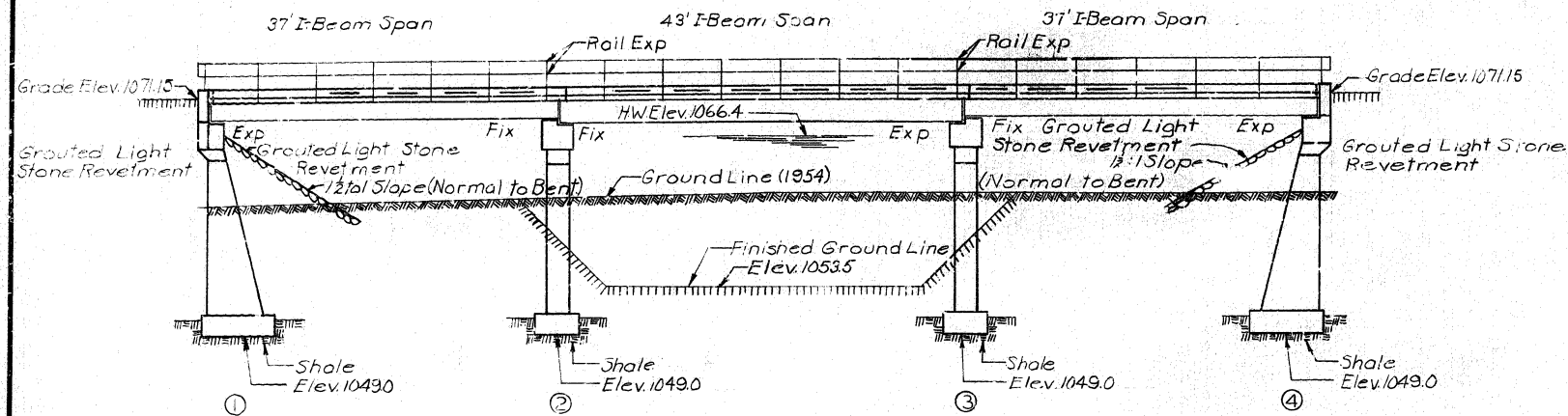
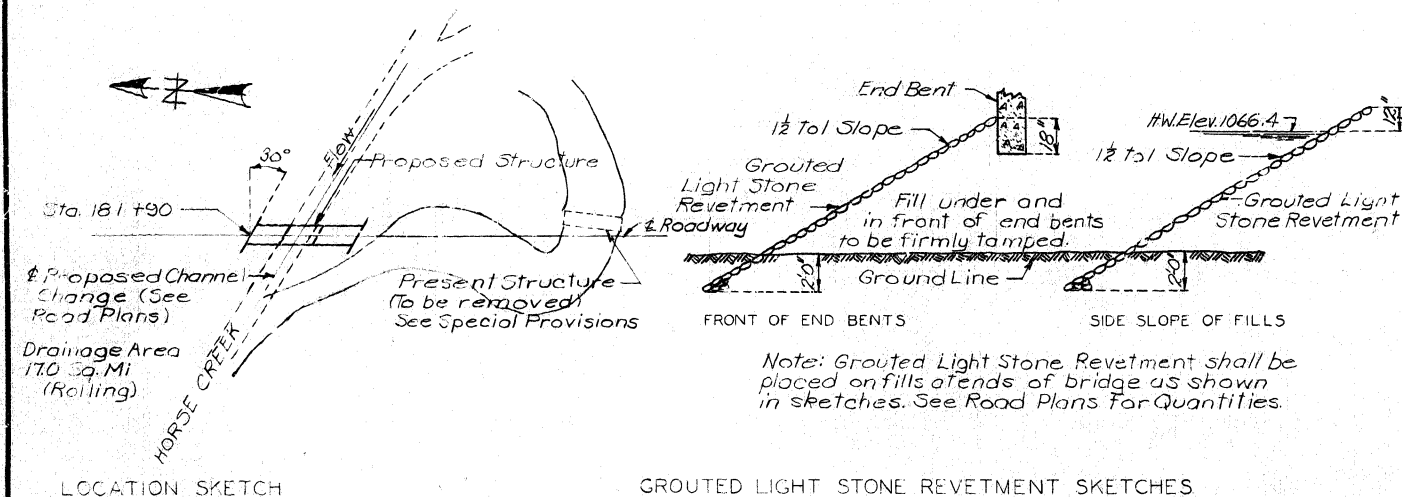
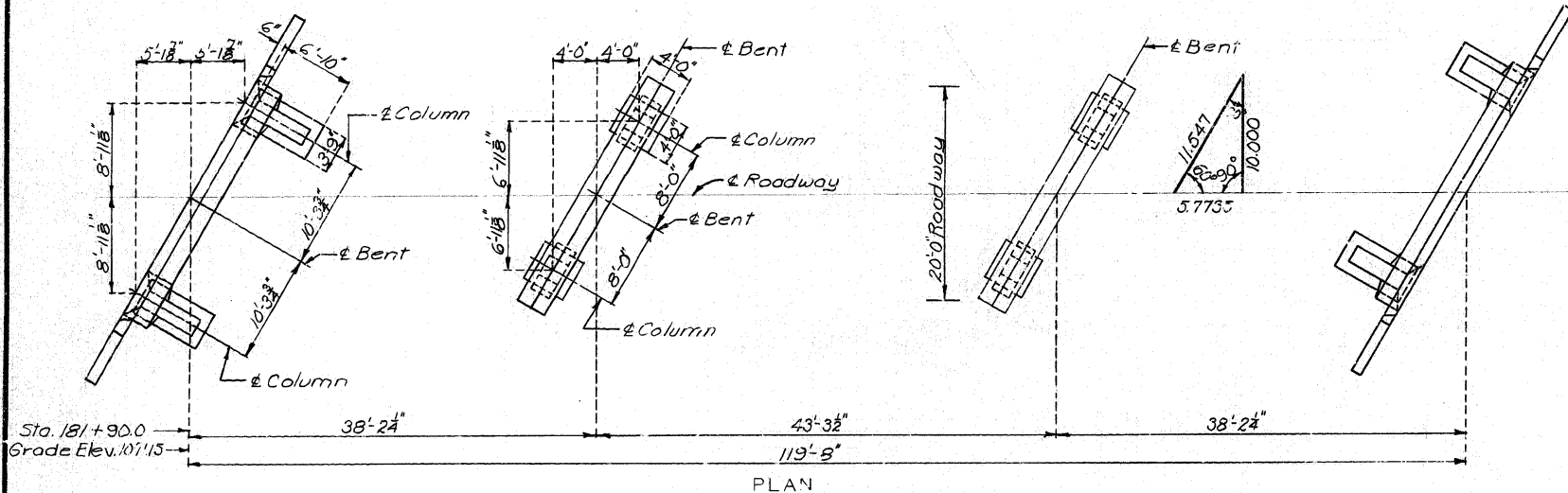


MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	5-188(1) SEC. B(SD)	19		



Note: Footings shall be carried at least 18" into and cast against vertical faces of firm undisturbed shale or other soft rock. If solid rock is encountered, all loose, shelly, or disintegrated material shall be removed and the footings placed on hard, solid undisturbed rock.



