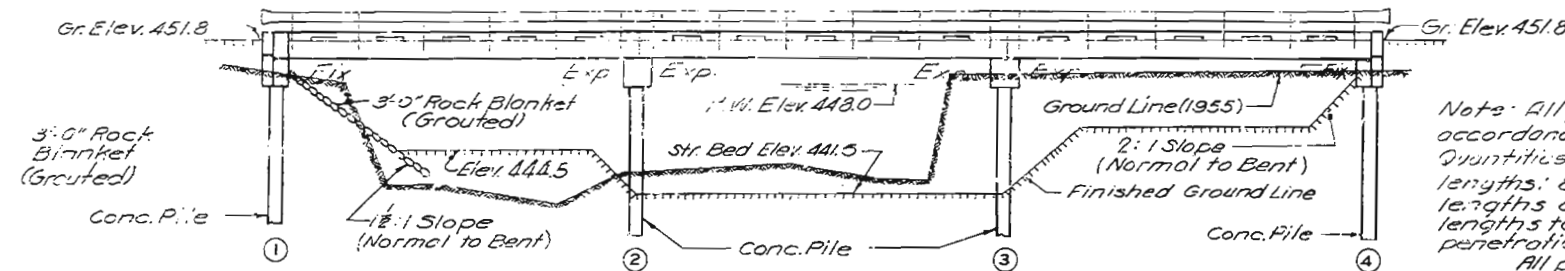


# MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	S-1677(1)	13		

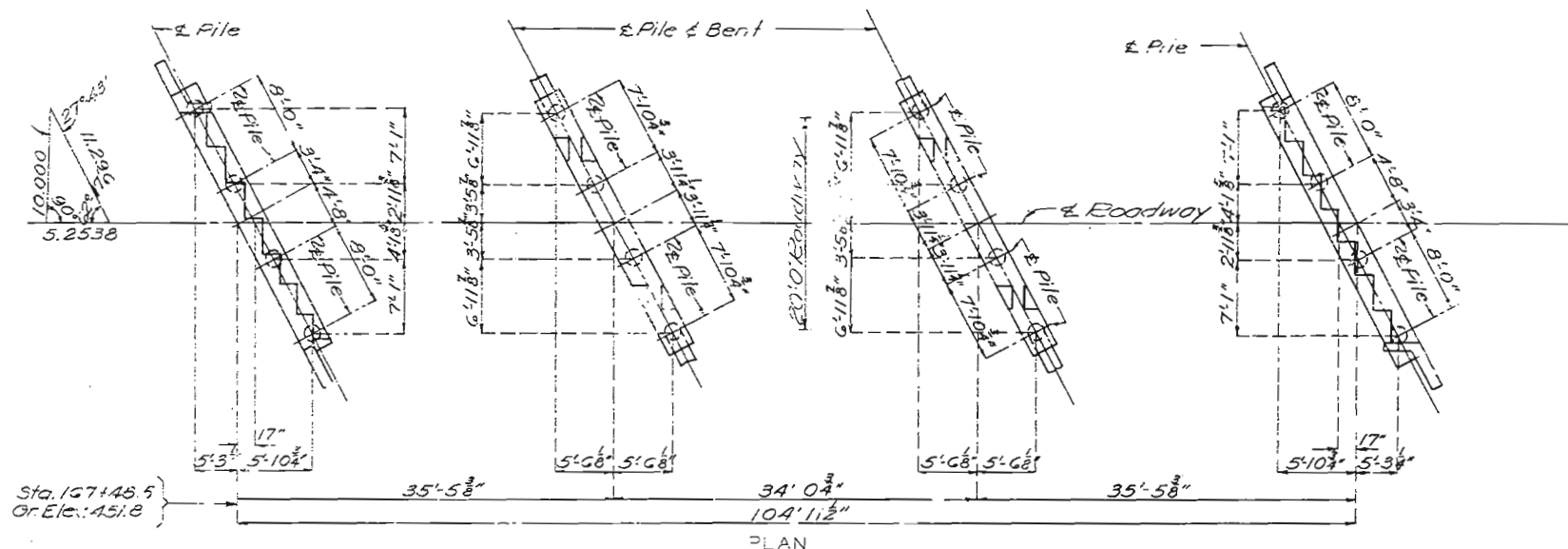
3-34'0" Precast Slab Spans



GENERAL ELEVATION

Note: Old roadway fill shall be removed to Elev. 446.0. Payment for this excavation outside the limits of excavation for structure will be made at unit contract price for Roadway Excavation.

Note: All piling shall be cast in place concrete pile in accordance with Special Provisions. Estimated quantities shown on plans are based on the following lengths: 8 @ 40'-0" & 8 @ 35'-0". These indicated lengths are approximate only. Proper lengths to give required bearing and/or penetration will be determined during driving. All piling shall be driven to or into solid rock, boulders, shale or cemented gravel or with tips to at least Elevation 420.0 and to sustain a load of at least 28 ton per pile. Concrete for cast in place pile to be Class "A". If gravity hammer weighing not less than 4,000 pounds with a drop of not more than 10 feet may be used for driving steel shells if desired.



