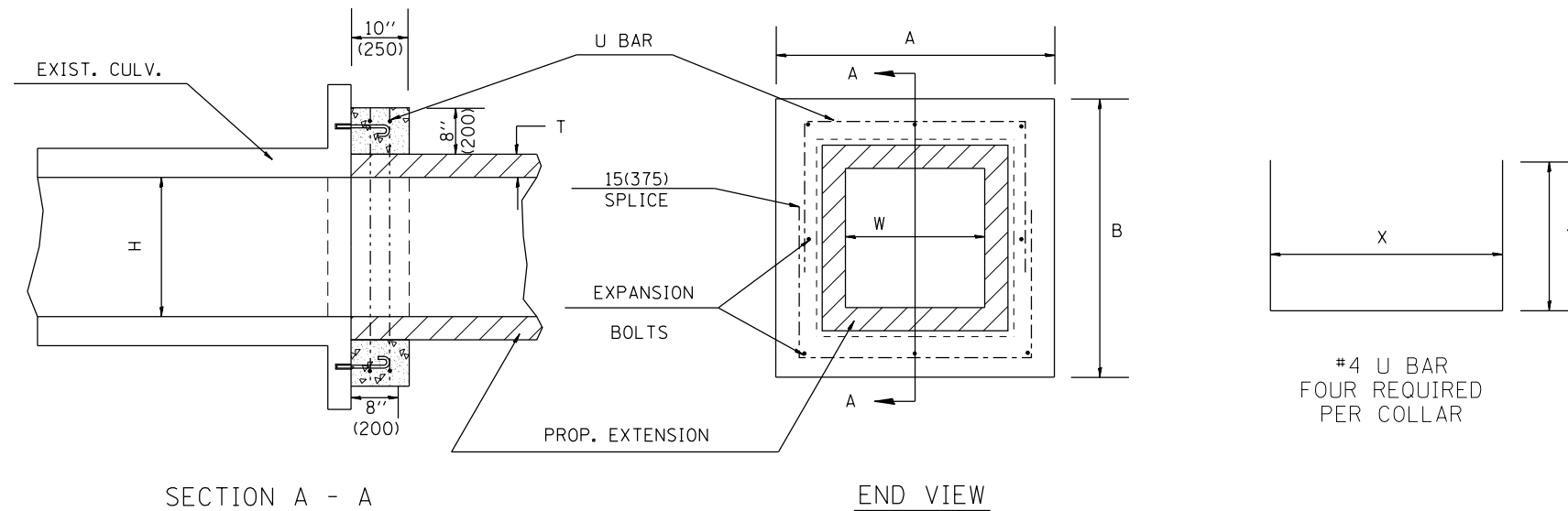


• MINIMUM 1' LAP ON U BARS



GENERAL NOTES

1. The collar shall be constructed entirely of class SI concrete and in accordance with the applicable portions of section 503 of the Standard Specifications. Reinforcement bars shall conform to section 508.
2. Expansion bolts shall consist of approved expansion anchors, and 3/4" (M20) hook bolts which conform to Section 1006.09. These bolts shall extend at least 8"(200) into the new concrete.
3. This work will be paid for by the cubic yard (cubic meter) for CONCRETE COLLAR, by the pound (kg) for REINFORCEMENT BARS, and by Each for EXPANSION BOLTS of the size indicated.

