Missouri Department of Transportation
Bridge Inventory and Inspection System
Non-State Structure Inspection Report

March 6, 2025
9:29:13am

County : FRANKLIN **District :** SL **Class :** NONSTATBR **Bridge :** 4330001 **Federal ID :** 23794

GENERAL STRUCTURE INFORMATION

[5D] Route :	00433	[41] Structure Status :	P-LOAD POSTED W/RESTRICT
[4] Place Code :	64496 ST. JOHNS	[9] Location :	S 0 T 44 R 1 W
[6] Features Intersected :	DUBOIS CR	[22] Owner :	COUNTY
[7] Facility Carried :	OLD HWY 100	[26] Functional Classification :	UMINCOL
[16] Latitude :	38 32 25.55 (DMS)	[21] Maintenance Responsibility :	COUNTY
[17] Longitude :	90 58 25.73 (DMS)	[11] Milepoint :	0.10 MILES

AGE AND SERVICE - GEOMETRIC DATA - MATERIAL

[27] Year Built :	1939	[106] Year Reconstructed :	
[49] Structure Length :	188 FT.	[51] Bridge Width :	26 FT. 0 IN.
[32] Approach Roadway Width :	25 FT. 0 IN.	[52] Deck Width :	28 FT. 3.6 IN.
[42B] Type of Service Under :	WATERWAY	[28A] Lanes On :	2
[19] Detour Length :	3.72 MILES	[28B] Lanes Under :	0

COMPONENTS	# SPANS	PRED	MATERIAL	CONSTRUCTION
MAIN SERIES	3	X	STEEL	GIRDER/FLOORBEAM SYSTEM
[107] Deck Type :			REINCONC	CIP
[108A] Wearing Surface :			ASPHALT	BITUMMAT
[108B] Membrane :			NOTAPPLIC	NONE
[108C] Deck Protection :			NOTAPPLIC	NONE

AADT INFORMATION

[29] AADT on Structure :	1,000	[30] Year :	2023	[109] AADT Truck :	10 %
[114] Future AADT :	1,600	[115] Year :	2043	[102] Direction of Traffic :	2-WAY TRAFFIC

STRUCTURE POSTING

FIELD POSTING Problem Code : Problem Direction Code :
Category : S-3 WEIGHT LIMIT 16 TONS.
Ton 1 : 16 Ton 2 : Ton 3 :

APPROVED POSTING
Category : S-3 WEIGHT LIMIT 16 TONS.
Ton 1 : 16 Ton 2 : Ton 3 :

COMPUTER GENERATED DEFICIENCY AND EVALUATION ITEMS

NOTE: The items listed in this section are updated whenever computer edits are ran on a structure after the inspection updates have been entered in to TMS.

Rated Item	Rating	Rating Date
[Item 67] Structure Evaluation Rating:	4-MEETS MINIMUM TOLERABLE	12/13/2002
[Item 68] Deck Geometry Rating:	5-BETTER THAN MINIMUM	12/13/2002
[Item 69] Underclearance:	N-NOT APPLICABLE	3/1/2002
Sufficiency Rating:	27.4 %	6/6/2017
Deficiency:	STRUCTURAL	4/29/2015

Funding Eligibility:

Estimated New Structure Length:

Estimated Structure Cost:

Estimated Total Project Cost:

Year of Cost Estimate:

NOTE: The above structure length and cost estimates are computer generated using algorithims in the TMS system. These algorthims are generalized to use NBI items to come up with a new structure length and width to calculate a new area which is taken times a representative cost per square foot. The actual structure size and cost may vary significantly from these numbers once site specific engineering is done.

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County : FRANKLIN **District :** SL **Class :** NONSTATBR **Bridge :** 4330001 **Federal ID :** 23794

****STRUCTURE GENERAL INSPECTION****

[90] Inspection Type: GENERAL **[91] Designated Frequency:** 24 **Inspection Responsibility:** DISTRICT
Inspection Date: 1/28/2025 ** **Calculated Frequency:** **Element Inspection Required:** NO

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

General Inspection Comments

Inspector	Team Leader	Organization
CLYDE DUNKER	X	MODOT

****UNDERWATER INSPECTION****

Inspection Category: SHALLOW-WADE **[92B] Designated Frequency:** 60 **Inspection Responsibility:** DISTRICT
Inspection Date: 1/28/2025 **Calculated Frequency:** **NBI:** NO

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

Underwater Inspection Comments
(RIDENJ1, 03/29/2022)--CHANGED IN 2021 FROM DRY TO SHALLOW-WADE

Inspector	Team Leader	Organization
CLYDE DUNKER	X	MODOT

****SPECIAL INSPECTION****

Inspection Category: CHANNEL CROSS SECTIONS **[92C] Designated Frequency:** 120 **Inspection Responsibility:** DISTRICT
Inspection Date: 2/27/2025 **Calculated Frequency:** 131 **NBI:** NO

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

Special Inspection Comments

Inspector	Team Leader	Organization
JACOB SCHMIDT	X	MODOT

****OTHER SPECIAL INSPECTIONS****

Category	Frequency	Calculated Frequency**	Date	Inspection Responsibility	NBI

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

County : FRANKLIN **District :** SL **Class :** NONSTATBR **Bridge :** 4330001 **Federal ID :** 23794

****GENERAL COMMENTS AND CONDITION RATINGS****

General Comments :

(GEIGEM1, 04/28/2015)--EAST FRANKLIN COUNTY - 3 SPAN_(4) RIVETED BUILT-UP GDRS; W/ RIVETED COVER PLATES ON BOTTOM FLANGES.
(DOLEJC, 04/05/2017)--PREVIOUSLY MODOT BRIDGE H0814. SUBMITTED FOR LOAD RATING ANALYSIS IN 2017

(DOLEJC, 07/29/2019)--REVISITED 07-26-19 UPON LOWERED WATER LEVELS TO ASSESS FURTHER SECTION LOSS AT W ABUT. NO SIGNIFICANT FINDINGS THAT WARRANT REVIEW, PRIOR SECTION LOSS DOCUMENTATION AMENDED TO INCLUDE CURRENT NOTES (IN MEDIA FILE).

[Item 58]--Deck Condition Rating: 4-POOR CONDITION **Rating Date:** 03/23/2017

Deck Rating Comments

(DOLEJC, 03/03/2017)--MANY WIDESPREAD MAP CRKS @ BOTTOM W/LT EFFL THROUGHOUT MULTIPLE SPANS

(DOLEJC, 03/03/2017)--HEAVY EDGE DETERIORATION THRU OUT W/ MANY DELAMS & REBAR EXPOSED.

(DOLEJC, 03/23/2017)--RANDOM AREAS OF DECK BECOMING DISINTEGRATED WITHIN THE CURBLINE LIMITS AND WHEELPATHS. WEARING SURFACE HAS BEEN REPEATEDLY PATCHED AND IN V. POOR CONDITION.
(DOLEJC, 03/29/2019)--ASPHALT MAT TRAPS WATER CAUSING MODERATE DECK SATURATION (20%) IN CENTER SPAN, (40%) W SPAN, 15% E SPAN
(DOLEJC, 03/29/2019)--2007 COMMENT... ASPHALT SURFACING IS ROUGH, PATCHED. 2017 COMMENT...ASPHALT MAT IN POOR SHAPE WITH RUTS AND WIDESPREAD SPALLING, PATCHES AND CRACKING
(SHIPPN1, 01/31/2025)--MANY ASPHALT SPALLS THOUGHOUT

[Item 59]--Superstructure Condition Rating: 4-POOR CONDITION **Rating Date:** 04/27/2015

Superstructure Rating Comments

(DOLEJC, 03/14/2013)--N ROCKER @ E ABUT - BOTH ANCHOR BOLTS BROKEN OFF

(CAMPBL1, 03/05/2015)--PAINTED IN 1963.

(CAMPBL1, 04/27/2015)--PACK RUST TOP FL W/DECK LIFTING NEAR W ABUT (1/2")

(DOLEJC, 03/03/2017)--MOD RANDOM PAINT RUSTING, ESP AT TOP FLANGES WHERE DECK SATURATED

(DOLEJC, 03/23/2017)--HEAVY RUST & SECTION LOSS GIRDERS 1, 2, & 3 FROM N @ WEST ABUT NEAR GIRDER ENDS. THESE GIRDERS EXPERIENCING HEAVY TO SEVERE WEB AND BEARING STIFFENER SECTION DETERIORATION, ALONG WITH MOD FLANGE SECTION LOSS NEAR BEARINGS AND IN TOP FLANGE AS WELL.
(DOLEJC, 03/23/2017)--STRUCTURE WAS SUBMITTED FOR LOAD RATING EVALUATION IN 2015 AND DUE TO CONTINUED GIRDER DETERIORATION AND SECTION LOSS IN SEVERAL GIRDERS NEAR THE W ABUT, UPDATED LOSS MEASUREMENTS WILL BE TAKEN AND THE BRIDGE WILL BE RE-EVALUATED FOR LOAD POSTING CONSIDERATIONS.
(DOLEJC, 03/29/2019)--GUSSET PLATE AT END DIAPHR AT E ABUT W/HEAVY PACK RUST AND SOME SECT. LOSS

(DOLEJC, 03/29/2019)--GIRDERS E END, UP AGAINST BACKWALL, BEARINGS HEAVILY PACK RUSTED WITH MOD SECT LOSS AND LOSS OF BEARING AT E ABUT. DECK PUMPS RUST IN W SPAN NEAR PIER
(DOLEJC, 03/29/2019)--SUBMITTED FOR LOAD POSTING RE-EVALUATION IN 2017. LOAD POSTING LOWERED TO 16 TONS AT THIS TIME, BASED PRIMARILY ON SECTION LOSS IN CRITICAL STRESS AREAS AT GIRDER ENDS NEAR W ABUTMENT
(DOLEJC, 07/29/2019)--SECTION LOSSES AT W ABUTMENT REVIEWED, NO NOTEWORTHY ADDITIONAL LOSSES THAT WARRANT FURTHER REVIEW AT THIS TIME. REVIEW AGAIN AT NEXT INSPECTION.
(SCHMIJ8, 03/22/2023)--HEAVY SECTION LOSS 2ND GIRDER FROM NORTH, BOTTOM FLANGE AT WEST ABUTMENT

(SCHMIJ8, 03/22/2023)--BEARING TIPPED BACK AT 60 F. GIRDER ENDS AGAINST BACKWALL

(SHIPPN1, 01/31/2025)--HEAVY SECTION LOSS WEST END DIAPHRAGM CONNECTION PLATES

(SHIPPN1, 01/31/2025)--HEAVY SECTION LOSS BOTTOM FLANGE WEST END BLOCKING PLACE NORTHWEST INTERIOR GIRDER

[Item 60]--Substructure Condition Rating: 5-FAIR CONDITION **Rating Date:** 03/22/2019

Compass Direction:

Substructure Rating Comments

County : FRANKLIN **District :** SL **Class :** NONSTATBR **Bridge :** 4330001 **Federal ID :** 23794

(DOLEJC, 03/03/2017)--SETTLEMENT @ ABUTS

(DOLEJC, 03/03/2017)--E&W INT BENT COLUMNS SCALING

(DOLEJC, 03/03/2017)--E INT BENT HAS MOD V-CRKS W/MOD EFFLORESCENCE AT CAP AND N COLUMN

(DOLEJC, 03/03/2017)--V-CRKS W/EFFLOR AT W ABUT BACKWALL

(DOLEJC, 03/23/2017)--FEW SPALLS AT W INT BENT CAP.

(DOLEJC, 03/29/2019)--E INT BENT N COL HAS SPALLS W/REBAR

(DOLEJC, 07/29/2019)--W INT BENT CAP DELAM AT BAY 2 FROM N

(DOLEJC, 07/29/2019)--SPALL W/REBAR AT E INT BENT CAP E FACE

(MARSHK2, 05/27/2021)--MANY LARGE CRACKS UNDER BEARING & MANY SPALLS @ E INT BT BM CAP. W ABUT BKWL WITH LARGE SPALL ACROSS TOP OF BKWL. FEW SPALLS . E ABUT DELAMINATED, SPALLED W/REBAR EXPOSED (AND SECT LOSS), GENERAL DETER. LOSS OF FILL UNDER BOTH ABUTMENTS, MAJORITY .
(SCHMIJ8, 03/22/2023)--MOD SPALLS W/RUST AT W ABUT, REBAR EXPOSED WITH SECTION LOSS

(SCHMIJ8, 03/22/2023)--VERTICAL CRACKS AT WEST INTERMEDIATE BENT

[Item 61]--Channel Condition Rating: 6-WIDESPREAD MINOR DAMAGE **Rating Date:** 03/21/2007

Rating Comments

(ALLBRD1, 03/25/2009)-- BANK FAILURE UPSTREAM (SLIDE). LOSS OF FILL UNDER WEST ABUTMENT.

[Item 62]--Culvert Condition Rating: N-NOT APPLICABLE **Rating Date:** 03/01/2002

Rating Comments

Design_No = 4330001 and County = FRANKLIN

County : FRANKLIN **District :** SL **Class :** NONSTATBR **Bridge :** 4330001 **Federal ID :** 23794

****APPRAISAL RATINGS****

[Item 36A]--Bridge Railing Appraisal: DOESNT MEET CURRNT STND-0 **Rating Date:** 03/01/2002

Rating Comments

(MARTEP, 03/07/2003)--STEEL DOUBLE CHANNELS
(CAMPBL1, 03/05/2015)--CURB SPALLS REPAIRED IN 2014.

[Item 36B]--Transition Railing Appraisal: NOT PROVIDED-0 **Rating Date:** 03/01/2002

Rating Comments

[Item 36C]--Approach Railing Appraisal: NOT PROVIDED-0 **Rating Date:** 03/01/2002

Rating Comments

[Item 36D]--Rail End Treatment Appraisal: NOT PROVIDED-0 **Rating Date:** 03/01/2002

Rating Comments

[Item 71]--Waterway Adequacy: DECK ABOVE FLOOD ELEV **Rating Date:** 03/01/2002

Rating Comments

[Item 72]--Approach Roadway Alignment: 8-VERYGOOD **Rating Date:** 03/01/2002

Rating Comments

(DOLEJC, 03/29/2019)--APPR ASPHALT IN POOR SHAPE - CRACKED AND SPALLING

[Item 113]--Scour Assessment: 8-STABLE FOR CALCULATED **Rating Date:** 3/1/2002

Type of Scour Evaluation:

Rating Comments

County : FRANKLIN **District :** SL **Class :** NONSTATBR **Bridge :** 4330001 **Federal ID :** 23794

Work Comments :

(DOLEJC, 03/14/2013)--SEAL ALL W.S. JTS@ BENTS

(CAMPBL1, 04/27/2015)--CHIP & PATCH ABUT BACKWALL

(DOLEJC, 03/23/2017)-- ADD LARGE ROCK AT WEST INTERIOR PIER - NORTH COLUMN. ROCK WEST BANK. EROSION - NORTH COLUMN (DEEPENING)

(DOLEJC, 03/23/2017)--CONSIDER BEARING REPLACEMENTS @ ABUTS WITH MORE CURRENT STYLE.

(DOLEJC, 03/23/2017)--CONSIDER REPLACEMENT OR MAJOR REHAB WORK: MAY NEED TO PERFORM DECK REPAIRS AND CHIP SEAL WEARING SURFACE IF LOOKING TO REPLACE IN THE NEXT 5 YEARS.

(DOLEJC, 03/23/2017)--G2 AND G3 FROM N @ WEST ABUT NEED ENGINEERED STRUCTURAL REPAIR @ BOTTOM OF WEB & STIFFENERS... CONSIDER STIFFENER REPAIRS @ G1 FROM N @ WEST ABUT AS WELL.

