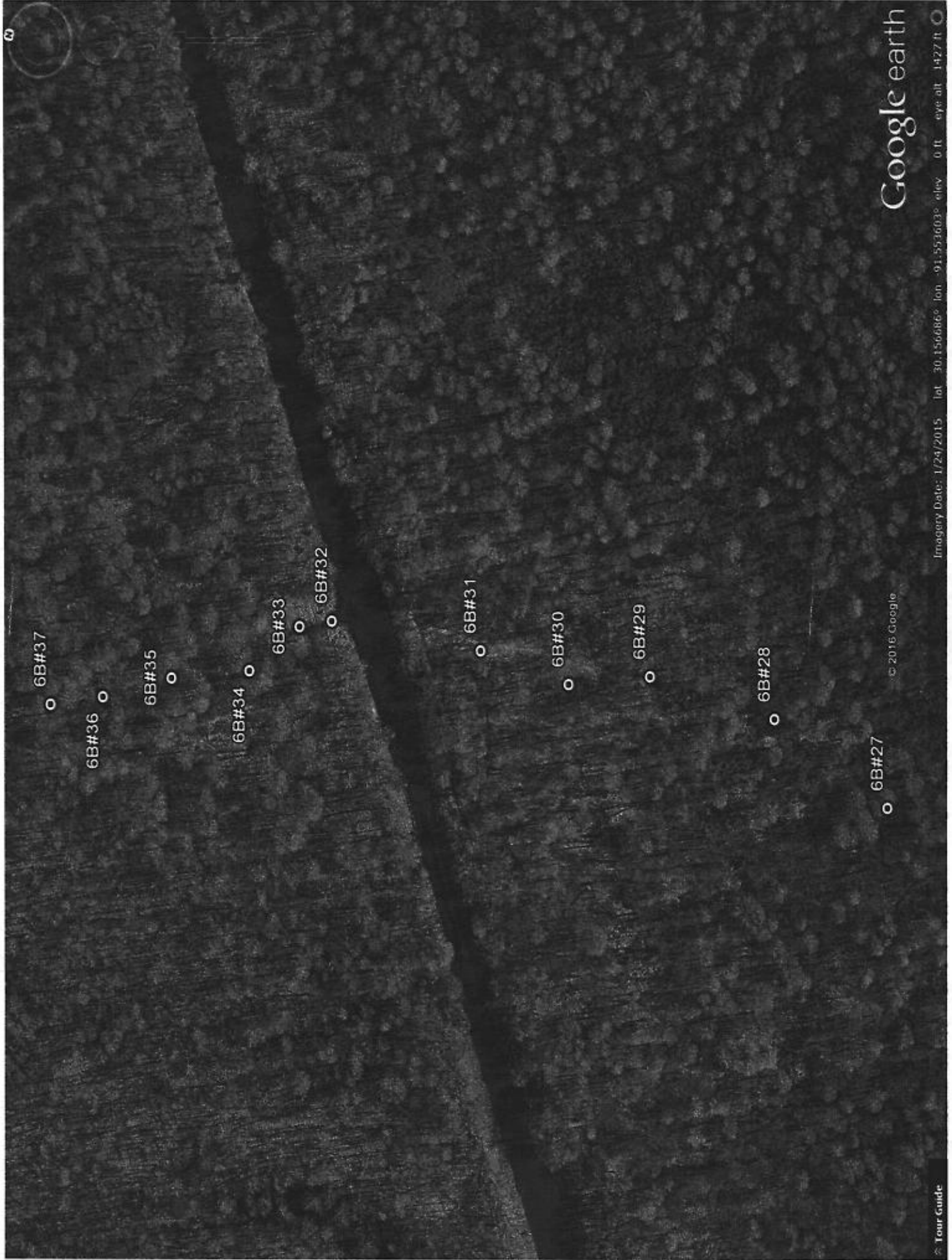


Project #6B, #36, @ (30.158164°, -91.554123°)



Project #6B, #37, @ (30.158373°, -91.554191°)





0

6B#37

6B#36

6B#35

6B#34

6B#33

6B#32

6B#31

6B#30

6B#29

6B#28

6B#27

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Imagery Date: 1/24/2015 lat: 30.156686° lon: -91.553603° elev: 0 ft eye alt: 1427 ft

📏 Tour Guide





### **Project 7**

Project 7 involves clearing, snagging and excavation operations near bifurcation of LakeFaussePointeCut and LittleGonsoulinBayou (30.078°, -91.599°). Area assessed via pirogue (16MAR'16) included the length of Proj. #7, approximately 955 linear feet, with a variable top width of 30' - 45', and bottom width of 30 feet. Project area measures a total of 1.7 acres, of which 1.6 acres are BaldCypress/Tupelo swamp, and 0.1 acres are water bottom.

#### **A. Wetland Status:**

Secure; Difficult to replace due to connectivity.

#### **B. Habitat Condition:**

Habitat consists of a BaldCypress/Tupelo swamp with a Tree stratum of <50% absolute cover of listed species. The Shrub stratum contains >50% absolute cover.

At time of inspection, there was very little water movement within the footprint of project area. Encountered relatively small amount of non-rooted floating vegetation, including small duckweed (*L. minor*), *Salvinia* sp. and mosquito fern (*A. caroliniana*). Encountered a number of large diameter black willow trees and Chinese tallow trees. Cypress and Tupelo trees within project area looked to be large/medium diameter specimens.

#### Tree Stratum

Bald cypress <sup>1</sup>	<i>Taxodium distichum</i>
Water tupelo <sup>2</sup>	<i>Nyssa aquatica</i>
Green ash	<i>Fraxinus pennsylvanica</i>
Red maple	<i>Acer rubrum</i>
Box elder	<i>Acer negundo</i>
Sugarberry	<i>Celtis laevigata</i>
American sycamore	<i>Plantanus occidentalis</i>
Cottonwood	<i>Populus deltoides</i>
Black willow (nuisance)	<i>Salix nigra</i>
Chinese tallow (invasive)	<i>Triadica sebifera</i>

LRAM Listed BaldCypress/Tupelo Tree Stratum Species<sup>1&2</sup>

#### Shrub Stratum

Button bush <sup>1</sup>	<i>Cephalanthus occidentalis</i>
Water elm <sup>2</sup>	<i>Planera aquatica</i>
Swamp privet	<i>Forestiera acuminata</i>
Water locust <sup>3</sup>	<i>Gleditsia aquatica</i>

LRAM Listed BaldCypress/Tupelo Shrub Stratum Species<sup>1-3</sup>



**C. Hydrologic Condition:**

Local hydrology is impaired by anthropogenic disturbances (channelization and pipeline ROWs) such that full functional recovery would not occur through natural processes.

**D. Negative Influences:**

The project site receives more than minimal static negative effects from extensive channelization throughout the area.

**E. Impact type:**

Partial / Temporary

**Conclusion**

Project 7 of the Beau Bayou Swamp Hydrologic Restoration will take place within an Atchafalaya Basin BaldCypress/Tupelo swamp habitat, which is classified as **Secure** / Difficult to Replace due to connectivity of similar wetland habitats >500 acres in size (LNHP, 2009).

Upon completion of this portion of the Beau Bayou Project, hydroperiod in adjacent swamp will be reduced which will improve tree seedling survival; decreased water stagnation and flushing of non-rooted aquatic vegetation will also stabilize dissolved oxygen levels.

**A. Wetland Status: (i) value\_ 2.0 \_Secure**

Bald cypress/Tupelo swamp is classified as **Secure** / RID due to connectivity by *The Natural Communities of Louisiana* (LNHP, 2009).

**B. Habitat Condition: (i) value\_ 2.0 \_Medium**

Tree stratum contains <50% absolute cover of listed BaldCypress/Tupelo species. Shrub stratum contains >50% absolute cover of Listed Cypress/Tupelo Shrub species. Combined, Black willow and Chinese tallow accounted for ~ 20% of all species present.

**C. Hydrologic Condition: (i) value\_ 2.0 \_Medium**

Anthropogenic factors, including extensive channelization and pipeline right-of-ways occurring in the area affect the local hydrologic condition.

**D. Negative Influences: (i) value\_ -0.5 \_High**

Pipeline ROW and access canals within the surrounding landscape negatively influence the natural hydrologic regime.

**E. Impact Type: (i) value\_ 0.5 \_Partial/Temporary Loss**

Activities necessary for completion of project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of project.

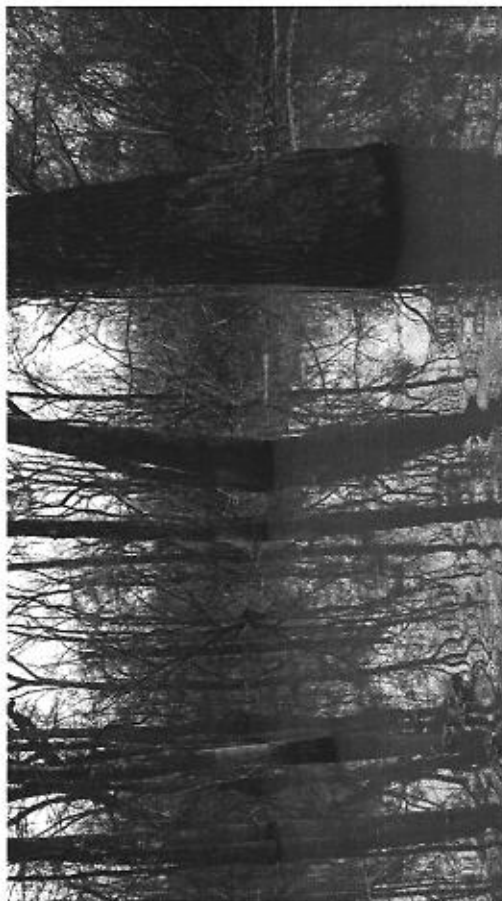




Project #7, #76, @ (30.078221°, -91.599728°)



Project #7, #3, @ (30.080433°, -91.597443°)



Project #7, #6, @ (30.080085°, -91.597443°)



Project #7, #7, @ (30.079758°, -91.597425°)





Project #7, #8, @ (30.079563°, -91.597548°)



Project #7, #9, @ (30.079158°, -91.597860°)



Project #7, #10, @ (30.079089°, -91.598177°)



Project #7, #11, @ (30.078846°, -91.598493°)



Project #7, #12, @ (30.078548°, -91.598656°)



Project #7, #13, @ (30.078400°, -91.598933°)



Project #7, #14, @ (30.078354°, -91.599256°)



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Google earth

Imagery Date: 1/24/2015 lat 30.079168° lon -91.508148° elev 0 ft eye alt 1785 ft

Tour Guide



**Project 8**

Project 8 involves the clearing operations within BayouLaRose, between BeauBayou (30.161°, -91.578°) and FourHundredDollarBayou (30.162°, -91.558°). The area from BeauBayou to Photo#11 ~ (30.162°, -91.562°) was assessed via pirogue, the remainder via small outboard (04MAR'16), and included the length of Proj. #8, approximately 6,750 linear feet, with a top width of 40'. Project area measures a total of 6.2 acres, of which 3.1 acres are BaldCypress/Tupelo swamp, and 3.1 acres are water bottom.

**A. Wetland Status:**

Secure; Difficult to replace due to connectivity.

**B. Habitat Condition:**

Habitat consists of a BaldCypress/Tupelo swamp with a Tree stratum >50% absolute cover of both listed tree stratum species. The Shrub stratum contains <50% absolute cover.

At time of inspection water levels were such that identifiable banks were non-noticeable from BeauBayou to approximately (30.161°, -91.569°), Photo#5.

Cypress and Tupelo trees within project area looked to be large/medium diameter, with very few small specimens encountered.

**Tree Stratum**

Bald cypress <sup>1</sup>	<i>Taxodium distichum</i>
Water tupelo <sup>2</sup>	<i>Nyssa aquatica</i>
Green ash	<i>Fraxinus pennsylvanica</i>
Red maple	<i>Acer rubrum</i>
Box elder	<i>Acer negundo</i>
Overcup oak	<i>Quercus lyrata</i>
Sugarberry	<i>Celtis laevigata</i>
American sycamore	<i>Plantanus occidentalis</i>
Cottonwood	<i>Populus deltoides</i>
Black willow (nuisance)	<i>Salix nigra</i>
Chinese tallow (invasive)	<i>Triadica sebifera</i>

LRAM Listed BaldCypress/Tupelo Tree Stratum Species<sup>1&2</sup>

**Shrub Stratum**

Button bush <sup>1</sup>	<i>Cephalanthus occidentalis</i>
Water elm <sup>2</sup>	<i>Planera aquatica</i>
Swamp privet	<i>Forestiera acuminata</i>
Water locust <sup>3</sup>	<i>Gleditsia aquatica</i>

LRAM Listed BaldCypress/Tupelo Shrub Stratum Species<sup>1-3</sup>





**C. Hydrologic Condition:**

Local hydrology is impaired by anthropogenic disturbances (channelization and pipeline ROWs) such that full functional recovery would not occur through natural processes.

**D. Negative Influences:**

The project site receives more than minimal static negative effects from extensive channelization throughout the area.

**E. Impact type:**

Partial / Temporary

**Conclusion**

Project 8 of the Beau Bayou Swamp Hydrologic Restoration will take place within an Atchafalaya Basin BaldCypress/Tupelo swamp habitat, which is classified as **Secure / Difficult to Replace** due to connectivity of similar wetland habitats >500 acres in size (LNHP, 2009).

**A. Wetland Status: (i) value\_ 2.0 \_Secure**

Bald cypress/Tupelo swamp is classified as **Secure / RID** due to connectivity by *The Natural Communities of Louisiana* (LNHP, 2009).

**B. Habitat Condition: (i) value\_ 3.0 \_High**

Tree stratum contains >50% absolute cover of listed BaldCypress/Tupelo species. Shrub stratum contains <50% absolute cover of Listed Cypress/Tupelo Shrub species.

**C. Hydrologic Condition: (i) value\_ 2.0 \_Medium**

Anthropogenic factors, including extensive channelization and pipeline right-of-ways occurring in the area affect the local hydrologic condition.

**D. Negative Influences: (i) value\_ -0.5 \_High**

Pipeline ROW and access canals within the surrounding landscape negatively influence the natural hydrologic regime.

**E. Impact Type: (i) value\_ 0.5 \_Partial/Temporary Loss**

Activities necessary for completion of project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of project.





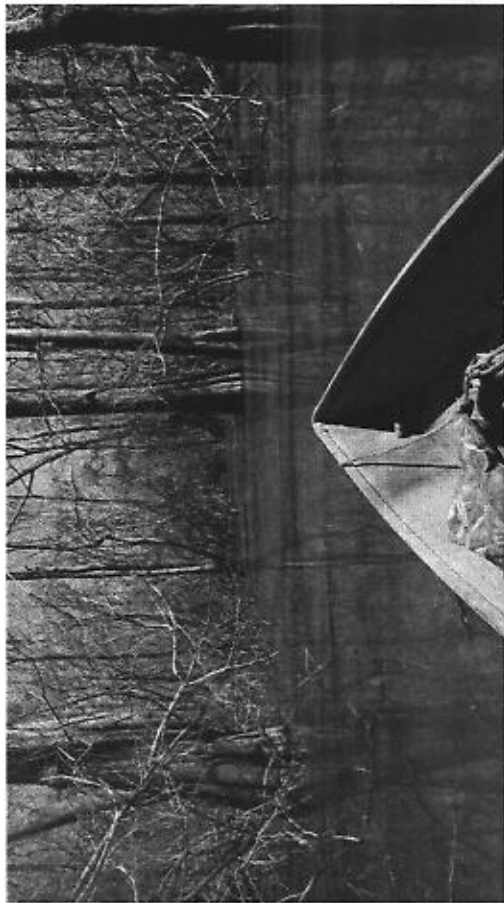
Project #8, #1, @ (30.161426°, -91.578886°)



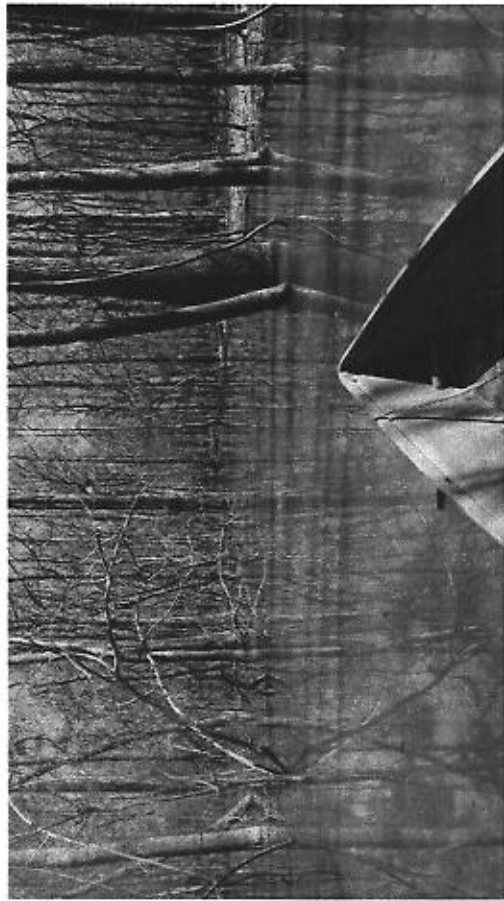
Project #8, #2, @ (30.160655°, -91.577260°)



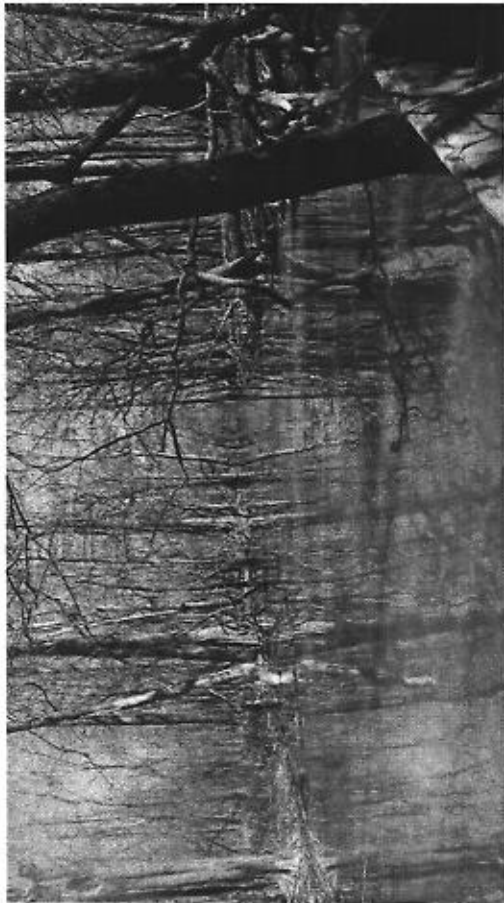
Project #8, #3, @ (30.160360°, -91.575150°)



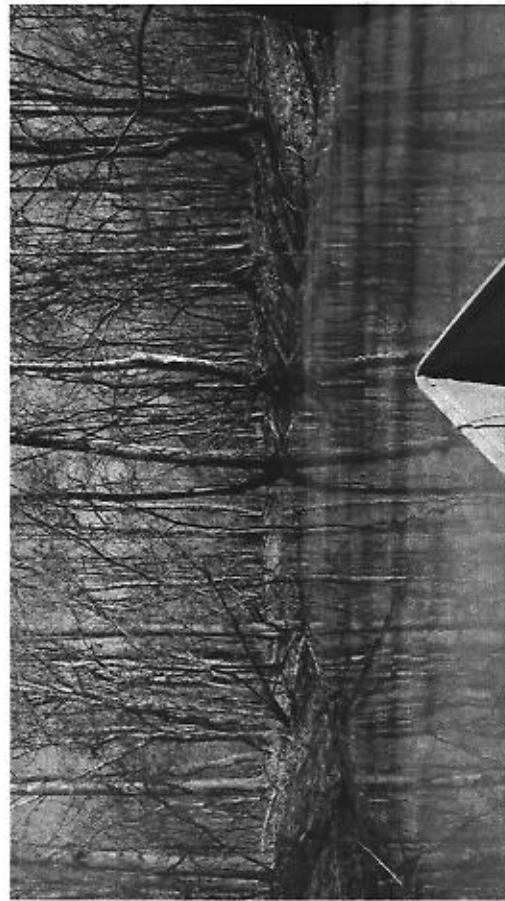
Project #8, #4, @ (30.160456°, -91.572328°)



Project #8, #5, @ (30.160881°, -91.569646°)



Project #8, #6, @ (30.161378°, -91.567900°)



Project #8, #7, @ (30.161828°, -91.565265°)



Project #8, #10, @ (30.162120°, -91.563785°)





Project #8, #11, @ (30.162121°, -91.562100°)



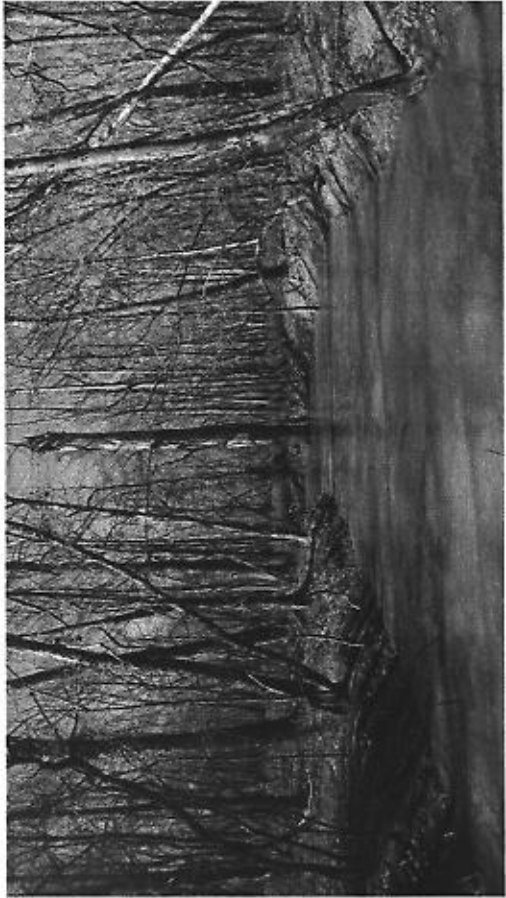
Project #8, #12, @ (30.162108°, -91.561435°)



Project #8, #13, @ (30.162139°, -91.559904°)



Project #8, #14, @ (30.162133°, -91.559203°)



Project #8, End, @ (30.161978°, -91.558368°)



Proj.#8End

#13

#12

#10

#7

#11

#6

#5

#4

#3

#2

#1

Google earth

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Imagery Date: 1/24/2015 lat: 30.159307° lon: -91.568023° elev: 0 ft eye alt: 9308 ft

Tour Guide



### **Project 9**

Project 9 involves clearing, snagging and excavation operations at the mouth of an un-named canal at SpliceIslandChute (30.181°,-91.529°). The area was assessed via small outboard (03MAR'16), and included the length of Proj. #9, approximately 910 linear feet, with a variable top width of 40'-75' and bottom width of 40'. Project area measures a total of 2.9 acres, of which 0.5 acres are Bottomland Hardwood wetlands, 1.3 acres are water bottom, and 1.1 acres are non-wetlands.

#### **A. Wetland Status:**

Secure; Difficult to replace due to connectivity.

#### **B. Habitat Condition:**

Bottomland Hardwood habitat with a Tree stratum <50% absolute cover of listed tree stratum species. The Shrub stratum contains <50% absolute cover.

Both banks of project worksite contains large number (80-90%) of both large and small diameter nuisance black willow (*S. nigra*) species. Found water elm (*P. aquatica*) growing at water's edge, along with Chinese privet (*L. sinense*) a bit farther lateral from midline of project work area.

#### Tree Stratum

Red maple <sup>1</sup>	<i>Acer rubrum</i>
Box elder <sup>2</sup>	<i>Acer negundo</i>
Black willow (nuisance)	<i>Salix nigra</i>

#### LRAM Listed BLH Tree Stratum Species<sup>1&2</sup>

#### Shrub Stratum

Water elm	<i>Planera aquatica</i>
Chinese privet (invasive)	<i>Ligustrum sinense</i>

#### **C. Hydrologic Condition:**

Local hydrology is impaired by anthropogenic disturbances (channelization and pipeline ROWs) such that full functional recovery would not occur through natural processes.

#### **D. Negative Influences:**

The project site receives more than minimal static negative effects from extensive channelization throughout the area.

#### **E. Impact type:**

Partial / Temporary





## Conclusion

Project 9 of the Beau Bayou Swamp Hydrologic Restoration will take place within an Atchafalaya Basin Bottomland Hardwood habitat (BLH), which is classified as **Secure** / Difficult to Replace due to connectivity of similar wetland habitats >500 acres in size (LNHP, 2009).

The clearing and snagging of this project area will rid the immediate area of nuisance black willow trees, improve water flow through the canal and increase navigable accessibility.

A. Wetland Status: (*i*) **value\_ 2.0 \_Secure**

BLH habitat is classified as **Secure** / RID due to connectivity by *The Natural Communities of Louisiana* (LNHP, 2009).

B. Habitat Condition: (*i*) **value\_ 1.0 \_ Low**

Tree stratum contains <50% absolute cover of listed BLH species. Shrub stratum contains <50% absolute cover of Listed BLH Shrub species. Cumulatively, the Tree & Shrub stratum contain more than 50% nuisance species.

C. Hydrologic Condition: (*i*) **value\_ 2.0 \_Medium**

Anthropogenic factors, including extensive channelization and pipeline right-of-ways occurring in the area affect the local hydrologic condition.

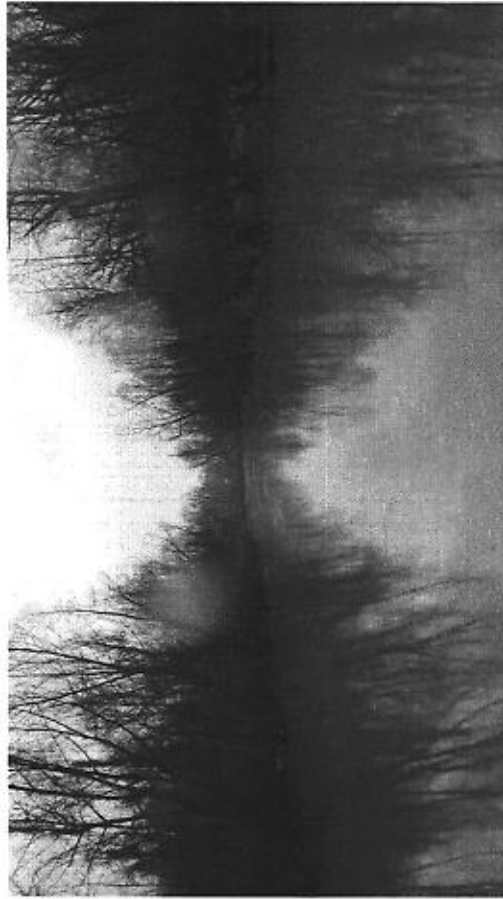
D. Negative Influences: (*i*) **value\_ -0.5 \_High**

Pipeline ROW and access canals within the surrounding landscape negatively influence the natural hydrologic regime.

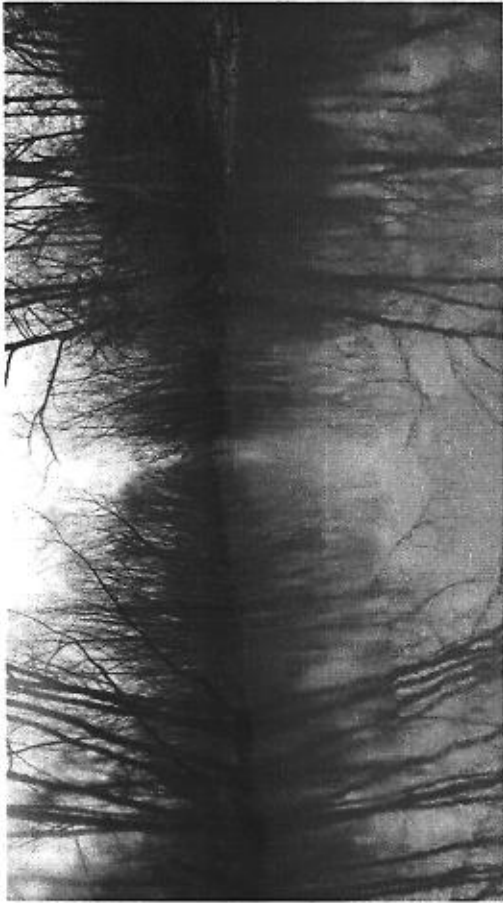
E. Impact Type: (*i*) **value\_ 0.5 \_Partial/Temporary Loss**

Activities necessary for completion of project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of project.





Project #9, #24, @ (30.181690°, -91.533700°)



Project #9, #25, @ (30.181673°, -91.532148°)



Project #9, #26, @ (30.181385°, -91.530555°)



Project #9, #27, @ (30.181395°, -91.530558°)



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Imagery Date: 1/29/2015    lat: 30.180876°    lon: -91.531836°    elev: 0 ft    eye alt: 2379 ft

© Tour Guide





### Project 10

Project 10 involves clearing, snagging and excavation operations in Bayou Chene, starting at (30.141°, -91.535°). The area was assessed via small outboard (16MAR'16), and included the full length of Proj. #10, approximately 3,730 linear feet, with a variable top width of 25'-45' and a bottom width of 20'. Project area measures a total of 4.4 acres, of which 0.1 acres are Bottomland Hardwood wetlands and 4.3 acres are water bottom.

#### A. Wetland Status:

Secure; Difficult to replace due to connectivity.

#### B. Habitat Condition:

Bottomland Hardwood habitat with a Tree stratum <50% absolute cover of listed tree stratum species. The Shrub stratum contains <50% absolute cover.

Both banks of project worksite contains large number (80-90%) of both large and small diameter nuisance black willow (*S. nigra*) species. Water elm (*P. aquatica*), Swamp privet (*F. acuminata*) and Chinese tallow (*T. sebifera*) were found growing at water's edge and lateral from midline of project work area.

##### Tree Stratum

Red maple <sup>1</sup>	<i>Acer rubrum</i>
Box elder <sup>2</sup>	<i>Acer negundo</i>
Black willow (nuisance)	<i>Salix nigra</i>

##### LRAM Listed BLH Tree Stratum Species<sup>1&2</sup>

##### Shrub Stratum

Water elm	<i>Planera aquatica</i>
Swamp privet <sup>1</sup>	<i>Forestiera acuminata</i>
Chinese privet (invasive)	<i>Ligustrum sinense</i>

##### LRAM Listed BLH Shrub Stratum Species<sup>1</sup>

#### C. Hydrologic Condition:

Local hydrology is impaired by anthropogenic disturbances (channelization and pipeline ROWs) such that full functional recovery would not occur through natural processes.

#### D. Negative Influences:

The project site receives more than minimal static negative effects from extensive channelization throughout the area.

#### E. Impact type:

Partial / Temporary



## Conclusion

Project 10 of the Beau Bayou Swamp Hydrologic Restoration will take place within an Atchafalaya Basin Bottomland Hardwood habitat (BLH), which is classified as Secure / Difficult to Replace due to connectivity of similar wetland habitats >500 acres in size (LNHP, 2009).

The clearing and snagging of this project area will rid the immediate area of nuisance black willow trees, improve water flow through the canal and increase navigable accessibility.

A. Wetland Status: *(i)* **value\_ 2.0 \_Secure**

Bald cypress/Tupelo swamp is classified as **Secure** / RID due to connectivity by *The Natural Communities of Louisiana* (LNHP, 2009).

B. Habitat Condition: *(i)* **value\_ 1.0 \_ Low**

Tree stratum contains <50% absolute cover of listed BLH species. Shrub stratum contains <50% absolute cover of Listed BLH Shrub species. Cumulatively, the Tree & Shrub stratum contain >50% nuisance species.

C. Hydrologic Condition: *(i)* **value\_ 2.0 \_Medium**

Anthropogenic factors, including extensive channelization and pipeline right-of-ways occurring in the area affect the local hydrologic condition.

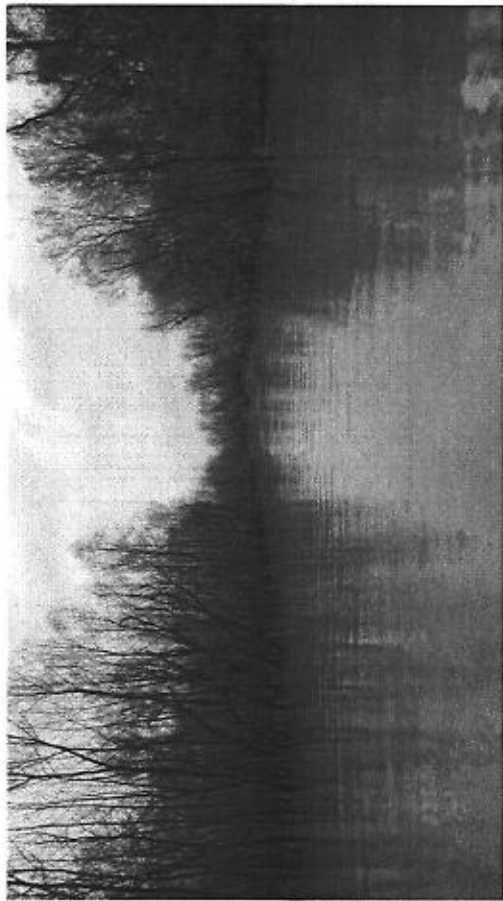
D. Negative Influences: *(i)* **value\_ -0.5 \_High**

Pipeline ROW and access canals within the surrounding landscape negatively influence the natural hydrologic regime.

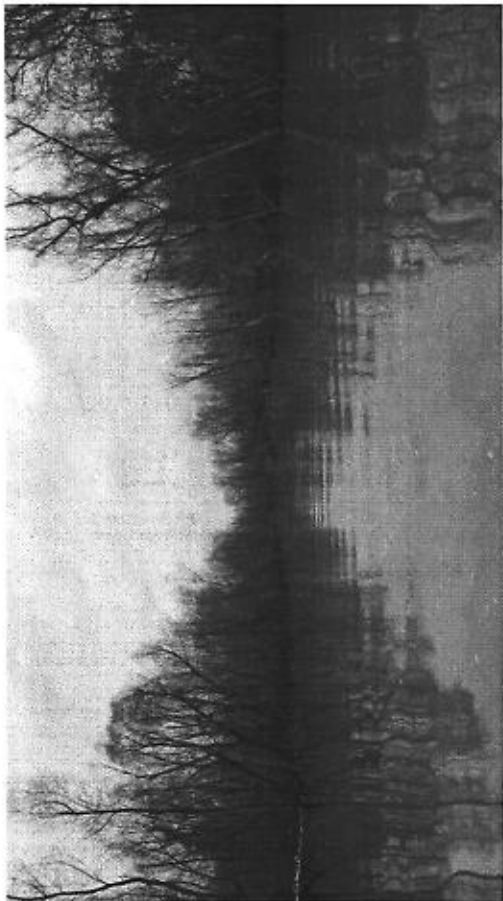
E. Impact Type: *(i)* **value\_ 0.5 \_Partial/Temporary Loss**

Activities necessary for completion of project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of project.

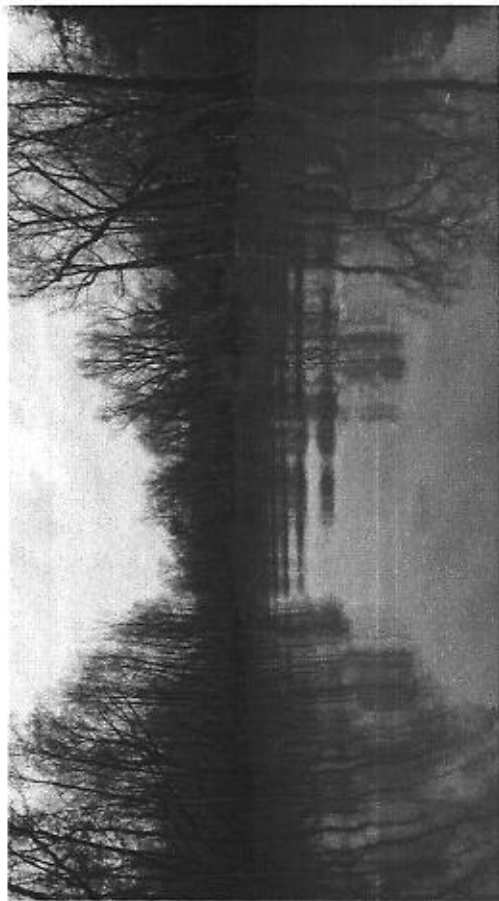




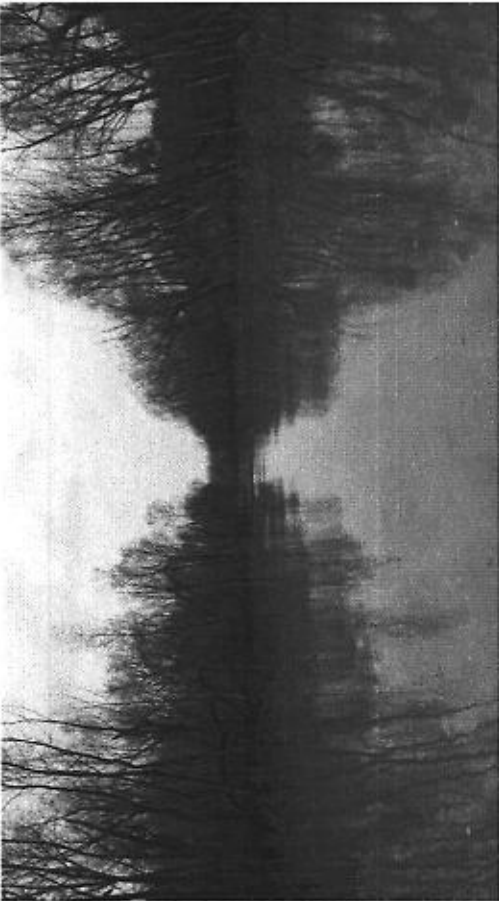
Project10, #68, @ (30.140685°,-91.522396°)



Project10, #69, @ (30.141000°,-91.523066°)



Project10, #70, @ (30.141650°,-91.524416°)



Project10, #71, @ (30.142026°,-91.525346°)

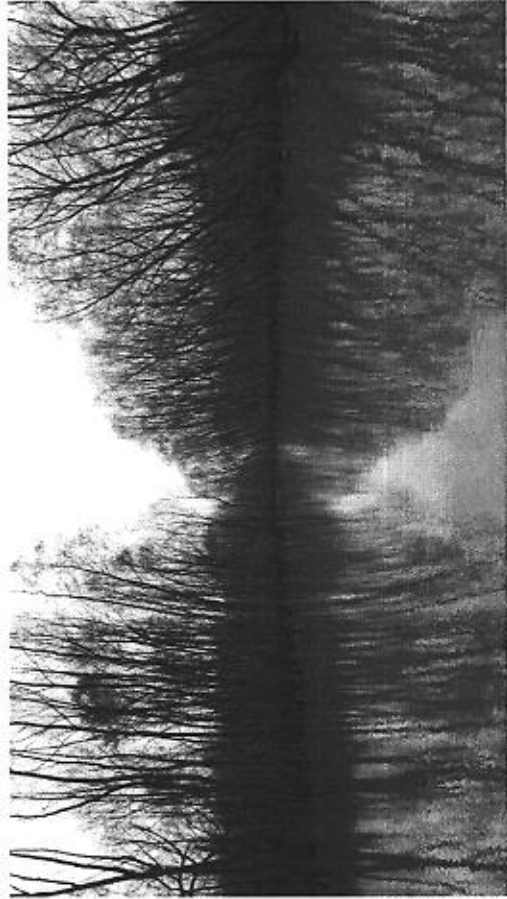




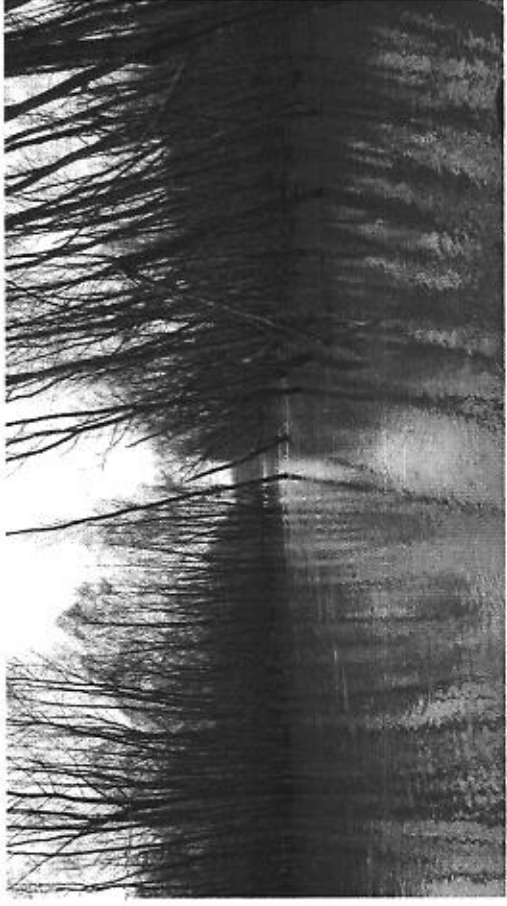
Project10, #72, @ (30.142206°, -91.527720°)



Project10, #73, @ (30.142331°, -91.529045°)



Project10, #74, @ (30.142193°, -91.530461°)



Project10, #75, @ (30.141973°, -91.531988°)



o Cow Island

o Bayou Chene

- o #75
- o #74
- o #73
- o #72
- o #71
- o #70
- o #69
- o #68

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⏪ Tour Guide

Imagery Date: 1/24/2015 lat 30.143026° lon -91.527612° elev 0 ft eye alt 6729 ft



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### References:

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- U.S. Army Corps of Engineers. 2016. Louisiana Wetland Rapid Assessment Method For use within the Boundaries of the New Orleans District, FINAL INTERIM Version 1.0
-

→Assigned by: OSB

# (ORM) PROCESSING SHEET

→Admin:

*OSB*  
*5/13/16*

APPLICANT ST. Martin Par. Gov. AGENT SELLERS & ASSOC  
 ACTIVITY BEAU BAYOU SWAMP HYDROLOGIC RESTORATION  
 PM Mike PM Code \_\_\_\_\_ FILE# 2015-1796-W<sup>4</sup> PARISH ST. Martin

() SP → ( Mod. → w/PN w/o PN ) ----- ( Time Ext. → w/PN w/o PN )  
 PGP \_\_\_\_\_ GP \_\_\_\_\_ NWP \_\_\_\_\_ LOP \_\_\_\_\_ TRANSFER \_\_\_\_\_ COMPLIANCE \_\_\_\_\_ PRE-APP \_\_\_\_\_  
 ATF: | Y or () N | AUTHORITY: ( ) Sec. 10 ( ) Sec. 404 () Sec. 10/404

() Coastal Zone Management - Classification: () OCZ CUP ENF GP Local NDSI Exempt Consistency  
 P# \_\_\_\_\_  
 () DEQ-Section 401 WQC required  
 WQC# \_\_\_\_\_

## DATES & INFO

- ▶ **APPLICATION:** Date rec'd: 5/13/16 Date assign: 5/13/16 Date complete:    /   /
- ▶ **NOTICE:** () 20 day Public Notice ( ) 15 day Public Notice/Sec. 10 only ( ) Agency Notice
- ▶ **MITIGATION:** | () or N | (Impact ac.): \_\_\_\_\_ (Habitat): \_\_\_\_\_ (Basin): \_\_\_\_\_
- ▶ **AUTHORIZATION:** Issued: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_
- ▶ **STANDARD PERMIT:** (1<sup>st</sup> time out) issued: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ (2<sup>nd</sup> time out) issued: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_
- ▶ **PROJECT IN 408 BUFFER:** | () or N |

**REMINDERS & NOTES:** (1) Check 408 Buffers (2) Upload comments to SONRIS for JPAs  
 (3) Notification to Real-estate, SHPO, Tribes (4) SLOPES (5) Maintain ORM & close upon issuance

- JD complete + enclosed.  
 - ~~Add yourself as primary, once JD complete.~~  
 - ~~Start on what you can until JD finished.~~  
 - Need in-depth info on project justification.  
 - Need to still assess Avoid + Min as practicable.



# BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

## **Brief History**

Historically the Beau Bayou Water Management Unit (BBWMU) received river inflows from the northern and eastern ends of the unit through overbank flooding of the Atchafalaya River and through existing and man-made channels. Dating back many years ago, the river inflows entered the unit from the northern end and discharged through the southern end at Bayou Darby. The circulation and flow of water through the water management unit (wmu) would distribute well-oxygenated, nutrient-rich, turbid river water to the interior swamps of the BBWMU, creating a productive and valuable ecosystem for aquatic species and various forms of wildlife.

In 1982 the United States Army Corps of Engineers (USACE) produced the Atchafalaya Basin Floodway System Feasibility Study Main Report and Environmental Impact Statement. In the study, the USACE delineated 13 wmus and identified a need to:

1. Restore as closely as practicable historical overflow patterns
2. Provide proper water movement throughout the units
3. Restrict sediment movement and deposition in the units
4. Supply nutrients and organic matter to the estuarine area and the Gulf of Mexico.

The Supplemental Appropriations Act of 1985 and the Water Resources Development Act of 1986 authorized the construction of two pilot wmus, Buffalo Cove and Henderson Lake, and conditionally authorized the construction of three additional management units – Flat Lake, Beau Bayou, and Cocodrie Swamp to take place upon approval of the Chief of Engineers after evaluation of the operational success of the pilot management units. These five (5) units were selected because they had the best potential for implementation. The USACE started construction on elements of the Buffalo Cove project in the early 2000's, and is currently constructing additional elements of the project. In 2005, the USACE published a Notice of Intent to prepare a Draft Supplemental Environmental Impact Statement for the Atchafalaya Basin Floodway System (ABFS), including Flat Lake, Beau Bayou and Cocodrie Swamp.

The current BBWMU project features were developed by the United States Fish and Wildlife Service (USFWS), Atchafalaya Basin Program Technical Advisory Committee, St. Martin Parish Government and local commercial fishermen. The project is currently included in the Atchafalaya Basin Program Annual Plan. The project is funded with St. Martin Parish Coastal Impact Assistance Program (CIAP) funds, which are administered through USFWS. Construction of the project and obligation of funds must be completed by December 31, 2016 or the remaining funds will be withdrawn from the project.

## **Current Issues**

- Levee construction and channelization of the Atchafalaya River has increased the river's flow capacity, decreasing overbank flooding and movement of water throughout the Atchafalaya River Basin (ARB) floodplain except at high river stages (Kelso, 2006).

## BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

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- Sedimentation along the outer banks of the BBWMU and within existing man-made and natural channels has cutoff overbank flooding and historical river inflows from the northern and eastern ends of the BBWMU.
- Man-made and natural canal spoil banks within the interior of the BBWMU have impaired north-to-south flow through the unit.
- BBWMU's period of inundation has been reduced from lower water stages and higher channel elevations from sedimentation.
- During the annual flood pulse, decreased flow and circulation through the BBWMU results in hypoxic, stagnant water ponding throughout the unit.

The BBWMU historically experienced flooding through existing channels and from overbank flooding, with the annual flood pulse typically beginning in December and lasting until June. The annual flooding reconnects the diverse aquatic habitats within the interior of the BBWMU with the Atchafalaya River, delivering well-oxygenated water and high loads of nutrients into backwater swamp areas (Allen, 2008). Collectively, the issues stated above have reduced the duration of the annual flood pulse, as well as river inflow, flooding, and circulation throughout the unit.

The BBWMU historically received hydrological inputs from overbank flooding of the Atchafalaya River and from existing channels along the northern and eastern boundaries of the unit. Sedimentation along the exterior banks of the BBWMU and within existing channels has raised the elevations of the existing channel beds and banks along the Atchafalaya River. The result of the raised banks and channel beds is that the interior swamp is cutoff from river inflows until river stages top the new higher elevations. A report prepared by the United States Geological Survey (USGS) in 2008 documented the percentage of inundation throughout the ABFS from 1985 to 2006. The report correlated percentage of inundation with varying stages at the Butte La Rose (BLR) Gage. Below is a table representing a portion of the data collected for the BBWMU. As shown in the table, the percent of inundation in 1986 with a river stage of 7.8ft BLR is greater than the percent of inundation in 2002 and 2006 with a river level of 11.1ft BLR and 10.9ft BLR, respectively. The data shows that in order to receive the flooding and river inflows as time progresses, river stages must reach higher elevations. Additionally, commercial fisherman report that the productive season for harvesting of crawfish in the wmu has been reduced as the period of inundation within the unit is shortened.

Date	River Level at BLR (ft)	Percentage of Inundation by Water within the BBWMU
1/16/1986	7.8	49%
2/02/2002	11.1	44%
2/05/2006	10.9	29%

Reduced river inflows from the northern and eastern ends of the unit are unable to overcome stronger inflows from the south, creating a hydraulic damming effect in the middle of the wmu and hypoxic conditions during the annual flood pulse. The current primary hydrological input is now Bayou Darby at the southern end of the unit, which also serves as the primary outflow for the unit. During the spring

## BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

season when the Atchafalaya River stages are the highest, river inflows from the northern end of the BBWMU are not sufficient to overcome the inflow of water through the southern end at Bayou Darby. During the annual flood pulse, water primarily enters the unit from the south through Bayou Darby and remains within the unit, becoming stagnant and creating hypoxic conditions until the river stages subside and the unit drains back through the south through Bayou Darby. These conditions are evident in the Landsat images below which were taken during the annual flooding in February 2002 and documented by Yvonne Allen with the USGS.

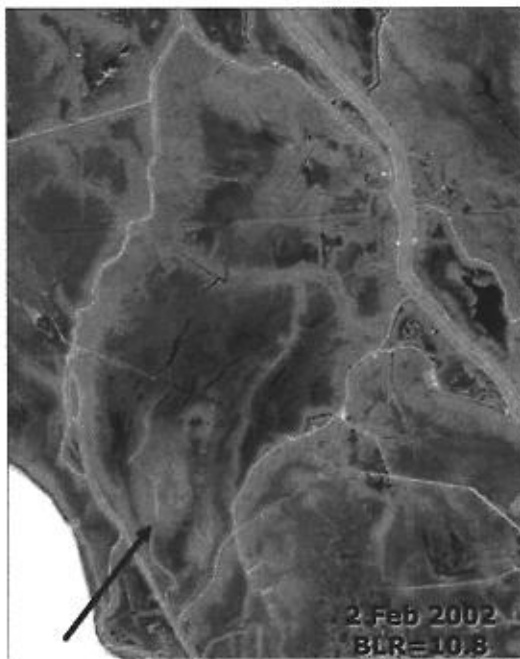


Fig. 1: BBWMU Inundation and Turbid Water at BLR=10.8ft



Fig. 2: BBWMU Inundation and Turbid Water at BLR=14.9ft



Fig. 3: BBWMU Inundation and Turbid Water at BLR=12.9ft

Figures 1-3: Series of Landsat images from Feb 2002. Cyan colors show the flow of turbid water from the river. Figure 1 shows 2 Feb 2002 at Butte LaRose (BLR) 10.8ft. River water mainly enters the Beau Bayou Water Management Unit (BBWMU) from the bottom at Bayou Darby (black arrow). Figure 2 shows 8 days later when BLR had increased to 14.9ft. River water is now widespread throughout the south part of the BBWMU and has also entered from the north through "the Ripleys" and to a limited extent through Bayou de Plomb (grey arrow). Figure 3 is from eight days later when BLR dropped to 12.9ft. River water has entered through both the north and south and water in the middle of the BBWMU is trapped by a strong hydraulic head to the south and a weaker hydraulic head to the north (Yvonne Allen, USGS). Figure 1 shows that river water did not enter the BBWMU until river stages increased above BLR 10.8 ft.

# BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

The annual rise and fall of the ABFS along with rising elevations in channel beds has allowed invasive vegetative species to germinate within existing channels, which decreases the flow through existing channels and increases the rate of accretion within the channel beds. The ABFS is a dynamic system that experiences high water stages in the late winter and spring seasons and low water stages in the summer to early winter seasons. Cross-sections through existing channels show evidence of channels within high banks that at one time were wide (100'-150'), and now only provide 5'-30' of clear water-bottom without woody vegetation. Evidence of these conditions is particularly evident in Elements 1 & 3 (channels near the hydrologic inputs) where invasive species such as willow have grown within the channel banks. Below is a cross-section through Element 3 and images of the current conditions.

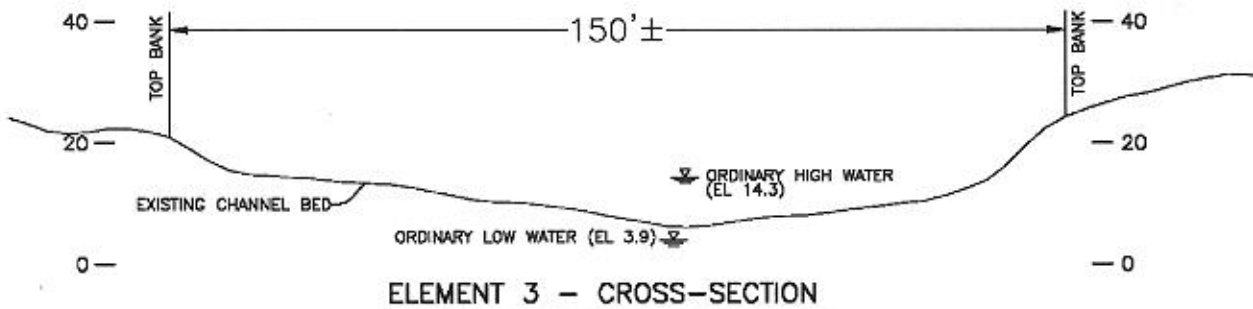


Fig. 4: Cross-section of Element 3 near the Atchafalaya River. The existing channel has high channel banks on each side and the typical width within the top banks is approximately 150'.

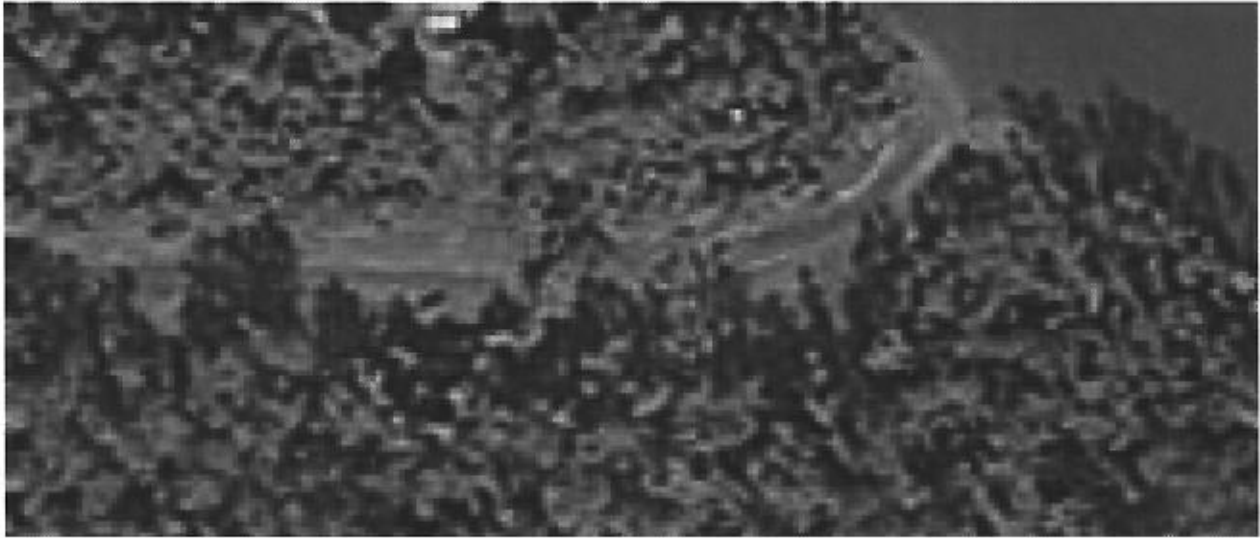


Fig. 5: Photo taken in 2015 at Element 3 from the Atchafalaya River during low water showing the high water mark on willow trees that have germinated within the channel bed. The cleared water bottom width is approximately 5'.



## BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

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**Fig. 6: 2008 Aerial image showing Element 3 at the Atchafalaya River. The existing channel appears to be clear of vegetation within the channel bed.**



**Fig. 7: 2015 Aerial image showing Element 3 at the Atchafalaya River. Aerial imagery and LIDAR data show that the first 1,000' of channel near the Atchafalaya River has experienced significant accretion within the existing channel bed. After approximately 1,000', the channel opens up suggesting that the first 1,000' of the channel is more susceptible to the effects of accretion and vegetative growth. The image also shows the progression of the accretion near the Atchafalaya River from the 2008 aerial image (Fig. 6). Element 3 of the project proposes to excavate and clear the first 1,000' of channel near the Atchafalaya River.**

Water quality and the overall aquatic habitat value within the BBWMU has been declining in recent past due to the issues detailed above, hindering the area's ability to sustain a healthy ecosystem. Widespread hypoxic conditions are evident in the summer as warmer temperatures accelerate the depletion of oxygen in the stagnant water, and water throughout the wmu becomes visibly deprived of oxygen (black). The decline in water quality and aquatic habitat value is also evident in the declined production and quality of finfish and crawfish in the wmu. Commercial fisherman in the area have reported a decline in the production and quality of seafood harvested from the area.

# BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

## Project Features & Impacts

The project proposes to restore hydrologic flow throughout the BBWMU by implementing the 3 main project features listed below:

1. Clearing, snagging & excavating 4.4 miles of existing channels (Elements 1, 2, 3, 5, 7, 9 and 10)
2. Clearing & snagging 4.1 miles of existing channels (Elements 1, 4 and 8)
3. Cutting gaps in existing spoil banks at 2 locations along the Dow Pipeline Canal (Element 6).

Excavation and clearing quantities are as follows:

- Excavation: 136,531 cubic yards
- Clearing & Snagging: 8.7 miles
- Clearing for spoil disposal: 22.2 acres

The proposed project will impact the following:

- Total Excavation of Waterbottoms: 27.0 acres; 68,592 cubic yards
- Total Direct Wetland Impacts (Fill, Excavation & Clearing): 51.6 acres
- Total Excavation & Clearing of Wetlands: 10.9 acres; 67,939 cubic yards
- Total Fill in Wetlands: 34.1 acres; 102,515 cubic yards
- Total Clearing of Forested Wetlands for Spoil Disposal: 6.6 acres; 1,287 cubic yards

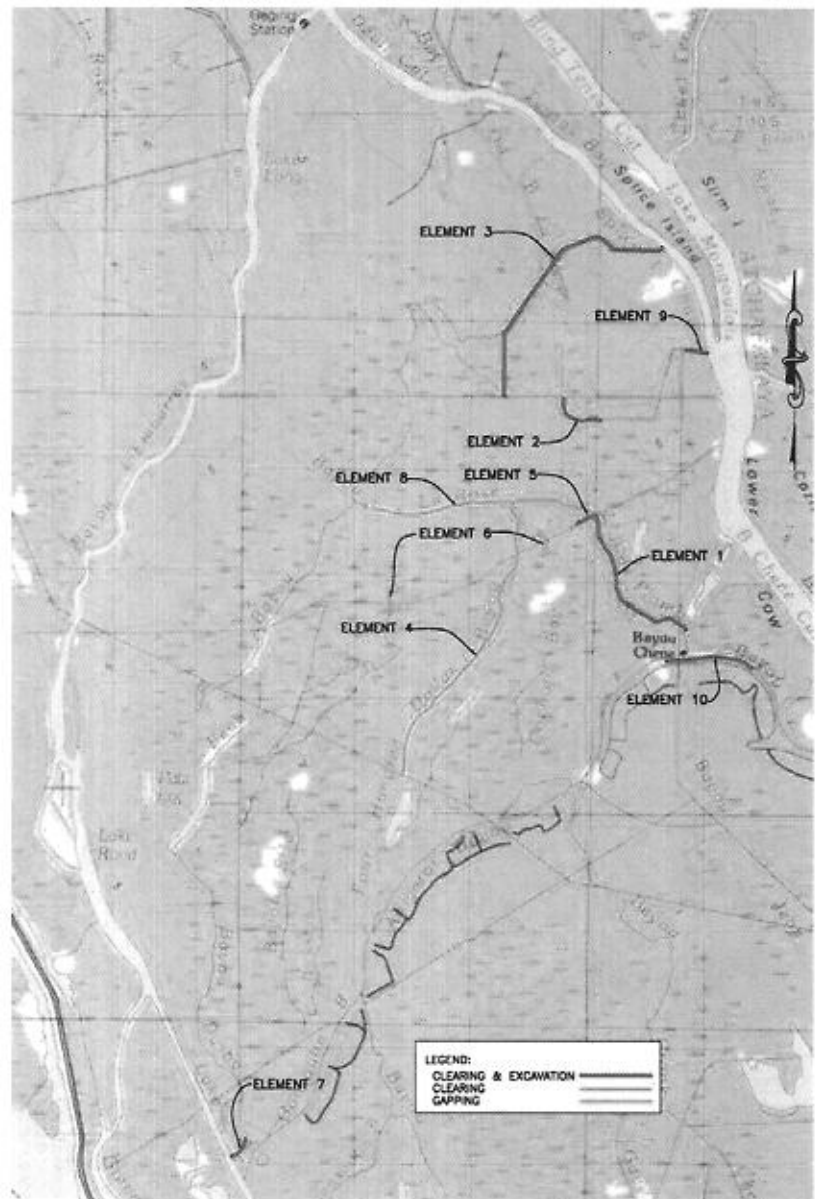


Fig. 8: Project Map

# BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

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## Other Water Quality Projects in the Atchafalaya River Basin

### **Buffalo Cove Water Management Unit – Sponsored by the USACE**

The Buffalo Cove Water Management Unit Project was selected as a Pilot Project in the 1982 ABFS Feasibility Study and was authorized for construction in 1986. The USACE started construction of the Buffalo Cove Project in 2006 with the Bayou Eugene Project and work is currently underway to construct additional elements. The BBWMU project features are similar to the project features currently being constructed in Buffalo Cove. The Buffalo Cove Water Management Unit borders the southern boundary of the BBWMU. Below are pictures taken during construction of the Buffalo Cove Project. Since the project is still under construction, a final report on the effectiveness of the project has not been completed.



**Fig.9: Picture taken on 11/12/2015 of construction on the Buffalo Cove Water Management Unit Project**



**Fig. 10: Picture taken on 11/12/2015 of construction on the Buffalo Cove Water Management Unit Project**

# BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

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## **Bayou Postillion Water Quality Project – Sponsored by the LA DNR – Atchafalaya Basin Program**

The Bayou Postillion Project consisted of dredging a natural bayou, depositing the spoil along the edges, and leaving gaps at floodplain elevation to allow water inflow to the adjacent swamp (Kelso 2006). The purpose of the project was to restore flow into the project area, increase flow velocities, reduce surface vegetation densities, lower water temperatures and increase dissolved oxygen concentrations. In 2006, a project report update was prepared analyzing the effects of the Bayou Postillion Project. Twelve (12) sites were monitored for water quality improvements. At the time of the report, five (5) sites showed increased water circulation and ten (10) sites showed improved water quality.

### **Alternative Methods of Construction Considered**

The five (5) alternatives considered for the deposition of the cleared and excavated materials are outlined below.

1. Excavate and distribute the material using the spray dredging method.
2. Designate upland and dead end pipeline canal disposal sites and deposit the material within those sites.
3. Chip or burn all cleared material and haul the excavated material to the Atchafalaya River and discharge the material along the edge of the Atchafalaya River outside of the USACE's authorized dimensions.
4. Locate an open water or degraded swamp area, and discharge the excavated material as a beneficial use to fill the area to an elevation that would be conducive to creating a healthy and sustainable wetland area.
5. Deposit the material along the existing channel banks and edge of excavation.

Alternative 1 would require mechanically excavating the material and placing it in a hopper barge or similar mechanism to pump it. The excavation could not be performed using a hydraulic dredge because of the existing trees and roots that would be encountered. If the work is performed during a low water period, there may not be a sufficient water source to provide water to fluidize the dredged material and spray it beyond the banks. For example, ordinary low water was determined to be El. +3.9 and the bottom elevation of the proposed excavation ranges from El. +2 to El. +9. If the work was performed during high water periods, the work would have to be performed with a barge mounted excavator next to a hopper barge. The proposed channel excavation typical sections were designed to remain within the existing top banks of the channels. This restricted the proposed bottom widths of the channels, which are typically 30'-40' (range from 15'-60'). Most barges are at least 30' wide, therefore the barge mounted excavator and hopper barge would be at a minimum 60' wide. There would be insufficient room to place and maneuver equipment, tugs, and barges within the proposed cuts to spray dredge the material. Also, initially the USACE stated that the deposition of fill over wetlands using the spray dredging method would be considered impacts to wetlands, which would require mitigation. The spray dredging alternative is not constructible within the proposed channel sections. Also, if constructible, the additional construction costs and mitigation make the spray dredging alternative for this project unfeasible.



# BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

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Alternatives 2, 3 and 4 listed above would involve transporting the excavated material to disposal sites or the Atchafalaya River. The material could be hauled by barge or truck to the discharge location or fluidized and pumped to the discharge location. Hauling the material by barge is not constructible. As stated above there is not sufficient room to place and maneuver barges, tugs and equipment within the proposed cuts to haul the material by barge to a disposal site. Also, the fluctuating water levels within the work area may prohibit the use of floating equipment within the project area. Hauling the material by trucks or land equipment was considered. This method would still require impacts and clearing outside of the proposed excavation to allow for driving of the trucks. Also, the unpredictable water level within the Atchafalaya Basin and BBWMU may not allow this method of hauling the material. Therefore, hauling the material by truck to disposal locations is not a practical alternative for disposing of the cleared and excavated material. In addition to the issues stated above, hauling or pumping the material to disposal sites increases the costs considerably, almost 3-4 times as much. The increased cost would severely limit the work that could be performed and the project's effectiveness would be hindered. Therefore, the alternatives for hauling or pumping the material to disposal sites are unfeasible, and Alternative 5 was selected for the disposal of the cleared and excavated material.

## **Project Benefits**

The BBWMU project proposes to accomplish the following objectives:

- Restore hydrological inputs along the northern and eastern boundaries of the wmu.
- Restore north-to-south flow through the wmu.
- Improve water circulation.
- Increase the duration of the hydroperiod by introducing river inflow at lower water stages.
- Improve water quality and aquatic habitat value within existing channels, deep water habitats (Beau Bayou) and interior swamps.

The project proposes to restore hydrological inputs along the northern and eastern boundaries of the wmu and restore north-to-south flow through the unit. As discussed above, the BBWMU's current primary input is Bayou Darby at the southern end of the unit. During the annual flood pulse, water becomes trapped in the middle of the wmu since the hydraulic head from the north is not sufficient to overcome the hydraulic head from the south produced by Bayou Darby. Elements 1, 3 and 9 as shown in Figure 8 propose to increase river inflow and the head from the northern end of the unit to overcome the head produced by Bayou Darby, which will generate a north-to-south flow through the unit to flush and replenish the system. Element 7 may generate some flow into the unit from the south, however it's primary objective is to provide an outlet for the area trapped between Bayou Darby's banks and the banks of Little Bayou Gonsoulin. It is not anticipated that inflow from Element 7 will significantly increase the head from the southern end of the unit. The tables below provide the estimated flow through the proposed improvements at varying stages for pre and post-construction conditions. A velocity of 1 ft/s was assumed for flow calculations.

## BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

Estimated Flows at BLR Stage = 4.0		
Element #	Pre-Construction	Post-Construction
1	0	68
3	0	42
9	0	42
<b>Total</b>	<b>0</b>	<b>152</b>

Estimated Flows at BLR Stage = 6.0		
Element #	Pre-Construction	Post-Construction
1	0	152
3	0	138
9	19	138
<b>Total</b>	<b>19</b>	<b>428</b>

Estimated Flows at BLR Stage = 8.0		
Element #	Pre-Construction	Post-Construction
1	4	252
3	32	250
9	74	250
<b>Total</b>	<b>110</b>	<b>752</b>

Estimated Flows at BLR Stage = 10.8		
Element #	Pre-Construction	Post-Construction
1	77	419
3	182	436
9	205	434
<b>Total</b>	<b>464</b>	<b>1289</b>

Estimated Flows at BLR Stage = 12.9		
Element #	Pre-Construction	Post-Construction
1	229	572
3	364	618
9	355	600
<b>Total</b>	<b>948</b>	<b>1790</b>

Estimated Flows at BLR Stage = 14.9		
Element #	Pre-Construction	Post-Construction
1	409	751
3	584	838
9	526	760
<b>Total</b>	<b>1519</b>	<b>2349</b>

Water circulation throughout the BBWMU has been altered from pipeline canals and spoil banks, existing canal spoil banks, sedimentation, growth of vegetation throughout the swamps and existing channel beds, and the overall evolution of the BBWMU. Elements 2, 4, 5, 6, 7 and 8 propose to increase water circulation throughout the unit. Below are descriptions of the proposed improvements and benefits of these elements.

Element 2: Excavation and clearing of the existing channel will improve flow from the "Ripleys" into the 42" SNG Pipeline Canal, which connects directly to the Beau Bayou Swamp.

Elements 4 and 8: Clearing and snagging historic channels will help to improve flow to the interior swamps and restore the historical hydrology of the BBWMU. Through the evolution of the Atchafalaya River Basin, and particularly the BBWMU, historical channels have experienced vegetative growth within existing channel beds. Four Hundred Dollar Bayou and Bayou La Rose are overgrown with woody vegetation, which provides snags within the channels and increases sedimentation within the channels which impair flow. Clearing and snagging these channels will increase flow and provide additional flow to the adjacent swamps during high water periods.

## BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

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Element 5: Removal of an existing earthen plug on the Dow Pipeline Canal. An existing earthen plug on the Dow Pipeline Canal was constructed to approximately Elevation +17.0 ft. Removal of this plug will allow flow through the Dow Pipeline Canal between Little Bayou de Plomb and Four Hundred Dollar Bayou when water stages reach Elevation +6.0ft. Currently, Cochon Bay which is bordered by Little Bayou de Plomb, Bayou Crook Chene, and Four Hundred Dollar Bayou receives minimal amounts of turbid water from hydrologic inputs. The construction of Elements 5 and 6B will provide an avenue for flow into the Cochon Bay area.

Elements 6A and 6B: These elements propose to cut gaps in the existing spoil banks of the Dow Pipeline Canal which will facilitate north-to-south flow through the interior of the wmu and provide additional hydrologic inputs into the swamps adjacent to the Dow Pipeline Canal.

Element 7: Excavation and clearing of an existing slough will provide inflow and drainage for the southern tip of the BBWMU that is entrapped by the banks of Bayou Darby and Little Bayou Gonsoulin. The additional outlet will facilitate circulation and movement of water through the unit as river stages rise and fall, and as water from the northern end of the unit flows south.

Sedimentation along the banks of the BBWMU and within existing canals is preventing river inflows from entering the wmu until higher river stages are reached. As detailed above under the Current Issues Section, studies performed by USFWS using Landsat imagery indicate that turbid river water does not enter the BBWMU until the river stage reaches 10.8ft BLR. The tables above providing the estimated flows through Elements 1, 3 and 9 at varying stages indicate that significant flows begin entering the unit between 8.0ft and 10.8ft BLR. Elements 1, 3 and 9 propose to introduce flows into the wmu once river stages reach 4.0ft BLR. (Note: Elements 1 and 3 are proposed to a bottom elevation of 2.0ft and Element 9 is proposed to a bottom elevation of 3.0 ft in an attempt to remain inundated during ordinary low water to prevent the germination of invasive woody vegetation). The introduction of river inflows at lower elevations will increase the hydroperiod within the BBWMU.

# BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

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## Conclusion

The construction activities proposed in this project propose to lengthen the hydroperiod and facilitate the introduction and distribution of well-oxygenated, nutrient-rich water throughout the habitat for the duration of the flood pulse, in turn restoring water circulation within the BBWMU and improving water quality and aquatic habitat for finfish, crawfish and other species of wildlife. Channelization, levee construction and the geologic evolution of rivers and floodplains can significantly alter the functions of floodplains such as the ARB, which can reduce the connectivity and functionality of terrestrial, semi-aquatic, and aquatic habitats, and ultimately result in the inability to maintain a sustainable ecosystem even under satisfactory water quality conditions (Kelso, 2006). The dynamic nature of the ABFS (i.e. the rise and fall of water stages averaging greater than 10ft annually) creates a challenging environment for successfully planning and implementing large scale water quality projects. The BBWMU encompasses a diverse ecosystem of approximately 22,000 acres of waterbottoms, swamps, and forested wetlands. This project proposes to improve water quality within the majority of the BBWMU, particularly the southern two-thirds (approximately 15,000 acres) of the wmu where flows and river inputs will be directed. Actual benefits to water quality and aquatic habitat values will be dependent on future conditions related to water stage fluctuation and ecological reactions from the improvements constructed under this project.

The features of this project are a collaborative effort of the USFWS, St. Martin Parish Government, LA DNR – Atchafalaya Basin Program and commercial fisherman. The project was developed using sound ecological and engineering practices based on past experience from similar projects within the basin and with historical input from local stakeholders that have used this area for commercial and recreational purposes for more than fifty (50) years and have witnessed the ecological evolution of the wmu. The Parish has acquired servitudes from all property owners, in some case 50+ stakeholders per tract, to perform all of the work detailed in the permit, which should serve as evidence of support for the project from property shareholders. The Parish has also met with representatives of the Louisiana Crawfish Producers Association to discuss the project and has received their support to move forward with the project as proposed.

In the 1982 ABFS Feasibility Study, the USACE noted the need to perform improvements throughout the ABFS. In 1985 and 1986, they authorized the construction of improvements to the Buffalo Cove and Henderson Lake Water Management Units, and conditionally authorized improvements to three (3) additional wmus including Flat Lake, Beau Bayou and Cocodrie Swamp because of their likelihood for implementation, following approval of the Chief of Engineers and after evaluation of the operational success of the pilot management units. In 2005 the USACE published a Notice of Intent to prepare a Draft Supplemental Environmental Impact Statement for the ABFS, including Flat Lake, Beau Bayou and Cocodrie Swamp. Since construction of the Buffalo Cove and Henderson Lake Pilot projects are not complete, the USACE did not proceed with preparing the Draft Supplemental Environmental Impact Statement, however, the intent to initiate the process for improving the BBWMU should be considered evidence that the area is in need of improvements. Under the CIAP program, the St. Martin Parish Government dedicated funds to restoring the BBWMU in an effort to be proactive in saving a valuable



## BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

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ecosystem, important for so many environmental, ecological, commercial, recreational and cultural reasons. Funds are available to construct improvements to the wmu until December 31, 2016. If action is not taken now to make the necessary improvements, there is no guarantee that future funding will be available and given the timeframe to begin construction of the Buffalo Cove Water Management Unit Project, the ecological issues that will be faced could be so severe that restoring the BBWMU will not be practical, feasible, or possible.

Construction of the project will directly impact approximately 51.6 acres of forested wetlands. The purpose of the project is to improve water quality and aquatic habitat values within the BBWMU. The project has been designed to minimize impacts to wetlands to the greatest extent practical in order to achieve the objectives of the project. As detailed above, the project's features resemble the features being implemented in the Buffalo Cove Water Management Unit Project sponsored by the USACE and currently under construction. The Environmental Assessment for the Buffalo Cove Project states that "Even though there are direct construction impacts, these are expected to be fully offset with benefits to over 58,000 acres of forested wetlands, and improvements in water quality and deep water and terrestrial habitat within the BCWMU". The final environmental documents for the Buffalo Cove project did not require compensatory mitigation for the project since the direct impacts of the project were considered to be offset by the water quality and habitat benefits. Although the BBWMU project does not have measurable benefits that directly relate to or compensate the impacts from construction (i.e. water quality compared to wetlands impacted), the proposed improvements to water quality and habitat benefits should be considered and provide justification for the project. Additionally, the Parish has stated its willingness to provide compensatory mitigation, should it be required.

# BEAU BAYOU SWAMP HYDROLOGIC RESTORATION PROJECT

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## References

Allen, Y.C., Constant, G.C., and Couvillion, B.R., 2008, Preliminary classification of water areas within the Atchafalaya Basin Floodway System by using Landsat imagery: U.S. Geological Survey Open-File Report 2008-1320, 14 p.

Kelso, W. E., Podey, A. M., and Rutherford, D. A., 2006. Assessing Bayou Postillion Floodplain-Swamp Water Quality Rehabilitation in the Atchafalaya River Basin, Louisiana. Project Report Update to the Louisiana Department of Natural Resources, Atchafalaya Basin Program. School of Renewable Natural Resources, LSU

**BEAU BAYOU SWAMP HYDROLOGIC RESTORATION  
LRAM WORKSHEET SUMMARY**

Element No.	Habitat	Wetland Status		Habitat Condition		Hydrologic Condition		Negative Influences		Impact Type		Sum of Impact Factors	Area	Sum x Area Affected
		Status	Value	Status	Value	Status	Value	Status	Value	Status	Value			
1	Bottomland Hardwood	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	27.7	166.2
2	Bald Cypress/Tupelo	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	2.4	14.4
3	Bottomland Hardwood	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	4.3	25.8
4-imp 1	Bottomland Hardwood	Secure	2	High	3	Medium	2	High	-0.5	Partial/Temp	0.5	7	6	42
4-imp 2	Cypress/Tupelo	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	2.4	14.4
5	Bottomland Hardwood	Secure	2	Low	1	Low	1	High	-0.5	Full/Perm	3	6.5	0.4	2.6
6A	Bottomland Hardwood	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	1.2	7.2
6B	Cypress/Tupelo	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	1.9	11.4
7	Bald Cypress/Tupelo	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	1.6	9.6
8	Bald Cypress/Tupelo	Secure	2	High	3	Medium	2	High	-0.5	Partial/Temp	0.5	7	3.1	21.7
9	Bottomland Hardwood	Secure	2	Low	1	Medium	2	High	-0.5	Partial/Temp	0.5	5	0.5	2.5
10	Bottomland Hardwood	Secure	2	Low	1	Medium	2	High	-0.5	Partial/Temp	0.5	5	0.1	0.5
Total												318.3		
Mitigation Potential												6.5		
Total Mitigation Credits												49.0		

FEB 01 2017



**Sellers & Associates, Inc.**  
**ENGINEERS** **SURVEYORS**

EUGENE M. SELLERS, FOUNDER  
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WILBERT J. GUIDRY, P.L.S.

January 27, 2017

US ARMY CORPS OF ENGINEERS  
DISTRICT ENGINEER  
ATTN: WESTERN EVALUATION SECTION  
7400 Leake Ave.  
New Orleans, LA 70118

Re: St. Martin Parish Government  
Beau Bayou Swamp Hydrologic Restoration Project  
St. Martin Parish - Atchafalaya Basin  
Permit No. MVN-2015-01796-WLL  
Project Commencement

To whom it May Concern,

Please consider this our notification for the commencement of the above referenced project. Construction on this project is expected to begin on January 30, 2017.

Sincerely,

SELLERS & ASSOCIATES, INC.

NICK SONNIER, P.E.

N:\DATA\8004\8004-07 Permits\Ltr USACE 2017-01-27.wpd  
c: Mr. Heath Babineaux, SMPG





17. DIRECTIONS TO THE SITE

The site is not accessible by land. From Butte La Rose, travel downstream on the Atchafalaya River approximately 14 miles. The Beau Bayou Water Management Unit (BBWMU) is bordered on the northwest and west by Lake Long and Bayou L'Embaras; on the southwest by Grand Bayou, on the southeast by Lake Fausse Pointe Cut, Bayou Gonsoulin, Alligator Bayou, and Bayou Chene, and on the east and northeast by Bayou Chene Cut, Splice Island Chute, Tensas Bay and Devil's Cut. This project consists of 10 separate elements throughout the Beau Bayou Water Management Unit.

18. Nature of Activity (Description of project, include all features)

SEE ADDITIONAL SHEETS (BLOCK 18, SHEET 1 OF 25)

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

SEE ADDITIONAL SHEETS (BLOCK 19, SHEET 2 OF 25)

**USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED**

20. Reason(s) for Discharge

This project involves clearing and snagging approximately 9 miles of existing channels and mechanically dredging 136,531 cubic yards of spoil material. The vegetative debris cleared from the existing channels will either be chipped in place or stockpiled in a disposal area and buried with excavated material. The excavated material dredged will be deposited within disposal areas along the existing spoil banks of the channels or as shown on the permit drawings.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
Wetlands: Spoil - 93,296	Waterbottom/Non-wet Areas: Spoil - 43,235	Wet & Non-wet: Woody Vegetation: 11,193

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres Wetlands: 34.1 acres, Water Bottoms: 12.3 acres, Non-wetlands: 5.8 acres  
or

Linear Feet SEE ADDITIONAL SHEETS FOR MORE DETAILED BREAKDOWN (BLOCK 22, SHEET 3 OF 25)

23. Description of Avoidance, Minimization, and Compensation (see instructions)

SEE ADDITIONAL SHEETS (BLOCK 23, SHEET 4 OF 25)

24. Is Any Portion of the Work Already Complete?  Yes  No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- SEE ADDITIONAL SHEETS (SHEETS 5-25 OF 25)

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
None					

\* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

  
SIGNATURE OF APPLICANT      2016-05-11  
DATE

  
SIGNATURE OF AGENT      2016-05-11  
DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

## **Block 18 – Nature of Activity**

The project includes 10 elements within the BBWMU and consists of clearing & snagging approximately 9 miles of existing channels, clearing approximately 22.2 acres for the disposal of cleared and excavated material, and mechanically dredging approximately 136,500 cubic yards of material from 3.9 miles of existing channels, earthen plugs, and spoil banks. Existing channels will be cleared of snags, shrubs and trees within the existing top banks of the channel. Cleared vegetative material will either be chipped in place or stockpiled in the clearing & spoil disposal areas shown on the plans and buried. In selected locations the existing channel will be mechanically dredged according to the dimensions and template shown in the permit drawings. If the proposed typical section will result in excavation outside of the existing channel top bank, the proposed alignment will be adjusted or the proposed channel bottom width will be reduced to remain within the existing channel top banks. The project also proposes to remove existing manmade earthen plugs that have been constructed across existing channels. When removing earthen plugs, the plug will first be cleared of all vegetation and then mechanically dredged. This work will be performed using barge mounted and/or amphibious equipment.

The project also involves creating gaps in existing spoil banks to increase sheet flow throughout the swamps of the BBWMU. This work will involve clearing the area of shrubs and trees, then excavating through the existing spoil bank until the existing elevation of the adjacent swamp is reached, a length of approximately 250' – 400' from the channel top bank into the adjacent swamp. Since creating gaps in existing spoil banks will involve work outside of the existing channels, this work will most likely be performed using some type of land or amphibious equipment, such as marsh buggies, or with barge mounted equipment if water levels are adequate.

If the element's reach calls for clearing and snagging only, the contractor shall chip all woody vegetation and trees as close to the ground as the cutting tools permit. If the element's reach calls for clearing and snagging and excavation, the contractor shall clear the clearing and spoil disposal areas designated on the plans to accommodate moving equipment and spreading the excavated material, stockpile the cleared material within the clearing and spoil disposal area, and bury the cleared material to a depth of at least 2 feet with excavated material.



## **Block 19 – Project Purpose**

The objective of this project is to improve the water quality and aquatic habitat values throughout the BBWMU by attempting to restore historical beneficial riverine inflows into the BBWMU and increasing sheet flow throughout the swamps of the BBWMU. Canal spoil banks, accretion within existing channels and swamps, and vegetative growth within existing channels have resulted in the blockage/impairment of beneficial inflow from historic hydrological inputs and reduced sheet flow throughout the BBWMU's swamps, further resulting in decreased dissolved oxygen levels and overall poor water quality and aquatic and wetland habitats for finfish and crawfish in the BBWMU. These issues are common throughout the Atchafalaya Basin, and the poor water quality has hindered the area's ability to sustain a healthy ecosystem, such that in recent years there has been a substantial decrease in recreational and commercial fishing within the BBWMU.

Since water stages within the BBWMU range from 3.9' at ordinary low water to 14.3' at ordinary high water, less desirable plant species such as willow and chinese tallow trees have grown within the channel banks and channel beds during low water periods. Shrubs and trees within the existing channels collect floating debris in the channel, increase accretion rates within the existing channels, and reduce the channels hydraulic capacity and ability to introduce oxygenated water into the BBWMU. Therefore, shrubs and trees as well as sediment that have built up within the existing channels must be removed in order to restore flow throughout the BBWMU. Additionally, channels adjacent to the Atchafalaya River are proposed to be excavated to greater depths in order to allow for future sediment buildup within those channels and postpone the need for future maintenance of the channel.

In 1982, the Corps noted the necessity to restore flow throughout the Atchafalaya Basin as part of an Environmental Impact Statement. In the Environmental Impact Statement, 13 proposed water management units were delineated, and later studies performed by the Corps indicated that the Beau Bayou Water Management Unit was listed as one of the five water management units that "have the best potential for implementation" (Atchafalaya Basin Floodway System, Louisiana Project, State Master Plan, Revised 1998). Efforts to restore flow throughout the Beau Bayou Water Management Unit were included in the State Master Plan for the Atchafalaya Basin Floodway System, and have been studied and supported by the LA DNR – Atchafalaya Basin Program. This project is funded through the Coastal Impact Assistance Program (CIAP) which is sponsored by the U. S. Fish & Wildlife Service. The features of this project are similar to those designed and implemented by the Corps' for improving flow throughout the Buffalo Cove Water Management Unit.

Work is proposed to start in July 2016 and be completed by December 31, 2016.

**Block 22 - Surface Area in Acres of Wetlands or Other Waters Filled**

Clearing & Snagging Only – Trees and woody vegetation will be chipped in place within the existing top bank of the channel. It is anticipated that the Contractor will use an excavator or marsh buggy with a grinder/chipper. The Contractor will be required to perform all work within the existing top bank of the channel.

Clearing & Snagging & Excavation – Trees and woody vegetation will be chipped in place or stockpiled and buried in the disposal areas shown on the drawings. Excavated material will be placed in the disposal areas within the limits shown. This work will be performed with a dragline or excavator on a barge or marsh buggies, depending on the water level.

Element #	Wetlands (Acres)	Water Bottoms (Acres)	Non-wetlands/Uplands (Acres)
1 (1+35 to 77+75)	10.1		2.2
1 (77+75 to 118+82)	6.2		
2	1.5		
3	1.8		2.0
4	8.4	7.4	
5	0.2		0.5
6	1.4		
7	0.8		
8	3.1	3.1	
9	0.5		1.1
10	0.1	1.8	
<b>Total</b>	<b>34.1</b>	<b>12.3</b>	<b>5.8</b>

The estimated cost of the project exceeds the project's construction budget. The element's have been prioritized to provide the most efficiency if all of the elements cannot be constructed. The priority of the elements is listed below. Impacts to Waters of the United States and the surface area of wetlands or waters filled would be decreased if all of the elements are not constructed.

Priority	Element #
1	1
2	3
3	5
4	6
5	10
6	7
7	2
8	4
9	9
10	8

## **Block 23 – Description of Avoidance, Minimization, and Compensation**

The objective of this project is to improve water quality and aquatic habitat values throughout the BBWMU by restoring historical beneficial riverine inflows from the Atchafalaya River into the BBWMU and increasing sheet flow throughout the swamps of the BBWMU. To accomplish this objective, existing channels along the perimeter of the BBWMU that feed the interior swamp must be dredged and cleared to increase and provide unobstructed flow of highly oxygenated water from the Atchafalaya River into the interior swamps. Sedimentation, accretion, and the growth of less desirable species within the existing channels have decreased flow into and throughout the BBWMU, and this project will improve the existing channels in an attempt to return them to historical conditions. No alternative methods of construction could be considered for increasing the flow of water into the BBWMU, therefore impacts from excavating and clearing the existing channels could not be avoided.

The four alternatives considered for the deposition of the cleared and excavated materials are outlined below.

1. Designate upland and dead end pipeline canal disposal sites and deposit the material within those sites.
2. Chip or burn all cleared material and haul the excavated material to the Atchafalaya River and discharge the material along the edge of the Atchafalaya River outside of the USACE's authorized dimensions.
3. Locate an open water or degraded swamp area, and discharge the excavated material as a beneficial use to fill the area to an elevation that would be conducive to creating a healthy and sustainable wetland area.
4. Deposit the material along the existing channel banks and edge of excavation.

Alternatives 1, 2 & 3 listed above would involve transporting the excavated material to disposal sites or the Atchafalaya River. The material could be hauled by barge or truck to the discharge location or fluidized and pumped to the discharge location. Hauling the material by barge is not constructible. The proposed channel excavation typical sections were designed to remain within the existing top banks of the channels. This restricted the proposed widths of the channels, and there is not sufficient room to place and maneuver barges, tugs and equipment within the proposed cuts to haul the material by barge to a disposal site. Also, the fluctuating water levels within the work area may prohibit the use of floating equipment within the project area. Hauling the material by trucks or land equipment was considered. This method would still require impacts and clearing outside of the proposed excavation to allow for driving the trucks. Also, the unpredictable water level within the Atchafalaya Basin and BBWMU may not allow this method of hauling the material. Therefore, hauling the material by truck to disposal locations is not a practical alternative for disposing of the cleared and excavated material. In addition to the issues stated above, hauling or pumping the material to disposal sites increases the costs considerably, almost 3-4 times as much. The increased cost would severely limit the work that could be performed, and the project's effectiveness would be hindered. Therefore, the alternatives for hauling or pumping the material to disposal sites are unfeasible, and alternative 4 was selected for the disposal of the cleared and excavated material.

This project's objectives and features are similar to the proposed and constructed improvements for the Buffalo Cove Water Management Unit (BCWMU), which borders the southern boundary of the BBWMU. Improvements to the Buffalo Cove Water Management Unit were constructed by the USACE in 2006, and 2012 (Maintenance of Elements 6, 7, 9-1, 9-2 and Bayou Eugene, Solicitation No. ABFSBC-12-S-0007) and are currently under construction by the USACE (Elements 3, 12, 14 and 16, Solicitation No. W912P8-15-B-0026). The Environmental Assessment for the Buffalo Cove project states that "Even though there are direct construction impacts, these are expected to be fully offset with benefits to over 58,000 acres of forested wetlands, and improvements in water quality and deep water and terrestrial habitat within the BCWMU". The Buffalo Cove Project estimated that the worst-case scenario for impacts to forested wetlands would be 547 acres. The final environmental documents for the project did not require compensatory mitigation for the project since the direct impacts of the project were offset by the water quality and habitat benefits. The BBWMU encompasses approximately 22,000 acres and the estimated impacts to forested wetlands for the clearing, excavation, and fill of all of the Elements included in the Beau Bayou Project are 51.6 acres. This project proposes to improve water quality and aquatic habitat value throughout the BBWMU, in line with the objectives and features of the BCWMU project and the activities permitted under Nationwide Permit 27. Since the activities to be performed under this project will result in net increases in aquatic resource functions and services, the St. Martin Parish Government requests that no compensatory mitigation be required for the direct impacts from construction of the proposed improvements. Should compensatory mitigation be required, the Parish intends to purchase the credits from an approved USACE Mitigation Bank.

**Block 26**

**\*\*\*\*Note: The St. Martin Parish Government is currently contacting adjacent landowners to acquire temporary servitudes for the construction of this project.**

**Parcel# 1540001108**

Allen, Beatrice Curry  
25340 Stassi Rd  
Plaquemine, LA  
Phone: 225-659-7859

**Percent Ownership: 2.381%**

Crowson, Andrew J. Jr.  
5445 Govt. St. Apt 135  
Baton Rouge, LA  
Phone: could not locate no.  
Gloria Crowson listed at same address, with Ph. 225-928-7692

**Percent Ownership: 2.8571%**

Hartner, Paige C.  
c/o Ouida Sepehri-nik  
44 West Broadway  
#1205 S. Tower  
Salt Lake City, UT  
84101-3213

Phone: could not locate no.

**Percent Ownership: 2.8571%**

Hubbs, Anna C.  
1753 May Street  
Baton Rouge, LA  
70808-2074  
Phone: 225-383-4534

**Percent Ownership: 2.8571%**

Kelly, Glyna Ann Mendoza  
65785 J.R. Drive  
Plaquemines, LA  
Phone?

**Percent Ownership: 0.3968%**

McGlothlin, Stephen W.  
C/O Delta Hudson  
63650 Old Hwy 77  
Plaquemine, LA  
Phone?

