LACOMBE BAYOU BRIDGE HAER No. LA-36
(Bridge Recall No. 058930)
Carries U.S. Route 190 (US 190) over Bayou Lacombe
Lacombe
St. Tammany Parish
Louisiana

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street, NW
Washington, DC 20240

HISTORIC AMERICAN ENGINEERING RECORD
LACOMBE BAYOU BRIDGE
(Bridge Recall No. 058930)

HAER No. LA-36

Location: Carries U.S. Route 190 (US 190) over Bayou Lacombe in the town of Lacombe, St. Tammany Parish, Louisiana.

The Lacombe Bayou Bridge (Recall No. 058930) is located at latitude 30.313851 north, longitude -89.935615 west.[1] The coordinates represent the center of the bridge. It was obtained in 2016 by plotting its location in Google Earth. The location has no restriction on its release to the public.

Present Owner: State of Louisiana.

Present Use: Vehicular and pedestrian traffic.

Significance: This steel plate girder swing bridge is significant as an example of a movable bridge. Its significance is demonstrated by the presence of distinctive engineering and design features of the steel plate girder swing type, characterized by the steel plate girder main span, the center-bearing turning mechanism, pivot pier, and operator's house. The bridge retains good integrity and clearly conveys the significant design features of the plate girder swing bridge type. This bridge was determined eligible for listing in the National Register of Historic Places (National Register) in 2013 under *Criterion C: Design/Engineering* at the state level of significance.[2]

Historian: Sara Gredler, Cultural Resource Specialist; Mead & Hunt, Inc. (Mead & Hunt); 2017.

Project Information: This documentation was prepared as mitigation to fulfill Stipulation IX.5 of the *Programmatic Agreement Among the Federal Highway Administration, the Louisiana Department of Transportation and Development, the Advisory Council on Historic Preservation, and the Louisiana State Historic Preservation Officer Regarding Management of Historic Bridges in Louisiana*, dated August 18, 2015, and executed September 21, 2015. The Louisiana Department of Transportation and Development (LADOTD) retained Mead & Hunt, Inc. (Mead & Hunt) to prepare this document. It was prepared by cultural resource specialist Sara Gredler of Mead & Hunt. Dietrich Floeter completed the photography.

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[1] The bridge is also known as Structure No. 62520131210841.

[2] Mead & Hunt, Inc., *National Register Eligibility Determination Report, Pre-1971 Louisiana Highway Bridges* (prepared for the Louisiana Department of Transportation and Development, September 2013).

Part I. Historical Information

A. Physical History:

1. Date(s) of construction: 1938.

2. Engineer: Louisiana Highway Commission (LHC).

3. Builder/Contractor/Supplier: T.L. James and Company, Inc., Ruston, Louisiana.[3]

4. Original plans and construction: Copies of the final tracings for the bridge are available in the General Files room at the LADOTD's Baton Rouge headquarters. Plans were prepared by the LHC. The individual plan sheets are dated November 1935 and generally do not indicate who designed, checked, or detailed the sheets.[4] The bridge design used LHC Standard Plan S-S-48-15 for a "130'-0' Swing Span, 6-and-1/2' Conf. Floor, Electrically Operated, 24'-0' Roadway, 2-3'-0' Sidewalks, 45'-0" Clear Channel" for the movable span.[5] Design work for the bridge began in 1935 and the bridge was completed in 1938.[6] The standard plan was designed by Louis Duclos (designer and detailer) with Charles A. Myers in charge as the bridge design engineer.

5. Alterations and additions: The bridge no longer functions as a swing span. LADOTD inspection data indicates that the swing span was not opened in 2012 or 2013 and the bridge is not currently included on the LADOTD's list of ferries and movable bridges as of October 2016.[7] All the original lights and gates have been removed. Guardrail has been added to the bridge approaches and terminates at each endpost.

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[3] The T.L. James and Company, Inc. is now the James Construction Group.

[4] Louisiana Highway Commission, "Plan and Profile of Proposed State Highway: Bayou Lacombe Bridge and Approaches, State Route No. 34, Covington-Slidell Pear River Hwy, St. Tammany Parish, Federal Aid Project No. 76 C, D, and E Reopened, State Project 6111," 1935, Final tracings, available on microfilm at the Louisiana Department of Transportation and Development, Baton Rouge, La.

[5] Louisiana Highway Commission, "Standard Plan S-S-48-15, 130'-0' Swing Span, 6-and-1/2' Conf. Floor, Electrically Operated, 24'-0' Roadway, 2-3'-0' Sidewalks, 45'-0" Clear Channel," December 1935, available on microfilm at the Louisiana Department of Transportation and Development, Baton Rouge, Louisiana.

[6] Louisiana Highway Commission, *Eighth Biennial Report of the Louisiana Highway Commission* (Baton Rouge, La.: Louisiana Highway Commission, 1936), 178; Louisiana Highway Commission, *Tenth Biennial Report of the Louisiana Highway Commission* (Baton Rouge, La.: Louisiana Highway Commission, 1939), 68.

[7] "La DOTD: Ferry and Moveable Bridge Status," *Louisiana Department of Transportation and Development*, October 25, 2016, http://wwwapps.dotd.la.gov/operations/ferrystatus/fmbs_status.aspx?PID=B_STATUS; *United States Coast Pilot 5: Gulf of Mexico, Puerto Rico and Virgin Islands 2016*.

B. Historical Context:

Historical background

The Lacombe Bayou Bridge carries US 190 across Lacombe Bayou in St. Tammany Parish, Louisiana. St. Tammany Parish borders Mississippi to the east, Lake Pontchartrain to the south, Tangipahoa Parish to the west, and Washington Parish to the north. The nearest community is Lacombe, located one-half mile west of the bridge. Beginning in Slidell, approximately 11.5 miles east of Lacombe, US 190 continues west to the Sabine River, where it crosses the state line into Texas. Bayou Lacombe is a navigable waterway at the bridge location. It is a tidal stream that extends into Lake Pontchartrain downstream of the bridge.

US 190 was the major east-west highway north of Lake Pontchartrain from the 1920s until the opening of Interstate Highway 12 (I-12) in the late 1960s. The highway was part of the original U.S. numbered highway system put in place in 1926. At that time, US 190 was an intrastate highway and gravel surfaced. The portion of the highway near Lacombe was not surfaced in concrete until 1932. Contracts completing the paving of US 190 were paid in 1934. After construction of the interstate, US 190 continued to serve as a major alternative route north of the lake.[8]

While the US 190 highway improvements were being completed in the early 1930s, the LHC began planning for a new bridge over Bayou Lacombe. The previous bridge was a swing bridge 192'-0" in overall length, with a 150'-0" steel swing span. The roadway was 16'-0" wide. The highway included a 90-degree turn in Lacombe south of the bridge and a 90-degree curve north of bridge.[9] The limited roadway width and the desire to eliminate the sharp turns required the realignment of the roadway and a change in the location of the bridge crossing. The new crossing, incorporating two wider curves, was located approximately 500' downstream from the original crossing.

The Bayou Lacombe Bridge was one of 58 bridges recommended for early construction in the LHC's 1930-1932 biennial report. This list showed some of the more important bridge projects in the state, and named their construction as urgent. A steel and concrete movable bridge was planned for the crossing.[10] However, design work on the bridge did not begin until 1935. The project included construction of the bridge and its approaches. By March 1936 the federal funds for the project had been allotted, using an estimated total of $61,000.[11]

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[8] Louisiana Highway Commission, *Seventh Biennial Report of the Louisiana Highway Commission* (Baton Rouge, La.: Louisiana Highway Commission, 1934), 194.

[9] Louisiana Highway Commission, "Plan and Profile of Proposed State Highway: Bayou Lacombe Bridge and Approaches, State Route No. 34, Covington-Slidell Pear River Hwy, St. Tammany Parish, Federal Aid Project No. 76 C, D, and E Reopened, State Project 6111."

[10] Louisiana Highway Commission, *Sixth Biennial Report of the Louisiana Highway Commission* (Baton Rouge, La.: Louisiana Highway Commission, 1932), 457.

[11] Louisiana Highway Commission, *Eighth Biennial Report of the Louisiana Highway Commission*, 178.

The U.S. War Department approved the general design for the bridge on September 30, 1935, a requirement due to its location on a navigable waterway.[12] The plans for the swing span design date to November and December 1935, and War Department approval was granted in December 1936.[13] By this time bids had already been made for the bridge's construction. The contract with T.L. James & Company, Inc. for $128,788 was signed on December 30, 1936.[14] T.L. James & Company, Inc., established in 1926 and originally headquartered in Ruston, Louisiana, constructed smaller bridge crossings as well as larger projects such as the later Lake Pontchartrain Causeway bridges and the New Orleans Expressway.[15] The company continues in business today as the James Construction Group.

Construction of the bridge and its approaches, including almost a mile of roadway, took two years and cost $144,272.01. Federal funds contributed nearly half (47 percent) of the final cost. When completed in 1938, it was one of 19 bridges put in service that year.[16]

Engineering background

Swing span bridges were a popular movable bridge type nationally from the 1890s through the 1920s as an economical means of spanning a navigable channel. Most nineteenth-century swing bridges were trusses but plate girder spans became more popular in the twentieth century. The plate girder design was the most common movable swing span type in Louisiana through 1970.[17] Because they require more complicated machinery than vertical lift and bascule types, swing bridges eventually fell out of favor in Louisiana and nationally.

In a swing bridge, the span rotates on a central pier 90 degrees until it is parallel to the navigation channel. When open, this central pier supports the entire load of the span. Generally, electricity is used to power the machinery to swing the main span. A major limitation of the swing span bridge is the pivot pier, which remains an obstacle in the center of the waterway. While the swing span creates an open

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[12] "Proposed Bridges Wins U.S. Approval," *The New Orleans Times-Picayune*, October 1, 1935.

[13] Louisiana Highway Commission, "Plan and Profile of Proposed State Highway: Bayou Lacombe Bridge and Approaches, State Route No. 34, Covington-Slidell Pear River Hwy, St. Tammany Parish, Federal Aid Project No. 76 C, D, and E Reopened, State Project 6111"; Louisiana Highway Commission, "Standard Plan S-S-48-15, 130'-0' Swing Span, 6-and-1/2' Conf. Floor, Electrically Operated, 24'-0' Roadway, 2-3'-0' Sidewalks, 45'-0" Clear Channel"; "Bayou Lacombe Bridge Plans Given Approval," *The Baton Route Morning Advocate*, December 8, 1936.

[14] "Open Bids on Bridge for Bayou Lacombe," *The New Orleans Times-Picayune*, November 26, 1936; Louisiana Highway Commission, *Ninth Biennial Report of the Louisiana Highway Commission* (Baton Rouge, La.: Louisiana Highway Commission, 1937), 34.

[15] "Ask Bids for Paving of Arline Highway," *The New Orleans Times-Picayune*, December 25, 1936; Mead & Hunt, Inc., *Historic Context for Louisiana Bridges* (prepared for the Louisiana Department of Transportation and Development, December 2013), 106.

[16] Louisiana Highway Commission, *Tenth Biennial Report of the Louisiana Highway Commission*, 50–51, 68.

[17] Of the 74 extant swing bridges, 40 are plate girder swing spans. Mead & Hunt, Inc., *Historic Context for Louisiana Bridges*, 75; Mead & Hunt, Inc., *National Register Eligibility Determination Report, Pre-1971 Louisiana Highway Bridges*.

navigational channel, the channel width is limited to one side of the pivot pier or the other. The span also requires a large swinging radius, based on the length of the swing span.

In addition to the span type, another structural distinction among swing bridges is found in the turning mechanism. The center-bearing turning mechanism rotates the movable span on a single pivot point on the center pier. The rim-bearing mechanism carries the dead load on a circular drum, which rides on a series of rollers in a circular track around the outside of the center pier. The center-bearing turning mechanism is more common, and is the type used for the Bayou Lacombe Bridge.[18]

Due to the requirements needed for Bayou Lacombe to remain a navigable waterway, a movable bridge was chosen for this site. Because of the large number of navigable waterways requiring movable bridge spans, the LHC designed a number of standard plans for movable bridges, beginning in 1924 and continuing through the 1960s. These designs were continually revised by the LHC. The Bayou Lacombe Bridge uses one of the standard plans for its plate girder swing span. The Bayou Lacombe Bridge also utilized standard plans for the reinforced-concrete, deck-girder approach spans (though two spans were custom designs for this bridge), the reinforced-concrete slabs that provide a transition between the bridge and the highway, and the operator's house.