(SHIPPN1, 01/31/2025)--PLACE PERMANENT BLOCKING NORTHWEST INTERIOR GIRDER

FED. ROAD DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.			1	
DIV. NO.	COUNTY		ROUTE	SEC. NO.	
6	FRANKLIN		47		

Rt. 47 Sec. 21
Rt. 47 Sec. 22
Rt. 47 Sec. 22-BM.
Rt. 47 Sec. 25
Rt. 47 Proj. FA 279-A
Rt. 47 Proj. FA 279-B

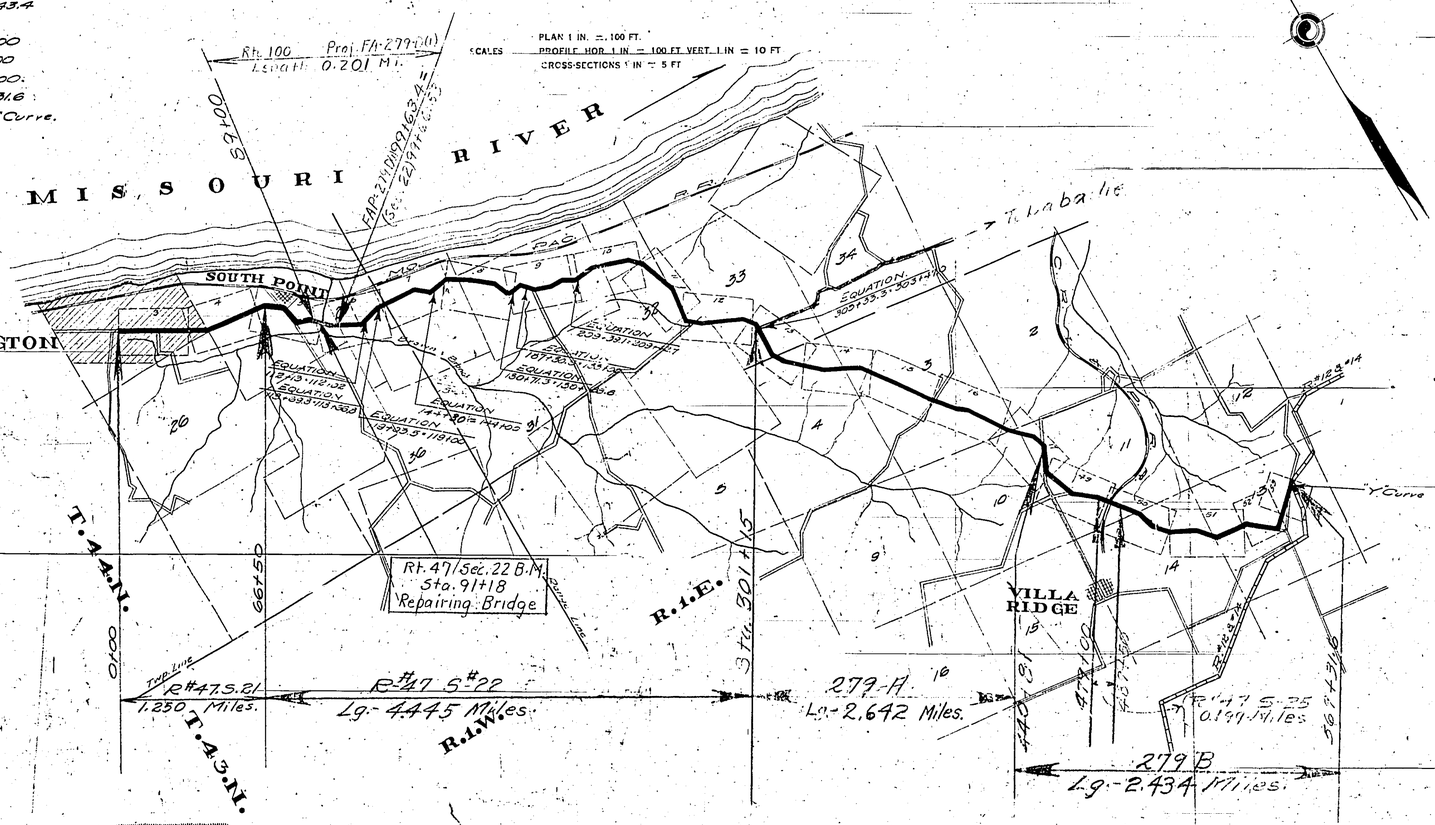
Rt. 100 Proj. FA 279-D(1)

INDEX OF SHEETS

MISSOURI
STATE HIGHWAY COMMISSION
PLAN AND PROFILE
OF PROPOSED
STATE ROAD

FEDERAL AID PROJECT

FRANKLIN COUNTY



CONVENTIONAL SIGNS

- STATE AND NATIONAL LINE
- COUNTY LINE
- CITY, VILLAGE OR BOROUGH
- TOWNSHIP LINE
- SECTION LINE
- GRANT LINE
- FENCE LINE
- GUARD RAIL
- UNFENCED PROPERTY
- RIGHT OF WAY LINE
- TRAVELED WAY
- RAILROADS
- RETAINING WALL
- BASE OR SURVEY LINE (30 +50)
- LEVEE
- CULVERTS
- DROP INLET
- TROLLEY POLE
- POWER POLE
- TELEPHONE OR TELEGRAPH POLE
- MARSH
- HEDGE
- GROUND ELEVATION (DATUM LINE 1236.6)
- GRADE ELEVATION (GRADE LINE 1232)
- SURFACE LINE
- GRADE LINE

EXCEPTIONS

Blank

EQUATIONS

Sta.	to	Sta.	Gain or Loss
112+13.3		112+02.0	11.3
118+69.8		118+66.8	3.0
119+03.5		119+00	3.5
144+30.0		144+00	30.0
130+71.3		130+88.8	17.5
137+80.5		138+00	19.5
209+39.1		209+42.7	3.6
303+38.8		303+47.0	19.7
Net			

LENGTH OF PROJECT.

APPARENT LENGTH [illegible] FT = [illegible] MILES
GROSS LENGTH [illegible]
NET LENGTH [illegible]

SUBMITTED [redacted]
CHIEF ENGINEER MO. STATE HIGHWAY COMMISSION

RECOMMENDED FOR APPROVAL [redacted]
DISTRICT ENGINEER - DISTRICT NO. 5

RECOMMENDED FOR APPROVAL [redacted]
CHIEF ENGINEER BUREAU PUBLIC ROADS

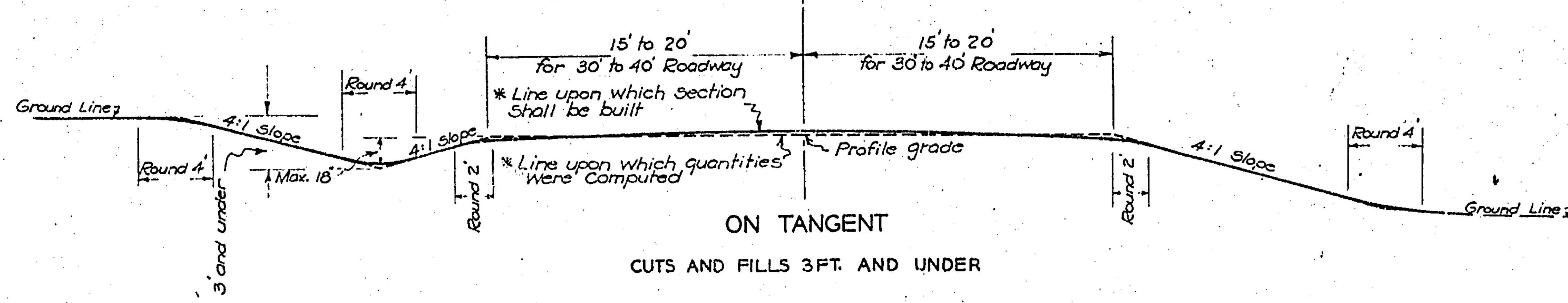
APPROVED [redacted]
DIRECTOR BUREAU OF PUBLIC ROADS

0327

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	2790-1	1939	2	35

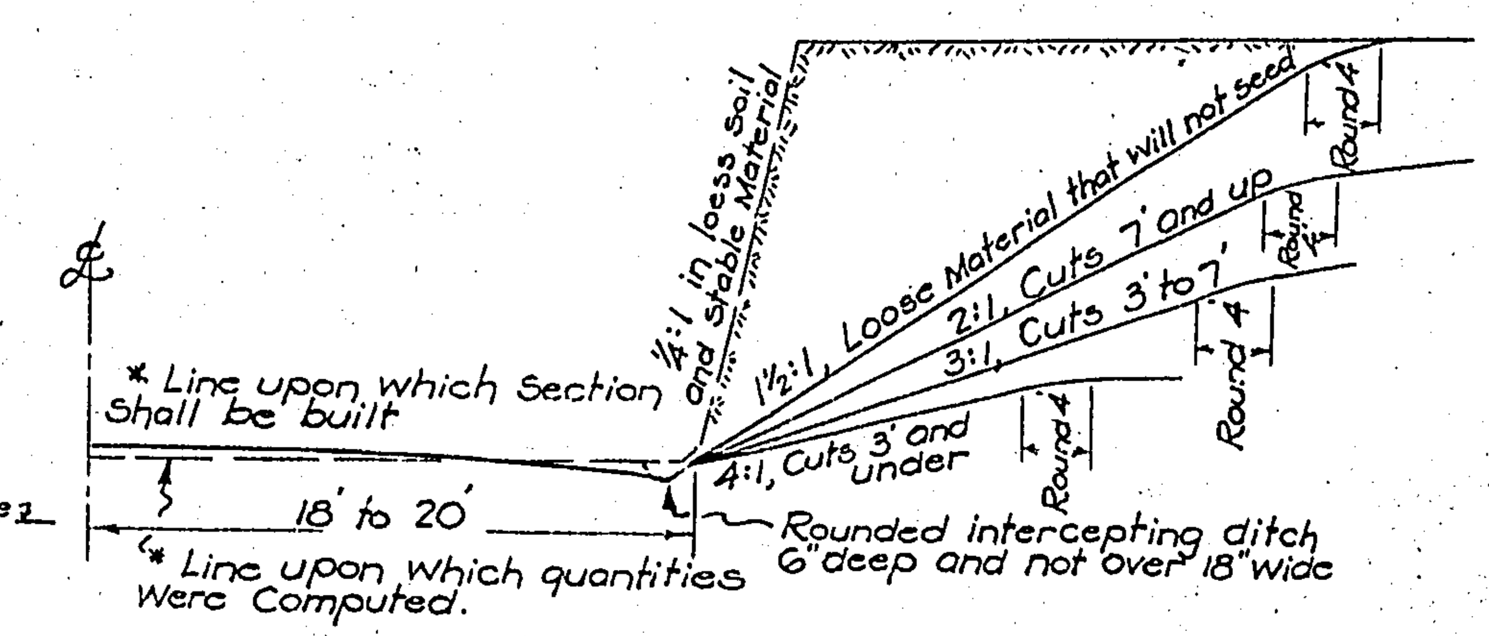
T.S. 40-GE

FINAL PLANS



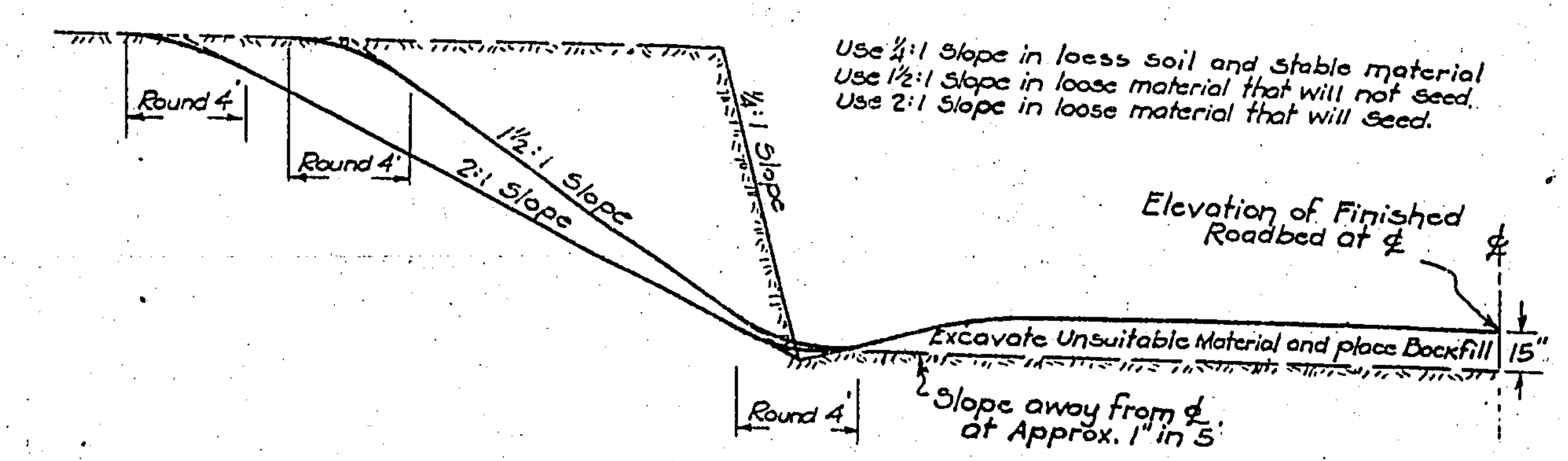
ON TANGENT

CUTS AND FILLS 3FT. AND UNDER



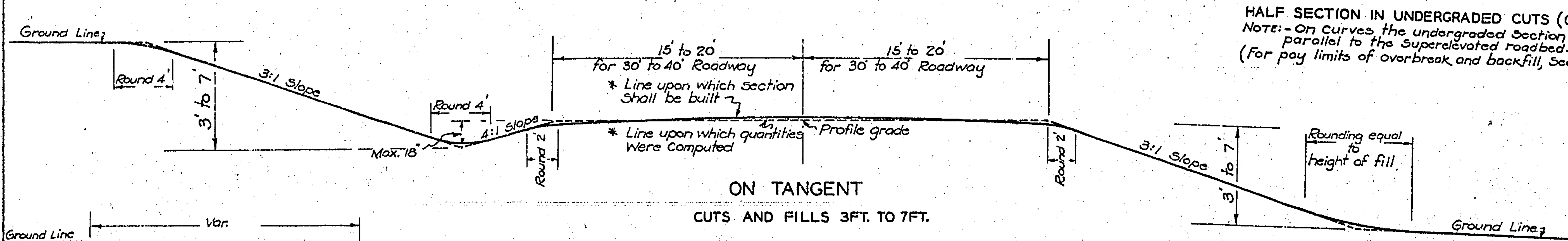
HALF BOX SECTION

This Section Shall not be used except where a high type Surface is Contemplated.



