



# PERMIT APPLICATION

Permit # 929 (Assigned by Department)

The Louisiana Department of Wildlife and Fisheries' Scenic Rivers program is authorized by LRS title 56, Chapter 9 Part II. This law requires permits authorizing activities in or affecting rivers that have been designated by the Louisiana Legislature as Natural and Scenic. Information provided on this form will be used in evaluating the application for a permit. Information in this application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary, however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

## APPLICANT INFORMATION

Name of Applicant Louisiana Department of Transportation and Development	Name of Agent (if any)
Address 1201 Capitol Access Rd.	Address
Address	Address
City, State, Zip Baton Rouge, LA 70802	City, State, Zip
Phone (225) 242-4518	Phone

## DESCRIPTION OF THE PROPOSED ACTIVITY

Brief summary of the description and purpose of the proposed activity (details to be attached as a separate document)

The Louisiana Department of Transportation and Development (DOTD) is proposing to replace one bridge, over Middle Fork Bayou D'Arbonne, on LA 520 in Claiborne Parish.

Is any portion of the activity complete? YES  NO (If yes indicate month and year of completion)

## LOCATION OF PROPOSED ACTIVITY

Stream Name	Middle Fork Bayou D'Arbonne	Names, Addresses, Phone Numbers of Adjacent Property Owners
Parish	Claiborne Parish	
Section	4	
Township	22N	
Range	06W	
Latitude/Longitude	Latitude 32.93032, Longitude -92.99446	

## ENVIRONMENTAL ASSESSMENT

Must be a separate document. See the attached instruction sheet for completing the assessment.

## CONFIRMATION OF INFORMATION ACCURACY

Application is hereby made for a Scenic River Use Permit to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that, to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities, or I am acting as the duly authorized agent of the applicant.

Maia Bernard  
Signature

6 April 2015  
Date



Office of the Secretary  
PO Box 94245 | Baton Rouge, LA 70804-9245  
ph: 225-379-1200 | fx: 225-379-1851

Bobby Jindal, Governor  
Sherri H. LeBas, P.E., Secretary

April 6, 2015

**STATE PROJECT NO. H.001763**  
**FEDERAL AID PROJECT NO. H001763**  
**LA 520: MIDDLE FORK BAYOU D'ARBONNE BRIDGE**  
**PARISH: CLAIBORNE**

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Mr. Chris Davis  
LDWF Scenic Rivers Program  
P.O. Box 9800  
Baton Rouge, LA 70898-9000

Dear Mr. Davis:

The Louisiana Department of Transportation and Development (DOTD) is proposing to replace the Middle Fork Bayou D'Arbonne Bridge on LA 520 in Claiborne Parish. The bridge is located at Latitude 32.93032, Longitude -92.99446 in Section 4 Township 22N Range 06W.

If you have any questions or need additional information, please contact Tiffinee Brown at (225) 242-4518.

Sincerely,

  
for Noel Ardoin  
Environmental Engineer Administrator

Enclosures  
NA/tnb  
cc: Ms. Traci Johnson

## **II. DESCRIPTION OF THE PROPOSED ACTION**

The DOTD is proposing to replace one bridge, over Middle Fork Bayou D'Arbonne, on LA 520 in Claiborne Parish. The bridge is located at Latitude 32.927487, Longitude -92.994729 in Section 4 Township 22N Range 06W.

The existing Middle Fork Bayou D'Arbonne Bridge (Structure No. 04141010109401) is 280 feet long with a 24-foot clear roadway width. Constructed in 1961, the existing structure is a Concrete Flat Span bridge with 14 spans.

The proposed new Middle Fork Bayou D'Arbonne Bridge would be 300 feet long with a 34-foot clear roadway consisting of two 11-foot travel lanes and two 6-foot shoulders. It would utilize eight 40 foot Quad Beam Spans, and two 40-foot concrete approach slabs, one at each end.

LA 520 would remain open during construction, as a diversion road and 160-foot diversion bridge would be constructed east of the existing alignment. The project limits encompass 6.34 acres, which consists of 4.79 acres of existing right-of-way, and 1.55 acres of construction servitude. Overall project length would be approximately 0.510 miles. This information was changed slightly from the Categorical Exclusion document due to the updates of the final Right-of-Way Maps.

LA 520 is classified as a Rural Major Collector (RC-2). Average Daily Traffic (ADT) for the Middle Fork Bayou D'Arbonne Bridge was 750 vehicles per day (vpd) for the year 2012. The projected ADT for the year 2032 is 1,025 vpd.



## State of Louisiana

BOBBY JINDAL  
GOVERNOR

DEPARTMENT OF WILDLIFE AND FISHERIES

ROBERT J. BARHAM  
SECRETARY

Dear Scenic River Permit Applicant:

Please review and concur on the following statement regarding the issuance of permits by the Louisiana Department of Wildlife and Fisheries. This agreement must be signed and returned before a Scenic River Permit can be issued.

"I have been advised and do understand that by applying for and accepting a Scenic Rivers permit issued by the Louisiana Department of Wildlife and Fisheries, I am being allowed to engage in an activity which would otherwise be prohibited by law or for which a permit is required. I understand that the permit is not a license and confers no property right upon me. I specifically agree to abide by all State and Federal fish and wildlife laws and regulations, and all State and Federal laws and regulations which relate to this permit or the permitted activity, and by all other terms and conditions of this permit. I understand that the permit for which I am applying may be suspended, annulled, withdrawn or revoked and that I may be assessed civil penalties, all in accordance with the provision of the Louisiana Administrative Procedure Act, and that I may be denied future permits as a consequence of my failure to fully and completely comply with the terms and conditions of the permit, as well as other laws and regulations pertinent thereto. If served with or notified of a cease and desist order signed by the Scenic Rivers Administrator, I agree to immediately and without delay cease all activities and operations which relate to the permitted activity or which are impacting the Scenic River, until such time as the matter can be resolved in an adjudicatory hearing pursuant to the Louisiana Administrative Procedure Act. I understand and agree that any permit issued to me by the Louisiana Department of Wildlife and Fisheries is in the nature of a privilege which is being voluntarily extended to me by the Department and the failure on my part to cooperate with the Department can result in the loss of the privilege conferred and the denial of future requests for permits. By accepting this permit, I evidence my agreement to be bound by all conditions and stipulations set forth herein."

