

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	294	19		

DATA FOR FILE DRIVING

Class 1 Excavation for Structures	154	25.8
Class 2 Excavation for Structures	160	16.3
Class 3 Excavation for Structures	18.5	16.0
Class 4 Excavation for Structures	26.80	26.80

Note: Excavation of all existing materials under bridge shall be made to not less than 3'-0" below bottom of steel and not less than 4'-0" outside of curb lines. Payment for this excavation outside the limits of excavation for structure will be made at contract price for Roadway Excavation.

Note: All piling shall be creosoted timber. Estimated quantities shown on plans are based on the following lengths: 4 @ 15'-0", 10 @ 30'-0", and 10 @ 35'-0". These indicated lengths are approximate only. Proper lengths to give required bearing and/or penetration will be authorized by the engineer.

Two timber test piles shall be driven, one near Bent No. 1 and one near Bent No. 3.

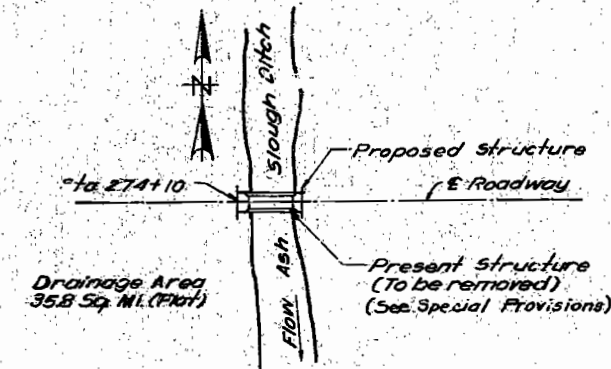
All wing piles shall be driven to full penetration of lengths given on plans. Piles other than wing piles shall be driven to not less than the specified "Plan" capacities, and to the minimum penetration noted, unless the pile lengths authorized and furnished fail to give "Plan" capacities in which case not less than the "Comp." capacities shall be obtained.

BILL OF REINFORCING STEEL

No.	Size	Length	Mark	Location	Bending Sketches
11	#5	3'-0"	C1	Curb	
12	#6	28'-6"	C2	"	
6	#6	22'-9"	C3	"	
13	#5	24'-3"	S1	Slab	
65	#5	24'-9"	S2	"	
90	#5	23'-6"	S3	"	
45	#5	22'-9"	S4	"	

GENERAL NOTES:

- Design Specifications A.A.S.H.O.-1953
- Loading H15-44
- Class "B" Concrete Stress 1,000 ψ /in²
- Reinforcing Steel Stress 18,000 ψ /in²
- Structural Steel Stress 16,000 ψ /in²
- Creosoted Timber Stress 1,600 ψ /in²
- All concrete shall be Class "B"
- All timber shall be creosoted and shall be 1600 ψ Douglas Fir of the West Coast Region or either Longleaf or Shortleaf 1600 ψ Southern Yellow Pine.
- All timber shall be standard sawn except as noted in timber bill for pile caps.
- All timber shall be cut to billed lengths and shapes and shall be bare as shown before treating. All backing plank are billed 6' long and are to be recut and fitted in the field.
- Rivets $\frac{3}{4}$ " Holes $\frac{1}{2}$ " except as noted.
- Field connections shall be riveted or if the Contractor desires he may use high tensile steel bolts with carbon and washers in place of rivets except for connections noted in handrail details. See Special Provisions.
- Paint: Shop none; Field, contact surfaces of bolted rail connections one coat of red lead and surfaces inaccessible after erection three coats of red lead. No other paint to be applied by the Contractor. Red lead required shall be furnished by the 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 plans it shall conform with the requirements for Pre-moulded Material for Filler as given in Section 38-19A(1)h of the Standard Specifications.



LOCATION SKETCH

ESTIMATED QUANTITIES

Item	Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu. Yds. 70		70
Class 2 Concrete	Cu. Yds. 37.8		37.8
Fabricated Structural Steel	Lbs. 29790		29790
Reinforcing Steel	Lbs. 9420		9420
Creosoted Timber Piles in Place	Lin. Ft. 638		638
Creosoted Timber Pile Cut-offs	Lin. Ft. 72		72
Creosoted Timber	F.B.M. 3310		3310
Test Piles	Lin. Ft. 85		85

Note: Bridge excavation will be allowed for all bents within the horizontal limits shown and noted on bent details. This excavation will be computed from existing ground line to bottom end of 6" x 6" backing supports for end bents and to bottom of sway bracing for interior bents.

All bridge excavation will be paid for as Class 1 Excavation for Structures.

B.M. Elev. 291.74 - Chiseled Sq. in S.W. Abut. of Bridge opp. Sta. 274+ (U.S.G.S. Datum.)

BRIDGE OVER ASH SLOUGH DITCH

STATE ROAD FROM CANALOU TO MATTHEWS

ABOUT 1.0 MILE W. OF MATTHEWS

PROJECT NO. 5-294(4) (CSH) STA. 274+10

NEW MADRID COUNTY

SUBMITTED BY J. A. Williams DATE 3/25/1954
APPROVED BY R. M. Whiston DATE 3/25/1954

