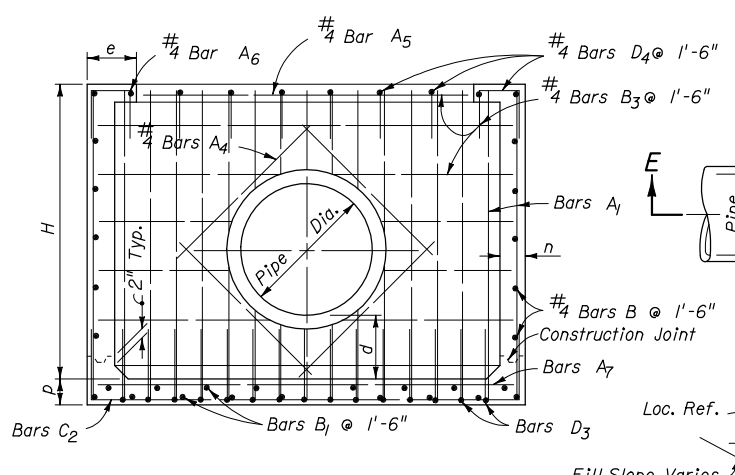
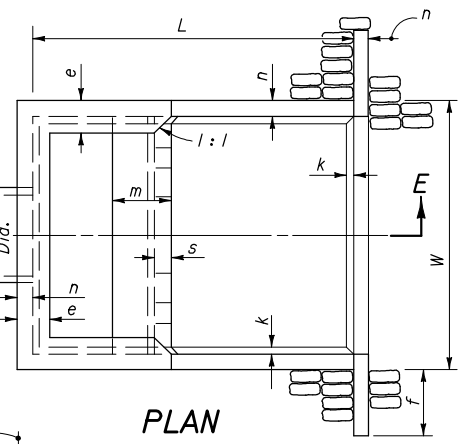


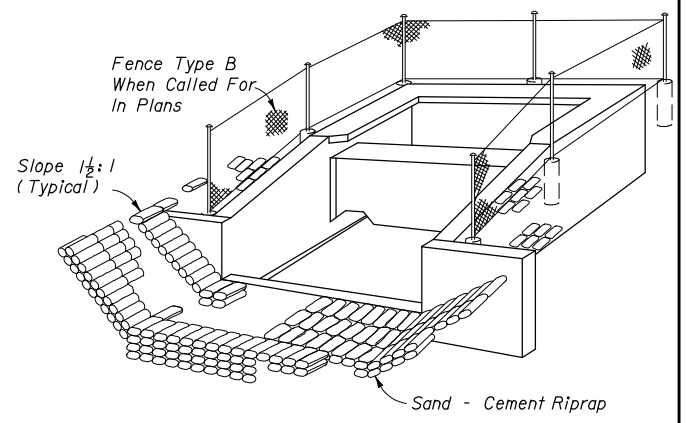
PLAN



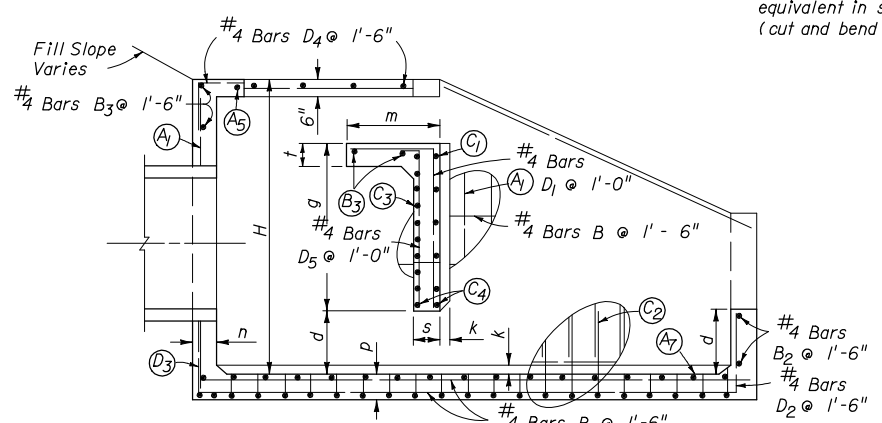
SECTION CC



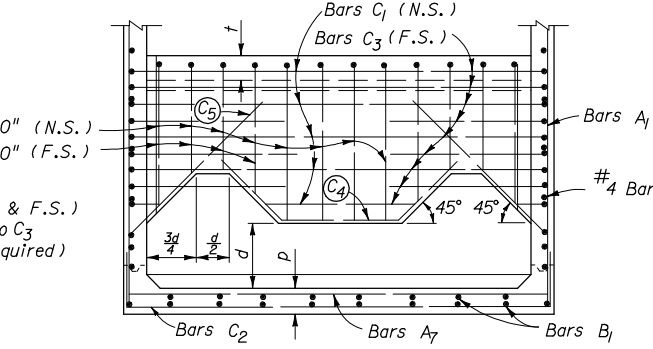
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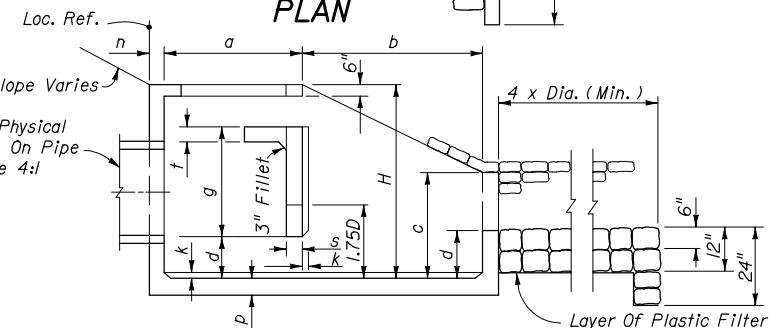
PERSPECTIVE