A handwritten signature in blue ink, appearing to read "Mona Bernard".

Authorized Signature

A handwritten date in blue ink, "6 April 2015".

Date

REV. 12/7/98

**CLASS B PERMIT REQUEST**

**PREPARED FOR:  
LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES**

**REGARDING:**

**MIDDLE FORK BAYOU D'ARBONNE  
LA 520  
CLAIBORNE PARISH**

**PREPARED BY:  
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT**

**April 2015**



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## I. INTRODUCTION

Louisiana Highway 520 begins north of the city limits of Homer, and proceeds north-northeast towards its junction with Louisiana Highway 2-A. Highway 520 runs concurrently with Highway 2-A for approximately  $\frac{3}{4}$  mile before diverging to the north, ending at its junction with Louisiana Highway 161 approximately 1 mile south of the Louisiana-Arkansas border.

Listed in the Louisiana Department of Wildlife and Fisheries Natural and Scenic River System, Middle Fork Bayou D'Arbonne runs southeast from its origin in the town of Haynesville in Claiborne Parish to its entrance into Lake D'Arbonne in Union Parish.

The Louisiana Department of Transportation and Development (DOTD) is proposing to replace one bridge, over Middle Fork Bayou D'Arbonne, on LA 520 in Claiborne Parish. The bridge is located at Latitude 32.927487, Longitude -92.994729 in Township 22N, Range 06W Section 4.

Environmental documentation in compliance with the National Environmental Policy Act (NEPA) process is being prepared for this project in the form of a Categorical Exclusion. As such, it is anticipated that this activity will be covered under a U.S. Army Corps of Engineers (Corps) Nationwide 23 permit. A pre-construction notification was submitted to the Corps. Coordination was done with the U.S. Coast Guard for Navigability determination of the bridge within the proposed project. On August 7, 2012 the U.S. Coast Guard determined the bridge replacement project is exempt under the Surface Transportation Authorization Act (STAA) from Coast Guard Permitting. A Cultural Resources Survey was conducted by DOTD staff on July 31 and August 6, 2012 and no archaeological sites were identified within the proposed right-of-way. The bridge within the proposed project (Structure Number 04141010109401) was determined ineligible for the National Register of Historic Places. It was determined that no Historic Places will be affected by the construction of the proposed project. The State Historic Preservation Office (SHPO) concurred with this finding on October 15, 2012.

The DOTD Environmental Section has prepared the following report in support of the State's Scenic River Permit Application process in an attempt to ensure the preservation and protection of Louisiana's natural resources. It is the Section's opinion that this proposed action will not significantly disrupt the unique characteristics that make Middle Fork Bayou D'Arbonne one of Louisiana's Scenic Rivers. This action will provide the motoring public a safer route on an existing roadway within this distinctive area.

### III. DESCRIPTION OF THE PROJECT AREA

The general area of the proposed project in Claiborne Parish is within the flood plain of Middle Fork Bayou D'Arbonne. With the exception of the existing roadbed and other man-made entities, the landscape within the project area is predominately flood plain and natural levees dominated by level loamy soils.

The Middle Fork of Bayou D'Arbonne flows southeast for 43 miles from its origin near the Louisiana-Arkansas border in the town of Haynesville, Louisiana and winds southeast through Claiborne Parish. It then defines the border between Lincoln and Union Parishes before its entrance to Lake D'Arbonne in Union Parish. It flows through a relatively narrow band of bottomland hardwoods flanked by upland mixed pine/hardwoods and stands of loblolly pine. The pristine, natural setting of the 90% undeveloped corridor fosters high scenic value. Game species, both fish and wildlife are probably optimum for the habitat carrying capacity. Except for the lower end adjacent to Lake D'Arbonne that has a public boat ramp and recreation facilities, the stream has limited access due to land usage.

Recent alluvial deposits formed the soils found in the area of the proposed project, specifically Iuka and Dela soils. These soils are located within flood plains along major streams. The soils are subject to frequent flooding from stream overflow. Typically, Iuka soils have a surface layer of fine sandy loam and subsoil layers of loam, fine sandy loam, and silt loam. Dela soils have surface layer of fine sand and subsoil layers of fine sandy loam and sandy loam.

These soils are moderately well-suited to, and used mainly as, woodland. The main concerns in producing and harvesting timber are moderate equipment use limitations and seedling mortality caused by wetness and flooding. Small acreages of these soils are also used as pastureland or cropland. The main limitations to those uses are the hazard of frequent flooding, low soil fertility, and wetness. However, these soils are poorly suited to most urban and recreational uses due to the hazard of flooding.

Vegetation in the immediate area is comprised of species equally adapted to frequent flooding/saturation or dryer conditions. Trees include bald cypress (*Taxodium distichum*), black willow (*Salix nigra*), sweet-gum (*Liquidambar styraciflua*), and water oak (*Quercus nigra*). Shrubs located within the project area were dominated by common buttonbush (*Cephalanthus occidentalis*) and American elm (*Ulmus americana*). Herbaceous plants include lizard's-tail (*Saururus cernuus*), hop sedge (*Carex lupulina*), and horsebrier (*Smilax rotundifolia*).

#### **IV. PERMIT EVALUATION CRITERIA**

The following is a discussion of the potential impacts due to construction of the proposed project on parameters listed in the guidelines for the evaluation of Louisiana Natural and Scenic Streams.

