

2019

FEDERAL AID OFF-SYSTEM
HIGHWAY BRIDGE PROGRAM



LOUISIANA DEPARTMENT OF
TRANSPORTATION & DEVELOPMENT

GUIDELINES

OFF-SYSTEM BRIDGE PROGRAM GUIDELINES

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PROGRAM CONTACTS

OFF-SYSTEM BRIDGE PROGRAM			
NAME	TITLE	PHONE NUMBER	ROOM NO.
Barbara Ostuno	Program Manager	225.379.1047	604 V
Amanda Ranck	Asst. Program Manager	225.379.1338	604 U
Ryan Rodney	Engineering Technician DCL	225.379.1308	604 T
FAX (Bridge Design)		225.379.1786	
OTHER CONTACTS			
NAME	PHONE NUMBER	SECTION	ROOM NO.
Mary Jean McAdams	225.379.1063	Bridge Design	603 C
Mitra Hashemieh	225.379.1482	Hydraulics	N 515
Chris Nickel	225.379.1016	Pavement & Geotechnical	606 Y
Noel Ardoin	225.242.4501	Environmental	502 P

ADDRESSES			
NAME	ADDRESS	CITY	ZIP CODE
LA DOTD	Post Office Box 94245	Baton Rouge	70804-9245
	1201 Capitol Access Rd.	Baton Rouge	70802-4438
E-MAIL ADDRESSES			
Barbara Ostuno	barbara.ostuno@la.gov		
Amanda Ranck	amanda.ranck@la.gov		
Ryan Rodney	ryan.rodney@la.gov		

**Check out DOTD's web page @
www.dotd.la.gov**

EXTERNAL RESOURCES

The following design guidelines or manuals are available for download from the DOTD website:

- 2019 Federal Aid Off-System Highway Bridge Program Guidelines
- DOTD Bridge Design – Guidelines, Manual, and Technical Memoranda
- Hydraulic Manual
- HEC 18 (or latest edition)
- DOTD Road Design – Guidelines, Manual, and Memoranda
- EDSMs
- Minimum Design Guidelines
 - Design Waiver / Exception Forms
- Environmental Clearance Procedures Packet – Includes copies of the SOV mailing lists (State and Parish).

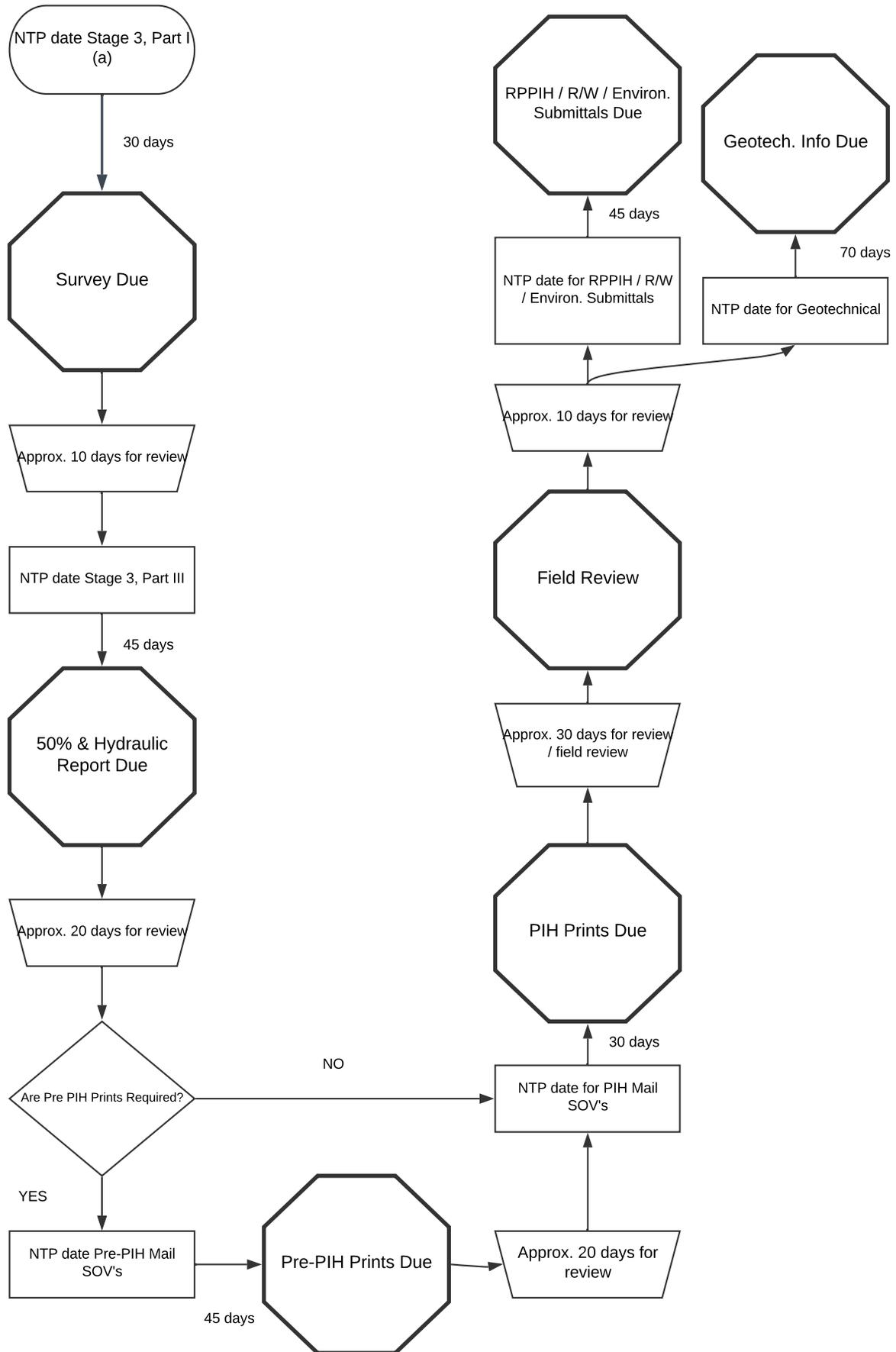
Other Design guidelines

- AASHTO “Green Book” latest edition
- AASHTO - *Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤ 400)*, 2001.

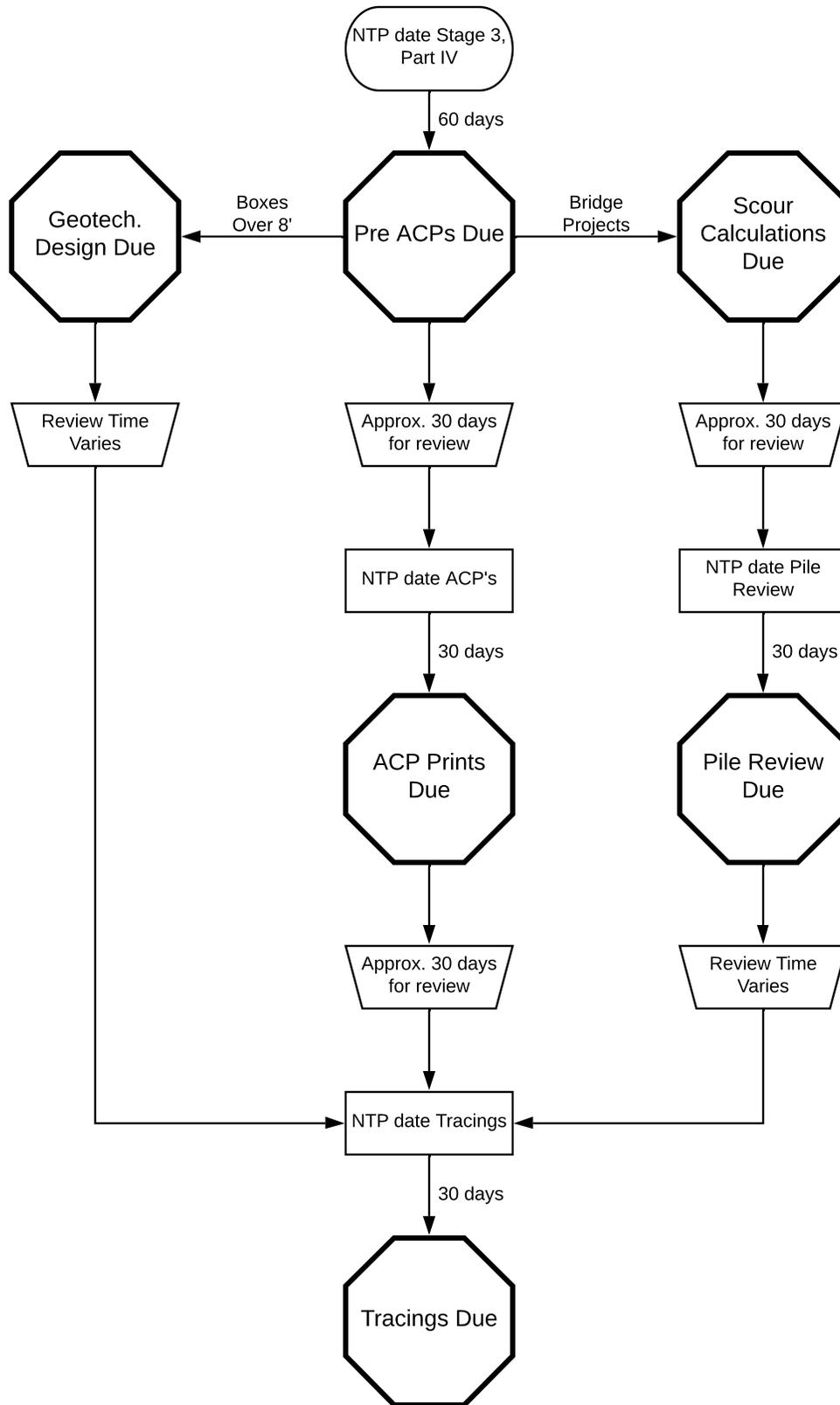
Off-System Bridge Program will provide the following:

- Project Number Request form and location map for each site
- Field Books; Level book (topo and cross section books if requested)
- Parish Contacts and phone numbers
- DOTD Lab results (after Plan-In-Hand) – pH & Resistivity and roadway cores

Time Line For Preliminary Plans (Typical Project)



Time Line For Final Plans (Typical Project)



SUBMITTAL REQUIREMENTS

Below is a list of the submittals required by this program. If you have questions concerning these submittals, please call our office.

PRELIMINARY PLANS

STAGE 3, PART I(a) - TOPOGRAPHIC SURVEY		
SUBMITTAL	NO. OF SETS	DELIVERABLES
SURVEY	1 Hard Copy / 1 PDF	Field roll(s)
	1 Hard Copy / 1 PDF	Existing drainage map(s)
	--	Original field book(s)
	1 Hard Copy / 1 PDF	Plotted cross sections (half-size is acceptable)
	1	Bound point listings (see page 16, Item 11d)
1 Hard Copy / 1 PDF	Additional copy of color photos (not bound) for each site on 8-1/2" x 11" paper for DOTD's files	
STAGE 3, PART III - PRELIMINARY PLANS		
50% COMPLETION	1 Hard Copy / 1 PDF	Hydraulic report
	1 Hard Copy / 1 PDF	Title sheet, layout map, and plan/profile sheet
SOVs ①	1 Hard Copy / 1 PDF	See Environmental Clearance Process guidelines.
PRE PLAN-IN-HAND	1 Hard Copy / 1 PDF	Full sized set of plans: title sheet & layout map, typical section sheet, culvert typical (if applicable), plan/profile sheet(s); drainage map(s); signing sheet(s); signing legend; general bridge plan sheet(s) (if applicable); cross section sheets (including stream cross sections).
	1 Hard Copy / 1 PDF	Culvert length calculations (if applicable)
PLAN-IN-HAND	1	Full sized set with cross sections & the Pre PIH "markups"
	8 Hard Copies / 1 PDF	Half-sized set of prints with cross sections
	1 Hard Copy / 1 doc. file	Constructability/Biddability Review form (1 per site) – design portion filled out and form emailed to coordinator.
POST PLAN-IN-HAND	1 Hard Copy 1 PDF	Half-sized set with cross sections
	1	Half-sized print of each plan/profile sheet
R/W REQUIREMENTS TO THE PROGRAM COORDINATOR	1 PDF Copy	Reproducible print of plan/profile sheet
	1 PDF Copy	Agreements and sketches
ENVIRONMENTAL ①	-	See Environmental Clearance Procedures booklet. Submit to the Program Coordinator after PIH or Post PIH as applicable
	1 Hard Copy / 1 PDF	Half-sized prints of typical section sheet and plan/profile sheet
	1 Hard Copy / 1 PDF	Permit sketches
BORINGS (if applicable)	3 Hard Copies / 1 PDF	Half-sized prints of boring log(s) & general bridge plan(s)
	1 Hard Copy / 1 PDF	Soil analysis report

① Need to include hydraulic data table in SOVs.

FINAL PLANS

STAGE 3, PART IV - FINAL PLANS		
SUBMITTAL	NO. OF SETS	DELIVERABLES
PRE ADVANCE CHECK PRINTS	1 Hard Copy 1 PDF	Half sized set of plans: title sheet & layout map; typical section sheet; super-elevation typical section sheet(s) (if applicable); pipe/box typical (if applicable); summary sheets; plan/profile sheet(s); erosion control plans; drainage map(s); drainage summary sheet; signing sheet(s); signing legend; general bridge plan(s); boring log (if applicable); ALL special details, bridge details and standard plans and cross section sheets
	1 PDF	New / replacement structure number request form
	1 Hard Copy / 1 PDF	Bridge scour calculations (if applicable)
ADVANCE CHECK PRINTS	9 Hard Copies / 1 PDF	Half-sized set of prints with standard plans, details, and cross sections
	1 Hard Copy	Half sized print of the title sheet & Layout map
REVISED POST ADVANCE CHECK PRINTS (If required)	1 Hard Copy 1 PDF	Half-sized set with Cross-Sections and the latest "markups"
TRACINGS		
TRACINGS	1 Full Sized Hard Copy	Stamped, Signed & Dated Tracings (as per contract) with standard plans and details and cross sections; ACP (or latest) "markups"; Bound Calculations; Original Field Book(s). Title Sheet must be mylar.
	1 Hard Copy / 1 PDF	As-designed load rating report and rating design files if applicable.
	1 PDF	Hydraulic report in .pdf format on CD

- **RETAIN TRACINGS UNTIL NOTIFIED**
- **IF A LOAD RATING WAS PREFORMED, CONSUTANTS SHALL SUBMIT THE LOAD RATING REPORTS AT FINAL PLAN STAGE**
- **SIGNED QA/QC STATEMENT IS REQUIED WITH EVERY SUBMITTAL**

INVOICING

1. Invoices must be submitted by e-mail every 30 days. If work is not performed on a contract during a 30-day period, a zero-dollar invoice must be submitted.
2. All Invoices, including zero dollar invoices, must be numbered sequentially. This information should be shown in the “Request for Payment Number” field on the Lump Sum Summary Sheet.
3. Partial Estimates must contain the following information:
 - a. Lump Sum Summary Sheet (Available on DOTD’s Consultant Contracts’ Site under Invoicing). Summary Sheet must include the Project Number, Contract Number, and Purchase Order Number.
 - b. Invoice Submittal Checklist (Available on DOTD’s Consultant Contracts’ Site under Invoicing). This form must be signed by the Consultant.
 - c. Progress Schedule
4. Zero Dollar Invoices only need to include the Lump Sum Summary Sheet
5. DBE Forms are only required if the contract includes a DBE goal OR if a DBE completes work on the contract. If either of these requirements are met, DBE Form 1 should be included with each invoice and DBE Form 2 should be included with the final invoice.
6. The contract will be paid based on the table shown below. Partial payments for items that are not completed within a 30-day period are allowed.

