

SECTION ON CENTERLINE

ELEVATION

NOTE: STEEL QUANTITIES ARE FOR CONCRETE HEADWALLS ONLY.

DIAMETER D INCHES	MASONRY PER FOOT OF WALL CU. YD.	MASONRY PER STANDARD HEADER CU. YD.	STEEL PER STANDARD HEADER LB.	LENGTH OF BARS	EXC. FOR 1' DEPTH CU. YD.	HEADER LENGTH L	HEADER HEIGHT H	FILL HEIGHT FH	WIDTH AT BOTTOM OF HEADER W	"L" HEADWALL	
										MASONRY IN CORNER FRUSTUM CU. YD.	EXC. FOR 1' DEPTH CU. YD.
12	0.186	0.61	9	3'-2"	0.789	3'-6"	3'-6"	0'-10"	0'-10 1/2"	0.28	1.057
15	0.202	0.85	11	3-10	0.947	4-6	3-9	1-1	1-11 1/4	0.31	1.232
18	0.222	1.13	14	5-2	1.111	5-6	4-0	1-4	2-0	0.35	1.406
24	0.260	1.78	20	7-2	1.451	7-6	4-6	1-10	2-1 1/2	0.42	1.776
30	0.301	2.58	25	9-2	1.810	9-6	5-0	2-4	2-3	0.51	2.164
36	0.344	3.53	31	11-2	2.187	11-6	5-6	2-10	2-4 1/2	0.61	2.572
42	0.389	4.65	36	13-2	2.581	13-6	6-0	3-4	2-6	0.72	3.000
48	0.436	5.95	42	15-2	3.000	15-6	6-6	3-10	2-7 1/2	0.84	3.447
54	0.486	7.44	47	17-2	3.432	17-6	7-0	4-4	2-9	0.98	3.914
60	0.538	9.13	52	19-2	3.882	19-6	7-6	4-10	2-10 1/2	1.12	4.401
66	0.593	11.04	58	21-2	4.350	21-6	8-0	5-4	3-0	1.28	4.907
72	0.649	13.17	63	23'-2"	4.638	23'-6"	8'-6"	5'-10"	3'-1 1/2"	1.46	5.433

NOTE: FOR PLAN OF "L" HEADWALL SEE PLATE NO. 1 OF STD. NO. HW-2

NHDOT STANDARD PLANS			REV. DATE	PLATE
HEADWALLS FOR PIPES OTHER THAN R.C.: CONCRETE	P.C.-1	06-16-2010	1	STANDARD HW-1
MORTAR RUBBLE MASONRY	P.C.-2			

DIMENSIONS SHOWN ARE TO PAYMENT LINES. MORTAR RUBBLE MASONRY TO BE STEPPED OUTSIDE PAYMENT LINES ON SLOPING FACES.

2:1 SLOPE

DIAMETER D INCHES	QUANTITIES PER HEADER		DIMENSIONS										
	M.R.M. CU. YD.	EXC. FOR 1' DEPTH CU. YD.	A	B	C	E	F	G	H	I	J	K	
24	2.45	1.89	2'-6"	5'-4"	2'-3"	2'-11"	1'-11"	0'-6"	5'-0"	4'-6"	3'-10"	1'-6"	
30	3.19	2.28	3-1	5-11	2-5	3-6	2-0	0-5	5-6	5-0	4-1	1-6	
36	4.03	2.57	3-8	6-6	2-6	4-1	2-1	0-4	6-0	5-6	4-4	1-6	
42	5.50	3.09	4-3	7-1	2-8	5-0	2-2	0-3	6-9	6-3	4-10	1-9	
48	6.68	3.53	4-10	7-8	2-10	5-8	2-3	0-2	7-3	6-9	5-1	1-9	
54	7.92	3.95	5-5	8-3	2-11	6-3	2-4	0-1	7-9	7-3	5-4	1-9	
60	9.39	4.40	6-0	8-10	3-1	6-10	2-5	0-1	8-3	7-9	5-8	1-9	
66	10.90	4.81	6-7	9-5	3-2	7-5	2-6	0-0	8-9	8-3	5-11	1-9	
72	12.66	5.22	7'-2"	10'-0"	3'-4"	8'-1"	2'-7"	0'-1"	9'-3"	8'-9"	6'-3"	1'-9"	

