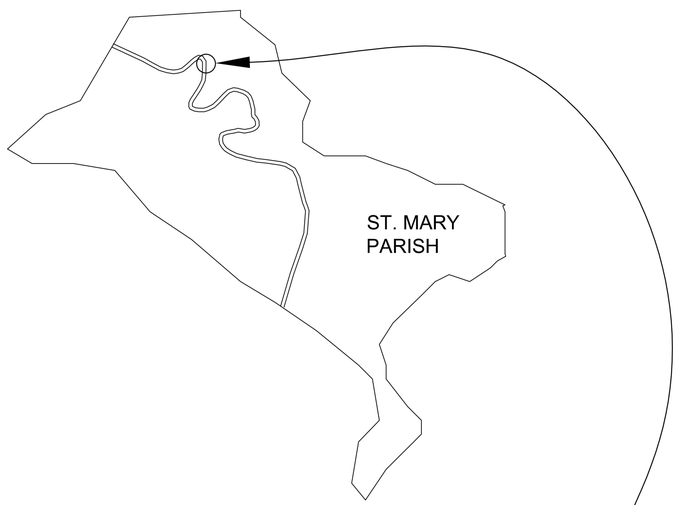
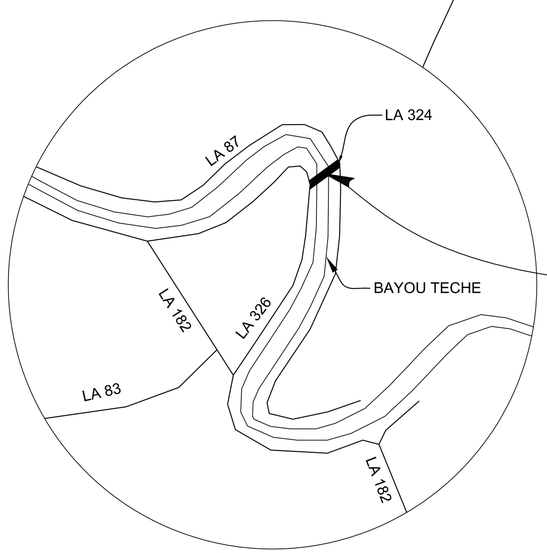
BAYOU TECHE AT CHARENTON BRIDGE

The Bayou Teche at Charenton Bridge (Bridge Recall No. 009130), designed by the Louisiana Highway Commission and constructed in 1935, is a Warren pony truss swing bridge significant as an example of a movable swing bridge. Its significance is demonstrated by the presence of distinctive engineering and design features, which is characterized by the polygonal Warren truss configuration, center-bearing turning mechanism, pivot pier, and operator's house. This bridge was determined eligible for listing in the National Register of Historic Places in 2013 under Criterion C: Design/Engineering at the state level of significance.

This documentation was prepared 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 to prepare this document. It was prepared by Emily Pettis and Katherine Haun Schuring, Senior Cultural Resource Specialists, of Mead & Hunt, Stephen V. Estopinal, P.E., P.L.S. and Trenton Iglehart, Geodetic Analyst, of SJB Group, LLC. Dietrich Floeter completed the photography.

These measured drawings were prepared based on a site visit to complete laser scanning of the bridge, with selective hand measuring in the field to verify measurements.

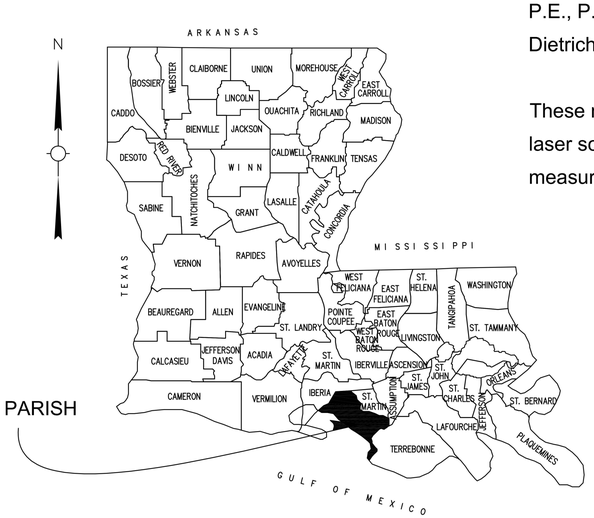




CHARENTON

BAYOU TECH
AT
CHARENTON BRIDGE

LOCATION MAP
Latitude: 29.88709 North
Longitude: -90.52269 West



LOUISIANA

DELINEATED BY: T. IGLEHART, SJB GROUP, LLC., 2017

LOUISIANA HISTORIC
BRIDGE INVENTORY
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

CHARENTON

BAYOU TECHE AT CHARENTON BRIDGE
CARRIES LOUISIANA HIGHWAY 324 (LA 324) OVER BAYOU TECHE
ST. MARY PARISH

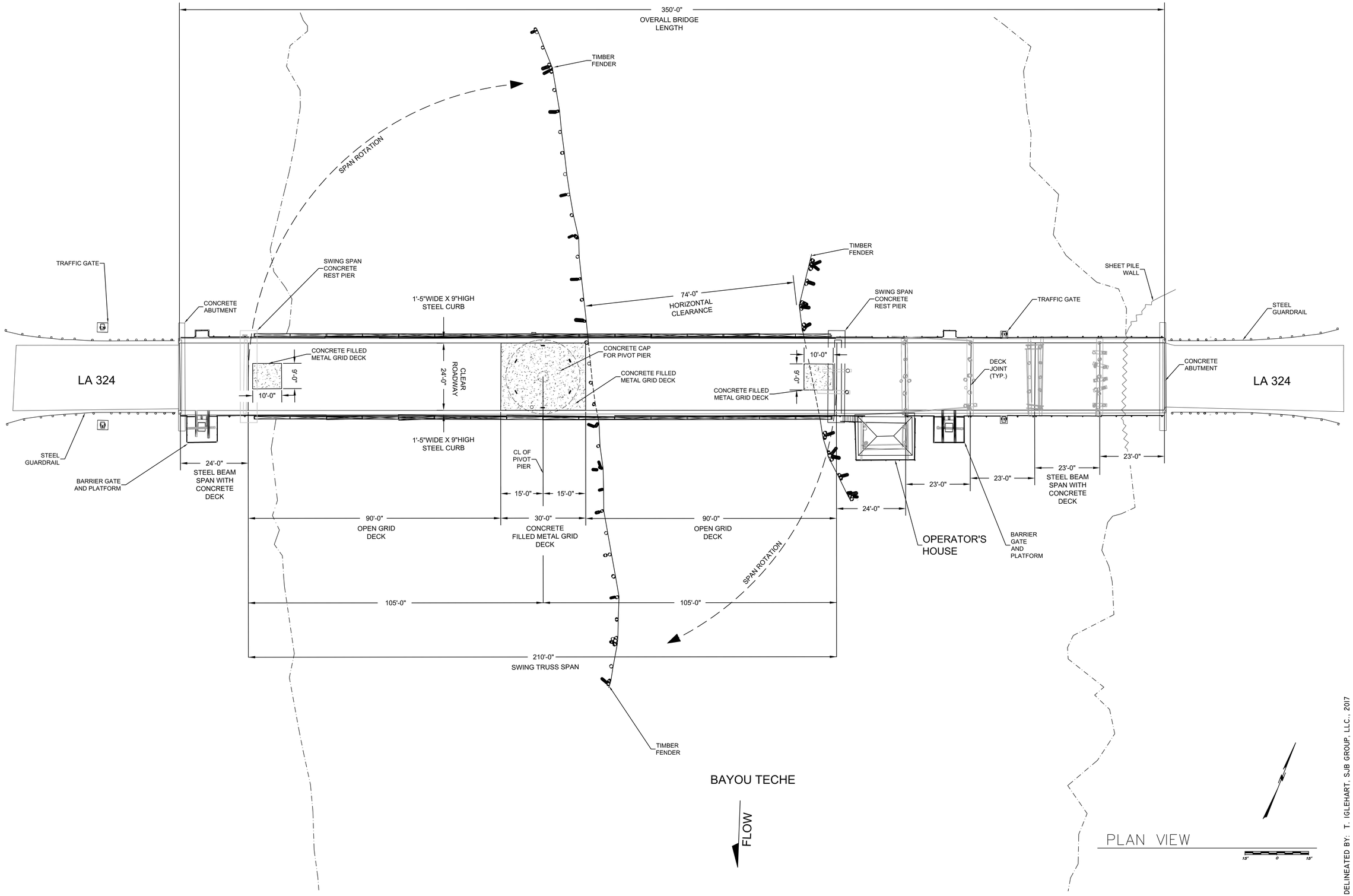
LOUISIANA

SHEET 1 OF 4

HISTORIC AMERICAN ENGINEERING RECORD
LA-37

LIBRARY OF CONGRESS INDEX NUMBER

IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN ENGINEERING RECORD, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF DRAWING