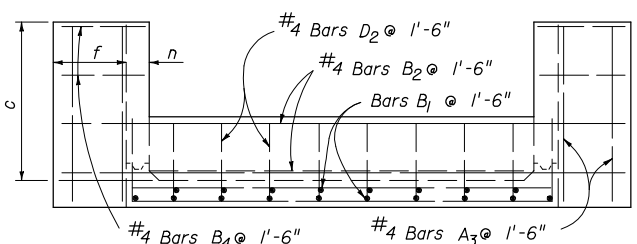
SECTION BB



SECTION DD



SECTION EE



VIEW AA

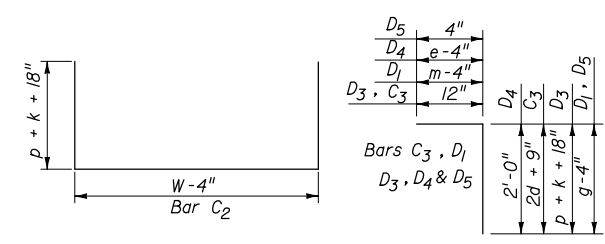
Note: Bars C4 & C5 (N.S. & F.S.) equivalent in size to C3 (cut and bend as required)

Pipe Size Dia. In.	Area S.F.	Q (Max.) (cfs)	Dimensions															Concrete Class I C.Y.	Reinf. Steel Lbs.	Sand Cement Riprap C.Y. (Nom.)	
			Ft. - In.																		
			W	H	L	a	b	c	d	e	f	g	m	n	p	s	t				k
30	4.91	59	9-0	6-3	10-8	4-7	6-1	3-4	1-4	1-2	2-6	3-0	1-11	6	6 1/2	7	7	3	6.72	736	10.6
36	7.07	85	10-5	7-3	12-4	5-3	7-1	3-10	1-7	1-3	3-0	3-6	2-3	7	7 1/2	8	8	3	10.34	1,072	13.6
42	9.62	115	11-10	8-0	14-0	6-0	8-0	4-5	1-9	1-6	3-0	3-11	2-6	8	8 1/2	9	8	4	14.82	1,429	17.5
48	12.57	151	13-3	9-0	15-8	6-9	8-11	4-11	2-0	1-7	3-0	4-5	2-10	9	9 1/2	10	8	4	20.36	2,000	22.1
54	15.90	191	14-8	9-9	17-4	7-4	10-0	5-5	2-2	1-10	3-0	4-11	3-0	10	10 1/2	10	8	4	27.19	2,659	27.2
60	13.63	236	16-1	10-9	19-0	8-0	11-0	5-11	2-5	1-11	3-0	5-4	3-4	11	11 1/2	11	8	6	34.49	3,552	32.5
66	23.76	285	17-3	11-6	20-6	8-8	11-10	6-5	2-7	2-1	3-0	5-9	3-7	12	12 1/2	12	8	6	42.82	4,472	38.3
72	28.27	339	18-6	12-3	22-0	9-3	12-9	6-11	2-9	2-3	3-0	6-2	3-9	12	12 1/2	12	8	6	50.68	5,426	44.5

GENERAL NOTES

- U-type concrete endwall energy dissipators are intended for use outside the clear zone.
- Chamfer all exposed edges 3/4".
- Concrete meeting the requirements of ASTM C478 (4000 psi) may be used in lieu of Class I Concrete in precast items manufactured in plants which are under the Standard Operating Procedures for the inspection of precast drainage products.
- Reinforcing steel shall have 2" min. cover.
- Endwall to be paid for under the contract unit price for Class I Concrete (Endwalls), CY and Reinforcing Steel (Roadway), LB. Riprap to be paid for under the contract unit price for Riprap (Sand-Cement) (Roadway), CY. Cost of plastic filter fabric to be included in the contract unit price for riprap.
- Fencing, when called for in the plans, to be paid for under the contract unit price for Fencing, Type B, LF. See Index No. 802 for details of Type B fencing.

Pipe Size	A1		A7		C1		C2		C3		D3	
	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)	Size (No.)	Spacing (Ft.-In.)
30"	4	0-9 1/2	4	1-6	5	0-11	4	0-9 1/2	5	0-5 1/2	4	0-9 1/2
36"	5	1-0	4	1-6	5	0-10	5	1-0	5	0-5	5	1-0
42"	5	0-11	4	1-6	6	1-1	5	0-11	6	0-6 1/2	5	0-11
48"	5	0-9 1/2	4	1-0	6	1-0	5	0-9 1/2	6	0-6	5	0-9 1/2
54"	5	0-8 1/2	4	0-10	7	1-1	5	0-8 1/2	7	0-6 1/2	5	0-8 1/2
60"	6	0-10	5	1-1	7	1-0	6	0-10	7	0-6	6	0-10
66"	6	0-8 1/2	5	0-11 1/2	7	0-11	6	0-8 1/2	7	0-5 1/2	6	0-8 1/2
72"	6	0-7 1/2	5	0-10	7	0-10	6	0-7 1/2	7	0-5	6	0-7 1/2



Note: All bar dimensions are out to out.

BENDING DIAGRAM