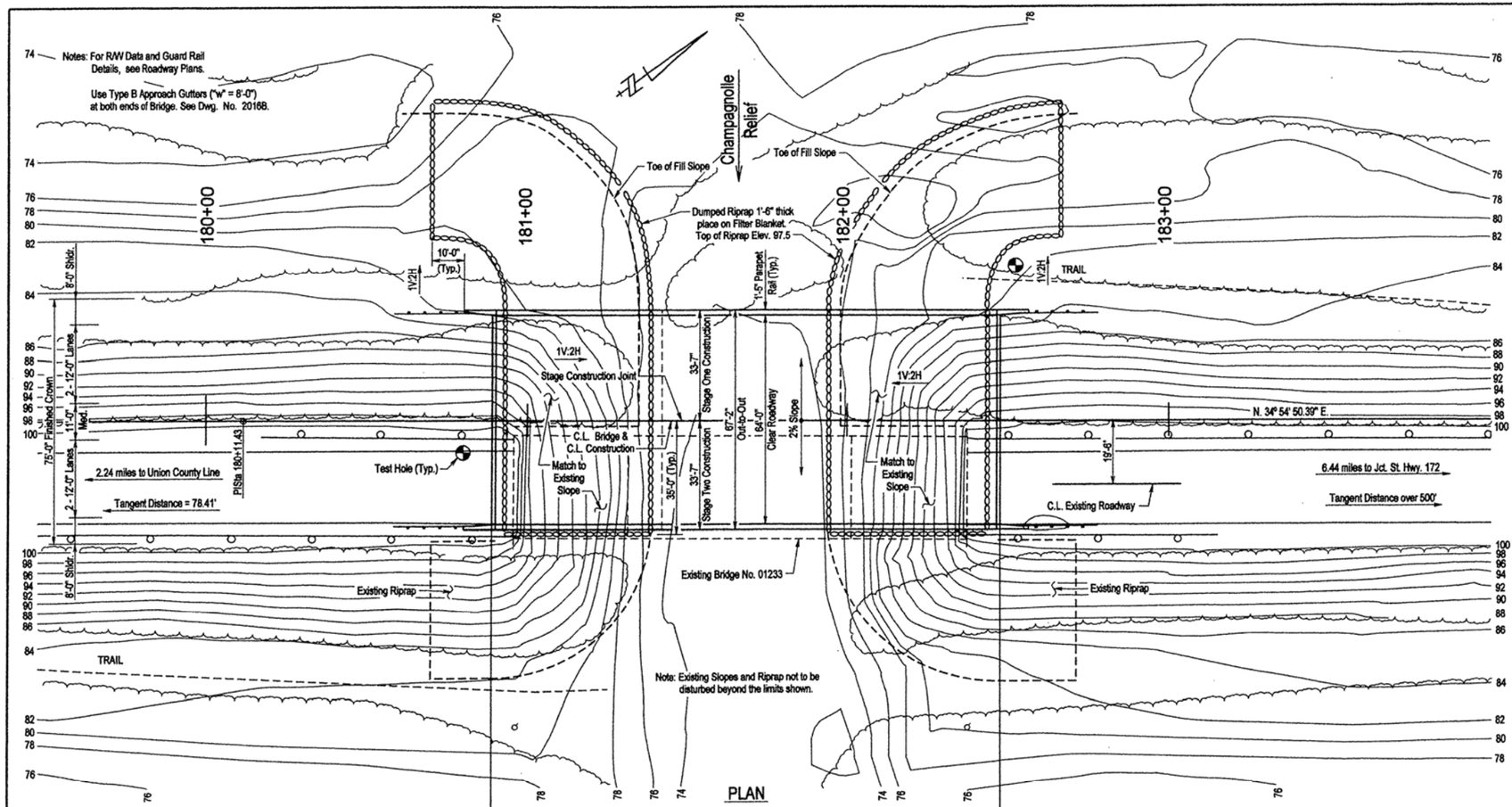
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		070268	73	202
				(1) 07108		LAYOUT		49304



GENERAL NOTES

BENCH MARK: TBM 911 SW Corner of Bridge, RT. of C.L., 19.28' RT. of Sta. 181+36, Elev. 101.96.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 2003 edition, with applicable supplemental specifications and special provisions. Unless otherwise noted, Section and subsection numbers in the plans refer to the Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO LRFD Specifications for Highway Bridges, 2004 edition, with 2005, 2006 interims.