Drawn FEB. 19 55 by D.K.J.
Checked Feb. 19 55 by J.D.M.

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

GENERAL NOTES:

Design Specifications A.A.S.H.O. 1953
Loading: H10-44
Structural Steel Stress: 18,000 ψ /in.
Reinforcing Steel Stress: 18,000 ψ /in.
Class "B" Concrete Stress: 1000 ψ /in.
All concrete shall be Class "B".
Rivets 3/4" holes 1/2" except in handrail where rivets shall be 5/8" holes 1/2".
Field connections shall be riveted except as noted in handrail details or, if the Contractor desires to eliminate all field riveting on this project, he may use machine bolts except for the 5/8" button head bolts specified for handrail heads and nuts of machine bolts shall be American Standard Regular.
Paint: Shop, none; Field, contact surfaces of bolted field connections one coat of red lead and surfaces inaccessible after erection three coats of red lead. No other paint to be applied by Contractor. Red lead required shall be furnished by Contractor.
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 3B-19A (1) of the Standard Specifications.

COMPLETE BILL OF REINFORCING STEEL									
No.	Size	Length	Mark	Location	Bending Sketches	Cutting Diagrams			
Superstructure									
176	#5	2'-9"	C1	Curb	2'-11 1/2" 7"	4'-12" 3"			
6	#6	37'-3"	C2	"	5'-3 1/2" 11 1/2"	7'-4 1/2" 4'-1 1/2"			
6	#6	38'-6"	C3	"	8'-3" 11 1/2"	11'-6" 4'-1 1/2"			
12	#6	22'-3"	C4	"	5 V2 CUT 10	14 V4 CUT 56			
168	#4	22'-0"	S1	Slab	3'-2 1/2" 10 1/2"	3'-2 1/2" 10 1/2"			
83	#4	24'-0"	S2	"	23'-0 1/2" 3'-2 1/2"	21'-10" 3'-2 1/2"			
128	#4	19'-9"	S3	"	26'-3" 34"	25'-6" 34"			
48	#4	26'-3"	S4	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
88	#4	25'-6"	S5	"	6'-0" 34"	3'-3 1/2" 34"			
6	#4	25'-6"	S6	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
64	#4	22'-3"	S7	"	6'-0" 34"	3'-3 1/2" 34"			
End Bents No. 1 & 4									
28	#5	4'-9"	D1	Footings	23'-5" 61"	24'-5" 112"			
12	#6	7'-0"	F2	Haunch	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
12	#6	7'-0"	F3	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
4	#6	26'-9"	H1	Br. wall	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
6	#6	27'-0"	H2	Beam	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
4	#6	25'-0"	H3	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
8	#11	25'-0"	H4	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
20	#5	8'-6"	H6	Wing	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
4	#5	6'-6"	H7	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
4	#5	7'-9"	H8	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
8	#6	9'-9"	T1	Wing	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
52	#4	11'-3"	U5	Beam	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
16	#4	3'-3"	U6	Beam	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
52	#4	3'-3"	V1	Br. wall	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
10	#4	8'-3"	V2	Wing	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
4	#4	5'-3"	V3	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
56	#3	11'-6"	V4	Column	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
12	#6	17'-9"	V5	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
16	#6	17'-3"	V6	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
24	#4	15'-3"	V7	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
Int. Bents No. 2 & 3									
32	#6	4'-9"	D1	Footings	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
32	#6	7'-3"	F1	Haunch	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
12	#7	26'-0"	G1	Beam	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
12	#8	23'-9"	G2	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
4	#6	23'-9"	G3	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
4	#4	23'-9"	G4	Br. Hch.	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
32	#6	17'-0"	P1	Column	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
56	#3	7'-9"	P2	"	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
48	#4	10'-0"	U1	Beam	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
64	#4	2'-6"	U2	Br. Hch.	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			
16	#4	3'-6"	U3	Beam	24 S4 CUT 48	23 S5 CUT 88 & BEND AS SHOWN			

B.M. Elev. 1065.89 + on S. End of W. Hubguard of Bridge. 7' Lt Sta 186+89.0

BRIDGE OVER HORSE CREEK
STATE ROAD FROM ROUTE SE. SOUTH TO ROUTE 150
ABOUT 7.5 MILES N.W. OF LOCKWOOD
PROJECT NO. S-198(1) SEC. B(SD) STA. 181+90
DADE COUNTY

SUBMITTED BY J.A. Williams DATE 2/25/1955
APPROVED BY R.M. Whitten DATE 2/25/1955

FINISHED
STDC-1083
P-844

ESTIMATED QUANTITIES			
Item	Substr.	Superstr.	Total
Class I Excavation for Structures Cu.Yds.	140		140
Class 2 Excavation for Structures Cu.Yds.	76		76
Class "B" Concrete Cu.Yds.	67.0	57.4	124.4
Fabricated Structural Steel Lbs.		43,520	43,520
Gray Iron Alloy Castings Lbs.		1280	1280
Reinforcing Steel Lbs.	7830	10470	18360

