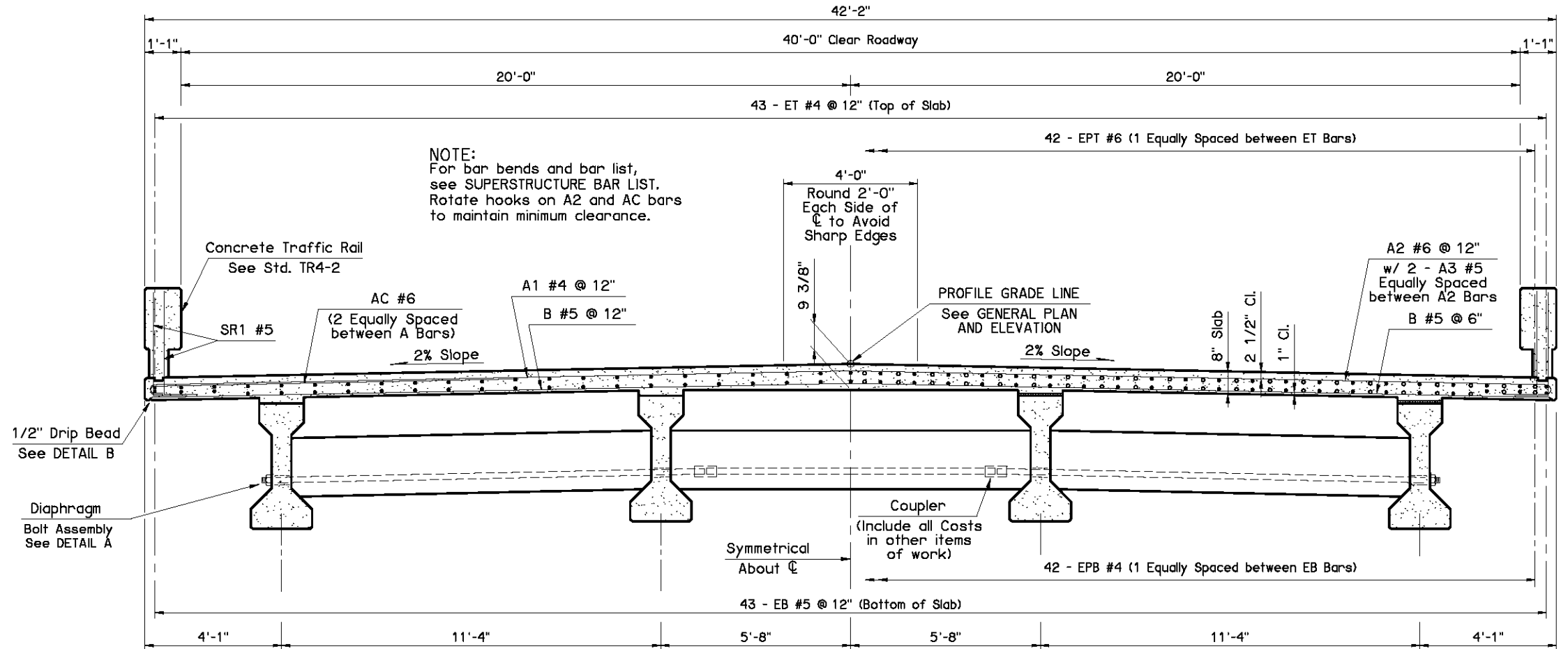


**DETAIL A**

**DIAPHRAGM BOLT NOTES**

Provide structural steel for Diaphragm Bolts and Plate Washers in accordance with AASHTO M270 (ASTM A709), Grade 50W (Weathering Steel, Charpy V-Notch testing not required). The Contractor may substitute a #10 reinforcing bar in accordance with AASHTO M31, Grade 60, and threaded at the ends as shown for the Diaphragm Bolt at no additional cost to the Department. Provide Hex Nuts in accordance with AASHTO M291 (ASTM A563).  
 Paint exposed Diaphragm Bolt, Plate Washer and Hex Nut with two (2) coats of zinc-rich paint (6 mil minimum thickness) after assembly. Include all cost of Diaphragm Bolt, Plate Washer and Hex Nut in the contract unit price for STRUCTURAL STEEL.