BILL OF REINFORCING STEEL-SUBSTRUCTURE					Bending Sketches & Cutting Diagrams	
No.	Size	Length	Work	Location		
End Bents No. 1 & 4						
16	#6	29'-6"	H1	Beam		
4	#6	27'-6"	H2	"		
2	#5	24'-9"	H3	Backwall		
20	#6	5'-6"	H4	Wing		
8	#6	3'-0"	H5	"		
4	#5	2'-6"	H6	"		
8	#6	10'-9"	T1	Wing		
48	#4	9'-9"	U1	Beam		
50	#5	3'-9"	V1	"		
6	#4	7'-6"	V2	Wing		
8	#4	1'-6"	V3	"		
Int. Bents No. 2 & 3						
16	#6	28'-9"	G1	Beam		
4	#6	26'-9"	G2	"		
16	#4	9'-9"	U1	"		
16	#4	9'-9"	U1	"		

Note: See sheet No. 3 for Bill of Reinforcing Steel for Superstructure.

## GENERAL NOTES:

Design Specifications: A.A.S.H.O. 1953

Loading: H10-44

Reinforcing Steel Stress: 18,000 "lb."

Concrete, Class "B" Stress: 1,000 "lb."

Concrete, Class "A" Stress: 1,500 "lb."

All substructure concrete and curbs to be Class "B."

All precast superstructure units shall be Class "A" or light weight concrete. See Special Provisions.

Paint: Shop, prime; Field, contact surfaces of bolted field connections (steel to steel) one coat of red lead and surfaces of rail posts in contact with concrete, three coats of red lead. No other paint to be applied by the Contractor except as noted for steel shells of cast-in-place concrete piles. Payment for cleaning and painting such surfaces will be included in unit price bid for Fabricated Structural Steel.

Where joint filler is specified on the plans it shall conform with the requirements for Premoulded Material for Filler as given in Section 59-220 of the Standard Specifications.

Cost of cement mortar used in assembling precast units to be included in unit price bid for precast units in place.

Fabricated Structural Steel superstructure includes guard rail posts, bolts fastening these posts to concrete, and bolts and washers fastening precast concrete units together.

Qualification of welding operators will be required.

Steel shells of cast in place concrete piles for Bents No. 1 & 4 shall be coated with a heavy coating of an approved bituminous mastic paint from bottom of cap to three feet below bottom of concrete cap. Steel shells of cast in place piles for Bents No. 2 & 3 shall be so coated to the full depth and not above the finished ground line.

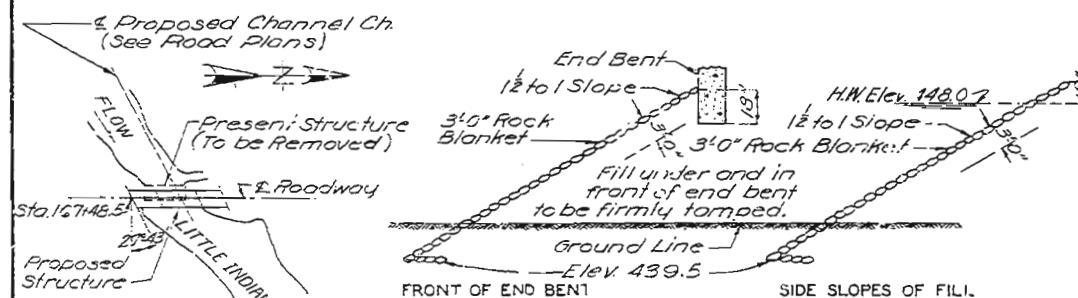
In no case will it be required to place the coating below the water line. Payment for excavating around piles and backfilling same, for finishing bituminous mastic paint and cleaning and painting steel surfaces will be included in unit price bid for other items.

## ESTIMATED QUANTITIES

Item	Substr.	Superstr.	Total
Class I Excavation for Structure	Cu. Yds. 60		60
Class "A" or Lightweight Concrete	Cu. Yds. 68.9		68.9
Class "B" Concrete	Cu. Yds. 32.2	5.5	37.7
Fabricated Structural Steel	Lbs. 1860	1860	
Reinforcing Steel	Lbs. 3000	22840	25840
Concrete Piles in place	Lin. Ft. 600		600
Bridge Guard Rail	Lin. Ft. 208		208
Asphalt Wearing Surface	Sq. Yds. 233		233

\* See Special Provisions.

Note: All excavation for bridge shall be class I Excavation.



LOCATION SKETCH

GROUTED ROCK BLANKET SKETCHES BENT NO. 1

Note: 3'-0" Grouted Rock Blanket shall be placed on fills at end of bridge as shown in sketches. See Road Plans for Quantities.

Note: This drawing is not to scale. Follow dimensions.

Drawn Apr. 1956 by W. G. S. & J. H. K.  
Checked Apr. 1956 by C. S. A.