**Percent ownership: 0.1323%**



McQuiston, Rose Mary  
32977 Bayou Sorrel Road  
Plaquemine, LA  
Phone?  
**Percent ownership: 0.39%**

Mendoza, John Estate  
c/o Raymond Mendoza  
148 Sun St.  
Morgan City, LA  
Phone: 985-395-5924  
**Percent Ownership: 69.0476%**

Mendoza, Richard Garrison, Jr.  
16619 Woodlawn Acres Ave.  
Baton Rouge, LA  
Phone?  
**Percent Ownership: 0.3968%**

Millet, Emma Wisdom  
58929 Postell Ave.  
Plaquemine, LA  
70764-3429  
Phone: 225-687-1000  
**Percent Ownership: 3.5714%**

Sarradet, Dorothy C.  
2116 Rowcliff Dr.  
Port Allen, LA  
70767-5832  
Phone: 225-749-2233  
**Percent Ownership: 2.8571%**

Tate, Pearl C.  
45 Pine Crest Rd.  
Purvis, MS  
39475-4475  
Phone: No number found  
**Percent Ownership: 2.8571%**

Thompson, Geraldine Lois Mendoza  
32981 Bayou Sorrel Rd.  
Plaquemine, LA  
**Percent Ownership: 0.3968%**

Tubbs, Patricia Ann McGlothlin  
P.O. Box 208  
St. Francisville, LA  
Phone: No number found  
**Percent Ownership: 0.3968%**

Verret, Diana McGlothlin  
C/o Delta Hudson  
63650 Old Hwy 77

Plaquemines, LA  
**Percent Ownership:** 0.1323%

Verret, Diana McGlothlin  
C/o Delta Hudson  
63650 Old Hwy 77  
Plaquemines, LA  
**Percent Ownership:** 0.1323%

Wisdom, Horace  
110 Cypress Island Road  
St .Martinville, LA  
70852-3600  
Phone: 337-394-6218  
**Percent Ownership:** 3.5714%

Wisdom, Leonard  
c/o Walter Wisdom  
65775 Shelby K. Drive  
Plaquemine, LA  
70764-7305  
Phone: 225-659-2386  
**Percent Ownership:** 3.5714%

**Parcel# 1530004158**  
Polk, Zeldia Leigh Powell et al.  
P.O. Box 460  
26551 Mandane Dr.  
Lacombe, LA 70445-2547  
Phone: 985-882-3721  
**Percent Ownership:** 75%

Edgar, Daniel  
155 Intracoastal Rd.  
Franklin, LA  
70538-7603  
Phone: 337-924-9844  
**Percent Ownership:** 33.3333%

Schwing, Inc.  
C/o Schwing Management, et al.  
9422 Common Street, Ste 2  
Baton Rouge, LA  
Phone: 225-927-4447  
**Percent Ownership:** 33.3333%

Gonsoulin, Keven  
2516 East Admiral Doyle Dr.  
New Iberia, LA  
70560  
Phone: 337-364-0279  
**Percent Ownership:** 33.3333%

Gutekunst, O.O.  
211 W. Port St.  
St. Martinville, LA  
70582-3921  
Phone: 337-394-3921  
**Percent Ownership:** 25%

Gutekunst, O.O.  
211 W. Port St.  
St. Martinville, LA  
70582-3921  
337-394-3921  
**Percent Ownership:** 12.5%

**Parcel# 1540001315**

Curry, Edwin  
3007 Hwy 87  
Franklin, LA  
Phone: No number listed; number for Edwin J. Curry is 337-828-0981  
**Percent Ownership: 100%**

**Parcel#1540001818**

Verret, Numa Heirs  
c/o Lucas Verret  
102 Beau Clos Rd.  
Lake Charles, LA 70607  
Phone: 337-598-5570  
**Percent Ownership: 100%**

**Parcel# 1540001911**

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership: 17.14%**

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380-4483  
Phone: 985-384-4564  
**Percent Ownership: 14.29%**

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%

Case, Jesse c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896 (Derouen, Verda Rey Case)  
**Percent Ownership:** 17.14%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

**Parcel# 1540001118**  
Stockstill, Albert Sidney Heirs  
c/o Stanley Leece  
102 Nan Street  
Lafayette, LA  
70503-2224  
Phone: None located  
**Percent Ownership:** 100%

Wisdom, Horace  
110 Cypress Island Rd.  
St. Martinville, LA  
Phone: 337-394-6218  
**Percent Ownership:** 3.5714

Wisdom, Percy Jr.  
32885 Bayou Sorrel Rd.  
Plaquemine, LA  
70764-7124  
Phone: 225- 659-2235  
**Percent Ownership:** 3.5714



Wisdom, Leonard  
c/o Walter Wisdom  
65775 Shelby K. Drive  
Plaquemine, LA  
70764-7305  
Phone: 225- 659-2386  
**Percent Ownership:** 3.5714

Hartner, Paige C.  
c/o Ouida Sepehri-nik  
44West Broadway  
#1205 S. Tower  
Salt Lake City, UT  
84101-3213  
Phone: could not locate no.  
**Percent Ownership:** 2.8571%

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148 Sun St.  
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Phone: could not locate no.; Gloria Crowson listed at same address, with Ph. No. 225-928-7692  
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70767-5832  
Phone: 225-749-2233  
**Percent Ownership:** 2.8571%

Hubbs, Anna C.  
1753 May Street  
Baton Rouge, LA  
70808-2074  
Phone: 225-383-4534  
**Percent Ownership:** 2.8571%

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45 Pine Crest Rd.  
Purvis, MS  
39475-4475  
Phone: No number found  
**Percent Ownership:** 2.8571%

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25340 Stassi Rd  
Plaquemine, LA

Phone: 225-659-7859  
**Percent Ownership: 2.381%**

Millet, Emma Wisdom  
58929 Postell Ave.  
Plaquemine, LA  
70764-3429  
Phone: 225-687-1000  
**Percent Ownership: 3.5714%**

**Parcel#1530001665**

Labiche, Kimberly Jane Stockstill; Mitzi; Brian; Kevin & Jason  
c/o Donald J. Stockstill  
726 Evergreen Dr.  
New Iberia, LA  
Phone: 337-364-2316  
**Percent Ownership: 50%**

Dumesnil, Adam F. Estate  
c/o Mrs. George Gregoire  
317 Jackson St.  
Donaldsonville, LA  
Phone: 225-473-8285  
**Percent Ownership: 50%**

**Parcel# 1410002363**

Wilbert, A. Sons Limited  
P.O. Box 694  
Plaquemines, LA  
Phone: 225-687-3591  
**Percent Ownership: 100%**

**Parcel# 1410002247**

St. Martin Parish School Board  
P.O. Box 859  
St. Martinville, LA  
Phone: Al Blanchard of the Parish Superintendent of Schools' staff, via cell phone: 337-316-8538  
**Percent Ownership: 100%**

**Parcel# 1410001968**

Case/Kurweg Properties, LLC et al.  
P.O. Box 619  
Plaquemine, LA  
**Percent Ownership: 100%**

Gonsoulin, Keven  
2516 East Admiral Doyle Drive  
New Iberia, LA 70560

**Percent Ownership:** 16.66%

Edgar, Daniel  
155 Intracoastal Road  
Franklin, LA

**Percent Ownership:** 16.66%

Landry, Jacob Durand; Stephanie; Louise; Antoinette; Mary; Albert, and Courtney  
5915 Cardinal Creek Way  
Kingwood, TX

**Percent Ownership:** 33.333

**Parcel# 1650001713**

Jeanerette Lumber & Shingle Co., LTD  
228 St. Charles Ave., Suites 1424  
New Orleans, LA 70130-3601  
Phone: 504-568-1922

**Percent Ownership:** 100%

**Parcel #1650003923**

Jeanerette Lumber & Shingle Co., LTD  
228 St. Charles Ave., Suites 1424  
New Orleans, LA 70130-3601  
Phone: 504-568-1922

**Percent Ownership:** 100%

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303

Phone: No number listed

**Percent Ownership:** 17.14%

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Morgan City, LA 70380

Phone: 985-384-4564

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P.O. Box 13038

New Iberia, LA 70562

Phone: None listed for her, but number for James L. Gray is 337-364-2176

**Percent Ownership:** 17.14%

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Benton, LA  
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Phone: 318-965-1027  
**Percent Ownership:** 17.14%

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101 Patrick Street  
New Iberia, LA  
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Phone: 337-364-5896  
**Percent Ownership:** 17.14%

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Lafayette, LA  
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Phone: 337-234-7137  
**Percent Ownership:** 17.14%

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1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership:** 17.14%

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**Percent Ownership:** 17.14%

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Phone: 337-924-9844  
**Percent Ownership:** 33.3333%

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c/o Doris Froisy  
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Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

Gonsoulin, Keven  
2516 East Admiral Doyle Dr.  
New Iberia, LA  
70560  
Phone: 337-364-0279  
**Percent Ownership:** 33.3333%

Schwing, Inc.  
c/o Schwing Management, et al.  
9422 Common Street, Ste 2  
Baton Rouge, LA 70809  
Phone: 225-927-4447  
**Percent Ownership:** 33.3333%

**Parcel #1530003051**  
Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 70303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%



Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership:** 17.14%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

**Parcel #1530001844**  
State of Louisiana  
P.O. Box 94095  
Baton Rouge, LA  
Phone: Clay Carter (225-342-4600; [clay.carter@la.gov](mailto:clay.carter@la.gov))  
**Percent Ownership:** 66.67%

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA 70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

Milmo, Bernard III  
2603 Houston Dr. South  
LaMarque, TX 77568-4356  
Phone: None found  
**Percent Ownership:** 9.26%

**Parcel #1530001437**  
State of Louisiana, Office of State Lands  
P.O. Box 94095  
Baton Rouge, LA  
Phone: Clay Carter (225-342-4600; [clay.carter@la.gov](mailto:clay.carter@la.gov))  
**Percent Ownership:** 66.67%

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed

**Percent Ownership:** 17.14%  
Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
70166-9117  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership:** 17.14%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

**Parcel #1530002341**

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA 70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

Schwing, Inc.  
c/o Schwing Management, et al.  
9422 Common Street, Ste 2  
Baton Rouge, LA 70809  
Phone: 225-927-4447  
**Percent Ownership:** 33.3333%

State of Louisiana  
P.O. Box 94095  
Baton Rouge, LA  
Phone: Clay Carter (225-342-4600; [clay.carter@la.gov](mailto:clay.carter@la.gov))  
**Percent Ownership:** 100%

Edgar, Daniel  
155 Intracoastal Rd.  
Franklin, LA  
70538-7603  
Phone: 337-924-9844  
**Percent Ownership:** 33.3333%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA

70563-3329  
Phone: 337-364-5896  
**Percent Ownership:** 17.14%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Case, Ernest (Jerold) Estate  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Gonsoulin, Keven  
2516 East Admiral Doyle Dr.  
New Iberia, LA  
70560  
Phone: 337-364-0279  
**Percent Ownership:** 33.3333%

**Parcel # 1530001628**  
Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
70166-9117  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership:** 17.14%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA 70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

**Parcel #1530003467**  
Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA 70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%



Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
337-364-5896  
**Percent Ownership:** 17.14%

**Parcel #2020004544**  
State of Louisiana, Office of State Lands  
P.O. Box 94095  
Baton Rouge, LA  
Phone: Clay Carter (225-342-4600; [clay.carter@la.gov](mailto:clay.carter@la.gov))  
**Percent Ownership:** 100%

**Parcel #2020004544**  
Beckmann, John Warren  
432 N. Ivescrest  
Covina, CA 91724-2719  
Phone: 626-339-4061  
**Percent Ownership:** 15.63%

Ernest, Rosemary Villarubia et al.  
701 Loreauville Rd  
New Iberia, LA 70563-2021  
Phone: 337-360-3472  
**Percent Ownership:** 4.17%

Gray, Margaret A.S.  
P.O. Box 260922  
Encino, CA  
Phone: None found  
**Percent Ownership:** 6.25%

Howell, Deborah Sue Reynolds  
c/o William David Reynolds  
870 N. Phelps Ave.  
Winter Park, FL 32789-2759  
Phone: 407-645-5056  
**Percent Ownership: 1.39%**

J.C.B. Development, Inc.  
108 Richland Ave.  
Lafayette, LA  
Phone: None located  
**Percent Ownership: 30%**

Metternich, Elsie Robichaux  
C/o Kathy Metternich  
525 Hyman Drive  
Jefferson, LA 70121-1717  
Phone: 504-833-2477  
**Percent Ownership: 1.25%**

Reynolds, Bobby Beckmann Joseph Jr.  
c/o William David Reynolds  
870 N. Phelps Ave.  
Winter Park, FL 32789-2759  
Phone: 407-645-5056  
**Percent Ownership: 1.39%**

Reynolds, William David  
870 N. Phelps Ave.  
Winter Park, FL 32789-2759  
Phone: 407-645-5056  
**Percent Ownership: 1.39%**

Riser, Charlie R  
PO Box 5021  
Lafayette, LA  
Phone: Try 337-896-0491 or 337-235-1721 or 337-232-3539  
**Percent Ownership: 9.3331%**

Riser, Charlie R  
PO Box 5021  
Lafayette, LA  
Phone: See above  
**Percent Ownership: 0.0469%**

Schreifer, Allen; Ruth Elizabeth Schreifer; & Margaret Ann Schriefer  
14928 LA HWY 82  
Abbeville, LA 70510-8717  
Phone: 337-893-6885  
**Percent Ownership: 8.33%**  
Terrell, Elizabeth S.  
P.O. Box 453  
Machias, ME 04654-0453

Phone: 207-255-0014

**Percent Ownership:** 6.25%

Wellborn, William W. &  
Barbara Bayhurst Krack et al.  
c/o Orr Adams Jr., Esq.  
110 Veterans Blvd, Ste. 440  
Metairie, LA 70005-3027  
Phone: 504-833-3800

**Percent Ownership:** 6.25%

Wheat, Brenda R.  
156 Liner Rd NE  
Cleveland, TN 37312-6757  
Phone: 423-336-3889

**Percent Ownership:** 8.33%

**Parcel #1530002341**

State of Louisiana, Office of State Lands  
P.O. Box 94095  
Baton Rouge, LA  
Phone: Clay Carter (225-342-4600; [clay.carter@la.gov](mailto:clay.carter@la.gov))

**Percent Ownership:** 10300%

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed

**Percent Ownership:** 17.14%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
70166-9117  
Phone: 318-965-1027

**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564

**Percent Ownership:** 14.29%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership:** 17.14%

Edgar, Daniel  
155 Intracoastal Rd.  
Franklin, LA  
70538-7603  
Phone: 337-924-9844  
**Percent Ownership:** 33.3333%

Gonsoulin, Keven  
2516 East Admiral Doyle Dr.  
New Iberia, LA  
70560-8271  
Phone: 337-364-0279  
**Percent Ownership:** 33.3333%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

Schwing, Inc.  
c/o Schwing Management, et al.  
9422 Common Street, Ste 2  
Baton Rouge, LA 70809  
Phone: 225-927-4447  
**Percent Ownership:** 33.3333%

**Parcel #1530001628**  
Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership:** 17.14%

**Parcel #1530002034**  
The Dow Chemical Co.  
Tax Dept.  
P.O. Box 159, Bldg. 2304  
Plaquemine, LA  
Phone:  
**Percent Ownership:** 100%

**Parcel #1530002439**  
The Dow Chemical Co.  
Tax Dept.  
P.O. Box 159, Bldg. 2304  
Plaquemine, LA  
Phone:  
**Percent Ownership:** 100%

**Parcel #1530003051**  
Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Case, Ethel Mrs.  
c/o Mrs. James Gray



P.O. Box 13038  
New Iberia, LA  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership:** 17.14%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Fr.  
Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

original copy?



# Sellers & Associates, Inc.

**ENGINEERS** **SURVEYORS**

EUGENE M. SELLERS, FOUNDER  
TODD A. VINCENT, PRESIDENT/CEO  
LARRY A. CRAMER, VICE PRESIDENT

EUGENE M. SELLERS, PE., P.L.S.  
TODD A. VINCENT, M.S., PE., P.L.S.  
THOMAS R. CARROLL, III, PE., P.L.S.  
JOHN A. KEY, PE., P.L.S.  
LARRY A. CRAMER, PE., P.L.S.  
T. J. SAVOY, PE.  
STEPHANIE M. BRIGGS, PE.  
NICHOLAS A. SONNIER, PE.  
MATTHEW W. VINCENT, E.I.  
WILBERT J. GUIDRY, P.L.S.

May 12, 2016

US ARMY CORPS OF ENGINEERS  
NEW ORLEANS DISTRICT  
CEMVN-OD-S  
ATTN: MR. MICHAEL HERRMANN, JR.  
Post Office Box 60267  
New Orleans, LA 70160-0267

Re: St. Martin Parish Government  
Beau Bayou Swamp Hydrologic Restoration Project  
St. Martin Parish - Atchafalaya Basin  
Acct. No. MVN-2015-01796-WLL  
Dept. of the Army Permit Application  
S&A File No. 8004-07

Dear Mr. Herrmann,

On behalf of the St. Martin Parish Government, please find attached a USACE Application for Department of the Army Permit with continuation sheets, two (2) copies of the permit drawings, and one (1) bound copy of the habitat evaluation report and LRAM worksheets for the project's elements. The USACE's jurisdictional determination (MVN-2015-01796-SB) states that a Department of the Army permit will be required under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. The project is located outside of the Louisiana Coastal Zone Boundary, therefore a Coastal Use Permit will not be required for this project.

If you have any questions or require additional information, please contact me at our office.

Sincerely,

SELLERS & ASSOCIATES, INC.

NICK SONNIER, P.E.

**Attachments**

- N:\DATA\8004\8004-07 Permits\Ltr USACE 2016-05-12.wpd
- c: Mr. Heath Babineaux, St. Martin Parish Government (w/ attachments)
- Mr. Michael Bell, John Chance Land Surveys, Inc. (w/ Attachments)



17. DIRECTIONS TO THE SITE

The site is not accessible by land. From Butte La Rose, travel downstream on the Atchafalaya River approximately 14 miles. The Beau Bayou Water Management Unit (BBWMU) is bordered on the northwest and west by Lake Long and Bayou L'Embaras; on the southwest by Grand Bayou, on the southeast by Lake Fausse Pointe Cut, Bayou Gonsoulin, Alligator Bayou, and Bayou Chene, and on the east and northeast by Bayou Chene Cut, Splice Island Chute, Tensas Bay and Devil's Cut. This project consists of 10 separate elements throughout the Beau Bayou Water Management Unit.

18. Nature of Activity (Description of project, include all features)

SEE ADDITIONAL SHEETS (BLOCK 18, SHEET 1 OF 25)

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

SEE ADDITIONAL SHEETS (BLOCK 19, SHEET 2 OF 25)

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

This project involves clearing and snagging approximately 9 miles of existing channels and mechanically dredging 136,531 cubic yards of spoil material. The vegetative debris cleared from the existing channels will either be chipped in place or stockpiled in a disposal area and buried with excavated material. The excavated material dredged will be deposited within disposal areas along the existing spoil banks of the channels or as shown on the permit drawings. The Contractor will have the option of depositing the material along the edges of the Atchafalaya River outside of the USACE's authorized dimensions.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
Wetlands: Spoil - 93,296	Waterbottom/Non-wet Areas: Spoil - 43,235	Wet & Non-wet: Woody Vegetation: 11,193

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres Wetlands: 34.1 acres, Water Bottoms: 12.3 acres, Non-wetlands: 5.8 acres  
or

Linear Feet SEE ADDITIONAL SHEETS FOR MORE DETAILED BREAKDOWN (BLOCK 22, SHEET 3 OF 25)

23. Description of Avoidance, Minimization, and Compensation (see instructions)

SEE ADDITIONAL SHEETS (BLOCK 23, SHEET 4 OF 25)

24. Is Any Portion of the Work Already Complete?  Yes  No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (# more than can be entered here, please attach a supplemental list).

a. Address- SEE ADDITIONAL SHEETS (SHEETS 5-25 OF 25)

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
None					

\* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

  
SIGNATURE OF APPLICANT

2016-05-11  
DATE

  
SIGNATURE OF AGENT

2016-05-11  
DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.



## **Block 18 – Nature of Activity**

The project includes 10 elements within the BBWMU and consists of clearing & snagging approximately 9 miles of existing channels, clearing approximately 22.2 acres for the disposal of cleared and excavated material, and mechanically dredging approximately 136,500 cubic yards of material from 3.9 miles of existing channels, earthen plugs, and spoil banks. Existing channels will be cleared of snags, shrubs and trees within the existing top banks of the channel. Cleared vegetative material will either be chipped in place or stockpiled in the clearing & spoil disposal areas shown on the plans and buried. In selected locations the existing channel will be mechanically dredged according to the dimensions and template shown in the permit drawings. If the proposed typical section will result in excavation outside of the existing channel top bank, the proposed alignment will be adjusted or the proposed channel bottom width will be reduced to remain within the existing channel top banks. The project also proposes to remove existing manmade earthen plugs that have been constructed across existing channels. When removing earthen plugs, the plug will first be cleared of all vegetation and then mechanically dredged. This work will be performed using barge mounted and/or amphibious equipment.

The project also involves creating gaps in existing spoil banks to increase sheet flow throughout the swamps of the BBWMU. This work will involve clearing the area of shrubs and trees, then excavating through the existing spoil bank until the existing elevation of the adjacent swamp is reached, a length of approximately 250' – 400' from the channel top bank into the adjacent swamp. Since creating gaps in existing spoil banks will involve work outside of the existing channels, this work will most likely be performed using some type of land or amphibious equipment, such as marsh buggies, or with barge mounted equipment if water levels are adequate.

If the element's reach calls for clearing and snagging only, the contractor shall chip all woody vegetation and trees as close to the ground as the cutting tools permit. If the element's reach calls for clearing and snagging and excavation, the contractor shall clear the clearing and spoil disposal areas designated on the plans to accommodate moving equipment and spreading the excavated material, stockpile the cleared material within the clearing and spoil disposal area, and bury the cleared material to a depth of at least 2 feet with excavated material.

## **Block 19 – Project Purpose**

The objective of this project is to improve the water quality and aquatic habitat values throughout the BBWMU by attempting to restore historical beneficial riverine inflows into the BBWMU and increasing sheet flow throughout the swamps of the BBWMU. Canal spoil banks, accretion within existing channels and swamps, and vegetative growth within existing channels have resulted in the blockage/impairment of beneficial inflow from historic hydrological inputs and reduced sheet flow throughout the BBWMU's swamps, further resulting in decreased dissolved oxygen levels and overall poor water quality and aquatic and wetland habitats for finfish and crawfish in the BBWMU. These issues are common throughout the Atchafalaya Basin, and the poor water quality has hindered the area's ability to sustain a healthy ecosystem, such that in recent years there has been a substantial decrease in recreational and commercial fishing within the BBWMU.

Since water stages within the BBWMU range from 3.9' at ordinary low water to 14.3' at ordinary high water, less desirable plant species such as willow and chinese tallow trees have grown within the channel banks and channel beds during low water periods. Shrubs and trees within the existing channels collect floating debris in the channel, increase accretion rates within the existing channels, and reduce the channels hydraulic capacity and ability to introduce oxygenated water into the BBWMU. Therefore, shrubs and trees as well as sediment that have built up within the existing channels must be removed in order to restore flow throughout the BBWMU. Additionally, channels adjacent to the Atchafalaya River are proposed to be excavated to greater depths in order to allow for future sediment buildup within those channels and postpone the need for future maintenance of the channel.

In 1982, the Corps noted the necessity to restore flow throughout the Atchafalaya Basin as part of an Environmental Impact Statement. In the Environmental Impact Statement, 13 proposed water management units were delineated, and later studies performed by the Corps indicated that the Beau Bayou Water Management Unit was listed as one of the five water management units that "have the best potential for implementation" (Atchafalaya Basin Floodway System, Louisiana Project, State Master Plan, Revised 1998). Efforts to restore flow throughout the Beau Bayou Water Management Unit were included in the State Master Plan for the Atchafalaya Basin Floodway System, and have been studied and supported by the LA DNR – Atchafalaya Basin Program. This project is funded through the Coastal Impact Assistance Program (CIAP) which is sponsored by the U. S. Fish & Wildlife Service. The features of this project are similar to those designed and implemented by the Corps' for improving flow throughout the Buffalo Cove Water Management Unit.

Work is proposed to start in July 2016 and be completed by December 31, 2016.

**Block 22 - Surface Area in Acres of Wetlands or Other Waters Filled**

Clearing & Snagging Only – Trees and woody vegetation will be chipped in place within the existing top bank of the channel. It is anticipated that the Contractor will use an excavator or marsh buggy with a grinder/chipper. The Contractor will be required to perform all work within the existing top bank of the channel.

Clearing & Snagging & Excavation – Trees and woody vegetation will be chipped in place or stockpiled and buried in the disposal areas shown on the drawings. Excavated material will be placed in the disposal areas within the limits shown. This work will be performed with a dragline or excavator on a barge or marsh buggies, depending on the water level.

Element #	Wetlands (Acres)	Water Bottoms (Acres)	Non-wetlands/Uplands (Acres)
1 (1+35 to 77+75)	10.1		2.2
1 (77+75 to 118+82)	6.2		
2	1.5		
3	1.8		2.0
4	8.4	7.4	
5	0.2		0.5
6	1.4		
7	0.8		
8	3.1	3.1	
9	0.5		1.1
10	0.1	1.8	
<b>Total</b>	<b>34.1</b>	<b>12.3</b>	<b>5.8</b>

The estimated cost of the project exceeds the project's construction budget. The element's have been prioritized to provide the most efficiency if all of the elements cannot be constructed. The priority of the elements is listed below. Impacts to Waters of the United States and the surface area of wetlands or waters filled would be decreased if all of the elements are not constructed.

Priority	Element #
1	1
2	3
3	5
4	6
5	10
6	7
7	2
8	4
9	9
10	8

## **Block 23 – Description of Avoidance, Minimization, and Compensation**

The objective of this project is to improve water quality and aquatic habitat values throughout the BBWMU by restoring historical beneficial riverine inflows from the Atchafalaya River into the BBWMU and increasing sheet flow throughout the swamps of the BBWMU. To accomplish this objective, existing channels along the perimeter of the BBWMU that feed the interior swamp must be dredged and cleared to increase and provide unobstructed flow of highly oxygenated water from the Atchafalaya River into the interior swamps. Sedimentation, accretion, and the growth of less desirable species within the existing channels have decreased flow into and throughout the BBWMU, and this project will improve the existing channels in an attempt to return them to historical conditions. No alternative methods of construction could be considered for increasing the flow of water into the BBWMU, therefore impacts from excavating and clearing the existing channels could not be avoided.

The four alternatives considered for the deposition of the cleared and excavated materials are outlined below.

1. Designate upland and dead end pipeline canal disposal sites and deposit the material within those sites.
2. Chip or burn all cleared material and haul the excavated material to the Atchafalaya River and discharge the material along the edge of the Atchafalaya River outside of the USACE's authorized dimensions.
3. Locate an open water or degraded swamp area, and discharge the excavated material as a beneficial use to fill the area to an elevation that would be conducive to creating a healthy and sustainable wetland area.
4. Deposit the material along the existing channel banks and edge of excavation.

Alternatives 1, 2 & 3 listed above would involve transporting the excavated material to disposal sites or the Atchafalaya River. The material could be hauled by barge or truck to the discharge location or fluidized and pumped to the discharge location. Hauling the material by barge is not constructible. The proposed channel excavation typical sections were designed to remain within the existing top banks of the channels. This restricted the proposed widths of the channels, and there is not sufficient room to place and maneuver barges, tugs and equipment within the proposed cuts to haul the material by barge to a disposal site. Also, the fluctuating water levels within the work area may prohibit the use of floating equipment within the project area. Hauling the material by trucks or land equipment was considered. This method would still require impacts and clearing outside of the proposed excavation to allow for driving the trucks. Also, the unpredictable water level within the Atchafalaya Basin and BBWMU may not allow this method of hauling the material. Therefore, hauling the material by truck to disposal locations is a not a practical alternative for disposing of the cleared and excavated material. In addition to the issues stated above, hauling or pumping the material to disposal sites increases the costs considerably, almost 3-4 times as much. The increased cost would severely limit the work that could be performed, and the project's effectiveness would be hindered. Therefore, the alternatives for hauling or pumping the material to disposal sites are unfeasible, and alternative 4 was selected for the disposal of the cleared and excavated material.

This project's objectives and features are similar to the proposed and constructed improvements for the Buffalo Cove Water Management Unit (BCWMU), which borders the southern boundary of the BBWMU. Improvements to the Buffalo Cove Water Management Unit were constructed by the USACE in 2006, and 2012 (Maintenance of Elements 6, 7, 9-1, 9-2 and Bayou Eugene, Solicitation No. ABFSBC-12-S-0007) and are currently under construction by the USACE (Elements 3, 12, 14 and 16, Solicitation No. W912P8-15-B-0026). The Environmental Assessment for the Buffalo Cove project states that "Even though there are direct construction impacts, these are expected to be fully offset with benefits to over 58,000 acres of forested wetlands, and improvements in water quality and deep water and terrestrial habitat within the BCWMU". The Buffalo Cove Project estimated that the worst-case scenario for impacts to forested wetlands would be 547 acres. The final environmental documents for the project did not require compensatory mitigation for the project since the direct impacts of the project were offset by the water quality and habitat benefits. The BBWMU encompasses approximately 22,000 acres and the estimated impacts to forested wetlands for the clearing, excavation, and fill of all of the Elements included in the Beau Bayou Project are 51.6 acres. This project proposes to improve water quality and aquatic habitat value throughout the BBWMU, in line with the objectives and features of the BCWMU project and the activities permitted under Nationwide Permit 27. Since the activities to be performed under this project will result in net increases in aquatic resource functions and services, the St. Martin Parish Government requests that no compensatory mitigation be required for the direct impacts from construction of the proposed improvements. Should compensatory mitigation be required, the Parish intends to purchase the credits from an approved USACE Mitigation Bank.

**Block 26**

**\*\*\*Note: The St. Martin Parish Government is currently contacting adjacent landowners to acquire temporary servitudes for the construction of this project.**

**Parcel# 1540001108**

Allen, Beatrice Curry  
25340 Stassi Rd  
Plaquemine, LA  
Phone: 225-659-7859

**Percent Ownership: 2.381%**

Crowson, Andrew J. Jr.  
5445 Govt. St. Apt 135  
Baton Rouge, LA  
Phone: could not locate no.  
Gloria Crowson listed at same address, with Ph. 225-928-7692

**Percent Ownership: 2.8571%**

Hartner, Paige C.  
c/o Ouida Sepehri-nik  
44West Broadway  
#1205 S. Tower  
Salt Lake City, UT  
84101-3213  
Phone: could not locate no.  
**Percent Ownership: 2.8571%**

Hubbs, Anna C.  
1753 May Street  
Baton Rouge, LA  
70808-2074  
Phone: 225-383-4534  
**Percent Ownership: 2.8571%**

Kelly, Glynna Ann Mendoza  
65785 J.R. Drive  
Plaquemines, LA  
Phone?  
**Percent Ownership: 0.3968%**

McGlothlin, Stephen W.  
C/O Delta Hudson  
63650 Old Hwy 77  
Plaquemine, LA  
Phone?  
**Percent ownership: 0.1323%**



McQuiston, Rose Mary  
32977 Bayou Sorrel Road  
Plaquemine, LA  
Phone?

**Percent ownership: 0.39%**

Mendoza, John Estate  
c/o Raymond Mendoza  
148 Sun St.  
Morgan City, LA  
Phone: 985-395-5924

**Percent Ownership: 69.0476%**

Mendoza, Richard Garrison, Jr.  
16619 Woodlawn Acres Ave.  
Baton Rouge, LA  
Phone?

**Percent Ownership: 0.3968%**

Millet, Emma Wisdom  
58929 Postell Ave.  
Plaquemine, LA  
70764-3429  
Phone: 225-687-1000

**Percent Ownership: 3.5714%**

Sarradet, Dorothy C.  
2116 Rowcliff Dr.  
Port Allen, LA  
70767-5832  
Phone: 225-749-2233

**Percent Ownership: 2.8571%**

Tate, Pearl C.  
45 Pine Crest Rd.  
Purvis, MS  
39475-4475  
Phone: No number found

**Percent Ownership: 2.8571%**

Thompson, Geraldine Lois Mendoza  
32981 Bayou Sorrel Rd.  
Plaquemine, LA

**Percent Ownership: 0.3968%**

Tubbs, Patricia Ann McGlothlin  
P.O. Box 208  
St. Francisville, LA  
Phone: No number found

**Percent Ownership: 0.3968%**

Verret, Diana McGlothlin  
C/o Delta Hudson  
63650 Old Hwy 77

Plaquemines, LA  
**Percent Ownership:** 0.1323%

Verret, Diana McGlothlin  
C/o Delta Hudson  
63650 Old Hwy 77  
Plaquemines, LA  
**Percent Ownership:** 0.1323%

Wisdom, Horace  
110 Cypress Island Road  
St .Martinville, LA  
70852-3600  
Phone: 337-394-6218  
**Percent Ownership:** 3.5714%

Wisdom, Leonard  
c/o Walter Wisdom  
65775 Shelby K. Drive  
Plaquemine, LA  
70764-7305  
Phone: 225-659-2386  
**Percent Ownership:** 3.5714%

**Parcel# 1530004158**  
Polk, Zelda Leigh Powell et al.  
P.O. Box 460  
26551 Mandane Dr.  
Lacombe, LA 70445-2547  
Phone: 985-882-3721  
**Percent Ownership:** 75%

Edgar, Daniel  
155 Intracoastal Rd.  
Franklin, LA  
70538-7603  
Phone: 337-924-9844  
**Percent Ownership:** 33.3333%

Schwing, Inc.  
C/o Schwing Management, et al.  
9422 Common Street, Ste 2  
Baton Rouge, LA  
Phone: 225-927-4447  
**Percent Ownership:** 33.3333%

Gonsoulin, Keven  
2516 East Admiral Doyle Dr.  
New Iberia, LA  
70560  
Phone: 337-364-0279  
**Percent Ownership:** 33.3333%

Gutekunst, O.O.  
211 W. Port St.  
St. Martinville, LA  
70582-3921  
Phone: 337-394-3921  
**Percent Ownership:** 25%

Gutekunst, O.O.  
211 W. Port St.  
St. Martinville, LA  
70582-3921  
337-394-3921  
**Percent Ownership:** 12.5%

**Parcel# 1540001315**

Curry, Edwin  
3007 Hwy 87  
Franklin, LA  
Phone: No number listed; number for Edwin J. Curry is 337-828-0981  
**Percent Ownership:** 100%

**Parcel#1540001818**

Verret, Numa Heirs  
c/o Lucas Verret  
102 Beau Clos Rd.  
Lake Charles, LA 70607  
Phone: 337-598-5570  
**Percent Ownership:** 100%

**Parcel# 1540001911**

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380-4483  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%

Case, Jesse c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896 (Derouen, Verda Rey Case)  
**Percent Ownership:** 17.14%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

**Parcel# 1540001118**  
Stockstill, Albert Sidney Heirs  
c/o Stanley Leece  
102 Nan Street  
Lafayette, LA  
70503-2224  
Phone: None located  
**Percent Ownership:** 100%

Wisdom, Horace  
110 Cypress Island Rd.  
St. Martinville, LA  
Phone: 337-394-6218  
**Percent Ownership:** 3.5714

Wisdom, Percy Jr.  
32885 Bayou Sorrel Rd.  
Plaquemine, LA  
70764-7124  
Phone: 225- 659-2235  
**Percent Ownership:** 3.5714

Wisdom, Leonard  
c/o Walter Wisdom  
65775 Shelby K. Drive  
Plaquemine, LA  
70764-7305  
Phone: 225- 659-2386  
**Percent Ownership: 3.5714**

Hartner, Paige C.  
c/o Ouida Sepehri-nik  
44West Broadway  
#1205 S. Tower  
Salt Lake City, UT  
84101-3213  
Phone: could not locate no.  
**Percent Ownership: 2.8571%**

Mendoza, John Estate  
c/o Raymond Mendoza  
148 Sun St.  
Morgan City, LA  
Phone: 985-395-5924  
**Percent Ownership: 69.0476%**

Crowson, Andrew J. Jr.  
5445 Govt. St. Apt 135  
Baton Rouge, LA  
Phone: could not locate no.; Gloria Crowson listed at same address, with Ph. No. 225-928-7692  
**Percent Ownership: 2.857%**

Sarradet, Dorothy C.  
2116 Rowcliff Dr.  
Port Allen, LA  
70767-5832  
Phone: 225-749-2233  
**Percent Ownership: 2.8571%**

Hubbs, Anna C.  
1753 May Street  
Baton Rouge, LA  
70808-2074  
Phone: 225-383-4534  
**Percent Ownership: 2.8571%**

Tate, Pearl C.  
45 Pine Crest Rd.  
Purvis, MS  
39475-4475  
Phone: No number found  
**Percent Ownership: 2.8571%**

Allen, Beatrice Curry  
25340 Stassi Rd  
Plaquemine, LA



Phone: 225-659-7859

**Percent Ownership:** 2.381%

Millet, Emma Wisdom

58929 Postell Ave.

Plaquemine, LA

70764-3429

Phone: 225-687-1000

**Percent Ownership:** 3.5714%

**Parcel#1530001665**

Labiche, Kimberly Jane Stockstill; Mitzi; Brian; Kevin & Jason

c/o Donald J. Stockstill

726 Evergreen Dr.

New Iberia, LA

Phone: 337-364-2316

**Percent Ownership:** 50%

Dumesnil, Adam F. Estate

c/o Mrs. George Gregoire

317 Jackson St.

Donaldsonville, LA

Phone: 225-473-8285

**Percent Ownership:** 50%

**Parcel# 1410002363**

Wilbert, A. Sons Limited

P.O. Box 694

Plaquemines, LA

Phone: 225-687-3591

**Percent Ownership:** 100%

**Parcel# 1410002247**

St. Martin Parish School Board

P.O. Box 859

St. Martinville, LA

Phone: Al Blanchard of the Parish Superintendent of Schools' staff, via cell phone: 337-316-8538

**Percent Ownership:** 100%

**Parcel# 1410001968**

Case/Kurweg Properties, LLC et al.

P.O. Box 619

Plaquemine, LA

**Percent Ownership:** 100%

Gonsoulin, Keven  
2516 East Admiral Doyle Drive  
New Iberia, LA 70560  
**Percent Ownership:** 16.66%

Edgar, Daniel  
155 Intracoastal Road  
Franklin, LA  
**Percent Ownership:** 16.66%

Landry, Jacob Durand; Stephanie; Louise; Antoinette; Mary; Albert, and Courtney  
5915 Cardinal Creek Way  
Kingwood, TX  
**Percent Ownership:** 33.333

**Parcel# 1650001713**  
Jeanerette Lumber & Shingle Co., LTD  
228 St. Charles Ave., Suites 1424  
New Orleans, LA 70130-3601  
Phone: 504-568-1922  
**Percent Ownership:** 100%

**Parcel #1650003923**  
Jeanerette Lumber & Shingle Co., LTD  
228 St. Charles Ave., Suites 1424  
New Orleans, LA 70130-3601  
Phone: 504-568-1922  
**Percent Ownership:** 100%

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%

Case, Jesse  
C/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership: 17.14%**

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership: 17.14%**

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
C/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership: 17.14%**

**Parcel #1530003947**  
Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership: 17.14%**

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership: 14.29%**

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176

**Percent Ownership: 17.14%**

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership: 17.14%**

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street

New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership:** 17.14%

Edgar, Daniel  
155 Intracoastal Rd.  
Franklin, LA  
70538-7603  
Phone: 337-924-9844  
**Percent Ownership:** 33.3333%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

Gonsoulin, Keven  
2516 East Admiral Doyle Dr.  
New Iberia, LA  
70560  
Phone: 337-364-0279  
**Percent Ownership:** 33.3333%

Schwing, Inc.  
c/o Schwing Management, et al.  
9422 Common Street, Ste 2  
Baton Rouge, LA 70809  
Phone: 225-927-4447  
**Percent Ownership:** 33.3333%

**Parcel #1530003051**  
Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 70303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership: 17.14%**

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership: 17.14%**

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership: 17.14%**

**Parcel #1530001844**  
State of Louisiana  
P.O. Box 94095  
Baton Rouge, LA  
Phone: Clay Carter (225-342-4600; [clay.carter@la.gov](mailto:clay.carter@la.gov))  
**Percent Ownership: 66.67%**

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership: 17.14%**

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership: 14.29%**



Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership: 17.14%**

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA 70508  
Phone: 337-234-7137  
**Percent Ownership: 17.14%**

Milmo, Bernard III  
2603 Houston Dr. South  
LaMarque, TX 77568-4356  
Phone: None found  
**Percent Ownership: 9.26%**

**Parcel #1530001437**  
State of Louisiana, Office of State Lands  
P.O. Box 94095  
Baton Rouge, LA  
Phone: Clay Carter (225-342-4600; [clay.carter@la.gov](mailto:clay.carter@la.gov))  
**Percent Ownership: 66.67%**

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed

**Percent Ownership: 17.14%**  
Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership: 14.29%**

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership: 17.14%**

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
70166-9117  
Phone: 318-965-1027  
**Percent Ownership: 17.14%**

Derouen, Verda Rey Case; Linda; Robert; Cynthia; &Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership: 17.14%**

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership: 17.14%**

**Parcel #1530002341**

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA 70508  
Phone: 337-234-7137  
**Percent Ownership: 17.14%**

Schwing, Inc.  
c/o Schwing Management, et al.  
9422 Common Street, Ste 2  
Baton Rouge, LA 70809  
Phone: 225-927-4447  
**Percent Ownership: 33.3333%**

State of Louisiana  
P.O. Box 94095  
Baton Rouge, LA  
Phone: Clay Carter (225-342-4600; [clay.carter@la.gov](mailto:clay.carter@la.gov))  
**Percent Ownership: 100%**

Edgar, Daniel  
155 Intracoastal Rd.  
Franklin, LA  
70538-7603  
Phone: 337-924-9844  
**Percent Ownership: 33.3333%**

Derouen, Verda Rey Case; Linda; Robert; Cynthia; &Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA

70563-3329

Phone: 337-364-5896

**Percent Ownership:** 17.14%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006

Phone: 318-965-1027

**Percent Ownership:** 17.14%

Case, Ernest (Jerold) Estate  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564

**Percent Ownership:** 14.29%

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed

**Percent Ownership:** 17.14%

Gonsoulin, Keven  
2516 East Admiral Doyle Dr.  
New Iberia, LA  
70560

Phone: 337-364-0279

**Percent Ownership:** 33.3333%

**Parcel # 1530001628**

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed

**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564

**Percent Ownership:** 14.29%

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
70166-9117  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; &Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership:** 17.14%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA 70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

**Parcel #1530003467**  
Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA 70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership: 17.14%**

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership: 17.14%**

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
337-364-5896  
**Percent Ownership: 17.14%**

**Parcel #2020004544**  
State of Louisiana, Office of State Lands  
P.O. Box 94095  
Baton Rouge, LA  
Phone: Clay Carter (225-342-4600); [clay.carter@la.gov](mailto:clay.carter@la.gov)  
**Percent Ownership: 100%**

**Parcel #2020004544**  
Beckmann, John Warren  
432 N. Ivescrest  
Covina, CA 91724-2719  
Phone: 626-339-4061  
**Percent Ownership: 15.63%**

Ernest, Rosemary Villarubia et al.  
701 Loreauville Rd  
New Iberia, LA 70563-2021  
Phone: 337-360-3472  
**Percent Ownership: 4.17%**

Gray, Margaret A.S.  
P.O. Box 260922  
Encino, CA  
Phone: None found  
**Percent Ownership: 6.25%**



Howell, Deborah Sue Reynolds  
c/o William David Reynolds  
870 N. Phelps Ave.  
Winter Park, FL 32789-2759  
Phone: 407-645-5056  
**Percent Ownership:** 1.39%

J.C.B. Development, Inc.  
108 Richland Ave.  
Lafayette, LA  
Phone: None located  
**Percent Ownership:** 30%

Metternich, Elsie Robichaux  
C/o Kathy Metternich  
525 Hyman Drive  
Jefferson, LA 70121-1717  
Phone: 504-833-2477  
**Percent Ownership:** 1.25%

Reynolds, Bobby Beckmann Joseph Jr.  
c/o William David Reynolds  
870 N. Phelps Ave.  
Winter Park, FL 32789-2759  
Phone: 407-645-5056  
**Percent Ownership:** 1.39%

Reynolds, William David  
870 N. Phelps Ave.  
Winter Park, FL 32789-2759  
Phone: 407-645-5056  
**Percent Ownership:** 1.39%

Riser, Charlie R  
PO Box 5021  
Lafayette, LA  
Phone: Try 337-896-0491 or 337-235-1721 or 337-232-3539  
**Percent Ownership:** 9.3331%

Riser, Charlie R  
PO Box 5021  
Lafayette, LA  
Phone: See above  
**Percent Ownership:** 0.0469%

Schreifer, Allen; Ruth Elizabeth Schreifer; & Margaret Ann Schriefer  
14928 LA HWY 82  
Abbeville, LA 70510-8717  
Phone: 337-893-6885  
**Percent Ownership:** 8.33%  
Terrell, Elizabeth S.  
P.O. Box 453  
Machias, ME 04654-0453

Phone: 207-255-0014

**Percent Ownership: 6.25%**

Wellborn, William W. &  
Barbara Bayhurst Krack et al.  
c/o Orr Adams Jr., Esq.  
110 Veterans Blvd, Ste. 440  
Metairie, LA 70005-3027  
Phone: 504-833-3800

**Percent Ownership: 6.25%**

Wheat, Brenda R.  
156 Liner Rd NE  
Cleveland, TN 37312-6757  
Phone: 423-336-3889  
**Percent Ownership: 8.33%**

**Parcel #1530002341**

State of Louisiana, Office of State Lands  
P.O. Box 94095  
Baton Rouge, LA  
Phone: Clay Carter (225-342-4600; [clay.carter@la.gov](mailto:clay.carter@la.gov))

**Percent Ownership: 10300%**

Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed

**Percent Ownership: 17.14%**

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
70166-9117  
Phone: 318-965-1027

**Percent Ownership: 17.14%**

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership: 14.29%**

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership:** 17.14%

Edgar, Daniel  
155 Intracoastal Rd.  
Franklin, LA  
70538-7603  
Phone: 337-924-9844  
**Percent Ownership:** 33.3333%

Gonsoulin, Keven  
2516 East Admiral Doyle Dr.  
New Iberia, LA  
70560-8271  
Phone: 337-364-0279  
**Percent Ownership:** 33.3333%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Dr.  
Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%

Schwing, Inc.  
c/o Schwing Management, et al.  
9422 Common Street, Ste 2  
Baton Rouge, LA 70809  
Phone: 225-927-4447  
**Percent Ownership:** 33.3333%

**Parcel #1530001628**  
Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Case, Ethel Mrs.  
c/o Mrs. James Gray  
P.O. Box 13038  
New Iberia, LA 70562  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership:** 17.14%

**Parcel #1530002034**  
The Dow Chemical Co.  
Tax Dept.  
P.O. Box 159, Bldg. 2304  
Plaquemine, LA  
Phone:  
**Percent Ownership:** 100%

**Parcel #1530002439**  
The Dow Chemical Co.  
Tax Dept.  
P.O. Box 159, Bldg. 2304  
Plaquemine, LA  
Phone:  
**Percent Ownership:** 100%

**Parcel #1530003051**  
Big Cane Land and Investment Corp  
1207 South Hampton Drive  
Alexandria, LA 71303  
Phone: No number listed  
**Percent Ownership:** 17.14%

Case, Ernest Jerold (Estate)  
c/o Wanda Kern  
1060 Susan Ct.  
Morgan City, LA 70380  
Phone: 985-384-4564  
**Percent Ownership:** 14.29%

Case, Ethel Mrs.  
c/o Mrs. James Gray

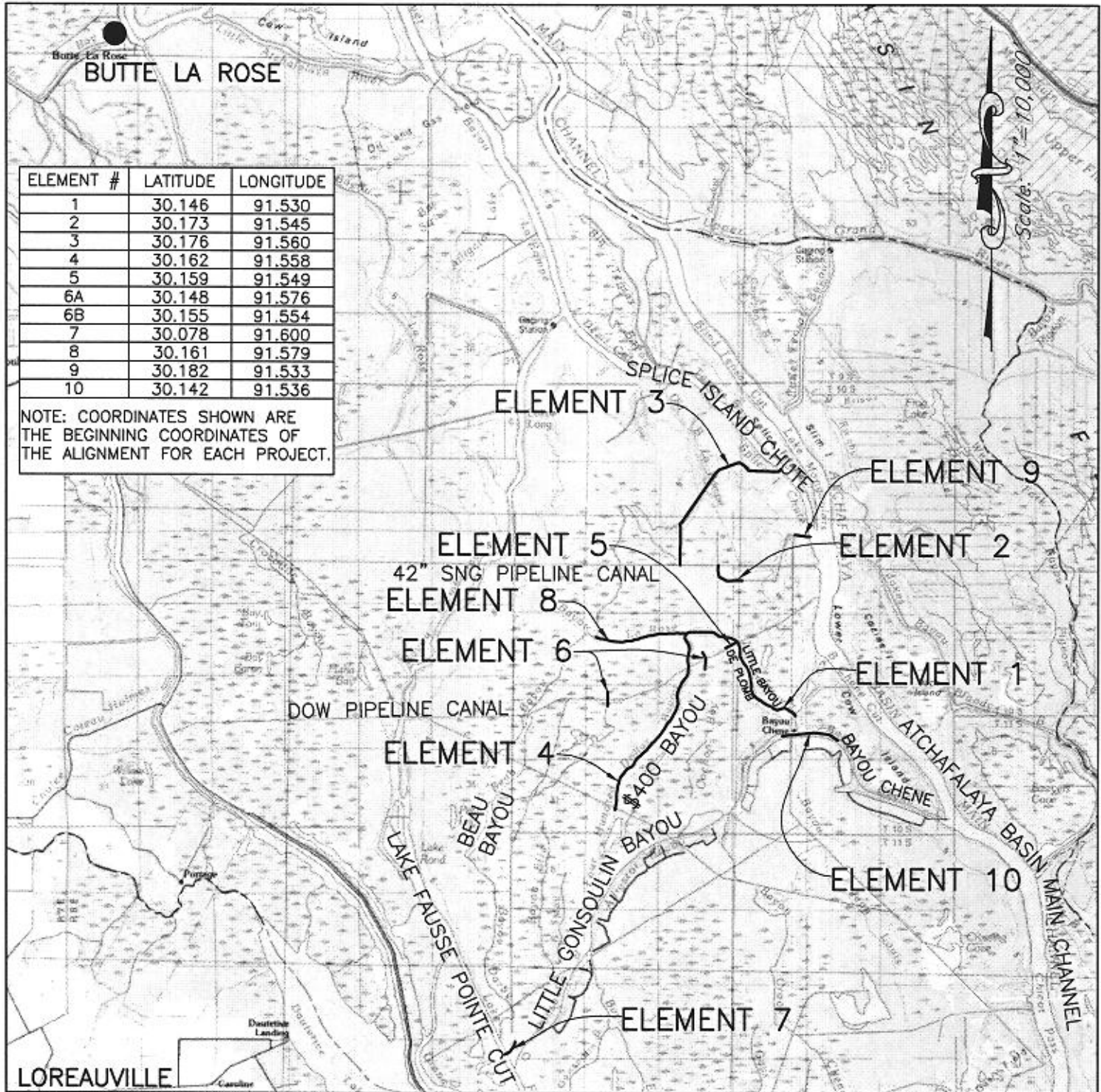
P.O. Box 13038  
New Iberia, LA  
Phone: None listed for her, but number for James L. Gray is 337-364-2176  
**Percent Ownership:** 17.14%

Case, Jesse  
c/o E.V. Case (Family Representative)  
2588 Cypress Village Drive  
Benton, LA  
71006  
Phone: 318-965-1027  
**Percent Ownership:** 17.14%

Derouen, Verda Rey Case; Linda; Robert; Cynthia; & Wanda Case Kern et al.  
101 Patrick Street  
New Iberia, LA  
70563-3329  
Phone: 337-364-5896  
**Percent Ownership:** 17.14%

Froisy, Doris C., Kathleen Dubois, Donna Gale Lejeune, Joanne C. Koch & Janice C. Touchet  
c/o Doris Froisy  
101 Kings Harbour Fr.  
Lafayette, LA  
70508  
Phone: 337-234-7137  
**Percent Ownership:** 17.14%





- GENERAL NOTES:**
1. THE CONTRACTOR SHALL MINIMIZE DISTURBING AREAS TO THE FOOTPRINT NEEDED FOR CONSTRUCTION. ALL AREAS TO BE CLEARED SHALL BE FLAGGED AND INSPECTED PRIOR TO CLEARING OPERATIONS TO INSURE NO DAMAGE TO SIGNIFICANT TREES.
  2. UNLESS SPECIFIED OTHERWISE, ALL EXCAVATION SHALL REMAIN WITHIN THE EXISTING CHANNEL TOP BANK. IF THE PROPOSED ALIGNMENT AND TEMPLATE WILL RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE ALIGNMENT OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH OF THE DESIGN TEMPLATE TO REMAIN WITHIN THE EXISTING TOP BANK OF THE CHANNEL.
  3. EXISTING FEATURES ARE ESTIMATED FROM LIDAR DATA. EXISTING TOP BANK SHALL BE FIELD DETERMINED AND ADJUSTED ACCORDINGLY.
  4. WITHIN AREAS MARKED FOR CLEARING & SPOIL DISPOSAL, ALL TREES AND WOODY VEGETATION NOT MARKED FOR PRESERVATION SHALL BE CUT SO THE REMAINING STUMP EXTENDS NO MORE THAN 12" ABOVE THE GROUND SURFACE. CLEARED MATERIAL SHALL BE STOCKPILED AND COVERED WITH EXCAVATED MATERIAL TO A DEPTH OF AT LEAST 2".
  5. PLACEMENT OF EXCAVATED MATERIAL SHALL BE CONTAINED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS. THE EXCAVATED MATERIAL BERM SHALL SLOPE BACK TO NATURAL GROUND AT A 2H:1V SLOPE, AND SHALL NOT BE CONTINUOUS FOR MORE THAN 400', UNLESS SPECIFIED OTHERWISE. THE EXCAVATED MATERIAL BERM SHALL HAVE GAPS WITH A MINIMUM OPENING OF 50' TO ALLOW THE FREE EXCHANGE OF WATER BETWEEN THE CHANNEL AND ADJACENT SWAMP.

QUAD MAP SHOWN: U.S.G.S. BATON ROUGE TOPOGRAPHIC MAP (1984) (1:100,000) (USGS REF. CODE:30091-A1-TM-100)

DESIGNED BY	N. SCHWIER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	B004-07
FILE NO.	SEE LEFT SIDE



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70506 (337) 232-0777

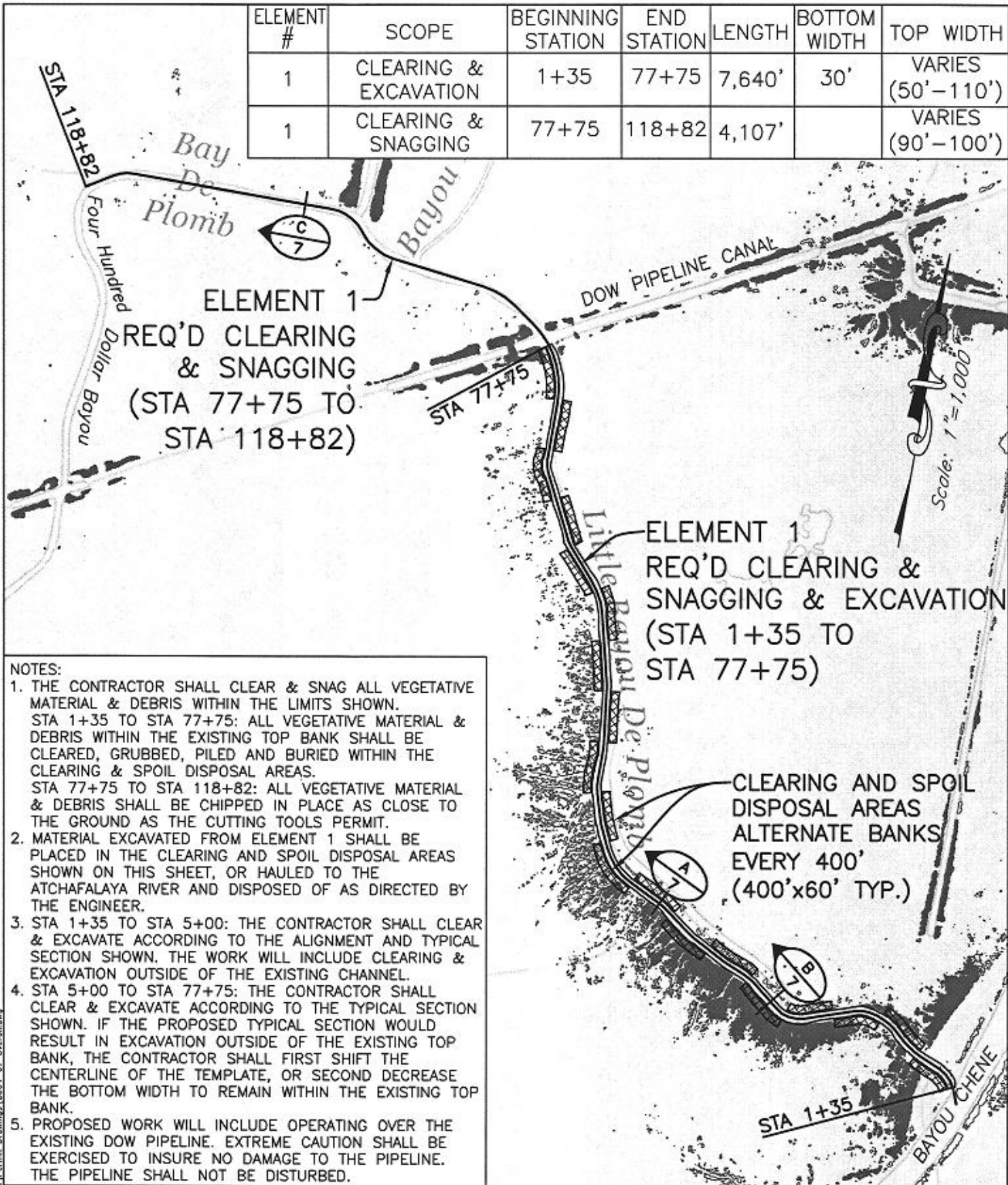
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

VICINITY MAP & GENERAL NOTES

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	1
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

AL1041(04) 10004 L0004-07 Permits/Permit Drawings/10004-07 Overall/10004-07

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
1	CLEARING & EXCAVATION	1+35	77+75	7,640'	30'	VARIES (50'-110')
1	CLEARING & SNAGGING	77+75	118+82	4,107'		VARIES (90'-100')



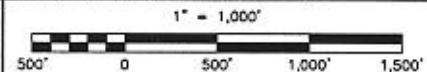
**NOTES:**

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. STA 1+35 TO STA 77+75: ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE EXISTING TOP BANK SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS. STA 77+75 TO STA 118+82: ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CHIPPED IN PLACE AS CLOSE TO THE GROUND AS THE CUTTING TOOLS PERMIT.
2. MATERIAL EXCAVATED FROM ELEMENT 1 SHALL BE PLACED IN THE CLEARING AND SPOIL DISPOSAL AREAS SHOWN ON THIS SHEET, OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. STA 1+35 TO STA 5+00: THE CONTRACTOR SHALL CLEAR & EXCAVATE ACCORDING TO THE ALIGNMENT AND TYPICAL SECTION SHOWN. THE WORK WILL INCLUDE CLEARING & EXCAVATION OUTSIDE OF THE EXISTING CHANNEL.
4. STA 5+00 TO STA 77+75: THE CONTRACTOR SHALL CLEAR & EXCAVATE ACCORDING TO THE TYPICAL SECTION SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.
5. PROPOSED WORK WILL INCLUDE OPERATING OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.

CLEARING & SPOIL DISPOSAL AREAS  
 UPLANDS (EL. > 15.6)

**LEGEND**

SECTION TITLE  
 SHEET NO. SHOWING SECTION



ENGINEER: W. SOMMER  
 DRAFTER: J. FABRE  
 DATE: APRIL 2016  
 AS SHOWN  
 PROJECT: 8004-07  
 FILE NO.: SEE LEFT SIDE

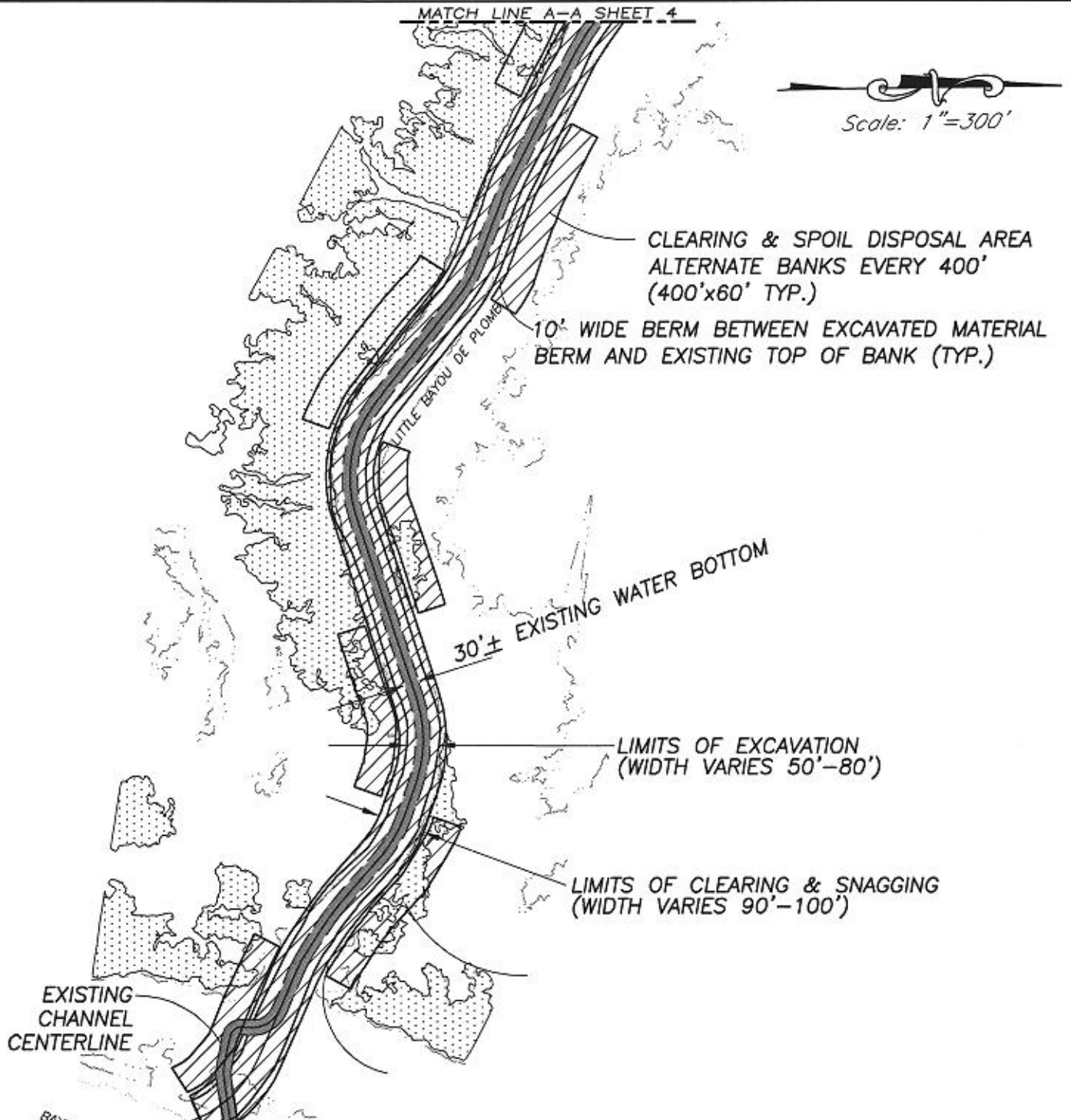
**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Bay Street, Lafayette, LA 70506 (337) 282-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 1 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	2
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

A:\L01\18004\8004-07\_Permit\Drawings\8004-07\_Overall.dwg

Scale: 1"=300'



CLEARING & SPOIL DISPOSAL AREA  
ALTERNATE BANKS EVERY 400'  
(400'x60' TYP.)

10' WIDE BERM BETWEEN EXCAVATED MATERIAL  
BERM AND EXISTING TOP OF BANK (TYP.)

30'± EXISTING WATER BOTTOM

LIMITS OF EXCAVATION  
(WIDTH VARIES 50'-80')






LIMITS OF CLEARING & SNAGGING  
(WIDTH VARIES 90'-100')

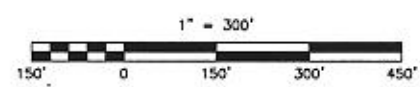
EXISTING  
CHANNEL  
CENTERLINE

Sta. 1+35 BEGIN EXCAVATION &  
CLEARING & SNAGGING

BAYOU CHENE

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



X:\GIS\1\8004\8004-07 Permits\Permit Drawings\8004-07 Project 1 Plans.dwg

DESIGNED BY	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
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148-B Bay Street, Lafayette, LA 70508 (337) 231-9777

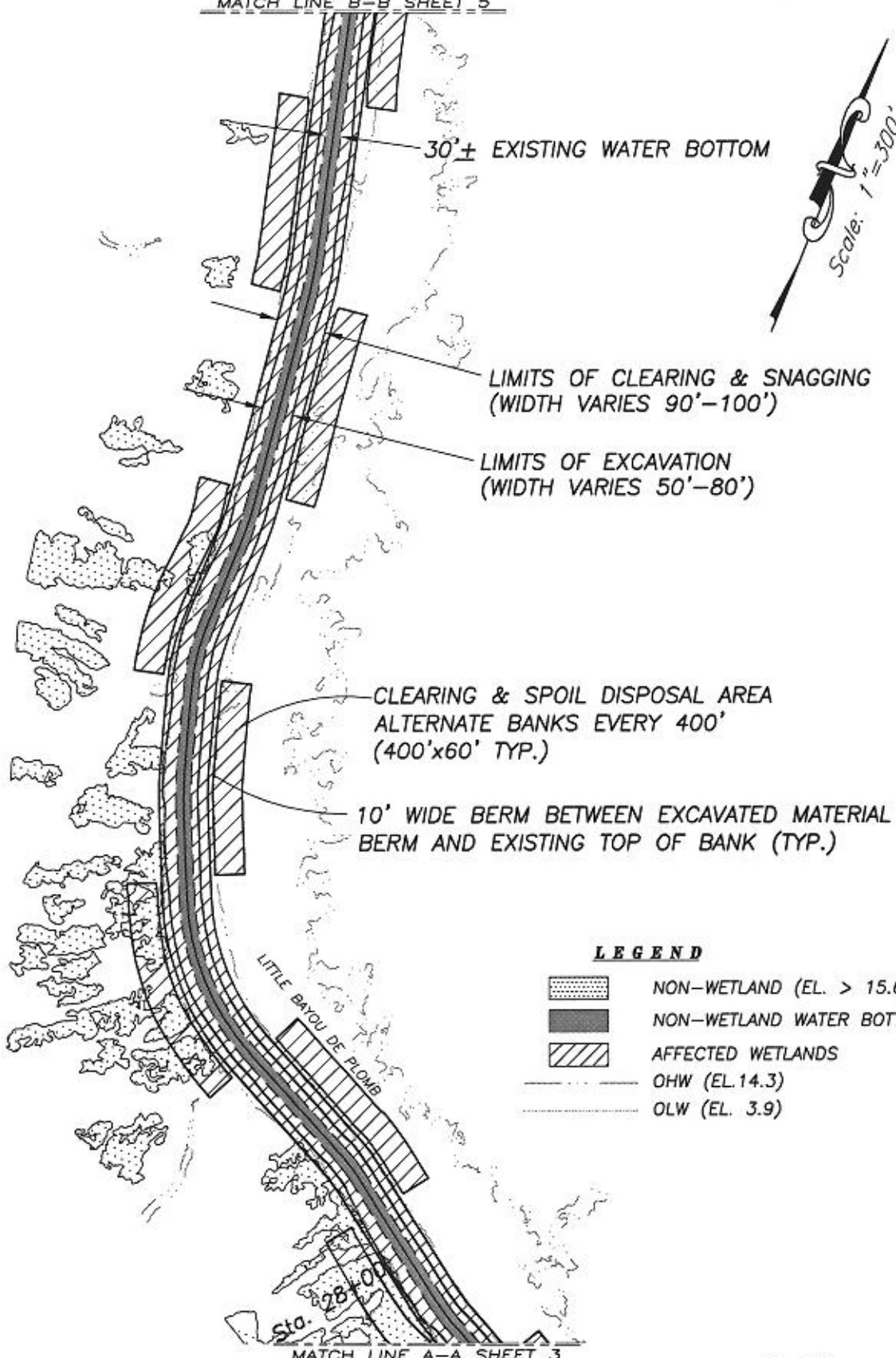
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT	3 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

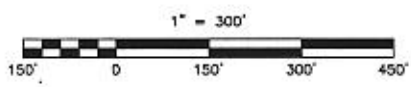


MATCH LINE B-B SHEET 5



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



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ENGINEER	N. SCHMIDT
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-3 Easy Street, Lafayette, LA 70506 (337) 232-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>4</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

MATCH LINE C-C SHEET 6

LITTLE BAYOU DE PLOMB  
 LIMITS OF CLEARING AND SNAGGING  
 (WIDTH VARIES 90'-100')

30'± EXISTING WATER BOTTOM

DOW PIPELINE CANAL

DOW PIPELINE CANAL

Sta. 77+75  
 END EXCAVATION  
 BEGIN CLEARING &  
 SNAGGING ONLY

LITTLE BAYOU DE PLOMB

30'± EXISTING WATER BOTTOM






LIMITS OF EXCAVATION  
 (WIDTH VARIES 50'-80')

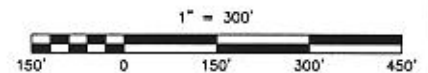
CLEARING & SPOIL DISPOSAL AREA  
 ALTERNATE BANKS EVERY 400'  
 (400'x60' TYP.)

10' WIDE BERM BETWEEN EXCAVATED MATERIAL BERM  
 AND EXISTING TOP OF BANK (TYP.)



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



MATCH LINE B-B SHEET 4

AL 08/21/2004 8:00:04-07 Permit/Plan/Drawings/8004-07 Project 1 Plans.dwg

DESIGNED BY	N. SCHWAB
DRAWN BY	J. FAURE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Bay Street, Lafayette, LA 70508 (337) 232-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 5 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



118+82  
END CLEARING  
& SNAGGING

FOUR HUNDRED  
DOLLAR BAYOU




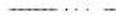
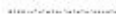
LIMITS OF CLEARING AND SNAGGING  
(WIDTH VARIES 90'-100')

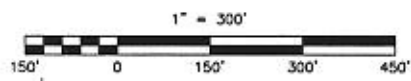
30'± EXISTING WATER BOTTOM

LITTLE BAYOU DE PLOMB

Scale: 1"=300'

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLV (EL. 3.9)



MATCH LINE C-C SHEET 5

A:\LDM\10004\10004-07 Permits\Permit Drawings\10004-07 Project 1 Plans.dwg

ENGINEER	N. SCHWARTZ
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	1004-07
FILE NO.	OVERALL.DWG

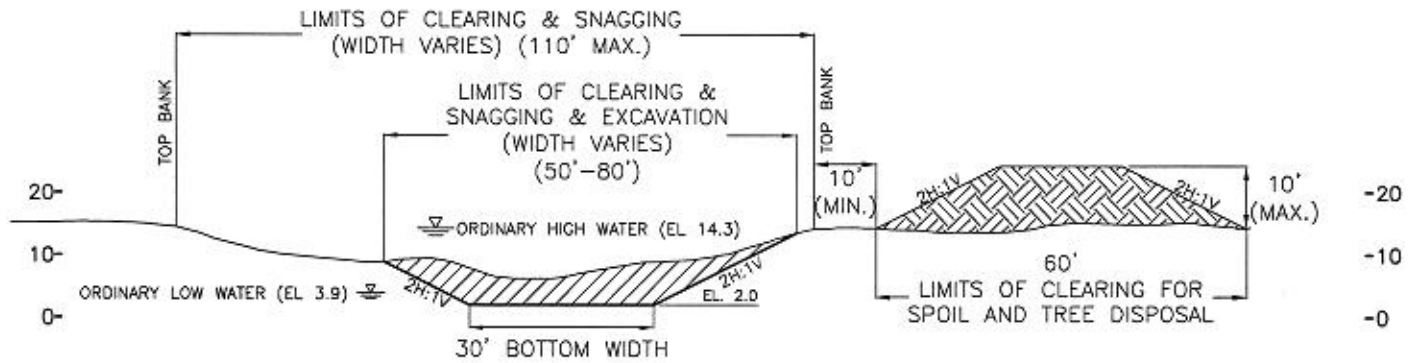


**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70506 (337) 232-0777

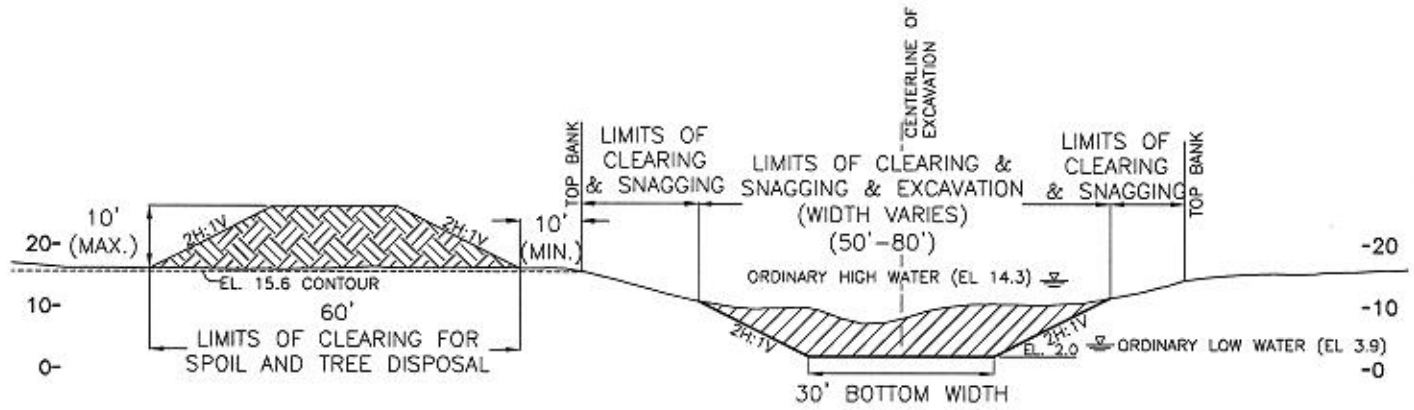
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW

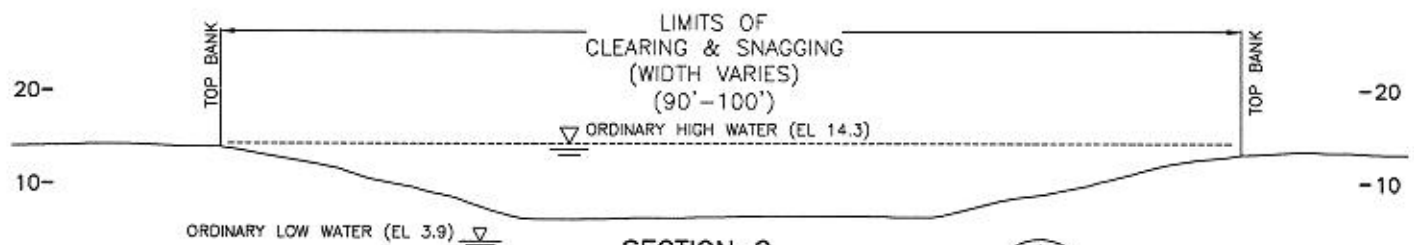
CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>6</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



SECTION A  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 1+35 TO STA 77+75  
 SCALE: 1"=30'



SECTION B  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 1+35 TO STA 77+75  
 SCALE: 1"=30'



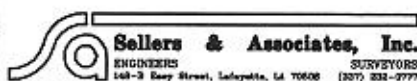
SECTION C  
 TYPICAL SECTION-CLEARING & SNAGGING  
 STA 77+75 TO STA 118+82  
 SCALE: 1"=20'

PROJECT FEATURES	QUANTITY
CHANNEL EXCAVATION (CU. YDS.)	86,670
CLEARING & SNAGGING (LIN. FT.)	11,747
CLEARING (ACRES)	12.3

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

ENGINEER	N. SONNER
DRAWN BY	N. SONNER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD

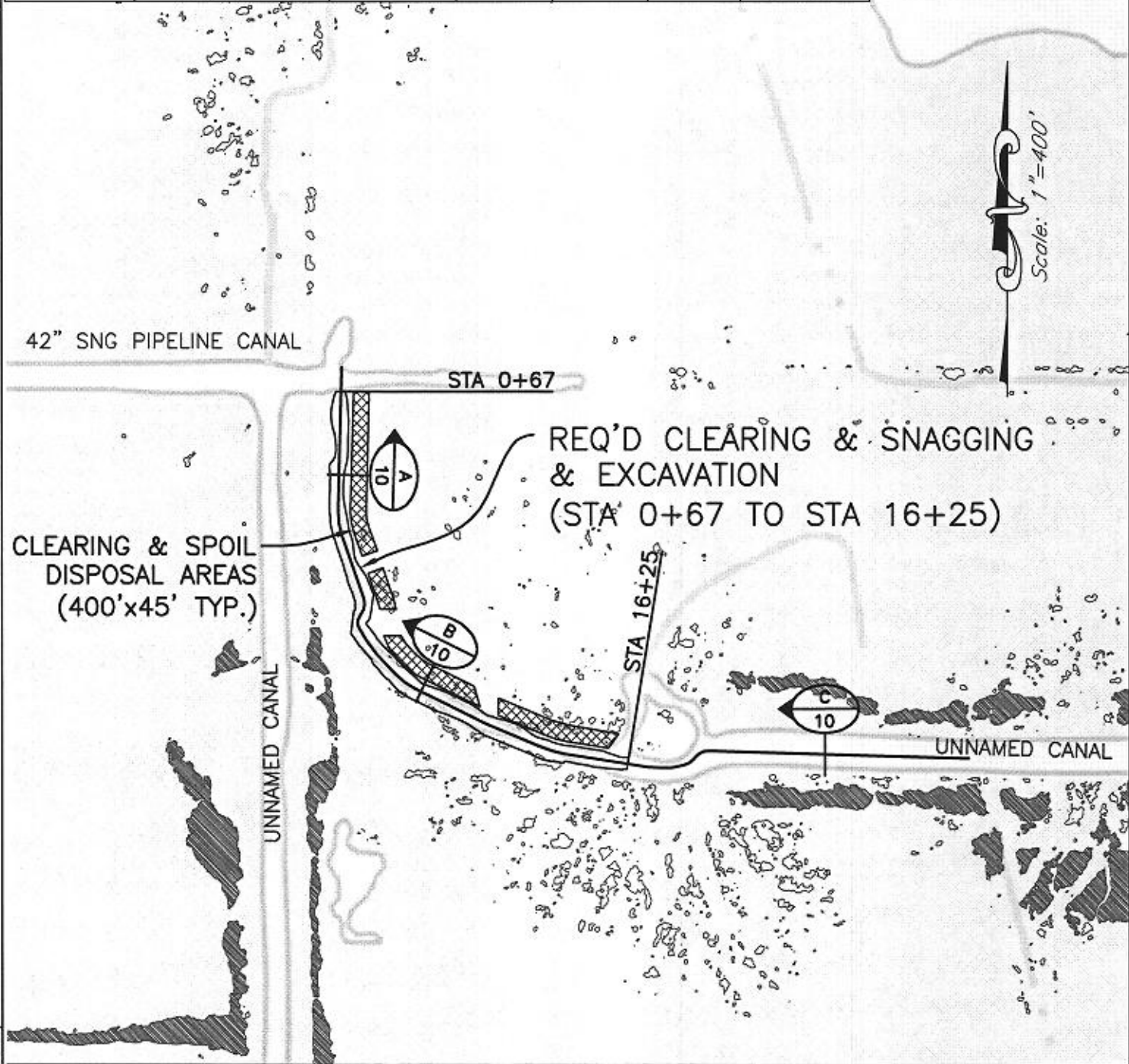


**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 1 - TYPICAL SECTIONS**





CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	7
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

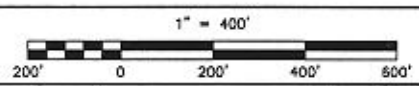
ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
2	CLEARING & EXCAVATION	0+67	16+25	1,558'	15'	VARIES (25'-55')



**NOTES:**

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 2 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE ALIGNMENT AND TYPICAL SECTION SHOWN. SINCE THE EXISTING CHANNEL CENTERLINE MEANDERS, THE PROPOSED ALIGNMENT MAY INVOLVE EXCAVATION OUTSIDE OF THE EXISTING TOP BANK.

 CLEARING & SPOIL DISPOSAL AREAS	<b>LEGEND</b>	 SECTION TITLE
 UPLANDS (EL. > 15.6)		 SHEET NO. SHOWING SECTION



DESIGNER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
PLANS	SEE LEFT SIDE



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
140-B Bay Street, Lafayette, LA 70508 (507) 232-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 2 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	8
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	
LOCATION	ST. MARTIN PARISH, LOUISIANA		44

N:\0121\8004\8004-07\_Planets\Permit\_Drawings\8004-07\_Overall.dwg

0+00

BEGIN EXCAVATION & CLEARING & SNAGGING  
STA 0+66

10' BERM BETWEEN EXCAVATED MATERIAL BERM & EXISTING OR PROPOSED TOP OF BANK (TYP.)

LIMITS OF EXCAVATION (WIDTH VARIES 25'-55')

LIMITS OF CLEARING & SNAGGING (WIDTH VARIES 40'-65')

CLEARING & SPOIL DISPOSAL AREAS (400' X 45' TYP.)

30'± EXISTING WATER BOTTOM






STA 16+25

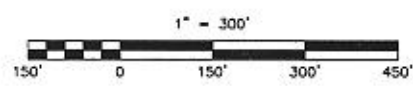
END EXCAVATION & CLEARING & SNAGGING

22+00

Scale: 1" = 300'

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\L001\10004\0004-07\_Permit\_Drawings\0004-07\_Project\_2\_Plans.dwg

ENGINEER	M. SANNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	PROJECT2.DWG



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lakeville, LA 70008 (504) 232-2999

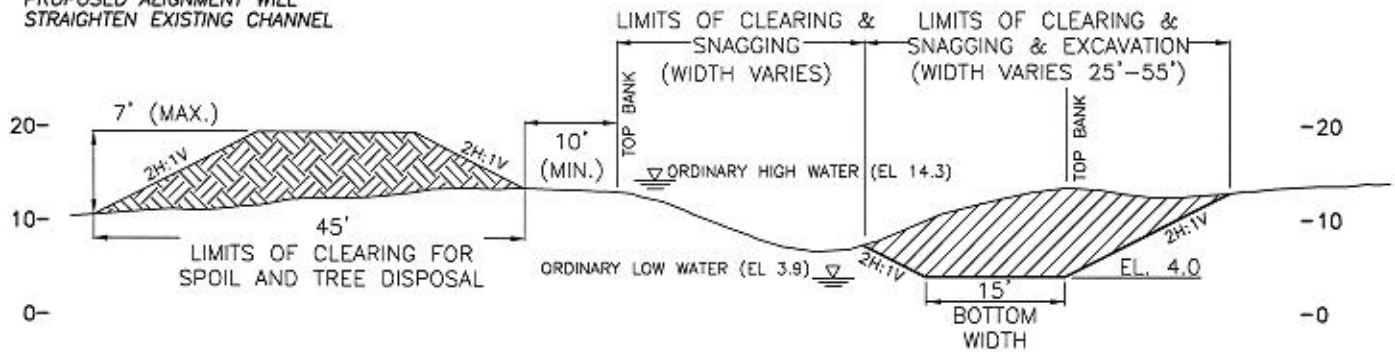
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 2 - PLAN VIEW

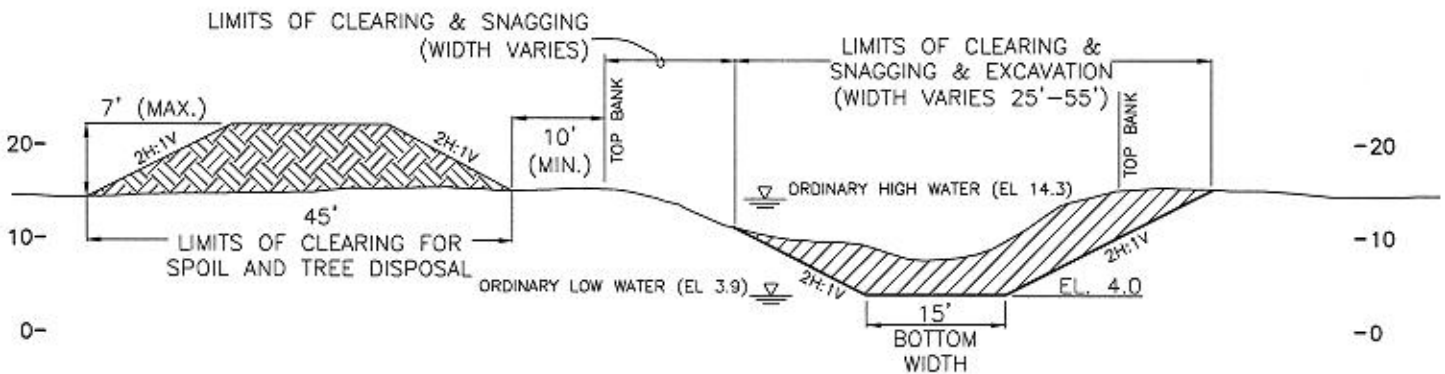
CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

9  
OF  
44

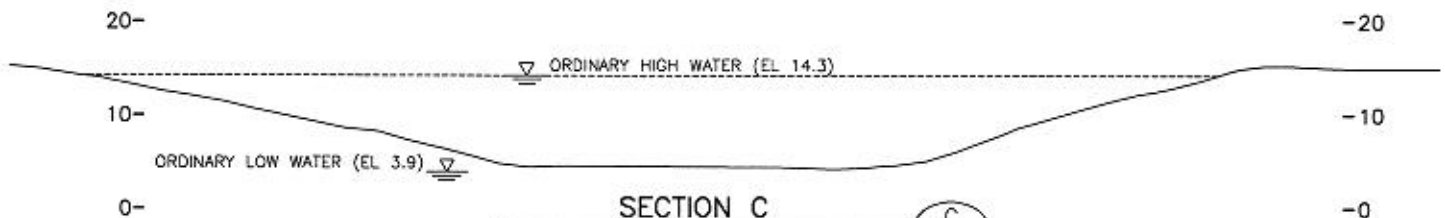
NOTE: EXISTING CHANNEL MEANDERS.  
PROPOSED ALIGNMENT WILL  
STRAIGHTEN EXISTING CHANNEL



SECTION A – EXISTING CHANNEL OFFSET FROM PROPOSED CENTERLINE  
TYPICAL SECTION—CLEARING & SNAGGING & EXCAVATION  
STA 0+67 TO STA 16+25  
SCALE: 1"=20'



SECTION B  
TYPICAL SECTION—CLEARING & SNAGGING & EXCAVATION  
STA 0+67 TO STA 16+25  
SCALE: 1"=20'



SECTION C  
TYPICAL SECTION—NO WORK  
SCALE: 1"=20'

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	9,191
CLEARING & SNAGGING (LIN. FT.)	1,558
CLEARING (ACRES)	1.5

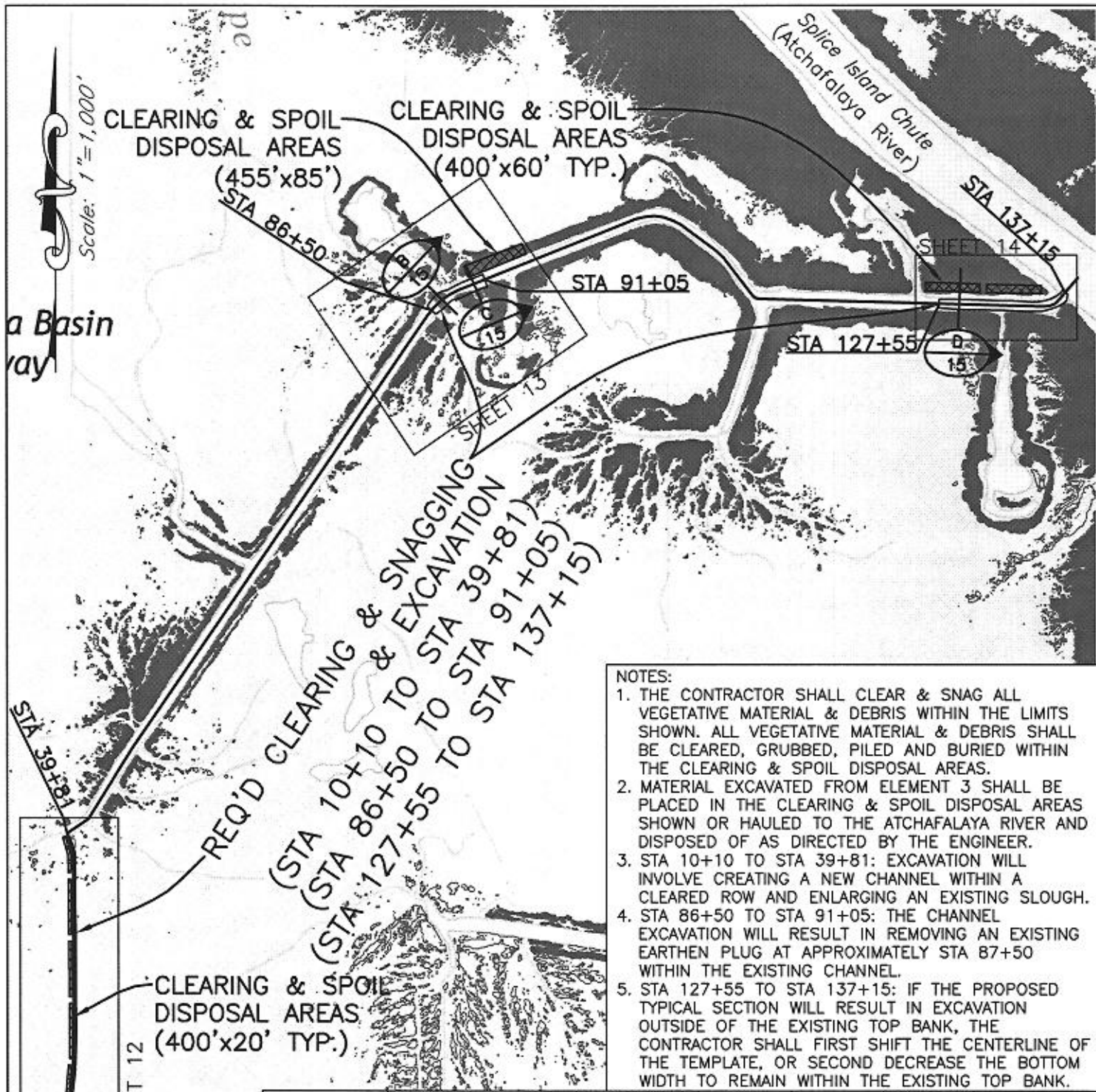
DESIGNER	N. SONNER
DRAWN BY	N. SONNER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
PLAN NO.	8004-05/CAD

**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lake Charles, LA 70608 (337) 522-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**  
ELEMENT 2 – TYPICAL SECTIONS

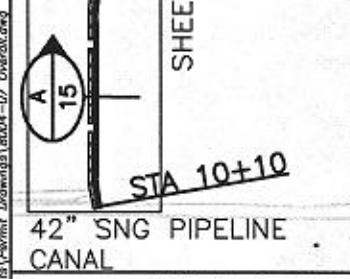
CLIENT	ST. MARTIN PARISH GOVERNMENT	DRAWN BY	
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	DATE	10
LOCATION	ST. MARTIN PARISH, LOUISIANA	SHEET NO.	44





- NOTES:**
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 3 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. STA 10+10 TO STA 39+81: EXCAVATION WILL INVOLVE CREATING A NEW CHANNEL WITHIN A CLEARED ROW AND ENLARGING AN EXISTING SLOUGH.
  4. STA 86+50 TO STA 91+05: THE CHANNEL EXCAVATION WILL RESULT IN REMOVING AN EXISTING EARTHEN PLUG AT APPROXIMATELY STA 87+50 WITHIN THE EXISTING CHANNEL.
  5. STA 127+55 TO STA 137+15: IF THE PROPOSED TYPICAL SECTION WILL RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
3	CLEARING & EXCAVATION	10+10	39+81	2,971	10'	VARIES (17'-25')
3	CLEARING & EXCAVATION	86+50	91+05	455'	60'	VARIES (75'-110')
3	CLEARING & EXCAVATION	127+55	137+15	960'	40'	VARIES (60'-75')



**LEGEND**

- CLEARING & SPOIL DISPOSAL AREAS
- UPLANDS (EL. > 15.6)
- SECTION TITLE
- SHEET NO. SHOWING SECTION

Scale: 1" = 1,000'

SPONSOR: M. SONNER  
 DRAWN BY: J. FABRE  
 DATE: APRIL 2016  
 SCALE: AS SHOWN  
 PROJECT: 8064-07  
 PLAN NO: SEE LEFT SIDE

**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Bay Street, Lafayette, LA 70508 (337) 288-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 3 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	11
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

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STA 39+81  
 END EXCAVATION &  
 CLEARING & SNAGGING

EXISTING CANAL

10' BERM BETWEEN EXCAVATED  
 MATERIAL BERM & EXISTING OR  
 PROPOSED TOP OF BANK (TYP.)

