

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							14	45

① 3424 AR&BR GEN & STRU NOTE 28163

GENERAL NOTES - JOB 60381

- ALL BEARINGS REFER TO TRUE NORTH.
- LEVEL DATUM IS MEAN SEA LEVEL REFERENCED TO U.S.C. AND G.S.
- ALL CONCRETE EXCEPT SEAL CONCRETE SHALL BE POURED IN THE DRY. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
- ALL CONCRETE IN THE SUPERSTRUCTURE SLABS AND PARAPET SHALL BE CLASS S(AE). ALL OTHER CONCRETE SHALL BE CLASS S.
- GRADE LINE DENOTES FINISHED GRADE.
- ALL STRUCTURAL STEEL SHALL BE A36 OR A572 GRADE 50. STRUCTURAL STEEL NOT IDENTIFIED AS TO GRADE SHALL BE A36.
- ANCHOR BOLTS SHALL BE ASTM DESIGNATION A36 AND SHALL BE GALVANIZED TO CONFORM TO ASTM A153. ANCHOR BOLTS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR "STRUCTURAL STEEL IN ... SPANS (A36)."
- DRAWINGS SHOW GENERAL FEATURES OF DESIGN ONLY. SHOP DRAWINGS SHOWING DETAILS OF STRUCTURAL STEEL AND PERMANENT STEEL FORMS SHALL BE PREPARED, SUBMITTED AND APPROVED BEFORE FABRICATION IS BEGUN.
- THE TOPS OF ALL NEW FOOTINGS SHALL NOT BE ABOVE THE TOPS OF THE EXISTING ADJACENT FOOTINGS.
- REINFORCING STEEL SHALL BE ASTM A615 OR A617 GRADE 60 DEFORMED BARS. LAP SPLICES SHALL BE A MINIMUM OF 32 BAR DIAMETERS IN LENGTH UNLESS OTHERWISE NOTED. BAR SIZES ARE DESIGNATED BY NUMBER, THE FIRST DIGIT OR DIGITS INDICATING THE SIZE OF THE BAR. BARS SHALL BE ACCURATELY LOCATED IN THE FORMS AND FIRMLY HELD IN PLACE BY STEEL SUPPORTS SUFFICIENT IN NUMBER AND SIZE TO PREVENT DISPLACEMENT DURING THE COURSE OF CONSTRUCTION. THE WIRE SUPPORTS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM OF "REINFORCING STEEL."
- DIMENSIONS SHOWN IN REINFORCING BAR BENDING DIAGRAMS ARE TO OUTER EDGE OF BARS, UNLESS OTHERWISE NOTED.
- REINFORCING STEEL IN TOP MAT OF SLAB SHALL BE EPOXY COATED. ALL REINFORCING STEEL TO BE EPOXY COATED HAS BEEN MARKED IN THE PLANS WITH AN "E" IMMEDIATELY AT THE END OF THE BAR MARK.
- THE TRANSVERSE TRUSS BARS IN THE SUPERSTRUCTURE SLAB MAY BE REPLACED WITH FULL LENGTH STRAIGHT BARS OF THE SAME SIZE IN THE TOP AND BOTTOM MAT OF THE SLAB. THE BARS IN THE TOP MAT SHALL BE EPOXY COATED. THE BASIS OF PAYMENT SHALL BE THE TRUSS BARS.
- CONCRETE SLABS FOR SPANS UP TO 50 FEET IN LENGTH SHALL BE POURED IN ONE CONTINUOUS OPERATION. SPANS OVER 50 FEET IN LENGTH MAY BE POURED IN INCREMENTS WITH THE CENTER ONE-THIRD TO ONE-HALF SPAN POURED FIRST. AFTER THE CENTER SECTION IS POURED, NOT LESS THAN 72 HOURS SHALL ELAPSE BEFORE POURING THE END SECTIONS. END SECTIONS MAY BE POURED SIMULTANEOUSLY. IF NOT POURED SIMULTANEOUSLY, 48 HOURS SHALL ELAPSE BETWEEN END SECTION POURS. A MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN COMPLETION OF THE SLAB AND THE POURING OF THE PARAPET RAILING.
- ALL CONCRETE SHALL BE Poured AND SCREEDED OFF PRIOR TO INITIAL SET. THE CONCRETE DECK SHALL BE GIVEN A GROOVED FINISH AS SPECIFIED IN SP. FINISHING AND GROOVING CONCRETE BRIDGE DECKS AND APPROACHES. MOVEMENT OF THE FINISHING MACHINE ACROSS NEW CONCRETE SHALL BE ON PLANKS PLACED ON THE SURFACE AND SHALL BE PROHIBITED FOR 72 HOURS AFTER FINISHING THE POUR.
- ANY EQUIPMENT OR APPURTENANCE THAT INTERFERS WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE RESPECTIVE OWNERS, UNLESS OTHERWISE PROVIDED.
- STEEL PILING: PILING SHALL BE DRIVEN WITH AN APPROVED AIR, STEAM OR DIESEL HAMMER TO 70 TONS MINIMUM. LENGTHS OF PILING SHOWN ARE BASED ON EXISTING DRIVING RECORDS. ORDER LENGTHS SHOWN; CUT-OFF OR SPLICING ON, IF NECESSARY, SHALL BE PAID FOR IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
- ALL MATERIAL REMOVED FROM THE BRIDGES AND NOT SCHEDULED TO BE REUSED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
- BOILED LINSEED OIL SHALL BE APPLIED TO THE ROADWAY SURFACE OF ALL BRIDGE DECKS AND THE ROADWAY FACE AND TOP OF THE CONCRETE PARAPET RAIL.
- ALL NEW STRUCTURAL STEEL, EXCEPT GALVANIZED MEMBERS, CONTACT SURFACES OF BOLTED CONNECTIONS, SURFACES WITHIN 3" OF HOLES AND FIELD WELDS, AND SURFACES IN CONTACT WITH CONCRETE, SHALL BE GIVEN ONE SHOP PRIME COAT AND TWO FIELD COATS OF PAINT AFTER ERECTION AS SPECIFIED IN SUBSECTION 807.59 OF THE STANDARD SPECIFICATIONS AND SP 807-10. THE SECOND FIELD COAT SHALL BE THE COLOR "ALUMINUM."
- ALL EXISTING STRUCTURAL STEEL SHALL BE PREPARED AND PAINTED IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISION "PAINTING EXISTING STRUCTURAL STEEL." THE FINISH COAT SHALL BE THE COLOR "ALUMINUM."
- THE CONTRACTOR SHALL SUBMIT A PLAN TO REMOVE DEMOLITION DEBRIS FROM THE WATER AREAS, FOR APPROVAL BY THE ENGINEER, PRIOR TO BEGINNING DEMOLITION OPERATIONS. THE CONTRACTOR MAY SUSPEND A PLATFORM OR NETTING FROM THE BRIDGE CAPABLE OF SUPPORTING PIECES OF CONCRETE FALLING FROM THE DECK, AS APPROVED BY THE ENGINEER.
- ADDITIONAL GENERAL NOTES ARE LISTED ON THE BRIDGE STAGE CONSTRUCTION PLAN.

STRUCTURAL STEEL NOTES

- ALL EXISTING BEARINGS TO REMAIN AND NEW BEARINGS SHALL BE FIRMLY SEATED OR RESEATED IN ACCORDANCE WITH SUBSECTION 807.51 OF THE STANDARD SPECIFICATIONS. THIS ITEM OF WORK AND MATERIAL IS TO BE CONSIDERED AS SUBSIDIARY TO THE ITEM OF "STRUCTURAL STEEL IN ... SPANS (A36)" AND WILL NOT BE PAID FOR DIRECTLY.
- PLATE GIRDER WEBS MAY BE MADE BY SHOP SPLICING WITH MINIMUM LENGTH OF 25'-0" FOR SECTIONS. NO ADDITIONAL PAYMENT FOR WELDS FOR THESE SPLICES WILL BE MADE.
- ALL WEB AND FLANGE PLATES MUST BE PLACED SO THAT THE DIRECTION IN WHICH THE PLATES ARE ROLLED IS ALONG THE LONGITUDINAL AXIS OF THE PLATE GIRDER.
- ALL WELDS TO BE MADE DURING FABRICATION, BOTH TEMPORARY AND PERMANENT, SHALL BE FULLY DETAILED ON THE SHOP DRAWINGS. ADDITIONAL WELDS FOR ERECTION PURPOSES, BOTH PERMANENT AND TEMPORARY, SHALL BE FULLY DETAILED AND SUBMITTED TO THE BRIDGE DESIGN DIVISION OF THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT FOR APPROVAL.
- ALL WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE AWS D1.1-75, AASHTO STANDARD SPECIFICATIONS FOR WELDING OF STRUCTURAL STEEL HIGHWAY BRIDGES, 1981 EDITION, SUBSECTION 807.24 OF THE STANDARD SPECIFICATIONS AND SP 807-5.
- ALL GIRDERS SHALL BE BLOCKED IN THEIR TRUE POSITION, WITH WEB PLATES HORIZONTAL, IN THE SHOP IN GROUPS OF 3 SECTIONS MINIMUM. THE CAMBER, LENGTH OF SECTIONS, DISTANCE BETWEEN BEARINGS AND OPENING OF JOINTS SHALL BE MEASURED WITH THE GIRDERS IN THIS POSITION AND THIS INFORMATION SHALL BECOME A PART OF THE PERMANENT RECORDS OF THIS JOB.
- TRANSVERSE INTERMEDIATE STIFFENERS SHALL BE SET NORMAL TO THE TOP FLANGE AND ON THE SIDE OF THE GIRDER WEB AS INDICATED ON THE FRAMING PLAN. NO TRANSVERSE INTERMEDIATE STIFFENERS ARE TO BE PLACED ON THE OUTSIDE OF THE EXTERIOR GIRDERS.
- CROSSFRAMES SHALL BE INSTALLED AS GIRDERS ARE ERECTED. ALL CROSSFRAMES SHALL BE INSTALLED AND COMPLETELY BOLTED PRIOR TO POURING OF FLOOR SLABS.
- ALL WIDE FLANGE BEAMS, AND GIRDER FLANGE AND WEB PLATES, ARE CONSIDERED MAIN LOAD CARRYING MEMBERS AND SHALL MEET THE REQUIREMENT OF THE CHARPY V-NOTCH TEST AS SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.
- PINS SHALL BE ASTM A668 CLASS C OR ASTM A108 GRADE 1016-1030 INCLUSIVE AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR "STRUCTURAL STEEL IN PLATE GIRDER SPANS (A36)."
- ALL METAL BEARINGS AND ROADWAY EXPANSION DEVICES SHALL BE PAID FOR AS "STRUCTURAL STEEL IN ... SPANS (A36)."
- THE BEARING ASSEMBLIES SHALL BE SET IN A VERTICAL POSITION AT 60 DEGREES F.
- UNLAMINATED ELASTOMERIC BEARINGS SHALL BE SUPPLIED IN NOMINAL 70 DUROMETER HARDNESS. LAMINATED ELASTOMERIC BEARINGS SHALL BE SUPPLIED IN NOMINAL 60 DUROMETER HARDNESS. ALL ELASTOMERIC BEARINGS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 808 OF THE STANDARD SPECIFICATIONS.
- THE LUMP SUM BID PRICE FOR ALL ELASTOMERIC BEARINGS SHALL INCLUDE PAYMENT FOR ALL PADS INCLUDING INTERNAL SHIM PLATES, EPOXY ADHESIVE, AND SOLE PLATES.
- ALL CONTACT SURFACES BETWEEN PLATES AT FIELD SPLICES SHALL BE FREE OF PAINT, OIL, RUST, OR SCALE BEFORE ASSEMBLY.
- STRUCTURAL SHAPES OF EQUAL OR GREATER STRENGTH MAY BE SUBSTITUTED FOR SHAPES SHOWN IF APPROVAL IS OBTAINED FROM THE BRIDGE ENGINEER. PAYMENT WILL BE MADE ON THE BASIS OF SHAPES SHOWN.
- FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER BOLTS UNLESS OTHERWISE NOTED. THE MINIMUM DISTANCE BETWEEN THE CENTERS OF 7/8" DIAMETER BOLTS SHALL NOT BE LESS THAN 3 TIMES THE DIAMETER OF THE BOLT AND PREFERABLY NOT LESS THAN 3". THE MINIMUM DISTANCE FROM THE CENTER OF A 7/8" DIAMETER BOLT TO A SHEARED OR FLAME CUT EDGE SHALL BE 1-1/2" AND TO A ROLLED OR PLANED EDGE SHALL BE 1-1/4". BOLT HOLES IN FIELD SPLICES SHALL NOT EXCEED 15/16" IN DIAMETER. BOLT HEADS AT FIELD SPLICES SHALL BE PLACED ON THE EXTERIOR SIDE OF BEAMS, AND BOTTOM OF BEAM FLANGES.
- OVERSIZED HOLES 3/16" GREATER THAN THE BOLT DIAMETER MAY BE USED AT ALL BOLTED CONNECTIONS OTHER THAN FIELD SPLICES FOR BOLTS 7/8" AND LESS IN DIAMETER. WASHERS UNDER BOTH NUT AND HEAD OF THE BOLT SHALL BE USED WITH OVERSIZED BOLT HOLES.

SPECIAL NOTE - ELEVATIONS

ELEVATIONS SHOWN ON THE BRIDGE DRAWINGS HAVE BEEN TAKEN OR COMPUTED FROM THE ORIGINAL BRIDGE CONSTRUCTION PLANS AND ARE PROVIDED FOR INFORMATION ONLY. THESE ELEVATIONS HAVE NOT BEEN SURVEYED OR REFERENCED TO A CURRENT T.B.M. WHEN A DISCREPANCY EXISTS BETWEEN THE ELEVATIONS PROVIDED IN THESE PLANS, THE ACTUAL FIELD ELEVATIONS AND THE DIMENSIONS SHOWN, THE ACTUAL FIELD ELEVATIONS AND/OR DIMENSIONS SHALL GOVERN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING CHECK MEASUREMENTS OF THE EXISTING BRIDGES AND NECESSARY ADJUSTMENTS TO THE NEW WORK.