Part II. Structural/Design Information

A. General Statement:

1. **Character:** The Bayou Lacombe Bridge is a steel plate girder swing bridge and is a significant example of this movable bridge type.

2. **Condition of fabric:** Good.

B. Description: The Bayou Lacombe Bridge is located approximately one-half mile east of Lacombe, Louisiana, and carries two lanes of US 190 traffic over Bayou Lacombe in St. Tammany Parish. The bridge was completed in 1938 and is aligned on an east-west axis. It is a steel plate girder swing span bridge with five reinforced-concrete deck girder approach spans. The Bayou Lacombe channel is aligned from northwest to southeast at the bridge's location. Bayou Lacombe is tidal at this location. The bridge no longer functions as a swing span. LADOTD inspection data indicates that the swing span was not opened in 2012 or 2013 and the bridge is not currently included on the LADOTD's list of ferries and movable bridges as of October 2016.[19]

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[18] Parsons Brinckerhoff and Engineering and Industrial Heritage, *A Context for Common Historic Bridge Types* (prepared for The National Cooperative Highway Research Program, Transportation Research Council, and National Research Council, October 2005), 3–115, http://onlinepubs.trb.org/onlinepubs/archive/NotesDocs/25-25(15)_FR.pdf.

[19] "La DOTD: Ferry and Moveable Bridge Status," *Louisiana Department of Transportation and Development*, October 25, 2016, http://wwwapps.dotd.la.gov/operations/ferrystatus/fmbs_status.aspx?PID=B_STATUS; *United States Coast Pilot 5: Gulf of Mexico, Puerto Rico and Virgin Islands 2016*.

The total length of the Bayou Lacombe Bridge is 320'-¾". The plate girder swing span (span 4) is 133'-3" in length and is flanked by three approach spans on the south and two on the north. The spans are numbered 1 through 6, south to north. The two spans immediately adjacent to the swing span (spans 3 and 5) are each 38'-3⅜" in length, while the other three spans (spans 1, 2, and 6) are each 36'-9" in length. Concrete approach slabs, 20'-0" in length, are located at both ends of the bridge as transitions to the US 190 roadway. The roadway width at the bridge is 24'-0". The bridge has raised concrete sidewalks that are 3'-0" wide with a 1'-1" concrete railing base cantilevered on triangular concrete brackets on both sides of the bridge deck, for a total bridge width of 32'-2".

Main span

The swing span was designed using LHC Standard Plan S-S-48-15.[20] This plan, created in December 1935, is for a 130'-0" span with a 24'-0" roadway and two 3'-0" sidewalks, providing a 45'-0" clear navigation channel, powered by an electric motor.[21] As built, the span has a 68'-0" swing radius to create a 45'-0" clear channel south of the pivot pier. The span is comprised of two variable-depth, riveted plate girders with a floor system. The girders are built up with riveted plates and angles added as vertical stiffeners. Plates riveted with angles comprise the top and bottom flanges. The bottom flanges are reinforced with cover plates at the centers.

The swing span rotates on a center-bearing pivot mechanism. The pivot bearing base is centered on the top of the circular concrete pivot-pier cap. The base holds the spherical thrust bearing disks that support the span above. The upper part of the pivot bearing is centered in a framework of rolled I-beams mounted between the plate girders of the swing span. The framework and plate girders also have four balance wheels riding on a circular steel track mounted on the top of the pivot pier to prevent the span from tipping out of plane during operation.

Mounted just inboard of the two balance wheels below the plate girders are wedge locks. The wedge is in place when the span is in the closed position and retracted when the span rotates. The wedge locks provide load-bearing capacity and stabilization for the closed span that is carrying traffic. When the swing span is in the closed position, the span ends are fixed in place with another set of wedge locks on piers 1 and 3 that serve as bearings and provide load-bearing capacity and stability. Electric motors power the turning mechanism and the sets of wedge locks on the pivot pier and the span ends. Although the bridge is no longer operated, the mechanical and electrical systems required for its opening remain in place.

The concrete deck is poured on the tops of the rolled stringers that extend across the floorbeams. Diagonal bracing extends between the plate girders, below the floorbeams. A welded steel ladder, 7'-0"

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[20] Louisiana Highway Commission, "Plan and Profile of Proposed State Highway: Bayou Lacombe Bridge and Approaches, State Route No. 34, Covington-Slidell Pear River Hwy, St. Tammany Parish, Federal Aid Project No. 76 C, D, and E Reopened, State Project 6111," General Plan sheet.

[21] Louisiana Highway Commission, "Standard Plan S-S-48-15, 130'-0' Swing Span, 6-and-1/2' Conf. Floor, Electrically Operated, 24'-0' Roadway, 2-3'-0' Sidewalks, 45'-0" Clear Channel," 1.

long, is mounted on the side of the swing span just south of pier 2 to provide access from the deck to the center pivot pier and the turning mechanism.

Approach spans and operator's house

Approach spans 1, 2, and 6 use LHC Standard Plan C-G-38 for a reinforced-concrete deck girder span. The remaining spans use a special or custom design. Each girder span has five integral beams with concrete diaphragms. The concrete approach slabs use LHC Standard Plan C-M-29.

The operator's house is a freestanding structure separate from the bridge and located on the downstream side, adjacent to pier 1. It is a one-story, rectangular, concrete building with a flat roof, raised on concrete piles. It features a center bay entrance door with a central panel and four fixed window panes. The door is flanked by a six-over-six, double-hung, wood-frame window on each side; identical windows are on the rear and side facades. The operator's house utilizes LHC Standard Plan CM 16 and features no stylistic detailing beyond integrated concrete pilasters on the exterior walls. The house is connected by a concrete platform to the bridge's east sidewalk. The operator's house holds the electrical controls used to open and close the swing span.

Railing

A reinforced-concrete, open-balustrade railing extends the length of the bridge on both sides. It features elongated oval openings, a horizontal cap, and solid endposts. It is interrupted only by the front wall of the operator's house. An endpost at the northwest corner of the operator's house has been damaged and has separated from the concrete base. The railing terminates in concrete-block endposts on both sides of the bridge and each is topped with a concrete obelisk. The obelisks originally held light fixtures. The approach guardrail terminates at the endpost. Each endpost also includes a rectangular concrete stepped pilaster, mounted perpendicular to the roadway. These endposts and pilasters originally supported the traffic gates to stop vehicles from entering the bridge when open. All the original lights and gates have been removed. Each concrete endpost has either the year of construction (1938) or the bridge name (Lacombe Bayou) molded into the concrete surface. This stepped endpost reflects a limited Moderne architectural treatment. The obelisk and endpost have been painted white, while the other concrete on the bridge remains uncoated. Modern light poles have been added to the northwest and southeast bridge approaches adjacent to the endposts.

Substructure

The substructure consists of five bents, two piers, and one pivot pier. The five bents are based on LHC Standard Plan C-S-125. Bents 1, 2, and 5 have five 14"-square reinforced-concrete piles, each 35'-0" long, topped with a concrete cap. Bents 3 and 4 have five 16" reinforced-concrete piles, each 45'-0" long, also topped with a concrete cap. Piers 1 and 3 each have two square concrete columns joined with a concrete web wall, topped with a concrete cap. These concrete caps have the year of construction (1938) formed into the concrete surface. Each pier has a square footing on 16 untreated timber piles. Pier 2, the cylindrical pivot pier, is 35'-0" high (measuring from the average groundline within the riverbed to the top of the concrete pivot pier) and has a diameter of 24'-0". It has a circular footing with 57 untreated timber piles set out in a grid pattern.

Timber fenders extending 91'-9" upstream and downstream from the center of the pivot pier delineate the navigable waterway and protect the swing span in the open position. The last 24'-0" of each end of the fenders extends away from the channel at a 45-degree angle. The fenders are supported by 30 creosote timber piles.

C. Site Information: The Bayou Lacombe Bridge spans Bayou Lacombe in Lacombe, St. Tammany Parish, Louisiana. The bridge is located approximately one-half mile east of Lacombe. Bayou Lacombe begins north of Lacombe at Talisheek, Louisiana, and flows for approximately 20 miles south through St. Tammany Parish to Lake Pontchartrain. At the bridge's location, Bayou Lacombe is approximately 130' wide and is tidal. The bayou is lined with thick vegetation and trees. The entire length of Bayou Lacombe is designated as a Louisiana Natural and Scenic Stream.[22]

Part III. Sources of Information

A. Primary Sources:

"Ask Bids for Paving of Arline Highway." *The New Orleans Times-Picayune*. December 25, 1936.

"Bayou Lacombe Bridge Plans Given Approval." *The Baton Route Morning Advocate*. December 8, 1936.

Louisiana Department of Wildlife & Fisheries: Office of Fisheries, Inland Fisheries Section. "Waterbody Management Plan Series: Bayou Lacombe, Lake History & Management Issues." In *Louisiana Department of Wildlife & Fisheries*, 2003. http://www.wlf.louisiana.gov/sites/default/files/pdf/document/38616-bayou-lacombe/bayou_lacombe_mp-a_2013.pdf.

Louisiana Highway Commission. *Eighth Biennial Report of the Louisiana Highway Commission*. Baton Rouge, La.: Louisiana Highway Commission, 1936.

———. *Ninth Biennial Report of the Louisiana Highway Commission*. Baton Rouge, La.: Louisiana Highway Commission, 1937.

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[22] Louisiana Department of Wildlife & Fisheries: Office of Fisheries, Inland Fisheries Section, "Waterbody Management Plan Series: Bayou Lacombe, Lake History & Management Issues," in *Louisiana Department of Wildlife & Fisheries*, 2003, http://www.wlf.louisiana.gov/sites/default/files/pdf/document/38616-bayou-lacombe/bayou_lacombe_mp-a_2013.pdf.

———. *Seventh Biennial Report of the Louisiana Highway Commission*. Baton Rouge, La.: Louisiana Highway Commission, 1934.

———. *Sixth Biennial Report of the Louisiana Highway Commission*. Baton Rouge, La.: Louisiana Highway Commission, 1932.

———. "Standard Plan S-S-48-15, 130'-0' Swing Span, 6-and-1/2' Conf. Floor, Electrically Operated, 24'-0' Roadway, 2-3'-0' Sidewalks, 45'-0" Clear Channel," December 1935. Available on microfilm at the Louisiana Department of Transportation and Development, Baton Rouge, Louisiana.

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B. Secondary Sources:

Bridge Inspection Report. Recall No. 058930, October 23, 2013. Available in Bridge Maintenance and Inspection Division, Louisiana Department of Transportation and Development, Baton Rouge, La.

Mead & Hunt, Inc. *Historic Context for Louisiana Bridges*. Prepared for the Louisiana Department of Transportation and Development, December 2013.

———. *National Register Eligibility Determination Report, Pre-1971 Louisiana Highway Bridges*. Prepared for the Louisiana Department of Transportation and Development, September 2013.