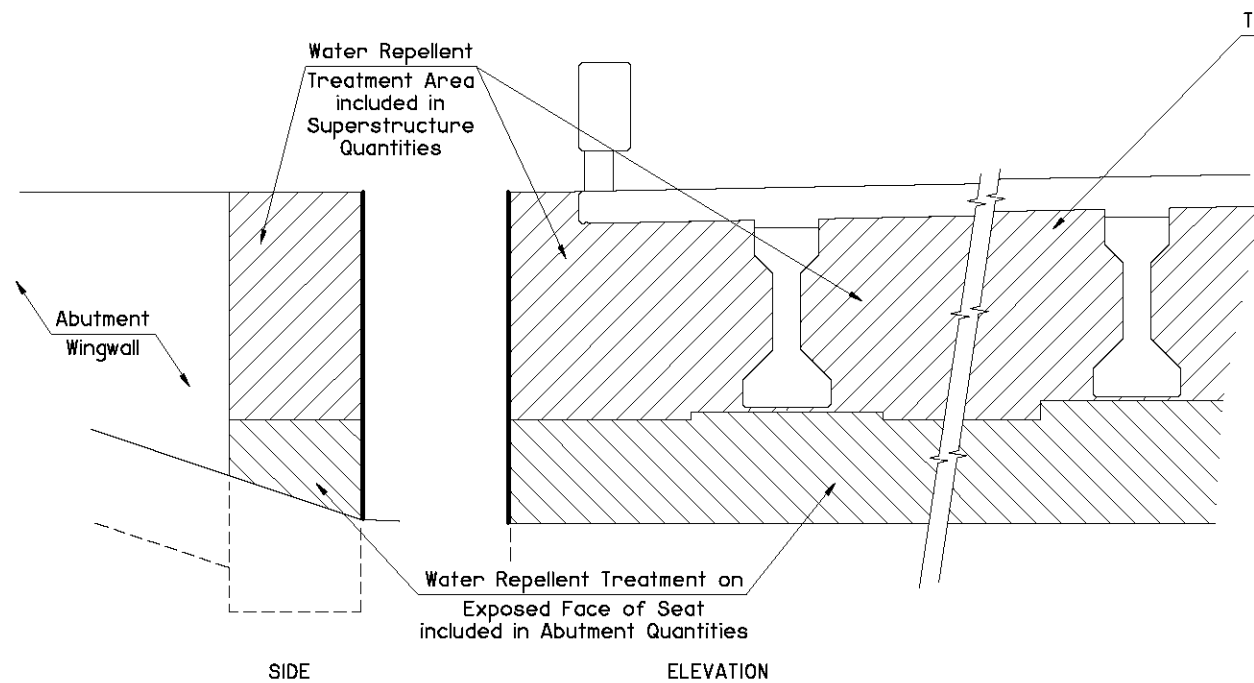


HALF SECTION AT INTERMEDIATE DIAPHRAGM

HALF SECTION AT PIER DIAPHRAGM

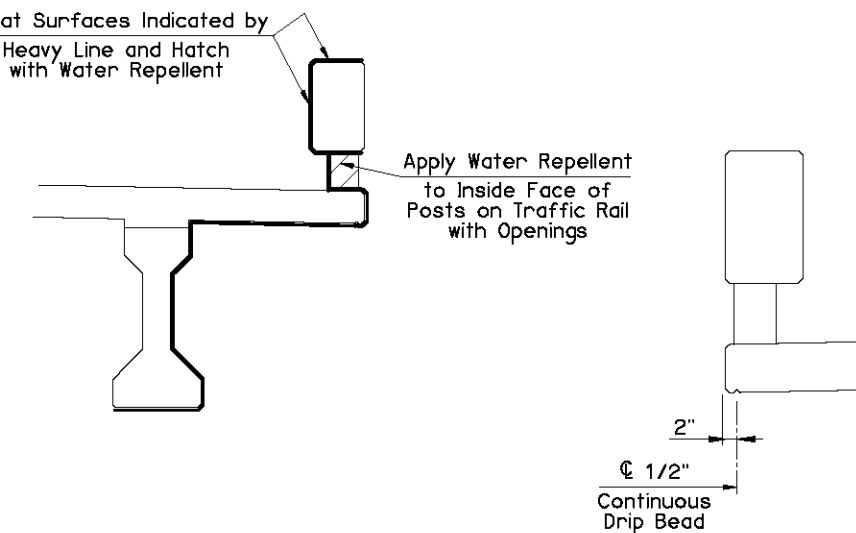
**TYPICAL CROSS SECTION**

NOTE:  
 For LFD Operating Rating and Dead Load Deflection Diagram, see P.C. BEAM DETAILS.



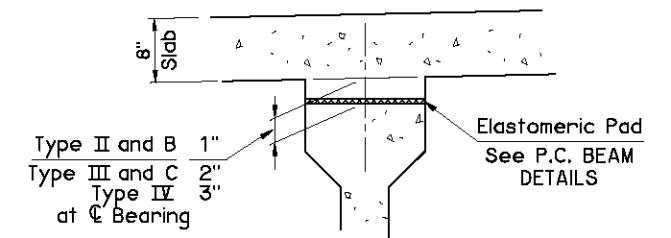
ABUTMENT DIAPHRAGM

**WATER REPELLENT TREATMENT DETAILS**



TRAFFIC RAIL, SLAB AND BEAM

**DETAIL B**



**BEAM HAUNCH DETAIL**

NOTE:  
 Plan quantities for CLASS AA CONCRETE include Beam Haunches. The haunch height shown is the theoretical haunch height at the centerline bearing only, measured from the bottom of the Deck Slab to the top of the Beam, and varies across the span. Determine the actual haunch height (accounting for beam camber, dead load deflection and roadway grade) after erection of the beams and submit to the Engineer for approval. The Engineer will not measure differences between the theoretical and the actual haunch heights for payment.

APPROVED BY BRIDGE ENGINEER *Scott J. Smith* DATE *4/2/10*

OKLAHOMA DEPT. OF TRANSPORTATION  
 BRIDGE STANDARD (ENGLISH)  
**TYPICAL CROSS SECTION**  
**TYPE II, B, III, C AND IV P.C. BEAMS**  
**INTEGRAL**

2009 SPECIFICATIONS | B40-I-XSECT-PC234 | 03E  
 B-61E