

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FEEDBACK	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
					6	009918	37	115
JOB NO. 06668 - LAYOUT (STA. 970+00) - 37592								

GENERAL NOTES

BENCH MARK: Chiseled square in S.E. corner of bridge, 38' left of Survey Sta. 969+63, Elev. 1181.48.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (1996 edition) with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (1996 edition) with current interim specifications.

LIVE LOADING: HS20 METHOD OF DESIGN: Load Factor SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:
Class (S/AE) Concrete (superstructure) $f'_c = 4,000$ psi
Class S Concrete (substructure) $f'_c = 3,500$ psi
Reinforcing Steel (AASHTO M31 or M53, GR. 60) $f_y = 60,000$ psi
Structural Steel (AASHTO M270, GR. 50W) $F_y = 50,000$ psi
Structural Steel (AASHTO M270, GR. 36) $F_y = 36,000$ psi

BORING LOGS: Boring logs may be obtained from the Programs and Contracts Division.

STEEL PILING: All piling shall be HP 10x42 and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 55 tons per pile and into the material designated as "D" or "E" on the boring legend. Lengths shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the specifications. Piles in and bents to be driven after embankment to bottom of cap is in place. On all piles the contractor shall use approved steel H-pile driving points. Minimum penetration for all piles shall be 10' below bottom of cap.

FOOTINGS: Footings for Bent 2 shall be set a minimum of 7'-0" into material designated as "J" on the boring legend. Footings for Bent 3 shall be set a minimum of 7'-0" into material designated as "E" on the boring legend. Foundations for footings shall be prepared in accordance with section 804.04 of the Standard Specifications. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock.

BRIDGE DECK: The concrete bridge deck shall be given a time finish as specified for final finishing in subsection 802.09 for Class 5 Tined Bridge Roadway Surface Finish.

BOILED LINSEED OIL: Class I Protective Surface treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

DETAIL DRAWINGS:
End Bents
Intermediate Bents
197'-0" Continuous Composite W-Beam Unit
Elastic Bearings
Permanent Steel Bridge Deck Forms
Steel Piling
Type C Bridge Name Plate
Embankment Construction
Dumped Riprap and Filter Blanket
Computing Excavation for Structures
Type B Approach Gutters

DRAWING NO.
37593
37594
37589-37591 & 37595-37596
37597
M999
M995A
2389A
M88A
M89F
M89F
20168

EXISTING BRIDGE: The existing bridge No. 292 at log mile 18.35 is 24' wide and 182' long and consists of a concrete deck with steel beams superstructure supported by a concrete substructure. The existing bridge is located approximately 70 feet upstream from the proposed new bridge.

REMOVAL AND SALVAGE: After the new bridge is opened to traffic, the existing bridge (No. 292) shall be removed in accordance with section 205 of the Standard Specifications. All material from the existing bridge shall become the property of the contractor.