3:1 SLOPE

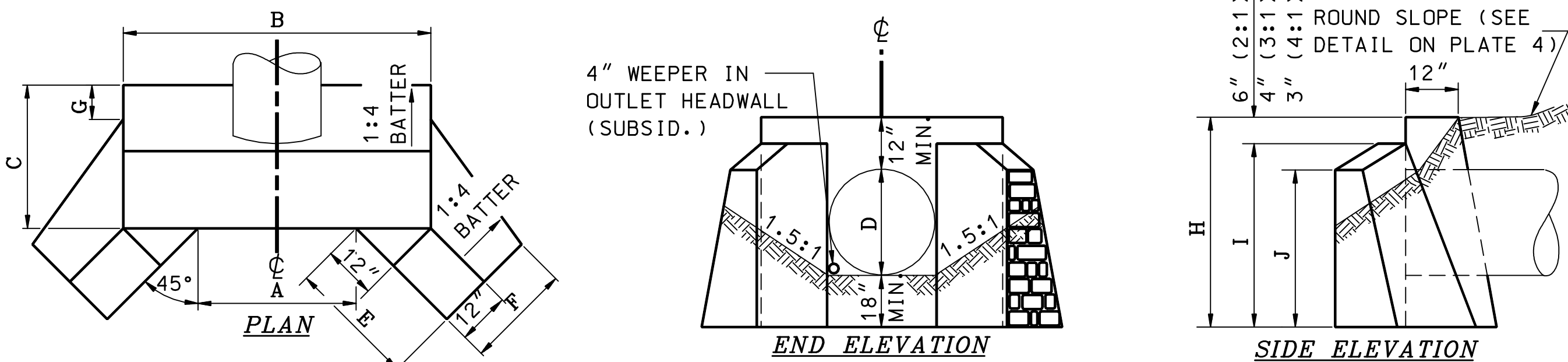
DIAMETER D INCHES	QUANTITIES PER HEADER		DIMENSIONS										
	M.R.M. CU. YD.	EXC. FOR 1' DEPTH CU. YD.	A	B	C	E	F	G	H	I	J	K	
24	2.81	2.09	2'-6"	5'-4"	2'-3"	3'-6"	2'-0"	0'-6"	5'-0"	4'-8"	4'-1"	1'-6"	
30	3.73	2.51	3-1	5-11	2-5	4-3	2-1	0-6	5-6	5-2	4-5	1-6	
36	4.69	2.90	3-8	6-6	2-6	4-11	2-2	0-4	6-0	5-8	4-9	1-6	
42	6.47	3.46	4-3	7-1	2-8	6-0	2-4	0-3	6-9	6-5	5-3	1-9	
48	7.85	3.93	4-10	7-8	2-10	6-8	2-5	0-3	7-3	6-11	5-7	1-9	
54	9.37	4.37	5-5	8-3	2-11	7-5	2-6	0-2	7-9	7-5	5-11	1-9	
60	11.10	4.85	6-0	8-10	3-1	8-1	2-7	0-1	8-3	7-11	6-3	1-9	
66	12.95	5.36	6-7	9-5	3-2	8-10	2-8	0-0	8-9	8-5	6-7	1-9	
72	15.03	5.86	7'-2"	10'-0"	3'-4"	9'-6"	2'-9"	0'-0"	9'-3"	8'-11"	6'-11"	1'-9"	

4:1 SLOPE

DIAMETER D INCHES	QUANTITIES PER HEADER		DIMENSIONS										
	M.R.M. CU. YD.	EXC. FOR 1' DEPTH CU. YD.	A	B	C	E	F	G	H	I	J	K	
24	3.05	2.21	2'-6"	5'-4"	2'-3"	3'-10"	2'-1"	0'-6"	5'-0"	4'-9"	4'-3"	1'-6"	
30	4.02	2.62	3-1	5-11	2-5	4-7	2-2	0-6	5-6	5-3	4-7	1-6	
36	5.10	3.03	3-8	6-6	2-6	5-4	2-3	0-4	6-0	5-9	5-0	1-6	
42	7.03	3.65	4-3	7-1	2-8	6-6	2-5	0-3	6-9	6-6	5-6	1-9	
48	8.60	4.14	4-10	7-8	2-10	7-3	2-6	0-3	7-3	7-0	5-11	1-9	
54	10.28	4.62	5-5	8-3	2-11	8-1	2-7	0-2	7-9	7-6	6-3	1-9	
60	12.18	5.16	6-0	8-10	3-1	8-10	2-8	0-1	8-3	8-0	6-7	1-9	
66	14.24	5.67	6-7	9-5	3-2	9-7	2-9	0-1	8-9	8-6	7-0	1-9	
72	16.54	6.21	7'-2"	10'-0"	3'-4"	10'-5"	2'-10"	0'-0"	9'-3"	9'-0"	7'-4"	1'-9"	