SHEET 1 OF 1

GENERAL AND STRUCTURAL NOTES
OUACHITA RIVER BRIDGE AND APPROACHES

HOT SPRING COUNTY
ROUTE I-30 SEC.2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: L.O.T. DATE: DEC 1985
CHECKED BY: H.J.P. DATE: DEC 1985
DESIGNED BY: J.P. DATE: DEC 1985

BRIDGE NO. 3424 AR & BR DRAWING NO. 28163

BRIDGE ENGINEER

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6-5-86	5-6-86	8-7-87	6-8-87	6	ARK.			
7-14-86	5-17-86							
9-30-86	8-27-86					60381	11	45

① 3424 AR & BR SCH. OF QUANT. 28164

BRIDGE NO.	CODE NO.	BRIDGE NAME PLATE TITLE	UNIT OF BRIDGE	ITEM NO.	ITEM												
					UNCLASSIFIED EXCAVATION FOR STRUCTURES- BRIDGE*	CLASS S CONCRETE	CLASS S(AE) CONCRETE	BOILED LINSEED OIL	REINFORCING STEEL (GRADE 60)	EPOXY COATED REINFORCING STEEL (GRADE 60)	STEEL BEARING PILING (HP 12 X 53)	STRUCTURAL STEEL IN BEAM SPANS (A36)	STRUCTURAL STEEL IN BEAM SPANS (A572 GR50)	STRUCTURAL STEEL IN PLATE GIRDER SPANS (A36)	STRUCTURAL STEEL IN PLATE GIRDER SPANS (A572 GR50)		
UNIT				CU. YD.	CU. YD.	CU. YD.	GAL.	LB.	LB.	LIN. FT.	LB.	LB.	LB.	LB.			
3424 AR	X071	OUACHITA RIVER	END BENT 1	20	11.2 43.4				1123 1,129		80 100	609 592					
			BENT 2	8	2.6				296 384		78		487				
			PIER 1	208 244	589 80 58.65				4032 3,983								
			PIER 2	35 18	667 84				4409 4,119					1,176 792			
			PIER 3	37 20	677 85				4409 4,133					1,248 966			
			PIER 4	36 28	677 85				4409 4,133					1,176 792			
			PIER 5	36 28	677 85				4409 4,133					1,176 792			
			PIER 6	214 246	602 83 59.55				4107 4,001								
			BENT 3	8	2.6				296 384		78		501				
			END BENT 4	20	11.2 43.4				1123 1,129		80 100		609 592				
			FOUR - 40' SPANS			192.0	17	24,007 25,007		25,204			25,360				
			FIVE - 110' SPANS			653.0	58	8,905 9,044		9,680 9,150				152,636 175,449			
			TOTAL FOR BR. NO. 3424 AR		622 648	415.0	845.0	75	33,912 32,412		121,354		316 476	21,173 19,770	25,360	157,406 178,791	82,452
			3424 BR	X071	OUACHITA RIVER	END BENT 1	20	11.2 43.4				1123 1,129		80 100	609 592		
BENT 2	8	2.6							296 384		78		487				
PIER 1	208 244	589 80 58.65							4032 3,983								
PIER 2	34 23	667 84							4409 4,119					1,176 792			
PIER 3	36 28	677 85							4409 4,133					1,248 966			
PIER 4	40 35	677 85							4409 4,133					1,176 792			
PIER 5	34 30	677 85							4409 4,133					1,176 792			
PIER 6	216 254	602 83 59.55							4107 4,001								
BENT 3	8	2.6							296 384		78		501				
END BENT 4	20	11.2 43.4							1123 1,129		80 100		609 592				
FOUR - 40' SPANS						192.0	17	24,007 25,007		25,204			25,360				
FIVE - 110' SPANS						653.0	58	8,905 9,044		9,680 9,150				152,636 175,449			
TOTAL FOR BR. NO. 3424 BR		664 622				415.0	845.0	75	33,912 32,412		121,354		316 476	21,173 19,770	25,360	167,406 178,791	82,452
TOTAL FOR JOB 60381		1,312 1,270				830.0	1,690.0	150	67,824 64,824		242,708		632 952	42,346	50,720	314,812	329,808

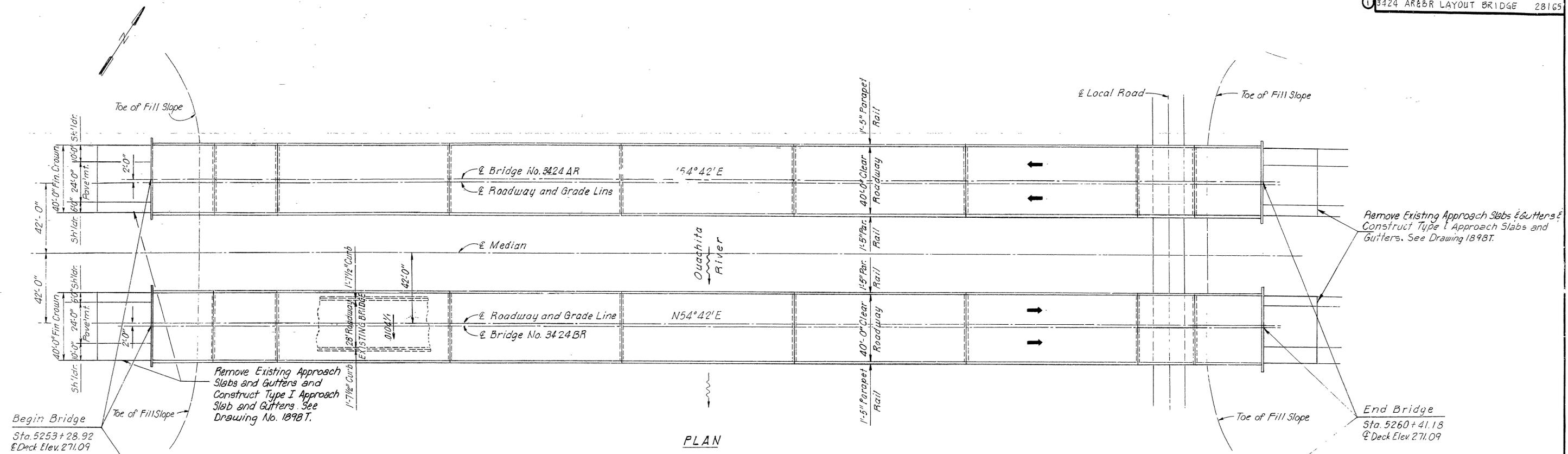
*ESTIMATED ROCK EXCAVATION = 85 C.Y.
 ① 180
 ② 211.2 930.0
 ③ 267,866
 ④ 244,386
 ⑤ 39,540
 ⑥ 357,582
 ⑦ 164,904

- ① Revised Quantity of Str. Steel (A572-50). LDF 6-5-86
- ② Revised Quantities. EJK 7-14-86
- ③ Revised Quantities 9-30-86. EJK
- ④ Revised Quantities. 8-7-87. F.H.

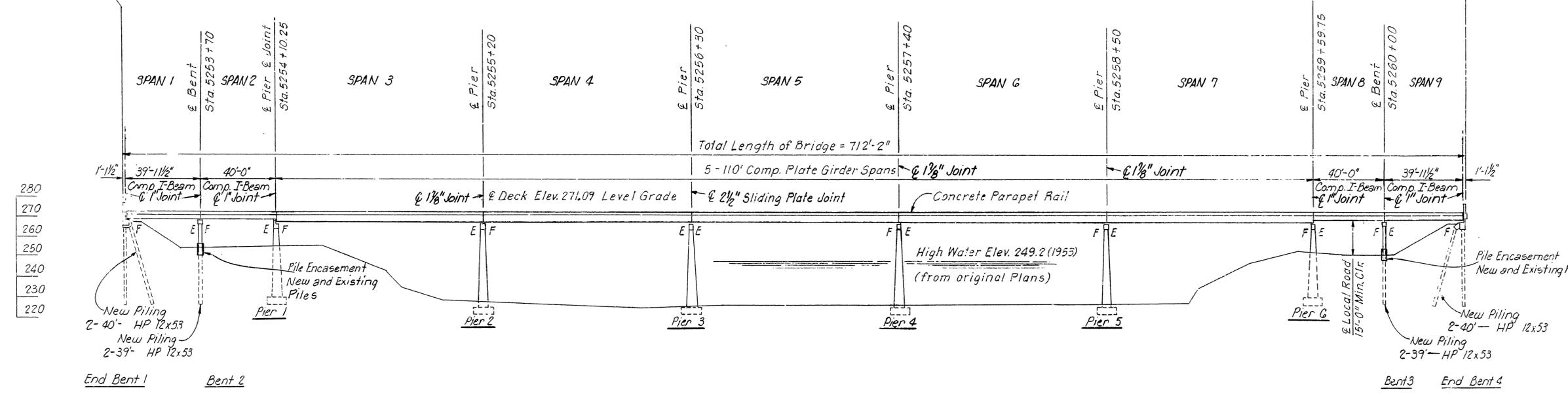
BRIDGE NO.	CODE NO.	BRIDGE NAME PLATE TITLE	UNIT OF BRIDGE	ITEM NO.	ITEM										SP 820 PILE ENCASEMENT	SP GROOVING	
					ELASTOMERIC BEARINGS	PREFORMED JOINT SEALER	BRIDGE NAME PLATES (TYPE C)	REPLUMBING EXISTING BEARINGS	PAINTING EXISTING STRUCTURAL STEEL (TYPE II)	REMODELING EXISTING BRIDGE STRUCTURES	REPLACING EXISTING ANCHOR BOLTS	REPAIR OF EXISTING CONCRETE STRUCTURES	REPLACEMENT OF SHOE PINS	REPLACEMENT OF MASONRY PLATES			
UNIT				L.S.	LIN. FT.	EA.	EA.	TON	L.S.	EA.	CU. FT.	EA.	EA.	LIN. FT.	SQ. YD.		
3424 AR	X071	OUACHITA RIVER	END BENT 1			1											
			BENT 2					2.88						35			
			PIER 1														
			PIER 2				4										
			PIER 3				8										
			PIER 4				4										
			PIER 5				4										
			PIER 6				4										
			BENT 3														
			END BENT 4								2.88						
			FOUR - 40' SPANS			0.4					36.00						
			FIVE - 110' SPANS			0.1					228.70			5	5		
			TOTAL FOR BR. NO. 3424 AR			0.5		386.1	1	20	270.46	0.5	13	5	5	70	2927
			3424 BR	X071	OUACHITA RIVER	END BENT 1											
BENT 2								2.88				1		35			
PIER 1																	
PIER 2							4										
PIER 3							8										
PIER 4							4										
PIER 5							4										
PIER 6							4										
BENT 3																	
END BENT 4											2.88						
FOUR - 40' SPANS						0.4					36.00						
FIVE - 110' SPANS						0.1					228.70			5	5		
TOTAL FOR BR. NO. 3424 BR						0.5		386.1	1	20	270.46	0.5	13	2	5	70	2927
TOTAL FOR JOB 60381						1.0		772.2	2	40	540.92	1.0	26	2	10	140	5854

SHEET 1 OF 1
 SCHEDULE OF BRIDGE QUANTITIES
 OUACHITA RIVER BRIDGE AND APPROACHES
 HOT SPRING COUNTY
 ROUTE I-30 SEC. 2
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DRAWN BY: L.D.T. DATE: DEC. 1985
 CHECKED BY: H.J.P. DATE: DEC. 1985
 DESIGNED BY: J.R. DATE: DEC. 1985
 SCALE: None
 BRIDGE ENGINEER
 BRIDGE NO. 3424 AR & BR DRAWING NO. 28164

DATE REVISED	DATE FILLED	DATE REVISED	DATE FILLED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 60381							15	45
3424 AR&BR LAYOUT BRIDGE							28165	



PLAN



ELEVATION

Remove Existing Approach Slabs & Gutters & Construct Type I Approach Slabs and Gutters. See Drawing 1898T.

End Bridge
Sta. 5260+41.18
Deck Elev. 271.09

NOTES:
All Stations are from Original Plans. All Elevations are 1/8" higher than Original Plans due to increased Slab Thickness and addition of a Bearing Pad under all Shoes.

For General Notes, See Dwg. 28163 & 28166 For Soils information, see Layout of Existing Bridge, Dwg. 11205.