FINISHED

FINISHED

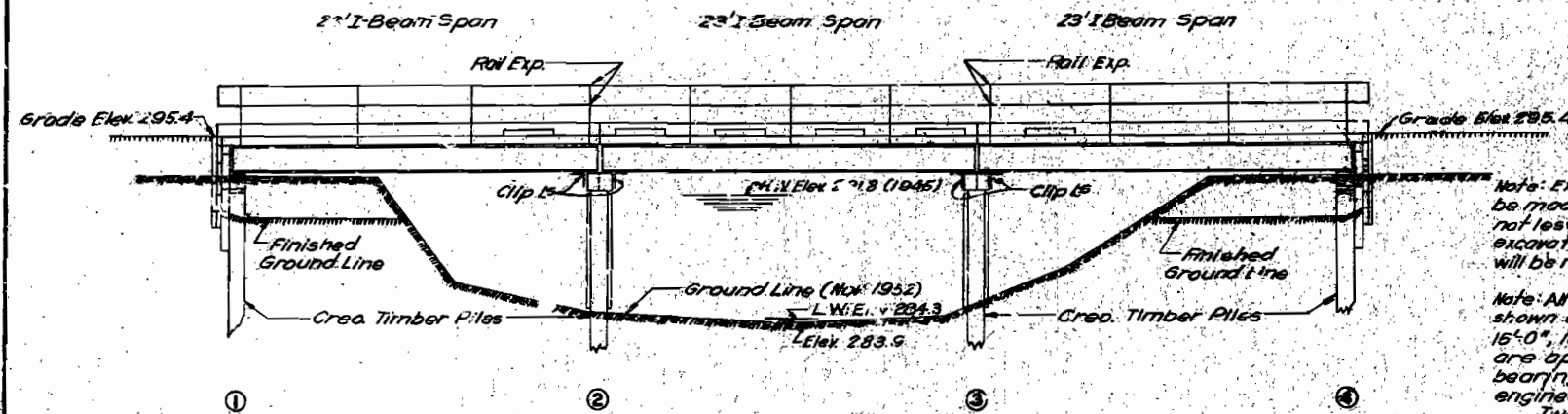
STD.C-110R3

L-619

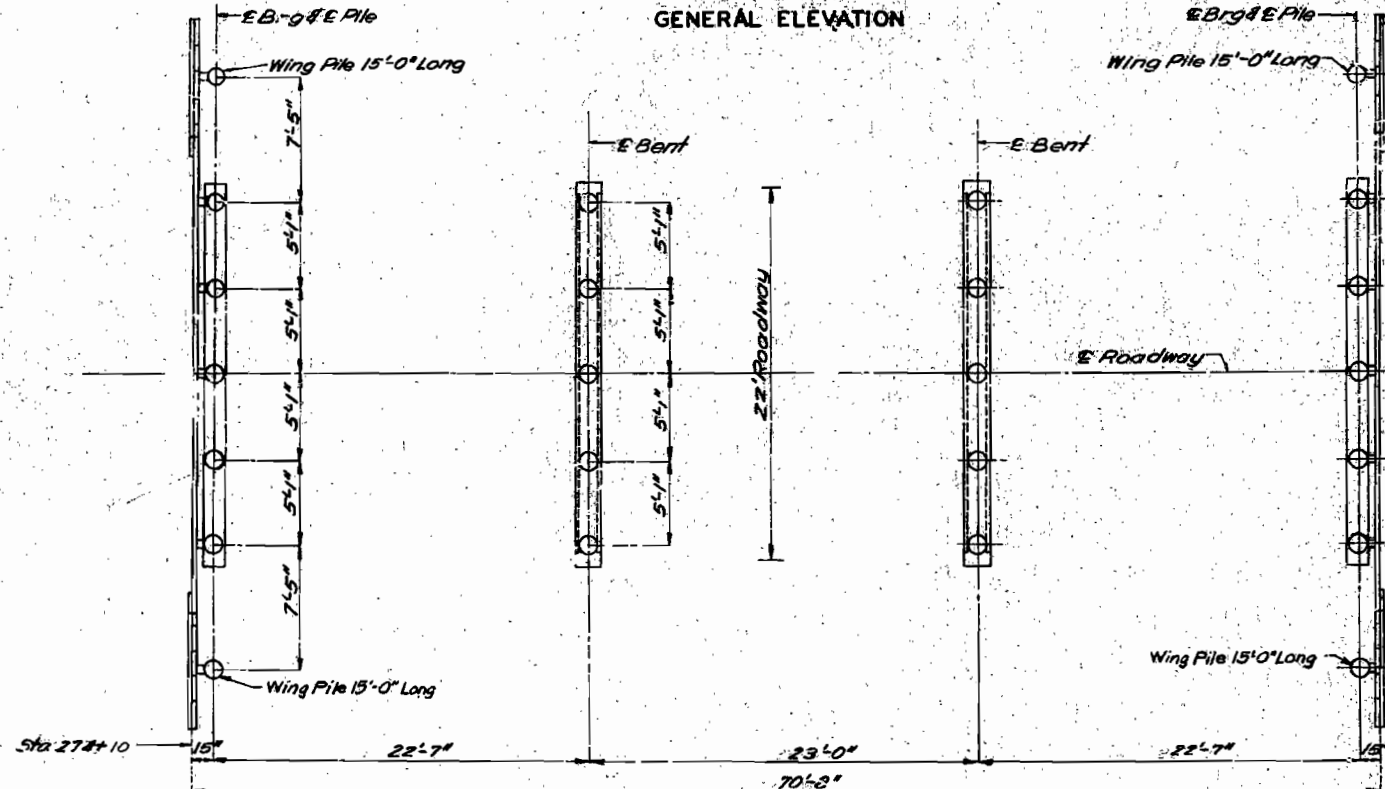
Sheet No. 1 of 3

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80 T. 22 - H15
Rev. Jan. 1951
Rev. Mar. 1953



GENERAL ELEVATION



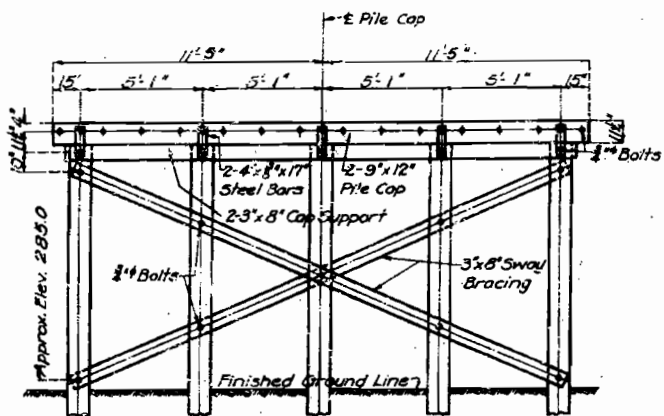
PLAN

Drawn Dec. 1953 by J. A. Williams M.G.S.
Traced
Checked Mar. 1954 by N.W.R.