SUBMITTAL	PERCENTAGE TO BILL
STAGE 3, PART I(a) – TOPOGRAPHIC SURVEY	
SURVEY	75% when submitted 100% when returned approved
STAGE 3, PART III – PRELIMINARY PLANS	
Hydraulic Reports	50%
Pre Plan-in-Hand	75%
Plan-in-Hand	95%
Post Plan-in-Hand	99%
Environmental & R/W requirements submitted	100%
STAGE 3, PART IV – FINAL PLANS	
Pre Advance Check Prints	75%
Advance Check Prints	95%
Waiting on borings or pile length review	99%
Tracings	100%

Consultant's Name
INVOICE SUMMARY SHEET
LUMP SUM

Purchase Order Number: 2000XXXXXX
Contract Number: 4400XXXXXX
Project Number: H.0XXXXX.5
Off-System Bridge Program
Parish:

Federal Aid Project No. : H0XXXXXX
Vendor Number: 310XXXXXX

Request for Payment Number : **xx / Partial or Final**
PERIOD: M/D/Y TO M/D/Y

Stage 3, Part IA - Topographic Survey - Total
 Consultant (Notice to Proceed M/D/Y) - Subtotal
 (Expiration Date M/D/Y)

Subconsultant (Notice to Proceed M/D/Y) - Subtotal
 (Expiration Date M/D/Y)

Supplemental No. 1 - (Description) - Total
 Consultant (Notice to Proceed M/D/Y) - Subtotal
 (Expiration Date M/D/Y)

Stage 3, Part III - Preliminary Plans - Total
 Consultant (Notice to Proceed M/D/Y) - Subtotal
 (Expiration Date M/D/Y)

Extra Work Letter No. 1 - (Description) - Total
 Consultant (Notice to Proceed M/D/Y) - Subtotal
 (Expiration Date M/D/Y)

Subconsultant (Notice to Proceed M/D/Y) - Subtotal
 (Expiration Date M/D/Y)

Stage 3, Part IV - Final Plans - Total
 Consultant (Notice to Proceed M/D/Y) - Subtotal
 (Expiration Date M/D/Y)

	MAXIMUM COMPENSATION	% COMPLETE	AMOUNT EARNED TO DATE	PREVIOUSLY INVOICED	LESS RETAINAGE	AMOUNT DUE THIS PERIOD
Lump Sum	75,000.00	100.00%	75,000.00	71,250.00	0.00	3,750.00
Lump Sum	55,500.00	100.00%	55,500.00	55,500.00	0.00	0.00
Lump Sum	65,450.00	100.00%	65,450.00	62,177.50	3,272.50	0.00
Lump Sum	199,000.00	50.00%	99,500.00	0.00	4,975.00	94,525.00
Lump Sum	35,250.00	65.00%	22,912.50	12,000.00	1,145.63	9,766.87
Lump Sum	58,160.52	95.00%	55,252.49	0.00	2,762.62	52,489.87
Lump Sum	22,002.45	5.00%	1,100.12	955.00	55.01	90.11
Total	510,362.97		374,715.11	201,882.50	12,210.76	

TOTAL AMOUNT DUE THIS PERIOD: \$160,621.85

Contact Information Regarding Invoicing Questions:

Name: _____ Telephone#: _____ Email: _____

Certified Correct by:

Principal Member's Signature



Office of Engineering
 PO Box 94245 | Baton Rouge, LA 70804-9245
 ph: 225-379-1401 | fx: 225-379-1857

John Bel Edwards, Governor
 Shawn D. Wilson, Ph.D., Secretary

Invoice Submittal Checklist

Consultant's Name _____ Invoice No. _____
 State Project No. _____ Description _____

To assure that the Consultant's invoice will be processed in a timely manner please make sure that the information listed below is provided/accurate.

Check	
	P. O. Overview report – Project Manager will provide
	Standard Invoice Format used
	Non Project Related Material, Receipts, etc., were not included
	Previous Amounts correct on current invoice
	Missing Invoice(s) – skipping a number(s)
	Overhead Rate was not the Overhead Rate approved through DOTD
	Math Errors – Double check math
	Direct Expense Calculations for mileage, lodging and meals are included
	Direct Expense Receipts
	Mileage logs and/or map quest print out
	State Project Number are correct on invoice (Lead Project number on Multiple Projects)
	Project Information for this project is correct
	Travel Expense Charges comply with State Travel Regulations
	Employee's Classification/s on the hour/rate breakdown of labor charges are shown
	Prior approval from Project Manager and Consultant Contract Services Administrator to switch Funds
	Dates Worked "From" and "To" are listed
	Expiration Date has not passed without an extension or justification letter to Project Manager approved by the Consultant Contracts Services Administrator
	Notice to Proceed – work was not done before the NTP date.
	Cost Disbursement Certification Form/Statement with the Principal's signature (if applicable)
	Copy of Cancelled check/s (if applicable)
	Sub-consultant's Invoice provided
	DOTD's State Project Number and/or Lead for Task Order Number(s)
	DOTD's Agreement Number
	DOTD's Progress Billing Number, i.e., our invoice number
	Federal ID

_____ **Project Manager**

PROJECT SCHEDULE

STATE PROJECT NO. H.0XXXXX
 STAGE ?, PART ?

(Contract time in days)(Additional contract days)

<u>Description of Work</u>	<u>Actual</u>	<u>Down/</u>	<u>Scheduled</u>	<u>Submittals/Resubmittals</u>		<u>Remarks</u>
	<u>Calendar Days</u>	<u>Review Days</u>	<u>Date</u>	<u>Date In</u>	<u>Date Out</u>	
Notice to Proceed			m/d/y			
milestone #1	x days	z days z days	m/d/y	m/d/y m/d/y	m/d/y m/d/y	
milestone #2 time extension #1	x days	z days z days	m/d/y rev (1) m/d/y	m/d/y m/d/y	m/d/y m/d/y	
milestone #3	x days	z days z days	m/d/y rev (1) m/d/y	m/d/y m/d/y	m/d/y m/d/y	
milestone #4	x days	z days z days	m/d/y rev (1) m/d/y	m/d/y m/d/y	m/d/y m/d/y	
milestone #4	x days	z days z days	m/d/y rev (1) m/d/y	m/d/y m/d/y	m/d/y m/d/y	
Completion						
Total Actual Calendar Days	_____		m/d/y			
Total Down/Review Days		_____	rev (1) m/d/y			

DBE FORM 1

Louisiana Department of Transportation and Development
DBE Participation **Monthly** Report

Contract No.	44	Invoice No.	
State Project No. / Task Order No.	H.	Report period begin date	
Prime Consultant		Report period end date	

LA UCP Certified DBE Prime and/or Sub-Consultant	Services performed this period	\$ amount invoiced this period	\$ total invoiced to date
Totals:			

Authorized Prime Consultant signature			
Typed or printed name		Date	
Title		Phone No.	

DOTD Project Manager has reviewed this form: _____ Date _____
DOTD Project Manager signature

This report shall be submitted **monthly** to the DOTD Project Manager with the current month's invoice. Questions should be directed to the DOTD Compliance Programs Section at (225) 379-1382.

DBE FORM 2

Louisiana Department of Transportation and Development
DBE Participation **Final** Report

Contract No.	44	DBE Goal %	
State Project No. / Task Order No.	H.	Contract amount	\$
Prime Consultant			

LA UCP Certified DBE Prime and/or Sub-Consultant	Services performed	Total dollar amount paid to DBE
Total:		\$

Authorized Prime Consultant signature			
Typed or printed name		Date	
Title		Phone No.	

DOTD Project Manager has reviewed this form: _____ Date _____
DOTD Project Manager signature
Date

This report shall be submitted with the **final** invoice to the DOTD Project Manager. Questions should be directed to the DOTD Compliance Programs Section at (225) 379-1382.

SURVEY PROCEDURES

- ! Prior to beginning any work at the site, the Consultant must contact the Parish Representative and request that they meet at the site to verify the location. Additional information about the site should be obtained from the parish at this time (road closure during construction, flooding, etc.).
 - ! A centerline survey is required. Base line surveys will not be accepted.
1. **GENERAL** – Surveys are to be performed in accordance with the DOTD Location and Survey Manual with certain exceptions specified in the following survey procedures. The topographic surveys shall be submitted to the coordinator for review and approval. **See Item No. 11, “Survey Submittal”.**
 2. **SURVEY BOOKS** – Only DOTD field books shall be used. DOTD will furnish numbered field books to the consultant prior to the commencement of the survey. Only the Level Book is **required**. If additional books are wanted, they will be furnished to you. **The construction project number and parish name should be written, in permanent ink, on the cover of each field book. A certification statement is required in each field book and shall be signed by the surveyor.**
 3. **ALIGNMENT & TOPOGRAPHY NOTES** – Survey to extend 500’ **MINIMUM** each end of bridge project. When end of project falls within existing curve, the entire curve is to be surveyed for alignment.
 - a) Topo of roadway at bridge site to extend entire length of project and 25’ beyond existing/apparent R/W on each side of road. Existing/apparent R/W to be shown on plan/profile sheet.
 - b) Topo of existing bridge to show gutter lines and centerline bent locations.
 - c) Topo of stream at bridge site to be located from a traverse which extends 150’ minimum each side of bridge, and a sufficient distance farther to define banks of curved stream. **Traverse to be shown on plan/profile sheet.**
 - d) All large trees are to be located.
 - e) Horizontal control (see item 5).
 - f) Utility data (see item 7).
 - g) Low chord elevation of the existing bridge is to be noted.

4. CROSS-SECTION NOTES

- a) Road Cross-Sections – take sections at bridge ends and 50', 75', 100', 200', 300', 400' and 500' from each end of bridge and at breaks in grade between these points (cross-sections must extend along roadway a **MINIMUM** of 500' each end of bridge). Roadway cross-section shots required at road centerline and at all breaks in grade up to 25' beyond R/W on each side of road.
- b) Stream Cross-Sections – take sections:
 - o On one side of existing bridge
 - o At 15' upstream and downstream from the bridge
 - o At 150' upstream and downstream from the bridge

Stream cross-sections will consist of elevations taken at stream centerline and all breaks in grade for the full width of the stream. ***A cross section at 15' from the bridge is required to ensure the consultant obtains information concerning channel transition. Additional cross sections may be required to ensure a correct earthwork quantity.***

5. **HORIZONTAL CONTROL** – Tie to nearest intersecting public road or highway. **The project survey control and horizontal alignment shall be based on the Louisiana State Plane Coordinate System, (NAD-83), as determined by G.P.S. observation.**

6. **VERTICAL CONTROL** – Vertical control will be required for all projects; vertical control shall be in accordance with NAVD-88.

Project TBMs – need a MINIMUM of four (4) at project (one at each end of project and one at each end of the bridge). Benchmarks should be established **within a 50' radius** of the bridge ends. **TBMs are to be 3/4" IP set in concrete.**

7. **UTILITIES** – Locate & identify all utilities within project site and record on field roll. ***DO NOT DELAY SUBMITTING YOUR SURVEYS FOR REVIEW WAITING ON COMPANIES TO MARK UTILITIES IN FIELD.***

8. **FIELD ROLL** – (May substitute a Plan/Profile Sheet). Plot at a **1"=50'** scale (plan) for rural projects or a **1"=20'** scale for urban projects; **1"=5'** scale (profile). Lettering on field rolls shall be of adequate size to facilitate a 50% reduction of plans. **The absolute minimum letter size is 0.11".**

9. **EXISTING DRAINAGE MAP** – Quad maps are required for the drainage map. Should the quad map not be feasible for a project, contact this office. **No more than 1 sheet per map.**
10. **FIELD ROLL/PLAN & PROFILE SHEET** – The minimum information to be shown on the field roll, in addition to the information required by the DOTD Location & Survey Manual, shall include the following:
- Name of roadway
 - Name of stream/channel
 - Existing/assumed/apparent Right-of-way
 - Existing roadway width
 - Type of existing roadway
 - Structure number
 - Description of existing structure(s) – (length x width; number of spans; material). **This description is to be placed in the upper right hand corner of the plan and profile sheet or field roll.**
 - Stream traverse line (upstream and downstream). Tie stream traverse line to roadway. **(See Item 4-b, page 14)**
 - Channel elevations and plus stations (in profile)
 - Curve data
 - Temporary bench marks (four minimum)
 - Existing utilities and depth (if buried)
 - Utility owners
 - North arrow and scale
 - Dash existing cross drains in profile
 - Show flow lines of existing cross drains in profile
 - Existing structure in both the plan and profile shall be ***dashed***. The spans should be shown in both views. Elevation of low chord is to be noted.
 - Centerline elevations – 2 decimal places
 - Reference points
 - State Plane coordinates to be shown on at least 2 points on field roll.

11. **SURVEY SUBMITTAL** – The following items are to be sent to the coordinator for review and approval:
- a. A hard copy and pdf of the field roll
 - b. A hard copy and pdf of the existing drainage map
 - c. The **original field books**
 - d. Listing of Points (bound in booklet format and a pdf):
 - i. One (1) list in numerical order with a description of each point and its coordinates and elevation
 - ii. One (1) list by station, offset, point number, elevation and a description of each point.
 - iii. One (1) list of all cross sections, including the roadway centerline, surveyed by station, offset with elevations. Stream cross sections are to be included.
 - iv. If necessary, a legend of point descriptions are to be included.
 - e. PDF file and plotted cross sections by station (1"=5') horizontal & vertical scale. Profile grade elevation shown. Stream cross sections are to be included. **Half-size is acceptable for cross sections only.**
 - f. PDF file and hard copies of color photos (not bound) of each site plotted on 8-1/2" x 11" paper for DOTD files.

PLAN AND PROFILE SHEETS THAT ARE NOT PROPERLY FORMATTED WILL BE RETURNED TO THE CONSULTANT WITHOUT REVIEW.

SURVEY CHECK LIST

1. Minimum of 4 TBMs (one at each end of project & at each bridge end)
2. North arrow
3. Scale:
4. Name of roadway:
5. Type of roadway:
6. Width of roadway:
7. Centerline elevations - 2 decimals (Asphalt or Concrete) - 1 decimal (Gravel)
8. Bearings
9. Curve data
10. Showing distance to the nearest intersecting roadway on both ends of survey?
11. Elevations & plusses of centerline of channel
12. Stream traverse shown & stationed where it ties to the survey line
13. Structure Number:
14. Description of existing structure in upper right corner?
15. Description of existing structure: W- x L-
16. # of Spans:
17. Type of Bridge:
18. Exist. structure dashed/spans in the plan view
19. Exist. structure dashed/spans in the profile view
20. All existing pipe dashed
21. All cross drains shown in profile (dashed) with flow lines
22. Pipe diameters shown
23. Name of waterway:
24. Flow arrows in stream shown
25. Type of fence spelled out. # strands of B/W shown? Y N N/A
26. Utilities in plan & profile (if buried) shown
27. Utility Owners
28. Existing / Assumed / Apparent R/W
29. Reference Points
30. Low Chord Elevation:
31. Drainage Map
32. Lettering & symbols correct size & weight? Legible when reduced to half-size?
33. State Project number and Parish name on field book(s) in permanent ink?
34. Certification in field book(s)?
35. Point listing: numerical order with description, coordinates, elevations?
36. Point listing: station & offset, descriptions, elevations?
37. Point listing: roadway cross section points; station, offset, elevations?
38. Point listing: stream cross section points; station, offset, elevations?
39. Plotted roadway and stream cross sections
40. Copy of color photos for DOTD file?
41. State plane coordinates shown at 2 points (min.) on survey?
42. QC/QA Certification

50% COMPLETION POINT

After the topographic surveys have been reviewed and deemed satisfactory, the consultant is given a “Notice to Proceed” date to begin the preliminary plan phase of the contract.

