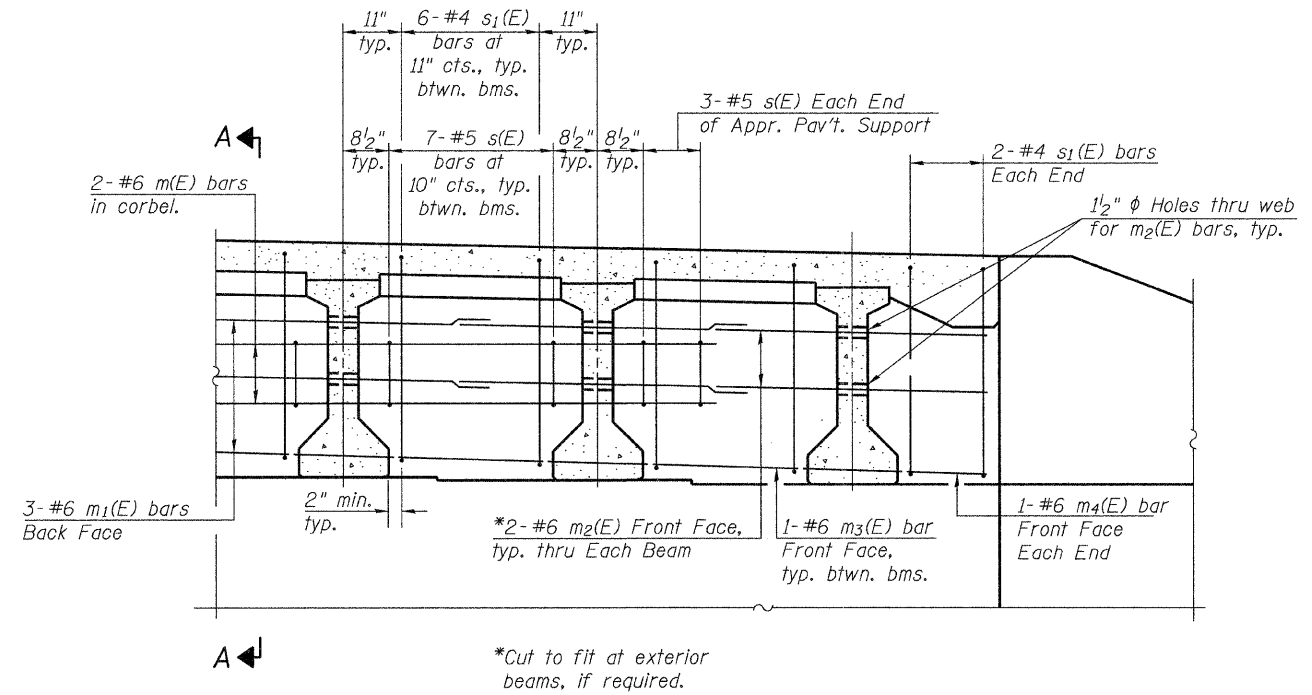


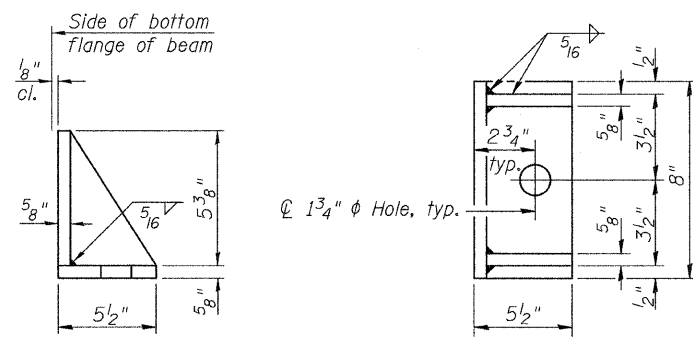
Notes:  
 Reinforcement bars in diaphragm are billed with superstructure on sheet 8 of 22.  
 Concrete in diaphragm is included with Concrete Superstructure on sheet 8 of 22.  
 For details of bars s(E), s<sub>1</sub>(E) and s<sub>2</sub>(E) see sheet 8 of 22.  
 For placement of v(E) bars see sheet 15 and 16 of 22.  
 See sheet 10 of 22 for Sections A-A and B-B.  
 Cost of 90 Lb. roofing felt is included with Concrete Superstructure.  
 The side retainer shall be galvanized after shop fabrication according to AASHTO M 111.  
 Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Anchor bolts for side retainers may be either cast in place or installed in holes drilled after the supporting member is in place and prior to pouring the deck.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Cost of side retainers shall be included with Concrete Structures.



**DIAPHRAGM ELEVATION AT ABUTMENT**

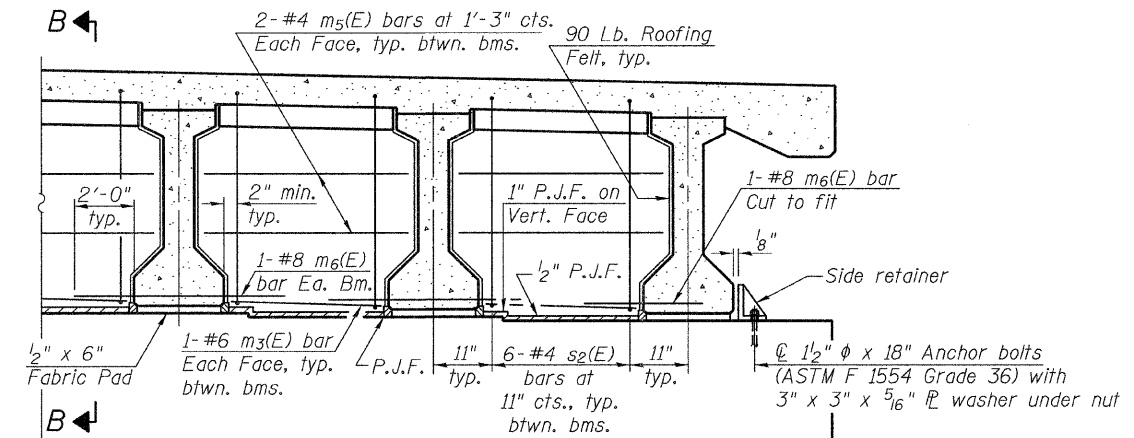
**MIN. BAR LAP**

#6 bar = 2'-9"



**SIDE RETAINER**

(2 required each side of each pier)  
 Equivalent rolled angle with stiffeners  
 will be allowed in lieu of welded plates.



**DIAPHRAGM AT PIERS**

**DIAPHRAGM DETAILS**  
**C.H. 12 OVER JOES CREEK**  
**SECTION 07-00090-00-BR**  
**MACOUPIN COUNTY**

SHEET NO. 9	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CH 12	07-00090-00-BR	MACOUPIN	77	38
22 SHEETS	SN 059-3557		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BRS-0732(148)		