ALTERNATE NO. 1 LAYOUT OF BRIDGE OVER LONG CREEK - STA. 970+00 LONG CREEK STRS. & APPRS. CARROLL COUNTY

ROUTE 412 SEC. 5
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 13 JUN 94

CHECKED BY: DHP DATE: 4-10-94

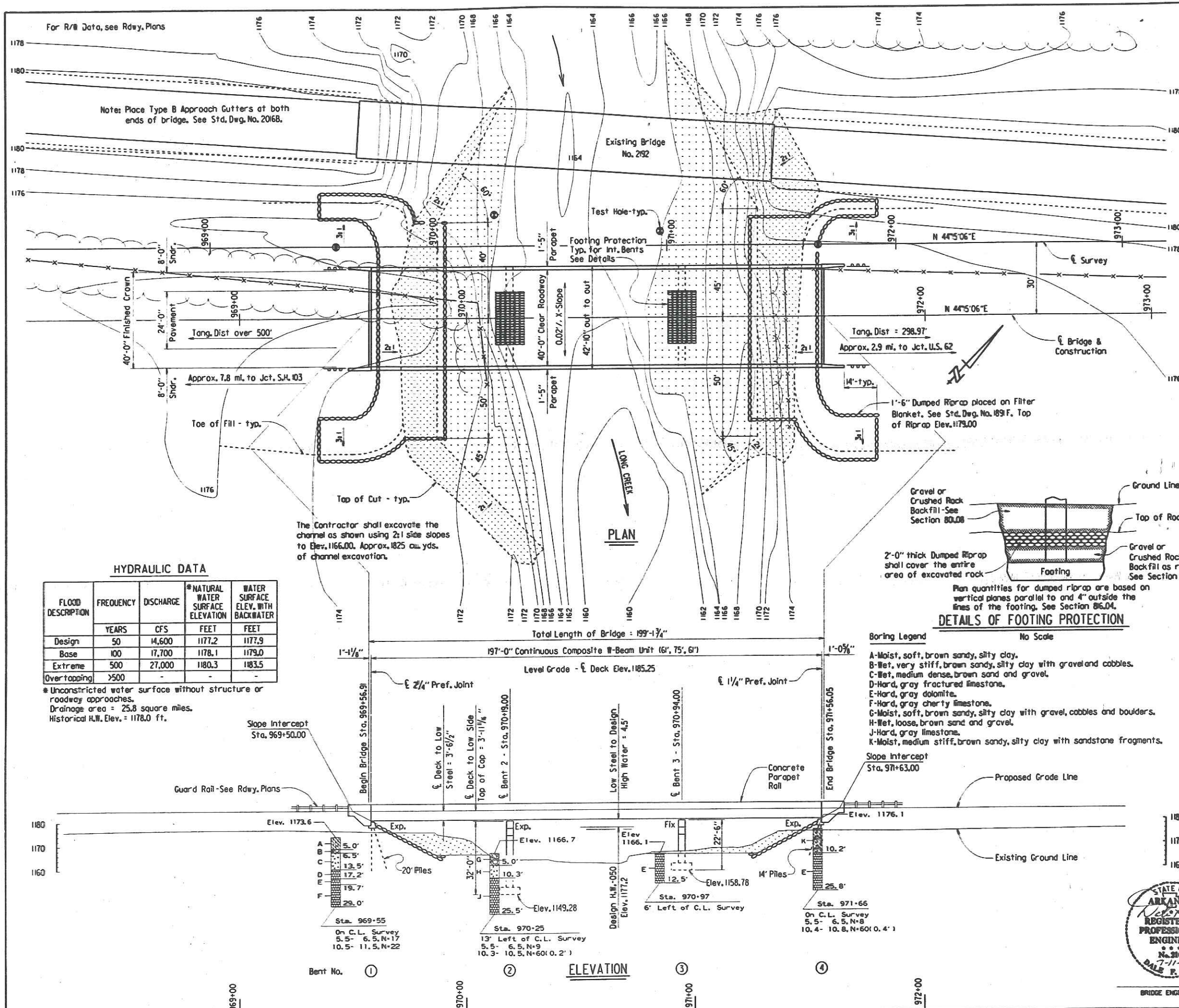
DESIGNED BY: C.J.F. DATE: 6-13-94

BRIDGE NO. 06668

DRAWING NO. 37592



BRIDGE ENGINEER



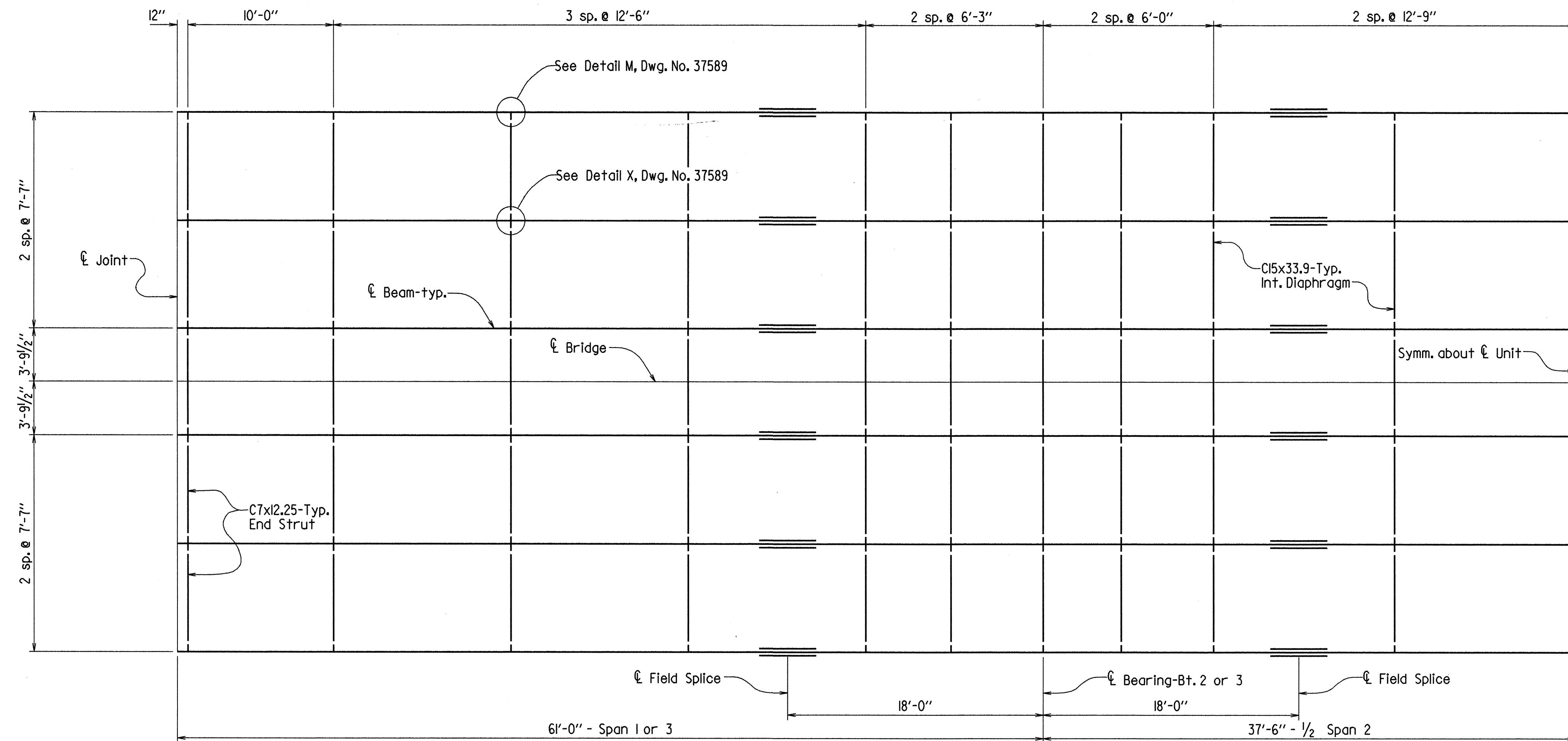
HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	*NATURAL WATER SURFACE ELEVATION	WATER SURFACE ELEV. WITH BACKWATER