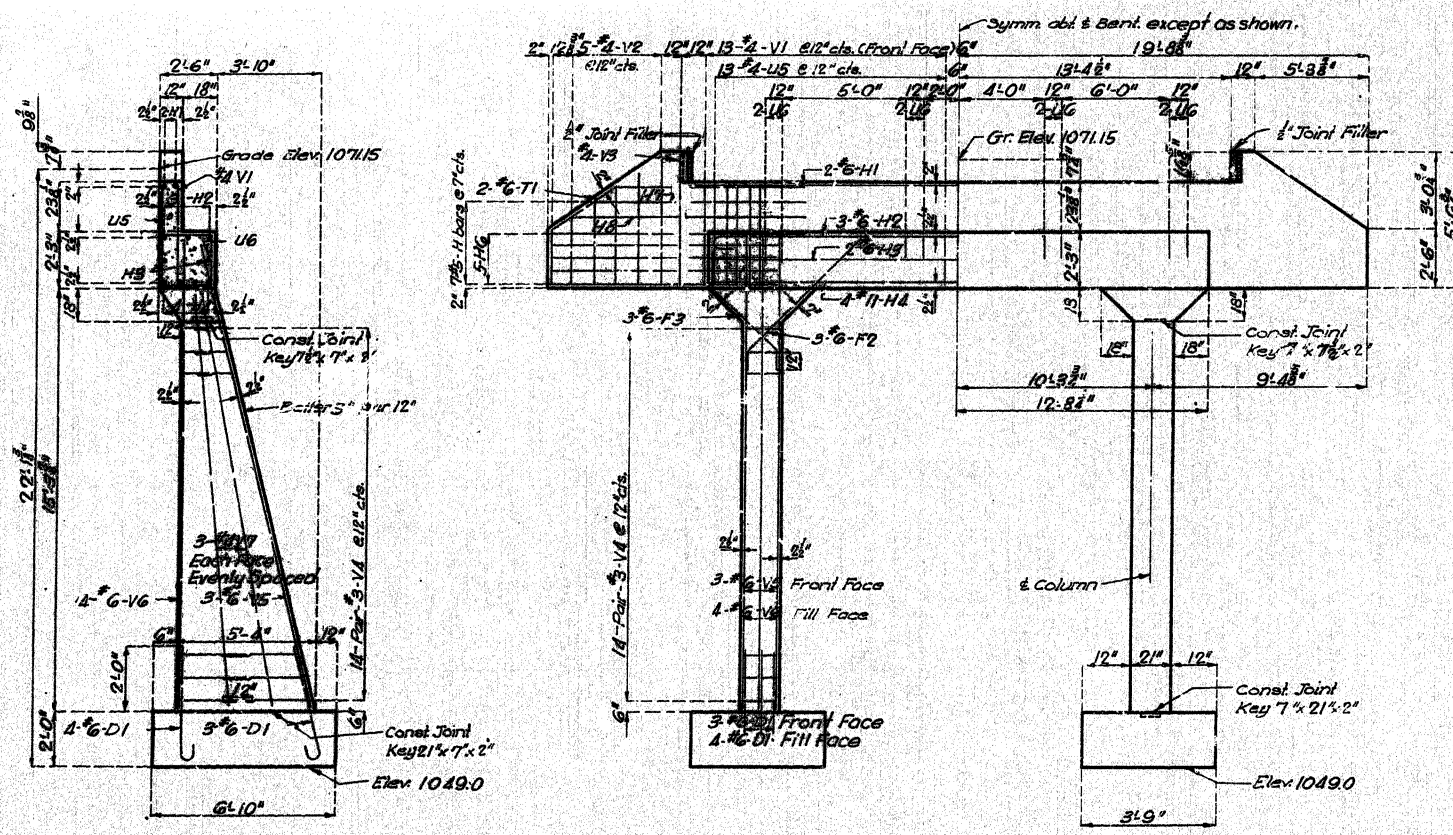
Note: Excavation for bridge made above Elev. 10535 will be paid for as Class I Excavation for Structures.
Excavation for bridge made below Elev. 10535 will be paid for as Class 2 Excavation for Structures.

FINISHED
Sheet No. 1 of 4

SEE FINAL PLANS BROWN-LINES

MISSOURI STATE HIGHWAY DEPARTMENT

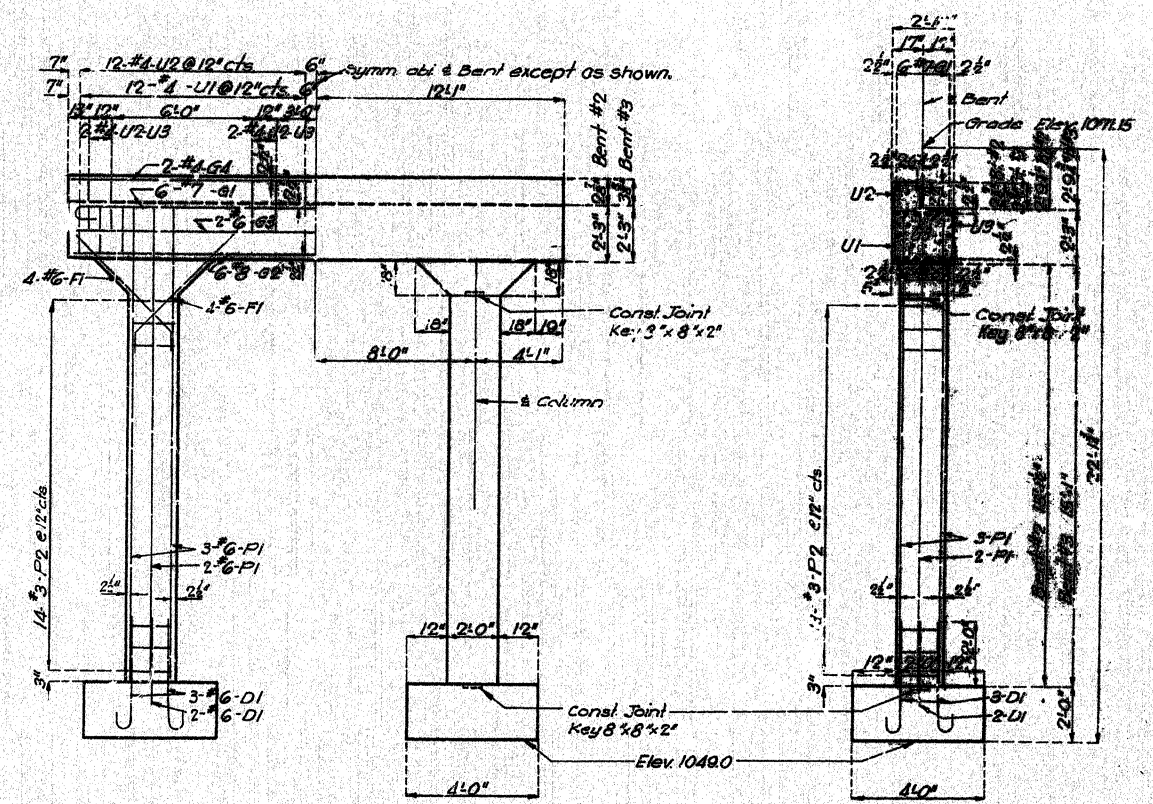
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS



SECTION AT E

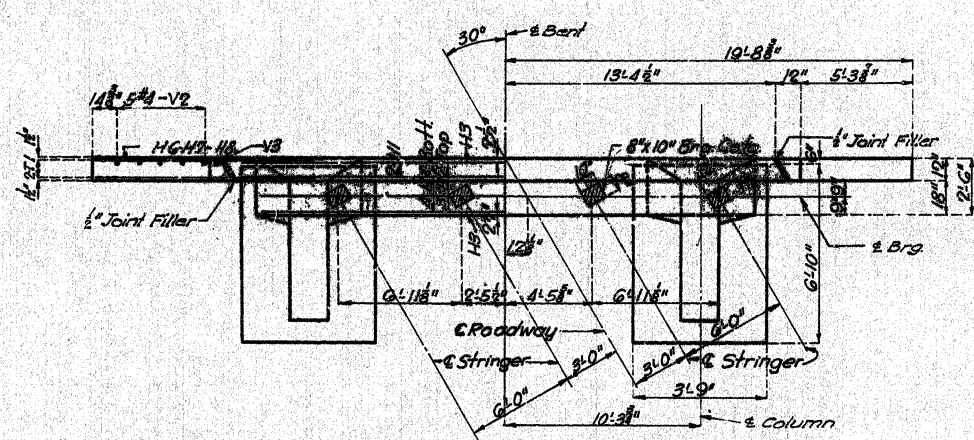
ELEVATION

Note: Fill at end bents No. 1&4 shall not be carried above bottom of beam and wings until superstructure spans (1-2) & (3-4) are in place.



