

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
08-07-00	8-21-00			6	ARK.			
						JOB NO.	009863	41
							LAYOUT	40309

# GENERAL NOTES

"ALL DIMENSIONS ARE IN METERS (m) UNLESS OTHERWISE NOTED"

BENCH MARK: Square cut in headwall 10.9m Lt. of C.L. Construction Sta. 7+05.74. Elevation 398.118.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (1996 edition) with applicable supplemental specifications and special provisions. Unless otherwise noted in the plans, Section and Subsection refer to the Standard Construction Specifications.

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

LIVE LOADING: MS18 METHOD OF DESIGN: Load Factor

SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:

Class 5 Concrete (substructure) f'c = 24 MPa  
Class 5(AE) Concrete (superstructure) f'c = 28 MPa  
Reinforcing Steel (ASTM A615M-96a, Gr. 420) fy = 420 MPa  
Structural Steel (AASHTO M270, Gr. 345W) Fy = 345 MPa  
Structural Steel (AASHTO M270, Gr. 250) Fy = 250 MPa

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

STEEL PILING: Piling in End Bents 1 and 4 shall be HP 250x62 (Grade 250) and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 490kN per pile and into the material designated as hard gray limestone on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the standard specifications. Piles in end bents to be driven after embankment to bottom of cap is in place.

FOOTINGS: Footings shall be set a minimum of 0.75 meter into material designated as hard gray limestone on the boring legend. The top of the intermediate bent footings shall be set at or below the channel bottom. Foundations for footings shall be prepared in accordance with section 801.04 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 fine finish as specified for final finishing in subsection 802.19 for Class 5 Bridge Roadway Surface Finish.

PROTECTIVE SURFACE TREATMENT: Class I Protective Surface Treatment shall be applied to the roadway surface and the face and top of the concrete parapet rail.

DETAIL DRAWINGS: DRAWING NO.  
End Bents 40311, 40312, 40315, 40316  
Intermediate Bents 40313, 40314  
46m Comp. W-Beam Unit 40317-40322  
Type B1 Approach Gutters 36525

EXISTING BRIDGE: The existing bridge No. 02819 (Log Mile 10.35) is 8.72m wide and 11.28m long and consists of a reinforced concrete slab span superstructure, supported by concrete column abutment and int. bents. A fallen slab span and abutment are buried in the west embankment and may interfere with channel excavation. Removal of fallen slab and abutment, as required for channel excavation, will be paid for under item 205 of the specifications. The existing bridge is approximately 18.5m downstream from the proposed bridge.

REMOVAL AND SALVAGE: After the new bridge is complete and open to traffic, the existing bridge No. 02819 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.

Note: For Hydraulic Data, see drwg. no. 40310.