	YEARS	CFS	FEET	FEET
Design	50	14,600	1177.2	1177.9
Base	100	17,700	1178.1	1179.0
Extreme	500	27,000	1180.3	1183.5
Overtopping	>500	-	-	-

* Unconstricted water surface without structure or roadway approaches.
Drainage area = 25.8 square miles.
Historical H.W. Elev. = 1178.0 ft.

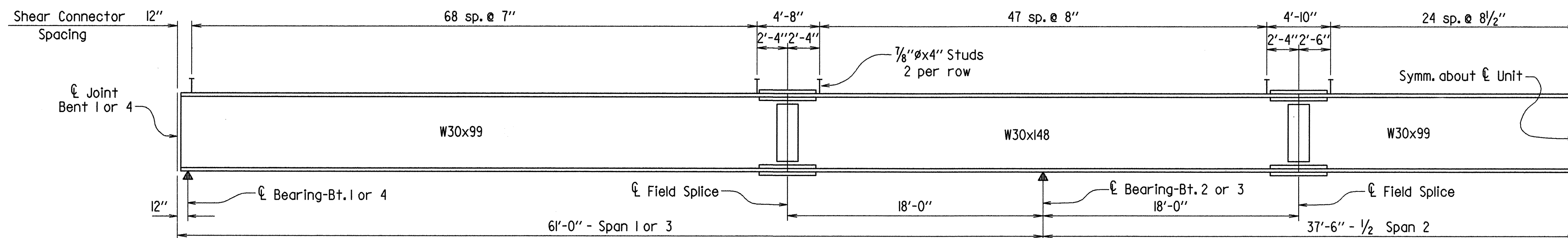
ELEVATION

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.		009918	40	115
06668 - W-BEAM UNIT (STA.970) - 37595								