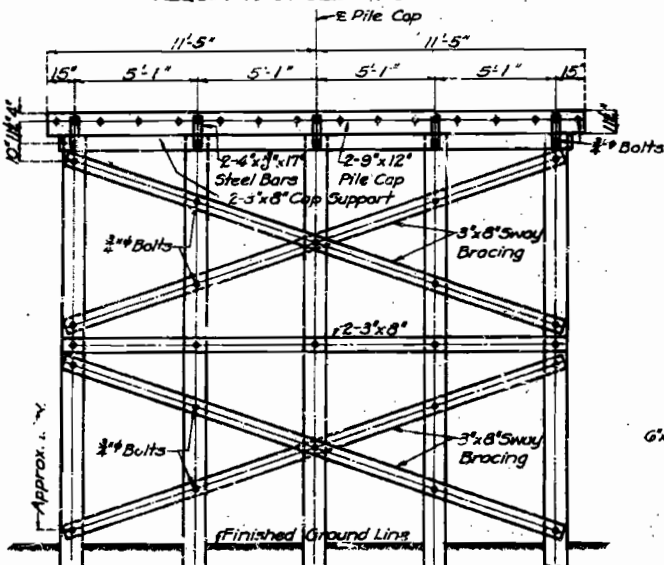
Note: This drawing is not to scale. Follow dimensions.

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	5-294 (4) (SH)	18		



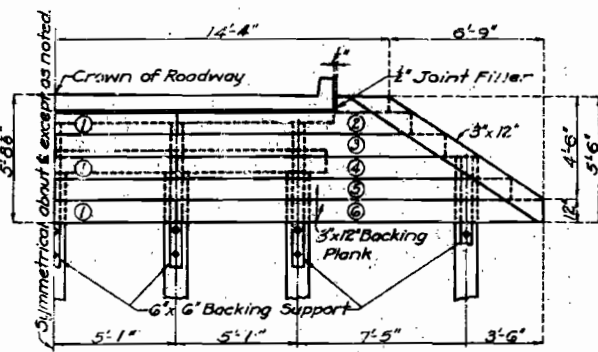
DETAIL OF INTERIOR BENTS NO. 2 & 3
REQUIRING SINGLE BRACING



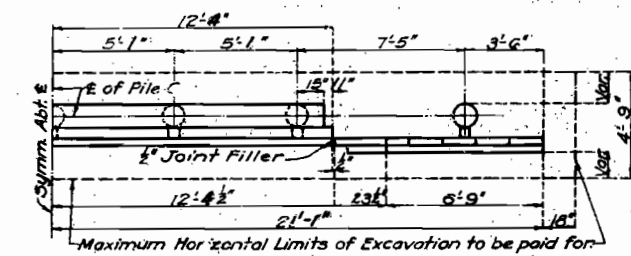
DETAIL OF INTERIOR BENT NO. 2
REQUIRING DOUBLE BRACING

Note: Excavation will be allowed for interior bents with the maximum horizontal limits of 4'-9" in width, and 2'-40" in length.
1-1/4" x 8" x 17" bars required for attaching pile cap to pile cap supports are to be considered substructure hardware and will be included in price bid for timber in place.

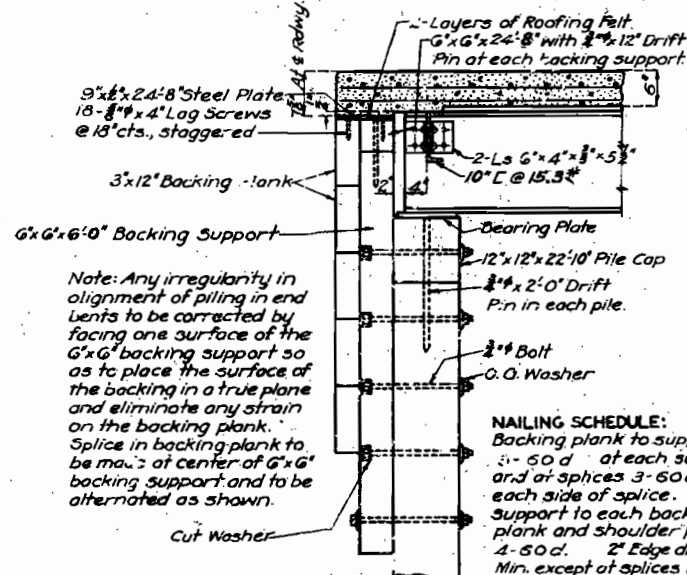
PILE CUT-OFF ELEVATIONS			
BENTS No. 1 & 4	Cut-Off Elev.	BENTS No. 2 & 3	Cut-Off Elev.
Wing Piles	292.72		