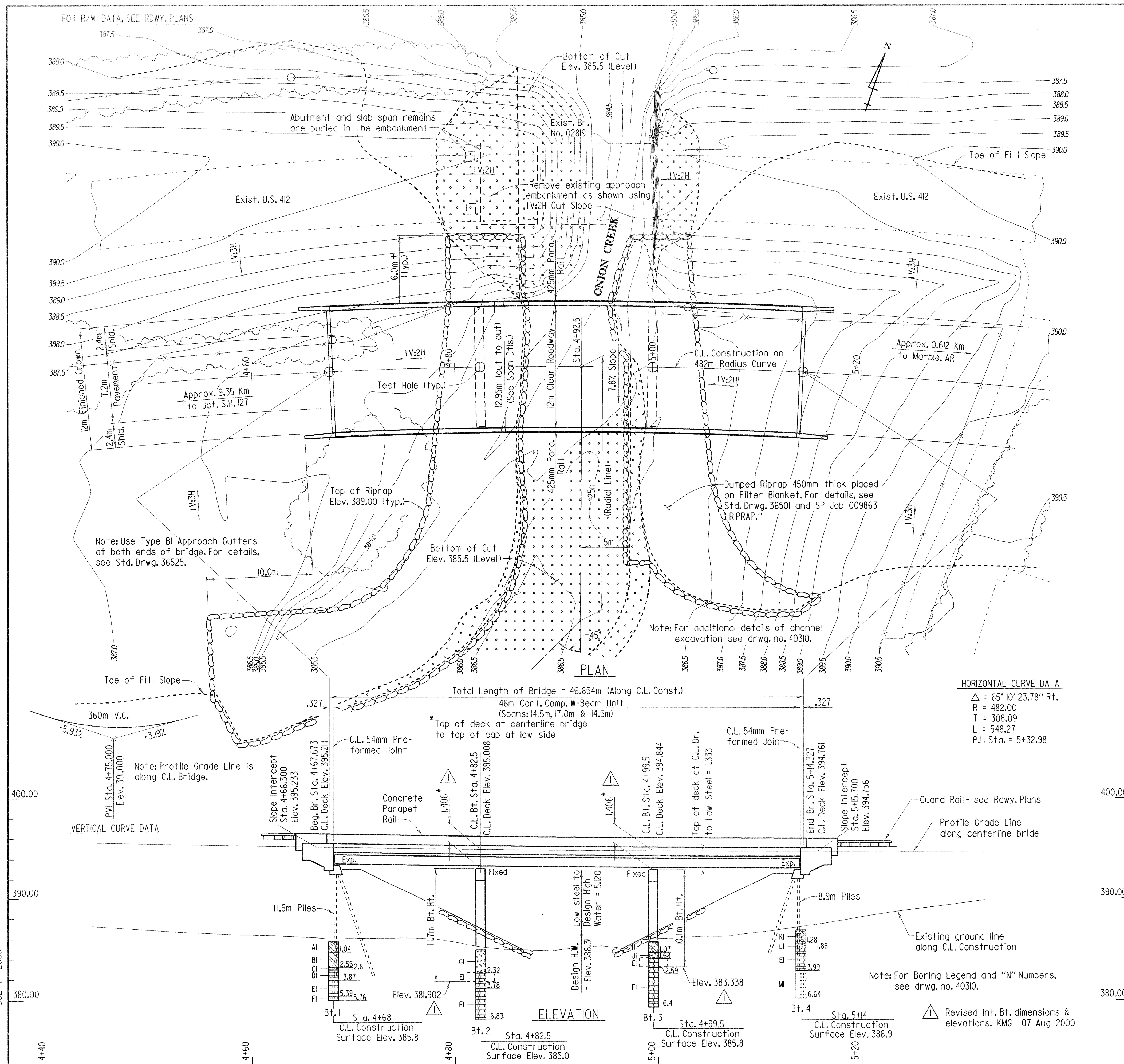
LAYOUT OF  
BRIDGE OVER ONION CREEK  
ONION CREEK & KINGS RIVER  
STRS. & APPRS. (F)  
MADISON COUNTY

ROUTE 412 SEC. 4  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: KMG DATE: 4 May 99 FILENAME: B009863X1.L1  
CHECKED BY: CAB DATE: 8-7-00 SCALE: 1:200  
DESIGNED BY: DBM DATE: 05-99  
BRIDGE NO. 06787 DRAWING NO. 40309