SHEET 1 OF 1
LAYOUT OF BRIDGE
OUACHITA RIVER BRIDGE AND APPROACHES
HOT SPRING COUNTY
ROUTE I-30 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: B.S.S. DATE: DEC 1985
CHECKED BY: T.B.H. DATE: DEC 1985
DESIGNED BY: T.B.H. DATE: DEC 1985
SCALE: 1" = 30'-0"
BRIDGE NO. 3424 AR & BR DRAWING NO. 28165

DATE	BY	REVISION	DATE	NO.	DATE	NO.	DATE	NO.	TOTAL
				6	ARK.				
				JOB NO. 60381		16	45		
				3424 AR & BR - STAGE CONST.				28166	

NOTES - BRIDGE 3424 AR & BR

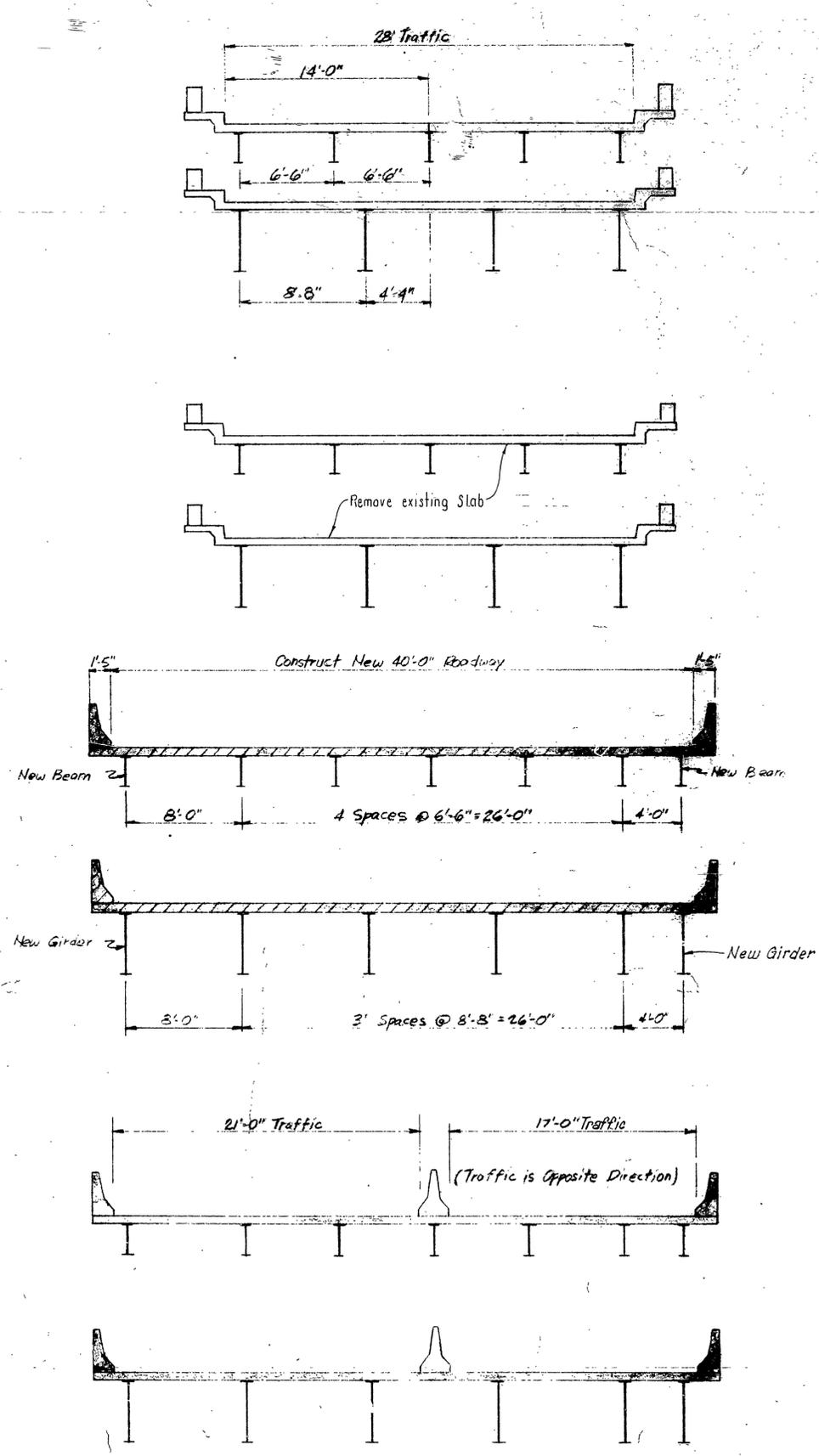
- CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1978 AND APPLICABLE SPECIAL PROVISIONS.
- DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1983 EDITION WITH CURRENT INTERIM SPECIFICATIONS.
- LIVE LOADING: HS20
- METHOD OF DESIGN: SERVICE LOAD FOR EXISTING STRUCTURE LOAD FACTOR FOR NEW DESIGN
- UNIT STRESSES - NEW DESIGN

CLASS S CONCRETE	F _c 3,500 PSI
CLASS S(AE) CONCRETE	F _c 3,500 PSI
REINFORCING STEEL (GR. 60)	F _y 60,000 PSI
STRUCTURAL STEEL	
ASTM (A36)	F _y 36,000 PSI
ASTM (A572 GRADE 50)	F _y 50,000 PSI
- PROPOSED WORK CONSISTS OF: REMOVING THE EXISTING CONCRETE DECK, PARAPET AND RAIL, RETAINING AND REHABILITATING THE EXISTING STEEL BEAMS, STRUTS, BRACING AND FRAMEWORK, AND EXISTING SHOES, REBUILDING BACKWALLS AT END BENTS, WIDENING PIERS, ADDING GIRDERS AND BRACING AND WIDENING THE DECK TO A 40 FOOT CLEAR ROADWAY BRIDGE, CONSTRUCTING NEW CONCRETE PARAPET RAILS AND NEW APPROACH SLABS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING CHECK MEASUREMENTS OF EXISTING BRIDGE AND MAKING NECESSARY ADJUSTMENTS TO THE NEW WORK.
- HALF-SIZE DETAIL SHEETS OF THE EXISTING BRIDGE MAY BE OBTAINED FROM THE ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT UPON REQUEST TO THE PROGRAMS AND CONTRACTS DIVISION. DRAWINGS 11205 THRU 11215.
- FOR REQUIREMENTS IN CONDUCTING THE WORK, SEE SPECIAL PROVISION, JOB NO 60381 "REMODELING EXISTING BRIDGE STRUCTURES."

NOTE: The Contractor may Construct any Part of the Substructure or Superstructure as Soon as Possible Under Any Stage when Approved by the Engineer. Longitudinal Slab Joints will not be allowed, Permanent Slab Spans must be cast monolithically across the entire width of the Bridge.

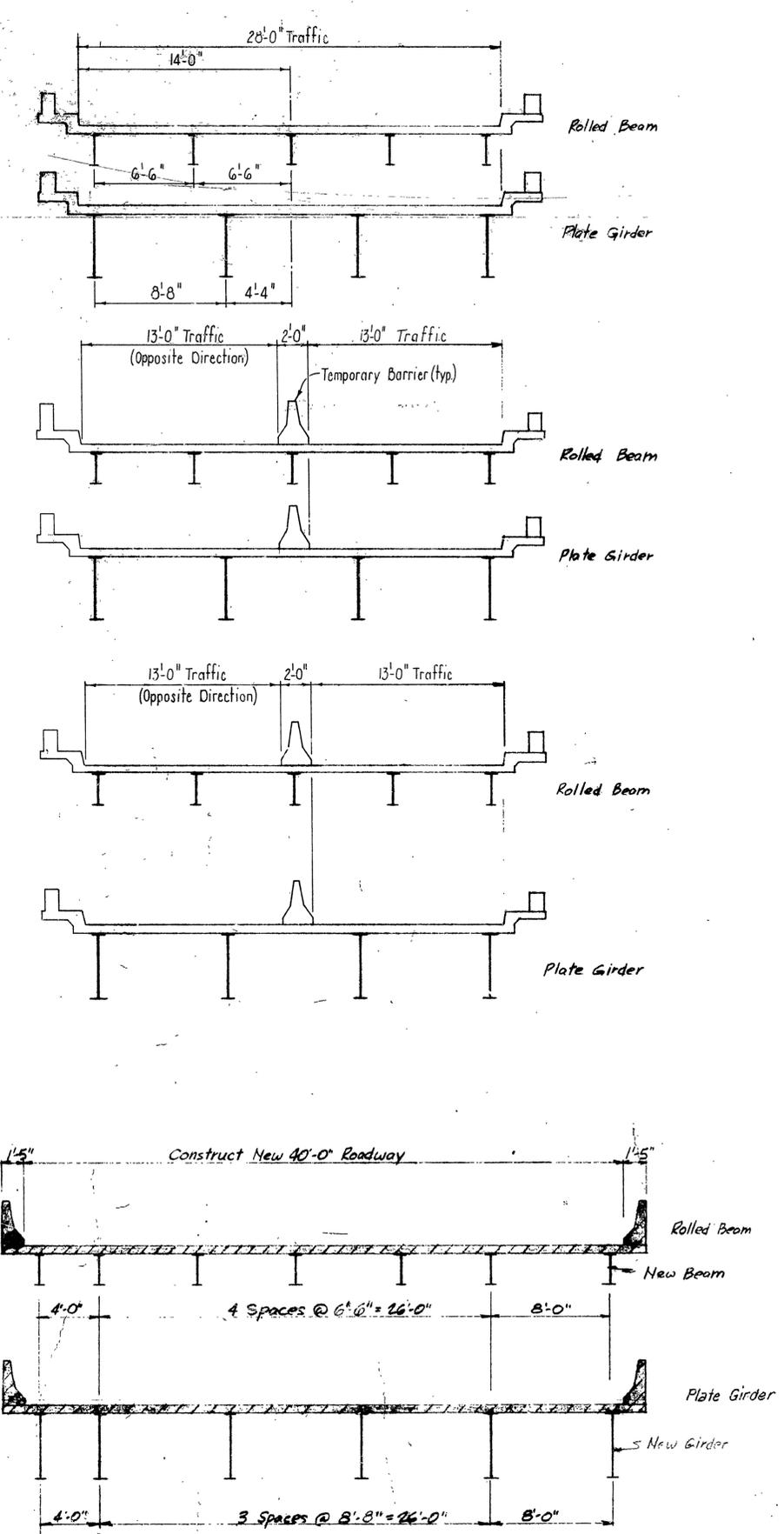
LEGEND

- Existing or Temporary
- Work During Phase
- New Work Previous Phase



BRIDGE B

NOTE:
RDWY SECTIONS ARE LOOKING BACK TOWARD BEGIN OF BRIDGES.



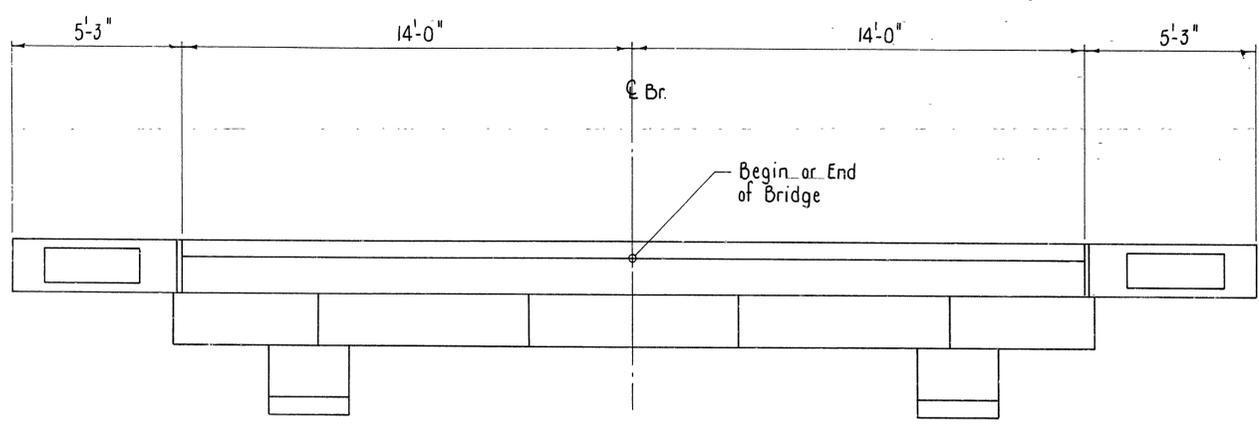
BRIDGE A

SHEET 1 OF 1
STAGE CONSTRUCTION
OUACHITA RIVER BRIDGE AND APPROACHES
HOT SPRING COUNTY
ROUTE I-30 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: J.P.D. DATE: DEC 1985
CHECKED BY: H.J.P. DATE: DEC 1985
DESIGNED BY: T.B.H. DATE: DEC 1985
SCALE: 1"=50'
BRIDGE NO. 3424 AR & BR DRAWING NO. 28165

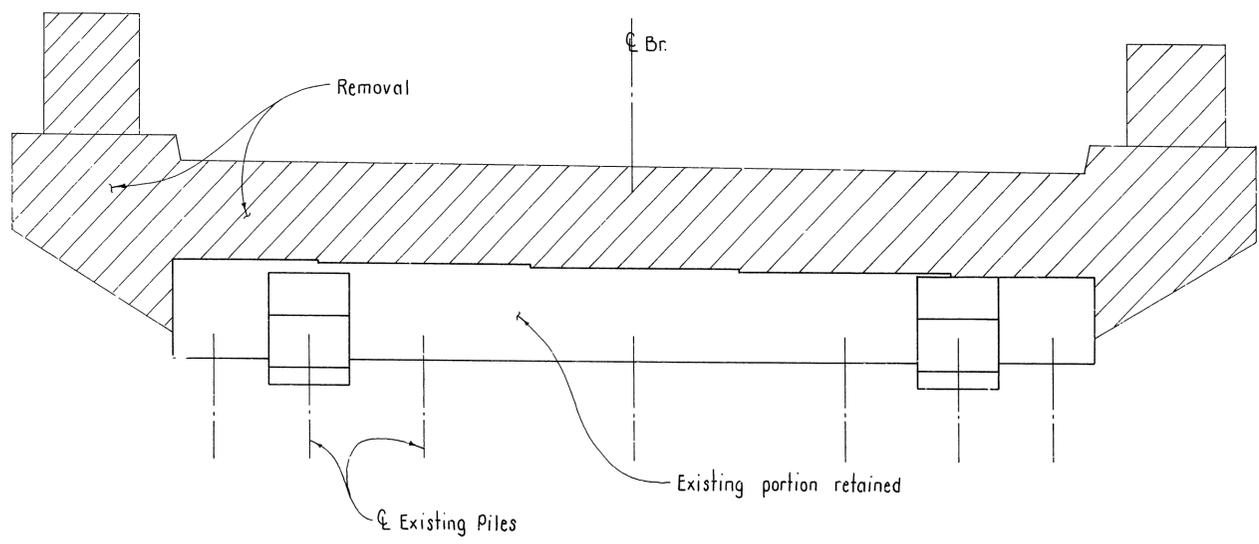
BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	60381	17
						① 3424 AR & BR - REMOVAL DTLS. - 28167		



EXISTING PLAN
Scale: 3/8"=1'-0"

Note:
For Stage Construction, see Drwg. No. 28166.



