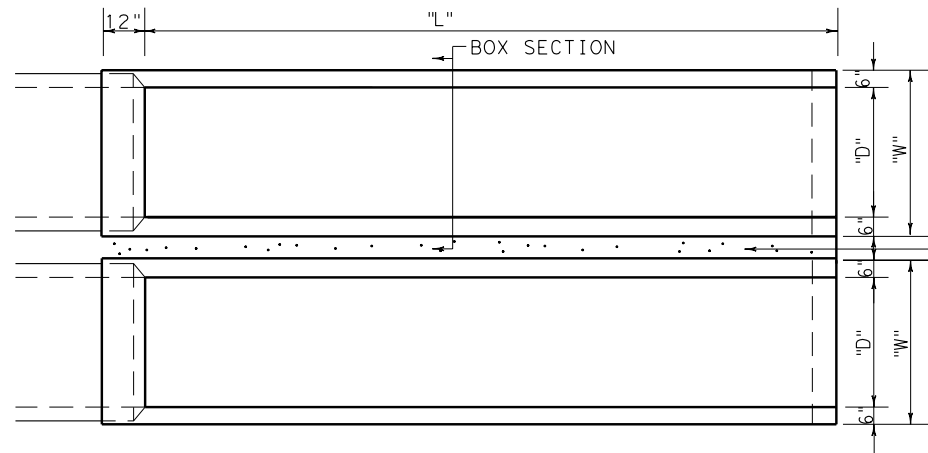


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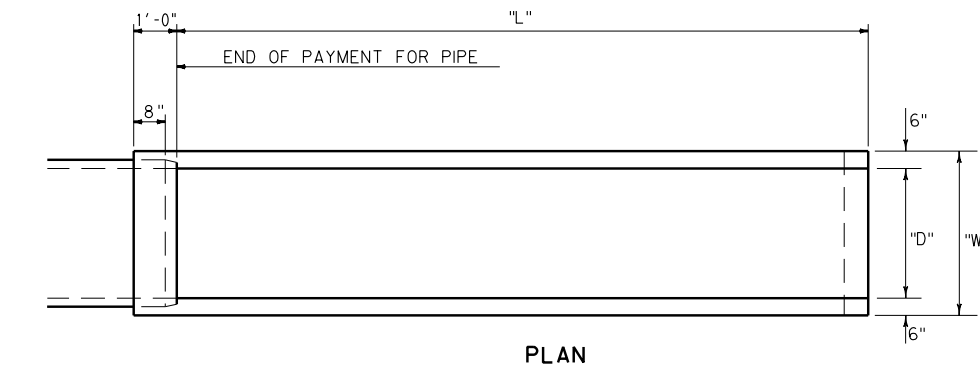
http://www.dot.state.tx.us/ftp/spec/info/standard.htm set1.dgn



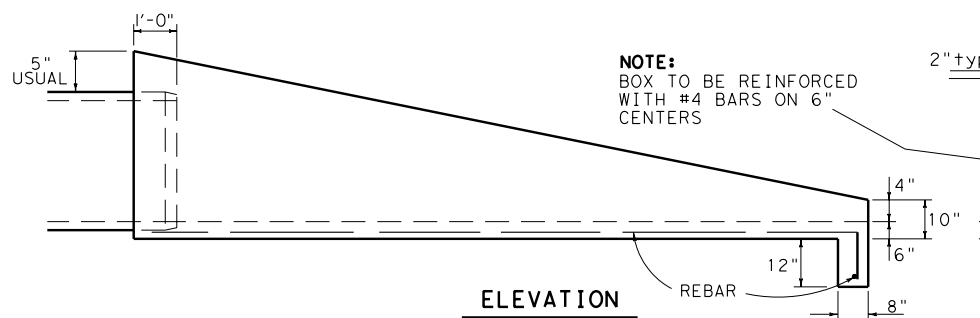
PLAN

5" CL. "B" MULTIPLE PIPES PLAN  
CONC. RIPRAP (CROSS DRAINAGE ONLY) \*

\* FOR MULTIPLE PIPES  
IN PARALLEL DRAINAGE  
APPLICATIONS, USE  
STANDARD SET (3) (FW).