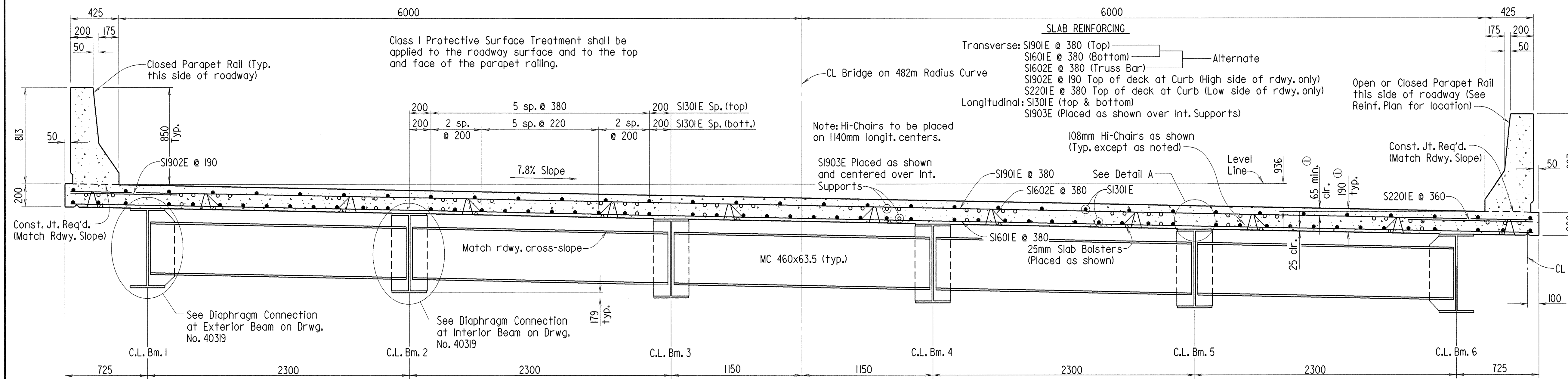


BRIDGE ENGINEER



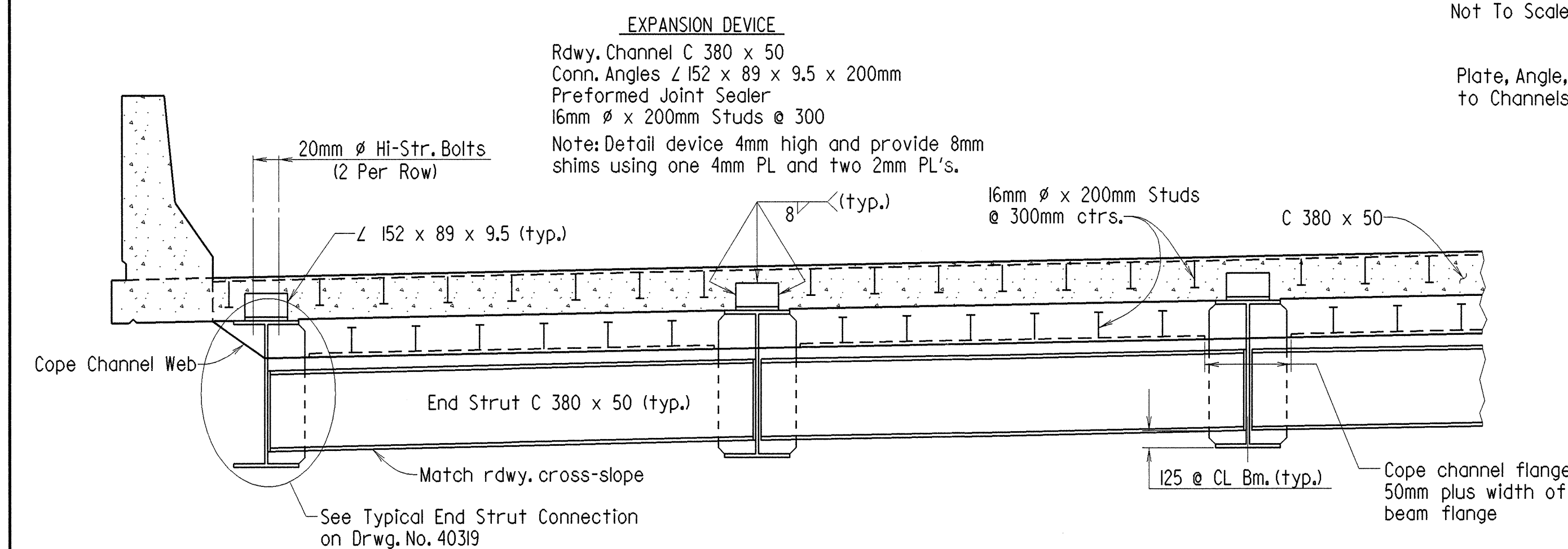


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				6	ARK.			
				JOB NO.		009863	49	120
				06787		SPAN DTLS.		40317