EXISTING FRONT ELEVATION
Scale: 3/8"=1'-0"

REMOVAL DETAILS FOR
EXISTING END BENTS 1 AND 4
OUACHITA RIVER BRIDGE AND APPROACHES
HOT SPRING COUNTY

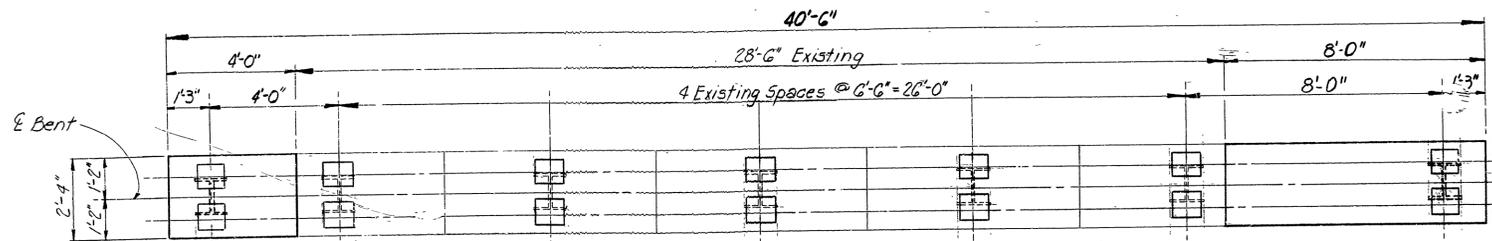
ROUTE I-30 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KMG DATE: 12 MAY 86
CHECKED BY: DATE: SCALE: AS SHOWN
DESIGNED BY: DATE:

BRIDGE ENGINEER BRIDGE NO. 3424 AR & BR DRAWING NO. 28167

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	G0381		19	45

3424 AR & BR DTL5. PILE BENTS 28169



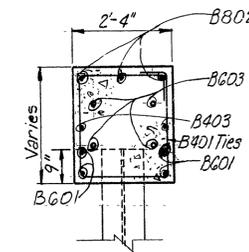
NOTE: Red Head Galvanized Threaded Anchors or equal and 3/4" x 2'-0" threaded rods can be substituted for the B803 Dowels.

PLAN BENTS 2 & 3
Scale: 3/8"=1'-0"

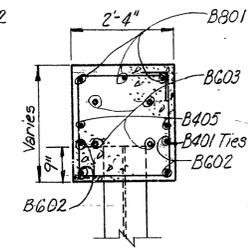
NOTE: Replace all existing Bent Shoes with New Elastomeric Shoes. For Details, see Drawing No. 28176.

Fixed Elastomeric Bearing Looking Forward Bridge B, Looking Back Bridge A Bent 2
Expansion Elastomeric Bearing Looking Forward Bridge B, Looking Back Bridge A Bent 3

Expansion Elastomeric Bearing Looking Forward Bridge B, Looking Back Bridge A Bent 2
Fixed Elastomeric Bearing Looking Forward Bridge B, Looking Back Bridge A Bent 3



SECTION A-A
Scale: 1/2"=1'-0"

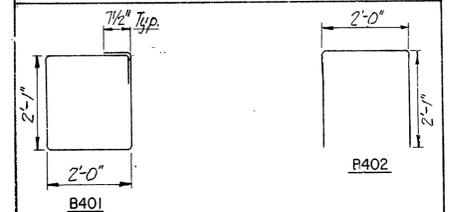


SECTION B-B
Scale: 1"=1'-0"

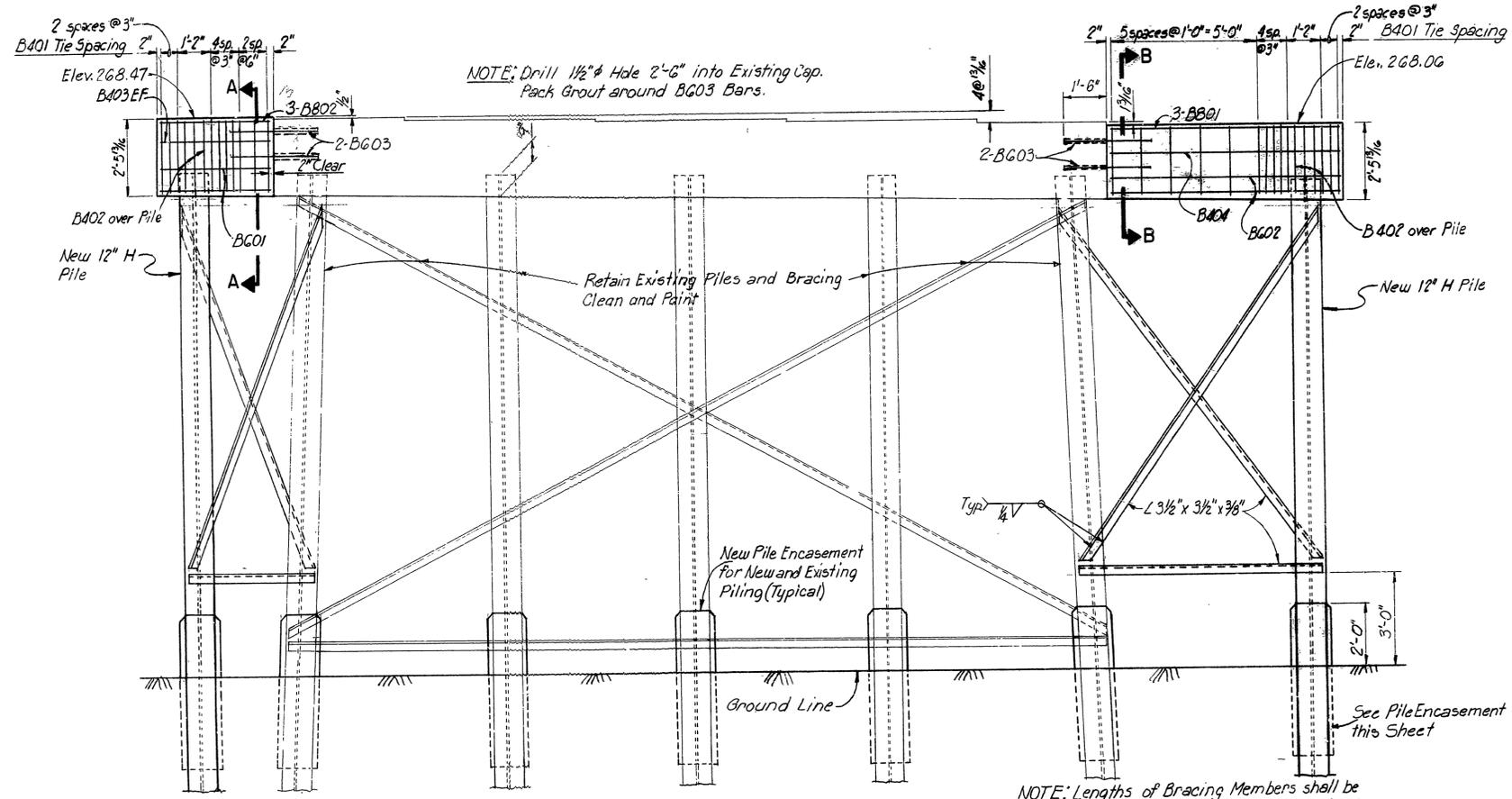
REINFORCEMENT SCHEDULE

MARK	NO.	LENGTH	PIN DIA.
B401	23	9'-0"	2"
B402	6	6'-0"	2"
B403	2	3'-8"	Str.
B404	2	7'-8"	Str.
B401	4	3'-8"	Str.
B402	4	7'-8"	Str.
B403	8	3'-0"	Str.
B801	3	7'-8"	Str.
B802	3	3'-8"	Str.

BENDING DIAGRAM

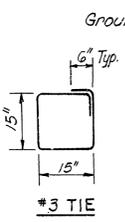


NOTE: 1. Dimensions of Bars are out-to-out.
2. Reinforcement Schedule is for One Bent, One Bridge Only.



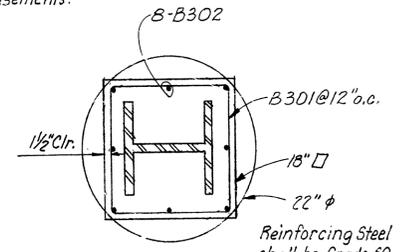
ELEVATION BENTS 2 & 3
LOOKING FORWARD-BRIDGE B
LOOKING BACK-BRIDGE A
Scale: 3/8"=1'-0"

NOTE: Lengths of Bracing Members shall be determined in the Field. Each Member shall be One Continuous Angle and shall be Welded to the Steel Bearing Piles as Shown. Angle Bracing shall be measured and paid for as Structural Steel in Beam Spans.



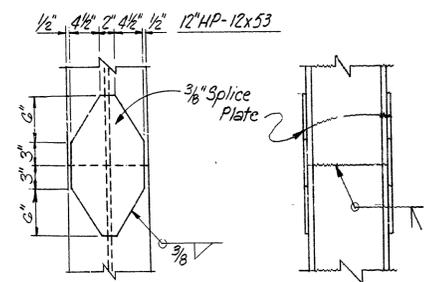
PILE ENCASEMENT DETAIL
Scale: None

Concrete and Reinforcing in Encasement shall be paid for at the contract unit price per linear foot bid for "Pile Encasements."

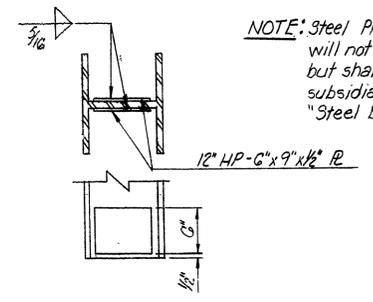


SECTION C-C

NOTE: The Contractor may for his convenience and at his own expense provide as many as Three splices per Pile for Steel Bearing Piling. Minimum Spacing between Splices shall be 5 ft.



PILE SPLICE DETAIL
Scale: 1"=1'-0"



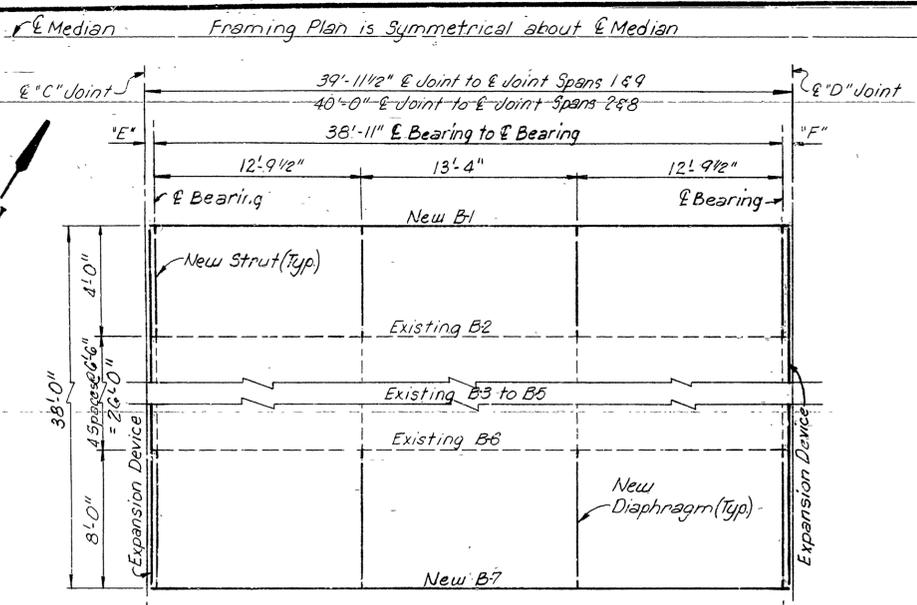
REINFORCING DETAIL FOR STEEL PILE TIP
Scale: 1"=1'-0"

NOTE: Steel Pile Tip Reinforcing will not be paid for directly, but shall be considered subsidiary to the item of "Steel Bearing Piling."

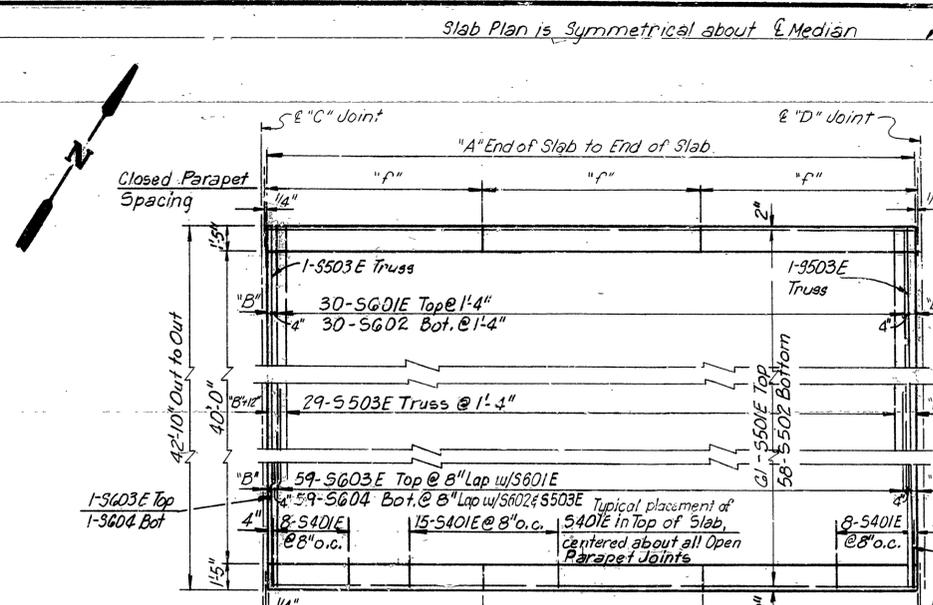
SHEET 1 OF 1
 DETAILS OF PILE BENTS
 OUACHITA RIVER BRIDGE AND APPROACHES
 HOT SPRING COUNTY
 ROUTE I-30 SEC. 2
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: T.V.A. DATE: DEC. 1985
 CHECKED BY: H.J.P. DATE: DEC. 1985
 DESIGNED BY: L.P. DATE: DEC. 1985
 SCALE: As Noted
 BRIDGE NO. 3424 AR & BR DRAWING NO. 28169

DATE REVISION	DATE FILED	DATE REVISION	DATE FILED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
7-30-80	8-31-10-1-86			6	ARK.			
11-7-80	6-47-11-7-86							
JOB NO. 3424 AR&BR DTL. RLD. BM SPANS 28172						0381	22	45



FRAMING PLAN
SPANS 1,2 AND 8,9
Scale: None



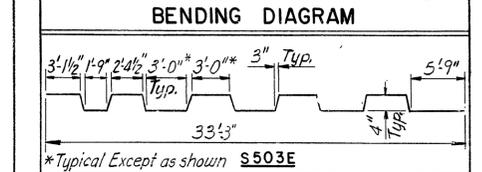
SLAB PLAN
SPANS 1,2 AND 8,9
Scale: None

"f"	OPEN PARAPET				
	a	b	c	k	m
13'-3 3/4"	2'-7 1/16"	8'-0"	5"	1 1/2"	7"

"f"	CLOSED PARAPET	
	k	n
13'-3 3/4"	7'-7 7/8"	12"
13'-3 3/4"	7'-7 7/8"	12"

NOTE: For Parapet Reinforcing and Bending Diagrams, See Drawing No. 28178.