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(Bridge Recall No. 058930)
Carries U.S. Route 190 (US 190) over Bayou Lacombe
Lacombe
St. Tammany Parish
Louisiana

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Dietrich G. Floeter, photographer, February and March 2016
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LA-36-16 Detail view of northeast abutment, from south

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LACOMBE BAYOU BRIDGE
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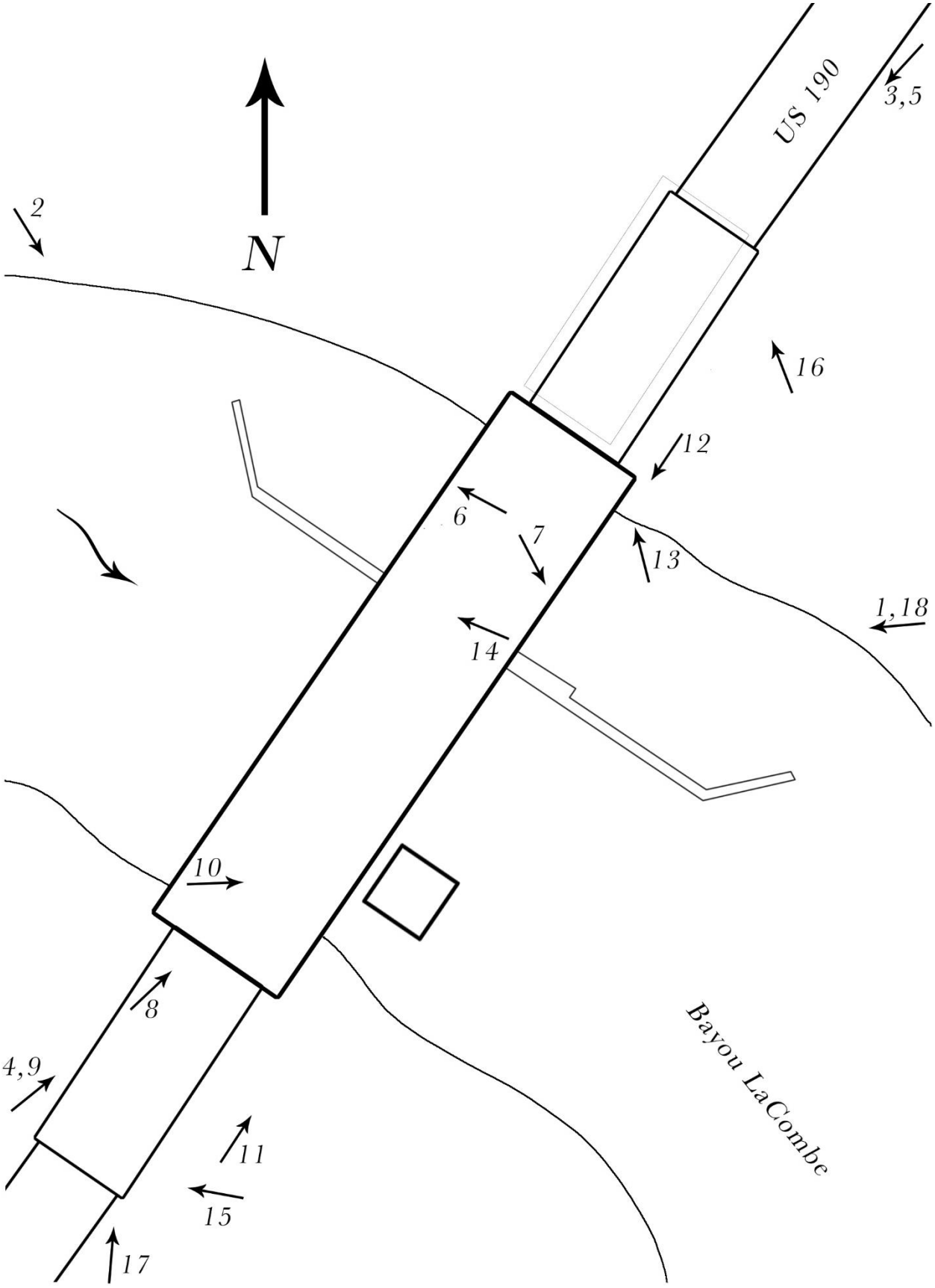

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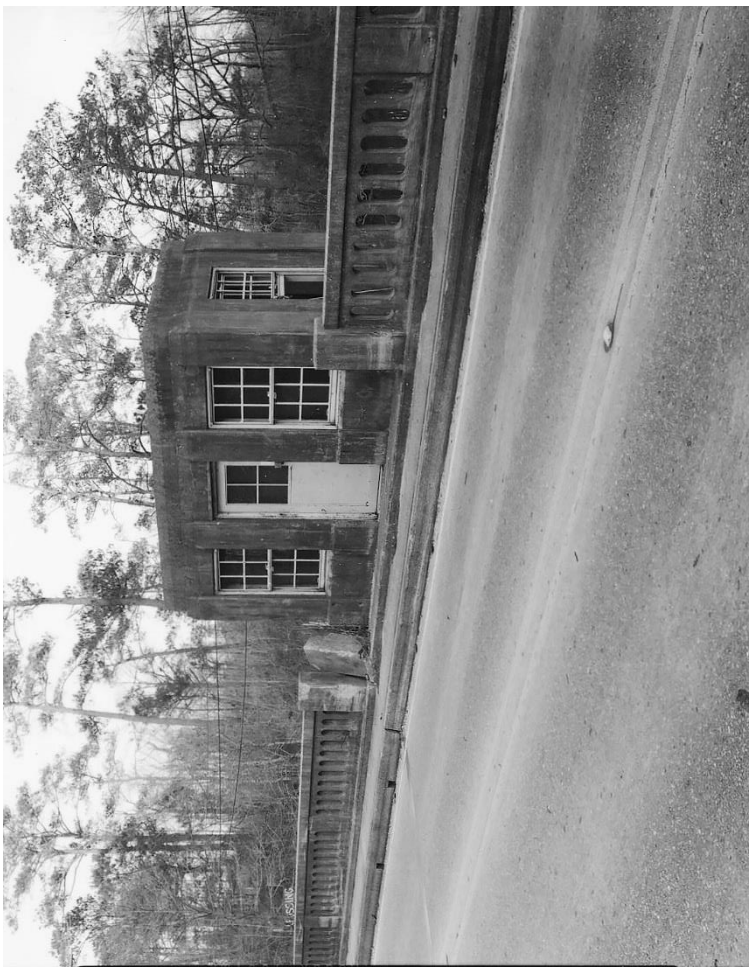

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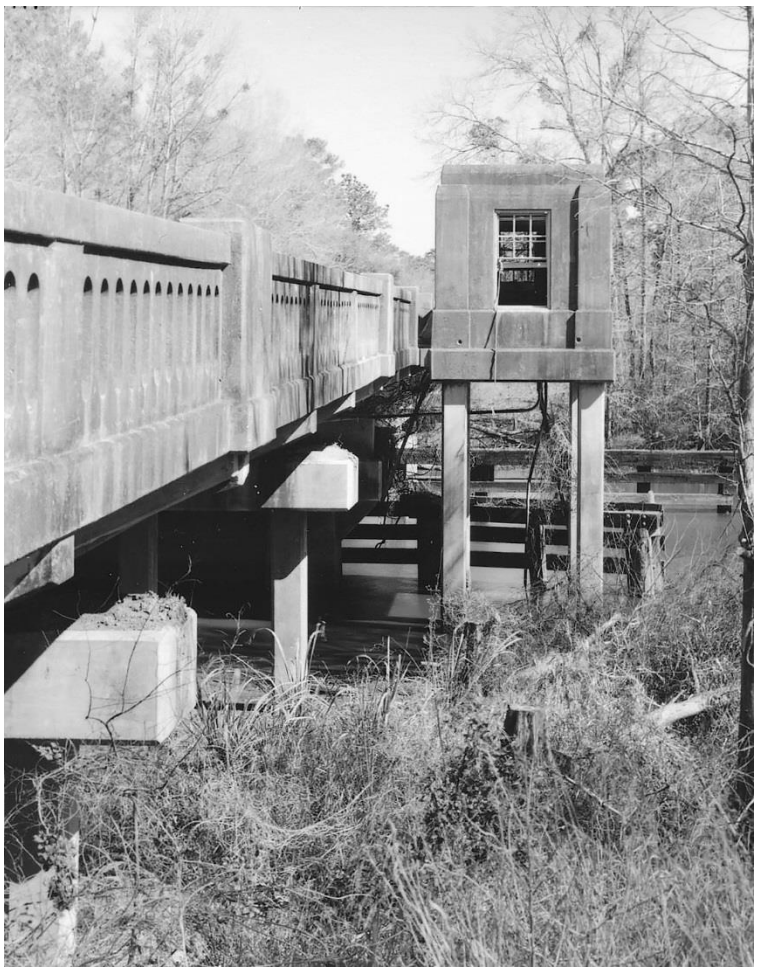

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STATE OF LOUISIANA

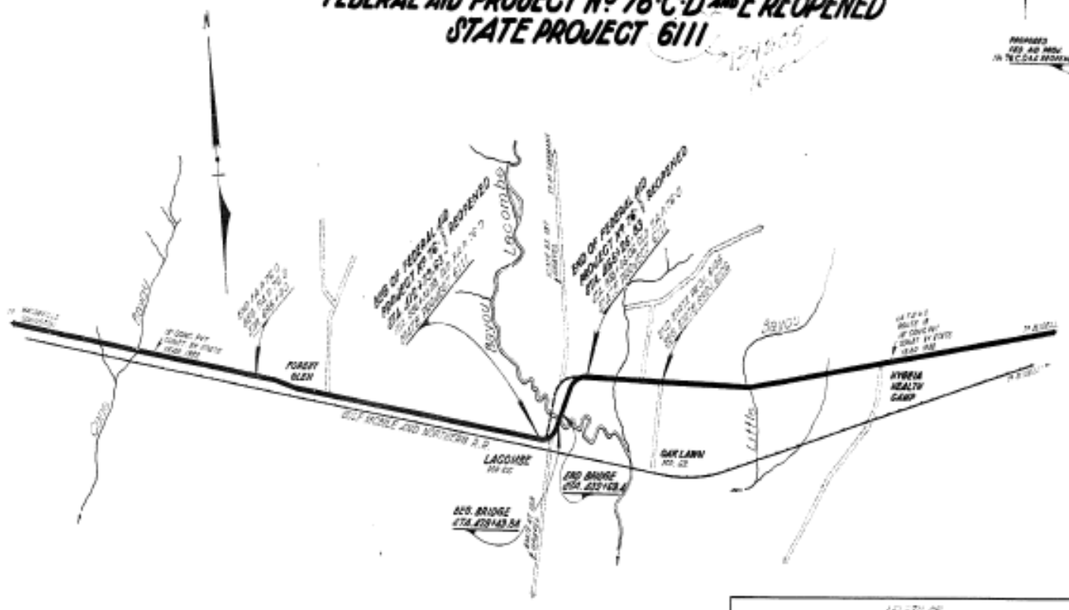
LOUISIANA HIGHWAY COMMISSION

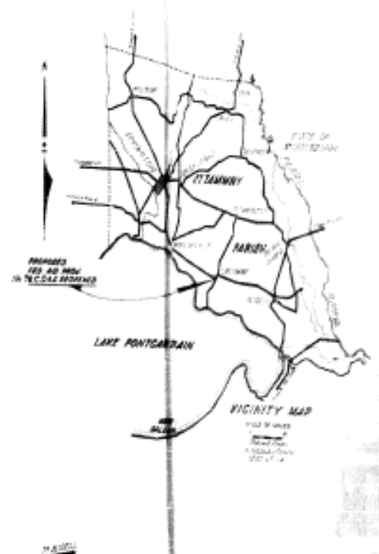
PLAN AND PROFILE OF PROPOSED

STATE HIGHWAY

BAYOU LACOMBE BRIDGE AND APPROACHES

STATE ROUTE No. 34
COVINGTON - SLIDELL PEARL RIVER HWY
ST. TAMMANY PARISH
FEDERAL AID PROJECT No. 76-C-D AND E REOPENED
STATE PROJECT 6111





CONVENTIONAL SIGNS

FIELD BOOKS IS 368 AND 7940
DATUM USED GIVEN
ELEVATIONS ARE TIDE

LAYOUT MAP
SCALE: 1 INCH = 3640 FEET

LENGTH OF FEDERAL AID PROJECT No. 76 (E) REOPENED
STATE PROJECT 6111

STA. TO STA.	STATIONS OLD R.P. TO D	ROADWAY FEET	BRIDGE FEET
410+73.63 - 428+23.84	556+80.96	1670.21	
428+43.84 - 428+68.63			319.56
428+68.63 - 465+26.83	383+05.04	3756.40	
TOTAL FEET		5426.61	319.56
TOTAL MILE		0.743	0.060

