

FEDERAL AID OFF-SYSTEM HIGHWAY BRIDGE PROGRAM



GUIDELINES

OFF-SYSTEM BRIDGE PROGRAM GUIDELINES

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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 2)**
 - 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 copy of the field roll
 - b. A copy of the existing drainage map
 - c. The **original field books**
 - d. Listing of Points (bound in booklet format):
 - 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. 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. 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. Station & offsets for TBMs shown in Level Book
3. Project number shown correctly
4. North arrow
5. Scale
6. Name of roadway
7. Type of roadway
8. Width of roadway
9. Topo notes
10. Centerline elevations - 2 decimal places (asphalt or concrete roadway) or 1 decimal place (gravel roadway)
11. Bearings
12. Curve data
13. Elevations & plus stations of channel @ centerline of roadway
14. Stream traverse shown & stationed where it ties to the survey line
15. Structure Number
16. Description of existing structure: W x L
17. # of Spans:
18. Type of Bridge:
19. Description of existing structure shown in upper right corner of field roll
20. Existing structure dashed & spans shown in both the plan and profile view
21. All existing pipe dashed
22. Pipe diameters shown
23. All cross drains shown in profile (dashed) with flow lines
24. Name of waterway
25. Flow arrows in stream shown
26. Type of fence spelled out. # of strands of B/W shown? Y N N/A
27. Utilities in plan & profile (if buried) shown
28. Utility Owners
29. Existing, Apparent or Assumed R/W
30. Reference Points
31. Low Chord Elevation
32. Drainage Map with drainage area delineated
33. All lettering and symbols correct size and weight? Symbols correct?
Will all be legible when reduced to half-size
34. State Plane coordinates shown on at least 2 points on field roll
35. State Project number and Parish name on all field books in permanent ink
36. Certification in all field books
37. Bound point listings
38. Plotted roadway and stream cross sections
39. Copy of color photos (unbound) for DOTD file
40. QC/QA Certification

INVOICING

1. Send your invoice packet under a separate cover letter. All invoice packets shall reflect the **engineering number**.
2. An invoice packet shall contain, as a minimum, the invoice and the progress schedule.
3. Send in one (1) original and two (2) copies. All should be stapled separately. **Those sent not stapled or without proper copies will be returned without action.**

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%

4. A sample of an invoice packet is shown on pages **7-9**.
5. Percent payment shown assumes that all items in submittal are complete and checked by your office. **Submitting prints that are unchecked and not complete will adversely impact your rating.**
6. All invoices shall have the Purchase Order number included for payment approval.

INVOICE SUMMARY SHEET LUMP SUM

By Project Number and Name (with corresponding construction number). Separated by Parts with each Supplement and Extra Work Listed separately.

Request for Payment No. X (Partial) Period M/D/Y To M/D/Y	TOTAL LUMP SUM	% COMPLETE	AMOUNT EARNED TO DATE	PREVIOUSLY INVOICED	LESS RETAINAGE	AMOUNT DUE THIS PERIOD
Stage 3, Part I(a) – Topographic Survey Total (Notice to Proceed M/D/Y) Consultant XYZ – Subtotal Subconsultant ABC – Subtotal Supplemental No. 1 (description) Total (Notice to Proceed M/D/Y) Consultant XYZ – Subtotal Subconsultant ABC – Subtotal						
Stage 3, Part III – Preliminary Plans Total (Notice to Proceed M/D/Y) Consultant XYZ – Subtotal Subconsultant ABC – Subtotal						
Extra Work Letter No. 1 (description) Total (Notice to Proceed M/D/Y) Consultant XYZ – Subtotal Subconsultant ABC – Subtotal						
Stage 3, Part IV – Final Plans Total (Notice to Proceed M/D/Y)						
Task Order No. 1 – (description) Total (Notice to Proceed M/D/Y) Consultant XYZ – Subtotal Subconsultant ABC – Subtotal						
TOTAL AMOUNT DUE THIS PERIOD						

(Please leave a 1 inch right margin for editing)

INVOICE SUMMARY SHEET LUMP SUM

STATE PROJECT NO. H.010941.5
 FEDERAL AID PROJECT NO. H010941
 P.O. No. 20000494
 OFF-SYSTEM HIGHWAY BRIDGE PROGRAM
 CATAHOULA PARISH, LOUISIANA

Request for Payment No. 2 (Partial) Period: 05/15/03 - 06/27/03	TOTAL LUMP SUM	% COMPLETE	AMOUNT EARNED TO DATE	PREVIOUSLY INVOICED	LESS RETAINAGE	AMOUNT DUE THIS PERIOD
Stage 3, Part I(a) – Topographic Survey Total Notice to Proceed: 03/24/03 Consultant -	\$6,636.00	100	\$6,636.00	\$6,304.00	\$0.00	\$332.00
Stage 3, Part III – Preliminary Plans Total Notice to Proceed: 04/26/03 Consultant -I	\$8,782.00	50	\$4,391.00	\$0.00	\$219.55	\$4,171.45
Stage 3, Part IV – Final Plans Total Notice to Proceed: N/A	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00
						<u>TOTAL AMOUNT DUE THIS PERIOD</u>
						<u>\$4503.45</u>

∞

CERTIFIED CORRECT BY: _____

PROJECT SCHEDULE

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

(Contract time in days)(Additional contract days)

<u>Description of Work</u>	<u>Actual Calendar Days</u>	<u>Down/ Review Days</u>	<u>Scheduled Date</u>	<u>Submittals/Resubmittals</u>		<u>Remarks</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	
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

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

! 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 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 .tif format for use **solely** for title sheet preparation can be downloaded from the Road Design website.
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, recall number and parish name, **in that order**.
 - ❖ 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. 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: Design Class, ADT, Design Speed and Posted Speed.
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 14-17 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, Superpave Asphaltic 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** 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)
- ❖ **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 15-17 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 16 & 17 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:

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

2. LENGTH OF BRIDGE:

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

3. LENGTH OF ROADWAY:

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

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

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" Superpave Asphaltic Concrete Pavement Binder Course (Level 1)

1½" Superpave Asphaltic 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)

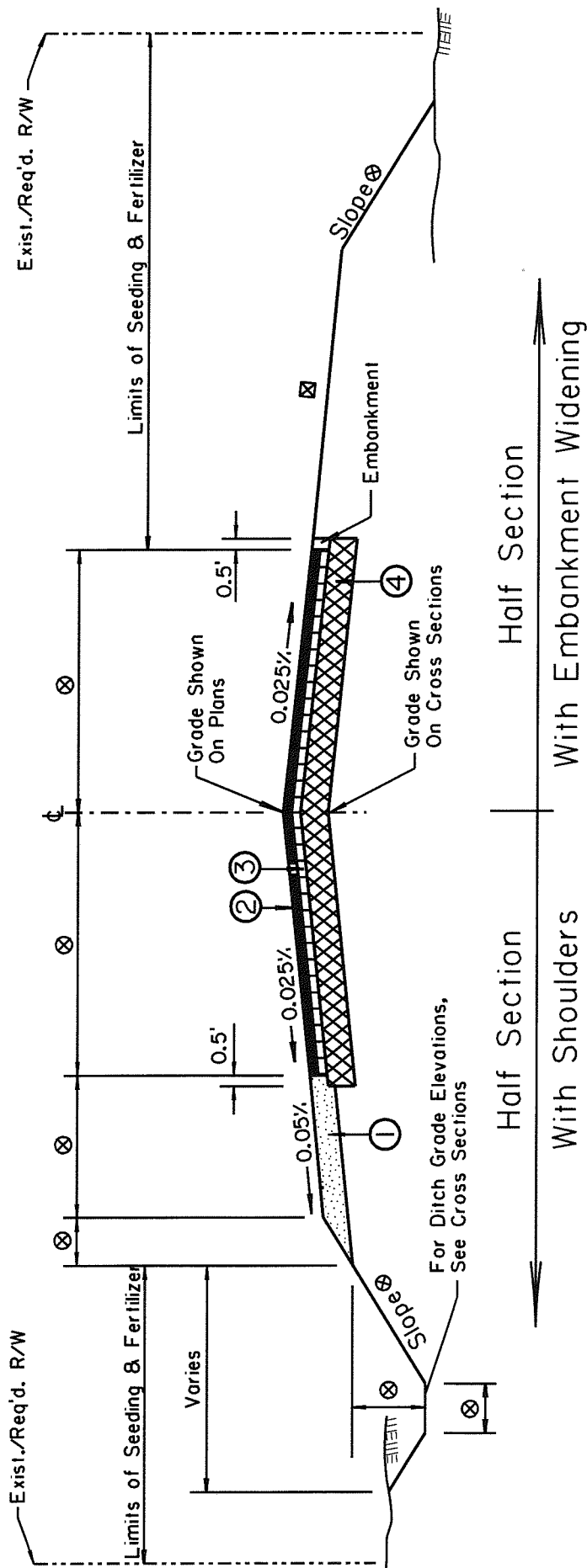
$e_{max} = 8\%$ (from 10% table)(Districts 04 & 05)

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:

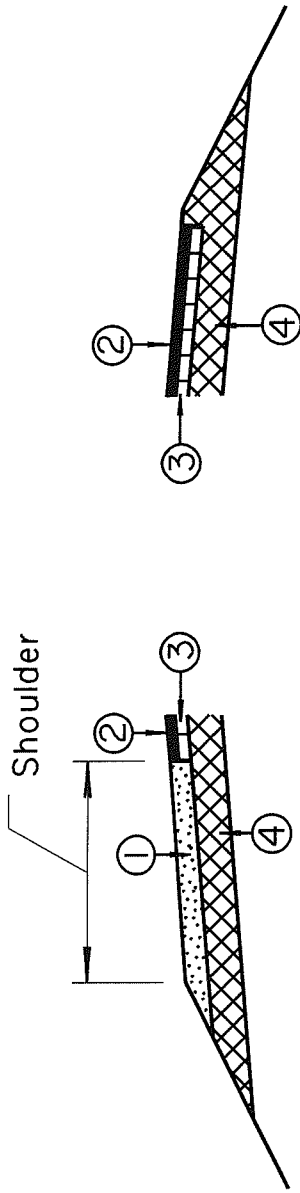
- One side of the roadway will be rotated about the pavement crown until reverse crown is reached.
- The roadway will then be rotated about the **centerline** until full superelevation is reached.
- The roadway is to be constructed using a constant rate of change along the outside edge.
- Assuming a 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 Exhibit 3-30 in the 2004 AASHTO "Green Book".

