

SHEET

RAIN SAFETY END TREATMENT - 7
42" - 60" CAP, 36" - 48" RCPA
42" - 60" RCP, 36" - 48" CAPA
SETCDR-2

__ See Inset "A"

Pipe Runner

Culvert Width 🛆

SECTION B-B

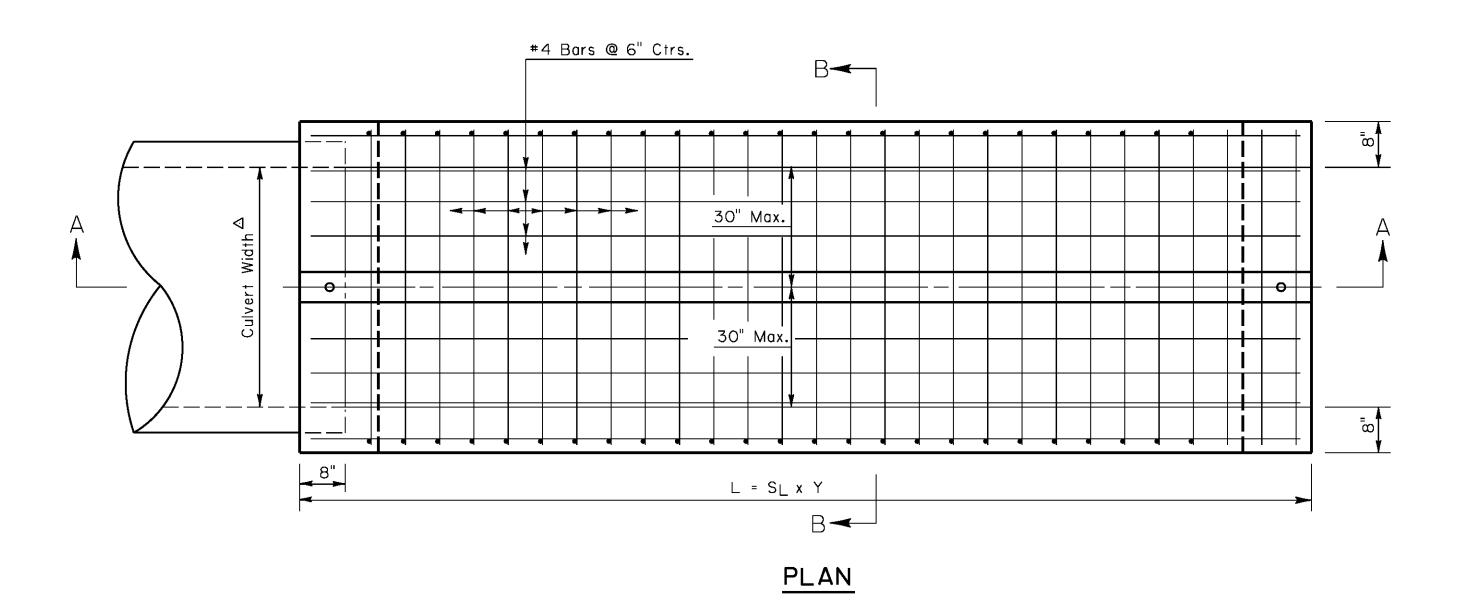
△ Culvert width shown is for a single culvert. For multiple culverts, culvert width will be adjusted to include all culvert openings.