DIMENSIONS

EXISTING BOX		A	B	T	EACH COLLAR				
W ft (mm)	H ft (mm)				CL SI CU YD (m ³)	REINFORCEMENT BARS X Y POUNDS (kg)		EXPANSION BOLTS NO.	
2 (600)	2 (600)	4'-0" (1.22m)	4'-0" (1.22m)	4(100)	0.27(0.21)	3'-4" (1.02m)	27.5(698)	21 (9.5)	8
3 (900)	2 (600)	5'-0" (1.52m)	4'-0" (1.22m)	4(100)	0.32(0.24)	4'-4" (1.32m)	27.5(698)	24 (11)	8
3 (900)	2.5 (750)	5'-0" (1.52m)	4'-6" (1.37m)	4(100)	0.34(0.26)	4'-4" (1.32m)	30.5(774)	25 (11.5)	8
3 (900)	3 (900)	5'-0" (1.52m)	5'-0" (1.52m)	4(100)	0.36(0.28)	4'-4" (1.32m)	33.5(850)	26.5 (12)	8
3 (900)	4 (1200)	5'-2" (1.57m)	6'-2" (1.88m)	5(125)	0.41(0.31)	4'-6" (1.37m)	40.5(1.03m)	30 (13.5)	10
4 (1200)	3 (900)	6'-2" (1.88m)	5'-2" (1.57m)	5(125)	0.41(0.31)	5'-6" (1.68m)	34.5(876)	30 (13.5)	10
4 (1200)	4 (1200)	6'-2" (1.88m)	6'-2" (1.88m)	5(125)	0.45(0.34)	5'-6" (1.68m)	40.5(1.03m)	33 (15)	12
4 (1200)	5 (1500)	6'-4" (1.93m)	7'-4" (2.24m)	6(150)	0.51(0.39)	5'-8" (1.73m)	3'-11.5"(1.21m)	36 (16.5)	14
5 (1500)	4 (1200)	7'-4" (2.24m)	6'-4" (1.93m)	6(150)	0.51(0.39)	6'-8" (2.03m)	3'-5.5"(1.05m)	36 (16.5)	14
5 (1500)	5 (1500)	7'-4" (2.24m)	7'-4" (2.24m)	6(150)	0.55(0.42)	6'-8" (2.03m)	3'-11.5"(1.21m)	39 (17.5)	16
5 (1500)	6 (1800)	7'-6" (2.29m)	8'-6" (2.59m)	7(175)	0.60(0.46)	6'-10" (2.08m)	4'-6.5"(1.38m)	42.5 (19)	16
6 (1800)	4 (1200)	8'-6" (2.59m)	6'-6" (1.98m)	7(175)	0.56(0.43)	7'-10" (2.39m)	3'-6.5"(1.08m)	40 (18)	14
6 (1800)	5 (1500)	8'-6" (2.59m)	7'-6" (2.29m)	7(175)	0.60(0.46)	7'-10" (2.39m)	4'-0.5"(1.23m)	42.5 (19)	16
6 (1800)	6 (1800)	8'-6" (2.59m)	8'-6" (2.59m)	7(175)	0.64(0.49)	7'-10" (2.39m)	4'-6.5"(1.38m)	45 (20.5)	16
6 (1800)	8 (2400)	8'-8" (2.64m)	10'-8" (3.25m)	8(200)	0.74(0.57)	8'-0" (2.44m)	5'-7.5"(1.71m)	51.5 (23)	18
8 (2400)	8 (2400)	10'-8" (3.25m)	10'-8" (3.25m)	8(200)	0.82(0.63)	10'-0" (3.05m)	5'-7.5"(1.71m)	57 (26)	20

DESIGNER NOTES:
1. IF USING A COLLAR SIZE NOT PROVIDED IN THE TABLE USE THE BLANK ROWS AT THE BOTTOM OF THE TABLE.

QUANTITIES	
CALC. BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE, BUREAU OF PROJECT IMPLEMENTATION, DOCUMENTATION SECTION	

All dimensions are in inches (millimeters) unless otherwise noted.

01-01-97	RENUM. J-12.01, METRICS, NEW REVISION BOX, REVISED	T.P.			STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	COLLAR FOR BOX CULVERT EXTENSIONS	NOT TO SCALE	CADD STD. 540001-D4	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10-16-06	REV. TO 2007 SPEC., REINF. BARS COL.	M.A.							CONTRACT NO.				
2-15-11	ADDED GENERAL NOTE #3 & REVISED BAR LAP LENGTH	R.D.							FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				