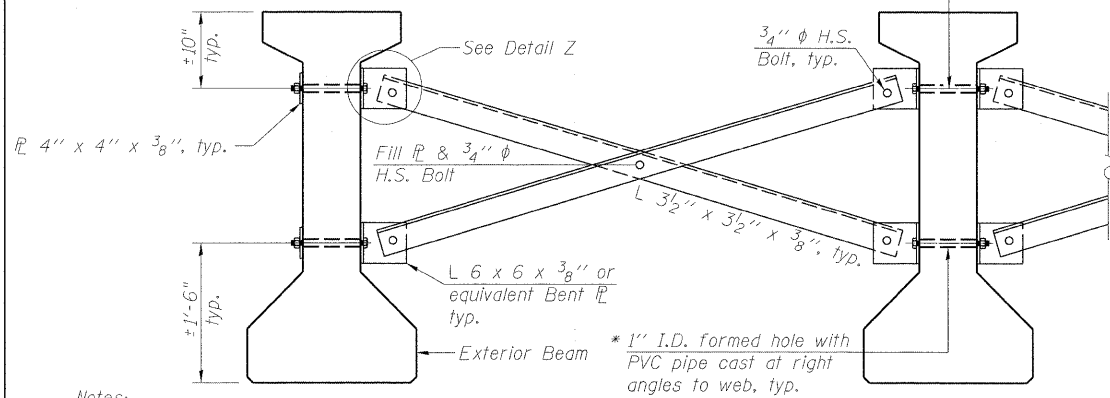


\* Fabricator shall locate to miss strands within permissible tolerances.

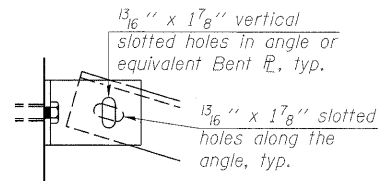
$\frac{3}{4}$ "  $\phi$  A307 Bolts with lock nuts., typ.  
Bolts through the concrete web shall be tightened to snug tight only.



**Notes:**

All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted. Two hardened washers are required for each set of oversized holes.  
All holes shall be  $\frac{15}{16}$ "  $\phi$  unless otherwise noted.  $\frac{5}{16}$ " x 3" x 3" plate washers are required over all slotted holes.  
All bolts shall be galvanized according to AASHTO M232. Bracing shall be installed as beams are erected and tightened as soon as possible during erection. Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams. See Framing Plan Sheet for approximate location of formed holes.

**PERMANENT BRACING DETAILS FOR 48" PPC I-BEAMS**



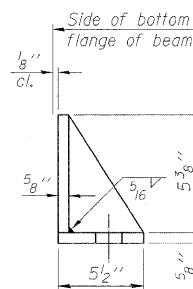
**DETAIL Z**

**Notes:**

Reinforcement bars in diaphragm are billed with superstructure on the Superstructure Details Sheet. Concrete in diaphragm is included with Concrete Superstructure on the Superstructure Details Sheet. For details of "s" bars see Diaphragm Details 2 Sheet. The "s" bars shall be placed parallel to the beams. See Diaphragm Details 2 sheet for Sections A-A, B-B and C-C. Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Field modify bar splicers if necessary.

**Notes for side retainer and anchor bolts at Pier 2:**

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 shall be drilled and set in the existing pier cap. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications. Cost of side retainer shall be included with Concrete Superstructure. For side retainers and anchor bolts at Piers 1 & 3 see Bearing Details Elastomeric and Fixed Sheet.