- 3) **SAMPLE TYPICAL SECTIONS** – Samples of the different typicals used are shown on pages 20 - 23.
- 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

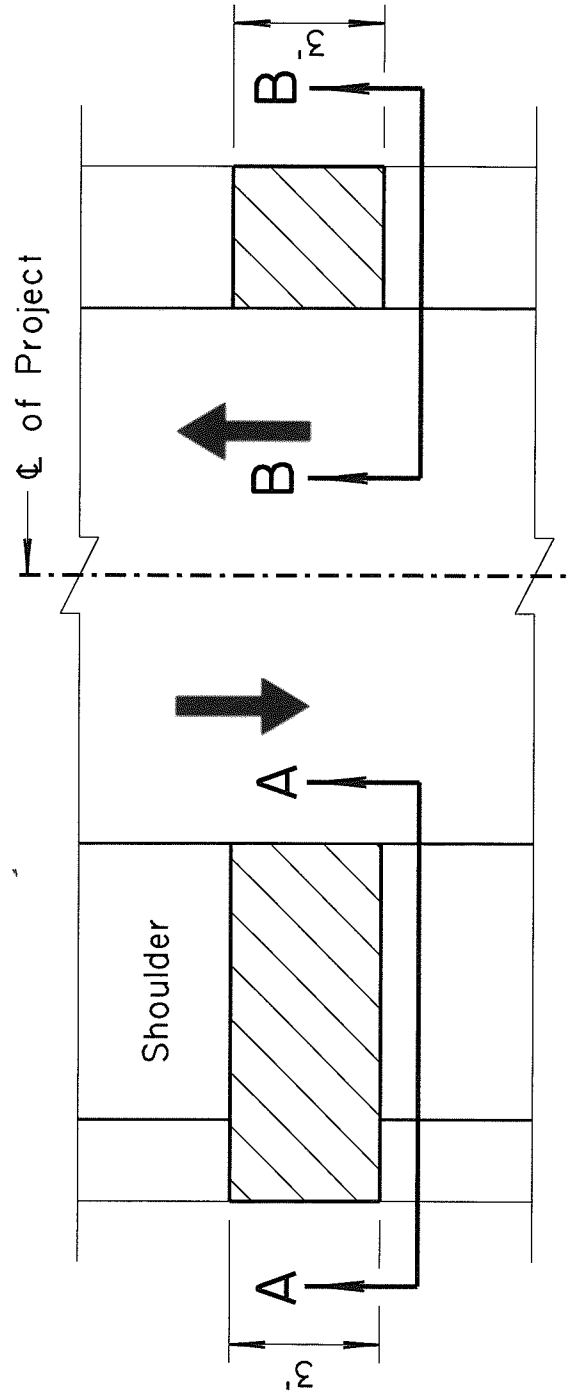
- ① 4" Aggregate Surface Course (Shoulders)
3/2" At Locations Where Base Course Is Extended To Foreslope (See Page 21)
- ② Superpave Asphaltic Concrete Wearing Binder Course (1 1/2" Thickness)(Level 1)^Δ
- ③ Superpave Asphaltic Concrete Binder Course (2" Thickness)(Level 1)^Δ
- ④ 8/2" Class II Base Course (See Specifications For Allowable Alternates)
- ☒ See Guard Rail Details For Slope
- Δ Grade PG 64-22 (AC-30) Is Allowed
- ⊗ To Be Dimensioned By Consultant For Plan-In-Hand



**SECTION A-A
(With Shoulders)**

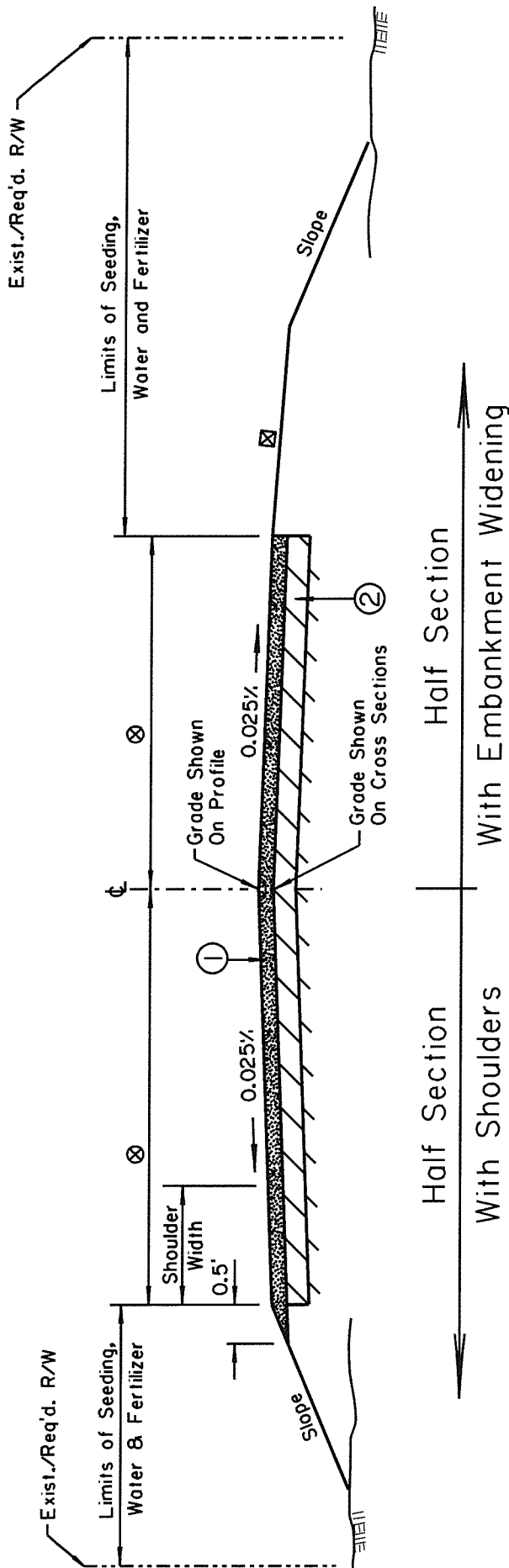
**SECTION B-B
(Without Shoulders)**

Notes: Fabric To Extend To Limits Of Base Course.
 Excavation For Wedge To Be Paid For Under Item 203-05-00100.
 See Sheet 20 For Legend



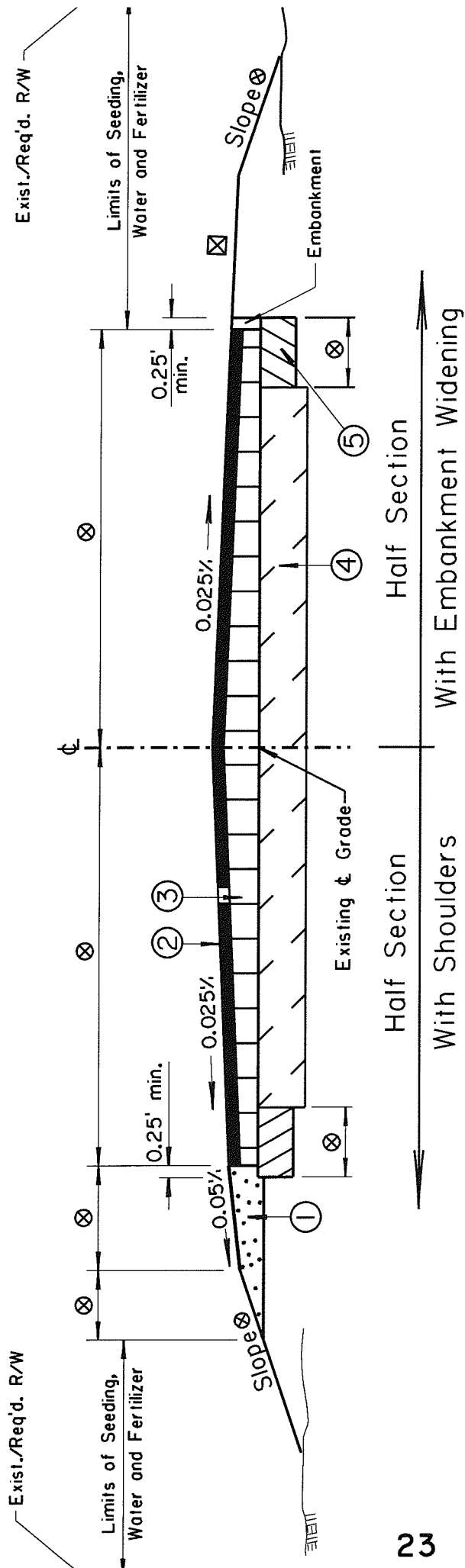
**EXTENSION OF CLASS II BASE COURSE
(STONE OR RPCC) AND FABRIC**

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



TYPICAL AGGREGATE ROADWAY SECTION

- ① Aggregate Surfacing (3" Min.) ⊕
- ② Existing Aggregate Roadway
- ⊗ As Required, The Lane Width Shall Include The Required Travelway And The Required Shoulder Width To Be Dimensioned By Consultant For Plan-In-Hand.
- ⊕ The Required Surfacing Shall Be Blade-Mixed With The Top 2" Of The Existing Roadway Surface or The Required Embankment.
- ⊗ See Guard Rail Details For Slope.