GROSS LENGTH FEDERAL AID PROJECT No. 76 (E) REOPENED = 0.803 MILE
GROSS LENGTH STATE PROJECT 6111 = 0.803 MILE

SCHEDULE OF REVISIONS

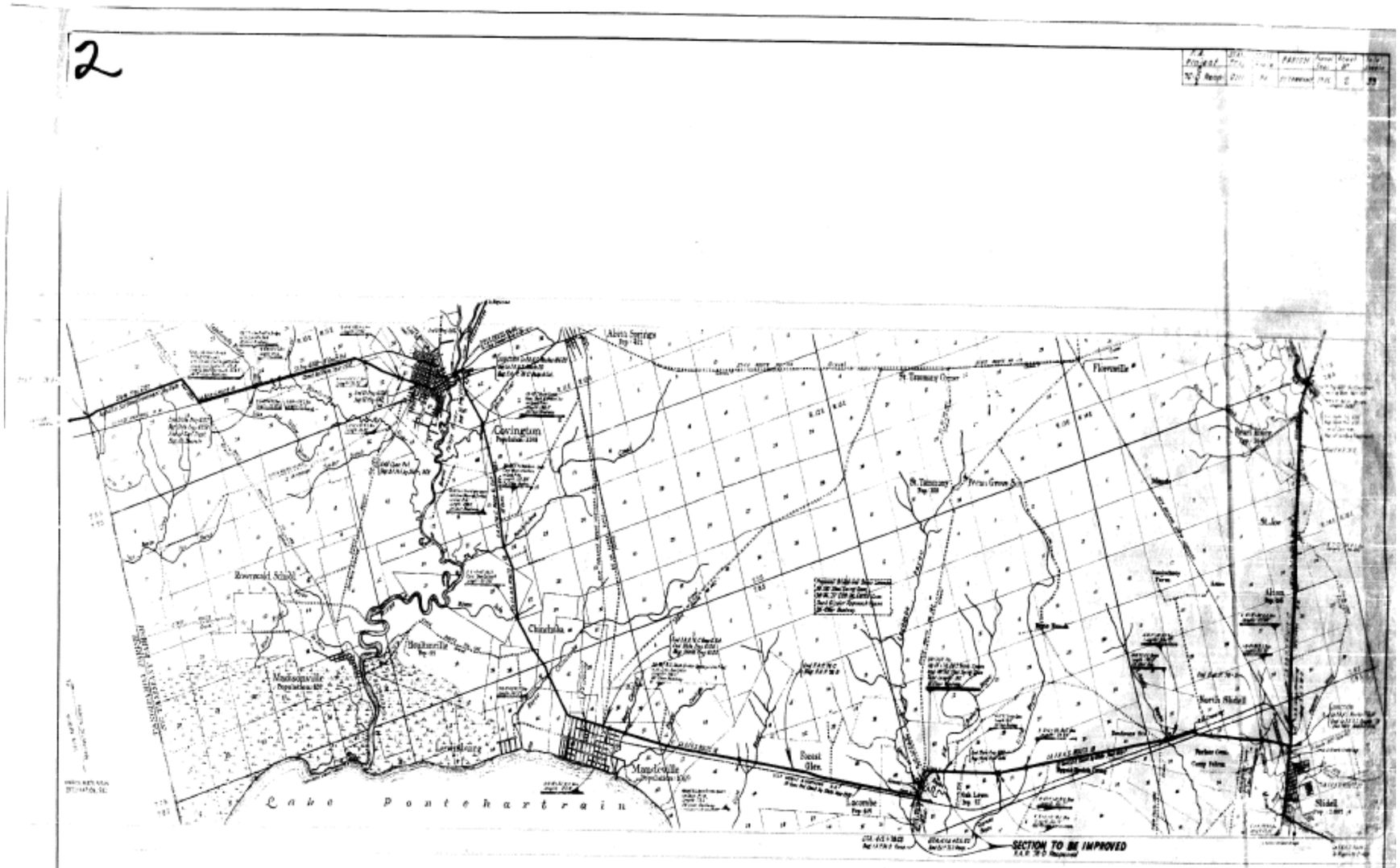
NO.	BY	DATE

[redacted]