This date comes from the Coordinator. The time frame, not including review time, for preliminary plans is typically **150 days**.

The 50% completion point is when the hydraulic report for each project is due [45 days]. **The hydraulic submittal shall include any viable alternate (bridge, RCB, CDP)**

Also required ***separate from the hydraulic report*** are the following:

- ❖ Title sheet and layout map
- ❖ One print of each plan/profile sheet
- ❖ No-rise Certification (see BDTM.67) if the project is located on F.I.R.M map

! Do not include the plan & profile sheet with the hydraulic report. The report is immediately sent to the Hydraulic Section for review while our office reviews the plan & profile sheet.

The plan & profile sheet(s) should reflect all comments made during the survey review. These sheets should be completed to the point where the **next step** will be the detailing of the design structure and roadway.

The consultant may choose to include scour calculations in the hydraulic report; however, fees for scour calculations will be included in the final plan supplement for bridge projects only.

Scour calculations will be requested with the preliminary advance check print submittal if not previously reviewed with the hydraulic report submittal.

After all hydraulic comments have been addressed, including scour, a copy of the hydraulic report and no-rise certification on a compact disc (in .pdf format) will be required. This report will be due with final tracings.

TITLE SHEET

! Under NO circumstances will hand lettering be allowed on the Title Sheet.

1. **LAYOUT MAP** – The layout map is placed in the center of the title sheet. For projects with three (3) or more sites, a separate layout map (Sheet 1a) will be needed. **A parish map must be used (either scanned or photographically reproduced). If the project lies within a city boundary, a city map must be used.** Parish maps in .pdf format for use **solely** for title sheet preparation can be downloaded from the LADOTD Cartographic Mapping webpage.
2. **CAPTION** – The project caption, placed directly above the layout map, consists of the site number (if applicable), federal-aid number, state project number, project name, structure number, **new recall** number and parish name, **in that order**. The **new recall** number is to be used on the title sheet and in the description of the new structure on the plan / profile sheets. The description of the existing structure will be the only place in the plans to include the existing recall number.
 - ❖ Text heights:
 - Project name - 0.5"
 - Other lettering in caption - 0.35".

! Project names are to be written exactly as shown on the Project Number Request form sent in the project packet.

3. **PROPOSED CONSTRUCTION** – The beginning and end of the project is shown in bold lettering. Arrows are drawn from the stationed descriptions to indicate bridge sites, equations, etc. The north arrow is shown on the right side of the map or title sheet. Descriptions should always be written outside the border of the map.
4. **VICINITY MAP** – The vicinity map, showing the borders of all parishes, is placed in the upper right corner of the title sheet. This allows the designer to place a heavy border around the parish in which the projects are located and place a label **PROJECT LOCATION** arrowed to the parish.
5. **INDEX** – The index to the sheets in the plans is to be placed in the upper left corner of the title sheet and includes a listing of the sheets in order by number and description. Standard plans shall be listed in alphabetical order. All roadway plan sheets, bridge plans, standard plans and cross section sheets are listed. A numerical total of all sheets, both with and without cross sections, are also shown. In the preliminary plan stage, ***ONLY*** the sheets included in the plan-in-hand set are to be shown. In the final plan stage (pre-ACP), the index must include all plan sheets, standard plans and cross sections.

6. **TRAFFIC DATA** – This information is shown on the left side of the title sheet. This information is furnished to you by DOTD. Title sheet is to include: ADT, Design Speed and Posted Speed. A new design report was created for use with the Minimum Design Guidelines, since the new guidelines allow a range of values. Refer to the Road design website for the latest copy of the Minimum Design Guidelines.

7. **LENGTH OF PROJECT** – Data concerning the length of project is shown in a table located right center, near the bottom. Please refer to pages **23-25** for additional information.

8. **TYPE OF CONSTRUCTION** – The “TYPE OF CONSTRUCTION” is located in the lower left corner and indicates the major construction involved in each project. The basic idea is to provide a brief, concise description of the work involved. Listed below are examples:

Surfacing (i.e. Class II Base Course, Asphalt Concrete, or Aggregate Surfacing); Drainage Structures (i.e. Concrete Slab Span Bridge, Girder Span Bridge, Cross Drain Pipes, Box Culvert, Pre-cast 3-Sided Structure)

9. **SIGNATURES** – Signatures of the appropriate parties are shown in the lower right of the title sheet. The first signature is the consultant who prepared the plans. This signature is labeled “RECOMMENDED FOR APPROVAL”. The name of the consultant firm is placed under the signature line. Space must be left for the professional engineering stamp of the designer. Signature lines are also provided for the DOTD Chief Engineer and the Federal Highway Administration (in that order). These signatures are labeled “APPROVED” with the titles shown under the signature line.

ORDER OF PLAN SHEETS

- 1) **Title Sheet** (Sheet #1. If there is a separate layout map sheet, it will be #1a)
- 2) **Typical Sections and Details** (first sheet is Sheet #2, remainder of sheets are numbered 2a, 2b, etc.)
- 3) **Summary Sheets** (first sheet is Sheet #3, remainder of sheets are numbered 3a, 3b, etc. Summary of Estimated Quantities is the last summary sheet) *The Summary of Drainage Structures Sheet is **not** included in the Summary Sheets.*
- 4) **Plan-Profile Sheets** (first sheet is Sheet #4, remainder of sheets are numbered 5,6, etc.)

Remainder of Sheets, **as required**, will be in the following sequence:

- ❖ **Storm Sewer Plan-Profile**
- ❖ **Erosion Control Plan**
- ❖ **Drainage Maps**
- ❖ **Summary of Drainage Structures Sheet**
- ❖ **Geometric Layout Sheets**
- ❖ **Graphical Grade Layout Sheets**
- ❖ **Construction Signing Sheets**
- ❖ **Traffic Control Plan(s)**
- ❖ **Special Details / Standard Plans** pertaining to the roadway or drainage structures other than a bridge
- ❖ **Bridge Plans** (first sheet is Sheet #101 and will be the General Bridge Plan unless there are General Bridge Notes and Bridge Summary Sheets which will come first and will begin with #101. Next will be the production pile data table, then bridge standard plan sheets.)
- ❖ **All Special details** (first sheet is #201)
- ❖ **Standard Plans** (first sheet is #301)
- ❖ **Cross Section Sheets** (first sheet is #401)

DETERMINATION OF PROJECT LENGTH

Each project shall equate separately as if it were the only project in the plans. In other words, the bridge, roadway lengths and equations in miles for each project shall equate to the gross length of the project minus any exceptions.

Once these lengths in miles are determined, the columns shall be added for the mile totals for bridges and roadways and then added together and placed in the "TOTAL MILES" block.

See pages **23-25** for additional information.

LENGTH OF PROJECT

SITE / RECALL	STATION		ALGEBRAIC SUM OF ALL EQUATIONS	GROSS LENGTH	BRIDGE LENGTH		ROADWAY LENGTH	
	BEGIN	END			FEET	FEET	FEET	MILES
1 / 500214	100+00.00	105+40.00	-0.16	539.84	76	0.014	463.84	0.088
2 / 500623	100+00.00	104+13.18		413.18	240	0.045	173.18	0.033
TOTAL LENGTH OF BRIDGES					316	0.059		
TOTAL LENGTH OF ROADWAY							637.02	0.121
TOTAL MILES						0.272		

**SEE PAGES 24 & 25 FOR STEP-BY-STEP
INSTRUCTIONS ON HOW THE LENGTHS FOR
THESE PROJECTS WERE COMPUTED**

EXAMPLE (SITE 1)

	Begin Bridge Sta. 103+00	End Bridge Sta. 103+76 Equ.: -0.16'	
Begin Project Sta. 100+00			End Project Sta. 105+40

1. LENGTH OF PROJECT:

A.
$$\begin{array}{r} 105+40 \\ - 100+00 \\ \hline 540' \end{array}$$

B.
$$\begin{array}{r} 540.00' \\ -0.16' \text{ (Equ.)} \\ \hline 539.84' \end{array}$$

2. LENGTH OF BRIDGE:

A.
$$\frac{76'}{5280'} = 0.0143 \text{ miles}$$

3. LENGTH OF ROADWAY:

A.
$$\begin{array}{r} 539.84' \\ -76.00' \\ \hline 463.84' \end{array}$$

B.
$$\frac{463.84'}{5280'} = 0.0878 \text{ miles}$$

TOTAL LENGTH OF PROJECT

$$\frac{539.84'}{5280} = 0.1022 \text{ miles}$$

(truncate 4th decimal place.
DO NOT round up or down)

4. TOTAL LENGTH OF PROJECT = LENGTH OF BRIDGE + LENGTH OF ROADWAY:

$$0.102 \text{ miles} = 0.0143 \text{ miles} + 0.0878 \text{ miles}$$

$$0.102 \text{ miles} = 0.014 \text{ miles} + 0.088 \text{ miles} *$$

* Round up the roadway or bridge length with the larger 4th decimal as required.

EXAMPLE (SITE 2)

	Begin Bridge Sta. 100+87	End Bridge Sta. 103+27	
Begin Project Sta. 100+00			End Project Sta. 104+13.18

1. LENGTH OF PROJECT:

$$\begin{array}{r}
 \text{A. } 104+13.18 \\
 \underline{-100+00.00} \\
 413.18'
 \end{array}$$

2. LENGTH OF BRIDGE:

$$\text{A. } \frac{240'}{5280'} = 0.04545 \text{ miles}$$

3. LENGTH OF ROADWAY:

$$\begin{array}{r}
 \text{A. } 413.18 \\
 \underline{-240.00} \\
 173.18'
 \end{array}$$

$$\text{B. } \frac{173.18'}{5280'} = 0.03279 \text{ miles}$$

TOTAL LENGTH OF PROJECT

$$\frac{413.18'}{5280'} = 0.07825 \text{ miles}$$

(truncate 4th decimal place.
DO NOT round up or down)

4. TOTAL LENGTH OF PROJECT = LENGTH OF BRIDGE + LENGTH OF ROADWAY:

$$0.078 \text{ miles} = 0.0455 \text{ miles} + 0.0328 \text{ miles}$$

$$0.078 \text{ miles} = 0.045 \text{ miles} + 0.033 \text{ miles}$$

$$0.078 \text{ miles} = 0.078 \text{ miles}$$

DO NOT ROUND UP OR DOWN; DROP 4th DECIMAL PLACE:

Length of Bridge = 0.045 miles

Length of Roadway = 0.033 miles

TYPICAL SECTION SHEETS

1) DOTD supplies typical sections for aggregate, Class II base course and widening and overlay projects. Copies are usually given on a CD with the initial project packet.

a) **DESIGN DATA** – It is recommended that the surfacing over Class II base course be placed in two lifts. Typically, the two lifts will be as follows:

2" Asphalt Concrete Pavement Binder Course (Level 1)

1½" Asphalt Concrete Pavement Wearing Course (Level 1)

If the plan-in-hand party feels that the traffic warrants a section thicker than 3½", the Pavement and Geotechnical Section will investigate on a project-by-project basis and make a recommendation.

b) **DIMENSIONS** – All horizontal dimensions are shown in feet. Most vertical dimensions, particularly thicknesses, are shown in inches.

c) **TRANSITIONS** – All transitions are shown by stations in the table on the Typical Section Sheet.

2) **SUPERELEVATED TYPICAL SECTIONS** – If superelevation is required, **the consultant is to prepare a superelevated typical section for final plans**. A few items to remember are:

a) It is recommended that you rotate about the centerline.

b) $e_{max} = 10.0\%$ (Rural) $e_{max} = 4\%$ (Urban)

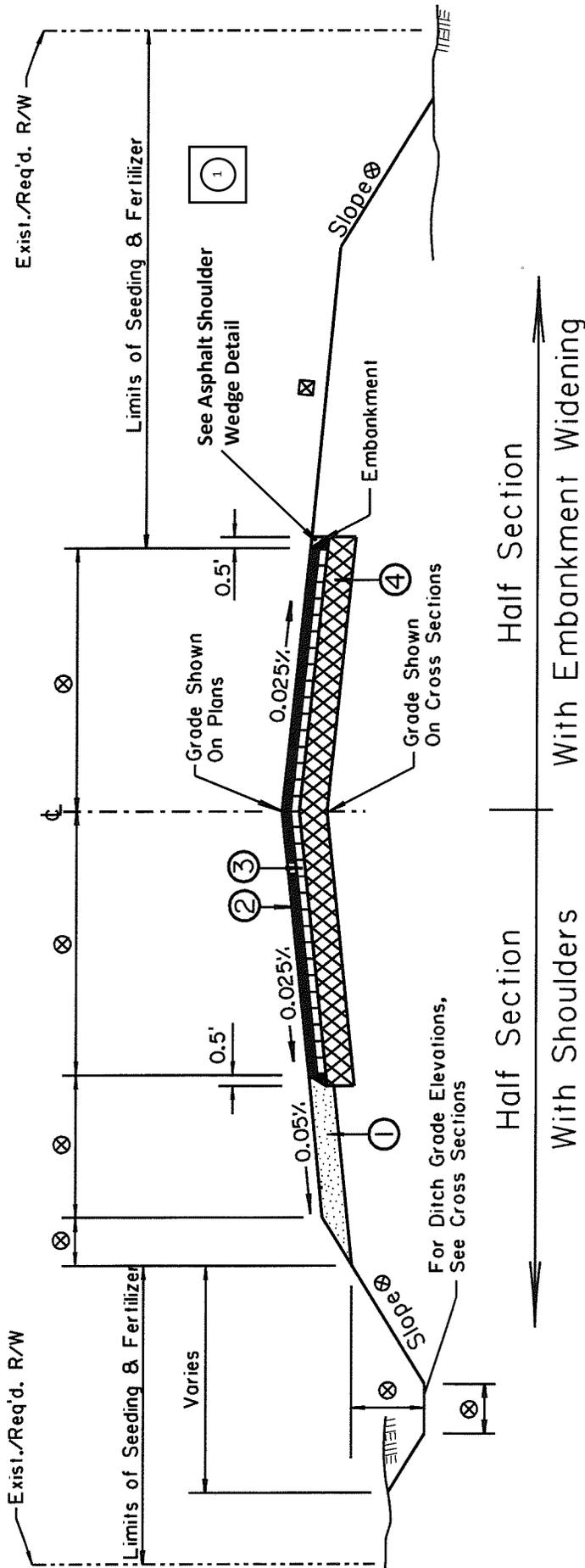
$e_{max} = 8\%$ (from 10% table)(Districts 04 & 05)

c) The runout length must be included in the total transition length.

