



LOUISIANA NATURAL AND SCENIC RIVERS SYSTEM

# PERMIT APPLICATION

Permit # 865 (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 & Development	Name of Agent (if any)
Address 1201 Capitol Access Road	Address
Address	Address
City, State, Zip Baton Rouge, LA 70802	City, State, Zip
Phone (225) 242-4507	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) proposes to widen LA 21 near Covington, LA. The current roadway varies between 2 and 3 lanes in the project area. DOTD proposes to widen it to 4 lanes. The project proposes widen LA 21 where it crosses the Tchefuncte river. The purpose of the project is to increase the capacity of the roadway in order to reduce congestion.

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

## LOCATION OF PROPOSED ACTIVITY

Stream Name	Tchefuncte River	Names, Addresses, Phone Numbers of Adjacent Property Owners
Parish	St. Tammany	
Section	45/46	
Township	07S	
Range	11E	
Latitude/Longitude	30°27'50.91"N, 90°7'3.23"W	

## 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.

*Robert Jett*

Signature

*3/7/13*

Date



BOBBY JINDAL,  
GOVERNOR

LOUISIANA DEPARTMENT OF  
TRANSPORTATION & DEVELOPMENT  
P.O. Box 94245 Baton Rouge, LA 70804-9245  
(225) 242-4502 • Fax (225) 242-4500  
dotd.louisiana.gov



SHERRI H. LEBAS, P.E.,  
SECRETARY

March 7, 2013

**STATE PROJECT NO.: H.001340 (Legacy: 736-52-0043)**  
**FEDERAL AID PROJECT NO.: H001340 (STP-5204(508))**  
**PROJECT NAME: LA 21 Widening**  
**ROUTE: LA 21**  
**PARISH: St. Tammany**

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**Mr. Keith Cascio**  
**Louisiana Department of Wildlife and Fisheries**  
**368 Century Tel Drive**  
**Monroe, Louisiana 71203**

Dear Mr. Cascio:

Enclosed for your review are six (6) copies of the Scenic Rivers Permit Request for the above-captioned project.

The Louisiana Department of Transportation and Development (LADOTD) is proposing widen LA 21 from its intersection with Bootlegger Rd. (LA 1085) to its intersection with 11<sup>th</sup> Ave. (parish route). Part of this widening will involve replacing the existing bridge and constructing a new bridge over the Tchefuncte River. The bridge is located at Latitude 30°27'50.91"N Longitude 90°7'3.23"W in Section 45 Township 07S Range 11E.

We are planning on publishing the required ads in the state and parish journals starting the week of March 25<sup>th</sup>. If you have any questions or need additional information, please contact Shawn Luke at (225) 242-4507.

Sincerely,

  
fes Noel Ardoin  
Environmental Engineer Administrator

Enclosures  
NA/RL/sl  
cc: Mr. Robert Lott

## ATTACHMENTS AND ENVIRONMENTAL ASSESSMENT

1. A complete description of the proposed project (including drawings).
2. A map showing the exact location of the project on the river.
3. Photographs of the project site from both banks of the river (if possible) and an upstream and downstream view of the project site from the project side of the river.
4. A list of all other local, state and federal permits required for this project.
5. An environmental assessment which includes separate evaluation of impacts on each of the following:

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| a. Existing Land Use              | g. Ecological Systems Present      |
| b. Historical/Archeological Sites | h. Fish and Wildlife in the Area   |
| c. Economic Impact of the Project | i. Botanical Elements (Vegetation) |
| d. Wilderness/Rural Quality       | j. Geological Features             |
| e. Scenic/Aesthetic Value         | k. Hydrological Features           |
| f. Recreational Use/Opportunities | l. Water Quality/Quantity          |

**For each of these criteria, detail existing conditions, potential adverse impacts, if any, and mitigative measures being taken to minimize, eliminate or compensate for those impacts. Provide a statement of justification for each proposed action and a discussion of any alternative locations and/or methods that were considered. If no impacts are projected for a criterion, then state that no impact is expected and give the reasons for that conclusion.**

6. The signed original of the enclosed legal agreement.
7. A statement of the applicant's compliance history. (Has the applicant ever been cited for a violation of the Scenic Rivers Act?)
8. A detailed listing of the steps that the applicant has taken in the development of the project to minimize and/or offset potential impacts to the river.
9. A listing of alternatives to the proposed project.

## FEES AND OTHER CHARGES

**The administrative fee for each application is \$100.00 and must be submitted with the application. A fee of \$135.00/day will be assessed for site visits and field evaluations if they are necessary. Make check payable to: State of Louisiana Scenic River Fund**

**Mail the completed application along with six (6) complete copies, the fee, and any additional charges to:**

**Louisiana Department of Wildlife and Fisheries  
Scenic Rivers Program  
P.O. Box 98000  
Baton Rouge, LA 70898-9000  
Telephone: (225) 343-4045**

## INFORMATION ON THE SCENIC RIVER PERMIT PROCESS

The Louisiana Legislature has prohibited certain uses on designated watercourses to preserve, protect, develop, reclaim and enhance their natural and scenic qualities (Act 947 of 1988). Prohibited uses are: (1) channelization, (2) channel realignment, (3) clearing and snagging and (4) reservoir construction (impoundment), (5) clearcutting of trees for commercial purposes within 100 feet of the ordinary low water mark of a designated Natural and Scenic River.

Uses other than those that are prohibited that have potential of causing direct and significant degradation to a Scenic River or its tributaries are regulated by a permit process and multi-agency review by the Department of Wildlife and Fisheries, Department of Environmental Quality, Department of Agriculture and Forestry, Department of Culture, Recreation, Tourism, and the Office of State Planning & Budget, and frequently in collaboration with other State and Federal regulatory functions. Examples of these include crossings by roads, pipelines and utilities, discharges, mining, piers, bulkheads and other non-conforming structures and activities.

After a complete and sufficient application has been assigned a permit number by the Scenic Rivers Coordinator, the copies are distributed to the review agencies for a full and thorough evaluation of thirty (30) days duration. During this time the coordinator may schedule and make a site inspection. The applicant publishes a description of the proposed use in selected newspapers and sends evidence of this to the Coordinator. The public comment period is forty-five (45) days and begins with the date of publication in the official state journal. If there is sufficient interest from the public, a public hearing may be held. The decision by the Administrator (Secretary of the Department of Wildlife and Fisheries) to grant or deny the permit will be made within fifteen (15) days after the public comment period or the public hearing (if one is held). Most permits are valid for the useful life of the project, but are invalidated if the permitted activity has not begun within eighteen (18) months. Applicants may appeal denial of a permit to the 19th Judicial District Court after an administrative hearing in accordance with the State Administrative Procedure Act.

In serious and urgent situations, the waiting periods for standard permitting procedures may be waived and an emergency permit granted by the Administrator. For these emergency procedures to be applicable, it must be clearly indicated in the application and the site inspection that circumstances are sufficiently dire, through no fault of the applicant, to represent imminent harm to human health or the immediate environment and that those circumstances would significantly worsen during the review period required by standard procedure.

## CHECKLIST OF APPLICANT RESPONSIBILITIES IN THE SCENIC RIVER PERMIT PROCESS

- \_\_\_ 1. Submit the original application along with six complete copies. In addition to addressing each of the twelve (12) criteria of the environmental assessment, the application must also contain the following information:
  - \_\_\_ a. Project description & scaled drawings
  - \_\_\_ b. Vicinity map of project location
  - \_\_\_ c. Color photos of project site (7 sets)
  - \_\_\_ d. List of other permits required
  - \_\_\_ e. Signed legal agreement
  - \_\_\_ f. Statement of compliance history
  - \_\_\_ g. List of steps taken to minimize impact
  - \_\_\_ h. List of project alternatives
  - \_\_\_ i. \$100 permit fee
  - \_\_\_ j. Site visit fees (if applicable)
- \_\_\_ 2. Publish public notices in the official state journal and the official parish journal of the parish where the project is located. Mail proof of publication to the Scenic Rivers Coordinator.
- \_\_\_ 3. Begin permitted activity within eighteen months of permit issuance.

INSUFFICIENT OR INCOMPLETE APPLICATIONS WILL BE RETURNED TO THE APPLICANT

## INFORMATION ON PUBLIC NOTICES FOR SCENIC RIVER PERMITS

The forty-five (45) day public comment period begins with the publication of notice in the official state journal. It is the applicants responsibility to place public notice in one (1) issue of the official state journal (The Advocate, P.O. Box 588, Baton Rouge, LA 70821, Phone: 225-388-0128, Fax: 225-388-0164) and three (3) consecutive issues of the official parish journal of the parish(es) in which the project is to be done. The name of the official parish(es) journal can be obtained from the Scenic Rivers staff at (504) 765-2334 if it is not known.

Once public notices have been placed, the applicant is to send proof of publication to: Louisiana Department of Wildlife and Fisheries, Scenic Rivers Program, P.O. Box 98000, Baton Rouge, LA 70898. A permit cannot be issued until proof of publication has been received.

The suggested format for the public notice (with appropriate insertions) is as follows:

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### PUBLIC NOTICE

#### Request for Scenic River Permit on (name of Scenic River)

The Secretary of the Louisiana Department of Wildlife and Fisheries as Administrator of the Louisiana Natural and Scenic Rivers System is currently considering the application of (applicant's name) for a permit to (brief description of proposed activity) on (name of Scenic River). The decision to grant or deny this permit in the public interest will be based on an evaluation of the probable impacts of the proposed activity on (name of Scenic River).

Copies of the application can be seen by the public at the Department of Wildlife and Fisheries main office, Room 432, 2000 Quail Drive, Baton Rouge, LA and at the District Office in the District where the proposed activity is located. The public is invited to comment on this permit request for a period of forty-five (45) days. Responses should convey sound reasoning for or against the proposal and be mailed to Scenic Rivers Program, LDWF, P.O. Box 98000, Baton Rouge, LA 70898-9000.



## 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."

Handwritten signature of Robert J. Barham in blue ink, written over a horizontal line.

Authorized Signature

Handwritten date "3/7/13" in blue ink, written over a horizontal line.

Date

REV. 12/7/98

**CLASS B PERMIT REQUEST**

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

**REGARDING:**

**PROJECT NAME: LA 21 WIDENING  
PROJECT NUMBER: H.001340 (LEGACY: 736-52-0043)  
FEDERAL AID PROJECT NUMBER: H001340 (STP-5204(508))  
ROUTE: LA 21  
ST. TAMMANY PARISH**

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

**March 2013**



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## **I. Introduction**

Louisiana Highway 21 spans St. Tammany Parish from its intersection with LA 22 in Covington to the parish line near the north east corner of the parish. Listed in the Louisiana Department of Wildlife and Fisheries (LDWLF) Natural and Scenic River System, the Tchefuncte River and its tributaries run south from near Sunny Hill, through Washington, Tangipahoa and St. Tammany Parishes to its entrance into Lake Pontchartrain.

The Louisiana Department of Transportation and Development (DOTD) proposes to widen LA 21 from its intersection with Bootlegger Road (LA 1085) to its intersection with 11<sup>th</sup> Avenue (parish route). Part of this widening will involve constructing a new bridge and replacing the existing bridge (Structure Number 0590105371) over the Tchefuncte River (in the end there will be two bridges over the river). This report will focus on the construction of the new bridge and the replacement of the existing bridge.

Environmental documentation in compliance with the National Environmental Policy Act (NEPA) process has been prepared for this project in the form of an Environmental Assessment with a Finding of No Significant Impact (EA/FONSI). Since this project will be widening the roadway and constructing a new structure, it is anticipated that this activity will require an individual Section 404 permit from the U.S. Army Corps of Engineers (Corps). A pre-construction notification will be submitted to the Corps.