HALF FRAMING PLAN

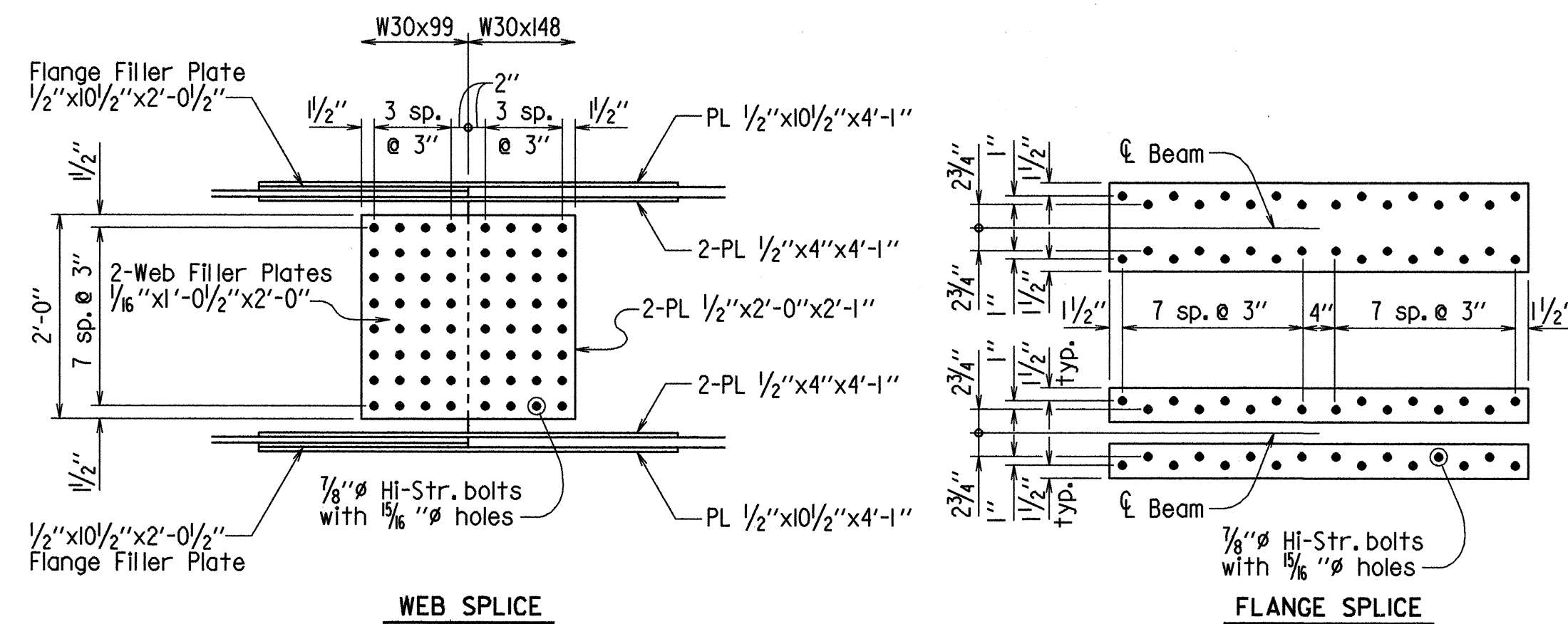
Scale: $\frac{3}{16}'' = 1'-0''$



BEAM ELEVATION

No Scale

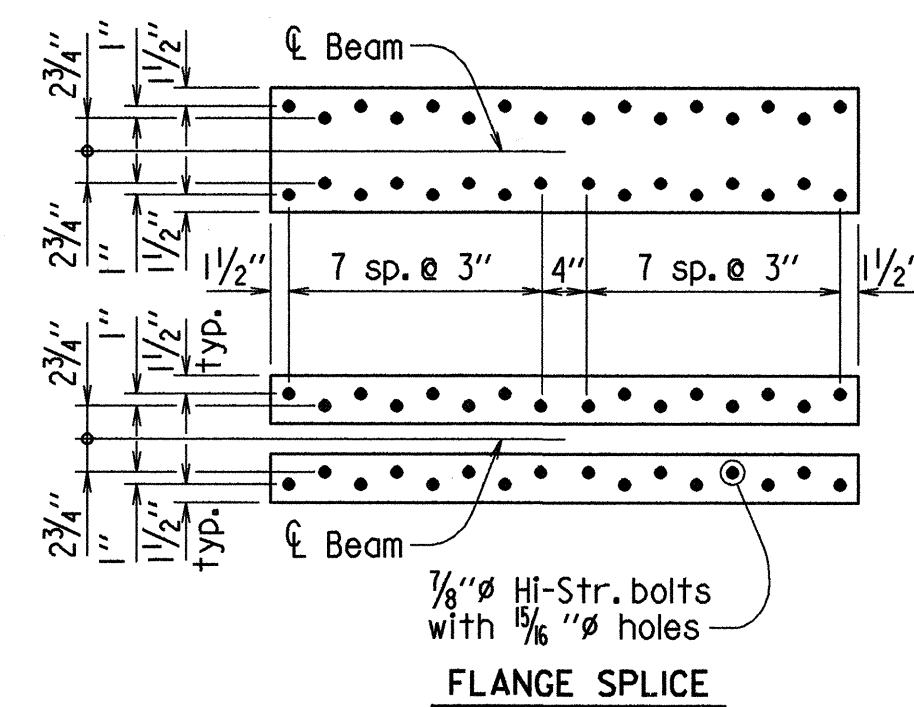
Note: Bolted field splices shown may be eliminated or shop welded splices may be substituted with approval of the Bridge Engineer. Payment