To calculate superelevation lengths for 2-lane roadways, the following procedure is recommended:

- One side of the roadway will be rotated about the pavement crown until reverse crown is reached.
- The roadway will then be rotated about the **centerline** until full superelevation is reached.
- The roadway is to be constructed using a constant rate of change along the outside edge.
- Assuming a roadway with 2-12' lanes, normal crown of 0.025'/', required superelevation rate of 0.010'/', and designing for 50 mph, the calculation for the transition length will be as follows: $(0.025 + 0.10)(12)(200) = 300'$
- The recommended split of **60% of the runoff** $\{0.6 \times (0.10 \times 12 \times 200)\}$ will be used outside of the curve. The runout $(0.025 \times 12 \times 200)$ will be added to the 60% runoff outside the curve. In this example, the total transition split is approximately 68% outside the curve.
- Alterations to this policy will be reviewed on a case-by-case basis.
- Maximum relative gradients are found in 2011 AASHTO "Green Book".

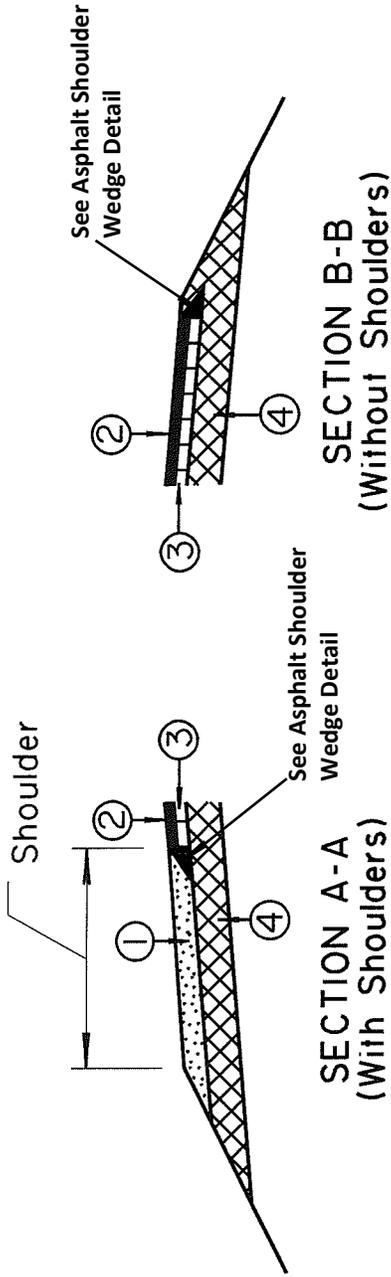
- 3) **SAMPLE TYPICAL SECTIONS** – Samples of the different typicals used are shown on pages 28-31.
- 4) **CULVERT TYPICAL** – This typical is furnished to the consultant by DOTD for those projects requiring culverts. This detail also shows the pipe spacing detail and the loose material note.



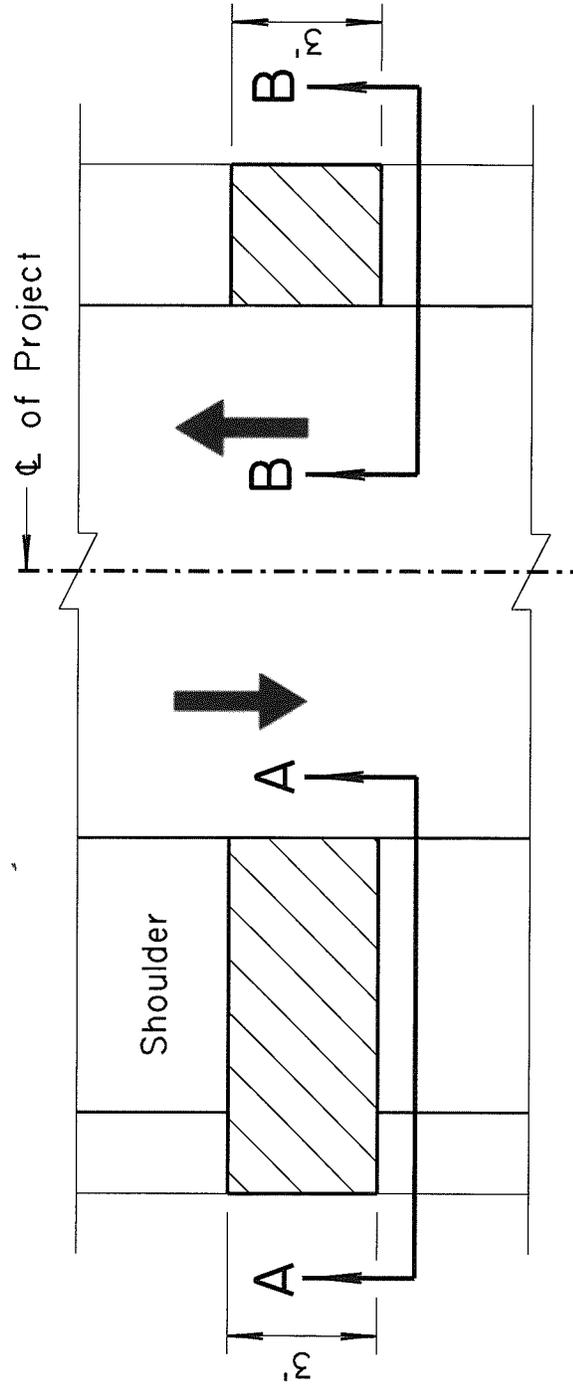
TYPICAL CLASS II BASE SECTION

- ① 4" Aggregate Surface Course (Shoulders)
3/2" At Locations Where Base Course Is Extended To Foreslope (See Page 29)
- ② Asphalt Concrete Wearing Course (1-1/2" Thickness) (Level 1)
- ③ Asphalt Concrete Binder Course (2" Thickness) (Level 1)
- ④ 8/2" Class II Base Course (See Specifications For Allowable Alternates)
- ☒ See Guard Rail Details For Slope
- ⊗ To Be Dimensioned By Consultant For Plan-In-Hand

① Revision by Gary C. Pentek 3/3/17

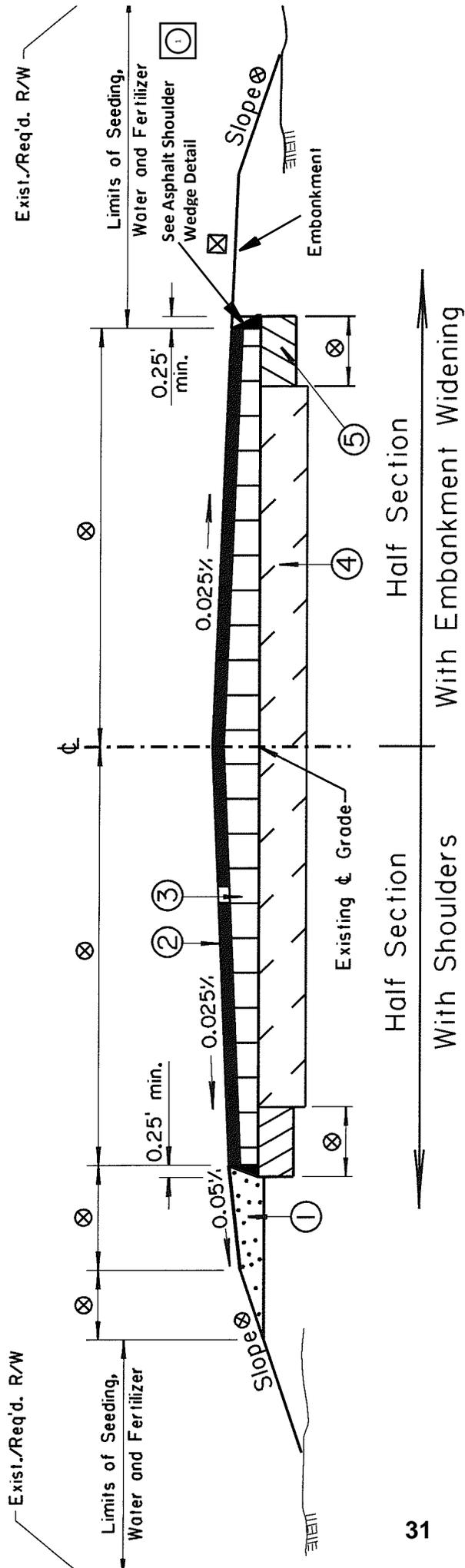


Notes: Fabric To Extend To Limits Of Base Course.
 Excavation For Extension To Be Paid For Under Item 203-05-00100.
 See Sheet 28 For Legend



**EXTENSION OF CLASS II BASE COURSE
(STONE OR RPCC) AND FABRIC**

(AT BEGINNING AND END OF PROJECT OR AT LOW POINTS AS DIRECTED BY THE PROJECT ENGINEER)



TYPICAL WIDENING AND OVERLAY SECTION

- ① Aggregate Surface Course (Shoulders)
- ② Asphalt Concrete Wearing Course (Thickness) (Level 1)
- ③ Asphalt Concrete Binder Course (If Required) (Avg. Thickness) (Level 1)
- ④ Existing Base and Surfacing To Remain
- ⑤ Pavement Widening (8" Thick)

⊗ To Be Dimensioned By Consultant For Plan-In-Hand
(Minimum Width of Pavement Widening is 1'-0")

⊠ See Guard Rail Details For Slope



Revision by Gary C. Pentek 3/3/17

SUMMARY SHEETS

The summary sheets are a part of **final plan preparation** and show the tabulations of items and quantities required for a cost estimate and construction of a project according to the “Louisiana Standard Specifications for Roads and Bridges”. These tabulations are categorized by item or related items.

1. **DRAFTING** – Abbreviations should be kept to a minimum and the only abbreviations allowed in the Summary of Estimated Quantities table are those permitted by the Contracts and Specifications Section, such as, “*Cross Drain Pipe (72” RCP/PCP or 84” CMP)*”. Approved abbreviations are shown on the Schedule of Pay Items.
2. **ORDER AND LAYOUT** – The “Summary of Estimated Quantities” sheet is the last summary sheet. A “Summary of Drainage Structures” is compiled, but it is not placed with the summary sheets. It is placed after the drainage maps.
3. **TABULATION AND COMPUTATION (EXCLUDING “SUMMARY OF ESTIMATED QUANTITIES”)** – As “equations” will affect the computations, they are shown in the tables, usually by a notation.

Where there are two or more projects or alternate structures included in the plan preparation for one contract, the tables shall be divided within themselves to show quantities and totals for each project and/or alternate and labeled accordingly.

4. **“SUMMARY OF ESTIMATED QUANTITIES” SHEET** – A Summary of Estimated Quantities is required in the plans for every project. It represents the summary of all the preceding tables and all other computations not listed in the tables, and reflect the quantities for all the work required to estimate and construct a project. The item numbers, items, and units of measure on the Summary of Estimated Quantities are listed in numerical order and correspond in the exact language with the Schedule of Pay Items.

Leave spaces in the table for revisions, especially between base items. Blank columns are required after each project column and after the total column.

! DO NOT USE ASTERISKS OR SYMBOLS ON THE SUMMARY OF ESTIMATED QUANTITY SHEET TO MAKE SPECIAL INSTRUCTIONS. ITEMS THAT REQUIRE ADDITIONAL EXPLANATION SHOULD HAVE A NOTE ON THE APPROPRIATE SHEET IN THE PLANS. IF AN ITEM NEEDS A SUPPLEMENTAL DESCRIPTION, INCLUDE THE DESCRIPTION IN PARENTHESES ON THE SUMMARY OF ESTIMATED QUANTITIES SHEET.

NOTES:

IF A PRE-CAST OR CAST-IN-PLACE BRIDGE IS REQUIRED, IT WILL BE SO NOTED IN THE SUPPLMENTAL DESCRIPTION FOR **BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE**

THE APPROACH SLAB IS TO BE PAID AS ITEM; 813-01-00100 - **CONCRETE APPROACH SLABS (CAST IN PLACE)**. INCLUDE THE FOLLOWING IN THE SUPPLEMENTAL DESCRIPTION (XX' CLEAR ROADWAY; XX° SKEW, XX' LENGTH).

**QUANTITY SHEETS ARE NOT REQUIRED
UNTIL THE PRELIMINARY ADVANCE
CHECK PRINTS SUBMITTAL**

PLAN AND PROFILE SHEETS

- 1) **WEIGHT OF LINES AND LETTERING** – Contrast in the weight of lines and lettering is especially important on plan and profile sheets. Proposed construction notes should be heavier than existing topography notes. Large lettering should, of course, be of a heavier weight than small lettering. Shown below are some examples of the weights of lines and lettering to be used:
 - a) **LIGHT WEIGHT** – existing topography; existing ground line; tangent lines (P.C. to P.I. and P.I. to P.T.) for both horizontal and vertical curves; alignment reference points; bench marks; dimension lines; limits of construction; and existing right-of-way lines.
 - b) **MEDIUM WEIGHT** – horizontal curve data; north arrow and scale.
 - c) **HEAVY WEIGHT** – surveyed centerline (P&A); names of roadways, streams, etc. (upper case lettering); required right-of-way lines; equations in plan and profile; proposed grade lines; notes indicating beginning and end of project (upper case lettering); station numbers in plan and profile; plotting of proposed drainage structures in plan and profile; and most other notes pertaining to proposed construction.
- 2) **PLAN PORTION** – Important topographic features that will be significantly affected by the proposed construction are indicated by station location, distance from centerline and description. Topographic notes shall be placed far enough away from the centerline so that they will not interfere with the plotting of proposed drainage structures, construction limits, required rights-of-way, etc. ***Description of topography should be very brief.***
 - a) **PLOTTING CENTERLINE AND ALIGNMENT** – The centerline is shown by a heavy solid line with a short vertical line (tick mark) on the upper side of the centerline at each station. At every fifth station a short vertical line crossing the centerline is shown. The station number of every fifth station is shown normal to the centerline, opposite the station mark. (For a scale of 1"=20', every station number is shown). *Topo notes should line up with the stations.* P.I.s, P.C.s and P.T.s of curves are shown by small circles. Tangent lines connecting the P.I. with the P.C. and P.T. are shown by a thin solid line. A thin solid line normal to the centerline on the concave side is shown at the P.C. and P.T. of each curve, and the station number of each is shown on these lines. ***Bearings are shown on the centerline between each P.T. and the next P.C.***

- b) **EQUATIONS** – Many times an equation occurs at the P.T. of a curve and in such cases both the Line Back (L.B.) and the Line Ahead (L.A.) stations are shown on the thin solid line normal to the centerline at the P.T. These equations should also be separately noted, as are all other equations. A conspicuous arrow is drawn from the equation note to the point on the centerline where the equation occurs. The equation note is placed beyond the limits of proposed construction, preferably above the centerline. The equation note should contain the following information, in the order shown: the value of the equation (+ or -), the L.B. station and the L.A. station. Equations are shown in both the plan and profile views.
- c) **SURVEYED AND ABANDONED DATA**– A surveyed and abandoned centerline (S&A) is always shown dashed. Dashed boxes are also placed around the surveyed and abandoned P.C.s and P.T.s as well as the curve data. All are noted as “Surveyed and Abandoned” data.
- d) **DIRECTION OF LETTERING**– The lettering is arranged so that it may be read from left to right, bottom to top, without turning the sheet from its normal position.
3. **SCALE** – The required horizontal scale to be used for rural projects is 1”=50’ and for urban projects, 1”=20’. The required vertical scale to be used with both horizontal scales is 1”=5’.
4. **PROFILE PLOT** – All points are plotted. This includes all breaks between stations, although the numerical value of the elevation of these breaks between stations is not shown.