CLEARING & SPOIL  
 DISPOSAL AREAS  
 (400' X 45' TYP.)

30'± EXISTING WATER BOTTOM  
 LIMITS OF CLEARING & SNAGGING  
 (30' MAX.)






LIMITS OF EXCAVATION  
 (WIDTH VARIES 17'-25')

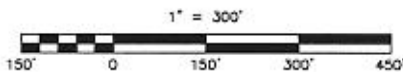
STA 10+10.00  
 BEGIN EXCAVATION &  
 CLEARING & SNAGGING

42" SNG PIPELINE  
 CANAL

Scale: 1" = 300'

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\DATA\6004\6004-07 Permits\Drawings\6004-07 Project\_3 Plans.dwg

DESIGNER	M. SPANNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	6004-07
FILE NO.	OVERALL.DWG



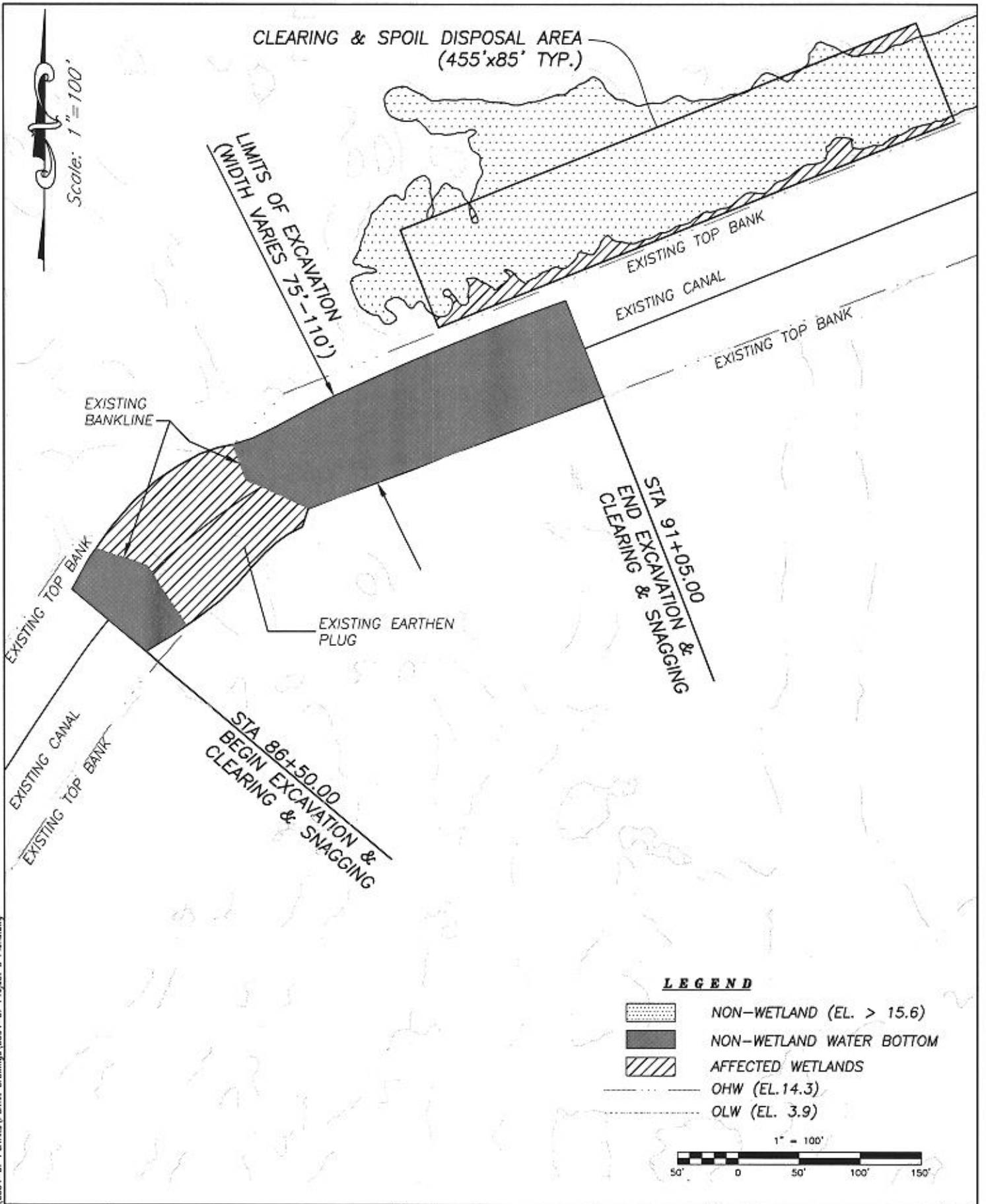
**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 245-B Bay Street, Lafayette, LA 70506 (337) 282-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**






ELEMENT 3 - PLAN VIEW

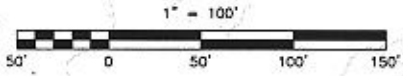
CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
 12  
 OF  
 44



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



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DESIGNED BY	M. SONNIER
CHECKED BY	J. FABRE
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	8004-07
PLANS	OVERALL.DWG



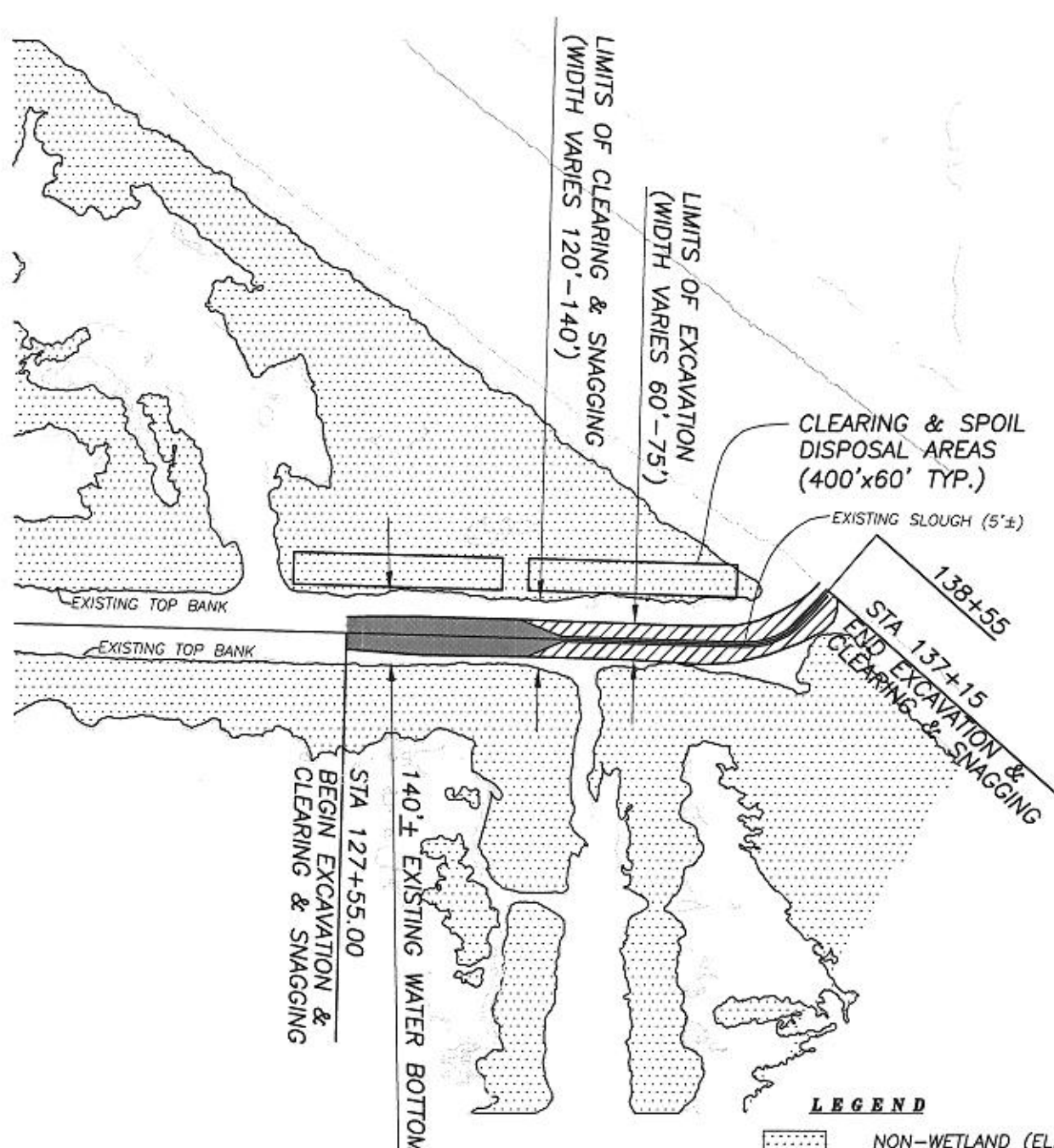
**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70508 (337) 232-9779

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

**ELEMENT 3 - PLAN VIEW**

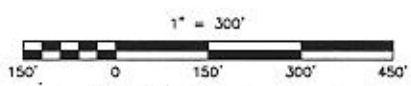
CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

Scale: 1"=300'



NOTE: SEDIMENT HAS BUILT UP WITHIN THE EXISTING CANAL AT THE ATCHAFALAYA RIVER. VEGETATION (MAINLY WILLOW TREES) HAS ALSO GROWN WITHIN THE EXISTING CANAL. THERE IS A SMALL EXISTING SLOUGH (APPROXIMATELY 5' WIDE) AT THE ATCHAFALAYA RIVER THAT OPENS UP TO THE EXISTING CANAL APPROXIMATELY 700' FROM THE ATCHAFALAYA RIVER.

- LEGEND**
- NON-WETLAND (EL. > 15.6)
  - NON-WETLAND WATER BOTTOM
  - AFFECTED WETLANDS
  - OHW (EL. 14.3)
  - OLW (EL. 3.9)



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DESIGNER	N. SCHWABER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	B004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Easy Street, Lafayette, LA 70506 (337) 238-0777

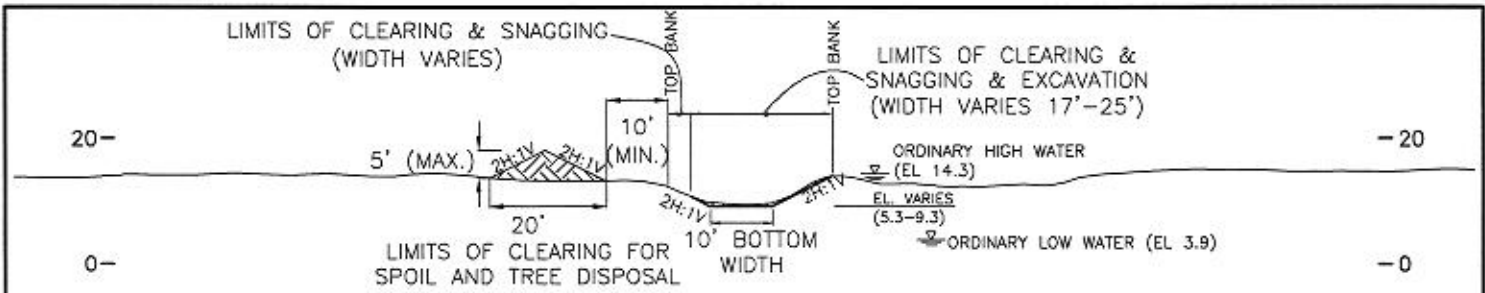
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 3 - PLAN VIEW**

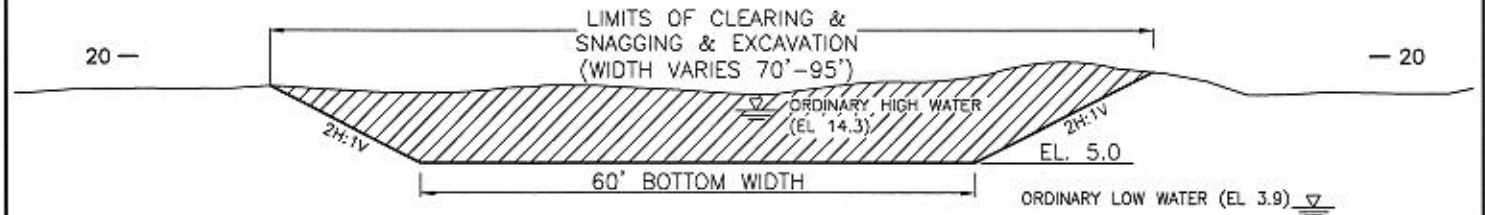
CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
 14  
 OF  
 44

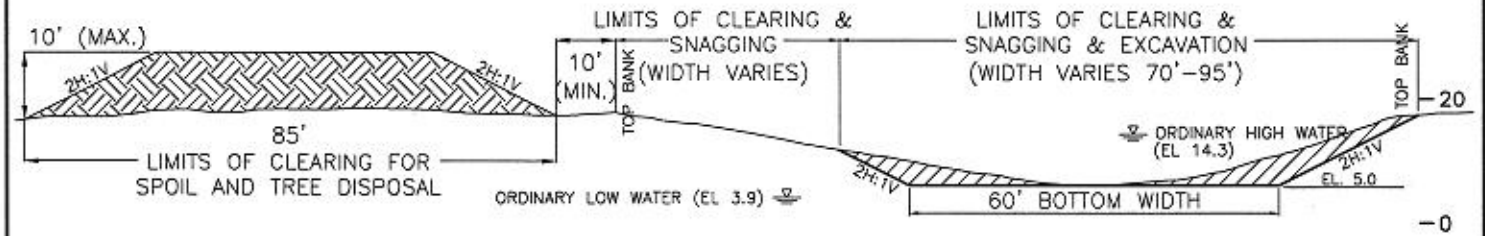




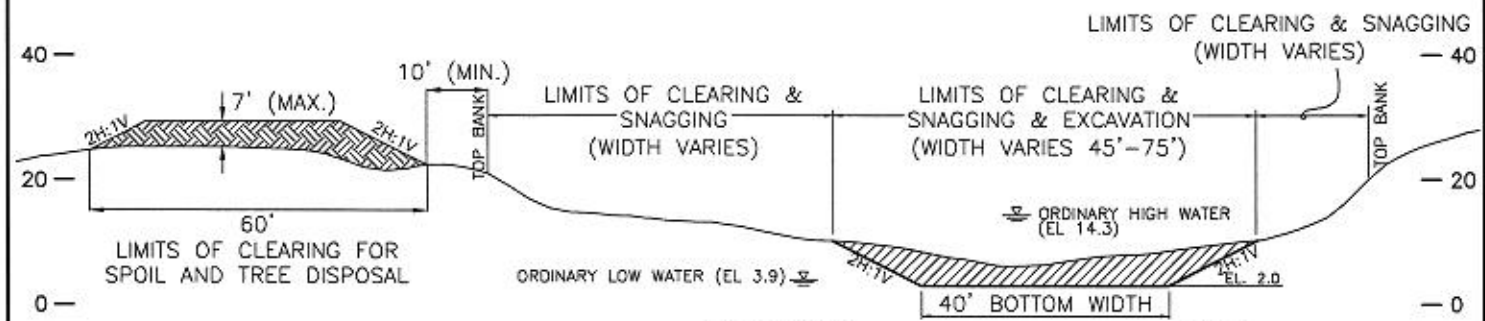
**SECTION A - SECTION THROUGH EXISTING CHANNEL**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 10+10 TO STA 39+81  
 SCALE: 1"=30'



**SECTION B - SECTION THROUGH EXISTING EARTHEN PLUG**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 86+50 TO STA 91+05  
 SCALE: 1"=20'



**SECTION C**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 86+50 TO STA 91+05  
 SCALE: 1"=30'



**SECTION D**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 127+55 TO STA 137+15  
 SCALE: 1"=30'

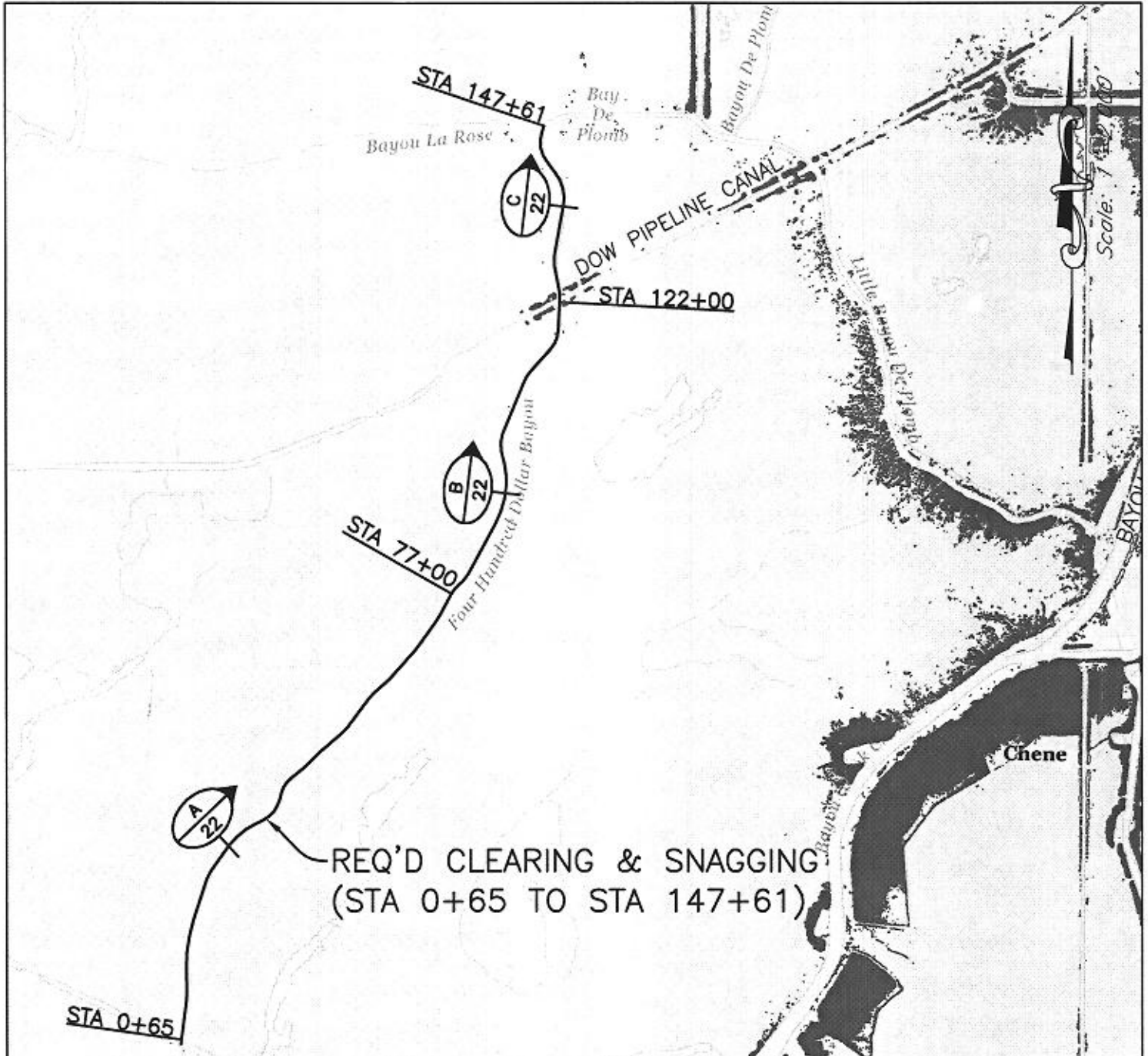
PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	19,795
CLEARING & SNAGGING (LIN. FT.)	4,386
CLEARING (ACRES)	3.8

**LEGEND**

SECTION TITLE  
 SHEET NO. SHOWING PLAN VIEW  
 EXCAVATED MATERIAL BERM  
 EXCAVATION

ENGINEER: N. SONNIER DRAWN BY: N. SONNIER DATE: APRIL 2016 SCALE: AS SHOWN PROJECT: 8004-05 FILE NO.: 8004-05(CAD)	 <b>Sellers &amp; Associates, Inc.</b> ENGINEERS 348-B Easy Street, Lafayette, LA 70508 (504) 285-9777	<b>BEAU BAYOU SWAMP          HYDROLOGIC RESTORATION</b> ELEMENT 3 - TYPICAL SECTIONS	CLIENT: ST. MARTIN PARISH GOVERNMENT PROJECT: BEAU BAYOU SWAMP HYDRO. REST. LOCATION: ST. MARTIN PARISH, LOUISIANA	SHEET <b>15</b> OF <b>44</b>
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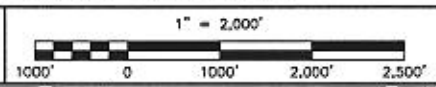


REQ'D CLEARING & SNAGGING  
(STA 0+65 TO STA 147+61)

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
4	CLEARING & SNAGGING	0+65	77+00	7,635'		40'
4	CLEARING & SNAGGING	77+00	122+00	4,500'		50'
4	CLEARING & SNAGGING	122+00	147+61	2,561'		60'

NOTES:  
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CHIPPED IN PLACE AS CLOSE TO THE GROUND AS THE CUTTING TOOLS PERMIT.

	CLEARING & SPOIL DISPOSAL AREAS	<b>LEGEND</b>		SECTION TITLE
	UPLANDS (EL. > 15.6)			SHEET NO. SHOWING SECTION



DESIGNED BY	N. SCHWERY
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
748-B Bay Street, Lafayette, LA 70508 (504) 288-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	16
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

M:\DATA\8004\8004-07 Permit Drawings\8004-07 Overall.dwg

MATCH LINE A-A SHEET 18

Scale: 1" = 300'

FOUR HUNDRED DOLLAR BAYOU

20'± EXISTING WATER BOTTOM






LIMITS OF CLEARING & SNAGGING  
(40' MAX.)

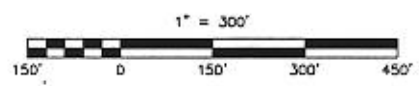
STA 0+65.00  
BEGIN CLEARING & SNAGGING

0+00.00

SORRENTO PIPELINE CANAL


**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\DWG\8004\8004-07 Permits\Drawings\8004-07 Project 4 Plans.dwg

DESIGNED BY	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
146-B Bay Street, Lafayette, LA 70506 (337) 232-2177

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

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ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
17  
OF  
44

MATCH LINE B-B SHEET 19








→ LIMITS OF CLEARING & SNAGGING (40' MAX.)

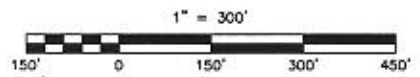
FOUR HUNDRED DOLLAR BAYOU

→ 20'± EXISTING WATER BOTTOM

MATCH LINE A-A SHEET 17

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



A:\DATA\8004\8004-07 Permits\Drawings\8004-07 Project 4 Plans.dwg

ENGINEER	N. SOWMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILENO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
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140-B Bay Street, Lakeville, LA 70508 (504) 888-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
**18**  
OF  
**44**

MATCH LINE C-C SHEET 20

LIMITS OF CLEARING & SNAGGING  
(50' MAX.)




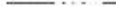



25' TRANSITION  
(40' TO 50')  
STA 77+00.00  
STA 76+75.00

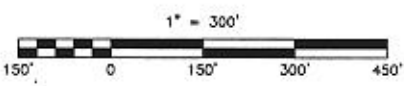
FOUR HUNDRED DOLLAR BAYOU

20'± EXISTING WATER BOTTOM

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

LIMITS OF CLEARING & SNAGGING  
(40' MAX.)



MATCH LINE B-B SHEET 18



AN:\004\11\0004\0004-07\_PlanView.dwg - 07\_PlanView.dwg - 07\_PlanView.dwg

ENGINEER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	0004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70506 (337) 532-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
19  
OF  
44

MATCH LINE D-D SHEET 21






Scale: 1"=300'

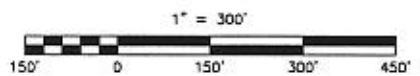
20'± EXISTING WATER BOTTOM

FOUR HUNDRED DOLLAR BAYOU

LIMITS OF CLEARING & SNAGGING  
(50' MAX.)

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



MATCH LINE C-C SHEET 19

N:\DATA\8004\8004-07 Permits\Permits Drawings\8004-07 Project 4 Plans.dwg

DESIGNED BY	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



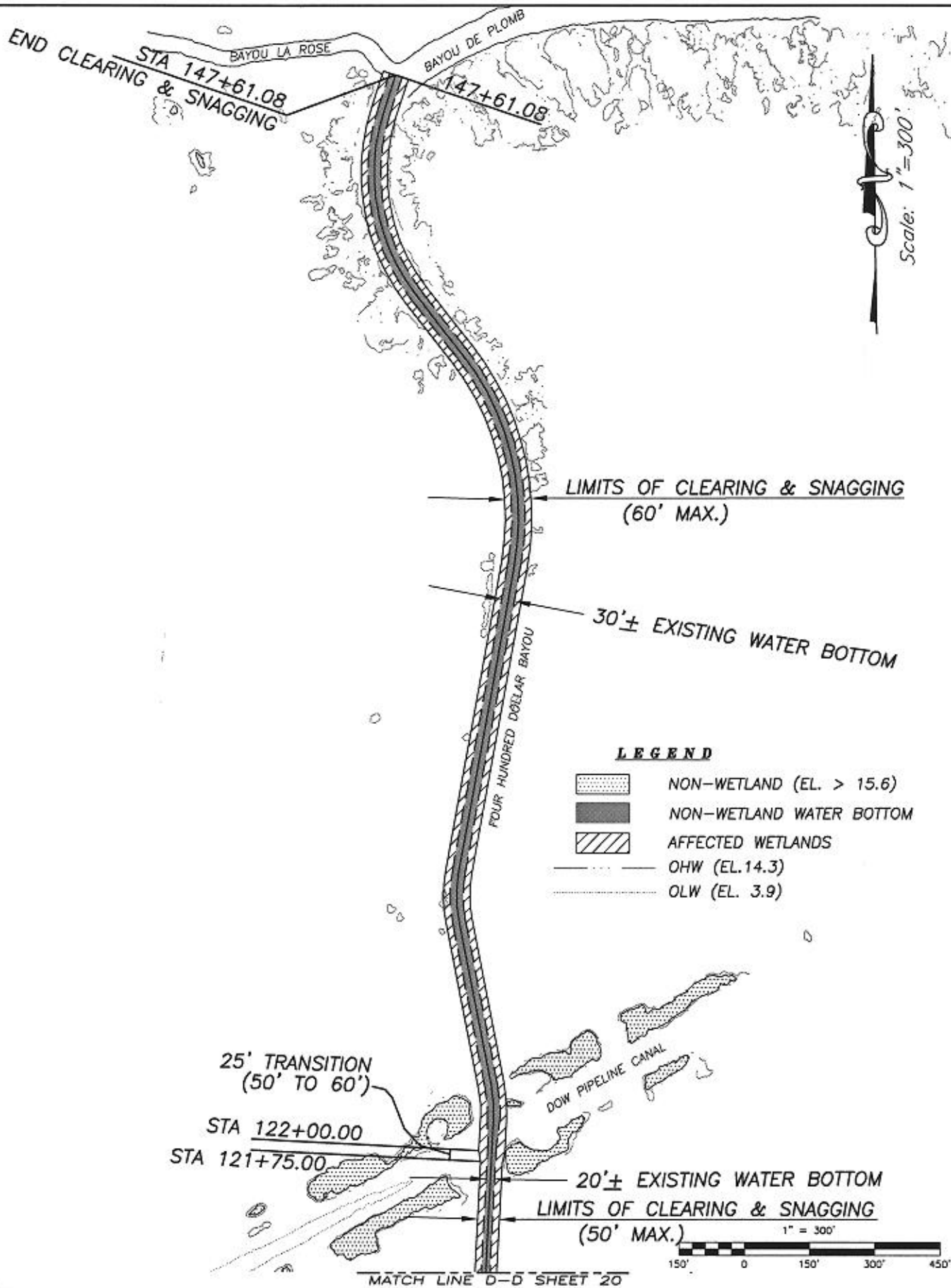
**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70506 (337) 232-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>20</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



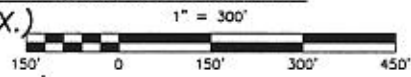


Scale: 1" = 300'

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLV (EL. 3.9)

MATCH LINE D-D SHEET 20



N:\DATA\8004\8004-07 Permits\Permit Drawings\8004-07 Project 4 Plans.dwg

DESIGNED BY	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILENAME	OVERALL.DWG

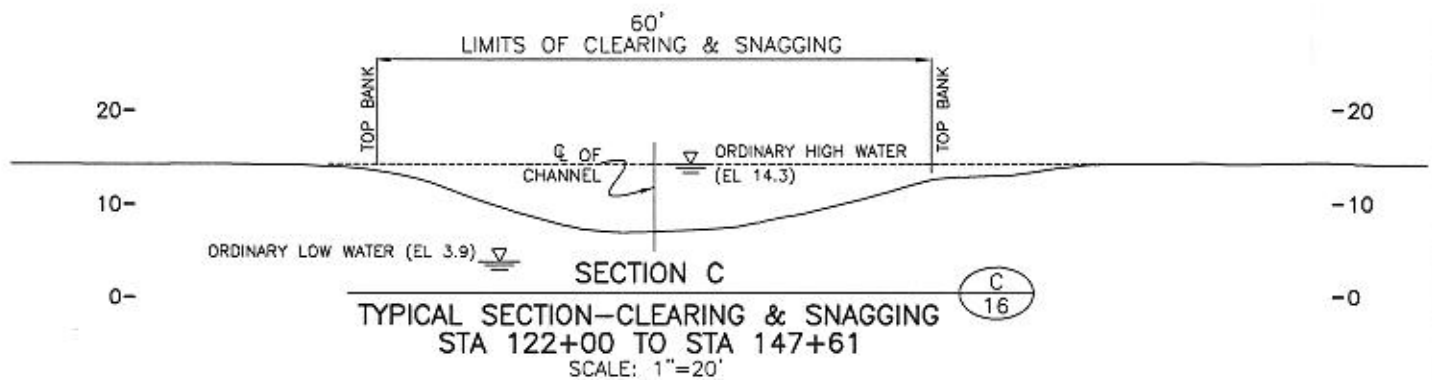
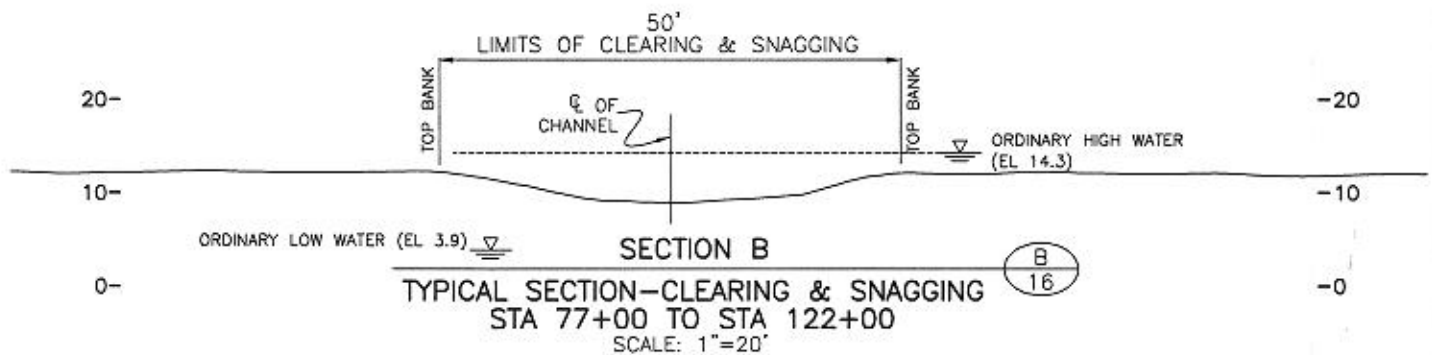
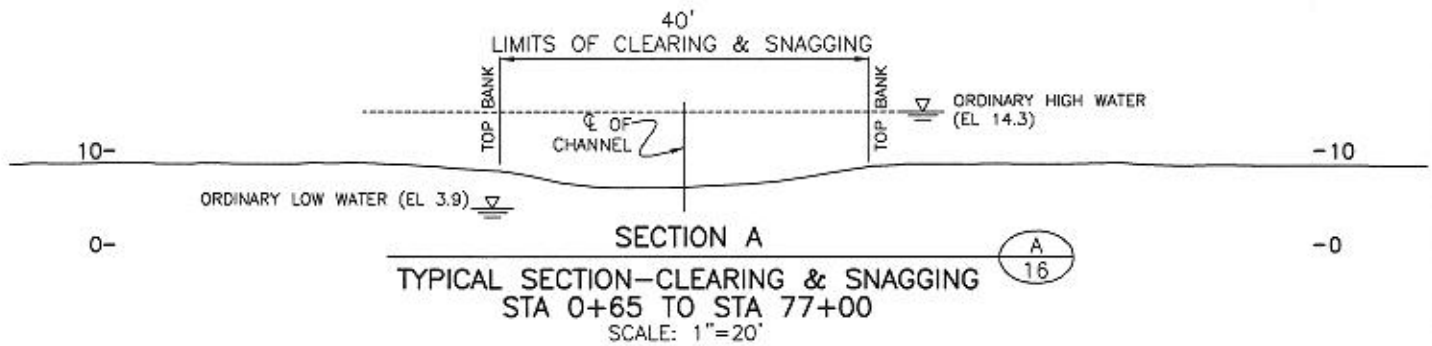


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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>21</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW

- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
CLEARING & SNAGGING (LIN. FT.)	14,696

DESIGNED BY	N. SONNIER
CHECKED BY	N. SONNIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD



**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

**ELEMENT 4 - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

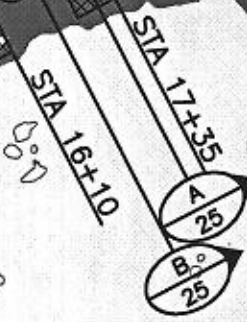
SHEET  
22  
OF  
44

REQ'D CLEARING & SNAGGING  
& EXCAVATION  
(STA 16+10 TO STA 17+35)

LITTLE BAYOU DE PLOMB

CLEARING & SPOIL  
DISPOSAL AREAS  
(50' WIDE TYP.)

DOW PIPELINE CANAL



Scale: 1"=200'

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
5	CLEARING & EXCAVATION	16+10	17+35	125'	40'	VARIES (70'-121')

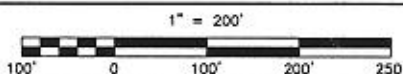
NOTES:

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 5 SHALL BE PLACED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN ON THIS SHEET, OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION SHOWN. THE EXCAVATION WILL RESULT IN REMOVING AN EARTHEN PLUG WITHIN THE EXISTING CHANNEL AT APPROXIMATELY STA 16+50. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE ADJACENT CHANNEL TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE TOP BANK OF THE ADJACENT CHANNEL.
4. PROPOSED WORK WILL INCLUDE EXCAVATION OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.

CLEARING & SPOIL DISPOSAL AREAS  
 UPLANDS (EL. > 15.6)

LEGEND

SECTION TITLE  
SHEET NO. SHOWING SECTION



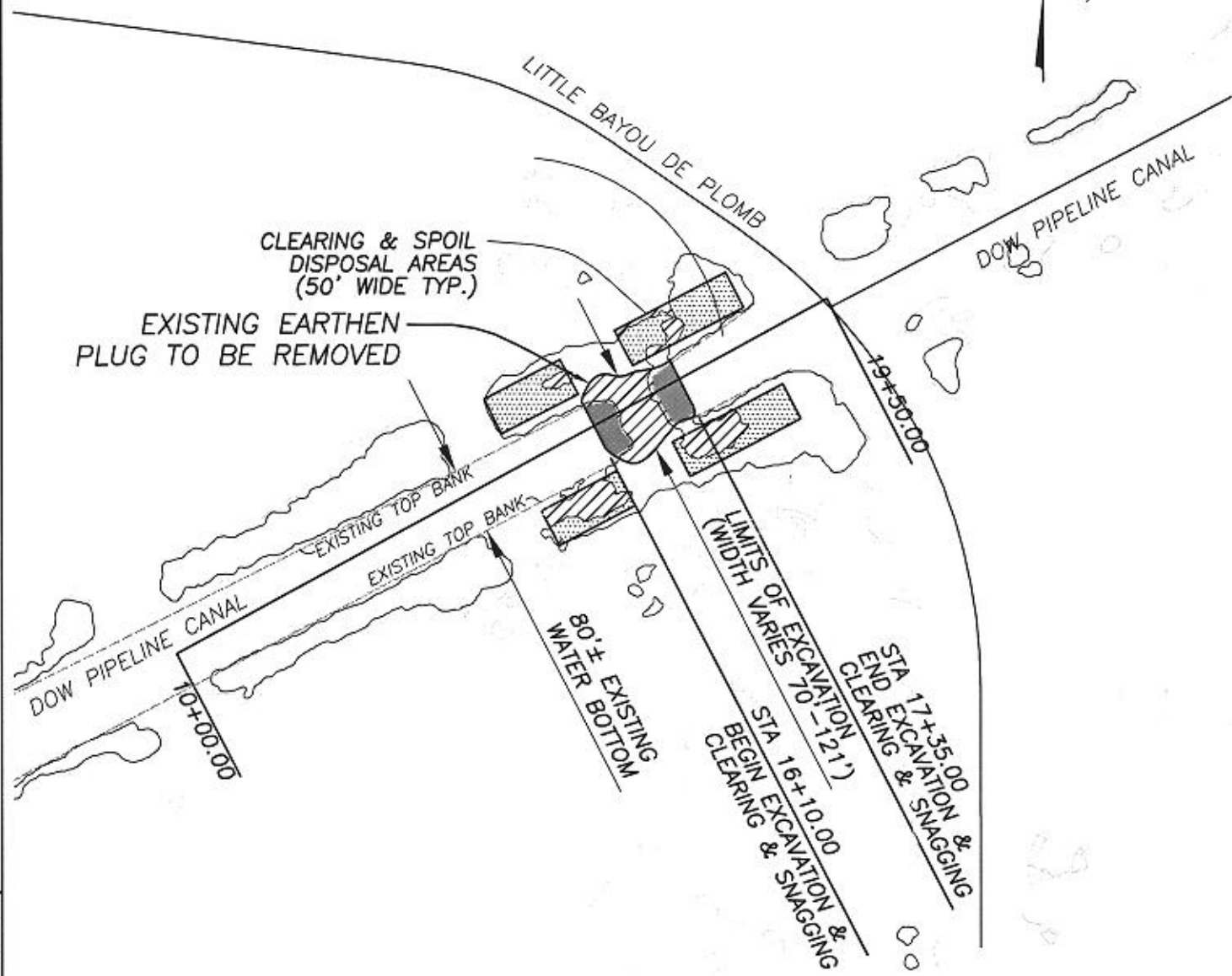
DESIGNED BY	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

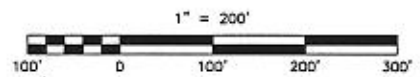
ELEMENT 5 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	23
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		



**LEGEND**

- NON-WETLAND (EL. > 15.6)
- NON-WETLAND WATER BOTTOM
- AFFECTED WETLANDS
- OHW (EL. 14.3)
- OLW (EL. 3.9)



A:\DWG\16004\16004-07 Permits\Permit Drawings\16004-07 Project 5 Plans.dwg

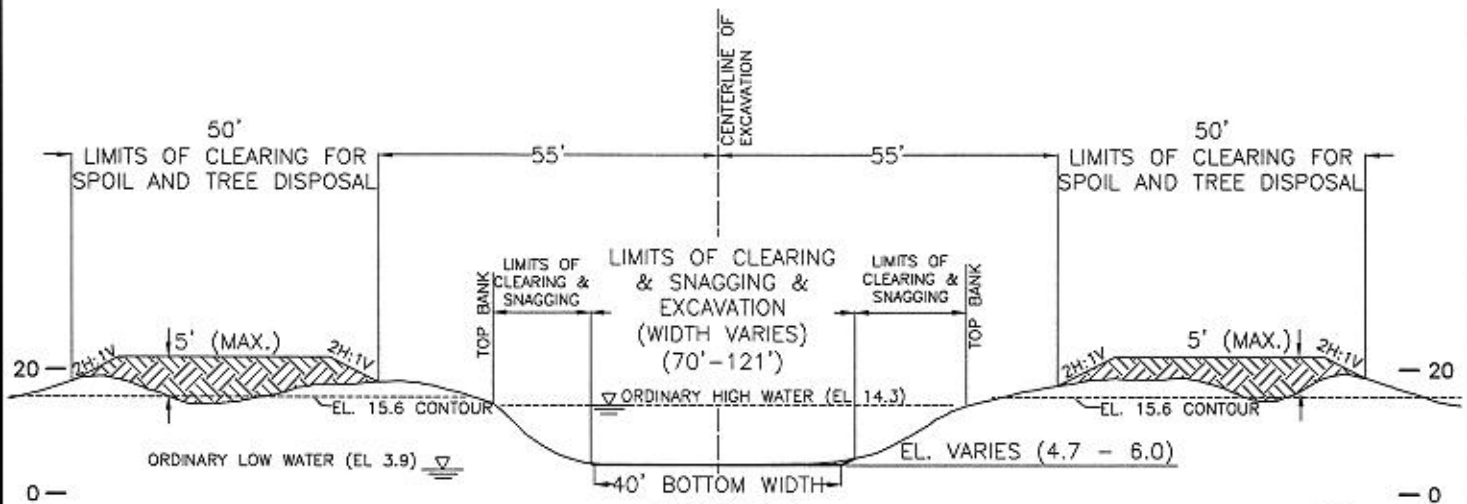
ENGINEER	N. SCHMIDT
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	16004-07
FILE NO.	OVERALL.DWG

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 148-B Esch Street, Lakeville, LA 70606 (504) 232-0777

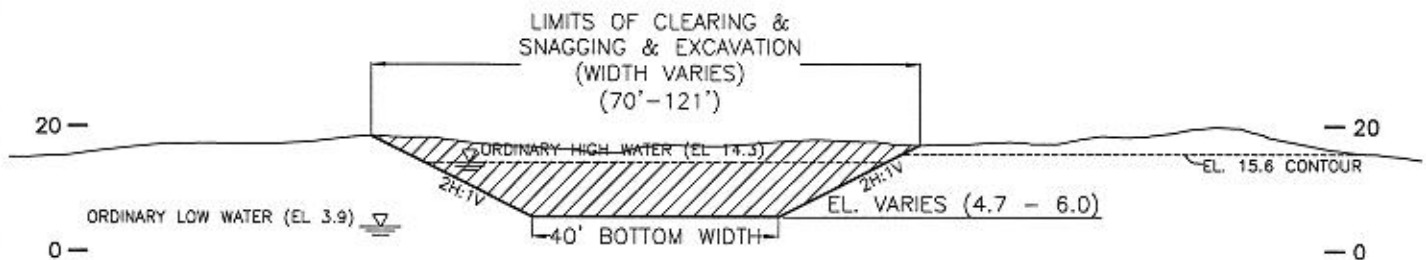
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 5 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>24</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



**SECTION A**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION W/ DISPOSAL AREA** (A/23)  
 STA 15+00 TO STA 18+50  
 STA 15+00 TO STA 16+10 (NO EXCAVATION)  
 STA 17+35 TO STA 18+50 (NO EXCAVATION)  
 SCALE: 1"=30'



**SECTION B**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION** (B/23)  
 STA 16+10 TO STA 16+90  
 SCALE: 1"=30'

**LEGEND**

- (C/13) SECTION TITLE
- (C/13) SHEET NO. SHOWING PLAN VIEW
- [Hatched Box] EXCAVATED MATERIAL BERM
- [Diagonal Lines Box] EXCAVATION

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	2,715
CLEARING & SNAGGING (LIN. FT.)	125
CLEARING (ACRES)	0.7

ENGINEER	AL SONNIER
DRAWN BY	AL SONNIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\04D



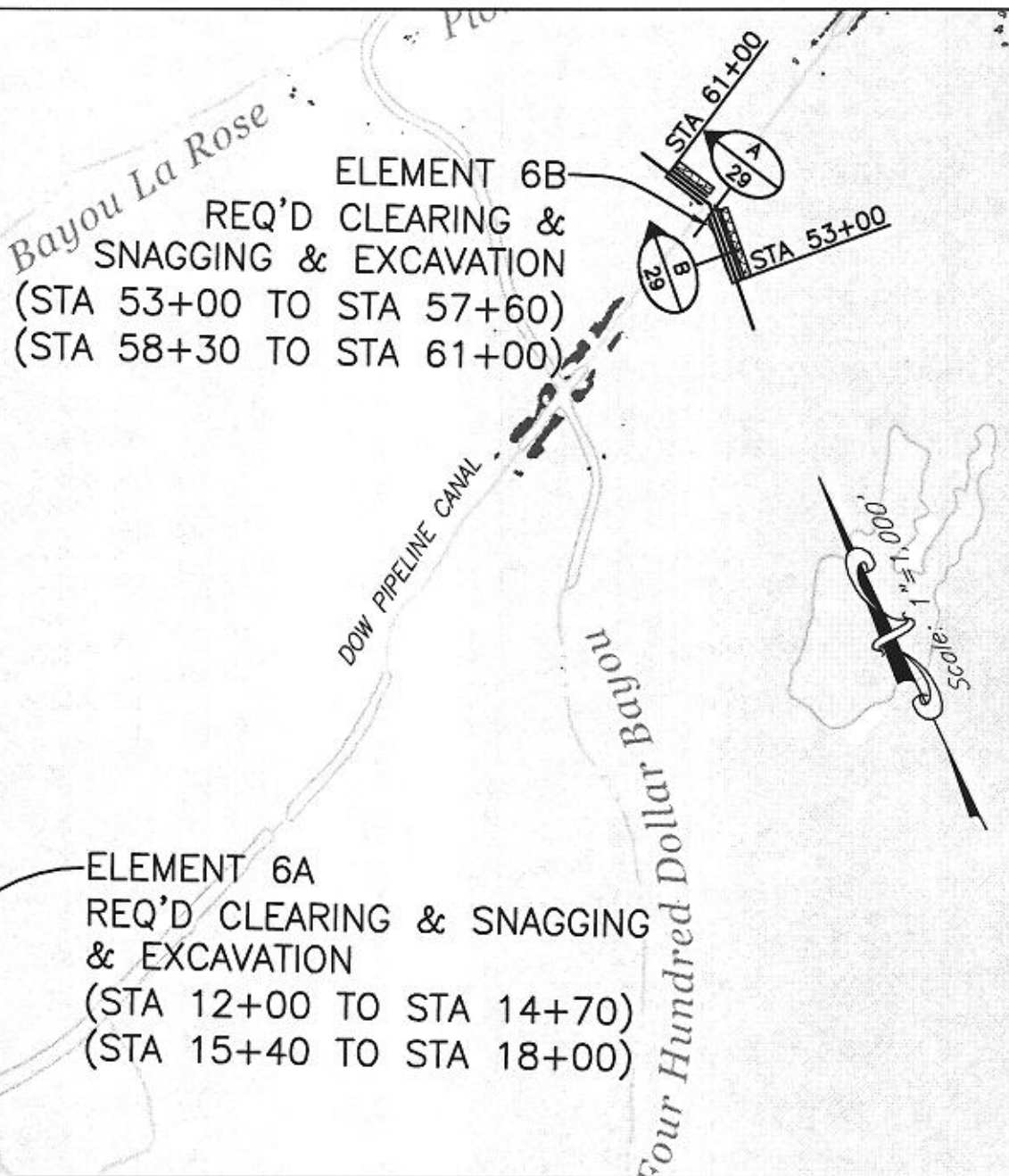
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 5 - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET	25
OF	44





**ELEMENT 6B**  
 REQ'D CLEARING & SNAGGING & EXCAVATION  
 (STA 53+00 TO STA 57+60)  
 (STA 58+30 TO STA 61+00)

**ELEMENT 6A**  
 REQ'D CLEARING & SNAGGING & EXCAVATION  
 (STA 12+00 TO STA 14+70)  
 (STA 15+40 TO STA 18+00)

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
6A	CLEARING & EXCAVATION	12+00	18+00	530'	50'	VARIES (50'-70')
6B	CLEARING & EXCAVATION	53+00	61+00	730'	50'	VARIES (50'-75')

- NOTES:**
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 6 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENTS SHOWN. THE WORK WILL INVOLVE EXCAVATING THROUGH AN EXISTING SPOIL BANK AND VIRGIN CUT THROUGH THE SWAMP.
  4. PROPOSED WORK WILL INCLUDE OPERATING OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)	<b>LEGEND</b>	SECTION TITLE SHEET NO. SHOWING SECTION	1" = 1,000' 
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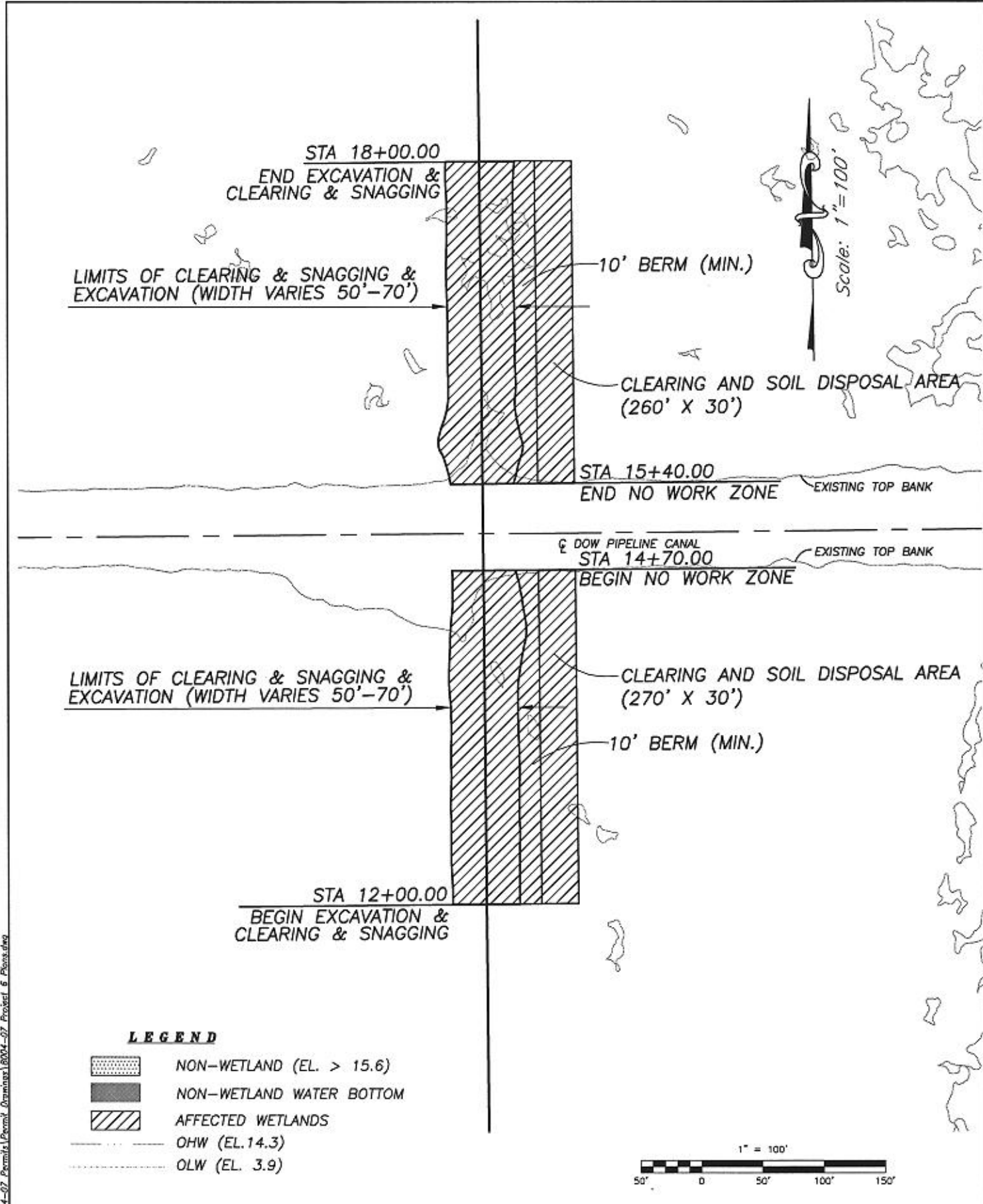
DESIGNED BY	M. SONNICK
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
PLANS	SEE LEFT SIDE

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 146-B Bay Street, Lafayette, LA 70508 (337) 288-0777






**BEAU BAYOU SWAMP**  
**HYDROLOGIC RESTORATION**  
 ELEMENT 6 - OVERALL PLAN VIEW

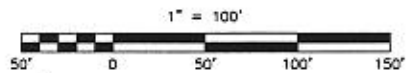
CLIENT	ST. MARTIN PARISH GOVERNMENT	26
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF
LOCATION	ST. MARTIN PARISH, LOUISIANA	44

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**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\04701\8004\8004-07 Permits\Permit\_Drainage\8004-07 Project 6 Plans.dwg

ENGINEER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

---

ELEMENT 6A - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
27  
OF  
44

STA 61+00.00  
END EXCAVATION &  
CLEARING & SNAGGING

10' BERM (MIN.)

CLEARING AND SOIL DISPOSAL AREA  
(270'x45')

LIMITS OF CLEARING &  
SNAGGING & EXCAVATION  
(WIDTH VARIES 50'-75')

STA 58+30  
END NO WORK ZONE  
& DOW PIPELINE CANAL

EXISTING TOP BANK

EXISTING TOP BANK






STA 57+60  
BEGIN NO WORK ZONE

LIMITS OF CLEARING &  
SNAGGING & EXCAVATION  
(WIDTH VARIES 50'-75')

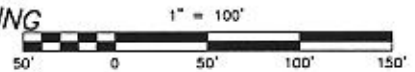
CLEARING AND SOIL DISPOSAL AREA  
(440'x45')

10' BERM (MIN.)

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

STA 53+00.00  
BEGIN EXCAVATION &  
CLEARING & SNAGGING



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DESIGNED BY	H. SONNIER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.CWG

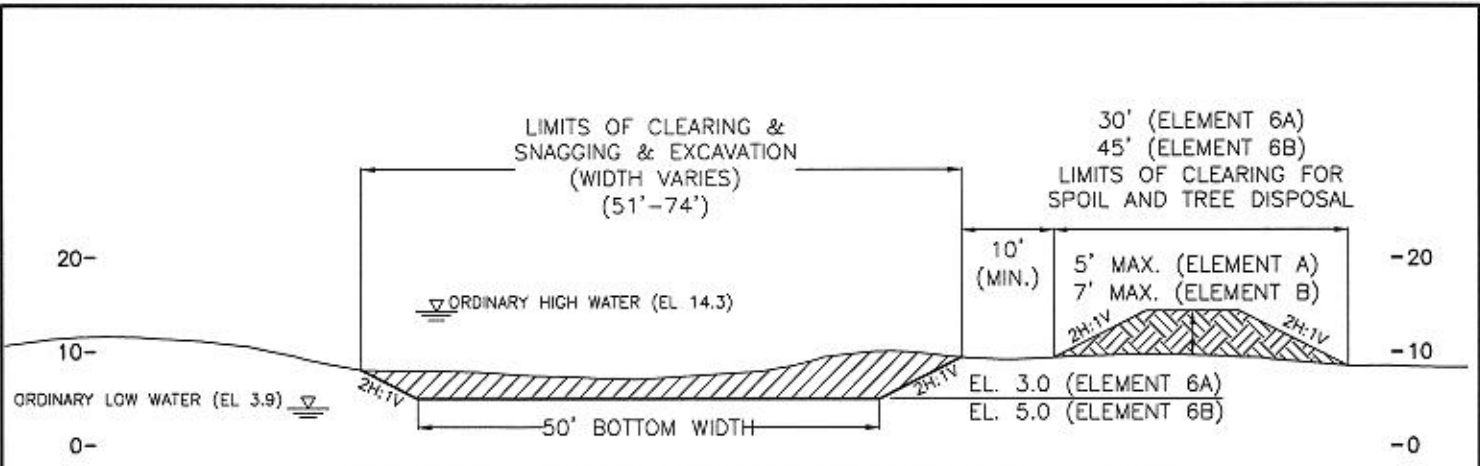


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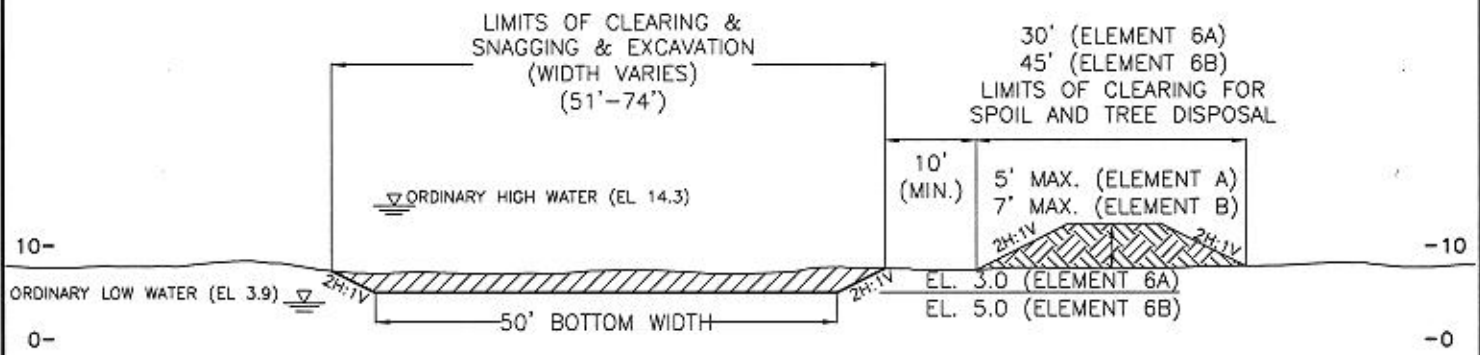
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 6B - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>28</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



**SECTION A - TYPICAL THROUGH EXISTING BANK** (A/26)  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 12+00 TO STA 18+00 (ELEMENT 6A)  
 STA 53+00 TO STA 61+00 (ELEMENT 6B)  
 SCALE: 1"=20'



**SECTION B - TYPICAL THROUGH EXISTING SWAMP** (B/26)  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 12+00 TO STA 18+00 (ELEMENT 6A)  
 STA 53+00 TO STA 61+00 (ELEMENT 6B)  
 SCALE: 1"=20'

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	6,029
CLEARING & SNAGGING (LIN. FT.)	1,290
CLEARING (ACRES)	1.4

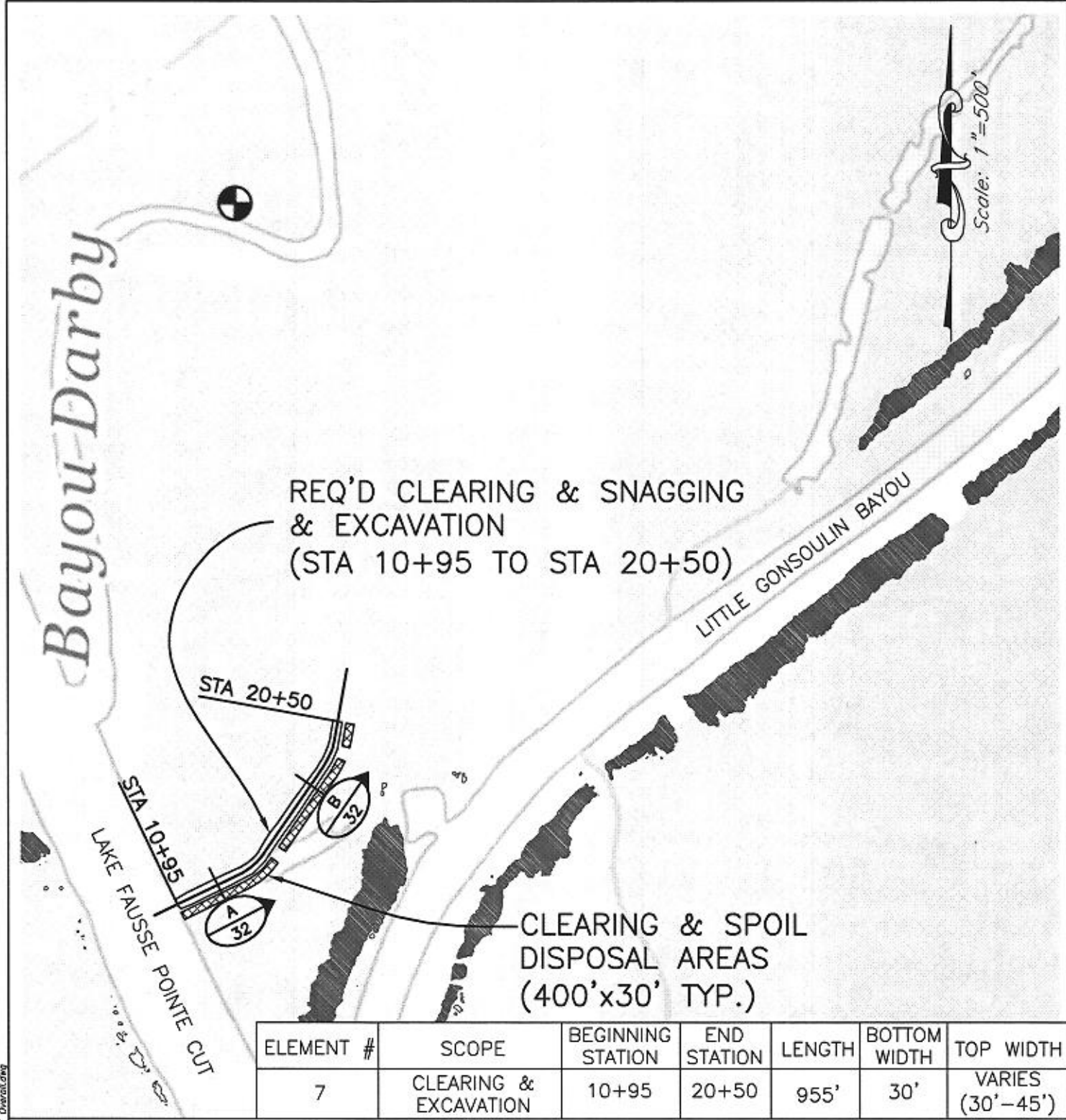
**LEGEND**

(C/13) SECTION TITLE  
 (13) SHEET NO. SHOWING PLAN VIEW

EXCAVATED MATERIAL BERM (diagonal hatching)  
 EXCAVATION (cross-hatching)

DESIGNER: N. SOMMER DRAWN BY: N. SOMMER DATE: APRIL 2016 SCALE: AS SHOWN PROJECT: 8004-05 FILE NO: 8004-05/CAD	<p><b>Sellers &amp; Associates, Inc.</b>          ENGINEERS          148-B Bay Street, Lafayette, LA 70506 (337) 283-0777</p>	<p><b>BEAU BAYOU SWAMP          HYDROLOGIC RESTORATION</b></p> <p><b>ELEMENT 6 - TYPICAL SECTIONS</b></p>	CLIENT: ST. MARTIN PARISH GOVERNMENT PROJECT: BEAU BAYOU SWAMP HYDRO. REST. LOCATION: ST. MARTIN PARISH, LOUISIANA	SHEET: 29 OF: 44
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ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
7	CLEARING & EXCAVATION	10+95	20+50	955'	30'	VARIES (30'-45')

- NOTES:
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 7 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. THE WORK WILL INVOLVE ENLARGING AN EXISTING SLOUGH AND VIRGIN CUT THROUGH THE SWAMP.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)	<b>LEGEND</b> SECTION TITLE SHEET NO. SHOWING SECTION	1" = 500' 250' 0 250' 500' 750'

ENGINEER	N. SOWARD
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	BO04-07
FILE NO.	SEE LEFT SIDE

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**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

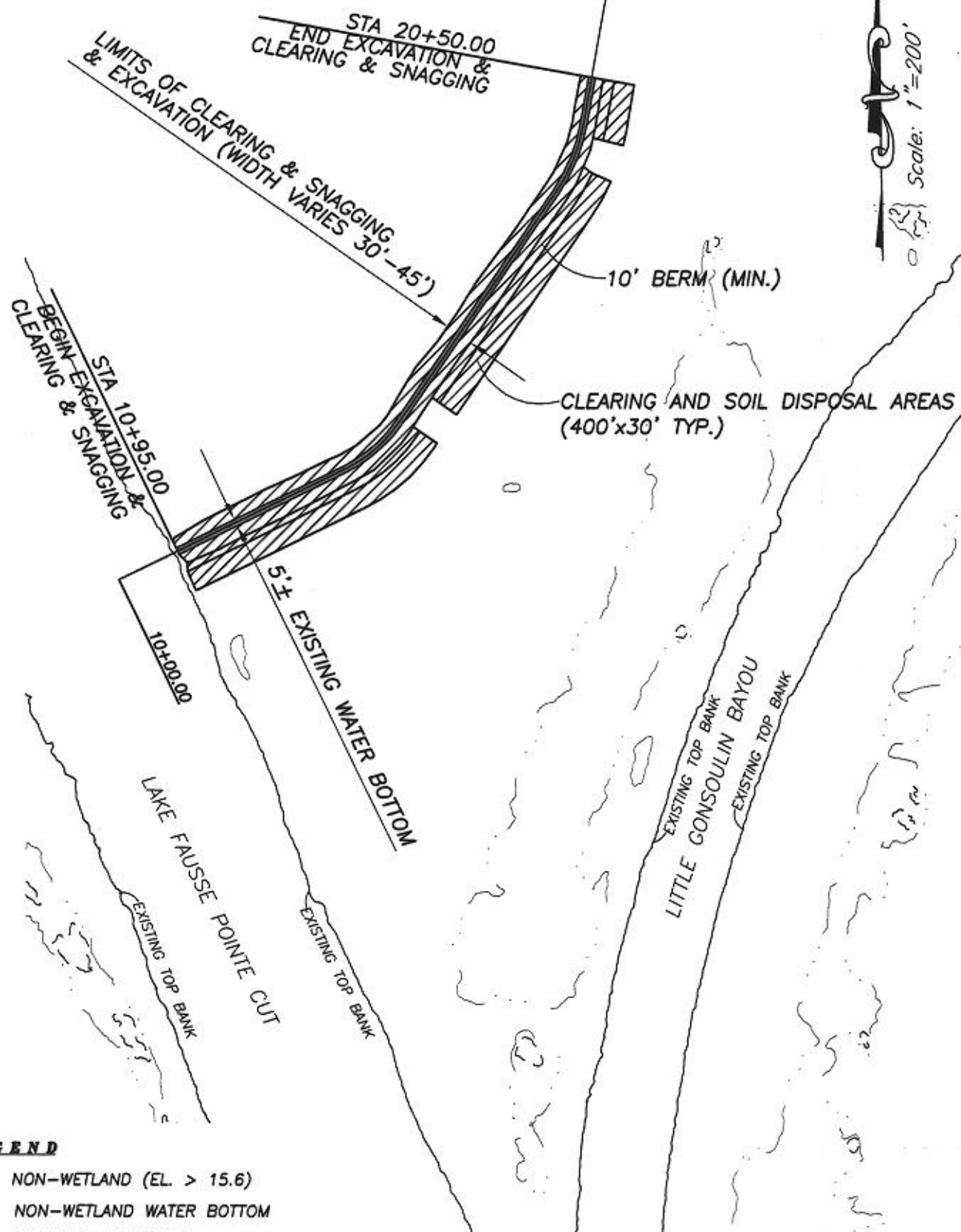
ELEMENT 7 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>30</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	






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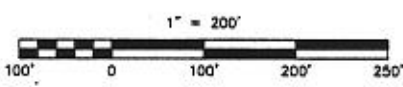


Scale: 1"=200'



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



J:\DATA\8004\8004-07 Permits\Drawings\8004-07 Project 7 Plans.dwg

DESIGNER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

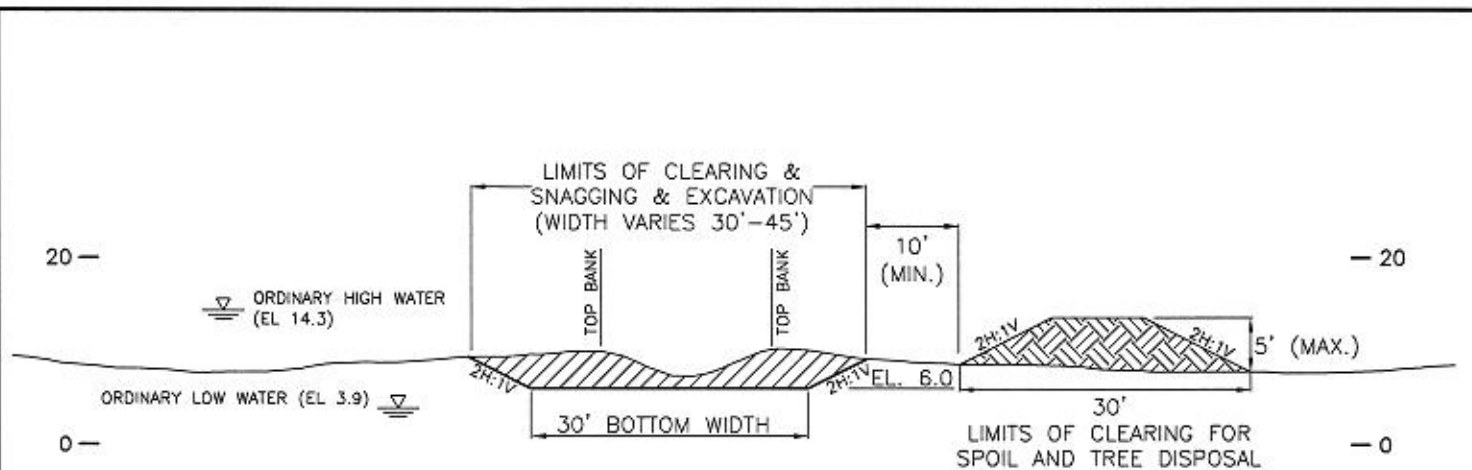


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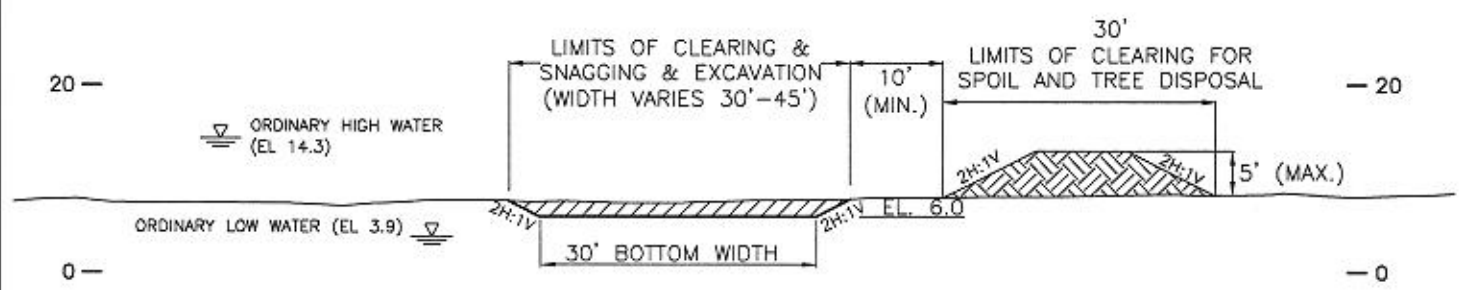
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 7 - PLAN VIEW**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>31</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



**SECTION A - SECTION THROUGH EXISTING CUT**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 10+95 TO STA 20+50  
 SCALE: 1"=20'



**SECTION B**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 10+95 TO STA 20+50  
 SCALE: 1"=20'

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	2,510
CLEARING & SNAGGING (LIN. FT.)	955
CLEARING (ACRES)	0.8

**LEGEND**

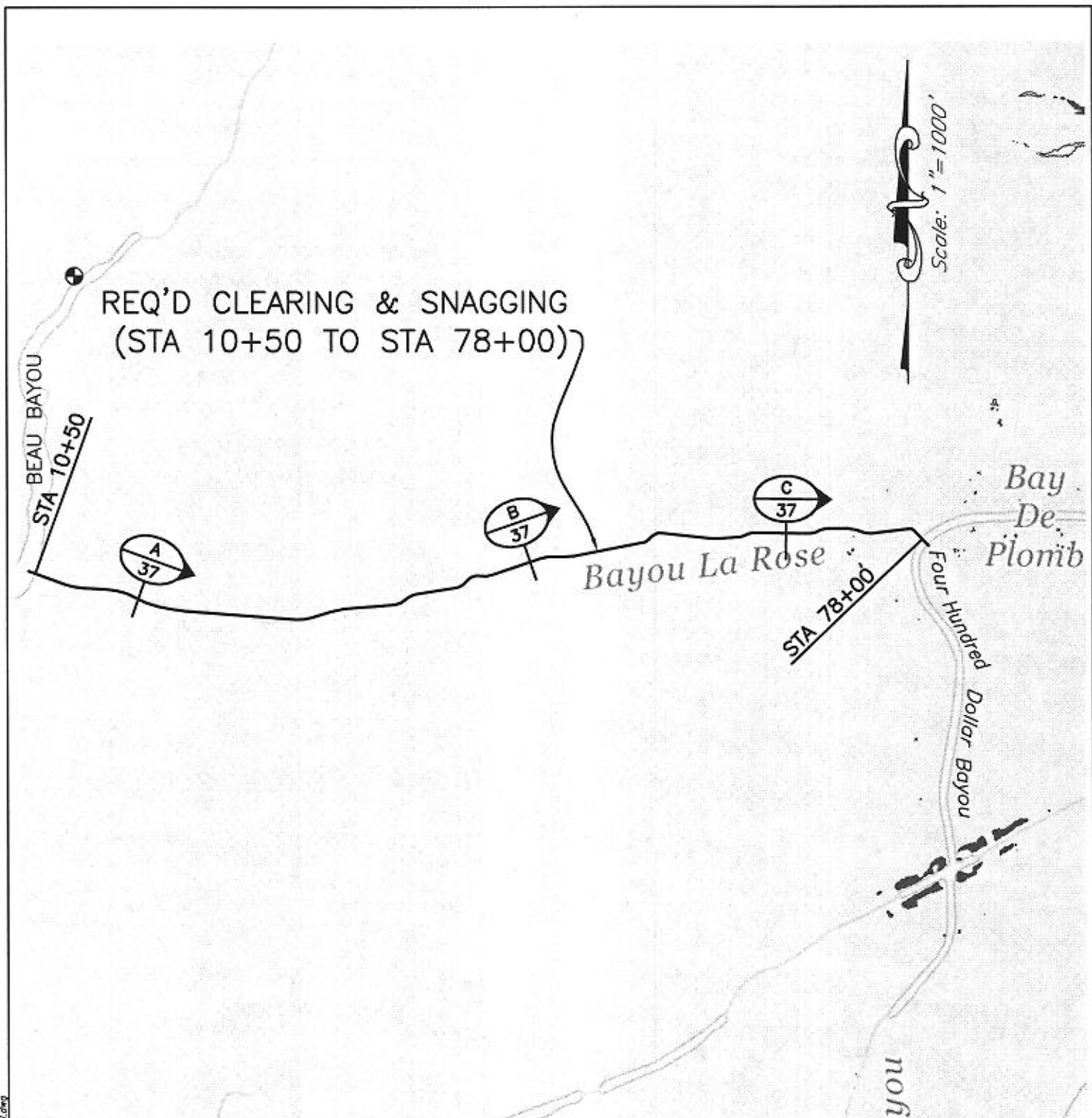
SECTION TITLE  
 SHEET NO. SHOWING PLAN VIEW  
 EXCAVATED MATERIAL BERM  
 EXCAVATION

DESIGNED BY	N. SOMMER
DRAWN BY	N. SOMMER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD

**Sellers & Associates, Inc.**  
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 148-3 Easy Street, Lafayette, LA 70508 (337) 283-0777

**BEAU BAYOU SWAMP**  
**HYDROLOGIC RESTORATION**  
**ELEMENT 7 - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>32</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
8	CLEARING & SNAGGING	10+50	78+00	6,750'		40'

NOTES:  
 1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CHIPPED IN PLACE AS CLOSE TO THE GROUND AS THE CUTTING TOOLS PERMIT.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)	<b>LEGEND</b>	SECTION TITLE SHEET NO. SHOWING SECTION	1" = 1,000' 
---	---------------	--	-----------------

DESIGNED BY	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

**Sellers & Associates, Inc.**  
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 148-B Bary Street, Lafayette, LA 70508 (337) 232-2777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 8 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>33</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

N:\DATA\8004\8004-07 Permits\Permit Drawings\8004-07 Overall.dwg

MATCH LINE A-A SHEET 35

Scale: 1"=300'

LIMITS OF CLEARING & SNAGGING (40' MAX)






20'± EXISTING WATER BOTTOM

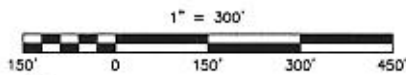
BAYOU LA ROSE

BEAU BAYOU

STA 10+50.00  
BEGIN CLEARING  
& SNAGGING  
10+00.00

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\DATA\8004\8004-07 Permits\Drawings\8004-07 Project 8 Plans.dwg

DESIGNED BY	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 8 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
34  
OF  
44

MATCH LINE B-B SHEET 36








Scale: 1"=300'

LIMITS OF CLEARING  
& SNAGGING (40' MAX)

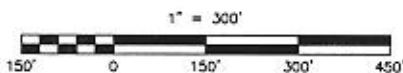
BAYOU LA ROSE

20'± EXISTING WATER BOTTOM

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

MATCH LINE A-A SHEET 34



N:\DWG\2004\2004-07 Permits\Permit Drawings\2004-07 Project 8 Plans.dwg

ENGINEER	M. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	2004-07
FILE NO.	OVERALL.DWG



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145-B Easy Street, Lakeyette, LA 70504 (507) 886-2777

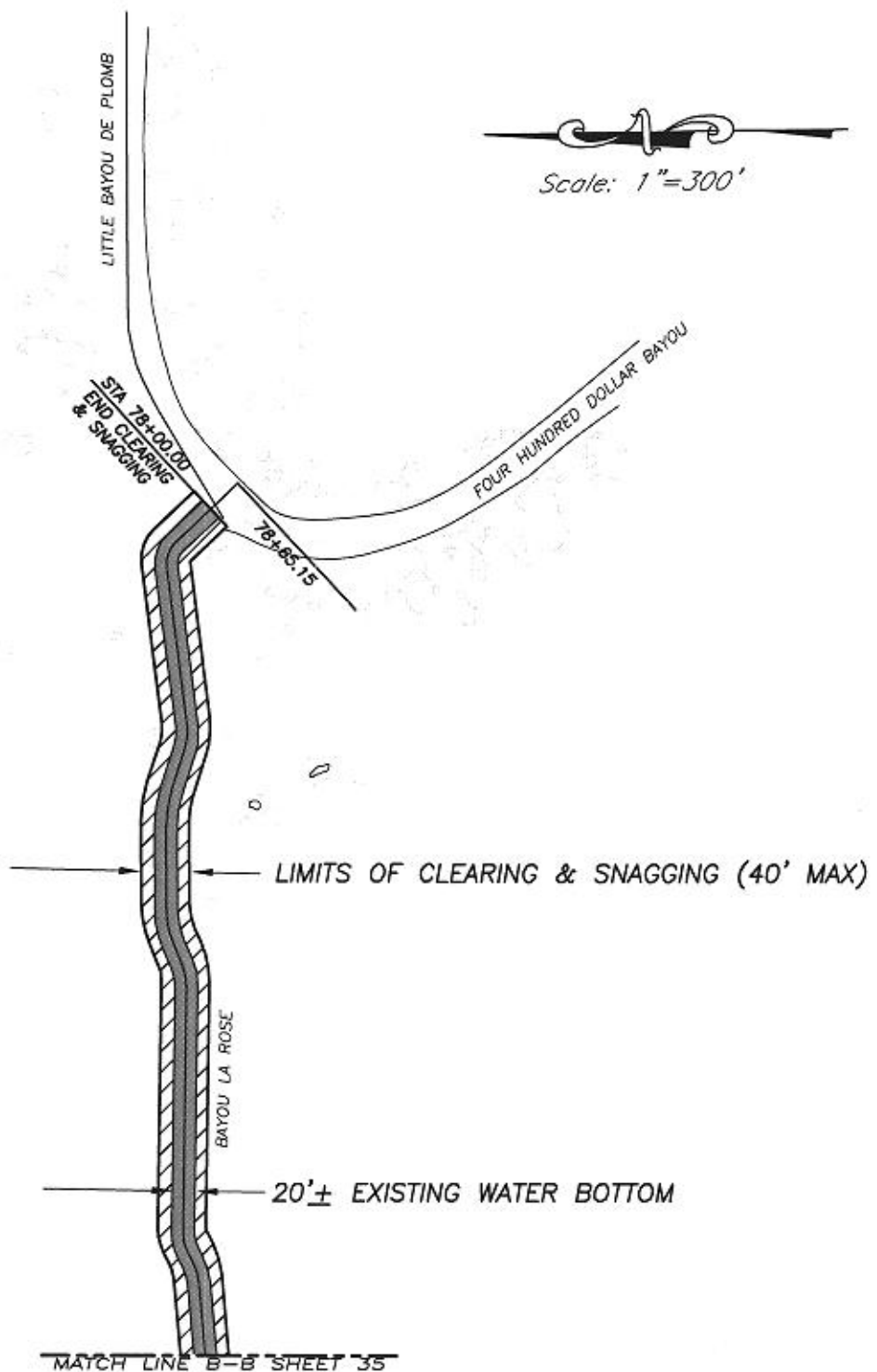
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 8 - PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	35
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

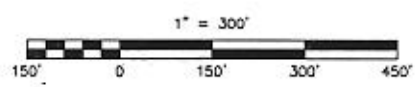


Scale: 1"=300'



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



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DESIGNER	N. SOMMER
CHECKED BY	J. FABRE
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

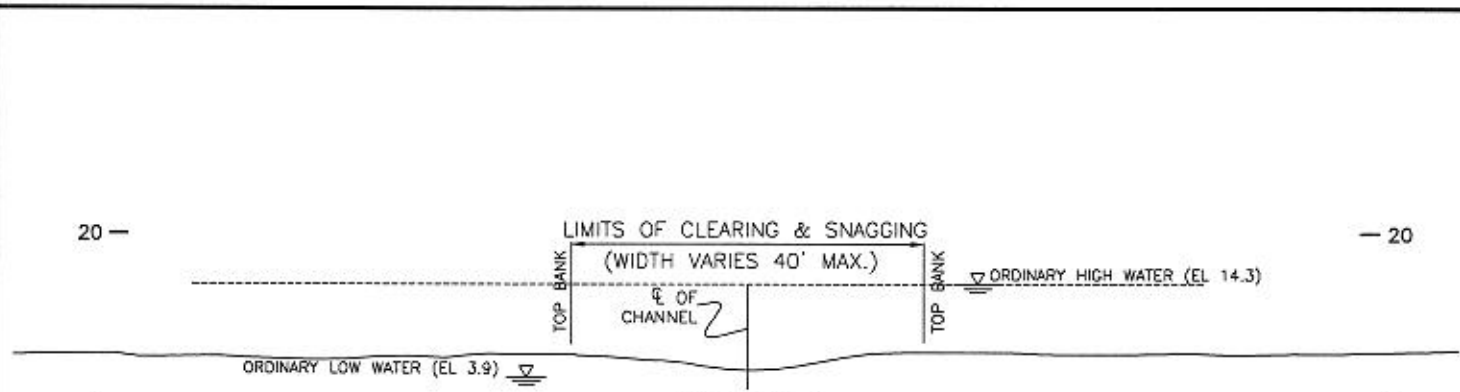


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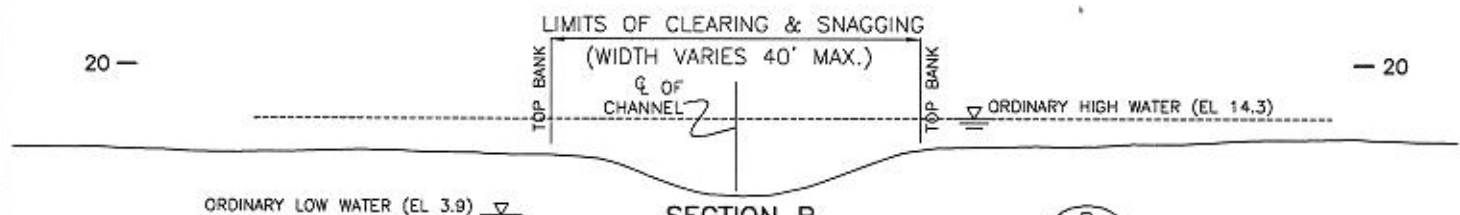
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 8 - PLAN VIEW

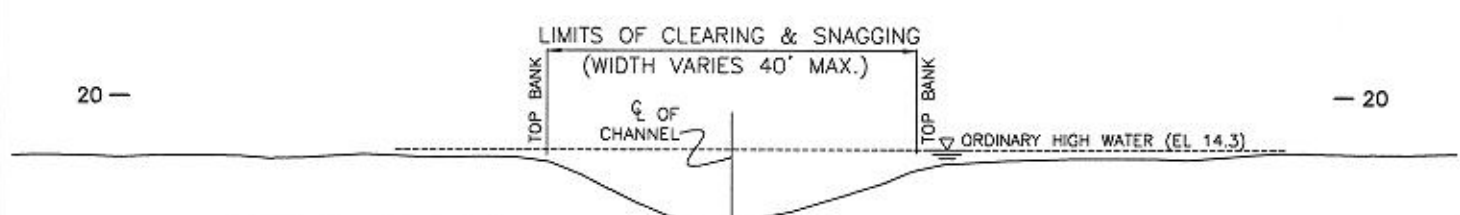
CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	36 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.		
LOCATION	ST. MARTIN PARISH, LOUISIANA		



SECTION A  
 TYPICAL SECTION—CLEARING & SNAGGING  
 STA 10+50 TO STA 78+00  
 SCALE: 1"=20'



SECTION B  
 TYPICAL SECTION—CLEARING & SNAGGING  
 STA 10+50 TO STA 78+00  
 SCALE: 1"=20'



SECTION C  
 TYPICAL SECTION—CLEARING & SNAGGING  
 STA 10+50 TO STA 78+00  
 SCALE: 1"=20'

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
CLEARING & SNAGGING (LIN. FT.)	6,750

DESIGNED BY	W. SONNIER
DRAWN BY	W. SONNIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05(CAD)

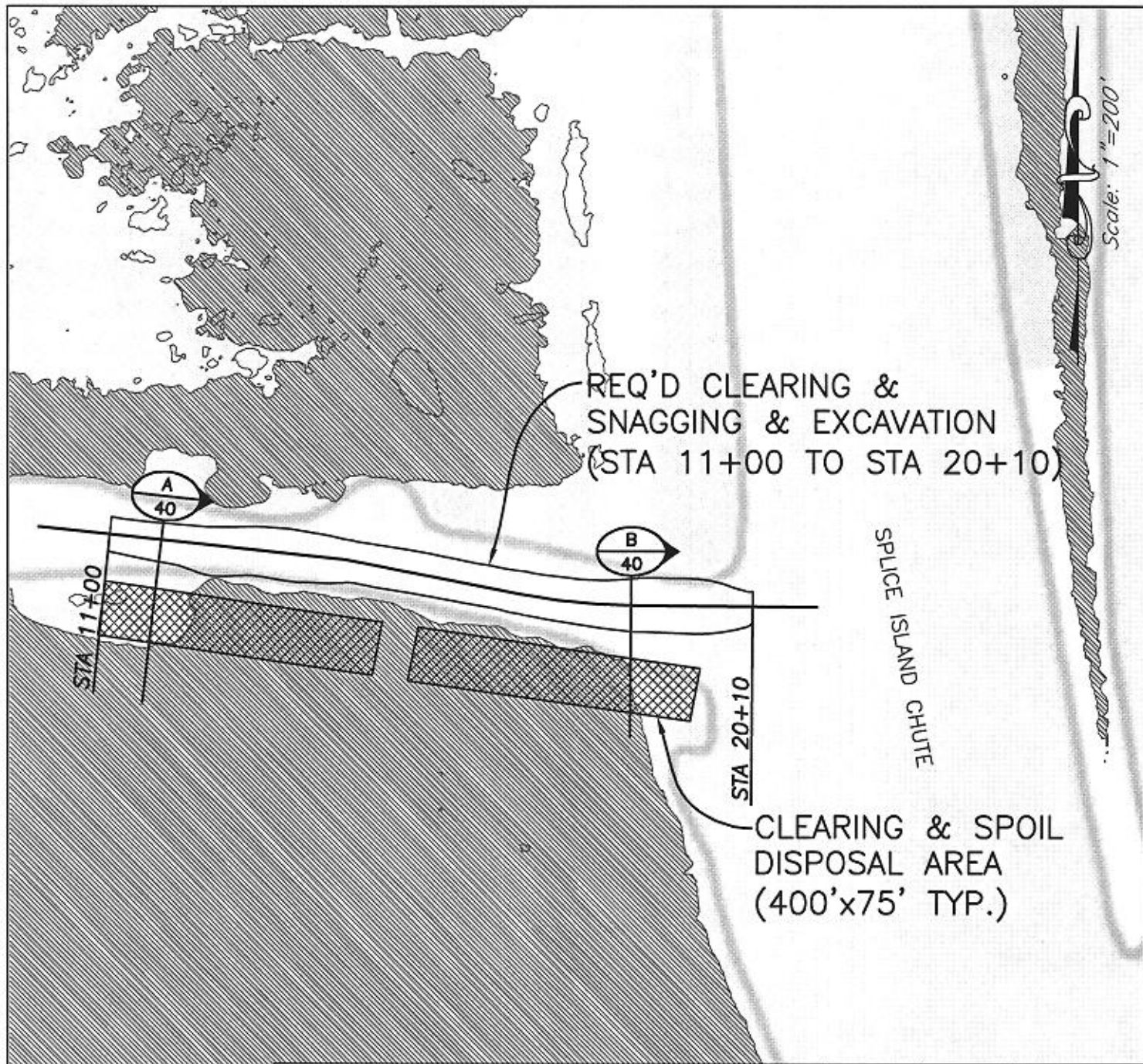
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 148-B Easy Street, Lafayette, LA 70506 (507) 632-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT B - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET	37
OF	44



ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
9	CLEARING & EXCAVATION	11+00	20+10	910'	40'	VARIES (40'-75')

**NOTES:**

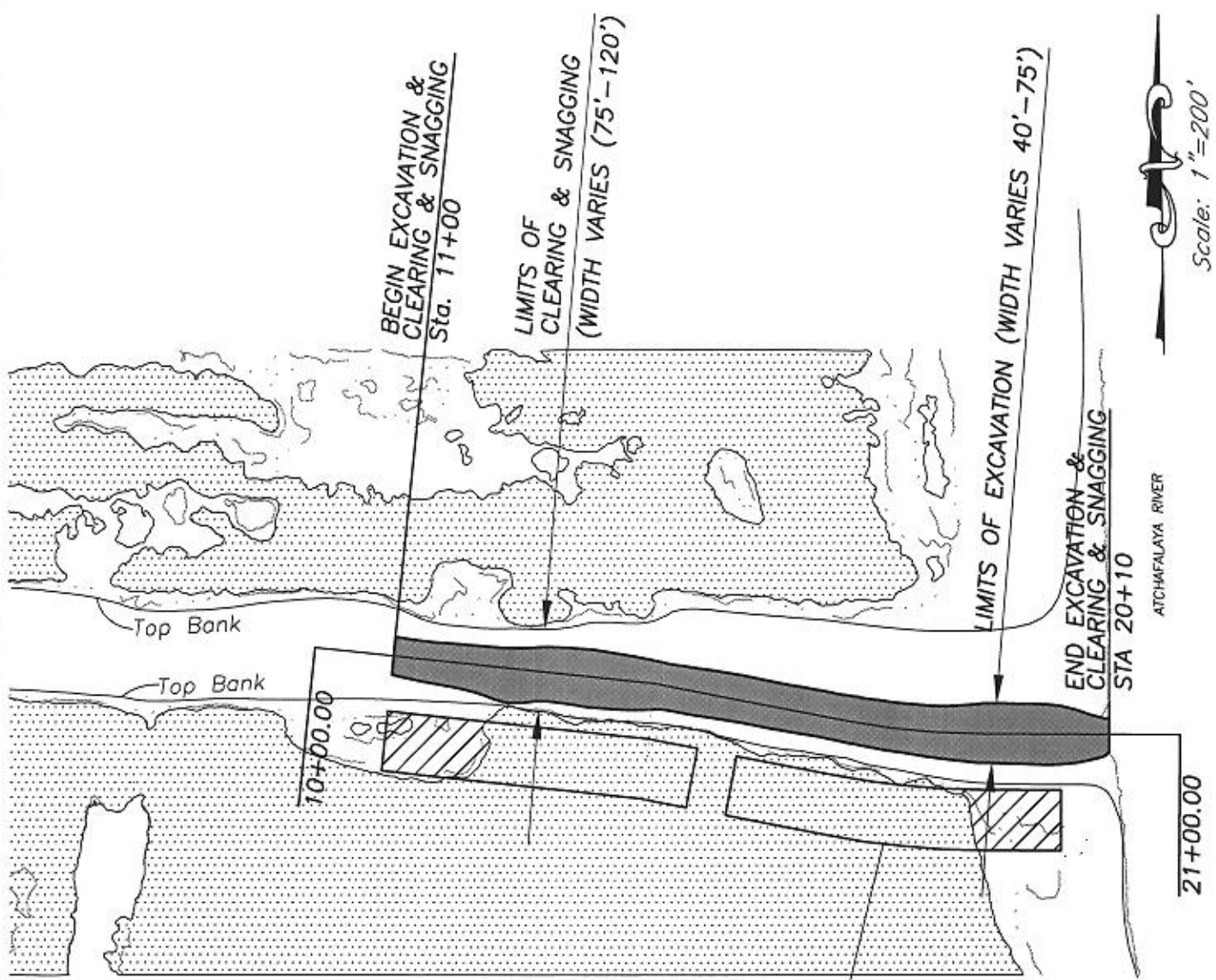
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 9 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)	<b>LEGEND</b> SECTION TITLE SHEET NO. SHOWING SECTION	1" = 200' 100' 0 100' 200' 300'	
		<b>OWNER</b> M. SONNER <b>DRAWN BY</b> J. FAGRE <b>DATE</b> APRIL 2016 <b>SCALE</b> AS SHOWN <b>PROJECT</b> 8004-07 <b>FILE NO.</b> SEE LEFT SIDE	 <b>Sellers &amp; Associates, Inc.</b> ENGINEERS SURVEYORS 148-9 Bay Street, Lakeyette, LA 70668 (337) 859-0777

141.D001A1.8004-07 Permit/Perm. Drawings/8004-07 Overall/ohg

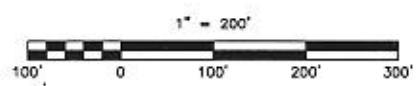
ELEMENT 9 - OVERALL PLAN VIEW

I:\DATA\8004\8004-07 Permits\Drawings\8004-07 Project 9 Plans.dwg



**LEGEND**

- NON-WETLAND (EL. > 15.6)
- NON-WETLAND WATER BOTTOM
- AFFECTED WETLANDS
- OHW (EL. 14.3)
- OLW (EL. 3.9)

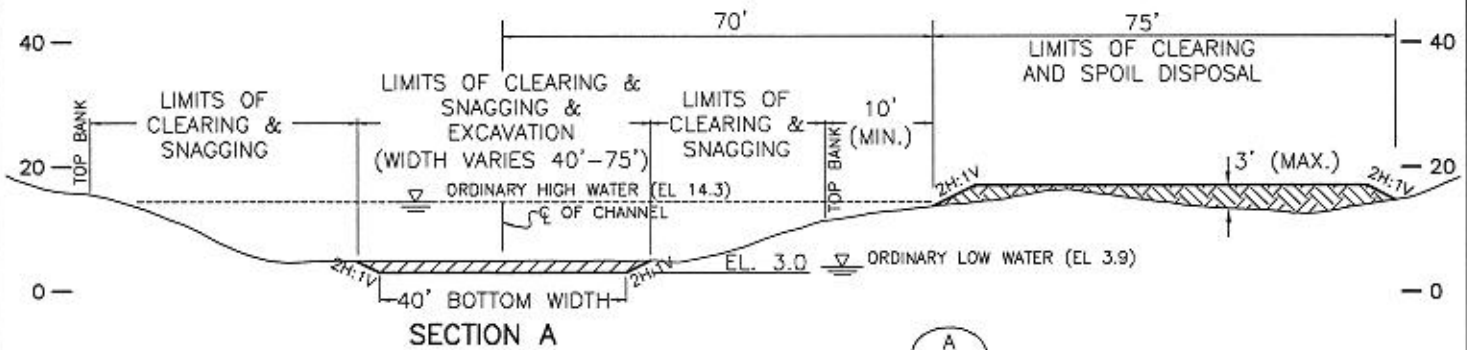


ENGINEER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

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 146-B Easy Street, Lafayette, LA 70506 (337) 232-0777

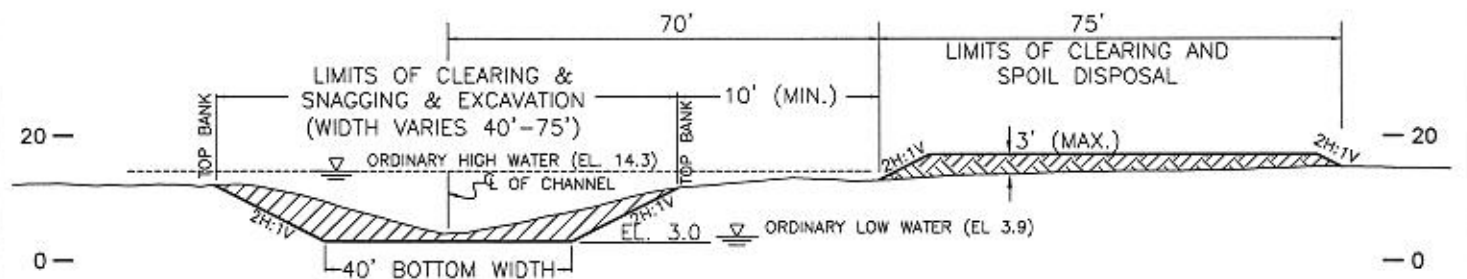
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 9 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>39</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



**SECTION A**  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 11+00 TO STA 20+10  
 SCALE: 1"=30'

A  
38



**SECTION B**  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 11+00 TO STA 20+10  
 SCALE: 1"=30'

B  
38

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
GENERAL EXCAVATION (CU. YDS)	4,690
CLEARING & SNAGGING (LIN. FT.)	910
CLEARING (ACRES)	1.6

DESIGNED BY	N. SOMMER
DRAWN BY	N. SOMMER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD

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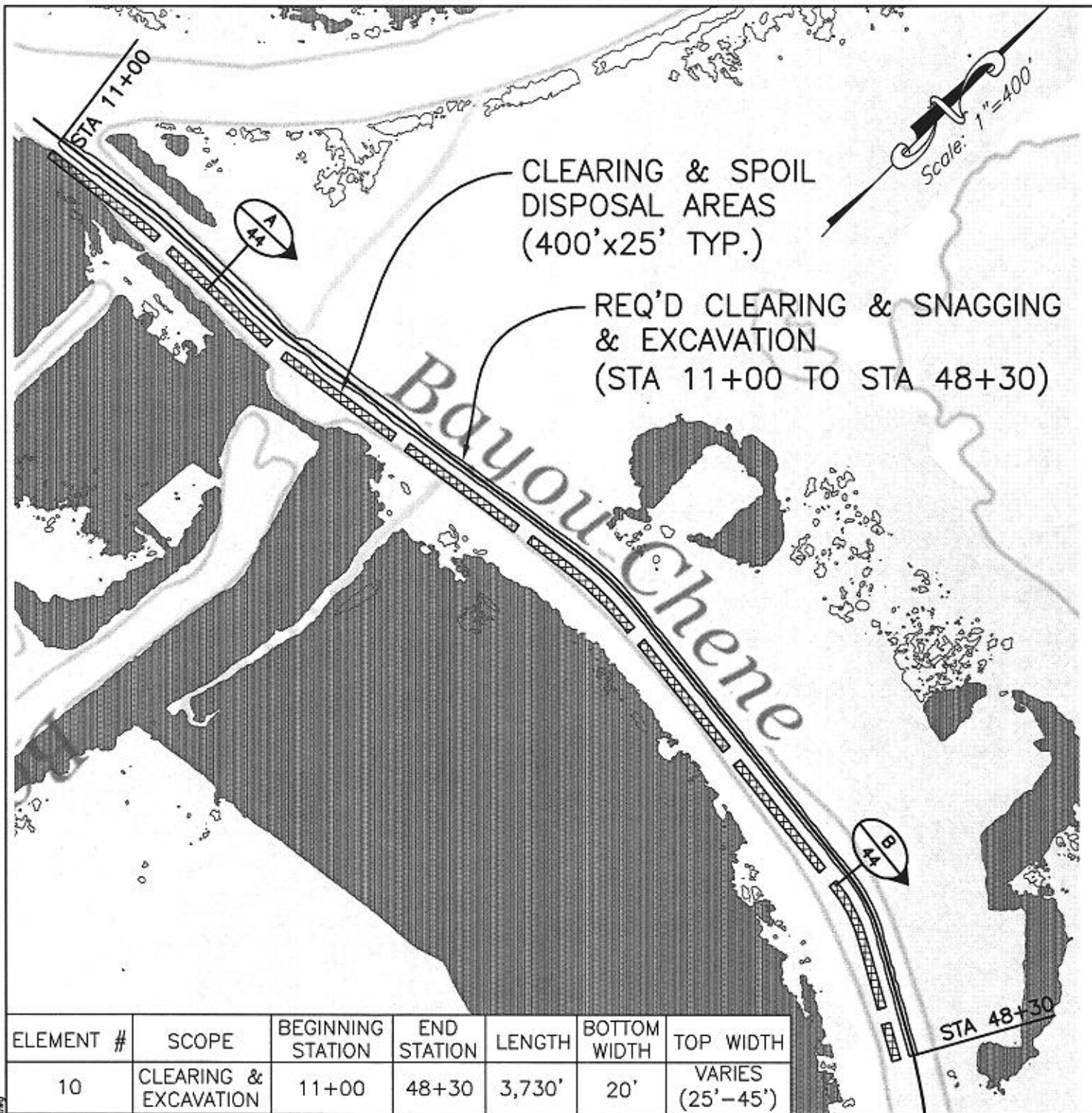
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 9 - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
40  
OF  
44





ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
10	CLEARING & EXCAVATION	11+00	48+30	3,730'	20'	VARIES (25'-45')

**NOTES:**

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 10 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

		<b>LEGEND</b> SECTION TITLE SHEET NO. SHOWING SECTION		1" = 400' 	
OWNER N. SOMNER DRAWN BY J. FABRE DATE APRIL 2018 SCALE AS SHOWN PROJECT 8004-07 PLAN NO. SEE LEFT SIDE				<b>BEAU BAYOU SWAMP HYDROLOGIC RESTORATION</b> CLIENT ST. MARTIN PARISH GOVERNMENT PROJECT BEAU BAYOU SWAMP HYDRO. REST. LOCATION ST. MARTIN PARISH, LOUISIANA	
<b>ELEMENT 10 - OVERALL PLAN VIEW</b>				SHEET 41 OF 44	

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MATCH LINE A-A SHEET 43

Scale: 1"=300'

LIMITS OF CLEARING & SNAGGING & EXCAVATION (WIDTH VARIES 25'-45')

CLEARING AND SPOIL DISPOSAL AREAS (400' X 25' TYP.)