##### ***A. Contemporary Cultural Associations***

Based on site investigations, there are no other structures within the project corridor at the area of the proposed bridge replacement. Therefore, it is not anticipated that this proposed project would have any impacts to cultural associations.

##### ***B. Historic/Archaeological Sites***

Cultural resources fieldwork was carried out on July 31 and August 6, 2012 by DOTD Environmental staff. Systematic shovel testing and pedestrian survey was conducted to identify historic properties within or adjacent to the Area of Potential Effect (APE). No cultural material was identified or recovered during the shovel testing. The existing bridge, built in 1961, is not considered eligible for the National Register of Historic Places (NRHP). No further cultural resource work is recommended for the proposed project. SHPO concurred with these findings on Oct. 25, 2012.

##### ***C. Economic Changes***

The activities of the proposed project do not pose any long-term economic changes for the surrounding communities. While there may be temporary inconveniences during construction, the project will not alter community cohesion or accessibility, nor will it cause any relocation to occur within the area surrounding the bridge structure. When the project is completed, cohesion and accessibility to the surrounding communities will continue.

According to the 2010 census on population and housing, Claiborne Parish has a population of 17,195. The 2000 census figures were 16,851. Claiborne Parish is currently ranked the 50th most populated parish in the state.

##### ***D. Wilderness Quality***

Based on a review of the National Park Services (NPS), U.S. Wildlife & Fisheries Service (USFWS), and Louisiana Department of Wildlife & Fisheries (LDWF) GIS databases, there are no State or Federally listed “wilderness” areas within the project area. It is not anticipated that this bridge replacement will alter any natural quality that already exists along the project corridor. Construction impacts, including noise, physical disruption, and increased human activity, will affect the wilderness quality in the immediate area of the project. However, these impacts will be short-term. Following project construction, the wilderness quality of the area should return to its previous status.

### ***E. Scenic Quality***

Construction activities within the project area will impact the scenic quality on a temporary basis. The site will rehabilitate in the post-construction period quite rapidly based on succession rates of vegetation within the temperate/subtropical climate. The techniques used in the removal of any vegetation are described in section VI.B of this permit.

The clearing of vegetation and other construction activities will lessen the scenic values in the immediate area of the proposed bridge replacement until native vegetation can be re-established. The scenic value of the right-of-way will not be adversely impacted by the proposed project. The scenic condition of the area should return to its presently existing condition following project construction.

### ***F. Recreational Resources***

Except for the lower end adjacent to Lake D'Arbonne that has a public boat ramp and recreation facilities, the stream has limited access due to land usage. A portion of the stream southeast of the project area is located within Kisatchie National Forest, which provides the best recreational access.

This proposed action would provide a safer roadway for recreationalists. Recreational activities will be compromised in the immediate area during construction, but the impacts to recreational values of this area should be minimal and temporary.

### ***G. Ecological Impacts***

Construction activities will have only minor effects on the ecological balance in the project corridor. Any disruption of the ecology in the immediate area will be minimal and temporal. The local ecology should return naturally in a short amount of time.

### ***H. Fish and Other Aquatic Life***

There will be sporadic increases in water turbidity in the area of the bridge replacement and downstream of the project area. Erosion controls described further in this permit will reduce any major impacts to the overall stream quality as far as fish and aquatic life are concerned. There should be no long-term adverse impacts on fishing resulting from construction activities.

### ***I. Wildlife***

The project area provides the habitat requirements for a wide variety of wildlife species. Food, water, cover, and nesting habitat are abundant for the occupants of the area. There are no known protected, rare, endangered, or threatened species in the immediate area.

### ***J. Botanical***

The botanical impacts within the project corridor will be minor. Overstory and understory vegetation is anticipated to be removed within the limits of construction. However, according to the Louisiana Natural Heritage Program's solicitation of views response during the NEPA process, no significant or unusual botanical specimens are present that could be destroyed during construction of the proposed project.

### ***K. Geological and Hydrological Features***

No significant landmarks or geological features are found within the immediate project area and thus, no impacts are expected. The project is located above the Alluvial/Valley Trains Aquifer system.

### ***L. Water Quality***

Outstanding natural resource and secondary contact recreation uses on Middle Fork Bayou D'Arbonne are fully supported. Fish and wildlife propagation and primary contact recreation uses are not supported. Impairments are dissolved oxygen and total fecal coliform. Sources listed are municipal point source discharges and natural conditions.

The installation of temporary erosion control features will be coordinated with the construction of the permanent erosion control features to the extent necessary to assure economical, effective, and continuous control of erosion and water pollution throughout the life of the contract.

## V. ALTERNATIVES

Two alternatives were considered for the project, build and no-build. The Department has selected the build alternative over the no-build alternative, which does not address the purpose and need of this project. The overall purpose of the project is to replace the existing bridge that has a sufficiency rating of 20.8, which is considered structurally deficient, with a new bridge that meets current bridge design criteria.

### Build Alternative

As proposed, the project consists of the replacing of the existing Middle Fork Bayou D'Arbonne Bridge with a new 300-foot long concrete slab span bridge.

### No-Build Alternative

The no-build alternative would leave the structurally deficient bridge as it is presently.

## **VI. METHODS OF CONSTRUCTION**

### ***A. Construction Techniques***

All work will be conducted within the existing right-of-way. Excavation and fill operation will be accomplished utilizing land-based equipment.

### ***B. Actions to Minimize Detrimental Effects***

In an effort to minimize project damage, the Louisiana Department of Transportation and Development, Office of Highways, will require that the project take certain measures toward reducing environmental and ecological damages. The planning measures taken or proposed to minimize harm are given below (in accordance with the Department's *Louisiana Standard Specifications for Roads and Bridges*, 2006 edition).

#### **1. Construction In, Over or Adjacent to Navigable Waters**

All work in, over, adjacent or continuous to navigable waters and/or wetlands will be conducted in accordance with the rules and regulations of the U.S. Army, Corps of Engineers and the U.S. Coast Guard.