will be made on the basis of the plan quantities.



WEB SPLICE

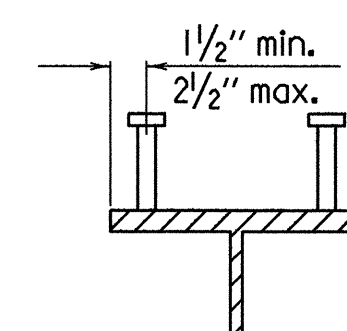
FIELD SPLICE DETAILS

Scale: $\frac{3}{4}'' = 1'-0''$



FLANGE SPLICE

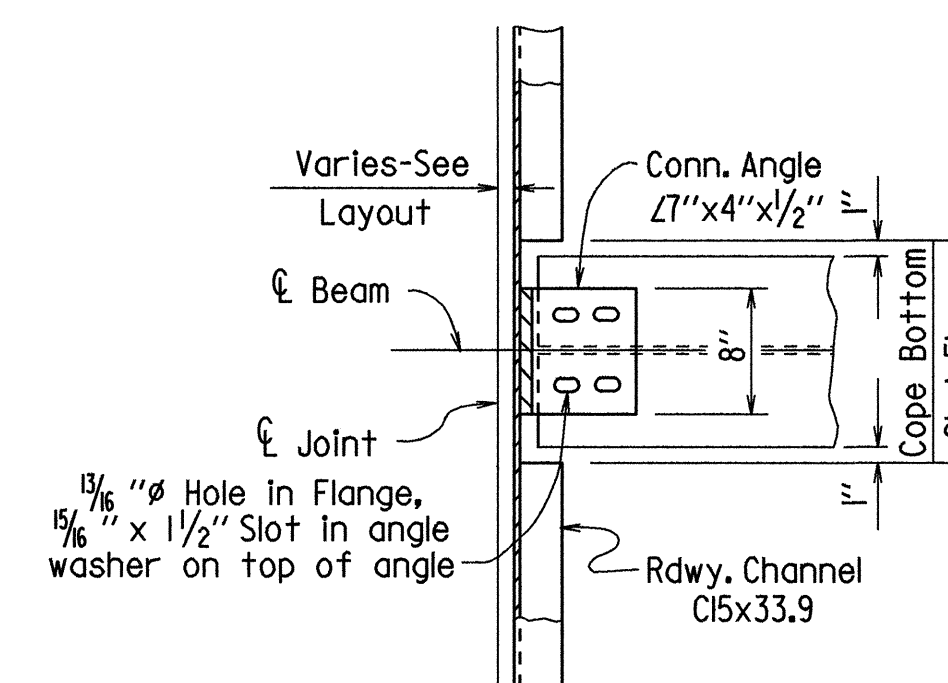
Note: All field splice plates shall be AASHTO M270, Gr. 50W steel.



