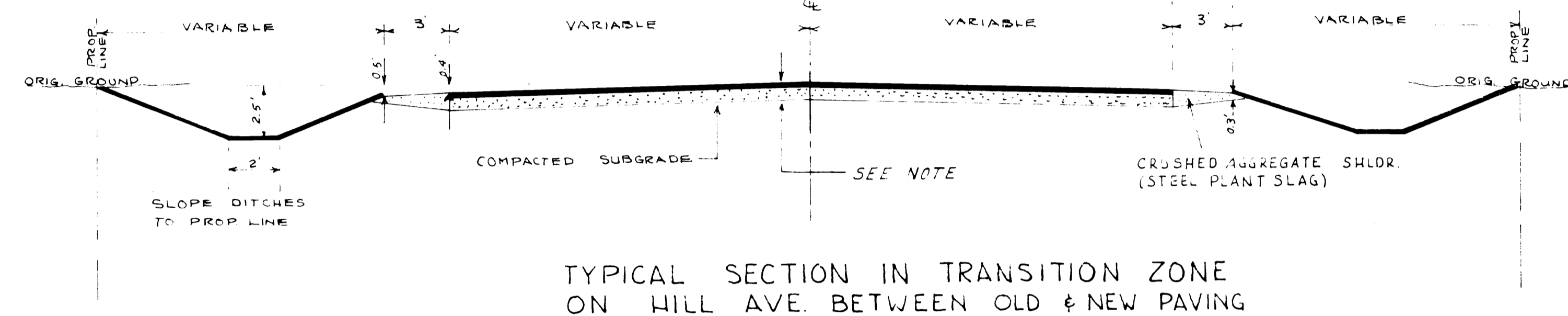


TYPICAL PAVING SECTION
NO SCALE



TYPICAL SECTION IN TRANSITION ZONE
ON HILL AVE. BETWEEN OLD & NEW PAVING

Note: The Pavement Section shall consist of 11" Crushed Aggregate Base (Steel Plant Slag) With a 2" Bit Base Course 1/2" Bit Binder Course and 1/2" Bit Wear Course