1 2 3 4 5 6

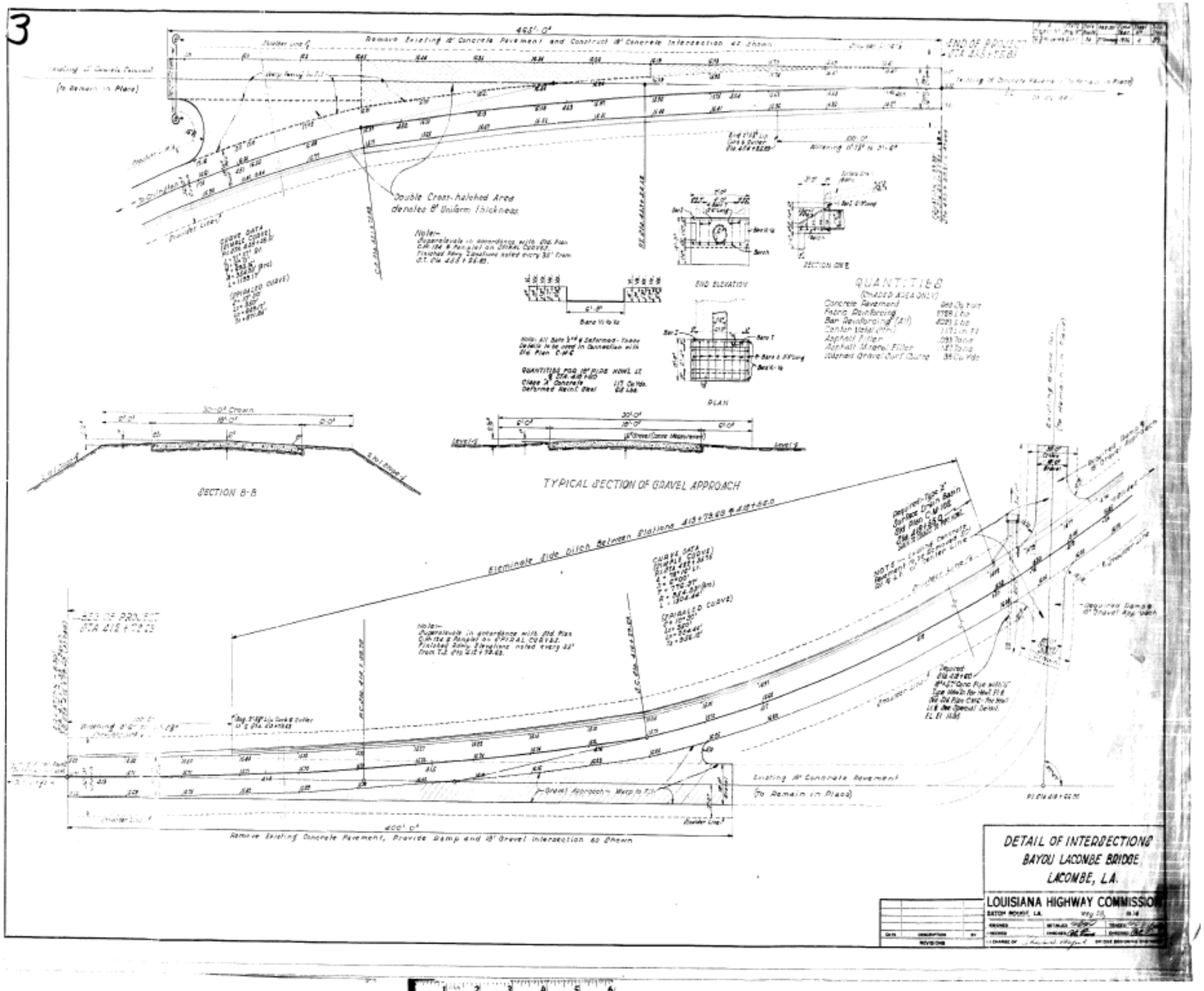
FINAL TRACINGS

2



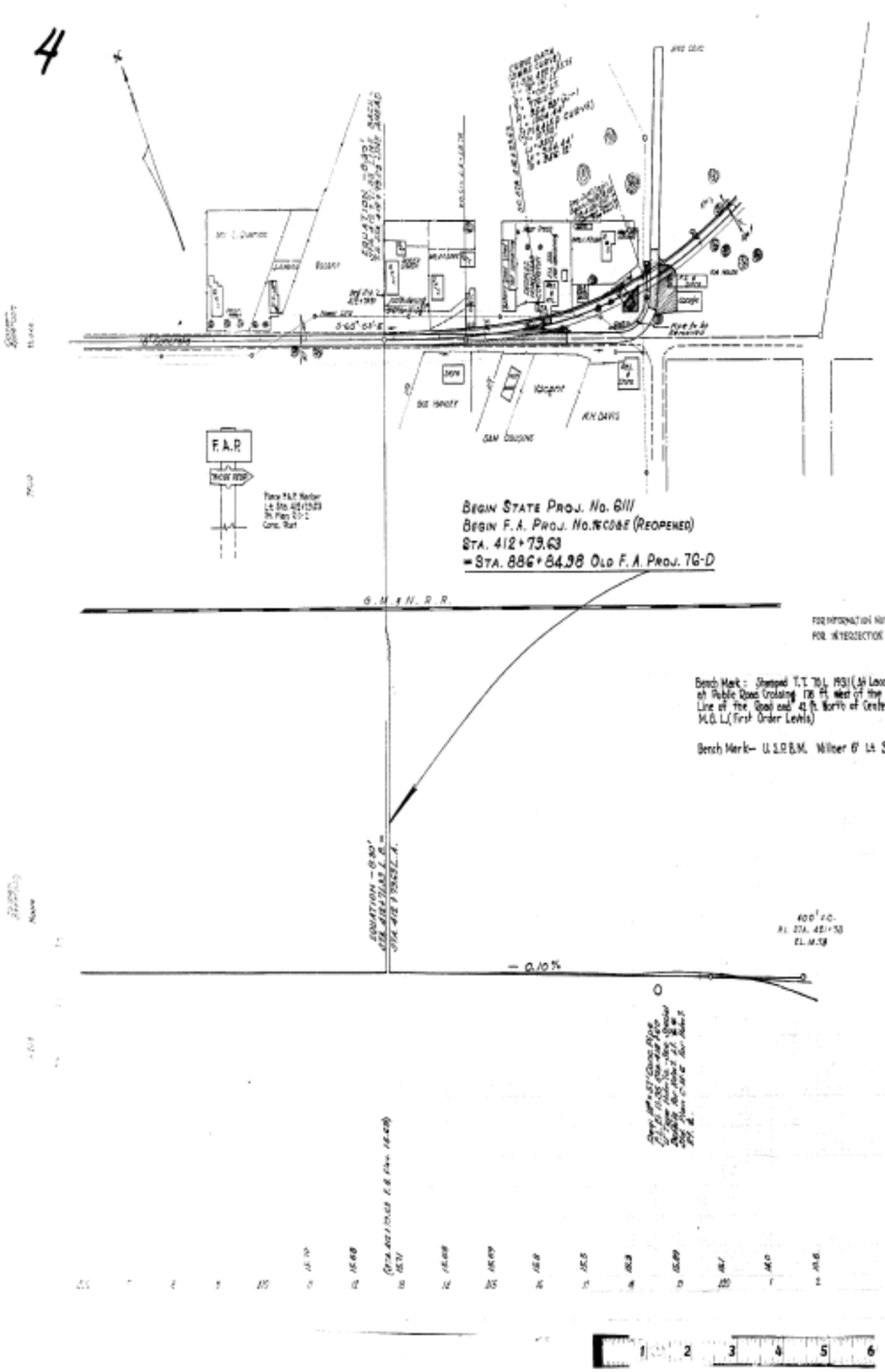
FINAL TRACINGS

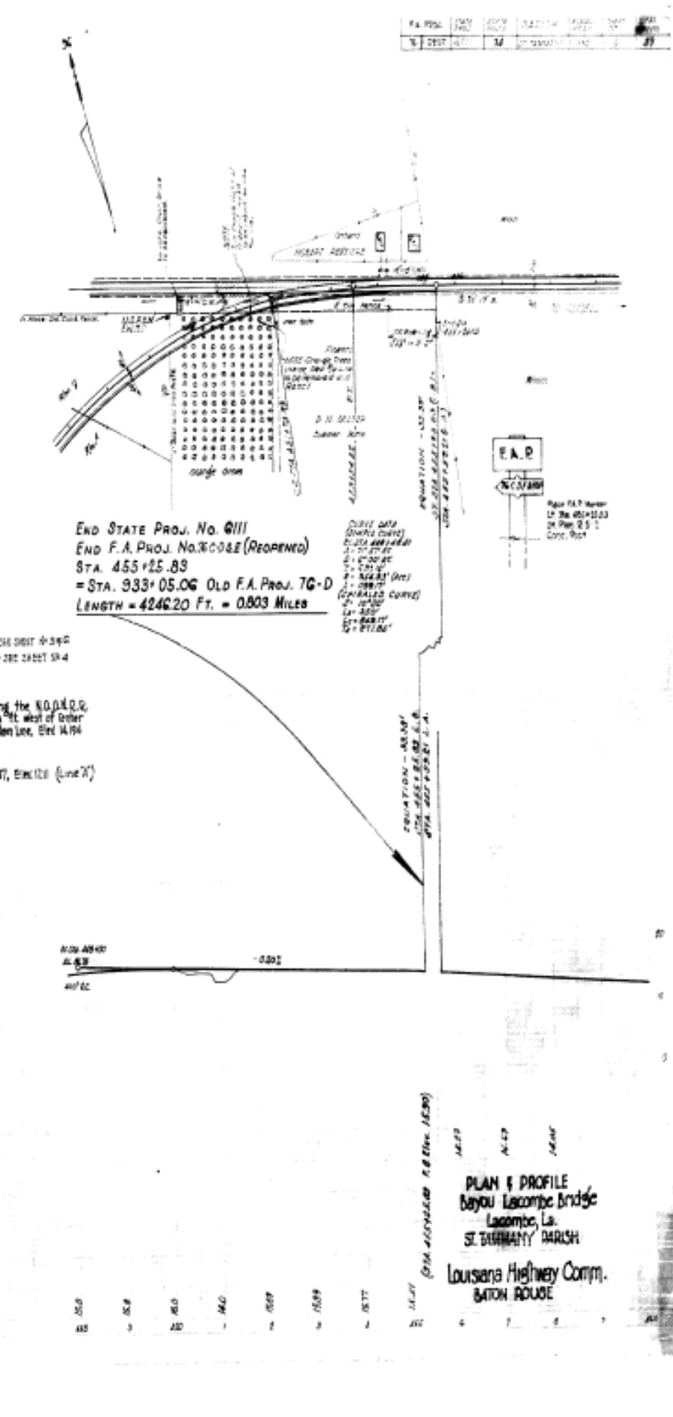
3



FINAL TRACINGS

4



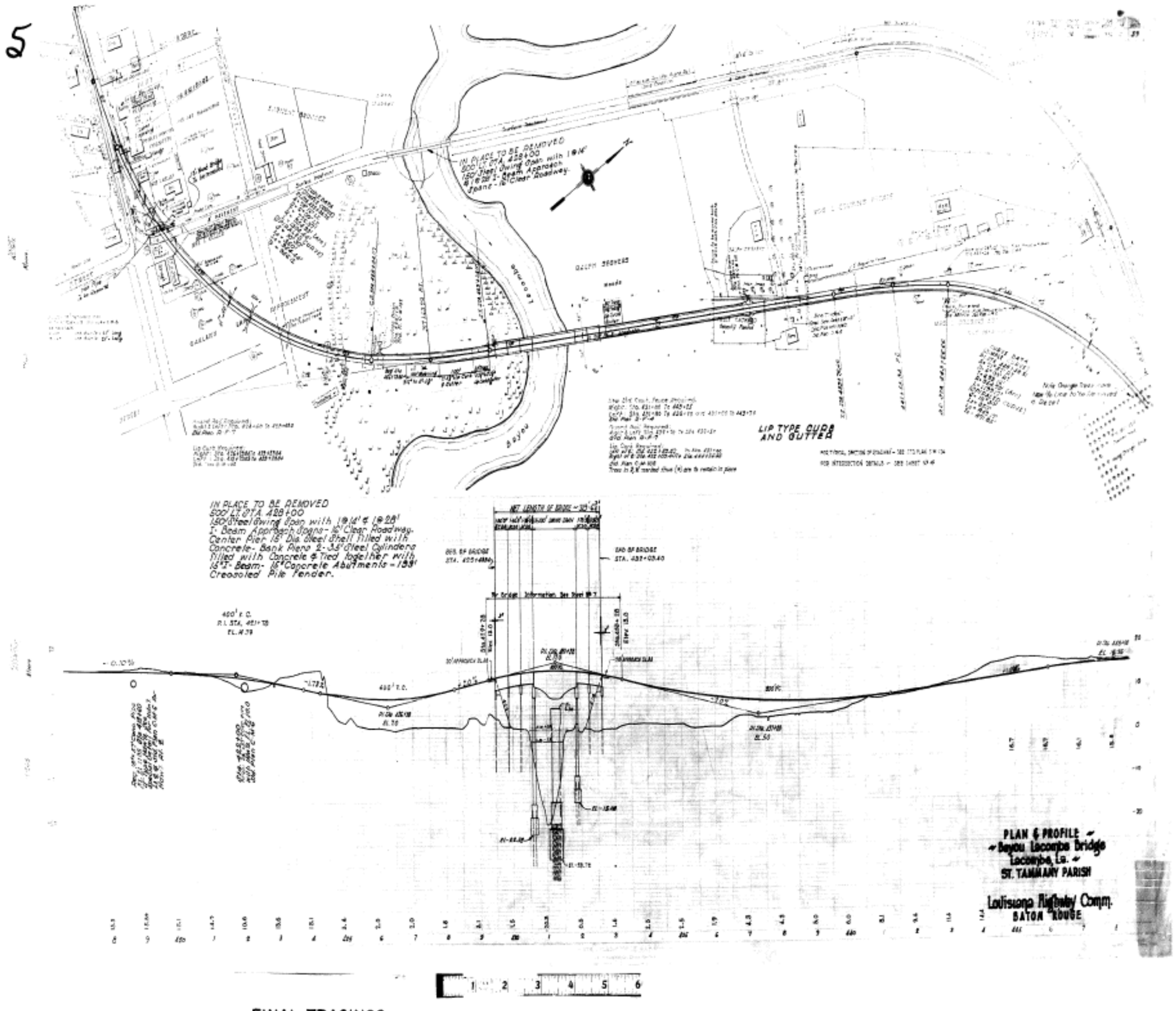


PLAN & PROFILE
Bayou Lacombe Bridge
Lacombe, La.
ST. TAMMANY PARISH

Louisiana Highway Comm.
BATON ROUGE

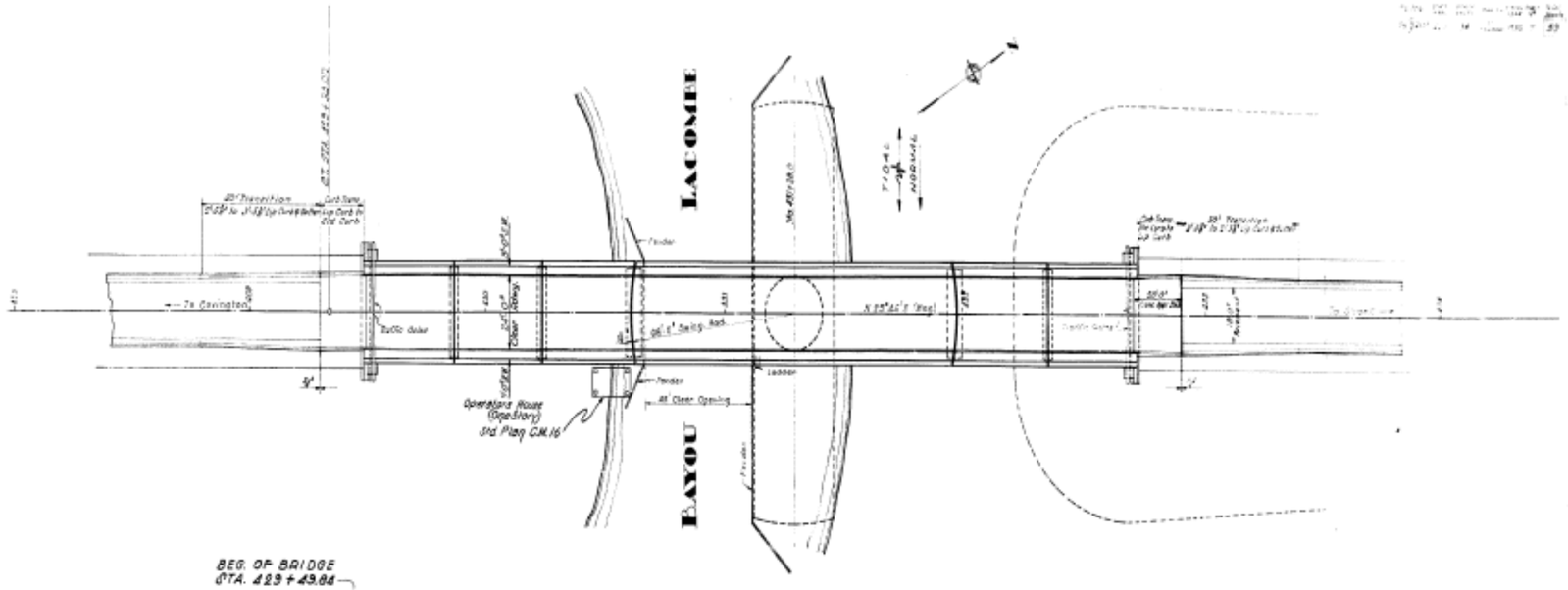
FINAL TRACINGS

5



FINAL TRACINGS

6



FINAL TRACINGS

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PLAN OF CAP

HALF SECTION ON AA.

SECTION ON BB

PART SIDE ELEVATION

HALF ELEVATION Showing Dimensions.

HALF ELEVATION Showing Reinforcing

HALF PLAN OF FOOTING Showing Reinforcing in Top.

HALF PLAN OF FOOTING Showing Reinforcing in Bottom

Top of Pier Cap

Bottom of Cap

DETAIL OF C.I. INSERTS & ANCHOR BOLTS IN FENDER BRACKET

4" Bars B - 10-0 Long

4" Bars B - 6-6 Long

4" Bars B - 7-6 Long.

4" Bars B - 9-0 Long

4" Bars B - 11-6 Long

U.S. STD. TYPE A - 10 PER INCH C.I. INSERT

ANCHOR BOLT

REQ. 18 - ANCHOR BOLTS & 18 INSERTS TO BE INCLUDED IN PRICE BID FOR REINFORCING STEEL.

BILL OF MATERIAL FOR PIER No. 1

Bars	Size	No.	Description	Total Length	Location
A	4"	6	Straight	159-0	Piles
B	"	36	"	180-0	"
C	"	"	"	91-0	Dowels
D	"	"	"	45-0	Stirrups in Cap
E	"	6	"	18-0	"
Bolts	"	3 each	Various	486-0	" - Column
J	"	44	"	748-0	Web Wall
K	"	6	"	91-0	Stirrups
L	"	"	"	30-0	"
M	"	15	"	97-6	Footing
T	"	8	"	120-0	"
V	"	34	"	204-0	Web Wall
X	"	4	"	40-0	Fender Brackets
Total 4" Bars				2244-6	2244 Pounds
A	9"	18	Straight	599-6	Cap
C	"	34	"	850-0	Columns
D	"	"	"	340-0	"
K	"	9	"	135-0	Stirrups
M	"	36	"	1350-0	Footing
V	"	36	"	1350-0	"
Total 9" Bars				4824-6	40,230 Pounds
Reinforcing Steel					42470 "
Class B concrete in Seal Course					38.14 C. Yds.
" " above Seal Course					87.67 " "
Structural Excavation					23.8 " "
Untreated Timber Piles 14" @ Tip					480 Lin. Ft.

MAX. PILE LOAD
With Seal 48.9 Tons
Without Seal 10.1 " "

BILL OF MATERIAL FOR PIER No. 3

Bars	Size	No.	Description	Total Length	Location
A	4"	6	Straight	159-0	Piles
B	"	36	"	198-0	"
C	"	"	"	91-0	Dowels
D	"	"	"	45-0	Stirrups in Cap
E	"	6	"	18-0	"
Bolts	"	3 each	Various	486-0	" - Col.
J	"	22	"	330-0	Web Wall
K	"	6	"	91-0	Stirrups
L	"	"	"	30-0	"
M	"	15	"	97-6	Footing
T	"	8	"	120-0	"
V	"	36	"	432-0	Web Wall
Total 4" Bars				2409-6	2412 Pounds
A	9"	18	Straight	599-6	Cap
C	"	34	"	4250	Columns
D	"	"	"	1680	"
M	"	9	"	338-6	Footing
V	"	36	"	1350-0	"
Total 9" Bars				4268-0	38412 Pounds
Reinforcing Steel					42720 "
Class B Conc. in Seal Courses					38.60 Cu. Yds.
" " above Seal Course					77.30 " "
Structural Excav.					23.1 " "
Untreated Timber Piles 14" @ Tip					540 Lin. Ft.