Stud Shear Connectors shown shall be $\frac{3}{8}'' \times 4''$ long, granular flux filled, solid fluxed or equal, and automatically and welded to the beam flange in accordance with the recommendations of the Manufacturer. $\frac{3}{4}'' \times 4''$ studs may be used in place of the $\frac{3}{8}'' \times 4''$ studs shown, at the ratio of 1.361 - $\frac{3}{4}'' \times 4''$ studs in place of one $\frac{3}{8}'' \times 4''$ stud. $\frac{3}{8}'' \times 4''$ studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

SHEAR CONNECTOR DETAIL

No Scale

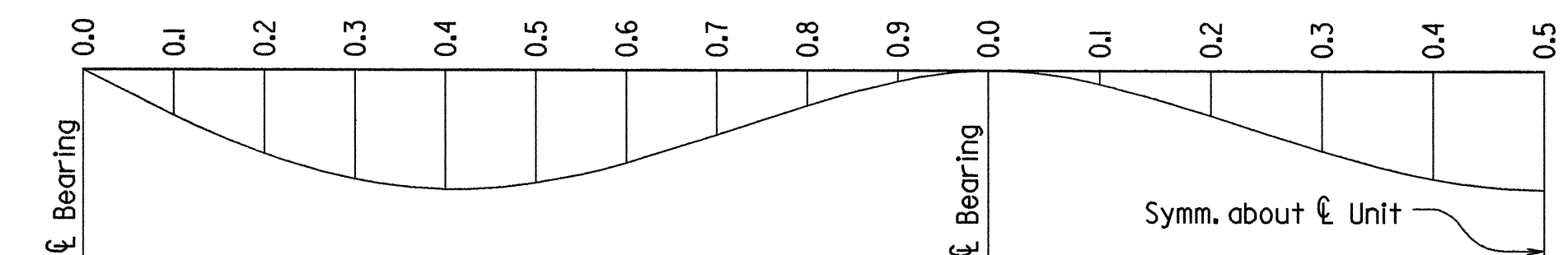


CHANNEL CONNECTION DETAIL

No Scale

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

Span	Point of Deflection	Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Parapet	
		Interior	Exterior	Interior	Exterior	Interior	Exterior
1 or 3	0	0	0	0	0	0	0
	0.1	0.043	0.040	0.287	0.241	0.308	0.263
	0.2	0.079	0.074	0.527	0.443	0.566	0.483
	0.3	0.104	0.097	0.687	0.578	0.738	0.630
	0.4	0.113	0.106	0.748	0.629	0.803	0.686
	0.5	0.108	0.101	0.710	0.597	0.762	0.651
	0.6	0.090	0.084	0.587	0.494	0.630	0.539
	0.7	0.063	0.059	0.410	0.345	0.440	0.376
	0.8	0.035	0.032	0.223	0.188	0.239	0.205
	0.9	0.011	0.010	0.070	0.059	0.075	0.064
2	0	0	0	0	0	0	0
	0.1	0.014	0.013	0.083	0.070	0.089	0.077
	0.2	0.045	0.042	0.279	0.235	0.301	0.258
	0.3	0.080	0.076	0.503	0.424	0.542	0.465
	0.4	0.107	0.101	0.677	0.571	0.730	0.625
	0.5	0.118	0.111	0.742	0.626	0.799	0.685



Camber for Dead Load Deflection plus Vertical curve $\pm \frac{1}{4}''$ tolerance. Deflections shown are from a chord from ℓ Bearing to ℓ Bearing. Vertical curve corrections not included.

DEAD LOAD DEFLECTION DIAGRAM

No Scale

TABLE FOR WELD

Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To $\frac{3}{4}''$ Inclusive	$\frac{1}{4}''$	
Over $\frac{3}{4}''$	$\frac{5}{16}''$	

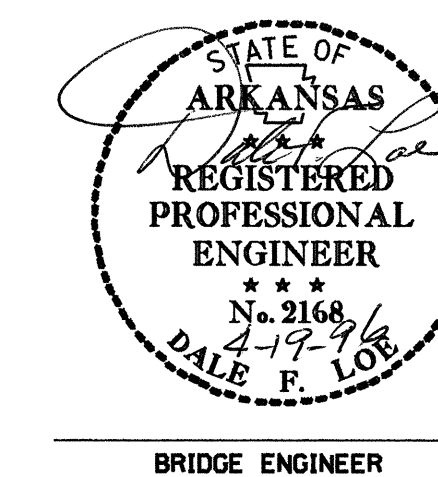
NOTE: When a fillet weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of fillet weld.