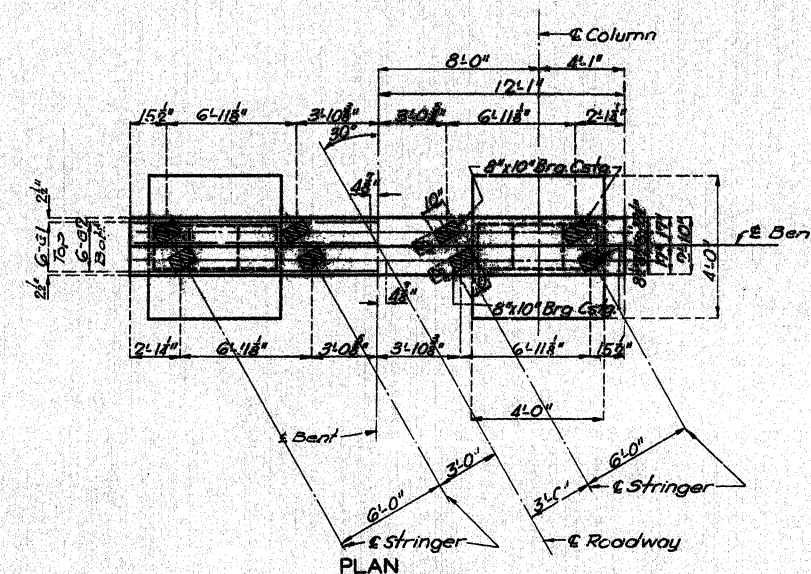
ELEVATION

SECTION AT E



PLAN

DETAILS OF END BENTS NO. 1&4



DETAILS OF INT. BENTS NO. 2&3

FINISHED

BRIDGE OVER HORSE CREEK

STATE ROAD FROM ROUTE 5E. SOUTH TO ROUTE 160
ABOUT 7.5 MILES N.W. OF LOCKWOOD
PROJECT NO. S-198(1) SEC. B(SD) STA. 181+90

DADE

COUNTY

FINISHED

FINISHED

P-844

Assembled Feb. 1955 by D.K.J. & W.G.S.
Checked Feb. 1955 by D.P.M.

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

Sheet No. 2 of 4

SEE FINAL PLANS FOR VERTICAL LINES

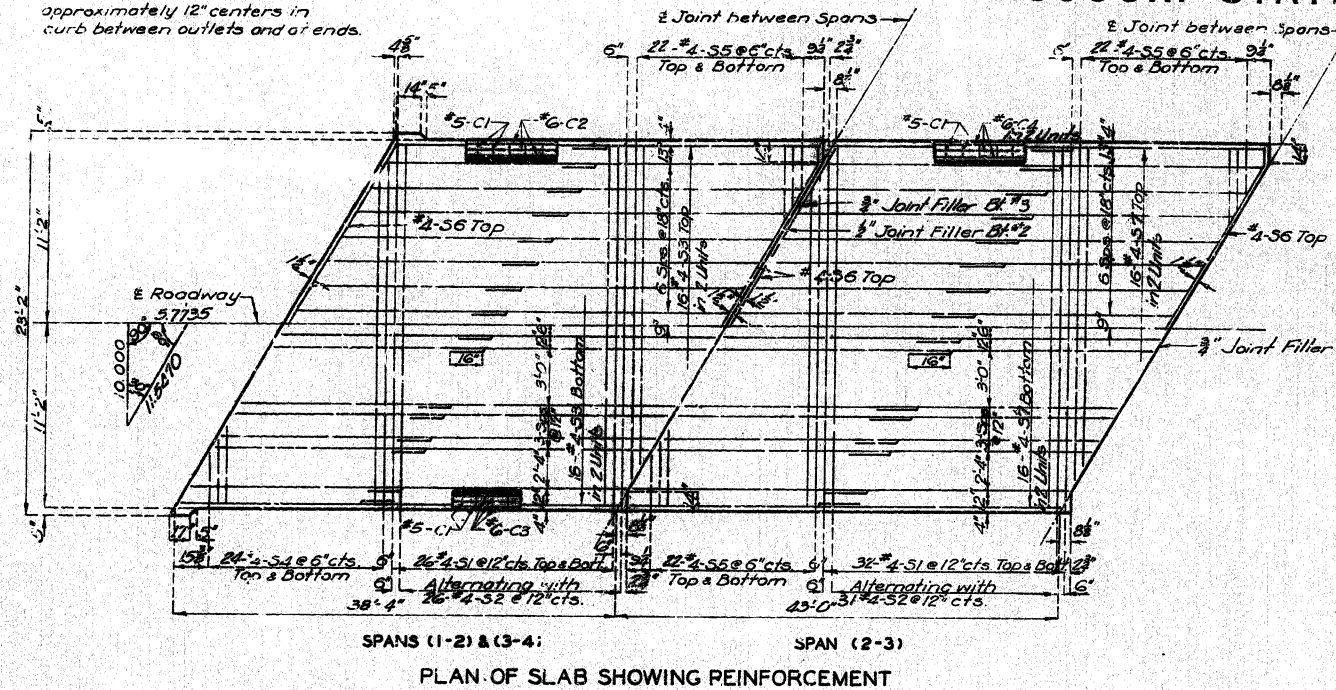
2 col. End & 2 col. Int. 20' or 22' Ro. 4' Square & Skewed H10

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MISSOURI STATE HIGHWAY DEPARTMENT

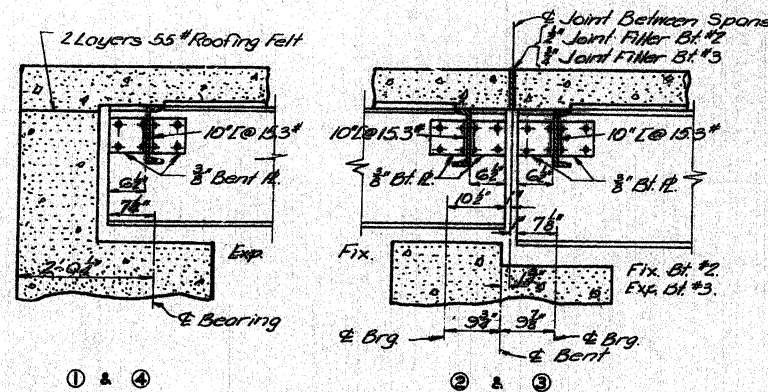
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	7-757(1)	19		

Note: Space dowel bars C1 at approximately 12" centers in curb between outlets and at ends.