EQUATIONS – When a *negative* equation is encountered, the plotting of the profile is discontinued, and a “gap” is inserted between the L.B. and the L.A. station. When a *positive* equation is encountered, a heavy vertical line is placed in the profile at the L.A. station. If the positive equation is of such a value where the stationing in the profile must then be adjusted, a “gap” will be inserted and the stationing will be revised to reflect the equation. The value of the equation, including plus or minus sign, along with the L.B. station and the L.A. station is shown in the profile as well as in the plan view.

5. **BENCHMARKS** – Benchmark stations, descriptions and elevations are shown at the top of the profile near the station where the benchmark occurs. ***A minimum of 4 TBMs is required on each project.***
6. **EXISTING UNDERGROUND UTILITIES** – All existing underground utilities, for which elevations have been established and which might affect the drainage design, should be plotted in the profile.

7. **HYDRAULIC TABLE** – A table consisting of hydraulic information for both the existing structure and the proposed structure is to be shown on the plan and profile sheet as well as the general bridge plan sheet (if applicable).

8. **CONSTRUCTION ITEMS** – Some of the more common construction features shown on the plans are discussed below:

a) **DRAINAGE FOR RURAL PROJECTS:** All structure lengths are plotted to scale. For plotting erosion pipe in the plan view, the location of the centerline of the proposed ditch is estimated.

b) **ROADWAY GRADES:** Roadway grades are plotted with a heavy solid line. The percentage of grade is shown on the heavy line.

c) **VERTICAL CURVES:** *According to AASHTO guidance, Chapter 5 AASHTO “Green Book, Exhibit 5-2.*

A design exception has been granted by the DOTD Chief Engineer for all Off-System projects to allow the designer to have a change in grade without having to add vertical curves.

The following table shows the allowable changes in grade without using vertical curves:

Maximum Change In Grade Without Vertical Curves								
DESIGN SPEED (mph)	20	30	40	45	50	60	65	70
MAXIMUM CHANGE IN GRADE IN PERCENT	1.20	1.00	0.80	0.70	0.60	0.40	0.30	0.20

If the project length is governed by horizontal geometry, steep vertical grades or realignment, the standard vertical curves will be used within the project limits.

- d) **HORIZONTAL CURVES:** Refer to the LADOTD Minimum Design Standards & Current AASHTO “Green Book”

Any curve falling within the limits of the guard rail or full roadway construction over culverts is to meet minimum design guidelines or the alignment is to be revised to meet minimum guidelines. If meeting minimum guidelines significantly increases the project limits, design exceptions will be discussed at the plan-in-hand inspection.

A design exception has been granted by the DOTD Chief Engineer and approved by the Federal Highway Administration to use the following table to determine the need for horizontal curves.

MAXIMUM DEFLECTION WITHOUT CURVE (DMS)

TYPE FACILITY		S ≥ 45mph	S ≤ 40 mph
Arterials and Collectors	Without Curb & Gutter	0°45'00"	2°00'00"
	With Curb & Gutter	1°00'00"	2°00'00"
Where S=Design Speed (mph)			

If the project length is governed by horizontal geometry, steep vertical grades or realignment, the standard horizontal curves will be used within the project limits.

- e) **LIMITS OF CONSTRUCTION, RIGHT-OF-WAY & SERVITUDES:** The limits of construction (toe of slope) are plotted for each cross section on all projects requiring grading and earthwork. A thin, dashed line is drawn from point to point. Limits of construction are not dimensioned.

The existing/assumed/apparent right-of-way line is plotted on the plan and profile sheet, the general bridge plan sheet and the cross section sheets.

Any required right-of-way and servitude are also shown on these sheets. Stations and offsets for the required right-of-way are shown in the plan view.

Any required drainage excavation/channel transition shall be delineated in the plan portions of both the plan and profile and general bridge plan sheets.

- f) **DESCRIPTIONS OF STRUCTURES:** Notes describing ***both*** the existing and proposed structure are to be shown in the upper right corner of the plan and profile sheet and general bridge plan sheet (if applicable). **The existing bridge description shall denote the existing structure number and recall number. Once the new structure number and recall numbers are assigned, they can be added to the Title sheet, Plan/Profile sheet, Bridge Plan, and Load Rating Box.** The beginning and ending stations of the existing bridge are to be noted.

- g) **BRIDGE SITES** – Embankment widening and guard rail are shown on both the plan and profile sheet and the general bridge plan sheet. Object markers are shown on the general bridge plan sheet only.

All projects require a 75-foot guard rail consisting of 25 feet of guard rail transition, 12.5 feet of blocked out guard rail and 37.5 feet of “flared” end treatment.

Each section of the guard rail flared end treatment requires only 1-Type 3 object marker (at the bridge).

- h) **CULVERT SITES** – A probing (furnished by DOTD) is required on all culvert sites. The required structure is superimposed on this probe.

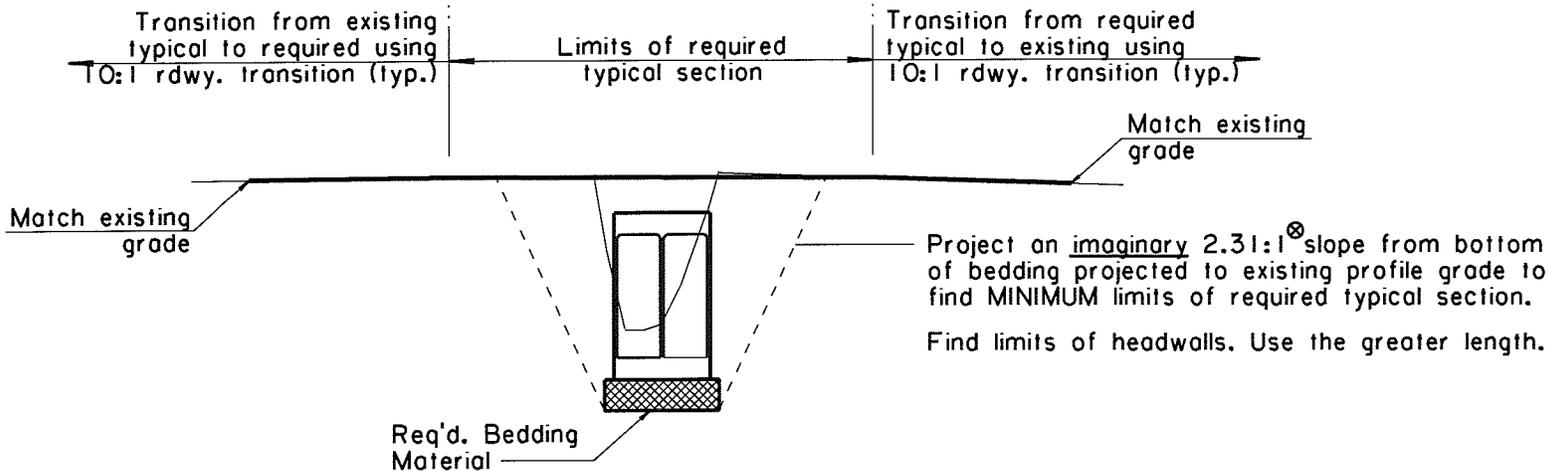
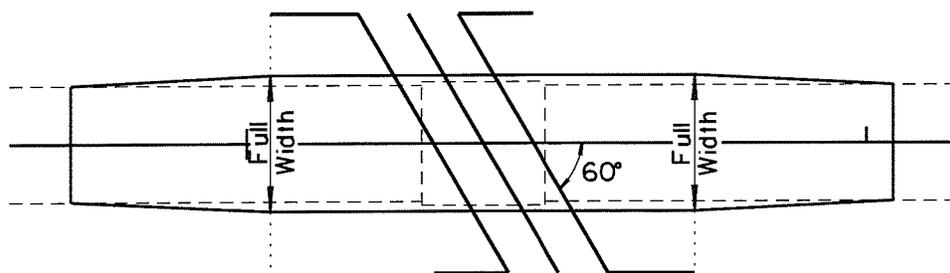
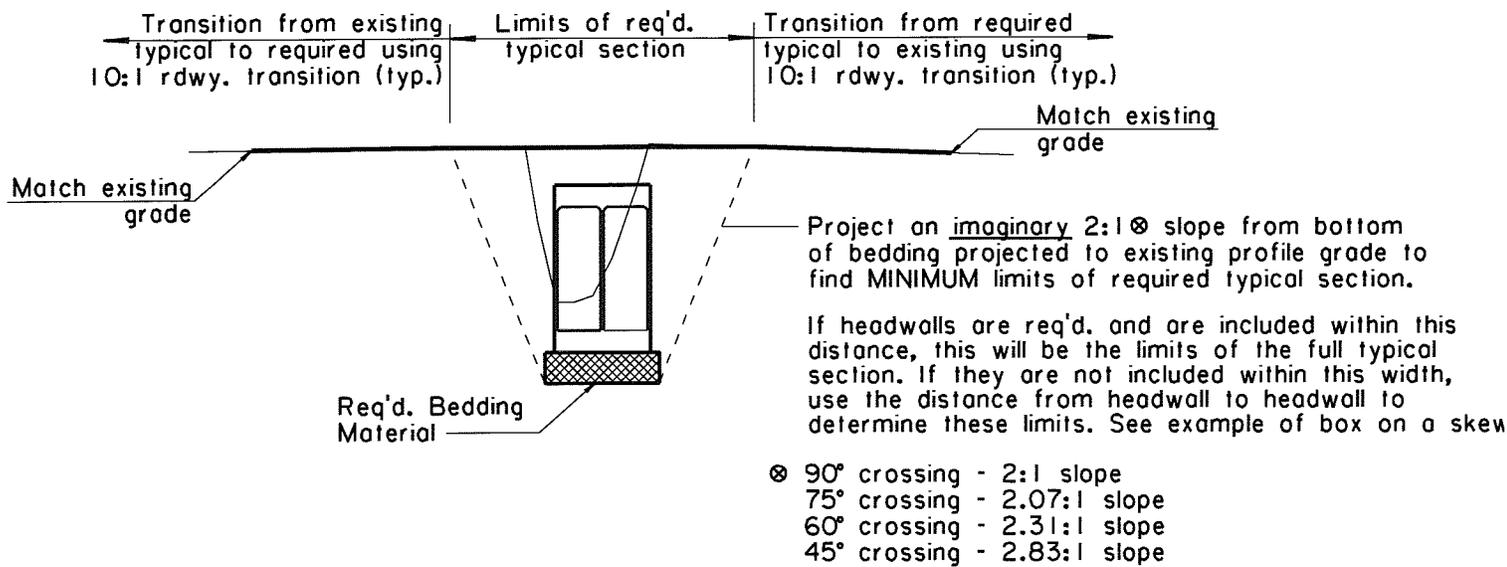
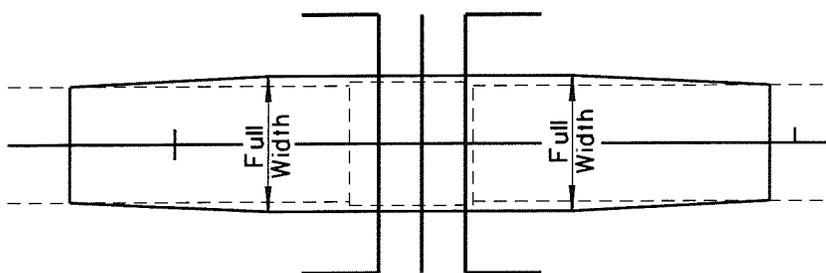
All culvert sites require 4-Type 2 object markers. These markers are shown on the plan and profile sheet.

Culvert length calculations (See page 41) are to be submitted at pre-PIH.

Often, on sites requiring a culvert, it is in the best interest of the project to “patch” the roadway instead of reconstructing a larger portion.

To determine the minimum limits of the full typical section, see examples on page 40.

DETERMINING MINIMUM LIMITS OF PATCHING



S.P. NO. _____

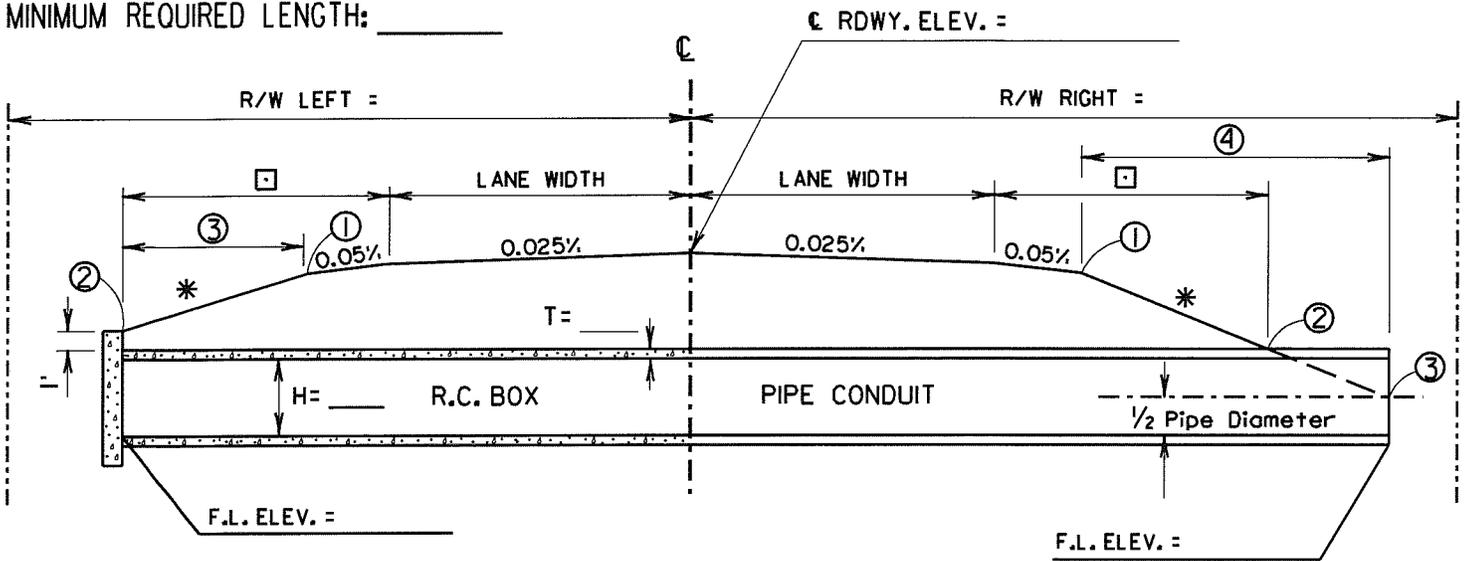
DATE: _____

_____ ° SKEW
_____ *SLOPE ON TYPICAL
_____ ROADWAY CLASS

PARISH: _____

REQ'D. STRUCTURE: _____

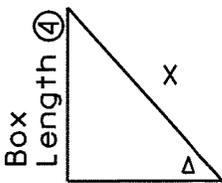
MINIMUM REQUIRED LENGTH: _____



For F.L. Elev. take the average of the Invert In and Out Flow Lines.

- ① Rdwy. C Elev. - [(Lane Width)(0.025)] - [(Shldr. Width)(0.05)] = _____
- ② F.L. Elev. + H + T + 1' = _____
- ②a Is ① > ② ? _____
- ③ (Elev. ① - Elev. ②) (*) = _____
- ④ Box Length: [(Lane+Shldr. + ③) x 2] or [(Lane+□) x 2], whichever is greater

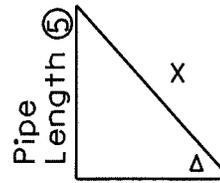
- ⑤ SKEWED LENGTH = _____



$$X = \frac{④}{\sin \Delta}$$

Box: Round up to nearest foot.