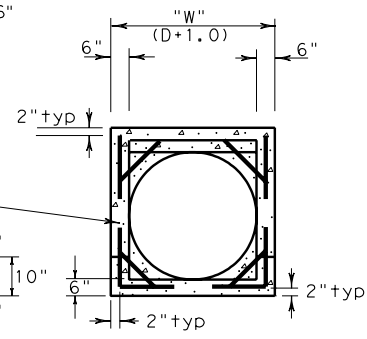


PLAN



ELEVATION

NOTE:  
BOX TO BE REINFORCED  
WITH #4 BARS ON 6"  
CENTERS



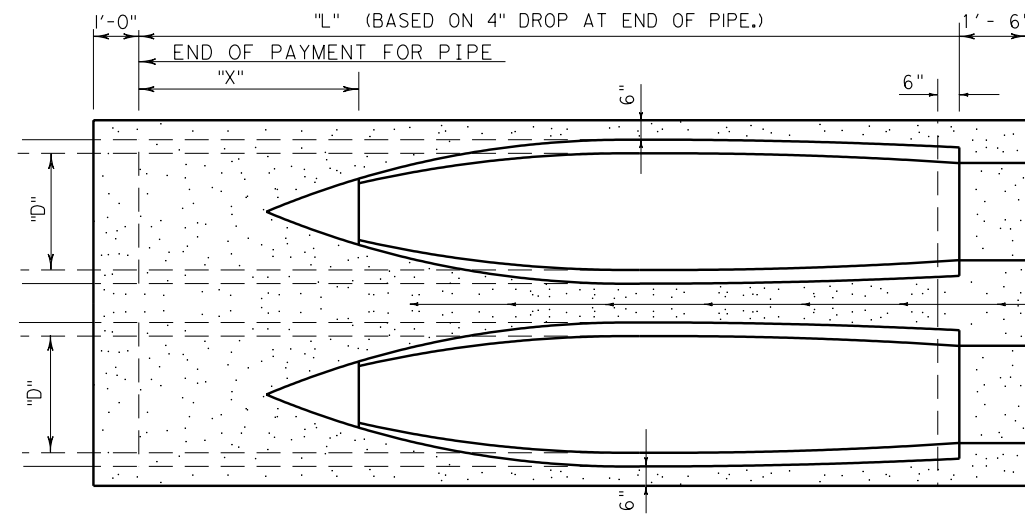
SECTION

OPTION TWO

SLOPED CLASS "A" CONCRETE BOX

"D"	SLOPE	"L"	"W"	CL. A CONC (CY)	5" CL. B CONC RIPRAP (CY)
18"	3:1	4'-4 1/2"	2'-6"	0.56 (N)	0.01 (N-1)
18"	4:1	6'-2"	2'-6"	0.72 (N)	0.02 (N-1)
18"	6:1	9'-9"	2'-6"	1.06 (N)	0.03 (N-1)
18"	8:1	13'-4"	2'-6"	1.39 (N)	0.04 (N-1)
21"	3:1	5'-2 1/4"	2'-9"	0.70 (N)	0.03 (N-1)
21"	4:1	7'-3"	2'-9"	0.91 (N)	0.04 (N-1)
21"	6:1	11'-4 1/4"	2'-9"	1.33 (N)	0.06 (N-1)
21"	8:1	15'-6"	2'-9"	1.75 (N)	0.07 (N-1)
24"	3:1	6'-0"	3'-0"	0.86 (N)	0.05 (N-1)
24"	4:1	8'-4"	3'-0"	1.12 (N)	0.06 (N-1)
24"	6:1	13'-0"	3'-0"	1.64 (N)	0.09 (N-1)
24"	8:1	17'-8"	3'-0"	2.16 (N)	0.12 (N-1)
27"	3:1	6'-9 3/4"	3'-3"	1.03 (N)	0.07 (N-1)
27"	4:1	9'-5"	3'-3"	1.35 (N)	0.09 (N-1)
27"	6:1	14'-7 1/2"	3'-3"	1.98 (N)	0.13 (N-1)
27"	8:1	19'-10"	3'-3"	2.61 (N)	0.18 (N-1)
30"	3:1	7'-7 1/2"	3'-6"	1.22 (N)	0.09 (N-1)
30"	4:1	10'-6"	3'-6"	1.59 (N)	0.12 (N-1)
30"	6:1	16'-3"	3'-6"	2.35 (N)	0.18 (N-1)
30"	8:1	22'-0"	3'-6"	3.10 (N)	0.24 (N-1)

