



Note: Quantities for 50' Roadway include quantities for one pedestal. Grooved Const. Joints and pedestals shall be used when and where noted on summary sheet. In general Grooved Construction Joints and pedestals shall be placed as follows: 60' to 100' of barrel use 1 const. joint and pedestal, 100' to 140' of barrel use 2 const. joints and pedestals, 140' to 180' barrel, use 3 const. joints and pedestals. The Grooved Construction Joints and pedestals shall be constructed perpendicular to E of box.

All construction and materials requirements shall be in accordance with the current standard specifications.

GENERAL NOTES:
 All reinforcing steel shall be deformed round bars. The design and table are based upon net areas of bars. Area of $\frac{1}{2}$ " = 0.1963 sq. in., $\frac{3}{8}$ " = 0.3068 sq. in., $\frac{1}{2}$ " = 0.442 sq. in. Other sizes may be used provided they are spaced so as to give as much net sectional area per foot width of slab. Plans showing such changed sizes and spacing must be approved. When necessary, reinforcing bars shall be lapped 40 diameters. Total quantities for 50' Roadway include lap of 1-8" on C bars. Unless otherwise specified, all exposed concrete surfaces shall have a finish in accordance with the current standard specifications. All exposed concrete edges shall have a $\frac{1}{4}$ " chamfer.

DESIGN DATA Okla. Std. Spec. Design is sufficient for H20-516-53 and PPM 20-4 Loading.

OKLAHOMA DEPARTMENT OF TRANSPORTATION
 STANDARD CONCRETE BOX CULVERT SKEWED 45° SPANS 2 TO 10 FEET FOR FILLS 3 TO 10 FEET

DESIGN NO.	WATERWAY	BARREL OF CULVERT															TWO WINGS AND ONE APRON															TWO CURBS					TOTAL QUANTS.	QUANT'S IN ONE PEDESTAL	DESIGN NO.	
		DIMENSIONS					REINFORCING STEEL					DIMENSIONS					REINFORCING STEEL					QUANTS.																		
		T1	T2	V	P	Size and Spacing	A1	A2	B	C	H	K	M	N	W	X	Y	Z	D	Dr	E	F	F1	G	G1	G2	Steel Lbs.	Conc. Cu. Yd.	4 Cts. Length	Reinf. Steel Same Size as Bars A	Steel Lbs.	Conc. Cu. Yd.	4 Cts. Length	Reinf. Steel Same Size as Bars A						
1	2'-0"	6.0	6"	3'-0"	3'-0"	1/2" x 6"	2'-8"	4	3'-7" to 4'-1"	1'-7" to 2'-1"	1/2" x 9"	3'-8"	8	19.34	0.185	2'-10"	1'-5"	4'-0"	7'-9"	3'-10"	11'-9"	6'-8"	2'-10"	4	4'-4"	4	2'-1" to 3'-9"	4	109	1.82	7'-2"	4'-3"	31	0.50	.291	1,694	18.49	25	.167	1

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