Sheet No. 1 of 3.

SEE FINAL PLANS BROWN LINES

SUBMITTED BY J. A. Williams  
APPROVED BY Roy M. Whitton  
BRIDGE ENGINEER  
CHIEF ENGINEER  
DATE 5-2-1956  
DATE 5-2-1956

## BRIDGE OVER LITTLE INDIAN CREEK

STATE ROAD FROM RTE. SW NORTHEAST TO PRESENT RTE. SY

ABOUT 8.2 MILES N.E. OF JACKSON

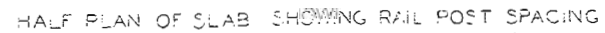
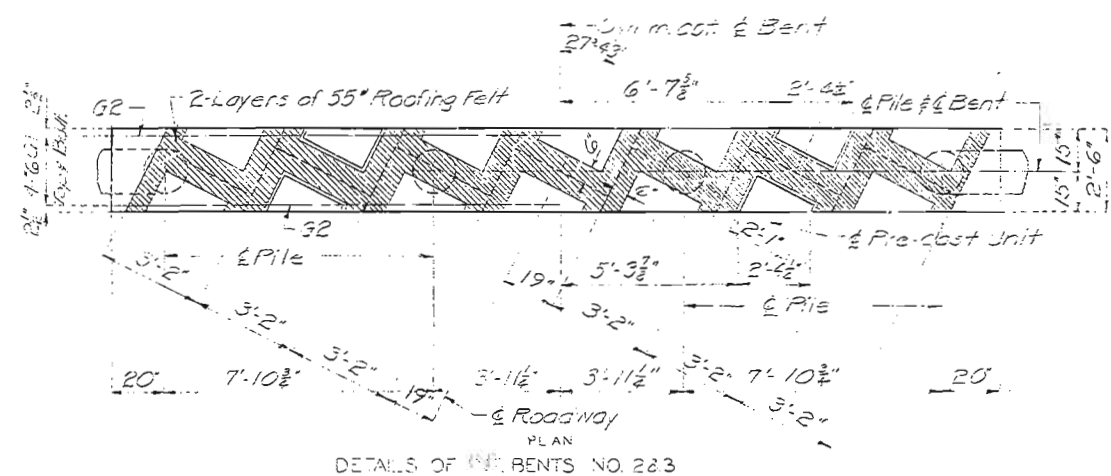
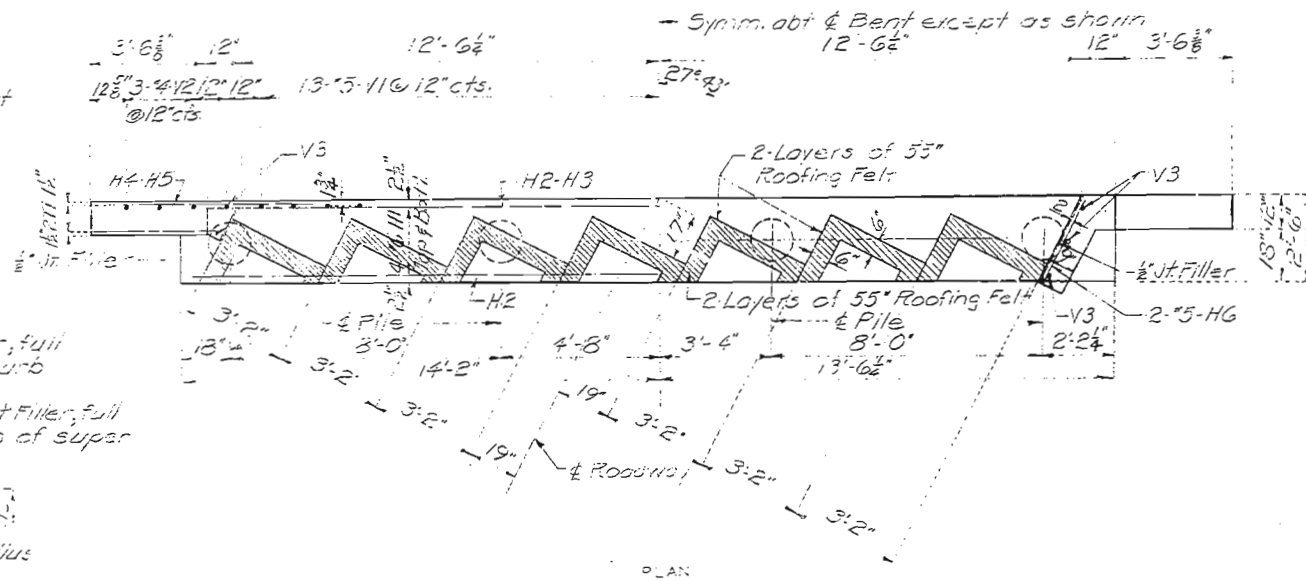
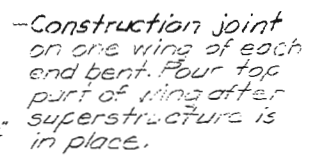
PROJECT NO. S-1617 (1) (SY) STA. 167 + 48.5

CAPE GIRARDEAU COUNTY

STD 27A-17
STD C110R3
N-198

4

Note: Backfill core  
concrete section. Joint  
shall not be poured  
until superstructure  
is in place.