SPANS 1,2 AND 8,9 REINFORCEMENT SCHEDULE			
MARK	NO. Δ	LENGTH	PIN DIA.
S401E	2E**	4'-0"	Sfr.
S501E	60	39'-5"	Sfr.
S502E	58	39'-5"	Sfr.
S503E	31	34'-2"	2 1/2"
S601E	30	30'-3"	Sfr.
S602E	30	33'-6"	Sfr.
S603E	61	14'-9"	Sfr.
S604E	61	11'-6"	Sfr.
P601	15	13'-0"	Sfr.
P401	75	6'-3"	2"
P402	36	7'-0"	2"
P403	39	5'-8"	2"
P404	24	3'-6"	2"
P405	24	6'-11"	2"
P406	39	13'-0"	2"
SPANS 2 & 8			
P401	78	6'-3"	2"
P403	78	5'-8"	2"
P406	42	13'-0"	2"

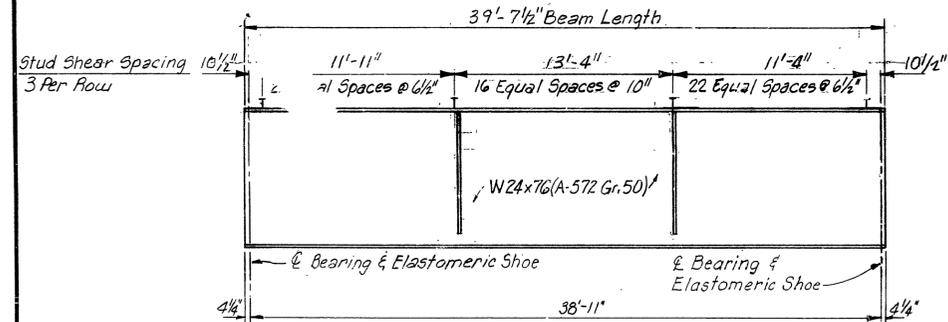


*Typical Except as shown S503E

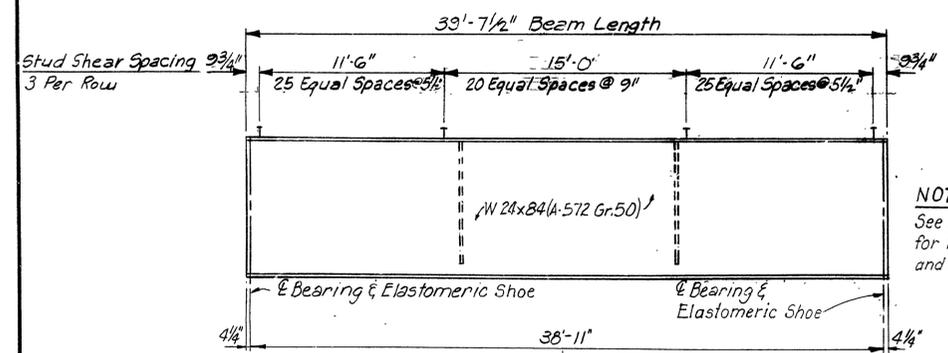
TABLE OF DEAD LOAD DEFLECTIONS					
BEAM	SPAN POINT	STEEL ONLY	CONCRETE ONLY	TOTAL	TOTAL OLD DEFLECTIONS
B-1	1/4	1/16"	3/8"	3/8"	
	1/2	1/16"	3/8"	1/2"	
B-2	1/4	1/16"	5/16"	3/8"	
	1/2	1/16"	3/8"	1/2"	9/16"
B-3 to B-5	1/4	1/16"	5/16"	3/8"	
	1/2	1/16"	7/16"	9/16"	7/16"
B-6	1/4	1/16"	3/8"	1/2"	
	1/2	1/16"	9/16"	5/8"	9/16"
B-7	1/4	1/16"	3/8"	7/16"	
	1/2	1/16"	1/2"	5/8"	

SPAN	DIMENSIONS						
	A	B	C	D	E	F	"f"
-1	39'-10 1/4"	3 1/4"	1"	1"	6"	6 1/2"	13'-3 1/16"
-9	39'-10 1/4"	3 1/4"	1"	1"	6 1/2"	6"	13'-3 1/16"
-2	39'-11"	3 1/2"	1"	1"	6 1/2"	6 1/2"	13'-3 13/16"
-8	39'-11"	3 1/2"	1"	1"	6 1/2"	6 1/2"	13'-3 13/16"

Δ Revised Bar List - EGK-9-30-86
 ⊕ Revised Dead Load Defl. II-F-86 F.M.H.



BEAM ELEVATION B1
SPANS 1,2 AND 8,9
Scale: None



BEAM ELEVATION B7
SPANS 1,2 AND 8,9
Scale: None

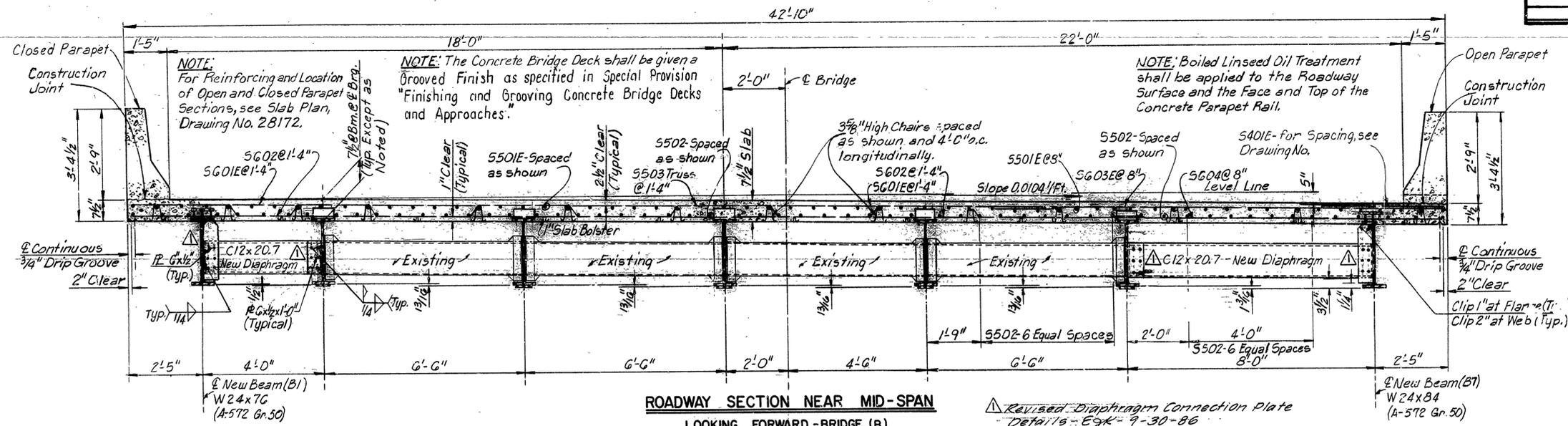
NOTE:
See Bridge Layout for location of Fixed and Expansion Shoes.

- NOTES:
- Dimensions of Bars are out-to-out.
 - "E" indicates that bars are to be Epoxy Coated Reinforcing Steel.
 - Reinforcement Schedule is for One Span, One Bridge Only.
 - For Joint Details of Expansion Devices, see Drawing No. 28176.
 - For Slab Joint Details, see Drawing No. 28176.
 - For Elastomeric Fixed and Expansion Shoe Details, see Drawing No. 28176.

SHEET 1 OF 2
 DETAILS OF ROLLED BEAM SPANS
 OUACHITA RIVER BRIDGE AND APPROACHES
 HOT SPRING COUNTY
 ROUTE I-30 SEC. 2
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DESIGNED BY: D.M.F. DATE: DEC. 1985
 CH. BY: H.J.P. DATE: DEC. 1985
 DRAWN BY: J.P. DATE: DEC. 1985
 SCALE: As Noted
 BRIDGE NO. 3424 AR&BR DRAWING NO. 28172

DATE	DATE	DATE	DATE	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
9-30-86	3-2-10-1-86			6	ARK.			
							23	45
JOB NO. G0381							23	45

3424 AR & BR ROLLED-BEAM SPANS 28-1-73

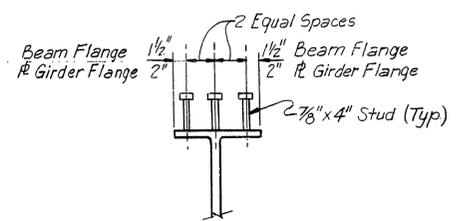


ROADWAY SECTION NEAR MID-SPAN

LOOKING FORWARD - BRIDGE (B)
LOOKING BACK - BRIDGE (A)
Scale: 1/2" = 1'-0"

LOAD DISTRIBUTION TABLE

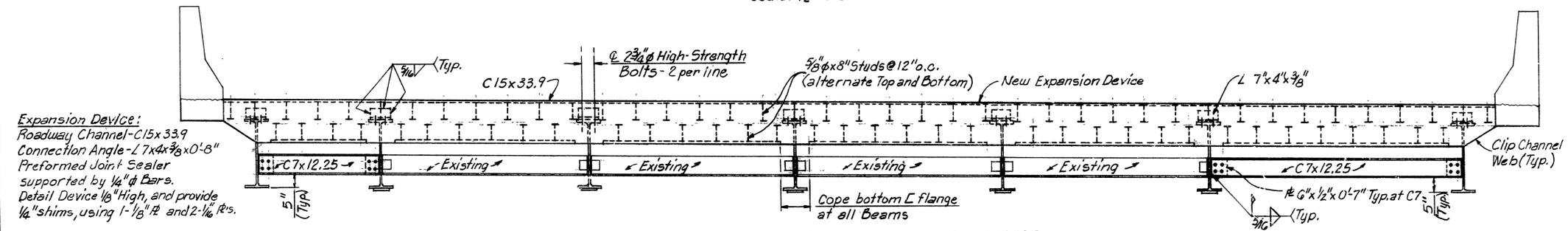
LOADING	B1	B7
Dead Load Non-Composite	414 PLF + Girder	602 PLF + Girder
Dead Load to Comp. Girder includes 20 lbs/Ft ² for Future Wearing Surface	168 PLF	208 PLF
Live Loads to Composite Girder	0.727 Wheels + Impact	1.333 Wheels + Impact



BEAM AND GIRDER FLANGE STUD SHEAR CONNECTION DETAIL

Scale: None

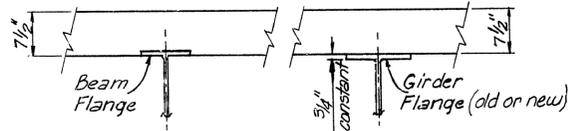
NOTE: Stud Shear Connectors shown shall be 4" long, Granular Flux Filled, Solid Fluxed or equal and automatically end welded to Flanges in accordance with the recommendations of the manufacturer. 3/4" diameter studs may be substituted for the 7/8" studs at the ratio of 1.37-3/4" studs in place of 1-7/8" stud. The 7/8" stud shall be used as the basis of payment of 31.0 lbs. per one hundred studs.



ROADWAY SECTION NEAR EXPANSION DEVICE

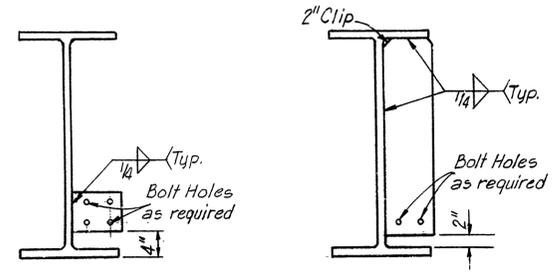
Scale: 1/2" = 1'-0"

Expansion Device:
Roadway Channel-C15x33.9
Connection Angle-L7x4x3/8x0'-8"
Preformed Joint Sealer supported by 1/4" dia Bars.
Detail Device 1/8" High, and provide 1/8" shims, using 1-1/8" R and 2-1/8" R's.



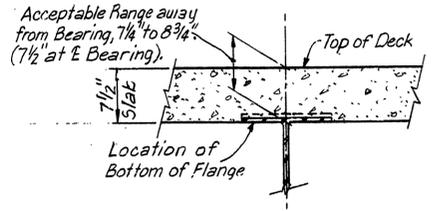
BEAM TO GIRDER SLAB TRANSITION

Scale: None



CONNECTION PLATE DETAILS

Scale: None



CONSTRUCTION METHOD FOR EXISTING BEAM CAMBER

Scale: None

NOTE: If After Erection of the New Girders, and After Removal of the Slab from the Existing Girders, the Girders are not within the Acceptable Camber Tolerance of ±1/4", the Contractor shall Vary the Haunch Thickness along the Beam to obtain the Specified Slab Thickness and Profile Gradeline. No additional Payment shall be made for Materials or Work Required to Vary Haunch or for Thickening Slab 1/4".