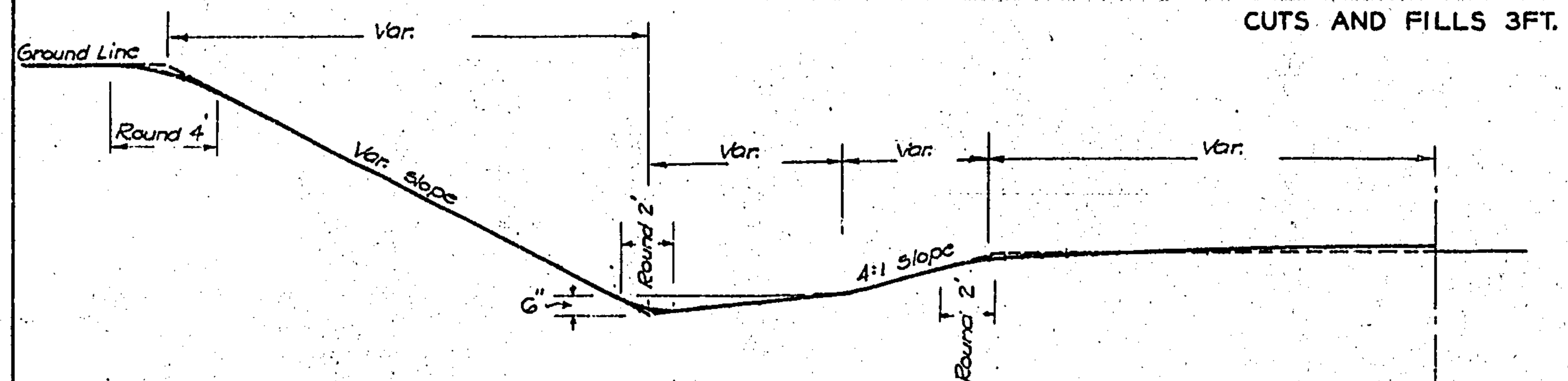
HALF SECTION IN UNDERGRADED CUTS (ON TANGENT)

NOTE:- On curves the undergraded Section shall be parallel to the superelevated roadbed.
(For pay limits of overbreak and backfill, See Specifications)



ON TANGENT

CUTS AND FILLS 3FT. TO 7FT.

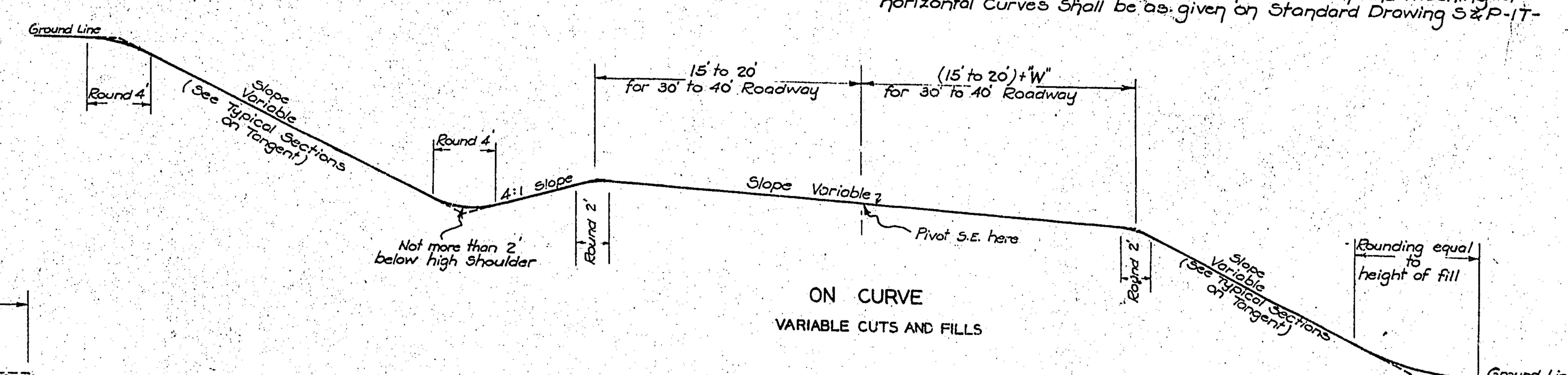


HALF SECTION SHOWING WIDENED DITCH

NOTE:- If standard ditch not sufficient to carry drainage, use widened ditch section.

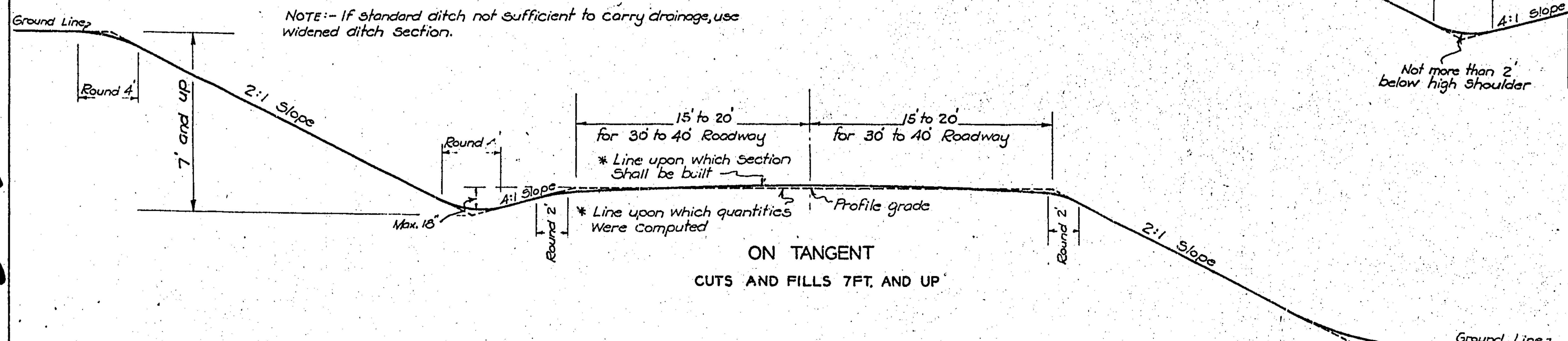
NOTE:- Where necessary, ditches shall be deepened for short distances in order to provide proper drainage on flat grades. (See Cross-Section Sheets).

NOTE:- Standard requirements for Superelevation and widening of horizontal Curves Shall be as given on Standard Drawing S&P-1T-



ON CURVE

VARIABLE CUTS AND FILLS



ON TANGENT

CUTS AND FILLS 7FT. AND UP

NOTES MARKED * DO NOT APPLY BETWEEN SHOULDER LINES WHEN CONTRACT INCLUDES PAVING. SEE SHEET T.S. 20-40 FOR DETAILS OF THIS PORTION

NOTE:- On fills over 15 ft. high, Widen Shoulder 2 ft. on each Side.

MISSOURI STATE HIGHWAY COMMISSION

TYPICAL SECTIONS FOR 30 FT. TO 40 FT. GRADED EARTH FOR MAJOR SYSTEM

SUBMITTED BY [signature]
ENGR. SURVEYS AND PLANS

APPROVED [signature]
CHIEF ENGINEER

S&P-1A-10

328

LOCATION WASHINGTON - EAST

TYPE 40'G.E. BRIDGE, & 22' P.C.C. PAV'T.

MISSOURI STATE HIGHWAY COMMISSION

SUMMARY OF QUANTITIES

FED. ROAD DIST. No.	STATE	PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
5	MO.	FA 279 D(1)	1939	2-A	35
DIV. No.	COUNTY			ROUTE	SEC. No.
6	FRANKLIN			100	

EXCAVTION

	Sta.	Unc. Exc.	Borrow	Comp.	Fill	Water
	88+00					
	100+53	3931	1092	3946	443.7	
Total		3931	1092	3946		0
Borrow		1092				
FE+SR		13			5.6	
Grand Total		5036		3946	449.3	0

BARRICADES

Sta.	No.
88+00	1
100+53	1
Total	2

REMOVING OLD PAV'T.

Sta.	Sta.	SQ. YD.
88+00	89+50	300
94+50	100+53	1199.74
	TOTAL	1499.74
	Use	1499.5

REMOVAL OF EXISTING STRUCTURES

Sta.	Loc.	Description	Cl. 3
88+82	P.E. Rt	12'-15" CMP	3.5
89+80	P.E. Lt.	10'-15" VCP	3.0
		Total	6.5

GRAVEL SURFACE TEMPORARY DETOUR

Bk. No	Sta.	Sta.	Cu Yds.
1	88+00	100+53	146.62
2	88+00	100+53	51.92
			198.54
Entrances			11
Grand Total			209.54
		Use	210

FARM ENTRANCES AND SIDE ROADS

Sta.	Type	Side	Size	Length	Cl. III	Excav.	Fill	Gravel
88+82	PE	Left	15"	24'	2	7	1.3	4
89+80	PE	Right	0	0	0	Included in Road		3
90+47	SR	Left	15"	32'	4	6	4.3	4
Total				56'	6	13	5.6	11

6" SEWER PIPE

Sta.	To Sta.		Cl. 3 Exc.
88+75	91+00	225' of 6" VCP	8

LENGTH OF PROJECT

End of Project	Station	99+63.4	
Beginning of Project	Station	89+00.0	
Apparent Length		1063.4	Feet
Equations and Exceptions:	None		
Total Corrections			Feet
Net Length of Project		1063.4	Feet
State Length =		0.201	Miles
Federal Length =		0.201	Miles

LENGTH OF SURFACING

Net Length of Project	1063.4	Feet
Additions:- Paved Connections		
Sta. 88+00 to 89+00	+100.0	"
Sta. 99+63.40 to 100+53.00	+86.47	"
Deductions- Bridge Sta. 91+06	-191.21	"
Length of Surfacing	1058.66	Feet
Chained length = 1058.70'		
22 Ft. P.C.C. Pavement		
1058.70 x 22 x 1/9 =	2587.93	Sq Yds.
Additional:-		
Widening at Bridge Ends	+17.07	"
TOTAL	2605.00	SQ.YD.
Use	2605.0	"

GENERAL SUMMARY

ITEM NO.	DESCRIPTION	UNIT	TOTAL UNITS	NO. UNITS FED. AID ONLY
1-F	Unclassified Excavation	Cu.Yd.	5036	
1-J	Class 3 Exc. For Structures	Cu. Yd.	20.5	
1-K	Compacting Embankment (Rolling)	Cu. Yd.	3946	
1-Q	Removing Old Pavement	Sq. Yd	1499.5	
1-B-A	Water (Comp. Emb's. Rolling)	100 Gal.	0	
13 Cor D	Gravel Surf (A) or Cr. Stone Surf.	Cu. Yd.	210	
15-A	Portland Cement Concrete Pavement	Sq. Yd.	2605.0	
18-	15" Cu/v Pipe (Ent. & Sd. Rd.)	Lin. Ft.	56	
28-A	Barricades	Each	2	
	Contingent Item			
	6" Sewer Pipe	Lin. Ft.	225	
	BRIDGE - STATION 91+06 DWG. NO. H 814 R			
1-G	Class 1 Exc. For Structures	Cu. Yd.	6.57	
1-H	" 2 " "	Cu. Yd.	341.5	
16-B	Class B Concrete (Superstr.)	Cu. Yd.	152.9	
16-B	" B " (Substr.)	Cu. Yd.	295.0	
16-F	Special Conc. Protection in Group A	Cu. Yd.	4.9	
16-G	" " " " " B	Cu. Yd.	0	
16-H	" " " " " C	Cu. Yd.	108.7	
17-B	Fab. Struct. Steel (Pl. Gird. Span)	Pound	163,990	
17-B	" " " (I-Bm. Spans)	Pound	26,160	
17-C	Steel Castings	Pound	5,510	
17-E	Gray Iron Alloy Castings	Pound	470	
19-A	Reinforcing Steel	Pound	48,930	
22-E	Concrete Piles in Place	Lin. Ft.	2,034	
22-H	Concrete test Piles	Lin. Ft.	95	
32-A	Temporary Bridges	Lin. Ft.	20	
33-A	Removal of Existing Struct (see spec. prov)	L. Sum	1	

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Prepared By P.W. Douglass Date Aug 23 1940 Checked in Div. Office By Date 19 Checked in Central Office By Date 19 Revised By Date 19

5 279D-1 1939 3 35
6 FRANKLIN 100
FINAL PLANS

ORIG. PAV'T. P.I. 85+2023 Δ 37°23' Lt D 11° 00' T 176.49 L 339.85 E 29.0 R 521.7
Sta. 91+16.95 W. End of a Bridge in place 2-17.5 approaches 1-100 steel truss built in 1896 by Stupp Bros. 14.9' Roadway only. Shift existing bridge to left of ℄ and constr. 20 ft. of temporary bridge and earth approaches for temporary crossing. Remove temporary crossing after new bridge is opened to traffic. See Spec. Prov.:- Detour "TEMPORARY BRIDGE," and "REMOVAL OF EXISTING STRUCTURE"
USE RELOCATION P.I. 94+99.92 Δ 14° 55' Lt D 1° 36' T 468.81 L 932.29 E 30.53 R 3581.10 S.E. .00585' PER. F.T. {See cross section for S.E. Transition}
STA. 91+06 Construct 1-40' I-Bm; 1-80' Pl. Gird; & 1-65' Pl. Gird Spans. Bridge. DWG. NO. H-814 R. Pav't. & Fill Exceptions = 191.21 Ft.
99+63.40 Relocation = 99+66.53 old Location
Sta 88+75 to Sta 91+00 lay 6" Sewer Pipe, 225' - Cl III 8 cu. yds
R.J. Swails Blk 14 Lots 15, 16.
Frank Sida Blk 14 Lots 11, 12, 13, 14.
Dr. Hamay Blk 14 Lots 9, 10
STREET 50 W.
DUBOIS CREEK
50' Esmt. for Temp. Bridge
KRUMSICK
PCC 99+63.40
10' Bor. Pit Esmt. None used
P.T. 88+63.59
BRANCH
MASSEY'S
Rudolph Sida
BEGIN F.A.P.-279-D(1)
END F.A.P.-279-D(1)
Sta 99+63.4 Construction Joint
Sta. 91+06 to 91+36 & Sta. 92+50 to 92+94.21 Remove Old Road Fill to natural Ground Slope inside of abutment on 2:1 Slope Exc. incl. in Rdwy Quantities
Sta. 88+00 to Sta. 100+50 Bypass left. Construct. Gravel surface. 194.55 Cu. yds.
paved connection
Sta. 88+00 to Sta. 89+00 ℄ Sta. 99+63.4 to Sta. 100+53 Construct connections To present pavement with 22 Ft. p.c.c. pavement
Uncl. Excav - 3931
FE & SR - 13
Borrow - 1092
Compaction - 3946
Fill - 4387
FE & SR - 56
Omit Lip Curb Right and Left
200 V.C. M.O. 0.15'
+50 P.C.
+50 P.T.
+50 P.I. 489.5
490.05 100 V.C. M=0.14
0.00%
+0.60%
B.M. Spike in root 18" Elm 86' Lt. sta. 90+85 Elev. 483.81
B.M. Spike in root 8" Water Oak 40' Rt. sta. 99+25 Elev. 492.93
500
490
480
80 1 2 3 4 85 6 7 8 9 90 1 2 3 4 95 6 7 8 9 100 1 2 3 4 105

CLEARING & GRUBBING

Station	Station	Clear	Grub
		0	0

REMOVAL OF EXISTING STRUCTURES

Sta.	Loc.	Description	Cl. 3 Exc.
88+82	Lt	12'-15" C.M. Pipe	3.5
89+80	Rt	10'-15" V.C. Pipe	3.0

ENTRANCES

Station	Type	Side	Pipe Size	Pipe Length	Cl. III Exc.	Exc.	Fill	Gravel	Remarks
88+82	PE	Lt	15"	24'	2	7	13	4	
89+80	PE	Rt	0	0	0			3	Exc. incld in R.R.
90+47	SR	Lt	15"	32'	4	6	43	4	

BARRICADES

Sta.	No.
88+00	1
100+53	1

SPECIAL DITCHES

Station	Station	Side	Type	Remarks
88+82	90+85	Lt	"V"	Quant in Rdwy

OLD P.C.C. PAVEMENT

Station	Station	Removing Old Pav't.	Remarks
88+00	89+50	300.00 Sys.	
94+50	100+53	1199.74	See Equat.