HALF ELEVATION OF END BENTS NO. 1 & 4

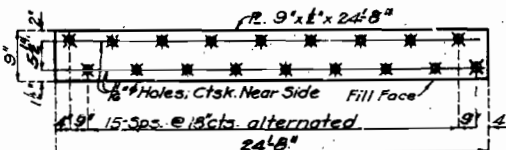


HALF PLAN OF END BENTS NO. 1 & 4

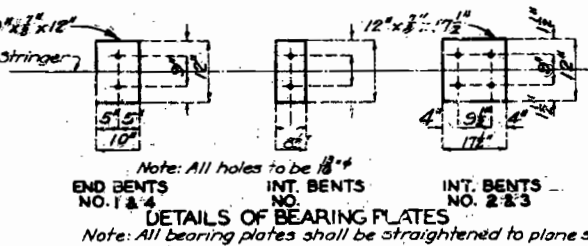


SECTION THRU END BENT NEAR 1

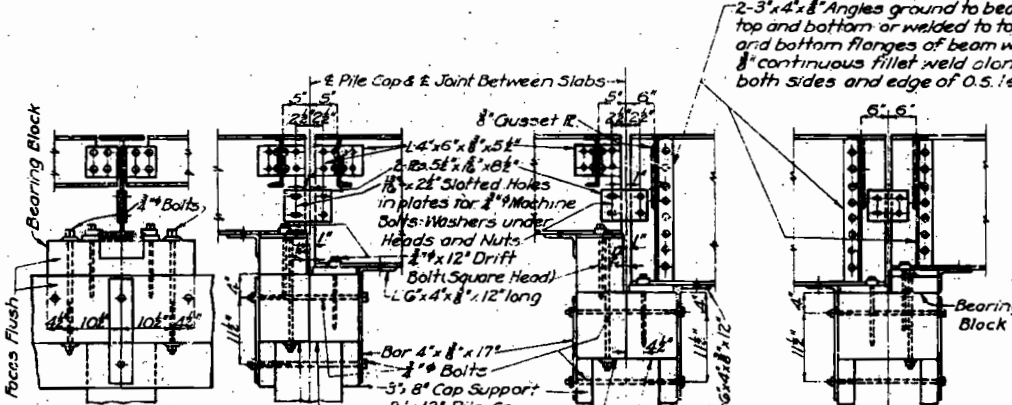
Note: As noted in Section 30-4 of Specifications an approved spike timber grid shall be used between piles.
Spike 3" x 12" x 12".



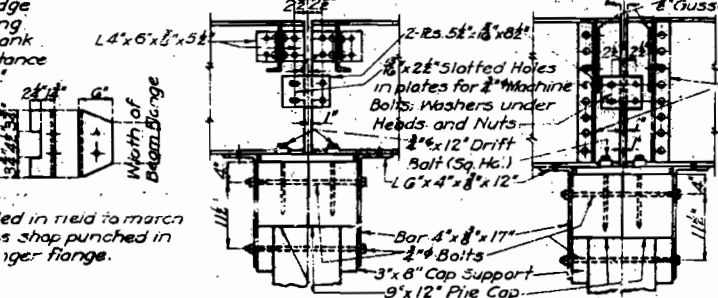
CAP PLATE AT END BENTS



DETAILS OF BEARING PLATES

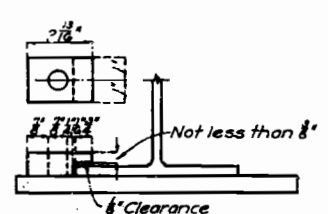


INTERIOR BENTS FOR UNEQUAL DEPTH STRINGERS



INTERIOR BENTS FOR EQUAL DEPTH STRINGERS

Note: Pile caps 12" x 18" may be substituted for 2-9" x 12" pile caps shown.
Field drill lower hole in one 4" x 17" bar at each pile.



DETAILS OF FLANGE CLAMP

SUBSTRUCTURE TIMBER BILL					Shaping and Boring Sketches	
Piece	No.	Size	Length	Remarks	Shaping and Boring Sketches	BACKING SUPPORT
Backing Plank	6	3" x 12"	10'-8"	Cut to length		
Shoulder Plank	4	3" x 6"	23'	Cut to length & shape	EDGE SUPPORT	PILE CAP-INTERIOR BENT
Backing Support Cap	2	6" x 6"	24'-8"	Cut to length		
Pile Cap	4	9" x 12"	27'-10"	Cut to length		
Cap Support	4	3" x 8"	21'-10"			
Bracing	4	3" x 8"	21'-10"			
Bearing Blocks	4	6" x 6"	6'-6"			

Note: Pile caps to be classified as 'Beams and Stringers'.
All other timber to be classified as 'Joists and Plank'.
* 5/25 to exact depth of 11 1/2".
No holes are to be bored in end bent pile caps or in 12" x 18" interior pile caps (if used) before treating.