SHEET 2 OF 2

DETAILS OF ROLLED BEAM SPANS
OUACHITA RIVER BRIDGE AND APPROACHES

HOT SPRING COUNTY
ROUTE 1-30 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: D.M.F. DATE: DEC. 1985
CHECKED BY: H.J.P. DATE: DEC. 1985
DESIGNED BY: J.P. DATE: DEC. 1985

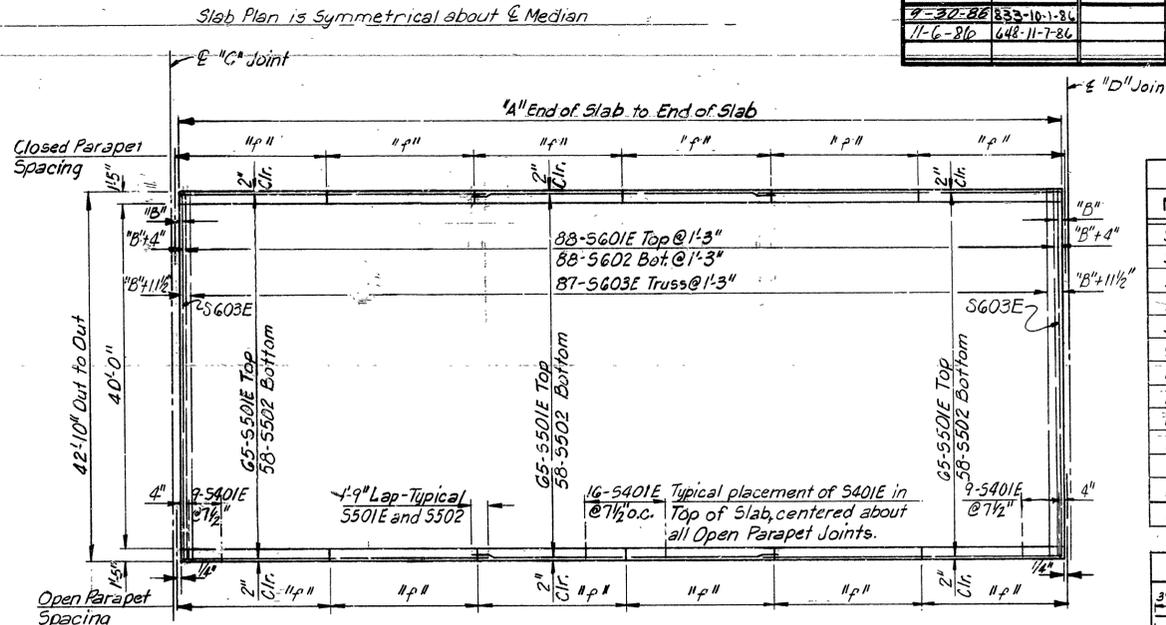
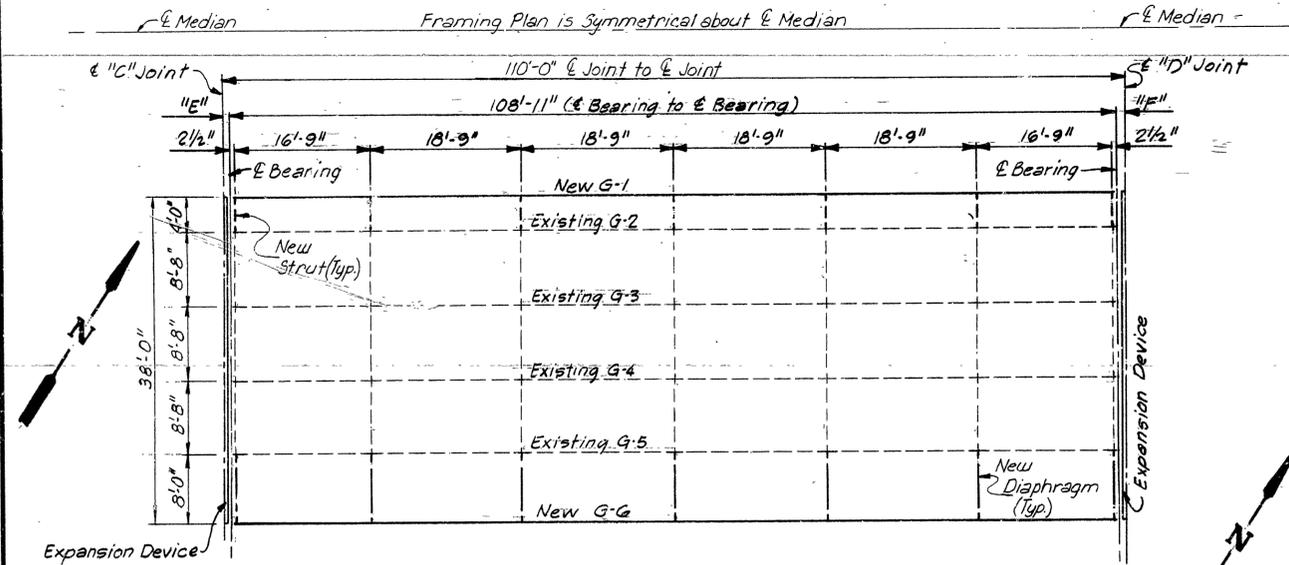
SCALE: As Noted

BRIDGE NO. 3424 AR & BR DRAWING NO. 28173

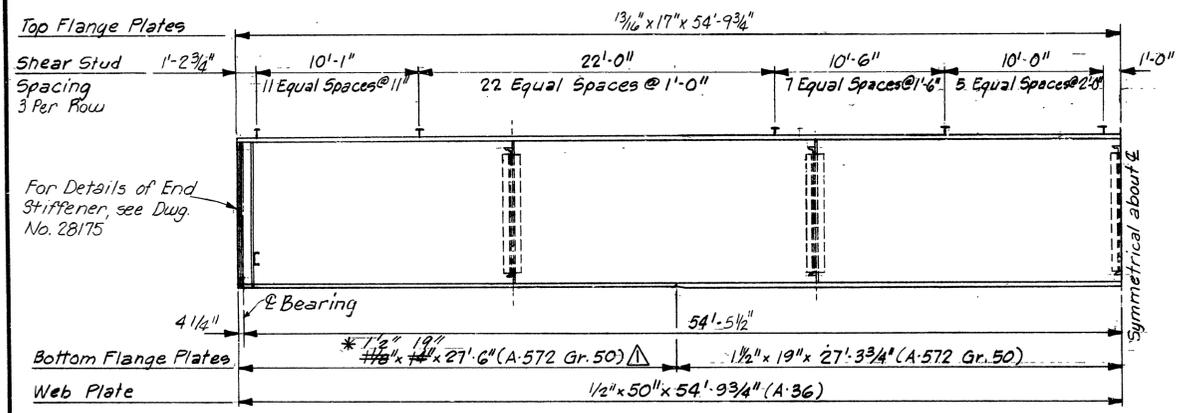
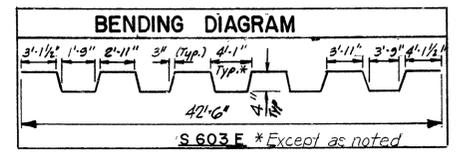
BRIDGE ENGINEER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11-6-86	648-11-7-86			6	ARK.			
JOB NO. 60381							24	45

3424 AR BR PL GIRD SPANS 28174



MARK	NO.	LENGTH	PIN DIA.
S401E	98	4'-0"	Str.
S501E	195	37'-8"	Str.
S502	174	37'-8"	Str.
SG01E	88	42'-6"	Str.
SG02	88	42'-6"	Str.
SG03E	89	43'-6 1/2"	3 3/4"
P401	216	6'-3"	2"
P402	108	7'-0"	2"
P403	108	5'-3"	2"
P404	48	3'-6"	2"
P405	48	6'-1"	2"
P406	66	18'-0"	Str.
P601	30	18'-0"	Str.

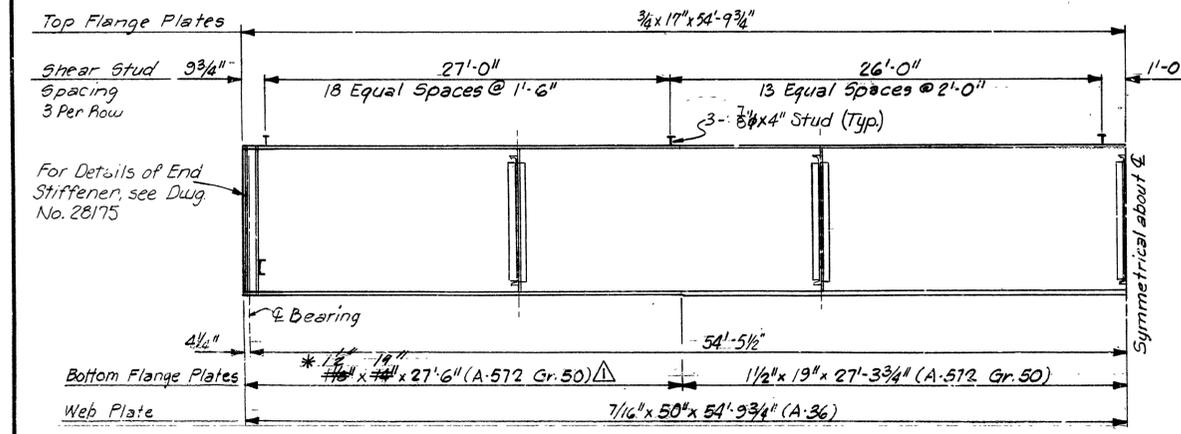


"f"	OPEN PARAPET				
	a	b	c	k	m
18'-3 3/16"	5'-1 19/16"	8'-0"	7"	3 7/16"	7
18'-3 3/4"	5'-1 7/8"	8'-0"	7"	3 3/8"	-7

"f"	CLOSED PARAPET	
	k	n
18'-3 3/16"	7 5/16"	17
18'-3 3/4"	7 7/8"	17

NOTE: For Parapet Reinforcing and Bending Diagram, see Dwg. No. 28023

GIRDER	SPAN POINT	STEEL ONLY	CONCRETE ONLY	TOTAL	TOTAL OLD DEFLECTIONS
G-1	1/4	3 1/16"	3 1/16"	2 1/4"	
	1/2	1 1/4"	1 1/4"	3 1/8"	
G-2	1/4	5/8"	1 1/16"	2 3/8"	
	1/2	7/8"	2 1/2"	3 5/8"	4 1/8"
G-3	1/4	5/8"	2 1/2"	3 5/8"	
	1/2	7/8"	3 3/16"	4 3/16"	3 3/4"
G-5	1/4	5/8"	2 7/16"	3 3/16"	
	1/2	7/8"	3 5/16"	4 3/8"	4 1/8"
G-6	1/4	3 1/16"	3 1/16"	2 3/4"	
	1/2	1 1/4"	1 1/4"	3 1/8"	



SPAN	DIMENSIONS					
	A	B	C	D	E	F
3	109'-10 3/16"	2 3/8"	1"	1 7/8"	6 1/2"	6 1/2"
4	109'-9 13/16"	2 3/8"	1 7/8"	2 1/2"	6 1/2"	6 1/2"
5	109'-9 13/16"	2 3/8"	2 1/2"	1 7/8"	6 1/2"	6 1/2"
6	109'-10 3/16"	2 3/8"	1 7/8"	1 7/8"	6 1/2"	6 1/2"
7	109'-10 3/16"	2 3/8"	1 7/8"	1"	6 1/2"	6 1/2"

Revised Dead Load Deflections, Girder Nos. & Girder Dimensions. E.g.K. 9-30-86
Revised Dead Load Defl. 11-7-86. FMH

* Dimensions submitted by Fabricator. (No increase in pay quantity)

- NOTE: 1. Dimensions of Bars are out-to-out.
2. "E" indicates that the Bars are to be Epoxy Coated Reinforcing Steel.
3. Reinforcement Schedule is for One Span, One Bridge Only.
4. For Joint Details of Expansion Device, see Dwg. No. 28176.
5. For Slab Joint Details, see Dwg. No. 28176.
6. For Shoe Details, see Dwg. No. 28177.
7. Concrete, Re-bars and Expansion Channel Extension will be paid for as quantities. Removal will be paid for under "Remodeling S.P." Entire New Expansion Device to be installed.
8. For Elastomeric Fixed Shoe Details, see Drawing No. 28176.

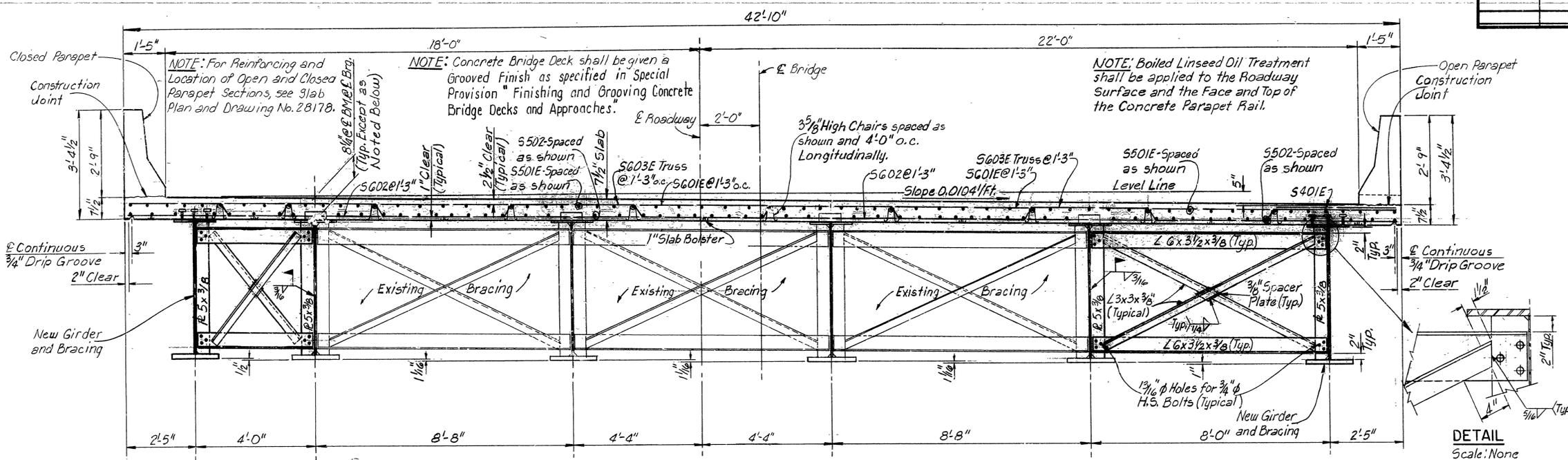
SHEET 1 OF 2
DETAILS OF PLATE GIRDER SPANS
OUACHITA RIVER BRIDGE AND APPROACHES
HOT SPRING COUNTY
ROUTE I-30 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
BRIDGE NO. 3424 AR & BR DRAWING NO. 28174