Drawn April 1956 by H.G.M.  
Checked April 1956 by C.S.A

Note: This drawing is not to scale. Follow dimensions

Sheet No. 2 of 3.

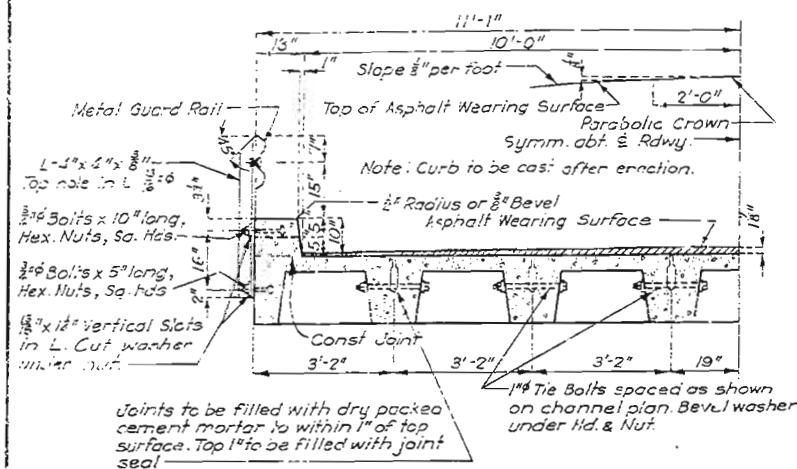
### SIX FINAL PLANS SHOWN LINES

V-93

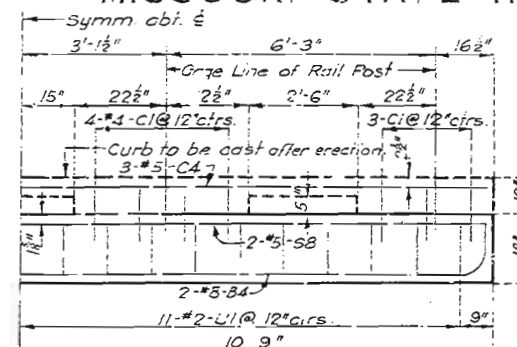
66

# MISSOURI STATE HIGHWAY DEPARTMENT

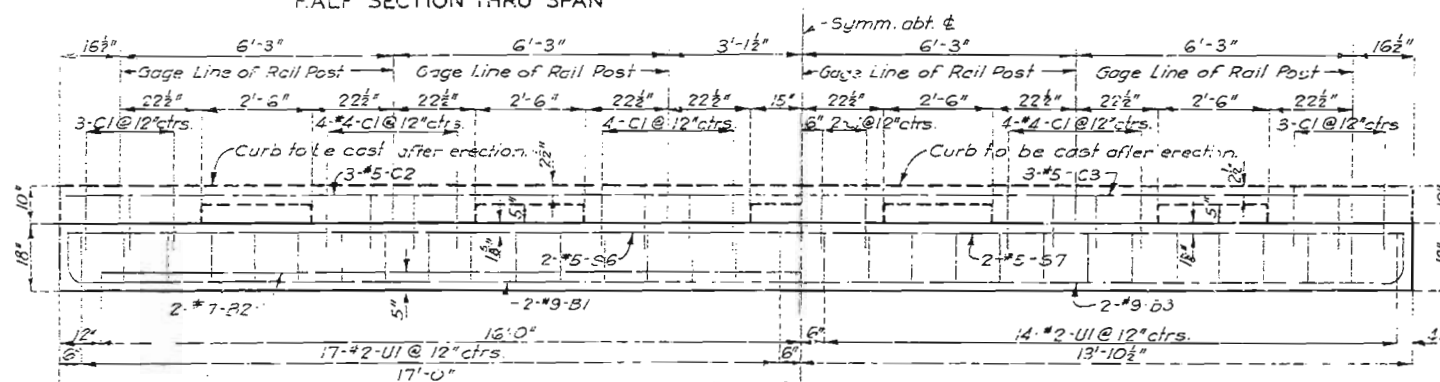
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MO	5-1679(1)	1956	12	



HALF SECTION THRU SPAN



DETAILS OF MAIN CHANNEL REINFORCEMENT FOR 21'-6" SPAN



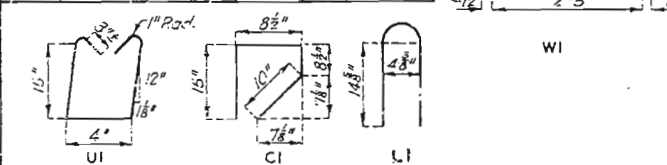
DETAILS OF MAIN CHANNEL REINFORCEMENT FOR 34'-0" SPAN