- ① Rdwy. C Elev. - [(Lane Width)(0.025)] - [(Shldr.)(0.05)] = _____
- ② F.L. + Pipe Dia. + Wall Thick. = _____
- ②a Is ① > ② By [(1'+Typ. Sec. Thick.) - (Shldr.)(0.05)] ? _____
- ③ F.L. Elev. + 1/2 Pipe Dia. = _____
- ④ (Elev. ① - Elev. ③) (*) = _____
- ⑤ Pipe Length: [(Lane+Shldr+ ④) x 2] or [(Lane+□+(②-③) (*) x 2], whichever is greater = _____
- ⑥ SKEWED LENGTH = _____



$$X = \frac{⑤}{\sin \Delta}$$

Pipe: Round up to nearest even foot.

□ Clear zone width, as determined by Minimum Design Guidelines

DIAMETER OF RCP	WALL THICKNESS	DIAMETER OF RCP	WALL THICKNESS
54"	5.5"	96"	9"
60"	6"	108"	10"
72"	7"	120"	11"
84"	8"		

EROSION CONTROL PLAN

1. A plan sheet showing required temporary erosion control items is required in final plans. See Order of Plan Sheets (page 21) for placement in plans.
2. A scale of 1"=20' is to be used.
3. Silt fence, sediment check dams and slope drains (bridge sites only) are to be shown.

DRAINAGE MAPS

1. Items to be included on the drainage maps are: the labeled site, north arrow and scale, and the area affected by backwater.
2. **NO MORE THAN ONE (1) SHEET PER MAP WILL BE ALLOWED.**
3. Quadrangle maps are required for the drainage map. Should the use of a quadrangle map not be feasible, contact this office.

SUMMARY OF DRAINAGE STRUCTURES

1. A drainage summary, commonly called “Summary of Drainage Structures”, is a part of final plan preparation and shows detailed descriptions of all required drainage structures by location, description, standard plan, allowable types and quantities.

The “Summary of Drainage Structures” sheet is not placed with the summary sheets. It is placed immediately after the drainage maps.

2. Rural drainage structures are listed in tabular form by item name, item number and stations in consecutive order. Each entry is described by a note in the remarks column, standard plan number (if applicable), and type of structure; quantities are placed in the proper quantity column. Each quantity column is totaled and where there are two or more projects included in one contract, a total for each project followed by a sum total for all the projects is shown.

At least one line should be skipped between individual entries. Abbreviations are used extensively in the preparation of this table and are explained and defined in a legend.

3. If pipes are required on a project, pH and resistivity test results are also shown on this sheet.
4. When side drains are being required, a side drain table is included on this sheet showing the diameter of the side drain, applicable gage, and side of centerline.
5. A table showing fill heights for plastic pipe is to be shown.

SAMPLE LEGEND

BCCSP(A)	Bituminous Coated Corrugated Steel Pipe (Arch)
CAP(A)	Corrugated Aluminum Pipe (Arch)
CB	Catch Basin
CDP(A)	Cross Drain Pipe (Arch)
CMP(A)	Corrugated Metal Pipe (Arch)
CPEPDW	Corrugated Polyethylene Pipe Double Wall
CSP(A)	Corrugated Steel Pipe (Arch)
MH	Manhole
PCP	Plastic Culvert Pipe
PRCB	Pre-cast Reinforced Concrete Box Culvert
RCB	Reinforced Concrete Box Culvert
RCP(A)	Reinforced Concrete Pipe (Arch)
RPVCP	Ribbed Polyvinyl Chloride Pipe
SD(A)	Side Drain Pipe (Arch)
SDP	Storm Drain Pipe

CONSTRUCTION SIGNING

1. As part of preliminary plan preparation, a straight-line diagram is prepared. ***Signing is required for the plan-in-hand inspection.***

The straight-line diagram consists of the centerline plotted on a plan sheet to a scale of 1"=200'. The beginning and ending of the project are shown. All public intersecting roads are shown as 90° intersections and are properly labeled.

2. The "Minimum Construction Signing Legend" for the Off-System Bridge Replacement and Rehabilitation Program is provided by DOTD. **This sheet must be included in all plan submittals.**
3. **DIVERSIONS** – If a diversion is required, a separate signing sheet will be provided by DOTD. This sheet is placed in lieu of the straight-line diagram discussed above.
4. If a new alignment or stage construction is required, the consultant will prepare a sequence of construction/signing sheet.
5. Dimension from the "Road Closed Ahead" sign (A) to the nearest major intersecting road.
6. Intersecting road names are to be shown.

DISTANCES BETWEEN SIGNS ARE TO BE DIMENSIONED

DIVERSIONS

1. If a low profile runaround is required, the following note must be placed on the plan and profile sheet and the general bridge plan sheet (if applicable):

The Runaround Will Be Designed, Constructed And Maintained By The Contractor As Directed By The Project Engineer. Cost To Be Included In Item 725-02-00100, Low Profile Runaround, per each.

2. Diversion alignments and structures for higher class roadways will be designed by the Consultant. Structures must be approved by the DOTD Hydraulics Section. To be paid for per linear foot under Items 725-01-00100, "Temporary Detour Roads". Refer to Chapter 4 of the Road Design Manual regarding dimensions. Typically design speed determines the geometry and the ADT of the pavement structure, diversions are site specific.

GENERAL BRIDGE PLAN

1. The general bridge plan shows a plan-profile of the bridge. The same information shown on the plan and profile sheet is shown on the general bridge plan.
2. **Items shown in greater detail include:** channel excavation or relocation; embankment widening; guard rails; object markers; spans (in both views); bents; drain holes; joint types; soil borings (with stations and offsets); revetment; slopes; bulkheads (if necessary); berms (if no approach slabs); approach slabs; bridge railing; hydraulic data table; piling type, size and length; design water surface elevation; pile elevation table; sketch of bridge (looking towards increasing stations); existing channel elevations and stations.
3. **SCALE** – A horizontal scale of 1"=10' (desirable) or 1"=20' is required. The required vertical scale is 1"=5'.
4. The limits of construction must be shown on this sheet.
5. ***Rights-of-Way and/or Servitude must match those on the plan and profile sheet.***
6. Embankment widening and guard rail must be shown.

All projects require a 75-foot guard rail consisting of 25 feet of guard rail transition, 12.5' feet of blocked out guard rail and 37.5 feet of "flared" end treatment. A reduced guard rail length (37.5' flared end treatment) may be used when the full length rail cannot be used. ***

In the case where no guard rail can be placed, a tapered barrier rail on the approach slab will be required. The need for this option will be discussed at the plan-in-hand inspection. ***When the taper barrier rails are used, the Consultant must modify the end bent wing wall detail and approach slab details.*** ***

Each section of the guard rail flared end treatment requires only 1-Type 3 object marker (at the bridge) and the turndown anchor section requires 2-Type 3 object markers.

Refer to EDSM II.3.1.3, x, y, and z design assumptions and EDSM II.3.1.4 Urban

7. **Minimum** bridge widths to be determined by Minimum Design Guidelines:
28-foot clear roadway ***
24-foot clear roadway ***
8. Bridge abutment slopes are to be 3h:1v or flatter.
9. Provide proper anchorage between the superstructure and the substructure if design water surface elevation encroaches slab.

*** Design exceptions / waivers will be required from DOTD and by Parish Resolution. Consultant shall prepare all required design exceptions / waivers and submit to the Program Manager for processing.

GENERAL NOTES

The following are general notes to be shown on both the **plan and profile sheet** and **general bridge plan sheet**:

- 1) ALL SALVAGEABLE MATERIAL, AS DETERMINED BY THE PROJECT ENGINEER, TO BE LOADED ONTO PARISH TRUCKS BY THE CONTRACTOR (INCLUDED IN ITEM 202-02-00010 REMOVAL OF ____ EA). ***THIS NOTE WILL BE DISCUSSED AT PLAN-IN-HAND.***
- 2) UNSALVAGEABLE MATERIAL TO BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF BEYOND THE LIMITS OF THE R/W.
- 3) FOR ADDITIONAL GUARD RAIL INFORMATION, SEE GUARD RAIL STANDARDS.
- 4) ALL AREAS OF BRIDGE EMBANKMENT SLOPE AND DISTURBED SOIL NOT RECEIVING REVETMENT ARE TO BE SEEDED AND FERTILIZED.
- 5) ALL EXCAVATION AND FILL TO BE IN PLACE BEFORE DRIVING AFFECTED PILES.
- 6) DATE OF CONSTRUCTION REQUIRED EACH END OF BRIDGE. SEE STANDARD PLAN YP-01.
- 7) UTILITIES TO BE RELOCATED BY OTHERS.
- 8) EXISTING PILES ARE TO BE CUT OFF 1 FOOT BELOW THE GROUND LINE. CONTRACTOR IS TO REMOVE ANY PILES INTERFERING WITH THE INSTALLATION OF NEW PILES (INCLUDED IN ITEM 202-02-00010 Removal of ____EA).
- 9) ANY DISTURBED FENCE SHALL BE REPLACED AS DIRECTED BY THE PROJECT ENGINEER (INCLUDE ITEM IF NECESSARY).

Sheets to be included in bridge plans:

1. **Bridge General Notes Sheet (if applicable)**
2. **Bridge Summary Sheet (if applicable)**
3. **General Bridge Plan Sheet**
4. **Standard Bridge Plans and/or Special Bridge Details**
5. **Standard Plan CS-216**
6. **Standard Plan BD.2.10.1.0.07** (When approach slabs are required)
7. **Standard Plan FR-1** (When revetment or riprap is required)
8. **Concrete Barrier Railing and Transition at Approach Slab Detail** (Only when MASH On System and Off System Guard Rail Standards will not work)
9. **Standard Plan YP-01** (Year plate detail)
10. **Soil Boring Sheet**

- **THE STANDARD SPAN LENGTH FOR SLAB SPAN BRIDGES IS 20'.**
- **STANDARD CLEAR BRIDGE WIDTHS FOR SLAB SPANS ARE 24' & 28' WIDE.**
- **STANDARD CLEAR BRIDGE WIDTH FOR GIRDER BRIDGES ARE 24' & 28'.**
- **REFER TO THE MINIMUM DESIGN GUIDELINES FOR REQUIRED MINIMUM WIDTH.**

SHOULD MODIFICATIONS BE NEEDED, THE ABOVE PLANS WILL BE AVAILABLE IN ELECTRONIC FORMAT.

- !** **If a standard detail is modified in any way, the detail name is removed, the changes are “bugged” and the detail shall be stamped by the consultant making the change.**
- !** **Also if a standard detail is modified in any way, the Consultant must submit a load rating report and include a completed “Bridge Load Rating Summary” box on the final plans.**
- !** **It is against Department policy to transmit files in any format other than Microstation (.dgn).**

GUARDRAIL STANDARDS:

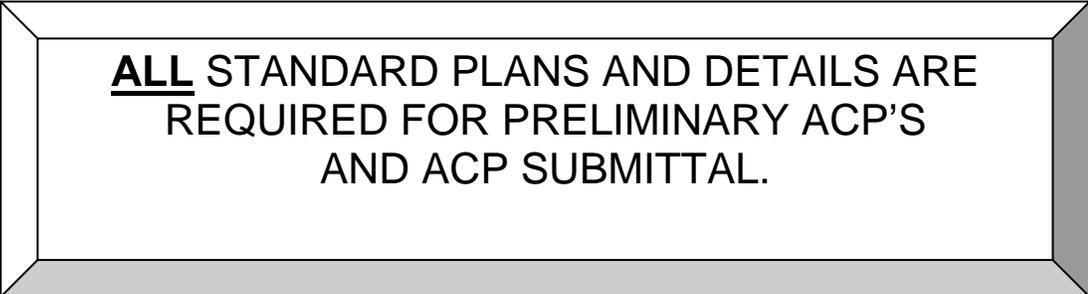
GR MASH On - System BD.1.1.1.0.01 through BD.1.1.1.0.11 - TO BE USED ON ALL PROJECTS REQUIRING GUARD RAIL

GR MASH Off - System BD.1.1.2.0.01 - OFF – SYSTEM BRIDGE GUARD RAIL DETAILS

GR MASH Box Culvert Detail BD.1.1.3.0.01 - (FOR BOX CULVERTS ONLY)

STANDARD PLANS

1. The Department has available a large number of Standard Plan sheets covering a wide variety of standard details required for plan preparation. Standard plans are utilized and incorporated in the plans to show particular details needed for the construction of a project.
2. Standard plans show details for such items as special drainage structure installations, fences, guard rails, etc. **If a standard plan is modified in any way, the standard plan number is removed and the sheet is handled as a special detail. *When changes are made to any of the provided standard plans, these changes are to be “bugged” and shall be stamped by the consultant making the change.***
3. **If a standard plan sheet is modified in any way, the Consultant must submit a load rating report and include a completed “Bridge Load Rating Summary” box on the final plans.**
4. Standard plans are not normally included in the preparation of preliminary plans. In final plan preparation all the applicable standard plans are listed in the title sheet index by sheet number, standard plan number and the latest revision date. The standard plans will be sent to the consultant after the review of the revised post plan-in-hand prints.
5. Only the project numbers applicable to the standard plan are to be shown on that sheet.
6. Many standard plans and details can be accessed through the Internet @ www.dotd.louisiana.gov under “Publications / Manuals”.



**ALL STANDARD PLANS AND DETAILS ARE
REQUIRED FOR PRELIMINARY ACP'S
AND ACP SUBMITTAL.**

CROSS SECTIONS

- 1) Cross sections contain the following information:
 - a) Volumes (in cubic yards) of “Excavation” and “Embankment” are to be shown at the right edge of the sheet between all cross sections. Do not repeat quantities.
 - b) Right-of-Way Limits – apparent and required right-of-way limits and required servitudes are to be plotted and labeled.
 - c) Erosion control pipes are to be drawn and labeled on the cross sections.
 - d) Cross drain pipe and/or box culverts are to be drawn on the cross sections.
- 2) A scale of 1”=5’ is used. The same scale is used for both horizontal and vertical plotting. **If this scale is not feasible, a scale of 1”=10’ will be allowed.**
- 3) A cross section is required at the centerline of the pipe or box.
- 4) A cross section is to be generated at the end of the headwalls.
- 5) A cross section is to be generated at the end of the new guard rail.
- 6) When the cross sections are finalized, they are incorporated in the final plans. The title sheet index shows, by sheet numbers, the total number of cross section sheets included in the plans. The cross section sheets may begin with either 301 or 401.
- 7) Cross sections shall be plotted on standard plate cross section sheets. The existing ground line and proposed grading section must be depicted differently. All plans submitted by the consultant shall conform to the quality standards adopted by DOTD, and the DOTD Chief Engineer may reject any plans not conforming to these standards.
- 8) Lettering on plans shall be of adequate size to facilitate a 50% reduction of plans.
- 9) The beginning and ending project stations are to be labeled.
- 10) The beginning and ending bridge stations (if applicable) are to be labeled.
- 11) Cross sections shall be plotted on the sheet, **bottom** to **top**, horizontally, with approximately four (4) cross sections per sheet.
- 12) Cross sections shall reflect embankment widening at the bridge ends.
- 13) The existing centerline elevations are shown below the cross section station numbers.
- 14) The subgrade elevations are to be shown.
- 15) Ditch grade elevations are to be shown.