DESIGNED BY: J.P. DATE: DEC. 1985
CHECKED BY: H.J.P. DATE: DEC. 1985
SCALE: As Noted

BRIDGE ENGINEER

DATE REVISED	DATE PLANNED	DATE REVISED	DATE PLANNED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	60381	25	45	

3424 AR & BR DTLS. PL. GIRD SPANS 28:75



ROADWAY SECTION NEAR MID-SPAN
 LOOKING FORWARD - BRIDGE (B)
 LOOKING BACK - BRIDGE (A)
 Scale: 1/2" = 1'-0"

LOAD DISTRIBUTION TABLE

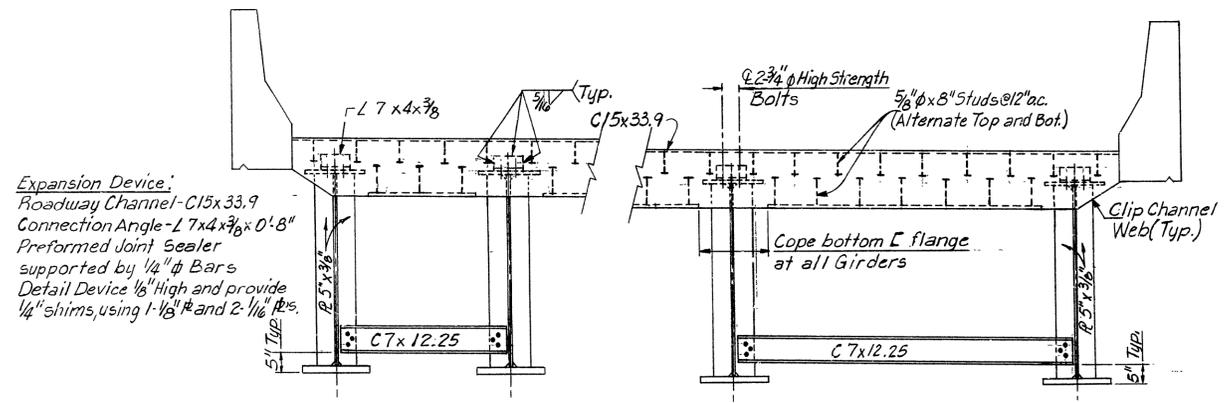
	G1	G6
Dead Load Non-Composite	414 PLF + Girder	202 PLF + Girder
Dead Load to Comp. Girder includes 20 lbs/ft ² for Future Wearing Surface	186 PLF	226 PLF
Live Loads to Composite Girder	0.728 Wheels + Impact	1.333 Wheels + Impact

TABLE FOR MINIMUM FILLET WELD SIZE

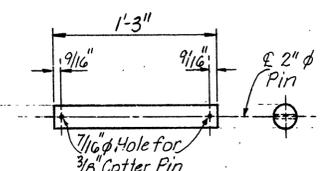
Material Thickness of Thicker Part (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To 1/2" Inclusive	3/16"	
Over 1/2" to 3/4"	1/4"	
Over 3/4"	5/16"	

NOTE: When a Fillet Weld Size, as Shown on Plans, is larger than the minimum, the First Pass shall be at least as large as that Specified for Minimum Size at Fillet Weld.
 For Minimum Fillet Weld Sizes for Material 2 1/4" and Larger, see Dwg. No. 28022.

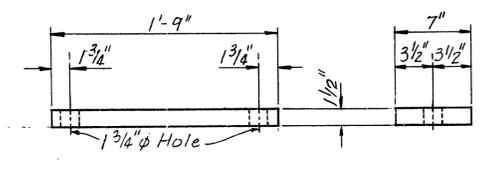
NOTE: Shoe Pins & Masonry Plates shall be replaced as directed by the Engineer.



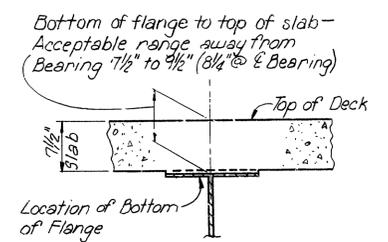
ROADWAY SECTION NEAR EXPANSION DEVICE
 Scale: 1/2" = 1'-0"



DETAILS OF REPLACEMENT SHOE PIN
 Scale: 1/2" = 1'-0"



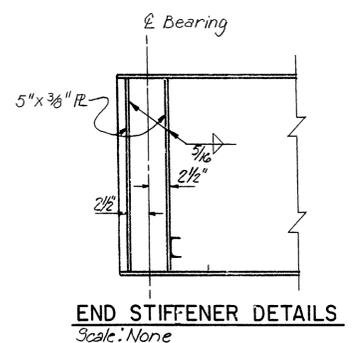
DETAILS OF REPLACEMENT MASONRY PLATE
 Scale: 1/2" = 1'-0"



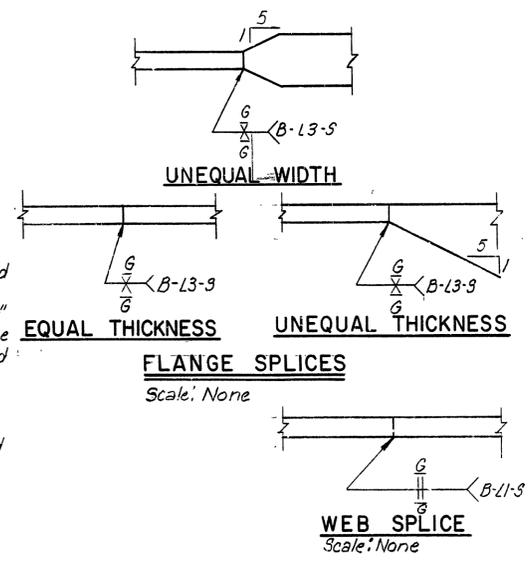
CONSTRUCTION METHOD FOR EXISTING GIRDER CAMBER
 Scale: None

See Dwg. No. 28173 for Note regarding Girder Camber Tolerances, Haunch Details and Thickened Slab Information.

NOTE: For Stud Shear Connection, see Detail, Dwg. No. 28173

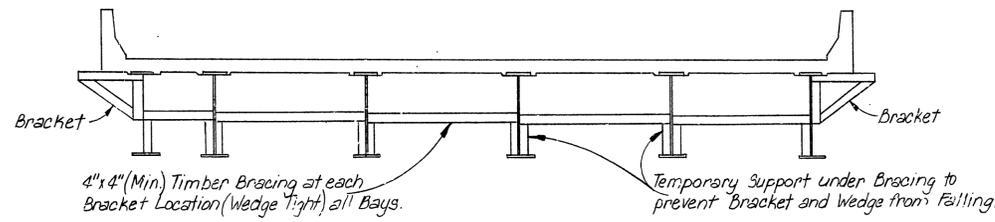


END STIFFENER DETAILS
 Scale: None



FLANGE SPLICES
 Scale: None

WEB SPLICE
 Scale: None



SCREED RAIL SUPPORT
 Scale: None

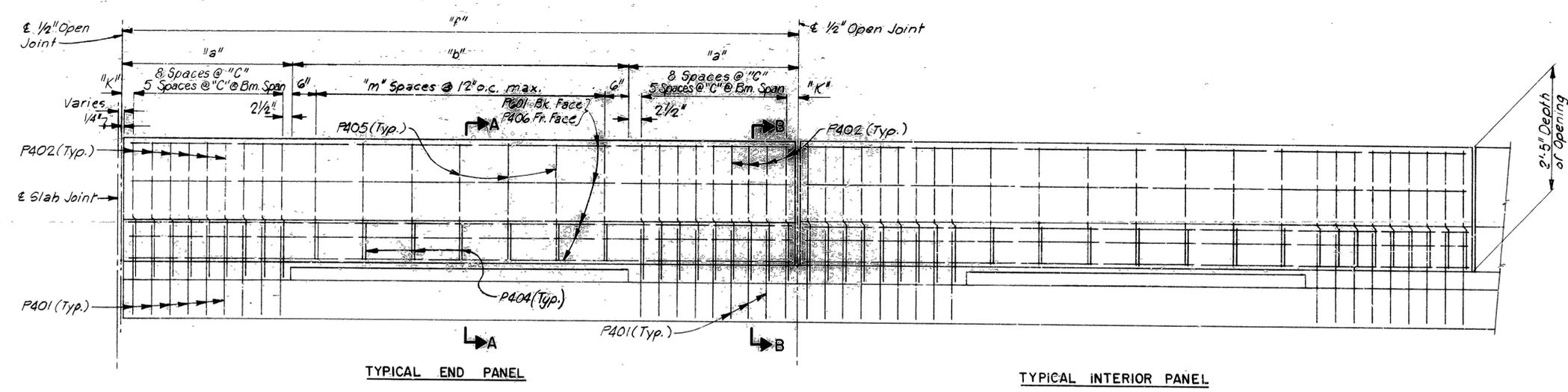
If a Transverse Finishing Machine is used, the Rail shall be Supported Directly over the Exterior Beams, or as an Alternate, the Rail may be Supported by the Overhang Brackets if the above Strutting System is Used.

SHEET 2 OF 2

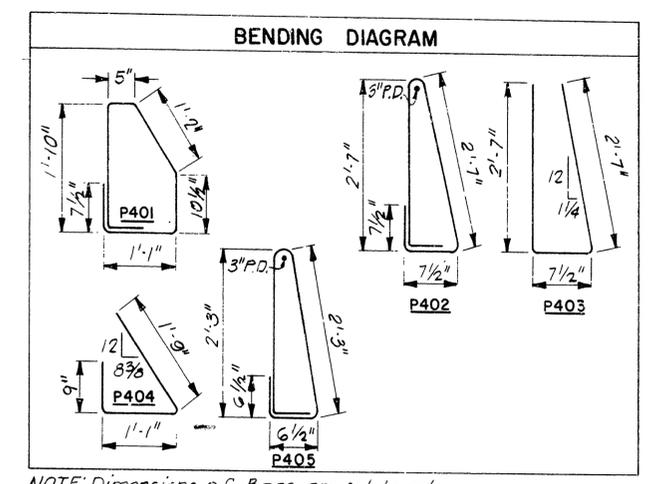
DETAILS OF PLATE GIRDER SPANS
 OUACHITA RIVER BRIDGE AND APPROACHES
 HOT SPRING COUNTY
 ROUTE I-30 SEC. 2
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: D.M.F. DATE: DEC. 1985
 CHECKED BY: H.U.P. DATE: DEC. 1985
 DESIGNED BY: J.P. DATE: DEC. 1985
 BRIDGE NO. 3424 AR & BR DRAWING NO. 28175

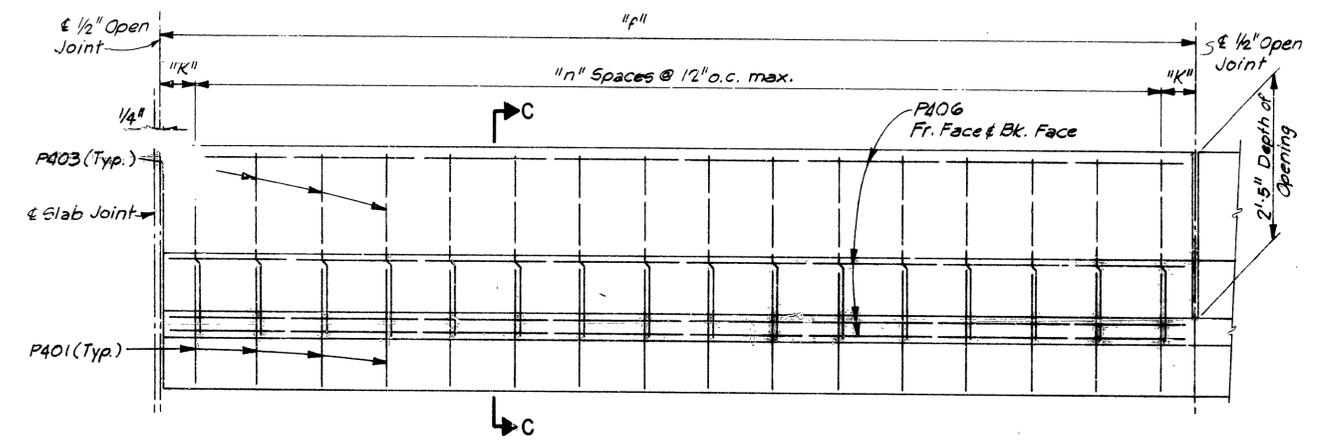
RAIL	DATE	REVISION	DATE	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 60381							28	45
3424 AR&BR DETAILS RAILING 28178								



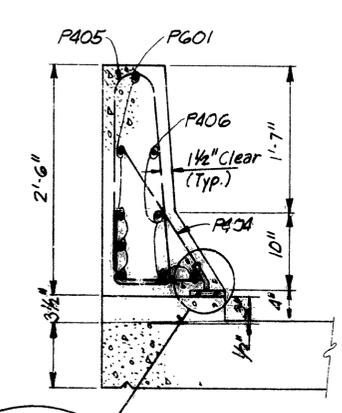
LONGITUDINAL SECTION AT CURB FOR OPEN PARAPET RAIL
Scale: 3/4" = 1'-0"



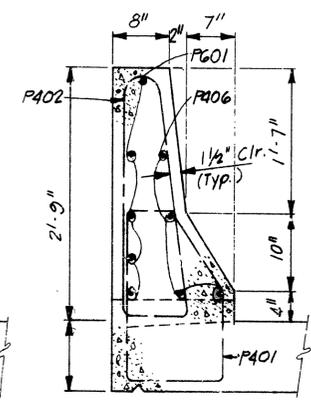
NOTE: Dimensions of Bars are out-to-out.