DETAILS OF MAIN CHANNEL REINFORCEMENT FOR 27'-9" SPAN

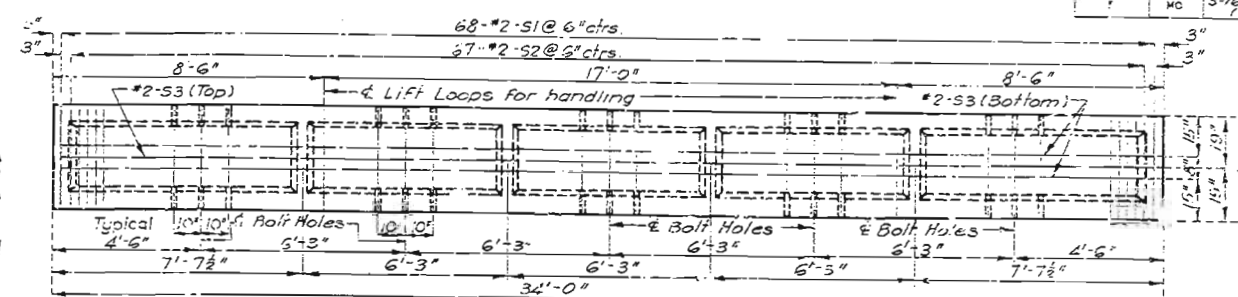
Note: \*5 Lift Loops to be cut off in field after units have been set in final position at bridge site and walls to be filled with grout containing iron oxide (Etneco or an approved equivalent) by contractor, except lift loops under curbs.

## BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE

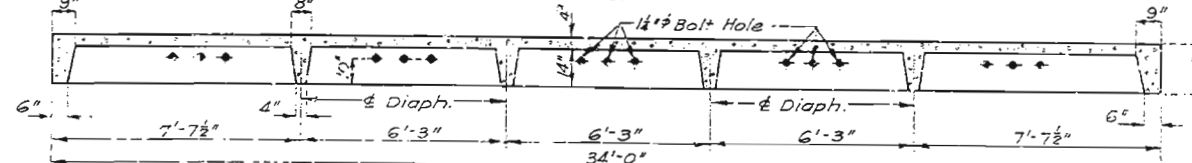
Total No.	One Span	Size	Length	Mark	Location	Bending Sketches
84	21'-6"	#9	35'-6"	B1	Channel	Symmetrical
84	27'-9"	#7	32'-0"	B2	"	"
26	27'-9"	#9	29'-3"	B3	"	"
132	34'-0"	#4	3'-6"	C1	Curb	"
18	34'-0"	#5	33'-9"	C2	"	"
6	34'-0"	#5	27'-6"	C3	"	"
6	34'-0"	#5	21'-3"	C4	"	"
1428	301	385	476	#2	3'-0"	SI Slab
107	294	385	469	#2	3'-0"	S1
63	21	#2	33'-9"	S2	"	"
21	21	#2	27'-6"	S4	"	"
84	28	#5	33'-9"	S6	"	"
28	28	#5	27'-6"	S7	"	"
28	28	#5	21'-3"	S8	"	"
1428	294	392	476	#2	3'-9"	UI Channel
126	23	35	42	#4	4'-6"	WI Diaph.
84	28	28	28	#5	3'-0"	LI Channel



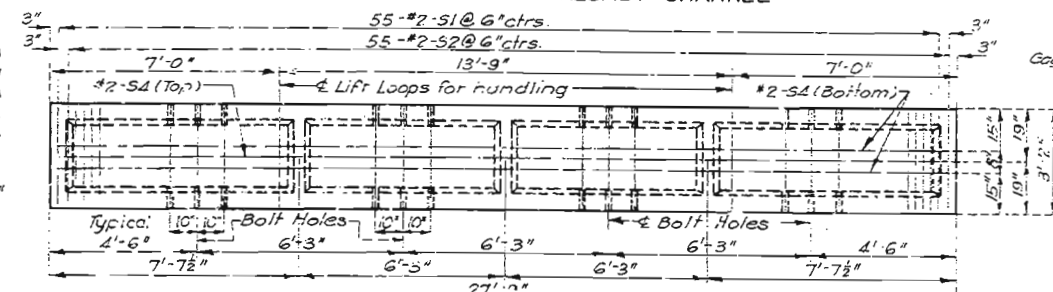
Note: This drawing is not to scale. Follow dimensions.