The bridge crosses the Tchefuncte River, which is a Louisiana Scenic River, and will require a scenic streams permit from the LDWLF.

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 the Tchefuncte River one of Louisiana's Scenic Rivers. This action will provide the motoring public a safer route within this distinctive area.

## **II. Description of the Proposed Action**

The proposed project calls for widening LA 21 from its intersection with Bootlegger Road (LA 1085) to its intersection with 11<sup>th</sup> Avenue (parish route). It proposes to widen the roadway to four travel lanes with a raised median throughout the project area and sidewalks where needed for safety reasons. Part of this widening will involve constructing a new bridge and replacing the existing bridge (Structure Number 0590105371) over the Tchefuncte River (in the end there will be two bridges over the river).

The existing bridge structure was built in 1950 and is a concrete and I-Beam span. The new bridges are proposed to be Type IV Concrete Girder Span Bridges. Traffic will be maintained during construction. The new bridge will be constructed to the north of the existing bridge (while traffic is maintained on the existing bridge). Traffic will then be shifted onto the new bridge while the existing bridge is replaced with a new bridge. Flexible revetment shall be placed on the banks of the channel to help maintain a slope of 3:1. The overall length of the project is approximately 1.5 miles and the length of the new bridges will be approximately 630 feet.

Design speed for the proposed project is 45 mph. The 2013 Average Daily Traffic (ADT) for this structure is 29,300 vehicles per day (vpd) and the 2033 ADT is 44,300 vpd. The roadway is classed as an urban arterial. Approximately 9.45 acres of right-of-way will be required for the whole project, however no relocations are anticipated.

### III. Description of the Project Area

The general area of the bridge replacement/construction in St. Tammany Parish is within the flood plain of the Tchefuncte River. With the exception of the existing roadbed and other manmade entities, the landscape within the project area is predominately flood plain and flat to gently sloping loamy soil.

The Tchefuncte River originates in the northeastern quadrant of the Florida Parishes and flows south for sixty-five miles and empties into Lake Pontchartrain. In doing so, it passes through two distinct ecological regions: the Mississippi Deltaic Plain and the upland Southeast Terraces, which add value to the high scenic quality. It meanders through flat, alluvial bottomland. The base flow is sustained by Lake Pontchartrain on the lower end and by the Alluvial and Southeast Louisiana Aquifers in the upper portions. Three segments have been designated as scenic by the LDWF- this project will take place on the "Tchefuncte River and Tributaries (subsegment 040802)" portion which extends from the origin to the confluence with Bogue Falaya River. The wildlife habitat ranges from wooded swamps to bottomland hardwoods. Fish habitat diversity, plant association, and wildlife communities are high. The Natural Heritage Database reports that there are several plants and animals in and along the Tchefuncte River that are Protected/Rare/Endangered/Threatened Species (PRETS). The majority of the river corridor (at least 90%) is still covered in natural vegetation.

The project area contains Guyton-Abita-Brimstone soils. These soils are flat to gently sloping, poorly drained and somewhat poorly drained soils that are loamy throughout. The soils in the area of the river are Arat silty clay loam. This soil is flat, very poorly drained and very fluid. The high water table ranges from 0.5 foot below the soil surface to three feet above the surface when the soil is not flooded; however, this soil is frequently flooded by freshwater for very long periods. This soil has low strength and the permeability is slow.

The Arat soils are well suited as habitat for wetland wildlife. It provides roosting areas for migratory ducks and food and nesting sites for wood ducks, squirrels, alligators, and non-game birds. It also provides suitable habitat for crawfish and furbearers (raccoons, beavers, etc). The soil is poorly suited for woodland. Trees grow slowly and the severity of the wetness and flooding causes a high seedling mortality rate. Special equipment is needed to harvest the timber, as the soil is poor for supporting the load required for most of the harvesting equipment. This wetness and flooding also makes the soil unsuitable for crops, livestock, urban uses or intensive recreational (playgrounds and campsites) use. The natural vegetation consists mainly of water-tolerant trees and aquatic understory plants.

Vegetation in the immediate area is comprised of species adapted to frequent flooding/saturation conditions. Trees include water-tupelo (*Nyssa aquatica*), slash pine (*Pinus elliottii*), and black willow (*Salix nigra*). Shrubs located within the stream area consisted of American elm (*Ulmus americana*), Chinese privet (*Ligustrum sinense*), and common buttonbush (*Cephalanthus occidentalis*). Herbaceous plants include lizard's tail

(*Saururus cernuus*), savannah panic grass (*Phanopyrum gymnocarpon*), alligator weed (*Alternanthera philoxeroides*), and soft rush (*Juncus effusus*).

#### **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.

##### **1. Contemporary Cultural Associations**

Based on a review of aerial photography, there are no other structures within the area of the bridge replacement/construction. Therefore, it is not anticipated that this proposed project would have any impacts to cultural associations.

##### **2. Archaeological Sites**

A cultural resource survey was performed during the EA and no archaeological sites were found within the footprint of the bridge work.

##### **3. Economic Changes**

According to the 2010 census on population and housing, St. Tammany Parish has a population of 233,740 people. The 1990 census figure was 144,508 people.

The proposed project will help to address the increased travel times, delays, and congestion caused by the continued and planned development in the area. While there may be temporary inconveniences during construction, the project will not alter community cohesion, accessibility, nor will it cause any relocations to occur within the area surrounding the bridge structure. When the project is completed, cohesion and accessibility to the surrounding communities will return to pre-construction levels.

##### **4. Wilderness Quality**

Based on a review of the National Park Service, US Fish and Wildlife Service (USFWS), and Louisiana Department of Wildlife and Fisheries (LDWF) databases, there are no State or Federally listed "wilderness" areas within the project area. It is not anticipated that this project 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.

## **5. Scenic Quality**

Construction activities within the project area will impact the scenic quality on a temporary basis. The clearing of vegetation and other construction activities will lessen the scenic values in the immediate area of the proposed project area until native vegetation can be re-established. 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.2 of this permit.

## **6. Recreational Resources**

There are a number of public boat launch ramps, commercial campgrounds and private camps on the river. Aerial photography appears to show a boat ramp approximately 700 feet downstream from the bridge. This project will have no long term adverse impacts on these resources.

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

## **7. Ecological Impacts**

Construction activities will have only minor effects on the components of the natural community with no anticipated impacts on the numbers of each species in the project corridor. Any disruptions of the local natural community outside of the required right-of-way will be minimal and temporary. Local conditions should return to its natural state in a short amount of time.

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

There will be sporadic increases in water turbidity during construction downstream of the project area. Erosion controls described further in this permit (section VI. 2 (E)) will reduce any major impacts to the overall stream quality as fish and aquatic life is concerned. When contacted via Solicitation of Views (during the EA process) LDWLF stated that no rare, threatened, or endangered species or critical habitats located in the project area. The USFWS requested to be contacted if any work takes place in the channel between November 1 and March 31 due to the possibility of Gulf Sturgeon (*Acipenser oxyrinchus desotoi*) in the channel. There should be no long-term adverse impacts on fishing resulting from construction activities.

## **9. 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 species occupying the area. US Fish and Wildlife has stated that there may be Gulf Sturgeon (*Acipenser oxyrinchus*

*desotoi*) in the river and has requested to be contacted if in-stream activity occurs between November 1 and March 31.

## **10. Botanical**

The botanical impacts within the project corridor will not be severe. Overstory and understory vegetation is anticipated to be removed. Based on a site visit done during the EA process, no significant or unusual botanical specimens are located within the limits of construction for the project. LADOTD has an Engineering Directive governing the treatment of significant trees (EDSM I.1.1.21). In order to qualify as a significant tree, it must be a Live Oak, Red Oak, White Oak, Magnolia or Cypress that is considered aesthetically important, 18" or greater in diameter at breast height (4'-6" above the ground), and having a form that separates it from the surrounding vegetation or is considered historic. A historic tree is a tree that stands at a place where an event of historic significance occurred that had local, regional, or national importance. A tree may also be considered historic if it has taken on a legendary stature to the community; mentioned in literature or documents of historic value; considered unusual due to size, age or has landmark status. Significant trees must be in good health and not in a declining condition. No trees meeting these qualifications were found in the project area during the field survey.

## **11. Geological and Hydrological Features**

A review of aerial photography and LiDAR data showed 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 Southern Hills Aquifer system.

## **12. Water Quality**

Fish and wildlife propagation, and primary contact recreation are not supported. Outstanding natural resource and secondary contact recreation uses are fully supported. Impairments identified include cadmium, copper, lead, mercury and total fecal coliform. Sources include on-site treatment systems (septic systems and similar decentralized systems), packaging plants or other permitted small flow discharges and unknown sources. The extreme lower reaches of the river is under a swimming advisory due to total fecal coliform. Fish in this stretch have been tested for mercury and an advisory for fish consumption may be forthcoming.

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**

The alternatives considered were symmetrical widening, asymmetrical widening, and the no build. The asymmetrical widening alternative had fewer wetland impacts at the bridge crossing. The Department has selected the asymmetrical widening build alternative since it addresses the purpose and need of this project and has fewer impacts. The overall purpose of the project is to reduce congestion and travel delays by adding capacity to LA 21 between Bootlegger Road and West 11<sup>th</sup> Avenue.

### Build Alternative

As proposed, the build alternative will consist of minor clearing and grubbing within the existing right-of-way, construction of the new bridge to the north of the existing bridge, replacement of the existing bridge, and placement of a less erodible flexible revetment on the river banks.

### No Build Alternative

The no build alternative would leave the existing roadway and bridge as it is and allow the congestion and travel delays to continue.

## **VI. Methods of Construction**

### **1. Construction Techniques**

All work will be conducted within the project limits. Excavation and fill operation will be accomplished utilizing land-based equipment.

### **2. 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).

#### **A. 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.

### **B. 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.

### **C. 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.

### **D. Excavation and Embankment**

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 and will be subject to the restrictions for materials hereinafter contained, will be soils conforming 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 inside and 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.

### **E. 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 live streams with construction equipment will not be permitted. Excavated material will not be deposited into rivers, streams, canals, or impoundments,

or in a position close enough thereto, to be washed away by high water or runoff except as necessary for construction.

The DOTD will not disturb lands or waters outside the limits of construction, except 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.

