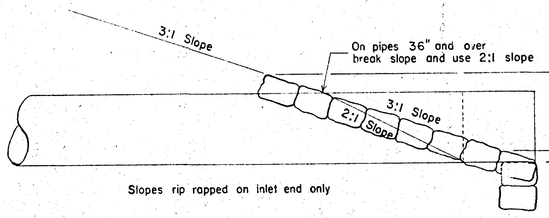
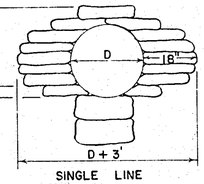
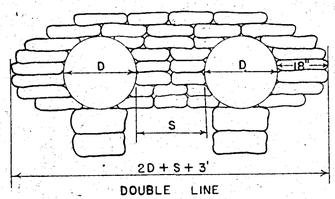
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	STATE AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	GA.					

STRAIGHT END WALL TYPE 1

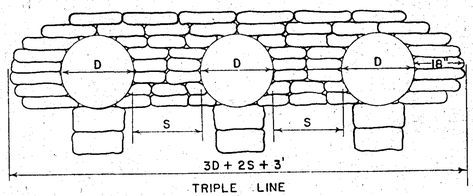




SINGLE LINE

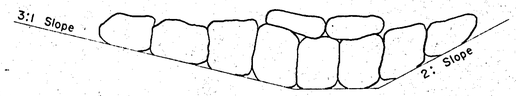


DOUBLE LINE

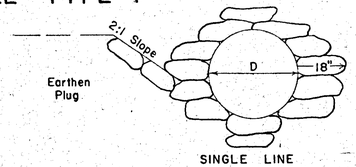


TRIPLE LINE

"L" TYPE END WALL TYPE 1



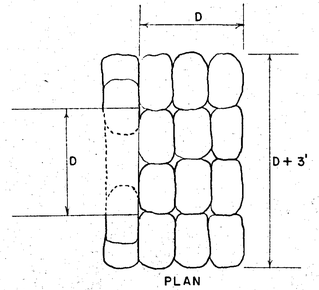
DITCH SECTION



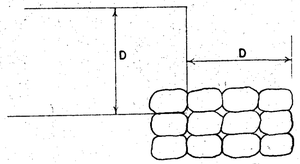
SINGLE LINE

Note: $S = \frac{1}{2}D$ with minimum value of 2' - 0"

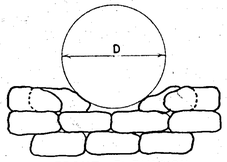
APRON FOR OUTLET END



PLAN

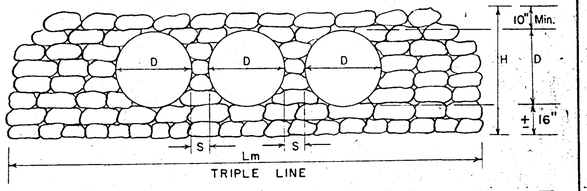


SIDE ELEVATION

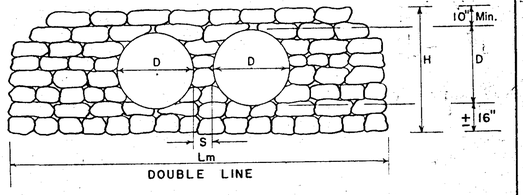


FRONT ELEVATION

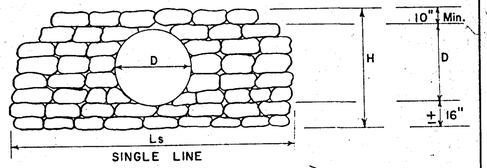
STRAIGHT END WALL TYPE 2



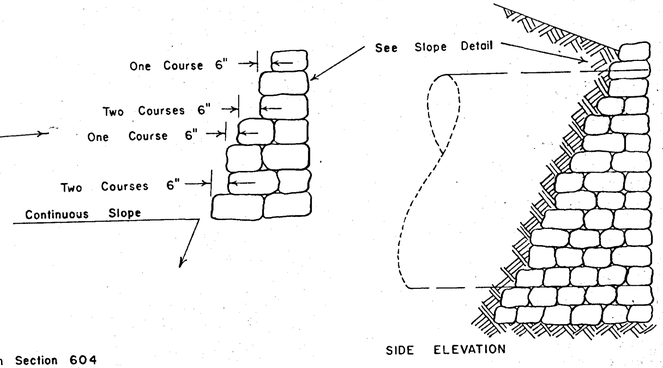
TRIPLE LINE



DOUBLE LINE



SINGLE LINE



SLOPE DETAIL

In general, end walls will be constructed with slopes formed by bag placement sequence as shown.