PLAN NOTE BOOK NO. SURVEYED PLOTTED ALIGNMENT CHECKED RT. OF WAY CHECKED BY DATE

PROFILE NOTE BOOK NO. SURVEYED PLOTTED GRADES CHECKED B. MS. NOTED STRUCTURE NOTATIONS CH'KD BY DATE

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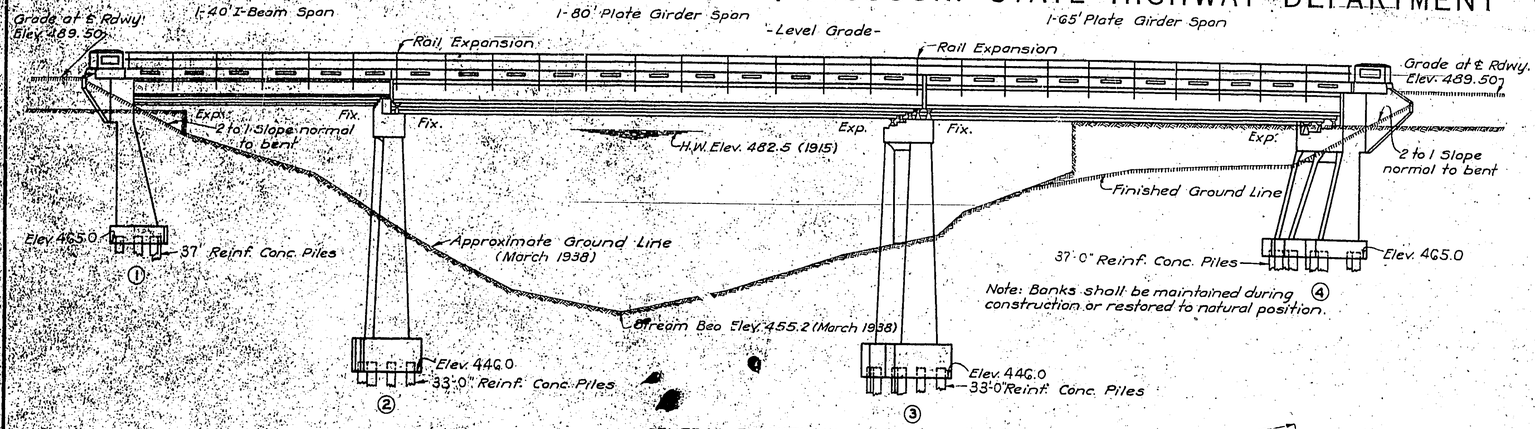
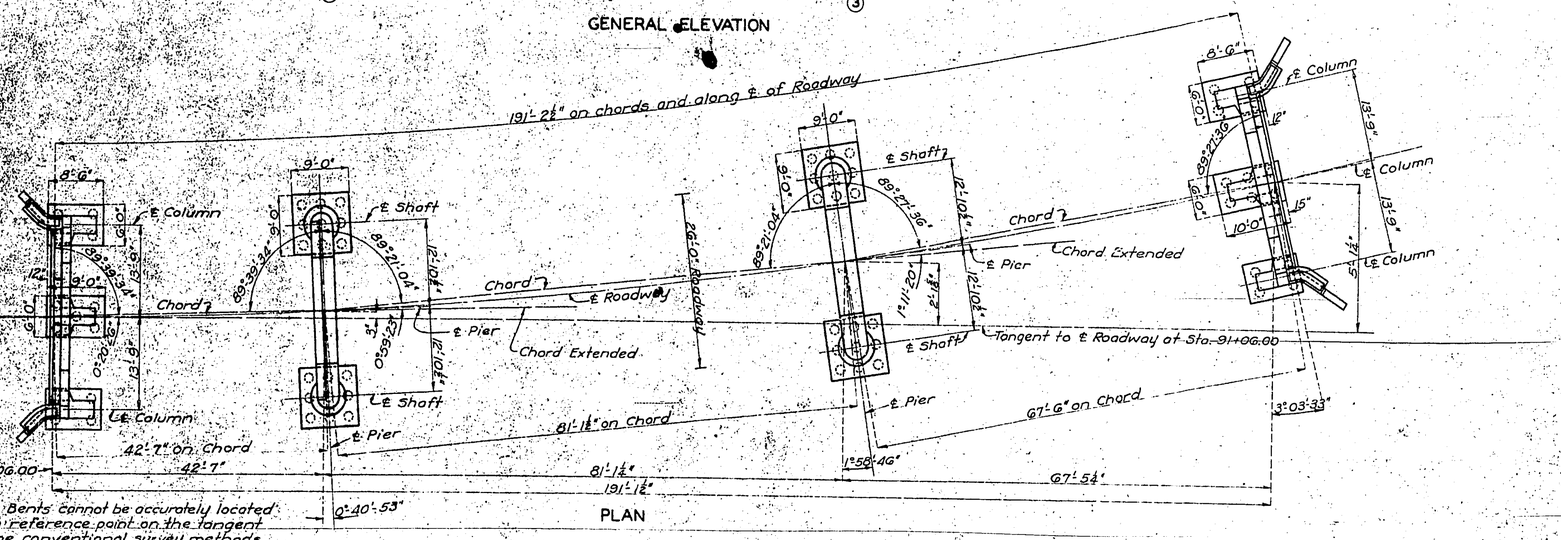
PLATE 1—PLAN—PROFILE O. P. F. & R.E. STANDARD
KEUFFEL & ESSER CO. NEW YORK

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	FA279-D(1) (R100)	19	23	35

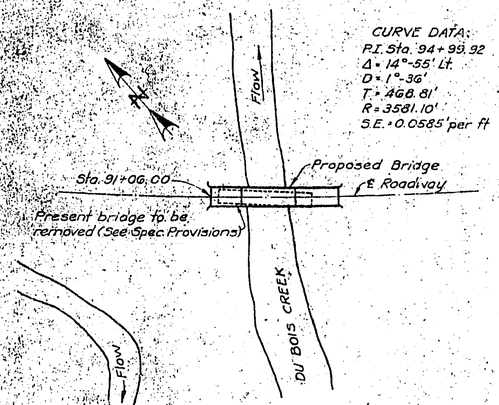


GENERAL ELEVATION



PLAN

Note: Bents cannot be accurately located from reference point on the tangent by the conventional survey methods based on 100' chords.



LOCATION SKETCH

CURVE DATA:
P.I. Sta. 94+99.32
Δ = 14°-55' Lt.
D = 1°-36'
T. = 468.81'
R = 3581.10'
S.E. = 0.0585' per ft

Drawn May 1939 by H.D.
Traced May 1939 by G.W.
Checked June 1939 by E.C.L.

GENERAL NOTES:

Design Specifications A.A.S.H.O.-1935
Loading H-15 A.A.S.H.O.
Structural Steel Stress 18,000 #/□"
Reinforcing Steel Stress 18,000 #/□"
Concrete Class "B" 900 #/□"
All concrete shall be Class "B".
All concrete shall be proportioned by the weight proportioning method.
Bar supports and spacers will be required for reinforcing steel in superstructure. See Standard C-110 RI.
Exposed edges shall be beveled ¾" where no other bevel is noted.
Where rubber compound is specified on plans for use in partition or expansion joints, the premoulded joint shall be securely stitched to one face of concrete with copper wire.
Floor slab for each span shall be constructed full width and length at one operation. No longitudinal or transverse construction joints will be permitted.
Detail shop drawings for all structural steel, cast steel and cast iron shall be submitted to the State Highway Department in duplicate and shall be approved before material is ordered or work started.
Beam flanges shall be squared up at all points of bearing.
Qualification of welding operators and electrodes for welding shown on plans will not be required.
Rivets ¾"ϕ, holes 15/16"ϕ except in handrail where rivets shall be ⅞"ϕ, holes 1 1/16"ϕ Field connections for handrail channels shall be ⅞"ϕ button head bolts and for connections of rail to rail posts shall be ⅞"ϕ machine bolts, holes 15/16"ϕ. All other field connections riveted except as noted. ½" Washers shall be used under nuts of all machine and turned bolts.
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 the Contractor. Payment for cleaning and painting such surfaces will be included in unit price bid for structural steel.
Excavation for structure shall be in accordance with Specification 1 of Standard and Supplemental Specifications.

Drainage Area 34.5 Sq. Miles - Rolling.

FINAL QUANTITIES

Item		Substr.	Superstr.	Total
Class 1 Excavation for Structures	Cu. Yds	657		657
Class 2 Excavation for Structures	Cu. Yds	3415		3415
Class "B" Concrete	Cu. Yds	2350	1529	4479
Fabricated Structural Steel (Plate Girder Spans)	Lbs.		163990	163990
Fabricated Structural Steel (I-Beam Span)	Lbs.		26160	26160
Steel Castings	Lbs.		5510	5510
Gray Iron Alloy Castings	Lbs.		470	470
Reinforcing Steel	Lbs.	17640	31290	48930
Concrete Piles in Place	Lin. Ft.	2034		2034
Concrete Test Piles	Lin. Ft.	95		95

Note: Excavation for bridge made above Elev. 462.0 will be paid for as Class 1 Excavation for Structures.
Excavation for bridge made below Elev. 462.0 will be paid for as Class 2 Excavation for Structures.
Old roadway fill shall be removed to natural ground line. Payment for this excavation outside the limits of excavation for structure will be made at unit contract price for Roadway Excavation.
Estimated quantity of concrete piles in place does not include test piles driven in place, but does include an estimated allowance of 2'-0" per pile for reinforcing steel stripped and bent into footings. See Special Provisions.

B. M. ℄ 10-Elev. 485.36 Spike in root of 18" Elm 36' Lt. Sta. 90+94. U.S.G.S. Datum.

BRIDGE OVER DU BOIS CREEK

STATE ROAD FROM WASHINGTON TO ROUTE U.S.66.
ABOUT 1.75 MILES EAST OF WASHINGTON.
PROJECT NO. FA279-D(1)(RT.100) STA. 91+06.00
FRANKLIN COUNTY

SUBMITTED BY N. R. Sack BRIDGE ENGINEER DATE 6/21/39
APPROVED BY C. W. Brown CHIEF ENGINEER DATE 6/21/39

C-110RI
H-814R

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

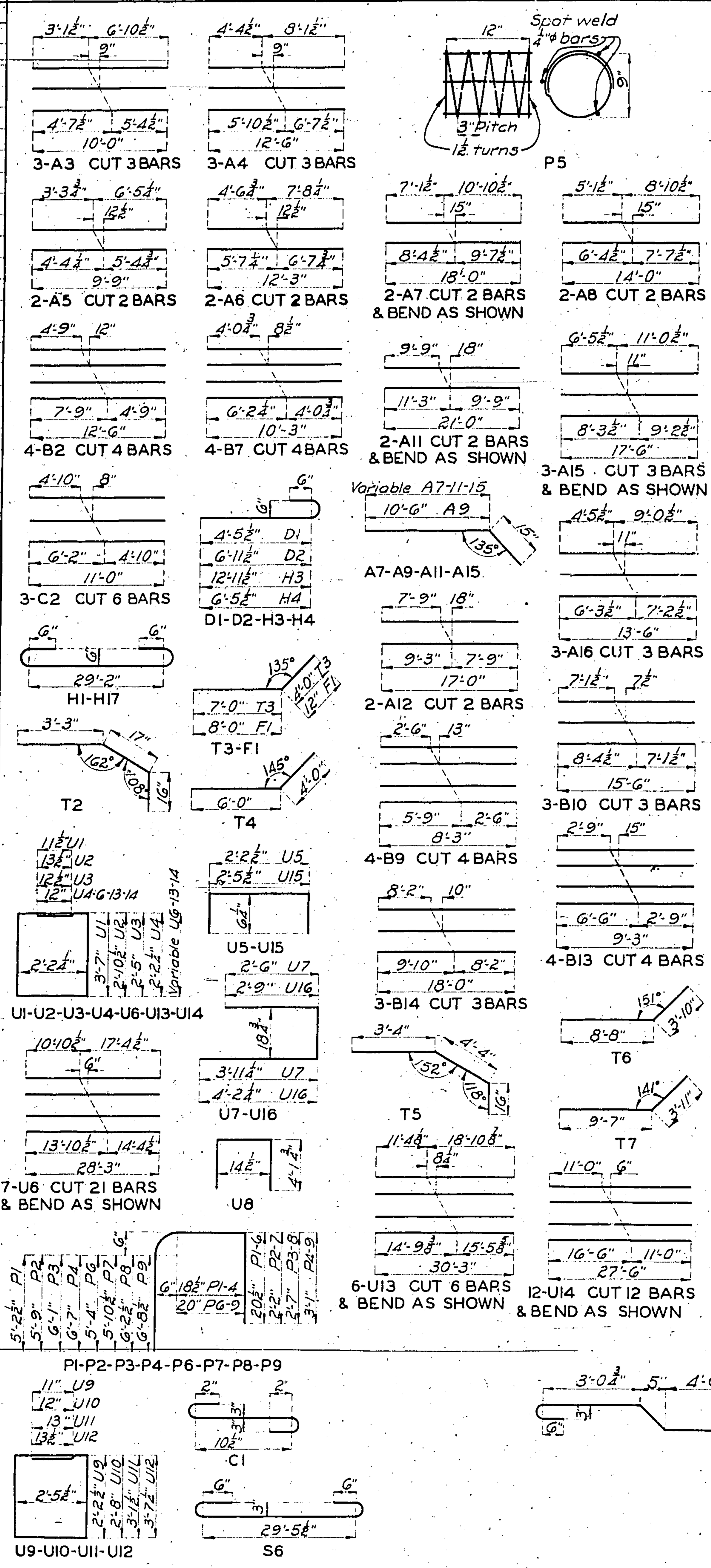
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FA279-D(I) (R100)	19		