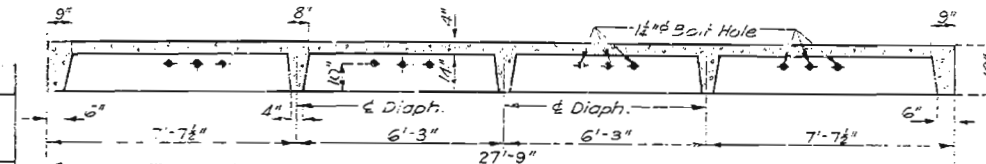
PLAN OF PRECAST INTERIOR CHANNEL (Approx. Weight: 13280#)



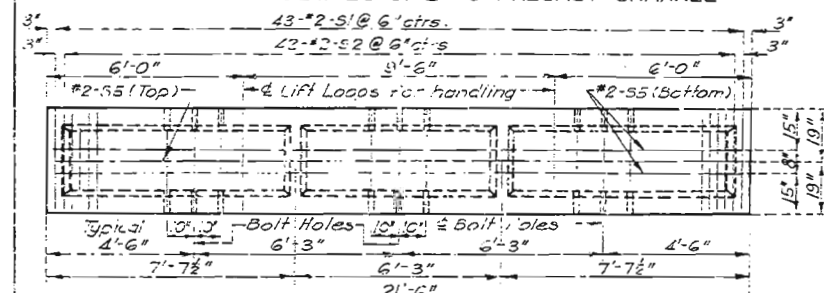
LONGITUDINAL SECTION DETAILS OF 34'-0" PRECAST CHANNEL



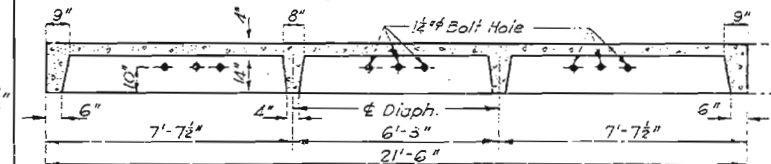
PLAN OF PRECAST INTERIOR CHANNEL (Approx. Weight: 10880#)



LONGITUDINAL SECTION DETAILS OF 27'-9" PRECAST CHANNEL

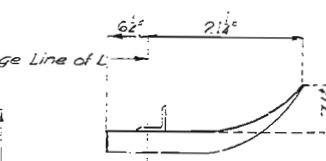


PLAN OF PRECAST INTERIOR CHANNEL (Approx. Weight: 8470#)



LONGITUDINAL SECTION DETAILS OF 21'-6" PRECAST CHANNEL

Note: Unless otherwise shown or noted all exposed edges are to be beveled 1/2".

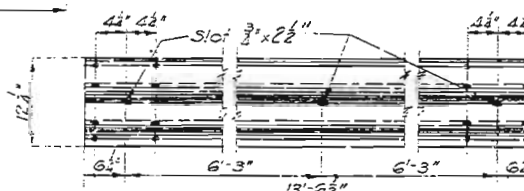


PLAN



ELEVATION

DETAILS OF FLARED ENDS



ELEVATION OF AN INTERMEDIATE PANEL

TYPICAL DETAILS OF RAIL

Note: Guard rail to be of 12 gage high carbon steel sheet. Rail to be secured to post by one 3/8" heat treated bolt. Sheets to be lapped 12 1/2" and connected by 6-3/8" heat treated bolts. All bolt holes to be 3/8" x 1/8" except as noted. Details of rail sheet and splices shall conform with the details shown on Missouri State Highway Guard Rail Std. 27.4-17.

## BRIDGE OVER LITTLE INDIAN CREEK

STATE ROAD FROM RTE. SW NORTHEAST TO PRESENT RTE. 3Y ABOUT 8.2 MILES N.E. OF JACKSON PROJECT NO. S-1617(1) (SY) STA. 187 + 48.5

CAPE GIRARDEAU COUNTY

Sheet No. 3 of 3.

N-198

Assembled Apr. 1956 By H. G. M. & J. L. L. Checked Apr. 1956 By C. S. L.

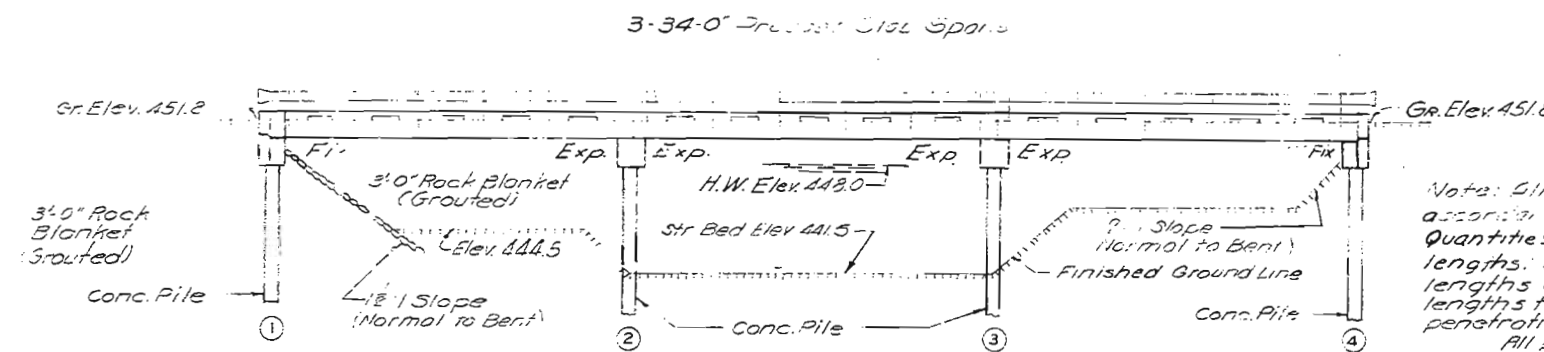
# MISSOURI STATE HIGHWAY DEPARTMENT

DIST. NO.	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
16	167-48.5	1956	16	16