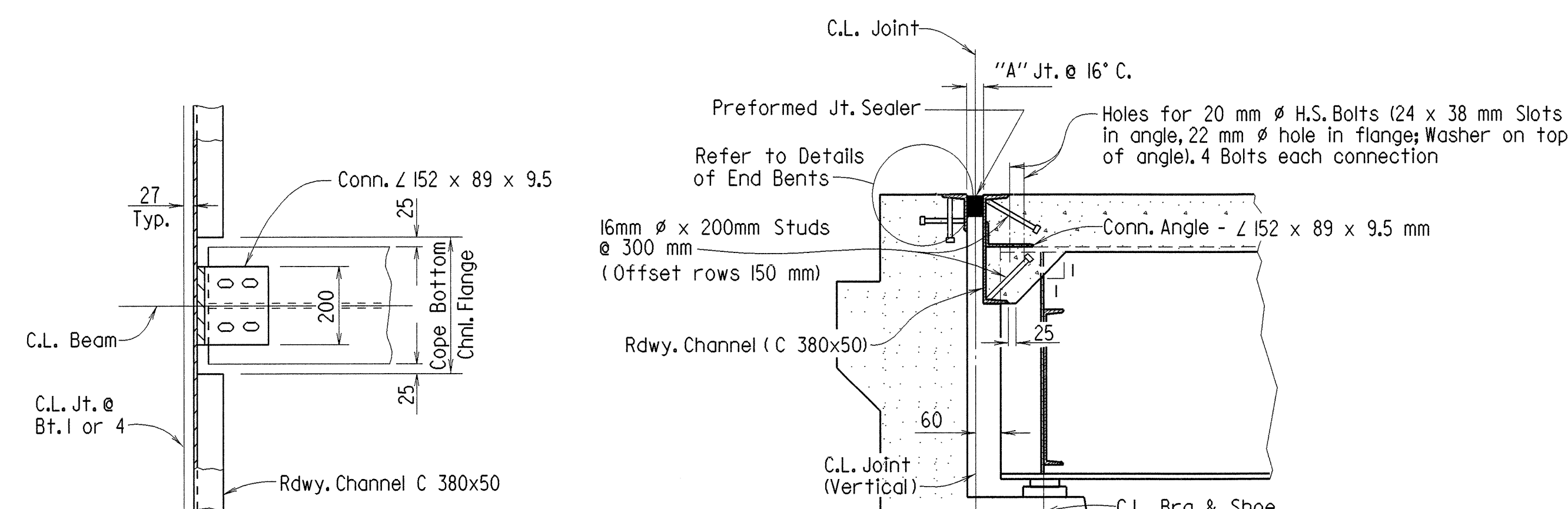
TYP. ROADWAY SECTION (LOOKING AHEAD)