COMPLETE BILL OF REINFORCING STEEL

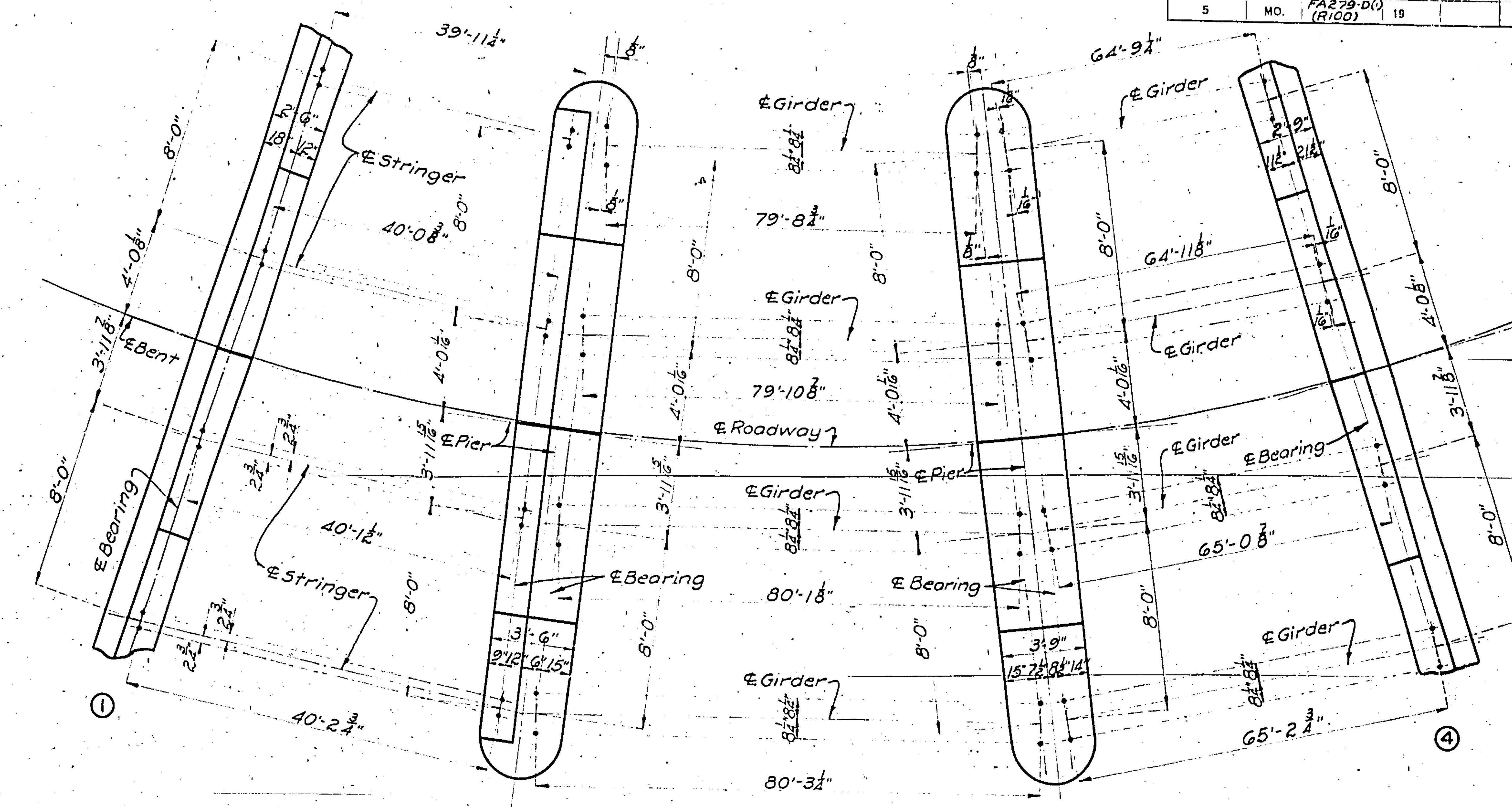
No	Size	Length	Mark	Location
End Bent No. 1				
4	5/8"φ	7'-3"	A1	Wings
4	5/8"φ	8'-6"	A2	"
3	5/8"φ	10'-0"	A3	"
3	5/8"φ	12'-6"	A4	"
2	5/8"φ	9'-9"	A5	"
2	5/8"φ	12'-3"	A6	"
2	1/2"φ	2'-9"	B1	"
4	1/2"φ	12'-6"	B2	"
2	1/2"φ	7'-9"	B3	"
6	3/4"φ	7'-3"	B4	"
6	3/4"φ	5'-6"	B5	"
2	1/2"φ	2'-6"	B6	"
4	1/2"φ	10'-3"	B7	"
2	1/2"φ	6'-3"	B8	"
3	3/4"φ	11'-0"	C2	Curbs
30	7/8"φ	5'-9"	D1	Footings
16	3/4"φ	9'-0"	F1	Haunches
7	3/4"φ	31'-9"	H1	Beam
2	3/4"φ	29'-6"	H2	"
3	3/4"φ	14'-3"	H3	"
3	3/4"φ	7'-9"	H4	"
7	7/8"φ	9'-6"	H5	"
3	3/4"φ	11'-0"	H6	"
2	1/2"φ	29'-6"	H7	Backwall
24	1/2"φ	3'-9"	R1	Rail
6	1/2"φ	5'-3"	R2	"
6	1/2"φ	4'-9"	R3	"
2	3/4"φ	29'-6"	T1	Wings
4	3/4"φ	6'-0"	T2	"
2	3/4"φ	11'-0"	T3	"
2	3/4"φ	10'-0"	T4	"
6	1/2"φ	12'-6"	U1	Beam
8	1/2"φ	11'-3"	U2	"
5	1/2"φ	10'-3"	U3	"
9	1/2"φ	9'-9"	U4	"
12	1/2"φ	3'-3"	U5	"
21	1/4"φ	28'-3"	U6	Columns
6	1/2"φ	8'-0"	U7	Wings
30	7/8"φ	17'-9"	V1	Column
52	1/2"φ	5'-3"	V2	Backwall
6	1/2"φ	13'-9"	V3	Column
6	1/2"φ	7'-6"	V4	"
Piers No. 2 & 3				
32	1"φ	8'-3"	D2	Footings
10	1"□	29'-6"	H8	Web
24	1/2"φ	26'-9"	H9	"
4	1"φ	26'-0"	H10	Cap
4	1"φ	9'-0"	H11	"
8	1"φ	12'-0"	H12	"
4	1"φ	5'-0"	H13	"
2	3/4"φ	8'-3"	H14	Haunch #2
4	3/4"φ	11'-0"	H15	" "
2	3/4"φ	4'-9"	H16	" "
16	3/4"φ	9'-3"	P1	Cap #2
20	3/4"φ	10'-3"	P2	" "
20	3/4"φ	11'-0"	P3	" "
14	3/4"φ	12'-0"	P4	" "
24	1/4"φ	19'-9"	P5	Cap
16	3/4"φ	9'-6"	P6	Cap #3
20	3/4"φ	10'-6"	P7	" "
20	3/4"φ	11'-3"	P8	" "
14	3/4"φ	12'-3"	P9	" "
35	5/8"φ	9'-6"	U8	Haunch #2
32	1"φ	19'-0"	V5	Shaft
32	1"φ	16'-9"	V6	"
52	1/2"φ	16'-9"	V7	Web

Bending Sketches & Cutting Diagrams

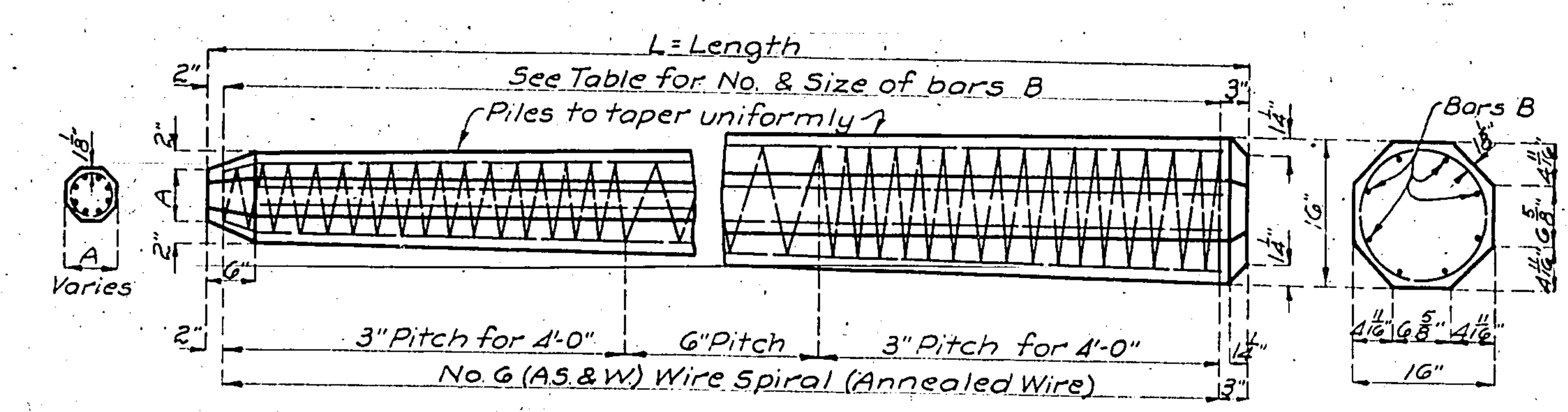


No.	Size	Length	Mark	Location
End Bent No. 4				
2	3/4"φ	18'-0"	A7	Wings
2	5/8"φ	14'-0"	A8	"
4	3/4"φ	11'-9"	A9	"
4	5/8"φ	9'-9"	A10	"
2	3/4"φ	21'-0"	A11	"
2	5/8"φ	17'-0"	A12	"
2	5/8"φ	4'-0"	A13	"
2	5/8"φ	3'-6"	A14	"
3	3/4"φ	17'-6"	A15	"
3	5/8"φ	13'-6"	A16	"
4	1/2"φ	8'-3"	B9	"
3	1/2"φ	15'-6"	B10	"
5	3/4"φ	7'-9"	B11	"
5	1/2"φ	8'-6"	B12	"
4	1/2"φ	9'-3"	B13	"
3	1/2"φ	18'-0"	B14	"
5	1/2"φ	10'-0"	B15	"
5	3/4"φ	9'-6"	B16	"
3	3/4"φ	11'-0"	C2	Curbs
30	7/8"φ	5'-9"	D1	Footings
16	3/4"φ	9'-0"	F1	Haunches
2	3/4"φ	29'-6"	H2	Beam
3	3/4"φ	14'-3"	H3	"
3	3/4"φ	7'-9"	H4	"
3	3/4"φ	11'-0"	H6	"
6	1/2"φ	29'-6"	H7	Backwall
8	7/8"φ	31'-9"	H17	Beam
3	1"φ	13'-0"	H18	"
5	1"φ	10'-6"	H19	"
8	1/4"φ	19'-9"	P5	"
24	1/2"φ	3'-9"	R1	Rail
6	1/2"φ	5'-3"	R2	"
6	1/2"φ	4'-9"	R3	"
2	3/4"φ	29'-6"	T1	Backwall
4	3/4"φ	9'-0"	T5	Wings
2	3/4"φ	12'-6"	T6	"
2	3/4"φ	13'-6"	T7	"
6	1/2"φ	10'-3"	U9	Beam
8	1/2"φ	11'-3"	U10	"
8	1/2"φ	12'-3"	U11	"
6	1/2"φ	13'-3"	U12	"
6	1/4"φ	30'-3"	U13	Columns
12	1/4"φ	27'-6"	U14	"
12	1/2"φ	3'-6"	U15	Beam
10	1/2"φ	8'-6"	U16	Wings
52	5/8"φ	7'-9"	V5	Backwall
30	7/8"φ	15'-6"	V6	Columns
6	1/2"φ	11'-9"	V7	"
2	1/2"φ	7'-9"	V8	"
4	1/2"φ	6'-0"	V9	"
Superstructure				
262	5/8"φ	2'-0"	C1	Curbs
406	5/8"φ	27'-9"	S1	Slab
202	5/8"φ	30'-3	S2	"
118	5/8"φ	22'-0"	S3	Slab & Curbs
177	5/8"φ	28'-9"	S4	" "
118	5/8"φ	34'-3"	S5	" "
12	5/8"φ	31'-3"	S6	Slab

Note: Dimensions given are along centerline of bars and are for computed lengths. Reinforcing bars 3/4" or over in diameter, which are bent to an angle greater than 90°, shall be of structural grade.



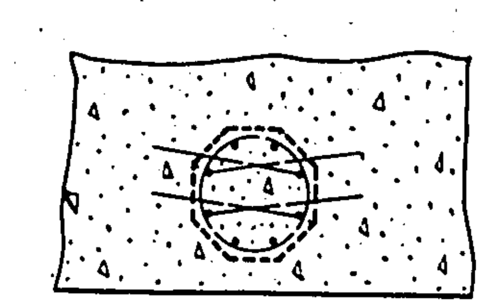
ANCHOR BOLT PLAN



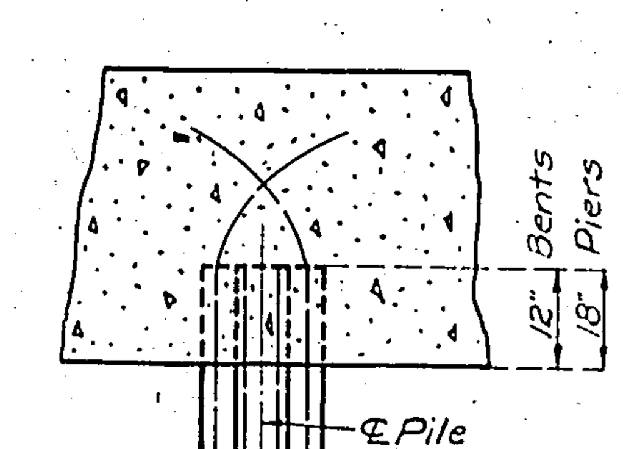
LENGTH OF PILE	Dim. A	Bars B
20'-0"	9 1/4"	8-5/8"φ
25'-0"	8 1/2"	8-5/8"φ
30'-0"	7 3/4"	8-5/8"φ
35'-0"	7"	8-5/8"φ
40'-0"	6 1/4"	8-3/4"φ
45'-0"	5 3/4"	8-1"φ
50'-0"	5"	8-1"□

STANDARD OCTAGONAL TAPERED PILE PRECAST

Note: All bars B shall be full length.
20'-0" and 25'-0" Piles may be picked up at any point for handling.
Piles longer than 25'-0" must be supported at two points located near the quarter points.



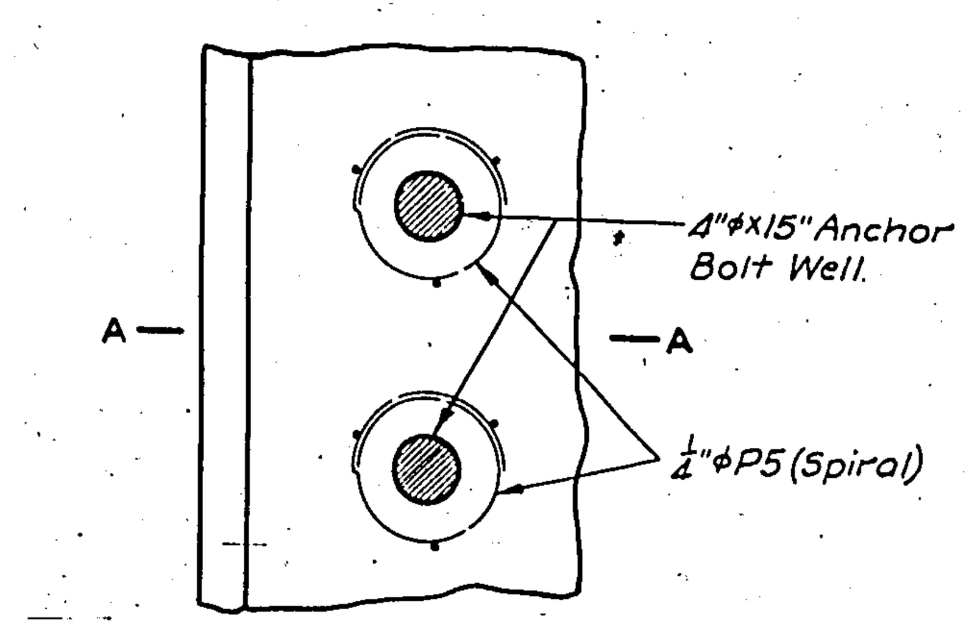
HOR. SECTION



VERT. SECTION

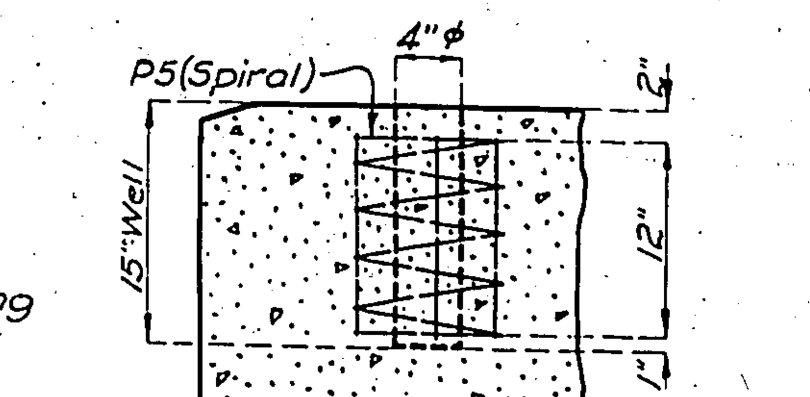
Note: Four (4) of the vertical bars of each concrete pile shall be stripped and cut 2'-0" above cut off elevation so that they may be bent into the concrete footings as shown.