MINIMUM 10' WIDE BERM BETWEEN EXCAVATED MATERIAL BERM & PROPOSED LIMIT OF EXCAVATION (TYP.)

Sta. 11+00.00  
BEGIN EXCAVATION & CLEARING & SNAGGING

10+00.00






Bayou Crook Chene

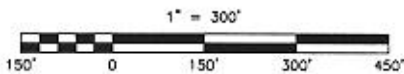
TREE LINE

TREE LINE

Bayou Chene

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



R:\DATA\8004\8004-07 Permits\Permit Drawings\8004-07 Project 10 Plans.dwg

DESIGNED BY	N. SOWNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



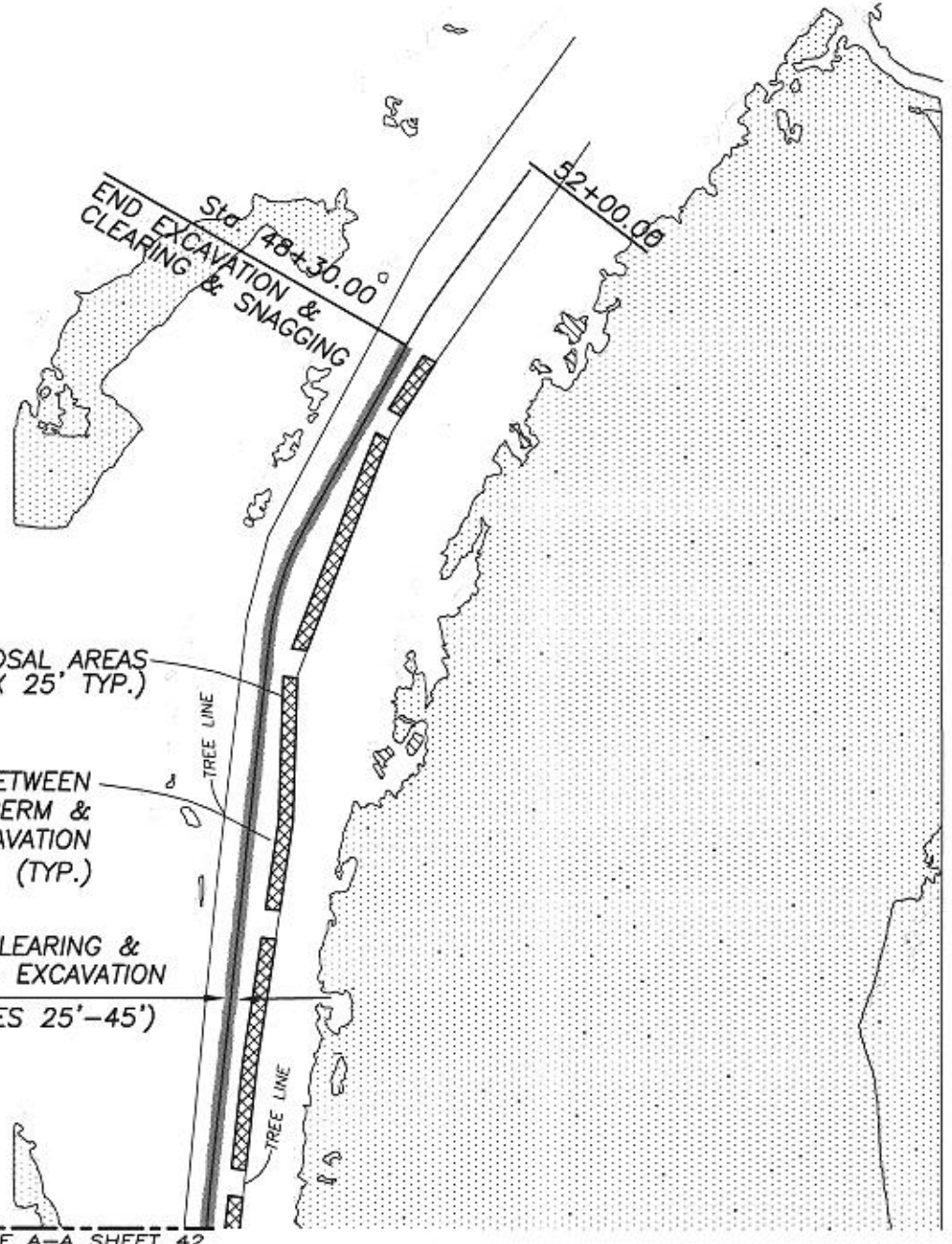
**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
146-B Bay Street, Lafayette, LA 70506 (337) 832-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 10 - PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 42 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

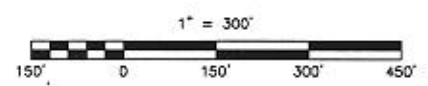
Scale: 1"=300'



LIMITS OF CLEARING & SNAGGING & EXCAVATION (WIDTH VARIES 25'-45')

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



A:\DATA\8004\8004-07 Permits\Drawings\8004-07 Project 10 Plans.dwg

DESIGNER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

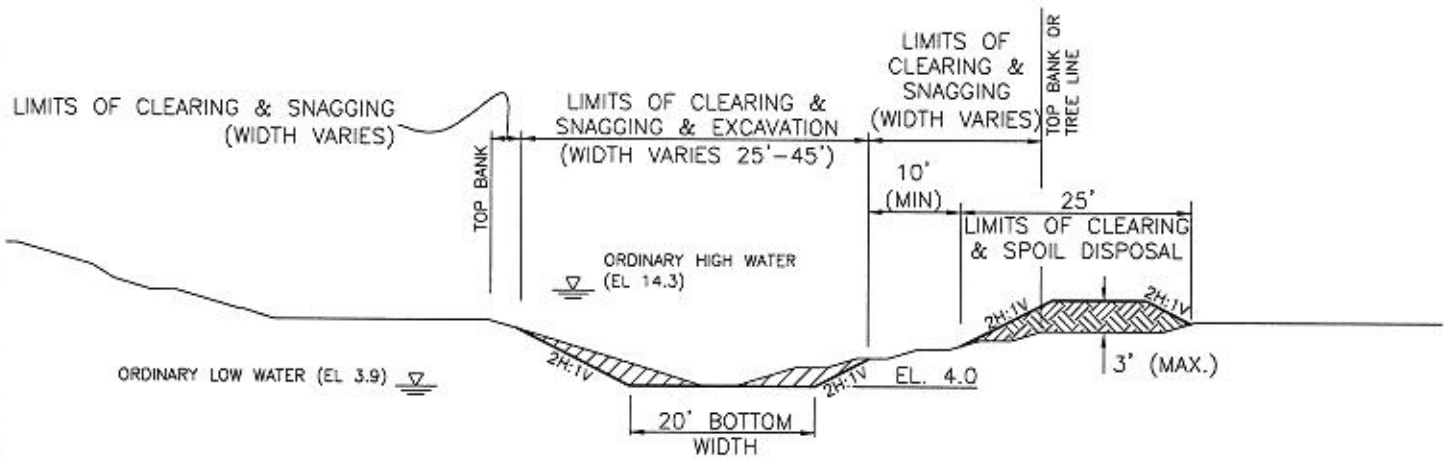


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ENGINEERS  
149-B Bay Street, Lafayette, LA 70508 (504) 232-3777

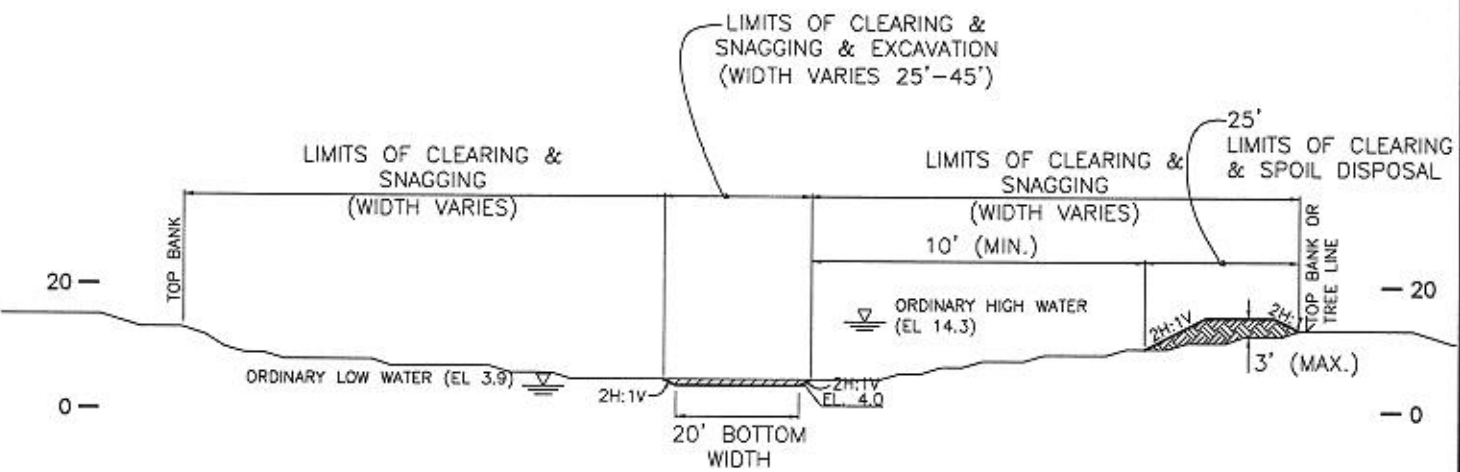
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 10 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>43</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



**SECTION A**  
**TYPICAL SECTION—CLEARING & SNAGGING & EXCAVATION**  
 STA 11+00 TO STA 48+30  
 SCALE: 1"=20'



**SECTION B**  
**TYPICAL SECTION—CLEARING & SNAGGING & EXCAVATION**  
 STA 11+00 TO STA 48+30  
 SCALE: 1"=30'

PROJECT FEATURES	QUANTITY
GENERAL EXCAVATION (CU. YDS)	4,931
CLEARING & SNAGGING (LIN. FT.)	3,730
CLEARING (ACRES)	0.1

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

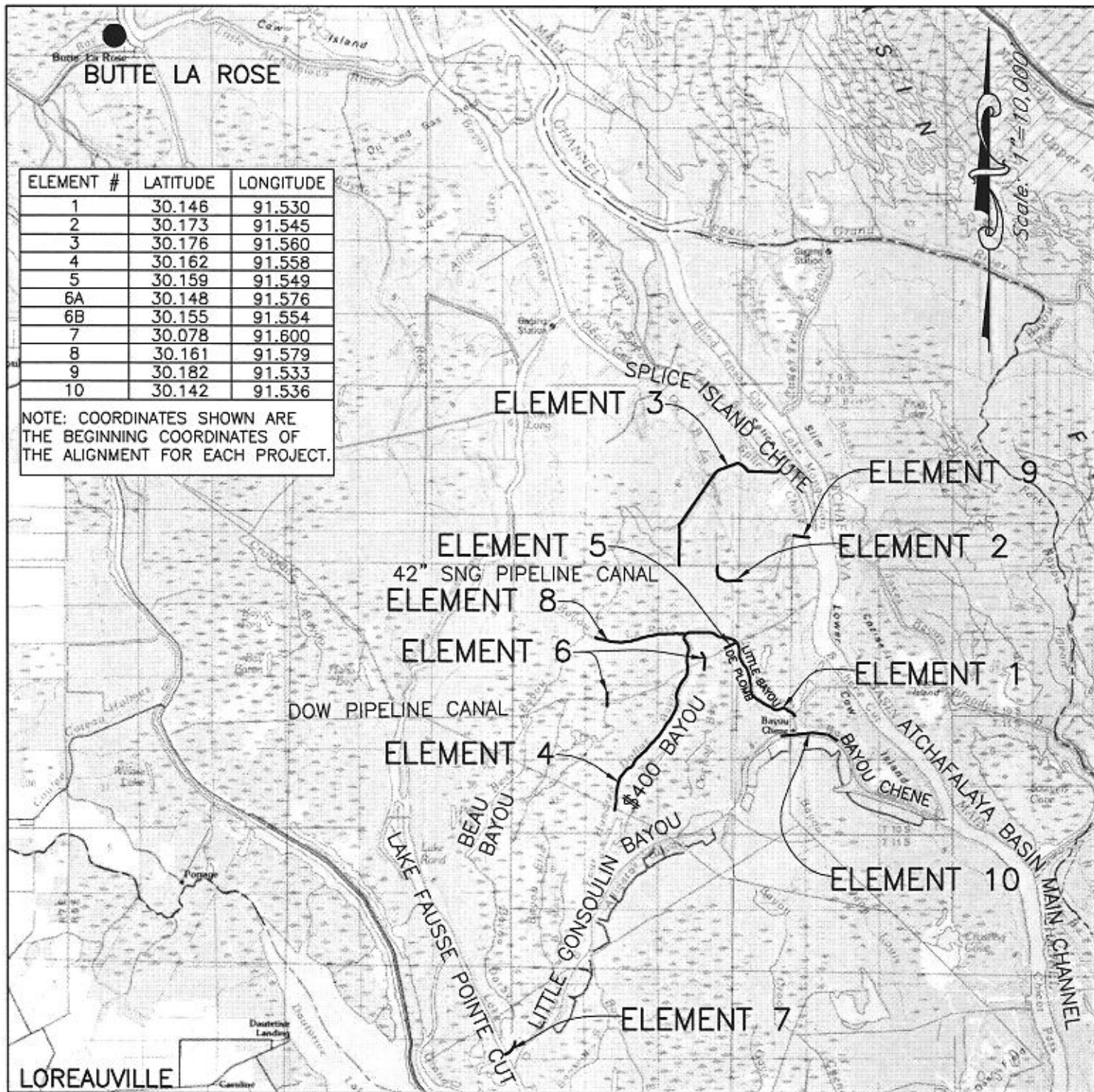
ENGINEER	N. SOMMER
DRAWN BY	N. SOMMER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05/CAD

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 148-B Bay Street, Lafayette, LA 70508 (337) 950-0777

**BEAU BAYOU SWAMP**  
**HYDROLOGIC RESTORATION**  
**ELEMENT 10 — TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		44





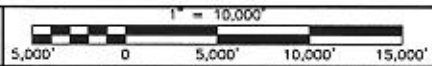
ELEMENT #	LATITUDE	LONGITUDE
1	30.146	91.530
2	30.173	91.545
3	30.176	91.560
4	30.162	91.558
5	30.159	91.549
6A	30.148	91.576
6B	30.155	91.554
7	30.078	91.600
8	30.161	91.579
9	30.182	91.533
10	30.142	91.536

NOTE: COORDINATES SHOWN ARE THE BEGINNING COORDINATES OF THE ALIGNMENT FOR EACH PROJECT.

**GENERAL NOTES:**

1. THE CONTRACTOR SHALL MINIMIZE DISTURBING AREAS TO THE FOOTPRINT NEEDED FOR CONSTRUCTION. ALL AREAS TO BE CLEARED SHALL BE FLAGGED AND INSPECTED PRIOR TO CLEARING OPERATIONS TO INSURE NO DAMAGE TO SIGNIFICANT TREES.
2. UNLESS SPECIFIED OTHERWISE, ALL EXCAVATION SHALL REMAIN WITHIN THE EXISTING CHANNEL TOP BANK. IF THE PROPOSED ALIGNMENT AND TEMPLATE WILL RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE ALIGNMENT OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH OF THE DESIGN TEMPLATE TO REMAIN WITHIN THE EXISTING TOP BANK OF THE CHANNEL.
3. EXISTING FEATURES ARE ESTIMATED FROM LIDAR DATA. EXISTING TOP BANK SHALL BE FIELD DETERMINED AND ADJUSTED ACCORDINGLY.
4. WITHIN AREAS MARKED FOR CLEARING & SPOIL DISPOSAL, ALL TREES AND WOODY VEGETATION NOT MARKED FOR PRESERVATION SHALL BE CUT SO THE REMAINING STUMP EXTENDS NO MORE THAN 12" ABOVE THE GROUND SURFACE. CLEARED MATERIAL SHALL BE STOCKPILED AND COVERED WITH EXCAVATED MATERIAL TO A DEPTH OF AT LEAST 2'.
5. PLACEMENT OF EXCAVATED MATERIAL SHALL BE CONTAINED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS. THE EXCAVATED MATERIAL BERM SHALL SLOPE BACK TO NATURAL GROUND AT A 2H:1V SLOPE, AND SHALL NOT BE CONTINUOUS FOR MORE THAN 400', UNLESS SPECIFIED OTHERWISE, THE EXCAVATED MATERIAL BERM SHALL HAVE GAPS WITH A MINIMUM OPENING OF 50' TO ALLOW THE FREE EXCHANGE OF WATER BETWEEN THE CHANNEL AND ADJACENT SWAMP.

QUAD MAP SHOWN: U.S.G.S. BATON ROUGE TOPOGRAPHIC MAP (1984) (1:100,000) (USGS REF. CODE:30091-A1-TM-100)



ENGINEER	M. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Dory Street, Lafayette, LA 70508 (337) 232-0771

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

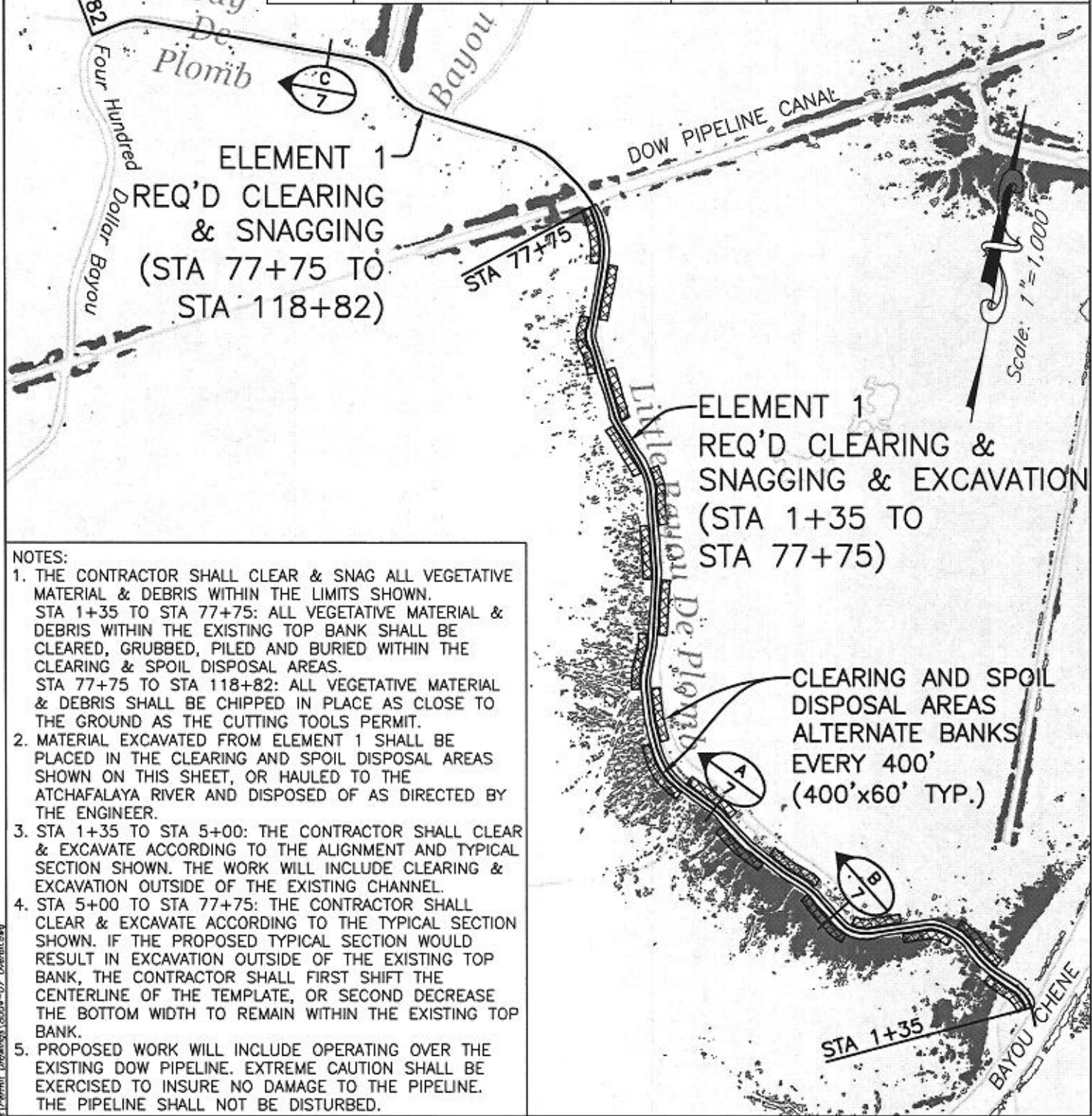
VICINITY MAP & GENERAL NOTES

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 1 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

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ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
1	CLEARING & EXCAVATION	1+35	77+75	7,640'	30'	VARIES (50'-110')
1	CLEARING & SNAGGING	77+75	118+82	4,107'		VARIES (90'-100')



- NOTES:**
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN.  
 STA 1+35 TO STA 77+75: ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE EXISTING TOP BANK SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.  
 STA 77+75 TO STA 118+82: ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CHIPPED IN PLACE AS CLOSE TO THE GROUND AS THE CUTTING TOOLS PERMIT.
  2. MATERIAL EXCAVATED FROM ELEMENT 1 SHALL BE PLACED IN THE CLEARING AND SPOIL DISPOSAL AREAS SHOWN ON THIS SHEET, OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. STA 1+35 TO STA 5+00: THE CONTRACTOR SHALL CLEAR & EXCAVATE ACCORDING TO THE ALIGNMENT AND TYPICAL SECTION SHOWN. THE WORK WILL INCLUDE CLEARING & EXCAVATION OUTSIDE OF THE EXISTING CHANNEL.
  4. STA 5+00 TO STA 77+75: THE CONTRACTOR SHALL CLEAR & EXCAVATE ACCORDING TO THE TYPICAL SECTION SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.
  5. PROPOSED WORK WILL INCLUDE OPERATING OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.

CLEARING & SPOIL DISPOSAL AREAS	<b>LEGEND</b>	SECTION TITLE	1" = 1,000'
UPLANDS (EL. > 15.6)		SHEET NO. SHOWING SECTION	500' 0 500' 1,000' 1,500'

DESIGNED BY	N. SONNIER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

**Sellers & Associates, Inc.**  
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 148-B Sorey Street, Lafayette, LA 70506 (337) 232-0771

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 1 - OVERALL PLAN VIEW**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	2
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

A:\DATA\8004\8004-07 Permit\Drawings\8004-07 Overall.dwg

MATCH LINE A-A SHEET 4

Scale: 1"=300'

CLEARING & SPOIL DISPOSAL AREA  
ALTERNATE BANKS EVERY 400'  
(400'x60' TYP.)

10' WIDE BERM BETWEEN EXCAVATED MATERIAL  
BERM AND EXISTING TOP OF BANK (TYP.)

30'± EXISTING WATER BOTTOM

LIMITS OF EXCAVATION  
(WIDTH VARIES 50'-80')

LIMITS OF CLEARING & SNAGGING  
(WIDTH VARIES 90'-100')






EXISTING  
CHANNEL  
CENTERLINE

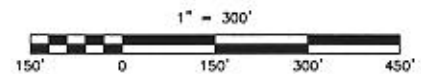
BAYOU CHENE

Sta. 1+35 BEGIN EXCAVATION &  
CLEARING & SNAGGING

0+00.00

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\DWG\8004\8004-07 Permits\Permit Drawings\8004-07 Project 1 Plans.dwg

DESIGNED BY	N. SOMNER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALLING



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148-B Bay Street, Lafayette, LA 70508 (337) 232-9777

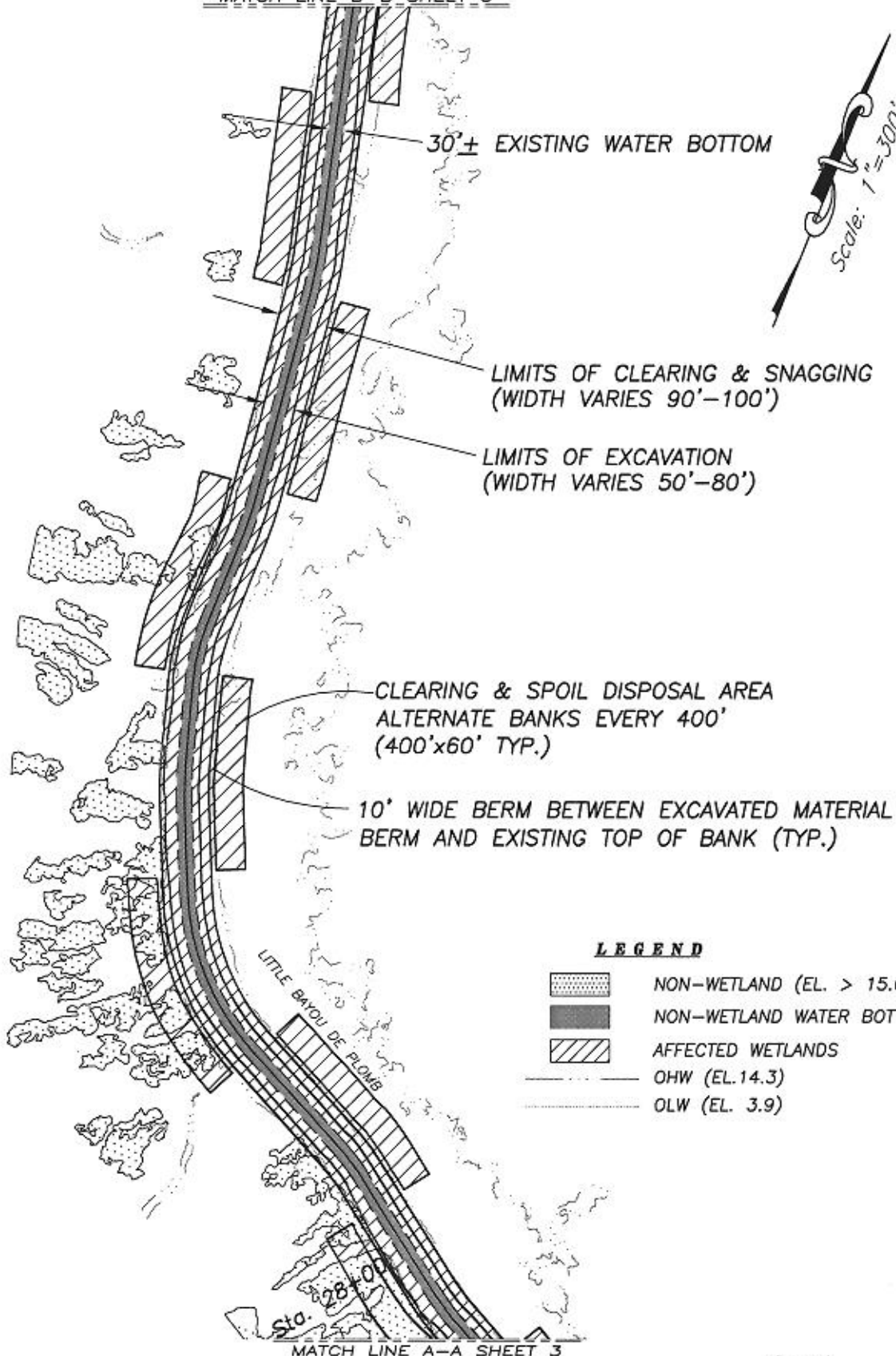
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

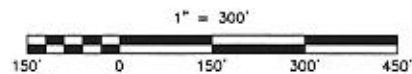
SHEET  
**3**  
OF  
**44**

MATCH LINE B-B SHEET 5



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\DATA\2004\2004-07 Permits\Permit Drawings\2004-07 Project 1 Plans.dwg

DESIGNER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	2004-07
FILE NO.	OVERALL.DWG



**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	4
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

MATCH LINE C-C SHEET 6

LIMITS OF CLEARING AND SNAGGING  
(WIDTH VARIES 90'-100')

30'± EXISTING WATER BOTTOM

LITTLE BAYOU DE PLOMB

DOW PIPELINE CANAL

Sta. 77+75  
END EXCAVATION  
BEGIN CLEARING &  
SNAGGING ONLY

30'± EXISTING WATER BOTTOM




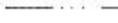

LIMITS OF EXCAVATION  
(WIDTH VARIES 50'-80')

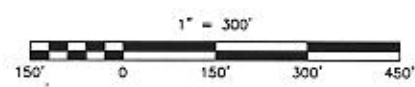
CLEARING & SPOIL DISPOSAL AREA  
ALTERNATE BANKS EVERY 400'  
(400'x60' TYP.)

10' WIDE BERM BETWEEN EXCAVATED MATERIAL BERM  
AND EXISTING TOP OF BANK (TYP.)



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



MATCH LINE B-B SHEET 4

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ENGINEER	N. SOMMER
DRAWN BY	J. FAIRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
5  
OF  
44

118+82  
END CLEARING  
& SNAGGING

FOUR HUNDRED  
DOLLAR BAYOU






LIMITS OF CLEARING AND SNAGGING  
(WIDTH VARIES 90'-100')

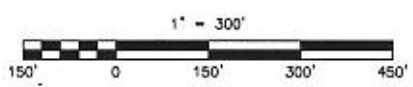
30'± EXISTING WATER BOTTOM

LITTLE BAYOU DE PLOMB

Scale: 1"=300'

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



MATCH LINE C-C SHEET 5

N:\DATA\80041-07 Permits\Permit Drawings\8004-07 Project 1 Plans.dwg

DESIGNED BY	N. SONNER
DRAWN BY	J. FAIRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALLDWG



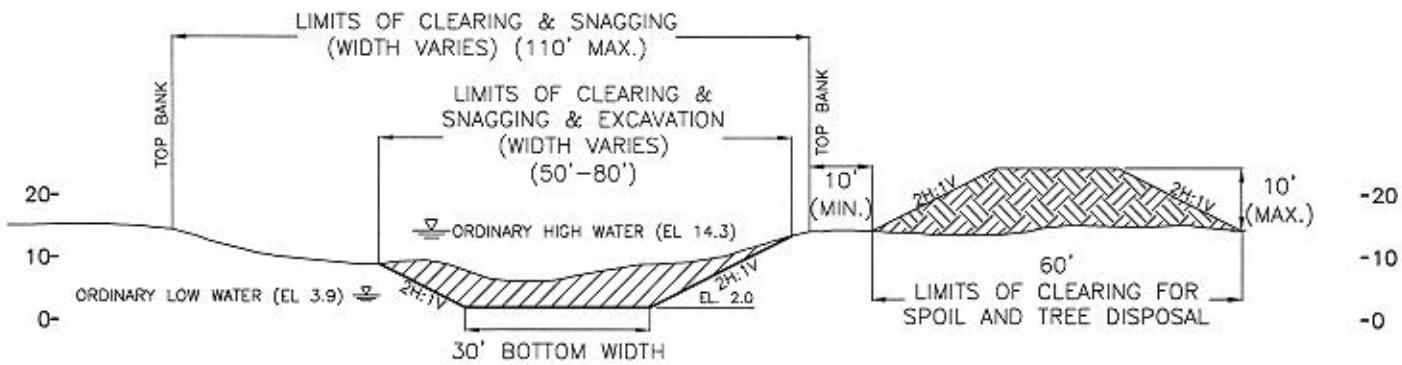
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ENGINEERS  
140-B Bay Street, Lake Charles, LA 70508 (877) 832-9777  
SURVEYORS

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

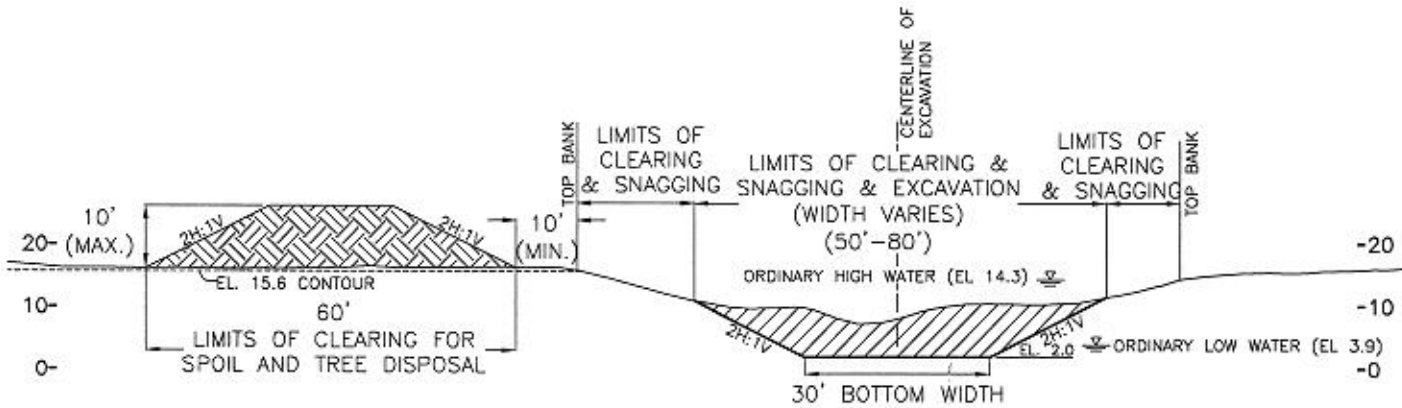
ELEMENT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>6</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

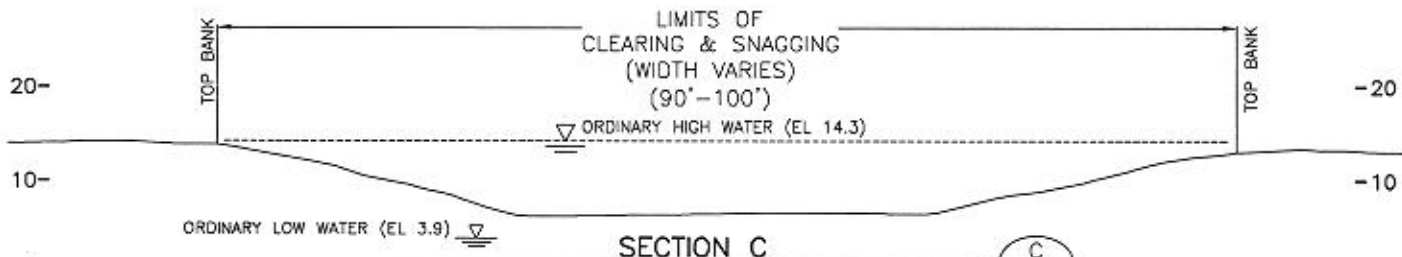




**SECTION A**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 1+35 TO STA 77+75  
 SCALE: 1"=30'



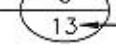


**SECTION B**  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 1+35 TO STA 77+75  
 SCALE: 1"=30'



**SECTION C**  
**TYPICAL SECTION-CLEARING & SNAGGING**  
 STA 77+75 TO STA 118+82  
 SCALE: 1"=20'

PROJECT FEATURES	QUANTITY
CHANNEL EXCAVATION (CU. YDS.)	86,670
CLEARING & SNAGGING (LIN. FT.)	11,747
CLEARING (ACRES)	12.3

**LEGEND**

 SECTION TITLE  
 SHEET NO. SHOWING PLAN VIEW  
 EXCAVATED MATERIAL BERM  
 EXCAVATION

DESIGNED BY	N. SONNIER
DRAWN BY	N. SONNIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-051.CAD

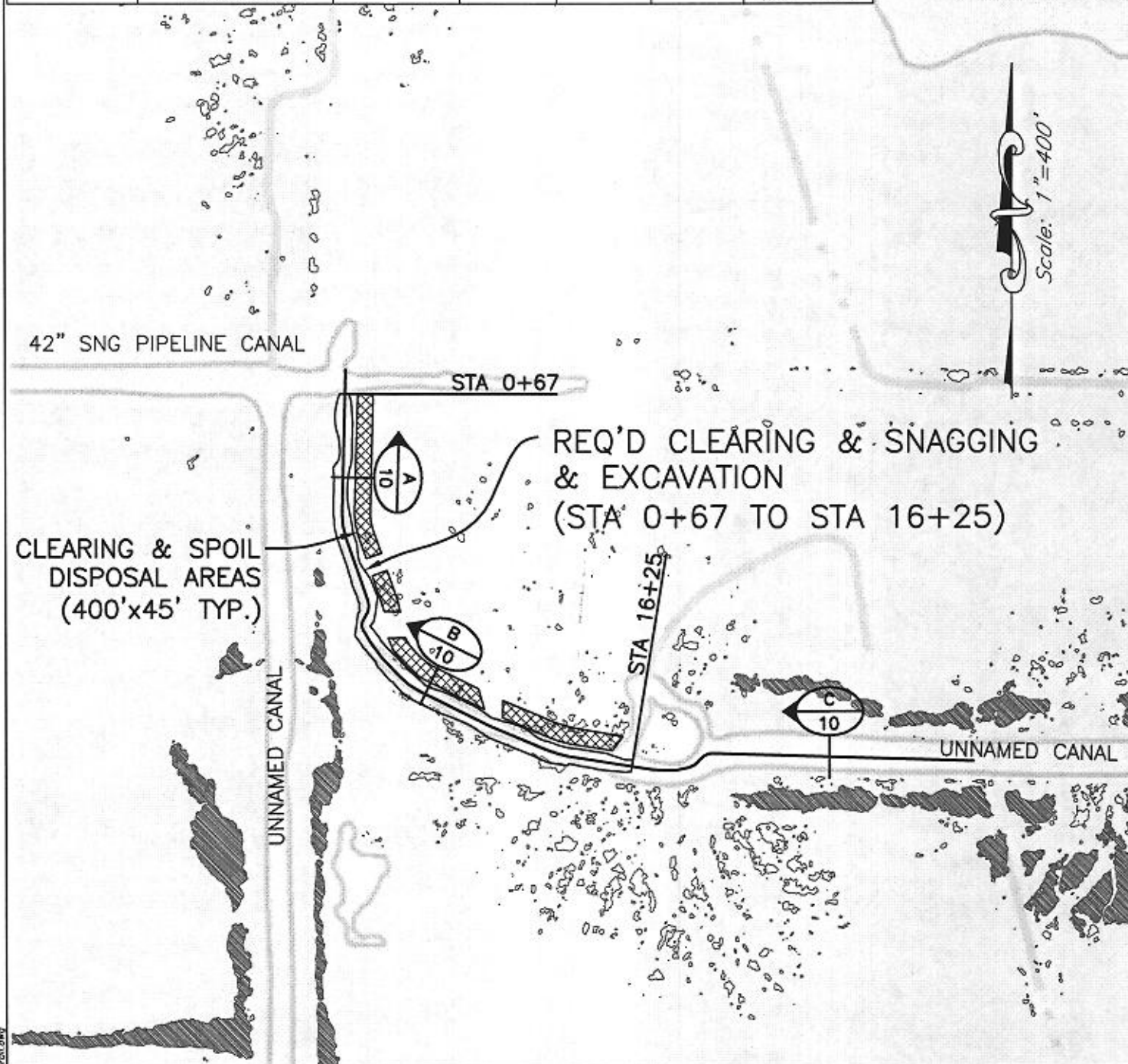

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 348-3 Bay Street, Lafayette, LA 70506 (504) 938-0777

**BEAU BAYOU SWAMP**  
**HYDROLOGIC RESTORATION**  
**ELEMENT 1 - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET	7
OF	44

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
2	CLEARING & EXCAVATION	0+67	16+25	1,558'	15'	VARIES (25'-55')



42" SNG PIPELINE CANAL

STA 0+67

REQ'D CLEARING & SNAGGING  
& EXCAVATION  
(STA 0+67 TO STA 16+25)

CLEARING & SPOIL  
DISPOSAL AREAS  
(400'x45' TYP.)

UNNAMED CANAL

STA 16+25

UNNAMED CANAL

NOTES:

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 2 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE ALIGNMENT AND TYPICAL SECTION SHOWN. SINCE THE EXISTING CHANNEL CENTERLINE MEANDERS, THE PROPOSED ALIGNMENT MAY INVOLVE EXCAVATION OUTSIDE OF THE EXISTING TOP BANK.



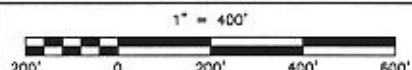
CLEARING & SPOIL  
DISPOSAL AREAS  
UPLANDS (EL. > 15.6)

LEGEND

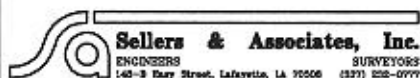


SECTION TITLE

SHEET NO. SHOWING SECTION



OWNER	M. SPANIER
DRAWN BY	J. FAURE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	9004-07
FILE NO.	SEE LEFT SIDE



BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	8
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	8
LOCATION	ST. MARTIN PARISH, LOUISIANA	OF	44

ELEMENT 2 - OVERALL PLAN VIEW

W:\DATA\9004\9004-07\_PlanView\Drawings\9004-07\_Overall.dwg

0+00  
 BEGIN EXCAVATION & CLEARING & SNAGGING  
 STA 0+66

10' BERM BETWEEN EXCAVATED MATERIAL BERM & EXISTING OR PROPOSED TOP OF BANK (TYP.)

LIMITS OF EXCAVATION (WIDTH VARIES 25'-55')

LIMITS OF CLEARING & SNAGGING (WIDTH VARIES 40'-65')

CLEARING & SPOIL DISPOSAL AREAS (400' X 45' TYP.)




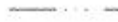

STA 16+25  
 END EXCAVATION & CLEARING & SNAGGING

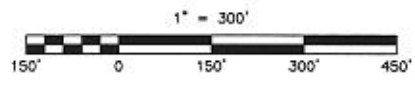
30'± EXISTING WATER BOTTOM

22+00



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\DATA\2004\2004-07 Permits\Permits\Drawings\2004-07 Project 2 Plans.dwg

DESIGNED BY	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	2004-07
FILE NO.	PROJECT2.DWG



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 248-B Bay Street, Lakeview, LA 70008 (504) 251-0777

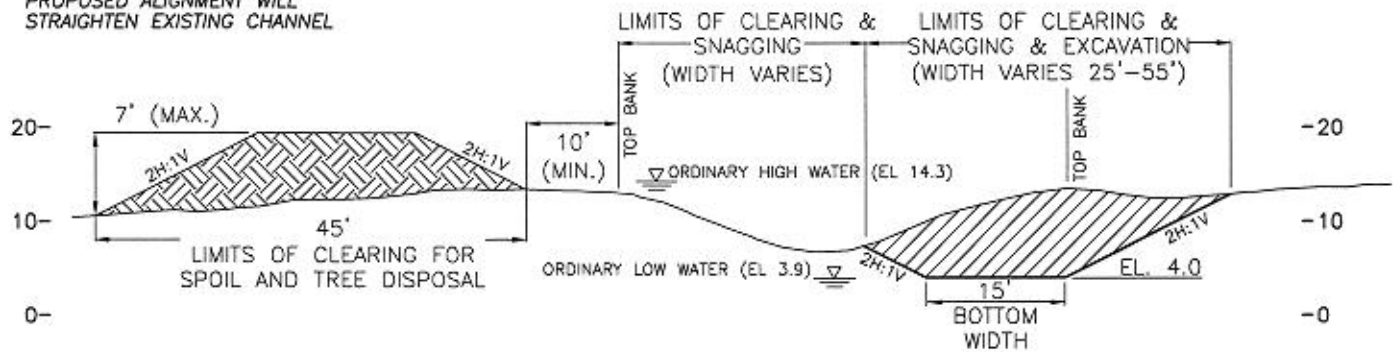
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 2 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
 9  
 OF  
 44

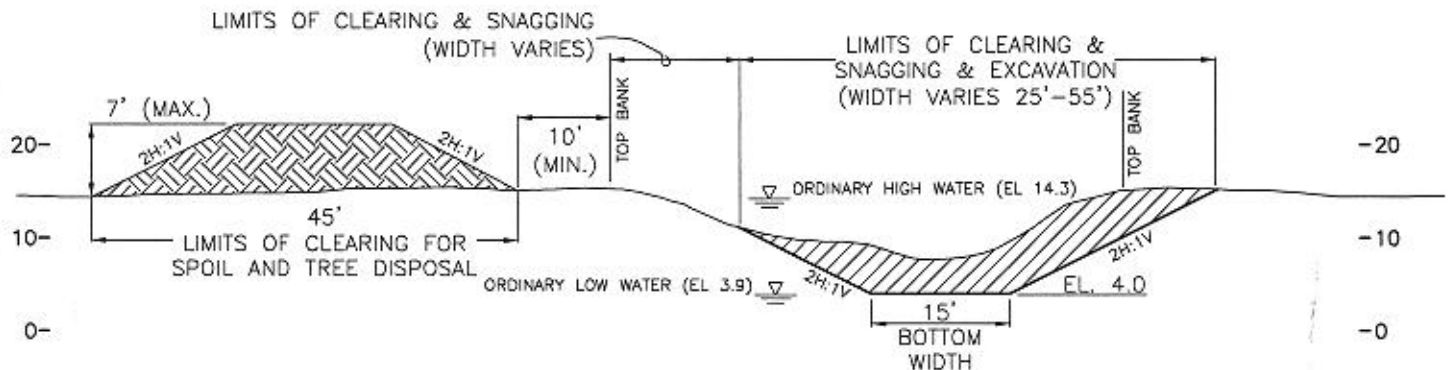
NOTE: EXISTING CHANNEL MEANDERS.  
PROPOSED ALIGNMENT WILL  
STRAIGHTEN EXISTING CHANNEL



SECTION A - EXISTING CHANNEL OFFSET FROM PROPOSED CENTERLINE

TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
STA 0+67 TO STA 16+25  
SCALE: 1"=20'

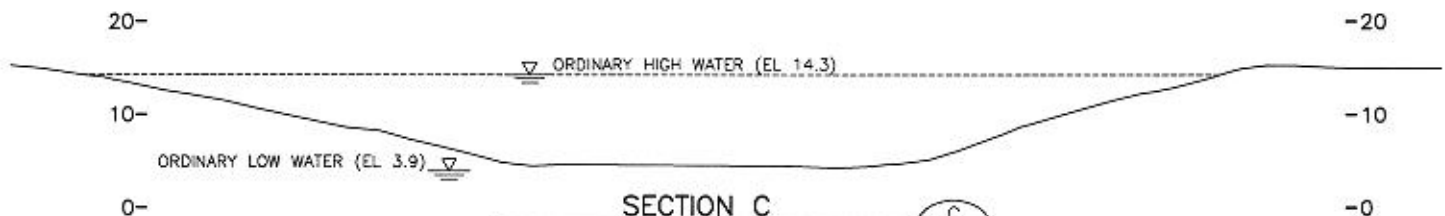
A  
8



SECTION B

TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
STA 0+67 TO STA 16+25  
SCALE: 1"=20'

B  
8



SECTION C

TYPICAL SECTION-NO WORK  
SCALE: 1"=20'

C  
8

LEGEND

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	9,191
CLEARING & SNAGGING (LIN. FT.)	1,558
CLEARING (ACRES)	1.5

ENGINEER	M. SONNER
DRAWN BY	M. SONNER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05/CAD

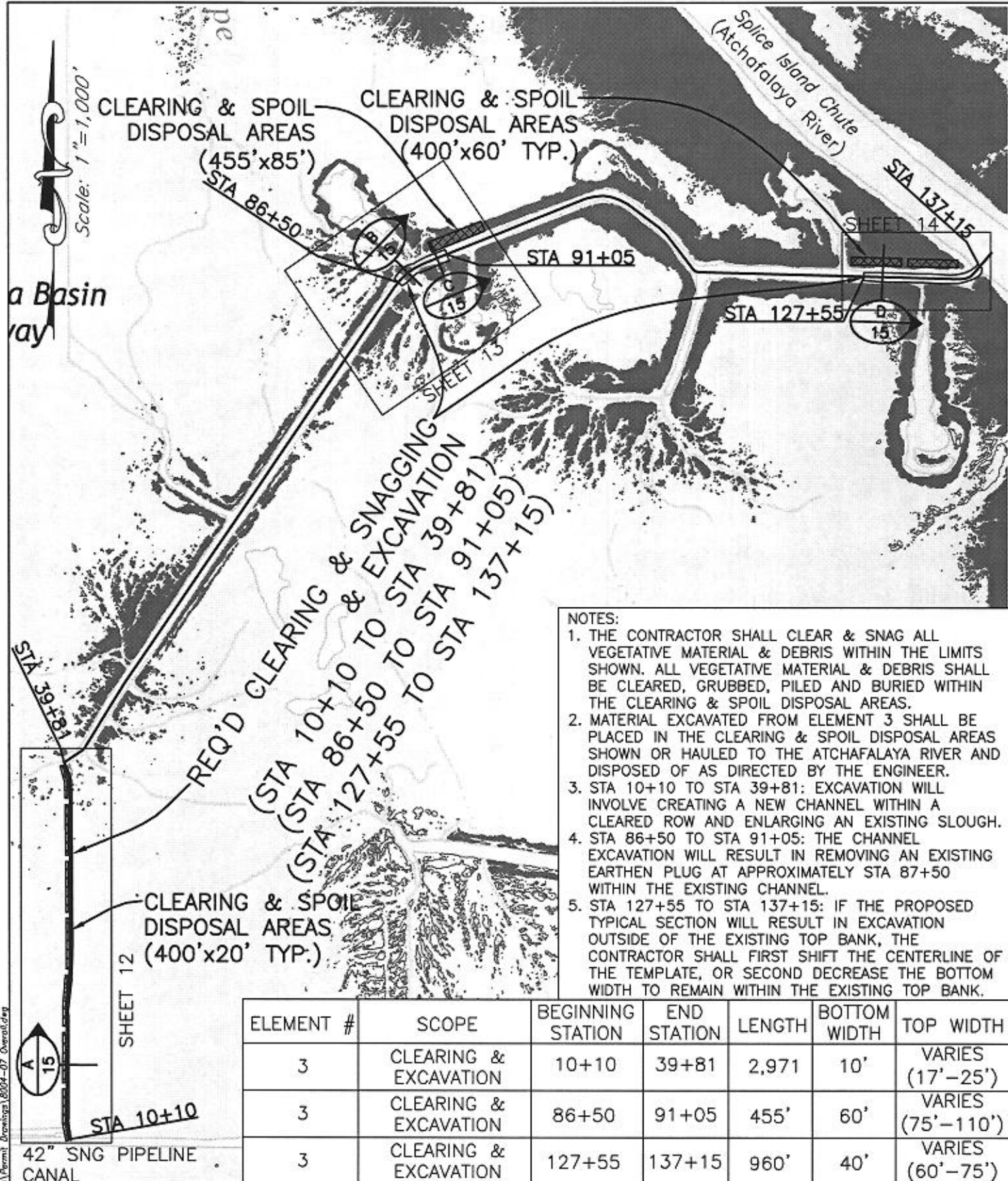


BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION

ELEMENT 2 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 10 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	





- NOTES:
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 3 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. STA 10+10 TO STA 39+81: EXCAVATION WILL INVOLVE CREATING A NEW CHANNEL WITHIN A CLEARED ROW AND ENLARGING AN EXISTING SLOUGH.
  4. STA 86+50 TO STA 91+05: THE CHANNEL EXCAVATION WILL RESULT IN REMOVING AN EXISTING EARTHEN PLUG AT APPROXIMATELY STA 87+50 WITHIN THE EXISTING CHANNEL.
  5. STA 127+55 TO STA 137+15: IF THE PROPOSED TYPICAL SECTION WILL RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
3	CLEARING & EXCAVATION	10+10	39+81	2,971	10'	VARIABLE (17'-25')
3	CLEARING & EXCAVATION	86+50	91+05	455'	60'	VARIABLE (75'-110')
3	CLEARING & EXCAVATION	127+55	137+15	960'	40'	VARIABLE (60'-75')

**LEGEND**

CLEARING & SPOIL DISPOSAL AREAS

UPLANDS (EL. > 15.6)

**SECTION TITLE**

SHEET NO. SHOWING SECTION

Scale: 1" = 1,000'

ENGINEER: N. SONNER  
DRAWN BY: J. FABRE  
DATE: APRIL 2016  
SCALE: AS SHOWN  
PROJECT: 8004-07  
FILE NO.: SEE LEFT SIDE

**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lafayette, LA 70508 (337) 289-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 3 - OVERALL PLAN VIEW

CLIENT: ST. MARTIN PARISH GOVERNMENT

PROJECT: BEAU BAYOU SWAMP HYDRO. REST.

LOCATION: ST. MARTIN PARISH, LOUISIANA

SHEET 11 OF 44

PROJECT: 8004-07, BEAU BAYOU SWAMP HYDROLOGIC RESTORATION, ST. MARTIN PARISH, LOUISIANA  
 SHEET: 11 OF 44  
 DATE: APRIL 2016  
 SCALE: AS SHOWN  
 ENGINEER: N. SONNER  
 DRAWN BY: J. FABRE  
 PROJECT: 8004-07  
 FILE NO.: SEE LEFT SIDE



STA 39+81  
 END EXCAVATION & CLEARING & SNAGGING  
 EXISTING CANAL

10' BERM BETWEEN EXCAVATED MATERIAL BERM & EXISTING OR PROPOSED TOP OF BANK (TYP.)

CLEARING & SPOIL DISPOSAL AREAS (400' X 45' TYP.)






30'± EXISTING WATER BOTTOM LIMITS OF CLEARING & SNAGGING (30' MAX.)

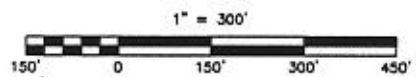
LIMITS OF EXCAVATION (WIDTH VARIES 17'-25')

STA 10+10.00  
 BEGIN EXCAVATION & CLEARING & SNAGGING  
 42" SNG PIPELINE  
 10+00



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



A:\DATA\8004\8004-07 Permits\Permit Drawings\8004-07 Project\_3 Plans.dwg

DESIGNED BY	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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 ENGINEERS SURVEYORS  
 148-B Bay Street, Lafayette, LA 70508 (507) 233-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 3 - PLAN VIEW**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 12 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

Scale: 1" = 100'

CLEARING & SPOIL DISPOSAL AREA  
(455'x85' TYP.)

LIMITS OF EXCAVATION  
(WIDTH VARIES 75'-110')

EXISTING TOP BANK  
EXISTING CANAL

EXISTING TOP BANK

EXISTING BANKLINE






STA 91+05.00  
END EXCAVATION & SNAGGING

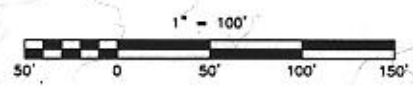
EXISTING EARTHEN PLUG

STA 86+50.00  
BEGIN EXCAVATION & SNAGGING

EXISTING TOP BANK  
EXISTING CANAL  
EXISTING TOP BANK

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\DATA\8004\8004-07 Permits\Permits\Drawings\8004-07 Project 3 Plans.dwg

OWNER	N. SONNER
DESIGNED BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILENAME	OVERALL.DWG



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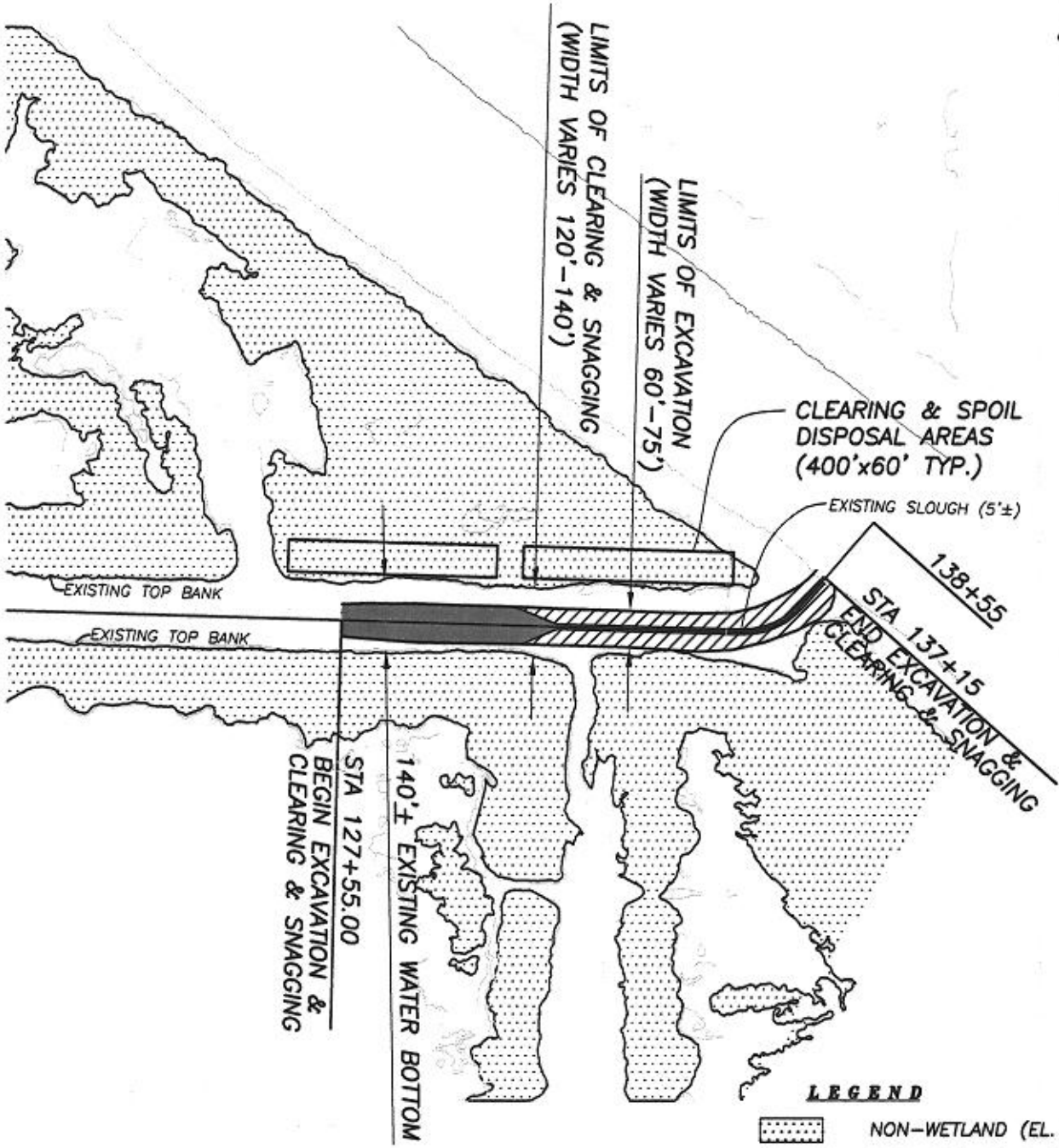
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 3 - PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

13  
OF  
44

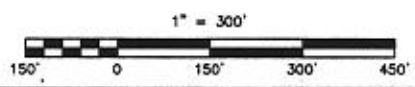
Scale: 1"=300'



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

NOTE: SEDIMENT HAS BUILT UP WITHIN THE EXISTING CANAL AT THE ATCHAFALAYA RIVER. VEGETATION (MAINLY WILLOW TREES) HAS ALSO GROWN WITHIN THE EXISTING CANAL. THERE IS A SMALL EXISTING SLOUGH (APPROXIMATELY 5' WIDE) AT THE ATCHAFALAYA RIVER THAT OPENS UP TO THE EXISTING CANAL APPROXIMATELY 700' FROM THE ATCHAFALAYA RIVER.



N:\DATA\8004\8004-07 Permits\Drawings\8004-07 Project 3 Plans.dwg

DESIGNER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



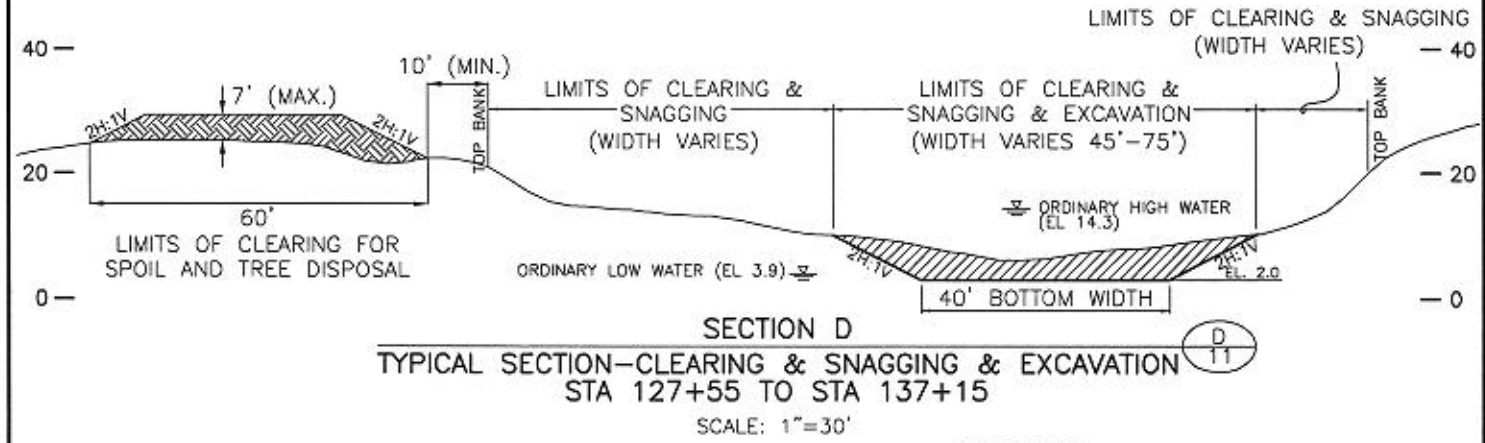
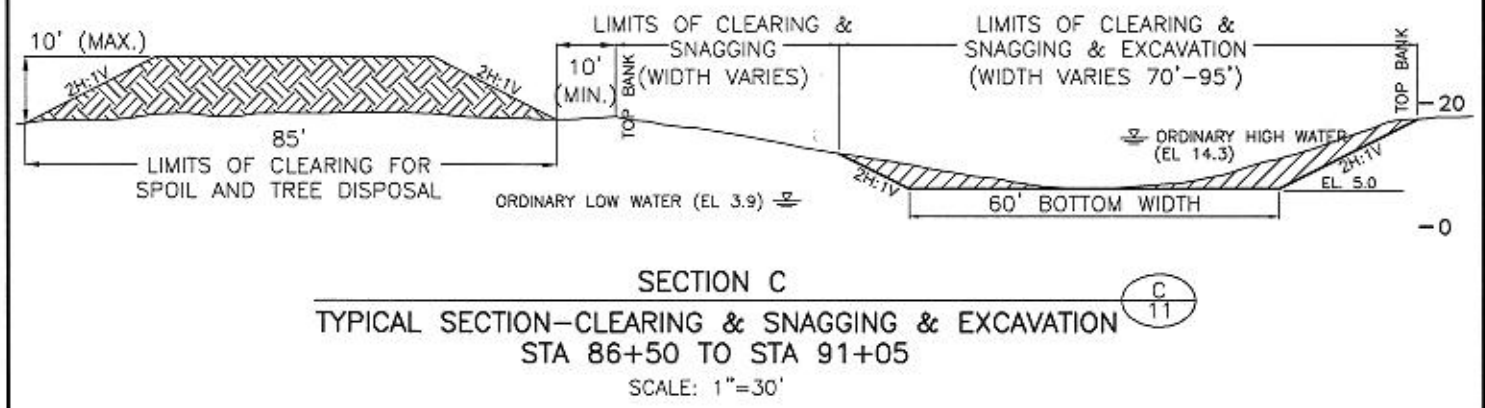
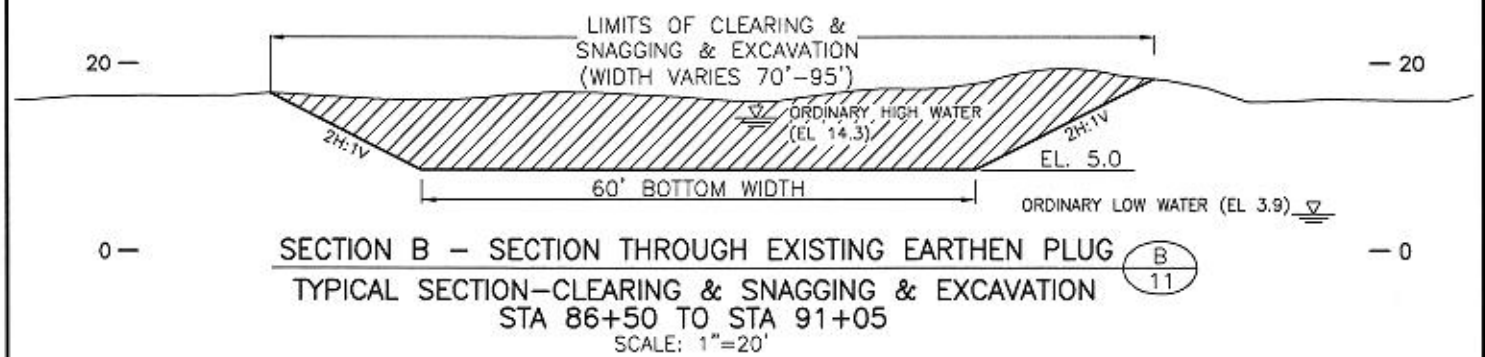
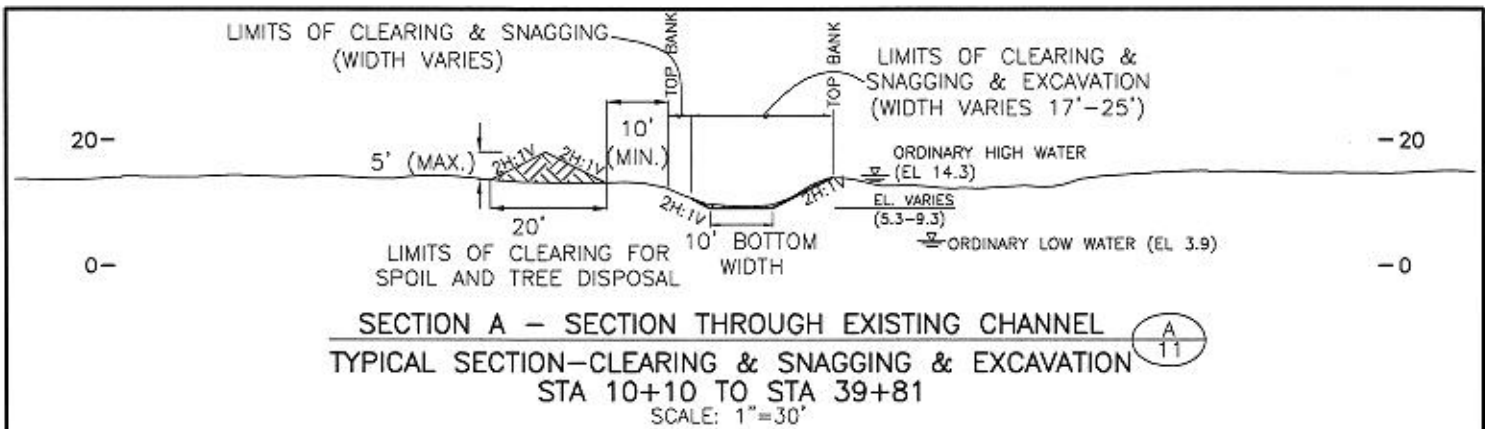
**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
140-B Bay Street, Lake Charles, LA 70606 (337) 238-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

**ELEMENT 3 - PLAN VIEW**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
**14**  
OF  
**44**



PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	19,795
CLEARING & SNAGGING (LIN. FT.)	4,386
CLEARING (ACRES)	3.8

**LEGEND**

C → SECTION TITLE  
 13 → SHEET NO. SHOWING PLAN VIEW

EXCAVATED MATERIAL BERM  
 EXCAVATION

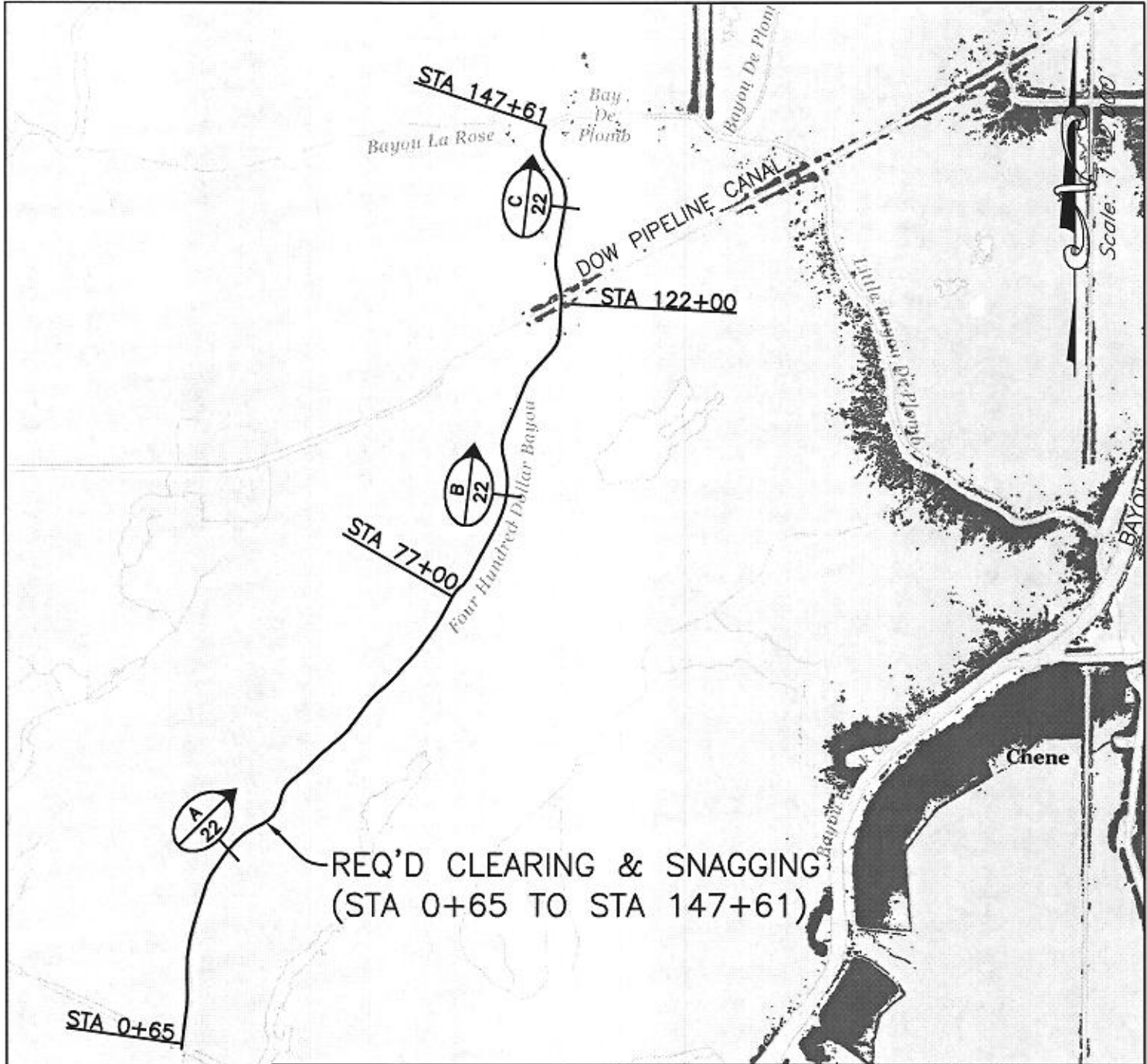
DESIGNED BY	N. SOMNER
DRAWN BY	N. SOMNER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-GS
FILE NO.	8004-GS-CAD

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 148-B Bay Street, Lafayette, LA 70506 (337) 285-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 3 - TYPICAL SECTIONS**





CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	15
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	
LOCATION	ST. MARTIN PARISH, LOUISIANA		44



REQ'D CLEARING & SNAGGING  
(STA 0+65 TO STA 147+61)

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
4	CLEARING & SNAGGING	0+65	77+00	7,635'		40'
4	CLEARING & SNAGGING	77+00	122+00	4,500'		50'
4	CLEARING & SNAGGING	122+00	147+61	2,561'		60'

NOTES:  
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CHIPPED IN PLACE AS CLOSE TO THE GROUND AS THE CUTTING TOOLS PERMIT.

	CLEARING & SPOIL DISPOSAL AREAS	<b>LEGEND</b>		SECTION TITLE
	UPLANDS (EL. > 15.6)			SHEET NO. SHOWING SECTION

DESIGNED BY: N. SOMMER  
DRAWN BY: J. FAISSE  
DATE: APRIL 2016  
SCALE: AS SHOWN  
PROJECT: B004-07  
PLANS: SEE LEFT SIDE

**Sellers & Associates, Inc.**  
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148-B Bay Street, Lafayette, LA 70508 (337) 232-2777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**  
ELEMENT 4 - OVERALL PLAN VIEW

CLIENT:	ST. MARTIN PARISH GOVERNMENT	SHEET:	16
PROJECT:	BEAU BAYOU SWAMP HYDRO. REST.	OF:	44
LOCATION:	ST. MARTIN PARISH, LOUISIANA		

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MATCH LINE A-A SHEET 18

Scale: 1"=300'

FOUR HUNDRED DOLLAR BAYOU

20'± EXISTING WATER BOTTOM






LIMITS OF CLEARING & SNAGGING (40' MAX.)

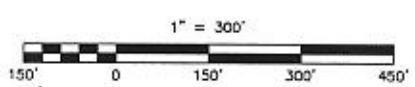
STA 0+65.00  
BEGIN CLEARING & SNAGGING

0+00.00

SORRENTO PIPELINE CANAL

LEGEND

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\DATA\8004\8004-07 Permits\Permit Drawings\8004-07 Project 4 Plans.dwg

DESIGNED BY	N. SCHMIDT
DRAWN BY	J. FAURE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.CWG



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146-B Bay Street, Lafayette, LA 70509 (337) 232-0177

BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	17
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

MATCH LINE B-B SHEET 19








LIMITS OF CLEARING & SNAGGING (40' MAX.)

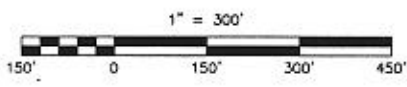
FOUR HUNDRED DOLLAR BAYOU

20'+ EXISTING WATER BOTTOM

MATCH LINE A-A SHEET 17

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\04761\8004\8004-07\_Permit\_Drainage\8004-07\_Project\_4\_Plan.dwg

DESIGNED BY	H. SOMNER
DRAWN BY	J. FAERE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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140-B Easy Street, Lafayette, LA 70508 (337) 232-8777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET 18 OF 44

MATCH LINE C-C SHEET 20

LIMITS OF CLEARING & SNAGGING  
(50' MAX.)








25' TRANSITION  
(40' TO 50')

STA 77+00.00  
STA 76+75.00

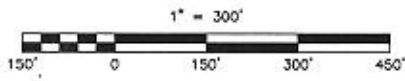
FOUR HUNDRED DOLLAR BAYOU

20'± EXISTING WATER BOTTOM

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

LIMITS OF CLEARING & SNAGGING  
(40' MAX.)



MATCH LINE B-B SHEET 18



N:\DATA\10004\10004-07\_Permits\Drawings\10004-07\_Project\_4\_Plan.dwg

DESIGNED BY	N. SONWER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALLDMS



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
19  
OF  
44

MATCH LINE D-D SHEET 21






Scale: 1"=300'

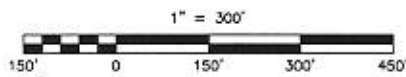
20'± EXISTING WATER BOTTOM

FOUR HUNDRED DOLLAR BAYOU

LIMITS OF CLEARING & SNAGGING  
(50' MAX.)