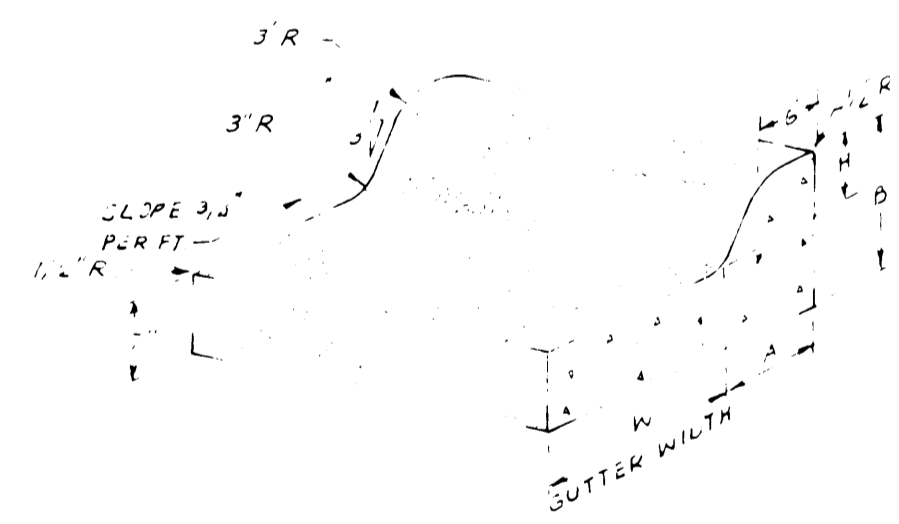
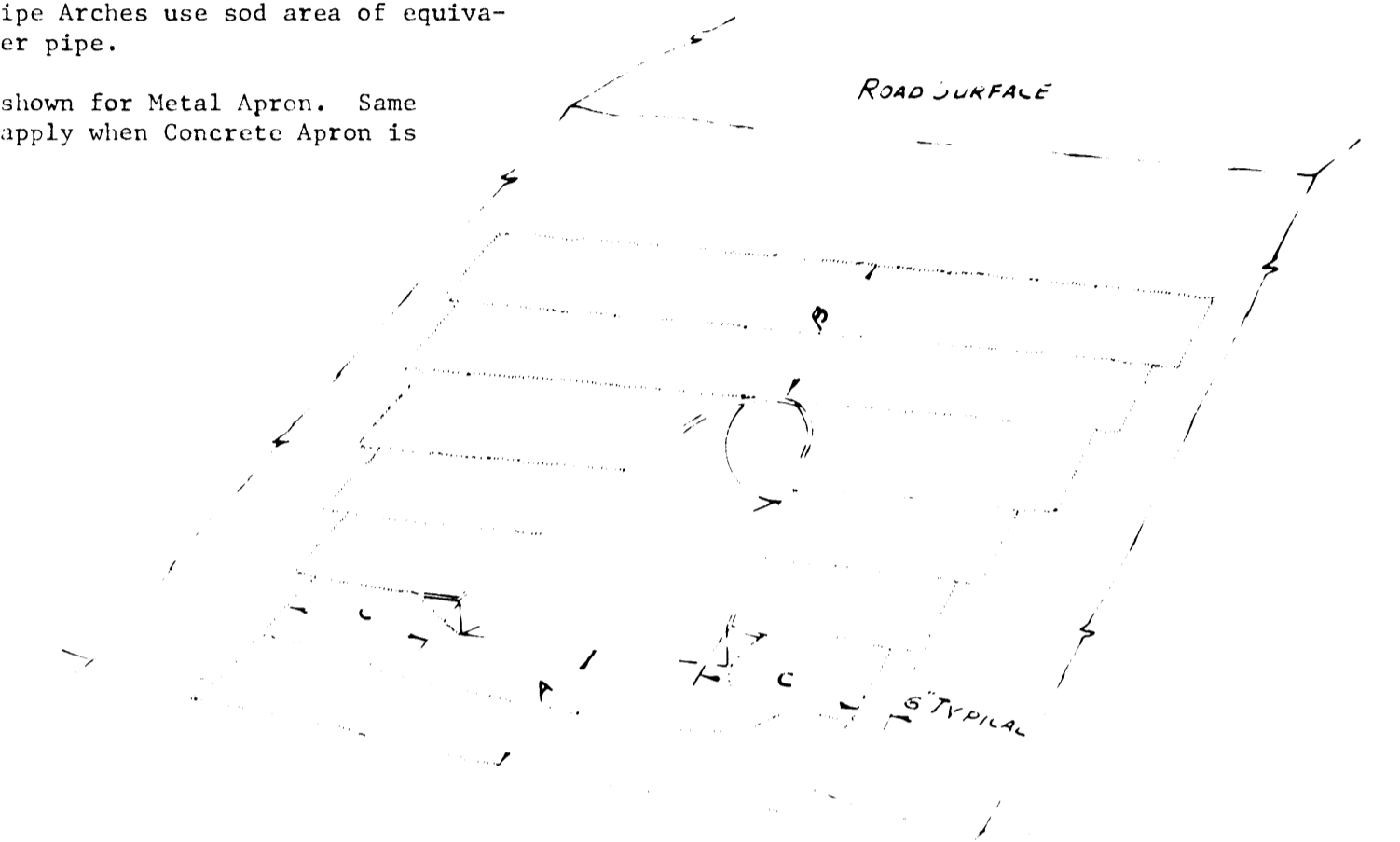
SOD DETAIL AT CULVERT ENDS

SOD QUANTITIES (SQ. YDS.) AROUND CULVERT APRONS

Culvert Diameter	Inlet Apron Sod Area (Sq. Yds.)			Outlet Apron Sod Area (Sq. Yds.)		
	Metal Apron	Concrete Apron	"A" "B" "C"	Metal Apron	Concrete Apron	"A" "B" "C"
15" & Smaller	8	8	3' 1.5' 3'	9	9	4.5' 1.5' 3'
18"	11	10	3' 3' 3'	11	11	6' 1.5' 3'
24"	14	13	3' 3' 3'	17	16	7.5' 1.5' 3'
30"	20	20	3' 4.5' 3'	22	20	9' 1.5' 3'
36"	25	24	4.5' 4.5' 4.5'	28	26	10.5' 1.5' 4.5'
42"	33	29	4.5' 6' 4.5'	34	29	12' 1.5' 4.5'
48"	42	37	4.5' 7.5' 4.5'	40	34	13.5' 1.5' 4.5'