Navigable clearance on waterways will not be infringed upon, and existing navigable depths will not be impaired except as allowed by permits issued by the responsible agency.

The DOTD will obtain a permit from the Department of the Army, Corps of Engineers relative to approval of construction plans for bridges, causeways, embankments, dredging and spoil disposal, etc. for work in navigable waters and/or wetlands. The DOTD will be responsible for conformance with all provisions and conditions of the permit.

#### **2. Prevention of Soil Erosion and Water Pollution**

The DOTD will exercise planning and forethought in coordinating the work of protecting the project and adjoining properties from soil erosion and siltation by effective and continuous erosion control methods of either a temporary or permanent nature. The area of bare soil exposed at any time by construction operations will be kept to a minimum.

#### **3. Environmental Protection**

The DOTD will comply with all Federal, State and local laws and regulations controlling pollution of the environment, including air, water and noise. The contractor will take necessary precautions to prevent pollution of all waters and wetlands with fuels, oils, asphalts, chemicals or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

#### **4. Excavation and Embankment Construction**

Borrow pits will be located a minimum distance of 300 feet from the right-of-way unless otherwise authorized in writing by the engineer. In instances where pits are located closer than 300 feet and are visible from the roadway, they will be screened in accordance with Department requirements at no additional cost to the Department. When resources of borrow are located adjacent to a stream or river listed on the National System of Wild and Scenic Rivers or the Louisiana Natural and Scenic Rivers System, the borrowed pits, and any stockpiled materials, will be located not less than 300 feet from the natural bank of the stream.

All materials designated usable and to be placed in embankments, whether from required excavations or borrow excavation, will have been tested and classified in their original position by the Department's Testing Laboratory before being excavated and placed in the embankment or other final positions on the project. These materials will be subject to the restrictions for materials hereinafter contained, and will conform to Department of Transportation and Development regulations.

Excavation and embankments for the roadway, intersections and entrances will be finished to reasonable smooth and uniform surfaces. Excavation operations will be so conducted that material outside of the limits of construction will not be disturbed. Prior to beginning excavation, grading and embankments operations in any area, all necessary clearing and grubbing in that area will have been completed.

Drainage excavation and rough grading will be performed simultaneously, unless otherwise directed. Drainage excavation may be disposed of or placed in the embankment, unless otherwise specified. Roots, stumps and other obstructions located inside and in bottoms of ditches and channel changes will be cut to conform to required cross section and grade. No excavated material will be left within 3 feet of the edge of the ditch or channel.

When the DOTD excavating operations encounter cultural artifacts or archaeological, historical or paleontological sites, the operations will be temporarily discontinued. The engineer will contact the proper authorities in order that an appropriate assessment may be made to determine the disposition thereof of any necessary actions that maybe required relative to the site. When directed, the DOTD will excavate the site in such manners as to preserve the artifacts encountered.

#### **5. Temporary Erosion Control**

The installation of temporary erosion control features will be coordinated with the construction of the permanent erosion control features to the extent necessary to assure economical, effective, and continuous control of erosion and water pollution throughout the life of the contract.

The DOTD will make sufficient precautions to prevent pollution of streams, canals, lakes, reservoirs, and other water impoundments, with fuels, oils, bitumens, or other harmful materials. Also, the schedule of operations will be so as to avoid or otherwise minimize pollution or siltation of such streams, etc., and to avoid interference with movement of migratory fish. No residue from dust collectors or washers will be dumped into any live stream.

Construction operations in rivers, streams, lakes, tidal waters, reservoirs, canals, and other impoundments will be restricted to those areas where it is necessary to perform filling or excavation to accomplish the work showed in the plans and to those areas which must be entered to construct temporary or permanent structures. As soon as conditions permit, rivers, streams and impoundments will be promptly cleared of all obstructions placed therein or cause by construction operations.

When structures are constructed near streams, the stream banks will be kept in their natural state as much as possible. The DOTD will not unduly strip existing protective vegetation in the vicinity of the stream banks and will so conduct this operation as not to damage the banks and will so conduct this operation as not to damage the banks with equipment. No bank up stream or downstream will be excavated except by approval of the engineer. Banks cut for work roads will be located downstream and replaced to their original shape and density. Unnecessary stripping of vegetation along banks in the construction area will not be permitted.

Frequent fording of streams with construction equipment will not be permitted. Except as necessary for construction, excavated material will not be deposited in rivers, streams, canals, impoundments, or in a position close enough thereto, to be washed away by high water or runoff.

The DOTD will not disturb lands or waters outside the limits of construction, accept as may be found necessary and authorized by the project engineer. However, all work will be confined to the permitted project limits.

The location of, and method of operation in, borrow pits, material pits, and disposal areas furnished by the DOTD for waste material from the project (other than commercially operated sources) will meet the approval of the engineer as being such that erosion during and after completion of the work will not result in probability of detrimental siltation or water pollution.

Permanent erosion control features will be incorporated into the project at the earliest practical time. Use of temporary erosion control features will be authorized to correct conditions that develop during construction which weren't foreseen at the time of design, to control erosion prior to the time it is practical to construct permanent control features, or to provide immediate temporary control of erosion that develops during normal construction operations but is not associated with permanent erosion control features on the project.

The DOTD will schedule operations such that the area of unprotected erodible earth exposed at any time is not larger than the minimum area necessary for efficient construction operations but is not associated with permanent erosion control features on the project.

Clearing and grubbing will be so scheduled and performed that grading operations can follow immediately thereafter, and grading operations will be so scheduled and performed that permanent erosion control features can follow as soon as practical.

## **6. Other**

In addition to the requirements or regulations of the Standard Specifications, the DOTD will conform to all prevailing requirements, restrictions and controls of Federal and State laws rules or regulations for pollution control or abatement (noise, water, air, soils erosion).