#### **F. 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.

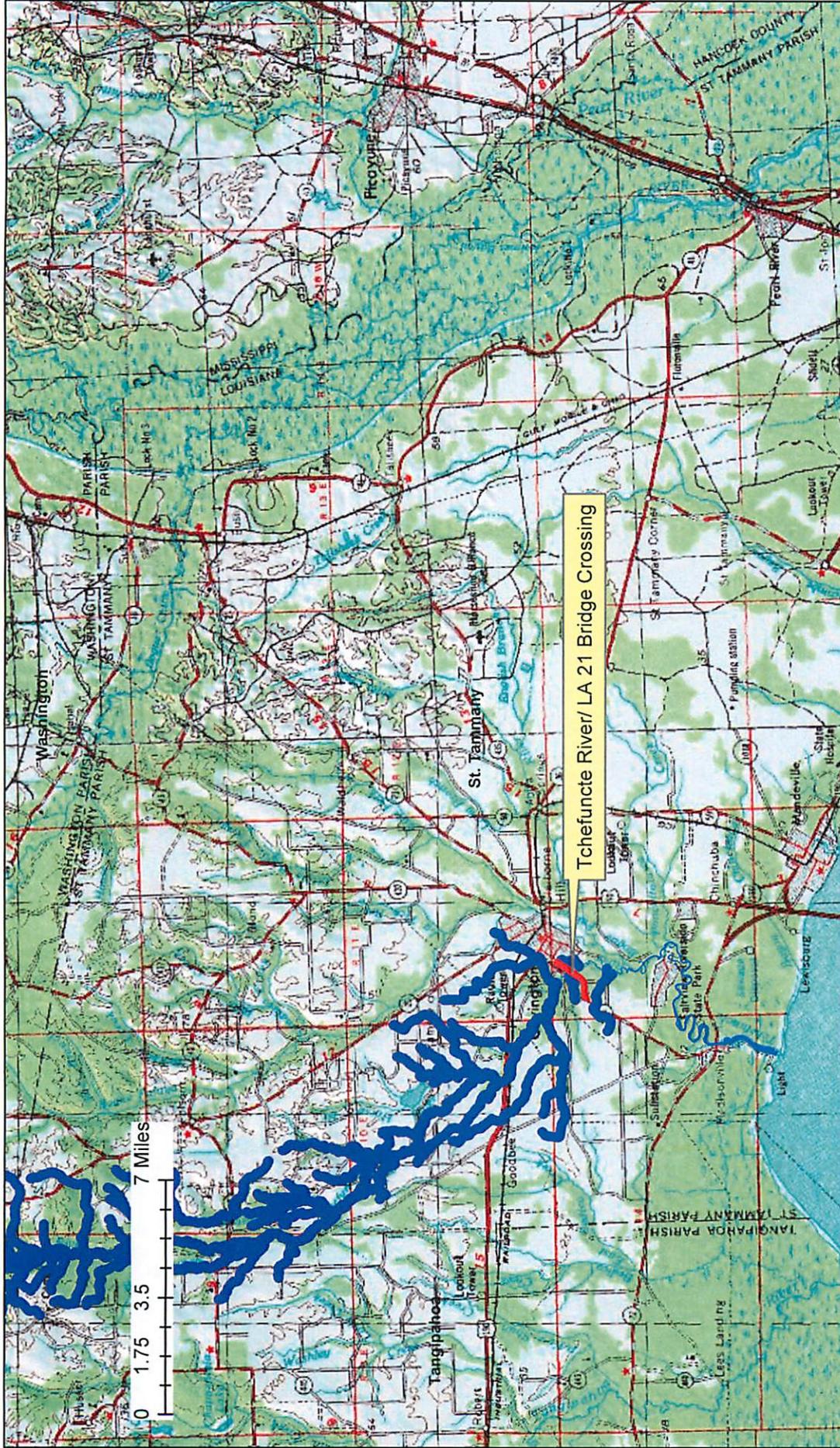
## REFERENCES

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

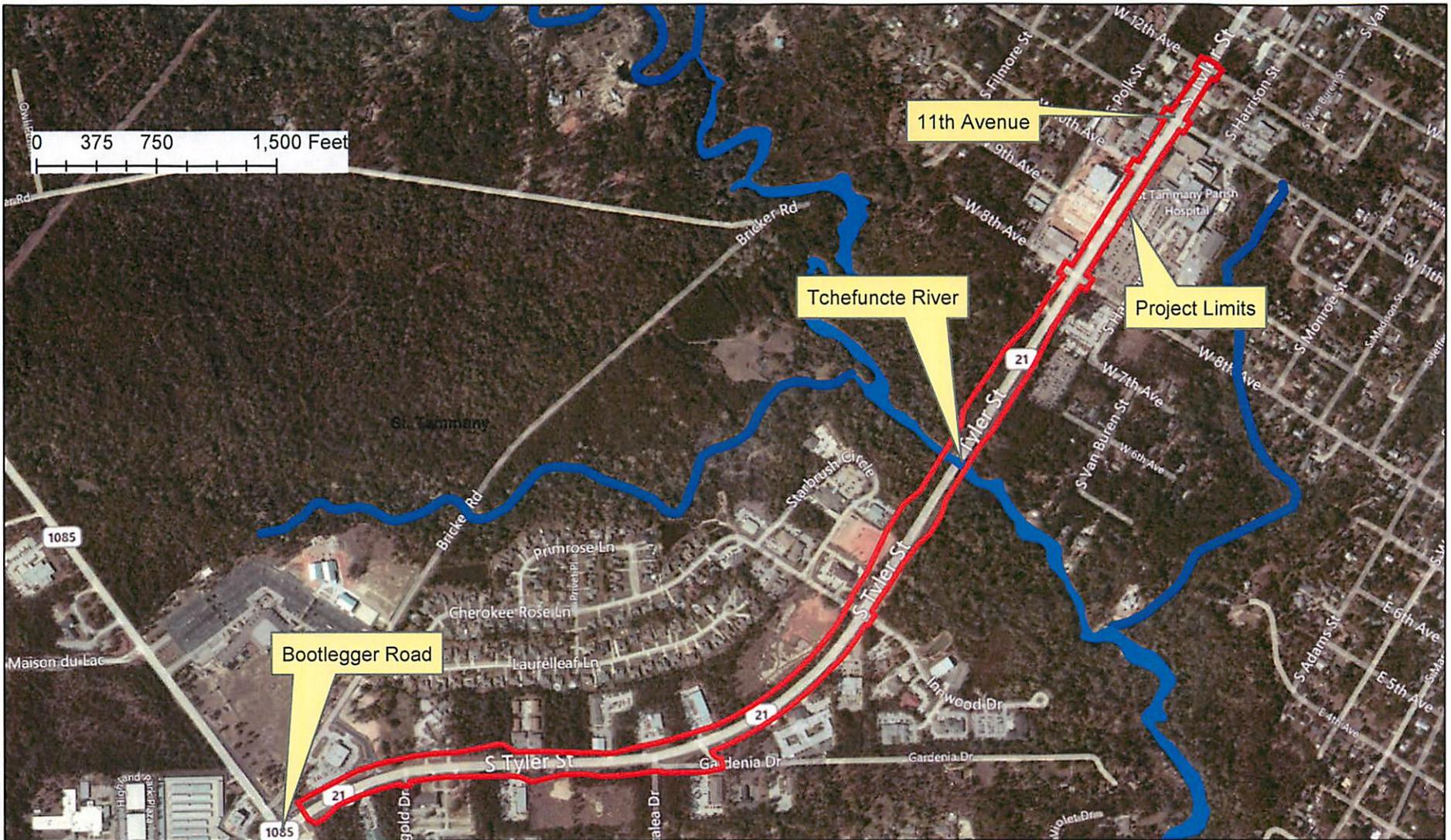
Louisiana Department of Wildlife and Fisheries. August 1993. Louisiana's Natural  
and Scenic Streams System. Baton Rouge, La.

U.S. Census Bureau

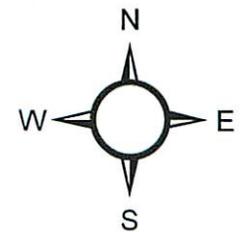
U.S. Department of Agriculture, Soil Conservation Service. General Soil Map.  
St. Tammany Parish, Louisiana.



SP No.: H.001340.2  
 FAP No.: H001340  
 Name: LA 21 Widening- Bootlegger Rd. to 11th Ave.  
 Route: LA 21  
 Parish: St. Tammany  
 Location Map

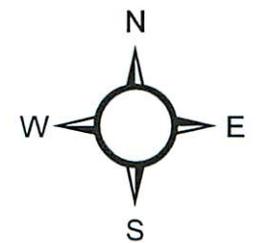


SP No.: H.001340.2  
 FAP No.: H001340  
 Name: LA 21 Widening- Bootlegger Rd. to 11th Ave.  
 Route: LA 21  
 Parish: St. Tammany  
 Detail Map





SP No.: H.001340.2  
FAP No.: H001340  
Name: LA 21 Widening- Bootlegger Rd. to 11th Ave.  
Route: LA 21  
Parish: St. Tammany





**Figure 1:** This is a picture of the bridge facing northwest.



**Figure 2:** This is a picture of the underside of the bridge facing northeast.



**Figure 3:** This is a picture of the bridge facing east.



**Figure 4:** This is a picture of the bridge facing east southeast.



**Figure 5: This is a picture of the river facing north.**



**Figure 6: This is a picture of the bridge facing west.**



**Figure 7: This is a picture of the bridge facing south.**

14-JUL-2011 10:39

**INDEX TO SHEETS**

SHEET NO	DESCRIPTION
1	TITLE SHEET AND LAYOUT MAP
2 - 2e	TYPICAL SECTIONS AND DETAILS
3 - 3b	SUMMARY SHEETS
4 - 12	PLAN AND PROFILE SHEETS
13 - 43	DRAINAGE PLAN AND PROFILE SHEETS
44 - 47	EXISTING DRAINAGE MAP
48 - 51	DESIGN DRAINAGE MAP
52 - 58	SUMMARY OF DRAINAGE STRUCTURES (NOT INCLUDED)
59 - 61	REFERENCE TIES
62 - 73	SUGGESTED SEQUENCE OF CONSTRUCTION
74 - 81	TRAFFIC CONTROL SPECIAL DETAILS (TC-00A-TC-00D, TC-02, TC-03, TC-05, TC-09)

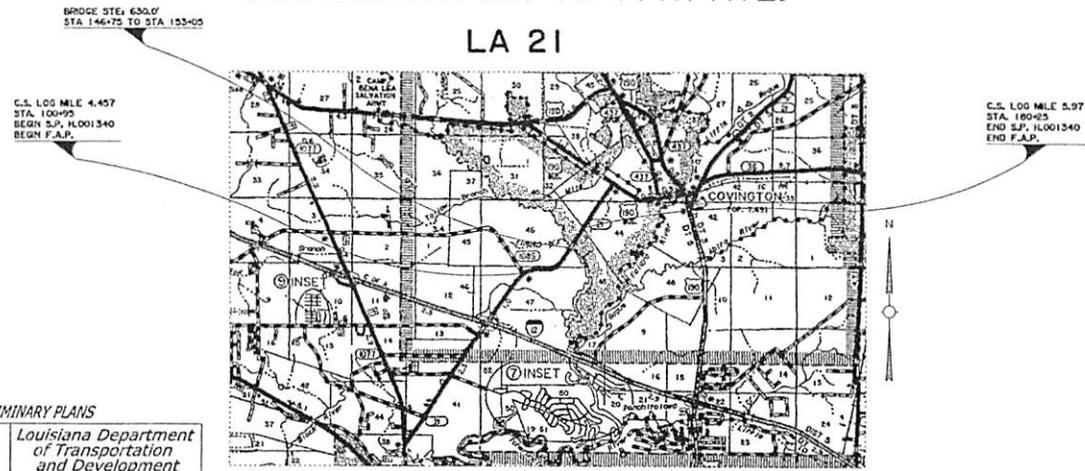
101 - 104	BRIDGE PLAN
401 - 422	CROSS SECTIONS

STANDARD PLANS		
SHEET NO.	STANDARD PLAN	REVISION DATE

STATE OF LOUISIANA  
DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

PLANS OF PROPOSED  
**STATE HIGHWAY**

F.A.P. H001340  
STATE PROJECT NO. H.001340  
LA 21 WIDENING  
ST. TAMMANY PARISH  
BOOTLEGGER RD. TO 11TH AVE.  
LA 21



TRAFFIC DATA  
2013 A.D.T. = 29,300  
2033 A.D.T. = 44,300  
D = 55%  
K = 10%  
T = 11%

DESIGN SPEED = 45 M.P.H.  
ROADWAY CLASS = UA-2

**90% PRELIMINARY PLANS**

**PRELIMINARY**  
NOT TO BE USED FOR  
CONSTRUCTION,  
BIDDING,  
RECORDATION,  
CONVEYANCE, SALES  
OR AS THE BASIS FOR  
THE ISSUANCE OF A  
PERMIT.