LIBRARY OF CONGRESS INDEX NUMBER

HISTORIC AMERICAN ENGINEERING RECORD
LA-37

SHEET 2 OF 4

LOUISIANA

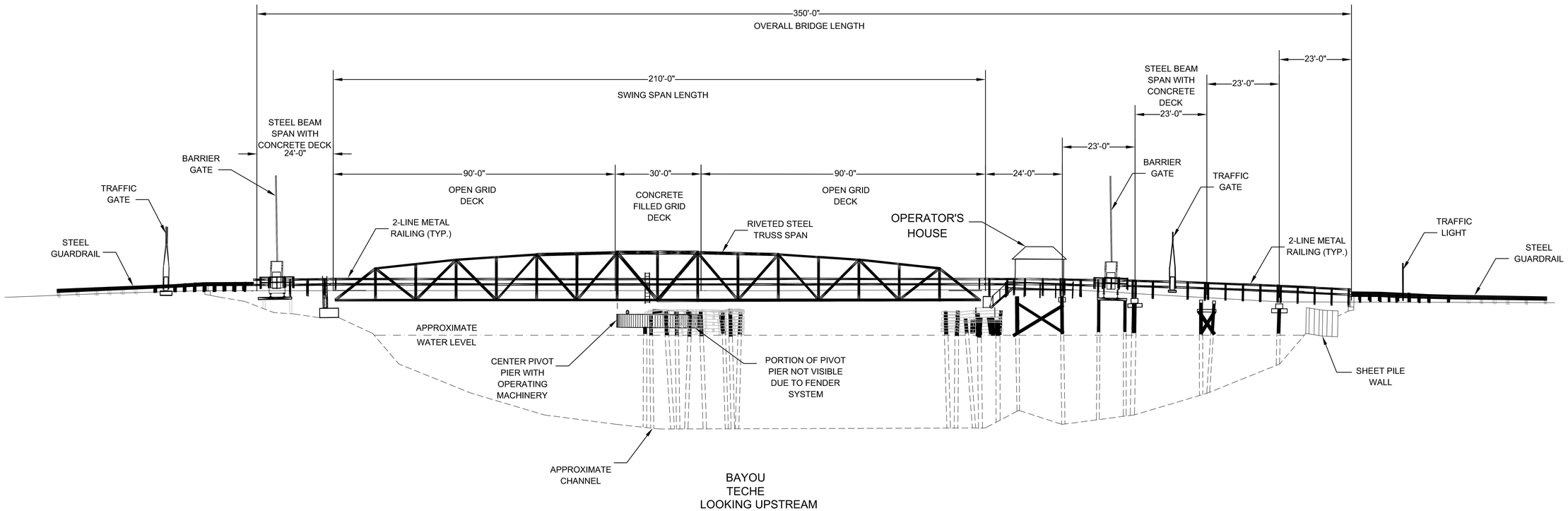
BAYOU TECHE AT CHARENTON BRIDGE
CARRIES LOUISIANA HIGHWAY 324(LA 324) OVER BAYOU TECHE
ST. MARY PARISH

CHARENTON

DELINEATED BY: T. IGLEHART, SJB GROUP, LLC., 2017

LOUISIANA HISTORIC BRIDGE INVENTORY
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN ENGINEERING RECORD, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF DRAWING



PROFILE VIEW

16' 0 16'

DELINEATED BY: T. IGLEHART, SJB GROUP, LLC., 2017

LOUISIANA HISTORIC BRIDGE INVENTORY
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

CHARENTON

BAYOU TECHE AT CHARENTON BRIDGE
CARRIES LOUISIANA HIGHWAY 324(LA 324) OVER BAYOU TECHE
ST. MARY PARISH

LOUISIANA

SHEET 3 OF 4

HISTORIC AMERICAN ENGINEERING RECORD
LA-37

LIBRARY OF CONGRESS INDEX NUMBER

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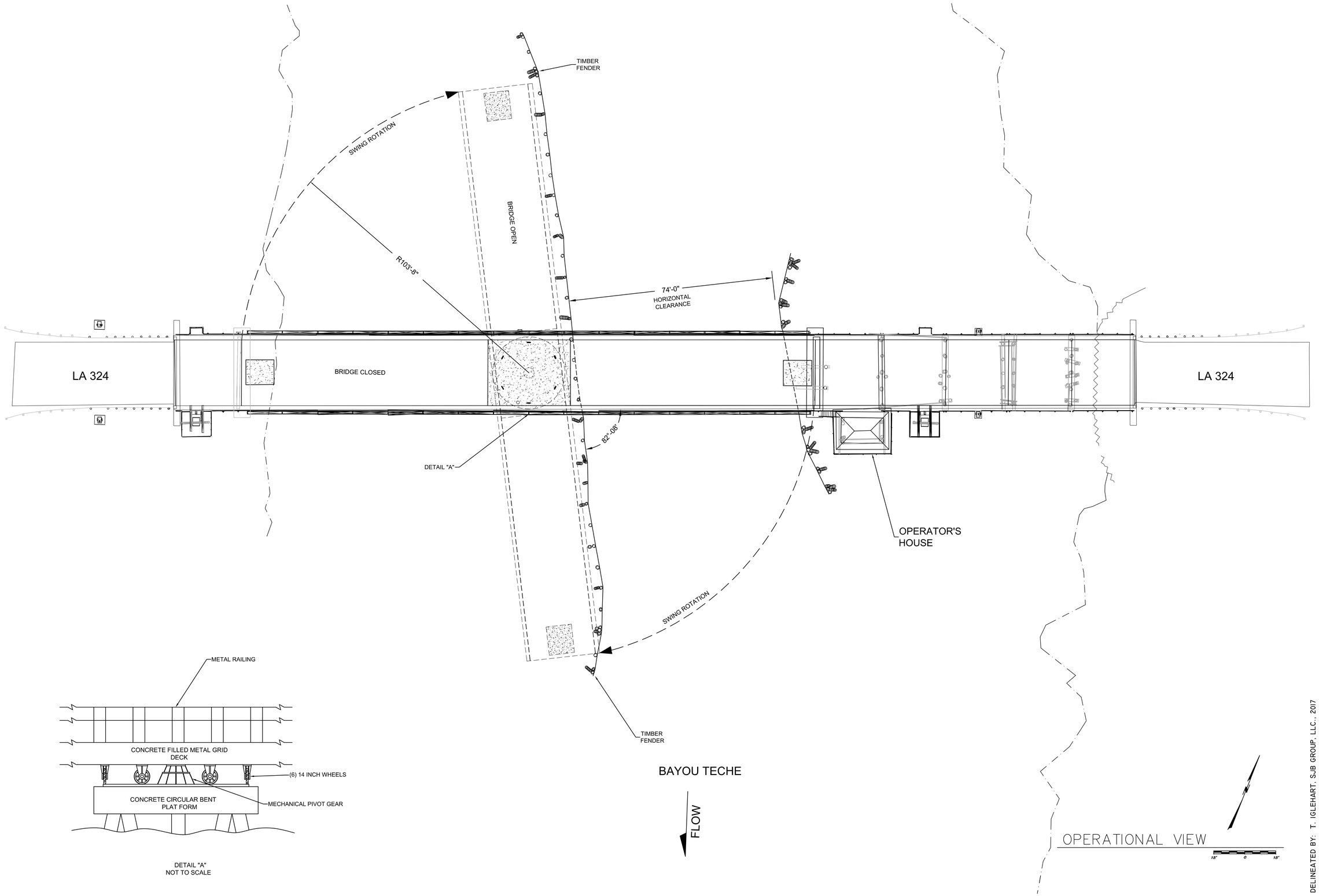

LIBRARY OF CONGRESS INDEX NUMBER

HISTORIC AMERICAN ENGINEERING RECORD
LA-37

SHEET 4 OF 4

LOUISIANA

BAYOU TECHE AT CHARENTON BRIDGE
CARRIES LOUISIANA HIGHWAY 324(LA 324) OVER BAYOU TECHE
ST. MARY PARISH

CHARENTON

DELINEATED BY: T. IGLEHART, SJB GROUP, LLC., 2017

LOUISIANA HISTORIC BRIDGE INVENTORY
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

IF REPRODUCED, PLEASE CREDIT THE HISTORIC AMERICAN ENGINEERING RECORD, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF DRAWING

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INDEX TO SHEETS

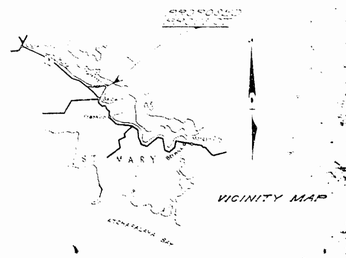
STATE OF LOUISIANA

DEPARTMENT OF HIGHWAYS

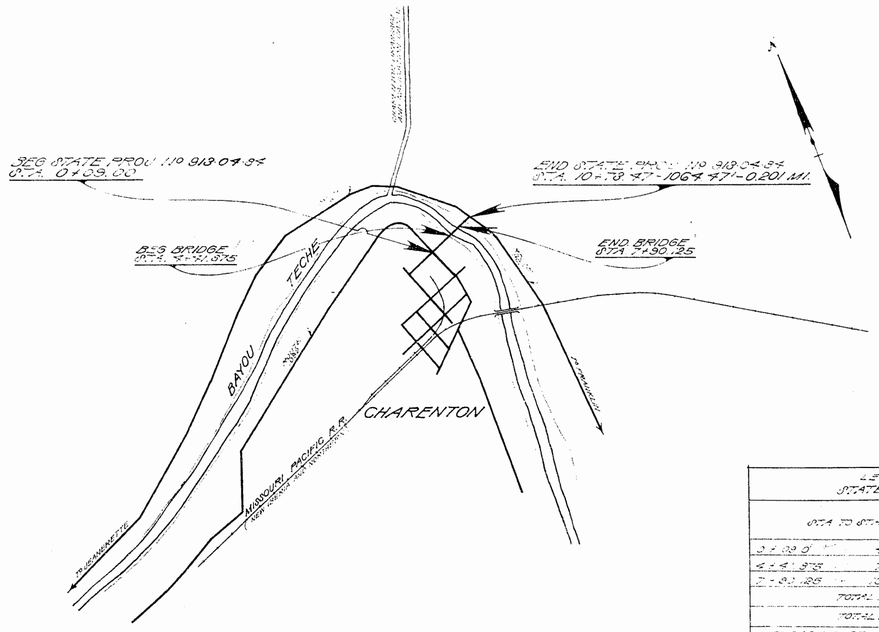
PLAN AND PROFILE OF PROPOSED

STATE HIGHWAY

CHARENTON BRIDGE
OVER BAYOU TECHE
CONNECTING
STATE ROUTE 1092 TO STATE ROUTE 902
AT CHARENTON
ST. MARY PARISH
STATE PROJECT No. 913-04-84
STATE ROUTE 129



VICINITY MAP



LENGTH OF STATE PROJECT 913-04-84			
STA. TO STA.		ROADWAY FEET	BRIDGE FEET
0+00.00	4+41.575	441.575	
4+41.575	7+90.35		348.775
7+90.35	10+78.47	288.12	
TOTAL FEET		729.695	348.775
TOTAL MILES		0.138	0.066
GROSS LENGTH STATE PROJECT 913-04-84 1064.47 FEET = 0.201 MI.			