Not To Scale



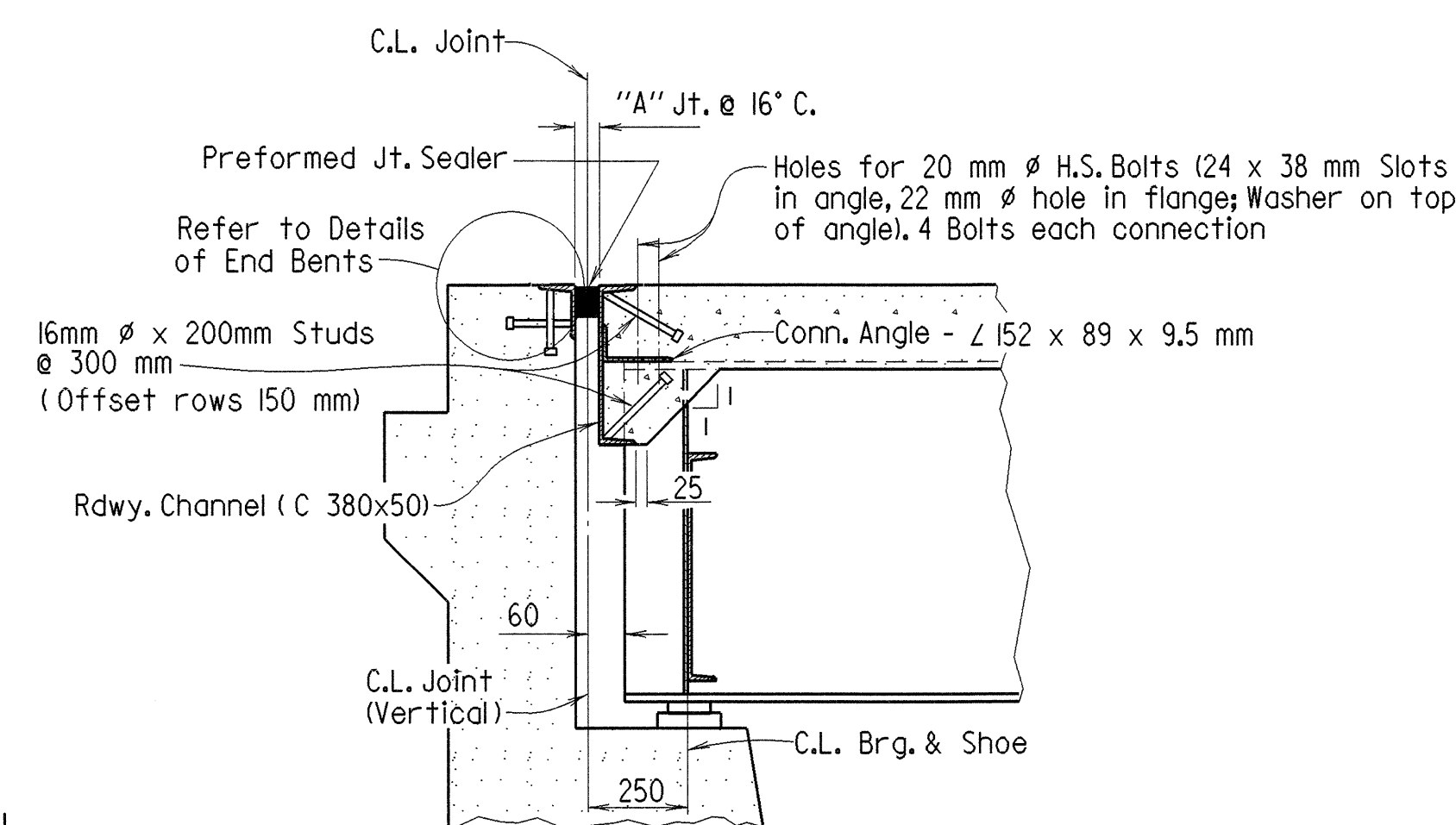
PART SECTION AT EXPANSION DEVICE

Not To Scale



TYPICAL CHANNEL CONNECTION DETAIL

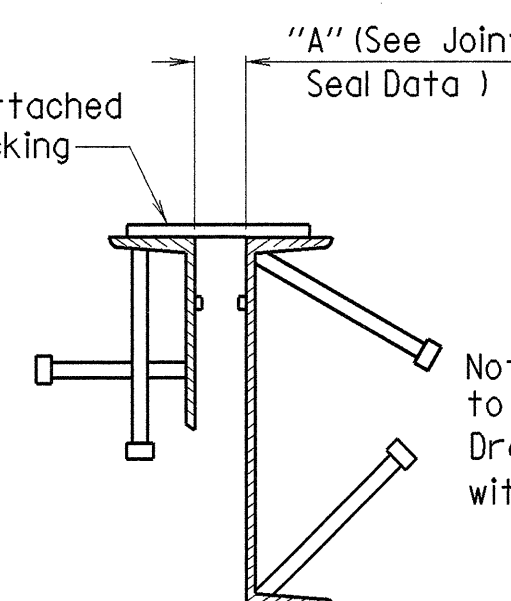
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SECTION THRU JOINT AT END BENTS

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Note: Section is taken perpendicular to joint.



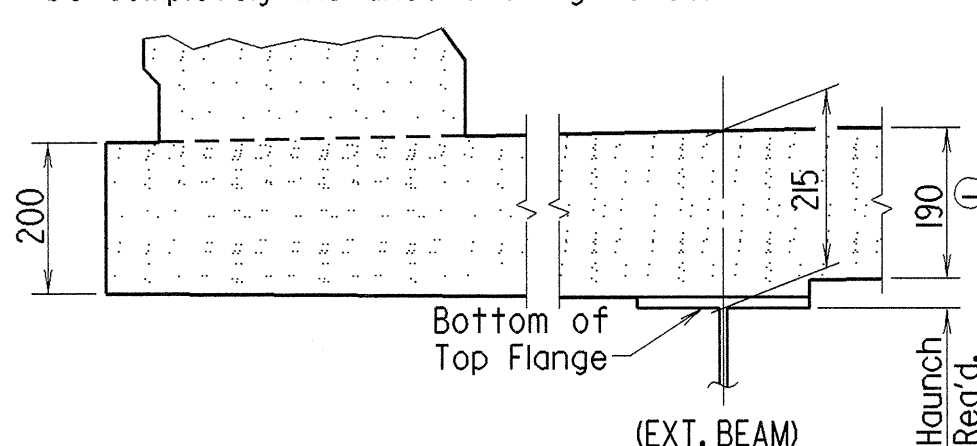
DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