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



MATCH LINE C-C SHEET 19

K:\DATA\8004\8004-07 Permits\Permit Drawings\8004-07 Project 4 Plans.dwg

ENGINEER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

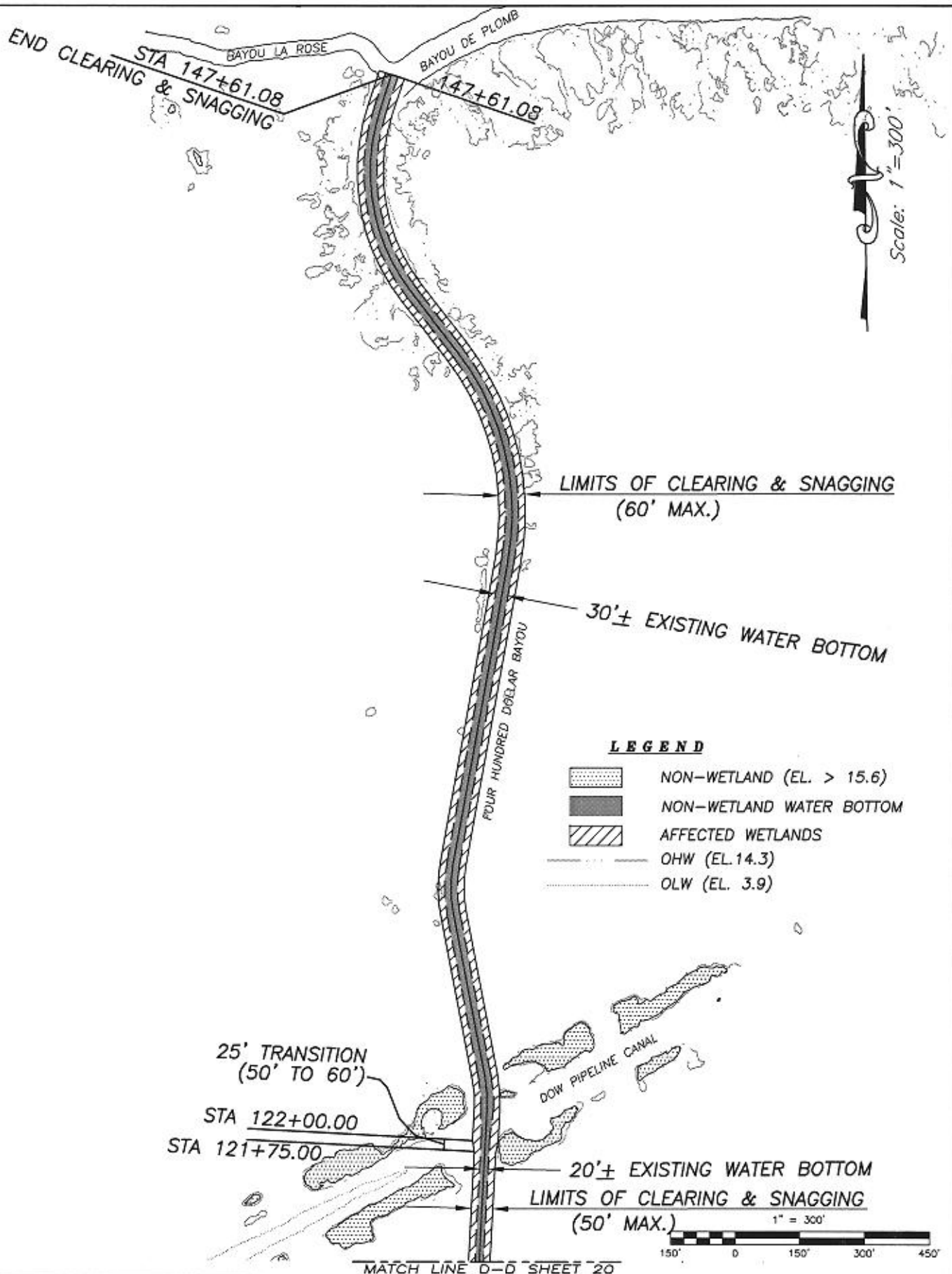


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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	20
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		



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ENGINEER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALLING



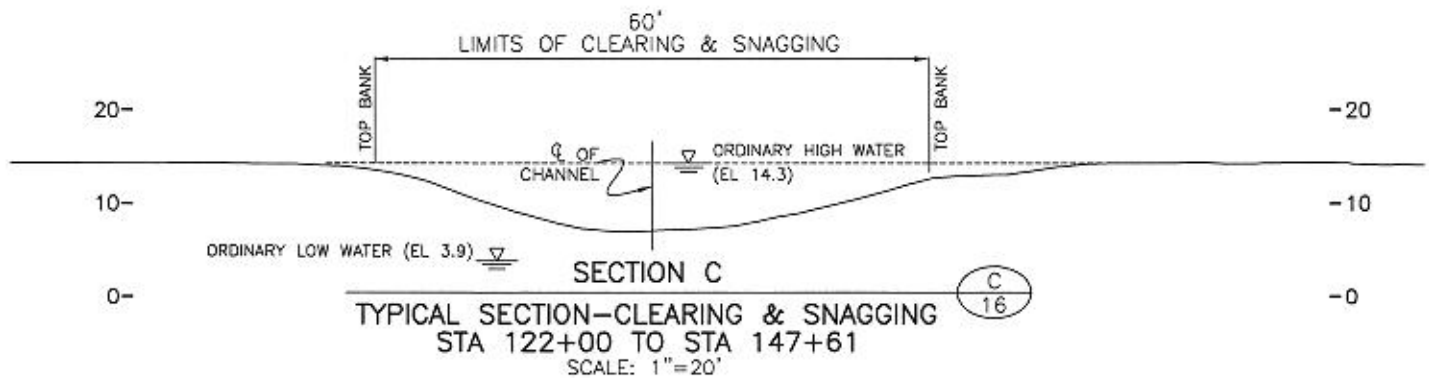
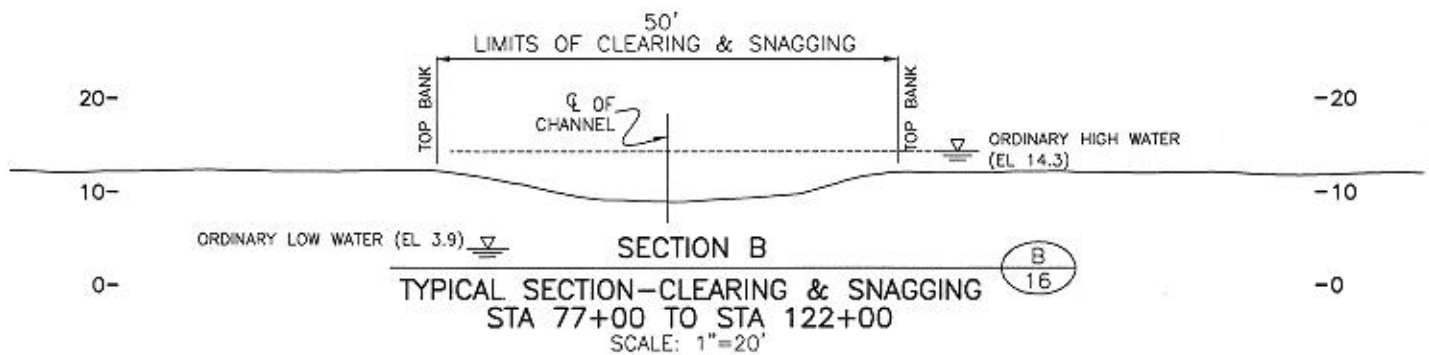
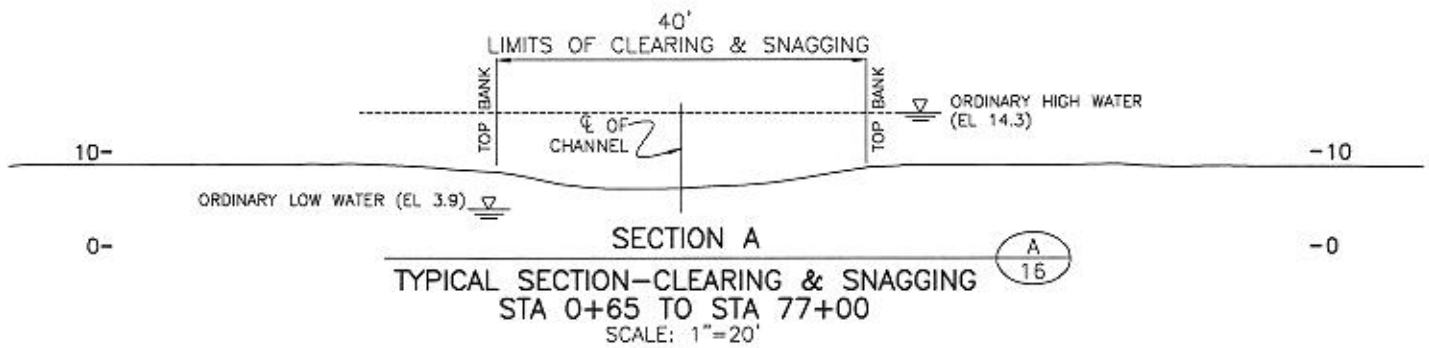
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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	21
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		





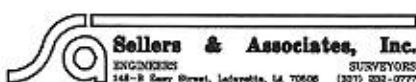
**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW

- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
CLEARING & SNAGGING (LIN. FT.)	14,696

DESIGNED BY	M. SONNER
DRAWN BY	M. SONNER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05/CAD



**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

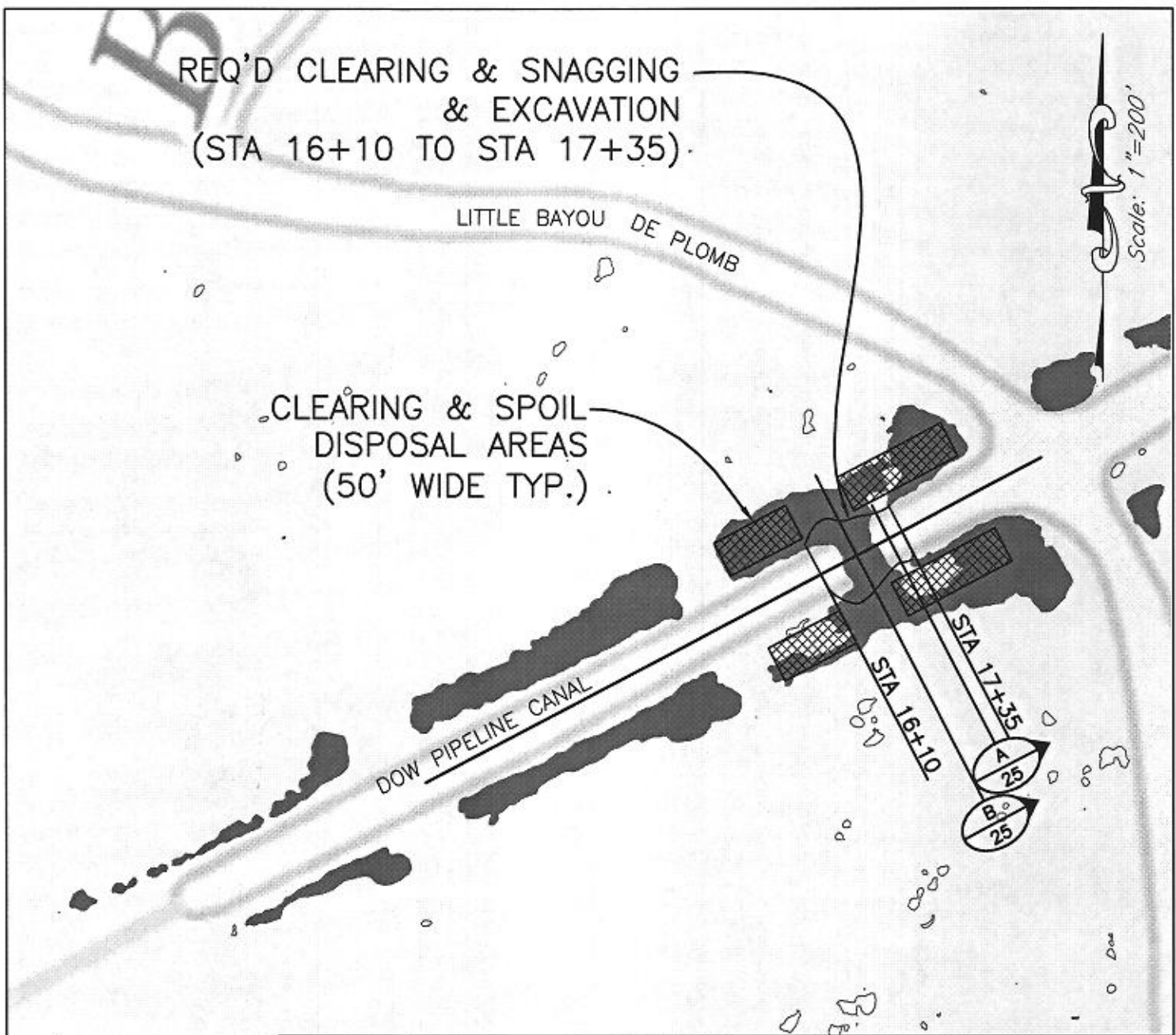
ELEMENT 4 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
22  
OF  
44

REQ'D CLEARING & SNAGGING  
& EXCAVATION  
(STA 16+10 TO STA 17+35)

Scale: 1"=200'



ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
5	CLEARING & EXCAVATION	16+10	17+35	125'	40'	VARIES (70'-121')

NOTES:

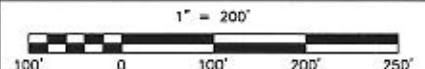
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 5 SHALL BE PLACED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN ON THIS SHEET, OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION SHOWN. THE EXCAVATION WILL RESULT IN REMOVING AN EARTHEN PLUG WITHIN THE EXISTING CHANNEL AT APPROXIMATELY STA 16+50. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE ADJACENT CHANNEL TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE TOP BANK OF THE ADJACENT CHANNEL.
4. PROPOSED WORK WILL INCLUDE EXCAVATION OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.



CLEARING & SPOIL DISPOSAL AREAS  
UPLANDS (EL. > 15.6)

LEGEND

SECTION TITLE  
SHEET NO. SHOWING SECTION



ENGINEER	N. SCHNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

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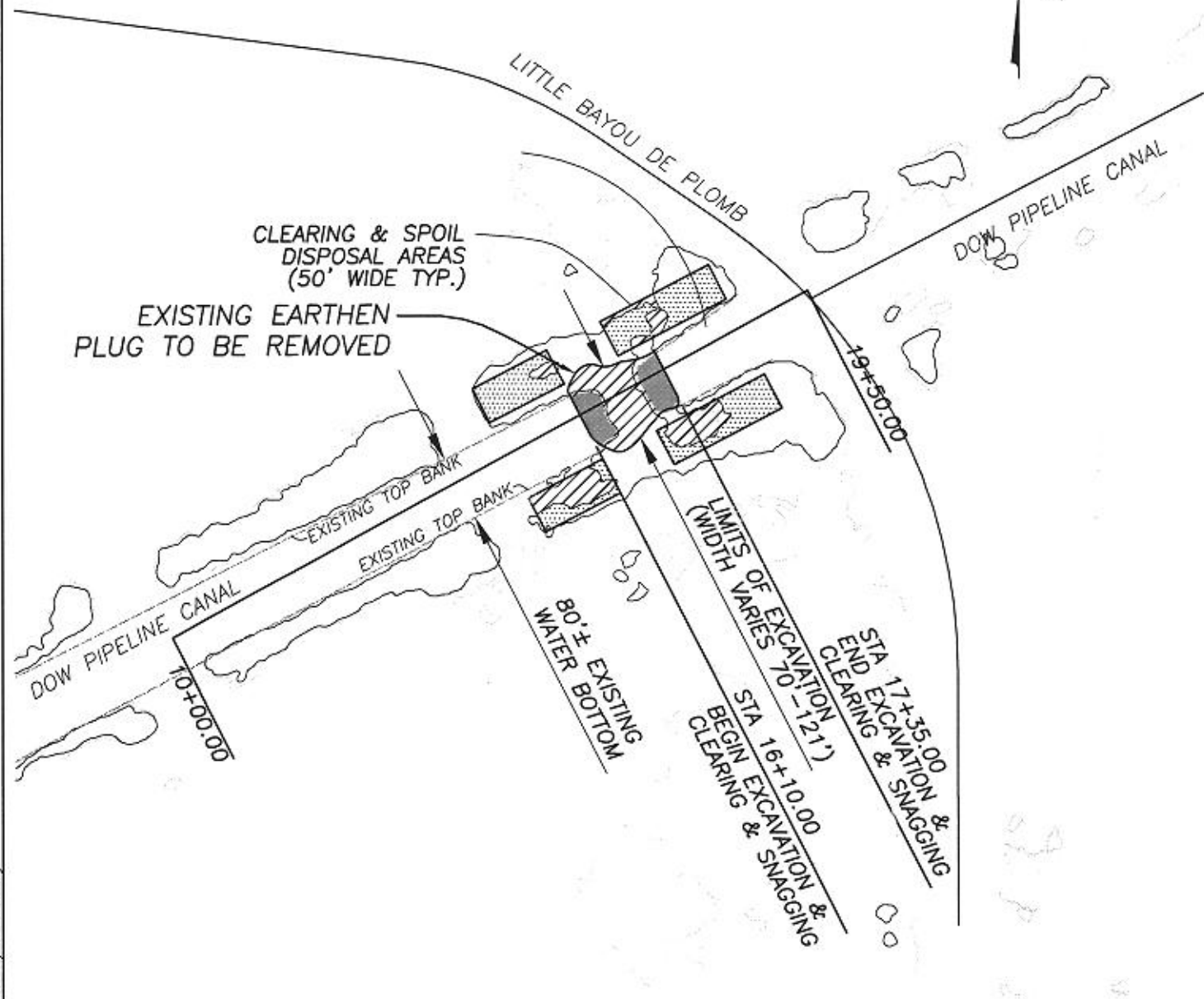
BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION

ELEMENT 5 - OVERALL PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	23
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

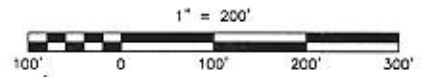
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Scale: 1" = 200'



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



N:\DATA\2004\2004-07 Permits\Permit Drawings\2004-07 Project 5 Plans.dwg

ENGINEER	N. SCHWENK
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



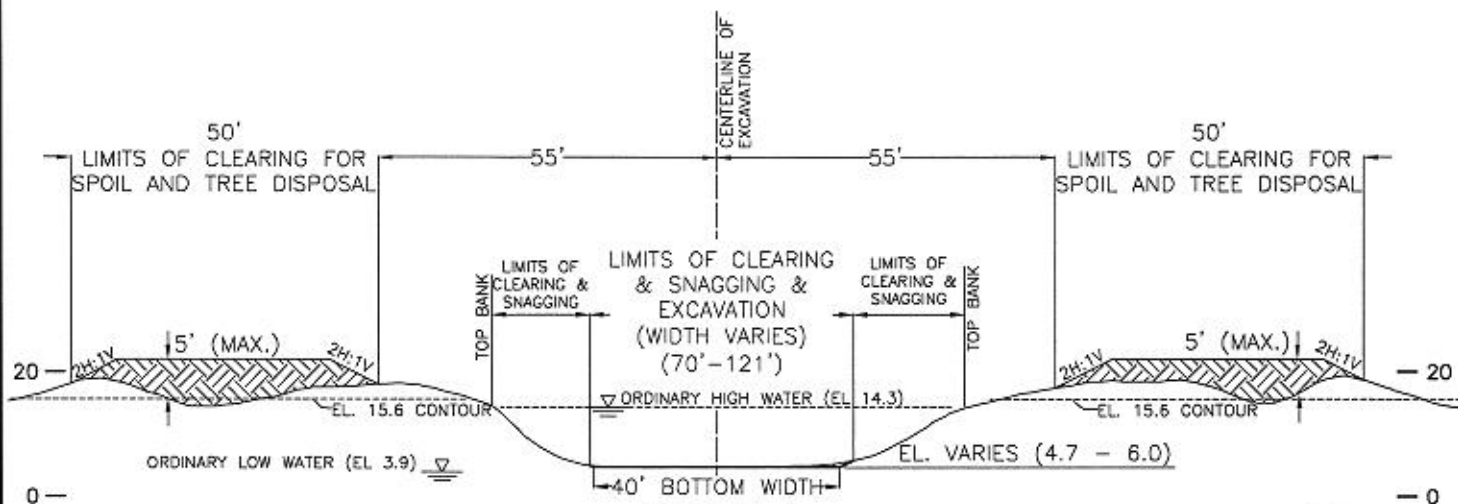
**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
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**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

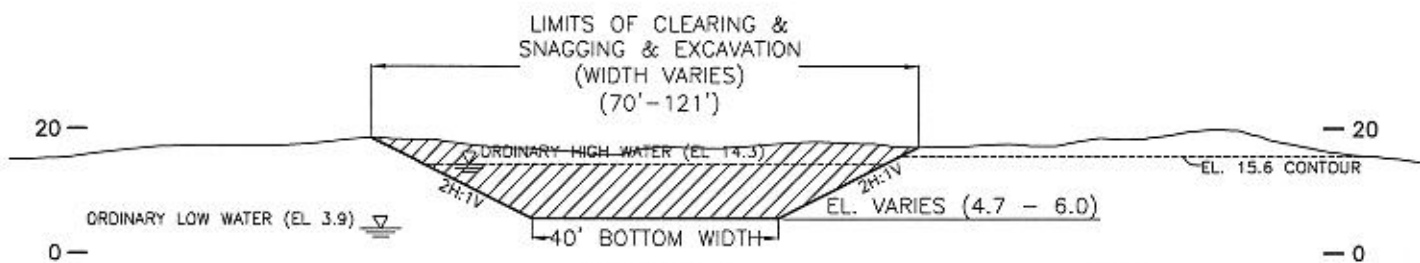
ELEMENT 5 — PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
 24  
 OF  
 44



**SECTION A**  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION W/ DISPOSAL AREA A  
23  
 STA 15+00 TO STA 18+50  
 STA 15+00 TO STA 16+10 (NO EXCAVATION)  
 STA 17+35 TO STA 18+50 (NO EXCAVATION)  
 SCALE: 1"=30'



**SECTION B**  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION B  
23  
 STA 16+10 TO STA 16+90  
 SCALE: 1"=30'

**LEGEND**

- C SECTION TITLE
- 13 SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	2,715
CLEARING & SNAGGING (LIN. FT.)	125
CLEARING (ACRES)	0.7

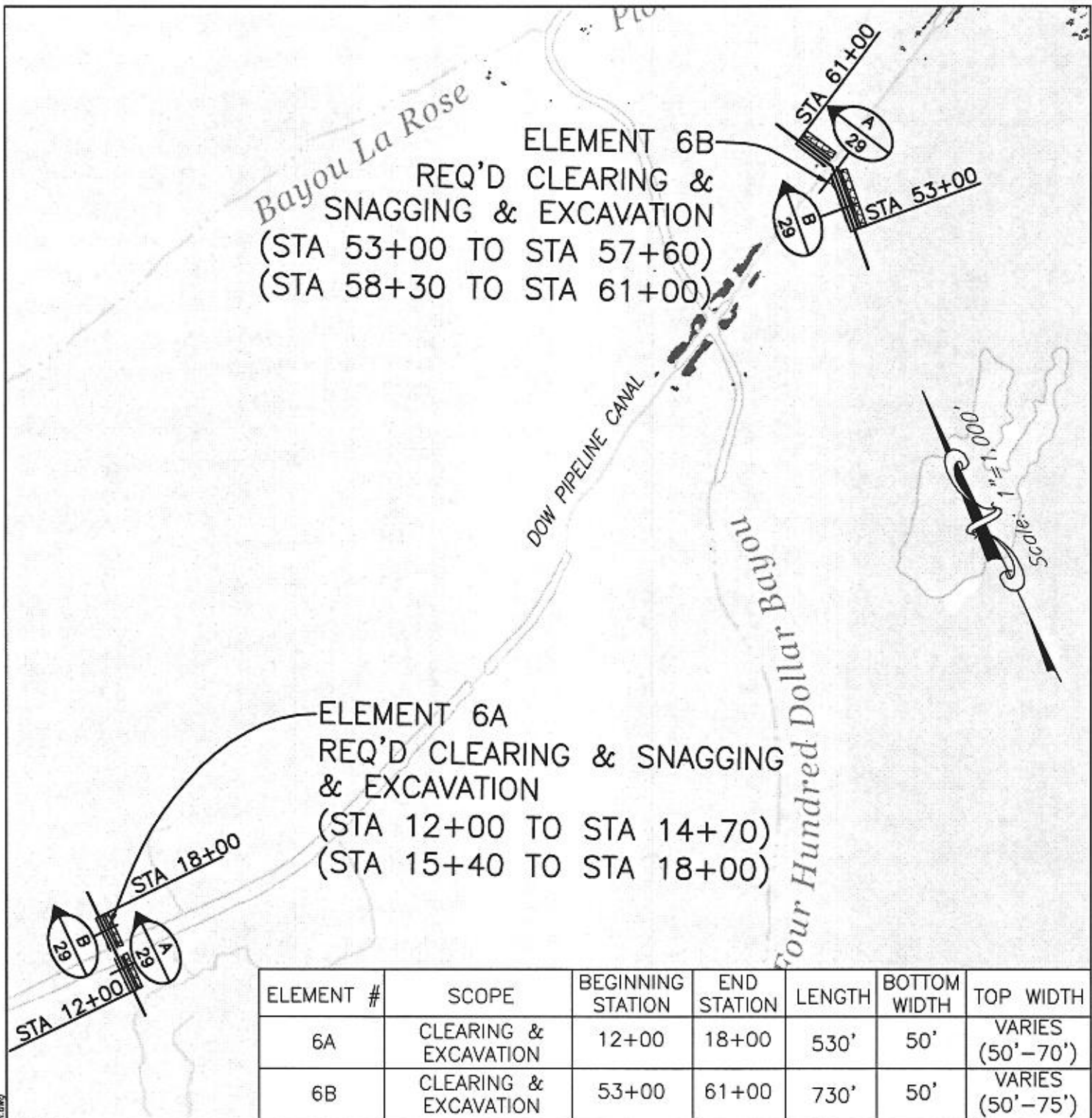
DESIGNED BY	M. SCHMIDT
DRAWN BY	M. SCHMIDT
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD

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 148-B Easy Street, Lafayette, LA 70508 (337) 522-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 5 - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>25</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



**ELEMENT 6B**  
**REQ'D CLEARING & SNAGGING & EXCAVATION**  
 (STA 53+00 TO STA 57+60)  
 (STA 58+30 TO STA 61+00)

**ELEMENT 6A**  
**REQ'D CLEARING & SNAGGING & EXCAVATION**  
 (STA 12+00 TO STA 14+70)  
 (STA 15+40 TO STA 18+00)

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
6A	CLEARING & EXCAVATION	12+00	18+00	530'	50'	VARIES (50'-70')
6B	CLEARING & EXCAVATION	53+00	61+00	730'	50'	VARIES (50'-75')

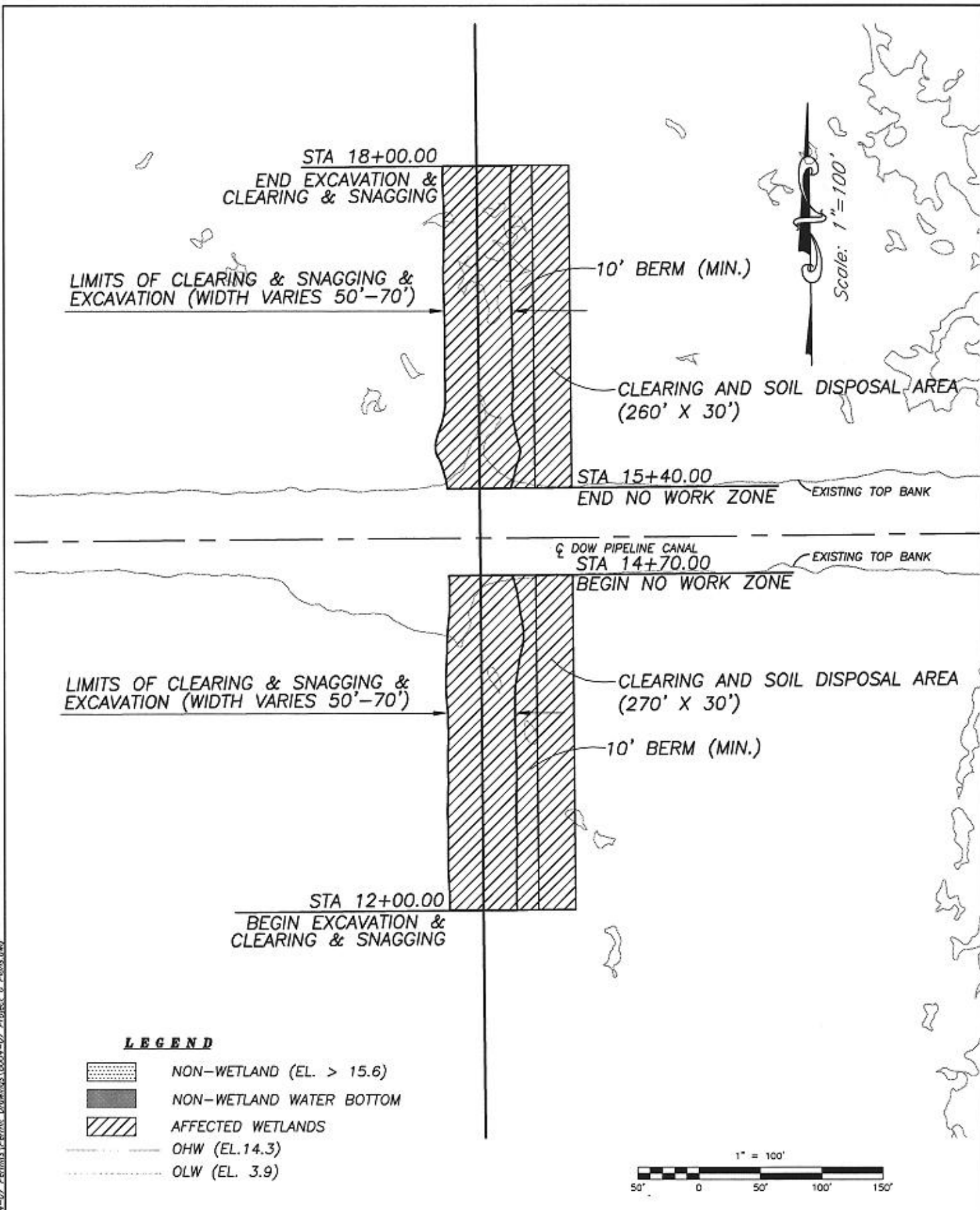
- NOTES:**
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 6 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENTS SHOWN. THE WORK WILL INVOLVE EXCAVATING THROUGH AN EXISTING SPOIL BANK AND VIRGIN CUT THROUGH THE SWAMP.
  4. PROPOSED WORK WILL INCLUDE OPERATING OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.

<p><b>LEGEND</b></p> <p>CLEARING &amp; SPOIL DISPOSAL AREAS</p> <p>UPLANDS (EL. &gt; 15.6)</p>		<p>SECTION TITLE</p> <p>SHEET NO. SHOWING SECTION</p>		<p>1" = 1,000'</p>	
<p>DESIGNED BY: N. SOMMER</p> <p>DRAWN BY: J. FAIRB</p> <p>DATE: APRIL 2016</p> <p>SCALE: AS SHOWN</p> <p>PROJECT: B004-07</p> <p>PLANS: SEE LEFT SIDE</p>		<p><b>Sellers &amp; Associates, Inc.</b></p> <p>ENGINEERS SURVEYORS</p> <p>146-B Bay Street, Lakeville, LA 70608 (887) 328-0777</p>		<p>CLIENT: ST. MARTIN PARISH GOVERNMENT</p> <p>PROJECT: BEAU BAYOU SWAMP HYDRO. REST.</p> <p>LOCATION: ST. MARTIN PARISH, LOUISIANA</p>	
<p><b>BEAU BAYOU SWAMP HYDROLOGIC RESTORATION</b></p> <p><b>ELEMENT 6 - OVERALL PLAN VIEW</b></p>				<p>SHEET <b>26</b> OF <b>44</b></p>	

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**LEGEND**

- NON-WETLAND (EL. > 15.6)
- NON-WETLAND WATER BOTTOM
- AFFECTED WETLANDS
- OHW (EL. 14.3)
- OLW (EL. 3.9)

DESIGNED BY	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

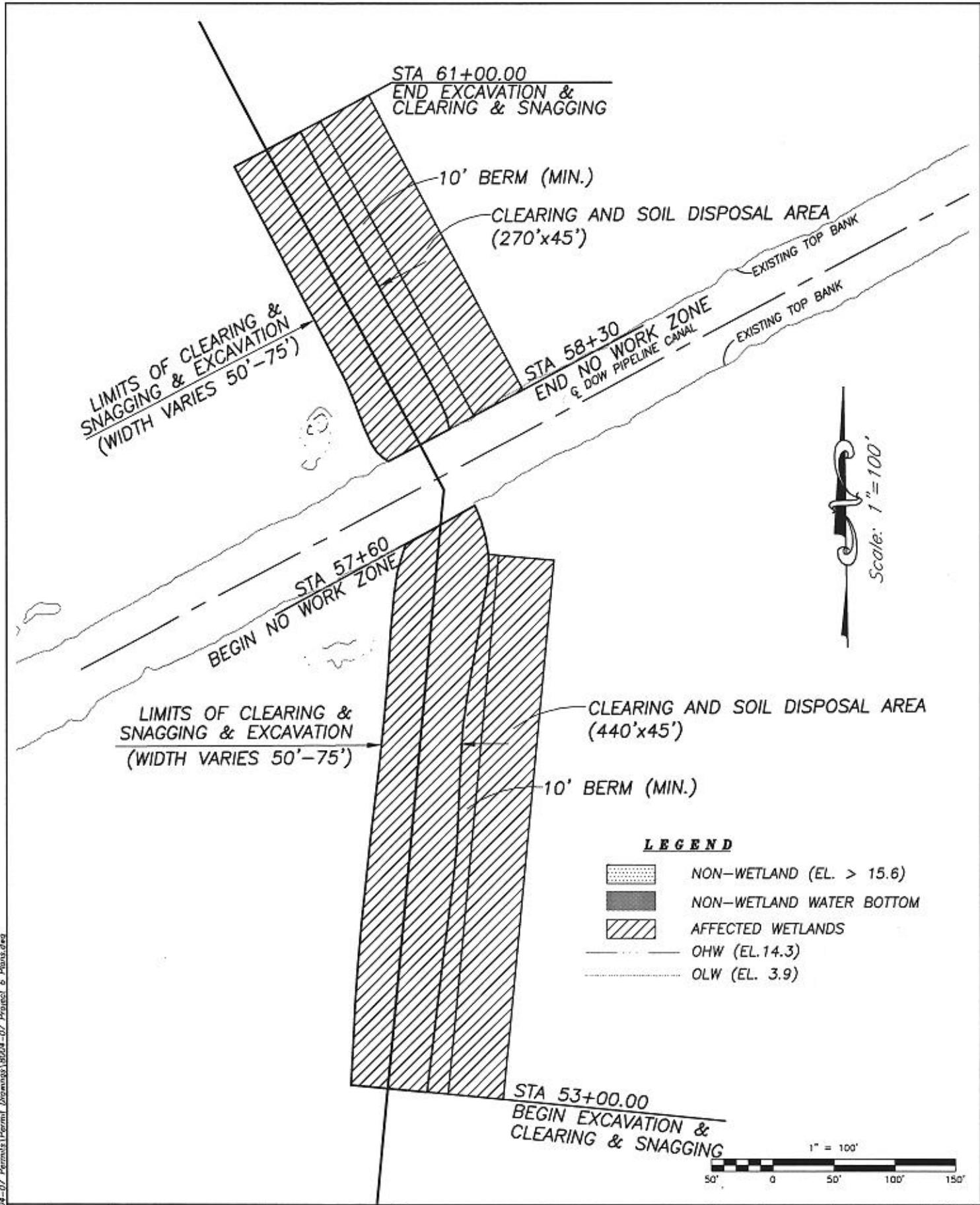
**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Bay Street, Lafayette, LA 70506 (337) 282-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 6A - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 27 OF 44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

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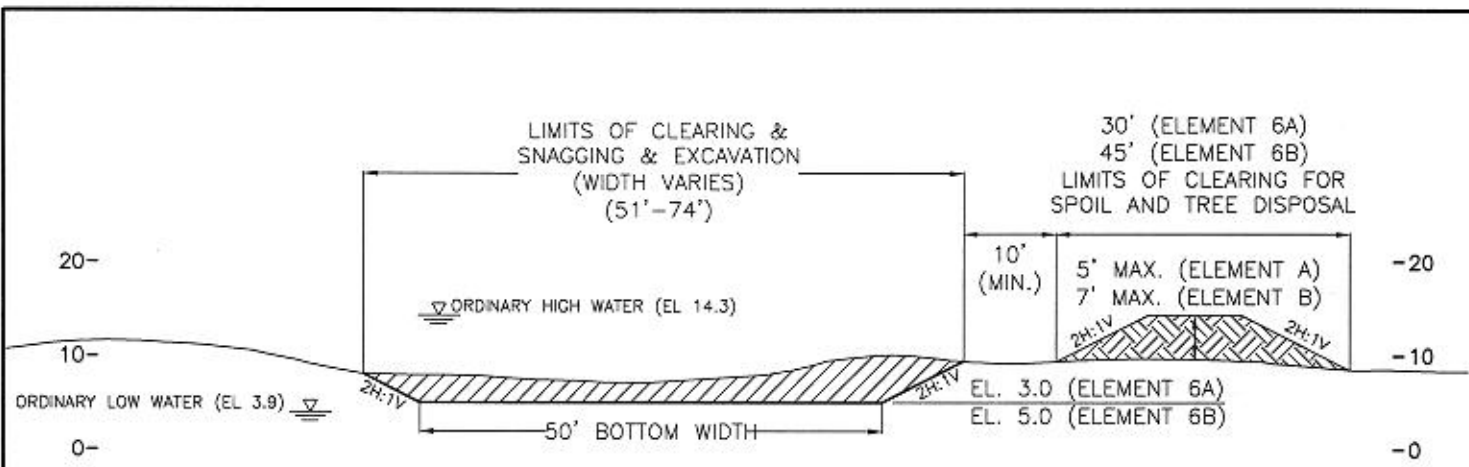


DESIGNER	N. SONNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

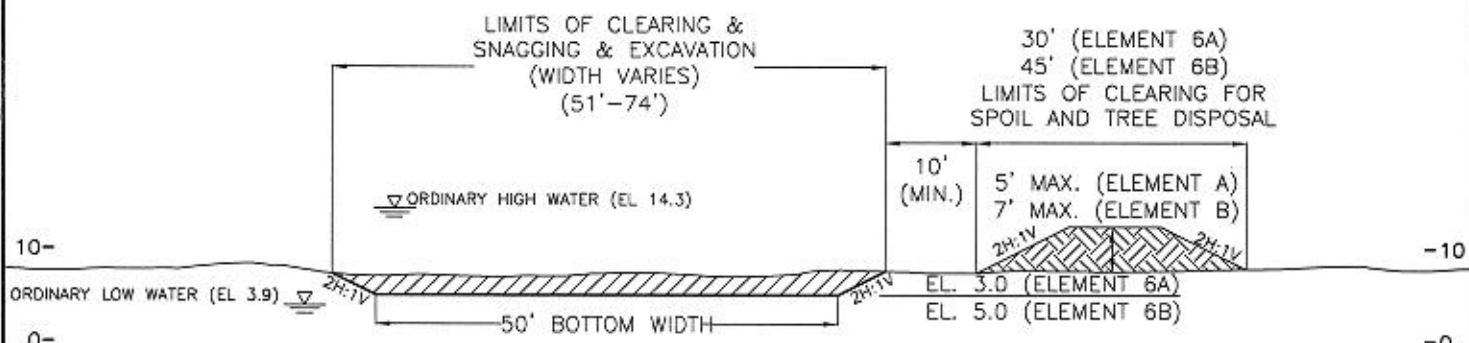

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**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 6B - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA



**SECTION A – TYPICAL THROUGH EXISTING BANK**  
**TYPICAL SECTION—CLEARING & SNAGGING & EXCAVATION**  
 STA 12+00 TO STA 18+00 (ELEMENT 6A)  
 STA 53+00 TO STA 61+00 (ELEMENT 6B)  
 SCALE: 1"=20'



**SECTION B – TYPICAL THROUGH EXISTING SWAMP**  
**TYPICAL SECTION—CLEARING & SNAGGING & EXCAVATION**  
 STA 12+00 TO STA 18+00 (ELEMENT 6A)  
 STA 53+00 TO STA 61+00 (ELEMENT 6B)  
 SCALE: 1"=20'

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	6,029
CLEARING & SNAGGING (LIN. FT.)	1,290
CLEARING (ACRES)	1.4

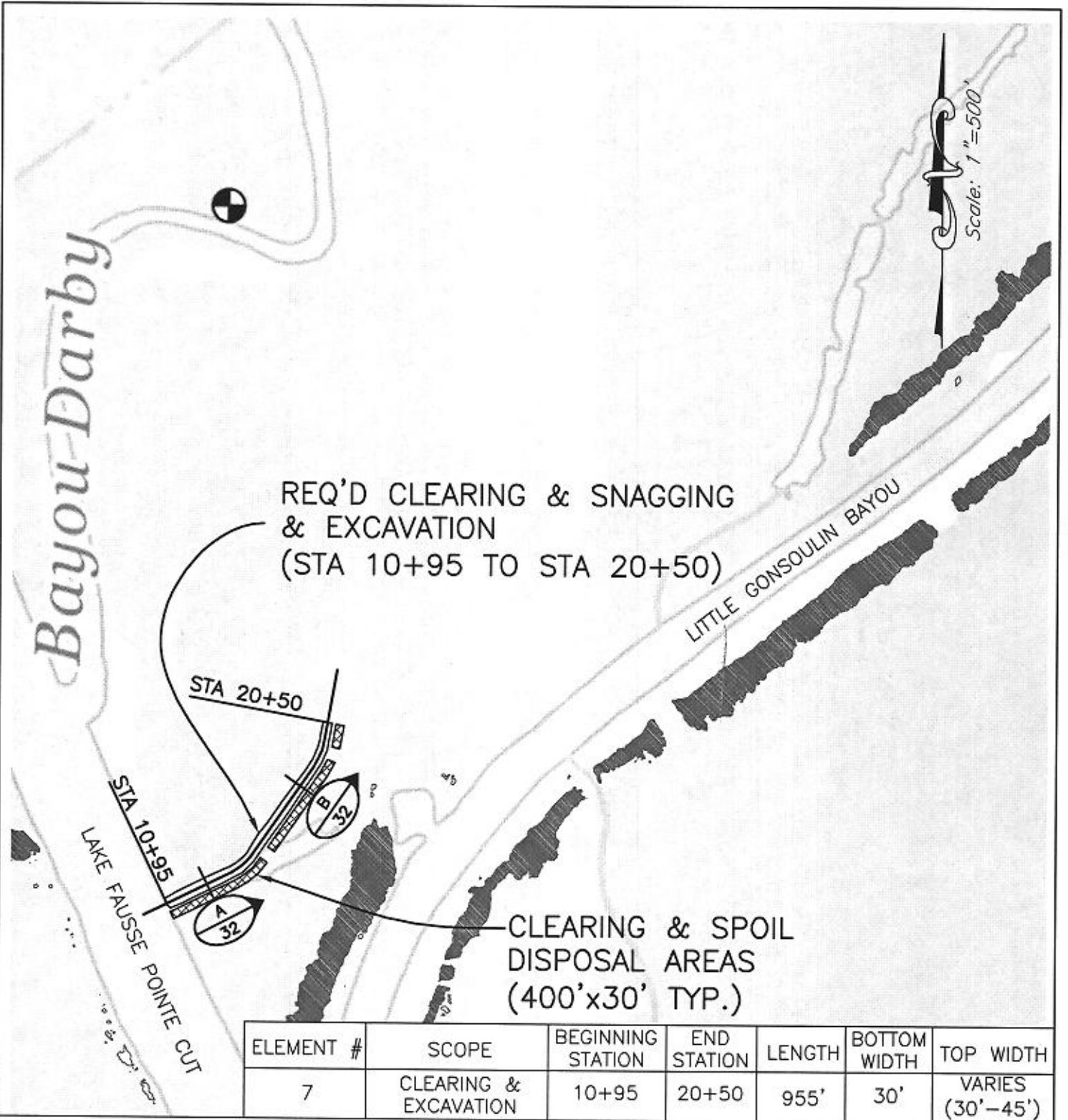
ENGINEER	N. SONNIER
DRAWN BY	N. SONNIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-051.CAD

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 1402-B Bay Street, Lafayette, LA 70506 (337) 282-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 6 – TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	29
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		



REQ'D CLEARING & SNAGGING  
& EXCAVATION  
(STA 10+95 TO STA 20+50)

CLEARING & SPOIL  
DISPOSAL AREAS  
(400'x30' TYP.)

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
7	CLEARING & EXCAVATION	10+95	20+50	955'	30'	VARIES (30'-45')

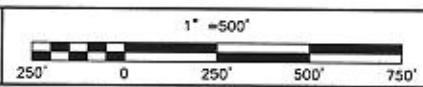
**NOTES:**

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 7 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. THE WORK WILL INVOLVE ENLARGING AN EXISTING SLOUGH AND VIRGIN CUT THROUGH THE SWAMP.

CLEARING & SPOIL DISPOSAL AREAS  
 UPLANDS (EL. > 15.6)

**LEGEND**

SECTION TITLE  
 SHEET NO. SHOWING SECTION



DESIGNED BY	N. SCHNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
PLANS	SEE LEFT SIDE

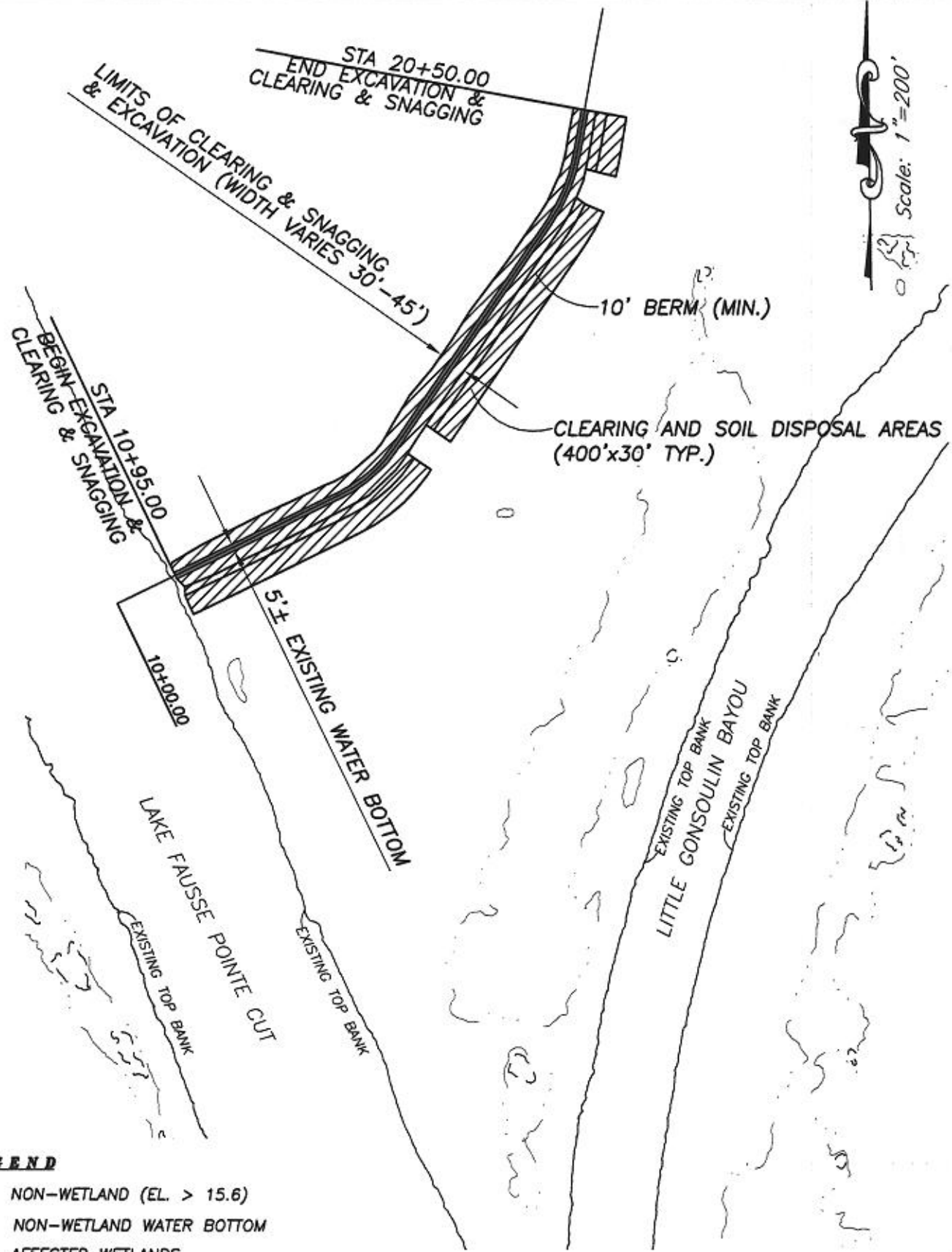
**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 345-B Bay Street, Lafayette, LA 70508 (337) 289-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 7 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	30
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

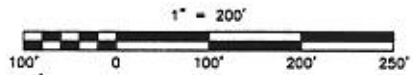
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**LEGEND**

- NON-WETLAND (EL. > 15.6)
- NON-WETLAND WATER BOTTOM
- AFFECTED WETLANDS
- OHW (EL. 14.3)
- OLW (EL. 3.9)



DESIGNED BY	N. SCHNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALLONG

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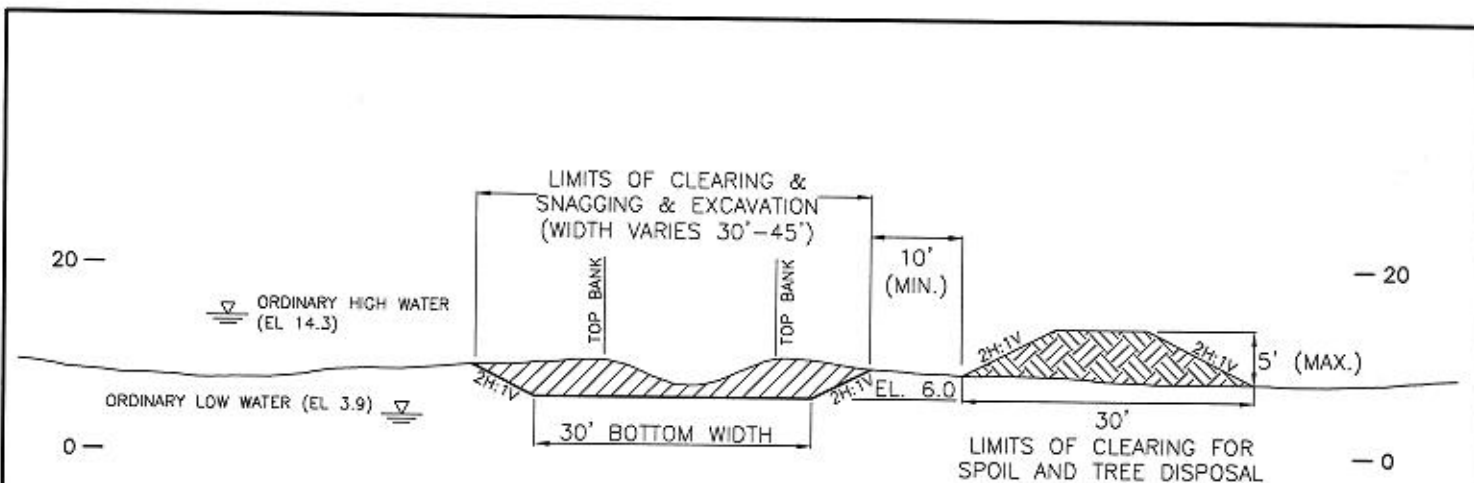
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 7 - PLAN VIEW**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

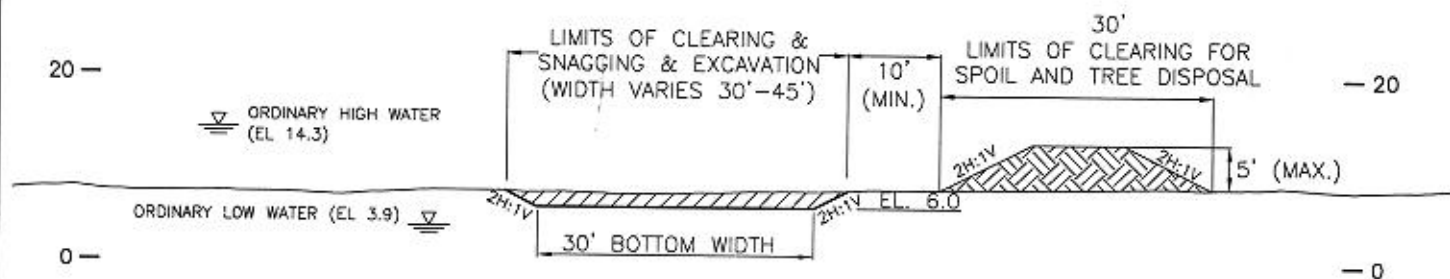
SHEET  
 31  
 OF  
 44





SECTION A - SECTION THROUGH EXISTING CUT  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 10+95 TO STA 20+50  
 SCALE: 1"=20'

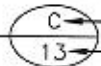
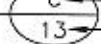


A  
30



SECTION B  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 10+95 TO STA 20+50  
 SCALE: 1"=20'


B  
30

**LEGEND**

-  SECTION TITLE
-  SHEET NO. SHOWING PLAN VIEW
-  EXCAVATED MATERIAL BERM
-  EXCAVATION

PROJECT FEATURES	QUANTITY
EXCAVATION (CU. YDS.)	2,510
CLEARING & SNAGGING (LIN. FT.)	955
CLEARING (ACRES)	0.8

DESIGNED BY	N. SCHWARTZ
DRAWN BY	N. SCHWARTZ
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-051.CAD

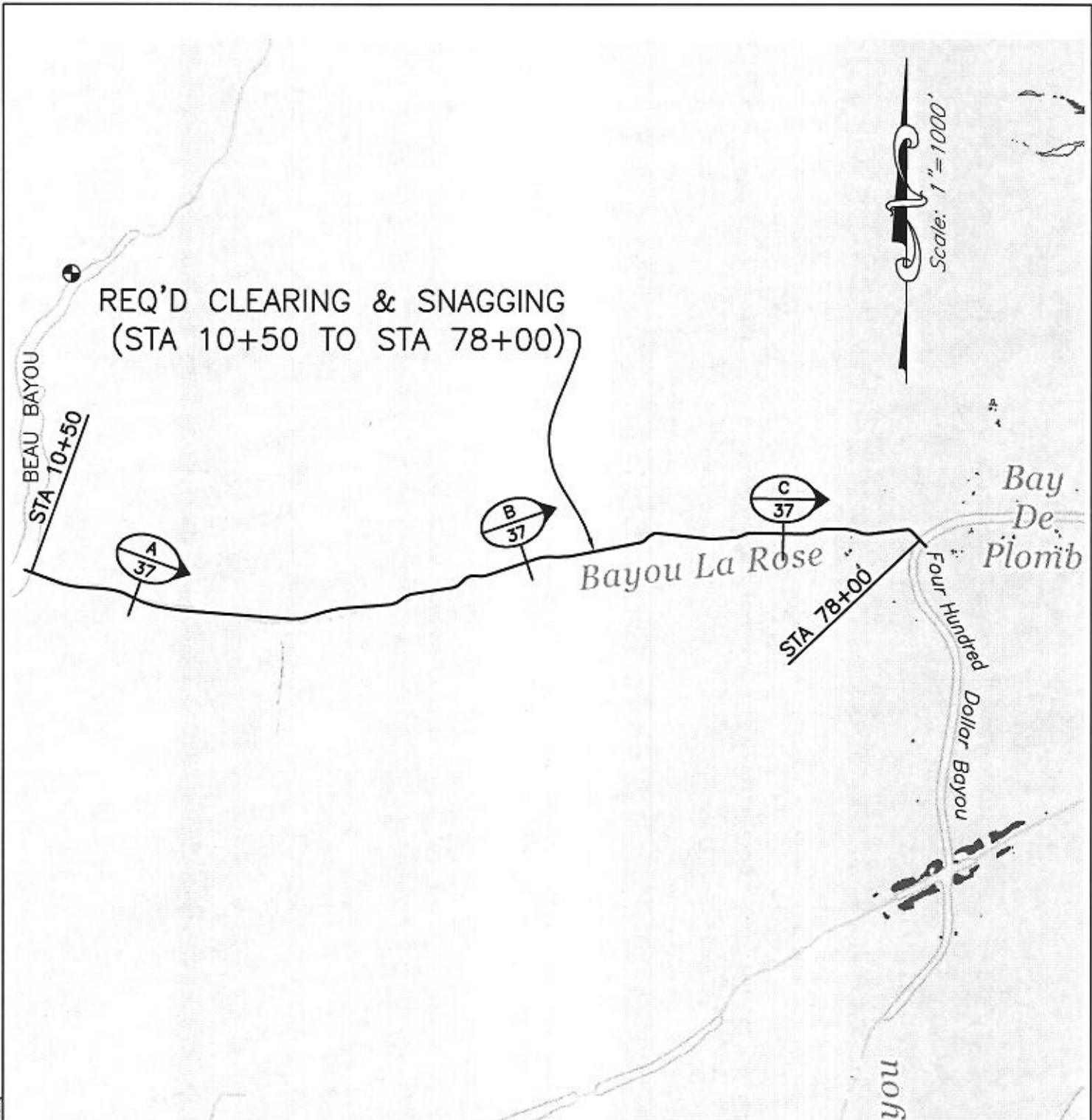


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**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 7 - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	32
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		



REQ'D CLEARING & SNAGGING  
(STA 10+50 TO STA 78+00)

Scale: 1" = 1000'

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
8	CLEARING & SNAGGING	10+50	78+00	6,750'		40'

**NOTES:**

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CHIPPED IN PLACE AS CLOSE TO THE GROUND AS THE CUTTING TOOLS PERMIT.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)	<b>LEGEND</b> SECTION TITLE SHEET NO. SHOWING SECTION	

ENGINEER	M. SONNER
DRAWN BY	J. FAURE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**  
ELEMENT 8 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>33</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

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Scale: 1"=300'

LIMITS OF CLEARING & SNAGGING (40' MAX)






20'± EXISTING WATER BOTTOM

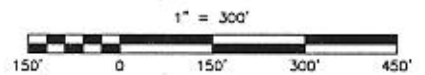
BAYOU LA ROSE

BEAU BAYOU

STA 10+50.00  
BEGIN CLEARING & SNAGGING  
10+00.00

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



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ENGINEER	M. SPANNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 8 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	34
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

MATCH LINE B-B SHEET 36








Scale: 1"=300'

LIMITS OF CLEARING  
& SNAGGING (40' MAX)

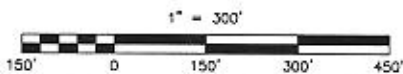
BAYOU LA ROSE

20'± EXISTING WATER BOTTOM

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)

MATCH LINE A-A SHEET 34



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ENGINEER	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

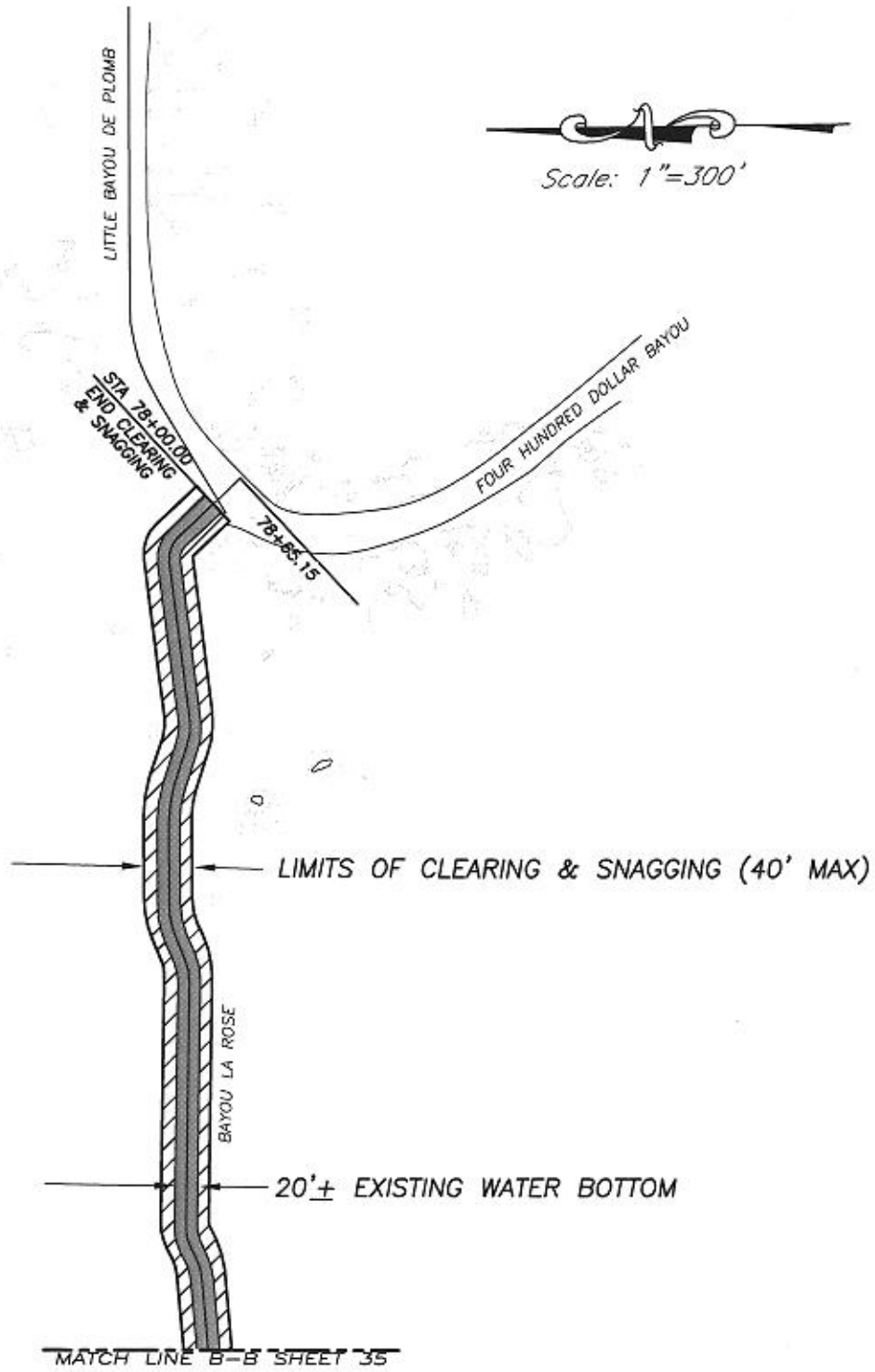
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ELEMENT 8 - PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

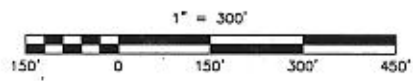
SHEET  
35  
OF  
44

Scale: 1"=300'



**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



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DESIGNED BY	N. DANNEN
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERFLOW



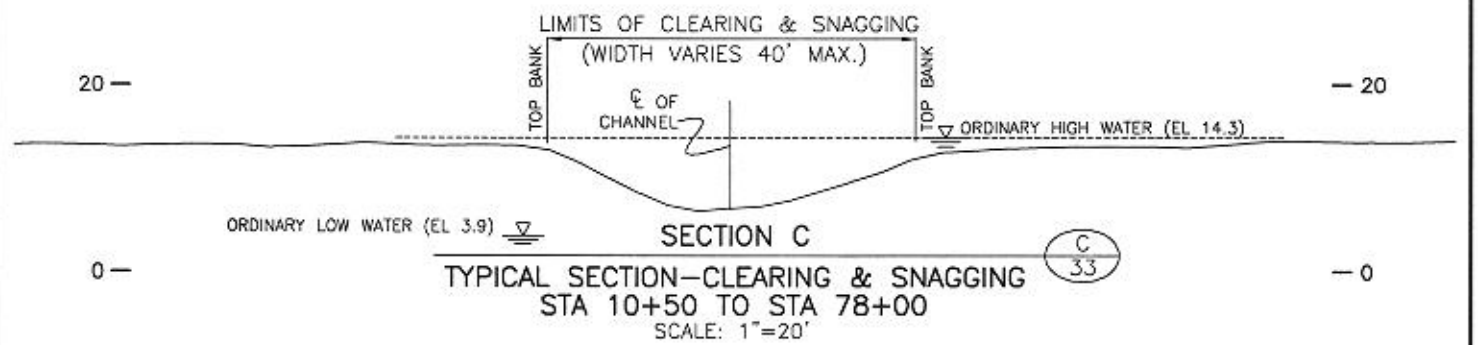
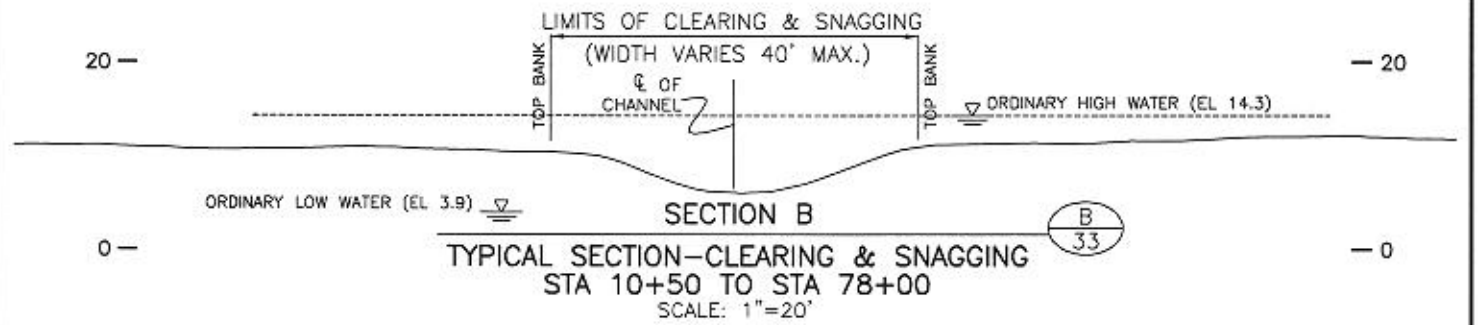
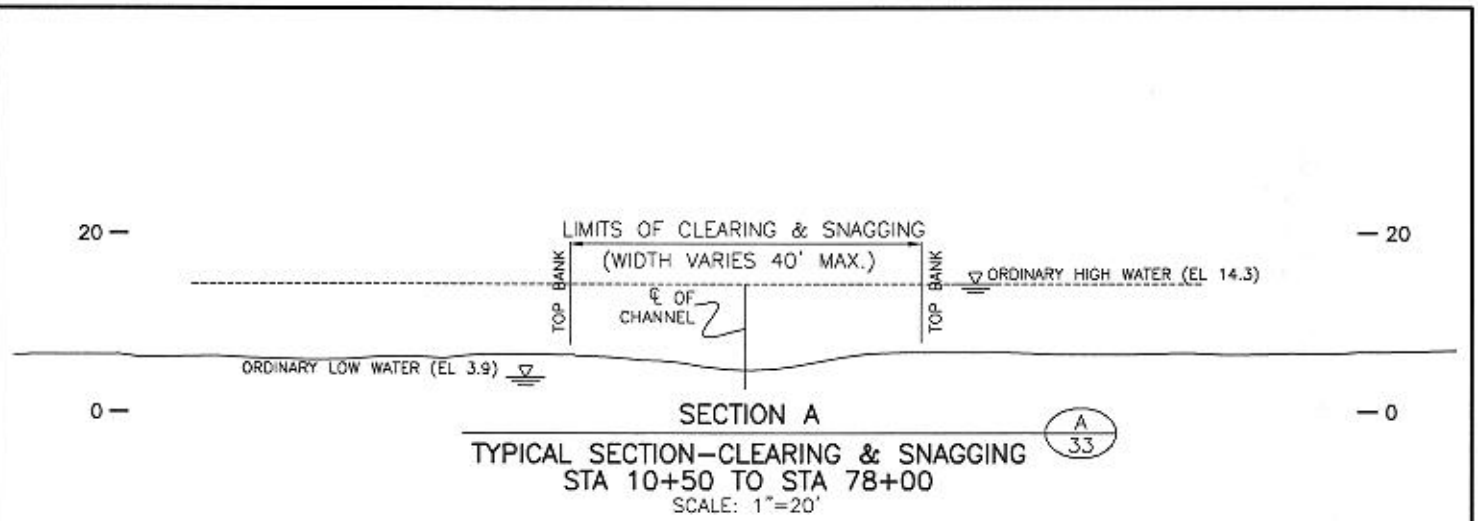
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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT B - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	36
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		





**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW

- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
CLEARING & SNAGGING (LIN. FT.)	6,750

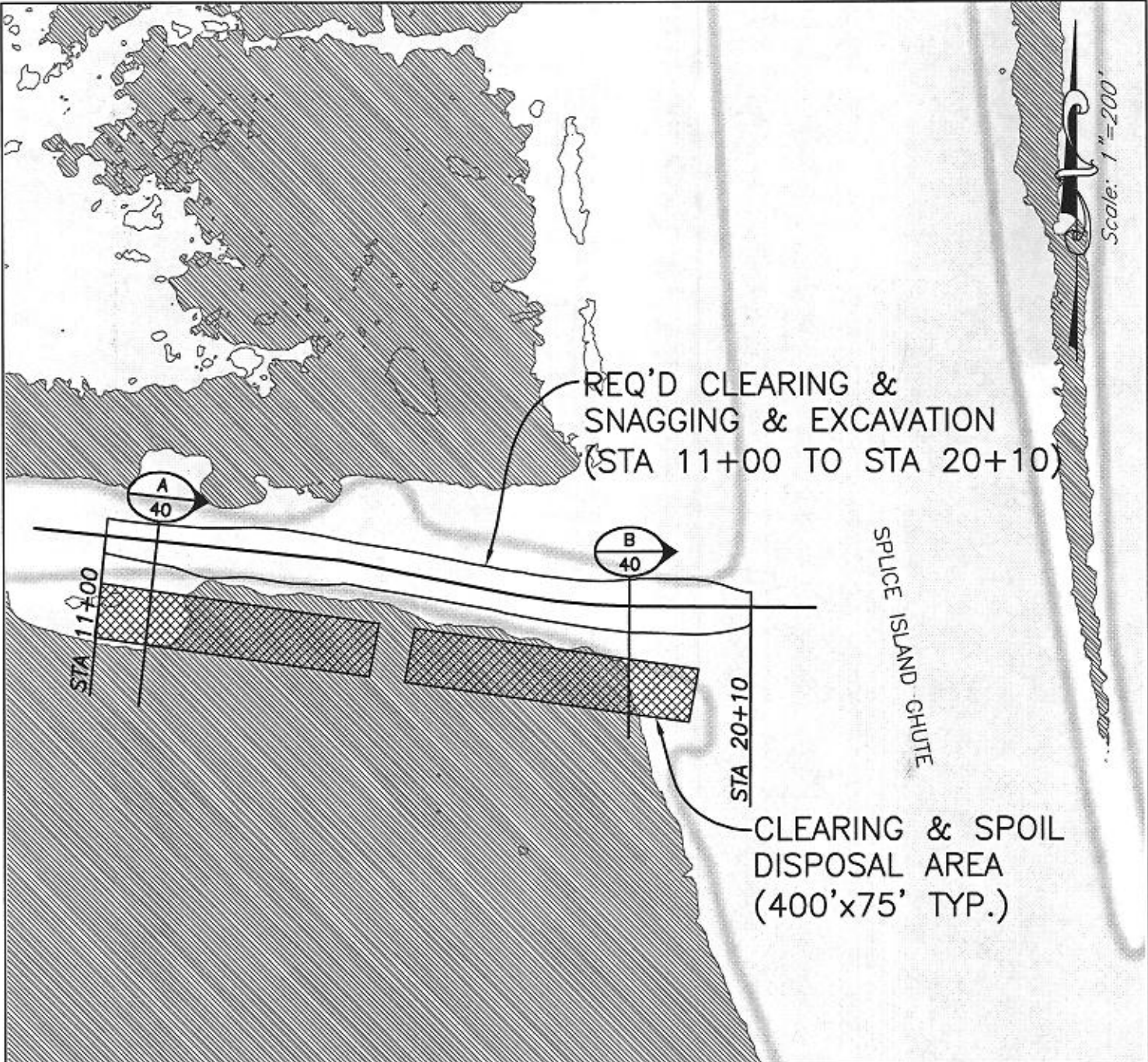
DESIGNED BY	N. SCHNEIDER
DRAWN BY	N. SCHNEIDER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-GS
FILE NO.	8004-GS\CAD



**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

**ELEMENT 8 - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	37
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		



ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
9	CLEARING & EXCAVATION	11+00	20+10	910'	40'	VARIES (40'-75')

- NOTES:
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 9 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)	<b>LEGEND</b> SECTION TITLE SHEET NO. SHOWING SECTION	1" = 200' 100' 0 100' 200' 300'

DESIGNER	M. SPANIER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

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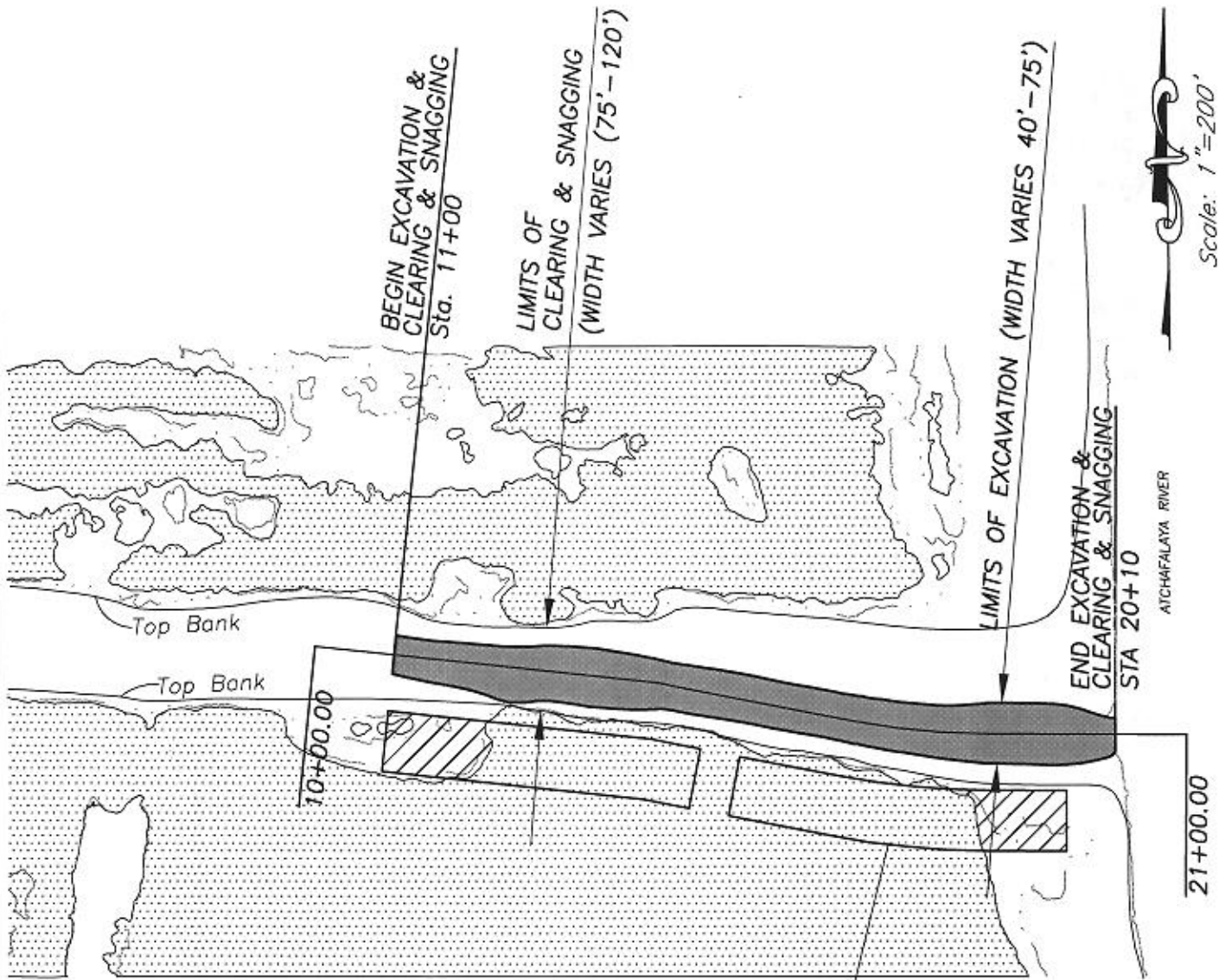
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 9 - OVERALL PLAN VIEW






CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>38</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

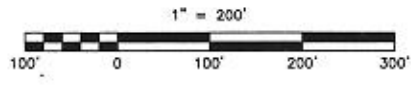
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**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



DESIGNED BY	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	BDC4-07
FILE NO.	OVERALL.DWG



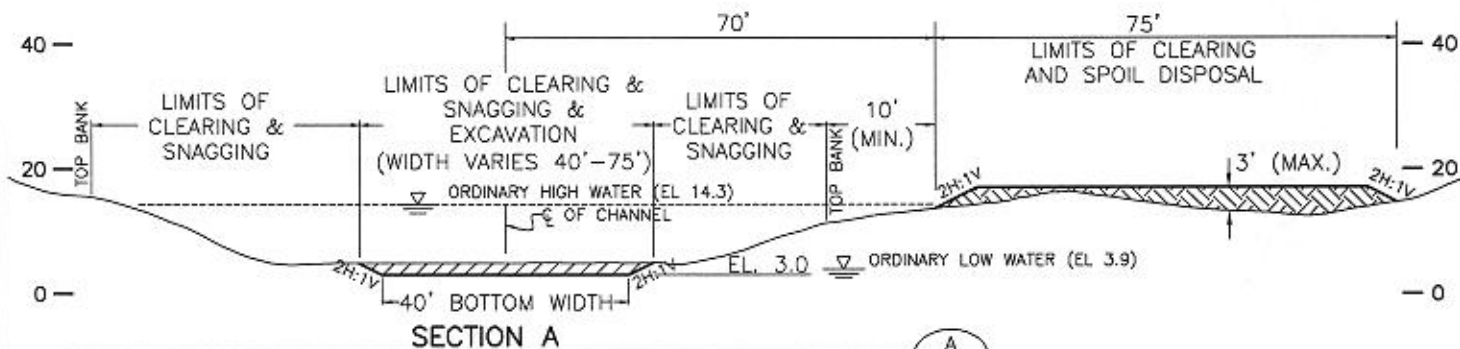
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ENGINEERS SURVEYORS  
148-B Bay Street, Lakeville, LA 70508 (504) 238-9797

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

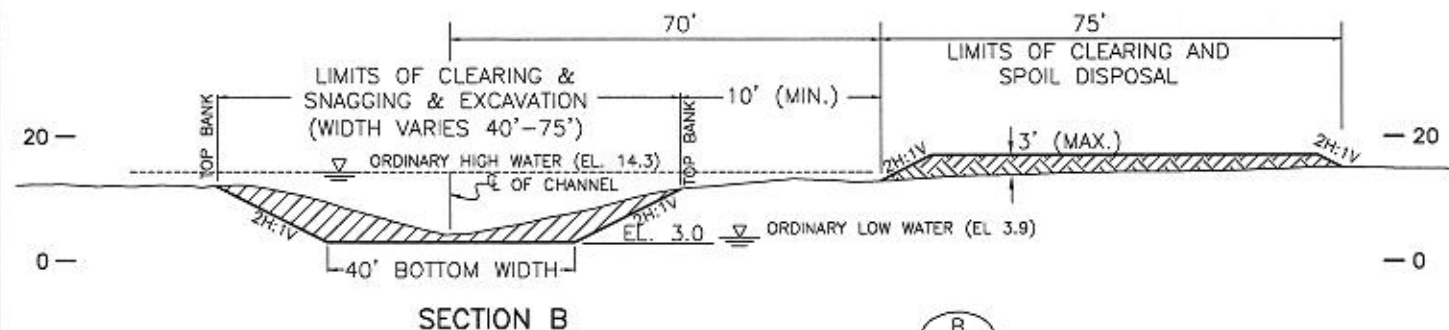
ELEMENT 9 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
**39**  
OF  
**44**



SECTION A  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 11+00 TO STA 20+10  
 SCALE: 1"=30'



SECTION B  
 TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION  
 STA 11+00 TO STA 20+10  
 SCALE: 1"=30'

**LEGEND**

- SECTION TITLE
- SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
GENERAL EXCAVATION (CU. YDS)	4,690
CLEARING & SNAGGING (LIN. FT.)	910
CLEARING (ACRES)	1.6

DESIGNED BY	N. SCHNER
DRAWN BY	N. SCHNER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05/CAD



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 ENGINEERS SURVEYORS  
 248-B Essey Street, Lafayette, LA 70506 (337) 352-0777

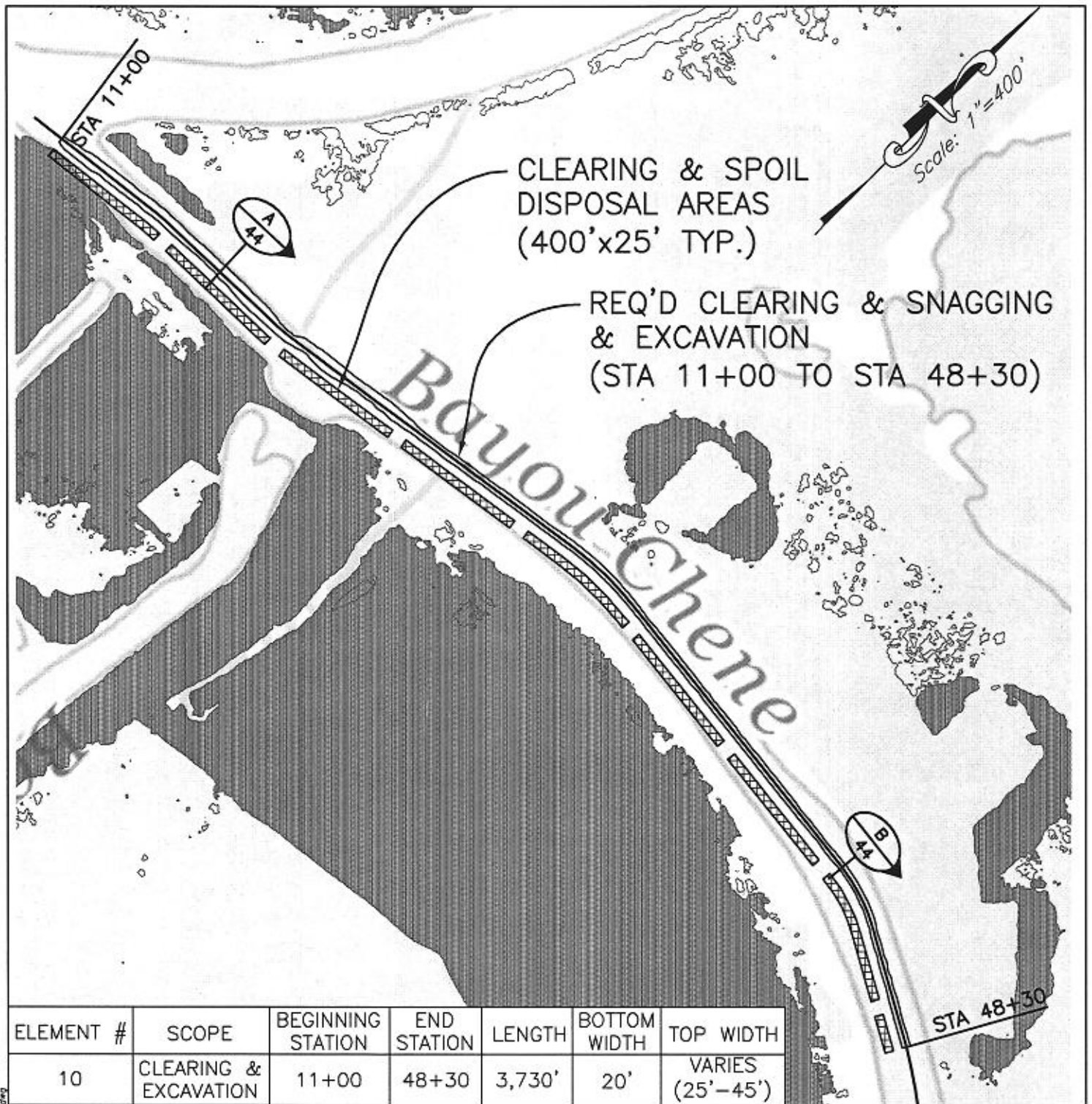
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 9 - TYPICAL SECTIONS

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
 40  
 OF  
 44






ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
10	CLEARING & EXCAVATION	11+00	48+30	3,730'	20'	VARIES (25'-45')

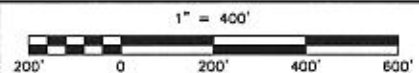
**NOTES:**

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 10 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

 CLEARING & SPOIL DISPOSAL AREAS  
 UPLANDS (EL. > 15.6)

**LEGEND**

 SECTION TITLE  
 SHEET NO. SHOWING SECTION



DESIGNED BY N. SOMMER  
 DRAWN BY J. FABRE  
 DATE APRIL 2016  
 SCALE AS SHOWN  
 PROJECT 8004-07  
 PLAN NO. SEE LEFT SIDE

 **Sellers & Associates, Inc.**  
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 140-B Bay Street, Lafayette, LA 70508 (337) 282-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 10 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	41
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	
LOCATION	ST. MARTIN PARISH, LOUISIANA		44



MATCH LINE A-A SHEET 43

Scale: 1"=300'

LIMITS OF CLEARING & SNAGGING & EXCAVATION (WIDTH VARIES 25'-45')

CLEARING AND SPOIL DISPOSAL AREAS (400' X 25' TYP.)






MINIMUM 10' WIDE BERM BETWEEN EXCAVATED MATERIAL BERM & PROPOSED LIMIT OF EXCAVATION (TYP.)

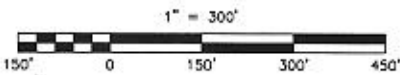
Sta. 11+00.00  
BEGIN EXCAVATION & CLEARING & SNAGGING

10+00.00

Bayou Chene  
Bayou Croak

**LEGEND**

-  NON-WETLAND (EL.  $\geq$  15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLV (EL. 3.9)



W:\DATA\8004-07 Permits\Drawings\8004-07 Project\_10\_Plans.dwg

ENGINEER	N. SOMNER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG




**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
148-B Bay Street, Lakeville, LA 70508 (887) 882-8777

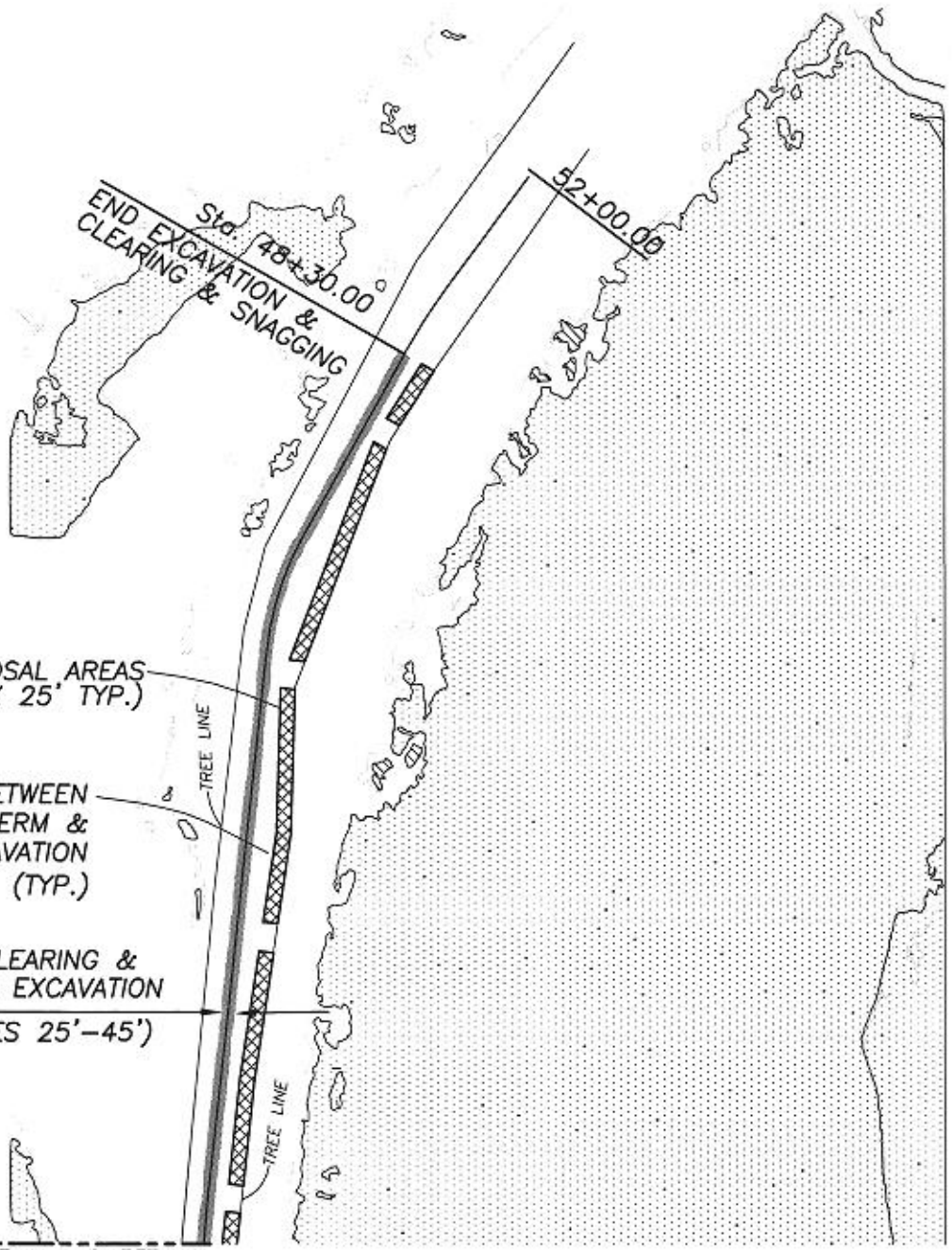
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 10 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
42  
OF  
44

  
 Scale: 1"=300'








CLEARING AND SPOIL DISPOSAL AREAS  
(400' X 25' TYP.)

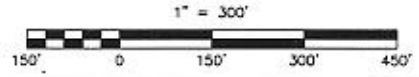
MINIMUM 10' WIDE BERM BETWEEN  
EXCAVATED MATERIAL BERM &  
PROPOSED LIMIT OF EXCAVATION  
(TYP.)

LIMITS OF CLEARING &  
SNAGGING & EXCAVATION  
(WIDTH VARIES 25'-45')

MATCH LINE A-A SHEET 42

**LEGEND**

-  NON-WETLAND (EL. > 15.6)
-  NON-WETLAND WATER BOTTOM
-  AFFECTED WETLANDS
-  OHW (EL. 14.3)
-  OLW (EL. 3.9)



W:\01\1004\0004-07 Permits\Drawings\0004-07 Project 10 Plans.dwg

DESIGNER	N. SONNER
CHECKED BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

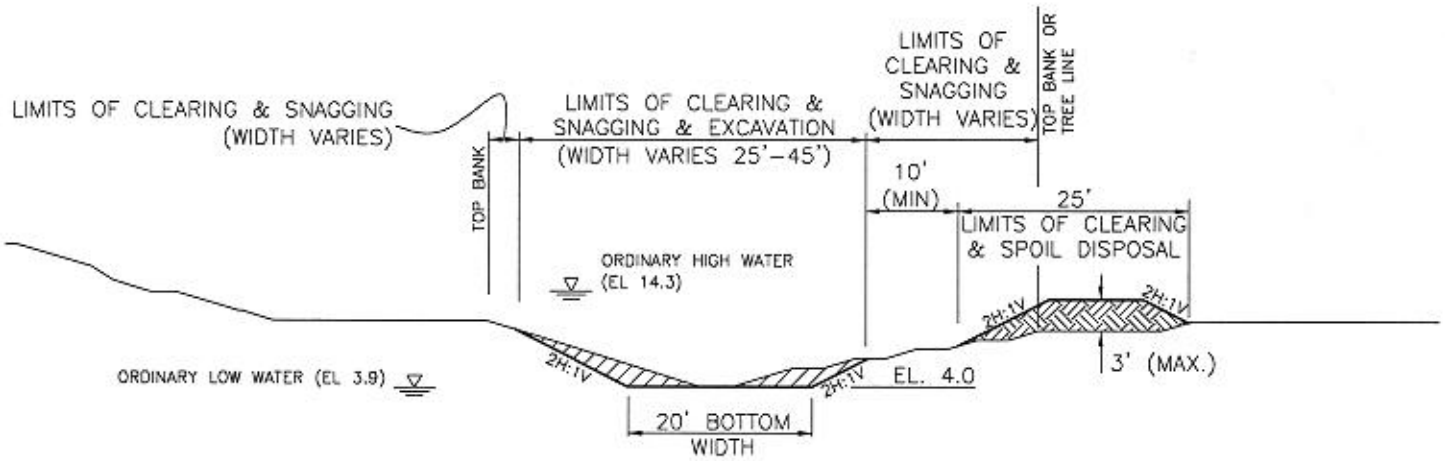


**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Bay Street, Lake Charles, LA 70508 (807) 238-5777

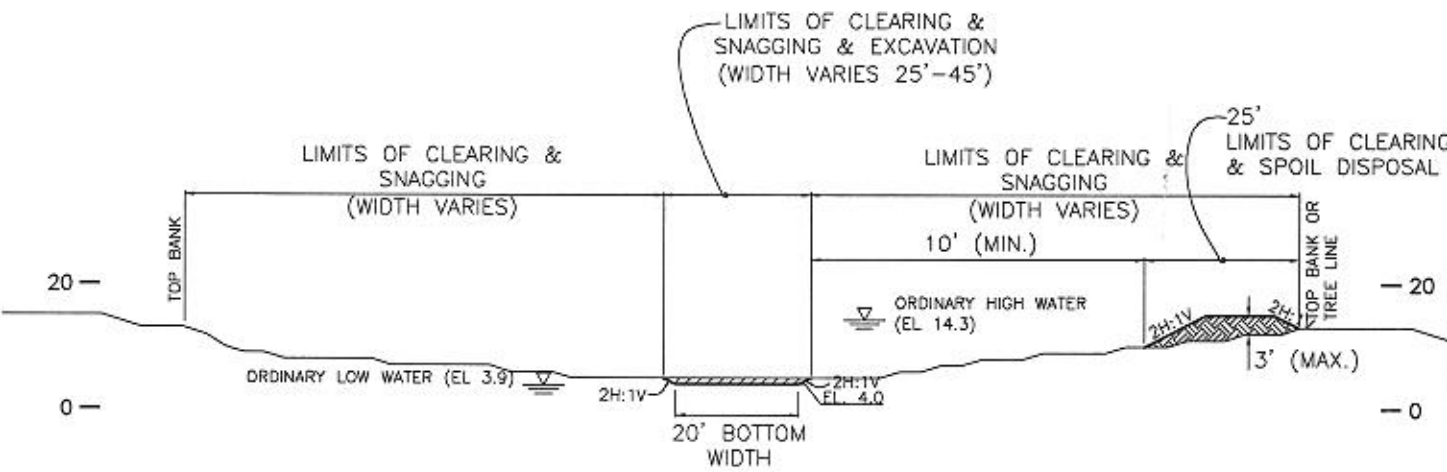
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 10 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
**43**  
 OF  
**44**



SECTION A A  
41  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 11+00 TO STA 48+30  
 SCALE: 1"=20'



SECTION B B  
41  
**TYPICAL SECTION-CLEARING & SNAGGING & EXCAVATION**  
 STA 11+00 TO STA 48+30  
 SCALE: 1"=30'

**LEGEND**

- C SECTION TITLE
- 13 SHEET NO. SHOWING PLAN VIEW
- EXCAVATED MATERIAL BERM
- EXCAVATION

PROJECT FEATURES	QUANTITY
GENERAL EXCAVATION (CU. YDS)	4,931
CLEARING & SNAGGING (LIN. FT.)	3,730
CLEARING (ACRES)	0.1

DESIGNER	N. SONNIER
DRAWN BY	N. SONNIER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05(1).CAD

**Sellers & Associates, Inc.**  
 ENGINEERS  
 148-B Easy Street, Lafayette, LA 70508 (337) 528-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 10 - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	44
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

JOHN BEL EDWARDS  
GOVERNOR



CHUCK CARR BROWN, PH.D.  
SECRETARY

OCT 21 2016

**State of Louisiana**  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
ENVIRONMENTAL SERVICES

August 11, 2016

Mr. Nick Sonnier  
Sellers & Associates, Inc.  
148-B Easy Street  
Lafayette, Louisiana 70506

AI No.: 101302  
Activity No.: CER20160001

RE: St. Martin Parish Government – Beau Bayou Swamp Restoration Project  
Water Quality Certification WQC 160523-01  
Corps of Engineers Permit MVN-2015-01796-WLL  
St. Martin Parish

Dear Mr. Sonnier:

The Louisiana Department of Environmental Quality, Water Permits Division (LDEQ), has reviewed the application to dredge and place spoil to clear existing drainage canals approximately 14 miles downstream from Butte La Rose, St. Martin Parish.