Subsequent to the completion of construction and the ultimate use of the facility, there may be possible applications of herbicides and/or pesticides involved within the highway right-of-way during future operations and maintenance activities.

Applications of herbicides by the Department are usually made in the following situations:

1. Soil sterilants under guard rail and around posts and other areas in which grass is not wanted.
2. Contact herbicides are used in ditches and other like areas to increase the flow of water for good maintenance.
3. Selective herbicides are used on the right-of-way to kill undesirable species in order to reduce mowing and for beautification.

All of the above-described applications are made under the supervision of properly trained and accredited individuals in the various fields of agriculture, who possess the required knowledge and training necessary in the handling and use of herbicides and other related agricultural chemicals.

The DOTD does not make any pesticide applications; however, pesticides are applied to the highway right-of-way by the U.S. Department of Agriculture and the Louisiana State Department of Agriculture, through their pesticide application programs. These applications are made in four to five year cycles and are regulated through their policies and procedures.

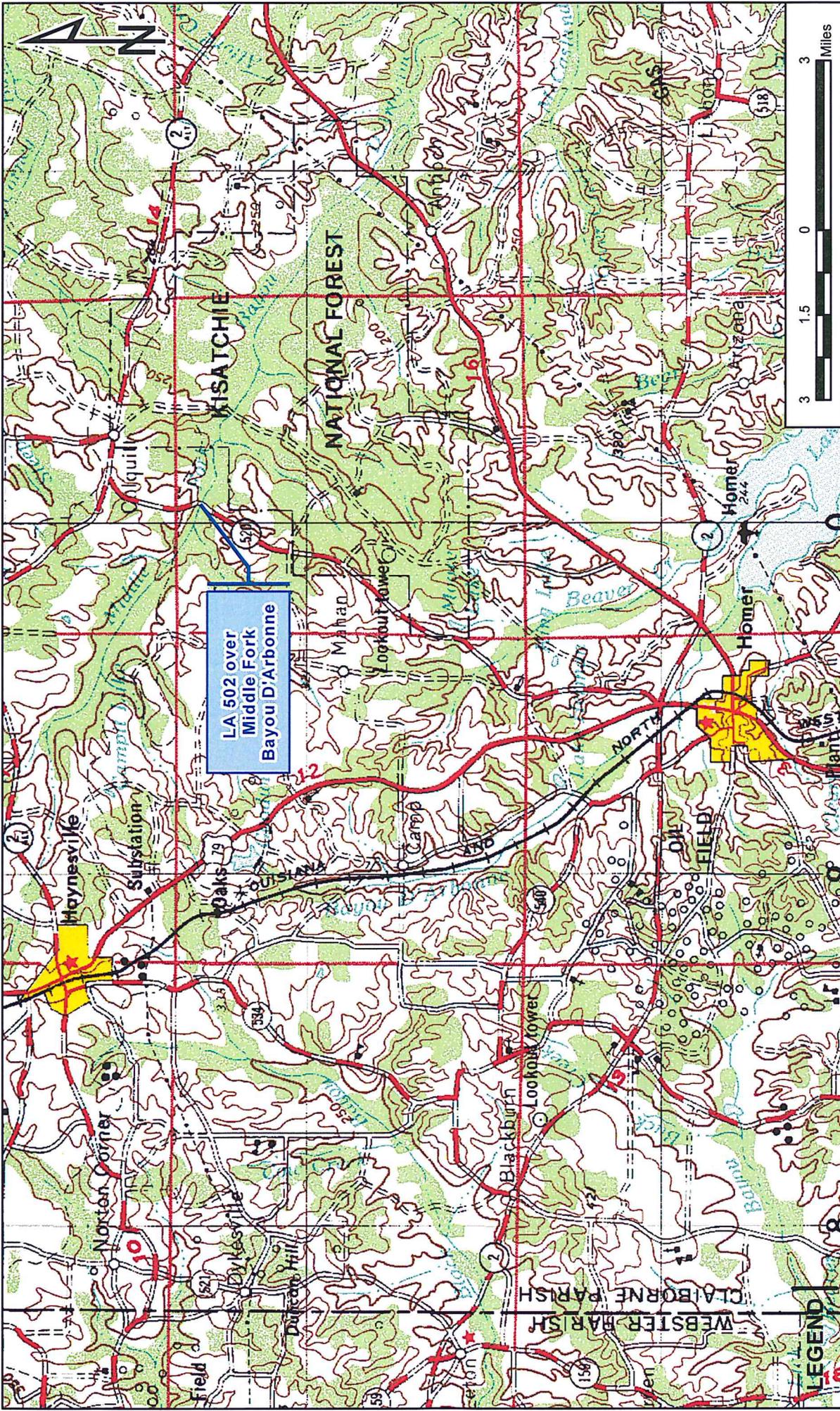
## **VII. REFERENCES**

Louisiana Department of Transportation and Development, Office of Highways, 2006.  
Louisiana Standard Specifications for Roads and Bridges. Baton Rouge, La.

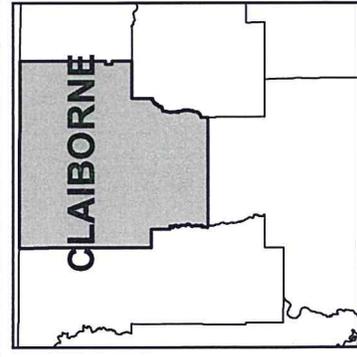
Louisiana Department of Wildlife and Fisheries. August 1993. Louisiana's Natural  
and Scenic Streams System. Baton Rouge, La.

U.S. Census Bureau

U.S. Department of Agriculture, Soil Conservation Service. 1989. Soil Survey of Claiborne  
Parish, Louisiana.