LIVE LOADING: HL-93.

SEISMIC ZONE: 1

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)	fy = 60,000 psi
Structural Steel (AASHTO M270, Grade 50W)	Fy=50,000 psi
Structural Steel (AASHTO M270, Grade 36)	Fy=36,000 psi

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

CONCRETE PILING: Piling in bents 1 and 4 shall be 20" square prestressed concrete piles and shall be driven to an ultimate bearing capacity of 152 tons per pile. Piling in bents 2 and 3 shall be 24" square prestressed concrete piles and shall be driven to an ultimate bearing capacity of 242 tons per pile. All piling shall be driven with an approved air, steam or diesel hammer. Piling in bents 1 and 4 shall be driven after embankment to bottom of cap is in place to a tip elevation of 64.0 or lower. Piling in bents 2 and 3 shall be driven to a tip elevation of 54.0 or lower. Lengths of piling shown are assumed for estimating quantities only. Actual lengths to be determined in the field. Drive one 45' test pile in bent 1 and one 55' test pile in bent 3.

DRIVING SYSTEM: The driving system approval and the ultimate bearing capacity determination for piling shall be based on the requirements of section 805.09(b) "Method B - Wave Equation Analysis (WEAP)" of the Standard Specifications. It is estimated that the minimum required rated energy of the hammer to obtain the minimum ultimate bearing capacity on Bents 1 thru 4 will be 45,000 foot pounds per blow.

PILE DESIGN CAPACITY: 24" Square Prestressed Concrete Pile = 88 tons, 20" Square Prestressed Concrete Pile = 55 tons.

PREBORING: Preboring may be required to obtain minimum penetration. All test piles shall be prebored a minimum of 10' below natural ground. Additional prebore locations and depths shall be as directed by the Engineer. After the piles have been driven the holes shall be backfilled with sand or pea gravel. Backfill shall not be paid for directly but shall be considered subsidiary to the item "Preboring". The Contractor shall be responsible for keeping prebored holes free of debris prior to driving of piles and backfilling, which may require the use of temporary casings or other methods. Temporary casings, if required, shall not be paid for directly but shall be considered subsidiary to the item "Preboring".

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

DETAIL DRAWINGS:	DRAWING NO.
End Bents	49309-49311
Int. Bents 2 and 3	49313
Concrete Piling	49314
Details Common to Cont. Comp. W-Bm Units	49315 & 49318
Details of 156' Continuous Composite W-Beam Unit	49319 & 49320
Elastomeric Bearings	49323

EXISTING BRIDGE: Existing Bridge No. 01233 is 140' in length and 31' in width and is comprised of 4 - 35'-0" R.C.D.G. spans supported by concrete pile bents. Centerline of Existing Bridge No. 01233 is located approximately 20 feet Downstream of the Proposed Roadway Centerline.

REMOVAL AND SALVAGE: After Stage One Construction of the new bridge is open to traffic, Existing Bridge No. 01233 shall be removed in accordance with Section 205. All material from the existing bridge shall become the property of the Contractor.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY	TOTAL DISCHARGE	* DISCHARGE	**NATURAL WATER SURFACE ELEVATION	WATER SURFACE ELEVATION WITH BACKWATER
	YEARS	CFS	CFS	FEET	FEET
Design	50	234,500	9,753	98.3	98.7
Base	100	269,800	8,778	99.8	100.4
Extreme	500	380,000	14,237	104.7	105.0
Overtopping	75	262,000	8,604	99.5	99.9

*Portion of flow through this bridge.

**Unconstricted water surface without structures or roadway approaches.
Drainage area = 6533 square miles (Ouachita River and Relief Bridges).
Historical H.W. Elev. = 100.0 ft.