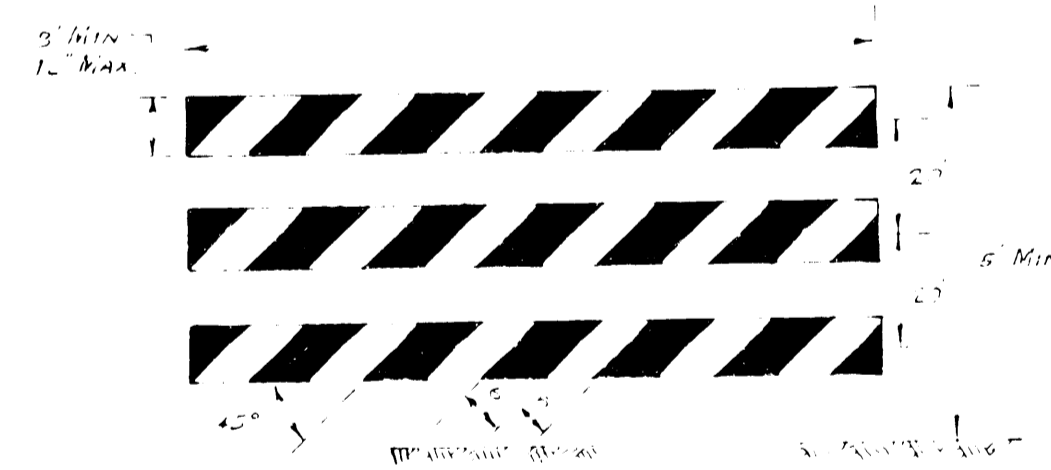
NOTE: Sod Area in square yards is for one culvert end. For Pipe Arches use sod area of equivalent diameter pipe.

Sodding is shown for Metal Apron. Same dimensions apply when Concrete Apron is used.



DESIGN B
Concrete Curb & Gutter

K = 18"
A = 8"
B = 13-1/2"
H = 6"



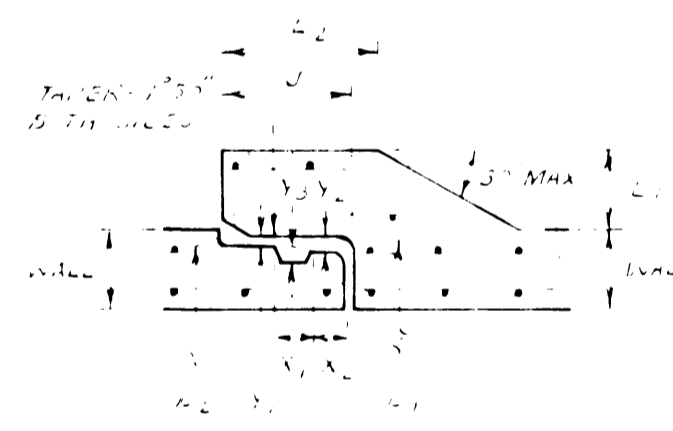
Stripes: All stripes to be white and 6 inches wide

Width of Rail	8" min. - 12" max.
Length of Rail	3' min. - variable max.
Width of Stripes	6 in.
Height	5 ft. min.
Type of Frame	cast or laid's
Flexibility	movable or permanent

NOTE: Barricades are to be placed so that stripes slope downward toward the side on which traffic is to pass.