SCHEDULE OF REVISIONS

DATE	BY	DATE	BY

APPROVED
State Highway Engineer 6-25-41
APPROVED
[redacted]
RECOMMENDED FOR APPROVAL
[redacted]
District Engineer, 6th Federal Aid District
RECOMMENDED FOR APPROVAL
[redacted]
Chief Engineer Bureau of Public Roads
APPROVED
[redacted]
Director Bureau of Public Roads

SURVEYED BY
PLOTTED "
TRACED "
CHECKED "
DATE

CONVENTIONAL SIGNS

Base Line
Grade Line
Ground Line
Right of Way
Traveled Roadway
Fences
Levees
Canals
Railroads
Property Lines
Section & Grant Lines
Township & Range Lines
Ward & Road Dist. Boundary Lines
Parish & State Boundary Lines
Telephone & Telegraph Lines
Boundary Lines (General)
Mile Posts-at end of mile

FIELD BOOK 19-185

LAYOUT MAP
SCALE: 1 INCH 1320 FEET

AS BUILT PLANS

109

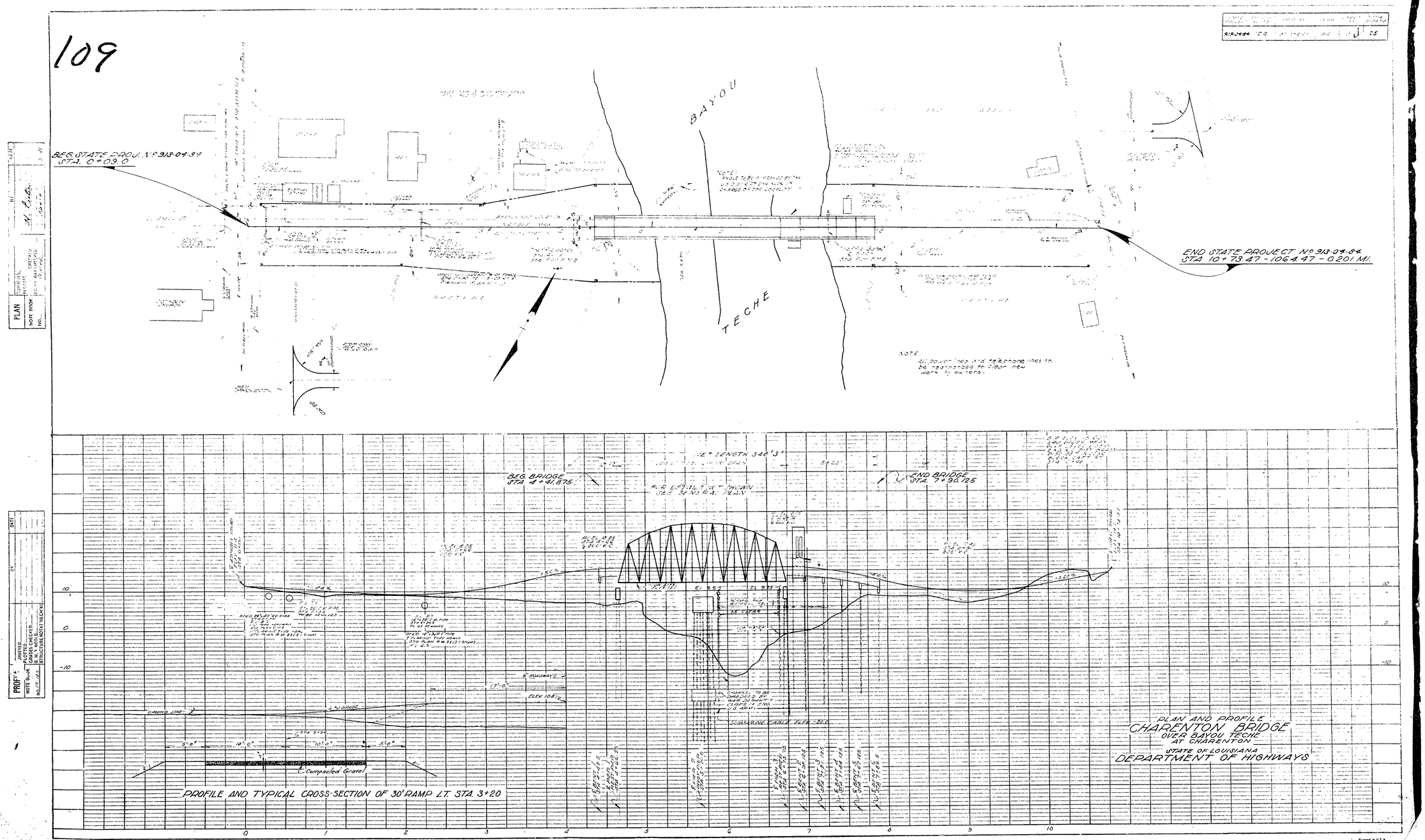


PLATE I-PLAN-PROFILE B. P. R. STANDARD

EUGENE DIETZGEN CO., Chicago-New York

Printed in U.S.A. On ARNWRIGHT Tracing Cloth

AS BUILT PLANS

110

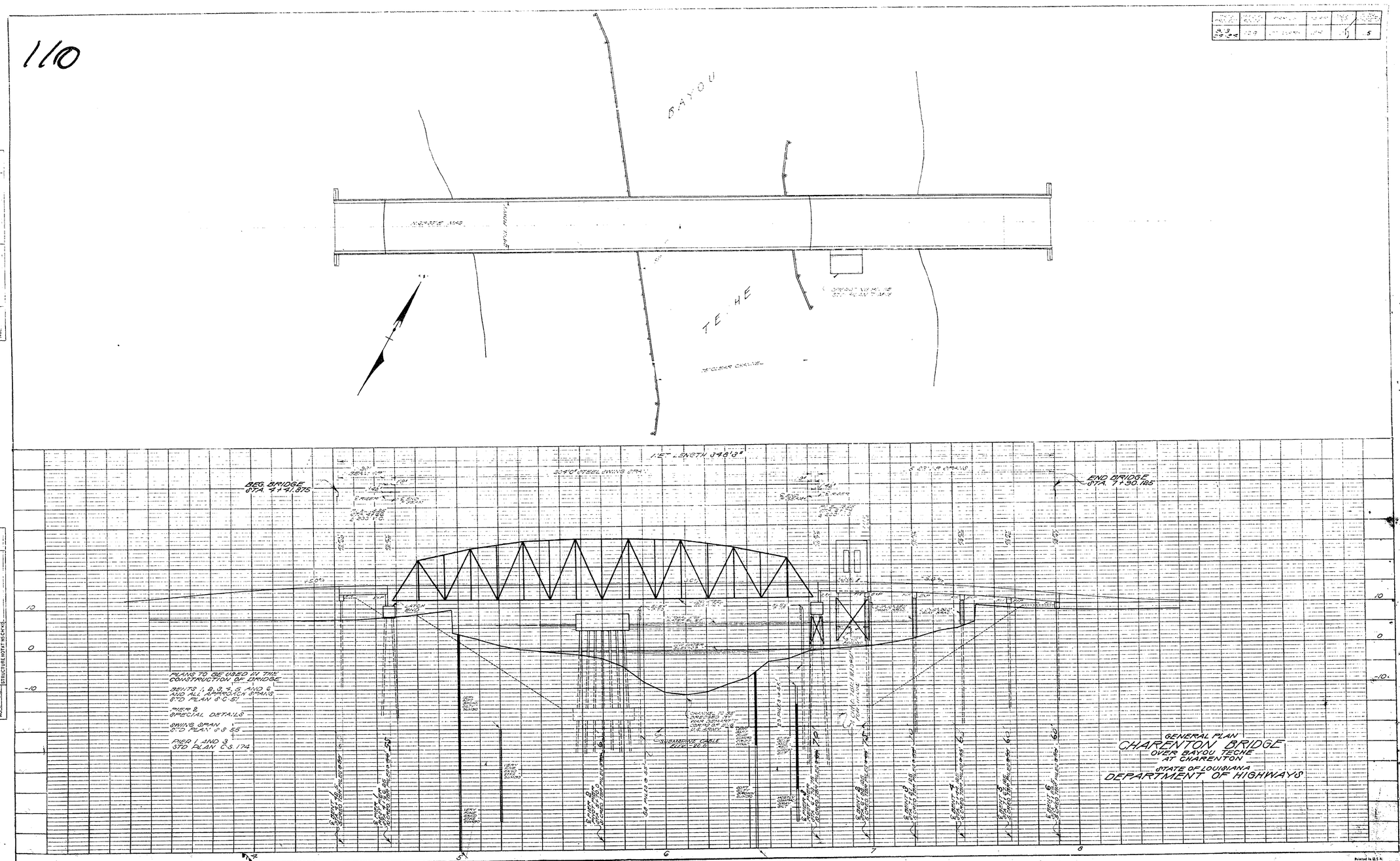


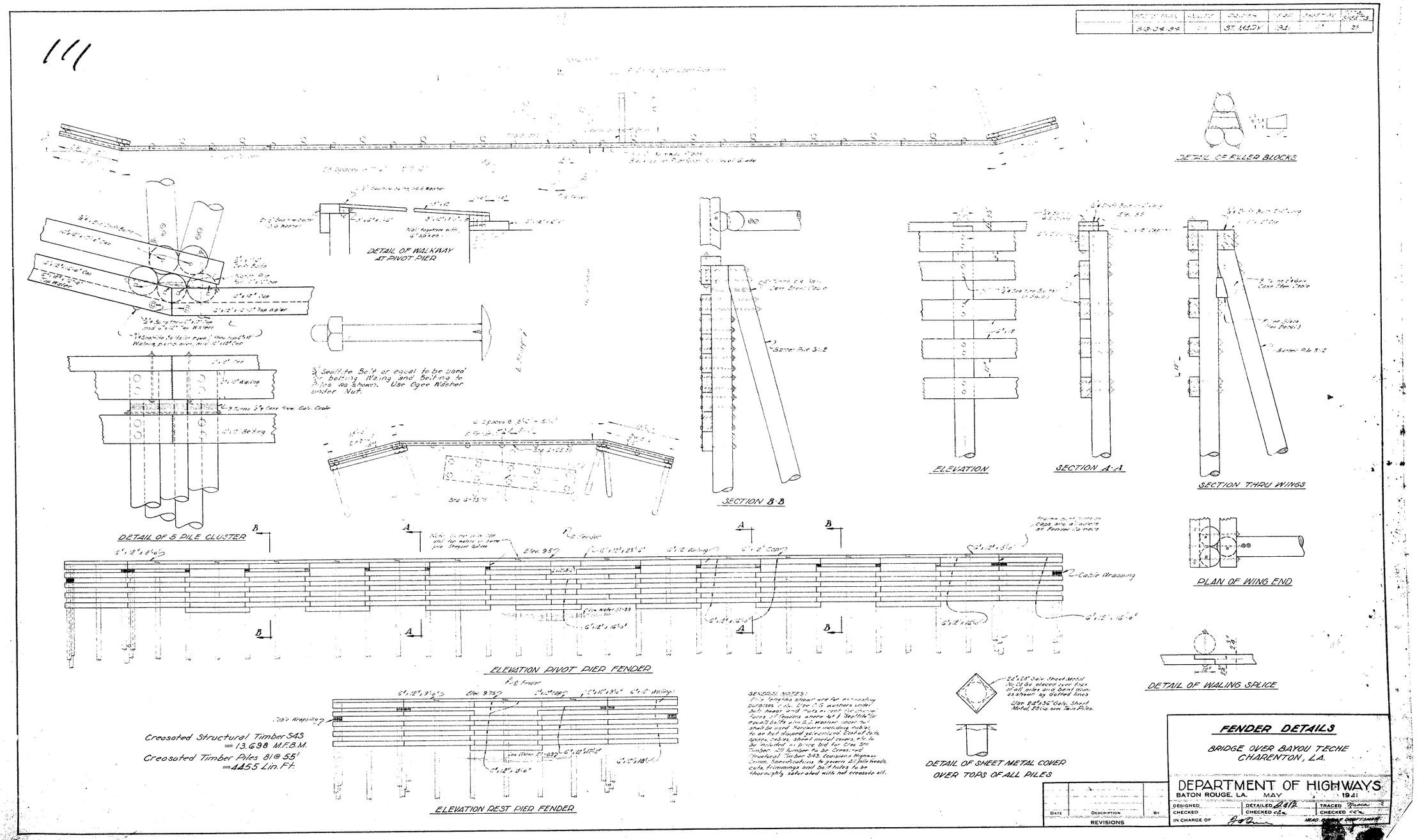
PLATE 1-PLAN-PROFILE B. P. R. STANDARD

Printed in U.S.A. On ARKWRIGHT Tracing Cloth

AS BUILT PLANS

HAER No. LA-37

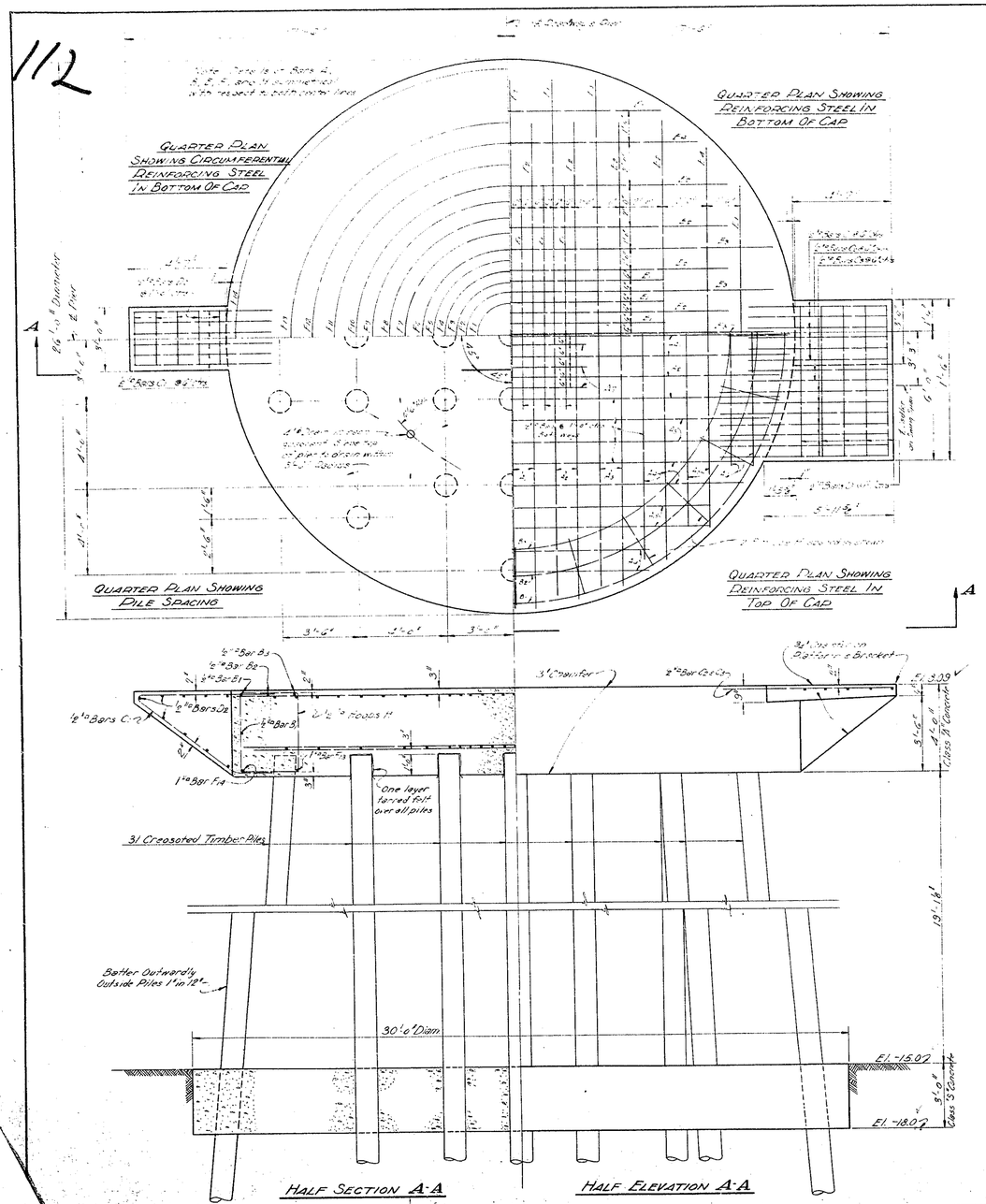
111

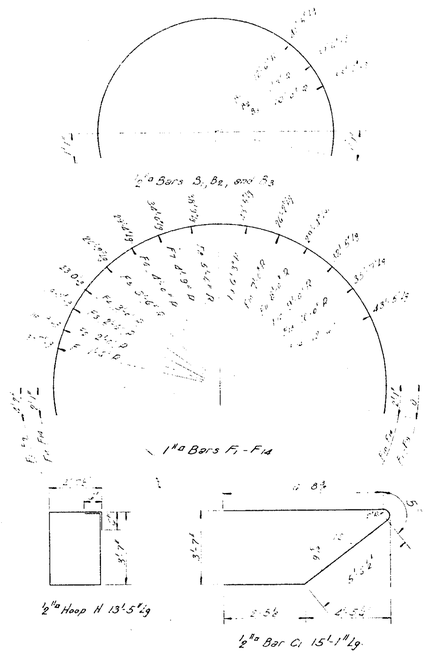


AS BUILT PLANS

112

39-04 87	109	St Mary	1941	7		25





Bill Of Reinforcing Steel And Estimate Of Quantities					
Item	No.	Size	In Length	Total Length	Location
A	6	½"	25'-0"	155'-0"	Top of Cap - Straight
A1	2	"	24'-0"	48'-0"	" " "
A2	2	"	24'-0"	48'-0"	" " "