TYPICAL WIDENING AND OVERLAY SECTION

- ① Aggregate Surface Course (Shoulders)
- ② Superpave Asphaltic Concrete Wearing Course (Thickness)(Level 1)▲
- ③ Superpave Asphaltic Concrete Binder Course (If Required)(Avg. Thickness)(Level 1)▲
- ④ Existing Base and Surfacing To Remain
- ⑤ Pavement Widening (8" Thick)
- ▲ Grade PG 64-22 (AC-30) Is Allowed
- ⊗ To Be Dimensioned By Consultant For Plan-In-Hand (Minimum Width of Pavement Widening is 1'-0")
- ⊠ See Guard Rail Details For Slope

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.

NOTES:

IF A PRE-CAST OR CAST-IN-PLACE BRIDGE IS REQUIRED, IT WILL BE SO NOTED UNER THE APPROPRIATE ITEM NUMBER FOR **BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE**

IF THE ROADWAY IS PAVED AND THE APPROACH SLAB IS NOT TO HAVE ASPHALT OVERLAY, THE PAY ITEM WILL BE NS-800-00040 - **CONCRETE APPROACH SLABS (XX' CLEAR ROADWAY; XX° CROSSING; W/O ASPHALT)**.

IF THE ROADWAY IS PAVED AND THE APPROACH SLAB IS TO HAVE ASPHALT OVERLAY, THE PAY ITEM WILL BE NS-800-00040 - **CONCRETE APPROACH SLABS (XX' CLEAR ROADWAY; XX° CROSSING; W/ ASPHALT)**. THE ASPHALT QUANTITY WILL BE INCLUDED IN THE COST OF THE APPROACH SLABS.

**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:** *Refer to the 2004 AASHTO “Green Book”, Exhibit 5-2, page 381.*

RL-3 – must meet AASHTO criteria. K value times the algebraic difference in grades **or** 3 times the design speed. **(The greater value is required).**

RL-1 and RL-2 – The lesser value is acceptable, but the greater is desirable.

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 Design Standards & 2004 AASHTO “Green Book”, pages 131 – 231.

Any curve falling within the limits of the guard rail or full roadway construction over culverts is to meet minimum design standards or the alignment is to be revised to meet minimum standards. If meeting minimum standards 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		V ≥ 45mph	V ≤ 40 mph
Arterials and Collectors	Without Curb & Gutter	0°45'00"	2°00'00"
	With Curb & Gutter	1°00'00"	2°00'00"
Where V=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 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.

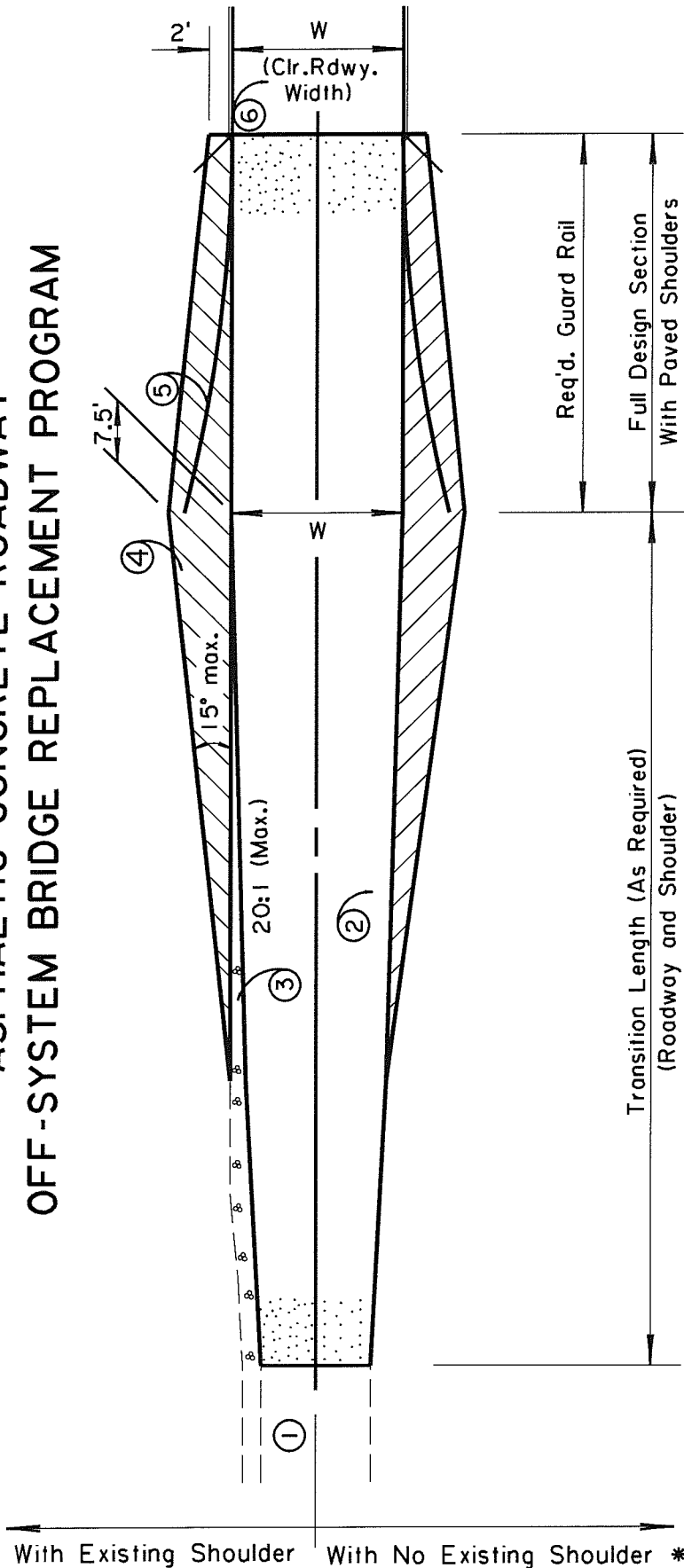
All culvert sites require 4-Type 2 object markers. These markers are shown on the plan and profile sheet.

Culvert length calculations (See page 33) 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 32.