LA 502 over  
Middle Fork  
Bayou D'Arbonne

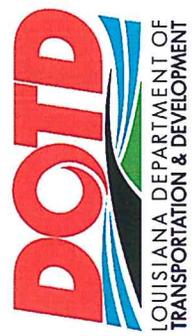


**CLAIBORNE**

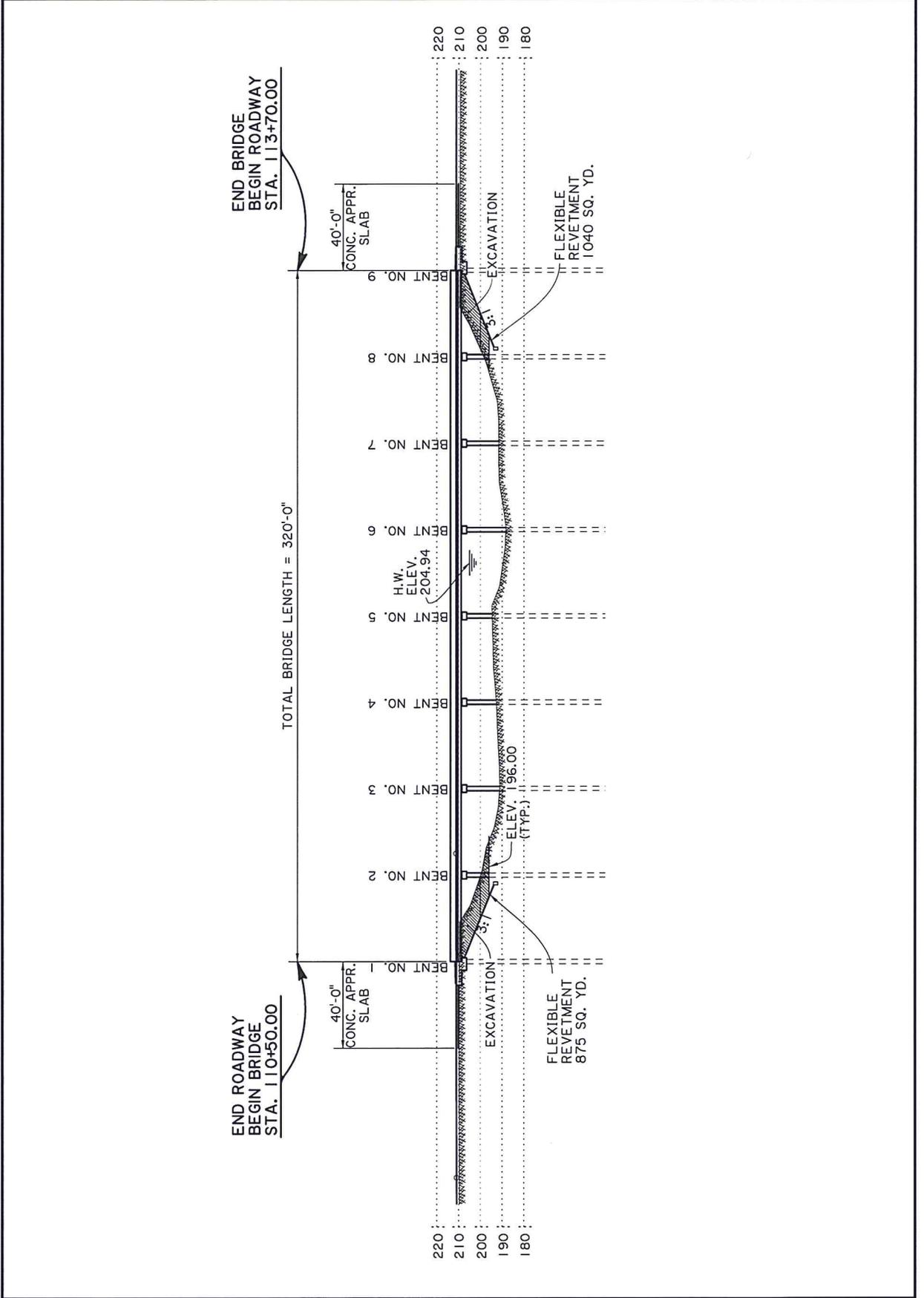
**LOCATION MAP**

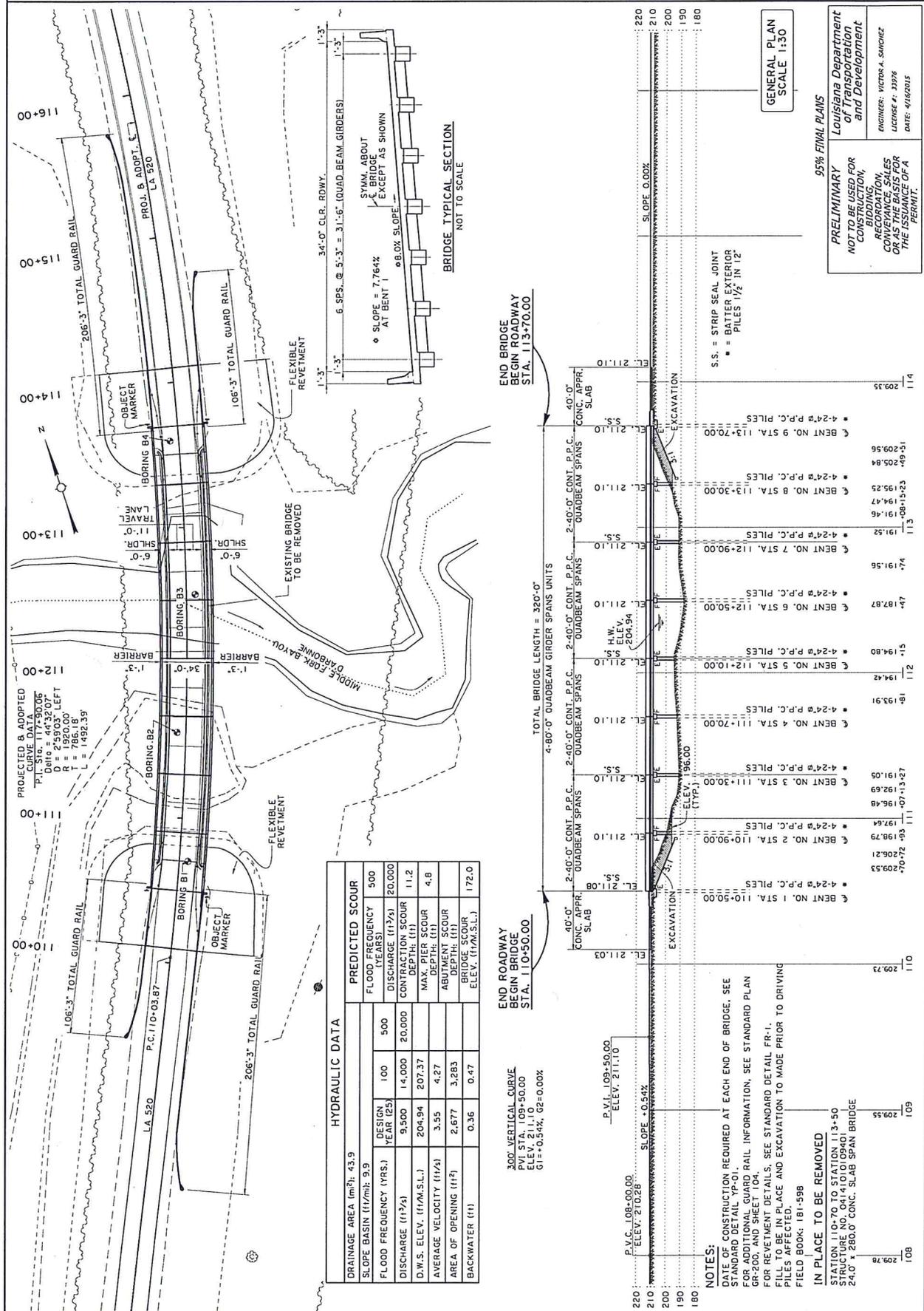
SOURCE: USGS 1:250,000 TOPOGRAPHIC MAP - SHREVEPORT QUADRANGLE

STATE PROJECT NO. H.001763  
 FEDERAL AID PROJECT NO. H001763  
LA 520: MIDDLE FORK BAYOU D'ARBONNE BRIDGE  
 CLAIBORNE PARISH









**HYDRAULIC DATA**

DRAINAGE AREA (m <sup>2</sup> ): 43.9		PREDICTED SCOUR	
SLOPE BASIN (1/10mi): 9.9 <td>DESIGN YEAR (23): 100</td> <td>FLOOD FREQUENCY (1/100): 500</td> <td>FLOOD FREQUENCY (1/25): 20,000</td>	DESIGN YEAR (23): 100	FLOOD FREQUENCY (1/100): 500	FLOOD FREQUENCY (1/25): 20,000
DISCHARGE (1/100): 9,500	DISCHARGE (1/25): 14,000	CONTRACTION SCOUR: 11.2	MAX. PIER SCOUR DEPTH: (1) 4.8
D.W.S. ELEV. (1/100 S.L.): 204.94	AVERAGE VELOCITY (1/100): 3.55	ABUTMENT SCOUR DEPTH: (1) 3.283	BRIDGE SCOUR DEPTH: (1) 172.0
AREA OF OPENING (1/100): 2,677	BACKWATER (1/100): 0.36		

300' VERTICAL CURVE  
 STA. 110+50.00  
 ELEV. 211.10  
 G1 = +0.54%, G2 = 0.00%

END ROADWAY  