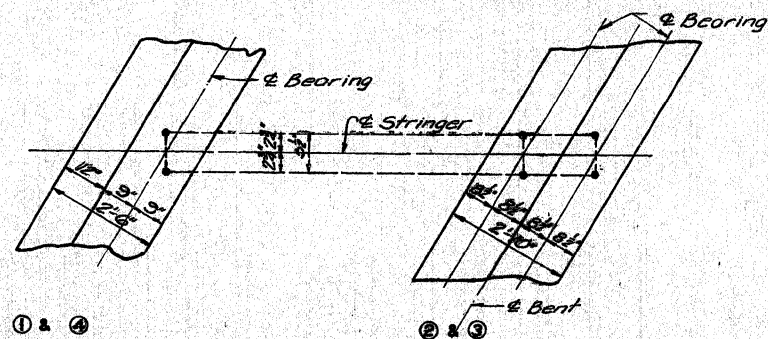


MISSOURI STATE HIGHWAY DEPARTMENT

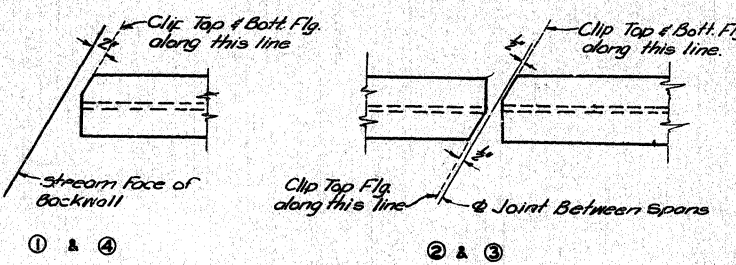
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	578579 Sec. 8 (S.D.)	19		



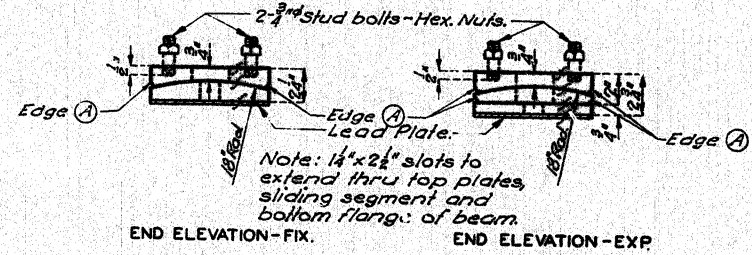
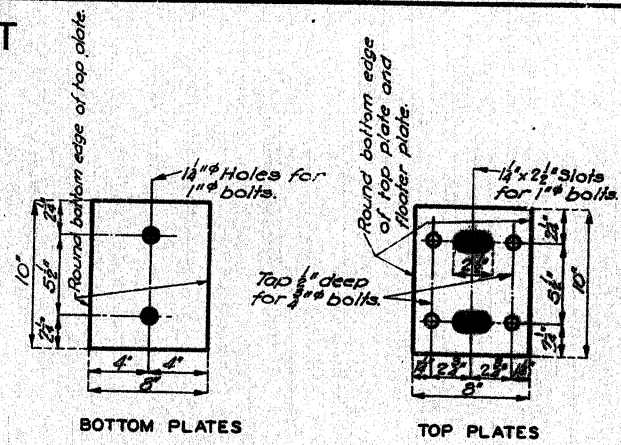
PART LONGITUDINAL SECTION



PART ANCHOR BOLT PLAN



DETAILS OF FLANGES AT ENDS OF BEAMS



Required: 12 Sets Each set consists of 5 plates each.

GENERAL NOTES:
Finish all surfaces marked S.
Bearings castings shall be either gray iron alloy or cast steel, but payment will be made as Gray Iron Alloy.
All bolts and nuts shall be paid for as structural steel.
Anchor bolts for 8"x10" castings shall be 1" swaged bolts, no heads or nuts and are to extend 10" into concrete. Top end of anchor bolts shall be above the top castings but not higher than 1/2" below the top surface of the bottom flange of beam.
Lead plates under bearings shall be approximately 1/2" thick and weigh 8#150. Cost of lead plates shall be included in price bid for other items.
Edge A to be rounded (1/2" to 3/4" radius)

BRIDGE OVER HORSE CREEK
STATE ROAD FROM ROUTE SE SOUTH TO ROUTE 160
ABOUT 75 MILES NW OF LOCKWOOD
PROJECT NO. S-198(1) SEC. B (SD) STA. 181+90

DADE COUNTY

FINISHED

Assembled Feb. 1955 by J.L. F.S.M.S.
Checked Feb. 1955 by J.D.M.