TYPICAL HORIZONTAL ALIGNMENT ASPHALTIC CONCRETE ROADWAY OFF-SYSTEM BRIDGE REPLACEMENT PROGRAM



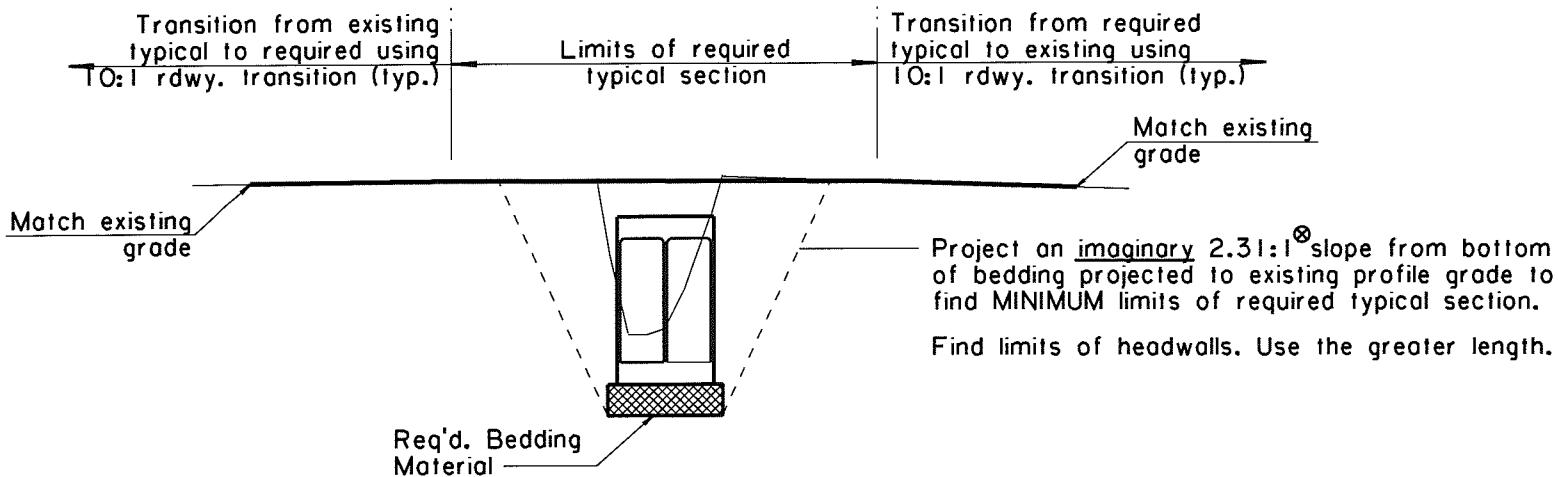
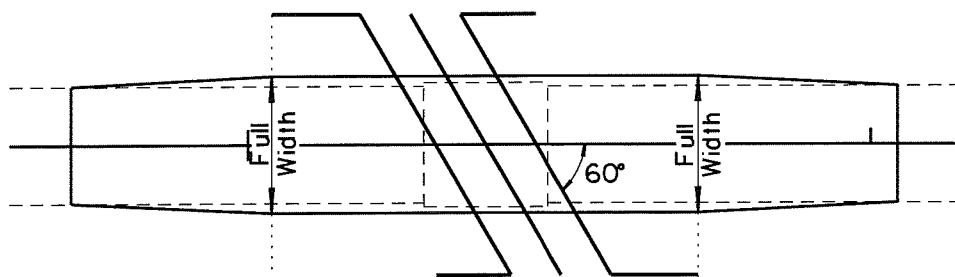
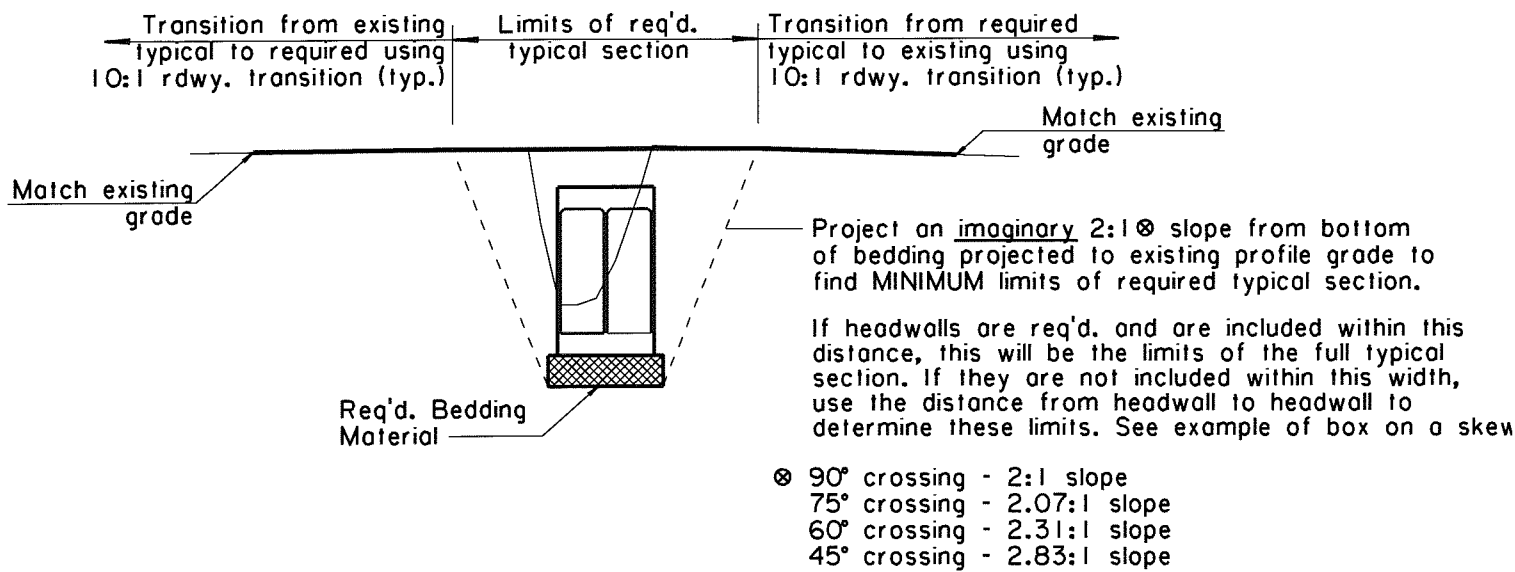
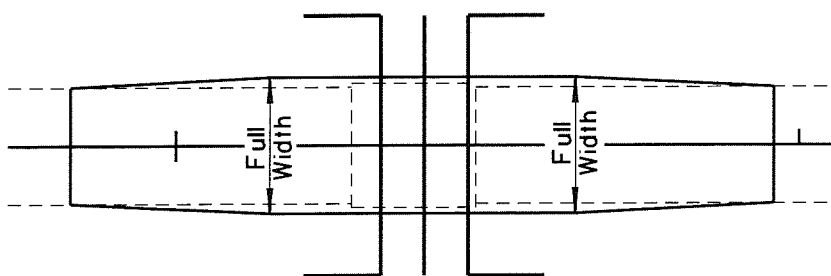
- ① Existing Roadway
- ② Required Roadway
- ③ Aggregate Shoulder
- ④ Embankment Widening (For Guard Rail)
- ⑤ Required Guard Rail
- ⑥ Required Bridge

* If Project Length Is Controlled By Horizontal or Vertical Criteria and The Typical Section (Lane Widths & Shoulders) Can Be Developed For At Least 50', Shoulders Are To Be Provided. The Shoulders Will Feather Out To Meet The Roadway At The Beginning and/or End Of Project.

Note: Transition Lengths and Limits May Vary Due To Grade Change, Horizontal Curvature, etc. Lengths Will Be Determined On An Individual Project Basis.

Note: For Dimensions Of Embankment Widening, See Standard Plans GR-203 A or GR-203 B

DETERMINING MINIMUM LIMITS OF PATCHING



S.P. NO. _____

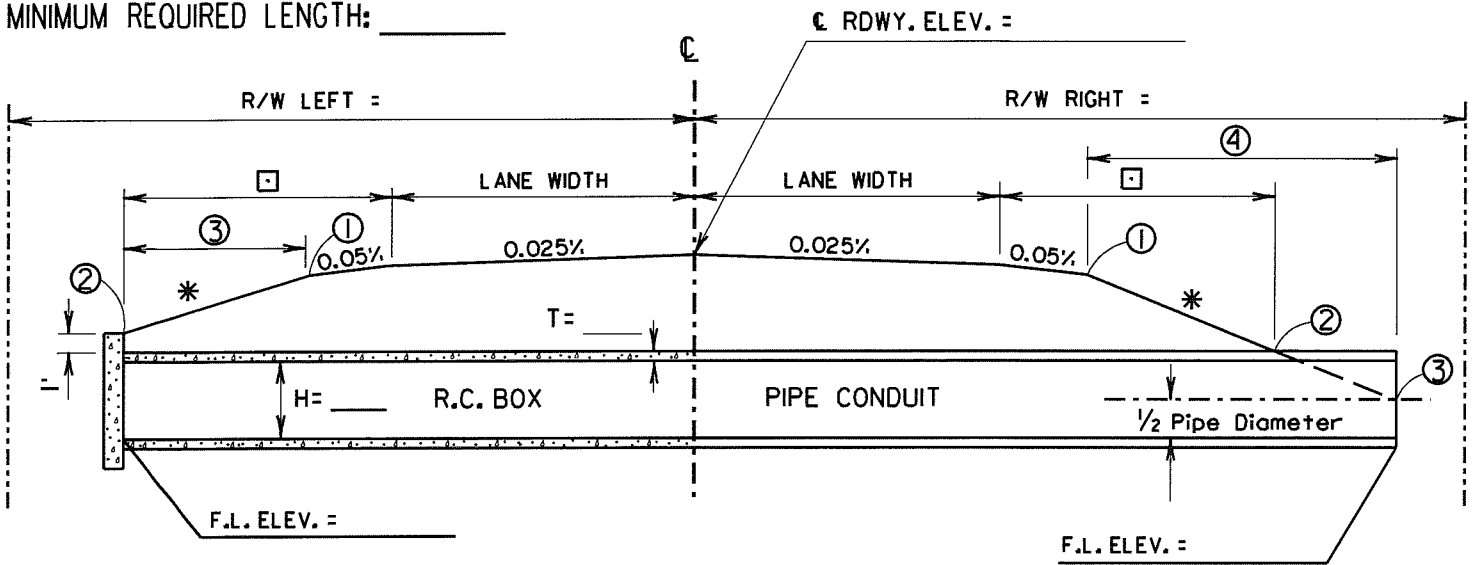
DATE: _____

_____ ° SKEW
_____ *SLOPE ON TYPICAL
_____ ROADWAY CLASS

PARISH: _____

REQ'D. STRUCTURE: _____

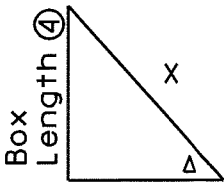
MINIMUM REQUIRED LENGTH: _____



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

- ① Rdwy. & 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

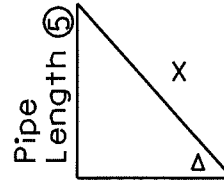
- ⑤ SKEWED LENGTH = _____



$$X = \frac{④}{\sin \Delta}$$

Box: Round up to nearest foot.

- ① Rdwy. & 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.

□ 10' minimum clear zone for roadway class RL-1 or RL-2.
14' desirable clear zone for roadway class RL-3.

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 now required in final plans. See Order of Plan Sheets (page 13) 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 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 and the applicable gage.
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 (roadway class RL-1), 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 725-03-00100, 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" and 725-02-00100, "Temporary Detour Bridging", if applicable.

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.

7. **Minimum** bridge widths:
RL-3 – 28-foot clear roadway
RL-2 & RL-1 – 24-foot clear roadway
8. Bridge abutment slopes are to be 3h:1v or flatter.
9. Fix all bents if design water surface elevation encroaches slab.

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 202-02-04000). ***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 DETAIL 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 202-02-04000).
- 9) ANY DISTURBED FENCE SHALL BE REPLACED AS DIRECTED BY THE PROJECT ENGINEER.

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 Detail CS-216
6. Standard Detail ASD-SS (When approach slabs are required)
7. Standard Detail FR-1 (When revetment or riprap is required)
8. Concrete Barrier Railing and Transition at Approach Slab Detail (Only when GR-203A or GR-203B do not apply)
9. Standard Detail YP-01 (Year plate detail)
10. Soil Boring Sheet

- **THE STANDARD SPAN LENGTH FOR SLAB SPAN BRIDGES IS 20'.**
- **TYPICAL CLEAR BRIDGE WIDTHS FOR SLAB SPANS ARE 24' & 28' WIDE.**
- **TYPICAL CLEAR BRIDGE WIDTH FOR GIRDER BRIDGES ARE 24' & 28'.**

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.