MAX. PILE LOAD
With Seal 52.0 Tons
Without Seal 13.1 " "

GENERAL NOTES:
Specifications: Louisiana Hwy. Commission.
All dimensions relating to Reinf. Steel are to bar centers.
The Lengths shown are for estimating purposes only.
All exposed surfaces to have Rubbed Finish
All exposed corners to be chamfered ¾" unless noted.

PIERS 1 & 3
BAYOU LACOMBE BRIDGE
BAYOU LACOMBE, LA.
LOUISIANA HIGHWAY COMMISSION
BATON ROUGE, LA. DECEMBER 1938.

FINAL TRACINGS

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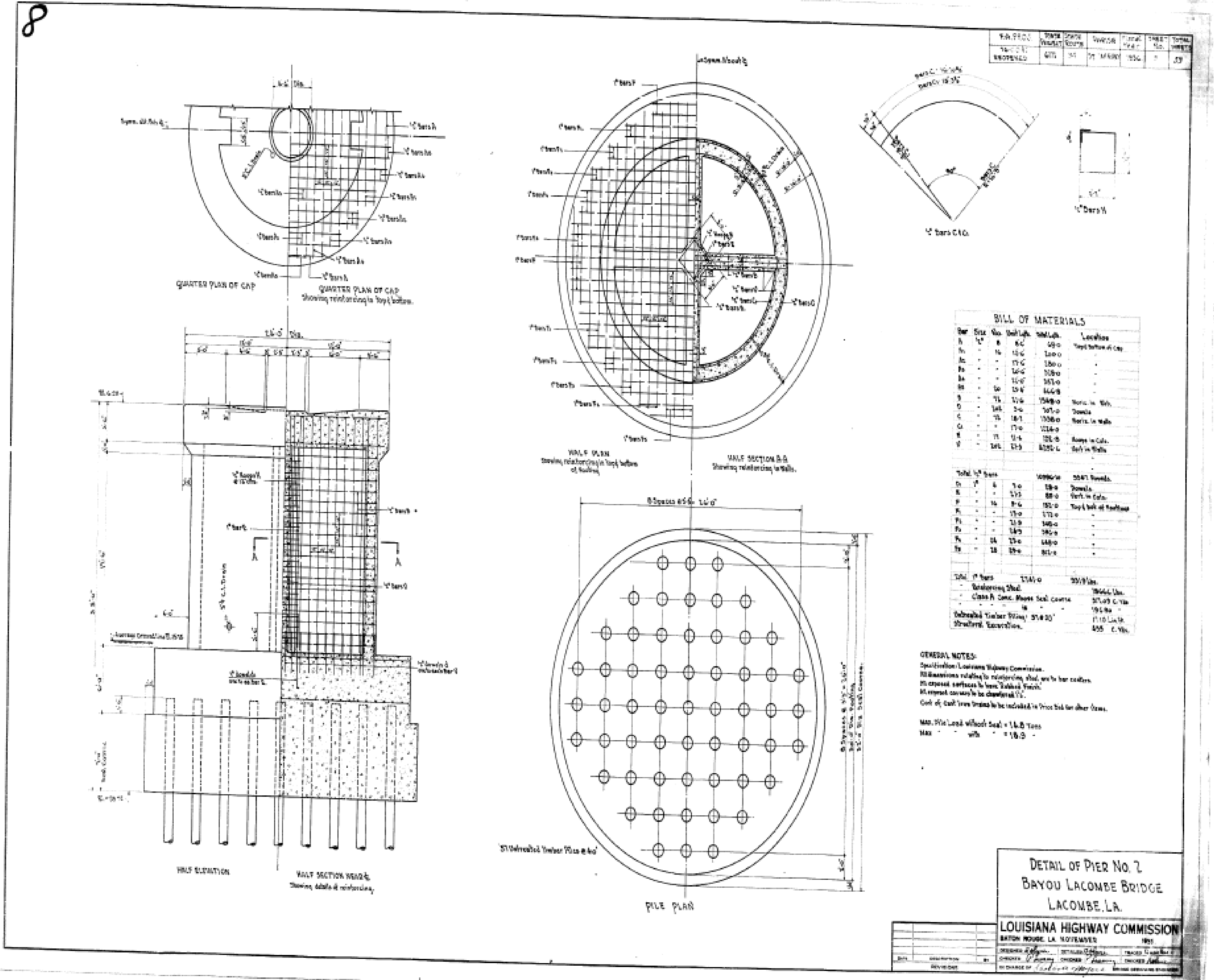

F.A. PROJ.	State Project	State Route	Parish	Fiscal Year	Sheet No.	Total Sheets
[illegible] ENGINEERS	675	34	St. Tammany	1936	9	37

BILL OF MATERIALS

Bar	Size	No.	Unit Lgth.	Total Lgth.	Location
A	½"	8	6-6	49-0	Top & bottom of Cap
A1	"	16	12-6	200-0	"
A2	"	"	17-6	280-0	"
B1	"	"	16-6	308-0	"
B2	"	"	11-6	181-0	"
B3	"	20	13-6	466-8	"
B	"	72	21-6	1548-0	Horiz. in Slab
D	"	101	3-6	367-0	Dowels
C	"	72	18-7	1338-0	Horiz. in Walls
C1	"	"	17-0	1224-0	
H	"	72	11-4	816-8	Hoops in Cols.
V	"	101	21-3	2135-4	Vert. in Walls
Total ½" Bars				10096-0	3547 Pounds
D1	1"	6	3-0	18-0	Dowels
E	"	"	14-8	88-0	Vert. in Cols.
F	"	16	9-6	152-0	Top & bot. of Footing
F1	"	"	11-0	172-0	"
F2	"	"	12-9	148-0	"
F3	"	"	14-9	196-0	"
F4	"	24	23-0	640-0	"
F5	"	18	25-0	501-0	"

Total 1" Bars 2760-0	3518 lbs.
" Reinforcing Steel	10444 Lbs.
" Class A Conc. Above Seal Course	37.43 C. Yds.
" " " " Seal "	19.4 "
Untreated Timber Piling 57 @ 30'	1710 Lin. ft.
Structural Excavation.	455 C. Yds.

GENERAL NOTES:

Specification: Louisiana Highway Commission.

All dimensions relating to reinforcing steel are to bar centers.

All exposed surfaces to have "Rubbed Finish."

All exposed corners to be chamfered ¾".

Cost of cast iron drains to be included in Price Bid for other items.

Max. Pile Load without Seal = 16.8 Tons

Max " " with " = 18.9 "

DETAIL OF PIER NO. 2
BAYOU LACOMBE BRIDGE
LACOMBE, LA.

LOUISIANA HIGHWAY COMMISSION
BATON ROUGE, LA. NOVEMBER 1935

DESIGNED	DETAILED	TRACED
CHECKED	CHECKED	CHECKED
IN CHARGE OF		BRIDGE DESIGNING ENGINEER

DATE	DESCRIPTION	BY
REVISIONS		

FINAL TRACINGS

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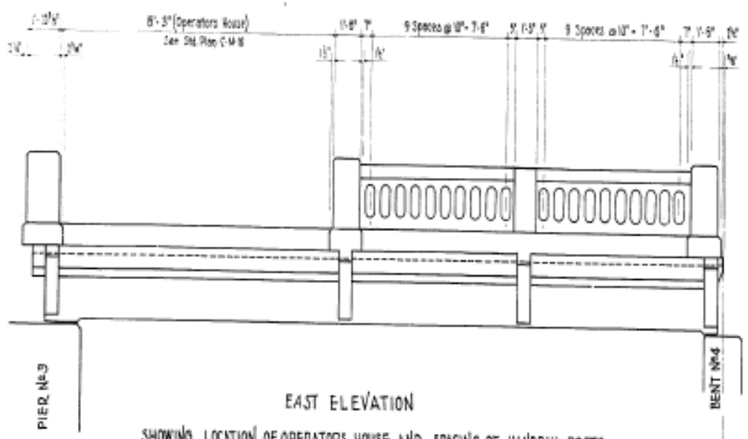
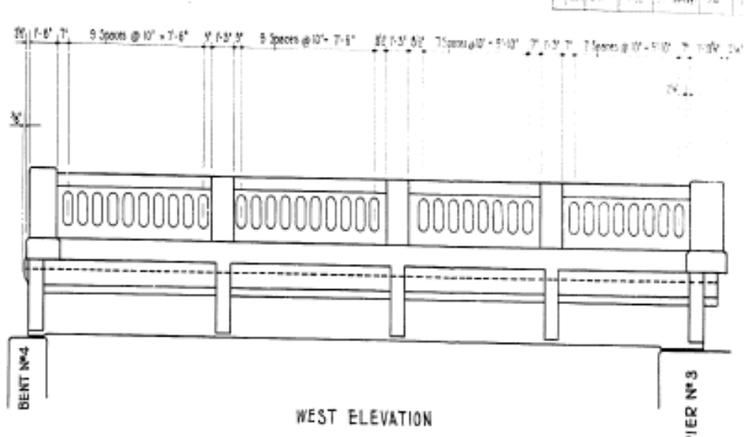


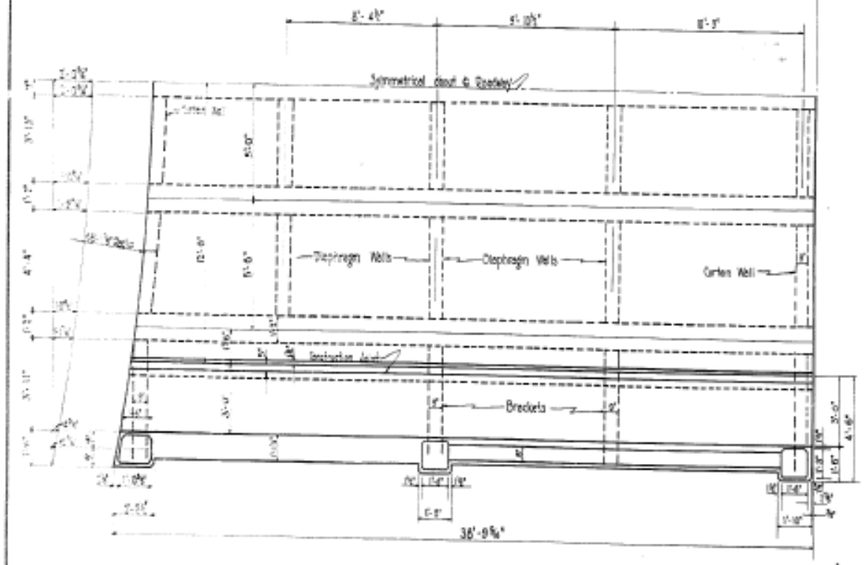
EAST ELEVATION

SHOWING LOCATION OF OPERATORS HOUSE AND SPACING OF HANDRAIL POSTS

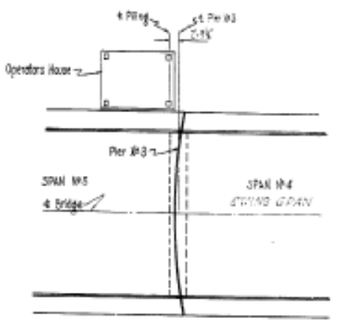


WEST ELEVATION

SHOWING SPACING OF HANDRAIL POSTS



HALF PLAN SHOWING DIMENSIONS



PLAN SHOWING LOCATION OF OPERATORS HOUSE

BILL OF STEEL

Note- The above Bill of Steel represents the Reinf. Steel in the retg. breshw and diaphragm wall of Span 5.

QUANTITIES - SPAN N°5

Class A-A Concrete	53.0 Cu. Yds.
Reinf. Steel	1866 #

Note- All dimensions and details not shown on this plan are same as for Span N°3

SPAN N°5
BAYOU LACOMBE BRIDGE
LACOMBE, LA.

LOUISIANA HIGHWAY COMMISSION
BATON ROUGE, LA.