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

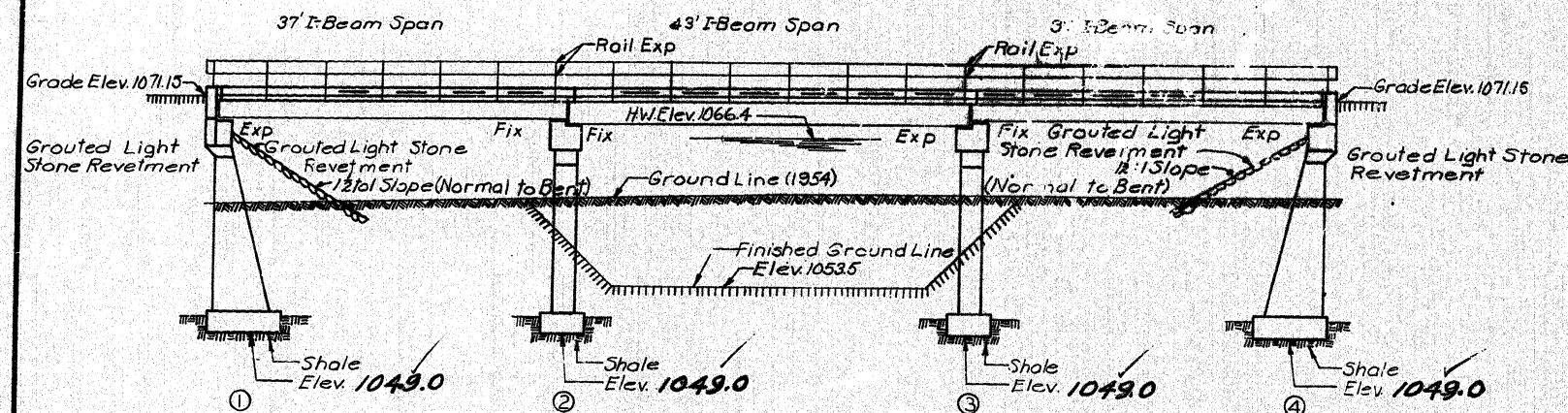
Sheet No. 4 of 4

P-844

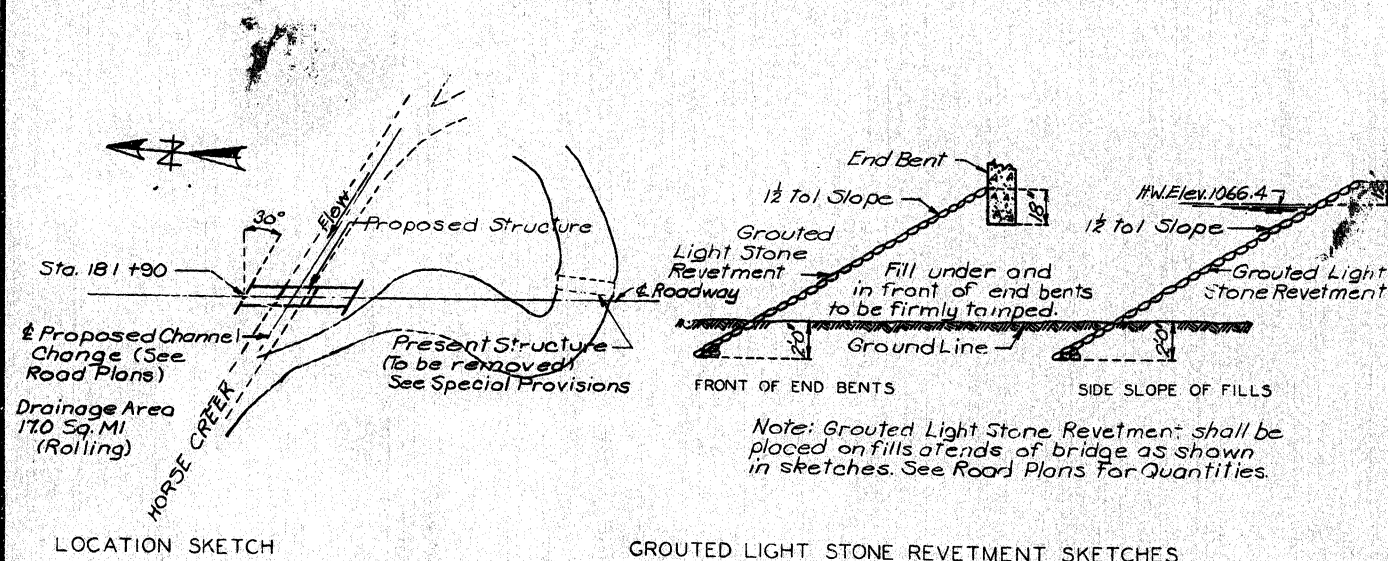
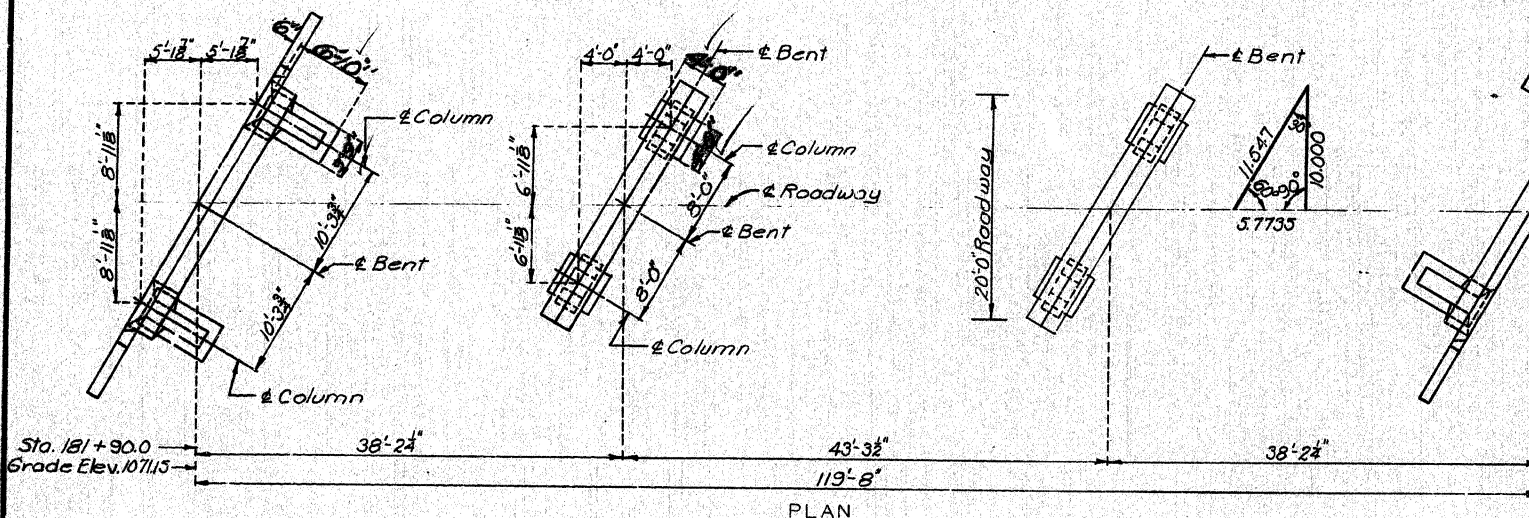
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19		

FINAL PLANS



Note: Footings shall be carried at least 18" into and cast against vertical faces of firm undisturbed shale or other soft rock. If solid rock is encountered, all loose, shelly, or disintegrated material shall be removed and the footings placed on hard, solid undisturbed rock.



Drawn FEB. 19 55 by D.K.J.
Checked Feb. 19 55 by J.D.M.

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

GENERAL NOTES:

Design Specifications A.A.S.H.O. 1953
Loading: H10-44
Structural Steel Stress: 18,000 ψ /in.
Reinforcing Steel Stress: 18,000 ψ /in.
Class "B" Concrete Stress: 1000 ψ /in.
All concrete shall be Class "B".
Rivets 3/4" holes 1/2" except in handrail where rivets shall be 5/8" holes 3/4".
Field connections shall be riveted except as noted in handrail details or, if the Contractor desires to eliminate all field riveting on this project, he may use machine bolts except for the 5/8" button head bolts specified for handrail heads and nuts of machine bolts shall be American Standard Regular.
Paint: Shop, none; Field, contact surfaces of bolted field connections one coat of red lead and surfaces inaccessible after erection three coats of red lead. No other paint to be applied by Contractor. Red lead required shall be furnished by Contractor. 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 38-19A(1)h of the Standard Specifications.