Louisiana Department  
of Transportation  
and Development

ENGINEER: PATRICK TONEY  
LICENSE #: 29644  
DATE: JULY 2011

DATE	REVISION	DATE	RECOMMENDED DATE	APPROVED

SCHEDULE OF REVISIONS

DATUM USED : NAVD 88  
MAG. VAR. :  
BEARINGS ARE : LOUISIANA STATE PLANE COORDINATES  
ZONE 1702  
HORIZONTAL CONTROL  
NAD 83

TRANSIT BOOKS :  
LEVEL BOOKS : ELECTRONICALLY DATA COLLECTED

SCALES :  
PLAN : 1" = 50' SHEET 4 TO SHEET 8  
          1" = 20' SHEET 9 TO SHEET 12  
PROFILE : HOR. 1" = 50'  
          VERT. 1" = 10'

**LAYOUT MAP**  
SCALE: 1 INCH = 5280 FEET

NOTE:  
THE 2006 EDITION OF THE LOUISIANA DOTD  
STANDARD SPECIFICATIONS FOR ROADS AND  
BRIDGES, AS AMENDED BY THE PROJECT  
SPECIFICATIONS, SHALL GOVERN ON THIS PROJECT

APPROVED \_\_\_\_\_  
D.O.T.D. CHIEF ENGINEER  
DATE \_\_\_\_\_

APPROVED \_\_\_\_\_  
FEDERAL HIGHWAY ADMINISTRATION  
DATE \_\_\_\_\_

**LENGTH OF PROJECT**

DESCRIPTION	ALGEBRAIC SUM OF ALL EQUATIONS	GROSS LENGTH	EXCEPTION	BRIDGE LENGTH		ROADWAY LENGTH	
				FEET	MILES	FEET	MILES
STATION TO STATION	FEET	FEET	FEET	FEET	MILES	FEET	MILES
100+95 - 180+25		7,930.00		630.0	0.1193	7,300.00	1.3826
TOTAL LENGTH OF BRIDGES				630.0	0.1193		
TOTAL LENGTH OF ROADWAY						7,300.00	1.3826
TOTAL MILES							1.5019

PROJECT	DATE	SHEET
ST. TAMMANY	JULY 2011	H.001340

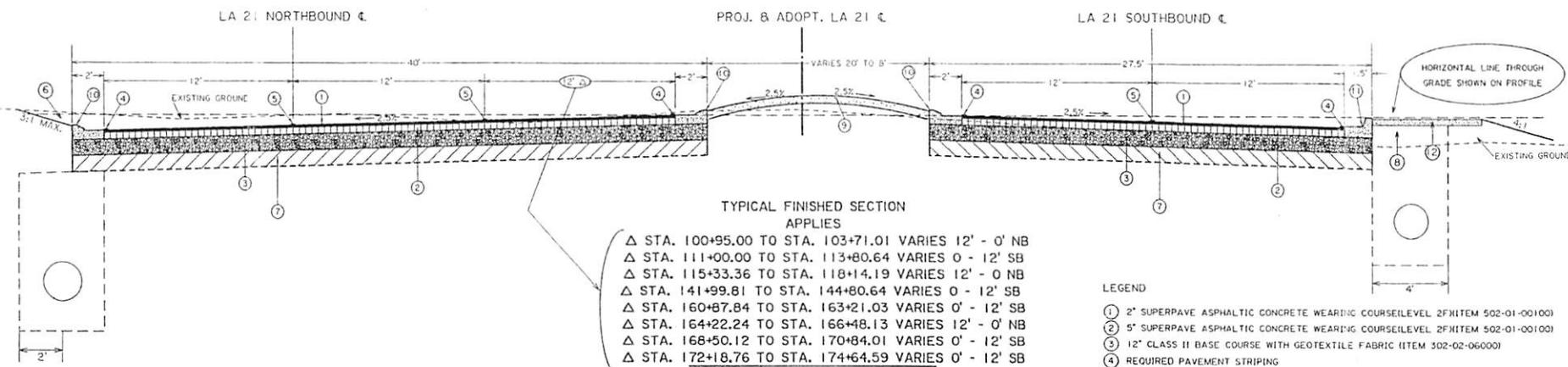
APPROVED \_\_\_\_\_  
D.O.T.D. CHIEF ENGINEER  
DATE \_\_\_\_\_

APPROVED \_\_\_\_\_  
FEDERAL HIGHWAY ADMINISTRATION  
DATE \_\_\_\_\_

**TITLE SHEET & LAYOUT MAP**  
LA 21 WIDENING

ROAD DESIGN

NOT TO SCALE



TYPICAL FINISHED SECTION APPLIES

- Δ STA. 100+95.00 TO STA. 103+71.01 VARIES 12' - 0' NB
- Δ STA. 111+00.00 TO STA. 113+80.64 VARIES 0 - 12' SB
- Δ STA. 115+33.36 TO STA. 118+14.19 VARIES 12' - 0' NB
- Δ STA. 141+99.81 TO STA. 144+80.64 VARIES 0 - 12' SB
- Δ STA. 160+87.84 TO STA. 163+21.03 VARIES 0' - 12' SB
- Δ STA. 164+22.24 TO STA. 166+48.13 VARIES 12' - 0' NB
- Δ STA. 168+50.12 TO STA. 170+84.01 VARIES 0' - 12' SB
- Δ STA. 172+18.76 TO STA. 174+64.59 VARIES 0' - 12' SB

- LEGEND
- ① 2" SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE/LEVEL 2F/ITEM 502-01-00100
  - ② 5" SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE/LEVEL 2F/ITEM 502-01-00100
  - ③ 12" CLASS II BASE COURSE WITH GEOTEXTILE FABRIC (ITEM 302-02-06000)
  - ④ REQUIRED PAVEMENT STRIPING
  - ⑤ REQUIRED PAVEMENT STRIPING AND RELECTORIZED MARKERS
  - ⑥ GENERAL EXCAVATION (ITEM 203-05-00100)
  - ⑦ REQUIRED SUBGRADE LAYER (12" MIN./ITEM 305-01-04000)
  - ⑧ REQUIRED EMBANKMENT MATERIAL (ITEM 203-05-00100)
  - ⑨ 6" TINTED & TEXTURED CONCRETE MEDIAN
  - ⑩ 4" CONCRETE MOUNTABLE CURB & GUTTER (ITEM 707-03-00100) ••
  - ⑪ 6" CONCRETE BARRIER CURB & GUTTER (ITEM 707-03-00100) •••
  - ⑫ 4" CONCRETE SIDEWALK (RT. SIDE) •••
- TOTAL THICKNESS OF CURB & GUTTER 11"
  - TOTAL THICKNESS OF CURB & GUTTER 13"
  - SEE SHEETS 2a-2d FOR EXACT LOCATION OF SIDEWALKS

**90% PRELIMINARY PLANS**

<p style="text-align: center;"><b>PRELIMINARY</b>          NOT TO BE USED FOR          CONSTRUCTION,          BIDDING,          RECORDATION,          CONVEYANCE, SALES          OR AS THE BASIS FOR          THE ISSUANCE OF A          PERMIT.</p>	<p style="text-align: center;"><i>Louisiana Department          of Transportation          and Development</i></p> <p style="text-align: center;">ENGINEER: PATRICK TONEY          LICENSE #: 29644          DATE: JUNE 2011</p>
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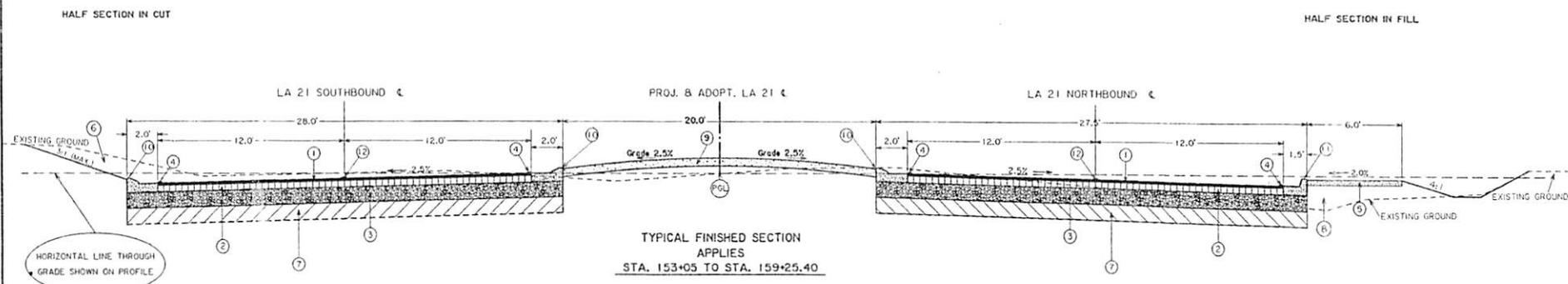
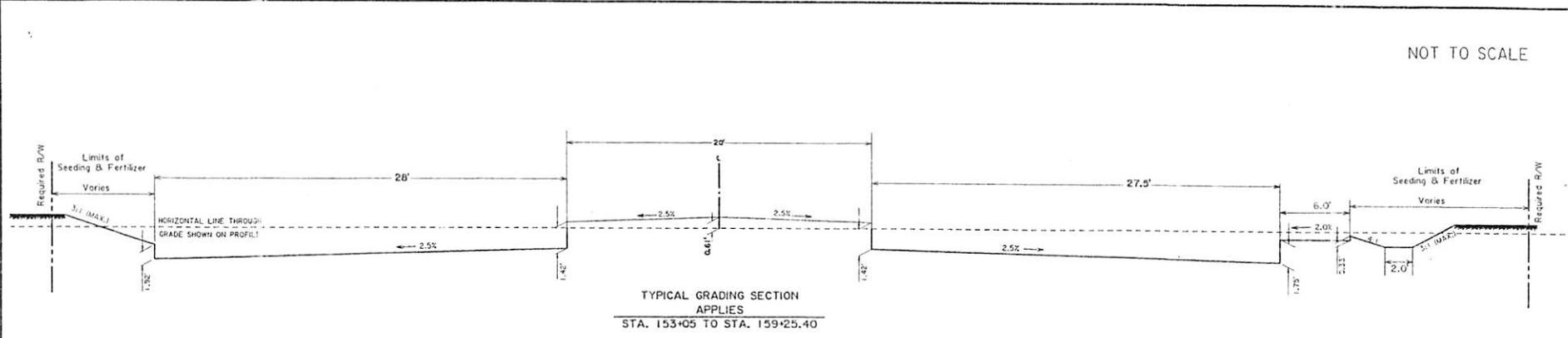
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DESIGNED BY	ST. TAMMANY
CHECKED BY	PATRICK TONEY
DATE	JUNE 2011
PROJECT	HCO1340
STATE	LA
SHEET	2

**TYPICAL SECTIONS**

LA 21 WIDENING

ROAD DESIGN

14-JUL-2011 09:53  
 90% PRELIMINARY PLANS  
 R:\Gang022\Projects\059010028\Typical Sections\La 21 Typ1.cad, Sec 2b.dwg



NOT TO SCALE

**90% PRELIMINARY PLANS**

<p><b>PRELIMINARY</b>          NOT TO BE USED FOR          CONSTRUCTION,          BIDDING,          RECORDATION,          CONVEYANCE, SALES          OR AS THE BASIS FOR          THE ISSUANCE OF A          PERMIT.</p>	<p><b>Louisiana Department          of Transportation          and Development</b></p> <p>ENGINEER: PATRICK TONEY          LICENSE #: 29644          DATE: JUNE 2011</p>
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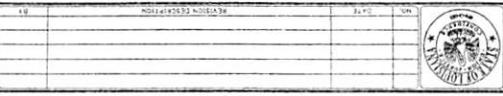
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CURRENT A.D.T. (2013)	• 29,300
DESIGN A.D.T. (2033)	• 44,300
18-Kip ESALS OVER 20 YEARS	•
PERFORMANCE PERIOD (YEARS)	•
ROADBED SOIL RESILIENT MODULUS(psi)	•
STRUCTURAL NUMBER REQUIRED (inches)	•
STRUCTURAL NUMBER PROVIDED (inches per layer)	
1 - Wearing Course, Superpave Asphaltic Concrete Level I	•
2 - Binder Course, Superpave Asphaltic Concrete Level I	•
3 - Class II Base Course	•
STRUCTURAL NUMBER PROVIDED (Total inches)	•