PILE ANCHORAGE



PART PLAN

Note: Holes for plate girder span anchor bolts shall be formed in substructure by placing and setting with templates, 4"φ x 15" wells.



SECTION A-A

DETAILS OF ANCHOR BOLT WELLS FOR PLATE GIRDER SPANS

BRIDGE OVER DU BOIS CREEK

STATE ROAD FROM WASHINGTON TO ROUTE U.S. 66
ABOUT 1.75 MILES EAST OF WASHINGTON
PROJECT NO. FA279-D(I)(RT.100) STA. 91+06.00

FRANKLIN COUNTY

Drawn May 1939 by H.D.
Traced May 1939 by E.M.A.
Checked May 1939 by F.C.L.

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

Sheet No. 2 of 8.

H-814R

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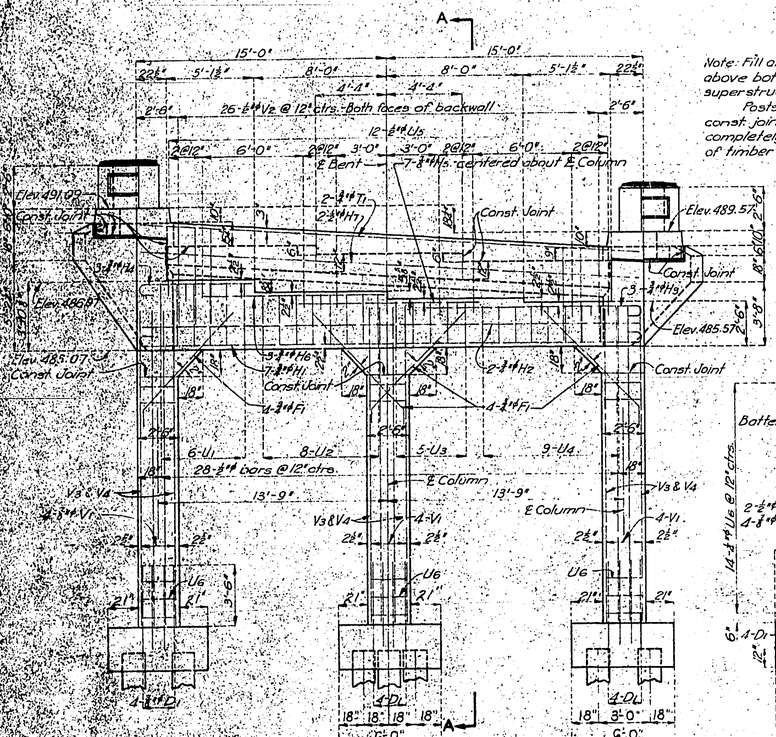
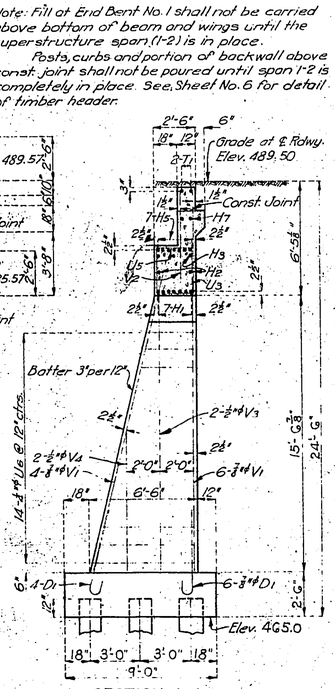
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FA279-D(1) (RT.100)	19	25	35



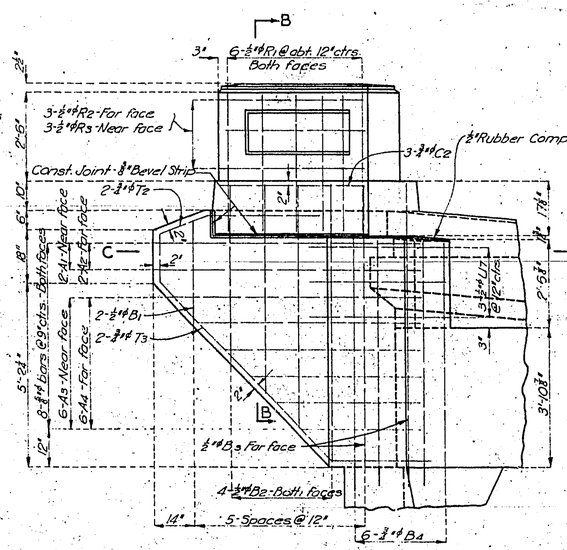
ELEVATION



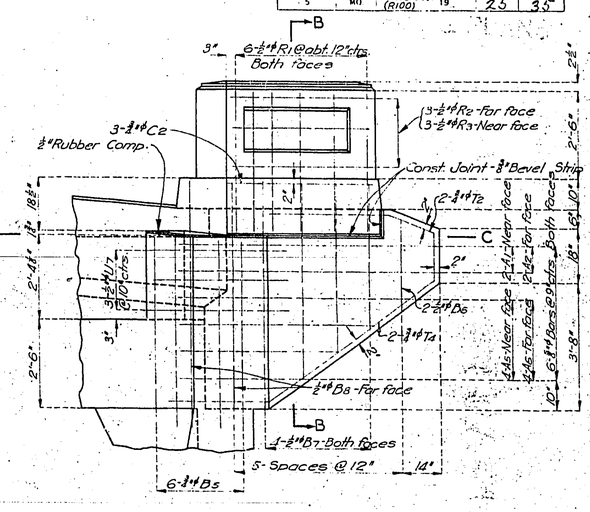
SECTION A-A

Note: Fill at End Bent No. 1 shall not be carried above bottom of beam and wings until the superstructure span (1-2) is in place.

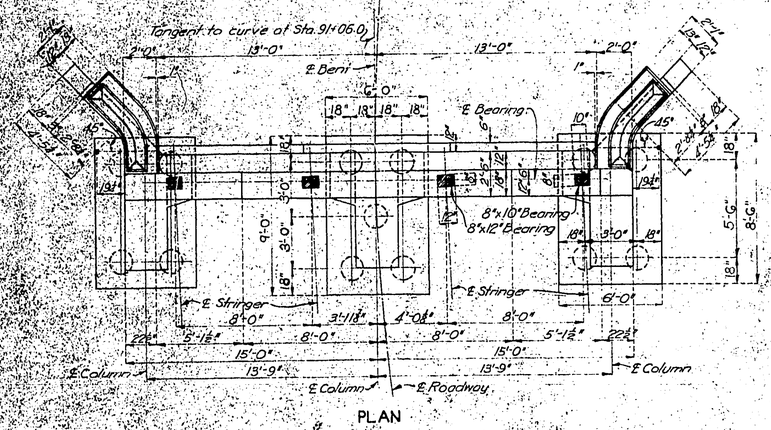
Posts, curbs and portion of backwall above const. joint shall not be poured until span 1-2 is completely in place. See Sheet No. 6 for detail of timber header.



ELEVATION OF HIGH WING

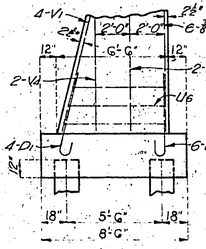


ELEVATION OF LOW WING

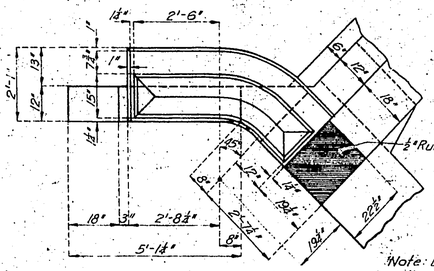


PLAN

Note: See Detail showing reinforcing at tops of piles on Sheet No. 2.

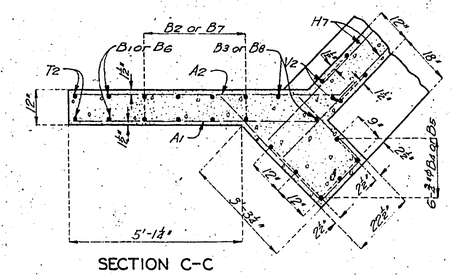


PART ELEVATION OF OUTSIDE COLUMN



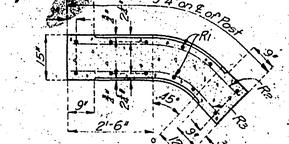
PLAN OF WING

Note: Bend A2 · C2 · A4 & A6 bars in the field.

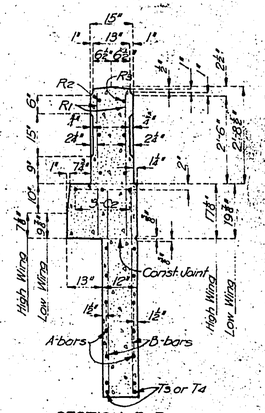


SECTION C-C

Section shown is for High Wing. Section thru Low Wing is opposite hand.



HORIZONTAL SECTION THRU RAIL POST



SECTION B-B

DETAILS OF END BENT NO. 1

℄ BRIDGE OVER DU BOIS CREEK

STATE ROAD FROM WASHINGTON TO ROUTE U.S.66

ABOUT 1.75 MILES EAST OF WASHINGTON

PROJECT NO. FA 279-D (1) (RT. 100) STA. 91+06.00

FRANKLIN COUNTY

H-814R

Drawn April 1939 By H.D.
Traced May 1939 By J.T.F.
Checked Jun. 1939 By F.G.L.

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

Sheet No. 3A of 4.

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FA279-D(1) (R100)	19	26	35

Note: Fill at End Bent No. 4 shall not be carried above bottom of beam and wings until superstructure span (3-4) is in place. Posts, curbs and portion of backwall above const. joint shall not be poured until Span 3-4 is completely in place.

Note: For details of anchor bolt wells see Sheet #2.

Note: See Sheet No. 6 for details of expansion device to be placed in top of backwall.

Note: See Detail showing reinforcing at tops of piles on sheet #2.

Note: Section shown is for low wing. Section thru high wing is opposite hand.

DETAILS OF END BENT NO. 4

BRIDGE OVER DU BOIS CREEK

STATE ROAD FROM WASHINGTON TO ROUTE U.S. 66
ABOUT 1.75 MILES EAST OF WASHINGTON
PROJECT NO. FA 279-D (1)(RT. 100) STA. 91+06.00

FRANKLIN COUNTY

Drawn April 1939 By H.D.
Traced May 1939 By J.T.F.
Checked June 1939 By F.C.L.

Note: This drawing is not to scale: Follow dimensions

Sheet No. 4A of 4

H-814R

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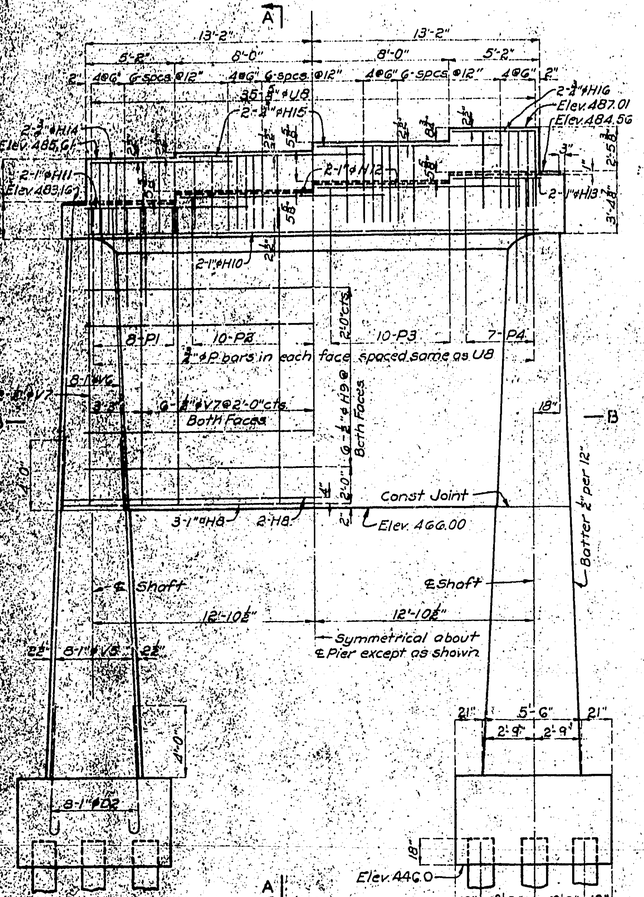
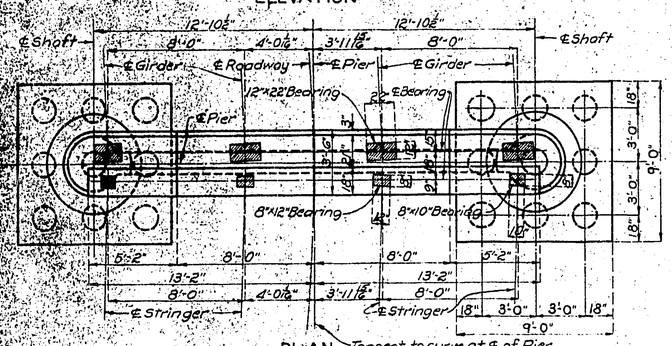
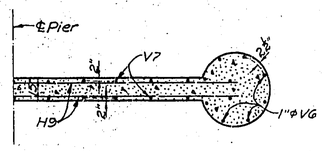
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	F.A.279-D(1) (R100)	19	27	35





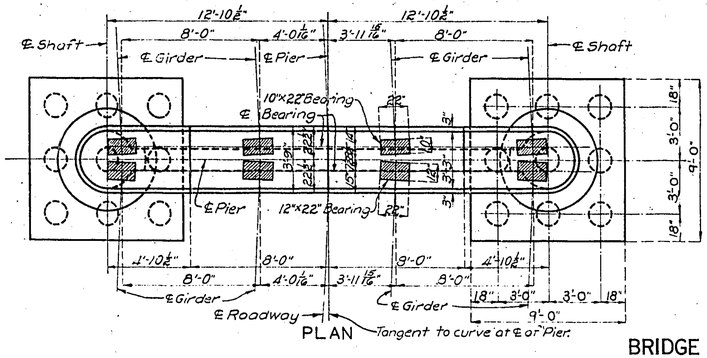
DETAILS OF PIER NO. 2



HALF HORIZONTAL SECTION B-B

Note: See Sheet No. 2 for details of Anchor Bolt Wells.

Note: See Detail Showing Reinforcing at Tops of Piles on Sheet No. 2.



DETAILS OF PIER NO. 3

BRIDGE OVER DU BOIS CREEK

STATE ROAD FROM WASHINGTON TO ROUTE U.S. 66
ABOUT 1.75 MILES EAST OF WASHINGTON
PROJECT NO. F.A 279-D(1)(RT.100) STA. 91+06.00

FRANKLIN COUNTY

Drawn Apr. 1939 by H.D.
Traced Apr. 1939 by E.M.A.
Checked June 1939 by F.C.L.

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

Sheet No. 5A of 4

H-814R

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FA279-D(1) (R100)	19		

Note: Curbs to be cast independently of slab.
Channel rail to be adjusted for horizontal alignment by use of full size metal shims placed between rail support and the rail connection angle. Shims of 1/8" and 1/4" thickness to be furnished with structural steel. Cost of shims to be included in price bid for other items.
Slab at ends of spans shall bear on tops of channel separators.