STANDARD BARRICADES

GASKET JOINT FOR R. C. PIPE



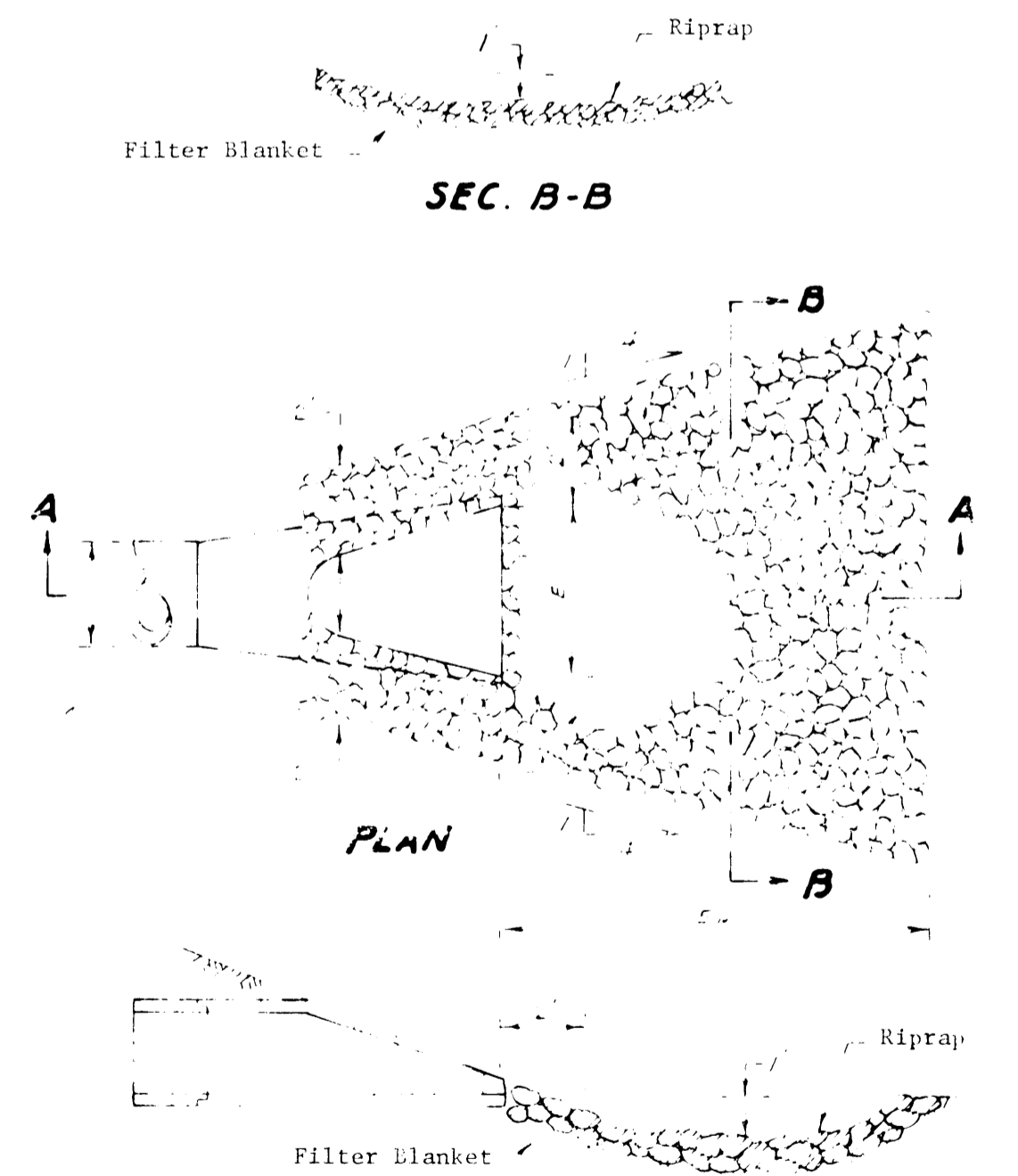
Diam. D	Approx. Dia. Gasket Mat'l. Not Stretched	Gasket Vol. In Cu. In.	Length of Joint J	D (Min.)		
				D ₁	D ₂	D ₂
12"	21/32"	13.5	3-5/8	15.223"	15.331"	5"
15"	21/32	16.5	3-7/8	18.723	18.831	4-3/4
18"	21/32	19.5	3-7/8	22.098	22.206	5
21"	21/32	22.5	3-7/8	25.600	25.724	5-1/4
24"	21/32	25.5	3-7/8	28.975	29.099	5-1/2
27"	21/32	28.0	4	32.476	32.608	5-1/2
30"	21/32	32.0	4	35.976	36.108	5-1/2
33"	21/32	35.0	4-1/8	39.476	39.616	5-3/4
36"	3/4	38.0	4-1/8	42.976	43.116	6
42"	3/4	59.0	4-5/8	50.021	50.183	6-3/4
48"	3/4	67.0	4-5/8	57.023	57.193	7-1/4

Diam. D	L ₁	X ₁	X ₂	Y		
				Y ₁	Y ₂	Y ₃
12"	2"	1"	7/8"	0.062"	0.090"	0.313"
15"	2-3/16	1	7/8	0.062	0.090	0.313
18"	2-3/8	1	7/8	0.062	0.090	0.313
21"	2-3/16	1	7/8	0.062	0.090	0.313
24"	2-3/8	1	7/8	0.062	0.090	0.313
27"	2-3/4	1	7/8	0.062	0.090	0.313
30"	2-3/4	1	7/8	0.062	0.090	0.313
33"	3-1/8	1	7/8	0.062	0.090	0.313
36"	3-1/8	1	7/8	0.062	0.090	0.313
42"	3-3/4	1-3/16	1	0.067	0.129	0.376
48"	4-1/8	1-3/16	1	0.067	0.129	0.376

TOLERANCES IN DIMENSIONS: Joint dimensions are nominal and subject to reasonable manufacturing tolerances. The tongue and groove shall be such that when the pipe is jointed with the gasket in place a proper fit is obtained. Final acceptance of the pipe will be at the job site after effective jointing has been obtained.

TABLE OF QUANTITIES

DIAM. ROUND PIPE	RIPRAP 12" DEPTH	FILTER BLANKET 6" DEPTH
	CLASS A CU. YD.	TYPE 1 CU. YD.
12"	1.7	0.9
15"	2.3	1.2
18"	2.9	1.5
21"	3.7	1.9
24"	4.6	2.3
27"	5.5	2.8
30"	6.6	3.3
36"	8.8	4.4
42"	10.9	5.5
48"	13.4	6.7



RIPRAP AT RCP OUTLETS

SEC. A-A

As BUILT Nov 1975

STANDARD DETAILS

SUPERIOR INDUSTRIAL PARK

ROBERT R. WALLACE & ASSOC., INC.
HIBBING, MINNESOTA

PROJECT NO. _____ SHEET NO. 4 OF 29