- LEGEND**
- (1) 2" SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE (LEVEL 2F) (ITEM 502-01-00100)
  - (2) 5" SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE (LEVEL 2F) (ITEM 502-01-00100)
  - (3) 12" CLASS II BASE COURSE WITH GEOTEXTILE FABRIC (ITEM 302-02-06000)
  - (4) REQUIRED PAVEMENT STRIPING
  - (5) 4" CONCRETE SIDE WALK (RT. SIDE)
  - (6) GENERAL EXCAVATION (ITEM 203-05-00100)
  - (7) REQUIRED SUBGRADE LAYER (12" MIN.) (ITEM 305-01-04000)
  - (8) REQUIRED EMBANKMENT MATERIAL (ITEM 203-05-00100)
  - (9) 6" TINTED & TEXTURED CONCRETE MEDIAN
  - (10) 4" CONCRETE MOUNTABLE CURB & GUTTER (ITEM 707-03-00100)•
  - (11) 6" CONCRETE BARRIER CURB & GUTTER (ITEM 707-03-00100)••
  - (12) REQUIRED PAVEMENT STRIPING & REFLECTORIZED MARKERS
- TOTAL THICKNESS OF CURB & GUTTER 11"  
 •• TOTAL THICKNESS OF CURB & GUTTER 13"

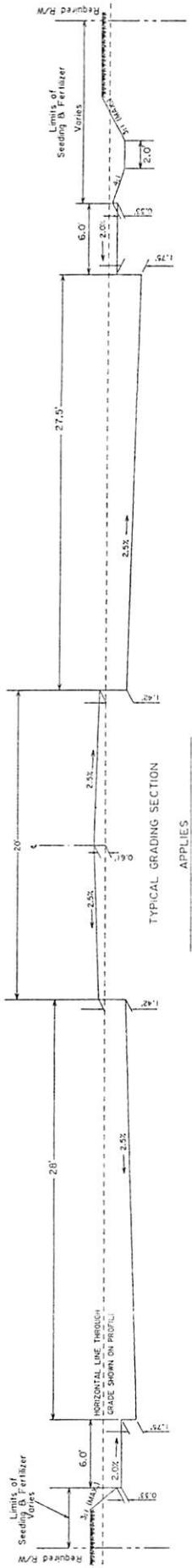
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DESIGNED BY	P. TONEY	DRAWN BY	J. VALUCHA	CHECKED BY	J. VALUCHA
SCALE	AS SHOWN	PROJECT	LA 21 WIDENING	SHEET	H.001340

**TYPICAL SECTIONS**

LA 21 WIDENING



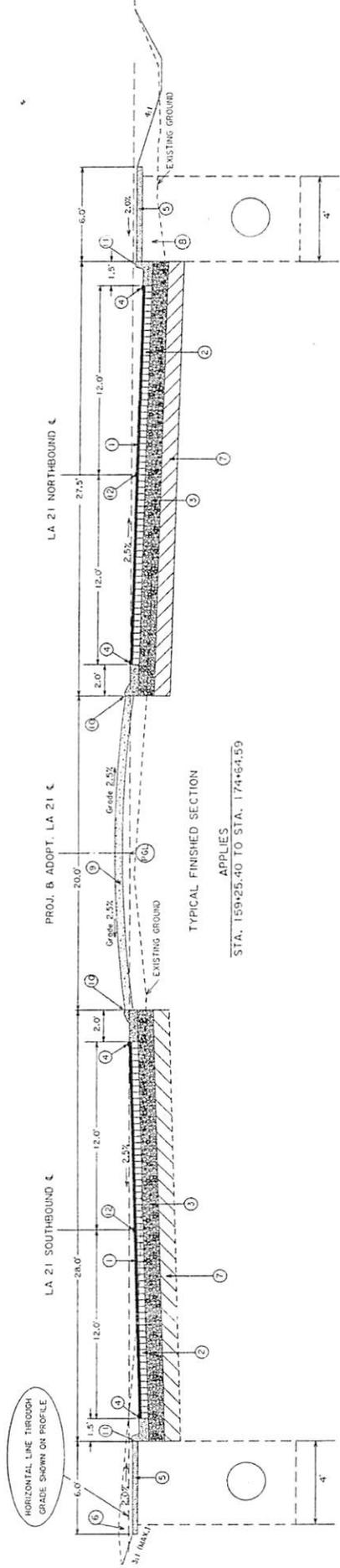
NOT TO SCALE



TYPICAL GRADING SECTION  
 APPLIES  
 STA. 159+25.40 TO STA. 174+64.59

HALF SECTION IN CUT

HALF SECTION IN FILL



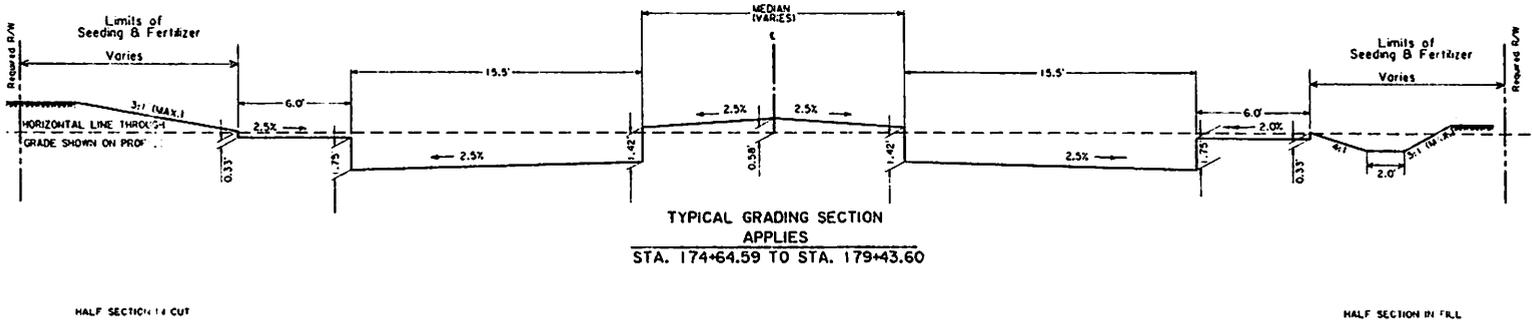
TYPICAL FINISHED SECTION  
 APPLIES  
 STA. 159+25.40 TO STA. 174+64.59

- LEGEND**
- ① 2" SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE LEVEL 2F (ITEM 502-01-00100)
  - ② 5" SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE LEVEL 2F (ITEM 502-01-00100)
  - ③ 12" CLASS II BASE COURSE WITH GEOTEXTILE FABRIC (ITEM 302-02-06000)
  - ④ REQUIRED PAVEMENT STRIPPING
  - ⑤ 4" CONCRETE SIDE WALK
  - ⑥ GENERAL EXCAVATION (ITEM 203-05-00100)
  - ⑦ REQUIRED SUBGRADE LAYER (12" MIN.) (ITEM 305-01-04000)
  - ⑧ REQUIRED EMBANKMENT MATERIAL (ITEM 203-05-00100)
  - ⑨ 6" TINTED & TEXTURED CONCRETE MEDIAN
  - ⑩ 4" CONCRETE MOUNTABLE CURB & GUTTER (ITEM 707-03-00100)\*
  - ⑪ 6" CONCRETE BARRIER CURB & GUTTER (ITEM 707-03-00100)\*\*
  - ⑫ REQUIRED PAVEMENT STRIPPING & REFLECTORIZED MARKERS
- \* TOTAL THICKNESS OF CURB & GUTTER 11"  
 \*\* TOTAL THICKNESS OF CURB & GUTTER 13"

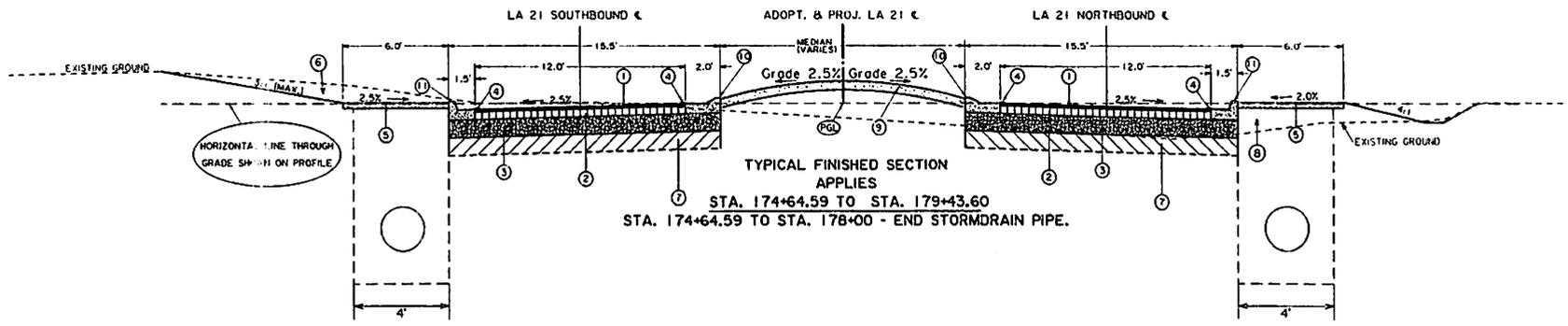
FLEXIBLE STRUCTURE DESIGN	
CURRENT A.D.T. (2013)	* 29,300
DESIGN A.D.T. (2033)	* 43,300
19. Kip ESALS OVER 20 YEARS	
PERFORMANCE PERIOD (YEARS)	*
ROADBED SOIL RESILIENT MODULUS (psi)	*
STRUCTURAL NUMBER REQUIRED (inches)	*
STRUCTURAL NUMBER PROVIDED (inches per layer)	
1 - Wearing Course, Superpave Asphaltic Concrete Level 1	*
2 - Binder Course, Superpave Asphaltic Concrete Level 1	*
3 - Class II Base Course	*
STRUCTURAL NUMBER PROVIDED (Total inches)	*

**90% PRELIMINARY PLANS**  
 Louisiana Department of Transportation and Development  
 ENGINEER: PATRICK TONEY  
 LICENSE #: 28644  
 DATE: JUNE 2011

**PRELIMINARY**  
 NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT.



NOT TO SCALE



**90% PRELIMINARY PLANS**

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 OR AS THE BASIS FOR  
 THE ISSUANCE OF A  
 PERMIT.