STATE OF ARKANSAS CHARLES P. BRAND No. 4337 REGISTERED PROFESSIONAL ENGINEER 5/4/07
BRIDGE ENGINEER

SHEET 1 OF 2
LAYOUT OF BRIDGE OVER CHAMPAGNOLLE RELIEF OUACHITA RIVER-BANGS SLOUGH (S)
CALHOUN COUNTY
ROUTE 167 SEC. 3
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: MJT DATE: 08-22-06 FILENAME: B070268X1.LLDGN
CHECKED BY: SAT DATE: 5/4/07 SCALE: 1" = 20'-0"
DESIGNED BY: BEF DATE: 5/07

BRIDGE NO. 07108 DRAWING NO. 49304

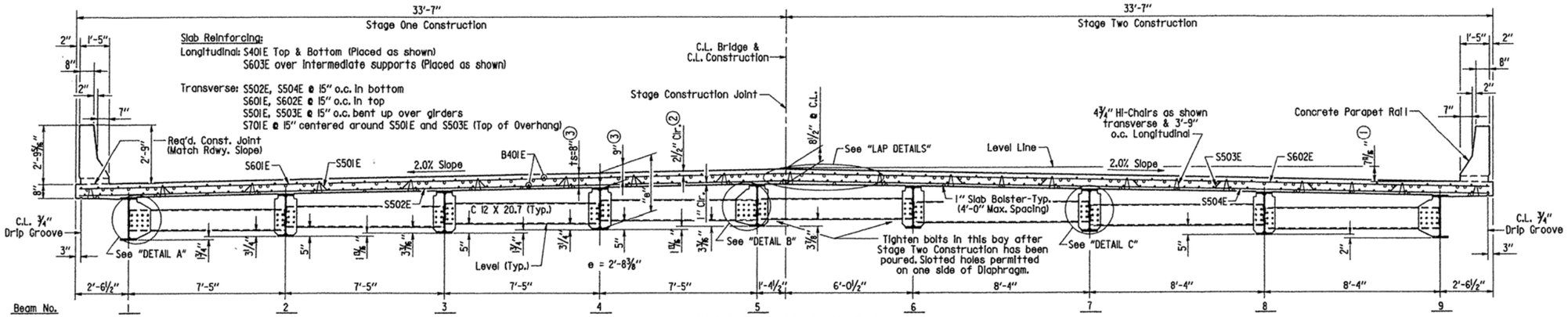
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		070268	84	202
				① 07107-07109		SPAN DETAILS	49315	

Note: Class I Protective Surface Treatment shall be applied to the Roadway Surface and to the Face and Top of Concrete Parapet Rail.

Note: The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class S(AE) Concrete.

Note: At Contractor's option, in lieu of providing Bars S501E, and S503E one #5 epoxy-coated bar top and bottom may be substituted. Payment for Reinforcing will be based on the weight of bars S501E and S503E. Bars in top and bottom mat shall be epoxy coated.

Note: All bars designated with a "E" suffix are to be Epoxy Coated.



TYPICAL ROADWAY SECTION

LOOKING AHEAD

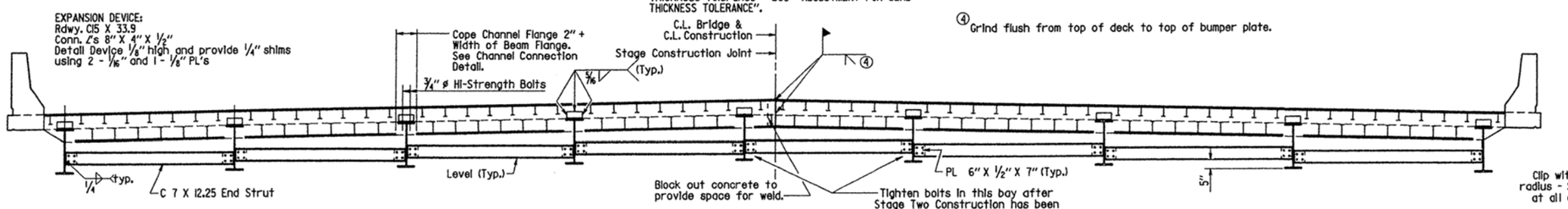
⅜" = 1'-0"

① C.L. Bridge to Gutterline

② Tolerance: Minus = ¼"
Plus = The amount of slab thickening used to meet slab thickness tolerance - see "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE".

③ See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE".