A3	8	"	11'-0"	88'-0"	
A4	5	"	8'-5"	42'-0"	
A5	8	"	12'-0"	96'-0"	
A6	2	"	7'-0"	14'-0"	
B1	4	"	11'-5"	45'-8"	Top & Side of Cap - Bent
B2	2	"	37'-6"	75'-0"	Top of Cap
B3	2	"	33'-7"	67'-2"	
C1	12	"	15'-1"	181'-0"	Bracket - Bent
C2	9	"	6'-3"	56'-6"	Platform - Straight
C3	7	"	7'-9"	54'-3"	" "
D1	5	"	7'-0"	35'-0"	Front Brackets & Platform - Straight
D2	13	"	6'-8"	86'-8"	Top & Bottom of Brackets "
H	84	"	13'-5"	362'-6"	Hoops in Cap - Bent
Total ½" ϕ Reinforcing Steel 1990'-9" @ .668 = 1684 Pounds					
E1	16	1"	11'-0"	176'-0"	Bottom of Cap - Straight
E2	16	"	10'-0"	160'-0"	" " "
E3	16	"	24'-0"	384'-0"	" " "
E4	4	"	19'-5"	77'-8"	" " "
F1	1	"	18'-7"	18'-7"	Bent
F2	1	"	19'-9"	19'-9"	"
F3	1	"	19'-11"	19'-11"	"
F4	1	"	23'-6"	23'-6"	"
F5	1	"	26'-2"	26'-2"	"
F6	1	"	29'-4"	29'-4"	"
F7	1	"	34'-0"	34'-0"	"
F8	1	"	38'-9"	38'-9"	"
F9	1	"	43'-6"	43'-6"	"
F10	2	"	46'-0"	92'-0"	"
F11	2	"	29'-4"	58'-8"	"
F12	2	"	32'-5"	64'-10"	"
F13	2	"	35'-7"	71'-2"	"
F14	2	"	43'-5"	86'-10"	"
Total 1" Reinforcing Steel 1432'-9" @ 3.4 = 4871 Pounds					

Total Reinforcing Steel = 6555 Pounds
Total Class 'A' Concrete = 80.54 Cu. Yds.
Total Class 'S' Concrete = 75.83 Cu. Yds.
Structural Excavation = ~~78.54~~ Cu. Yds. 83.3

Pile Loading DL+LL - 13.5 Tons

GENERAL NOTES:
Specifications - Louisiana Highway Commission, March, 1940.
Dimensions to Reinforcing Steel are to bar centers.
Cost of tar paper to be included in price bid for other items.
All exposed surfaces to have a "Rubbed" finish.