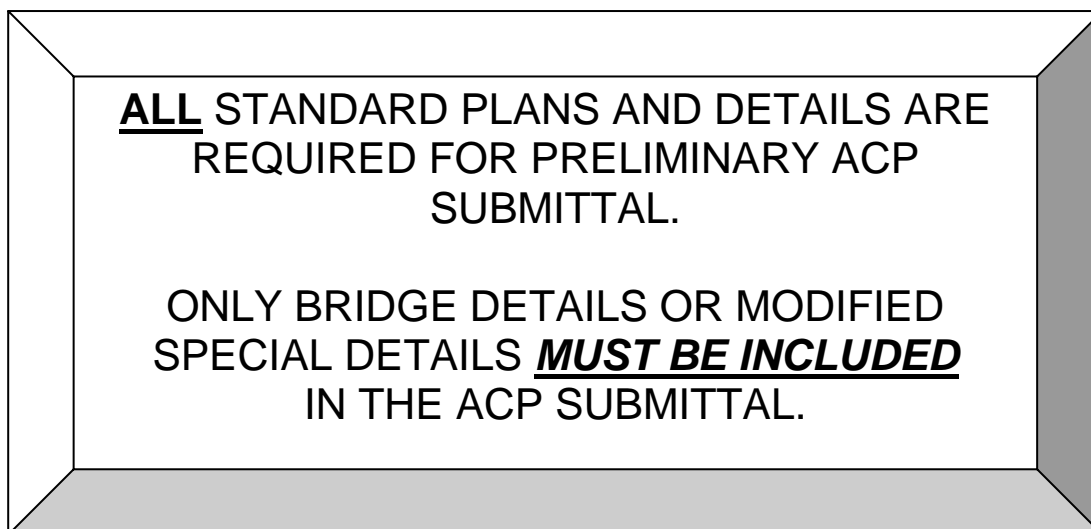
! It is against Department policy to transmit files in any format other than Microstation (.dgn).

GUARDRAIL STANDARDS:

- GR-200 - TO BE USED ON ALL PROJECTS REQUIRING GUARD RAIL**
- GR-203A - STANDARD LENGTH (FOR LOCAL ROADS)**
- GR-203B - MINIMUM LENGTH (FOR LOCAL ROADS)**

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. 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.
4. Only the project numbers applicable to the standard plan are to be shown on that sheet.
5. Many standard plans and details can be accessed through the Internet @ www.dotd.louisiana.gov under “Publications / Manuals”.



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.
 - 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.

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 **45-48**. Resource is the “LPA Right of Way Manual” revised April, 2009.
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}
More particularly described in metes and bounds as: Beginning at the metric station 29+73.463, 8.84 meters left of the centerline of the proposed project, which is also a point on the apparent property line/existing Right-of-Way and (POB); thence proceed N 62 18' 33" W a distance of 16.00 feet to a corner (Station 29+72.463, 13.716m LT) thence N 27 41' 27" E a distance of 173.3 feet to a corner (Station 30+25.304, 13.716m LT); thence S 62 18' 33" E a distance of 14.50 feet to a corner (Station 30+25.304, 9.30m LT) to the apparent existing Right-of-Way; thence proceed along the apparent Right-of-Way back to the POB containing xx.x 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.XXXXXX
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

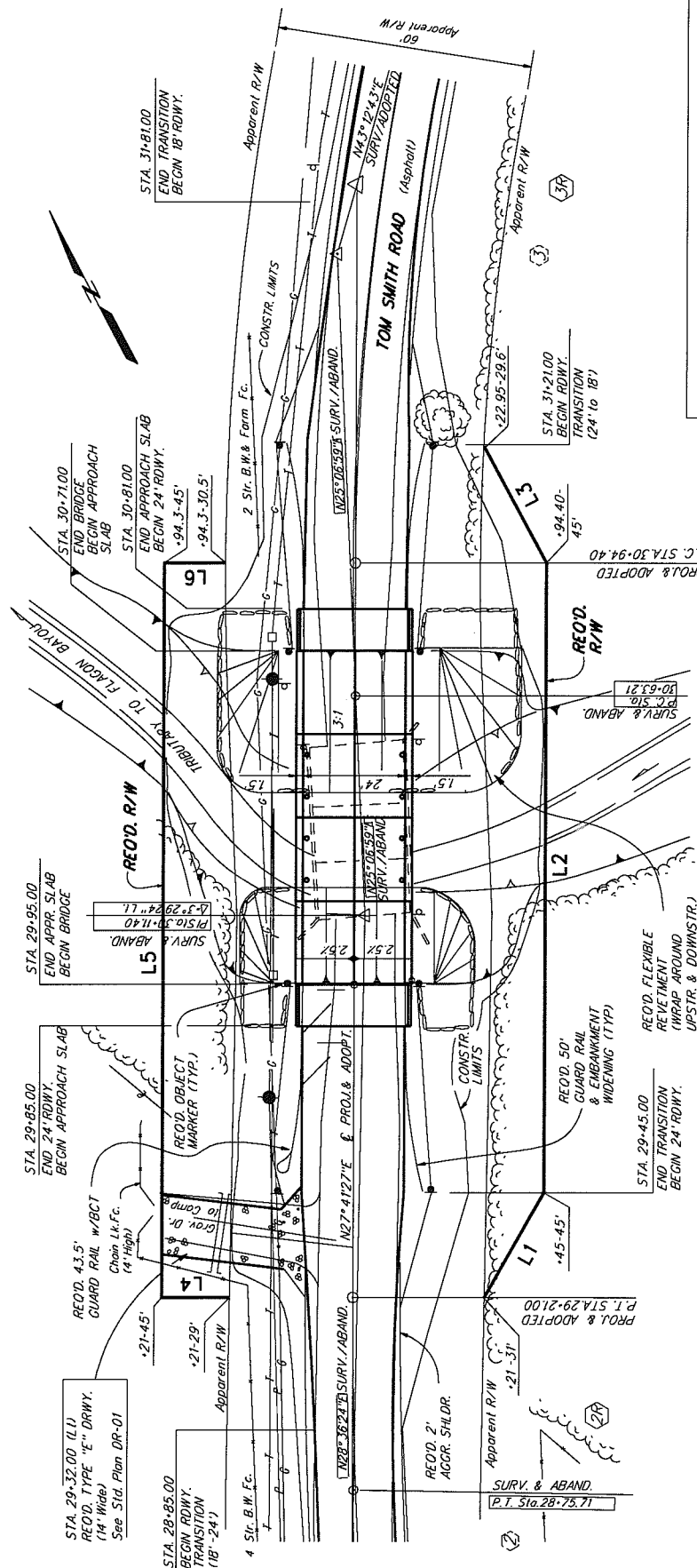
SWORN TO and subscribed before me, this _____ day of _____, 19____.

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

NUMBER	REQUIRED R/W	DIRECTION
L1	28.5 feet	N57° 06'05"E
L2	148.6 feet	N27° 41'27"E
L3	31.3 feet	N00° 30'49"W
L4	16.0 feet	N62° 18'33"W
L5	173.3 feet	N27° 41'27"E
L6	14.5 feet	S62° 18'33"E

EXAMPLE

F. A. P.	STATE PROJECT	PARISH	SHEET NO.
HXXXXXX	H. XXXXXX	PARISH	000



STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

REQUIRED RIGHT-OF-WAY SKETCH

DATE MONTH 2015

ABC ENGINEERS & ASSOCIATES, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS

DESIGNED X. Y. Z. TRACED
CHECKED A. B. C. FILE NAME: XXXXXXXX

PLAN
SCALE: 1"=10'

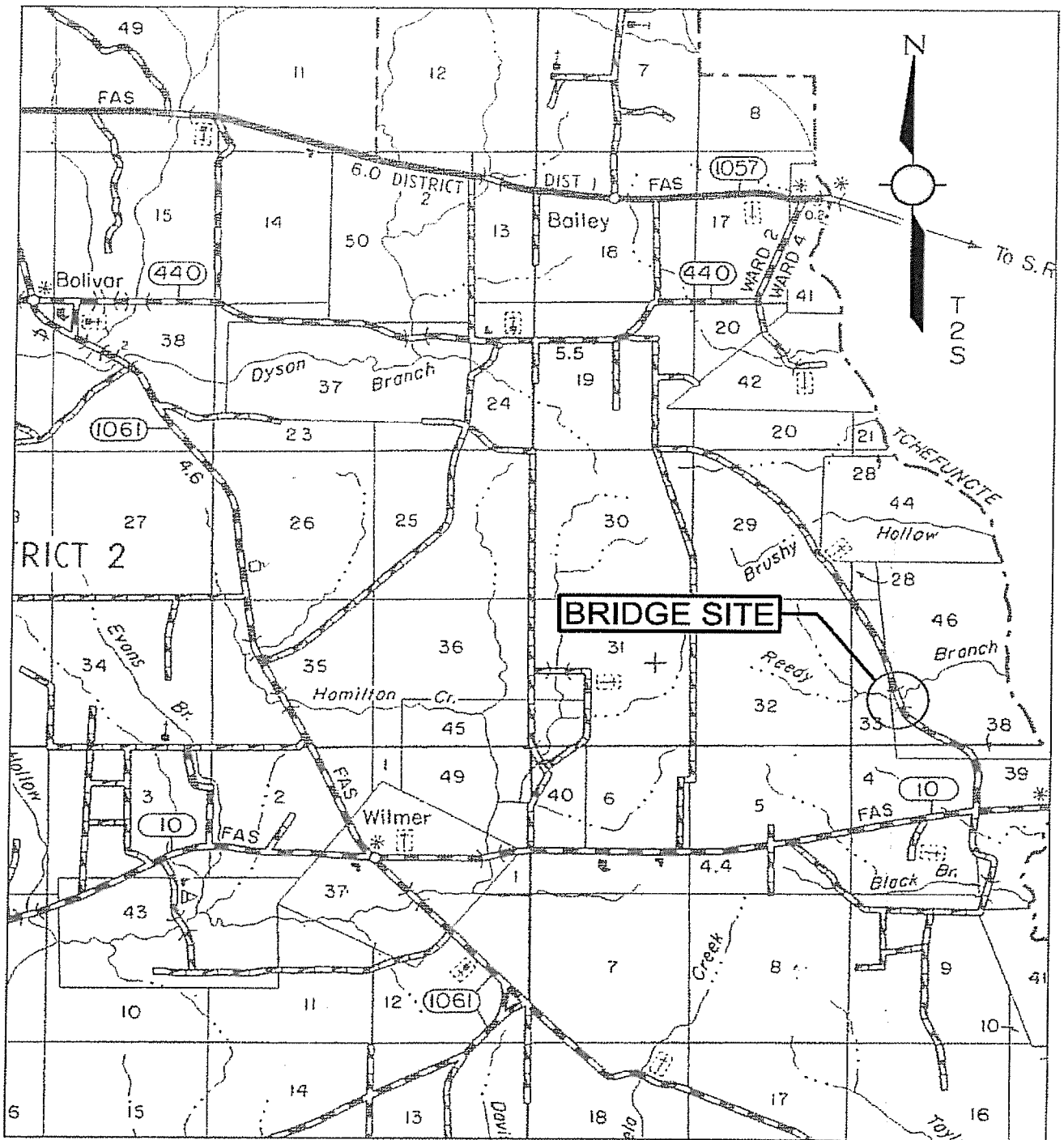
THIS IS A PRELIMINARY DOCUMENT AND IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE, SALES, OR AS THE BASIS FOR THE ISSUANCE OF A PERMIT.