NHDOT STANDARD PLANS

NHDOT STANDARD PLANS			REV. DATE	PLATE
MORTAR RUBBLE MASONRY HEADWALLS WITH 45° WINGS FOR R.C. PIPE	P.C.-8	06-16-2010	2	STANDARD HW-1



2:1 SLOPE

DIAMETER D INCHES	QUANTITIES PER HEADER		DIMENSIONS									
	M.R.M. CU. YD.	EXC. FOR 1' DEPTH CU. YD.	A	B	C	E	F	G	H	I	J	
24	1.89	1.65	2'-3"	5'-1"	2'-2"	2'-4"	1'-11"	0'-7"	4'-6"	4'-0"	3'-6"	
30	2.54	1.94	2-9	5-7	2-3	2-11	1-11	0-6	5-0	4-6	3-10	
36	3.31	2.29	3-3	6-1	2-5	3-7	2-0	0-6	5-6	5-0	4-1	
42	4.17	2.63	3-9	6-7	2-6	4-2	2-1	0-5	6-0	5-6	4-5	
48	5.33	3.00	4-4	7-2	2-8	4-9	2-2	0-4	6-6	6-0	4-8	
60	7.63	3.76	5-4	8-2	2-11	6-0	2-4	0-2	7-6	7-0	5-3	
72	10.59	4.60	6'-5"	9'-3"	3'-2"	7'-2"	2'-5"	0'-1"	8'-6"	8'-0"	5'-10"	

3:1 SLOPE

DIAMETER D INCHES	QUANTITIES PER HEADER		DIMENSIONS									
	M.R.M. CU. YD.	EXC. FOR 1' DEPTH CU. YD.	A	B	C	E	F	G	H	I	J	
24	2.18	1.79	2'-3"	5'-1"	2'-2"	2'-10"	1'-11"	0'-7"	4'-6"	4'-2"	3'-9"	
30	2.94	2.18	2-9	5-7	2-3	3-7	2-0	0-6	5-0	4-8	4-1	
36	3.81	2.55	3-3	6-1	2-5	4-3	2-1	0-6	5-6	5-2	4-5	
42	4.86	2.93	3-9	6-7	2-6	5-0	2-2	0-4	6-0	5-8	4-9	
48	6.04	3.36	4-4	7-2	2-8	5-8	2-3	0-4	6-6	6-2	5-1	
60	8.90	4.24	5-4	8-2	2-11	7-1	2-5	0-3	7-6	7-2	5-9	
72	12.46	5.13	6'-5"	9'-3"	3'-2"	8'-6"	2'-7"	0'-1"	8'-6"	8'-2"	6'-5"	