CENTER PIVOT PIER

CHARENTON BRIDGE
OVER BAYOU TECHE

DEPARTMENT OF HIGHWAYS
BATON ROUGE, LA. April 1941

Date	Description	By

REVISIONS

DESIGNED [illegible] DETAILED [illegible] TRACED [illegible]
CHECKED Louis Pulo CHECKED Louis Pulo CHECKED Louis Pulo
IN CHARGE OF [illegible] HEAD BRIDGE DESIGNER

AS BUILT PLANS

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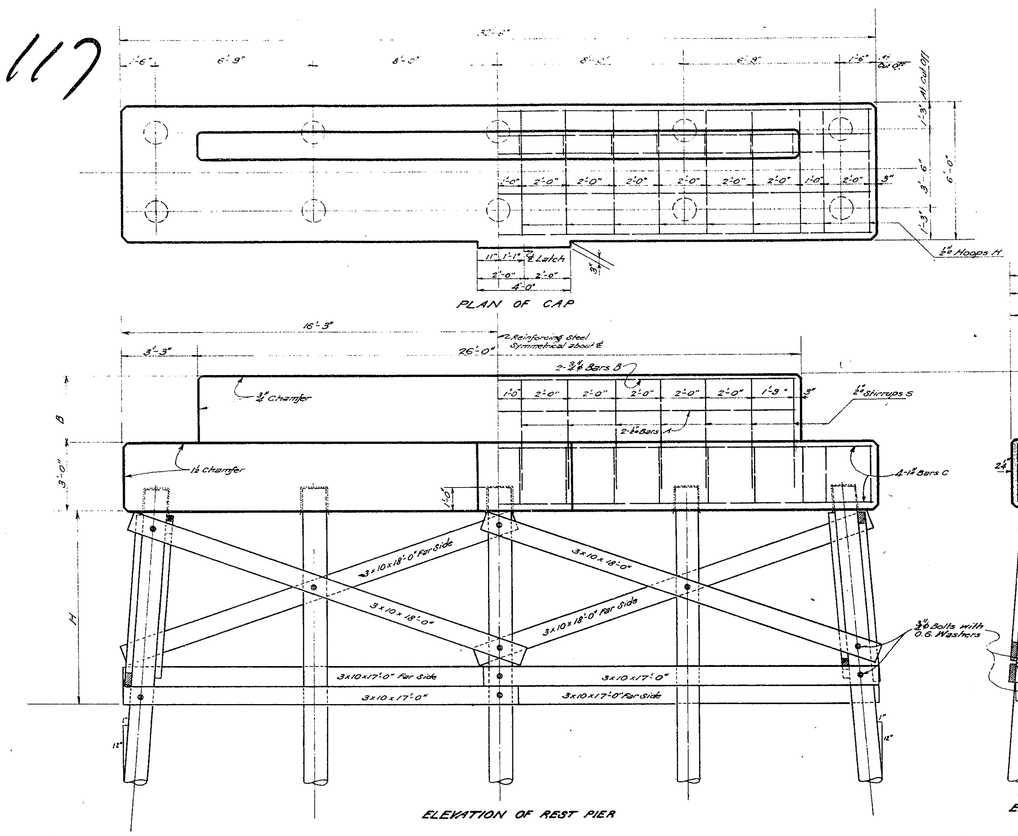
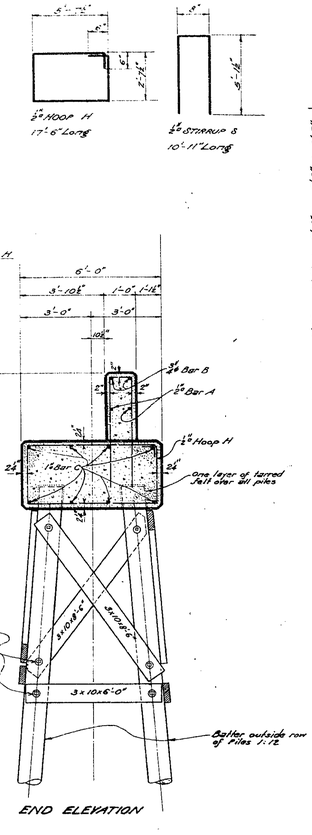
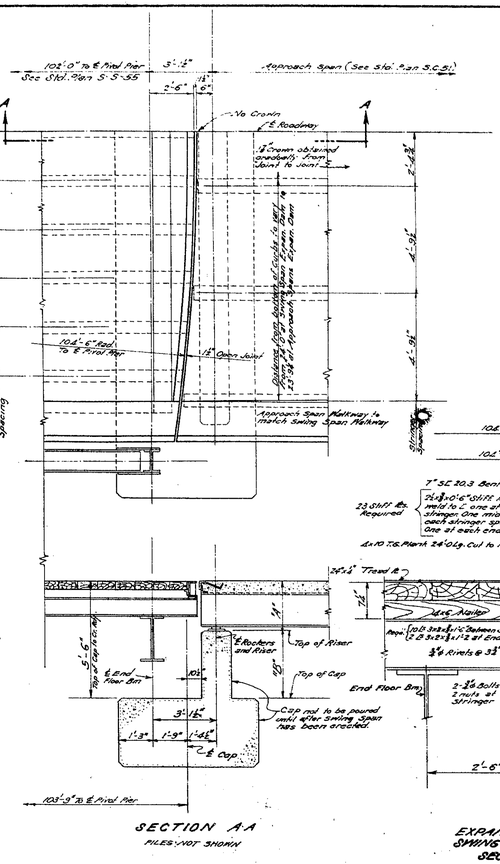
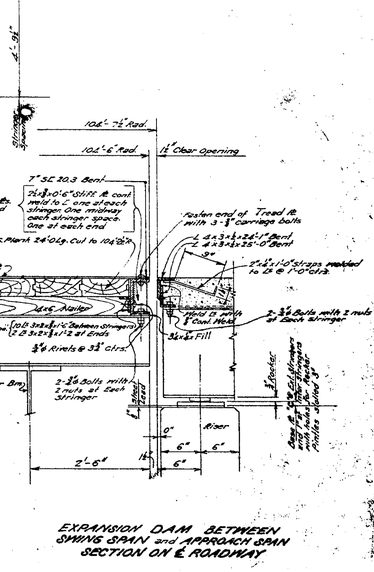








BILL OF REINFORCING STEEL						
Mark	No.	Size	Unit Length	Total Length	Location	
A	2	1 1/4"	25'-8"	51'-4"	Longitudinal in Riser,	Straight
H	18	"	17'-6"	315'-0"	Hoops in Cap,	Bent
S	14	"	10'-11"	152'-10"	Stirrups in Riser	Bent
Total 1 1/4" Reinforcing steel				519'-2" @ 0.838# = 434 Lbs.		
B	2	3/4"	25'-8"	51'-4"	Long. in Top of Riser,	straight
Total 3/4" Reinforcing Steel				51'-4" @ 1.502# = 77 Lbs.		
C	8	1"	32'-2"	257'-4"	Longitudinal in Cap	Straight
Total 1" Reinforcing Steel				257'-4" @ 3.40# = 875 Lbs.		
Total Reinforcing Steel = 1393 Lbs.						

Max. Pile Loading, D.L + L.L. = 13.3 Tons

BILL OF DIAGONAL and SASH BRACING For 17'-7" to 9'				
No.	Size	Unit Length	Total Length	LOCATION
4	3 x 10	18'-0"	72'-0"	Diagonals on Sides
4	3 x 10	17'-0"	68'-0"	Sash on Sides
4	3 x 10	8'-6"	34'-0"	Diagonals on Ends
2	3 x 10	6'-0"	12'-0"	Sash on Ends
Total 3x10 Creo. Timber 186'-0" @ 2.5 = 465 F.B.M.				

DIMENSIONS and QUANTITIES				
Span	Dim. A	Dim. B	Dim. C	Class A Concrete
19'	1'-11 3/8"	3'-0 5/8"	18"	24.80
21'	1'-11 1/2"	3'-0 1/2"	18"	24.79
23'	1'-11 5/8"	3'-0 3/8"	18"	24.78
25'	2'-1 3/8"	3'-4 5/8"	18"	24.64
27'	2'-1 1/2"	3'-4 1/2"	18"	24.63
29'	2'-1 1/4"	3'-4 3/4"	1'-0"	24.65
31'	2'-4 1/2"	3'-7 3/4"	1'-0"	24.[illegible]

GENERAL NOTES:

Specifications: Louisiana Highway Comm., March 1940.
Dimensions to reinforcing steel are to bar centers.
All exposed surfaces to have a rubbed finish.
Cost of tarred felt to be included in price bid for other items.

DATE	DESCRIPTION	BY
8-2-41	Plan B.F. Changed from 6-5-38	I.A.P.

REVISIONS

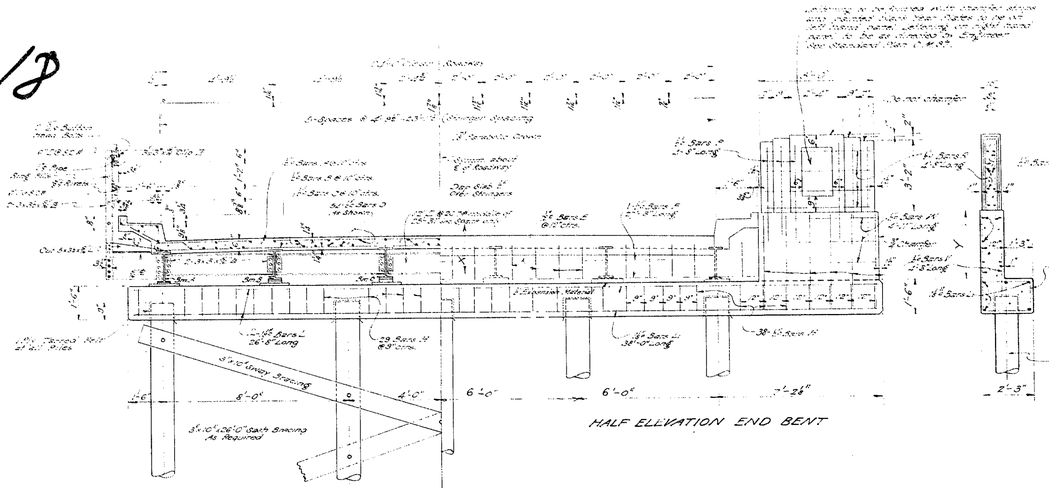
STANDARD PLAN
REST PIER
CONCRETE CAP ON TIMBER PILES
TO BE USED WITH S.S.55 and S.S.051

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS
BATON ROUGE, LA. May 5 1938

