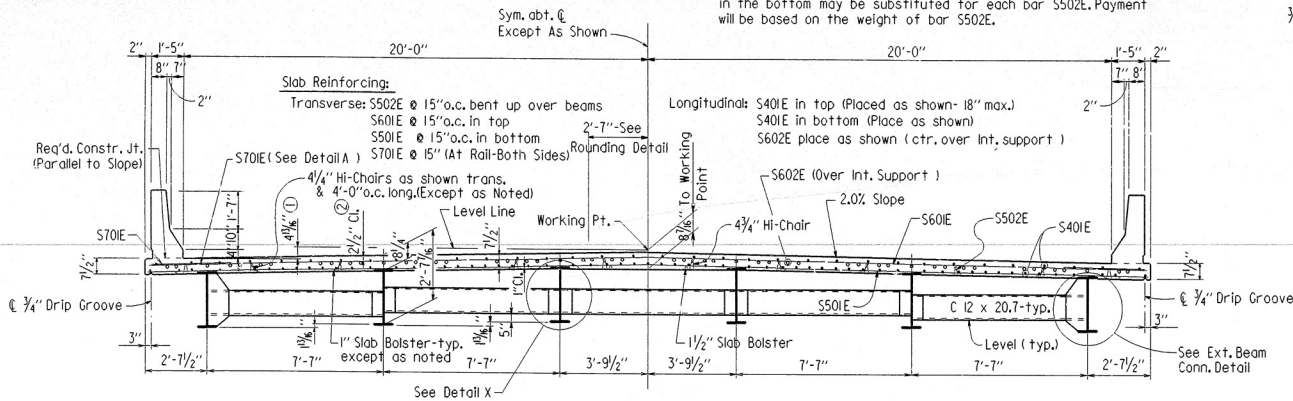


Note: Class I Protective Surface Treatment shall be applied to the Roadway Surface and the face and top of Concrete Parapet Rail.

Note: One epoxy coated #5 bar in the top and one epoxy #5 bar in the bottom may be substituted for each bar S502E. Payment will be based on the weight of bar S502E.



① Working Point to Gutter Line

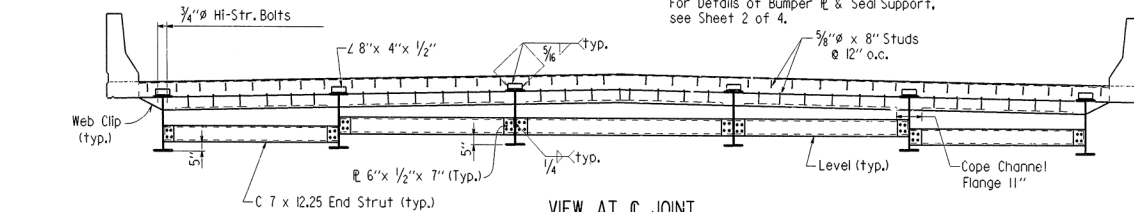
SECTION NEAR MIDSPAN
N.T.S.

② Tolerance Minus = 1/4"
Plus: Equal to amount of slab thickening used to meet slab thickness tolerance
See Adjustment For Slab Thickness Tolerance.

Expansion Device:

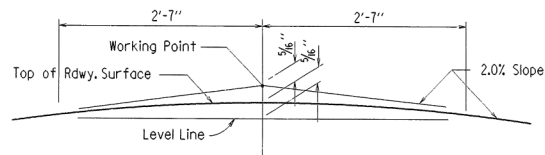
Rdwy. C 15 x 33.9
Conn. 8' x 4' x 1/2"

Detail Device 1/8" high & provide 1/4" Shims using 2- 1/8" & 1- 1/8" R's
5/8" x 8" Studs @ 12" o.c. (Top & Bottom)
For Details of Bumper & Seal Support, see Sheet 2 of 4.



VIEW AT Q JOINT
N.T.S.

Preformed Joint at End Bents (typ.)

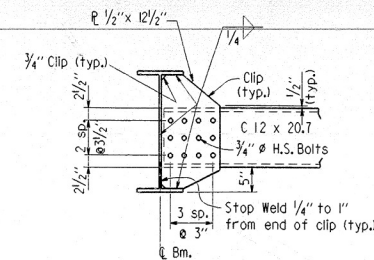


NOTE: Working Point matches Theoretical Roadway Grade.

ROUNDING DETAIL
N.T.S.

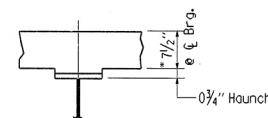
BAR LIST

MK	No. Required	Length	Pin Dia.	Bending Diagrams (Dimensions are out to out of bars.)
S401E	380	34'-6"	Str.	<p>**1/2" Overtolerance, No Undertolerance.</p>
S501E	86	42'-10"	Str.	
S502E	85	43'-8"	3"	
S601E	86	42'-10"	Str.	
S602E	100	29'-0"	Str.	
S603E	4	49'-0"	Str.	
S604E	6	5'-0"	Str.	
S605E-S637E	4 Ea.	5'-8" to 40'-3"	Str.	
S701E	208	11'-1"	6 1/2"	
P401E	284	6'-4"	2"	
P402E	284	5'-6"	2"	<p>**1/2" Overtolerance, No Undertolerance.</p>
P403E	24	4'-6"	Str.	
P404E	48	9'-8"	Str.	
P405E	96	3'-2"	2"	
P406E	96	5'-10"	2"	
P407E	24	11'-8"	Str.	
P408E	48	5'-6"	Str.	
P601E	60	9'-8"	Str.	
P602E	60	9'-8"	Str.	
P603E	60	9'-8"	Str.	