## FINAL PLANS

Size	Engineering Location	Barbing	Section	Diagram
16" x 28" H1	Beam	2" x 3" x 12"	6"	6"
16" x 28" H2	"	2" x 3" x 12"	6"	6"
20" x 24" H3	Backwall	3" x 12" x 4" x 4"	26" x 11" H1	26" x 8" G1
20" x 24" H4	"	3" x 12" x 4" x 4"	26" x 11" H1	26" x 8" G1
8" x 5" H5	"	3" x 12" x 4" x 4"	26" x 11" H1	26" x 8" G1
4" x 5" H6	"	3" x 12" x 4" x 4"	26" x 11" H1	26" x 8" G1
8" x 10" T1	Wing	3" x 12" x 4" x 4"	26" x 11" H1	26" x 8" G1
22" x 9" U1	Beam	3" x 12" x 4" x 4"	26" x 11" H1	26" x 8" G1
50" x 3" V1	"	3" x 12" x 4" x 4"	26" x 11" H1	26" x 8" G1
6" x 7" V2	Wing	3" x 12" x 4" x 4"	26" x 11" H1	26" x 8" G1
8" x 4" V3	"	3" x 12" x 4" x 4"	26" x 11" H1	26" x 8" G1
Int. Bents No. 2 & 3				
16" x 28" G1	Beam	2" x 3" x 12"	6"	6"
4" x 5" G2	"	2" x 3" x 12"	6"	6"
46" x 9" U1	"	2" x 3" x 12"	6"	6"

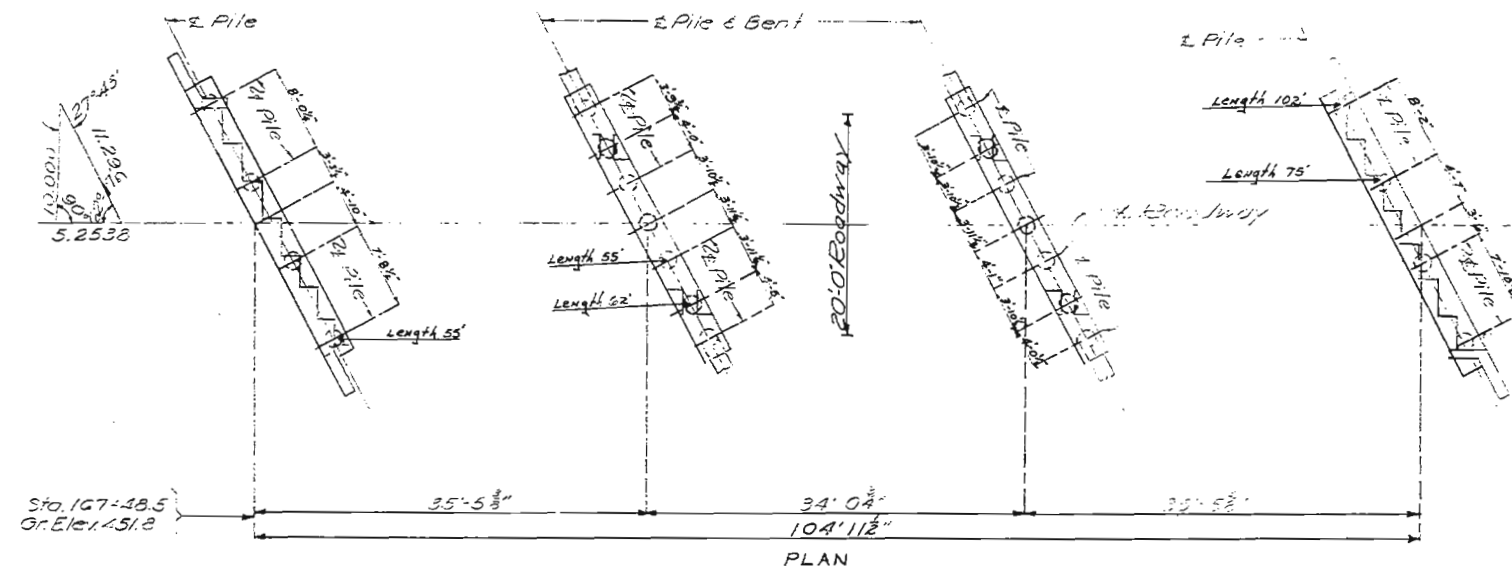
Note: See sheet No. 16 of Reinforcing Steel for Superstructure.