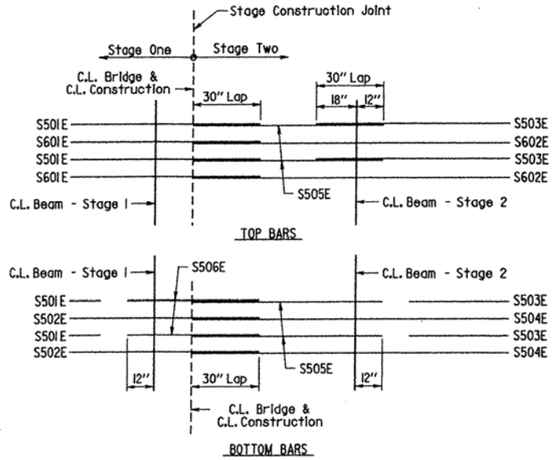
④ Grind flush from top of deck to top of bumper plate.



EXPANSION DEVICE

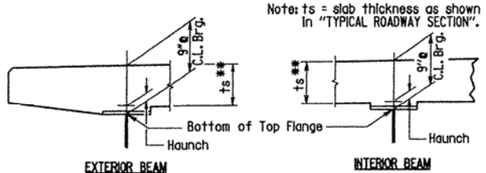
LOOKING AHEAD

⅜" = 1'-0"



LAP DETAILS

N.T.S.



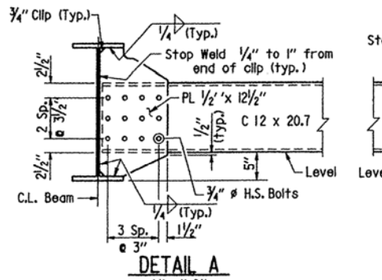
** Tolerance when removable deck forming is used is + ½", - ¼" Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

Notes:
Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance : Minimum - occurs when top flange contacts bottom reinforcing steel; Maximum - top flange thickness plus 1¾". No increase in concrete and structural steel quantities will be made to maintain tolerances.

Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 1499 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

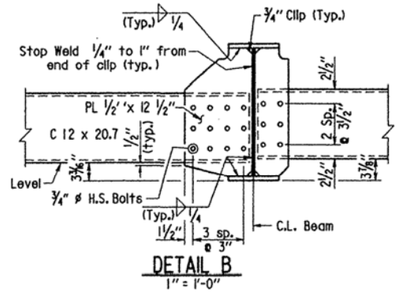
ADJUSTMENT FOR SLAB THICKNESS TOLERANCE WHEN REMOVABLE DECK FORMING IS USED

N.T.S.



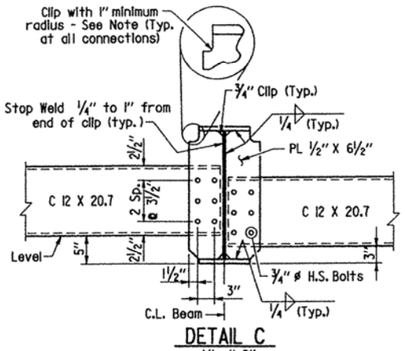
DETAIL A

1" = 1'-0"



DETAIL B

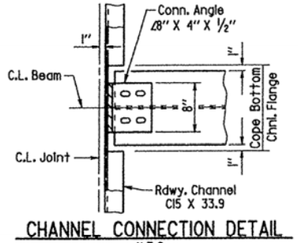
1" = 1'-0"



DETAIL C

1" = 1'-0"

Note: If permanent steel deck forms are used, the fabricator shall clip the plate as necessary to accommodate the deck form support.



CHANNEL CONNECTION DETAIL

N.T.S.

STATE OF ARKANSAS
CHARLES P. BRAND
REGISTERED PROFESSIONAL ENGINEER
No. 4837
5/4/07

BRIDGE ENGINEER

(SHEET 1 OF 4)

DETAILS COMMON TO CONTINUOUS COMPOSITE W-BEAM UNITS

ROUTE 167 SEC. 3

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: MJT DATE: 03-13-07 FILENAME: B070268XL_SI.DGN

CHECKED BY: SAT DATE: 4/13/07 SCALE: AS NOTED

DESIGNED BY: REF DATE: 3/07

BRIDGE NO. 07107-07109 DRAWING NO. 49315