Geotechnical Investigation and Design

Subsurface Investigations (Boring Request)

Borings for bridge sites are to be obtained following the plan-in-hand inspections. All borings will be procured through the Pavement and Geotechnical Services Section. Subsurface investigations will be performed by LADOTD in-house drilling and laboratory testing personnel or by consultant through a Geotechnical Services Retainer Contract as determined by the Pavement and Geotechnical Services Section.

All boring requests shall be submitted to the LADOTD Off-System Bridge Program Manager on the Deep Soil Boring Request Form available at the Pavement and Geotechnical section of the LADOTD website. The Project and Structural Information sections of the form shall be completed in full. The Field and Laboratory Request section will be completed by Pavement and Geotechnical Services personnel. Copies of the General Plan Sheets and Location Maps shall be included with the request. Additional information such as existing boring logs, embankment cross-sections, retaining wall details, etc. should also be included when applicable.

Upon completion of the all required subsurface sampling and laboratory testing the soil boring log and CPT sounding sheets will be transmitted to the LADOTD Off-System Bridge Manager.

Geotechnical Design Request

The design of geotechnical components such as deep foundations, temporary and permanent retaining walls, embankment settlement, etc. shall be performed by the Pavement and Geotechnical Services Section. For geotechnical structures that require structural design and detailing (i.e. reinforced concrete retaining walls, tie back walls, etc.) the structural component shall be the consultant's responsibility. The following sections outline the request requirements for the three most common geotechnical components off-system bridge projects: driven piles, sheet pile walls, and embankment settlement. Design request may be combined for projects that include multiple geotechnical components.

Upon completion of the design a Geotechnical Report or Memorandum will be provided by the Pavement and Geotechnical Section to the Off-System Bridge Manger. If multiple requests are made for a specific project, separate reports may be provided.

Pile Design Request

The pile design request shall be submitted after the completion of the subsurface investigation. The following plan sheets shall be included with pile design request letter:

1. Title Sheet
2. General Plan sheet
3. Foundation Layout sheet
4. Pile Data Table sheet
5. Bent Detail sheets
6. Boring Log and/or CPT sounding sheets

Sheet Pile Wall Design Request

The sheet design request shall be submitted after the completion of the subsurface investigation. The following plan sheets shall be included with sheet pile design request letter:

1. Title Sheet
2. General Plan Sheet
3. Sheet Pile Layout Sheet
4. Boring Log and/or CPT sounding Sheets
5. Cross-section Sheets at sheet pile wall location
6. Construction phasing sheets (if applicable)

Embankment Settlement Request

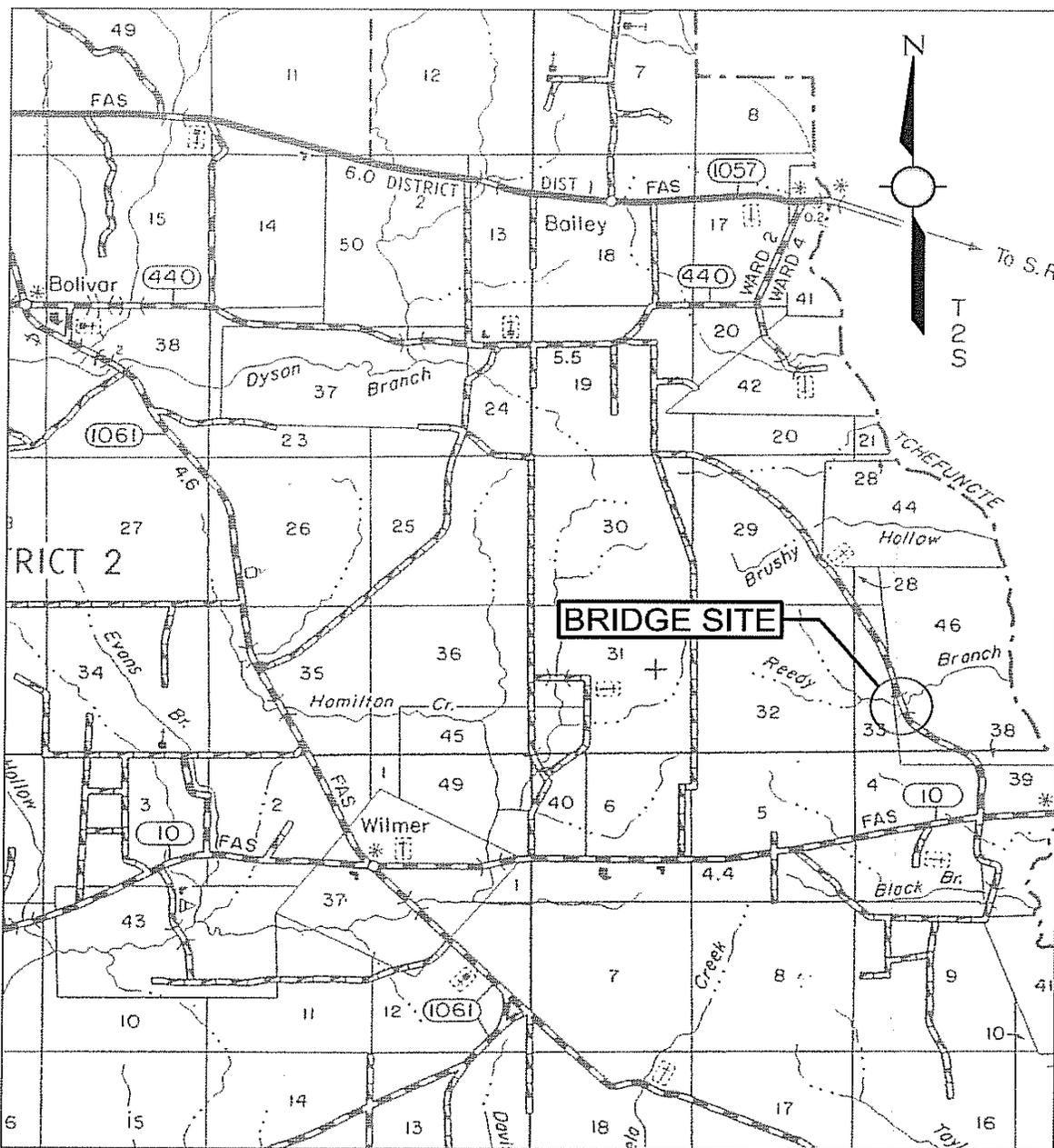
For projects that will require fill due to new alignment, change in grade, and/or widening an embankment settlement request shall be submitted. Settlement and bedding for box culverts shall be included with embankment settlement requests. The following plan sheet shall be included with the settlement request letter:

1. Title Sheet
2. General Plan sheet
3. Cross-sections
4. Box Culvert Detail sheets
5. Boring Log and/or CPT sounding sheets
6. Construction phasing sheets (if applicable).

ENVIRONMENTAL CLEARANCE

1. The Consultant is responsible for sending out the necessary solicitation of views and categorical exclusion clearance documentation required for the environmental clearance of each project. The fee for these services is included in the direct expenses for preliminary plans.
2. SOV mailing lists and environmental checklists shall be obtained from the DOTD Environmental Section.
3. The Consultant will be responsible for providing information to the Parish or the LADOTD to be used in the Environmental Clearance process. This information shall include, but is not limited to, drawings required to obtain permits, calculations, quantities, etc.
4. Invoices received from agencies reviewing documents are to be forwarded to the Parish for payment.
5. The Solicitation of Views is to begin immediately following approval of the replacement structure from the Hydraulic Design Section. The Categorical Exclusion Checklist is to be completed **following the plan-in-hand inspection**.
6. **Section, township, range, latitude and longitude to be shown on map.**
7. **Permit Sketches** - The Consultant will be responsible for preparing permit sketches for the Corps of Engineers. The fees to prepare these sketches are included in the direct expenses for Preliminary Plans.
 - i. The permit sketches are to be 8.5" x 11'.
 - ii. They are to include a location map, typical section sheet, plan view and profile view.
 - iii. Examples are shown on pages 56-59.

8. **Preliminary Jurisdictional Determinations** – The Consultant shall obtain a Preliminary Jurisdictional Determination for each project site; the request shall be submitted to the Corps of Engineers immediately after the Wetland Delineation report has been satisfactorily completed. Upon receipt of the Preliminary Jurisdictional Determination from the Corps of Engineers, the Consultant shall forward two copies to the DOTD Program Manager. The completed SOV package submittal shall not be delayed by waiting for the Preliminary Jurisdictional Determination issuance.
9. **SOV Loop Closure** – The Consultant shall close the loop on all SOV responses that require additional information or raise potential issues; this action shall take place immediately after the Consultant receives such a response/responses from an addressee/addressees on the SOV mailing lists.
10. **SOV Package** - The Consultant's SOV package submittal shall the following as a minimum: mailing lists, SOV responses, SOV loop contain closure documents, Corps of Engineers permit sketches, right-of-way sketch showing additional right-of-way/servitude requirements, checklist, etc. The wetland delineation report/reports shall be submitted at this time; two copies each are required. The Consultant will be called upon to clarify issues with their deliverables and asked to submit certain DGN files to the DOTD Environmental Section. The goal of this Program is to receive responses from everyone on the mailing lists; the Consultant shall allow a minimum of thirty days for the addressees to respond.
11. **Corps of Engineers Permit Drawings** – Permanent impacts and temporary impacts will be clearly delineated and quantified on the drawings; this requirement is in addition to other requirements set forth in these Guidelines.
12. **Wetland Delineation Reports** – The project report maps shall clearly delineate and quantify permanent impacts and temporary impacts when delineating and quantifying impacted wetlands; this requirement is in addition to all other requirements set forth herein and in regulation requirements and standards of reporting.
13. **Submittal Format** – All submittals shall be turned in **CLAMPED ONLY**. Nothing is to be bound under any circumstance. All submittals shall include a disc with .dgn files of Plan / Profile sheets and R/W sketches.



Bridge Site Located at Latitude 30°49' 51.64" N, Longitude 90°18' 28.65" W

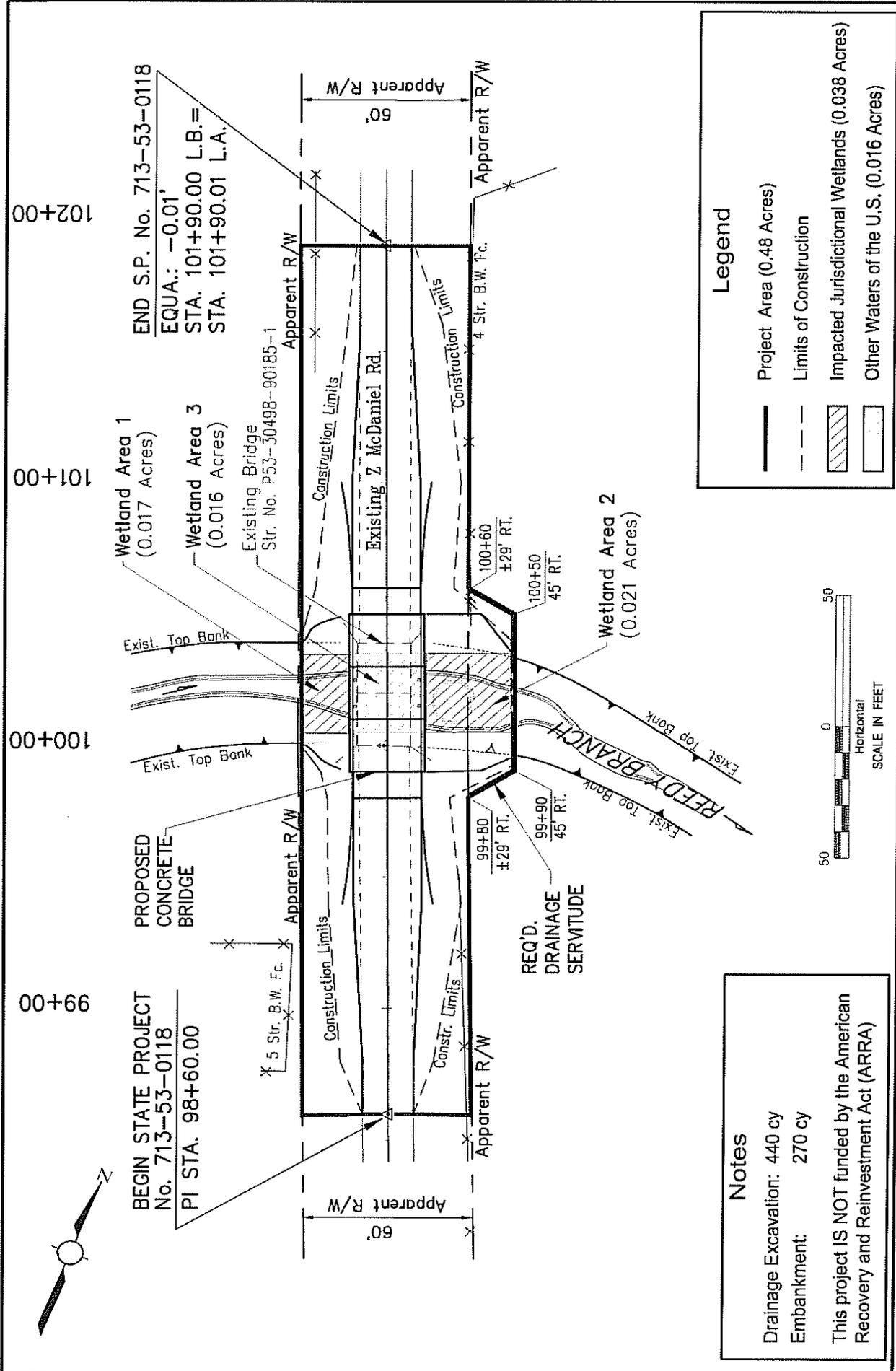


SITE LOCATION MAP

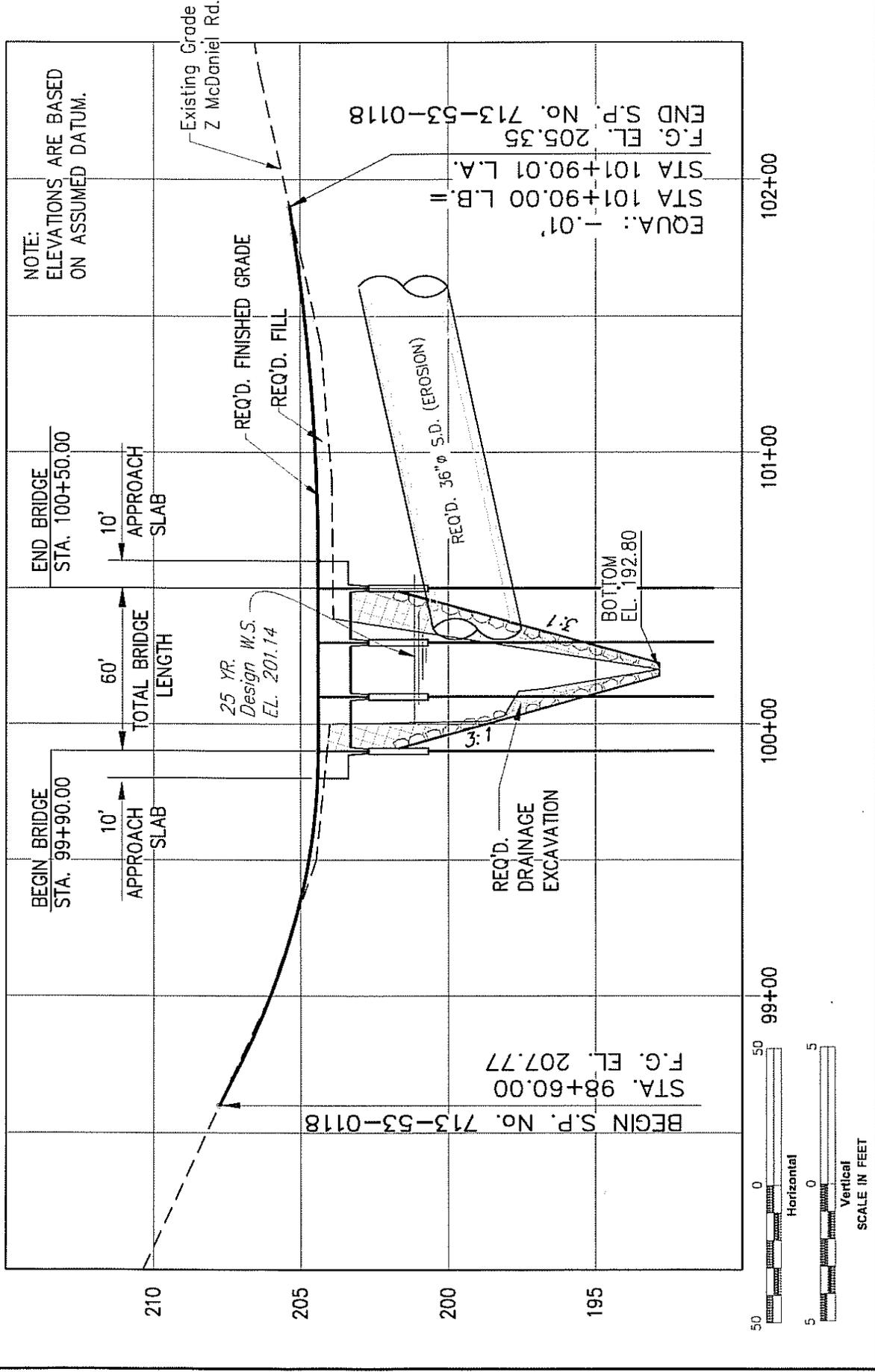
Z McDANIEL ROAD BRIDGE OVER REEDY BRANCH
TANGIPAHOA PARISH
S. P. 713-53-0118