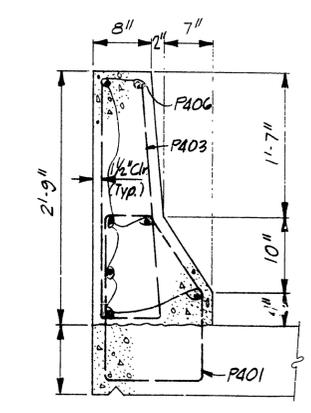
LONGITUDINAL SECTION AT CURB FOR CLOSED PARAPET RAIL
Scale: 3/4" = 1'-0"



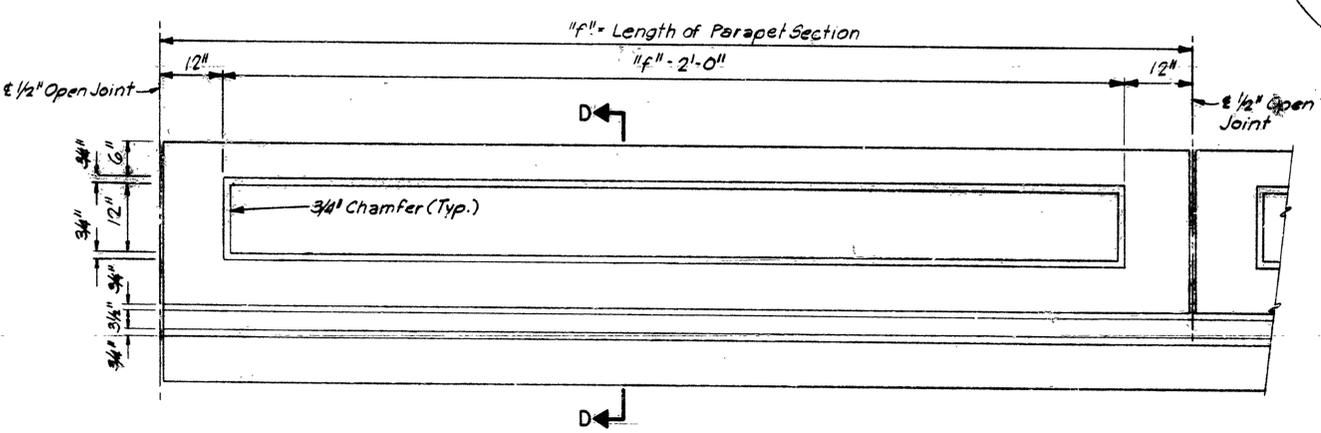
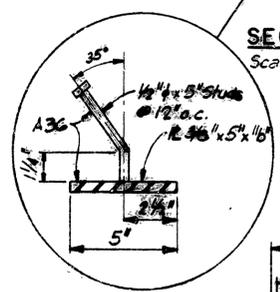
SECTION A-A
Scale: 1" = 1'-0"



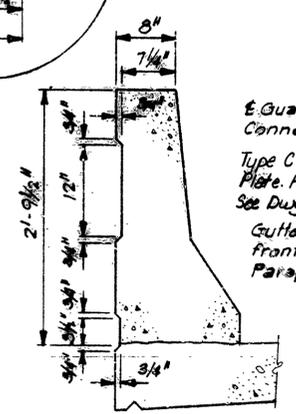
SECTION B-B
Scale: 1" = 1'-0"



SECTION C-C
Scale: 1" = 1'-0"

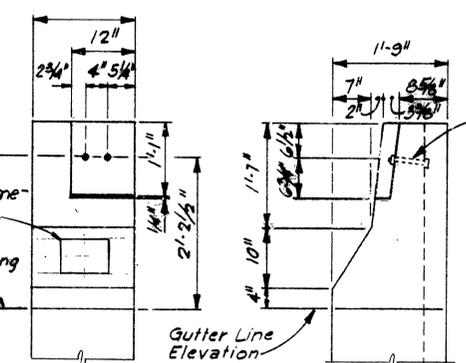


ELEVATION SHOWING TREATMENT FOR OUTSIDE PARAPET RAILING
Scale: 3/4" = 1'-0"



SECTION D-D
Scale: 1" = 1'-0"

Guard Rail Connection
Type C Bridge Name-Plate. For Details, See Dwg. 2389A.
Gutter Line along front face of Parapet



GUARD FENCE BOLT DETAIL
Scale: 3/4" = 1'-0"

2-3/4" A325 Bolts 1/2" long w/ 2" thread, 1 full flat washer, 1 clipped flat washer and 2 nuts, galv. ASTM A153.

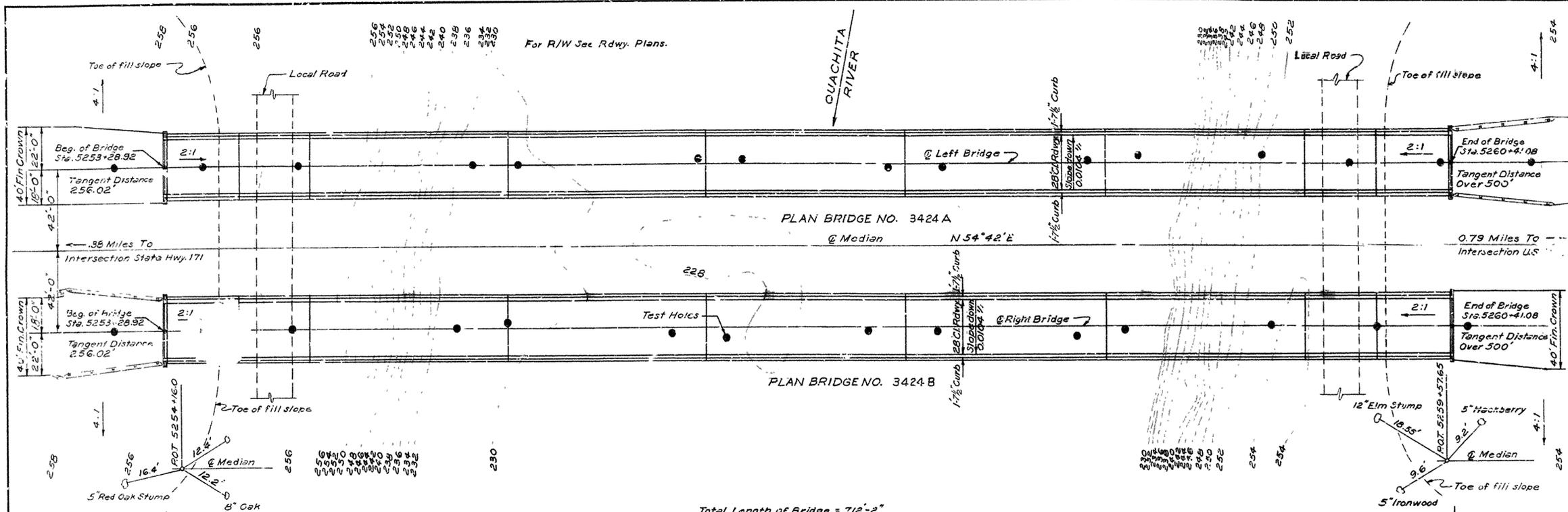
NOTE: A325 Bolts, washers and nuts for Guard Rail will be paid for as "Guard Rail" pay item.

NOTES:

1. Boiled Linseed Oil Treatment shall be applied to the roadway surface and the face and top of the concrete parapet rail.
2. Studs shall be 5" long, granular flux filled, solid fluxed or equal and automatically welded to plate. Studs and plate to be measured and paid for as "Structural Steel In".
3. The surfaces of the 3/8" Plate which will not be in contact with concrete shall receive two coats of paint in the shop. These coats shall be those specified as First Shop Coat and Second Field Coat in Subsection 807.59(a) and 807.59(c).

SHEET 1 OF 1
DETAILS OF RAILING
OUACHITA RIVER BRIDGE AND APPROACHES
HOT SPRING COUNTY
ROUTE I-30 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DESIGNED BY: J.P. DATE: DEC. 1985
CHECKED BY: H.J.P. DATE: DEC. 1985
DRAWN BY: D.M.F. DATE: DEC. 1985
SCALE: As Noted
BRIDGE NO. 3424 AR & BR DRAWING NO. 28178



GENERAL NOTES

8M-RR Spike in 8" Stump 30' Lt. Sta. 5254+00 Elev. 238.67.

For Details of Superstructure See Drwg. Nos. 5462, 5477, & 11215.

For Details of Substructure See Drwg. Nos. 54, 1A & 11214.

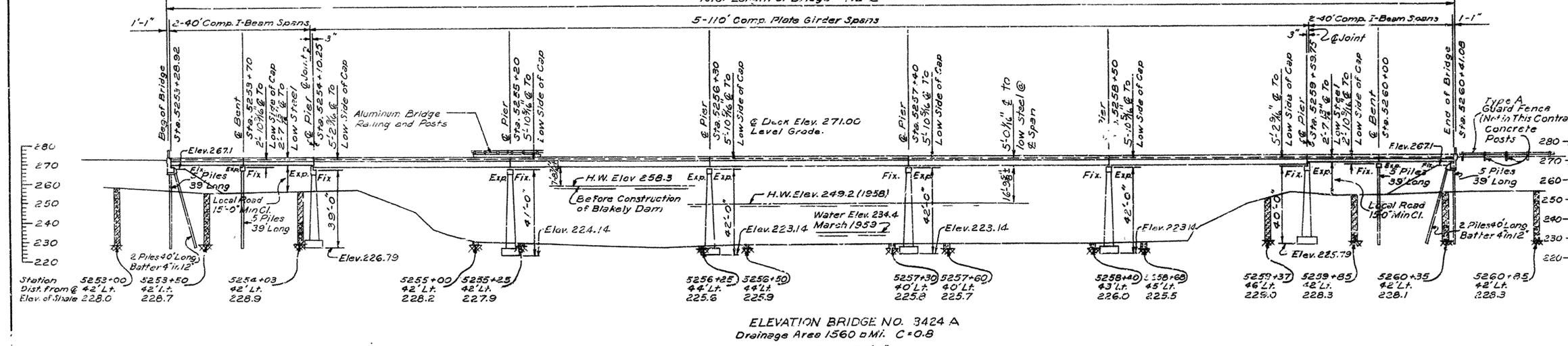
All piling shall be 12 B.P. 53 steel bearing pile, driven to refusal or to a minimum depth of two feet into the material designated as hard shale on the boring logs with a minimum bearing capacity of 36 tons per pile.

Lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field. Order lengths shown. Cut-off or build-up, if necessary, to be paid for in accordance with Sect. 204 of the Specifications. All piling to be driven with a steam hammer after embankment is in place.

Loading: H20-S16 AASHO. 1951 and Special Interstate Loading of 2-24,000* Axles 4' on Centers.

Stresses: Class A Concrete (n=15) 840 psi
Class B Concrete (n=10) 1200 psi
Reinforcing Steel 20,000 psi
Structural Steel (ASTM-A7) 18,000 psi
(ASTM-A242) 3/8" & under 27,000 psi
over 3/8" to 1/2" incl. 24,000 psi
over 1/2" to 1" incl. 22,000 psi

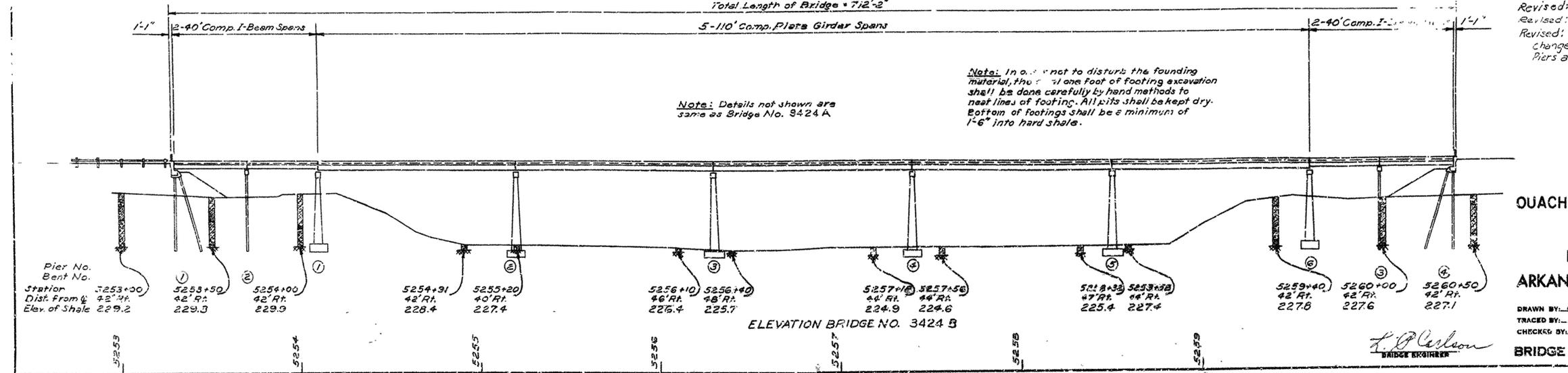
Foundation Pressure: 6500 p.s.f. D.L. + L.L.
Specifications: Arkansas State Highway Commission Standard Specifications for Highway Construction, Adopted Dec. 9, 1959.



SOIL LEGEND

- Sandy Clay and Gravel with Boulders or Thin Layers of Rock
- Gravel and Boulders
- Sandy Clay
- Hard Shale

Revised: Guard Fence. W.E.W. 4-20-60
Revised: Bridge Railing C.S.V. 10-18-60
Revised: Dimension E to low side of cap changed to agree with details. Height of Piers and elevation of footing altered. F.M.H. 11-16-61. J.M.C. 11-16-61



LAYOUT OF BRIDGE OVER OUACHITA RIVER

OUACHITA RIVER BRIDGE & APPROACHES
HOT SPRING COUNTY
INT. ROUTE 30 SEC. 2
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.
DRAWN BY: L.H.T. DATE: 4-30-59
CHECKED BY: J.M. DATE: 6 MAY 59
BRIDGE NO. 3424 A & B DRAWING NO. 11205

SCALE: 1"=30'