No Scale

#### EXPANSION DEVICE INSTALLATION PROCEDURES

End bent backwall forms shall be in place and the beams shall be erected before the blocked expansion device is placed and adjusted for grade. The blocked expansion device shall be held in place by the backwall forms and erected beams prior to the pouring and set of the concrete in the backwall. Bolts shall be loosely installed so thermal movements of the span will not effect the attachment of the angle to the backwall.

Prior to pouring the deck concrete, the blocking shall be removed and the width of the joint adjusted. The joint width shall be set to the dimension shown in the table, "Joint Erection Dimensions", for the appropriate temperature, and all connection bolts on the span side shall be completely installed and tightened.



DETAIL A

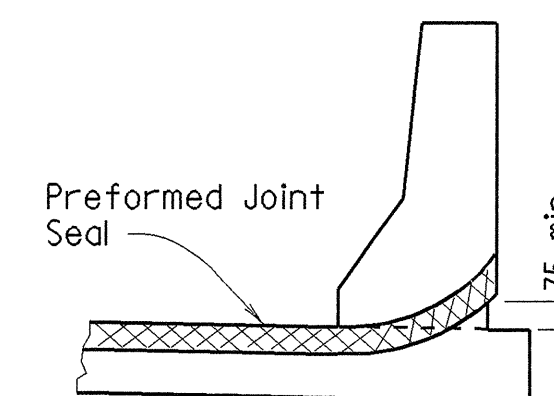
No Scale

① Tolerance when removable deck forming is used is (+)12mm and (-)6mm. Haunch forming is required and shall be adjusted to maintain slab thickness tolerance. Haunch dimension may vary within the following limits to maintain grade and slab thickness tolerance: Minimum - occurs when top flange contacts bottom reinforcing steel; Maximum - top flange thickness plus 44mm. No increase in concrete and structural steel quantities will be made to maintain tolerance.

Note: Tolerances shown are applicable only when removable deck forming is used. See Std. Drwg. 36515 for tolerance when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

"A" Joint Width Perpendicular To Joint @ 16°C ***	"B" Perpendicular To Joint	"C" Uncompressed Seal Width	Bumper Plate Size
54mm	60mm	89mm	25 x 19mm

\*\*\* Installation is limited to 4°C. min. and 28°C. max.