GENERAL ELEVATION

Note: Old roadway fill was removed to Elev. 446.0.  
Payment for this excavation outside the limits of excavation or structure was made at unit contract price for Roadway Excavation.

Note: All piling were cast in place concrete pile in accordance with special provisions. Estimated quantities shown on plans are based on the following lengths: 2 @ 40'-0" & 2 @ 35'-0". These indicated lengths are approximate only. Proper lengths to give required bearing and/or penetration was determined during driving.  
All piling were driven to or into solid rock, boulders, shale or cemented gravel or with tips to at least Elevation 420.0. The following minimum bearing was obtained, Bents 1 & 4, 16.8 Tons - Bents 2 & 3, 16.0 Tons.  
Concrete for cast in place pile was, Class "B".  
A gravity hammer weighing not less than 4,000 pounds with a drop of not more than 10 feet was used for driving steel shells.



PLAN

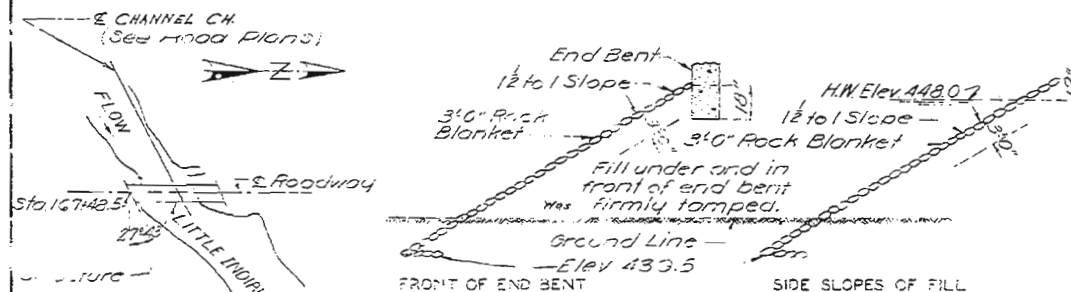
### GENERAL NOTES:

Design Specifications: AASHTO 1955  
Loadings: 410-14  
Reinforcing Steel: 18" x 14" Class "B" Stress: 50,000 psi  
Concrete: Class "B" Stress: 5,000 psi  
All precast superstructure concrete and curbs were Class "B" concrete. See Special Provisions.  
Paint: Suspension, Field, and end surface of hollow field members (steel to steel) one coat of red lead and surface of end posts in contact with concrete, three coats of red lead. No other paint was applied by the Contractor except as noted for steel shells of cast in place concrete piles. Day rent for cleaning and painting such surfaces was included in unit price bid for Fabricated Structural Steel.  
Where joint filler is specified on the plans it will conform with the requirements for Premoulded Material for Filler as given in Section 59-22.2 of the standard specifications.  
Cost of cement mortar used in assembling precast units to be included in unit price bid for precast units in place.  
Fabricated Structural Steel superstructure includes guard rail posts, bolts fastening these posts to concrete, washers and washers fastening precast concrete units together.

A Qualification of welding operators was required.  
Steel shells of cast in place concrete piles for Bents No. 1 & 4 were coated with a heavy coating of improved bituminous mastic paint from bottom of pile to three feet below bottom of concrete cap. Steel shells of cast in place concrete piles for Bents No. 2 & 3 were so coated three feet below and one foot above the finished ground line. In no case was it required to place the coating inside the water line. Payment for excavating around piles and backfilling same, furnishing bituminous mastic paint and cleaning and painting steel surfaces was included in unit price bid for other items.

Item	Substr.	Superstr.	Total
Class I Excavation for Structure	Cu. Yds.	34.5	34.5
Class "A" or Lightweight Concrete	Cu. Yds.	68.9	68.9
Class "B" Concrete	Cu. Yds.	32.2	32.2
Fabricated Structural Steel	Lbs.	1820	1820
Reinforcing Steel	Lbs.	3000	3000
Concrete piles in place	Lin. Ft.	988	988
Bridge Guard Rail	Lin. Ft.	206	206
Asphalt Wearing Surface	Sq. Yds.	233	233

\* See Special Provisions.  
Note: All excavation for bridge was class I Excavation.



LOCATION SKETCH

GRouted ROCK BLANKET SKETCHES BENT NO. 1

Drawn - 1956 by W. G. & J. A. K.  
Checked for 1956 by C. S. A.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1A of 2

## FINAL PLANS

### BRIDGE OVER LITTLE INDIAN CREEK

STATE ROAD FROM RTE. SW. NORTHEAST TO PRESENT RTE. 59  
ABOUT 8.2 MILES N.E. OF JACKSON  
PROJECT NO. 167-48.5 (1) (2) STA. 167+48.5

CAPE GIRARDEAU COUNTY

DESIGNED

By *W. G. & J. A. K.* 5-2-1956  
Checked by *W. G. & J. A. K.* 5-2-1956

STA. 27A-17

17D 10033

N-198