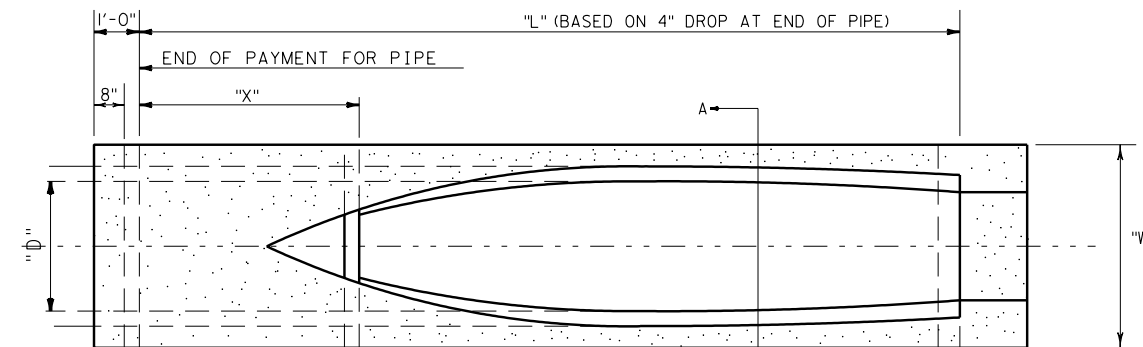
NOTE: "N" = # OF PIPES.  
CONCRETE QUANTITIES ARE  
SHOWN FOR CONTRACTOR'S  
INFORMATION ONLY.



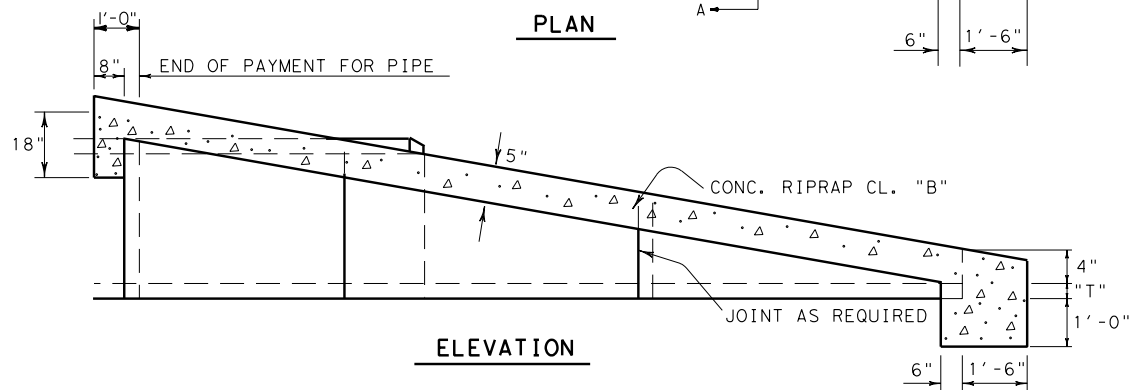
PLAN

MULTIPLE PIPES PLAN  
(CROSS DRAINAGE ONLY) \*

\* FOR MULTIPLE PIPES  
IN PARALLEL DRAINAGE  
APPLICATIONS, USE  
STANDARD SET (3) (FW).