FINAL TRACINGS

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ELEVATION
Showing Handrail and Reinforcing in Beams A

HALF ELEVATION

SECTION A-A

SECTION B-B
Showing Reinforcing in Slab, Curtain Walls and Beams B & C

SECTION THROUGH REVISED TYPE "C" HANDRAIL

HALF PLAN
Showing Slab Reinforcing

CONNECTION DETAIL
PIERS 1 & 3

Bar Bending Table

BILL OF REINFORCING STEEL

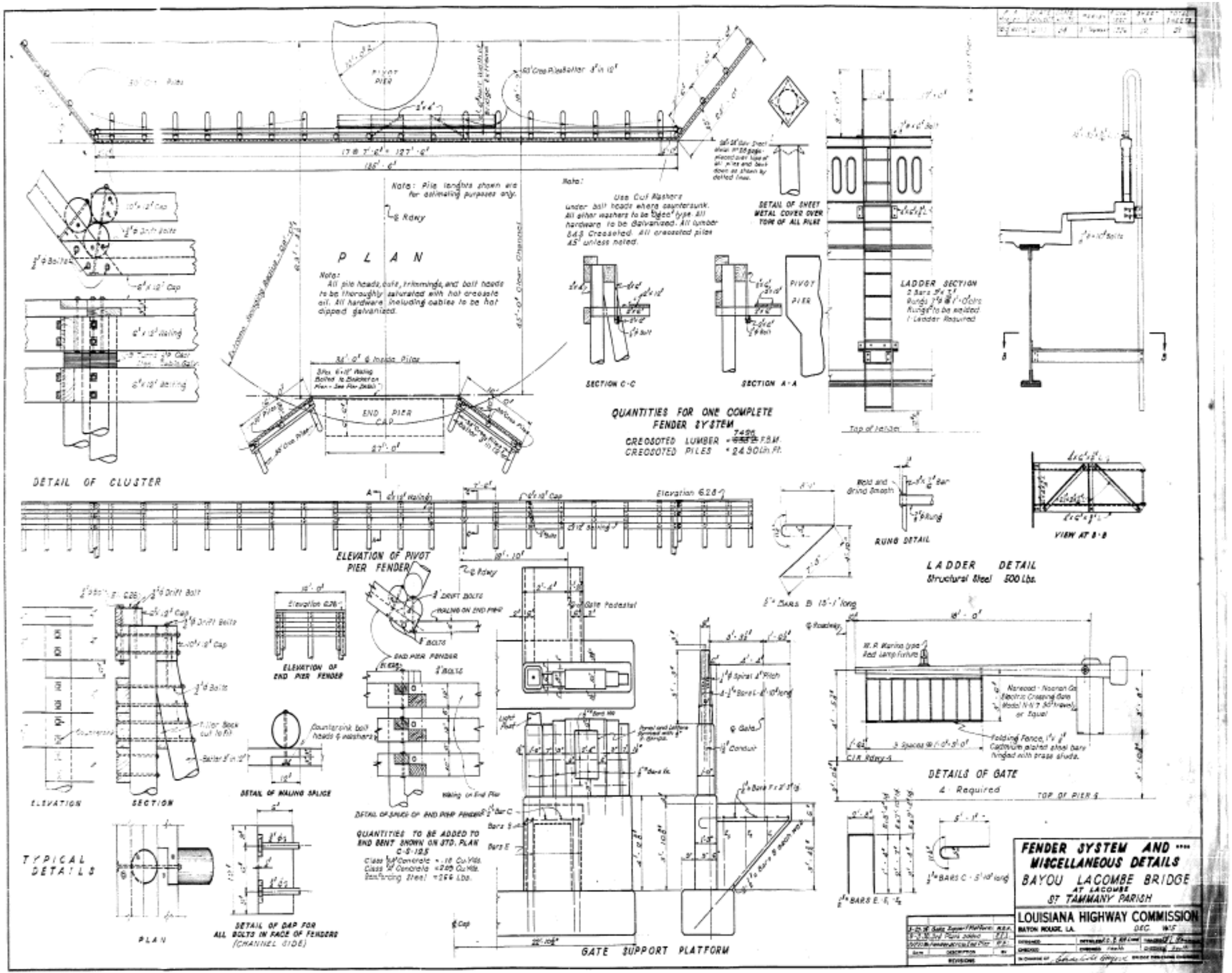
Bar	Nº	Size	Length	Total Length	Location
A	16		90'0"	1440'0"	Top of Slab
B	16		90'0"	1220'0"	Bottom of Slab
C	65		27'0"	1230'0"	Reinforcing in Slab
D	10		36'4"	363'4"	Longit. in Slab
Da	6		38'10"	233'0"	" " "
Db	4		37'7"	150'8"	" " "
Dc	6		37'6"	900'0"	" " "
De	6		37'6"	900'0"	" " "
De	12		36'0"	432'0"	" " "
H	64		5'0"	320'0"	Curb
Ha	64		2'3"	2304'0"	Handrail
Hb	32		31'3"	1004'0"	Handrail Posts
Hc	44		31'0"	1705'0"	Sidewalk Curb
J	16		5'0"	80'0"	Bracket
K	12		22'3"	267'0"	Curtain Walls
M	16		5'10"	93'4"	" "
N	17		6'1"	311'9"	Beams B C
N	50		6'6"	618'4"	Beam A
Ab	12		38'0"	456'0"	Handrail
S	6		9'9"	58'6"	Bracket
Sa	80		8'8"	1840'0"	Bracket and Diaphram
Sa	16		8'1"	129'6"	Bracket
U	16		7'8"	123'0"	"
Y	10		9'4"	93'4"	Dowels
			Total	8806.3#	734 lbs
O	16	¾"	6'0"	96'0"	Bracket and Slab
			Total	96'0"	144 lbs
W	154	¾"	6'0"	5776'0"	Sidewalk Slab
			Total	5776'0"	732 lbs
E	9	1"	38'1"	342'9"	Beams B-C
F	3	"	39'3"	117'9"	" "
G	6	"	39'3"	235'6"	" "
			Total	696'3"	2392 lbs
P	6	1"	33'9"	202'6"	Beams B-C
Q	3	"	30'9"	92'3"	" "
			Total	294'9"	707 lbs
D	6	1"	36'5"	438'6"	Beams A
F1	2	"	40'5"	80'10"	" "
G1	4	"	40'5"	161'8"	" "
			Total	680'4"	2545 lbs
N	4	1"	32'5"	130'0"	Beams A
Q1	2	"	31'5"	62'10"	" "
			Total	200'10"	689 lbs
Total Reinforcing Steel					14628 lbs.
Class A Concrete					525.9 Cu.Yds.

General Notes: Specifications Louisiana Highway Commission Live Load M 15 Dead Load: Calculated weight of concrete. Concrete to be Class AA. All dimensions to reinforcing steel are to bar centers. Bar splices are allowed only where shown. All exposed corners to have ¾" Chamfer unless noted. Slab, Curb and Beam stems to be placed in one continuous operation. Structural steel (bronze and C.I. plates are to be paid for as structural steel. Expansion material to be included in unit price bid for concrete. All exposed surfaces, except roadway slab to have rubbed finish. See Standard Plan C-6.8 for details of Expansion Plates.

SPAN Nº 3
BAYOU LACOMBE BRIDGE
LACOMBE - LA.

LOUISIANA HIGHWAY COMMISSION
BATON ROUGE, LA. November 1925

FINAL TRACINGS



FINAL TRACINGS

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ITEM NO	1	2	4	5	10	11	13	14	90-A	141-B	141.10	135	139-A	139-D	18	19	36A-B&E	36.17	36.18A	36.20A	36.20B	36.35A&B	511	60	61	61A	66	70	75	89-C	116	81	361	551	54	90	131	196	144-A	79	79
	CLEARING	GRUBBING	ROADWAY EXCAVATION	BORROW COMPLETE IN PLACE	EX. BASALT BASE	NEW COND. PLANT	SURFACING	DETOUR MARKERS	18" PRECAST CONCRETE PILES	DEMOLITION OF BUILDINGS AND STRUCTURES	REMOVAL OF ABUT. MASONRY	REMOVAL OF EXIST. BRIDGE	GUARD RAIL 3-B CONC. POST	CLOSE CLOSED PIPE	OPERATING ITEMS	PORTLAND CEMENT CONCRETE PAVEMENT	ASPHALT FILLER	ASPHALT MINERAL FILLER (FILL)	FABRIC REINFORCING	BAR REINFORCING (FILL)	CENTER METAL STRIP	FOUR TREES REMOVED AND REPLANTED	CLASS AA CONCRETE	CLASS A CONCRETE	CLASS A CONCRETE IN BR. DECK	DEFORMED REINFORCING STEEL	FABRICATED STRUCTURAL STEEL	RAKING GRAVEL AT CONC. PIPE	CONC. CYL. CAST C.A.S. CREOSOTED TIMBER PILES	CREOSOTED TIMBER PILES	UNTREATED TIMBER PILES	LOADING TEST PILES	UNLOADED TEST PILES	UNTREATED TEST PILE	CREOSOTED TEST PILES	REMOVAL OF TIMBER BENT	TEMPORARY TIMBER BENT	HOUSE MOVING MACHINERY	POWER PLANT
	Acres	Acres	Cu. Yds.	Cu. Yds.	Stns.	Stns.	Stns.	No.	Lin. Ft.	Each	Each	Each	Lin. Ft.	Lin. Ft.	No.	No.	Sq. Yds.	Tons	Tons	Pounds	Pounds	Lin. Ft.	Each	Cu. Yds.	Cu. Yds.	Cu. Yds.	Pounds	Pounds	Cu. Yds.	Lin. Ft.	Lin. Ft.	M.B.M.	Lin. Ft.	Each	Each	Lin. Ft.	Lin. Ft.	Each	Cu. Yds.	Each	No.	No.
SOUTH APPROACH	1.4	0.4	1466	12132	1.0		6.36	1		6	13	1	336	.67			3300.42	0.181	0.200	13070	19604	1650.21	36	53.38	3.84		3312		38	39	3001							1000		7		
BRIDGE BENTS															1									113.28			25000	185,500												1	1
AVANT PIER & FENDER																									317.09	19.90	18666				5.9		2	Creo. Timber	1710	1490		435			
PIERS NO 1 & 3																									173.89	66.76	14466						2	Creo. Timber	1040			453			
BENTS NO 1-2-3-4-5									GGS															2.22	46.34		6098						450	2	Creo. Piles Timber							
R. C. D. G. GRADE																								163.85			12962	4075														
NORTH APPROACH	3.2	0.8	1613	14785	4.36	38.45	13.1	1		2	13		760	84	3		5161.86	0.339	0.537	20441	30662	2353.45		23.54	3.44		3349				1403							330		2		
TOTAL ROADWAY	4.6	1.2	3099	26917	6.35	38.45	13.61	2		8	26		1768	141	3		8462.28	0.520	0.803	33511	50266	4003.64	36	47.52	7.30		6555		38	39	4404							1330		9		
TOTAL BRIDGE									GGS			1			1									319.35	537.92	263.64	136786	189575			5.9	450	6	6	1750	1490		688		1	1
GRAND TOTAL	4.6	1.2	3099	26917	6.35	38.45	13.61	2	GGS	8	26	1	1768	141	3	1	8462.28	0.520	0.803	33511	50266	4003.64	36	452.87	545.22	263.64	143141	189575	38	39	4404	5.9	450	6	6	1750	1490	1330	688	9	1	1

Note - Pile lengths shown are approximate and are for estimating purposes only.