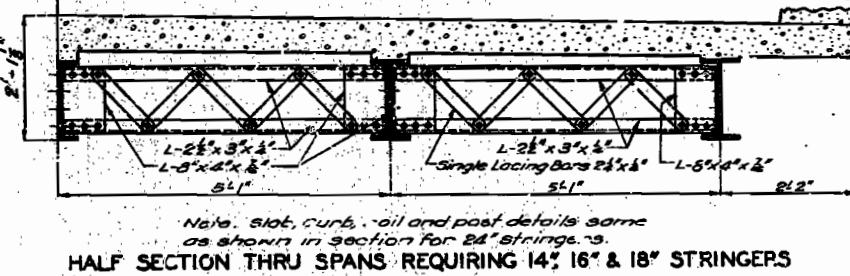
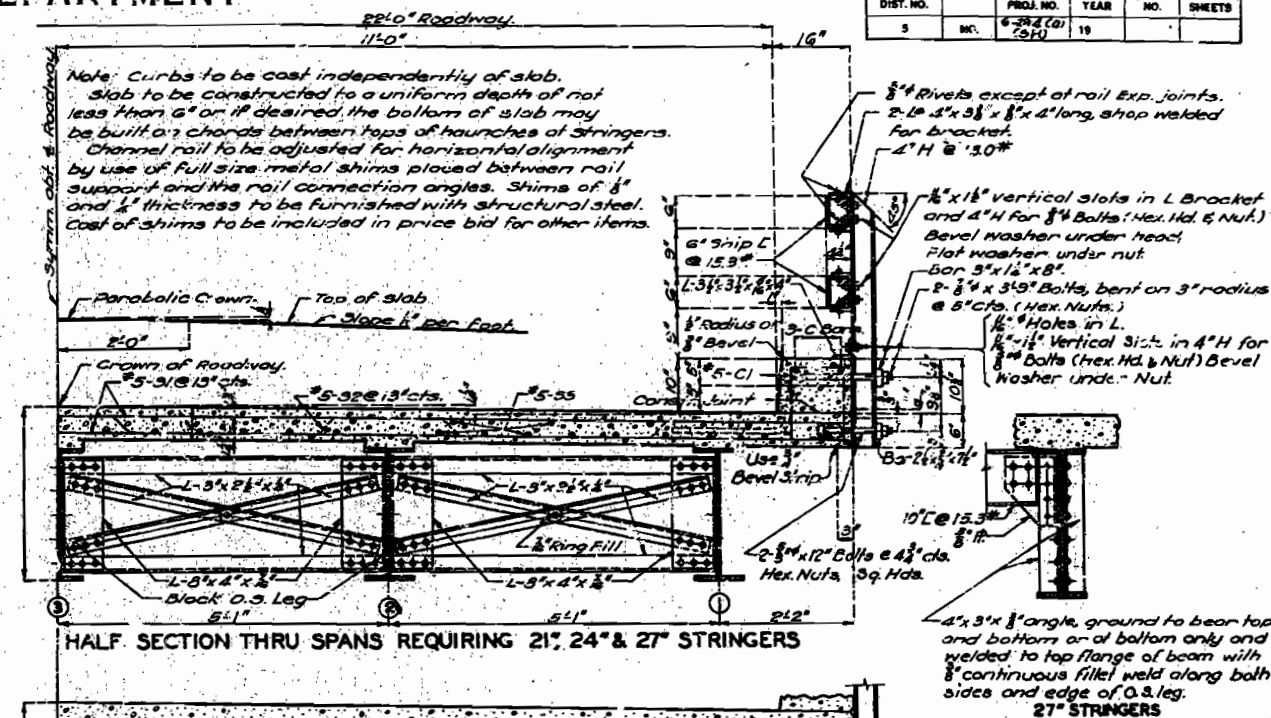
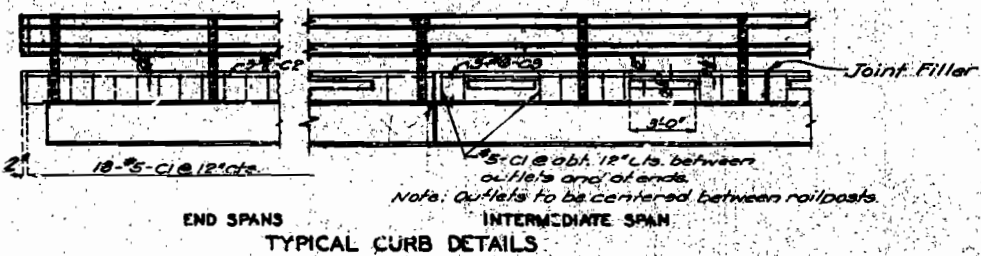
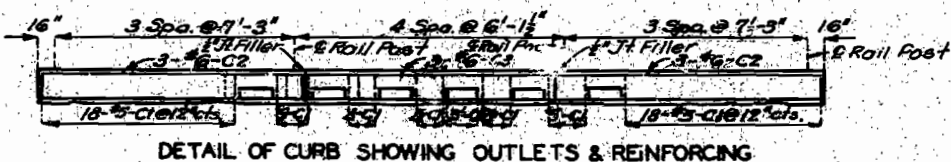
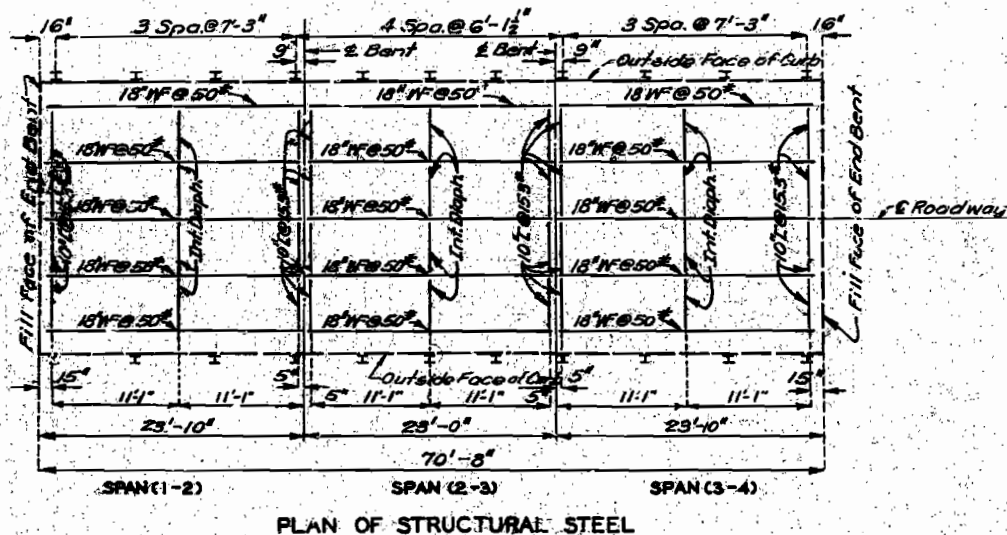
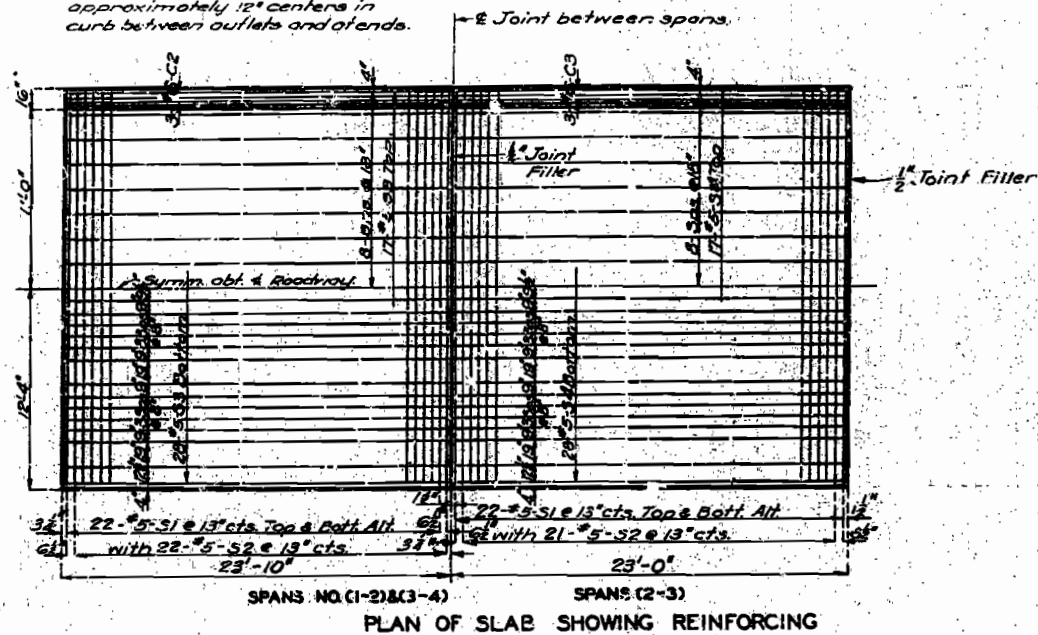
BRIDGE OVER ASH SLOUGH DITCH