NOTE:
This Sketch Shows The Approximate Required Right-Of-Way Servitude Areas Needed For Construction And Maintenance Of The Structure As Determined From The Apparent Existing Property/Right-Of-Way Lines. A Boundary Survey Was Not Performed As Part Of This Project; Therefore, The Dimensions Shown Are Not The Exact Dimensions Of The Property. This Drawing Is Not To Be Used For Transfer Of Title Or Acquisition Of Right-Of-Way.

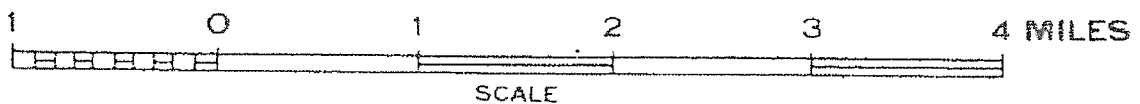
ENVIRONMENTAL CLEARANCE

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 51-54.

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.



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

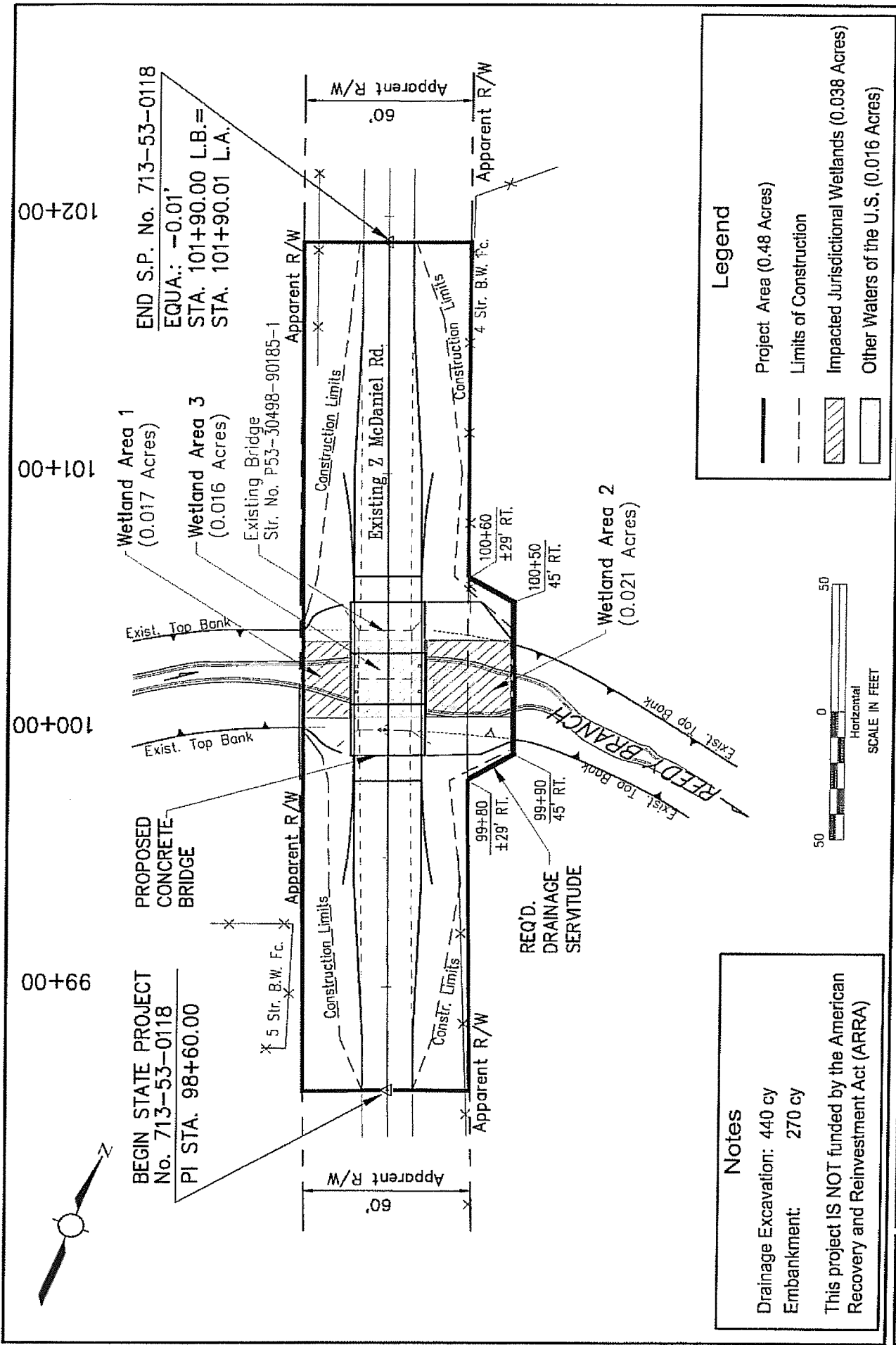


SITE LOCATION MAP

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

SHEET NO.

1



END S.P. No. 713-53-0118
 EQUA.: -0.01'
 STA. 101+90.00 L.B.=
 STA. 101+90.01 L.A.

Wetland Area 1
 (0.017 Acres)

Wetland Area 3
 (0.016 Acres)

Existing Bridge
 Str. No. P53-30498-90185-1

PROPOSED
 CONCRETE
 BRIDGE

BEGIN STATE PROJECT
 No. 713-53-0118
 PI STA. 98+60.00

Apparent R/W
 60'

Apparent R/W
 60'

Apparent R/W
 60'

Apparent R/W
 60'

4 Str. B.W. P.C.

100+60
 ±29' RT.

100+50
 45' RT.

99+80
 ±29' RT.

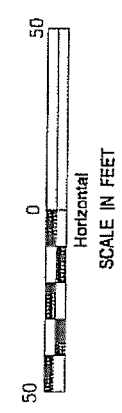
99+90
 45' RT.

REQ'D.
 DRAINAGE
 SERVITUDE

Wetland Area 2
 (0.021 Acres)

Legend

- Project Area (0.48 Acres)
- Limits of Construction
- Impacted Jurisdictional Wetlands (0.038 Acres)
- Other Waters of the U.S. (0.016 Acres)

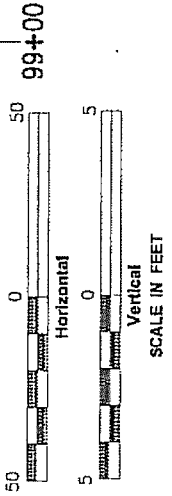
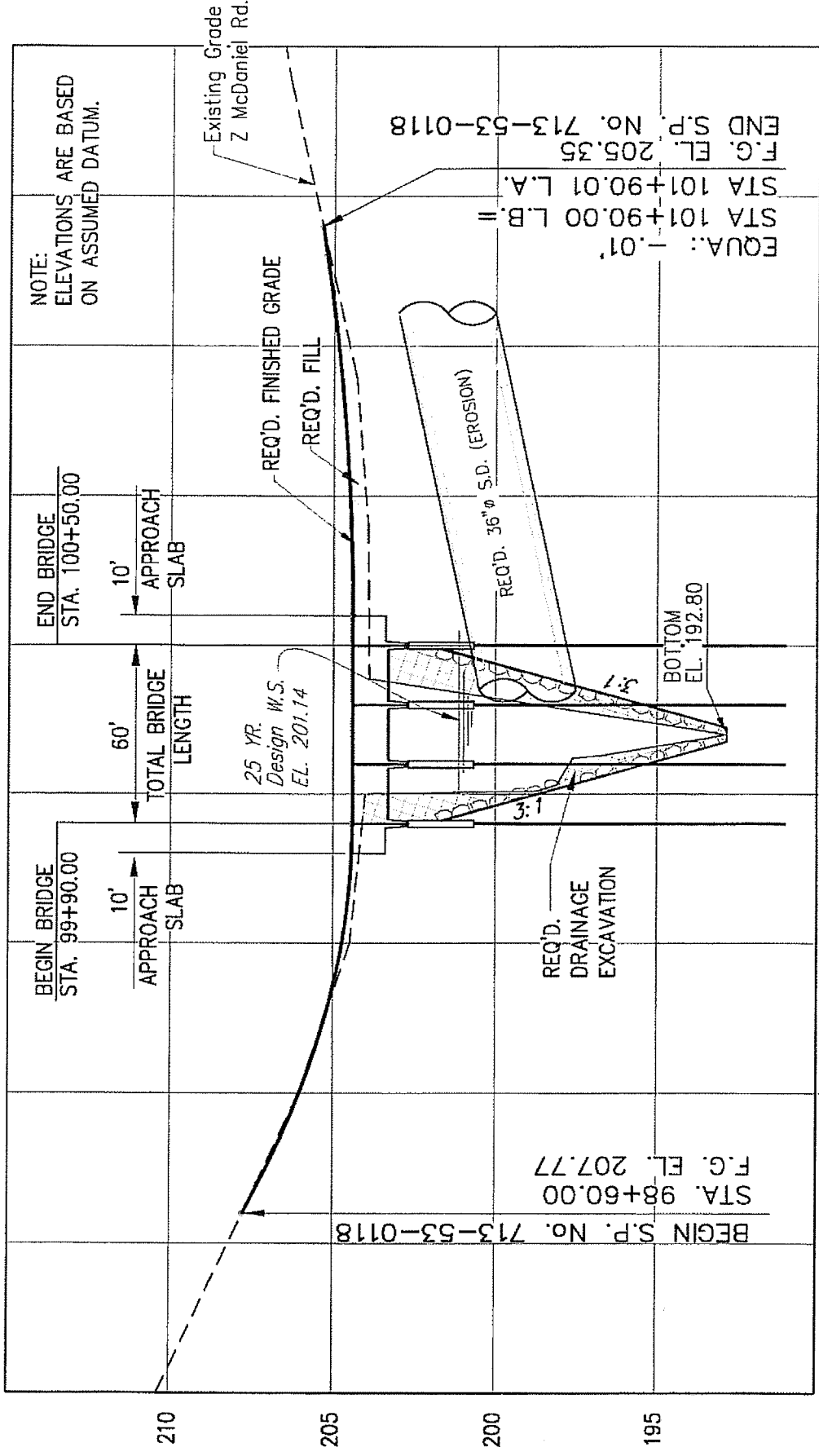