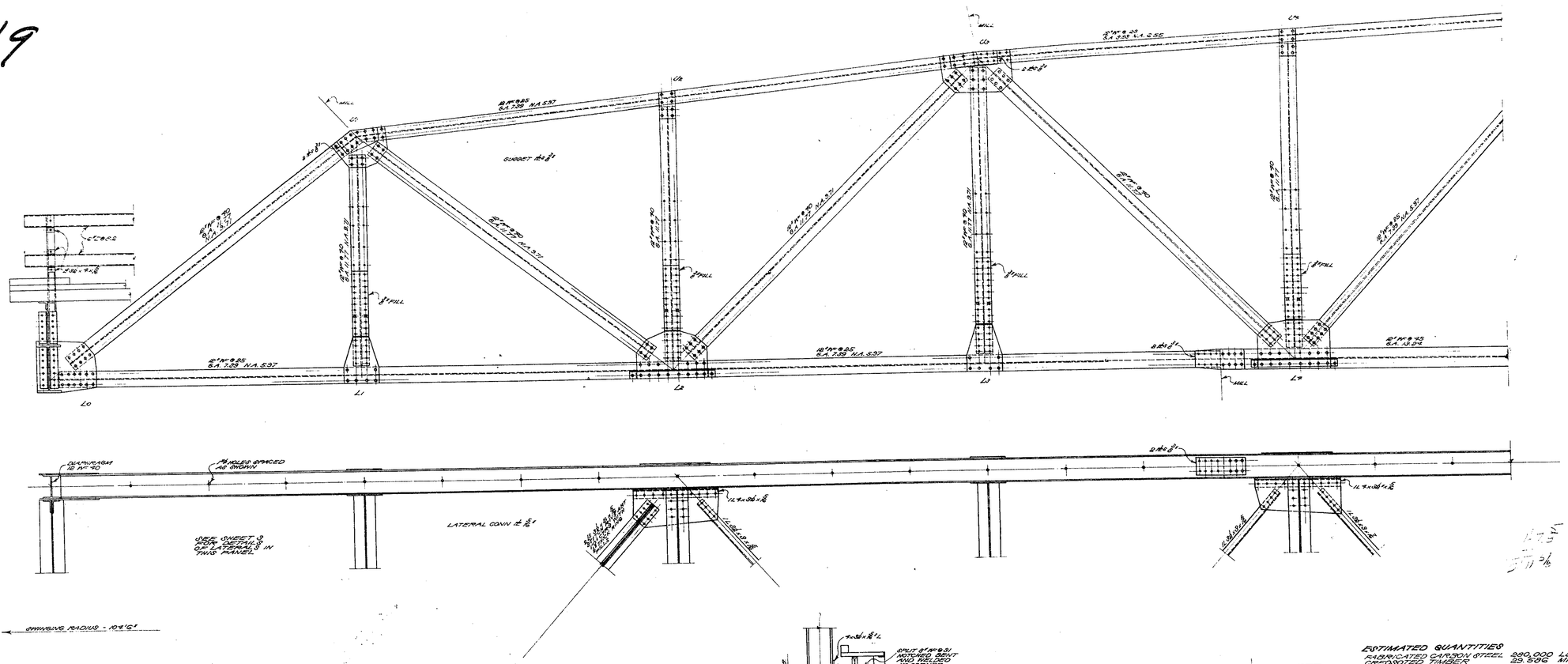
DESIGNED I.A.P. DETAILED T.A.R. TRACED
CHECKED J.P. CHECKED J.P. COMPARED
IN CHARGE OF

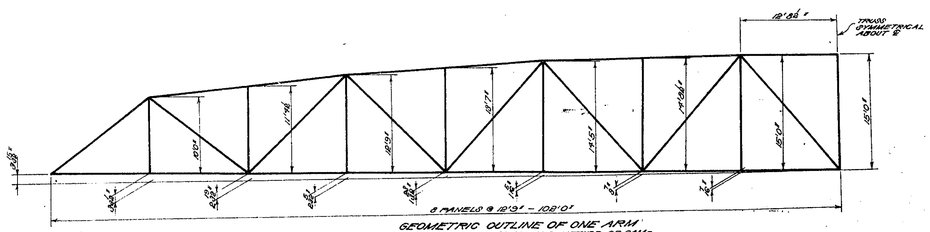
AS BUILT PLANS

118

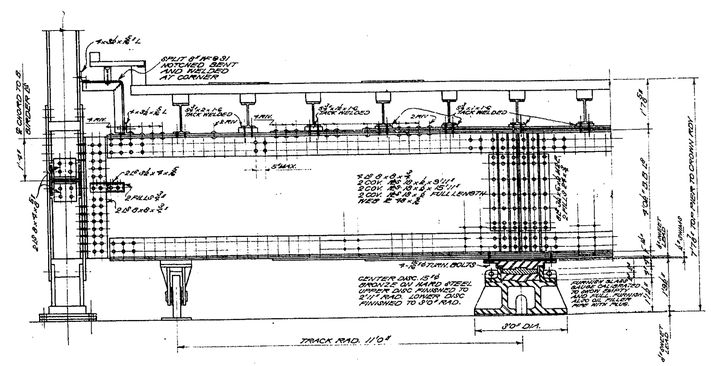

3"x10" Sway Bracing
3"x10"x26'-0" Sash Bracing As Required
6'-0"
6'-0"
7'-2½"
2'-3"
1½" Bars L 26'-8" Long
39 Bars H 8'-9" Long
34 Bars H 34'-0" Long
38-½" Bolts H
½" Bolts H
½" Bars E 8'-6" Long
½" Bars H 8'-9" Long
½" Bars H 34'-0" Long
½" Bars H 8'-9" Long
½" Bars H 8'-9" Long
½" Bars H 8'-9

119





GEOMETRIC OUTLINE OF ONE ARM
SHOWING BLOCKING DIAGRAM AND METHOD OF CAMBERING BY SHORTENING U1 U2 SO THAT U2 WILL DEFLECT 3/8" BELOW GRADE WHEN WEDGES ARE WITHDRAWN.



ESTIMATED QUANTITIES
FABRICATED CARBON STEEL 280,000 LBS.
CREOSOTED TIMBER 29.596 MFBM

STANDARD PLAN
204'0" SWING SPAN
24'0" CLEAR ROADWAY
TIMBER DECK

DATED 7-9 1941

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DATE	DESCRIPTION	BY
	REVISIONS	

DESIGNED Louis Burke | DETAILED Louis Burke | TRACED
CHECKED | CHECKED | CHECKED
IN CHARGE OF | HEAD | DESIGNER

SHEET 1 OF 7

S.S. 55

AS BUILT PLANS

HAER No. LA-37

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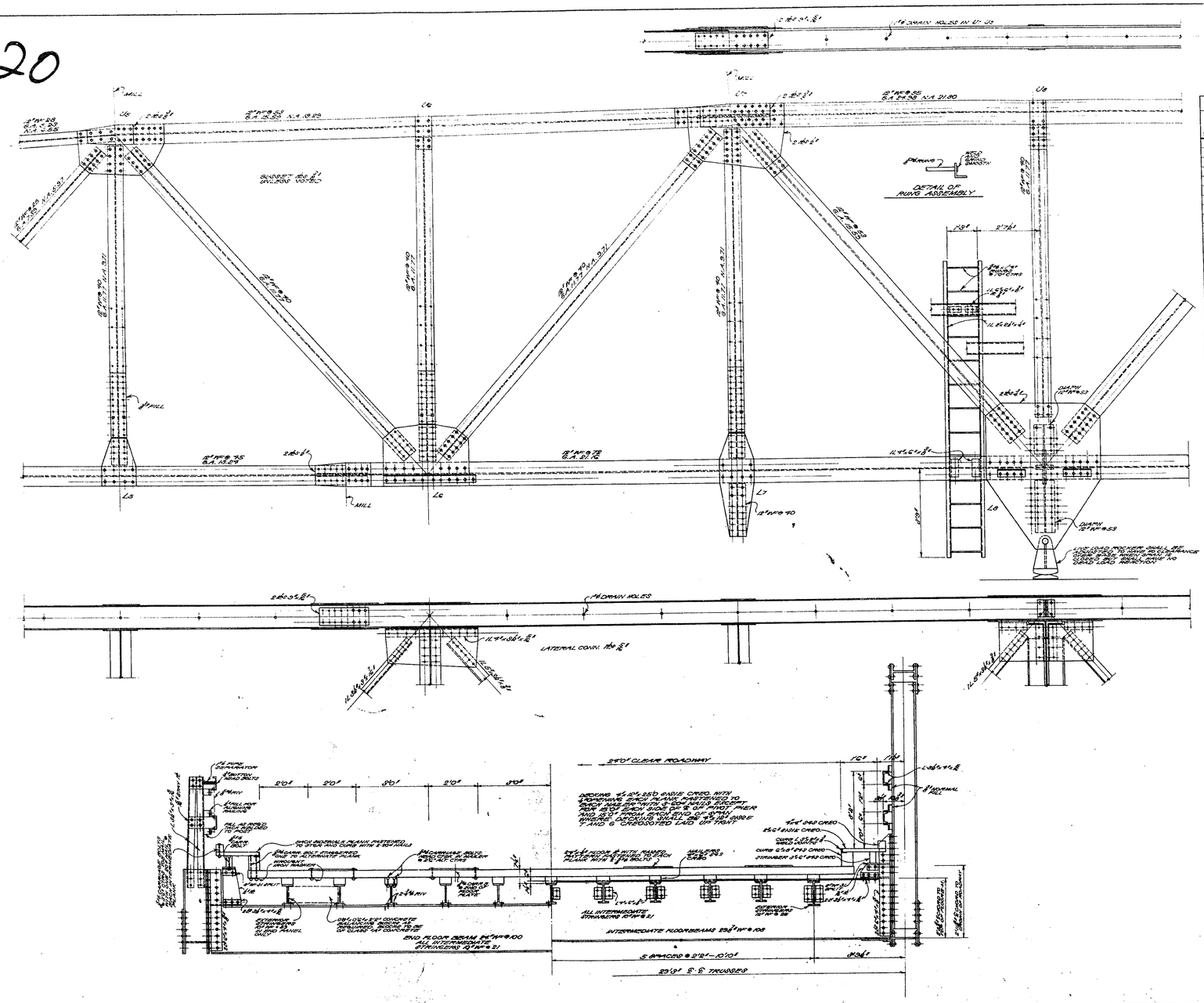
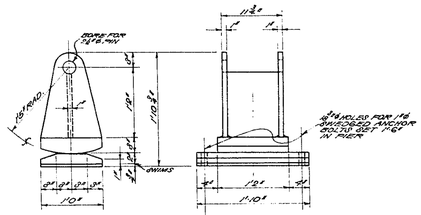
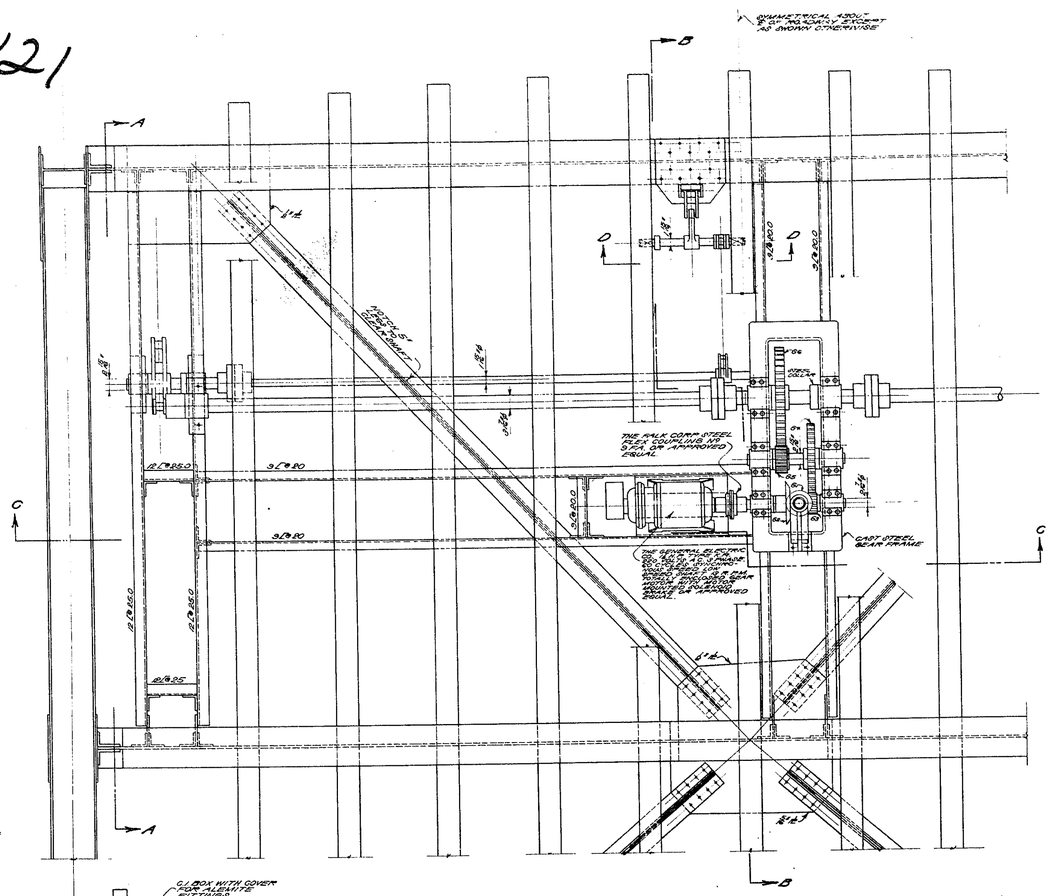