For General Notes, See Dwg. No. 37590

ALTERNATE NO. 1
SHEET 1 OF 2
DETAILS OF 197'-0" CONTINUOUS
COMPOSITE W-BEAM UNIT
LONG CREEK - STA. 970+00

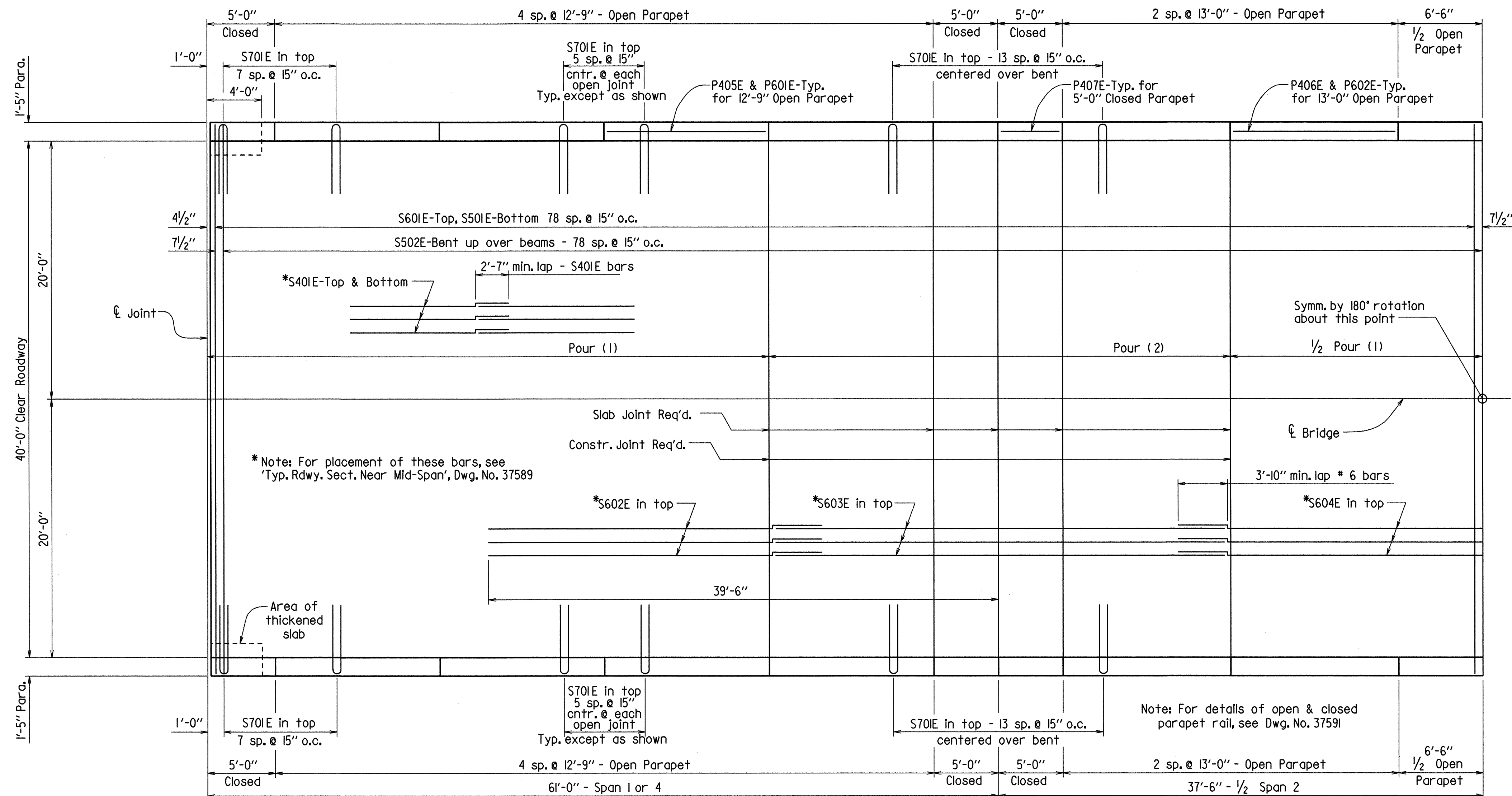
ROUTE 1
ARIZONA STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 19 JAN 95
CHECKED BY: CDF DATE: 4-16-95 SCALE: AS NOTED
DESIGNED BY: CDF DATE: 9-30-94
BRIDGE NO. 06668 DRAWING NO. 37595



NOTE: Pours with the same number may be placed simultaneously or separately. All Pours (1) must be placed before Pours (2) can be placed. 48 hours shall elapse between the end of a pour and the start of the next pour. 72 hours shall elapse between the end of a pour and the start of an adjacent pour. Any rolling pours made before the entire slab unit has been placed must be approved by the Bridge Engineer. The contractor must obtain approval from the Bridge Engineer for any deviations from the pouring sequence.