Notes

Drainage Excavation: 440 cy
 Embankment: 270 cy

This project IS NOT funded by the American Recovery and Reinvestment Act (ARRA)

MC PROJ. NO. 709 DATE 3/30/2010 DESIGN BY: HCH DRAWN BY: SAV SCALE: AS SHOWN	<h3>SITE PLAN</h3> <p>S.P. No. 713-53-0118: Z McDANIEL ROAD BRIDGE OVER REEDY BRANCH</p> <p>FEDERAL AID OFF-SYSTEM HIGHWAY BRIDGE PROGRAM</p>	SHEET NO. 2
<h2>Consultant Name and Address</h2>		



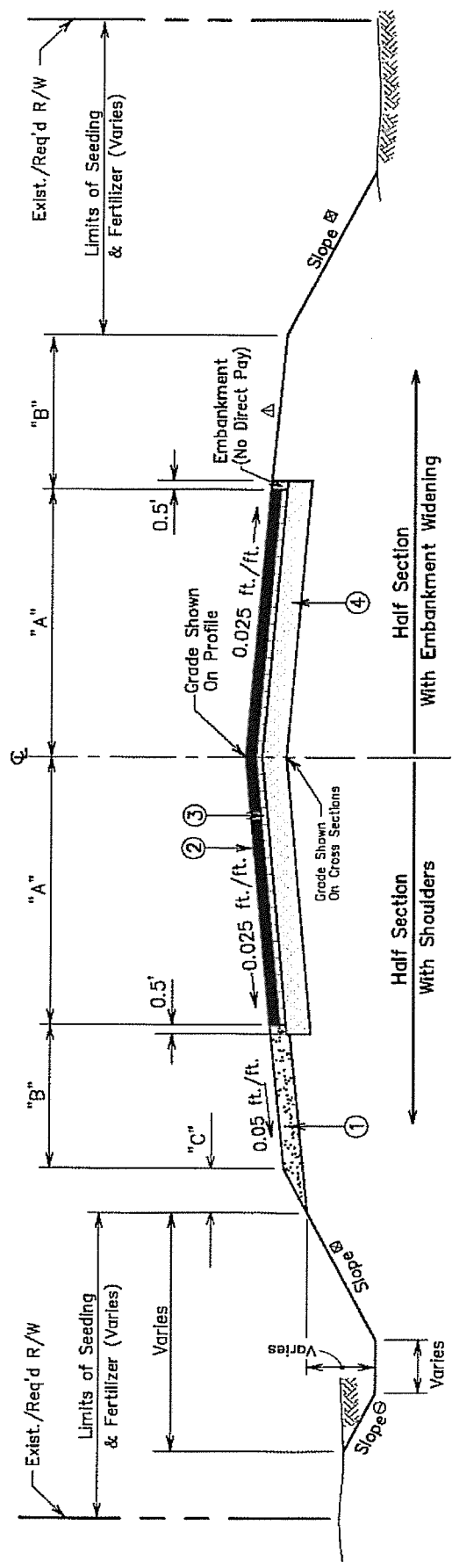
PROFILE

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

FEDERAL AID OFF-SYSTEM HIGHWAY BRIDGE PROGRAM

Consultant Name and Address

MC PROJ. NO.	709
DATE	3/29/2010
DESIGN BY	WCM
DRAWN BY	SAY
SCALE	AS SHOWN



TYPICAL SECTION
CLASS II BASE

- ① 4" Aggregate Surface Course (Shoulders)
- ③ 1 1/2" At Locations Where Base Course is Extended to Foreslope
- ② 1 1/2" Superpave Asphaltic Concrete Wearing Course (Level 1) □
- ③ 2" Superpave Asphaltic Concrete Binder Course (Level 1) □
- ④ 8 1/2" Class II Base Course (See Specifications for Allowable Alternates) *
- Grade PG-64-22 (AC-30) is Allowed
- * 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	
					Δ FORE	Θ 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'					

MC PROJ. NO.	760
DATE	3/26/10
DESIGN BY	WOL
DRAWN BY	SAV
SCALE	HTS

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

The consultant will be given a copy of the standard soil boring log sheet required by LADOTD.

Boring submittals will include 3 - ½ size prints of the boring log sheet(s) general bridge plan(s) with boring locations shown and a copy of the soil analysis report.

Bound calculations, appropriate plan sheets and checklists are required for the pile length submittals. Copies of the checklists are shown on pages **57-58**. **Pile lengths are to be calculated using FHWA's "Driven" program which can be found on the web @ www.fhwa.dot.gov/bridge/sa98074.pdf .**

Pile length calculations cannot be determined until scour depths have been approved.

At this time, the DOTD Geotechnical Section provides all pile sizing for the Program.

Pile Checklist

State Project No. _____
F.A.P. No. _____
Project Name: _____
Checked by: _____
Date: _____

- Verify Pile is 20 ft (6 m) below scour for 14", 16", and 18" piles, 25 ft (8m) below scour for 24" and 30" piles. This is minimum penetration depths below the computed scour depth elevation.
- Checked general notes sheet included necessary pile notes if required.
- Verify pile lengths less than maximum casting length. Refer to detail CS-216.
- Verify borings shown on the general plan match the boring log stations and locations.
- Verify proper elevations are shown on the boring log sheets.
- Checked for fill at bridge ends. Checked boring logs to see if consolidation tests have been run for these areas.
- For bearing piles, make sure pile is tipped 3-5 ft. into dense sand (≥ 50 blows) or hard clay ($q_u = 4.0$ tsf). Recommended Tip Elevation _____ MSL
- Checked for feasibility to use a test pile using a cost analysis. Compare the cost of total length of piling saved, from F.S.2 to 3, vs. the cost of the test pile @ F.S.=2.0. Approximate test pile cost = \$20,000 (14", 16", 18")
- Determined the required factor of safety.
 - Offsystem: with test pile-F.S.= 2.0, w/o test pile F.S.= 2.5
 - Onsystem: with test pile-F.S.= 2.0, w/o test pile F.S.= 3.0

**PAVEMENT AND GEOTECHNICAL SECTION
CHECKLIST FOR INFORMATION TO
REVIEW OFF-SYSTEM BRIDGE PLANS**

PROJECT NO.:	
PROJECT NAME:	
STREAM NAME:	
STRUCTURE NO.:	

CHECK	REQUIRED ITEMS	INFORMATION ON PLANS
	SKEW ANGLE CLEAR ROADWAY WIDTH	
	CHANNEL BOTTOM ELEV.	
	SCOUR ELEVATION	
	BORING LOG STATIONS	
	BORING LOGS LOCATED ACCURATELY ON PLANS	
	BORING LOG ELEVATIONS ACTUAL NOT ASSUMED SHOWN ON BORING LOGS	
	PILE DATA TABLE PILE TYPE PILE SIZE PILE CUTOFF ELEV. PLAN TIP ELEV. PILE PLAN LENGTHS	
	MAX PILE DESIGN LOAD SHOWN ON PLANS	

