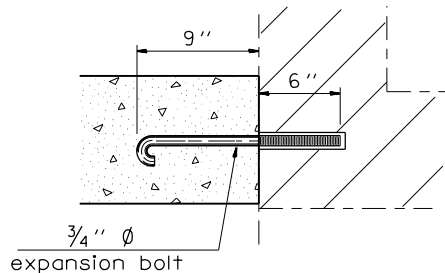


#5 U - bar



Expansion Bolt Detail

Notes:

- Expansion bolts shall consist of self drilling expansion shields and  $\frac{3}{4}$ "  $\emptyset$  hooked bolts. Hooked bolts shall extend a minimum of 9" into new concrete. Minimum Certified Proof Load - 2 ton
- Use minimum of 1 (one) expansion bolt at each corner.

Location	Station	Section Type	Skew	Collar		Reinforcement Bars											Expansion Bolts $\frac{3}{4}$ "	Concrete Collar		
				Existing Culvert Size	Proposed Culvert I.D.	O.D.	Height	Width	S bar				U bar			(lb)				
									No.	Size	Length	No.	Size	A	B				Lap	Length
IL 9	1226+35 (LT)	A	0°	2'x2'	30"	37"	49"	49"	-	-	-	4	#5	43"	30.5"	18	104"	36.2	8	0.34
IL 9	1226+35 (RT)	A	0°	2'x2'	30"	37"	49"	49"	-	-	-	4	#5	43"	30.5"	18	104"	36.2	8	0.34
IL 9	1246+50 (LT)	A	0°	2'x2'	30"	37"	49"	49"	-	-	-	4	#5	43"	30.5"	18	104"	36.2	8	0.34
IL 9	1246+50 (RT)	A	0°	2'x2'	30"	37"	49"	49"	-	-	-	4	#5	43"	30.5"	18	104"	36.2	8	0.34
IL 9	1187+65 (RT)	C	0°	30"	30"	37"	49"	49"	8	#5	18"	4	#5	43"	30.5"	18	104"	48.7	-	0.87