Note: Bolts in Diaphragm Connections shall be properly installed and tightened in accordance with Subsection 807.71 of the Standard Specifications.

DIAPHRAGM CONNECTIONS AT EXTERIOR BEAMS
N.T.S.

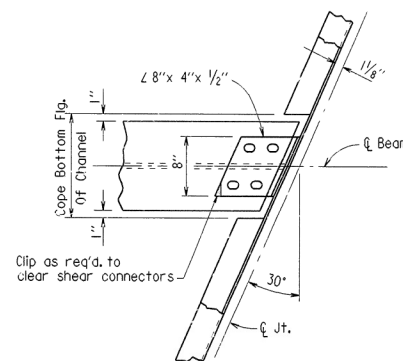


Haunch is required. Slab may be thickened and/or the haunch thickened to maintain slab tolerance.

*Thickness as detailed on Span Drawings. Tolerance is minus 1/4" and plus 1".

Note: No increase in concrete and structural steel quantities will be made to meet slab tolerances.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE
N.T.S.



TYP. CHANNEL CONNECTION DETAIL
N.T.S.

Design Specifications: AASHTO 1996 with Interim Specifications

Live loading: HS20

Method of Design: Load Factor

Dead Load:

Interior Beam

Exterior Beam

A. To W-Beam

723 plf + 1.3 (Wt./Ft. of W-Bm.)

581 plf + 1.3 (Wt./Ft. of W-Bm.)

B. To Composite Beam

290 plf + 279 plf *

290 plf + 279 plf *

Closed Parapets

290 plf + 279 plf *

290 plf + 279 plf *

Open Parapets

290 plf + 279 plf *

290 plf + 279 plf *

Live Load: To each composite beam

1,379 wheels + impact

1,286 wheels + impact

* Includes 160 plf future wearing surface

Material Strengths:

Class (S/AE) Concrete (N=8)

f'c = 4,000 p.s.i.

Reinforcing Steel (AASHTO M31 or M53, Gr. 60)

f'y = 60,000 p.s.i.

Structural Steel (AASHTO M270, Gr. 36)

f'y = 36,000 p.s.i.

Structural Steel (AASHTO M270, Gr. 50W)

f'y = 50,000 p.s.i.

GENERAL NOTES

Governing specifications are the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (1996 edition) with applicable supplemental specifications and special provisions.

All concrete shall be Class (S/AE) and shall be poured in the dry. All exposed corners to be chamfered 1/4" unless otherwise noted.

All concrete shall be poured and screeded off prior to initial set. The concrete deck shall be finished in accordance with section 802.9, Class 5 of the Standard Specifications. 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. Sufficient concrete must be placed ahead of the strike-off to fully load the beam. If a longitudinal strike-off is used, a vertical camber adjustment must be made in the strike-off to account for the future dead load deflection of the railing.

Concrete in bridge superstructure shall be placed and consolidated for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

The bridge deck shall be given a fine finish as specified for final finishing in subsection 802.10 for a Class 5 Bridge Roadway Surface Finish.

Reinforcing steel shall conform to AASHTO M31 or M53, Grade 60. The reinforcing is to be accurately located in the forms and firmly held in place by steel wire 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 "Reinforcing Steel-Bridge".

All stud shear connectors shall be granular flux filled, solid fluxed, or equal, and shall be automatically end welded in accordance with recommendations of the manufacturer.

Field connections shall be bolted with 3/4" high strength bolts unless otherwise noted. Bolt holes shall be 1/8" except that 5/8" holes may be used for connection of expansion devices and end struts if a washer is used under both the nut and head of the bolt.

Diaphragms shall be installed as beams are erected and shall be completely bolted prior to pouring of the concrete deck.

Drawings show general features of design only. Shop drawings shall be made in accordance with the specifications, submitted and approval secured before any fabrication is begun. 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.

All Structural Steel shall be AASHTO M270, Gr. 50W unless otherwise noted and shall be paid for at the unit price per pound bid for "Structural Steel in Beam Spans (M270, Gr. 50W)". M270, Gr. 50W steel shall not be painted. All exposed surfaces to be cleaned in accordance with Subsection 807.84(e) of the Standard Specifications. Structural steel completely embedded in concrete may be AASHTO M270, Gr. 36.

All beams shall be blocked in their true position in the shop. The camber, length of sections, distance between bearings and openings of joints shall be measured with the beams in this position and this information shall become a part of the permanent record of the job. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram. All beam dimensions are based on a temperature of 60°F. A tolerance of 1/4" is allowed for camber.

Beams are considered main load carrying members and shall meet the longitudinal Charpy V-Notch test specified in Section 807.05. All welding shall conform to Subsection 807.26. Welded connections shall be 1/2" fillet shop welds unless otherwise noted. All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If the Contractor or Erector should want to make additional welds, whether temporary or permanent, he shall submit detailed drawings with formal request to the Bridge Engineer for approval.



SHEET 1 OF 4
DETAILS OF
130' CONT. COMP. W-BEAM UNIT
FIELD CREEK
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: W.M.A. DATE: 2-14-00
CHECKED BY: R.E.F. DATE: 4-25-00 SCALE: As Shown
DESIGNED BY: R.E.F. DATE: 1-2-00