STATE ROAD FROM CANALOU TO MATTHEWS
ABOUT 1.0 MILE W. OF MATTHEWS
PROJECT NO. 5-294 (4) (SH) STA. 274+10
NEW MADRID COUNTY

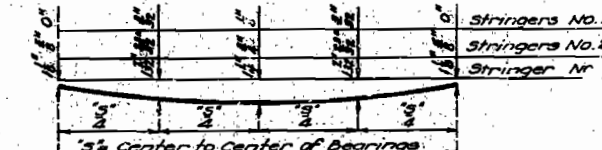
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	6-28-60	19		

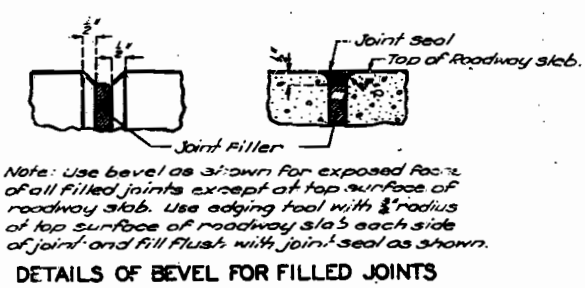
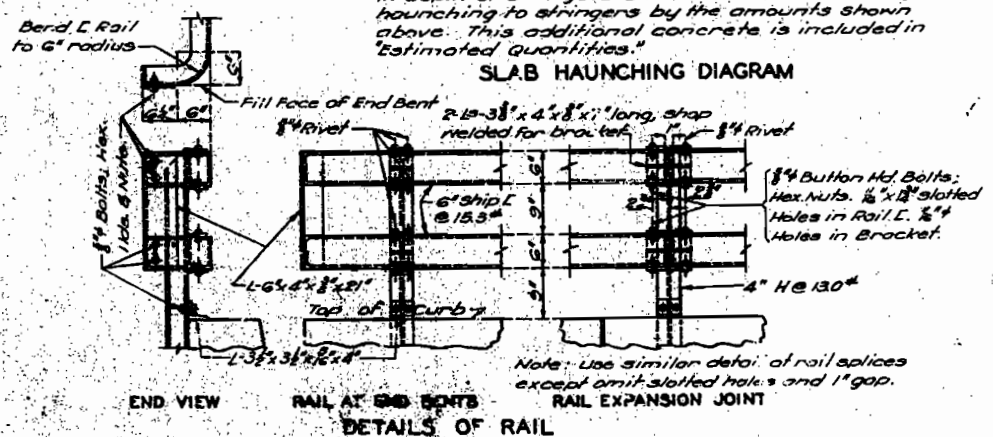
Note: Space dowel bars $\frac{1}{2}$ " at approximately 12" centers in curb between outlets and at ends.



14", 16", 18", 21" & 24" STRINGERS
SECTIONS AT ENDS OF SPANS
Note: Horizontal slab to bear on L separators.



Note: Slab shall be built parallel to grade and to a minimum thickness of 6". Dead load deflection, vertical curve (if any), crown and any difference in depth of stringers shall be taken care of by haunching to stringers by the amounts shown above. This additional concrete is included in "estimated quantities."



BRIDGE OVER ASH SLOUGH DITCH
STATE ROAD FROM CANALOU TO MATTHEWS
ABOUT 1.0 MILE W. OF MATTHEWS
PROJECT NO. 5-28-60 (354) STA. 274+10
NEW MADRID COUNTY

FINISHED

3/15/61

L-619

Sq. 22-415
Rev. July 1953

Assembled Dec. 1953 by J.K.W. & J.C.G.
Checked Mar. 1954 by N.W.R.