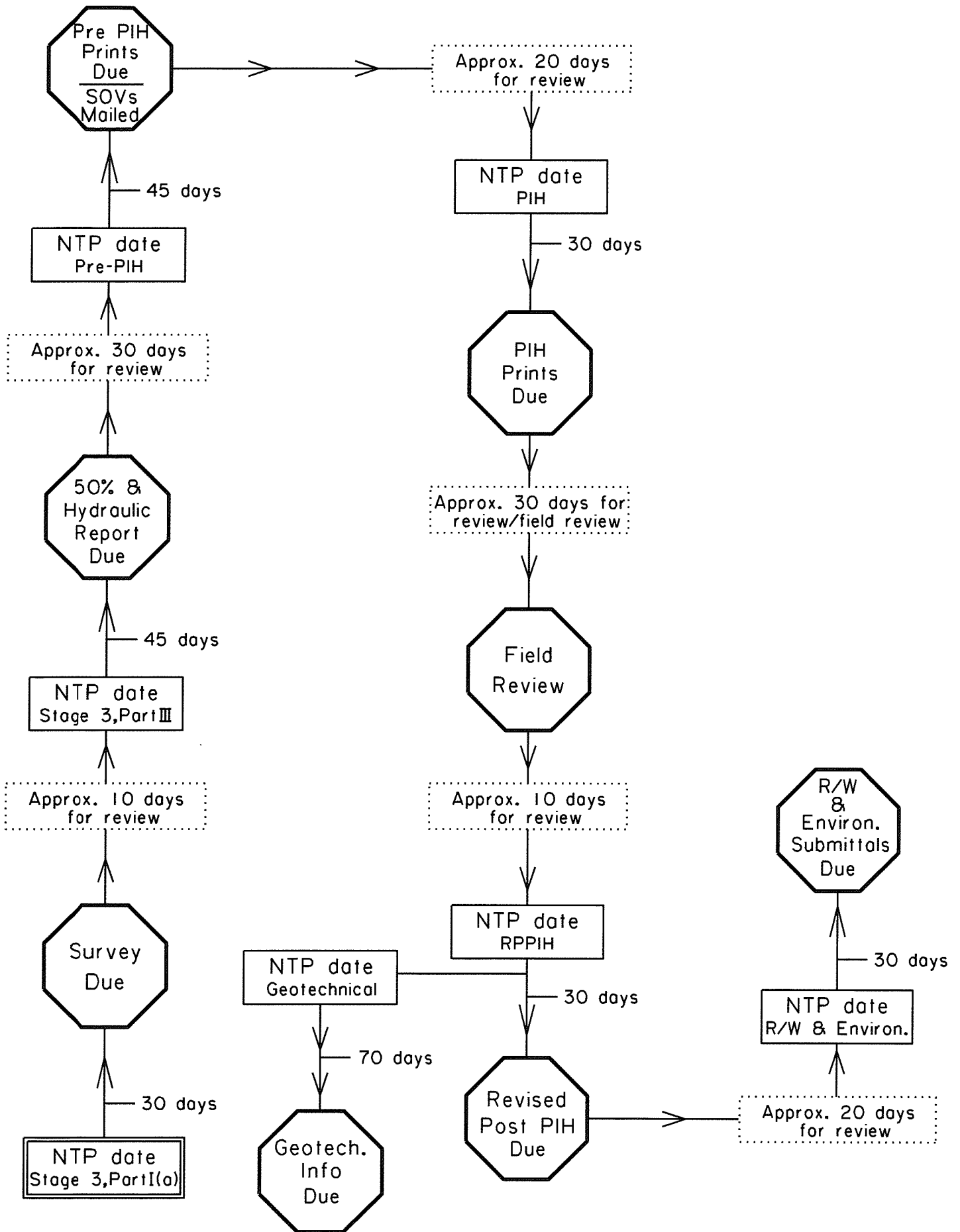
CONSULTANT IS TO FILL OUT THIS CHART AND INCLUDE
IT WITH THE PILE LENGTH REVIEW SUBMITTAL.

FINAL TRACINGS

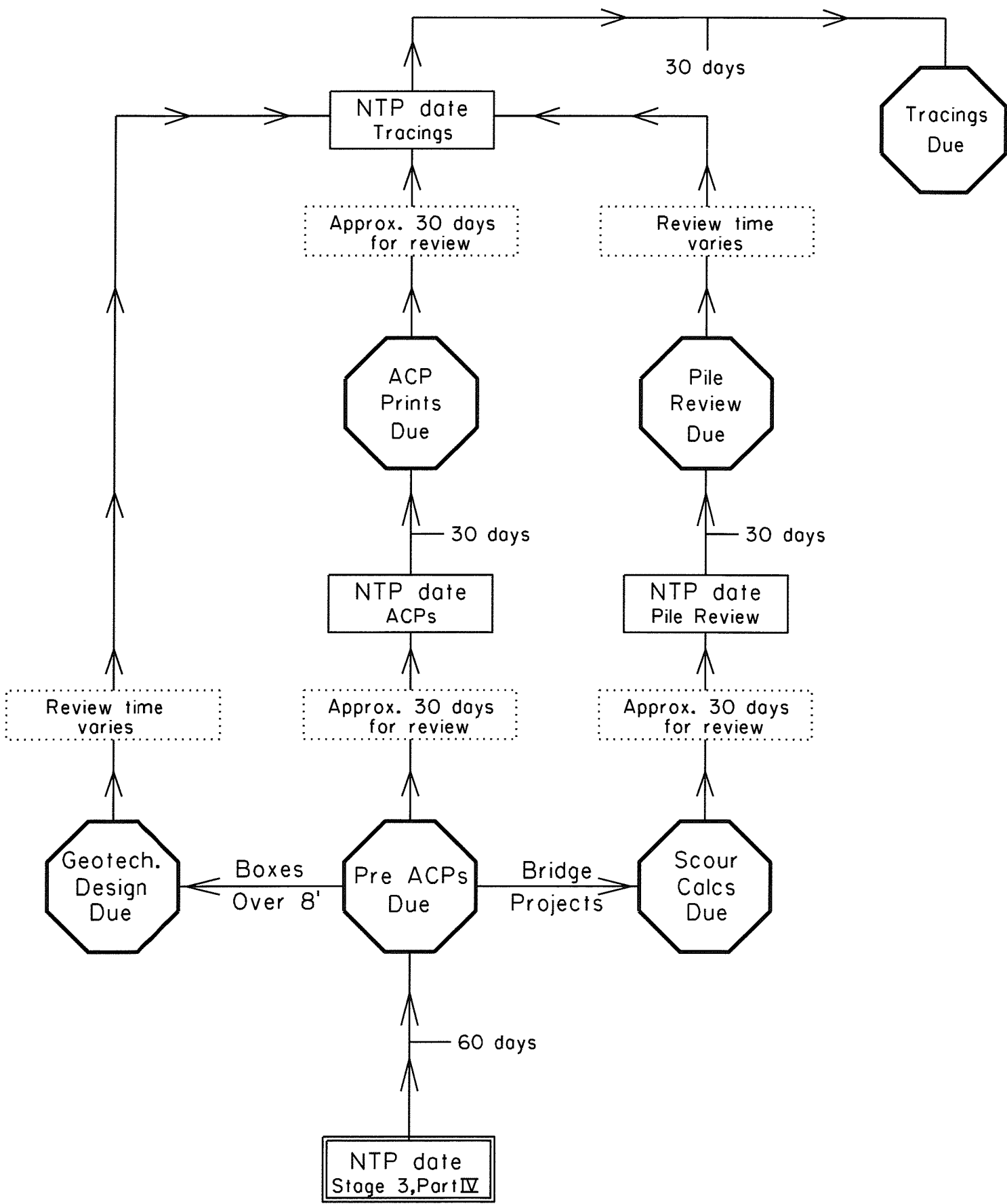
Final contract plans submitted to the Project Coordinator shall be original drawings conforming to the following specifications:

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** and **dated**.
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.

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	WHAT TO SEND
SURVEY	1	Field roll(s)
	1	Existing drainage map(s)
	--	Original field book(s)
	1	Plotted cross sections (half-size is acceptable)
	1	Bound point listings (refer to page 4, Item 11d)
	1	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	Hydraulic report
	1	Title sheet & layout map and plan/profile sheet
SOVs ①	1	See Environmental Clearance Process guidelines.
PRE PLAN-IN-HAND	1	Full 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	Culvert length calculations (if applicable)
PLAN-IN-HAND	1	Full set with cross sections and the Pre PIH "markups"
	8	Half-size set of prints with cross sections
	1	Constructability/Biddability Review form (1 per site) – design portion filled out and form emailed to coordinator.
POST PLAN-IN-HAND	1	Half-size set with cross sections
	1	Half-size print of each plan/profile sheet
R/W REQUIREMENTS TO THE PROGRAM COORDINATOR	1	Reproducible print of plan/profile sheet
	1	Agreements and sketches
ENVIRONMENTAL ①	-	See Environmental Clearance Procedures booklet. Submit to the Program Coordinator after PIH or Post PIH as applicable
	1	Half-size prints of typical section sheet and plan/profile sheet
	1	Permit sketches
BORINGS (if applicable)	3	Half-size prints of boring log(s) & general bridge plan(s)
	1	Soil analysis report

① Need to include hydraulic data table in SOVs.

FINAL PLANS

STAGE 3, PART IV - FINAL PLANS		
SUBMITTAL	NO. OF SETS	WHAT TO SEND
PRE ADVANCE CHECK PRINTS	1	Full 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	Bridge scour calculations (if applicable)
ADVANCE CHECK PRINTS	1	Full set with cross sections and Pre ACP "markups". Standard plans and details are not required, but bridge details and modified special details are required.
	7	Half-size set of prints with cross sections
	1	Print of the title sheet & Layout map (half-size is acceptable)
	1	Constructability/Biddability Review form – design portion filled out and form emailed to coordinator.
REVISED POST ADVANCE CHECK PRINTS (If required)	1	Full set with Cross-Sections and the latest "markups"
TRACINGS		
TRACINGS	-	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).
	1	<u>Half-size</u> print of the layout map and each plan/profile sheet.
	1	Hydraulic report in .pdf format on CD

➤ **RETAIN TRACINGS UNTIL NOTIFIED**

PROGRAM CONTACTS

OFF-SYSTEM BRIDGE PROGRAM SQUAD			
NAME	TITLE	PHONE NUMBER	ROOM NO.
Gary Pentek	Program Manager	225.379.1047	604 V
Hubert Almeida	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.
Victor Sanchez	225.379.1061	Bridge Design	604 B
Mitra Hashemieh	225.379.1482	Hydraulics	N 515
Jeff Lambert	225.379.1345	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			
Gary Pentek	gary.pentek@la.gov		
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