**Louisiana Department  
 of Transportation  
 and Development**

ENGINEER: PATRICK TONEY  
 LICENSE #: 29644  
 DATE: JUNE 2011

FLEXIBLE STRUCTURE DESIGN	
CURRENT A.D.T. (2013)	= 29,300
DESIGN A.D.T. (2033)	= 44,300
18-Kip ESALS OVER 20 YEARS	=
PERFORMANCE PERIOD (YEARS)	=
ROADBED SOIL RESILIENT MODULUS(psi)	=
STRUCTURAL NUMBER REQUIRED (inches)	=
STRUCTURAL NUMBER PROVIDED (inches per layer)	=
1 - Wearing Course, Superpave Asphaltic Concrete Level I	=
2 - Binder Course, Superpave Asphaltic Concrete Level I	=
3 - Class II Base Course	=
STRUCTURAL NUMBER PROVIDED (Total inches)	=

**LEGEND**

- ① 2" SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE (LEVEL 2) (ITEM 502-01-00100)
  - ② 5" SUPERPAVE ASPHALTIC CONCRETE WEARING COURSE (LEVEL 2) (ITEM 502-01-00100)
  - ③ 12" CLASS II BASE COURSE WITH GEOTEXTILE FABRIC (ITEM 302-02-06000)
  - ④ REQUIRED PAVEMENT STRIPING
  - ⑤ 4" CONCRETE SIDE WALK
  - ⑥ GENERAL EXCAVATION (ITEM 203-05-00100)
  - ⑦ REQUIRED SUBGRADE LAYER (12" MIN.) (ITEM 305-01-04000)
  - ⑧ REQUIRED EMBANKMENT MATERIAL (ITEM 203-05-00100)
  - ⑨ 6" TINTED & TEXTURED CONCRETE MEDIAN
  - ⑩ 4" CONCRETE MOUNTABLE CURB & GUTTER (ITEM 707-03-00100)\*
  - ⑪ 6" CONCRETE BARRIER CURB & GUTTER (ITEM 707-03-00100)\*\*
- \* TOTAL THICKNESS OF CURB AND GUTTER 11"  
 \*\* TOTAL THICKNESS OF CURB AND GUTTER 13"

SHEET NUMBER	2d
PROJECT	ST. TAMMANY
DESIGNED BY	B. VALMORIA
CHECKED BY	B. LOSEY
DRAWN BY	B. VALMORIA
DATE	JUNE 2011
SCALE	AS SHOWN
PROJECT NO.	H.001340

**TYPICAL SECTIONS**

LA 21 WIDENING

ROAD DESIGN









SUMMARY OF ESTIMATED QUANTITIES



PROJECT NO.	059-01-0028
PROJECT NAME	St. Tammany
PROJECT LOCATION	HOO1340
DATE	01/18/11
SCALE	AS SHOWN

ITEM	DESCRIPTION	UNIT	QUANTITY
201-01-0010	Clearing and Grubbing	Lump	
202-01-0010	Removal of Structures and Obstructions	Lump	
202-02-0010	Removal of Bridge [15ft x 16ft+07.98 to 152+07.98] 500 x 28" CONCRETE	EACH	1
202-02-0810	Removal of Concrete Walls and Caissons	SQYD	1
202-02-28500	Removal of Surfacing and Stabilized Base	SQYD	1
201-01-0010	General Excavation	CUYD	1
203-02-0010	Drainage Excavation	CUYD	1
203-03-0010	Excavation and Extension	Lump	
203-03-0010	Excavation and Extension	Lump	
204-02-0010	Temporary Hay or Straw Bales	EACH	1
302-02-08121	Class II Base Course (1 1/2" Thick) (Stone or Recycled Portland Cement Concrete, or Blended Calcium Sulfate)	SQYD	1
401-02-00100	Aggregate Surface Course (Adjusted Vehicular Measurement)	CUYD	1
402-01-00100	Traffic Maintenance Aggregate (Vehicular Measurement)	CUYD	1
502-01-00100	Superpave Asphaltic Concrete, Drives, Turnouts and Miscellaneous	TON	1
701-03-01000	Stone Drain Pipe (15" RCP/PP)	LFT	1
701-03-01020	Stone Drain Pipe (18" RCP/PP)	LFT	1
701-03-01040	Stone Drain Pipe (24" RCP/PP)	LFT	1
701-03-01060	Stone Drain Pipe (30" RCP/PP)	LFT	1
701-03-01080	Stone Drain Pipe (36" RCP/PP)	LFT	1
701-03-01100	Stone Drain Pipe (42" RCP/PP)	LFT	1
701-03-01120	Stone Drain Pipe (48" RCP/PP)	LFT	1
701-03-01140	Stone Drain Pipe (54" RCP/PP)	LFT	1
701-03-01160	Stone Drain Pipe (60" RCP/PP)	LFT	1
702-03-00100	Catch Basins (CB-01)	EACH	1
702-03-00500	Catch Basins (CB-05)	EACH	1
702-03-00700	Catch Basins (CB-08)	EACH	1
704-03-00100	Blocked Out Guard Rail	LFT	1
704-03-00200	Guard Rail Transition (Single Triple Beam)	LFT	1
704-11-00100	Guard Rail End Treatment (T-Beam)	EACH	1
709-01-00100	Galvanized Wire Fence	LFT	1
709-02-00200	Concrete Walk (6" Thick)	SQYD	2
709-03-00300	Incidental Concrete Paving (6" Thick)	SQYD	1
707-03-00100	Combination Concrete Curb and Gutter	LFT	1
712-04-00100	Flexible Pavement	SQYD	1
713-01-00100	Temporary Signs and Barriers	Lump	
713-02-00100	Temporary Pavement Markings (4" Width)	Lump	
717-01-00100	Sealing	LB	1
718-01-00100	Perforated	LB	1
720-01-01000	Erosion Control System (Slope Protection) (Type A)	SQYD	1
722-01-00100	Project Site Laboratory	EACH	2
726-01-00100	Sealing Material	CUYD	1
727-01-00100	Mobilization	Lump	
729-16-00200	Object Marker Assembly (Type 2)	EACH	1
729-16-00300	Object Marker Assembly (Type 3)	EACH	1
731-02-00100	Rectangularized Raised Pavement Markers	EACH	1
732-01-00200	Plastic Pavement Striding (12" Width) (Thermoplastic 125 MI)	LFT	1
732-01-02000	Plastic Pavement Striding (24" Width) (Thermoplastic 125 MI)	LFT	1
732-02-01000	Plastic Pavement Striding (Solid Line) (4" Width) (Thermoplastic 40 MI)	LFT	1
732-03-01000	Plastic Pavement Striding (Broken Line) (4" Width) (Thermoplastic 40 MI)	LFT	1
733-01-00100	Concrete Approach Slabs	SQYD	1
810-01-00100	Concrete Walling (Standard Barrier)	LFT	1

DRAFT DRAFT DRAFT

SUMMARY OF ESTIMATED QUANTITIES



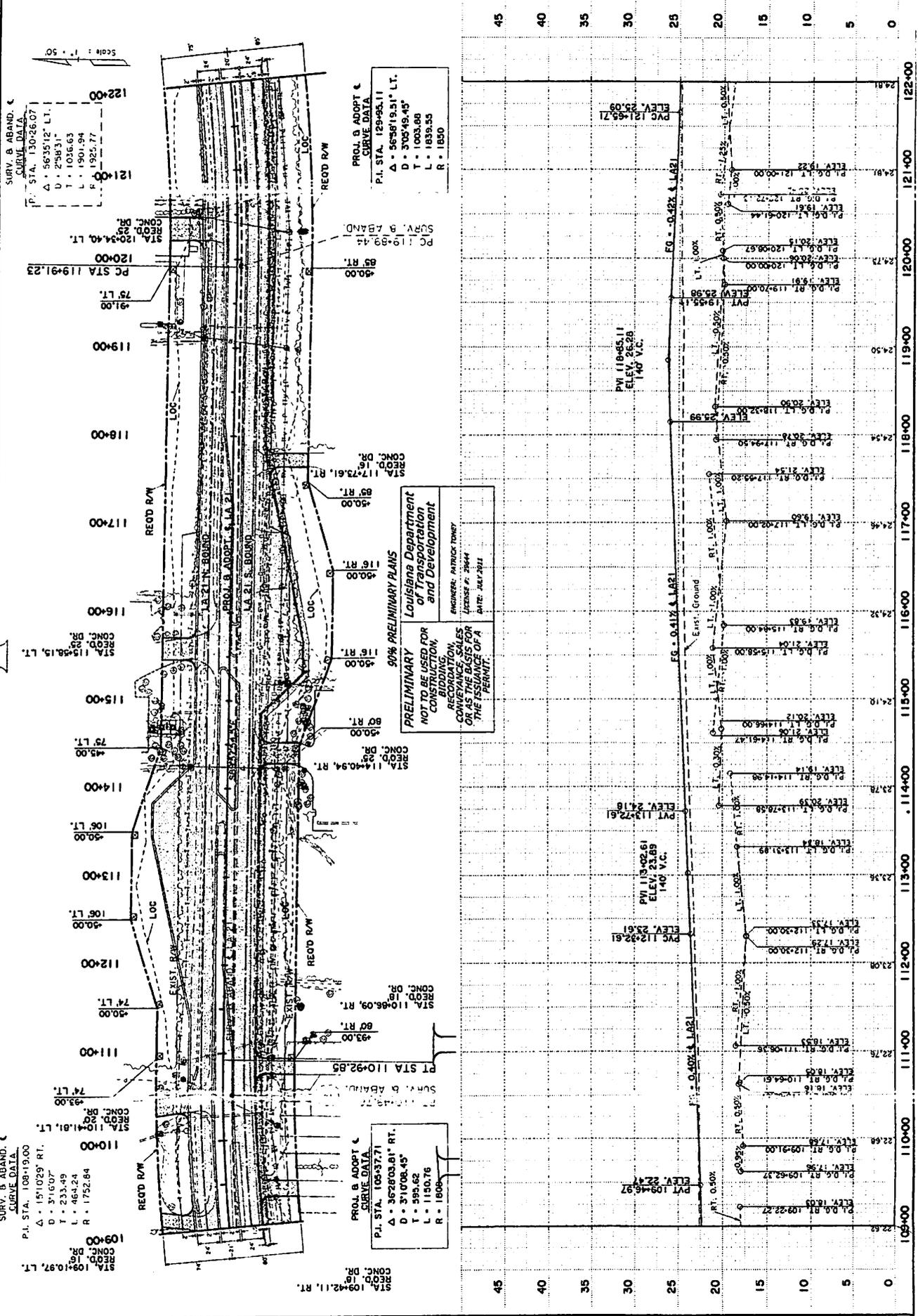


PLAN PROFILE SHEET

LA 21 WIDENING



PROJECT NUMBER	5
DATE	JULY 2011
STATE	LA
PROJECT	H-001340
DESIGNED BY	ST. TAMMANY
CHECKED BY	ST. TAMMANY
APPROVED BY	ST. TAMMANY



SURV. & ABAND.  $\curvearrowleft$   
 CURVE DATA  
 P.I. STA. 130+86.07  
 $\Delta$  - 56°35'12" LT.  
 $D$  - 2°58'31"  
 $T$  - 1036.63  
 $L$  - 1901.94  
 $R$  - 1925.77

STA. 120+34.40, LT.  
 RECD. DR. 25  
 CONC. DR.  
 PC STA 119+91.23  
 75' LT.  
 51.00

STA. 117+36.1, RT.  
 RECD. DR. 16  
 CONC. DR.  
 85' RT.  
 45.00

STA. 116+49.94, RT.  
 RECD. DR. 22  
 CONC. DR.  
 80' RT.  
 45.00

STA. 114+04.94, RT.  
 RECD. DR. 22  
 CONC. DR.  
 80' RT.  
 45.00

STA. 110+96.09, RT.  
 RECD. DR. 16  
 CONC. DR.  
 80' RT.  
 43.00

STA. 109+42.11, RT.  
 RECD. DR. 16  
 CONC. DR.  
 80' RT.  
 43.00

STA. 109+19.00  
 RECD. DR. 25  
 CONC. DR.  
 80' RT.  
 43.00

STA. 108+19.00  
 RECD. DR. 25  
 CONC. DR.  
 80' RT.  
 43.00

PROJ. B ADOPT  $\curvearrowleft$   
 CURVE DATA  
 P.I. STA. 129+95.11  
 $\Delta$  - 56°58'19.51" LT.  
 $D$  - 3°05'49.45"  
 $T$  - 1003.88  
 $L$  - 1839.53  
 $R$  - 1850