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

Sheet No. 3 of 3

NO CONSTRUCTION CHANGES

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MISSOURI STATE HIGHWAY DEPARTMENT

PROJ. NO.	STATE	FED. AID	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2-294	MO.	100	1954	15	15

FINAL PLANS

BILL OF REINFORCING STEEL					
No.	Size	Length	Mark	Location	Bending Sketches
116	#5	3'-0"	C1	Curb	
12	#6	23'-6"	C2	"	
6	#6	22'-9"	C3	"	
132	#5	21'-3"	S1	Slab	
65	#5	26'-8"	S2	"	
90	#5	23'-6"	S3	"	
45	#5	22'-9"	S4	"	

DATA FOR PILE DRIVING

Bent No. (Not including Wing Piles)	154	253
Plan Capacity Per Pile	16.0 Ton	16.5 Ton
Computed Capacity Req'd Per Pile	10.6 Ton	14.0 Ton
Min Penetration (Pile tip elev)	268.0	269.0

Note: Excavation of all existing materials under bridge shall be made to not less than 3'-0" below bottom of steel and not less than 4'-0" outside of curb lines. Payment for this excavation outside the limits of excavation for structure will be made at contract price for Roadway Excavation.

Note: All piling shall be creosoted timber. Estimated quantities shown on plans are based on the following lengths: 4 @ 15'-0", 10 @ 30'-0", and 10 @ 35'-0". These indicated lengths are approximate only. Proper lengths to give required bearing and/or penetration will be authorized by the engineer.

Two timber test piles shall be driven, one near Bent No. 1 and one near Bent No. 3.

All wing piles shall be driven to full penetration of lengths given on plans. Piles other than wing piles shall be driven to not less than the specified "Plan" capacities, and to the minimum penetration noted; unless the pile lengths authorized and furnished fail to give "Plan" capacities in which cases not less than the "Computed" capacities shall be obtained.

GENERAL NOTES:

- Design Specifications A.A.S.H.O.-1953
- Load Factor 1.4
- Class B Concrete Stress 1,000 ψ /in²
- Reinforcing Steel Stress 18,000 ψ /in²
- Structural Steel Stress 18,000 ψ /in²
- Creosoted Timber Stress 1,600 ψ /in²
- All concrete shall be Class B
- All timber shall be creosoted and shall be 1600 ψ Douglas Fir of the West Coast Region or either Longleaf or Short leaf 1600 ψ Southern Yellow Pine
- All timber shall be standard sawn except as noted in timber bill for pile caps.
- All timber shall be cut to billed lengths and shapes and shall be bored as shown before treating. All backing plates are billed 6" long and are to be rapped and fitted in the field.
- Rivets 3/4" Holes 1/2" except as noted.
- Field connections shall be riveted or if the Contractor desires he may use high tensile steel bolts with washers in place of rivets except for connections noted in handrail details. See Special Provisions.
- Paint: Shop, none; Field, contact surfaces of bolted rail connections one coat of red lead and surfaces inaccessible after erection three coats of red lead; other paint to be applied by the Contractor. Red lead required shall be furnished by the 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 plans it shall conform with the requirements for Premoulded Material for filler as given in Section 38-19A(1) of the Standard Specifications.

B.M. Elev. 291.47
Nail in N.E. Road 36" Cypress 120' Rt Sta 271+60

B.M. Elev. 276.16
C on East End of South Curb of New Bridge 12' Rt Sta 274+10

BRIDGE OVER ASH SLOUGH DITCH

STATE ROAD FROM CANALOU TO MATTHEWS

ABOUT 1.0 MILE W. OF MATTHEWS

PROJECT NO. S-294 (4) CSH STA. 274+10

NEW MADRID COUNTY

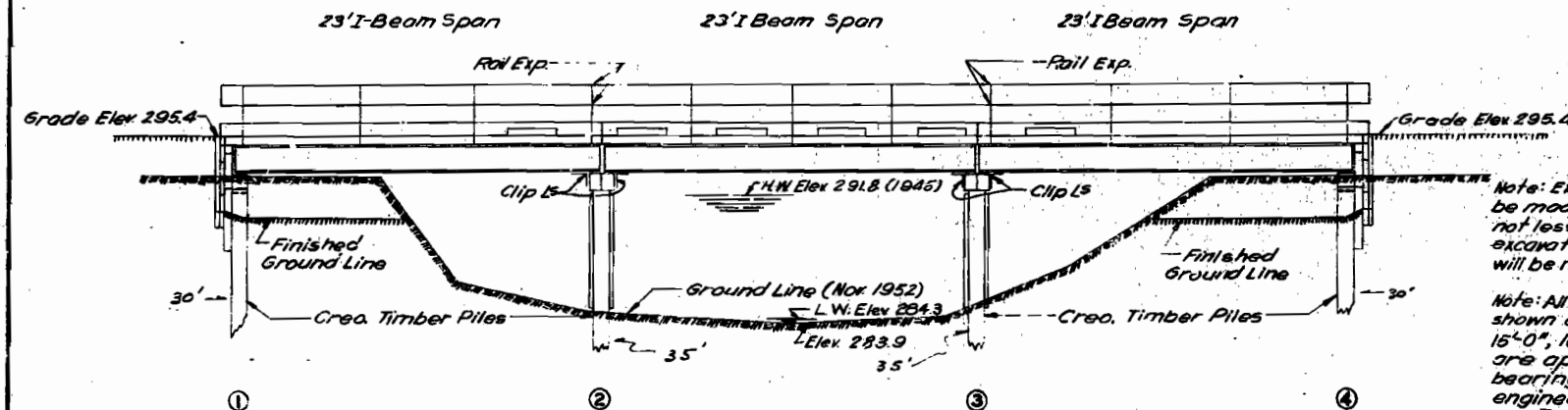
DESIGNED BY J.A. Williams 3/25/1954
CHECKED BY R.M. Whitten 3/25/1954