SIDE ELEVATION

		TYPE 1				TYPE 2					APRON AT OUTLET	
		STRAIGHT END WALL		"L" TYPE END WALL		STRAIGHT END WALL						
		QUANTITIES — ONE WALL		QUANTITIES — ONE WALL		QUANTITIES — ONE WALL						
Diameter of Pipe	Area Opening	Sand Cement Bag Rip Rap	Additional Rip Rap for Each Additional Pipe	Sand Cement Bag Rip Rap	Additional Rip Rap for Each Additional Pipe	Ls Length in Feet and Inches	H Height in Feet and Inches	H Height in Bag Courses No.	Sand Cement Bag Rip Rap	Additional Rip Rap for Each Additional Pipe	Normal Sand Cement Bag Rip Rap	Additional Rip Rap for each Additional Pipe
Inches	Sq. Ft.	Sq. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.				Sq. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.
18	1.767	2.5	2.7	4.2	2.7						3.5	3.0
24	3.142	2.8	3.8	5.3	3.8						4.5	3.0
30	4.909	3.5	4.3	6.9	4.3	10'-6"	4'-8"	7	14.7	5.4	6.0	4.0
36	7.069	3.2	3.7	7.2	3.7	12'-6"	5'-4"	8	21.8	7.2	6.0	5.3
42	9.621	3.5	4.0	8.5	4.0	14'-6"	6'-0"	9	30.6	9.0	9.2	5.0
48	12.566	3.8	4.5	10.2	4.5	16'-6"	6'-8"	10	40.6	11.4	9.2	6.6
54	15.904	4.2	5.8	12.0	5.8	18'-6"	6'-8"	10	44.8	12.1	11.0	10.0
60	19.635	4.8	6.3	13.8	6.3	20'-6"	7'-4"	11	58.4	15.8	13.0	10.0
66	23.758	4.8	7.7			22'-6"	8'-0"	12	73.7	19.9	15.2	14.0
72	28.274	5.2	9.3			24'-6"	8'-8"	13	92.0	24.9	15.2	14.0
78	33.183	5.8	10.7			26'-6"	8'-8"	13	98.3	25.7	20.0	16.0
84	38.485	6.2	12.8			28'-6"	9'-4"	14	120.6	31.5	20.0	18.7
90	44.179	6.5	14.0			30'-6"	10'-0"	15	144.8	37.9	22.5	24.0
96	50.266	6.8	14.7			32'-6"	10'-8"	16	172.9	45.4	25.5	24.0
102	56.745	7.2	15.8			34'-6"	10'-8"	16	196.0	54.5	28.3	30.0
108	63.617	7.8	17.8			36'-6"	11'-4"	17	220.0	60.0	28.3	30.0

Note: These quantities are to be used for estimating purposes only.
Payment is to be made according to quantities measured as actually placed.

GENERAL NOTES

Sand Cement Bag Rip Rap to be in accordance with Section 604 of the Standard Specifications, except that the bags will be 8" thick. Normal size of Sand Cement Bag to be approximately 18" X 12" X 8". Each course of bags to be wetted sufficiently to allow the proper cement reaction.

Basis of Payment: The quantity to be paid for shall be square yards of sand cement bag rip rap in horizontal planes of one bag thickness (8" ±), in place, complete and accepted.

Sand Cement Bag Rip Rap — per Sq. Yd.

Note: $S = \frac{1}{2}D$ with minimum value of 2' - 0"
Lm = Ls + (D+S) Double Line
Lm = Ls + 2(D+S) Triple Line
H & L dimensions may vary slightly

DATE	REVISIONS	BY

STATE HIGHWAY BOARD OF GEORGIA
ENGINEERING DEPARTMENT

STANDARD

SAND CEMENT BAG RIP RAP FOR END WALL AND APRON

NO SCALE — DECEMBER, 1957

DESIGNED C. E. B.
DRAWN C. E. B.
TRACED H. A. S.
CHECKED

SUBMITTED STATE ROAD DESIGN ENGINEER
APPROVED STATE HIGHWAY ENGINEER

NUMBER 1018 A