STA. 119+99.45  
 SURV. & ABAND.  
 PC STA 119+91.23  
 85' RT.  
 45.00

STA. 117+36.1, RT.  
 RECD. DR. 16  
 CONC. DR.  
 85' RT.  
 45.00

STA. 116+49.94, RT.  
 RECD. DR. 22  
 CONC. DR.  
 80' RT.  
 45.00

STA. 114+04.94, RT.  
 RECD. DR. 22  
 CONC. DR.  
 80' RT.  
 45.00

STA. 110+96.09, RT.  
 RECD. DR. 16  
 CONC. DR.  
 80' RT.  
 43.00

STA. 109+42.11, RT.  
 RECD. DR. 16  
 CONC. DR.  
 80' RT.  
 43.00

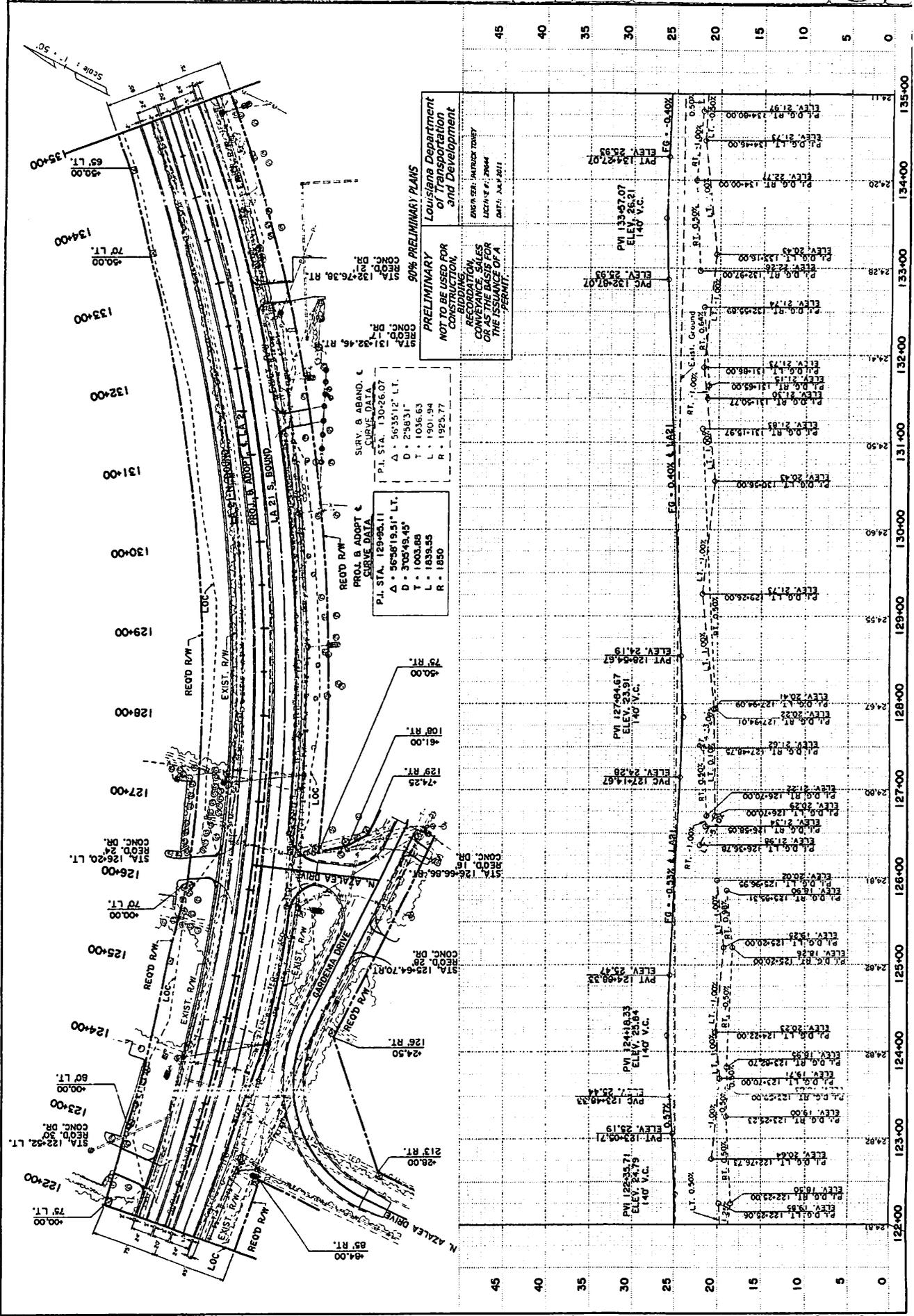
STA. 109+19.00  
 RECD. DR. 25  
 CONC. DR.  
 80' RT.  
 43.00

STA. 108+19.00  
 RECD. DR. 25  
 CONC. DR.  
 80' RT.  
 43.00

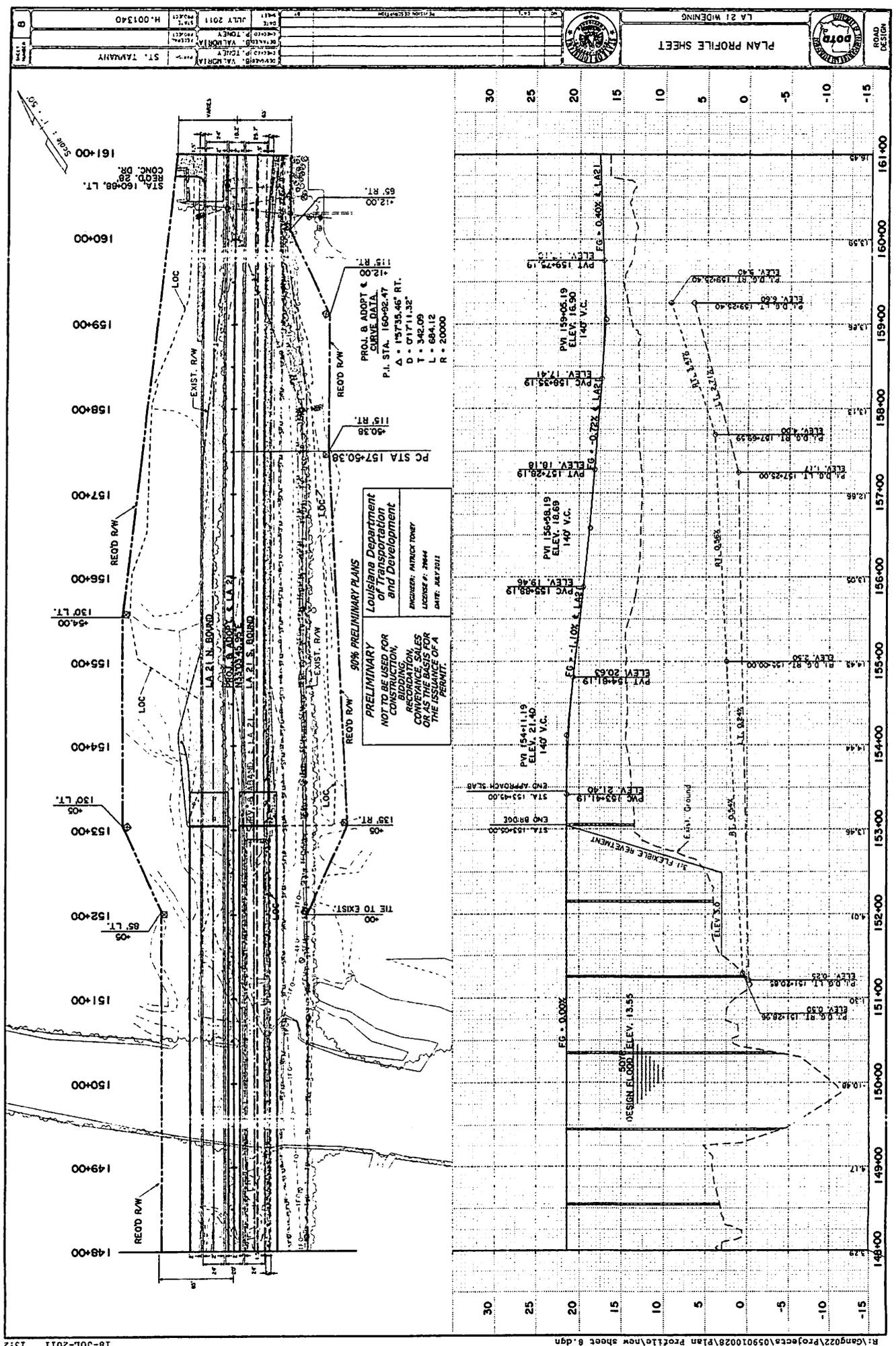
50% PRELIMINARY PLANS  
 Louisiana Department  
 of Transportation  
 and Development  
 ENGINEER: PATRICK TONEY  
 LICENSE # 21844  
 DATE: JULY 2011  
 NOT TO BE USED FOR  
 BIDDING,  
 RECORDATION,  
 CONVEYANCE, SALES  
 OR AS THE BASIS FOR  
 THE ISSUANCE OF A  
 PERMIT.

PROJ. B ADOPT  $\curvearrowleft$   
 CURVE DATA  
 P.I. STA. 108+37.71  
 $\Delta$  - 36°28'03.81" RT.  
 $D$  - 3°10'08.45"  
 $T$  - 595.62  
 $L$  - 1150.76  
 $R$  - 1808

STA. 109+42.11, RT.  
 RECD. DR. 16  
 CONC. DR.  
 80' RT.  
 43.00







**PRELIMINARY**  
 NOT TO BE USED FOR  
 CONSTRUCTION,  
 RECORDATION,  
 CONFORMANCE, SALES  
 OR THE ISSUANCE OF A  
 PERMIT.

**50% PRELIMINARY PLANS**  
 Louisiana Department  
 of Transportation  
 and Development

ENGINEER: MITCHELL TONEY  
 LICENSE #: 3944  
 DATE: APR 2011

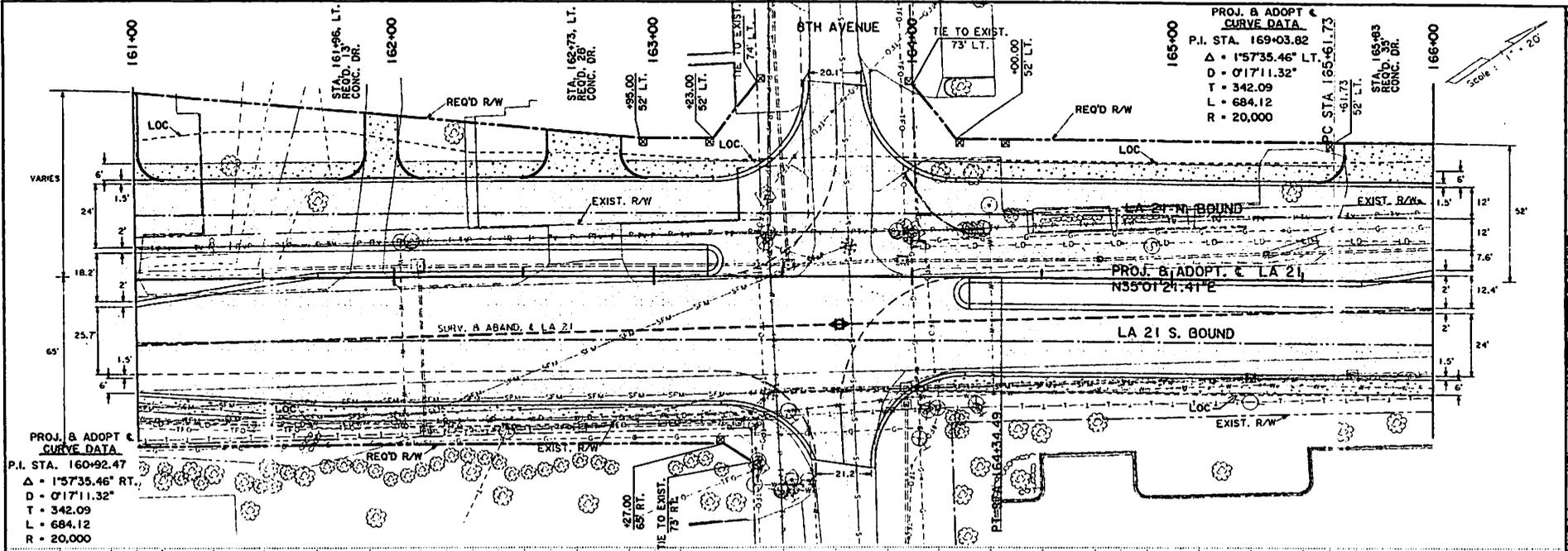
PROJ. B ADOPT &  
 SURVE DATA.  
 P.I. STA. 160+92.47  
 $\Delta = 15735.46'$  RT.  
 $D = 01711.32'$   
 $T = 342.09'$   
 $L = 684.12'$   
 $R = 20000'$

PC STA 157+50.38  
 115 RT.  
 115 RT.  
 115 RT.