SHEET NO.

1



<p>Notes</p> <p>Drainage Excavation: 440 cy Embankment: 270 cy</p> <p>This project IS NOT funded by the American Recovery and Reinvestment Act (ARRA)</p>	<p>Legend</p> <ul style="list-style-type: none"> Project Area (0.48 Acres) Limits of Construction Impacted Jurisdictional Wetlands (0.038 Acres) Other Waters of the U.S. (0.016 Acres) 	<p>Scale</p> <p>Horizontal SCALE IN FEET</p> <p>0 50</p>	<p>Consultant Name and Address</p> <p>S.P. No. 713-53-0118: Z McDaniel Road Bridge over Reedy Branch</p> <p>FEDERAL AID OFF-SYSTEM HIGHWAY BRIDGE PROGRAM</p>	<p>SHEET NO.</p> <p style="font-size: 24pt; font-weight: bold;">2</p>
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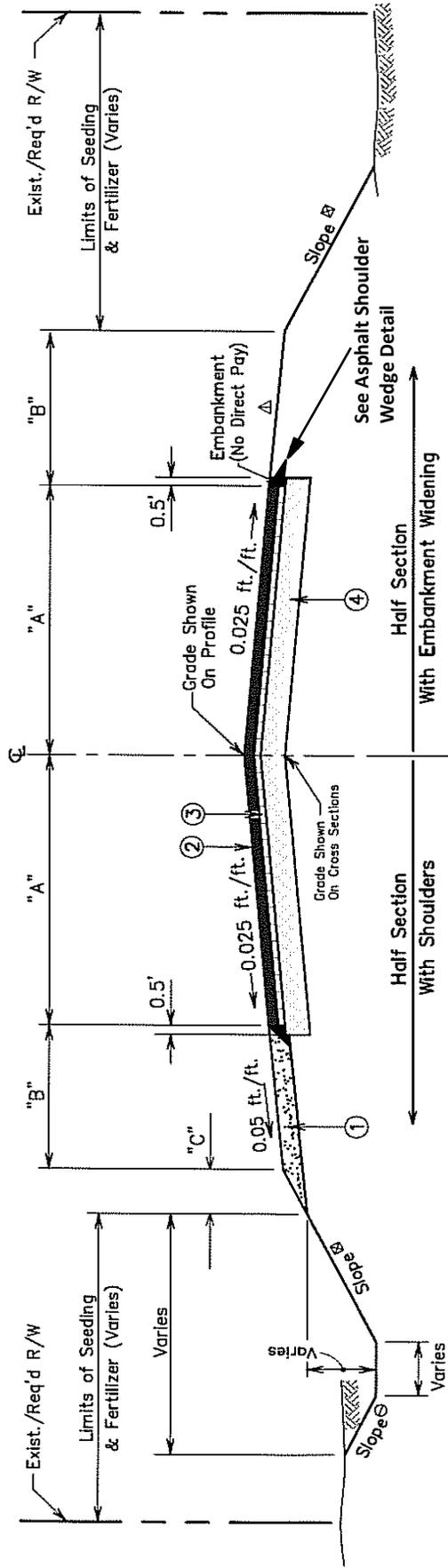
PROFILE

S.P. No. 713-53-0118: Z McDaniel Road Bridge over Reedy Branch

FEDERAL AID OFF-SYSTEM HIGHWAY BRIDGE PROGRAM

Consultant Name
and Address

INC PROJ. NO.	769
DATE:	3/20/2010
DESIGN BY:	WCM
DRAWN BY:	SAY
SCALE:	AS SHOWN



TYPICAL SECTION
CLASS II BASE

- ① 4" Aggregate Surface Course (Shoulders)
- ② 3 1/2" Asphalt Concrete Wearing Course (Level 1)
- ③ 2" Asphalt Concrete Binder Course (Level 1)
- ④ 8 1/2" Class II Base Course (See Specifications for Allowable Alternates) *

* When Stone or RPCC Base is used, geotextile fabric is required and is included in the base-course item.
 Δ The Finished Slope of the Embankment Widening shall be 0.10 ft./ft. or flatter per Off-System Highway Guard Rail Standard Plans.

STATION	STATION	WIDTH "A" (FEET)	WIDTH "B" (FEET)	WIDTH "C" (FEET)	SLOPE	
					⊖ FORE	⊕ BACK
98+60.00	98+80.00	9	0-2	0-1.18	3:1	2:1
98+80.00	99+40.00	9-12	2-0	1.18-0	3:1	2:1
99+40.00	99+80.00	12	0	0	3:1	2:1
BRIDGE & APPROACHES						
100+60.00	101+00.00	12	0	0	4.25:1	2:1
101+00.00	101+60.00	12-9	0-2	0-1.18	3:1	2:1
101+60.00	101+90.00 LB=	9	2-0	1.18-0	3:1	2:1
	101+90.01 LA					
EQUA.: -0.01'						

DC PROJ. NO.	769
DATE	3/28/10
DESIGN BY:	WCM
DRAWN BY:	SAV
SCALE	NTS

Consultant Name and Address

TYPICAL ROADWAY SECTION
S.P. No. 713-53-0118: Z McDaniel Road Bridge Over Reedy Branch
 FEDERAL AID OFF-SYSTEM HIGHWAY BRIDGE PROGRAM

R/W SKETCHES & AGREEMENTS

1. The Consultant shall be required to prepare one or more required right-of-way sketches based upon the survey layout of the proposed site. The rights-of-way required for construction shall be expressed in English units (normal metes and bounds description) indicating the approximate required rights-of-way area expressed in acres.

The Consultant shall also use the current DOTD right-of-way legal forms to prepare the necessary right-of-way agreements. The Consultant shall submit one original copy of each document to the Off-System Highway Bridge Replacement Program Coordinator for execution.

2. **The Consultant is not required to perform any property research nor any right-of-way negotiations with the property owners.**
3. A sample right-of-way sketch and agreement follows on pages **61-63**. Resource is the “LPA Right of Way Manual” revised January, 2017.
4. A copy of the agreement will be made available to the consultant. Example agreements are also located in the “LPA Right of Way Manual”
5. A separate agreement is required for:
 - a) Required right-of-way for the left side of the roadway
 - b) Required right-of-way for the right side of the roadway
 - c) Each type of servitude for the left side of roadway
 - d) Each type of servitude for the right side of roadway
6. Consultant is **NOT** to stamp sketch.
7. Consultant is to add a disclaimer on sketch that it is for information only.

Only one sketch per site will be required.

The parish is required to further define property boundaries for each owner.

RIGHT-OF-WAY SERVITUDE AGREEMENT

STATE OF LOUISIANA:
PARISH OF *{name of Parish}*

STATE PROJECT NO. H.XXXXXXX
BRIDGE OVER: *{name of creek}*
PARISH ROAD NAME: *{local parish road name}*

BE IT KNOWN, that Mr. _____,
Social Security No. _____ and/or Ms/Mrs. _____,
Social Security No. _____ domiciled at _____,

_____ being hereinafter referred to as "Grantor-Landowner", in consideration of the benefits, uses and advantages accruing to Grantor-Landowner by reason of the replacement of the existing timber bridge, known as the BRIDGE OVER *{name of creek}* on *{local parish road name}* in *{name of Parish}* Parish to be constructed as State Project No. H.XXXXXXX, of the Off System Bridge Replacement Program by the *{name of Parish}* Parish Police Jury, and for and upon such other terms and conditions or considerations hereinafter expressed does hereby grant, transfer, assign, set over and deliver unto the *{name of Parish}* Parish Police Jury for use by the general public, herein represented by *{Police Jury President's name}*, President of the *{name of Parish}* Parish Police Jury, accepting and acknowledging delivery and possession for the *{name of Parish}* Parish Police Jury, all and singular a Right-of-Way on, over and across the portion of the landowner's property described to-wit:

The required Right-of-Way Servitude as shown on the attached sketch prepared by *{name of consulting engineering firm}* is being obtained from the grantor-landowner for the construction and maintenance of a drainage structure for *{name of creek}* on *{local parish road name}* road, located in Section XX, T-X-S, R-X-E in *{name of Parish}* parish, for the sole purpose of replacing the existing timber bridge.

{the following is a typical description of the Right-of-Way}

Shown on the attached sketch as Parcel "A2" and more particularly described in metes and bounds as: Beginning at the project station 104+33.45, 24.54 feet left of the Projected and Adopted centerline of the proposed project; thence proceed N 08° 04' 12" W a distance of 76.68 feet to a corner (Station 105+09.41, 35.00' LT.); thence proceed N 00° 15' 13" W a distance of 99.76 feet to a corner (Station 106+09.34, 35.00' LT.); thence proceed N 07° 23' 55" E a distance of 37.75 feet to a corner (Station 106+46.73, 29.81' LT.) to the apparent existing Right-of-Way; containing 0.02 acres more or less.

It is expressly understood that this grant and transfer of the above described permanent servitude is made solely for the construction and maintenance of the said project and since the exact property lines are not shown and were not precisely determined at the site, that the landowner is hereby agreeing to grant and transfer that portion of required Right-of-Way which is located on the landowner's property. This servitude is also for such other purposes as may be authorized by the laws of the State of Louisiana and Parish of *{name of Parish}*, and is conveyance of servitude across the lands hereinabove described and NOT a conveyance of the full ownership thereto, and the Grantor by these presents especially does not transfer any right to oil, gas and other minerals lying beneath the area herein subjected to said servitude for the Right-of-Way purposes, it being specifically understood, however, that while no exploration, drilling nor mining of gas or other minerals of any kind shall be conducted upon the area covered by said servitude, there may be directional drilling from adjacent lands to extract the oil, gas or other minerals from under the area subject to said servitude.

It is understood and agreed that, in the construction and maintenance of said project, the {Parish Name} Parish Police Jury may move to or remove from the property herein described earth or other material in accordance with usual bridge construction and maintenance practices.

Grantor acknowledges and agrees that the consideration provided herein constitutes full and final settlement for the permanent servitude herein granted and for any and all diminution in the value of Grantor's remaining property as a result of the granting of this Right-of-Way for bridge replacement purposes.

It is expressly agreed and understood that Grantor has been afforded the right and opportunity to receive just compensation for the aforementioned property, and that Grantor has elected to forego, waive and extinguish such right and opportunity in favor of a donation to the {name of Parish} Parish Police Jury.

It is expressly and specifically agreed by and between all parties to this donation of Right-of-Way that, while the {name of Parish} Parish Police Jury will attempt to secure donations of all needed Right-of-Way for the proposed transportation improvement, if it finds it necessary to buy any portion of the Right-of-Way, such fact will not be available to any donor herein to revoke this donation or otherwise to change the conditions hereof.

IN TESTIMONY WHEREOF, the parties hereto have signed and executed and acknowledged this instrument as their free and voluntary acts, in duplicate originals in the presence of the undersigned competent witnesses, as of the _____ day of _____, 19____.

WITNESSES:

Grantor - Landowner

Mr. _____

[and/or] Ms./Mrs. _____

Attesting Witness
Attesting Witness

Second Witness

Attesting Witness

BY: _____
{Police Jury President's Name}, President
{name of Parish} PARISH POLICE JURY

Second Witness

AFFIDAVIT

STATE OF LOUISIANA:
PARISH OF *{name of Parish}*

STATE PROJECT NO. H.XXXXXXX
BRIDGE: *{name of creek}*
PARISH ROAD NAME: *{local name of parish road}*

BEFORE ME, the undersigned authority this day personally appeared, the undersigned attesting witness to me personally known to be the identical person whose name is subscribed to the foregoing instrument as an attesting witness, who being first duly sworn on oath, says:

That he subscribed his name to the foregoing instrument as a witness, and that he knows *{Police Jury President's name}*, representing the *{name of Parish}* Parish Police Jury, and _____, Grantor-Landowner, who executed said document and saw him/her sign the same as a voluntary act and deed, and that he, the undersigned witness subscribed his name to said document as an attesting witness.

Attesting Witness

SWORN TO and subscribed before me, this _____ day of _____, 19__.

{Name of Police Jury Secretary}
{name of Parish} Parish Police Jury

FINAL TRACINGS

Final contract plans submitted to the Project Coordinator shall be original drawings conforming to the following specifications:

1. Original drawings shall be as per contract. **Adhesive drafting aids will not be accepted.**
2. Tracings are to be **stamped, signed** and **dated**.
3. All standard plans and details shall be included.
4. Any detail/standard plan *modified* by the consultant shall be **stamped, signed, dated, and load rated; unless instructed otherwise by Program Manager.**
5. Cross sections shall be plotted on standard plate cross section sheets.
6. The outside measure of each plan sheet shall be 22 x 34 inches. Top, bottom and right hand margins shall be at least ½ inch, and the left-hand margin shall be at least 1- ½ inches.
7. Lettering on plans shall be of adequate size to facilitate a 50% reduction of plans. The absolute minimum letter size is 0.11”.
8. The plans shall be accompanied by a properly indexed, neatly arranged, bound copy of all design computations and computations used in developing the pay quantities.
9. The original field books are also transmitted at this time.
10. As-designed load rating report and design files shall be submitted to the DOTD Bridge Design Load Rating Section for any structure that is designed by the Consultant or modified from standard plans.