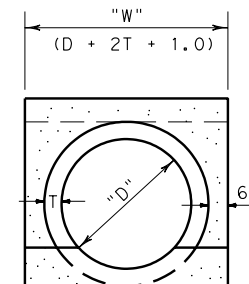


PLAN



ELEVATION

SLOPED REINFORCED CONCRETE PIPE



A-A

OPTION ONE

"D"	SLOPE	"T"	"L"	"X"	1 PIPE		2 PIPES		MULTIPLE PIPES N = # OF PIPES	
					"W"	RIPRAP	"W"	RIPRAP	"W" (INCHES)	RIPRAP (CY)
18"	3:1	2 1/2"	5'-1 1/4"	1'-7 1/4"	2'-11"	0.48 CY	5'-7"	0.91 CY	32 (N) + 3	0.0532+0.430 (N)
18"	4:1	2 1/2"	6'-10 1/2"	2'-2 1/2"	2'-11"	0.54 CY	5'-7"	1.01 CY	32 (N) + 3	0.0608+0.475 (N)
18"	6:1	2 1/2"	10'-5 1/2"	3'-5 1/2"	2'-11"	0.64 CY	5'-7"	1.20 CY	32 (N) + 3	0.0754+0.560 (N)
18"	8:1	2 1/2"	14'-0 1/4"	4'-8 1/4"	2'-11"	0.73 CY	5'-7"	1.37 CY	32 (N) + 3	0.0895+0.642 (N)
21"	3:1	2 3/4"	5'-11"	1'-8"	3'-2 1/2"	0.55 CY	6'-3"	1.06 CY	36.5 (N) + 2	0.0379+0.510 (N)
21"	4:1	2 3/4"	7'-11 1/2"	2'-3 1/2"	3'-2 1/2"	0.61 CY	6'-3"	1.17 CY	36.5 (N) + 2	0.0436+0.566 (N)
21"	6:1	2 3/4"	12'-1"	3'-7"	3'-2 1/2"	0.73 CY	6'-3"	1.40 CY	36.5 (N) + 2	0.0546+0.671 (N)
21"	8:1	2 3/4"	16'-2 1/4"	4'-10 1/4"	3'-2 1/2"	0.84 CY	6'-3"	1.61 CY	36.5 (N) + 2	0.0655+0.773 (N)
24"	3:1	3"	6'-8 3/4"	1'-8 3/4"	3'-6"	0.61 CY	6'-11"	1.21 CY	41 (N) + 1	0.0201+0.594 (N)
24"	4:1	3"	9'-0 1/2"	2'-4 1/2"	3'-6"	0.68 CY	6'-11"	1.35 CY	41 (N) + 1	0.0233+0.661 (N)
24"	6:1	3"	13'-8 1/2"	3'-8 1/2"	3'-6"	0.82 CY	6'-11"	1.61 CY	41 (N) + 1	0.0295+0.790 (N)
24"	8:1	3"	18'-4 1/4"	5'-0 1/2"	3'-6"	0.95 CY	6'-11"	1.87 CY	41 (N) + 1	0.0356+0.915 (N)
27"	3:1	3 1/4"	7'-9 1/2"	1'-9 1/2"	3'-9 1/2"	0.68 CY	7'-7"	1.36 CY	45.5 (N)	0.682 (N)
27"	4:1	3 1/4"	10'-1 1/2"	2'-5 1/2"	3'-9 1/2"	0.76 CY	7'-7"	1.53 CY	45.5 (N)	0.763 (N)
27"	6:1	3 1/4"	15'-4"	3'-10"	3'-9 1/2"	0.92 CY	7'-7"	1.83 CY	45.5 (N)	0.917 (N)
27"	8:1	3 1/4"	20'-8 1/4"	5'-2 1/4"	3'-9 1/2"	1.07 CY	7'-7"	2.13 CY	45.5 (N)	1.066 (N)
30"	3:1	3 1/2"	8'-4 1/4"	1'-10 1/4"	4'-1"	0.75 CY	8'-3"	1.53 CY	50 (N) - 1	-0.022+0.775 (N)
30"	4:1	3 1/2"	11'-2 1/2"	2'-6 1/2"	4'-1"	0.84 CY	8'-3"	1.71 CY	50 (N) - 1	-0.026+0.870 (N)
30"	6:1	3 1/2"	16'-11 1/2"	3'-11 1/2"	4'-1"	1.02 CY	8'-3"	2.07 CY	50 (N) - 1	-0.033+1.051 (N)
30"	8:1	3 1/2"	22'-8 1/4"	5'-4 1/4"	4'-1"	1.19 CY	8'-3"	2.41 CY	50 (N) - 1	-0.041+1.228 (N)

NOTE: CONCRETE QUANTITIES ARE  
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TYPE II  
SAFETY END TREATMENT  
-CROSS OR PARALLEL DRAINAGE-  
18" TO 30" PIPES  
SET (1) (FW)

REVISED - JULY 1983 - J. B. C.  
REVISED - AUG. 1984 - H. G. O.  
REVISED - APR. 1985 - R. O. N.  
REVISED - OCT. 1986 - L. J. M.  
REVISED - FEB. 1987 - J. A. T.  
REVISED - NOV. 1991 - M. J. N.  
REVISED - FEB. 1994 - E. R. F.

DRAWN	FED. NO. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
CHECKED	6	TEXAS		
TRACED	STATE DIST. NO.	COUNTY	CONTROL NO.	SECTION NO.
CHECKED	FORT WORTH			JOB NO. HIGHWAY NO.

LEVELS DISPLAYED	6
1	
2	
3	
4	
5	
6	