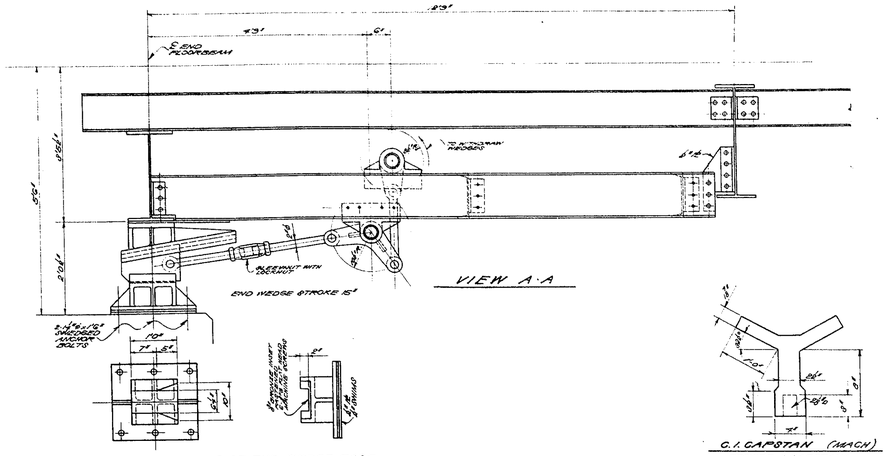


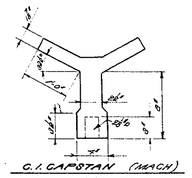
| MEMBER | DEAD LOAD | | LIVE LOAD | | |

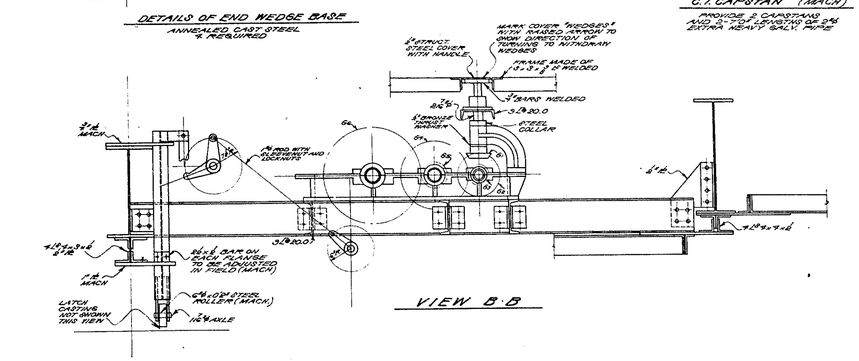
121

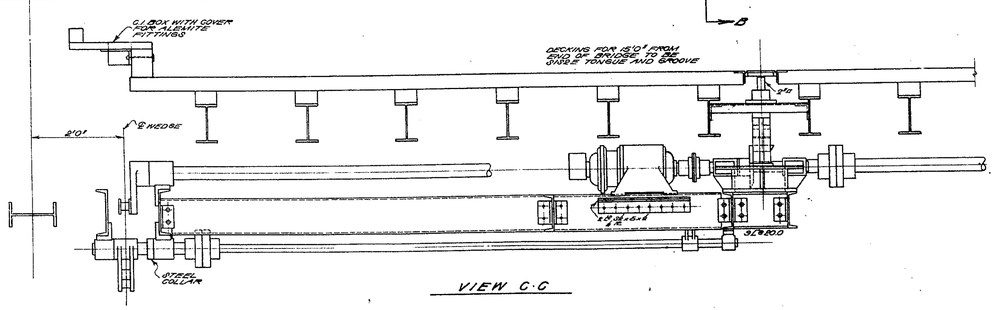
16

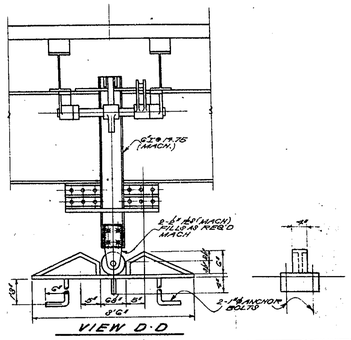












GENERAL NOTES:

END WEDGES SHALL BE ADJUSTED TO LIFT THE ENDS OF THE SPAN 3/8" WHEN ALL TRUSS MEMBERS ARE AT THE SAME TEMPERATURE.
ALL BOLTS CONNECTING MACHINERY SHALL BE DRIVING FIT TURNED BOLTS.

TABLE OF GEARS FOR END WEDGE DRIVE
ALL 20° PRESSURE ANGLE CUT TEETH

GEAR	NO. TEETH	PITCH	PITCH DIAM'R	FACE	TYPE GEAR	MATERIAL
G1	20	3 D.P.	6.667"	2"	BEVEL	FORGED STEEL
G2	35	3 D.P.	11.333"	2"	BEVEL	CAST STEEL
G3	17	3 D.P.	5.667"	2½"	SPUR	FORGED STEEL
G4	55	3 D.P.	18.000"	2"	SPUR	CAST STEEL
G5	17	2½ D.P.	6.800"	3"	SPUR	FORGED STEEL
G6	64	2½ D.P.	25.600"	2½"	SPUR	CAST STEEL

PINE ALL BEARINGS AND SLIDING SURFACES WITH RIGID COPPER TUBING OR FLEXIBLE CONDUIT HOSE AS REQUIRED TO ADMIT LUBRICANT. GREASE CUPS LOCATED IN SIDEWALKS AT MOST CONVENIENT LOCATIONS.
AT MOST CONVENIENT LOCATIONS PROVIDE HANDRAILS (MACH) TO BE INCLUDED IN LUMP SUM BID FOR "MACHINERY".