* Non-participating items

LIST OF MISCELLANEOUS STRUCTURES

PLAN	STATION	TYPE OF STRUCTURE	CLASS REINF. CONC.	CLASS "B" CONC.	REINF. STEEL	12" C.I. PIPE	24" C.I. PIPE	FLAP GATES	REMARKS
D-M-B	414+50	Storm Pipe, 2-Wells		0.58	48	21			Rt. &
D-M-C	414+10	18" " " "		0.88	48	31			Rt. &
D-M-EC	408+65	Side Drain Type "A"	2.35		286				Lt. & Round Rt. & Flat Slab
D-M-E	413+40	18" Conc. Pipe, 2-Wells		1.40	68	57			Lt. &
D-M-E	413+10	24" Conc. Pipe, Fl. Wells		1.24	70		57		Rt. &
D-M-EC	408+10	Side Drain Type "B"	5.80		687				Lt. &
D-M-EC	404+28.84	12' Transom Slab	15.15		2164				Bag. Br.
	Total	Storm Approach	23.38	3.86	3312	89	57		
D-M-EC	410+49.45	12' Transom Slab	15.13		2144				End. Brt
D-M-EC	407+00	Side Drain Type "A"	5.66		970				Lt. &
"	407+00	" " " "B"	4.73		683				Rt. &
D-M-E	459+55	24" Conc. Pipe-2 Wells		0.86	60		51		Lt. &
"	458+55	" "		0.86	60		51	1	Rt. &
"	463+20	" "		0.96	60		51	1	Lt. &
"	465+20	" "		0.96	60		51	1	Rt. &
	Total	North Approach	20.52	5.24	5148		84	3	
	Grand Total		43.90	9.10	8460	89	141	3	

BUILDINGS TO BE REMOVED

STATION	DESCRIPTION	REMARKS
414+70	Filling Sta.	12'x60' Lt. &
416+40	" "	50'x70' Lt. &
415+25	" "	30'x40' &
419+30	" "	30'x90' Rt. &
419+10	Garage	30'x50' Rt. &
419+00	Shed	12'x12' Lt. &
451+00	8'-6"	850' Tile Fence & Wooden
415+80	Awning	21'x60' Lt. &
417+25	Conc. Gate	24'x30' Lt. &

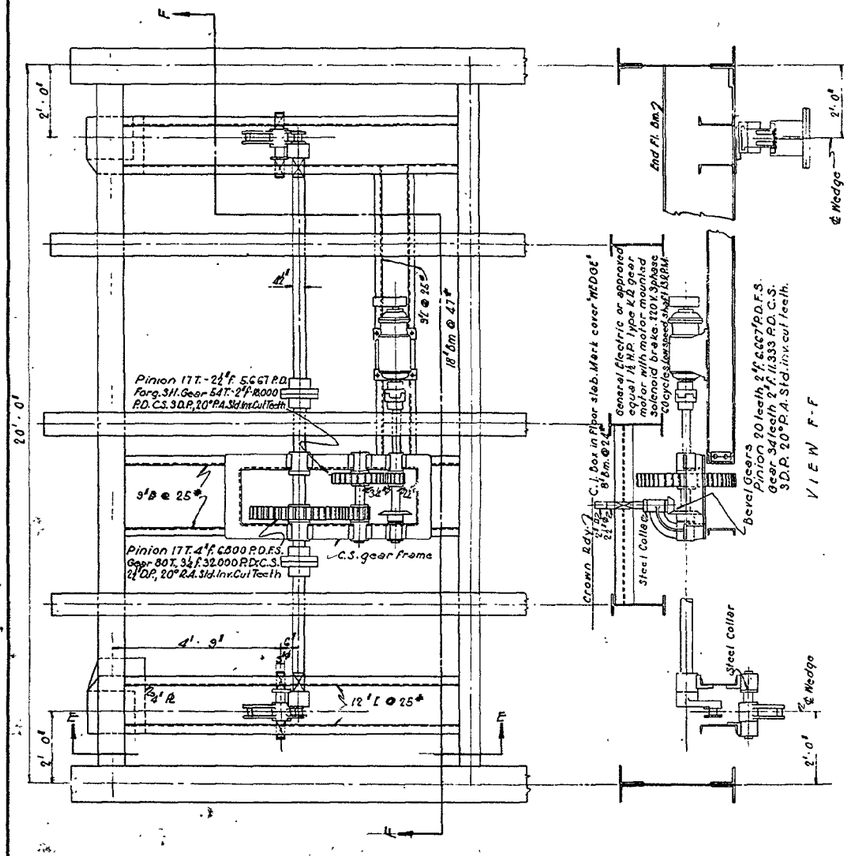
SUMMARY OF QUANTITIES FOR BAYOU LA COMBE BRIDGE

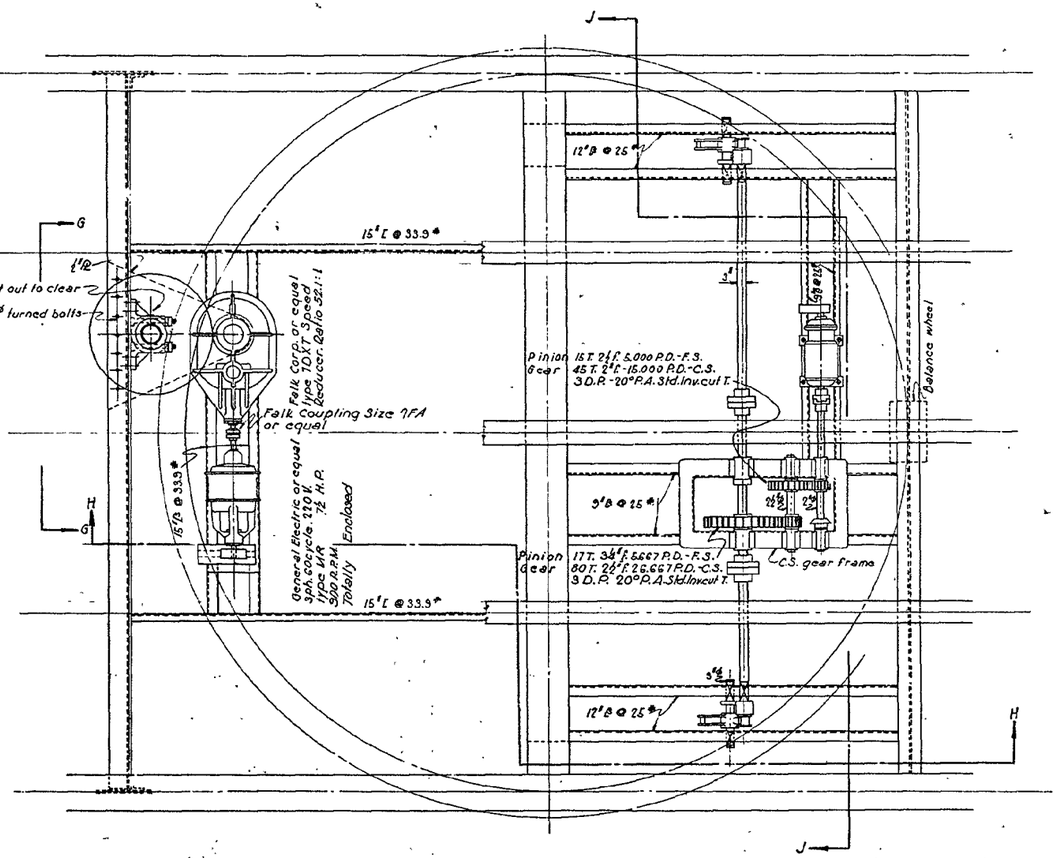
LOUISIANA HIGHWAY COMMISSION
BATON ROUGE, LA. September 1945

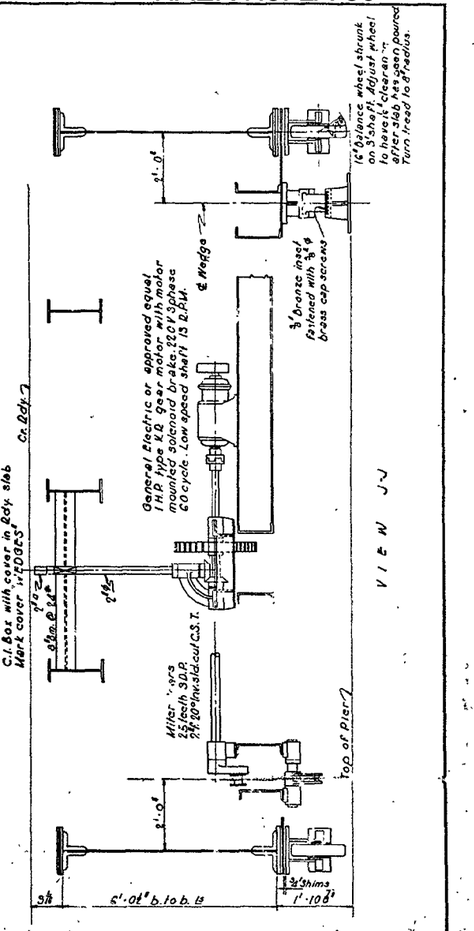
DESIGNED ... DETAILED ... TRACED ...
CHECKED ... CHECKED ... COMPARED ...
IN CHARGE OF ...

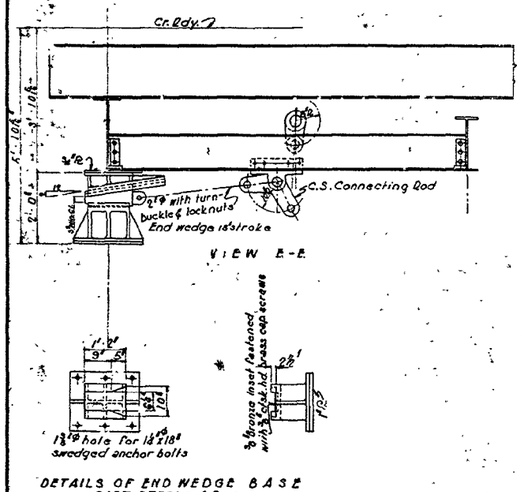
DATE	DESCRIPTION	BY
9-24-46	Revised Title	
	REVISIONS	

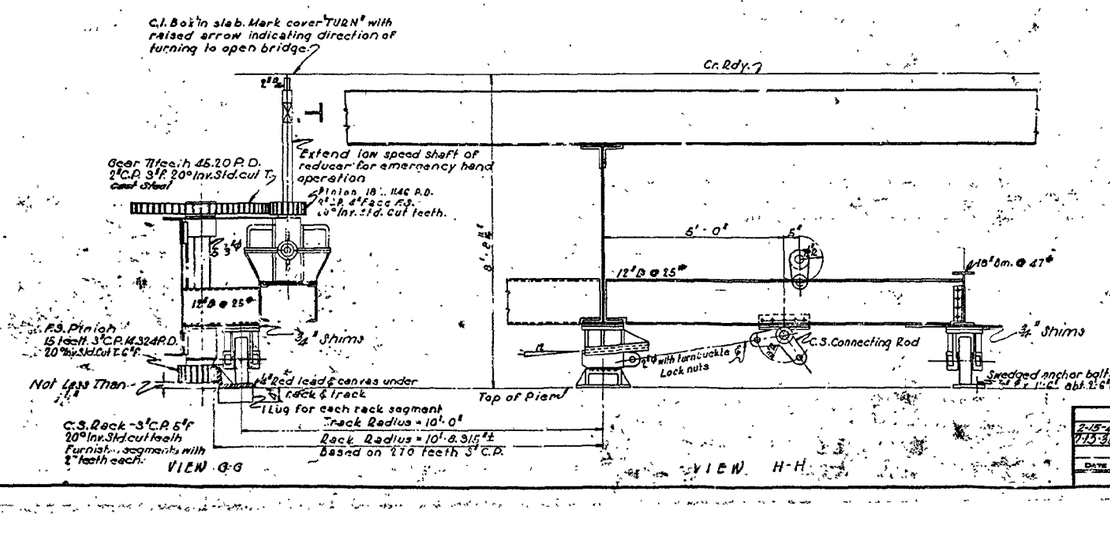
FINAL TRACINGS











Note: Pipe all bearings and sliding surfaces with rigid copper tubing or ¾" bl. copper hose, as required, to alemite fitting in C.I. boxes with covers located in concrete sidewalk slabs of most convenient locations.

STANDARD PLAN
130'-0" SWING SPAN
24'-0" ROADWAY 2-3'-0" SIDEWALKS
61" CONCRETE FLOOR
45'-0" CLEAR CHANNEL
ELECTRICALLY OPERATED

LOUISIANA HIGHWAY COMMISSION
BATON ROUGE, LA. NOV. 1935

DATE	DESCRIPTION	BY
2-15-36	Main Motor Size	C.A.M.
7-15-38	Dimen. Ma. Pinion	C.A.M.

REVISIONS

DESIGNED Louis Fricke | DETAILED Louis Fricke | TRACED G.H. Hopkins
CHECKED [illegible] | CHECKED [illegible] | CHECKED C.S. Gruber
In CHARGE OF Charles E. Myers — BRIDGE DESIGNING ENGINEER