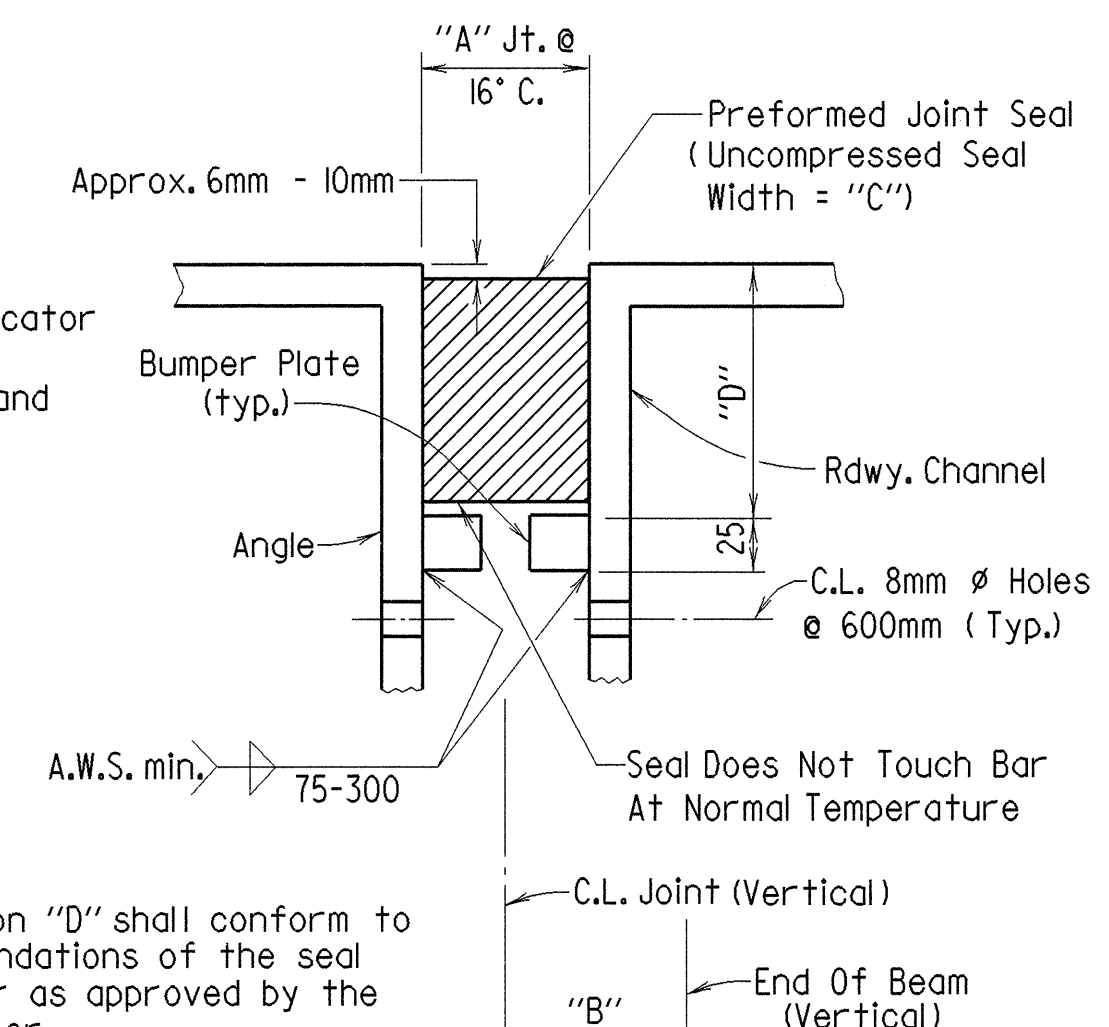


JOINT SEAL PLACEMENT AT CURB

No Scale

#### JOINT ERECTION DIMENSIONS

Temp. at time of Installation (C.)	Bent No. 1 or 4 Joint Width "A"	
	4° C.	57mm
10° C.	56mm	
16° C.	54mm	
21° C.	53mm	
28° C.	51mm	



A.W.S. min. 75-300

Note: Dimension "D" shall conform to the recommendations of the seal manufacturer as approved by the Bridge Engineer.

DETAIL OF JOINT SEAL & SUPPORT

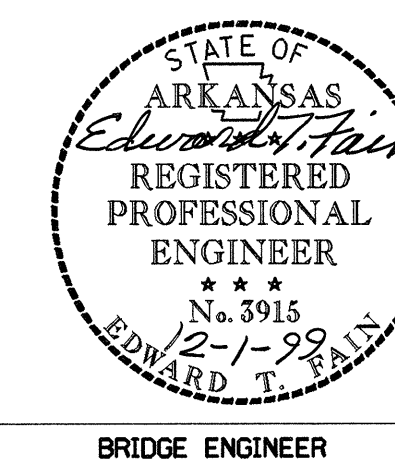
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Note: The Seal shall be in one piece (without splices) for the full length of the joint, except that lengths 17 meters and longer may have a factory made splice. Splices, when required, shall be shown on the Shop Drawings and shall be placed near the high ends of the Roadway. Separation of the Splice during installation shall be cause for rejection of the Seal.

All dimensions are in millimeters (mm) unless otherwise noted.

SHEET 1 OF 5  
DETAILS OF  
46m CONTINUOUS COMPOSITE W-BEAM UNIT  
BRIDGE OVER ONION CREEK  
MADISON COUNTY  
ROUTE 412 SEC. 4  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: KMG DATE: 13 July 99 FILENAME: B009863X1.S11  
CHECKED BY: CAB DATE: 11-30-99 SCALE: As Shown  
DESIGNED BY: CAB DATE: 07-97  
BRIDGE NO. 06787 DRAWING NO. 40317



BRIDGE ENGINEER



MICROFILMED  
JUL 11 2000