 BEGIN BRIDGE  
 STA. 110+50.00

END BRIDGE  
 BEGIN ROADWAY  
 STA. 113+70.00

END BRIDGE  
 BEGIN ROADWAY  
 STA. 113+70.00

**NOTES:**  
 DATE OF CONSTRUCTION REQUIRED AT EACH END OF BRIDGE, SEE STANDARD DETAIL 4P-01.  
 FOR ADDITIONAL GUARD RAIL INFORMATION, SEE STANDARD PLAN 6P-03.  
 FOR RETAINMENT DETAILS, SEE STANDARD DETAIL FR-1.  
 FILLS TO BE IN PLACE AND EXCAVATION TO MADE PRIOR TO DRIVING PILES AFFECTED.  
 FIELD BOOK: 181-598  
 IN PLACE TO BE REMOVED  
 STATION 110+70 TO STATION 113+50  
 STRUCTURE NO. 041410109401  
 24.0' X 280.0' CONC. SLAB SPAN BRIDGE

GENERAL PLAN  
 SCALE 1:30

95% FINAL PLANS  
 PRELIMINARY  
 NOT TO BE USED FOR  
 CONSTRUCTION,  
 BIDDING,  
 RECORDATION,  
 OR AS THE BASIS FOR  
 THE ISSUANCE OF A  
 PERMIT.  
 Louisiana Department  
 of Transportation  
 and Development  
 ENGINEER: VICTOR A. SANCHEZ  
 LICENSE # 33978  
 DATE: 4/16/2015

104  
 SHEET NUMBER  
 PROJECT: LA 520  
 SECTION: CLAIRBORNE  
 DATE: 4/16/2015  
 DRAWN BY: V. SANCHEZ  
 CHECKED BY: H. SANCHEZ  
 APPROVED BY: C. MCKOWN  
 PROJECT NO: H001763 (101-01-00121)