FINAL PLANS

COMPLETE BILL OF REINFORCING STEEL

No.	Size	Length	Mark	Location	Bending Sketches	Cutting Diagrams
Superstructure						
176	5/8"	2'-9"	C1	Curb	2'-11 1/2" T	4'-11 1/2" 3"
6	5/8"	37'-3"	C2	"	5'-3 1/2" 2'-11 1/2"	7'-4 1/2" 4'-11 1/2"
6	5/8"	38'-6"	C3	"	8'-3"	11'-6"
12	5/8"	22'-3"	C4	"	5 V2 CUT 10	4 V4 CUT 56
168	5/8"	22'-0"	S1	Slab	3'-2 1/2" 10 1/2"	2'-2 1/2" 10 1/2"
83	5/8"	24'-0"	S2	"	25'-0" 3'-2 1/2"	21'-10" 3'-2 1/2"
128	5/8"	19'-9"	S3	"	26'-3"	25'-0"
48	5/8"	26'-3"	S4	"	24 S4 CUT 48	23 S5 CUT 88
88	5/8"	26'-6"	S5	"	BEND AS SHOWN	BEND AS SHOWN
6	5/8"	25'-6"	S6	"		
64	5/8"	22'-3"	S7	"		
End Bents No. 1 & 4						
28	5/8"	4'-9"	D1	Footing	23'-5" 61"	3'-5 1/2" D1
12	5/8"	7'-0"	F2	Haunch	Varies 54-35	
12	5/8"	7'-0"	F3	"	G1-H2-S4-S5	
4	5/8"	26'-9"	H1	Skwall	2'-9 1/2" 5'-3 1/2"	
6	5/8"	27'-0"	H2	Beam		
4	5/8"	25'-0"	H3	"		
8	7/8"	25'-0"	H4	"		
20	5/8"	8'-6"	H6	Wing		
4	5/8"	6'-6"	H7	"		
4	5/8"	7'-9"	H8	"		
8	5/8"	8'-9"	T1	Wing		
52	5/8"	11'-3"	U5	Beam		
16	5/8"	3'-3"	U6	Beam		
52	5/8"	3'-3"	V1	Skwall		
10	5/8"	8'-3"	V2	Wing		
4	5/8"	5'-3"	V3	"		
56	5/8"	11'-6"	V4	Column		
12	5/8"	17'-9"	V5	"		
16	5/8"	17'-9"	V6	"		
24	5/8"	13'-3"	V7	"		
Int. Bents No. 2 & 3						
32	5/8"	4'-8"	D1	Footing		
32	5/8"	7'-3"	F1	Haunch		
12	5/8"	26'-0"	G1	Beam		
12	5/8"	27'-9"	G2	"		
4	5/8"	23'-3"	G3	"		
4	5/8"	23'-3"	G4	Bm. Hch.		
32	5/8"	17'-0"	P1	Column		
56	5/8"	7'-9"	P2	"		
48	5/8"	10'-0"	U1	Beam		
64	5/8"	2'-6"	U2	Bm. Hch.		
16	5/8"	3'-6"	U3	Beam		

C1-U2-U3-U6-V4

B.M. Elev. 1065.89 + on S. End of W. Hubguard of Bridge. 7' Lt. Sta. 186 + 89.0

BRIDGE OVER HORSE CREEK
STATE ROAD FROM ROUTE SE. SOUTH TO ROUTE 160
ABOUT 7.5 MILES N.W. OF LOCKWOOD
PROJECT NO. S-198(1) SEC. B (SD) STA. 181 + 90
DADE COUNTY

SUBMITTED BY J.A. Williams DATE 2/25/1955
FINISHED BY J.M. Williams DATE 2/25/1955