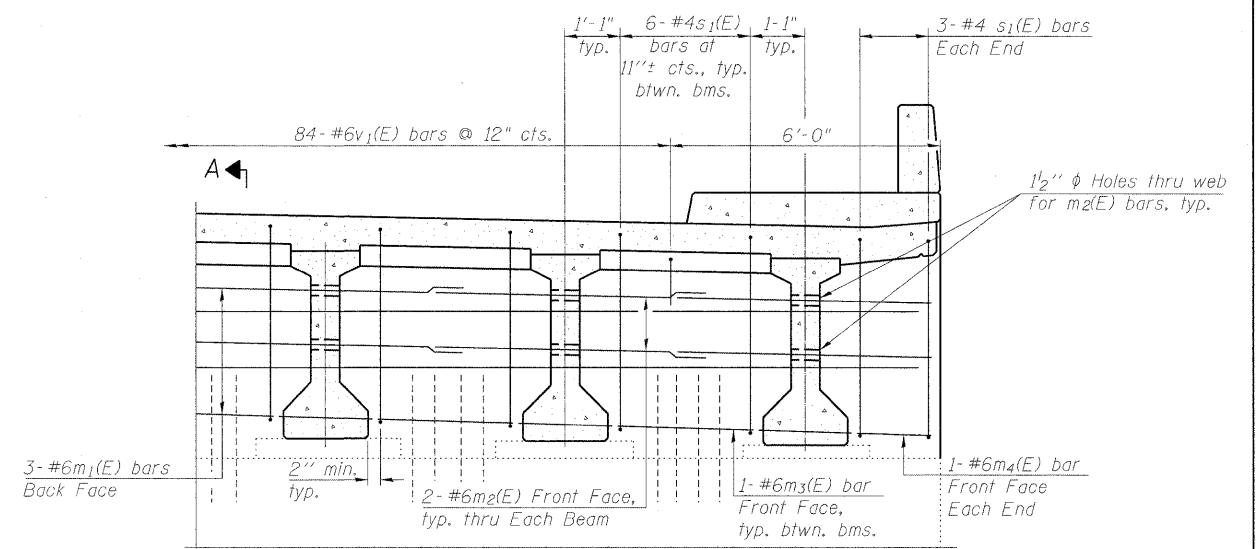


**SIDE RETAINER**

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

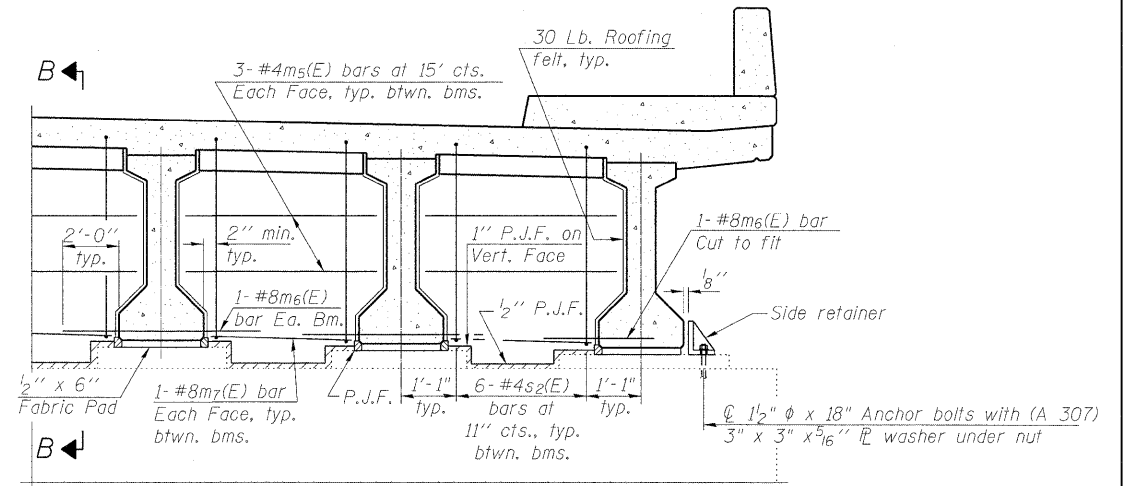
**MIN. BAR LAP**

#6 bar = 3'-4"



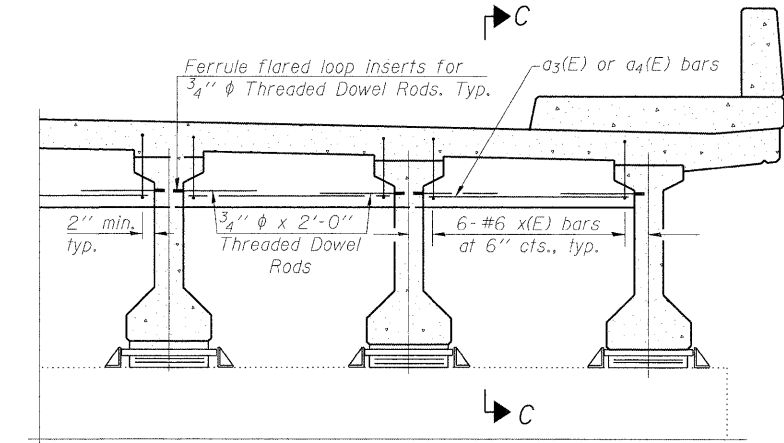
**DIAPHRAGM ELEVATION AT ABUTMENT**

Provide 6 Bar Splicers (E) for #6 Bars in diaphragm at stage constructin joint. (Integral)



**DIAPHRAGM AT PIER 2**

Provide 8 Bar Splicers (E) for #4 and #8 Bars in diaphragm at stage constructin joint. (Fixed)  
#8v(E) bars not shown for clarity



**DIAPHRAGM AT PIERS 1 & 3**



FILE NAME = 0160199-62099-22-DIAPHRAGM_1.dgn	USER NAME =	DESIGNED - JPMILLA	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL. RT 1 - HALSTED ST. OVER I-80/294 DIAPHRAGM DETAILS 1</b>	F.A.P. RTE. 876	SECTION 2001-001BR	COUNTY COOK	TOTAL SHEETS 62	SHEET NO. 41
PLOT SCALE =	DRAWN - RMKANE	REVISED -	STRUCTURE NO. 016-0199			CONTRACT NO. 62099				
PLOT DATE = 08/05/2011	CHECKED - RALEE	REVISED -	ILLINOIS FED. AID PROJECT							
SHEET NO. 22 OF 33 SHEETS										