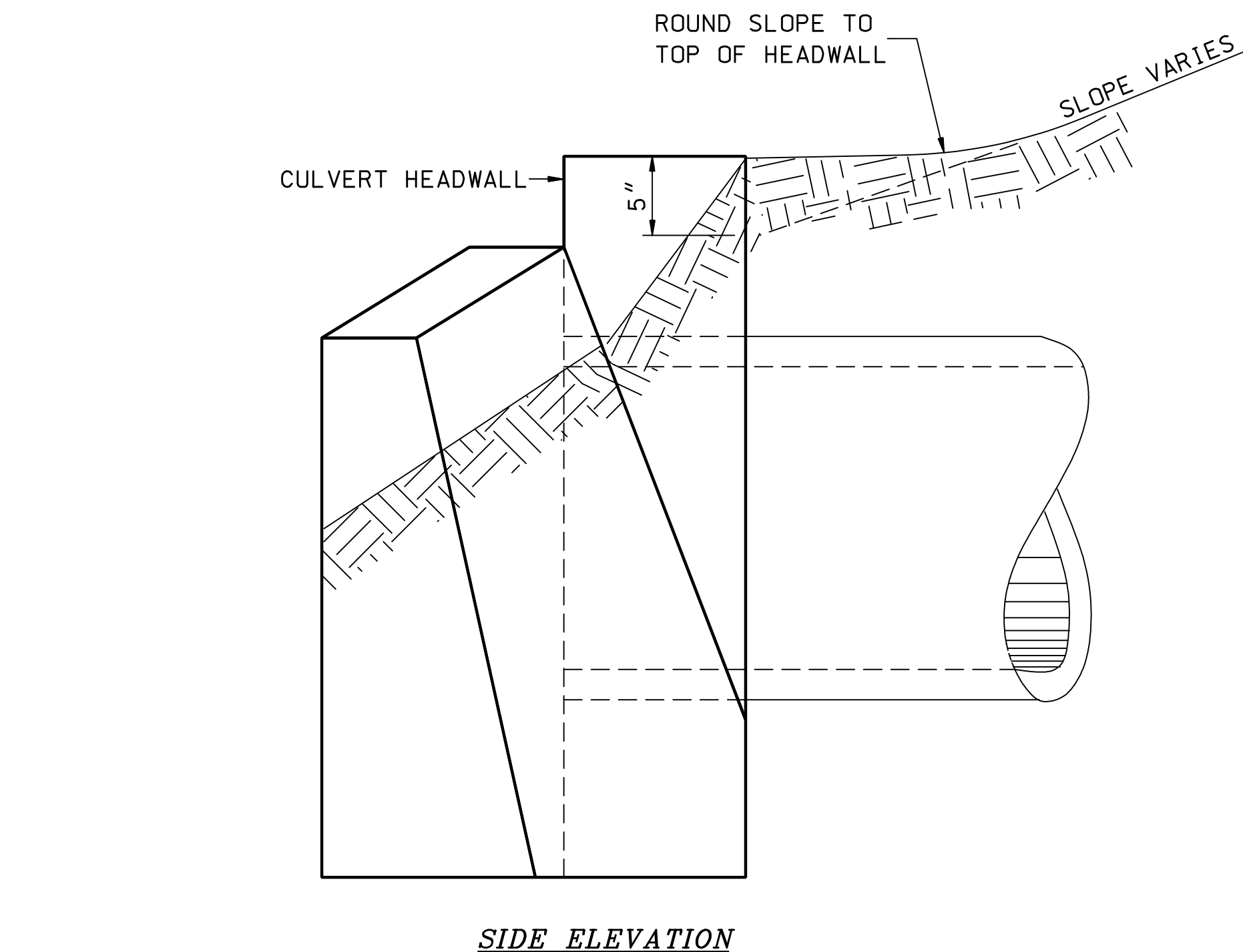
4:1 SLOPE

DIAMETER D INCHES	QUANTITIES PER HEADER		DIMENSIONS									
	M.R.M. CU. YD.	EXC. FOR 1' DEPTH CU. YD.	A	B	C	E	F	G	H	I	J	
24	2.36	1.91	2'-3"	5'-1"	2'-2"	3'-2"	2'-0"	0'-7"	4'-6"	4'-3"	3'-10"	
30	3.18	2.27	2-9	5-7	2-3	3-11	2-1	0-6	5-0	4-9	4-3	
36	4.18	2.67	3-3	6-1	2-5	4-8	2-2	0-6	5-6	5-3	4-7	
42	5.28	3.08	3-9	6-7	2-6	5-6	2-3	0-4	6-0	5-9	5-0	
48	6.65	3.55	4-4	7-2	2-8	6-3	2-4	0-4	6-6	6-3	5-4	
60	9.78	4.46	5-4	8-2	2-11	7-9	2-6	0-3	7-6	7-3	6-1	
72	14.81	5.86	6'-5"	9'-3"	3'-2"	9'-4"	2'-8"	0'-1"	8'-6"	8'-3"	6'-9"	

DIMENSIONS SHOWN ARE TO PAYMENT LINES. MORTAR RUBBLE MASONRY TO BE STEPPED OUTSIDE PAYMENT LINES ON SLOPING FACES.

NHDOT STANDARD PLANS

NHDOT STANDARD PLANS			REV. DATE	PLATE
MORTAR RUBBLE MASONRY HEADWALLS WITH 45° WINGS FOR PIPES OTHER THAN R.C.	P.C.-6	06-16-2010	3	STANDARD HW-1



SIDE ELEVATION

NHDOT STANDARD PLANS

NHDOT STANDARD PLANS			REV. DATE	PLATE
SLOPE ROUNDING AT TOP OF CULVERT HEADWALL		06-16-2010	4	STANDARD HW-1

STANDARD NO. HW-1

REVISION DATE	07-13-2001
	06-16-2010
DGN FILE NAME	HW-1

STANDARD PLANS