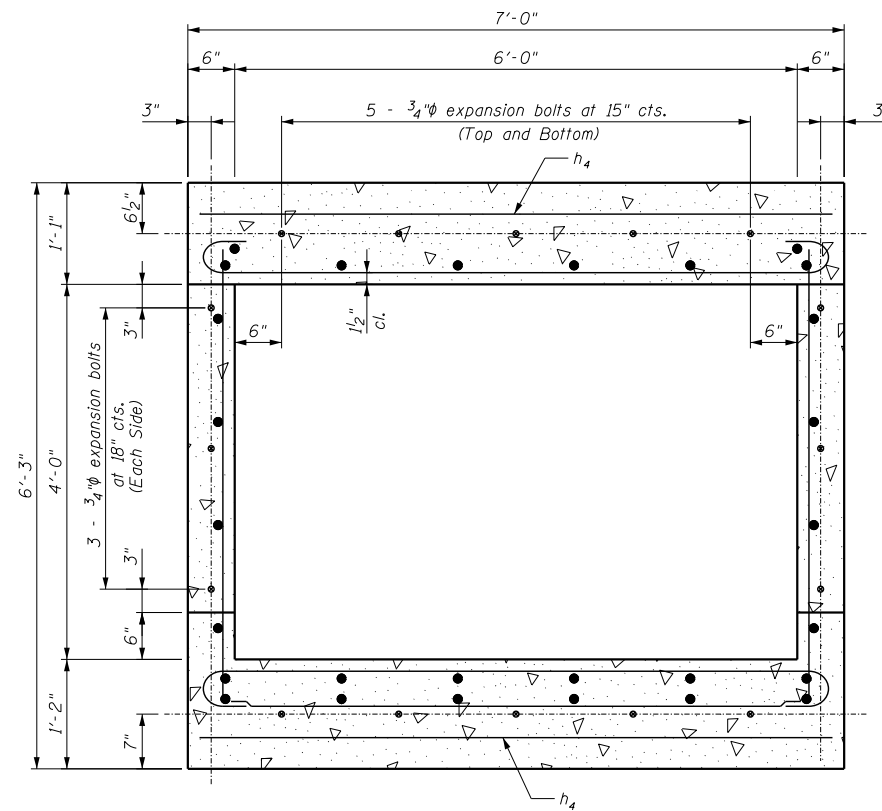
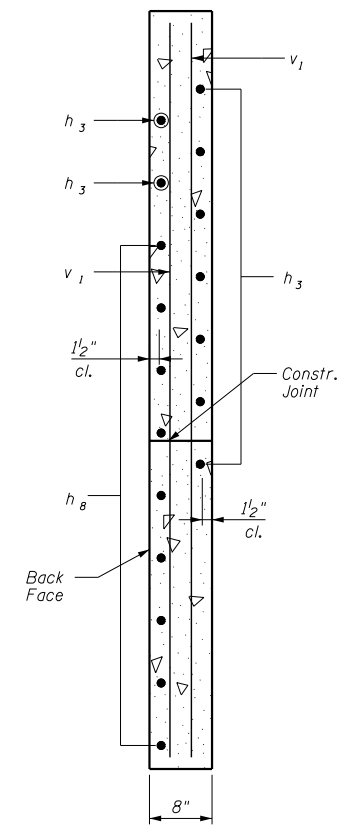


**SECTION THRU BARREL**



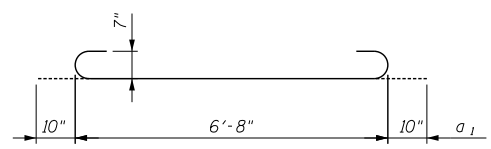
**SECTION B-B**

Expansion Bolt Locations  
Section Shown Without Skew

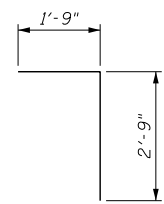


**SECTION A-A**

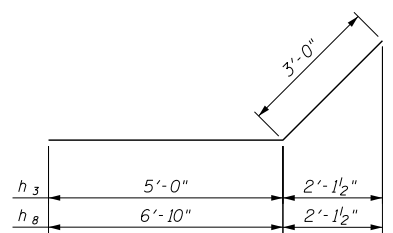
Wing Wall



**a BARS**



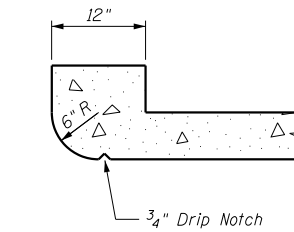
**d BAR**



**h BARS**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a <sub>1</sub>	52	7	8'-4"	
a <sub>2</sub>	9	4	6'-3"	
d	7	4	4'-6"	
h	8	6	15'-0"	
h <sub>1</sub>	14	4	15'-0"	
h <sub>2</sub>	8	5	15'-0"	
h <sub>3</sub>	18	4	8'-0"	
h <sub>4</sub>	6	6	6'-0"	
h <sub>8</sub>	18	4	9'-10"	
v	44	4	4'-11"	
v <sub>1</sub>	8	4	7'-10"	
<sup>3</sup> / <sub>4</sub> " Expansion Bolts			Each	16
Concrete Box Culverts			Cu. Yd.	10.4
Reinforcement Bars			Pound	1860
Granular Culvert Backfill			Cu. Yd.	4.1



**SECTION THRU HEADWALL**

(UPSTREAM END ONLY)

**BAR BEND DETAILS**