The information provided in the application and the additional information received July 28, 2016, has been reviewed in terms of compliance with State Water Quality Standards, the approved Water Quality Management Plan and applicable state water laws, rules and regulations. LDEQ determined that the requirements for a Water Quality Certification have been met. LDEQ concludes the discharge of fill material will not violate water quality standards as provided for in LAC 33:IX.Chapter 11. Therefore, LDEQ hereby issues St. Martin Parish Government – Beau Bayou Swamp Restoration Project Water Quality Certification, WQC 160523-01.

Should you have any questions concerning any part of this certification, please contact T.D. Wilcox at (225) 219-3026 or by email at [terriana.wilcox@la.gov](mailto:terriana.wilcox@la.gov). To ensure all correspondence regarding this certification is properly filed into the Department's Electronic Document Management System, you must reference Agency Interest (AI) number 101302 on all future correspondence.

Sincerely,

Handwritten signature of Scott Guilliams in cursive.

Scott Guilliams  
Administrator  
Water Permits Division

c: IO-W  
Corps of Engineers – New Orleans District



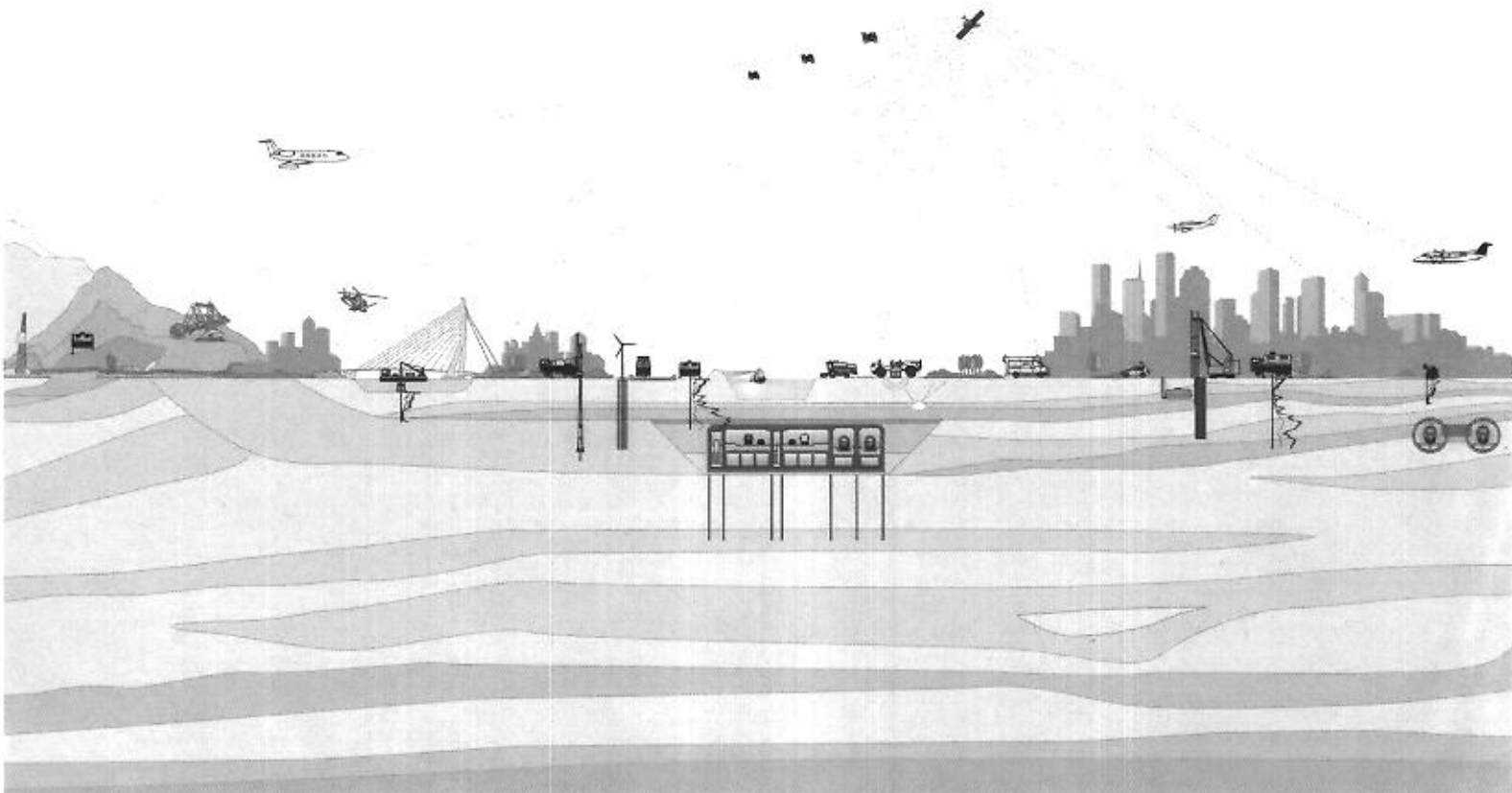
**Sellers & Associates, Inc.**  
**Beau Bayou Water Management Unit**  
**Hydrologic Restoration Project**

April 28, 2016

**Submitted to:**  
Nick A. Sonnier, P.E.  
Sellers & Associates, Inc.  
148B Easy Street  
Lafayette, Louisiana 70506

**Submitted by:**  
John Chance Land Surveys, Inc.  
200 Dulles Drive  
Lafayette, Louisiana 70506

JCLS Job No. 20160002







---

**Field Data Collection for Projects Associated with the  
Hydrologic Restoration  
Of the Beau Bayou/Atchafalaya Basin Water Management Unit**

**Introduction**

St. Martin Parish secured the engineering and surveying services of Sellers & Associates, Inc. to address the lack of river inflows and blockage/impairment of sheet flow in the west-central portions of the Mid-Atchafalaya Basin Floodway. Extensive channelization, pipeline rights-of-way, the accumulation of fallen large woody debris, and tree species growing in small drainages have resulted in decreased flow/velocity, thereby leading to sediment build-up perpetuating a higher likelihood of a positive feedback response resulting in more trees growing in drainages, further reduced velocity, and decreased net primary productivity.

Upon completion of the Beau Bayou Hydrologic Restoration Project, water flow through the area will increase which will lead to a healthier system. Dissolved oxygen levels will increase leading to a healthier environment for fin fish and crawfish. Restored hydrology will also flush out non-rooted aquatic vegetation, increase navigable access, and assist in the restoration of the area's hydrogeomorphology. Gapping of artificially high spoil banks will reduce the wetland hydroperiod to promote new seedling recruitment.

**Location & Boundaries**

Project work is located within the west-central portion of the Mid-Atchafalaya Basin Water Management Unit. The Unit is bordered on the northwest and west by Lake Long and Bayou L'Embarras, on the southwest by Grand Bayou, on the southeast by Lake Fausse Pointe Cut, Bayou Gonsoulin, Alligator Bayou, and Bayou Chene, and on the east and northeast by Bayou Chene Cut, Splice Island Chute, Tensas Bay and Devil's Cut.

**Methods**

In January of 2016 Sellers & Associates, Inc. secured the services of John Chance Land Surveys, Inc. (Fugro) ecological staff to evaluate habitat condition measures such as species richness, stratum composition, exotic species presence, and overall structure of the habitat throughout the project area and to assess the Hydrologic Condition and Negative Influences of the Unit.

Over the course of two (2) months, the total length of each project location was assessed via the use of a small outboard, pirogue, and on foot. A GPS-enabled camera, handheld Trimble and Garmin GPS units, binoculars, 10X hand held loop, and field notebooks were used to document and evaluate pertinent findings.

**Findings**

Extensive channelization and landform fragmentation in the area have resulted in greatly reduced water velocity and flushing of backwater areas of the Basin causing heavy sediment buildup within small naturally occurring bayous and sloughs. During periods of low water/drought, these drainages are prime areas for fast growing Black Willow (*S. nigra*) and Chinese tallow (*T. sebifera*) trees to become

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established and out-compete more desirable native species for limited resources such as sunlight and nutrients (Kroes and Kraemer 2013, Hup et al. 2008). In addition to tree species, many scrub-shrub species have taken advantage of high-light conditions in drainages without a tree canopy. Once established in the drainages the stems further slow water movement which allows additional sediment build-up (T. Doyle and R. Day, personal communication). This phenomenon is apparent in many of the project work areas. In addition to the occluded drainages, spoil banks higher than normal tidal reach increase hydro period in adjacent wetlands. Research by Faulkner et al., 2009, suggests that <6% of cypress-tupelo forest in the Lower Atchafalaya Basin Floodway is capable of naturally regenerating due to continuous and long-term increases in depth and extent of hydroperiod. Inability to naturally regenerate in standing water also applies, to a larger degree, to native Bottomland Hardwood species.

### **Conclusion**

Anthropogenic influences such as oil & gas pipelines, rights-of-way and constructed channels disrupt the Atchafalaya Basin's natural movement and flow of water and thus altered sediment deposition within the wetlands. Disrupted hydrology in the area of the Beau Bayou Swamp Water Management Unit (BBWMU) is also slowly changing the middle region of the Basin from a historically cypress-tupelo swamp to a habitat conducive to a Bottomland Hardwood forested community (Piazza, 2014). Additionally, large expanses with decreased flow result in poor water quality and degraded forest health.

Proposed work in the BBWMU will address issues related to maintaining, restoring and enhancement of the mid-basin wetland habitats. Activities necessary for completion of the project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of the Beau Bayou Restoration Project.

The evaluation and identification of plant and tree species took place during the dormant season, just prior to full leaf-out of the tree species encountered. Identification was based on bark characteristics, growth form and bud arrangement, senesced plant structures, location of their rooted bases and familiarity of native plant species of the Atchafalaya Basin and South Louisiana.

The determination of ecological system classifications, functions, values and boundaries is an inexact science and different individuals may reach different conclusions. With regard to wetlands, the final determination of boundaries for regulatory purposes is the responsibility of the resource agencies that regulate wetland activities. We cannot guarantee the outcome of such agency determinations. Therefore, the conclusions of this report should be reviewed by the appropriate regulatory agencies prior to construction activities.

The field work was completed and this report has been prepared in accordance with and through the guidance of the USACE 2016 Louisiana Wetland Rapid Assessment Method Version 1.0 Guidelines. Maps, shape files of project locations and other location data were supplied by the engineering and surveying firm of Sellers & Associates, Inc. John Chance Land Surveys Inc. warrants that the work performed conforms to the accepted industry standards and that the data contained in this report conform to current technical State and Federal guidelines. This report is for the exclusive use of Sellers & Associates, Inc. who may use and share with State and Federal agencies as appropriate for the completion of the Beau Bayou Hydrologic Restoration Project. No other persons or agencies may rely on the information, analysis or conclusions contained without permission from Sellers & Associates, Inc.



### **Project 1**

Project 1 begins at Bayou Chene (30.146°, 91.530°), running in a NNE direction through Little Bayou DePlomb, terminating at Four hundred Dollar Bayou (30.160°, 91.546°). Area assessed via pirogue (04MAR'16) included the Total length of Project 1, approximately 11,747 feet in length, a bottom width of 30 feet between the top banks of the existing channel, and a variable top width of 50-110 feet. Project 1 area measures a total of 38.0 acres, of which 27.7 acres are bottomland hardwood forested wetlands (BLH), 8.1 acres are water bottom, and 2.2 acres are non-wetlands.

#### **A. Wetland Status:**

Secure; Difficult to replace due to connectivity.

#### **B. Habitat Condition:**

Tree stratum contains approximately 40% absolute cover, which includes invasive Chinese tallow (*Triadica sebifera*) and nuisance Black willow (*Salix nigra*) tree species. The Shrub stratum contains approximately 60% absolute cover, and is contiguous from NE bank, through drainage, to the SW bank throughout most of length of the project area.

Cumulatively, the tree species observed contained predominately bottomland hardwood tree species and 20% exotic/nuisance species. Also encountered were small clumps of senesced cutgrass (*Zizaniopsis miliacea*), which is also considered a nuisance species because of its monospecific growth habit and its propensity to invade shallow waters and limit species diversity.

#### Tree Stratum

Red maple <sup>1</sup>	<i>Acer rubrum</i>
Box elder <sup>2</sup>	<i>Acer negundo</i>
Sugarberry <sup>3</sup>	<i>Celtis laevigata</i>
Black willow (nuisance)	<i>Salix nigra</i>
Chinese tallow (invasive)	<i>Triadica sebifera</i>

LRAM listed BLH tree species<sup>1-3</sup>

#### Shrub Stratum

Swamp privet <sup>1</sup>	<i>Forestiera acuminata</i>
Button bush <sup>2</sup>	<i>Cephalanthus occidentalis</i>
Water elm	<i>Planera aquatica</i>
Swamp dogwood	<i>Cornus foemina</i>

LRAM listed BLH shrub species<sup>1-2</sup>

#### **C. Hydrologic Condition:**

Local hydrology is impaired by anthropogenic disturbances (channelization and a pipeline right-of-way) such that full functional recovery would not occur through natural processes. The anthropogenic influences to the existing channel include a pipeline right-of-way at (30.152, -91.543 [photo #22]), and spoil banks along the canal that appear to be of height and width that will impede sheet flow during normal high water events, thus negatively affect hydroperiod in



nearby wooded areas. Note that this project 1 has an impaired hydrologic condition due to high number of shrubs and large woody debris throughout the stretch of the project length and width.

**D. Negative Influences:**

The project site receives more than minimal static negative effects from extensive channelization throughout the area, and a maintained pipeline right-of-way transecting the project area.

**E. Impact type:**

Partial / Temporary

**Conclusion**

Project 1 of the Beau Bayou Swamp Hydrologic Restoration will take place within an Atchafalaya Basin Bottomland Hardwood Forested Habitat, classified as **Secure** / difficult to replace due to connectivity of similar wetland habitats >500 acres in size, by the Louisiana Natural Heritage Program (LNHP, 2009).

Fallen large woody debris and tree species growing in this drainage decreases flow/velocity which leads to sediment buildup within the existing channel, perpetuating a higher likelihood of a positive feedback response resulting in more trees growing in drainage, further reduced velocity, and decreased net primary productivity.

Upon completion of this portion of the Beau Bayou Project, velocity through the area will increase which will lead to a healthier system in that dissolved oxygen levels will increase leading to a healthier environment for fin fish and crawfish in the immediate vicinity. Furthermore, increased flow through the drainage will flush out non-rooted aquatic vegetation and increase the usefulness of this once navigable water way.

**A. Wetland Status: (i) value\_ 2.0 \_Secure**

Bottomland Hardwood (BLH) is classified as Secure (**RID** due to connectivity) by *The Natural Communities of Louisiana*, (LNHP, 2009).

**B. Habitat Condition: (i) value\_ 2.0 \_Medium**

Tree stratum is comprised of <50% absolute cover of listed BLH tree stratum species, and consists of exotic, nuisance, and native BLH species; the shrub stratum is > 50% absolute cover.

**C. Hydrologic Condition: (i) value\_ 2.0 \_Medium**

Anthropogenic factors, including extensive channelization and pipeline right-of-ways occurring in the area negatively affect the hydrologic condition of this project worksite.

**D. Negative Influences: (i) value\_ -0.5 \_High**

Pipeline ROW negatively influences natural hydrologic regime.

---

E. Impact Type: (i) **value\_ 0.5 \_Partial/Temporary Loss**

Activities necessary for completion of project will temporarily increase turbidity and disturb the natural community in the short term. Favorable conditions will be observed shortly after completion of project.

---







Project #1, #17, @ 30°9'37.36", 91°32'46.55"



Project #1, #18, @ 30°9'31.54", 91°32'44.28"



Project #1, #19, @ 30°9'26.23", 91°32'43.61"



Project #1, #20, @ 30°9'21.13", 91°32'41.03"



Project #1, #21, @ 30°9'12.31", 91°32'36.60"



Project #1, #22, @ 30°9'7.13", 91°32'34.64"



Project #1, #50, @ 30°8'55.70", 91°32'27.02"



Project #1, #51, @ 30°8'52.73", 91°32'22.04"





Project #1, #52, @ 30°8'49.33", 91°32'15.89"



Project #1, #53, @ 30°8'49.51", 91°32'15.92"



Project #1, #59, @ 30°8'50.65", 91°32'7.86"



Project #1, #60, @ 30°8'49.89", 91°32'5.53"



Project #1, #61, @ 30°8'47.85", 91°32'1.87"



Project #1, #62, @ 30°8'46.36", 91°31'59.80"



Project #1, #63, @ 30°8'46.27", 91°31'57.66"



## Herrmann, Michael H MVN

---

**From:** Nick Sonnier <nasonnier@sellersandassociates.com>  
**Sent:** Monday, October 17, 2016 3:48 PM  
**To:** Herrmann, Michael H MVN  
**Cc:** 'Todd Vincent'; 'Heath Babineaux'  
**Subject:** RE: [EXTERNAL] RE: MVN 2015-01795-WLL  
**Attachments:** 8004-07 Beau Bayou Revised Cross-Sections 2016-10-17.pdf

Mike,

Attached are the revised cross-sections for the Beau Bayou project. They have been revised to show the extension of the Ordinary High Water Elevation to the bank line as requested. I have also added the distance from the Ordinary high water to the edge of the Clearing & Snagging. After you get a chance to look at the drawings, it would probably help for you to give me a call so we can discuss how I came up with the impacted footprints. Some of the footprints were measured in the plan view drawings, so those will need to be referenced to come up with the totals.

Nick A. Sonnier, P.E.  
Sellers & Associates, Inc.  
148-B Easy Street  
Lafayette, Louisiana 70506  
(337) 232-0777  
(337) 232-0851 FAX  
nasonnier@sellersandassociates.com  
Blockedwww.sellersandassociates.com

-----Original Message-----

**From:** Herrmann, Michael H MVN [mailto:Michael.H.Herrmann@usace.army.mil]  
**Sent:** Monday, October 17, 2016 11:24 AM  
**To:** Nick Sonnier  
**Subject:** RE: [EXTERNAL] RE: MVN 2015-01795-WLL

Nick, Are you calling to discuss the cross sections and OHWM? I saw earlier drawings had the mark on each bank. I would like to see that on the revised drawings. I'm trying to get with Darrell on the recent description (15 page packet) of benefits and history. I'd like to call after he and I have discussed that ; and hopefully we can address everything that needs addressing then.

I will check/ run LRAM after our conversation.

-----Original Message-----

**From:** Nick Sonnier [mailto:nasonnier@sellersandassociates.com]  
**Sent:** Monday, October 17, 2016 9:15 AM  
**To:** Herrmann, Michael H MVN <Michael.H.Herrmann@usace.army.mil>  
**Subject:** RE: [EXTERNAL] RE: MVN 2015-01795-WLL

Mike,

I figure it might be easier for you and Darrell to call today when you are together and ready. You can call at our office whenever or set a time. Todd will probably join us but we should both be around all day.

Nick A. Sonnier, P.E.  
Sellers & Associates, Inc.  
148-B Easy Street  
Lafayette, Louisiana 70506  
(337) 232-0777  
(337) 232-0851 FAX  
nasonnier@sellersandassociates.com  
BlockedBlockedwww.sellersandassociates.com

-----Original Message-----

From: Herrmann, Michael H MVN [mailto:Michael.H.Herrmann@usace.army.mil]  
Sent: Friday, October 14, 2016 1:33 PM  
To: Nick Sonnier  
Subject: RE: [EXTERNAL] RE: MVN 2015-01795-WLL

Nick, Darrell and I will talk to you on Monday when we are both available. You can call me when you get back if need be. Sorry I missed your call.

-----Original Message-----

From: Nick Sonnier [mailto:nasonnier@sellersandassociates.com]  
Sent: Friday, October 14, 2016 12:36 PM  
To: Herrmann, Michael H MVN <Michael.H.Herrmann@usace.army.mil>  
Subject: RE: [EXTERNAL] RE: MVN 2015-01795-WLL

Mike,

I tried calling your office but you were not in. Can you give me a call when you get a chance so we can discuss. I'll be out of the office until about 2. You can reach me on my cell at (337)789-1688.

Nick A. Sonnier, P.E.  
Sellers & Associates, Inc.  
148-B Easy Street  
Lafayette, Louisiana 70506  
(337) 232-0777  
(337) 232-0851 FAX  
nasonnier@sellersandassociates.com  
BlockedBlockedBlockedwww.sellersandassociates.com

-----Original Message-----

From: Herrmann, Michael H MVN [mailto:Michael.H.Herrmann@usace.army.mil]  
Sent: Friday, October 14, 2016 12:06 PM  
To: Nick Sonnier

Subject: RE: [EXTERNAL] RE: MVN 2015-01795-WLL

What happened to the OHWM locations in the cross sections? That needs to be in there for clarity regarding impacts to wetlands vs waterbottoms.

-----Original Message-----

From: Nick Sonnier [mailto:nasonnier@sellersandassociates.com]  
Sent: Friday, October 14, 2016 11:18 AM  
To: Herrmann, Michael H MVN <Michael.H.Herrmann@usace.army.mil>  
Cc: 'Todd Vincent' <tavincent@sellersandassociates.com>; 'Heath Babineaux' <hbabineaux@stmartinparish.net>  
Subject: [EXTERNAL] RE: MVN 2015-01795-WLL

Mike,

Attached are the cross-sections of the project elements which we have overlaid on each other, and the plan views to show the approximate locations. The attached cross-sections help to show the build-up of material in the channels, particularly at the confluence with the larger river channels. As shown, the channels are more constricted closer to the river inputs, and then open to larger channels as they get further from the river. It also helps to show what the historical or original channel widths may have been.

Nick A. Sonnier, P.E.

Sellers & Associates, Inc.

148-B Easy Street

Lafayette, Louisiana 70506

(337) 232-0777

(337) 232-0851 FAX

nasonnier@sellersandassociates.com

BlockedBlockedBlockedBlockedwww.sellersandassociates.com

From: Nick Sonnier [mailto:nasonnier@sellersandassociates.com]  
Sent: Thursday, October 13, 2016 9:42 AM  
To: 'Herrmann, Michael H MVN'  
Cc: 'Todd Vincent'; 'Heath Babineaux'  
Subject: MVN 2015-01795-WLL

Mike,

Attached are the revised wetland impacts and the LRAM summary for the Beau Bayou Project. based on our conversation on Tuesday. As discussed, the clearing and snagging below the Ordinary High Water elevation of 14.3 was not considered impacts. The impacts for the project have been reduced from 51.6 acres to 29.2 acres of wetlands impacted. Let me know if you need anything else, or if there has been any more discussion about the permit.

Thanks,

Nick A. Sonnier, P.E.

Sellers & Associates, Inc.

148-B Easy Street

Lafayette, Louisiana 70506

(337) 232-0777

(337) 232-0851 FAX

nasonnier@sellersandassociates.com

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---

I am using the Free version of SPAMfighter  
<BlockedBlockedBlockedBlockedhttp://www.spamfighter.com/len> .  
SPAMfighter has removed 5158 of my spam emails to date.

Do you have a slow PC?  
<BlockedBlockedBlockedBlockedhttp://www.spamfighter.com/SLOW-PCfighter?cid=sigen>  
Try a free scan!

--

I am using the free version of SPAMfighter.

SPAMfighter has removed 5161 of my spam emails to date.

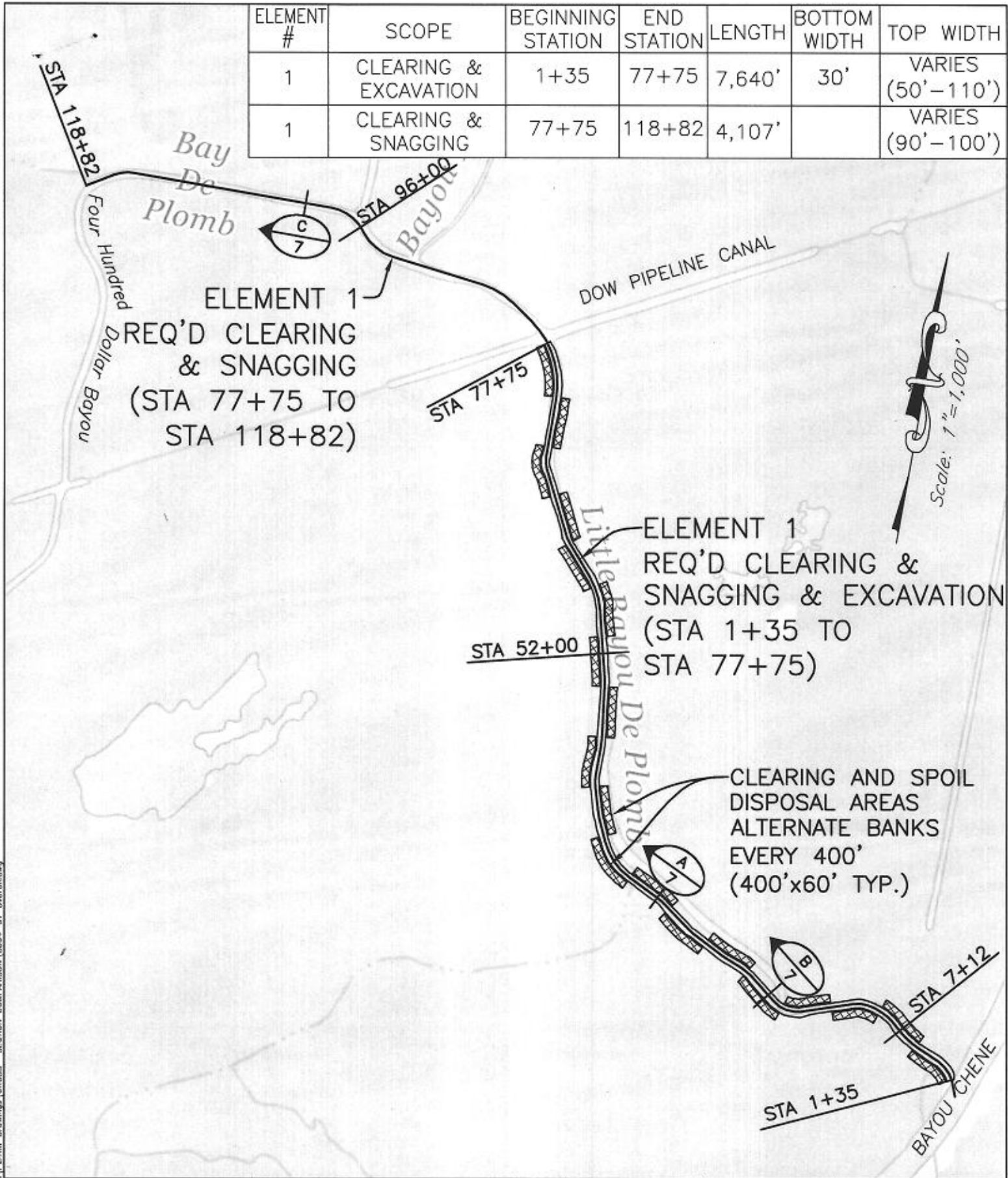
Get the free SPAMfighter here: BlockedBlockedBlocked<http://www.spamfighter.com/len>

Do you have a slow PC? Try a Free scan

BlockedBlockedBlocked<http://www.spamfighter.com/SLOW-PCfighter?cid=sigen>





ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
1	CLEARING & EXCAVATION	1+35	77+75	7,640'	30'	VARIES (50'-110')
1	CLEARING & SNAGGING	77+75	118+82	4,107'		VARIES (90'-100')

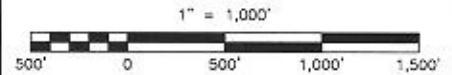


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 CLEARING & SPOIL DISPOSAL AREAS  
 UPLANDS (EL. > 15.6)

**LEGEND**

 SECTION TITLE  
 SHEET NO. SHOWING SECTION



DESIGNED BY H. SONNER  
 DRAWN BY J. FABRE  
 DATE APRIL 2016  
 SCALE AS SHOWN  
 PROJECT 8004-07  
 FILE NO. SEE LEFT SIDE

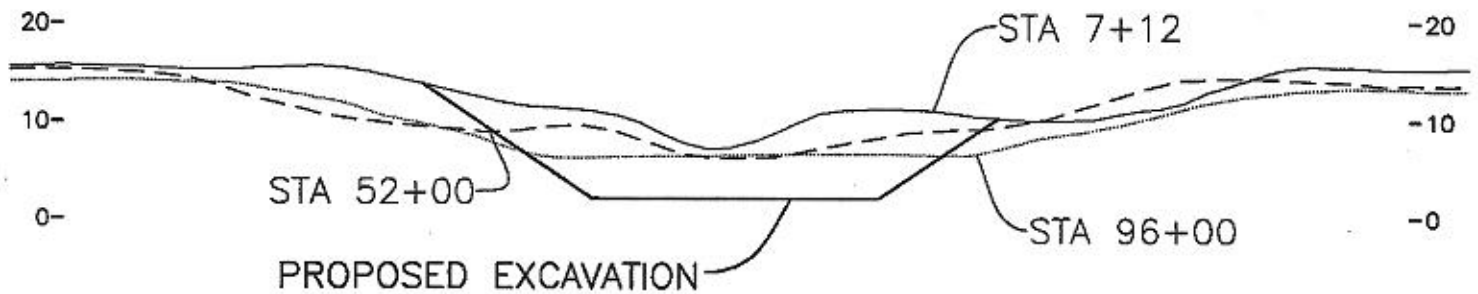


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 148-B Easy Street, Lafayette, LA 70506 (337) 232-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

ELEMENT 1 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	2
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	
LOCATION	ST. MARTIN PARISH, LOUISIANA		44



ELEMENT 1 – CROSS SECTIONS

SCALE: 1"=20'

DESIGNED BY	N. SCHMER
DRAWN BY	N. SCHMER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD



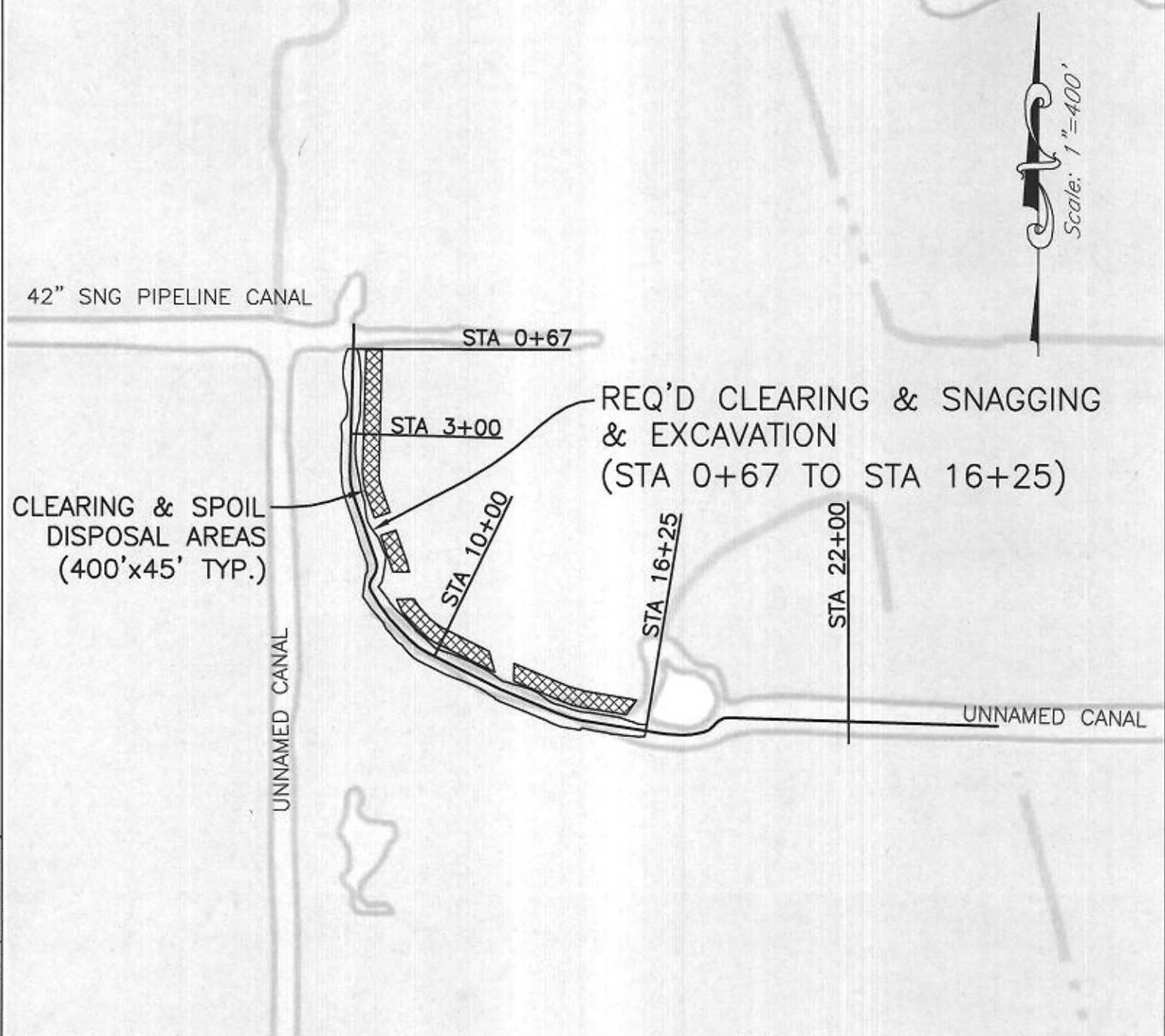
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

**ELEMENT 1 – TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
7  
OF  
44

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
2	CLEARING & EXCAVATION	0+67	16+25	1,558'	15'	VARIES (25'-55')



**NOTES:**

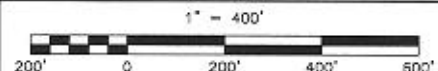
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 2 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE ALIGNMENT AND TYPICAL SECTION SHOWN. SINCE THE EXISTING CHANNEL CENTERLINE MEANDERS, THE PROPOSED ALIGNMENT MAY INVOLVE EXCAVATION OUTSIDE OF THE EXISTING TOP BANK.



**LEGEND**  
 CLEARING & SPOIL DISPOSAL AREAS  
 UPLANDS (EL. > 15.6)



SECTION TITLE  
 SHEET NO. SHOWING SECTION



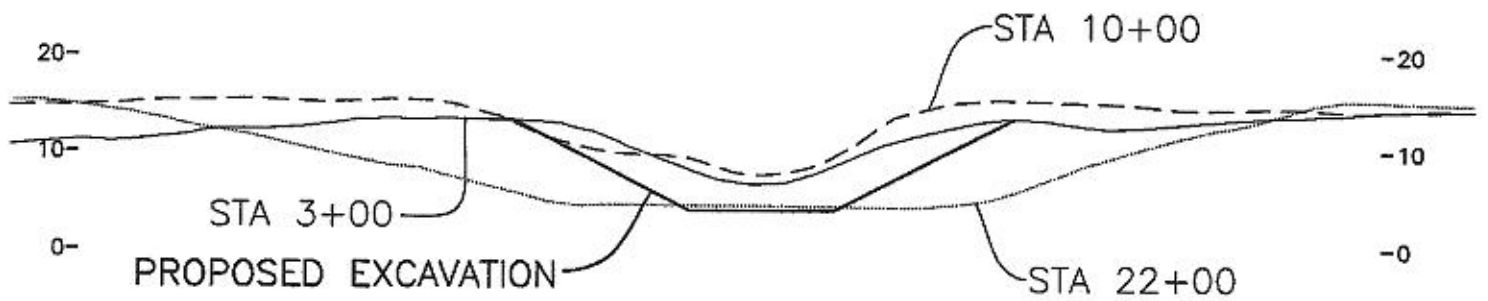
DESIGNED BY	N. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

**Sellers & Associates, Inc.**  
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 148-B Bay Street, Lafayette, LA 70508 (337) 232-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 2 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	8
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	
LOCATION	ST. MARTIN PARISH, LOUISIANA		44

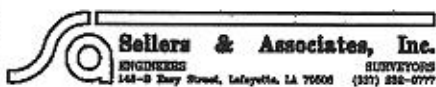
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ELEMENT 2 – CROSS SECTIONS

SCALE: 1"=20'

DESIGNER	N. SONNIER
DRAWN BY	N. SONNIER
DATE	4-17-2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD



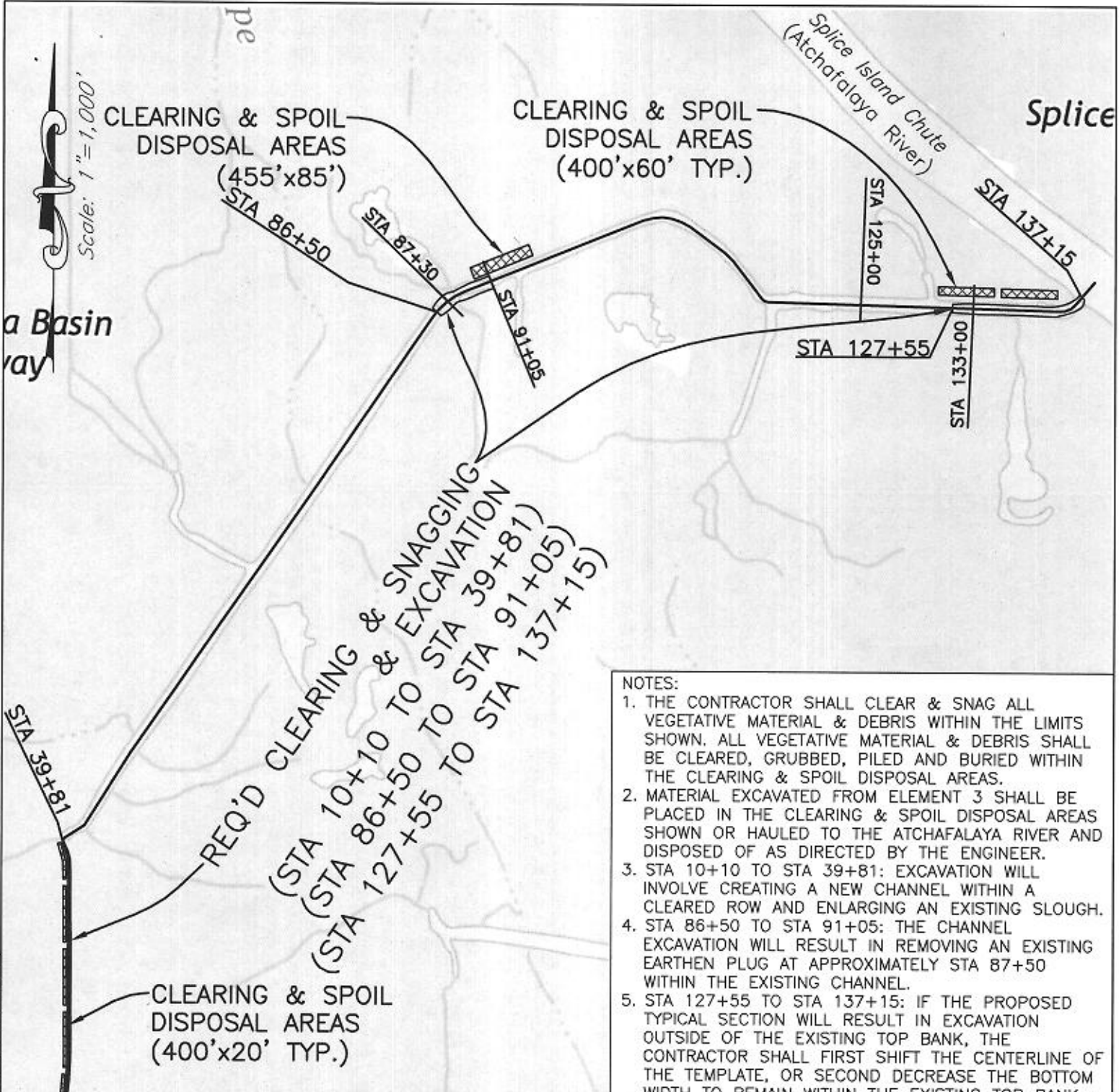
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

**ELEMENT 2 – TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

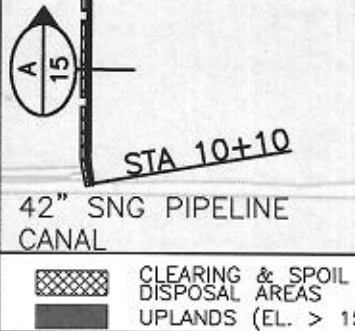
**SHEET  
10  
OF  
44**





- NOTES:
1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
  2. MATERIAL EXCAVATED FROM ELEMENT 3 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
  3. STA 10+10 TO STA 39+81: EXCAVATION WILL INVOLVE CREATING A NEW CHANNEL WITHIN A CLEARED ROW AND ENLARGING AN EXISTING SLOUGH.
  4. STA 86+50 TO STA 91+05: THE CHANNEL EXCAVATION WILL RESULT IN REMOVING AN EXISTING EARTHEN PLUG AT APPROXIMATELY STA 87+50 WITHIN THE EXISTING CHANNEL.
  5. STA 127+55 TO STA 137+15: IF THE PROPOSED TYPICAL SECTION WILL RESULT IN EXCAVATION OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
3	CLEARING & EXCAVATION	10+10	39+81	2,971	10'	VARIES (17'-25')
3	CLEARING & EXCAVATION	86+50	91+05	455'	60'	VARIES (75'-110')
3	CLEARING & EXCAVATION	127+55	137+15	960'	40'	VARIES (60'-75')



**LEGEND**

- CLEARING & SPOIL DISPOSAL AREAS
- UPLANDS (EL. > 15.6)
- SECTION TITLE
- SHEET NO. SHOWING SECTION

Scale: 1" = 1,000'

OWNER: N. SONNER  
 DRAWN BY: J. FABRE  
 DATE: APRIL 2015  
 SCALE: AS SHOWN  
 PROJECT: 8004-07  
 FILE NO.: SEE LEFT SIDE

**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 140-B Bay Street, Lafayette, LA 70508 (337) 232-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

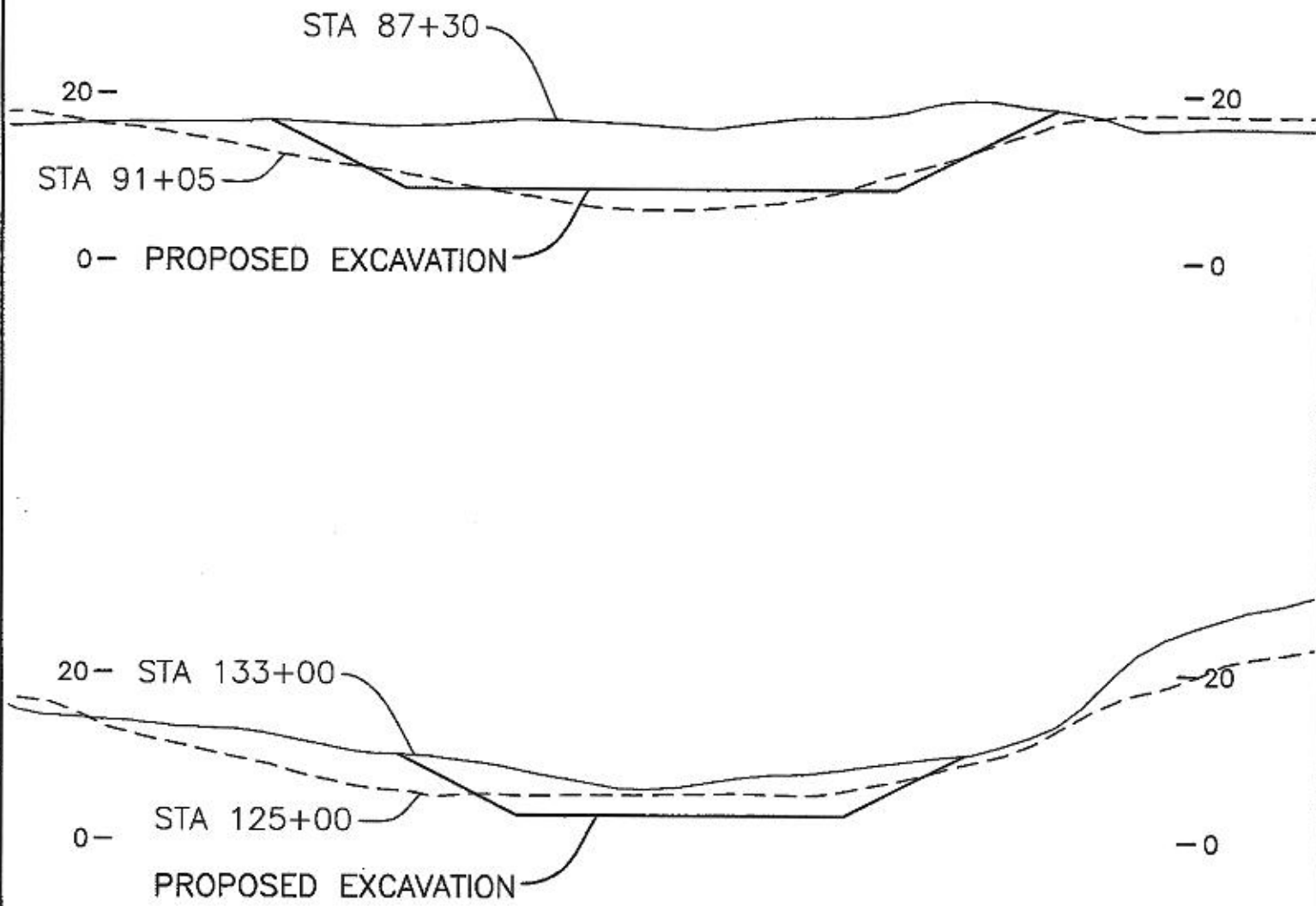
ELEMENT 3 - OVERALL PLAN VIEW

CLIENT: ST. MARTIN PARISH GOVERNMENT  
 PROJECT: BEAU BAYOU SWAMP HYDRO. REST.  
 LOCATION: ST. MARTIN PARISH, LOUISIANA

SHEET 11 OF 44

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ELEMENT 3 - CROSS SECTIONS

SCALE: 1"=20'

DESIGNED BY	H. SOMMER
DRAWN BY	H. SOMMER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
PERMITS	8004-05\CAD



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**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 3 - TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET	15
OF	44

REQ'D CLEARING & SNAGGING  
& EXCAVATION  
(STA 16+10 TO STA 17+35)

Scale: 1" = 200'

LITTLE BAYOU DE PLOMB

CLEARING & SPOIL  
DISPOSAL AREAS  
(50' WIDE TYP.)

DOW PIPELINE CANAL

STA 16+10  
STA 16+90  
STA 17+35

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
5	CLEARING & EXCAVATION	16+10	17+35	125'	40'	VARIES (70'-121')

NOTES:

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 5 SHALL BE PLACED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN ON THIS SHEET, OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION SHOWN. THE EXCAVATION WILL RESULT IN REMOVING AN EARTHEN PLUG WITHIN THE EXISTING CHANNEL AT APPROXIMATELY STA 16+50. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE ADJACENT CHANNEL TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE TOP BANK OF THE ADJACENT CHANNEL.
4. PROPOSED WORK WILL INCLUDE EXCAVATION OVER THE EXISTING DOW PIPELINE. EXTREME CAUTION SHALL BE EXERCISED TO INSURE NO DAMAGE TO THE PIPELINE. THE PIPELINE SHALL NOT BE DISTURBED.

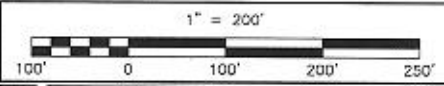


CLEARING & SPOIL DISPOSAL AREAS  
UPLANDS (EL. > 15.6)

LEGEND



SECTION TITLE  
SHEET NO. SHOWING SECTION



ENGINEER	N. SONMEYER
DRAWN BY	J. FABRE
DATE	APRIL 2018
SCALE	AS SHOWN
PRIORITY	8004-07
FILE NO.	SEE LEFT SIDE

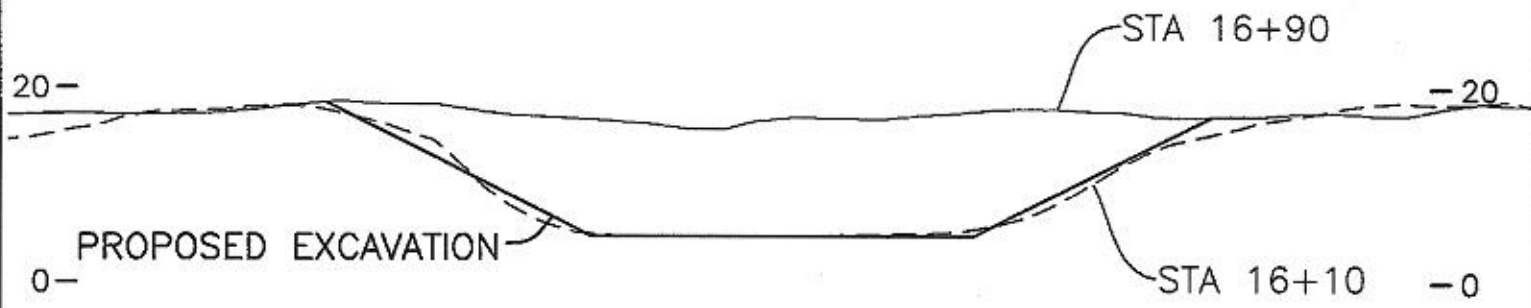
**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
149-B Bay Street, Lafayette, LA 70506 (337) 232-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

ELEMENT 5 - OVERALL PLAN VIEW


CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	23
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	44
LOCATION	ST. MARTIN PARISH, LOUISIANA		

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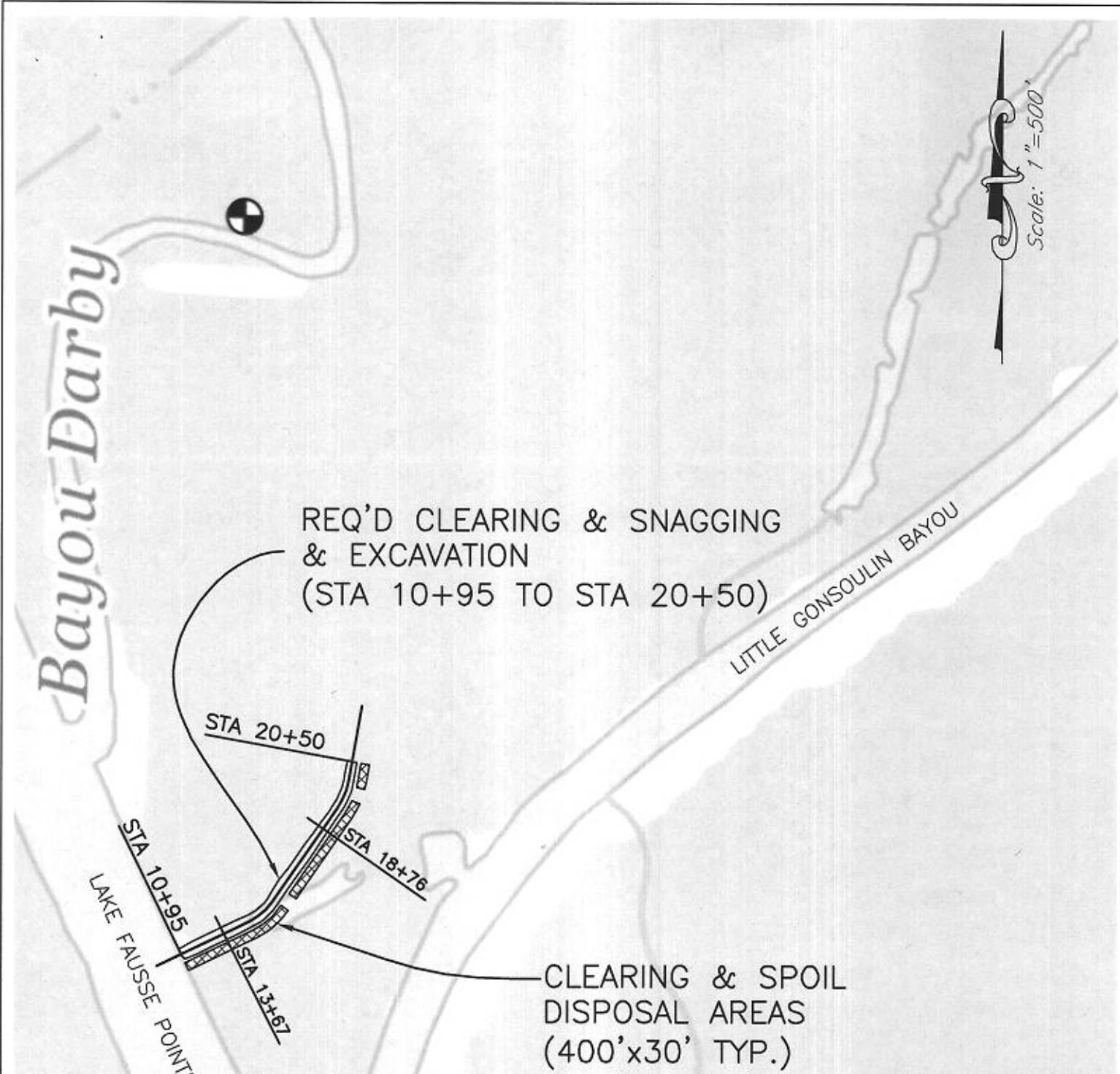


**ELEMENT 5 - CROSS SECTIONS**

SCALE: 1"=20'

ENGINEER DWYLLER, N. SOMNER DATE APRIL 2016 SCALE AS SHOWN PROJECT 8004-05 FILE NO. 8004-05\CAD	 <b>Sellers &amp; Associates, Inc.</b> ENGINEERS SURVEYORS 148-B Bay Street, Lafayette, LA 70508 (337) 233-0777	<b>BEAU BAYOU SWAMP          HYDROLOGIC RESTORATION</b> <b>ELEMENT 5 - TYPICAL SECTIONS</b>	CLIENT ST. MARTIN PARISH GOVERNMENT PROJECT BEAU BAYOU SWAMP HYDRO. REST. LOCATION ST. MARTIN PARISH, LOUISIANA	SHEET <b>25</b> OF <b>44</b>
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**REQ'D CLEARING & SNAGGING  
& EXCAVATION  
(STA 10+95 TO STA 20+50)**

**CLEARING & SPOIL  
DISPOSAL AREAS  
(400'x30' TYP.)**

ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
7	CLEARING & EXCAVATION	10+95	20+50	955'	30'	VARIES (30'-45')

**NOTES:**

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 7 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. THE WORK WILL INVOLVE ENLARGING AN EXISTING SLOUGH AND VIRGIN CUT THROUGH THE SWAMP.

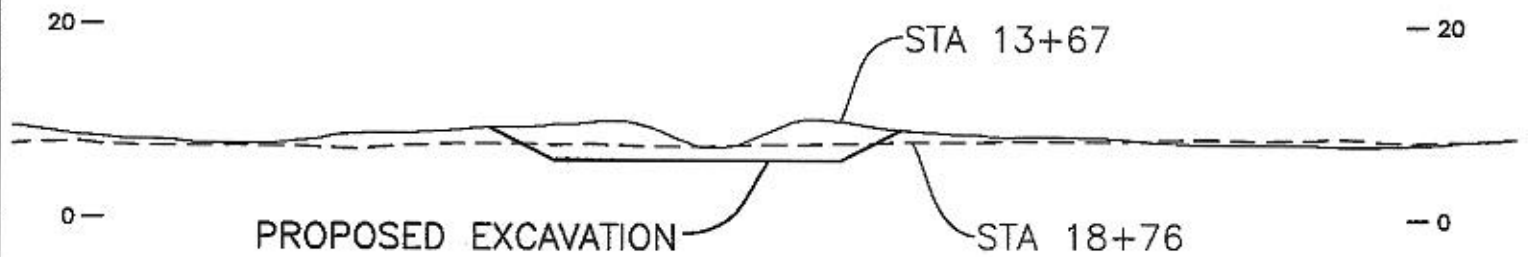
CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)	<b>LEGEND</b>	SECTION TITLE SHEET NO. SHOWING SECTION	1" = 500' 
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DESIGNED BY	M. SOMMER
DRAWN BY	J. FABRE
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	SEE LEFT SIDE

**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Bay Street, Lafayette, LA 70506 (337) 232-2177

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**  
 ELEMENT 7 - OVERALL PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>30</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



ELEMENT 7 — CROSS SECTIONS

SCALE: 1"=20'

DESIGNED BY	N. SONNER
CHECKED BY	N. SONNER
DATE	APRIL 2016
SCALE	AS SHOWN
PROJECT	8004-05
FILE NO.	8004-05\CAD



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 144-B Easy Street, Lafayette, LA 70508 (337) 282-0777

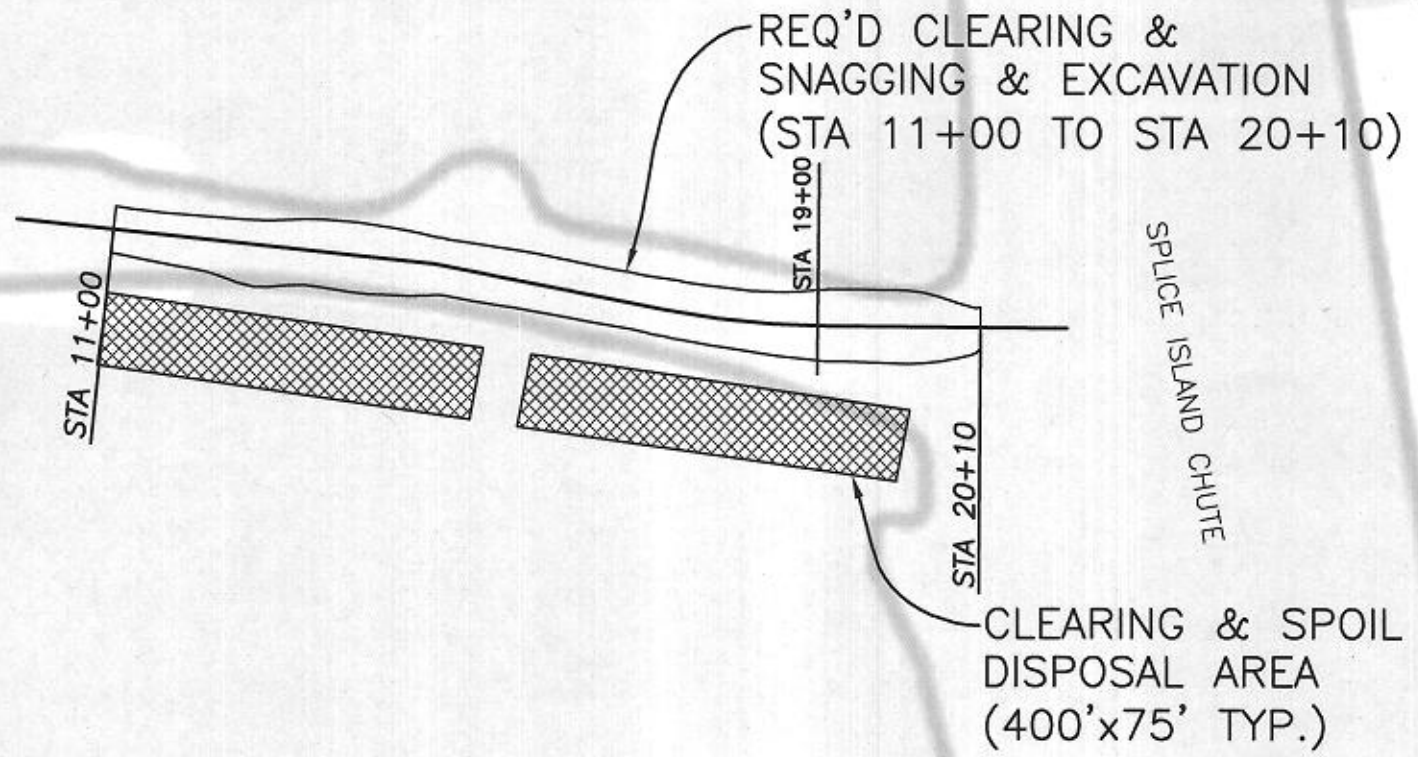
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

**ELEMENT 7 — TYPICAL SECTIONS**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>32</b> OF <b>44</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



Scale: 1"=200'



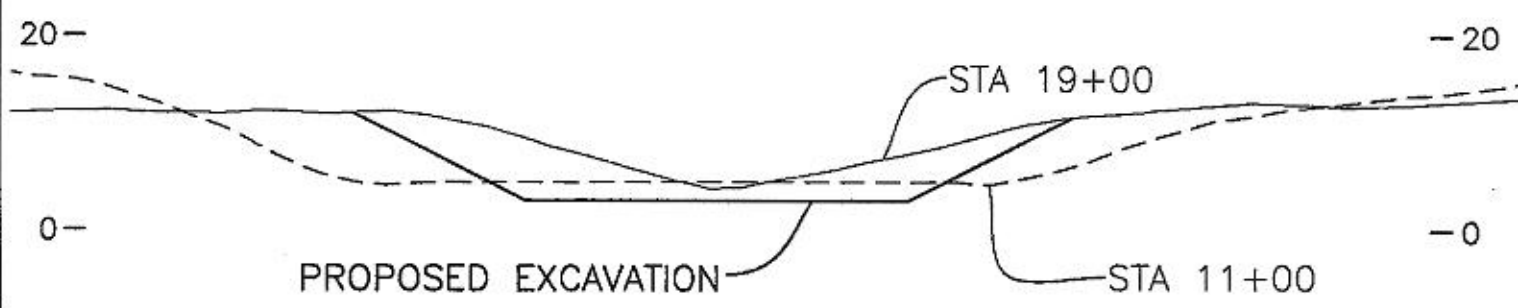
ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
9	CLEARING & EXCAVATION	11+00	20+10	910'	40'	VARIES (40'-75')

**NOTES:**

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 9 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS SHOWN OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.


CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)		<b>LEGEND</b> SECTION TITLE SHEET NO. SHOWING SECTION		1" = 200' 	
ENGINEER: M. SCHWARTZ DRAWN BY: J. FABRE DATE: APRIL 2018 SCALE: AS SHOWN PROJECT REF NO.: 8004-07 SEE LEFT SIDE	 <b>Sellers &amp; Associates, Inc.</b> ENGINEERS SURVEYORS 140-B Bay Street, Lafayette, LA 70506 (337) 238-0777		<b>BEAU BAYOU SWAMP HYDROLOGIC RESTORATION</b>		CLIENT: ST. MARTIN PARISH GOVERNMENT PROJECT: BEAU BAYOU SWAMP HYDRO. REST. LOCATION: ST. MARTIN PARISH, LOUISIANA
ELEMENT 9 - OVERALL PLAN VIEW				SHEET 38 OF 44	

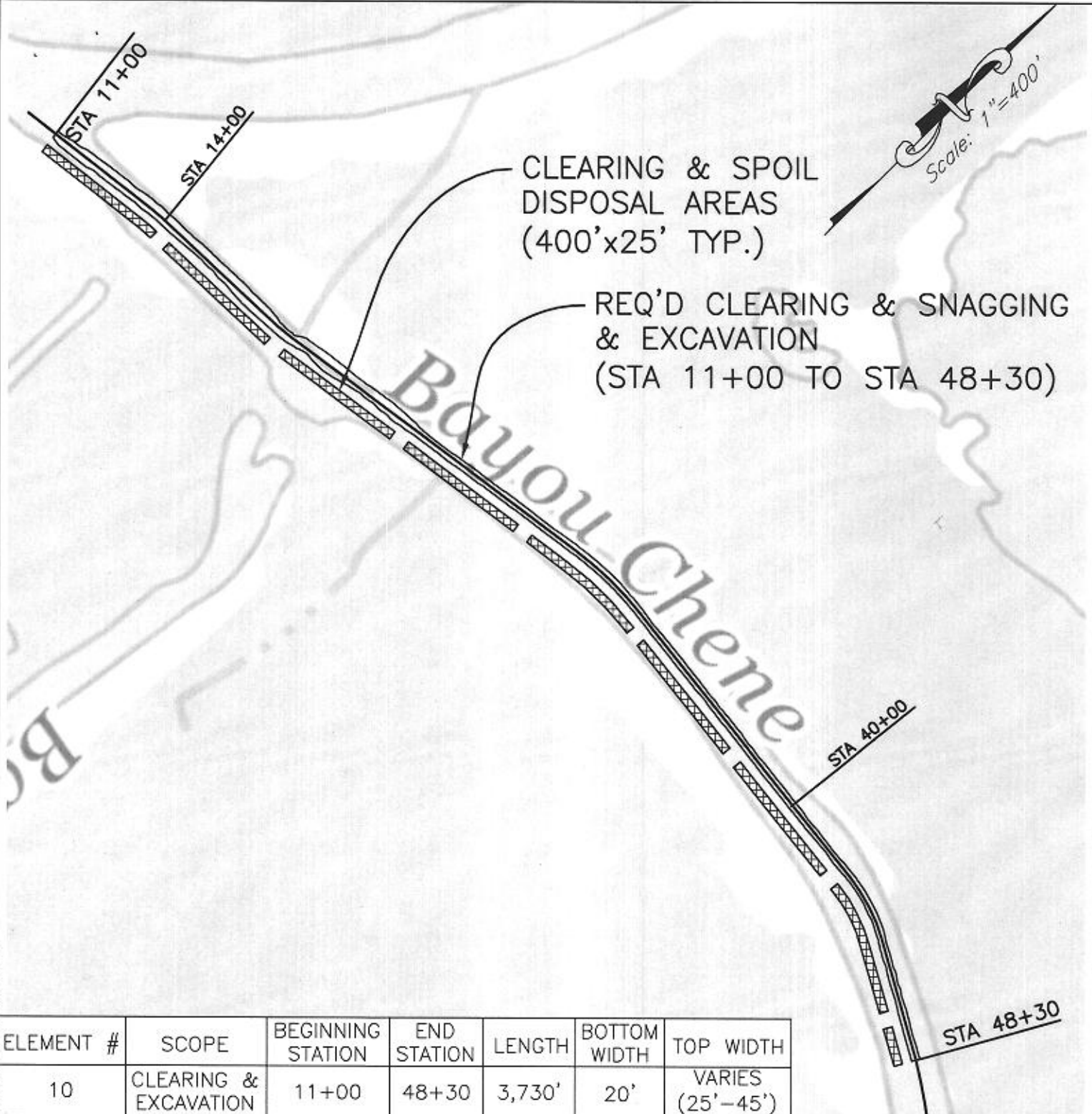
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ELEMENT 9 – CROSS SECTIONS

SCALE: 1"=30'

DESIGNED BY: H. SCHMIDT DRAWN BY: H. SCHMIDT DATE: APRIL 2018 SCALE: AS SHOWN PROJECT: 8004-05 FILE NO.: 8004-05\CAD	 <b>Sellers &amp; Associates, Inc.</b> ENGINEERS SURVEYORS 146-B Bay Street, Lake Charles, LA 70601 (887) 838-0777	<b>BEAU BAYOU SWAMP          HYDROLOGIC RESTORATION</b> <b>ELEMENT 9 – TYPICAL SECTIONS</b>	CLIENT: ST. MARTIN PARISH GOVERNMENT PROJECT: BEAU BAYOU SWAMP HYDRO. REST. LOCATION: ST. MARTIN PARISH, LOUISIANA	SHEET <b>40</b> OF <b>44</b>
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ELEMENT #	SCOPE	BEGINNING STATION	END STATION	LENGTH	BOTTOM WIDTH	TOP WIDTH
10	CLEARING & EXCAVATION	11+00	48+30	3,730'	20'	VARIES (25'-45')

**NOTES:**

1. THE CONTRACTOR SHALL CLEAR & SNAG ALL VEGETATIVE MATERIAL & DEBRIS WITHIN THE LIMITS SHOWN. ALL VEGETATIVE MATERIAL & DEBRIS SHALL BE CLEARED, GRUBBED, PILED AND BURIED WITHIN THE CLEARING & SPOIL DISPOSAL AREAS.
2. MATERIAL EXCAVATED FROM ELEMENT 10 SHALL BE PLACED IN THE CLEARING & SPOIL DISPOSAL AREAS OR HAULED TO THE ATCHAFALAYA RIVER AND DISPOSED OF AS DIRECTED BY THE ENGINEER.
3. THE CONTRACTOR SHALL CLEAR AND EXCAVATE ACCORDING TO THE TYPICAL SECTION AND ALIGNMENT SHOWN. IF THE PROPOSED TYPICAL SECTION WOULD RESULT IN EXCAVATION AND/OR CLEARING OUTSIDE OF THE EXISTING TOP BANK, THE CONTRACTOR SHALL FIRST SHIFT THE CENTERLINE OF THE TEMPLATE, OR SECOND DECREASE THE BOTTOM WIDTH TO REMAIN WITHIN THE EXISTING TOP BANK.

CLEARING & SPOIL DISPOSAL AREAS UPLANDS (EL. > 15.6)	<b>LEGEND</b>	SECTION TITLE SHEET NO. SHOWING SECTION	1" = 400' 
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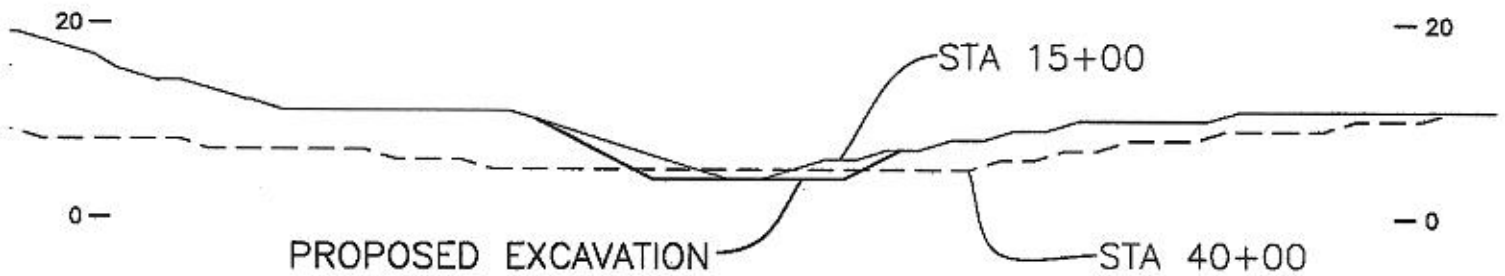
DESIGNED BY: N. SOWNER  
 DRAWN BY: J. FABRE  
 DATE: APRIL 2016  
 SCALE: AS SHOWN  
 PROJECT: 8004-07  
 FILE NO: SEE LEFT SIDE

**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Bay Street, Lafayette, LA 70503 (507) 282-0799

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 ELEMENT 10 - OVERALL PLAN VIEW


CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	41
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	
LOCATION	ST. MARTIN PARISH, LOUISIANA		44

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ELEMENT 10 – CROSS SECTIONS

SCALE: 1"=20'

DESIGNED BY: N. SONNIER DRAWN BY: N. SONNIER	 <b>Sellers &amp; Associates, Inc.</b> ENGINEERS SURVEYORS 148-B Esch Street, Lafayette, LA 70508 (807) 280-0777	<b>BEAU BAYOU SWAMP HYDROLOGIC RESTORATION</b>		CLIENT: ST. MARTIN PARISH GOVERNMENT	SHEET: 44
DATE: APRIL 2016 SCALE: AS SHOWN		PROJECT: BEAU BAYOU SWAMP HYDRO. REST.	LOCATION: ST. MARTIN PARISH, LOUISIANA	OF: 44	
PROJECT: 8004-G3 PLAN NO.: 8004-05/CAD		<b>ELEMENT 10 – TYPICAL SECTIONS</b>			
N:\DATA\8004\8004-07 Permits\Permit Drawings\CROSS-SECTION COMPARISON\8004-07 TYPICAL SECTIONS-comparisons.dwg NAS October 13, 2016 - 5:18pm					

Subject: RE: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Considering the size of this project, I don't see a problem with extending .  
Thanks,

-----Original Message-----

From: Bordelon, Seth [mailto:seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov> ]

Sent: Friday, June 03, 2016 11:01 AM

To: Herrmann, Michael H MVN <Michael.H.Herrmann@usace.army.mil

<mailto:Michael.H.Herrmann@usace.army.mil> >

Cc: Walther, David <david\_walther@fws.gov <mailto:david\_walther@fws.gov> >

Subject: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Hi Mike.

David Walther from our office plans to review this proposal in detail and coordinate with our fisheries office in Baton Rouge. He will be out of the office all next week and may need additional time to prepare our response. Can we please have a 10-day extension to the advertised comment period? If we decide not to comment we'd let you know immediately. Thanks.

Seth Bordelon

U.S. Fish and Wildlife Service

Louisiana Ecological Services Office

(337) 291-3138

seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov> <mailto:seth\_bordelon@fws.gov

<mailto:seth\_bordelon@fws.gov> >



## Herrmann, Michael H MVN

---

**From:** Nick Sonnier <nasonnier@sellersandassociates.com>  
**Sent:** Thursday, October 13, 2016 9:42 AM  
**To:** Herrmann, Michael H MVN  
**Cc:** 'Todd Vincent'; 'Heath Babineaux'  
**Subject:** [EXTERNAL] MVN 2015-01795-WLL  
**Attachments:** Beau Bayou Impacts 2016-10-12.pdf

Mike,

Attached are the revised wetland impacts and the LRAM summary for the Beau Bayou Project. based on our conversation on Tuesday. As discussed, the clearing and snagging below the Ordinary High Water elevation of 14.3 was not considered impacts. The impacts for the project have been reduced from 51.6 acres to 29.2 acres of wetlands impacted. Let me know if you need anything else, or if there has been any more discussion about the permit.

Thanks,

Nick A. Sonnier, P.E.

Sellers & Associates, Inc.

148-B Easy Street

Lafayette, Louisiana 70506

(337) 232-0777

(337) 232-0851 FAX

nasonnier@sellersandassociates.com

Blockedwww.sellersandassociates.com

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I am using the Free version of SPAMfighter <Blocked<http://www.spamfighter.com/len>> .  
SPAMfighter has removed 5158 of my spam emails to date.

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**BEAU BAYOU SWAMP HYDROLOGIC RESTORATION  
LRAM WORKSHEET SUMMARY**

Element No.	Habitat	Wetland Status		Habitat Condition		Hydrologic Condition		Negative Influences		Impact Type		Sum of Impact Factors	Area	Sum x Area Affected
		Status	Value	Status	Value	Status	Value	Status	Value	Status	Value			
1	Bottomland Hardwood	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	17.6	105.6
2	Bald Cypress/Tupelo	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	2.4	14.4
3	Bottomland Hardwood	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	3.5	21
4-Imp 1	Bottomland Hardwood	Secure	2	High	3	Medium	2	High	-0.5	Partial/Temp	0.5	7		0
4-Imp 2	Cypress/Tupelo	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6		0
5	Bottomland Hardwood	Secure	2	Low	1	Low	1	High	-0.5	Full/Perm	3	6.5	0.4	2.6
6A	Bottomland Hardwood	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	1.2	7.2
6B	Cypress/Tupelo	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	1.9	11.4
7	Bald Cypress/Tupelo	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	1.6	9.6
8	Bald Cypress/Tupelo	Secure	2	High	3	Medium	2	High	-0.5	Partial/Temp	0.5	7		0
9	Bottomland Hardwood	Secure	2	Low	1	Medium	2	High	-0.5	Partial/Temp	0.5	5	0.5	2.5
10	Bottomland Hardwood	Secure	2	Low	1	Medium	2	High	-0.5	Partial/Temp	0.5	5	0.1	0.5
												Total	174.8	
												Mitigation Potential	6.5	
												Total Mitigation Credits	26.9	



**BILLY NUNGESSER**  
LIEUTENANT GOVERNOR

**State of Louisiana**  
OFFICE OF THE LIEUTENANT GOVERNOR  
DEPARTMENT OF CULTURE, RECREATION & TOURISM  
OFFICE OF CULTURAL DEVELOPMENT  
DIVISION OF ARCHAEOLOGY

**RENNIE S. BURAS, II**  
DEPUTY SECRETARY

**PHIL BOGGAN**  
ASSISTANT SECRETARY

25 July 2016

Michael Hermann, Project Manager  
U.S. Army Corps of Engineers  
New Orleans District  
Regulatory Branch  
Post Office Box 60267  
New Orleans, LA 70160-0267

Re: MVN-2015-01796-WLL; Water Quality Enhancement Project in St. Martin Parish

Dear Mr. Herrmann:

Our office was requested by Mr. Nick Sonnier of Seller and Associates, Inc., to review the above referenced project and provide our comment concerning the project's potential impact on historic properties. Following several conversations with Mr. Sonnier concerning clarification and explanation of the proposed project, our office offers the following comment.

The project involves effort to improve drainage in the Beau Bayou area of the Atchafalaya Basin by clearing sediment and vegetation from segments of various bayous and canals. Our office does not have any concerns for the proposed dredging operations, or for the clearing of vegetation by cutting and chipping. Nor does our office have concerns for the proposed disposal of spoil and vegetation debris along the channel banks, provided that the ground disturbing impacts of the clearing and disposal operations are limited to the upper foot of the disposal area surface.

Our office does have potential concerns for the grubbing of tree roots from the banks of bayous and canals as this effort could result in significant ground disturbance as the tree is removed. If the grubbing can be shown to occur entirely within the original bayou/canal channel (i.e., the trees are growing on silted-in sections of the original bayou/canal), then we do not have concerns. Our concerns are limited to those segments where the grubbing will occur on or very near to what appears to be the original bayou/canal bank. In these areas, we recommend either that grubbing not occur, or that an archaeological monitor be present to assess whether any historic properties were impacted by the disturbance. This would be particularly important on the south bank of Bayou Chene (Element 10) where an archeological site and cemetery are known to be located. We are also particularly concerned for those project elements that follow historic bayous (Elements 1, 3, 4, and 8). We also request that an archaeological monitor be present during the excavation of the 'virgin cut' on Element 7.

If you have any questions please contact Chip McGimsey at the Division of Archaeology by email at [cmcgimsey@crt.la.gov](mailto:cmcgimsey@crt.la.gov) or by phone at 225-219-4598.

Sincerely,

Phil Boggan  
State Historic Preservation Officer

PB/cm



## Sellers & Associates, Inc.

ENGINEERS SURVEYORS

EUGENE M. SELLERS, FOUNDER  
TODD A. VINCENT, PRESIDENT/CEO  
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MATTHEW W. VINCENT, E.I.  
LANCE C. ROBICHAUX, E.I.  
WILBERT J. GUIDRY, PL.S.

August 11, 2016

MR. KYLE BALKUM  
LA DEPT. OF WILDLIFE & FISHERIES  
P.O. Box 98000  
Baton Rouge, LA 70898-9000

Re: St. Martin Parish Government  
Beau Bayou Swamp Hydrologic Restoration  
Application No.: MVN-2015-01796-WLL  
Alternatives Analysis  
S&A Project No. 8004-07

Dear Mr. Balkum,

During our meeting on July 27, 2016 and in recent conversation concerning the Beau Bayou Swamp Hydrologic Restoration Project (MVN-2015-01796-WLL), your office asked that we explore spray dredging as an alternative to side casting the excavated material. In the initial design phase, we discussed spray dredging the excavated material. After discussion with contractors and our pre-application meeting on March 3, 2015 with the USACE, we abandoned the spray dredging method for the following reasons:

- During the pre-application meeting the USACE personnel stated that deposited fill would need to be spread in a thin layer to prevent impacts to wetlands. Particularly they stated that chipping debris would need to be spread to a maximum of 4" thick. Spreading the material to a thickness of 4" would require spreading the material great distances from the edge of the excavation. Examples of the required widths for the disposal of the excavated material at different depths for some of the elements are listed below:
  - Element 1
    - @ 4" → width = 1200'
    - @ 6" → width = 800'
    - @ 1' → width = 400'
  - Element 2
    - @ 4" → width = 657'
    - @ 6" → width = 434'
    - @ 1' → width = 217'
  - Element 6A (smallest typical section for placement)
    - @ 4" → width = 300'
    - @ 6" → width = 200'
    - @ 1' → width = 100'

Achieving a maximum height of fill could not be guaranteed, and our initial perception was that the areas of deposition would still be considered impacts, which would require compensatory mitigation.

- During the preliminary stages of design, we discussed hydraulically dredging or pumping the material. Our discussions included spray dredging or pumping the material to the Atchafalaya River. Traditionally this would be performed with a cutterhead suction dredge. Through our discussion with marine construction contractors, the consensus was that this work could not be performed feasibly or practically with a cutterhead suction dredge due to the woody vegetation, debris, and roots that



would be encountered. Even if clearing were performed prior to dredging, the remaining stumps, roots, etc. that would be encountered would severely decrease production, and the anticipated mechanical breakdowns and wear on the equipment would drive the cost up significantly and would probably prevent most contractors from bidding the project. A very large cutterhead suction dredge would be more capable of working through areas of debris such as roots, stumps, etc. However it would have to be a very large dredge capable of producing adequate horsepower to cut through the debris that would be encountered, and the dimensions of the proposed channel cuts for this project would not allow that type and size of equipment. Therefore, it was determined that the traditional method of using a cutterhead suction dredge could not be used for this project. We also considered mechanically excavating the material with a barge mounted excavator or dragline and depositing it into a hopper barge, fluidizing it, and pumping it. This method would require excavating the material with a barge mounted excavator or dragline, and depositing the material into the hopper barge. The two barges would have to be connected side by side to allow the crane barge to deposit the material into the hopper barge. A typical crane barge is 40' wide and a typical hopper barge is 35' wide, for a total width of 75'. The proposed channel bottom widths for the project range from 10'-60', therefore the proposed channel widths do not meet the required width for this type of construction, and it was determined that the project could not be constructed using this method.

For the reasons stated above, the project was designed to side cast the material adjacent to the clearing and excavation. This method of construction is standard in conditions and environments similar to the Beau Bayou project.

Since our meeting and follow-up conversations, we have explored the method of spray dredging further with the contractors listed below. A summary of the issues discussed is included in the paragraphs below.

- Ben Leblanc, Leblanc Marine, LLC. Leblanc Marine is currently constructing the USACE sponsored project for the Buffalo Cove Water Management Unit.
- Tyler Roy, Wilco Marsh Buggies.
- Tom Matthews, Matthews Brothers, Inc.

The project is funded through the Coastal Impact Assistance Program (CIAP) which requires that construction of the project must be completed by December 31, 2016. The Atchafalaya Basin is currently at the low water stage, which generally extends from August to January as depicted in the hydrograph for the Atchafalaya River at Butte La Rose Gage shown in Figure 1. Considering the typical hydrograph for the project area and the time frame to complete construction, the project will be constructed during the low water period, and the ordinary low water elevation calculated for the project area was determined to be El. 3.9. Figures 2 and 3 below were taken at Elements 1 and 3 respectively during the low water period, and they show that at low water the project areas are nearly "in the dry", making any type construction that requires fluidizing the excavated material practically not possible.

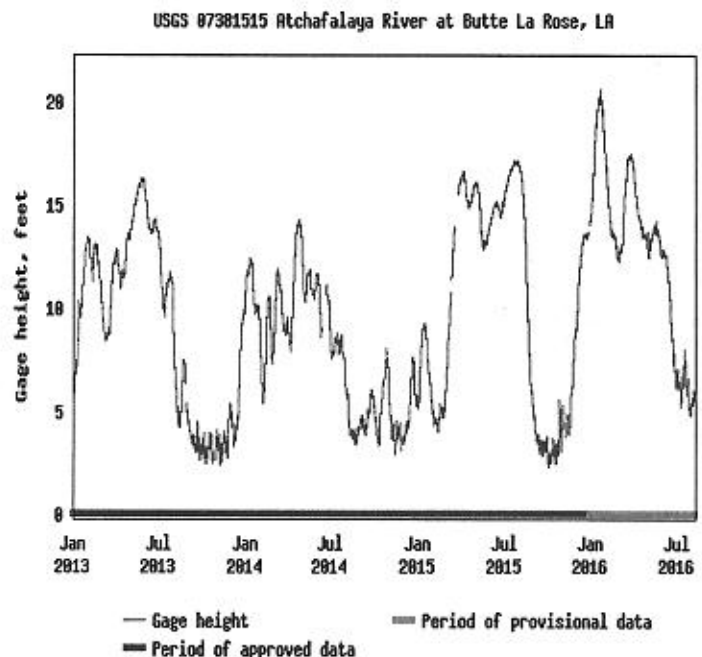


Figure 1: Hydrograph of the Atchafalaya at Butte La Rose Gage (January 2013 - August 2016)



**Figure 2:** Element 1 - Mouth of Bayou de Plomb at Bayou Chene.  
(Atchafalaya River at Butte La Rose Stage = 4.5)



**Figure 3:** Element 3 - Mouth of Canal at the Atchafalaya River  
(Atchafalaya River at Butte La Rose Stage = 4.5)

Table 1 identifies the proposed bottom elevations for the respective elements of the project. A small cutterhead suction dredge typically drafts at least 2', however it requires additional depth ranging from 4'-6' to provide an adequate clean water source to create the dredge slurry. In my conversation with Tom Matthews, he stated that their hopper barge rigged to pump excavated material typically drafts 4', however they would require almost 6' of depth to provide an adequate clean water source. When considering the

proposed bottom elevations and the ordinary low water elevation, a majority of the elements will still be dry ground following construction, and none of the elements will have sufficient depth to provide for the draft of any hydraulic dredge to access the project area, or enough depth to provide a clean water source to create a slurry to pump the material, whether it be spray dredging or pumping to a disposal site.

For the reasons stated above, the spray dredging method for disposal of the excavated material is not feasible or practical for this project. Even considering the conditions during high water, the equipment required to perform the work are not capable of working within the confinement of the proposed improvements.

Upon your review of the information included in this letter, we hope that you will consider our efforts for exploring alternatives for the spoil disposal to minimize impacts to wetlands, and concur that the proposed method of construction is the appropriate method of construction. We also hope that you will consider the benefits and improvements to the aquatic resources and habitats of the Beau Bayou Swamp as a result of the project.

Should you have any questions or require additional information, you may contact me at our office.

Sincerely

SELLERS & ASSOCIATES, INC.



NICK SONNIER, P.E.

N:\DATA\8004\8004-07 Permits\Ltr K\_Balkum 2016-08-11.wpd

c: Mike Herrmann, USACE

Heath Babineaux, SMPG

<b>Element #</b>	<b>Bottom Elev.</b>	<b>Element #</b>	<b>Bottom Elev.</b>
1	2.0	6	3.0 - 5.0
2	4.0	7	6.0
3	2.0 - 9.3	8	Clearing
4	Clearing	9	3.0
5	4.7 - 6.0	10	4.0
Ordinary Low Water Elev. = 3.9'			

BASIN LEVEE

United States Army Corps of Engineers  
New Orleans District  
Regulatory Branch  
Post Office Box 60267  
New Orleans, La. 70160-0267  
ATTENTION: REGULATORY BRANCH (Michael Hermann)  
Permit Application Number MVN-2015-01796-WLL

Dear Mr. Hermann,

We've had a chance to review the Beau Bayou Management Unit permit, and we are very concerned about the irreparable consequences that this project will have on valuable wetlands in the Atchafalaya Basin. Please, if possible, make these comments part of the public record.

The Atchafalaya Basin is of tremendous economic, ecological, cultural, and recreational value to residents of Louisiana, the people of the United States, and the world. The largest river swamp left in North America, it provides the largest harvest of wild crawfish in the world; critical for both migratory birds, and our Louisiana Cajun culture.

As important as the Atchafalaya Basin is for ecological values, we cannot forget that the Basin is also a Spillway that is critical for flood control. Since 1932, there has been a net accretion of nearly 2.5 billion cubic meters of sediment in the Basin floodway, converting a substantial amount of open water and cypress swamps to bottomland hardwood forests. The ability of the Atchafalaya Basin to move flood waters is still immense, but is already severely diminished because of this massive accretion issue. As an example, during our last ongoing flood Grand River at Bayou Sorrel crested at 10.39' on August 17, while across the levee inside the floodway it crested at only 7.1' on August 14 (levels are fluctuating as the Mississippi River rises). Converting more the Spillway's wetlands and open water into uplands will greatly diminish the ability of the Spillway to handle future floods. This is not only irresponsible, but negligent.

In addition to converting cypress swamps and open water into uplands, projects to enlarge or create new cuts to increase river water diversions will most likely silt-up again in a short period of time making the project a complete waste of money. Louisiana should not be using public funds to fill valuable wetlands located far away from the coast and these constant controversies are unnecessary and detrimental to Louisiana's image nationwide.

The project would have other impacts which are very worrisome:

1) Total Direct Wetland Impacts (Fill, Excavation & Clearing):

51.6 acres Total Excavation of Wetlands: 10.9 acres; 67,939 Cubic Yards

2) Total Excavation of Waterbottoms: 27.0 acres; 68,592 cubic yards

3) Total Fill in Wetlands: 34.1 acres; 102,515 cubic yards

4) Total Clearing of Forested Wetlands: 6.6 acres; 1,287 cubic yards

As these issues demonstrate, permitting projects like this one is permitting the filling of wetlands, and for that reason they should be denied until such time as sediment control measures are put in place to guarantee the integrity of those ecosystems.

As wetland ecosystems disappear along the coast, the Atchafalaya Basin will become more and more important for migratory birds and flood protection, and should be protected at all costs. We owe it to our country, the world, and future generations.

Thank you for the opportunity to comment.

Sincerely,

LCPA-West. Vice-President

Ben Bienvenu

Atchafalaya Basinkeeper. Executive Director

Dean A. Wilson



## Herrmann, Michael H MVN

---

**From:** Gary Snellgrove <gwsnellgrove@gmail.com>  
**Sent:** Wednesday, June 29, 2016 3:09 PM  
**To:** Herrmann, Michael H MVN  
**Subject:** [EXTERNAL] Beau Bayou Water Management Unit - Bayou Chene Element 10 - St. Martin Parish Gov Permit Application.

Michael, I appreciate you providing application information on the subject project, DA Permit No. MVN-2015-01796-WLL. I am in favor of the Bayou Chene clearing/snagging/excavation project described in element 10 of the May 30, 2016 joint public notice. I am requesting to be included in any future notices, etc. for the entire project and particularly the Bayou Chene element 10 project as an interested party. In separate emails, as we discussed, I will forward to you additional related information. My cell number is 225-252-7455 if needed. I prefer communication by my email account gwsnellgrove@gmail.com. My home address is 1816 Chopin Drive, BR, LA 70806. Thank you. Gary W. Snellgrove

Sent from my iPhone



JOHN BEL EDWARDS  
GOVERNOR

State of Louisiana  
DEPARTMENT OF WILDLIFE AND FISHERIES

CHARLES J. MELANCON  
SECRETARY

May 31, 2016

Mr. Martin S. Mayer, Chief  
Regulatory Branch  
United States Army Corps of Engineers  
P. O. Box 60267  
New Orleans, LA 70160-0267

RE: *Application Number: MVN-2015-01796-WLL*  
*Applicant: St. Martin Parish Government*  
*Notice Date: May 30, 2016*

Dear Mr. Mayer:

The professional staff of the Louisiana Department of Wildlife and Fisheries (LDWF) has reviewed the above referenced notice for a proposed water quality enhancement project involving mechanized clearing, snagging and the excavation and placement of spoil material along 9 miles of existing channels within the Beau Bayou Water Management Unit in St. Martin Parish, Louisiana. Approximately 51.6 acres of wetlands are proposed as being impacting as a part of this project. Based upon this review, the following has been determined:

Justification:

The impacts associated with this water quality enhancement project seem excessive. Additionally, no information has been provided regarding the need for the project or its potential benefit to the Beau Bayou Water Management Unit. Therefore, the applicant shall provide justification as well as an alternatives analysis. The justification should clearly show if there is a real need for the water quality enhancement project as well as a need for its associated 51.5 acres of wetland impacts. If need can be established, actions must be taken to avoid and/or minimize adverse impacts to fish and wildlife resources. Those actions and other measures designed to fully compensate for unavoidable wetland impacts must be addressed in a mitigation plan and approved by this Department.