STANDARD PLAN
204'0" SWING SPAN
24'0" CLEAR ROADWAY
TIMBER DECK

7-2-41

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

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

REVISIONS

DATE	DESCRIPTION	BY

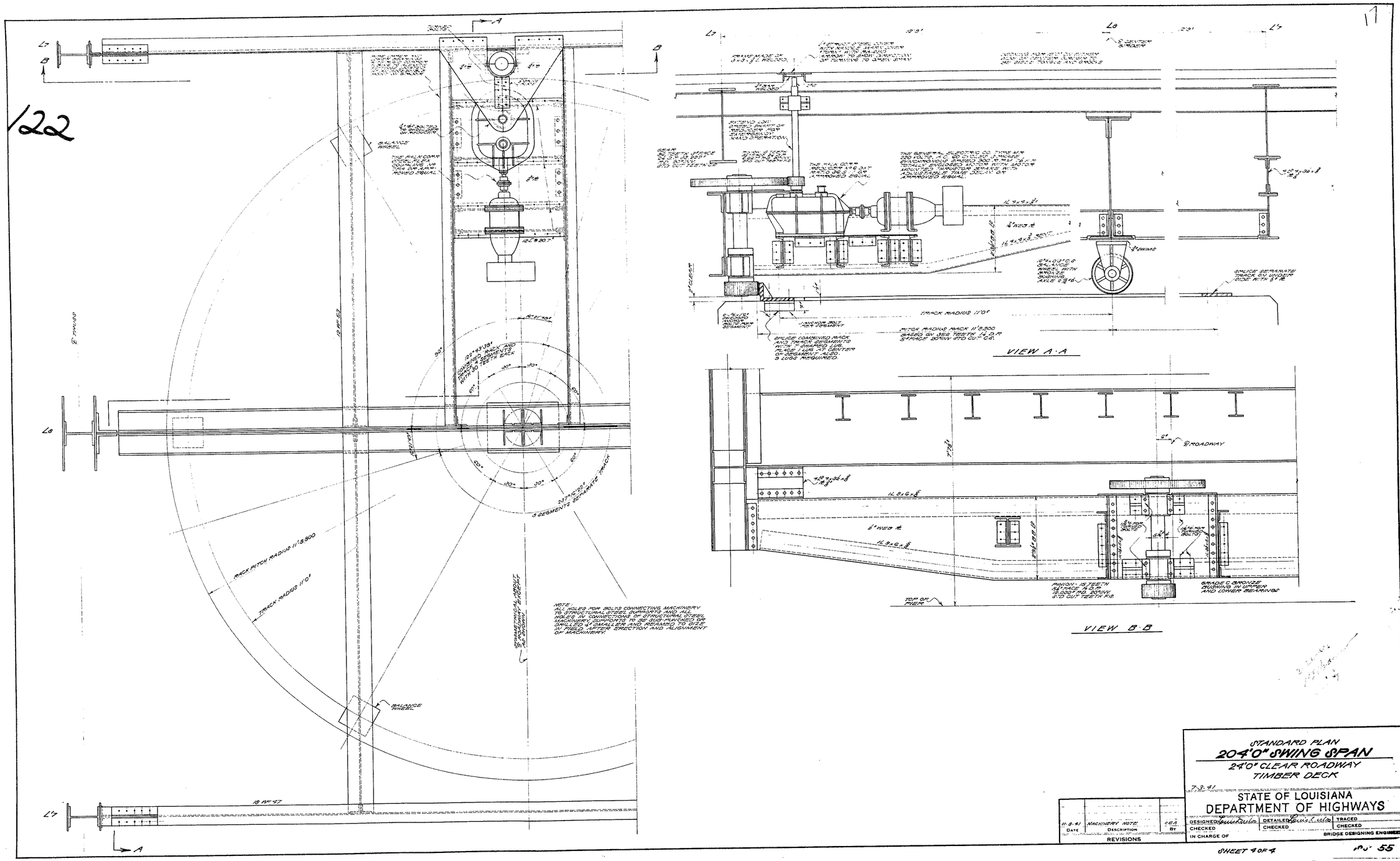
SHEET 3 OF 4

S.S. 55

AS BUILT PLANS

HAER No. LA-37

122



STANDARD PLAN
204'0" SWING SPAN
24'0" CLEAR ROADWAY
TIMBER DECK

7.3.41

STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

DATE	DESCRIPTION	BY
11.8.41	MACHINERY NOTE	CEA

REVISIONS

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

SHEET 4 OF 4

No. 55

AS BUILT PLANS

HAER No. LA-37

128

General Notes:

Louisiana Highway Commission Specs., March 1940 to govern where applicable, except as otherwise noted.

All window openings to have full length copper screen, hinged at top with hook at bottom, not less than 1½" stock cypress.

Screen door to be copper mesh, not less than 1½" stock cypress, with double spring hinges, provide handle and hook.

Main door to have Bronze weather stripping. (See Detail) Tumbler lock to be provided for above door.

All hardware to have Bronze finish.

Roof and flue to have copper flashing and be free from leaks.

All exterior walls to have 3 coats of weather proof paint color white.

All interior walls to have 2 coats of washable paint color Buff.

Floor to be hard Oil finished.

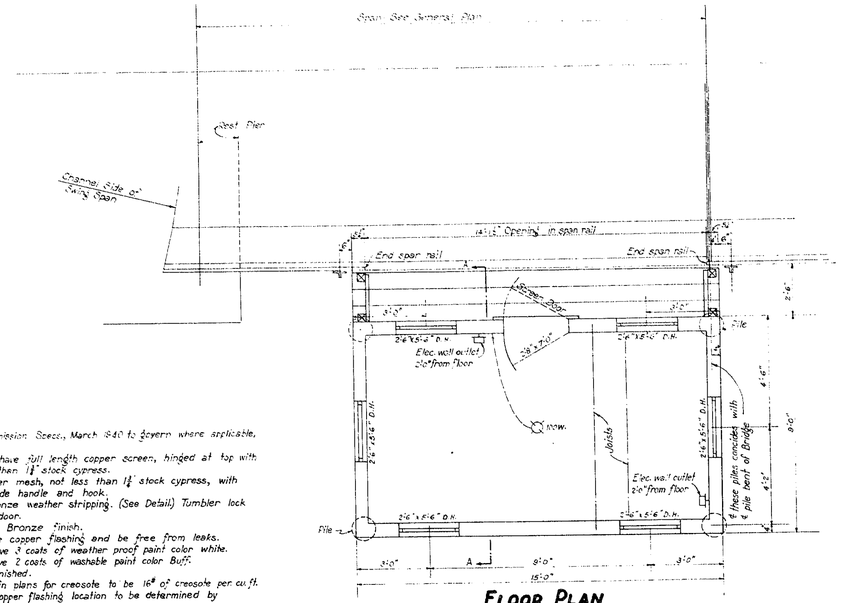
All timbers called for in plans for creosote to be 16# of creosote per cu. ft.

Provide G.I. flue with copper flashing location to be determined by contractor.

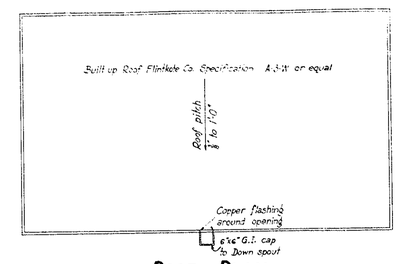
All materials required to complete Operators house to be included in lump sum bid for house except creosoted timber piles which are to be paid for at the price bid for that item.

Provide all necessary materials to complete this job if specified or not.

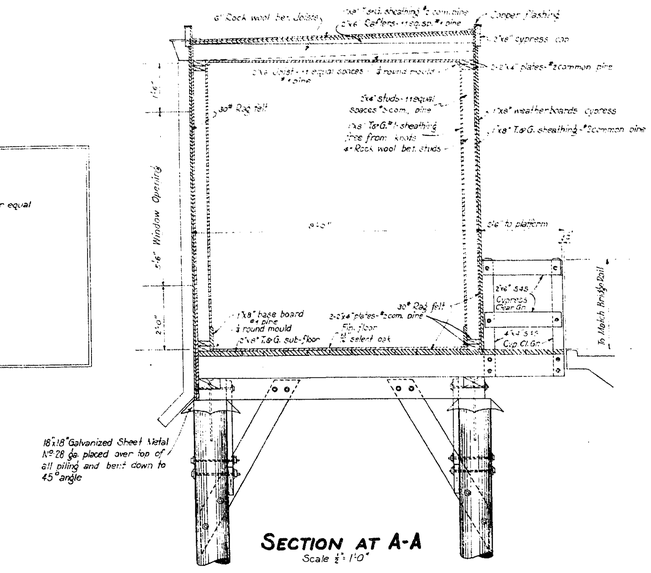
All cypress to be clear grade.



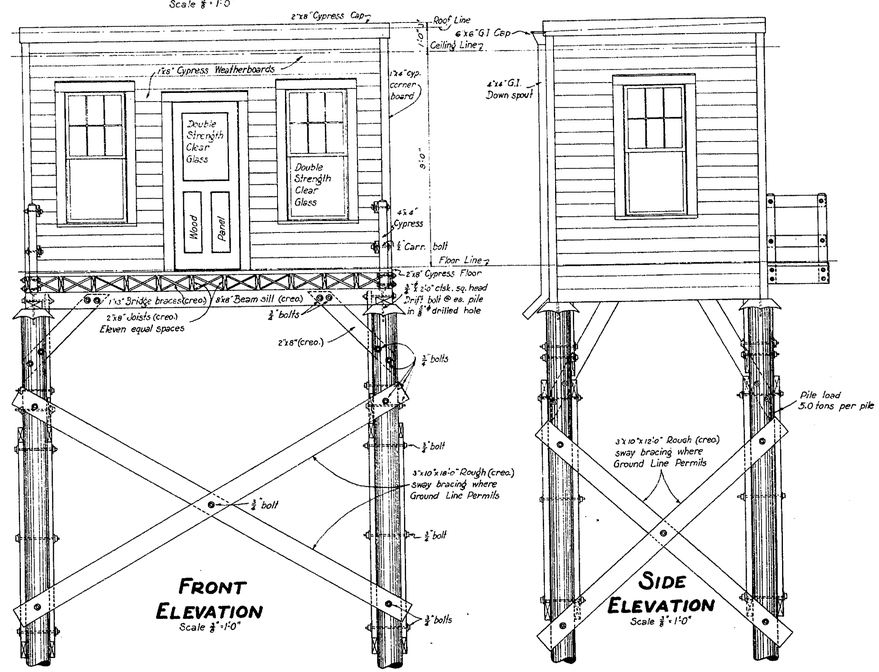
FLOOR PLAN
Scale ⅜" = 1'-0"



ROOF PLAN
Scale ⅜" = 1'-0"

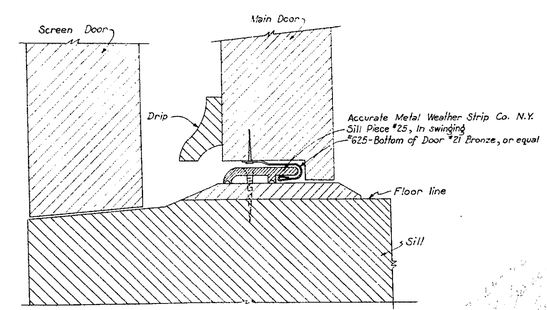


SECTION AT A-A
Scale ⅜" = 1'-0"



FRONT ELEVATION
Scale ⅜" = 1'-0"

SIDE ELEVATION
Scale ⅜" = 1'-0"



SECTION THRU DOOR SILL
Scale Full Size

STANDARD BRIDGE OPERATORS HOUSE

8'x 14' FRAME STRUCTURE

STATE of LOUISIANA
DEPARTMENT of HIGHWAYS
BATON ROUGE, LA.

JUNE 1941

DATE	DESCRIPTION	BY
10-15-41	2"x8" Braces	L.T.

REVISIONS

DESIGNED / CHECKED / IN CHARGE OF — DETAILED / CHECKED — TRACED / CHECKED — HEAD BRIDGE DRAFTSMAN

T-M-18

AS BUILT PLANS

HAER No. LA-37