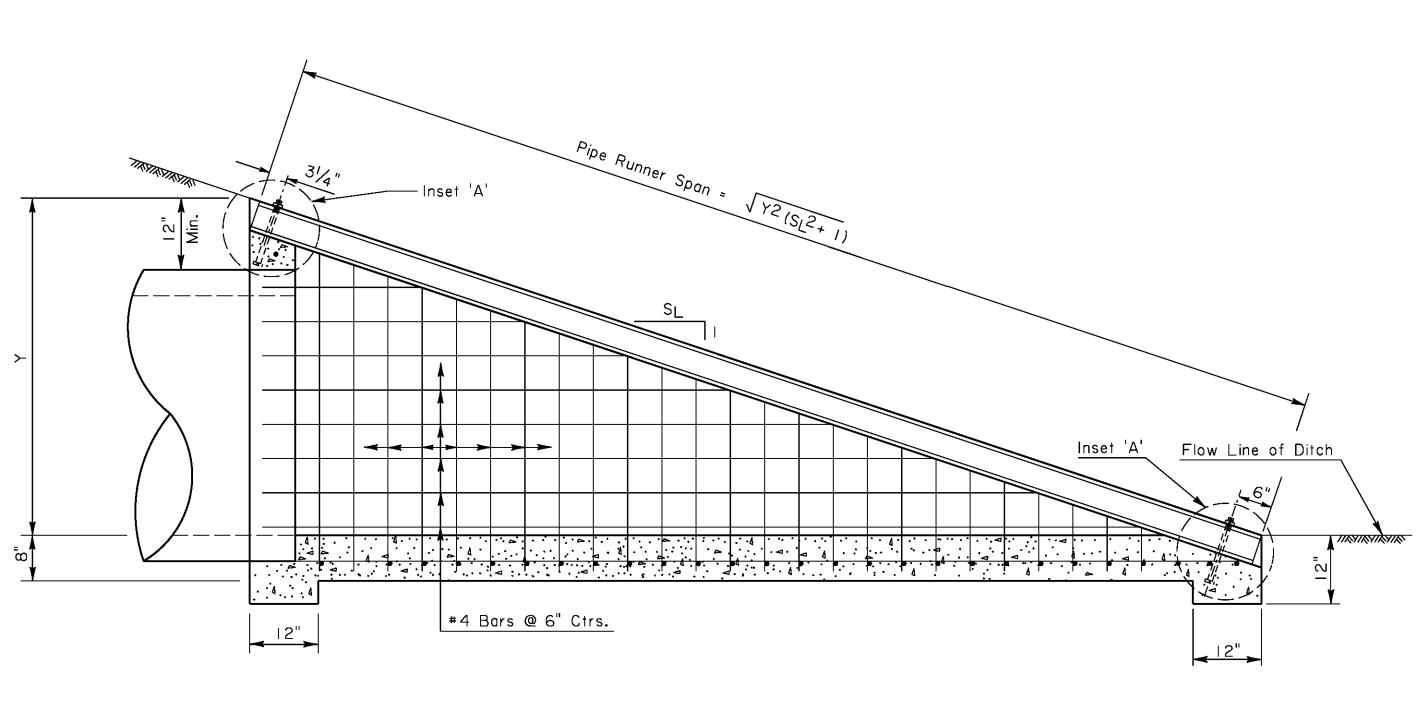
3" Clear

2" Clear

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SHEET





SECTION A-A

2) The slope of the Safety End walls (SL:1) shall match the embankment foreslope required on the typical section. If no foreslope is given, a slope of 4:1 shall be required. Skewed Safety Ends shall require flatter wall slopes to match embankment foreslopes. 3) Pipe Runners shall be galvanized steel pipe conforming to ASTM A53, Type E or S, Grade B, 35ksi; or ASTM A501, 36ksi. Required Pipe Runner diameters and strengths for various maximum spans are:

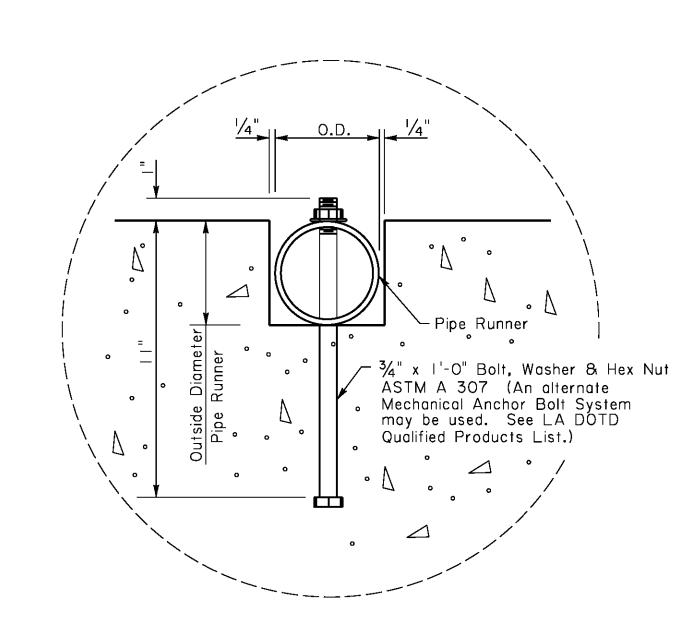
Tot Various maximam spans are.				
Strength/ Schedule	Maximum * Span	Outside <u>Diameter</u>	Wall Thickness	Weight Per Foot
XS/80	14'-5"	3.5"	0.300"	10.25 lbs
Std/40	15'-6"	4.0"	0.226"	9.11 lbs
XS/80	20'-4"	3.548"	0.318"	12.50 lbs
Std/40	20'-10"	4.5"	0.237	10.78 lbs
XS/80	27'-8"	4.5"	0.337"	14.98 lbs
Std/40	35'-4"	5.563"	0.258"	14.62 lbs
XS/80	48'-2"	5.563"	0.375"	20.78 lbs
Std/40	55'-।"	6.625	0.280"	18.97lbs
XS/80	79'-0"	6.625	0.432"	28.57lbs
	Strength/ Schedule XS/80 Std/40 XS/80 Std/40 XS/80 Std/40 XS/80 Std/40 XS/80 Std/40	Strength/Schedule Maximum * Span XS/80 14'-5" \$td/40 15'-6" XS/80 20'-4" \$td/40 20'-10" XS/80 27'-8" \$td/40 35'-4" XS/80 48'-2" \$td/40 55'-1"	Schedule Span Diameter XS/80 14'-5" 3.5" Std/40 15'-6" 4.0" XS/80 20'-4" 3.548" Std/40 20'-10" 4.5" XS/80 27'-8" 4.5" Std/40 35'-4" 5.563" XS/80 48'-2" 5.563" Std/40 55'-1" 6.625	Strength/Schedule Maximum* Outside Diameter Wall Thickness XS/80 14'-5" 3.5" 0.300" \$td/40 15'-6" 4.0" 0.226" XS/80 20'-4" 3.548" 0.318" \$td/40 20'-10" 4.5" 0.237 XS/80 27'-8" 4.5" 0.337" \$td/40 35'-4" 5.563" 0.258" XS/80 48'-2" 5.563" 0.375" \$td/40 55'-1" 6.625 0.280"

General Notes:

While a RCP culvert is detailed, this Safety End shall also be used with RCPA, ACMP, ACMPA, PVC and RCB culverts.

Safety Ends for skewed culverts shall also be skewed with walls parallel to the centerline of the culvert.

- *Pipe Runners are designed for a traversing load of 1,800 pounds at yield.
- 4) For culvert widths of 60" and less a single pipe runner is required. For larger culvert widths, multiple pipe runners are required. The maximum pipe runner spacing is 30".



INSET "A"