Additional Comments:

Please note that the Louisiana black bear (*Ursus americanus luteolus*) may occur in your general project area. The Louisiana black bear utilizes a variety of habitat types, including forested wetlands, marsh, spoil banks, and upland forests. We strongly urge workers and contractors to avoid bears, particularly if work is to be conducted during the non-denning season (April through December). Employees should be cautioned to not leave food or garbage in the field, as bears can become attracted and accustomed to human food easily. In addition, we recommend the use of bear proof garbage containers on site.

Our database indicates the presence of bird nesting colonies within one mile of the Element 7 portion of the proposed project. Please be aware that entry into or disturbance of active breeding colonies is prohibited by LDWF. In addition, LDWF prohibits work within a certain radius of an active nesting colony.

May 31, 2016

Nesting colonies can move from year to year and no current information is available on the status of these colonies. If work for the proposed project will commence during the nesting season, conduct a field visit to the worksite to look for evidence of nesting colonies. This field visit should take place no more than two weeks before the project begins. If no nesting colonies are found within 400 meters (700 meters for brown pelicans) of the proposed project, no further consultation with LDWF will be necessary. If active nesting colonies are found within the previously stated distances of the proposed project, further consultation with LDWF will be required. In addition, colonies should be surveyed by a qualified biologist to document species present and the extent of colonies. Provide LDWF with a survey report which is to include the following information:

1. qualifications of survey personnel;
2. survey methodology including dates, site characteristics, and size of survey area;
3. species of birds present, activity, estimates of number of nests present, and general vegetation type including digital photographs representing the site; and
4. topographic maps and ArcView shapefiles projected in UTM NAD83 Zone 15 to illustrate the location and extent of the colony.

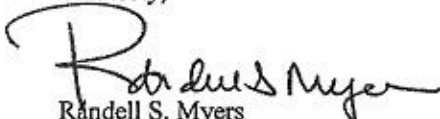
Please mail survey reports on CD to: Louisiana Natural Heritage Program  
La. Dept. of Wildlife & Fisheries  
P.O. Box 98000  
Baton Rouge, LA 70898-9000

To minimize disturbance to colonial nesting birds, the following restrictions on activity should be observed:

- For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, roseate spoonbills, anhingas, and/or cormorants), all project activity occurring within 300 meters of an active nesting colony should be restricted to the non-nesting period (i.e., September 1 through February 15).
- For colonies containing nesting gulls, terns, and/or black skimmers, all project activity occurring within 400 meters (700 meters for brown pelicans) of an active nesting colony should be restricted to the non-nesting period (i.e., September 16 through April 1).

The Louisiana Department of Wildlife and Fisheries submits these recommendations to the U.S. Army Corps of Engineers in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). Please do not hesitate to contact Habitat Section biologist Zachary Chain at 225-763-3587 should you need further assistance.

Sincerely,

  
Randell S. Myers  
Assistant Secretary

zc

c: EPA, Marine & Wetlands Section  
USFWS Ecological Services

## Herrmann, Michael H MVN

---

**From:** Walther, David <david\_walther@fws.gov>  
**Sent:** Tuesday, June 21, 2016 2:00 PM  
**To:** Seth Bordelon; Herrmann, Michael H MVN; Dan Kroes  
**Subject:** Re: FW: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Mr. Herrmann,

We have reviewed the proposed restoration project (MVN-2015-01796-WLL) and do not oppose the construction of that project. However, we do have some concerns about the proposed removal of two plugs from a canal, specifically Elements 5 and 6b. The removal of those plugs could result in most of the water traveling north in Little Bayou de Plomb to begin flowing west and not flow northward towards Bayou LaRose (Element 8) during rising and high river stages, thus circumventing what we believe might be an area targeted for improved water flows/circulation. We respectfully request that the need to remove those plugs be re-examined. Of the two plugs proposed to be removed, the removal of the plug by construction of Element 5 is viewed as possibly causing the greatest loss of flows from Little Bayou de Plomb.

If you have any concerns or questions about these comments please feel free to contact me.

David Walther  
Supervisory Biologist  
SE Region Conservation Planning Assistance Coordinator

US Fish and Wildlife Service  
Lafayette, LA 70508  
Phone: 337.291.3122  
Fax: 337.291.3139

Blocked<http://www.fws.gov/lafayette/>

Blocked<http://www.fws.gov/habitatconservation/cpa.html>

On Fri, Jun 10, 2016 at 10:31 AM, Seth Bordelon <seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov> > wrote:

Seth Bordelon  
U.S. Fish and Wildlife Service  
Louisiana Ecological Services Office  
(337) 291-3138  
seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov>

-----Original Message-----

From: Herrmann, Michael H MVN [mailto:Michael.H.Herrmann@usace.army.mil <mailto:Michael.H.Herrmann@usace.army.mil> ]  
Sent: Friday, June 10, 2016 10:28 AM  
To: Bordelon, Seth

## Herrmann, Michael H MVN

---

**From:** Twyla Cheatwood - NOAA Federal <twyla.cheatwood@noaa.gov>  
**Sent:** Wednesday, June 08, 2016 3:27 PM  
**To:** Herrmann, Michael H MVN  
**Subject:** [EXTERNAL] MVN-2015-01796-WLL, St Martin Parish Government

Michael,

The NMFS has no objection to the issuance of the following permit:

MVN-2015-01796-WLL, St Martin Parish Government

Thank you for your coordination,

Twyla

--

Twyla H Cheatwood  
Fishery Biologist  
Southeast Region, Habitat Conservation Division  
NOAA Fisheries  
Baton Rouge, LA 70803  
Office: (225) 389-0508 ext 209  
Twyla.cheatwood@noaa.gov

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Web Blocked[www.nmfs.noaa.gov](http://www.nmfs.noaa.gov) <Blocked<http://www.nmfs.noaa.gov/>>  
Facebook Blocked[www.facebook.com/usnoaafisheriesgov](http://www.facebook.com/usnoaafisheriesgov)  
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YouTube Blocked[www.youtube.com/usnoaafisheriesgov](http://www.youtube.com/usnoaafisheriesgov) <Blocked<http://www.youtube.com/usnoaafisheriesgov>>





DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT  
P.O. BOX 60267  
NEW ORLEANS, LOUISIANA 70160-0267

FILE COPY

JUL 07 2016

REPLY TO  
ATTENTION OF  
Operations Division  
Western Evaluation Section

SUBJECT: MVN-2015-01796-WLL

St Martin Parish Government  
Attn: Nick Sonnier  
C/O Sellers and Associates, Inc.  
148-B Easy Street,  
Lafayette, LA 70506

Dear Mr. Sonnier:

The enclosed letters from the United States Fish and Wildlife Service and the Louisiana Department of Wildlife and Fisheries offer objections and/or comments regarding your clients permit application requesting authorization to conduct mechanized clearing, snagging, excavation and placement of spoil material along 9 miles of existing channels and remove excessive overgrowth of woody vegetation and trees, for the purpose of restoring and opening channels, restoring water quality, sheet-flow, and circulation within the surrounding swamp within the Beau Bayou Water Management Unit in the Atchafalaya Basin, St Martin Parish, LA.

Although the U.S. Army Corps of Engineers makes the final determination as to whether or not a permit should be issued, we must carefully consider and address all comments received in response to the public notice.

If you would like to discuss your position or project and/or attempt resolution of the matter with the objectors, you should contact your project manager, listed below, to arrange such a meeting. If you prefer to contact the objectors in writing, you must forward to your project manager a copy of those letters. If the objections are resolved, the objectors must provide written documentation that they no longer object to the proposed project.

If you do not wish to contact the objectors, we suggest that you furnish written arguments or additional information to us to refute or rebut the objections.

You are not required to rebut or resolve the objections. Please advise us whether you plan to attempt resolution of the objections, to rebut the objections, or want us to continue processing the permit based on the information presently available.

The Corps and Regulatory/Resource agencies who commented on the project have expressed concerns with the current aspects of the project and how it may have direct, secondary and cumulative project related detriments. The commenting parties

have requested additional information about the project to ensure that the work has a demonstrated need and will not be contrary to the public interest.

To assist us in further review of the project, we ask that you provide us with a response relevant to the enclosed comments.

If we have not received a written reply within 25 days of the date of this letter, we will assume that you are no longer interested in pursuing this project and will return your application. If you have any questions concerning this matter you can call Michael Herrmann of this office at (504) 862-1954.

Sincerely,

*Danell S. Barbosa*

*for:*

Michael H. Herrmann Jr.  
Western Evaluation Section

**Herrmann, Michael H MVN**

---

**From:** Twyla Cheatwood - NOAA Federal <twyla.cheatwood@noaa.gov>  
**Sent:** Wednesday, June 08, 2016 3:27 PM  
**To:** Herrmann, Michael H MVN  
**Subject:** [EXTERNAL] MVN-2015-01796-WLL, St Martin Parish Government

Michael,

The NMFS has no objection to the issuance of the following permit:

MVN-2015-01796-WLL, St Martin Parish Government

Thank you for your coordination,

Twyla

--

Twyla H Cheatwood  
Fishery Biologist  
Southeast Region, Habitat Conservation Division  
NOAA Fisheries  
Baton Rouge, LA 70803  
Office: (225) 389-0508 ext 209  
Twyla.cheatwood@noaa.gov

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JOHN BEL EDWARDS  
GOVERNOR

  
State of Louisiana  
DEPARTMENT OF WILDLIFE AND FISHERIES

CHARLES J. MELANCON  
SECRETARY

May 31, 2016

Mr. Martin S. Mayer, Chief  
Regulatory Branch  
United States Army Corps of Engineers  
P. O. Box 60267  
New Orleans, LA 70160-0267

RE: *Application Number: MVN-2015-01796-WLL*  
*Applicant: St. Martin Parish Government*  
*Notice Date: May 30, 2016*

Dear Mr. Mayer:

The professional staff of the Louisiana Department of Wildlife and Fisheries (LDWF) has reviewed the above referenced notice for a proposed water quality enhancement project involving mechanized clearing, snagging and the excavation and placement of spoil material along 9 miles of existing channels within the Beau Bayou Water Management Unit in St. Martin Parish, Louisiana. Approximately 51.6 acres of wetlands are proposed as being impacting as a part of this project. Based upon this review, the following has been determined:

Justification:

The impacts associated with this water quality enhancement project seem excessive. Additionally, no information has been provided regarding the need for the project or its potential benefit to the Beau Bayou Water Management Unit. Therefore, the applicant shall provide justification as well as an alternatives analysis. The justification should clearly show if there is a real need for the water quality enhancement project as well as a need for its associated 51.5 acres of wetland impacts. If need can be established, actions must be taken to avoid and/or minimize adverse impacts to fish and wildlife resources. Those actions and other measures designed to fully compensate for unavoidable wetland impacts must be addressed in a mitigation plan and approved by this Department.

Additional Comments:

Please note that the Louisiana black bear (*Ursus americanus luteolus*) may occur in your general project area. The Louisiana black bear utilizes a variety of habitat types, including forested wetlands, marsh, spoil banks, and upland forests. We strongly urge workers and contractors to avoid bears, particularly if work is to be conducted during the non-denning season (April through December). Employees should be cautioned to not leave food or garbage in the field, as bears can become attracted and accustomed to human food easily. In addition, we recommend the use of bear proof garbage containers on site.

Our database indicates the presence of bird nesting colonies within one mile of the Element 7 portion of the proposed project. Please be aware that entry into or disturbance of active breeding colonies is prohibited by LDWF. In addition, LDWF prohibits work within a certain radius of an active nesting colony.

May 31, 2016

Nesting colonies can move from year to year and no current information is available on the status of these colonies. If work for the proposed project will commence during the nesting season, conduct a field visit to the worksite to look for evidence of nesting colonies. This field visit should take place no more than two weeks before the project begins. If no nesting colonies are found within 400 meters (700 meters for brown pelicans) of the proposed project, no further consultation with LDWF will be necessary. If active nesting colonies are found within the previously stated distances of the proposed project, further consultation with LDWF will be required. In addition, colonies should be surveyed by a qualified biologist to document species present and the extent of colonies. Provide LDWF with a survey report which is to include the following information:

1. qualifications of survey personnel;
2. survey methodology including dates, site characteristics, and size of survey area;
3. species of birds present, activity, estimates of number of nests present, and general vegetation type including digital photographs representing the site; and
4. topographic maps and ArcView shapefiles projected in UTM NAD83 Zone 15 to illustrate the location and extent of the colony.

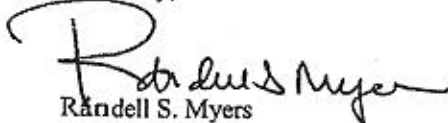
Please mail survey reports on CD to: Louisiana Natural Heritage Program  
La. Dept. of Wildlife & Fisheries  
P.O. Box 98000  
Baton Rouge, LA 70898-9000

To minimize disturbance to colonial nesting birds, the following restrictions on activity should be observed:

- For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, roseate spoonbills, anhingas, and/or cormorants), all project activity occurring within 300 meters of an active nesting colony should be restricted to the non-nesting period (i.e., September 1 through February 15).
- For colonies containing nesting gulls, terns, and/or black skimmers, all project activity occurring within 400 meters (700 meters for brown pelicans) of an active nesting colony should be restricted to the non-nesting period (i.e., September 16 through April 1).

The Louisiana Department of Wildlife and Fisheries submits these recommendations to the U.S. Army Corps of Engineers in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). Please do not hesitate to contact Habitat Section biologist Zachary Chain at 225-763-3587 should you need further assistance.

Sincerely,



Randall S. Myers  
Assistant Secretary

zc

c: EPA, Marine & Wetlands Section  
USFWS Ecological Services



## Herrmann, Michael H MVN

---

**From:** Walther, David <david\_walther@fws.gov>  
**Sent:** Tuesday, June 21, 2016 2:00 PM  
**To:** Seth Bordelon; Herrmann, Michael H MVN; Dan Kroes  
**Subject:** Re: FW: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Mr. Herrmann,

We have reviewed the proposed restoration project (MVN-2015-01796-WLL) and do not oppose the construction of that project. However, we do have some concerns about the proposed removal of two plugs from a canal, specifically Elements 5 and 6b. The removal of those plugs could result in most of the water traveling north in Little Bayou de Plomb to begin flowing west and not flow northward towards Bayou LaRose (Element 8) during rising and high river stages, thus circumventing what we believe might be an area targeted for improved water flows/circulation. We respectfully request that the need to remove those plugs be re-examined. Of the two plugs proposed to be removed, the removal of the plug by construction of Element 5 is viewed as possibly causing the greatest loss of flows from Little Bayou de Plomb.

If you have any concerns or questions about these comments please feel free to contact me.

David Walther  
Supervisory Biologist  
SE Region Conservation Planning Assistance Coordinator

US Fish and Wildlife Service  
Lafayette, LA 70508  
Phone: 337.291.3122  
Fax: 337.291.3139

Blocked<http://www.fws.gov/lafayette/>

Blocked<http://www.fws.gov/habitatconservation/cpa.html>

On Fri, Jun 10, 2016 at 10:31 AM, Seth Bordelon <seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov> > wrote:

Seth Bordelon  
U.S. Fish and Wildlife Service  
Louisiana Ecological Services Office  
(337) 291-3138  
seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov>

-----Original Message-----

From: Herrmann, Michael H MVN [mailto:Michael.H.Herrmann@usace.army.mil  
<mailto:Michael.H.Herrmann@usace.army.mil> ]  
Sent: Friday, June 10, 2016 10:28 AM  
To: Bordelon, Seth

Subject: RE: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Considering the size of this project, I don't see a problem with extending .  
Thanks,

-----Original Message-----

From: Bordelon, Seth [mailto:seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov> ]

Sent: Friday, June 03, 2016 11:01 AM

To: Herrmann, Michael H MVN <Michael.H.Herrmann@usace.army.mil

<mailto:Michael.H.Herrmann@usace.army.mil> >

Cc: Walther, David <david\_walther@fws.gov <mailto:david\_walther@fws.gov> >

Subject: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Hi Mike.

David Walther from our office plans to review this proposal in detail and coordinate with our fisheries office in Baton Rouge. He will be out of the office all next week and may need additional time to prepare our response. Can we please have a 10-day extension to the advertised comment period? If we decide not to comment we'd let you know immediately. Thanks.

Seth Bordelon

U.S. Fish and Wildlife Service

Louisiana Ecological Services Office

(337) 291-3138

seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov> <mailto:seth\_bordelon@fws.gov

<mailto:seth\_bordelon@fws.gov> >

## Herrmann, Michael H MVN

---

**From:** Landry, Dorcas MVK @ MVN  
**Sent:** Wednesday, August 31, 2016 11:17 AM  
**To:** Herrmann, Michael H MVN; DLL-RE-Permit-Review  
**Subject:** No RE Interest RE: MVN-2015-01796-WLL St Martin Parish Govt.

Michael,

No RE interest as per map 70, no RE instrument needed.

"If it is determined that a Section 408 permit is required, Inspection of Completed Works or the Operations Manager, as applicable, should directly contact Real Estate for our review and comment in accordance with EC 1165-2-216."

Dorcas Landry  
Real Estate Clerk, Management & Disposal  
U.S. Army Corps of Engineers  
Real Estate Region South Division  
Phone: 504-862-1510  
Cell: 806 231-1975  
Fax: 504 862-2936

-----Original Message-----

**From:** Herrmann, Michael H MVN  
**Sent:** Wednesday, August 17, 2016 5:18 PM  
**To:** DLL-RE-Permit-Review <DLL-RE-Permit-Review@usace.army.mil>  
**Subject:** MVN-2015-01796-WLL St Martin Parish Govt.

Forwarded for your review and determination for RE purposes.

Michael H. Herrmann Jr.  
U.S. Army Corps of Engineers  
Environmental Resource Specialist  
michael.h.herrmann@usace.army.mil  
(504) 862-1954

## Herrmann, Michael H Jr CIV USARMY CEMVN (US)

---

**From:** Landry, Dorcas MVK @ MVN  
**Sent:** Wednesday, August 31, 2016 11:17 AM  
**To:** Herrmann, Michael H MVN; DLL-RE-Permit-Review  
**Subject:** No RE Interest RE: MVN-2015-01796-WLL St Martin Parish Govt.

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Dorcas Landry  
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Phone: 504-862-1510  
Cell: 806 231-1975  
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Sent: Wednesday, August 17, 2016 5:18 PM  
To: DLL-RE-Permit-Review <DLL-RE-Permit-Review@usace.army.mil>  
Subject: MVN-2015-01796-WLL St Martin Parish Govt.

Forwarded for your review and determination for RE purposes.

Michael H. Herrmann Jr.  
U.S. Army Corps of Engineers  
Environmental Resource Specialist  
michael.h.herrmann@usace.army.mil  
(504) 862-1954

CEMVN-OD-SW

August 17, 2016

MEMORANDUM FOR: Operations Manager for Atchafalaya Basin  
ATTENTION: Tim Connell

SUBJECT: Review of Sec. 408 for Regulatory Permit Application.

1. The attached permit application is forwarded for your Sec 408 decision.
2. Information relative to this application is as follows:

**APPLICANT:** St. Martin Parish Government

**APPLICATION NUMBER:** MVN 2015-01796-WLL

**PROJECT MANAGER:** Michael Herrmann

Martin S. Mayer  
Chief, Regulatory Branch

Encls

CEMVN-OD-D      1st end

DATE: September 16, 2016

FOR C/ REGULATORY BRANCH

Reference permit application forwarded for review:

- a. No objection. 408 permission not required.
- b. 408 permission granted. Copy of permission letter attached.
- c. 408 objection. Copy of denial letter attached.

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NGUYEN.ANH THU.THI.1251902964  
DN: c=US, o=U.S. Government,  
ou=DoD, ou=PKI, ou=USA,  
cn=NGUYEN.ANH THU.THI.1251902  
964  
Date: 2016.09.16 12:09:58 -05'00'



## Herrmann, Michael H Jr CIV USARMY CEMVN (US)

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**From:** Nick Sonnier <nasonnier@sellersandassociates.com>  
**Sent:** Monday, July 11, 2016 11:04 AM  
**To:** Walther, David; 'Seth Bordelon'; Herrmann, Michael H MVN; 'Dan Kroes'  
**Cc:** 'Vincent, Todd'  
**Subject:** RE: FW: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Dear Mr. Walther,

We received your comments below from Mike Herrmann concerning the Beau Bayou Project in the Atchafalaya Basin. We would like to set up a time to discuss the comments over the phone, and if necessary meet to discuss, so we can resolve any concerns. Once we discuss we can submit a formal response addressing your comments.

As you mention below, removing the plug from Element 5 may reduce the flow through Little Bayou De Plomb to Bayou La Rose (Element 8), however the following overall improvements will occur:

- \* The removal of the plug at Element 5 and the spoil bank at Element 6B will improve water quality and sheet flow to the eastern portion of Beau Bayou, just south of Element 6B.
- \* The increased North to South flow from Element 3 and the increased flow through Elements 2 and 9 will be conveyed through the 42" SNG Pipeline Canal to Beau Bayou, improving the water quality in Beau Bayou. Also, the increased flow through Little Bayou de Plomb from Element 1 and Bayou La Rose from Element 8 will help to achieve the objective of the project by introducing oxygenated water into Beau Bayou.

As stated, we are willing to discuss and resolve your comments below to satisfy any concerns and continue with the permitting process. We are available today until 4 if you would like to have a phone conference.

Nick A. Sonnier, P.E.

Sellers & Associates, Inc.

148-B Easy Street

Lafayette, Louisiana 70506

(337) 232-0777

(337) 232-0851 FAX

nasonnier@sellersandassociates.com

Blockedwww.sellersandassociates.com

From: Walther, David [mailto:david\_walther@fws.gov]

Sent: Tuesday, June 21, 2016 2:00 PM

To: Seth Bordelon; Herrmann, Michael H MVN; Dan Kroes

Subject: Re: FW: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

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If you have any concerns or questions about these comments please feel free to contact me.

David Walther

Supervisory Biologist

SE Region Conservation Planning Assistance Coordinator

US Fish and Wildlife Service

Lafayette, LA 70508

Phone: 337.291.3122

Fax: 337.291.3139

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BlockedBlocked<http://www.fws.gov/habitatconservation/cpa.html>

On Fri, Jun 10, 2016 at 10:31 AM, Seth Bordelon <[seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov) <[mailto:seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov)> > wrote:

Seth Bordelon  
U.S. Fish and Wildlife Service  
Louisiana Ecological Services Office  
(337) 291-3138  
[seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov) <[mailto:seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov)>

-----Original Message-----

From: Herrmann, Michael H MVN [<mailto:Michael.H.Herrmann@usace.army.mil> <<mailto:Michael.H.Herrmann@usace.army.mil>> ]  
Sent: Friday, June 10, 2016 10:28 AM  
To: Bordelon, Seth  
Subject: RE: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Considering the size of this project, I don't see a problem with extending .  
Thanks,

-----Original Message-----

From: Bordelon, Seth [[mailto:seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov) <[mailto:seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov)> ]  
Sent: Friday, June 03, 2016 11:01 AM  
To: Herrmann, Michael H MVN <[Michael.H.Herrmann@usace.army.mil](mailto:Michael.H.Herrmann@usace.army.mil) <<mailto:Michael.H.Herrmann@usace.army.mil>> >  
>  
Cc: Walther, David <[david\\_walther@fws.gov](mailto:david_walther@fws.gov) <[mailto:david\\_walther@fws.gov](mailto:david_walther@fws.gov)> >  
Subject: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Hi Mike.

David Walther from our office plans to review this proposal in detail and coordinate with our fisheries office in Baton Rouge. He will be out of the office all next week and may need additional time to prepare our response. Can we please have a 10-day extension to the advertised comment period? If we decide not to comment we'd let you know immediately. Thanks.

Seth Bordelon  
U.S. Fish and Wildlife Service  
Louisiana Ecological Services Office  
(337) 291-3138  
[seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov) <[mailto:seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov)> <[mailto:seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov)>  
<[mailto:seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov)> >

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SPAMfighter has removed 5110 of my spam emails to date.

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## Herrmann, Michael H Jr CIV USARMY CEMVN (US)

---

**From:** Kroes, Daniel <dkroes@usgs.gov>  
**Sent:** Wednesday, July 13, 2016 11:26 AM  
**To:** Nick Sonnier  
**Cc:** Walther, David; Seth Bordelon; Herrmann, Michael H MVN; Vincent, Todd; Glenn C. Constant; Yvonne Allen; Heath Babineaux  
**Subject:** Re: FW: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Great!

By the way we now have the Bayou Darby gage reconstructed and will be getting directional water velocity installed at the gage soon.

On Wed, Jul 13, 2016 at 11:23 AM, Nick Sonnier <nasonnier@sellersandassociates.com <mailto:nasonnier@sellersandassociates.com> > wrote:

Thanks Dan. I'll try to keep you updated as we move forward and into construction. I understand you are out in this area a good bit so maybe one day we can get together for one of our progress meetings.

Thanks again.

Nick A. Sonnier, P.E.

Sellers & Associates, Inc.

148-B Easy Street

Lafayette, Louisiana 70506

(337) 232-0777

(337) 232-0851 FAX

nasonnier@sellersandassociates.com <Blockedhttp://nasonnier@sellersandassociates.com>

Blockedwww.sellersandassociates.com <Blockedhttp://www.sellersandassociates.com>

From: Kroes, Daniel [mailto:dkroes@usgs.gov <mailto:dkroes@usgs.gov> ]  
Sent: Wednesday, July 13, 2016 9:34 AM  
To: Nick Sonnier  
Cc: Walther, David; Seth Bordelon; Herrmann, Michael H MVN; Vincent, Todd; Glenn C. Constant; Yvonne Allen; Heath Babineaux



Subject: Re: FW: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Nick,

In light of the information provided here I accept that this may be the best option available to improve water quality in Beau Bayou.

Thank you,

Dan Kroes

On Wed, Jul 13, 2016 at 9:12 AM, Nick Sonnier <nasonnier@sellersandassociates.com  
<mailto:nasonnier@sellersandassociates.com> > wrote:

Dan,

We appreciate your suggestion and understand that you are just wanting to see the most benefit out of the project. After receiving your comments we reached out to Glenn Constant and Yvonne Allen with US FWS, and David Dugas who commercial fishes in Beau Bayou and has been involved in the area throughout his 54 year life. Glenn and Yvonne have studied this area a good bit and Yvonne has used Satellite imagery data to determine inundation within the Beau Bayou Water Management Unit. I attached a quad map with the channels named so we can make sure we are referring to the same channels.

I forwarded your email to Glenn and Yvonne. Below are their responses:

Glenn Constant (USFWS):

Nick,

I don't have any information that would inform the relative difference in water movement associated with the listed scenarios. I think the correct assessment is that there is no data to support or refute any of those scenarios. I am still in support the project in its current form.

Yvonne Allen (USFWS):

Nick,

The intent with the removal of the plug at element 5 was to increase circulation in Cochon Bay. That area does not currently have a source for fresh water input and black water is seen there consistently. I do, however, agree that removal of that barrier may capture more flow than intended with detriment to flows in Bayou LaRose and \$400. If possible, I would suggest that element 5 be tabled for now or set as a lower priority than the other features. Improvements to flow down \$400 alone may help that region of swamp without removing the plug.

Yvonne

After receiving Glenn and Yvonne's responses I contacted David Dugas. He provided the following insight:

- \* Historically Beau Bayou has been replenished with oxygenated "fresh" water from the 42" SNG pipeline canal which has been fed from the north.
- \* Historically Bayou de Plomb provided fresh water to the Cochon Bay area and eastern portion of the Beau Bayou Water Management Unit.
- \* Although fresh water from Bayou de Plomb could make it to Beau Bayou, there is not enough volume and pressure in Bayou de Plomb to significantly improve Beau Bayou.
- \* At times when water flow throughout the BBWMU was undisturbed, water would enter the northern portion of Beau Bayou From the 42" (SNG) Pipeline Canal and flow south, and at times water would flow from Beau Bayou into Bayou La Rose, and that would feed \$400 Bayou and the eastern portion of the BBWMU.

We would also like to add the following:

- \* Element 1 will be excavated from Bayou Chene to the Dow Pipeline Canal to an elevation of +2.0. The portion of Bayou De Plomb from the Dow Pipeline Canal to \$400 Bayou and Bayou La Rose will only be cleared, and the bottom elevation of the existing channel bed is approximately between Elevation 7-8. Therefore, the water stage must reach approximately Elevation 8 for water to reach \$400 Bayou and Bayou La Rose.
- \* Element 5 will be excavated to the bottom elevation of the existing channel, so the bottom elevation of the cut will vary from Elevation 4.7 to Elevation 6.0. Since Element 1 will be excavated to Elevation 2.0 and the plug will be removed to Elevation 6.0, water will begin entering the Dow Pipeline Canal when the water stage reaches Elevation 6. This should start improving water quality and the fishery at that point.
- \* Element 6B consists of cutting a gap in the existing spoil banks along the channel and will be excavated to Elev. 5.0, however the elevation of the back swamp at Element 6B is approximately 8.0. We would like to note that some of the Elements were dredged deeper than the surrounding swamp or adjacent channels to increase the lifespan and effectiveness of this project. Some of the channel beds may hold water at low water events following construction, which would prevent vegetative growth in the channel beds.
- \* Once construction of Elements 2 & 3 are complete, water from the Atchafalaya should start reaching the 42" SNG Pipeline Canal when the water stage reaches approximately Elevation 5.0. however, water from Bayou de Plomb will not reach Bayou La Rose or \$400 Bayou until the water stage in Bayou de Plomb reaches approximately Elevation 8.

Given the feedback we have received from Glenn, Yvonne and David Dugas, and the fact that the funds allocated for this project will not allow for monitoring and future changes or additions to the project and elements, we would like

to include Element 5 in this permit and the construction of the project. Please review the information included in this email and let us know your thoughts and if you still have any concerns.

Sincerely,

Nick A. Sonnier, P.E.

Sellers & Associates, Inc.

148-B Easy Street

Lafayette, Louisiana 70506

(337) 232-0777

(337) 232-0851 FAX

nasonnier@sellersandassociates.com <Blockedhttp://nasonnier@sellersandassociates.com>

Blockedwww.sellersandassociates.com <Blockedhttp://www.sellersandassociates.com>

From: Kroes, Daniel [mailto:dkroes@usgs.gov]

Sent: Monday, July 11, 2016 2:18 PM

To: Nick Sonnier

Cc: Walther, David; Seth Bordelon; Herrmann, Michael H MVN; Vincent, Todd

Subject: Re: FW: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Good afternoon Nick,

I believe the concern over elements 5 and 6b originated from me so these are my thoughts on it.

The addition of more water into the area in a non-backwater flow pattern is the only way water quality can get better in that area. I am in favor of the project. My comments are not meant to block this project and should be considered to be suggestions in order to extend the life span and water quality benefits of this project.

My experience is that elements 5 and 6b would channel most of the water through that pipeline canal and sediment in the channels of elements 1, 8, and 4 at the intersections with the Dow pipeline (42" SNG). In my best professional opinion the project would be better without the removal of both of the blockages at 5 and 6b.

In order to prevent water following the Dow pipeline, at least one of those blockages should remain. I would suggest that the blockage at element 5 remain. Leaving the blockage at 5 would result in the hydraulic gradient of Bayou de Plomb to Beau Bayou and the gradient from the Dow pipeline to Beau Bayou being close to equal with a greater chance of flow persisting in both channels, and preventing backwater conditions in the the upper parts of Beau Bayou.

I agree that 6b has the potential to introduce water into the area you describe without capturing the flow from Bayou de Plomb if the blockage at 5 is not removed.

Thank you,

Dan Kroes

On Mon, Jul 11, 2016 at 11:03 AM, Nick Sonnier <nasonnier@sellersandassociates.com  
<mailto:nasonnier@sellersandassociates.com> > wrote:

Dear Mr. Walther,

We received your comments below from Mike Herrmann concerning the Beau Bayou Project in the Atchafalaya Basin. We would like to set up a time to discuss the comments over the phone, and if necessary meet to discuss, so we can resolve any concerns. Once we discuss we can submit a formal response addressing your comments.

As you mention below, removing the plug from Element 5 may reduce the flow through Little Bayou De Plomb to Bayou La Rose (Element 8), however the following overall improvements will occur:

- \* The removal of the plug at Element 5 and the spoil bank at Element 6B will improve water quality and sheet flow to the eastern portion of Beau Bayou, just south of Element 6B.
- \* The increased North to South flow from Element 3 and the increased flow through Elements 2 and 9 will be conveyed through the 42" SNG Pipeline Canal to Beau Bayou, improving the water quality in Beau Bayou. Also, the increased flow through Little Bayou de Plomb from Element 1 and Bayou La Rose from Element 8 will help to achieve the objective of the project by introducing oxygenated water into Beau Bayou.

As stated, we are willing to discuss and resolve your comments below to satisfy any concerns and continue with the permitting process. We are available today until 4 if you would like to have a phone conference.

Nick A. Sonnier, P.E.

Sellers & Associates, Inc.

148-B Easy Street

Lafayette, Louisiana 70506

(337) 232-0777

(337) 232-0851 FAX

nasonnier@sellersandassociates.com <Blockedhttp://nasonnier@sellersandassociates.com>

Blockedwww.sellersandassociates.com <Blockedhttp://www.sellersandassociates.com>

From: Walther, David [mailto:david\_walther@fws.gov <mailto:david\_walther@fws.gov> ]

Sent: Tuesday, June 21, 2016 2:00 PM

To: Seth Bordelon; Herrmann, Michael H MVN; Dan Kroes

Subject: Re: FW: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Mr. Herrmann,

We have reviewed the proposed restoration project (MVN-2015-01796-WLL) and do not oppose the construction of that project. However, we do have some concerns about the proposed removal of two plugs from a canal, specifically Elements 5 and 6b. The removal of those plugs could result in most of the water traveling north in Little Bayou de Plomb to begin flowing west and not flow northward towards Bayou LaRose (Element 8) during rising



and high river stages, thus circumventing what we believe might be an area targeted for improved water flows/circulation. We respectfully request that the need to remove those plugs be re-examined. Of the two plugs proposed to be removed, the removal of the plug by construction of Element 5 is viewed as possibly causing the greatest loss of flows from Little Bayou de Plomb.

If you have any concerns or questions about these comments please feel free to contact me.

David Walther

Supervisory Biologist

SE Region Conservation Planning Assistance Coordinator

US Fish and Wildlife Service

Lafayette, LA 70508

Phone: 337.291.3122

Fax: 337.291.3139

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<Blocked<http://www.fws.gov/habitatconservation/cpa.html>>

On Fri, Jun 10, 2016 at 10:31 AM, Seth Bordelon <[seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov) <[mailto:seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov)> > wrote:

Seth Bordelon  
U.S. Fish and Wildlife Service  
Louisiana Ecological Services Office  
(337) 291-3138  
[seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov) <[mailto:seth\\_bordelon@fws.gov](mailto:seth_bordelon@fws.gov)>

-----Original Message-----

From: Herrmann, Michael H MVN [<mailto:Michael.H.Herrmann@usace.army.mil>]  
<<mailto:Michael.H.Herrmann@usace.army.mil>> ]  
Sent: Friday, June 10, 2016 10:28 AM

To: Bordelon, Seth  
Subject: RE: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Considering the size of this project, I don't see a problem with extending .  
Thanks,

-----Original Message-----

From: Bordelon, Seth [mailto:seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov> ]  
Sent: Friday, June 03, 2016 11:01 AM  
To: Herrmann, Michael H MVN <Michael.H.Herrmann@usace.army.mil  
<mailto:Michael.H.Herrmann@usace.army.mil> >  
Cc: Walther, David <david\_walther@fws.gov <mailto:david\_walther@fws.gov> >  
Subject: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Hi Mike.

David Walther from our office plans to review this proposal in detail and coordinate with our fisheries office in Baton Rouge. He will be out of the office all next week and may need additional time to prepare our response. Can we please have a 10-day extension to the advertised comment period? If we decide not to comment we'd let you know immediately. Thanks.

Seth Bordelon  
U.S. Fish and Wildlife Service  
Louisiana Ecological Services Office  
(337) 291-3138  
seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov> <mailto:seth\_bordelon@fws.gov  
<mailto:seth\_bordelon@fws.gov> >

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SPAMfighter has removed 5110 of my spam emails to date.

Do you have a slow PC? <Blocked<http://www.spamfighter.com/SLOW-PCfighter?cid=sigen>> Try a free scan!

--

Dan Kroes

Research Ecologist  
US Geological Survey

Lower Mississippi-Gulf Water Science Center  
3535 S Sherwood Forest Blvd  
Suite 120  
Baton Rouge, LA 70816  
dkroes@usgs.gov <mailto:dkroes@usgs.gov>  
(225) 298-5481 X3134

All things and actions are patterns. To understand the patterns you must see the underlying fabric.

--

Dan Kroes  
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## Herrmann, Michael H Jr CIV USARMY CEMVN (US)

---

**From:** Kroes, Daniel <dkroes@usgs.gov>  
**Sent:** Monday, July 11, 2016 2:18 PM  
**To:** Nick Sonnier  
**Cc:** Walther, David; Seth Bordelon; Herrmann, Michael H MVN; Vincent, Todd  
**Subject:** Re: FW: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Good afternoon Nick,

I believe the concern over elements 5 and 6b originated from me so these are my thoughts on it.

The addition of more water into the area in a non-backwater flow pattern is the only way water quality can get better in that area. I am in favor of the project. My comments are not meant to block this project and should be considered to be suggestions in order to extend the life span and water quality benefits of this project.

My experience is that elements 5 and 6b would channel most of the water through that pipeline canal and sediment in the channels of elements 1, 8, and 4 at the intersections with the Dow pipeline (42" SNG). In my best professional opinion the project would be better without the removal of both of the blockages at 5 and 6b.

In order to prevent water following the Dow pipeline, at least one of those blockages should remain. I would suggest that the blockage at element 5 remain. Leaving the blockage at 5 would result in the hydraulic gradient of Bayou de Plomb to Beau Bayou and the gradient from the Dow pipeline to Beau Bayou being close to equal with a greater chance of flow persisting in both channels, and preventing backwater conditions in the the upper parts of Beau Bayou.

I agree that 6b has the potential to introduce water into the area you describe without capturing the flow from Bayou de Plomb if the blockage at 5 is not removed.

Thank you,  
Dan Kroes

On Mon, Jul 11, 2016 at 11:03 AM, Nick Sonnier <nasonnier@sellersandassociates.com <mailto:nasonnier@sellersandassociates.com> > wrote:

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If you have any concerns or questions about these comments please feel free to contact me.

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Supervisory Biologist

SE Region Conservation Planning Assistance Coordinator

US Fish and Wildlife Service

Lafayette, LA 70508

Phone: 337.291.3122

Fax: 337.291.3139

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BlockedBlocked<http://www.fws.gov/habitatconservation/cpa.html>

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Seth Bordelon

U.S. Fish and Wildlife Service

Louisiana Ecological Services Office

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From: Herrmann, Michael H MVN [mailto:Michael.H.Herrmann@usace.army.mil  
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Sent: Friday, June 03, 2016 11:01 AM  
To: Herrmann, Michael H MVN <Michael.H.Herrmann@usace.army.mil  
<mailto:Michael.H.Herrmann@usace.army.mil> >  
Cc: Walther, David <david\_walther@fws.gov <mailto:david\_walther@fws.gov> >  
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<mailto:seth\_bordelon@fws.gov> >

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Dan Kroes

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JOHN BEL EDWARDS  
GOVERNOR

State of Louisiana  
DEPARTMENT OF WILDLIFE AND FISHERIES

CHARLES J. MELANCON  
SECRETARY

May 31, 2016

Mr. Martin S. Mayer, Chief  
Regulatory Branch  
United States Army Corps of Engineers  
P. O. Box 60267  
New Orleans, LA 70160-0267

RE: *Application Number: MVN-2015-01796-WLL*  
*Applicant: St. Martin Parish Government*  
*Notice Date: May 30, 2016*

Dear Mr. Mayer:

The professional staff of the Louisiana Department of Wildlife and Fisheries (LDWF) has reviewed the above referenced notice for a proposed water quality enhancement project involving mechanized clearing, snagging and the excavation and placement of spoil material along 9 miles of existing channels within the Beau Bayou Water Management Unit in St. Martin Parish, Louisiana. Approximately 51.6 acres of wetlands are proposed as being impacting as a part of this project. Based upon this review, the following has been determined:

Justification:

The impacts associated with this water quality enhancement project seem excessive. Additionally, no information has been provided regarding the need for the project or its potential benefit to the Beau Bayou Water Management Unit. Therefore, the applicant shall provide justification as well as an alternatives analysis. The justification should clearly show if there is a real need for the water quality enhancement project as well as a need for its associated 51.5 acres of wetland impacts. If need can be established, actions must be taken to avoid and/or minimize adverse impacts to fish and wildlife resources. Those actions and other measures designed to fully compensate for unavoidable wetland impacts must be addressed in a mitigation plan and approved by this Department.

Additional Comments:

Please note that the Louisiana black bear (*Ursus americanus luteolus*) may occur in your general project area. The Louisiana black bear utilizes a variety of habitat types, including forested wetlands, marsh, spoil banks, and upland forests. We strongly urge workers and contractors to avoid bears, particularly if work is to be conducted during the non-denning season (April through December). Employees should be cautioned to not leave food or garbage in the field, as bears can become attracted and accustomed to human food easily. In addition, we recommend the use of bear proof garbage containers on site.

Our database indicates the presence of bird nesting colonies within one mile of the Element 7 portion of the proposed project. Please be aware that entry into or disturbance of active breeding colonies is prohibited by LDWF. In addition, LDWF prohibits work within a certain radius of an active nesting colony.

May 31, 2016

Nesting colonies can move from year to year and no current information is available on the status of these colonies. If work for the proposed project will commence during the nesting season, conduct a field visit to the worksite to look for evidence of nesting colonies. This field visit should take place no more than two weeks before the project begins. If no nesting colonies are found within 400 meters (700 meters for brown pelicans) of the proposed project, no further consultation with LDWF will be necessary. If active nesting colonies are found within the previously stated distances of the proposed project, further consultation with LDWF will be required. In addition, colonies should be surveyed by a qualified biologist to document species present and the extent of colonies. Provide LDWF with a survey report which is to include the following information:

1. qualifications of survey personnel;
2. survey methodology including dates, site characteristics, and size of survey area;
3. species of birds present, activity, estimates of number of nests present, and general vegetation type including digital photographs representing the site; and
4. topographic maps and ArcView shapefiles projected in UTM NAD83 Zone 15 to illustrate the location and extent of the colony.

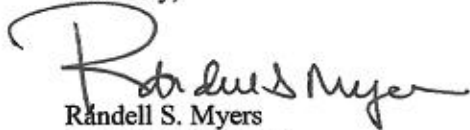
Please mail survey reports on CD to: Louisiana Natural Heritage Program  
La. Dept. of Wildlife & Fisheries  
P.O. Box 98000  
Baton Rouge, LA 70898-9000

To minimize disturbance to colonial nesting birds, the following restrictions on activity should be observed:

- For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, roseate spoonbills, anhingas, and/or cormorants), all project activity occurring within 300 meters of an active nesting colony should be restricted to the non-nesting period (i.e., September 1 through February 15).
- For colonies containing nesting gulls, terns, and/or black skimmers, all project activity occurring within 400 meters (700 meters for brown pelicans) of an active nesting colony should be restricted to the non-nesting period (i.e., September 16 through April 1).

The Louisiana Department of Wildlife and Fisheries submits these recommendations to the U.S. Army Corps of Engineers in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). Please do not hesitate to contact Habitat Section biologist Zachary Chain at 225-763-3587 should you need further assistance.

Sincerely,



Randall S. Myers  
Assistant Secretary

zc

c: EPA, Marine & Wetlands Section  
USFWS Ecological Services



## Herrmann, Michael H Jr CIV USARMY CEMVN (US)

---

**From:** Twyla Cheatwood - NOAA Federal <twyla.cheatwood@noaa.gov>  
**Sent:** Wednesday, June 08, 2016 3:27 PM  
**To:** Herrmann, Michael H MVN  
**Subject:** [EXTERNAL] MVN-2015-01796-WLL, St Martin Parish Government

Michael,

The NMFS has no objection to the issuance of the following permit:

MVN-2015-01796-WLL, St Martin Parish Government

Thank you for your coordination,

Twyla

--

Twyla H Cheatwood  
Fishery Biologist  
Southeast Region, Habitat Conservation Division  
NOAA Fisheries  
Baton Rouge, LA 70803  
Office: (225) 389-0508 ext 209  
Twyla.cheatwood@noaa.gov

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Web Blocked[www.nmfs.noaa.gov](http://www.nmfs.noaa.gov) <Blocked<http://www.nmfs.noaa.gov/>>  
Facebook Blocked[www.facebook.com/usnoaafisheriesgov](http://www.facebook.com/usnoaafisheriesgov)  
<Blocked<http://www.facebook.com/usnoaafisheriesgov>>  
Twitter Blocked[www.twitter.com/noaafisheries](http://www.twitter.com/noaafisheries) <Blocked<http://www.twitter.com/noaafisheries>>  
YouTube Blocked[www.youtube.com/usnoaafisheriesgov](http://www.youtube.com/usnoaafisheriesgov) <Blocked<http://www.youtube.com/usnoaafisheriesgov>>

**Herrmann, Michael H Jr CIV USARMY CEMVN (US)**

---

**From:** Gary Snellgrove <gwsnellgrove@gmail.com>  
**Sent:** Wednesday, June 29, 2016 3:09 PM  
**To:** Herrmann, Michael H MVN  
**Subject:** [EXTERNAL] Beau Bayou Water Management Unit - Bayou Chene Element 10 - St. Martin Parish Gov Permit Application.

Michael, I appreciate you providing application information on the subject project, DA Permit No. MVN-2015-01796-WLL. I am in favor of the Bayou Chene clearing/snagging/excavation project described in element 10 of the May 30, 2016 joint public notice. I am requesting to be included in any future notices, etc. for the entire project and particularly the Bayou Chene element 10 project as an interested party. In separate emails, as we discussed, I will forward to you additional related information. My cell number is 225-252-7455 if needed. I prefer communication by my email account gwsnellgrove@gmail.com. My home address is 1816 Chopin Drive, BR, LA 70806. Thank you. Gary W. Snellgrove

Sent from my iPhone



JOHN BEL EDWARDS  
GOVERNOR

State of Louisiana  
DEPARTMENT OF WILDLIFE AND FISHERIES

CHARLES J. MELANCON  
SECRETARY

May 31, 2016

Mr. Martin S. Mayer, Chief  
Regulatory Branch  
United States Army Corps of Engineers  
P. O. Box 60267  
New Orleans, LA 70160-0267

RE: *Application Number: MVN-2015-01796-WLL*  
*Applicant: St. Martin Parish Government*  
*Notice Date: May 30, 2016*

Dear Mr. Mayer:

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Justification:

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May 31, 2016

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1. qualifications of survey personnel;
2. survey methodology including dates, site characteristics, and size of survey area;
3. species of birds present, activity, estimates of number of nests present, and general vegetation type including digital photographs representing the site; and
4. topographic maps and ArcView shapefiles projected in UTM NAD83 Zone 15 to illustrate the location and extent of the colony.

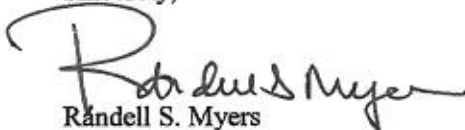
Please mail survey reports on CD to: Louisiana Natural Heritage Program  
La. Dept. of Wildlife & Fisheries  
P.O. Box 98000  
Baton Rouge, LA 70898-9000

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Sincerely,



Randall S. Myers  
Assistant Secretary

zc

c: EPA, Marine & Wetlands Section  
USFWS Ecological Services



# Sellers & Associates, Inc.

ENGINEERS  
SURVEYORS

EUGENE M. SELLERS, FOUNDER  
TODD A. VINCENT, PRESIDENT/CEO  
LARRY A. CRAMER, VICE PRESIDENT

EUGENE M. SELLERS, PE., PL.S.  
TODD A. VINCENT, M.S., PE., PL.S.  
JOHN A. KEY, PE., PL.S.  
LARRY A. CRAMER, PE., PL.S.  
T. J. SAVOY, PE.  
STEPHANIE M. BRIGGS, PE.  
NICHOLAS A. SONNIER, PE.  
MATTHEW W. VINCENT, E.I.  
LANCE C. ROBICHAUX, E.I.  
WILBERT J. GUIDRY, PL.S.

August 11, 2016

MR. KYLE BALKUM  
LA DEPT. OF WILDLIFE & FISHERIES  
P.O. Box 98000  
Baton Rouge, LA 70898-9000

Re: St. Martin Parish Government  
Beau Bayou Swamp Hydrologic Restoration  
Application No.: MVN-2015-01796-WLL  
Alternatives Analysis  
S&A Project No. 8004-07

Dear Mr. Balkum,

During our meeting on July 27, 2016 and in recent conversation concerning the Beau Bayou Swamp Hydrologic Restoration Project (MVN-2015-01796-WLL), your office asked that we explore spray dredging as an alternative to side casting the excavated material. In the initial design phase, we discussed spray dredging the excavated material. After discussion with contractors and our pre-application meeting on March 3, 2015 with the USACE, we abandoned the spray dredging method for the following reasons:

- During the pre-application meeting the USACE personnel stated that deposited fill would need to be spread in a thin layer to prevent impacts to wetlands. Particularly they stated that chipping debris would need to be spread to a maximum of 4" thick. Spreading the material to a thickness of 4" would require spreading the material great distances from the edge of the excavation. Examples of the required widths for the disposal of the excavated material at different depths for some of the elements are listed below:
  - Element 1
    - @ 4" → width = 1200'
    - @ 6" → width = 800'
    - @ 1' → width = 400'
  - Element 2
    - @ 4" → width = 657'
    - @ 6" → width = 434'
    - @ 1' → width = 217'
  - Element 6A (smallest typical section for placement)
    - @ 4" → width = 300'
    - @ 6" → width = 200'
    - @ 1' → width = 100'

Achieving a maximum height of fill could not be guaranteed, and our initial perception was that the areas of deposition would still be considered impacts, which would require compensatory mitigation.

- During the preliminary stages of design, we discussed hydraulically dredging or pumping the material. Our discussions included spray dredging or pumping the material to the Atchafalaya River. Traditionally this would be performed with a cutterhead suction dredge. Through our discussion with marine construction contractors, the consensus was that this work could not be performed feasibly or practically with a cutterhead suction dredge due to the woody vegetation, debris, and roots that



would be encountered. Even if clearing were performed prior to dredging, the remaining stumps, roots, etc. that would be encountered would severely decrease production, and the anticipated mechanical breakdowns and wear on the equipment would drive the cost up significantly and would probably prevent most contractors from bidding the project. A very large cutterhead suction dredge would be more capable of working through areas of debris such as roots, stumps, etc. However it would have to be a very large dredge capable of producing adequate horsepower to cut through the debris that would be encountered, and the dimensions of the proposed channel cuts for this project would not allow that type and size of equipment. Therefore, it was determined that the traditional method of using a cutterhead suction dredge could not be used for this project. We also considered mechanically excavating the material with a barge mounted excavator or dragline and depositing it into a hopper barge, fluidizing it, and pumping it. This method would require excavating the material with a barge mounted excavator or dragline, and depositing the material into the hopper barge. The two barges would have to be connected side by side to allow the crane barge to deposit the material into the hopper barge. A typical crane barge is 40' wide and a typical hopper barge is 35' wide, for a total width of 75'. The proposed channel bottom widths for the project range from 10'-60', therefore the proposed channel widths do not meet the required width for this type of construction, and it was determined that the project could not be constructed using this method.

For the reasons stated above, the project was designed to side cast the material adjacent to the clearing and excavation. This method of construction is standard in conditions and environments similar to the Beau Bayou project.

Since our meeting and follow-up conversations, we have explored the method of spray dredging further with the contractors listed below. A summary of the issues discussed is included in the paragraphs below.

- Ben Leblanc, Leblanc Marine, LLC. Leblanc Marine is currently constructing the USACE sponsored project for the Buffalo Cove Water Management Unit.
- Tyler Roy, Wilco Marsh Buggies.
- Tom Matthews, Matthews Brothers, Inc.

The project is funded through the Coastal Impact Assistance Program (CIAP) which requires that construction of the project must be completed by December 31, 2016. The Atchafalaya Basin is currently at the low water stage, which generally extends from August to January as depicted in the hydrograph for the Atchafalaya River at Butte La Rose Gage shown in Figure 1. Considering the typical hydrograph for the project area and the time frame to complete construction, the project will be constructed during the low water period, and the ordinary low water elevation calculated for the project area was determined to be El. 3.9. Figures 2 and 3 below were taken at Elements 1 and 3 respectively during the low water period, and they show that at low water the project areas are nearly "in the dry", making any type construction that requires fluidizing the excavated material practically not possible.

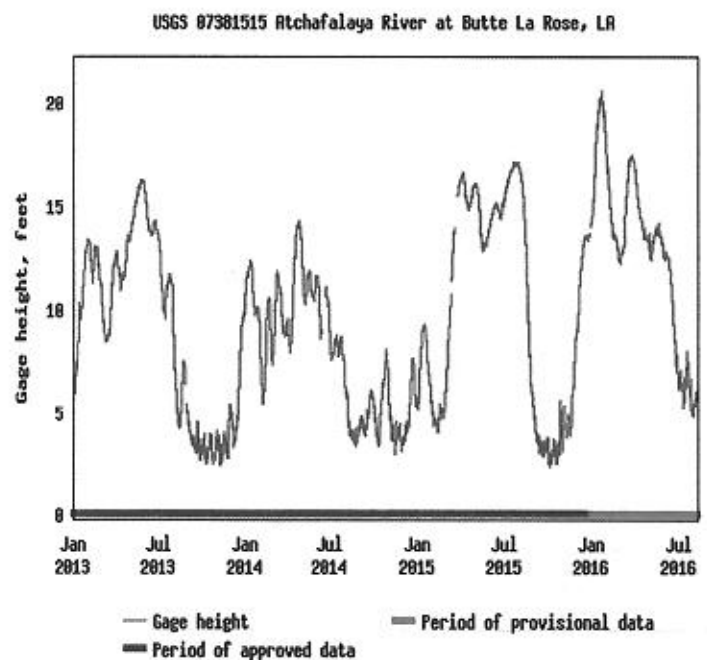


Figure 1: Hydrograph of the Atchafalaya at Butte La Rose Gage (January 2013 - August 2016)



**Figure 2: Element 1 - Mouth of Bayou de Plomb at Bayou Chene.  
(Atchafalaya River at Butte La Rose Stage = 4.5)**



**Figure 3: Element 3 - Mouth of Canal at the Atchafalaya River  
(Atchafalaya River at Butte La Rose Stage = 4.5)**

Table 1 identifies the proposed bottom elevations for the respective elements of the project. A small cutterhead suction dredge typically drafts at least 2', however it requires additional depth ranging from 4'-6' to provide an adequate clean water source to create the dredge slurry. In my conversation with Tom Matthews, he stated that their hopper barge rigged to pump excavated material typically drafts 4', however they would require almost 6' of depth to provide an adequate clean water source. When considering the

<b>Element #</b>	<b>Bottom Elev.</b>	<b>Element #</b>	<b>Bottom Elev.</b>
1	2.0	6	3.0 - 5.0
2	4.0	7	6.0
3	2.0 - 9.3	8	Clearing
4	Clearing	9	3.0
5	4.7 - 6.0	10	4.0
Ordinary Low Water Elev. = 3.9'			

proposed bottom elevations and the ordinary low water elevation, a majority of the elements will still be dry ground following construction, and none of the elements will have sufficient depth to provide for the draft of any hydraulic dredge to access the project area, or enough depth to provide a clean water source to create a slurry to pump the material, whether it be spray dredging or pumping to a disposal site.

For the reasons stated above, the spray dredging method for disposal of the excavated material is not feasible or practical for this project. Even considering the conditions during high water, the equipment required to perform the work are not capable of working within the confinement of the proposed improvements.

Upon your review of the information included in this letter, we hope that you will consider our efforts for exploring alternatives for the spoil disposal to minimize impacts to wetlands, and concur that the proposed method of construction is the appropriate method of construction. We also hope that you will consider the benefits and improvements to the aquatic resources and habitats of the Beau Bayou Swamp as a result of the project.

Should you have any questions or require additional information, you may contact me at our office.

Sincerely

SELLERS & ASSOCIATES, INC.



NICK SONNIER, P.E.

N:\DATA\8004\8004-07 Permits\Ltr K\_Balkum 2016-08-11.wpd

c: Mike Herrmann, USACE  
Heath Babineaux, SMPG

**Herrmann, Michael H Jr CIV USARMY CEMVN (US)**

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**From:** Landry, Dorcas MVK @ MVN  
**Sent:** Wednesday, August 31, 2016 11:17 AM  
**To:** Herrmann, Michael H MVN; DLL-RE-Permit-Review  
**Subject:** No RE Interest RE: MVN-2015-01796-WLL St Martin Parish Govt.

Michael,

No RE interest as per map 70, no RE instrument needed.

"If it is determined that a Section 408 permit is required, Inspection of Completed Works or the Operations Manager, as applicable, should directly contact Real Estate for our review and comment in accordance with EC 1165-2-216."

Dorcas Landry  
Real Estate Clerk, Management & Disposal  
U.S. Army Corps of Engineers  
Real Estate Region South Division  
Phone: 504-862-1510  
Cell: 806 231-1975  
Fax: 504 862-2936

-----Original Message-----

**From:** Herrmann, Michael H MVN  
**Sent:** Wednesday, August 17, 2016 5:18 PM  
**To:** DLL-RE-Permit-Review <DLL-RE-Permit-Review@usace.army.mil>  
**Subject:** MVN-2015-01796-WLL St Martin Parish Govt.

Forwarded for your review and determination for RE purposes.

Michael H. Herrmann Jr.  
U.S. Army Corps of Engineers  
Environmental Resource Specialist  
michael.h.herrmann@usace.army.mil  
(504) 862-1954

## Herrmann, Michael H Jr CIV USARMY CEMVN (US)

---

**From:** Herrmann, Michael H MVN  
**Sent:** Thursday, July 07, 2016 4:06 PM  
**To:** 'Nick Sonnier'  
**Subject:** RE: [EXTERNAL] MVN-2015-01796-WLL Beau Bayou Public Notice Status  
**Attachments:** Newspaper Notice.doc; Re: FW: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL); SP-3.doc; MVN-2015-01796-WLL.PDF

-----Original Message-----

From: Nick Sonnier [mailto:nasonnier@sellersandassociates.com]  
Sent: Thursday, June 30, 2016 11:38 AM  
To: Herrmann, Michael H MVN <Michael.H.Herrmann@usace.army.mil>  
Subject: Re: [EXTERNAL] MVN-2015-01796-WLL Beau Bayou Public Notice Status

Mike. We are not planning on it since we would have to go back on public notice and it would delay receiving the permit. If there is a way to amend the permit once we receive it to add work, even if it includes putting the additional work on public notice by itself we would like to discuss those options.

Nick Sonnier

> On Jun 30, 2016, at 11:22 AM, Herrmann, Michael H MVN <Michael.H.Herrmann@usace.army.mil> wrote:

>

> Nick,

>

> Are you sending us a modification to this project?

>

> -----Original Message-----

> From: Nick Sonnier [mailto:nasonnier@sellersandassociates.com]  
> Sent: Tuesday, June 28, 2016 1:13 PM  
> To: Herrmann, Michael H MVN <Michael.H.Herrmann@usace.army.mil>  
> Cc: 'Vincent, Todd' <tavincent@sellersandassociates.com>  
> Subject: [EXTERNAL] MVN-2015-01796-WLL Beau Bayou Public Notice Status

>

> Mike,

>

>

>

> The end of the 10-day extension for the public notice comment period should end tomorrow June 29. Just wanted to check to see if we were receiving comments on the project, and when those comments might be forwarded to us so we can begin addressing them. Let me know when you get a chance.

>

>

>

> Thanks,

>

>

>



> Nick A. Sonnier, P.E.  
>  
> Sellers & Associates, Inc.  
>  
> 148-B Easy Street  
>  
> Lafayette, Louisiana 70506  
>  
> (337) 232-0777  
>  
> (337) 232-0851 FAX  
>  
> nasonnier@sellersandassociates.com  
>  
> BlockedBlockedwww.sellersandassociates.com  
>  
>  
>  
>  
> \_\_\_\_\_  
>  
> I am using the Free version of SPAMfighter <BlockedBlocked<http://www.spamfighter.com/len>> .  
> SPAMfighter has removed 5103 of my spam emails to date.  
>  
> Do you have a slow PC? <BlockedBlocked<http://www.spamfighter.com/SLOW-PCfighter?cid=sigen>> Try a free scan!  
>

## Herrmann, Michael H Jr CIV USARMY CEMVN (US)

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**From:** Walther, David <david\_walther@fws.gov>  
**Sent:** Tuesday, June 21, 2016 2:00 PM  
**To:** Seth Bordelon; Herrmann, Michael H MVN; Dan Kroes  
**Subject:** Re: FW: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Mr. Herrmann,

We have reviewed the proposed restoration project (MVN-2015-01796-WLL) and do not oppose the construction of that project. However, we do have some concerns about the proposed removal of two plugs from a canal, specifically Elements 5 and 6b. The removal of those plugs could result in most of the water traveling north in Little Bayou de Plomb to begin flowing west and not flow northward towards Bayou LaRose (Element 8) during rising and high river stages, thus circumventing what we believe might be an area targeted for improved water flows/circulation. We respectfully request that the need to remove those plugs be re-examined. Of the two plugs proposed to be removed, the removal of the plug by construction of Element 5 is viewed as possibly causing the greatest loss of flows from Little Bayou de Plomb.

If you have any concerns or questions about these comments please feel free to contact me.

David Walther  
Supervisory Biologist  
SE Region Conservation Planning Assistance Coordinator

US Fish and Wildlife Service  
Lafayette, LA 70508  
Phone: 337.291.3122  
Fax: 337.291.3139

Blocked<http://www.fws.gov/lafayette/>

Blocked<http://www.fws.gov/habitatconservation/cpa.html>

On Fri, Jun 10, 2016 at 10:31 AM, Seth Bordelon <seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov> > wrote:

Seth Bordelon  
U.S. Fish and Wildlife Service  
Louisiana Ecological Services Office  
(337) 291-3138  
seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov>

-----Original Message-----

From: Herrmann, Michael H MVN [mailto:Michael.H.Herrmann@usace.army.mil  
<mailto:Michael.H.Herrmann@usace.army.mil> ]  
Sent: Friday, June 10, 2016 10:28 AM  
To: Bordelon, Seth

Subject: RE: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Considering the size of this project, I don't see a problem with extending .  
Thanks,

-----Original Message-----

From: Bordelon, Seth [mailto:seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov> ]

Sent: Friday, June 03, 2016 11:01 AM

To: Herrmann, Michael H MVN <Michael.H.Herrmann@usace.army.mil

<mailto:Michael.H.Herrmann@usace.army.mil> >

Cc: Walther, David <david\_walther@fws.gov <mailto:david\_walther@fws.gov> >

Subject: [EXTERNAL] 10-Day extension request (St. Martin Parish Government, MVN-2015-01796-WLL)

Hi Mike.

David Walther from our office plans to review this proposal in detail and coordinate with our fisheries office in Baton Rouge. He will be out of the office all next week and may need additional time to prepare our response. Can we please have a 10-day extension to the advertised comment period? If we decide not to comment we'd let you know immediately. Thanks.

Seth Bordelon

U.S. Fish and Wildlife Service

Louisiana Ecological Services Office

(337) 291-3138

seth\_bordelon@fws.gov <mailto:seth\_bordelon@fws.gov> <mailto:seth\_bordelon@fws.gov

<mailto:seth\_bordelon@fws.gov> >



**BILLY NUNGESSER**  
LIEUTENANT GOVERNOR

**State of Louisiana**  
OFFICE OF THE LIEUTENANT GOVERNOR  
DEPARTMENT OF CULTURE, RECREATION & TOURISM  
OFFICE OF CULTURAL DEVELOPMENT  
DIVISION OF ARCHAEOLOGY

**RENNIE S. BURAS, II**  
DEPUTY SECRETARY

**PHIL BOGGAN**  
ASSISTANT SECRETARY

25 July 2016

Michael Hermann, Project Manager  
U.S. Army Corps of Engineers  
New Orleans District  
Regulatory Branch  
Post Office Box 60267  
New Orleans, LA 70160-0267

Re: MVN-2015-01796-WLL; Water Quality Enhancement Project in St. Martin Parish

Dear Mr. Herrmann:

Our office was requested by Mr. Nick Sonnier of Seller and Associates, Inc., to review the above referenced project and provide our comment concerning the project's potential impact on historic properties. Following several conversations with Mr. Sonnier concerning clarification and explanation of the proposed project, our office offers the following comment.

The project involves effort to improve drainage in the Beau Bayou area of the Atchafalaya Basin by clearing sediment and vegetation from segments of various bayous and canals. Our office does not have any concerns for the proposed dredging operations, or for the clearing of vegetation by cutting and chipping. Nor does our office have concerns for the proposed disposal of spoil and vegetation debris along the channel banks, provided that the ground disturbing impacts of the clearing and disposal operations are limited to the upper foot of the disposal area surface.

Our office does have potential concerns for the grubbing of tree roots from the banks of bayous and canals as this effort could result in significant ground disturbance as the tree is removed. If the grubbing can be shown to occur entirely within the original bayou/canal channel (i.e., the trees are growing on silted-in sections of the original bayou/canal), then we do not have concerns. Our concerns are limited to those segments where the grubbing will occur on or very near to what appears to be the original bayou/canal bank. In these areas, we recommend either that grubbing not occur, or that an archaeological monitor be present to assess whether any historic properties were impacted by the disturbance. This would be particularly important on the south bank of Bayou Chene (Element 10) where an archeological site and cemetery are known to be located. We are also particularly concerned for those project elements that follow historic bayous (Elements 1, 3, 4, and 8). We also request that an archaeological monitor be present during the excavation of the 'virgin cut' on Element 7.

If you have any questions please contact Chip McGimsey at the Division of Archaeology by email at [cmcgimsey@crt.la.gov](mailto:cmcgimsey@crt.la.gov) or by phone at 225-219-4598.

Sincerely,

A handwritten signature in black ink that reads "Phil Boggan".

Phil Boggan  
State Historic Preservation Officer

PB/cm



JOHN BEL EDWARDS  
GOVERNOR

State of Louisiana  
DEPARTMENT OF WILDLIFE AND FISHERIES

CHARLES J. MELANCON  
SECRETARY

May 31, 2016

Mr. Martin S. Mayer, Chief  
Regulatory Branch  
United States Army Corps of Engineers  
P. O. Box 60267  
New Orleans, LA 70160-0267

RE: *Application Number: MVN-2015-01796-WLL*  
*Applicant: St. Martin Parish Government*  
*Notice Date: May 30, 2016*

Dear Mr. Mayer:

The professional staff of the Louisiana Department of Wildlife and Fisheries (LDWF) has reviewed the above referenced notice for a proposed water quality enhancement project involving mechanized clearing, snagging and the excavation and placement of spoil material along 9 miles of existing channels within the Beau Bayou Water Management Unit in St. Martin Parish, Louisiana. Approximately 51.6 acres of wetlands are proposed as being impacting as a part of this project. Based upon this review, the following has been determined:

Justification:

The impacts associated with this water quality enhancement project seem excessive. Additionally, no information has been provided regarding the need for the project or its potential benefit to the Beau Bayou Water Management Unit. Therefore, the applicant shall provide justification as well as an alternatives analysis. The justification should clearly show if there is a real need for the water quality enhancement project as well as a need for its associated 51.5 acres of wetland impacts. If need can be established, actions must be taken to avoid and/or minimize adverse impacts to fish and wildlife resources. Those actions and other measures designed to fully compensate for unavoidable wetland impacts must be addressed in a mitigation plan and approved by this Department.

Additional Comments:

Please note that the Louisiana black bear (*Ursus americanus luteolus*) may occur in your general project area. The Louisiana black bear utilizes a variety of habitat types, including forested wetlands, marsh, spoil banks, and upland forests. We strongly urge workers and contractors to avoid bears, particularly if work is to be conducted during the non-denning season (April through December). Employees should be cautioned to not leave food or garbage in the field, as bears can become attracted and accustomed to human food easily. In addition, we recommend the use of bear proof garbage containers on site.

Our database indicates the presence of bird nesting colonies within one mile of the Element 7 portion of the proposed project. Please be aware that entry into or disturbance of active breeding colonies is prohibited by LDWF. In addition, LDWF prohibits work within a certain radius of an active nesting colony.



May 31, 2016

Nesting colonies can move from year to year and no current information is available on the status of these colonies. If work for the proposed project will commence during the nesting season, conduct a field visit to the worksite to look for evidence of nesting colonies. This field visit should take place no more than two weeks before the project begins. If no nesting colonies are found within 400 meters (700 meters for brown pelicans) of the proposed project, no further consultation with LDWF will be necessary. If active nesting colonies are found within the previously stated distances of the proposed project, further consultation with LDWF will be required. In addition, colonies should be surveyed by a qualified biologist to document species present and the extent of colonies. Provide LDWF with a survey report which is to include the following information:

1. qualifications of survey personnel;
2. survey methodology including dates, site characteristics, and size of survey area;
3. species of birds present, activity, estimates of number of nests present, and general vegetation type including digital photographs representing the site; and
4. topographic maps and ArcView shapefiles projected in UTM NAD83 Zone 15 to illustrate the location and extent of the colony.

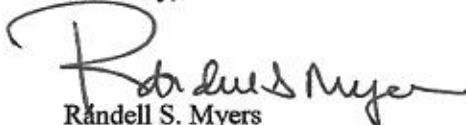
Please mail survey reports on CD to: Louisiana Natural Heritage Program  
La. Dept. of Wildlife & Fisheries  
P.O. Box 98000  
Baton Rouge, LA 70898-9000

To minimize disturbance to colonial nesting birds, the following restrictions on activity should be observed:

- For colonies containing nesting wading birds (i.e., herons, egrets, night-herons, ibis, roseate spoonbills, anhingas, and/or cormorants), all project activity occurring within 300 meters of an active nesting colony should be restricted to the non-nesting period (i.e., September 1 through February 15).
- For colonies containing nesting gulls, terns, and/or black skimmers, all project activity occurring within 400 meters (700 meters for brown pelicans) of an active nesting colony should be restricted to the non-nesting period (i.e., September 16 through April 1).

The Louisiana Department of Wildlife and Fisheries submits these recommendations to the U.S. Army Corps of Engineers in accordance with provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.). Please do not hesitate to contact Habitat Section biologist Zachary Chain at 225-763-3587 should you need further assistance.

Sincerely,

  
Randall S. Myers  
Assistant Secretary

zc

c: EPA, Marine & Wetlands Section  
USFWS Ecological Services

## **PUBLIC NOTICE**

The St. Martin Parish Government is requesting authorization to conduct mechanized clearing, snagging, excavation and placement of spoil material along 9 miles of existing channels within the Beau Bayou Water Management Unit. Vegetative debris and excessive overgrowth of woody vegetation and trees will be removed all for the purpose of restoring and opening channels for the purpose of restoring water quality, sheetflow, and circulation within the surrounding swamp and opening existing spoil banks to reduce un-natural ponding. The location of work is the Beau Bayou Water Management Unit, approximately 14 miles downstream from Butte Larose, Louisiana in St. Martin Parish, (Lat 30.145N, Long. 91.595W). The US Army Corps of Engineers (USACE) and the Louisiana Department of Environmental Quality (LDEQ) will be accepting public comments on this project until August 9, 2016. To provide comments, additional information and plans related to the proposed work may be obtained at the following website: <http://www.mvn.usace.army.mil/Missions/Regulatory/Public-Notices/> (see MVN-2015-01796-WLL). If you have any questions, please contact Mike Herrmann with the USACE at (504) 862-1954 and/or Elizabeth Hill with the LDEQ at (225) 219-3225.

7.20.16, 7.27.16, 8.3.16

## **Herrmann, Michael H Jr CIV USARMY CEMVN (US)**

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**From:** Bryant Celestine <Celestine.Bryant@actribe.org>  
**Sent:** Thursday, August 25, 2016 2:00 PM  
**To:** Herrmann, Michael H MVN  
**Subject:** [EXTERNAL] RE: MVN-2015-01796-WLL Beau Bayou Hydrologic Restoration

Dear Mr. Herrmann:

On behalf of Mikko Colabe III Clem Sylestine and the Alabama-Coushatta Tribe, our appreciation is expressed on your efforts to consult us regarding 2015-1796: Beau Bayou Hydrologic Restoration in St. Martin Parish.

Our Tribe maintains ancestral associations throughout the state of Louisiana despite the absence of written records to completely identify Tribal activities, villages, trails, or burial sites. However, it is our objective to ensure significances of American Indian ancestry, especially of Alabama-Coushatta origin, are administered with the utmost considerations.

Upon review of your July 25, 2016 submission, no known impacts to cultural assets of the Alabama-Coushatta Tribe of Texas are anticipated in conjunction with this proposal. In the event of the inadvertent discovery of human remains and/or archaeological artifacts, activity in proximity to the location must cease and appropriate authorities, including our Office, notified without delay for additional consultation.

Should you require further assistance, please do not hesitate to contact us.

Sincerely,

Bryant J. Celestine  
Historic Preservation Officer  
Alabama-Coushatta Tribe of Texas  
571 State Park Rd 56  
Livingston, Texas 77351  
936 - 563 - 1181 (office)  
936 - 933 - 7297 (cell)  
celestine.bryant@actribe.org



REPLY TO  
ATTENTION OF

Operations Division  
Surveillance and Enforcement Section

DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, NEW ORLEANS DISTRICT  
P.O. BOX 60267  
NEW ORLEANS, LOUISIANA 70160-0267

MAR 28 2016

Mr. Nick Sonnier  
Sellers & Associates, Inc.  
148B Easy Street  
Lafayette, LA 70506

Dear Mr. Sonnier:

Reference is made to your request, on behalf of St. Martin Parish Government, for a U.S. Army Corps of Engineers' jurisdictional determination on property in multiple sections, Township 10 South, Range 9 East, St. Martin Parish, Louisiana (enclosed map). Specifically, this property is identified as Beau Bayou Swamp Hydrologic Restoration Project.

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 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 this wetland. A portion of this wetland is also tidal, and along with the areas designated in blue on the map, is subject to Corps' jurisdiction under Section 10 of the Rivers and Harbors Act. A DA Section 10 permit will be required prior to any work in the waterways or the tidal wetland.

Additionally, federal projects are known to exist in this area that may require further engineering review prior to the initiation of any activities on this site. For more information, please contact Mr. Tim Connell of our Operations Division at (504) 862-2360.

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.

You are advised that this approved 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 or the District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

Should there be any questions concerning these matters, please contact Mr. Brad Guarisco at (504) 862-2274 and reference our Account No. MVN-2015-01796-SB. If you have specific questions regarding the permit process or permit applications, please contact Mr. Mike Herrmann of our Western Evaluation Section at (504) 862-1954.

Sincerely,



*M* Martin S. Mayer  
Chief, Regulatory Branch

Enclosures



MATCH LINE A-A SHEET 4

LIMITS OF CLEARING & SPOIL DISPOSAL

Sta. 23+00  
Sta. 22+00

LIMITS OF CLEARING & SPOIL DISPOSAL

100'

LITTLE BAYOU DE FLOUVE

Sta. 13+50

30'± EXISTING WATER BOTTOM

LIMITS OF EXCAVATION  
(WIDTH VARIES 50'-80')

LIMITS OF CLEARING & SNAGGING  
(WIDTH VARIES 90'-100')





EXISTING CHANNEL CENTERLINE

BAYOU CHENE  
Sta. 0+00.00

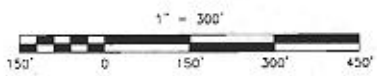
Sta. 1+35 BEGIN EXCAVATION & CLEARING & SNAGGING

Scale: 1"=300'

**USACE** Map 10/24 IH 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

-  NON-WETLAND
-  WETLAND (404)
-  WETLAND (10/404)
-  WATERS OF THE U.S. (10/404)

**U.S. ARMY CORPS OF ENGINEERS**  
**APPROVED**  
 JURISDICTIONAL DETERMINATION



N:\USACE\2014\2014-07\_Paris\10\24\102407\_Paris\10\24\102407\_Paris.dwg Project: J. Pharoque

DESIGNER	M. SOUVER
DRAWN	J. FADAC
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG



**Sellers & Associates, Inc.**  
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 148-B East Street, Lafayette, LA 70508 (337) 232-0177

**BEAU BAYOU SWAMP**  
**HYDROLOGIC RESTORATION**  
 PROJECT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
**3**  
 OF  
**46**

MATCH LINE B-B SHEET 5



30'± EXISTING WATER BOTTOM

LIMITS OF EXCAVATION  
(WIDTH VARIES 50'-80')

LIMITS OF CLEARING & SNAGGING  
(WIDTH VARIES 90'-100')





LITTLE BAYOU DE BLOND

Sta. 28+00

MATCH LINE A-A SHEET 3

USACE Map 2 of 24 IH 3/25/2016

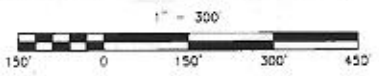
BY: BRAD GUARISCO  
FOR: SONNIER  
(MVN-2015-01796-SB)

-  NON-WETLAND
-  WETLAND (404)
-  WETLAND (10/404)
-  WATERS OF THE U.S. (10/404)

U.S. ARMY CORPS OF ENGINEERS

**APPROVED**

JURISDICTIONAL DETERMINATION



W:\GIS\800418004\_07\_Army\GIS\hydro\hydro\Information\Drawings\8004\_07\_Project\_1\_PlanView.dwg

DESIGNER	W. SCHWIER
DRAWN BY	J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8504-07
FILE NO.	OVERALL DWG



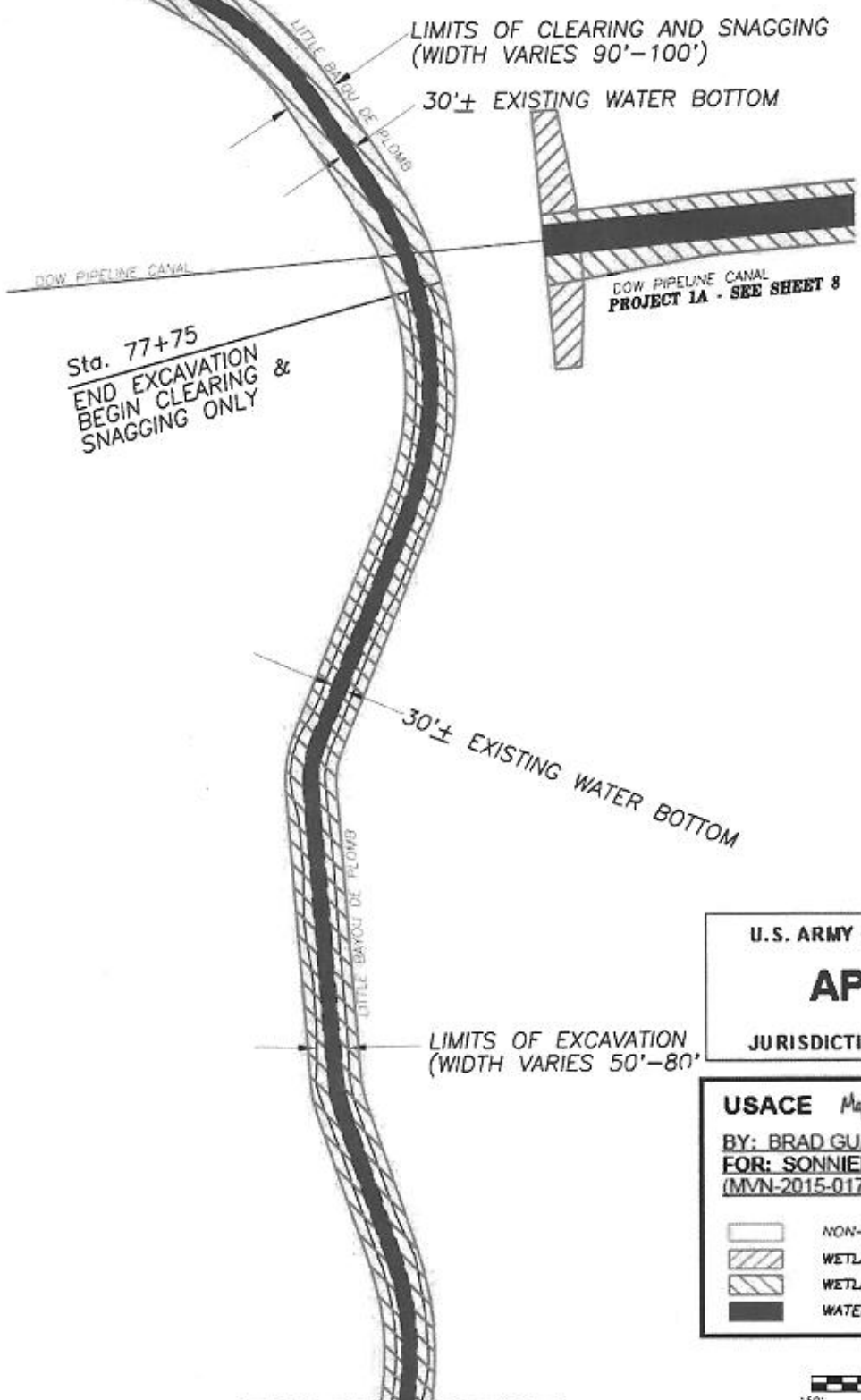
**Sellers & Associates, Inc.**  
ENGINEERS  
148-B Bay Street, Lake Charles, LA 70606 (337) 292-0777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**  
 PROJECT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
**4**  
 OF  
**46**

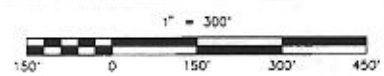
MATCH LINE C-C SHEET 6



U.S. ARMY CORPS OF ENGINEERS  
**APPROVED**  
 JURISDICTIONAL DETERMINATION

**USACE** Map 3 of 24 IH 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

- NON-WETLAND
- WETLAND (404)
- WETLAND (10/404)
- WATERS OF THE U.S. (10/404)



MATCH LINE B-B SHEET 4

PROJECT	N. SONNIER
DESIGNED BY	J. CADRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8204-07
FILE NO.	OVERALL.DWG

**Sellers & Associates, Inc.**  
 ENGINEERS  
 188-31 Easy Street, Lafayette, LA 70506 (504) 752-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 PROJECT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
**5**  
 OF  
**46**

S:\proj\8204\8204\_07\_PlanView\8204\_07\_PlanView.dwg 07 Project 1.dwg

118+82  
END CLEARING  
& SNAGGING

FOUR HUNDRED  
DOLLAR BAYOU

LIMITS OF CLEARING AND SNAGGING  
(WIDTH VARIES 90'-100')

30'± EXISTING WATER BOTTOM

LITTLE BAYOU DE PLOMB



Scale: 1" = 300'





U.S. ARMY CORPS OF ENGINEERS

**APPROVED**

JURISDICTIONAL DETERMINATION

USACE Map 4 of 24 IH 3/25/2016

BY: BRAD GUARISCO  
FOR: SONNIER  
(MVN-2015-01796-SB)

-  NON-WETLAND
-  WETLAND (404)
-  WETLAND (10/404)
-  WATERS OF THE U.S. (10/404)

1" = 300'



MATCH LINE C-C SHEET 5

M:\10241\10241\_0001\_07\_French%20L%20River\_Determination\_Drawing\10241\_0001\_07\_Project\_1\_Ansatz.dwg

DESIGNER	SI SOMMER
DRAWN BY	J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8004-07
PLANS	OVERALLING



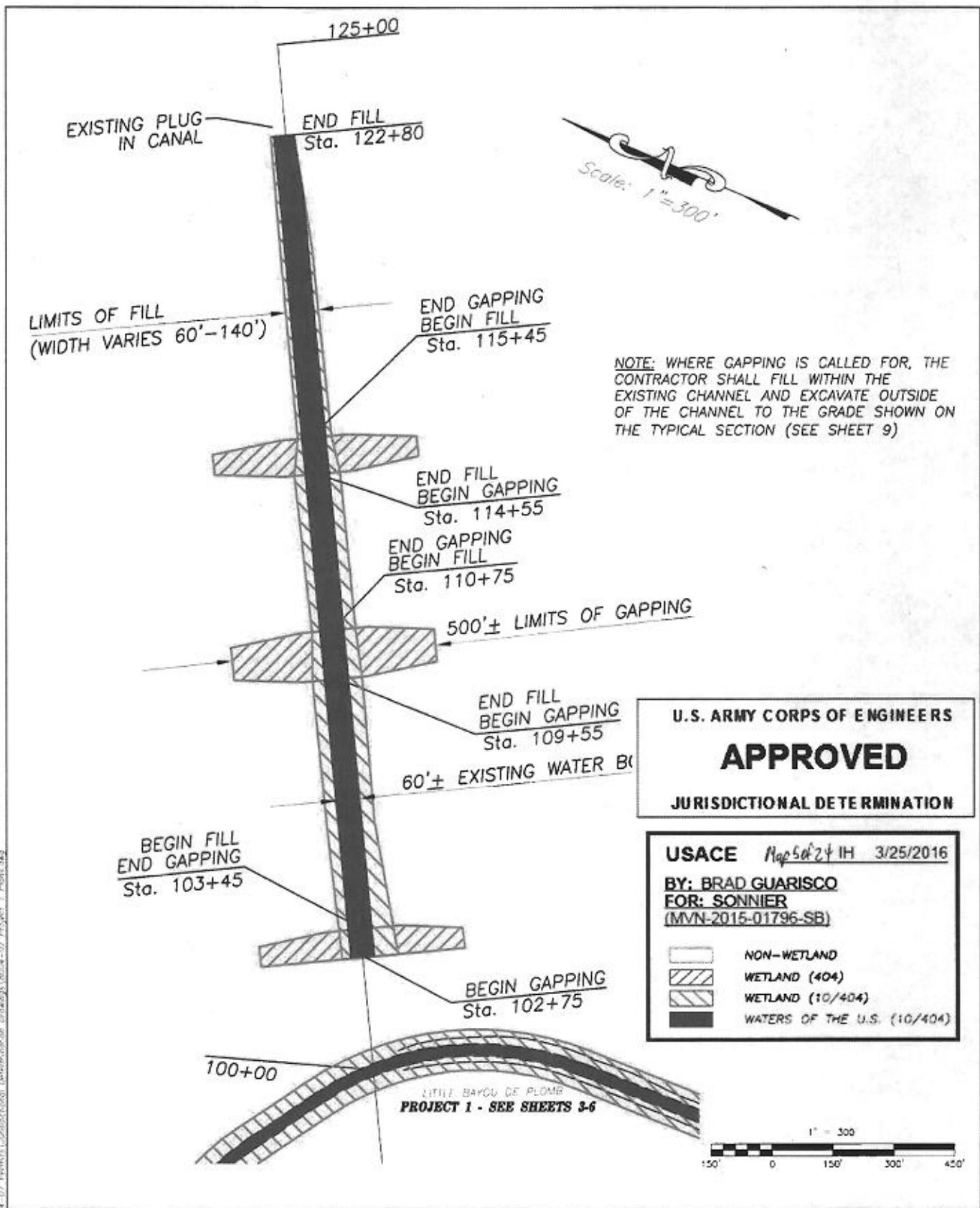
**Sellers & Associates, Inc.**  
ENGINEERS SURVEYORS  
140-3 Easy Street, Galveston, TX 77550 (409) 526-5777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

PROJECT 1 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
6  
OF  
46

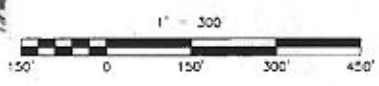


NOTE: WHERE GAPPING IS CALLED FOR, THE CONTRACTOR SHALL FILL WITHIN THE EXISTING CHANNEL AND EXCAVATE OUTSIDE OF THE CHANNEL TO THE GRADE SHOWN ON THE TYPICAL SECTION (SEE SHEET 9)

U.S. ARMY CORPS OF ENGINEERS  
**APPROVED**  
 JURISDICTIONAL DETERMINATION

USACE Map 50124 IH 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

NON-WETLAND  
 WETLAND (404)  
 WETLAND (10/404)  
 WATERS OF THE U.S. (10/404)



N:\0041\0041\0041.dwg - 07 - Permit\0041\0041.dwg - 07 - Project 1 - Plans.dwg

ENGINEER	BY: SONNIER
DRAWN BY	J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8504-07
FILE NO.	OVERALL.DWG

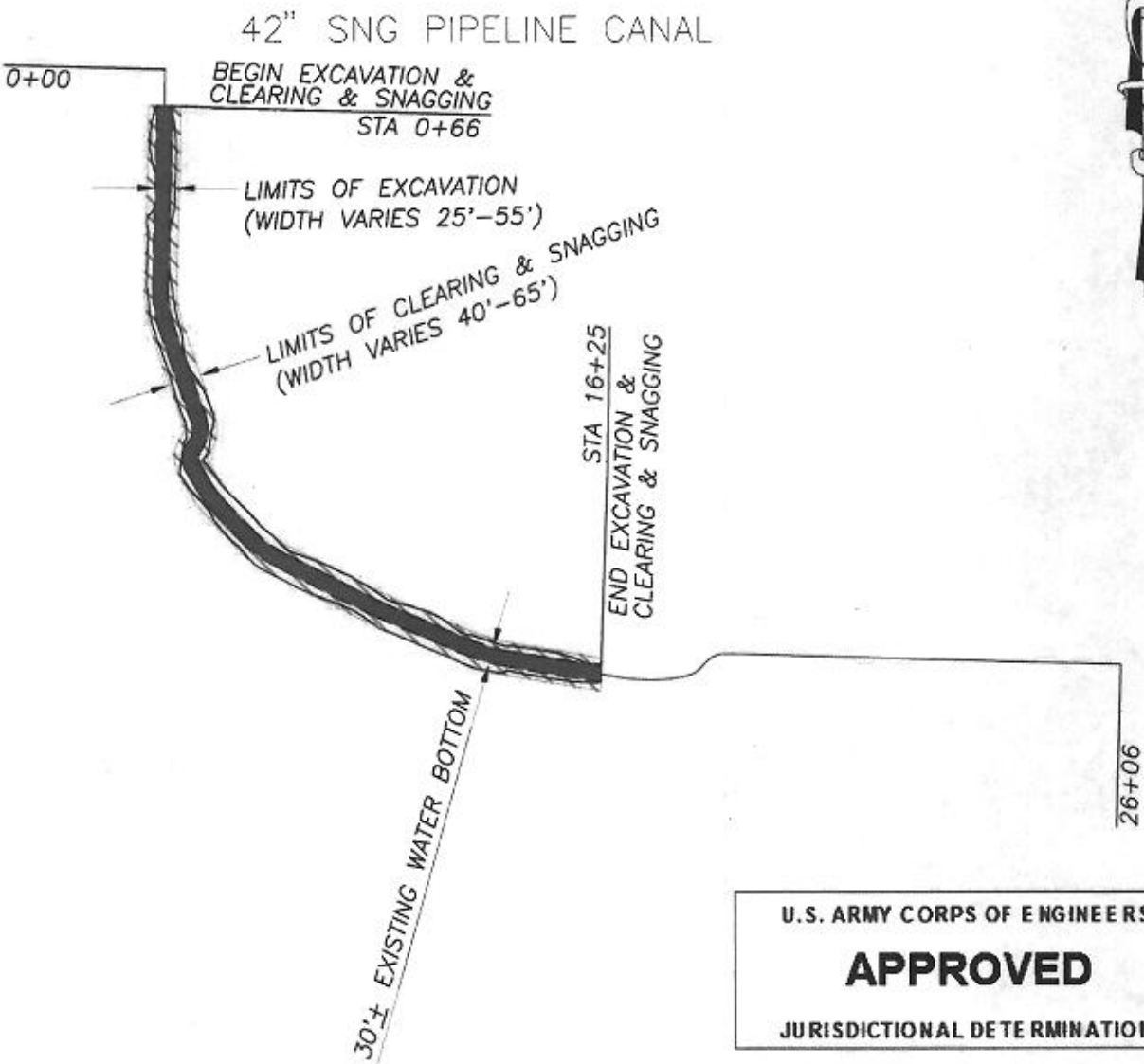
**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 148-B Easy Street, Lafayette, La 70508 (225) 232-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 PROJECT 1A - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	8
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	46
LOCATION	ST. MARTIN PARISH, LOUISIANA		



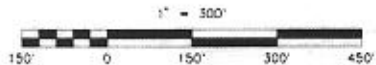
Scale: 1" = 300'



U.S. ARMY CORPS OF ENGINEERS  
**APPROVED**  
 JURISDICTIONAL DETERMINATION

USACE Map of 24 IH 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

	NON-WETLAND
	WETLAND (404)
	WETLAND (10/404)
	WATERS OF THE U.S. (10/404)



M:\2015\01796-SB\Permit\Jurisdictional Determination\Drawings\0204 - 07 - Project 2 - Plans.dwg

DESIGNER	N. SONNIER
DRAWN BY	J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	0204-07
FILE NO.	PROJECT2.DWG

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 146-E Bay Street, Lafayette, LA 70506 (337) 928-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

PROJECT 2 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 11 OF 46
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

STA 39+81  
 END EXCAVATION &  
 CLEARING & SNAGGING

EXISTING CANAL



30'± EXISTING WATER BOTTOM  
 LIMITS OF CLEARING & SNAGGING  
 (30' MAX.)