130 RT.  
 130 RT.  
 130 RT.

TIE TO EXIST.  
 100 RT.  
 100 RT.

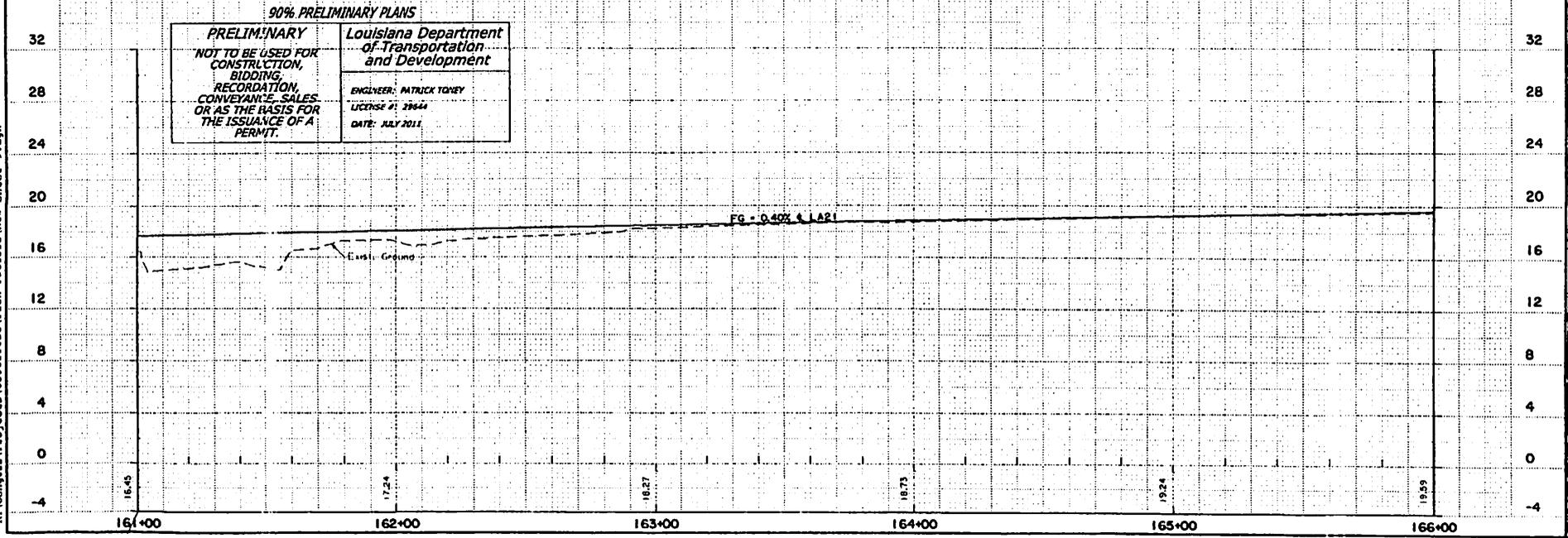
150 RT.  
 150 RT.  
 150 RT.



90% PRELIMINARY PLANS

**PRELIMINARY**  
 NOT TO BE USED FOR  
 CONSTRUCTION,  
 BIDDING,  
 RECORDATION,  
 CONVEYANCE, SALES  
 OR AS THE BASIS FOR  
 THE ISSUANCE OF A  
 PERMIT.

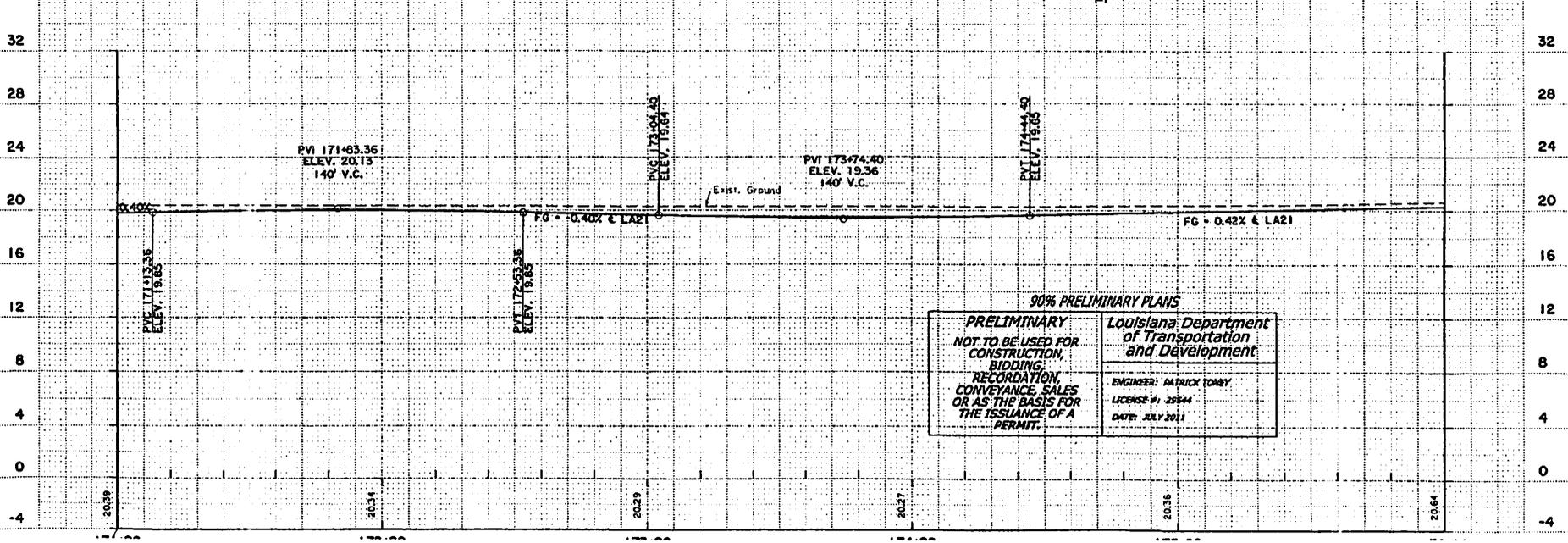
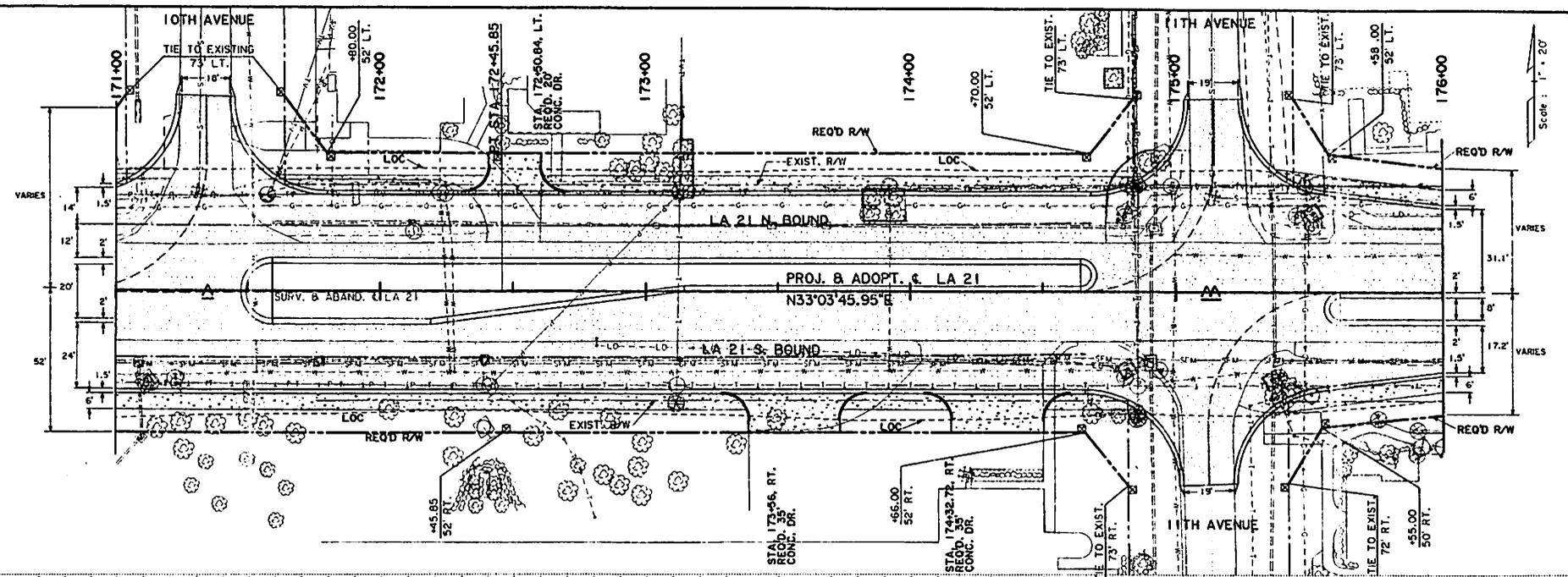
**Louisiana Department  
 of Transportation  
 and Development**  
 ENGINEER: PATRICK TONEY  
 LICENSE #1 29644  
 DATE: JULY 2011



ST. TAMMANY	9
VALERIA	
PATRICK TONEY	
VALERIA	
PATRICK TONEY	
JULY 2011	
H.001340	

ROAD DESIGN  
 PLAN AND PROFILE SHEET  
 LA 21 WIDENING





**90% PRELIMINARY PLANS**  
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 BIDDING,  
 RECORDATION,  
 CONVEYANCE SALES  
 OR AS THE BASIS FOR  
 THE ISSUANCE OF A  
 PERMIT.

Louisiana Department  
 of Transportation  
 and Development

ENGINEER: PATRICK DANEY  
 LICENSE # 2584  
 DATE: JULY 2011

DATE	11
PROJECT	ST. TAMMANY
SCALE	1" = 20'
DATE	H.0013.40
PROJECT	LA 21 WIDENING
SCALE	LA 21 WIDENING
DATE	LA 21 WIDENING
PROJECT	LA 21 WIDENING
SCALE	LA 21 WIDENING

PLAN AND PROFILE SHEET