INT. CROSS FRAME PL. GIRDER SPAN

INT. CROSS FRAME I-BM. SPAN

SECTION THRU SUPERSTRUCTURE

END FRAME FOR PL. GIRDER SPANS

Note: End stiffener angles on I-Bms. to be ground to bear top and bottom.

END SEPARATORS I-BM. SPAN

CONN. OF END FRAME TO GIRDER FLANGE

CAST IRON CONE

Note: Cost of timber headers complete in place to be included in price bid for concrete.
An approved alternate may be substituted for cast iron cone shown.

SECTION

SECTION

PLAN AT BENT NO. 1

PLAN AT PIER NO. 2

BEARING DETAILS

DETAIL OF SLAB HAUNCH OVER PLATE GIRDERS

Note: Use bevel as shown for exposed faces of all joints consisting of rubber compound except at top surface of roadway slab. Use edging tool with 1" Radius at top surface of roadway slab each side of rubber compound joint and fill flush with joint filler as shown.
DETAIL OF BEVEL FOR RUBBER COMPOUND JOINTS

EXPANSION DEVICE AT PIER NO. 3

EXPANSION DEVICE END BENT NO. 4

Note: Expansion devices shall be fabricated in three sections.

PLAN OF STRUCTURAL STEEL

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

BRIDGE OVER DU BOIS CREEK

STATE ROAD FROM WASHINGTON TO ROUTE U.S. 66
ABOUT 1.75 MILES EAST OF WASHINGTON
PROJECT NO. FA 279-D (1)(RT. 100) STA. 91+06.00

FRANKLIN COUNTY

Drawn April 1939 By H.D.
Traced April 1939 By J.T.F.
Checked May 1939 By F.C.L.

Sheet No. 6 of 8

H-814R

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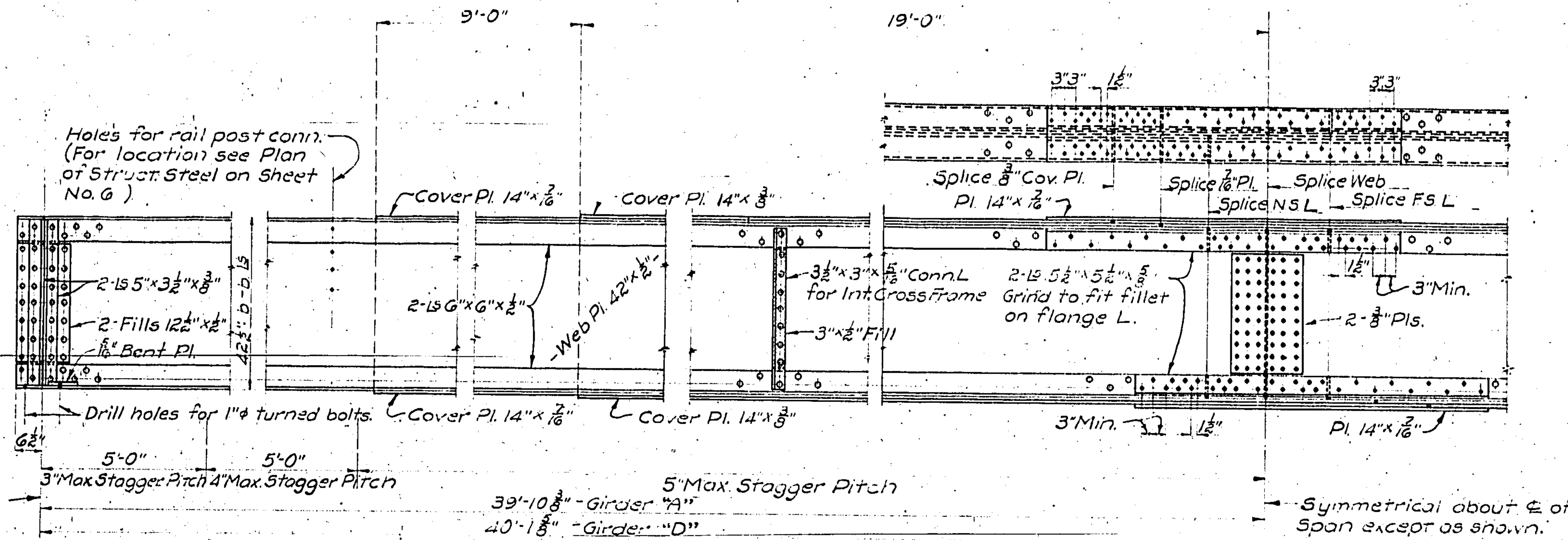
MISSOURI STATE HIGHWAY DEPARTMENT

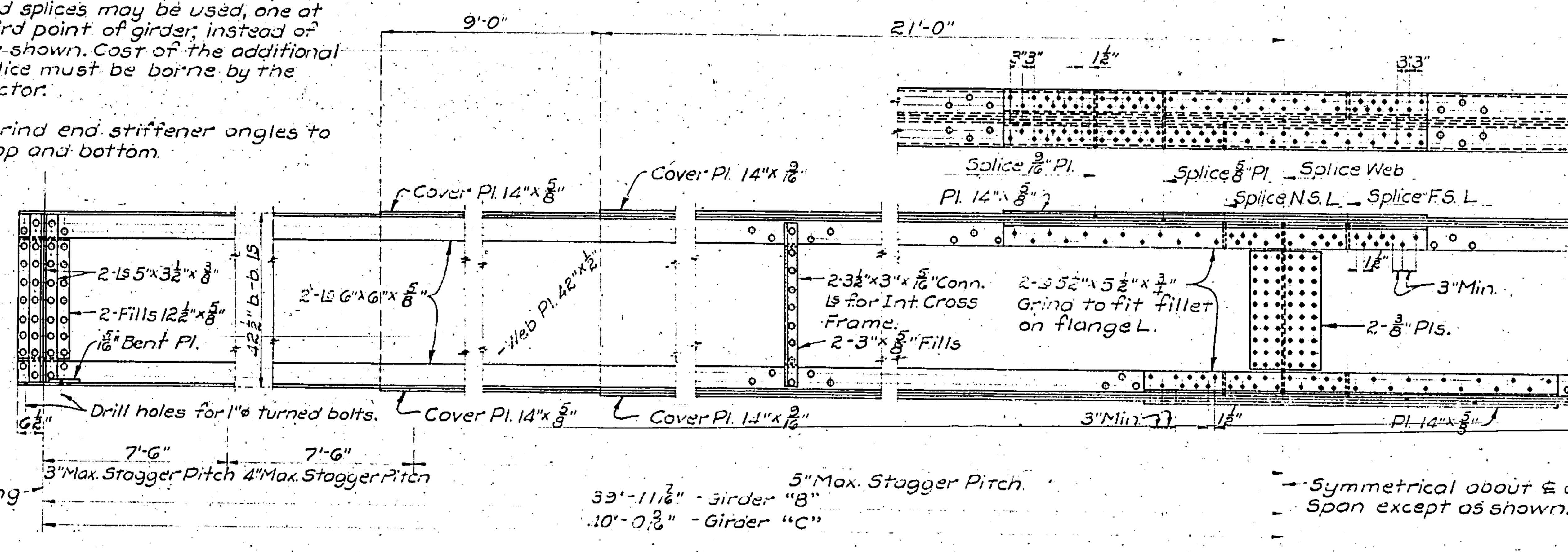
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	FA279-D(1) (R100)	19		



DETAILS OF PLATE GIRDERS "A" & "D"

Note: At the option of the contractor, two field splices may be used, one at each third point of girder, instead of the one shown. Cost of the additional field splice must be borne by the contractor.

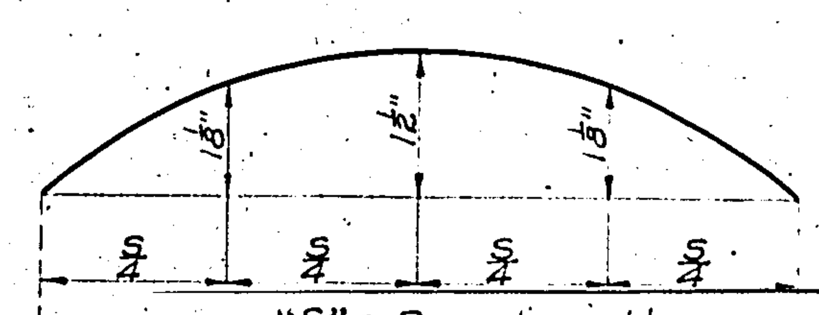
Note: Grind end stiffener angles to bear top and bottom.



DETAILS OF PLATE GIRDERS "B" & "C"

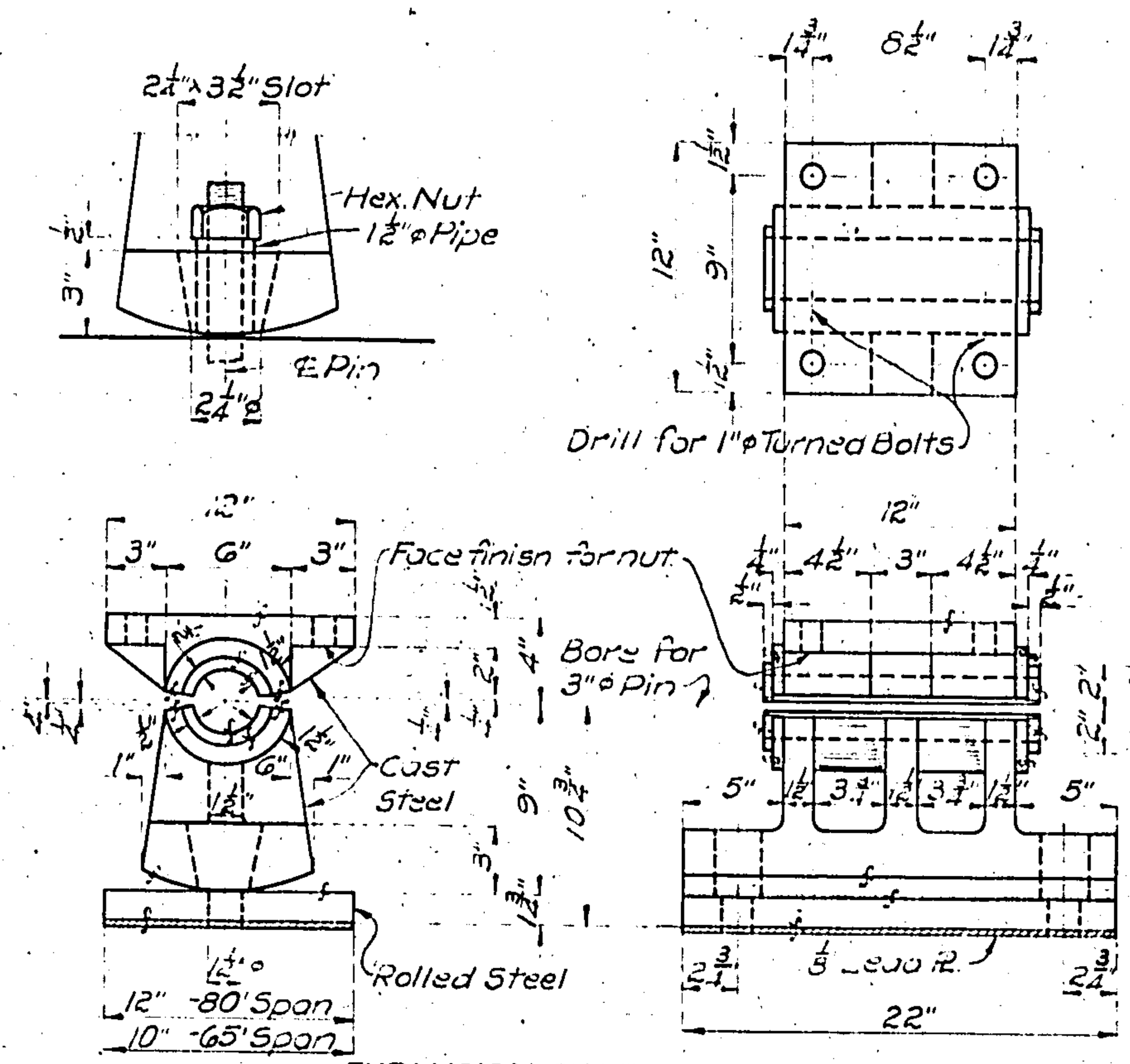
Note: Rivet spacing at ends of cover plates shall be 3" staggered pitch for 21".

DETAILS FOR 80' PLATE GIRDERS

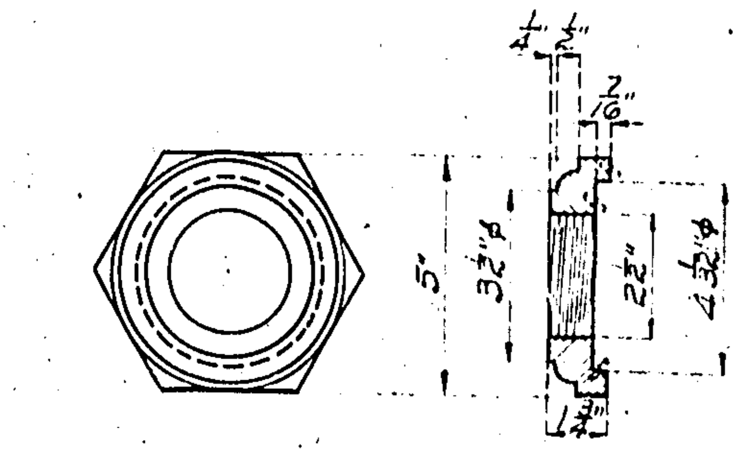


Note: Girders shall be fabricated to the camber curve shown above and web plates ordered to widths necessary to hold distance from edge of plate to back of flange angles ½" maximum.

CAMBER CURVE

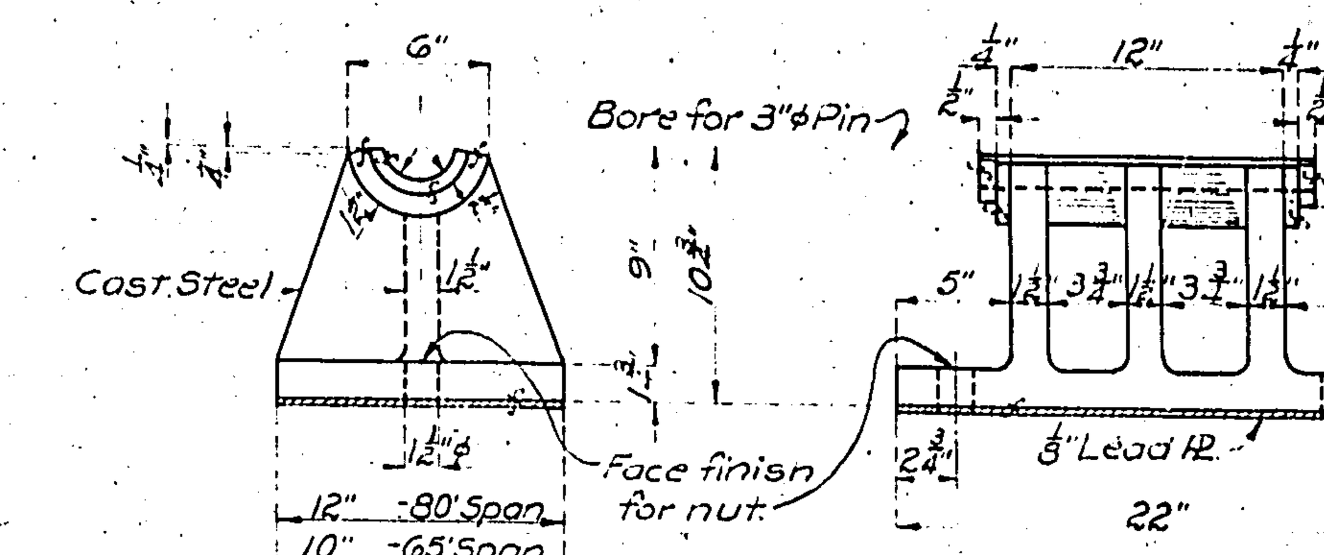


EXPANSION SHOE
4-Required 80' Span
4-Required 65' Span



CAST STEEL NUT
Note: 16-3"ϕ Rolled Steel Pins and 32-Cast Steel Nuts required.