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				JOB NO.		009918	41	115
① 06668 - W-BEAM UNIT (STA.970) - 37596								



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

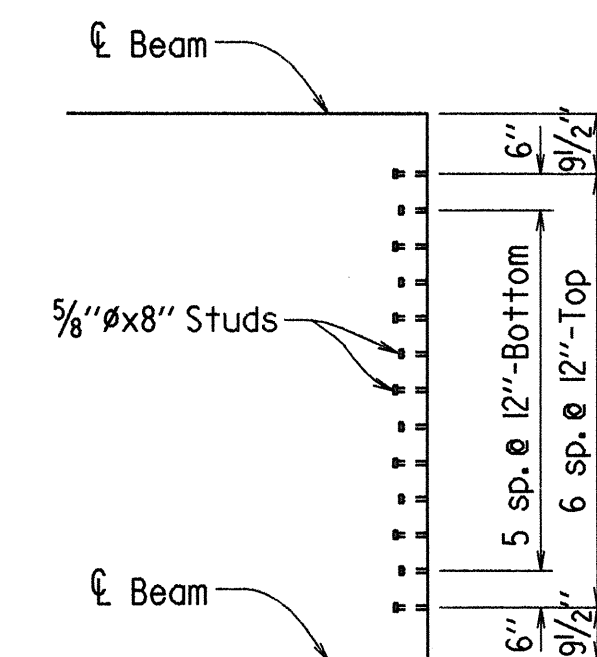
BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.	BENDING DIAGRAMS
S401E	540	35'-0"	Str.	
P401E	424	6'-4"	2"	
P402E	424	5'-6"	2"	
P403E	156	5'-10"	2"	
P404E	156	3'-2"	2"	
P405E	64	12'-4"	Str.	
P406E	40	12'-4"	Str.	
P407E	60	4'-7"	Str.	
S501E	158	42'-6"	Str.	
S502E	157	43'-4"	3"	
S601E	158	42'-6"	Str.	
S602E	92	25'-9"	Str.	
S603E	92	35'-5"	Str.	
S604E	46	47'-0"	Str.	
P601E	80	12'-4"	Str.	
P602E	50	12'-7"	Str.	
S701E	208	11'-0"	6 1/2"	

Note: At the contractor's option, two straight epoxy coated #5 bars may be substituted for the bar S502E. Payment will be based on the weight of the S502E bars.

Bar designations ending with an "E" indicates epoxy coated bars.

Dimensions are out to out of bars.



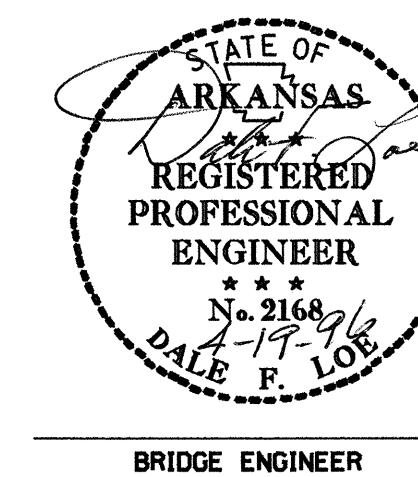
STUD CONNECTORS AT EXPANSION DEVICE

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

For General Notes, See Dwg. No. 37590

ALTERNATE NO. 1
SHEET 2 OF 2
DETAILS OF 197'-0" CONTINUOUS
COMPOSITE W-BEAM UNIT
LONG CREEK - STA. 970+00
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 19 JAN 95
CHECKED BY: C3F DATE: 4-16-95 SCALE: AS NOTED
DESIGNED BY: C3F DATE: 9-30-94
BRIDGE NO. 06668 DRAWING NO. 37596



BRIDGE ENGINEER