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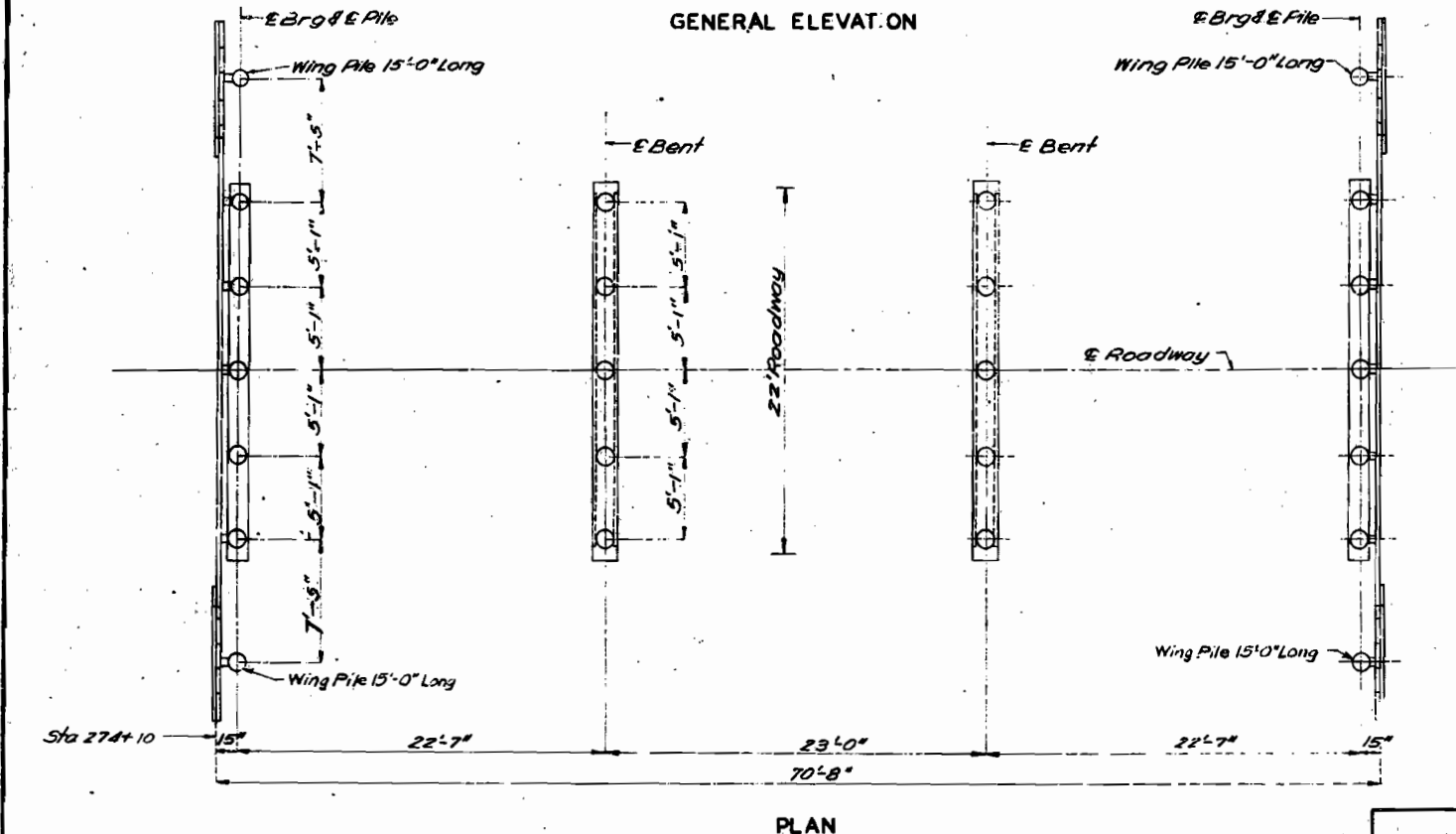
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STD. C-110R3

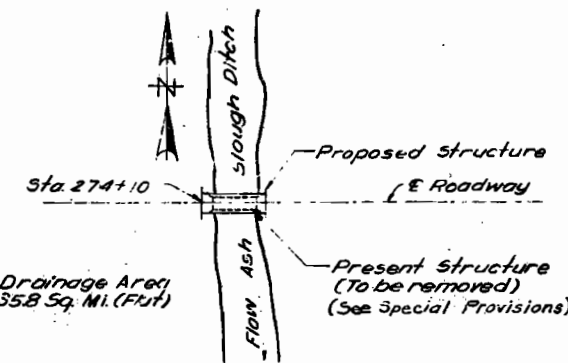
L-619



GENERAL ELEVATION



PLAN



LOCATION SKETCH

FINAL - QUANTITIES

Item	Substr.	Superstr.	Total
Class I Excavation for Structures	Cu Yds	78.2	78.2
Class B Concrete	Cu Yds	37.8	37.8
Fabricated Structural Steel	Lbs.	29720	29720
Reinforcing Steel	Lbs.	9620	9620
Creosoted Timber Piles in Place	Lin Ft	603	603
Creosoted Timber Pile Cut-offs	Lin Ft	107	107
Creosoted Timber	F.B.M.	3310	3310
Test Piles	Lin Ft	80	80

Note: Bridge excavation will be allowed final limits within the horizontal limits shown and noted on bent details. This excavation will be computed from existing ground line to bottom end of 6" x 6" backing supports for bents and to bottom of swl, bracing for interior bents.

All bridge excavation will be paid for as Class I Excavation for Structures.

Drawn Dec 1953 by J.A.W. & W.G.S.

Checked Mar 1954 by N.W.R.

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

Sheet No. 1A of 1

FINAL PLANS

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