Note: Cast Steel Cap same as for Expansion Shoe.

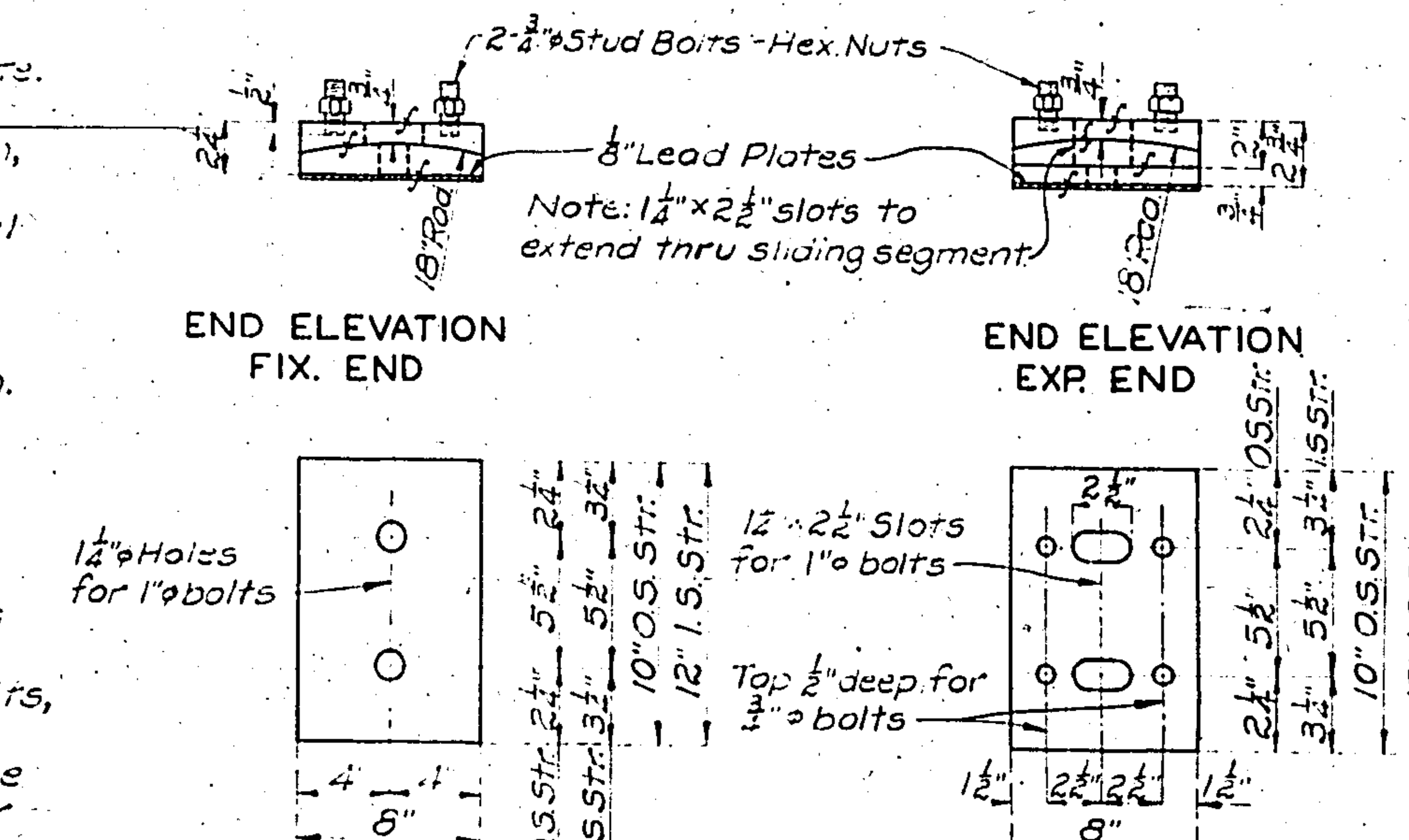


FIXED SHOE
4-Required 80' Span
4-Required 65' Span

Note: All fillets shall have ¾" radius.
Finish all surfaces marked "f".
All pins, bolts, and rolled plates will be paid for as structural steel.
Anchor bolts shall be 1¼"ϕ swedged bolts with Hex. nuts and shall extend 12" into concrete.
All finished surfaces shall be painted with one coat of white lead and tallow.

DETAILS OF BEARINGS FOR PLATE GIRDER SPANS

Note: 2-8"x10" and 2-8"x12" fixed plates required, each consisting of one top and one bottom plate.
2-8"x10" and 2-8"x12" expansion plates required, each consisting of one top, one bottom, and one floater plate.
Bearing plates may be either cast steel or gray iron alloy.
All machine-finished surfaces shall be coated with white lead and tallow before shipment or before being placed in the open. Before erection, the white lead and tallow shall be completely removed and the contact surfaces shall be given a heavy coat of graphite and oil.
Finish all surfaces marked "f".
Stud bolts and nuts will be paid for as structural steel.
Anchor bolts shall be 1"ϕ swedged bolts, no heads or nuts and shall extend 10" into concrete. Top ends of anchor bolts shall be above the top of castings but not higher than ¼" below top surface of bottom flange of beam.



DETAILS OF BEARINGS FOR 40' SPAN

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BRIDGE OVER DU BOIS CREEK
STATE ROAD FROM WASHINGTON TO ROUTE U.S. 66
ABOUT 1.75 MILES EAST OF WASHINGTON
PROJECT NO. FA279-D(1)(RT.100) STA. 91+06.00
FRANKLIN COUNTY

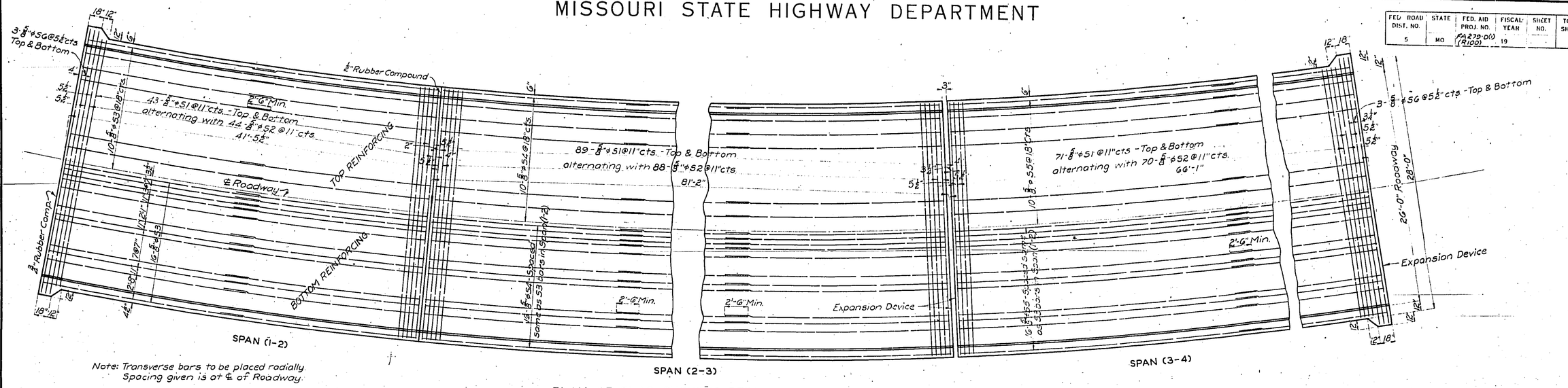
Drawn Jan. 1939 by H.D.
Traced Jan. 1939 by E.M.A.
Checked Mar. 1939 by RAB. & F.C.L.

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

H-814R

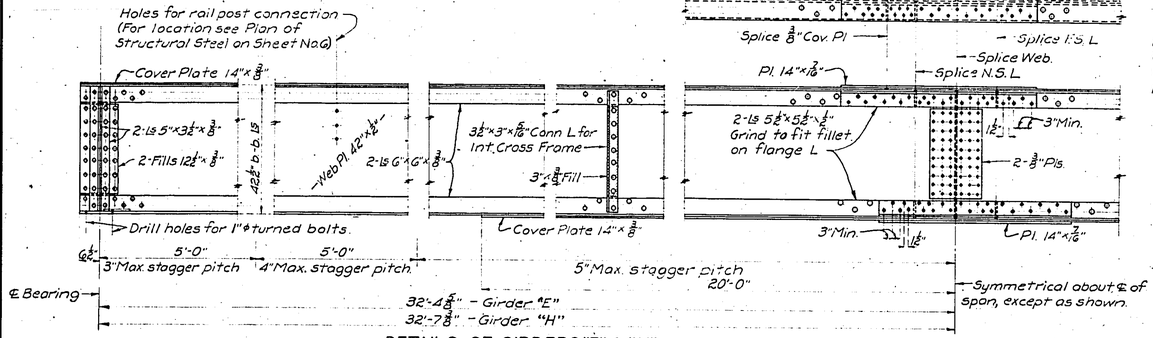
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	(FA 279-D) (R100)	19		



Note: Transverse bars to be placed radially. Spacing given is at ℄ of Roadway.

PLAN OF SLAB SHOWING REINFORCING

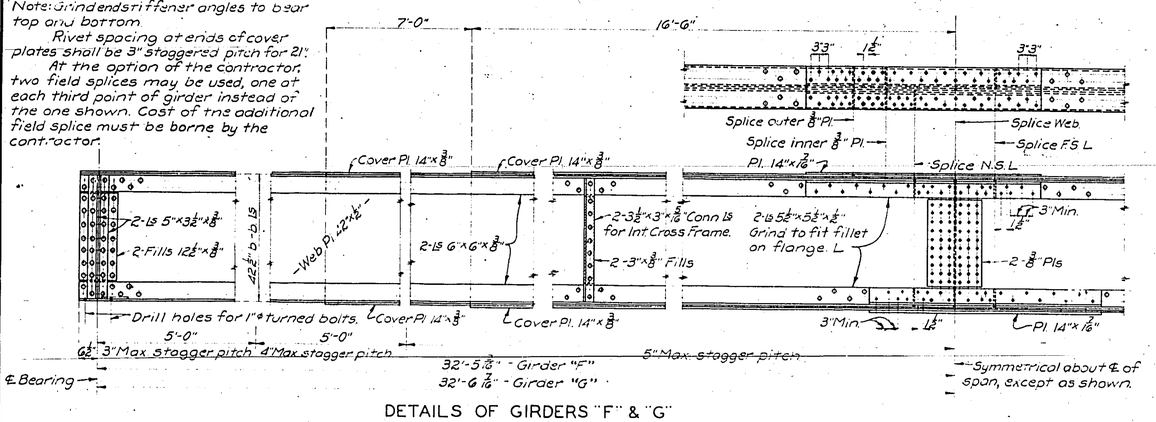


DETAILS OF GIRDERS "E" & "H"

Note: Grind end stiffener angles to bear top and bottom.

Rivet spacing at ends of cover plates shall be 3" staggered pitch for 21".

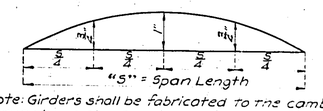
At the option of the contractor, two field splices may be used, one at each third point of girder instead of the one shown. Cost of the additional field splice must be borne by the contractor.



DETAILS OF GIRDERS "F" & "G"

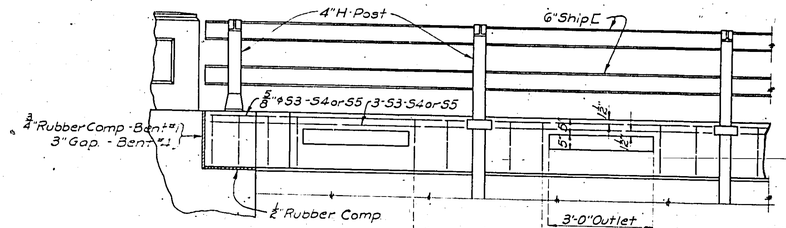
DETAILS FOR 65' PLATE GIRDERS

Drawn April 1939 by H.D.
Traced April 1939 by E.M.A.
Checked June 1939 by F.C.L.



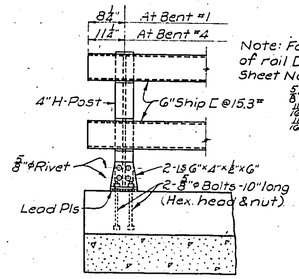
Note: Girders shall be fabricated to the camber curve shown above, and web plates groered to widths necessary to hold distance from edge of plate to back of flange angles ½" maximum.

CAMBER CURVE



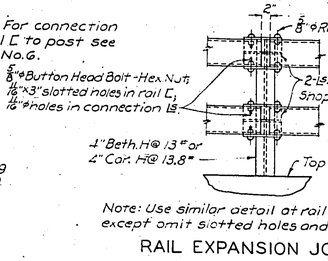
Note: Outlets to be centered between rail posts.

TYPICAL PART ELEVATION OF CURB AND RAIL



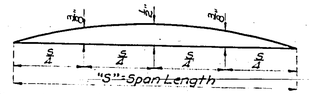
ELEVATION

Note: For connection of rail C to post see Sheet No.6.



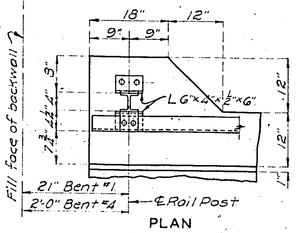
Note: Use similar detail at rail splices except omit slotted holes and 2" gap.

RAIL EXPANSION JOINT



Note: Floor slab shall be brought to grade and dead load deflection taken care of by increasing slab thickness. Depth of slab at outside face of curb shall be kept uniform and bottom surface of slab warped between curb and outside beam to obtain required thickness at beam. Payment will be allowed for additional concrete required for thickening slab. This additional concrete is included in "Estimated Quantities."

DEFLECTION DIAGRAM FOR SPAN (1-2)



PLAN

DETAILS OF RAIL AT ENDS OF SUPERSTRUCTURE

Note: Top of curbs shall be finished to a smooth surface parallel to grade. Not less than one nor more than four soft lead plates of 1/8" thickness shall be used under base angles of each rail post for aligning rail to correct elevation. Plates shall be of same size as leg of base angle and shall be punched ⅞"ϕ on same gauges as the base angles. No grouting will be permitted. Cost of lead plates shall be included in price bid for other items.

BRIDGE OVER DU BOIS CREEK

STATE ROAD FROM WASHINGTON TO ROUTE U.S. 66
ABOUT 1.75 MILES EAST OF WASHINGTON
PROJECT NO. FA 279-D (1) CRT. 100 STA. 91+06.00

FRANKLIN COUNTY

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

H-814R

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STANDARDS

Route 100
[redacted] or Proj F-229D(1)
County FRANKLIN
Sheet # 31

TYP SEC. & Earthwork

1T-1

15A7-2

1L-8

DRAINAGE

CONC.-REINF, APPURTS, FINISH ETC.

15D15-3

15E-11

C-110R1

C-101

SURFACE-CURB & GUTTER APPROACHES

15C10-2

1C-2

BRIDGES

MISC.

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ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK, NO., AREAS CHECKED, BY, DATE

FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK, NO., AREAS CHECKED, BY, DATE