PROJECT NUMBER	105	DESIGNER	V. SANCHEZ	DATE	4/16/2015
CLIENT	CLAIRBORNE	PROJECT	101-01	NO.	LA 520
STATE	HO01763 (101-01-0012)	CONTRACTOR	J. SANCHEZ	REVISION OR CHANGE ORDER DESCRIPTION	
CITY		DESIGNED BY	V. SANCHEZ		
COUNTY		CHECKED BY	J. SANCHEZ		
PARISH		APPROVED BY	C. MCKOWN		



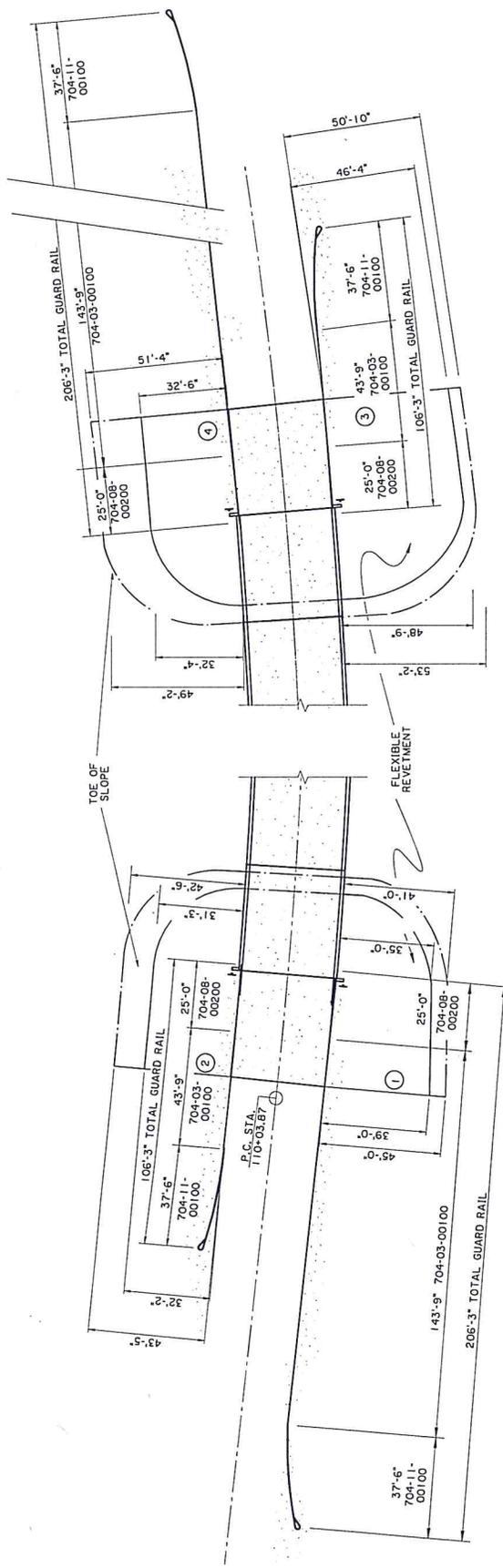
GUARD RAIL & RETEMENT  
 MIDDLE FORK BAYOU PARBONNE BRIDGE



BRIDGE & STRUCTURAL DESIGN

GUARDRAIL DESIGN STANDARDS									
HWY. DESIGN CLASS	DESIGN SPEED (MPH)	2002 ADT	LC						
RC-2	60	1025	24'						
GUARDRAIL LENGTH REQUIREMENTS									
BR. SIDE	LR	LH	LW	SW	R/R	C2C	X	Y	
1	345	24'	11'	6'	N/A	31.2	193.75'	N/A	
2	345	24'	11'	6'	N/A	31.2	193.75'	N/A	
3	345	24'	11'	6'	N/A	31.2	193.75'	N/A	
4	345	24'	11'	6'	N/A	31.2	193.75'	N/A	

\* GUARDRAIL TO BE INSTALLED PARALLEL WITH EDGE OF ROADWAY.



NOTE:  
 FOR ADDITIONAL GUARD RAIL INFORMATION, SEE STANDARD PLAN GR-200.  
 ALL AREAS OF DISTURBED EMBANKMENT SHALL BE SEEDED AND FERTILIZED.  
 FOR ADDITIONAL RETEMENT INFORMATION, SEE STANDARD DETAIL FR-01.

95% FINAL PLANS  
 PRELIMINARY  
 NOT TO BE USED FOR  
 CONSTRUCTION,  
 BIDDING,  
 RECORDATION, LES  
 OR AS THE BASIS FOR  
 THE ISSUANCE OF A  
 PERMIT.

Louisiana Department  
 of Transportation  
 and Development

ENGINEER: VICTOR A. SANCHEZ  
 LICENSE #: 33976  
 DATE: 4/16/2015



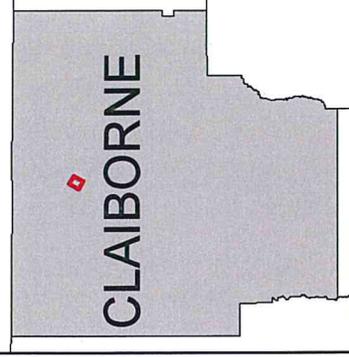


Middle Fork  
Bayou D'Arbonne Bridge



**LEGEND** | Project Limits  8.59 acres

425 212.5 0 425 Feet



**CLAIBORNE**

### AERIAL MAP

SOURCE: 2010 NATIONAL AGRICULTURE IMAGERY PROGRAM

STATE PROJECT NO: H.001763  
FEDERAL AID PROJECT NO. H001763  
LA 520: MIDDLE FORK BAYOU D'ARBONNE BRIDGE  
CLAIBORNE PARISH





Photo of Middle Fork Bayou D'Arbonne Bridge on LA 520; facing SSW



Photo of Middle Fork Bayou D'Arbonne upstream of the bridge; facing WNW



Photo of Middle Fork Bayou D'Arbonne downstream of bridge; facing SE



Photo of Middle Fork Bayou D'Arbonne beneath the bridge; facing SSE