LIMITS OF EXCAVATION  
 (WIDTH VARIES 17'-25')

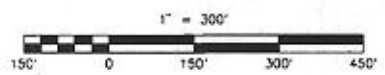
STA 10+10.00  
 BEGIN EXCAVATION &  
 CLEARING & SNAGGING

10+00

U.S. ARMY CORPS OF ENGINEERS  
**APPROVED**  
 JURISDICTIONAL DETERMINATION

USACE Map 7 of 74 IH 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

-  NON-WETLAND
-  WETLAND (404)
-  WETLAND (10/404)
-  WATERS OF THE U.S. (10/404)



N:\0216\8004-07\Armed\Jurisdictional Determination\Drawings\8004-07\Project\_1\_Plan.dwg

DESIGNER	BY SONNIER J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8004-07
PLANS	OVERALL DWD



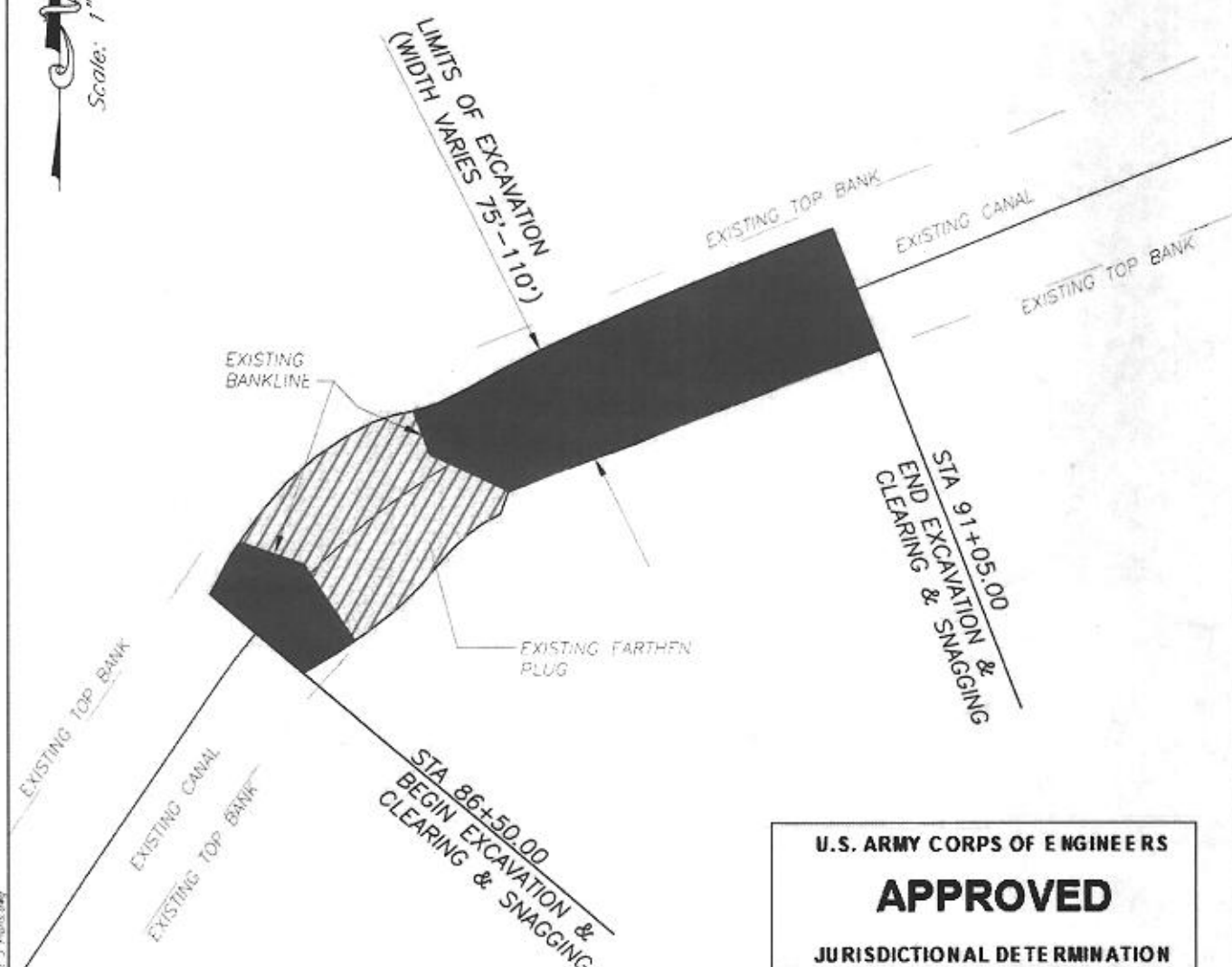
**Sellers & Associates, Inc.**  
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 149-B East Street, Lafayette, LA 70506 (337) 232-0373

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

PROJECT 3 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 14 OF 46
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

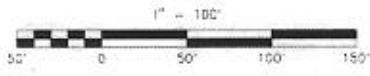
Scale: 1" = 100'



U.S. ARMY CORPS OF ENGINEERS  
**APPROVED**  
 JURISDICTIONAL DETERMINATION

USACE *Map 2014* 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

	NON-WETLAND
	WETLAND (404)
	WETLAND (10/404)
	WATERS OF THE U.S. (10/404)



N:\1\104\8004\2014-07\Projects\Jurisdictional Determination Drawings\2014-07-Project\_3\_Appls.dwg

DESIGNED BY	M. SONNIER
CHECKED BY	J. FARRIS
DATE	12/2015
SCALE	AS SHOWN
PROJECT	804-07
FILE NO.	OVERALL DWG

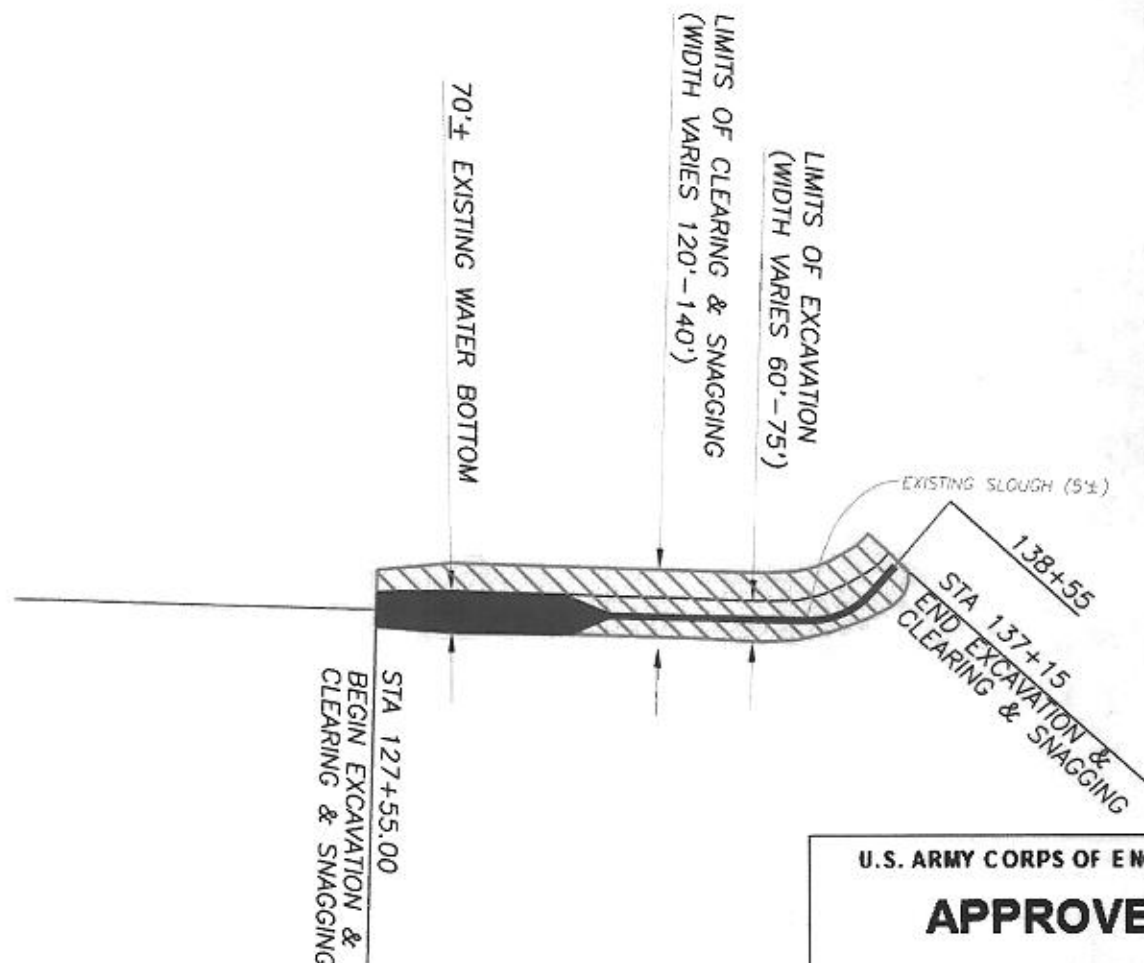
**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 140-B Bay Street, Lafayette, LA 70506 (337) 281-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 PROJECT 3 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
 15  
 OF  
 46

Scale: 1"=300'

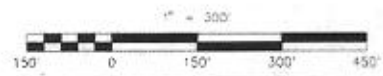


U.S. ARMY CORPS OF ENGINEERS  
**APPROVED**  
 JURISDICTIONAL DETERMINATION

USACE Map 9 d 241H 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

NON-WETLAND  
 WETLAND (404)  
 WETLAND (10/404)  
 WATERS OF THE U.S. (10/404)

NOTE: SEDIMENT HAS BUILT UP WITHIN THE EXISTING CANAL AT THE ATCHAFALAYA RIVER. VEGETATION (MAINLY WILLOW TREES) HAS ALSO GROWN WITHIN THE EXISTING CANAL. THERE IS A SMALL EXISTING SLOUGH (APPROXIMATELY 5' WIDE) AT THE ATCHAFALAYA RIVER THAT OPENS UP TO THE EXISTING CANAL APPROXIMATELY 700' FROM THE ATCHAFALAYA RIVER.



DESIGNER	SI SONNIER
DRAWN BY	J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8004-07
PLANS	OVERALL C&M

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 ENGINEERS SURVEYORS  
 148 S. Day Street, Lafayette, LA 70506 (504) 282-2777

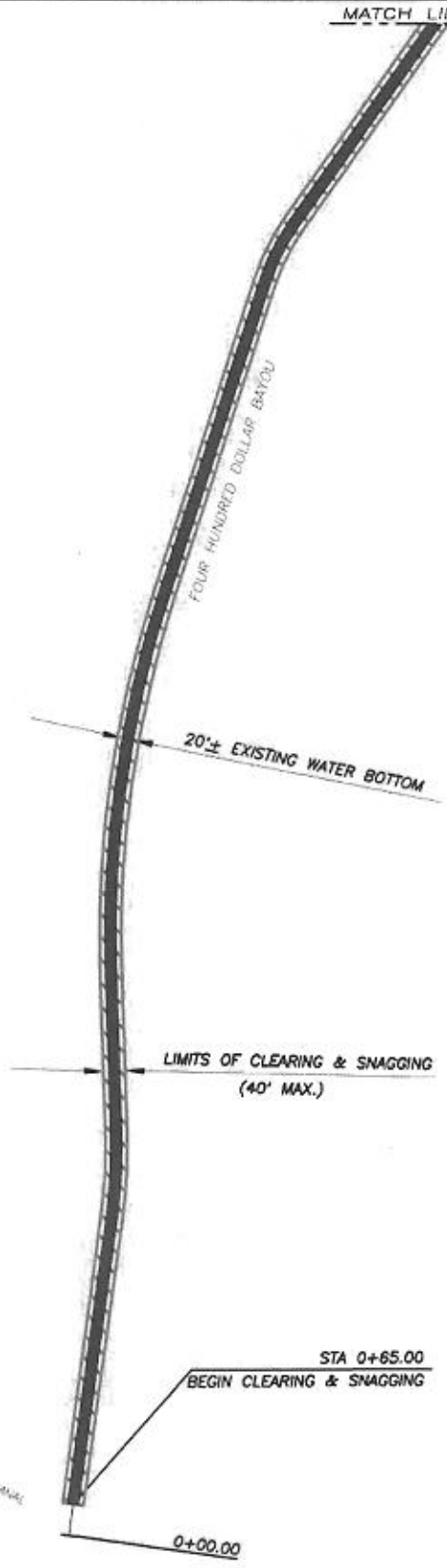
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 PROJECT 3 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 16 OF 46
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

M:\Data\8004\8004.dwg - 07 Permit\Auto\Civil\Jurisdictional Determination\8004-07\Project\_3\_Plan.dwg

MATCH LINE A-A SHEET 20

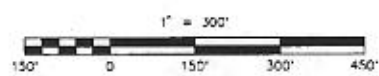
Scale: 1" = 300'



U.S. ARMY CORPS OF ENGINEERS  
**APPROVED**  
 JURISDICTIONAL DETERMINATION

USACE *Map 10 of 24* IH 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

NON-WETLAND  
 WETLAND (404)  
 WETLAND (10/404)  
 WATERS OF THE U.S. (10/404)



N:\04\01\0104-07\Permits\Jurisdictional Determination\04\_07\_Plan.dwg

DESIGNED BY	N. SCHNIER
DRAWN BY	J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	0404-07C

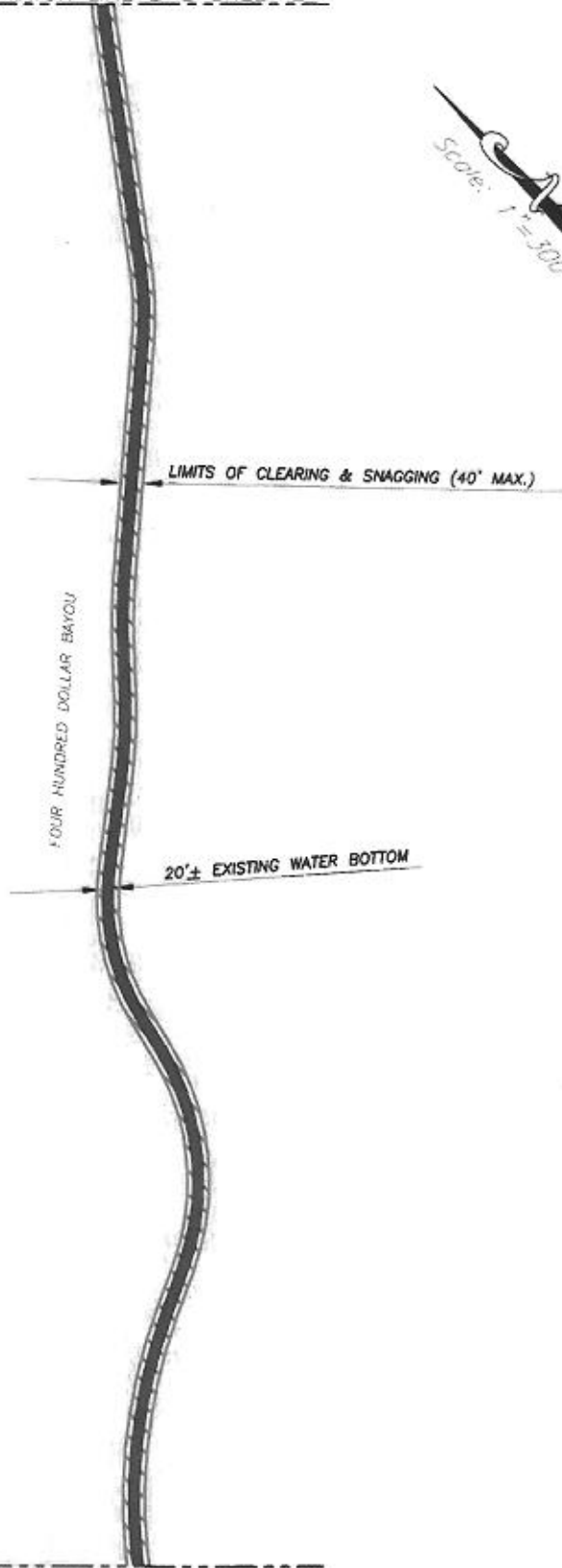
**Sellers & Associates, Inc.**  
 ENGINEERS SURVEYORS  
 1415-B Bay Street, Lafayette, LA 70506 (337) 432-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 PROJECT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 19 OF 46
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



MATCH LINE B-B SHEET 21

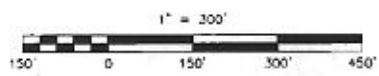


MATCH LINE A-A SHEET 19

U.S. ARMY CORPS OF ENGINEERS  
**APPROVED**  
 JURISDICTIONAL DETERMINATION

USACE *Map of 24 IH* 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

	NON-WETLAND
	WETLAND (404)
	WETLAND (10/404)
	WATERS OF THE U.S. (10/404)



N:\DATA\2015\03\04\07\Hydro\Jurisdictional Determination\0304-07 Project 4 Plans.dwg

DESIGNER	M. SONNIER
DRAWN BY	J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	0304-07

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 348-B Bay Street, Lafayette, LA 70504 (337) 282-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 PROJECT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	20
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	46
LOCATION	ST. MARTIN PARISH, LOUISIANA		

MATCH LINE C-C SHEET 22



LIMITS OF CLEARING & SNAGGING  
(50' MAX.)

25' TRANSITION  
(40' TO 50')

STA 77+00.00  
STA 76+75.00

FOUR HUNDRED DOLLAR BAYOU

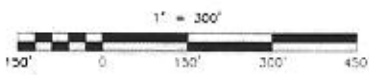
U.S. ARMY CORPS OF ENGINEERS  
**APPROVED**  
JURISDICTIONAL DETERMINATION

20' ± EXISTING WATER BOTTOM

**USACE** Map R/L 24 IH 3/25/2016  
**BY: BRAD GUARISCO**  
**FOR: SONNIER**  
 (MVN-2015-01796-SB)

	NON-WETLAND
	WETLAND (404)
	WETLAND (10/404)
	WATERS OF THE U.S. (10/404)

LIMITS OF CLEARING & SNAGGING  
(40' MAX.)



MATCH LINE B-B SHEET 20

DESIGNER	N. SONNIER
DRAWN BY	J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8504-07
FILE NO.	OVERALL SWG

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 ENGINEERS SURVEYORS  
 148-B Gray Street, Lafayette, LA 70508 (504) 282-2777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

PROJECT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
21  
OF  
46

A:\10401\8504\8504-07\_Plan\63\_Ausd\05swamp\8504-07\_Sheet\_4.dwg

MATCH LINE D-D SHEET 23

20'± EXISTING WATER BOTTOM

FOUR HUNDRED DOLLAR BAYOU

LIMITS OF CLEARING & SNAGGING  
(50' MAX.)

Scale: 1" = 300'

U.S. ARMY CORPS OF ENGINEERS





**APPROVED**

JURISDICTIONAL DETERMINATION

USACE Map 13 of 24 IH 3/25/2016

BY: BRAD GUARISCO

FOR: SONNIER  
(MVN-2015-01796-SB)

-  NON-WETLAND
-  WETLAND (404)
-  WETLAND (10/404)
-  WATERS OF THE U.S. (10/404)



MATCH LINE C-C SHEET 21

N:\DATA\2014\2014-07\_PlanView\Jurisdictional Determination\Drawings\15024-07\_Project 4\_Plan.dwg

DESIGNED BY	N. SCHWEP
DRAWN BY	J. FIERE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	2004-07
PLANS	OVERALL DWG



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ENGINEERS SURVEYORS  
148-B Bay Street, Lake Charles, LA 70604 (337) 232-2777

**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

PROJECT 4 - PLAN VIEW

COUNTY	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

SHEET  
**22**  
OF  
46

BAYOU LA ROSE  
 BAYOU DE PLOMS  
 STA 147+61.08  
 END CLEARING & SNAGGING

Scale: 1" = 300'

LIMITS OF CLEARING & SNAGGING  
 (60' MAX.)  
 30'± EXISTING WATER BOTTOM

FOUR HUNDRED DOLLAR BAYOU

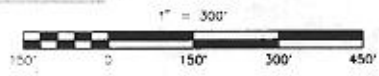
**USACE** Map # 241H 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

	NON-WETLAND
	WETLAND (404)
	WETLAND (10/404)
	WATERS OF THE U.S. (10/404)

U.S. ARMY CORPS OF ENGINEERS  
**APPROVED**  
 JURISDICTIONAL DETERMINATION

25' TRANSITION  
 (50' TO 60')  
 STA 122+00.00  
 STA 121+75.00

20'± EXISTING WATER BOTTOM  
 LIMITS OF CLEARING & SNAGGING  
 (50' MAX.)



MATCH LINE D-D SHEET 22

N:\DATA\2015\0004-07\_Armch\Jurisdictional Determination\Design\15004-D7\_Plan.dwg

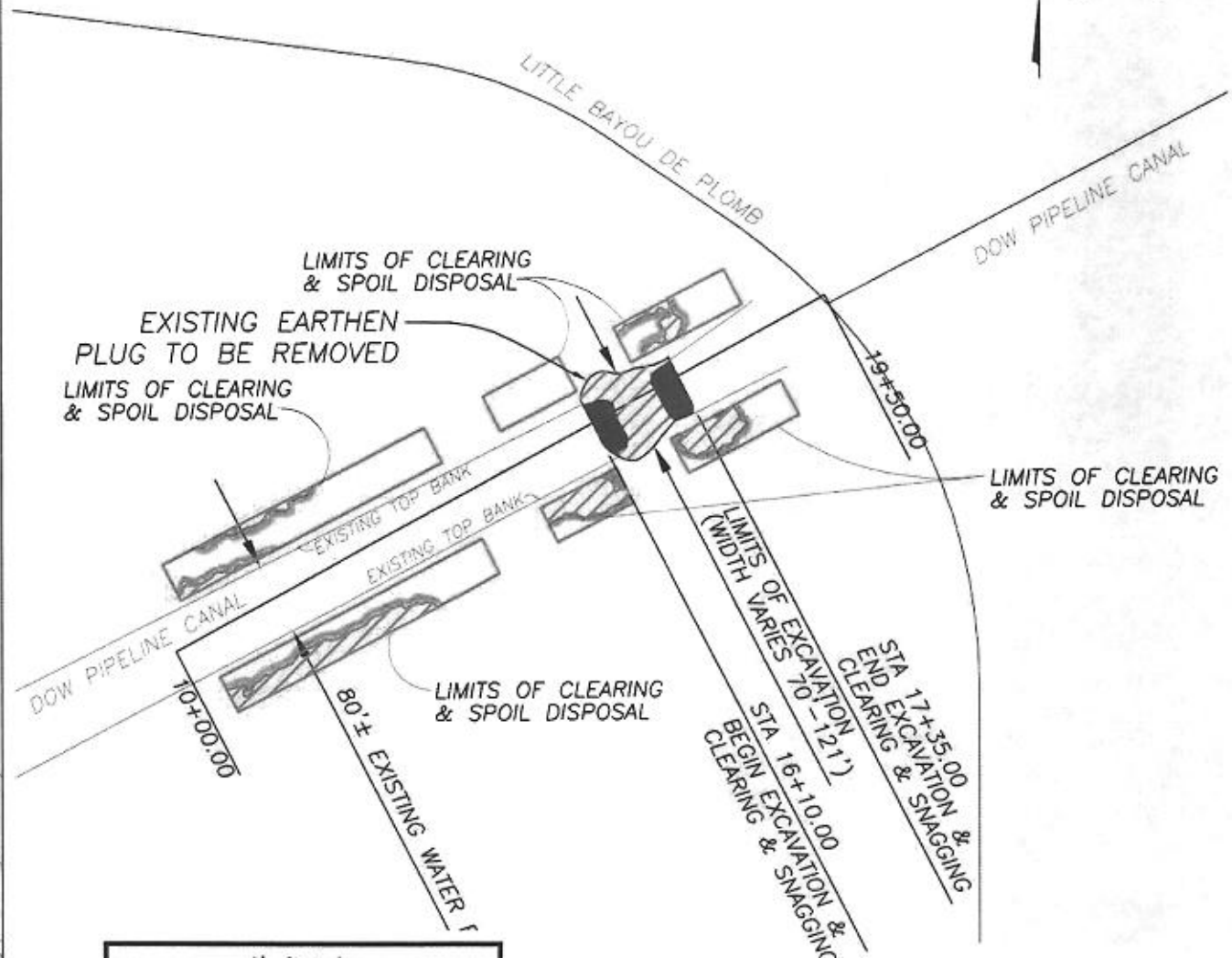
DESIGNER	N. SCHWARTZ
CHECKER	J. FABRE
DATE	12/2/2015
SCALE	AS SHOWN
PROJECT	0504-07
FILE NO.	0452ALL.DWG

**Sellers & Associates, Inc.**  
 ENGINEERS  
 148-B Bay Street, Metairie, LA 70006 (504) 885-0777

**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 PROJECT 4 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>23</b> OF <b>46</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

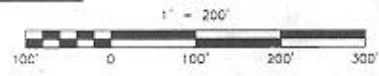
Scale: 1"=200'



USACE *Map 15414 IH* 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

	NON-WETLAND
	WETLAND (404)
	WETLAND (10/404)
	WATERS OF THE U.S. (10/404)

U.S. ARMY CORPS OF ENGINEERS  
**APPROVED**  
 JURISDICTIONAL DETERMINATION



W:\Data\180204\180204-07 Permits\Jurisdictional Determination Drawings\180204-07 Project 5 Planning

DESIGNED BY	A. SCHMIDT
CHECKED BY	J. FAHLE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8004-07
PLANNING	OVERALL DWG

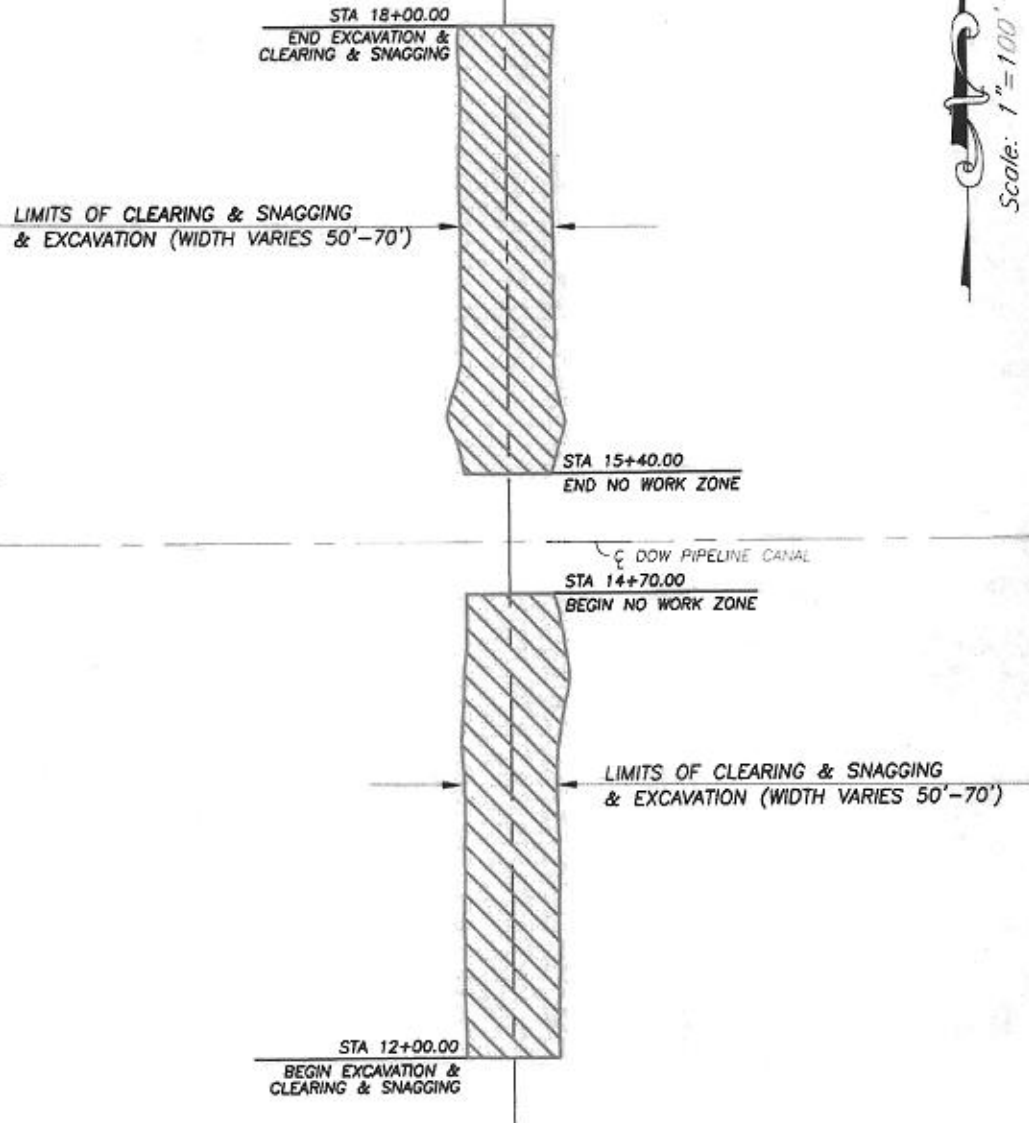
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**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**  
 PROJECT 5 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 26 OF 46
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



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**USACE Map 16 of 24 IH 3/25/2016**

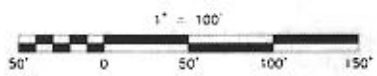
**BY: BRAD GUARISCO**  
**FOR: SONNIER**  
**(MVN-2015-01796-SB)**

	NON-WETLAND
	WETLAND (404)
	WETLAND (10/404)
	WATERS OF THE U.S. (10/404)

**U.S. ARMY CORPS OF ENGINEERS**

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**JURISDICTIONAL DETERMINATION**



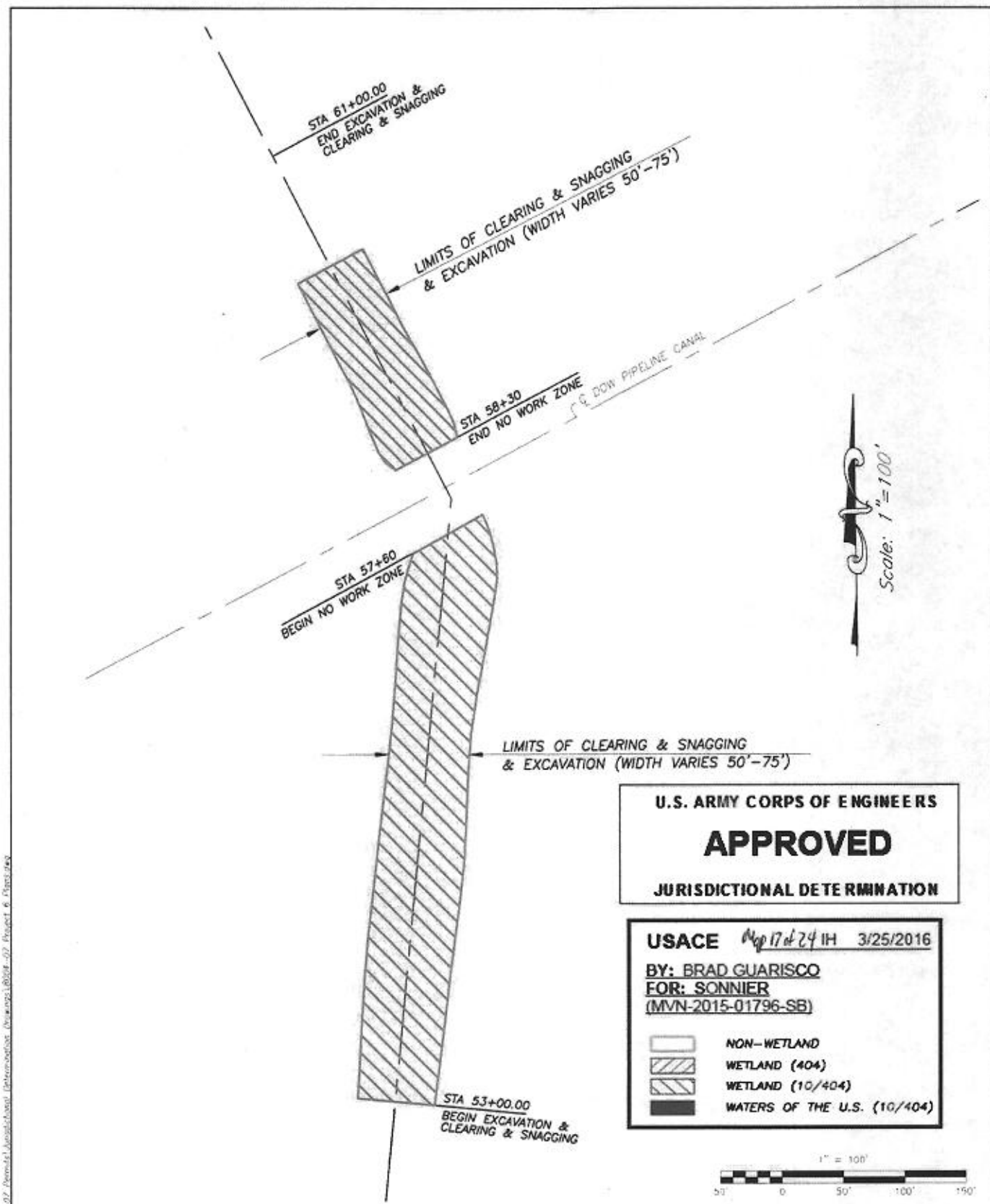
DESIGNED BY	N. SCHNER
DRAWN BY	J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

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**BEAU BAYOU SWAMP**  
**HYDROLOGIC RESTORATION**

**PROJECT 6A - PLAN VIEW**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>29</b> OF <b>46</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



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**JURISDICTIONAL DETERMINATION**

**USACE** *App 17 of 24 IH* 3/25/2016  
**BY: BRAD GUARISCO**  
**FOR: SONNIER**  
**(MVN-2015-01796-SB)**

	NON-WETLAND
	WETLAND (404)
	WETLAND (10/404)
	WATERS OF THE U.S. (10/404)



OWNER	M. SONNIER
DESIGNED BY	J. TARDY
DATE	12/2015
SCALE	AS SHOWN
PROJECT	2024-07
FILE NO.	OVERALL DWG

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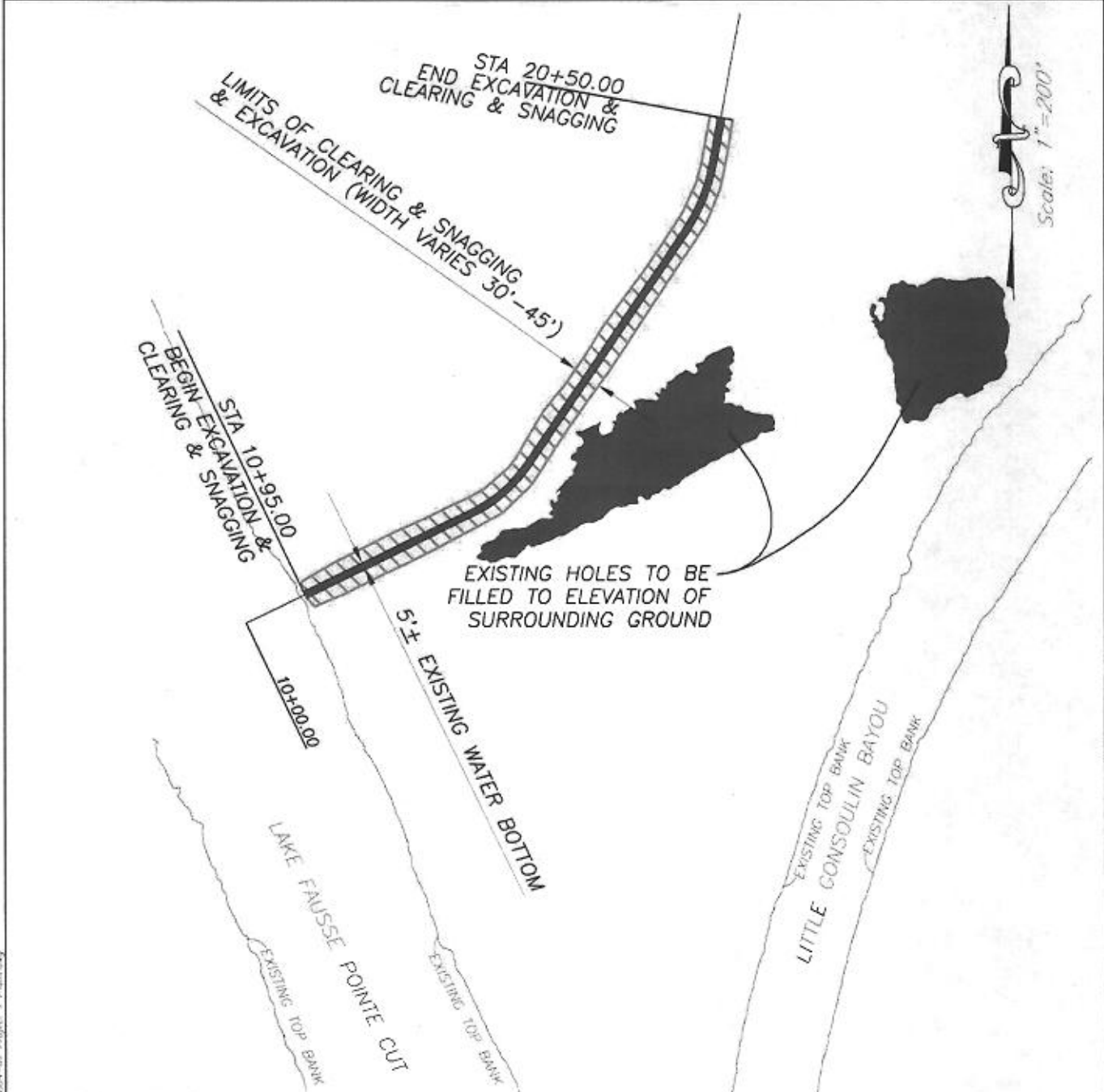
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

PROJECT 6B - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET	30
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	46
LOCATION	ST. MARTIN PARISH, LOUISIANA		

M:\2015\2024-07 Permit\2024-07 Beau Bayou Swamp Hydrologic Restoration\Drawings\2024-07 Project 6B.dwg

M:\GIS\8004\8004-07 Permits\Wetlands\Wetlands\8004-07 Project 7 Plans.dwg



**USACE** *Map 12 of 24 IH* 3/25/2016  
**BY: BRAD GUARISCO**  
**FOR: SONNIER**  
**(MVN-2015-01796-SB)**

	NON-WETLAND
	WETLAND (404)
	WETLAND (10/404)
	WATERS OF THE U.S. (10/404)

**U.S. ARMY CORPS OF ENGINEERS**  
**APPROVED**  
**JURISDICTIONAL DETERMINATION**



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DRAWN BY	J. FARR
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8004-07
FILED	OVERALL.DWG

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**BEAU BAYOU SWAMP**  
**HYDROLOGIC RESTORATION**  
**PROJECT 7 - PLAN VIEW**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>33</b> OF <b>46</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

MATCH LINE A-A SHEET 37

Scale: 1"=300'





LIMITS OF CLEARING & SNAGGING(40' MAX)

20'± EXISTING WATER BOTTOM

BAYOU LA ROUSE

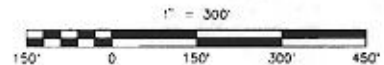
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**APPROVED**  
JURISDICTIONAL DETERMINATION

USACE *Page 19 of 24* IH 3/25/2016  
BY: BRAD GUARISCO  
FOR: SONNIER  
(MVN-2015-01796-SB)

-  NON-WETLAND
-  WETLAND (404)
-  WETLAND (10/404)
-  WATERS OF THE U.S. (10/404)

STA 10+50.00  
BEGIN CLEARING  
& SNAGGING  
10+00.00

BEAU BAYOU



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DRAWN BY	J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT FILE NO.	0304-07
OVERALL DWG	



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**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**  
PROJECT 8 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET <b>36</b> OF <b>46</b>
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

MATCH LINE B-B SHEET 38

Scale: 1"=300'


LIMITS OF CLEARING  
& SNAGGING (40' MAX)

BAYOU LA ROSE

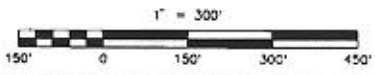
20'± EXISTING WATER BOTTOM

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**APPROVED**  
JURISDICTIONAL DETERMINATION

USACE Map 26 of 24 IH 3/25/2016  
BY: BRAD GUARISCO  
FOR: SONNIER  
(MVN-2015-01796-SB)


 NON-WETLAND  
 WETLAND (404)  
 WETLAND (10/404)  
 WATERS OF THE U.S. (10/404)

MATCH LINE A-A SHEET 36



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DESIGNER	N. SCHNEP
DRAWN BY	J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	6204 - 07
FILE NO.	OVERALL DWG



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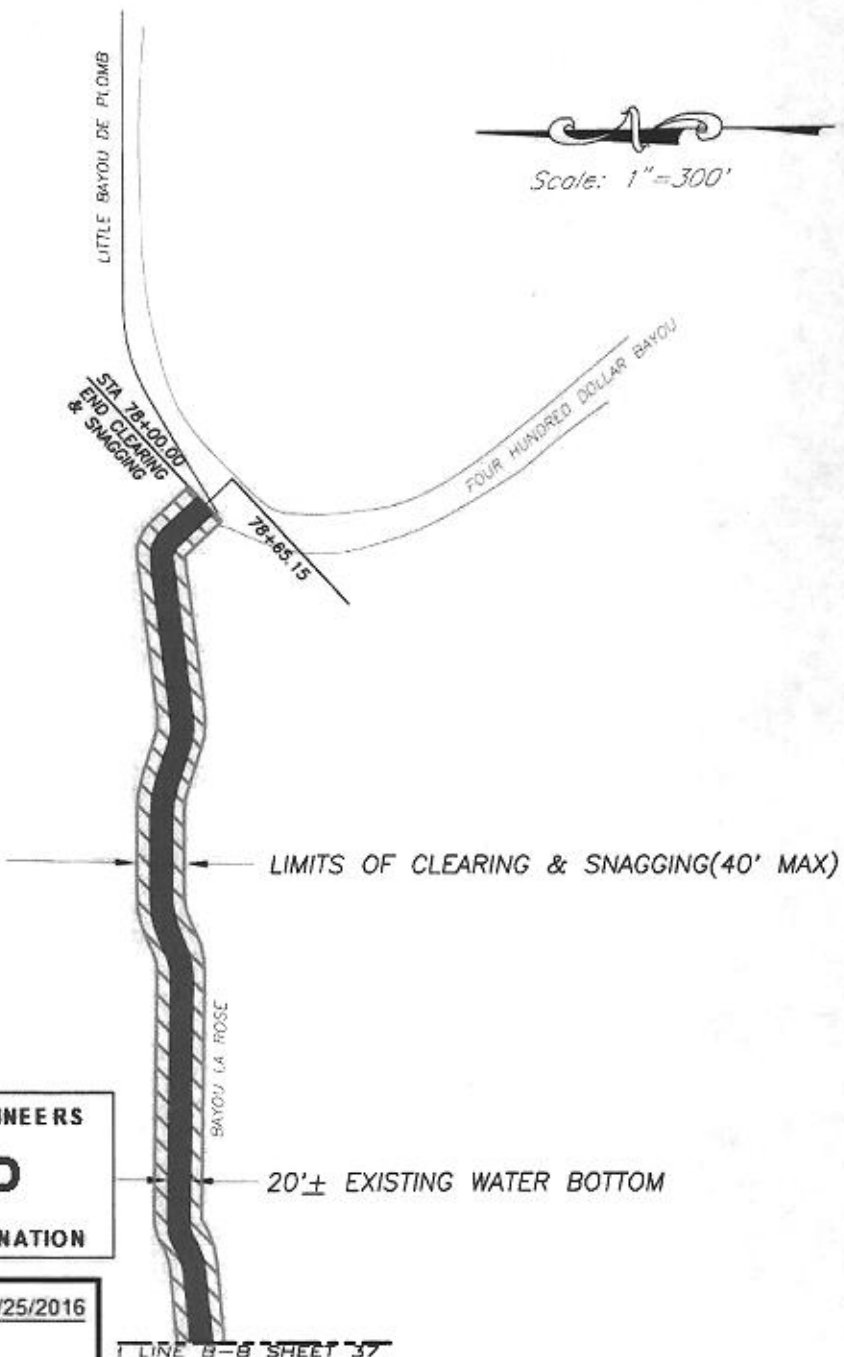
**BEAU BAYOU SWAMP  
HYDROLOGIC RESTORATION**

PROJECT 8 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 37 of 46
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	



Scale: 1" = 300'



U.S. ARMY CORPS OF ENGINEERS  
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 JURISDICTIONAL DETERMINATION

USACE Map 21 of 24 IH 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

NON-WETLAND  
 WETLAND (404)  
 WETLAND (10/404)  
 WATERS OF THE U.S. (10/404)



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DESIGNER	N. SCHWEN
CHECKED BY	J. FARRIS
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL DWG

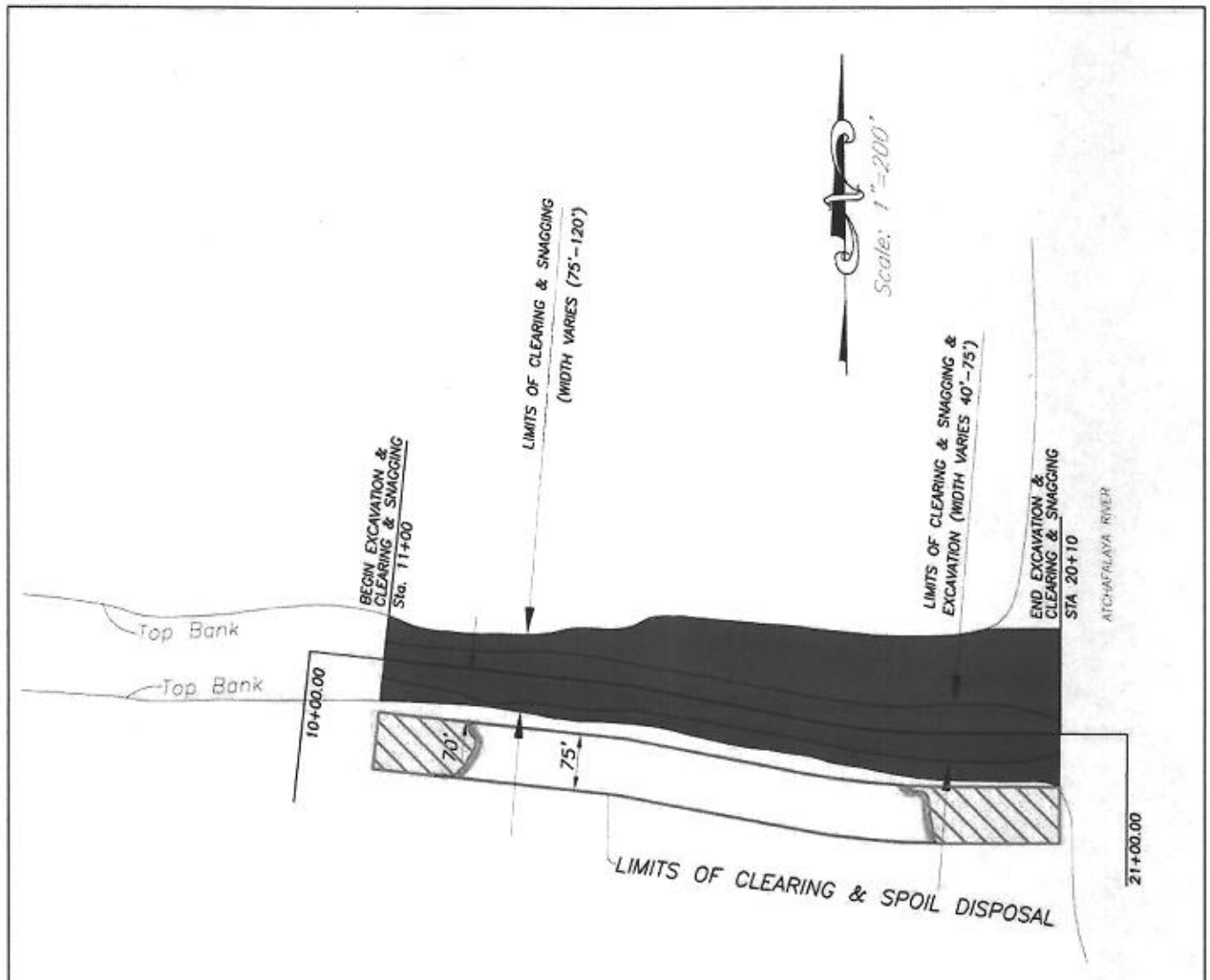
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**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

PROJECT 8 - PLAN VIEW





CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA

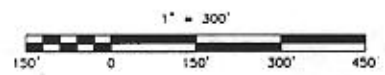
SHEET  
**38**  
 OF  
**46**



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**APPROVED**  
**JURISDICTIONAL DETERMINATION**

**USACE** *Map 22 of 24* IH 3/25/2016  
**BY: BRAD GUARISCO**  
**FOR: SONNIER**  
**(MVN-2015-01796-SB)**

	NON-WETLAND
	WETLAND (404)
	WETLAND (10/404)
	WATERS OF THE U.S. (10/404)



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DESIGNER	N. SONNIER
DRAWN	J. FABRE
DATE	12/2015
SCALE	AS SHOWN
PROJECT	5004-07
FILE NO.	OVERALL.DWG



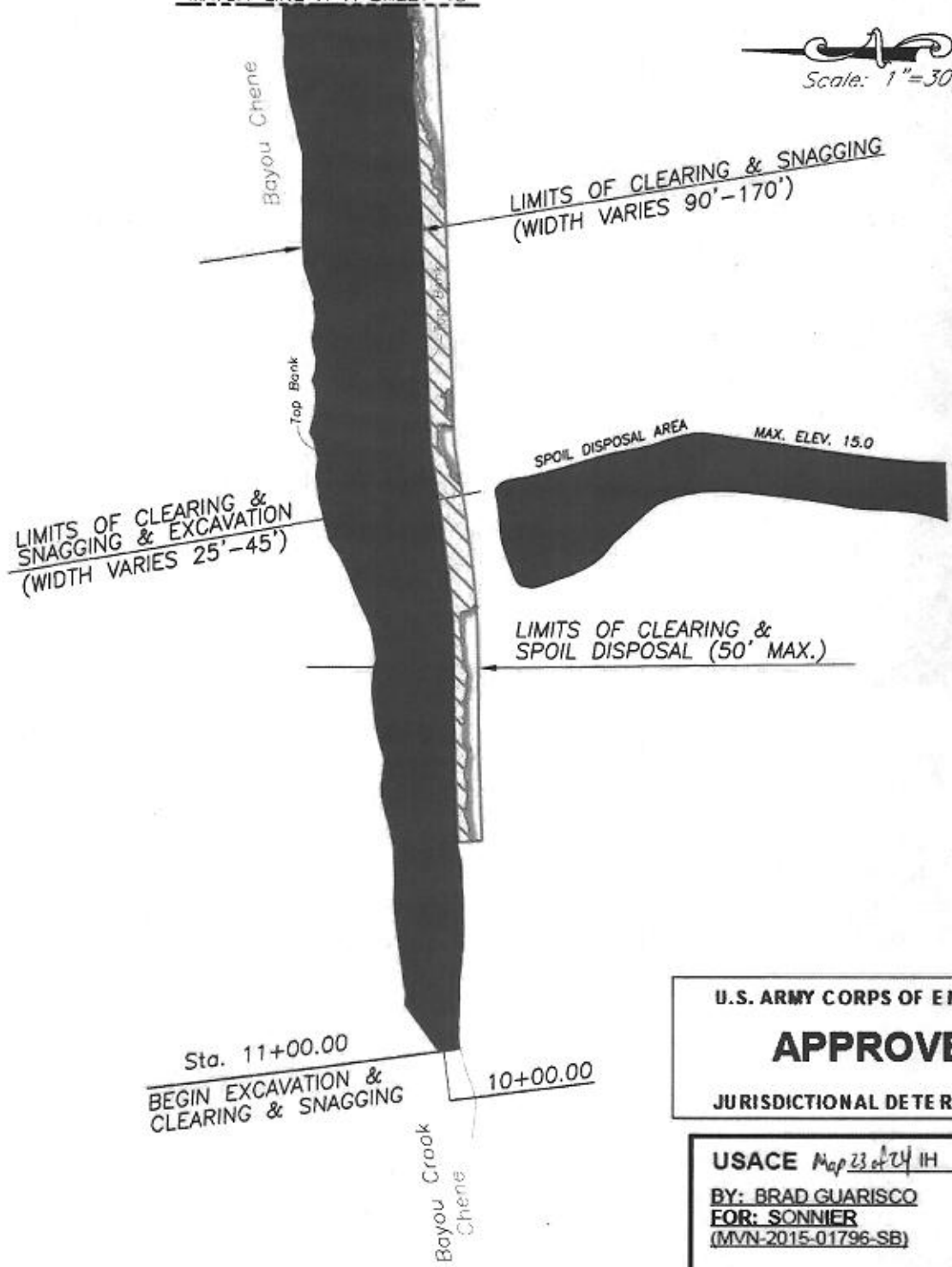
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**BEAU BAYOU SWAMP**  
**HYDROLOGIC RESTORATION**  
**PROJECT 9 - PLAN VIEW**

CLIENT	ST. MARTIN PARISH GOVERNMENT	SHEET 41 OF 46
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	
LOCATION	ST. MARTIN PARISH, LOUISIANA	

MATCH LINE A-A SHEET 45

Scale: 1"=300'



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**APPROVED**  
 JURISDICTIONAL DETERMINATION

USACE Map 23 of 24 IH 3/25/2016  
 BY: BRAD GUARISCO  
 FOR: SONNIER  
 (MVN-2015-01796-SB)

	NON-WETLAND
	WETLAND (404)
	WETLAND (10/404)
	WATERS OF THE U.S. (10/404)

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DESIGNED BY	N. SONNIER
DRAWN BY	J. FARR
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8004-07
FILE NO.	OVERALL.DWG

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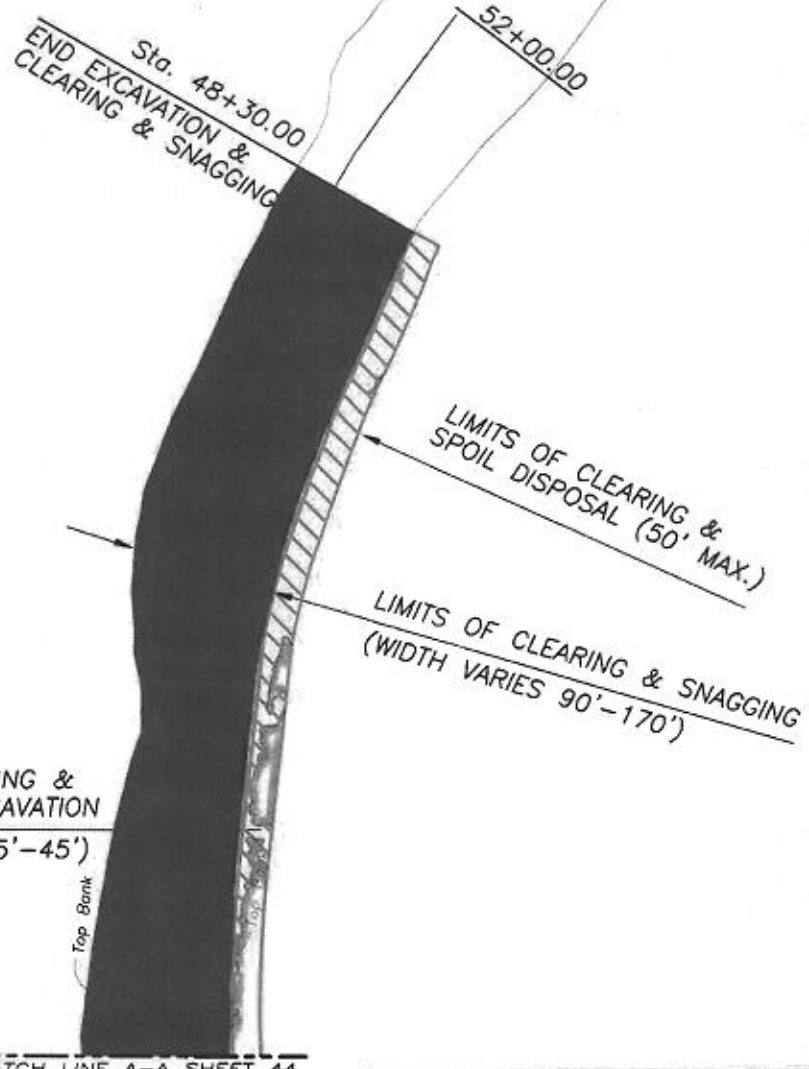
**BEAU BAYOU SWAMP  
 HYDROLOGIC RESTORATION**

PROJECT 10 - PLAN VIEW

CLIENT	ST. MARTIN PARISH GOVERNMENT
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.
LOCATION	ST. MARTIN PARISH, LOUISIANA





SHEET  
**44**  
 OF  
**46**

  
Scale: 1"=300'

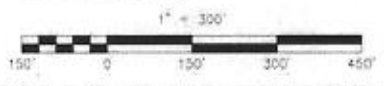


LIMITS OF CLEARING & SNAGGING & EXCAVATION  
(WIDTH VARIES 25'-45')

**USACE** *Map 24 of 29 IH* 3/25/2016  
**BY: BRAD GUARISCO**  
**FOR: SONNIER**  
 (MVN-2015-01796-SB)

-  NON-WETLAND
-  WETLAND (404)
-  WETLAND (10/404)
-  WATERS OF THE U.S. (10/404)

**U.S. ARMY CORPS OF ENGINEERS**  
**APPROVED**  
 JURISDICTIONAL DETERMINATION



DESIGNED BY	N. SONNIE
DRAWN BY	J. GARR
DATE	12/2015
SCALE	AS SHOWN
PROJECT	8504-02
FILE NO.	OVERALL D&C

**EAU BAYOU SWAMP**  
**ROLOGIC RESTORATION**

CITY	ST. MARTIN PARISH GOVERNMENT	SHEET	45
PROJECT	BEAU BAYOU SWAMP HYDRO. REST.	OF	
LOCATION	ST. MARTIN PARISH, LOUISIANA		46

PROJECT 10 - PLAN VIEW

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APPROVED JURISDICTIONAL DETERMINATION FORM  
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

**SECTION I: BACKGROUND INFORMATION**

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): **MAR 28 2016**

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: MVN-2015-01796-SB

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Louisiana County/parish/borough: St. Martin City:  
Center coordinates of site (lat/long in degree decimal format): Lat. 30.194792° N, Long. 91.5383° W.  
Universal Transverse Mercator: 15N

Name of nearest waterbody: Bayou Chene

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Bayou Chene

Name of watershed or Hydrologic Unit Code (HUC): 08080101 Atchafalaya

- Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.  
 Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: March 15, 2016  
 Field Determination. Date(s):

**SECTION II: SUMMARY OF FINDINGS**

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.  
 Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>

- TNWs, including territorial seas  
 Wetlands adjacent to TNWs  
 Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs  
 Non-RPWs that flow directly or indirectly into TNWs  
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs  
 Impoundments of jurisdictional waters  
 Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or 32.6 acres.  
Wetlands: 31.1 acres.

c. Limits (boundaries) of jurisdiction based on: **Established by mean (average) high waters.**

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.



### SECTION III: CWA ANALYSIS

#### A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

##### 1. TNW

Identify TNW: Bayou Chene, Four Hundred Dollar Bayou, Little Bayou de Plomb, Lake Fause Pointe Cut, Bayou La Rose, Spice Island Chute, and tidal wetlands.

Summarize rationale supporting determination: All of the named TNWs and tidal wetlands are subject to the ebb and flow of the tide.

##### 2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": Wetlands above mean high waters are directly neighboring the TNWs.

#### B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

##### 1. Characteristics of non-TNWs that flow directly or indirectly into TNW

###### (i) General Area Conditions:

Watershed size: **Pick List**  
Drainage area: **Pick List**  
Average annual rainfall: inches  
Average annual snowfall: inches

###### (ii) Physical Characteristics:

###### (a) Relationship with TNW:

- Tributary flows directly into TNW.  
 Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.  
Project waters are **Pick List** river miles from RPW.  
Project waters are **Pick List** aerial (straight) miles from TNW.  
Project waters are **Pick List** aerial (straight) miles from RPW.  
Project waters cross or serve as state boundaries. Explain:

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW<sup>6</sup>:  
Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

Tributary is:  Natural  
 Artificial (man-made). Explain:  
 Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):

Average width: feet  
Average depth: feet  
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

Silts  Sands  Concrete  
 Cobbles  Gravel  Muck  
 Bedrock  Vegetation. Type/% cover:  
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime:

Other information on duration and volume:

Surface flow is: **Pick List**. Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks  
 OHWM<sup>6</sup> (check all indicators that apply):  
 clear, natural line impressed on the bank  the presence of litter and debris  
 changes in the character of soil  destruction of terrestrial vegetation  
 shelving  the presence of wrack line  
 vegetation matted down, bent, or absent  sediment sorting  
 leaf litter disturbed or washed away  scour  
 sediment deposition  multiple observed or predicted flow events  
 water staining  abrupt change in plant community  
 other (list):  
 Discontinuous OHWM.<sup>7</sup> Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by:  Mean High Water Mark indicated by:  
 oil or scum line along shore objects  survey to available datum;  
 fine shell or debris deposits (foreshore)  physical markings;  
 physical markings/characteristics  vegetation lines/changes in vegetation types.  
 tidal gauges  
 other (list):

(iii) Chemical Characteristics:

<sup>6</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

<sup>6</sup>A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup>Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size:        acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately (        ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)      Size (in acres)      Directly abuts? (Y/N)      Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

### C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note:** the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

### D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
  - TNWs: linear feet      width (ft). Or, 60.3 acres.
  - Wetlands adjacent to TNWs: +/- 8.4 acres.
2. **RPWs that flow directly or indirectly into TNWs.**
  - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
  - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters:          linear feet          width (ft).  
 Other non-wetland waters:          acres.

Identify type(s) of waters:

**3. Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters:          linear feet          width (ft).  
 Other non-wetland waters:          acres.

Identify type(s) of waters:

**4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.  
 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:  
  
 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area:          acres.

**5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area:          acres.

**6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area:          acres.

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or  
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  
 Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.  
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
 which are or could be used for industrial purposes by industries in interstate commerce.  
 Interstate isolated waters. Explain:  
 Other factors. Explain:

<sup>8</sup>See Footnote # 3.

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup> Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.



**Identify water body and summarize rationale supporting determination:**

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters:

Wetlands: acres.

**F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:

Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

Non-wetland waters (i.e., rivers, streams): linear feet width (ft).

Lakes/ponds: acres.

Other non-wetland waters: acres. List type of aquatic resource:

Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).

Lakes/ponds: acres.

Other non-wetland waters: acres. List type of aquatic resource:

Wetlands: acres.

**SECTION IV: DATA SOURCES.**

**A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):**

Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:

Data sheets prepared/submitted by or on behalf of the applicant/consultant.

Office concurs with data sheets/delineation report.

Office does not concur with data sheets/delineation report.

Data sheets prepared by the Corps:

Corps navigable waters' study:

U.S. Geological Survey Hydrologic Atlas:

USGS NHD data.

USGS 8 and 12 digit HUC maps.

U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 Lake Mongoulots.

USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey of St. Martin Parish, Louisiana.

National wetlands inventory map(s). Cite name: PFO1/2C, PFO1/2F, PFO1C, R2UBH.

State/Local wetland inventory map(s):

FEMA/FIRM maps:

100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)

Photographs:  Aerial (Name & Date): ArcMap '98, '04, '05, '06, '08, '10, '12, '13.

or  Other (Name & Date): Google EarthPRO, Consultant photos.

Previous determination(s). File no. and date of response letter:

Applicable/supporting case law:

Applicable/supporting scientific literature:

Other information (please specify): LIDAR.

**B. ADDITIONAL COMMENTS TO SUPPORT JD: This site consists of uplands, wetlands, and TNWs.**

# JOINT PUBLIC NOTICE

May 30, 2016

U.S. Army Corps of Engineers  
New Orleans District  
Regulatory Branch  
Post Office Box 60267  
New Orleans, LA 70160-0267

State of Louisiana  
Department of Environmental Quality  
Water Quality Certification Section  
Post Office Box 4313  
Baton Rouge, LA 70821-4313

Project Manager: Michael H. Herrmann  
(504) 862-1954  
Michael.h.herrmann@usace.army.mil  
DA Permit Number: MVN-2016-01796-WLL

Project Manager: Elizabeth Hill  
(225) 219-3225  
WQC Number: WQC 160523-01

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: [X] Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 U.S.C. 403); and/or [X] Section 404 of the Clean Water Act (86 Stat. 816; 33 U.S.C. 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 La. R.S. 30:2074(A)(3) and provisions of Section 401 of the Clean Water Act (P.L. 95-217; 33 U.S.C. 1341).

## WATER QUALITY ENHANCEMENT PROJECT IN ST MARTIN PARISH

**Name of Applicant:** St.Martin Parish Government, c/o: Sellers & Associates, Inc., 148-B Easy Street, Lafayette, LA 70506.

**Location of Work:** Beau Bayou Water Management Unit, approximately 14 miles downstream from Butte Larose, Louisiana in St. Martin Parish, (Lat 30.145N, Long -91.595W), as shown on the attached drawings. Project is located in the Atchafalaya Basin Watershed H.U.C. 08080101.

**Character of Work:** Conduct mechanized clearing, snagging, excavation and placement of spoil material along 9 miles of existing channels within the Beau Bayou Water Management Unit. Vegetative debris and excessive overgrowth of woody vegetation and trees will be removed all for the purpose of restoring and opening channels for the purpose of restoring water quality, sheetflow, and circulation within the surrounding swamp and opening existing spoil banks to reduce un-natural ponding.

The proposed project will impact the following:

Total Direct Wetland Impacts (Fill, Excavation & Clearing): 51.6 acres  
Total Excavation of Wetlands: 10.9 acres; 67,939 Cubic Yards  
Total Excavation of Waterbottoms: 27.0 acres; 68,592 cubic yards  
Total Fill in Wetlands: 34.1 acres; 102,515 cubic yards  
Total Clearing of Forested Wetlands: 6.6 acres; 1,287 cubic yards

The applicant proposes to compensate for all unavoidable, project related impacts to jurisdictional wetlands through the purchase of mitigation credits from a Corps approved mitigation bank.

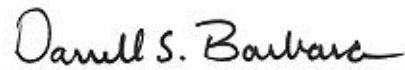
The comment period for the Department of the Army (DA) permit application and the Louisiana Department of Environmental Quality WQC will close **20 days** from the date of this joint public notice. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this DA permit and WQC request and must be mailed, so as to be received before or by the last day of the comment period. Letters concerning the DA permit application must reference the applicant's name and the DA Permit Number,

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 U.S. Environmental Protection Agency. Also, a certification that the proposed activity will not violate applicable water quality standards will be required from the Louisiana 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.

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



Darrell S. Barbara  
Chief, Western Evaluation Section  
Regulatory Branch

Enclosure

CEMVN-OD-SW

August 17, 2016

MEMORANDUM FOR: Operations Manager for Atchafalaya Basin  
ATTENTION: Tim Connell

SUBJECT: Review of Sec. 408 for Regulatory Permit Application.

1. The attached permit application is forwarded for your Sec 408 decision.
2. Information relative to this application is as follows:

**APPLICANT:** St. Martin Parish Government

**APPLICATION NUMBER:** MVN 2015-01796-WLL

**PROJECT MANAGER:** Michael Herrmann

Martin S. Mayer  
Chief, Regulatory Branch

Encls

CEMVN-OD-D      1st end

DATE: September 7, 2016

FOR C/ REGULATORY BRANCH

Reference permit application forwarded for review:

- a. No objection. 408 permission not required.
- b. 408 permission granted. Copy of permission letter attached.
- c. 408 objection. Copy of denial letter attached.

We have no objections to the subject permit. The excavated material shall be deposited within disposal areas along the existing spoil banks of the channels or as shown on the permit drawings. If the applicant exercise the option of depositing the excavated material along the edges of the Atchafalaya River, the 408 permission will be required.

16-9343

22-Aug-16

**CEMVN-OD-D**

**MEMORANDUM FOR:** Chief, Engineering Division (CEMVN-ED)

**SUBJECT:** Review of Permit Application for Comment and Return

1. Please forward the enclosed permit application to the appropriate section(s) for review and comment. Utilize the funded work item (FWI) 2118F5 provided for all labor.

Organization Code-Description	FWI 2118F5
B2L0300-Geotech Br Labor	
B2L0400-Civil Br Labor (only ED-LW: Waterways)	
B2L0900-Structures Br Labor	
B2L0200-Hydraulics Br	
B2L0500-Relocations Br Labor	

2. Permit Information:

APPLICANT: St Martin Parish Government

APPLICANT No: MVN-2015-01796-WLL

3. Proposed work: Clear and snag approximately 9 miles of existing channels and dredge spoil material. Material will be deposited within disposal areas along the existing spoil banks of the channels or as shown in the drawings.

4. The permit application point-of-contact is AnhThu Nguyen, extension 2153 or Kirk Dietrich, extension 2494.

Kirk Dietrich  
DIETRICH.KIRK.  
EDWARD.1215  
for 649713  
Operations Manager  
Operations Division

Digitally signed by  
DIETRICH.KIRK.EDWARD.1215649713  
DN: cn=US, ou=US Government,  
ou=OD, ou=PEI, ou=USA,  
c=DIETRICH.KIRK.EDWARD.12156497  
13  
Date: 2016.08.22 09:38:43 -0500



MEMORANDUM FOR Chief, Operations Division (CEMVN-OD-D/AnhThu Nguyen)

SUBJECT: Review of Permit MVN-2015-01796-WLL Application from St. Martin Parish Government to construct the Beau Bayou Swamp Hydrologic Restoration Project with clearing, snagging, and excavation of approximately 9 miles of existing channels within the Atchafalaya Basin, St. Martin Parish, LA (Mailtrax #16-9343)

1. Reference CEMVN-OD-D memorandum dated 22 August 2016 requesting review of the subject permit (Encl).
2. Engineering Division has no adverse comments regarding the subject permit request.
3. Engineering Division POC for this review is Kim Tessitore, extension 1795.

Encl



JEAN S. VOSSEN, P.E.  
Chief, Engineering Division



REPLY TO  
ATTENTION OF

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

NOV 03 2016

FILE

Operations Division  
Western Evaluation Section

SUBJECT: MVN-2015-01795-WLL

St. Martin Parish Government  
Attn: Nick Sonnier  
C/O: Sellers and Associates, Inc.  
148-B Easy Street  
Lafayette, LA 70506

Dear Mr. Sonnier:

This is in regard to the above subject Department of the Army permit application requesting authorization to conduct mechanized clearing, snagging, excavation and placement of spoil material along 9 miles of existing channels and remove excessive overgrowth of woody vegetation and trees, for the purpose of restoring and opening channels, restoring water quality, sheet-flow, and circulation within the surrounding swamp in the Beau Bayou Water Management Unit in the Atchafalaya Basin, St. Martin Parish, Louisiana (30.145 N, -91.595 W).

In order to satisfy the requirements of our regulations, and comply with our 1990 Memorandum of Agreement with the US Environmental Protection Agency (EPA), it has been determined that **compensatory mitigation will be required** for unavoidable impacts to jurisdictional wetlands, associated with your proposed project.

Attached is a list of approved mitigation banks, sponsor contact information, and necessary credits suitable for your project. Your compensatory mitigation requirements may be met by obtaining the appropriate credits from the sponsor/sponsors listed on the enclosure. You must insure that the selected bank sponsor(s) provides written notification to the US Army Corps of Engineers, New Orleans District, Regulatory Branch, that the appropriate compensatory mitigation credits have been obtained and the credit procurement has been recorded into the Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS). It is also important that you contact the bank sponsor/sponsors listed to ensure the availability of the prescribed acreage and resource type.

Please advise your project manager within **15 days** of the date of this letter, if you chose to utilize an approved mitigation bank for compensating project related impacts and provide the mitigation bank you have entered into an agreement with. Once the above requirements are met, we will continue with our processing of your subject application.

If you have any questions, please contact your project manager with this office, Michael H. Herrmann at (504) 862-1954 or [michael.h.herrmann@usace.army.mil](mailto:michael.h.herrmann@usace.army.mil).

Sincerely,

*Danell S. Barbara*

*for:* Martin S. Mayer  
Chief, Regulatory Branch  
Operations Division

*Enclosure*

**APPROVED MITIGATION BANKS FOR  
MVN-2015-01795-WLL**

**For impacts within the Atchafalaya Basin Watershed:**

**1. Bank Name: Bayou Fisher Mitigation Bank**

**Bank Sponsor: Delta Land Services, LLC**  
1090 Cinclair Drive  
Port Allen, LA 70767  
Email: Daniel@deltaland-services.com  
Phone: (225) 388-5146

**Bank POC: Ms. Codi Moore**  
1090 Cinclair Drive  
Port Allen, LA 70767  
Email: [codi@deltaland-services.com](mailto:codi@deltaland-services.com)  
Phone: (225) 388-5146

**Number of Habitat Acres/Credits required: 44.3 acres of bottomland hardwoods.**

**OR:**

**2. Bank Name: Marine Bayou Mitigation Bank**

**Bank Sponsor: JMB Partnership, LLC**  
203 Main Street  
Franklin, LA 70538  
Email: [Russell@jmbcompanies.com](mailto:Russell@jmbcompanies.com)  
Phone: (337) 828-7090

**Bank POC: Mr. Russell Walters**  
203 Main Street  
Franklin, LA 70538

**Number of Habitat Acres/Credits required: 59.8 acres of bottomland hardwoods.**



December 1, 2016

**Via Email**

U.S. Corps of Engineers  
Regulatory Branch  
PO Box 60267  
New Orleans, LA 70160  
ATTN: Mr. Michael H. Herrmann

RE: Bayou Fisher Mitigation Bank, Sale of 44.3 acres of Bottomland Hardwood for Corps permit number **MVN-2015-01795-WLL**

Dear Mr. Little:

The Bayou Fisher Mitigation Bank has made arrangements with St. Martin Parish Government to purchase **44.3** acres of bottomland hardwoods for unavoidable impacts associated with work authorized by the Department of the Army permit number MVN-2015-01795-WLL. The Bayou Fisher Mitigation Bank assumes the responsibility for the permittee's compensatory mitigation requirements (i.e., to implement, assure performance, and provide long-term management of the compensatory mitigation project) in accordance with provisions of the Mitigation Banking Instrument governing this bank. If you have any further questions about this correspondence, please feel free to contact me at 225-388-5151 or electronic mail at [codi@deltaland-services.com](mailto:codi@deltaland-services.com).

Sincerely,

Codi Moore  
Delta Land Services, LLC

Cc: Ms. Brenda Archer, U.S. Army Corps of Engineers  
Mr. George Guerin, Delta Land Services, LLC  
Mr. Nick Sonnier, Sellers & Associates, Inc.



**Herrmann, Michael H Jr CIV USARMY CEMVN (US)**

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**From:** Codi Moore <codi@deltaland-services.com>  
**Sent:** Thursday, December 01, 2016 8:17 AM  
**To:** Herrmann, Michael H Jr CIV USARMY CEMVN (US)  
**Cc:** Archer, Brenda A CIV USARMY CEMVN (US); George Guerin; Nick Sonnier  
**Subject:** [EXTERNAL] St. Martin Parish Government Mitigation Requirement (Bayou Fisher Mitigation Bank) - MVN 2015-01795-WLL  
**Attachments:** DLS\_St.Martin\_acceptance\_MVN-2015-01795-WLL.pdf

Mr. Herrmann,

Please see the attached mitigation acknowledgement/confirmation letter for the above referenced project (Permit No. MVN-2015-01795-WLL). On behalf of Delta Land Services and Bayou Fisher Mitigation Bank, we will immediately enter the mitigation credits purchase into the RIBITS database. Please call if you have any questions.

Thank you,

Codi

Codi Moore

Delta Land Services

1090 Cinclare Dr.

Port Allen, LA 70767

225-718-0428 cell

225-388-5151 direct

225-343-3900 office

225-388-5214 fax

Blockedwww.deltaland-services.com

Louisiana Wetland Rapid Assessment Method (LRAM)

CEMVN Acct # MVN-2015-01795-WLL  
 Acres Impacted 17.6  
 Watershed Basin Atchafalaya

Habitat: BLH Elem 1

Impact Factors		Imp 1	Imp 2	Imp 3	Imp 4	Imp 5	Imp 6	Imp 7
Wetland Status	Secure	Secure	Secure	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0
Habitat Condition	Med	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrologic Condition	High	High	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Negative Influences	Low	Low	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
Impact Type	Full/Perm	Partial/Temp	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	3.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Sum:	10.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0
Area:	16.5	1.1						
Sum x Area Affected:	165.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0
Σ Impacts:								

Bank Mit	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7
Select Bank:		Bayou/Fisher BLH	Bayou/Teche III BLH	BigBard-BLH	MarineBayou BLH	Pick Here	Pick Here
Mitigation Potential:	#N/A	6.5	5.2	5.9	4.8	#N/A	#N/A
Acres Required:	#N/A	26.7	33.3	29.4	36.1	#N/A	#N/A

*No credits NO credits*



Louisiana Wetland Rapid Assessment Method (LRAM)

CEMVN Acct # **MVN-2015-01796-WLL**  
 Acres Impacted **2.4**  
 Watershed Basin **Atchafalaya**

Habitat: **SW Elem 2**

Impact Factors	Watershed Basin						
	Imp 1	Imp 2	Imp 3	Imp 4	Imp 5	Imp 6	Imp 7
Wetland Status	Secure	Secure	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	2.0	0.0	0.0	0.0	0.0	0.0
Habitat Condition	Med	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	2.0	0.0	0.0	0.0	0.0	0.0
Hydrologic Condition	High	High	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	3.0	3.0	0.0	0.0	0.0	0.0	0.0
Negative Influences	Low	Low	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Impact Type	Full/Perm	Partial/Temp	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	3.0	0.5	0.0	0.0	0.0	0.0	0.0
Sum:	10.0	7.5	0.0	0.0	0.0	0.0	0.0
Area:	2.2	0.2					
Sum x Area Affected:	22.0	1.5	0.0	0.0	0.0	0.0	0.0

Σ Impacts: 0.0

Bank Mit	Bank						
	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7
Select Bank:	Pick Here	BayouFisher BLH	BayouTchreuil BLH	BigBend BLH	MarineBayou BLH	Pick Here	Pick Here
Mitigation Potential:	#N/A	6.5	5.2	5.9	4.8	#N/A	#N/A
Acres Required:	#N/A	3.6	4.5	4.0	4.9	#N/A	#N/A

*No Credits*      *No Credits*





Louisiana Wetland Rapid Assessment Method (LRAM)

CEM/VN Acct # MVN-2015-01795-WLL  
 Acres Impacted 3.5  
 Watershed Basin Atchafalaya

Habitat: BLH Elem 3

Impact Factors	Impacts						
	Imp 1	Imp 2	Imp 3	Imp 4	Imp 5	Imp 6	Imp 7
Wetland Status	Secure	Secure	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	2.0	0.0	0.0	0.0	0.0	0.0
Habitat Condition	Med	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	2.0	0.0	0.0	0.0	0.0	0.0
Hydrologic Condition	High	High	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	3.0	3.0	0.0	0.0	0.0	0.0	0.0
Negative Influences	Low	Low	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Impact Type	Full/Perm	Partial/Temp	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	3.0	0.5	0.0	0.0	0.0	0.0	0.0
Sum:	10.0	7.5	0.0	0.0	0.0	0.0	0.0
Area:	2.9	0.6					
Sum x Area Affected:	29.0	4.5	0.0	0.0	0.0	0.0	0.0

Σ Impacts: 0.0

Bank Mit	Bank						
	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7
Select Bank:	Pick Here	BayouFisher BLH	BayouTeeth BLH	<del>BigBead-BH</del>	MarineBayou BLH	Pick Here	Pick Here
Mitigation Potential:	#N/A	6.5	5.2	5.9	4.8	#N/A	#N/A
Acres Required:	#N/A	5.2	6.4	5.7	7.0	#N/A	#N/A

No credits  
 No credits



Louisiana Wetland Rapid Assessment Method (LRAM)

CEM/N Acct # 2015-01795  
 Acres Impacted 0.4  
 Watershed Basin Atchafalaya

Habitat: BLH Elem 5

Impact Factors	Imp 1	Imp 2	Imp 3	Imp 4	Imp 5	Imp 6	Imp 7	
	Wetland Status	Secure	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
Habitat Condition	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	
Hydrologic Condition	High	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	
Negative Influences	Low	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	
Impact Type	Full/Perm	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	
Sum:	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
Area:	10.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sum x Area Affected:	0.4	0.0	0.0	0.0	0.0	0.0	0.0	
Σ Impacts:								0.0

Bank Mit	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7
	Select Bank:	BayouFisher BLH	BayouTachett BLH	BigBend BLH	MarineBayou BLH	Pick Here	Pick Here
Mitigation Potential:	6.5	5.2	5.9	4.8	#N/A	#N/A	#N/A
Acres Required:	0.6	0.8	0.7	0.8	#N/A	#N/A	#N/A

No credits No credits



Louisiana Wetland Rapid Assessment Method (LRAM)

CEM/NV Acct # 2015-01795  
 Acres Impacted 1.2  
 Watershed Basin Atchafalaya

Habitat: BLH Elem 6a

Impact Factors	Imp 1	Imp 2	Imp 3	Imp 4	Imp 5	Imp 6	Imp 7	
	Wetland Status	Secure	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
Habitat Condition	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	
Hydrologic Condition	High	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	
Negative Influences	Low	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	
Impact Type	Full/Perm	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	
Sum:	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
Area:	10.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sum x Area Affected:	1.2	0.0	0.0	0.0	0.0	0.0	0.0	
Σ Impacts:								0.0

Bank Mit	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7
	Select Bank:	BayouFisher BLH	BayouTachett BLH	BigBend BLH	MarineBayou BLH	Pick Here	Pick Here
Mitigation Potential:	6.5	5.2	5.9	4.8	#N/A	#N/A	#N/A
Acres Required:	1.8	2.3	2.0	2.5	#N/A	#N/A	#N/A

*No credits*      *No credits*





Louisiana Wetland Rapid Assessment Method (LRAM)

CEMWN Acct #

2015-01795

Acres Impacted

1.9

Watershed Basin

Atchafalaya

Habitat:

SW Elem 6b

Impact Factors	Watershed Basin						
	Imp 1	Imp 2	Imp 3	Imp 4	Imp 5	Imp 6	Imp 7
Wetland Status	Secure	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Habitat Condition	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrologic Condition	High	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Negative Influences	Low	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
Impact Type	Full/Perm	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Sum:	10.0	0.0	0.0	0.0	0.0	0.0	0.0
Area:	1.9						
Sum x Area Affected:	19.0	0.0	0.0	0.0	0.0	0.0	0.0

Σ Impacts: 0.0

Bank Mit	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7
	Select Bank:	BayouFisher BLH	BayouTeehalli BLH	BigBand-BLH	MarineBayou BLH	Pick Here	Pick Here
Mitigation Potential:	6.5	5.2	5.9	4.8	#N/A	#N/A	#N/A
Acres Required:	2.9	3.7	3.2	4.0	#N/A	#N/A	#N/A

No credits No credits



Louisiana Wetland Rapid Assessment Method (LRAM)

CEM/VN Acct # 2015-01795  
 Acres Impacted 1.6  
 Watershed Basin Atchafalaya

Habitat: SW Elem 7

Impact Factors		Imp 1	Imp 2	Imp 3	Imp 4	Imp 5	Imp 6	Imp 7
Wetland Status	Secure	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Habitat Condition	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrologic Condition	High	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Negative Influences	Low	Pick Here	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
Impact Type	Full/Perm	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sum:	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Area:	1.6							
Sum x Area Affected:	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Σ Impacts: 0.0

Bank Mit	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7
Select Bank:	BayouFisher BLH	BayouTeche BLH	BigBand BLH	MarineBayou BLH	Pick Here	Pick Here	Pick Here
Mitigation Potential:	6.5	5.2	5.9	4.8	#N/A	#N/A	#N/A
Acres Required:	2.5	3.1	2.7	3.3	#N/A	#N/A	#N/A

No. credit  
 No. credit





Louisiana Wetland Rapid Assessment Method (LRAM)

CEMWN Acct #

2015-01795

Acres Impacted

0.5

Watershed Basin

Atchafalaya

Habitat:

BLH Elem 9

Impact Factors		Imp 1	Imp 2	Imp 3	Imp 4	Imp 5	Imp 6	Imp 7
Wetland Status	Secure	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Habitat Condition	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hydrologic Condition	High	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Negative Influences	Low	Pick Here	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
Impact Type	Full/Perm	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sum:	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Area:	0.5							
Sum x Area Affected:	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Σ Impacts: 0.0

Bank Mit	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7
Select Bank:	BayouFisher BLH	BayouTeche BLH	BigBend BLH	MarineBayou BLH	Pick Here	Pick Here	Pick Here
Mitigation Potential:	6.5	5.2	5.9	4.8	#N/A	#N/A	#N/A
Acres Required:	0.8	1.0	0.8	1.0	#N/A	#N/A	#N/A

No credits No credits



Louisiana Wetland Rapid Assessment Method (LRAM)

CEMVN Acct # 2015-01795  
 Acres Impacted 0.1  
 Watershed Basin Atchafalaya

Habitat: BLH Elem 10

Impact Factors	Imp 1	Imp 2	Imp 3	Imp 4	Imp 5	Imp 6	Imp 7
	Wetland Status	Secure	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
Habitat Condition	Med	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
Hydrologic Condition	High	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
Negative Influences	Low	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
Impact Type	Full/Perm	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here	Pick Here
Sum:	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Area:	10.0	0.0	0.0	0.0	0.0	0.0	0.0
Sum x Area Affected:	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Σ Impacts:	1.0	0.0	0.0	0.0	0.0	0.0	0.0

Bank Mit	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7
	Select Bank:	BayouFisher BLH	BayouTchellil BLH	BigBend BLH	MarineBayou BLH	Pick Here	Pick Here
Mitigation Potential:	6.5	5.2	5.9	4.8	#N/A	#N/A	#N/A
Acres Required:	0.2	0.2	0.2	0.2	#N/A	#N/A	#N/A

No No  
 Credit credits



BEAU BAYOU SWAMP HYDROLOGIC RESTORATION  
 LRAM WORKSHEET SUMMARY  
 10/20/2016

Element No.	Habitat	Activity	Wetland Status		Habitat Condition		Hydrologic Condition		Negative Influences		Impact Type		Sum of Impact Factors	Sum x Area Affected
			Status	Value	Status	Value	Status	Value	Status	Value	Status	Value		
1	Bottomland Hardwood	Excavation	Secure	2	Medium	2	Medium	2	High	-0.5	Full/Perm	3	8.5	54.4
1	Bottomland Hardwood	Clearing & Snagging	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	6.6
1	Bottomland Hardwood	Clearing & Fill	Secure	2	Medium	2	Medium	2	High	-0.5	Full/Perm	3	8.5	85.85
2	Bald Cypress/Tupelo	Excavation	Secure	2	Medium	2	Medium	2	High	-0.5	Full/Perm	3	8.5	5.95
2	Bald Cypress/Tupelo	Clearing & Snagging	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	1.2
2	Bald Cypress/Tupelo	Clearing & Fill	Secure	2	Medium	2	Medium	2	High	-0.5	Full/Perm	3	8.5	12.75
3	Bottomland Hardwood	Excavation	Secure	2	Medium	2	Medium	2	High	-0.5	Full/Perm	3	8.5	9.35
3	Bottomland Hardwood	Clearing & Snagging	Secure	2	Medium	2	Medium	2	High	-0.5	Partial/Temp	0.5	6	3.6
3	Bottomland Hardwood	Clearing & Fill	Secure	2	Medium	2	Medium	2	High	-0.5	Full/Perm	3	8.5	15.3
5	Bottomland Hardwood	Excavation	Secure	2	Low	1	Low	1	High	-0.5	Full/Perm	3	6.5	1.3
5	Bottomland Hardwood	Clearing & Fill	Secure	2	Low	1	Low	1	High	-0.5	Full/Perm	3	6.5	1.3
6A	Bottomland Hardwood	Excavation	Secure	2	Medium	2	Medium	2	High	-0.5	Full/Perm	3	8.5	5.95
6A	Bottomland Hardwood	Clearing & Fill	Secure	2	Medium	2	Medium	2	High	-0.5	Full/Perm	3	8.5	4.25
6B	Cypress/Tupelo	Excavation	Secure	2	Medium	2	Medium	2	High	-0.5	Full/Perm	3	8.5	8.5
6B	Cypress/Tupelo	Clearing & Fill	Secure	2	Medium	2	Medium	2	High	-0.5	Full/Perm	3	8.5	7.65
7	Cypress/Tupelo	Excavation	Secure	2	Medium	2	Medium	2	High	-0.5	Full/Perm	3	8.5	6.8
7	Cypress/Tupelo	Clearing & Fill	Secure	2	Medium	2	Medium	2	High	-0.5	Full/Perm	3	8.5	6.8
9	Bottomland Hardwood	Clearing & Fill	Secure	2	Low	1	Medium	2	High	-0.5	Full/Perm	3	7.5	3.75
10	Bottomland Hardwood	Clearing & Fill	Secure	2	Low	1	Medium	2	High	-0.5	Full/Perm	3	7.5	0.75
Total													242.05	

Bottomland Hardwood Credits	192.4
Cypress/Tupelo Credits	49.65

1 17.6  
 2 2.4  
 3 3.5  
 5. 4  
 6A. 1.2  
 6B. 1.9  
 7. 1.6  
 9. 5  
 10. 1



Element 7 16.5 acres perm impact BLH  
1.1 acres temp impact BLH

Bayou Fisher 26.7~~6~~ acres BLH required  
Bayou Tech 3 33.3~~9~~ acres BLH required  
BIG BEND 29.4 acres BLH required  
MARINE BAYOU 35.6 " " "  
36.1

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Element 2 2.2 acres of perm. impact SW  
.2 acres of temp. impact SW

Bayou Fisher SW 3.6 acres of SW required

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Element 3 2.9 acres of perm. impact BLH  
0.6 acres of temp impact BLH

Bayou Fisher BLH 5.2 acres of BLH required  
Bayou Tech 3 BLH 6.4 acres of BLH required  
BIG BEND 5.9 acres  
MARINE BAYOU 7.0 acres

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Element 5 0.4 acres of perm. impact BLH

Bayou Fisher BLH .6 acres of BLH required  
Bayou Tech III .8 acres  
BIG BEND .7 acres  
MARINE BAYOU .8 acres

ELEMENT 6 A 1.2 acres of perm. impact BLH  
Bayou Fisher BLH 1.8 acres of ~~perm impact~~ BLH  
Bayou Tech 3 BLH 2.3 acres of ~~perm imp~~ BLH  
BIG BOND BLH 2.0 acres BLH  
MARINE BAYOU BLH 2.5

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ELEMENT 6 B 1.9 acres of perm. impact SW

Bayou Fisher SW 2.9 acres of SW

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ELEMENT 7 1.6 acres of perm impact SW

BAYOU FISHER SW 2.5 acres of SW

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ELEMENT 9 0.5 acres of BLH perm. impact

Bayou Fisher BLH 0.8

Bayou Tech BLH 1.0

BIG BOND BLH 0.8

MARINE BAYOU BLH 1.0

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ELEMENT 10 0.1 acres of BLH perm impact

FISHER 0.2

TECH 0.2

B. BOND 0.2

MARINE 0.2

35 blh

7 SW