FINISHED

STDG10R3
P-844

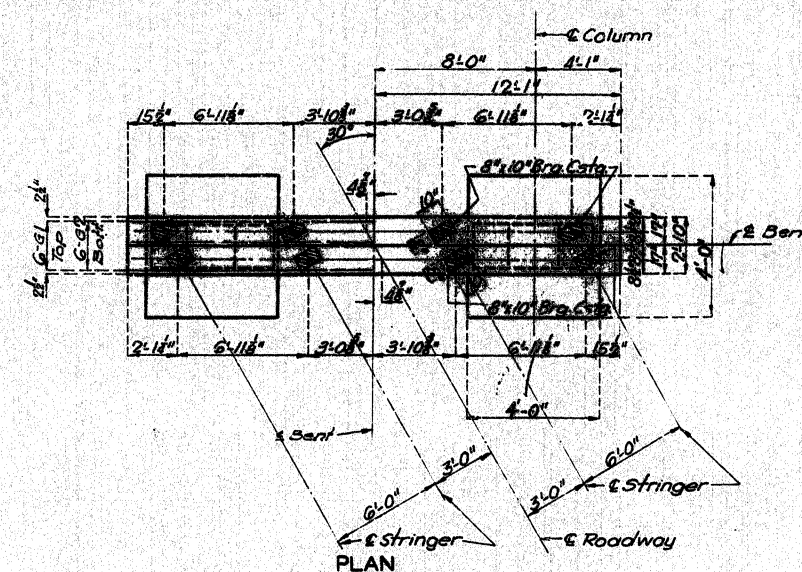
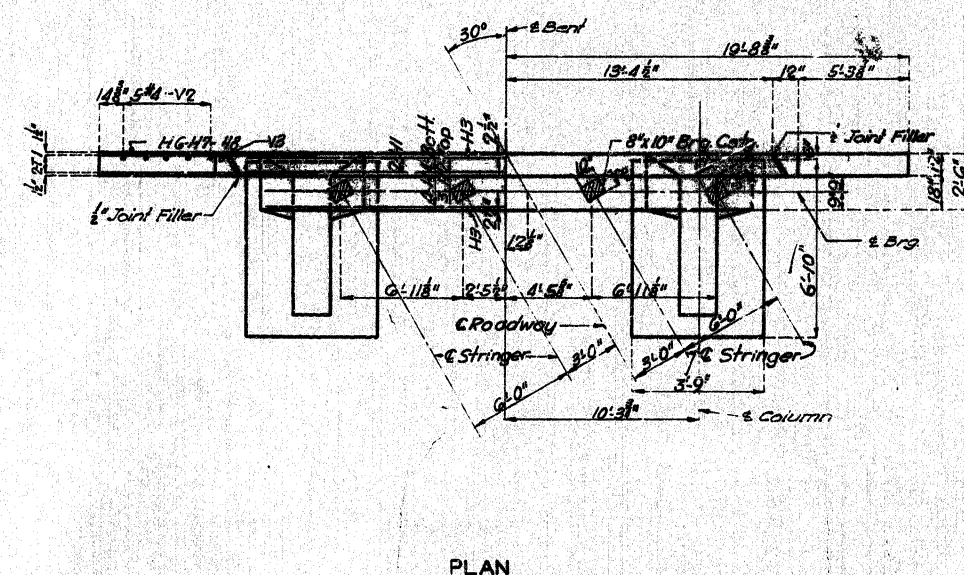
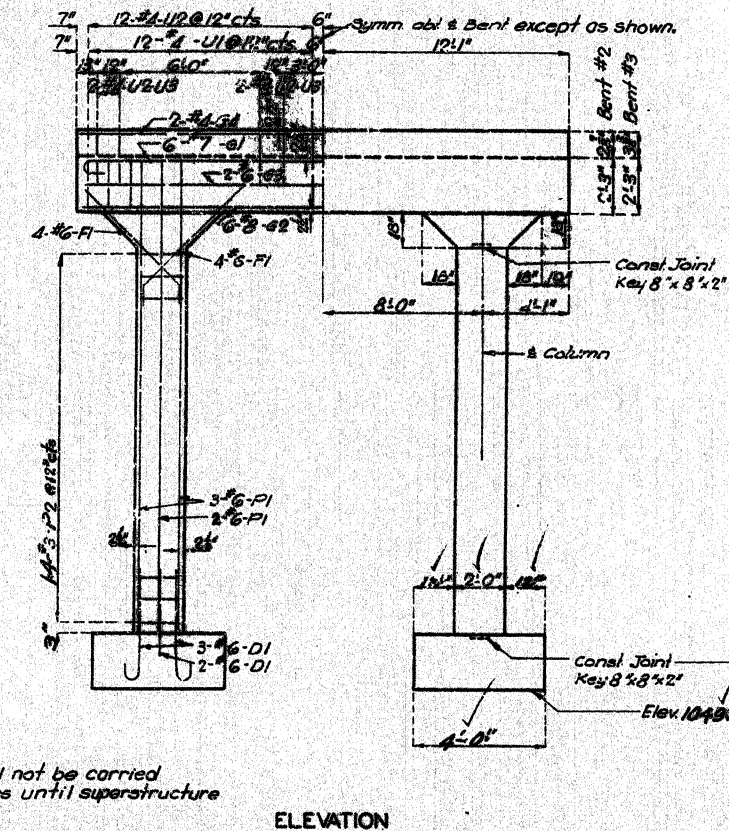
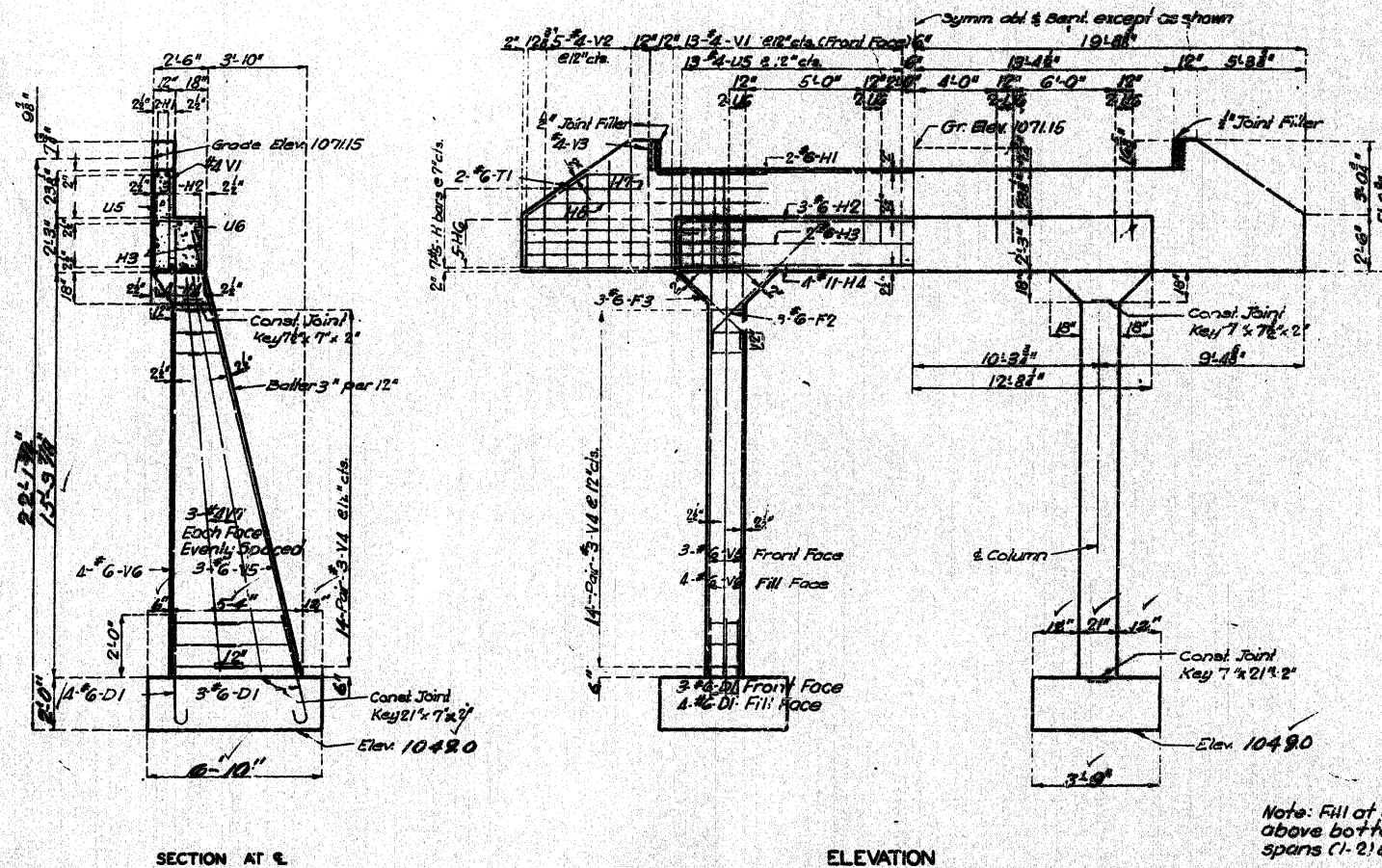
Sheet No. 1A of 2

FINAL PLANS

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	5-1984 (Sec. B)	19		

FINAL PLANS



BRIDGE OVER HORSE CREEK

STATE ROAD FROM ROUTE SE. SOUTH TO ROUTE 160
ABOUT 7.5 MILES N.W. OF LOCKWOOD
PROJECT NO. 5-1984 (SEC. B) STA. 181+90

DADE COUNTY

FINISHED

FINISHED

P-844

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

Sheet No. 2A of 2

FINAL PLANS

2 Col. End & 2 Col. Int. 20' or 22' Ro. 4' Square & Skewed HIO

Assembled Feb. 1955 by D.K.J. & W.G.S.
Checked Feb. 1955 by W.D.M.

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