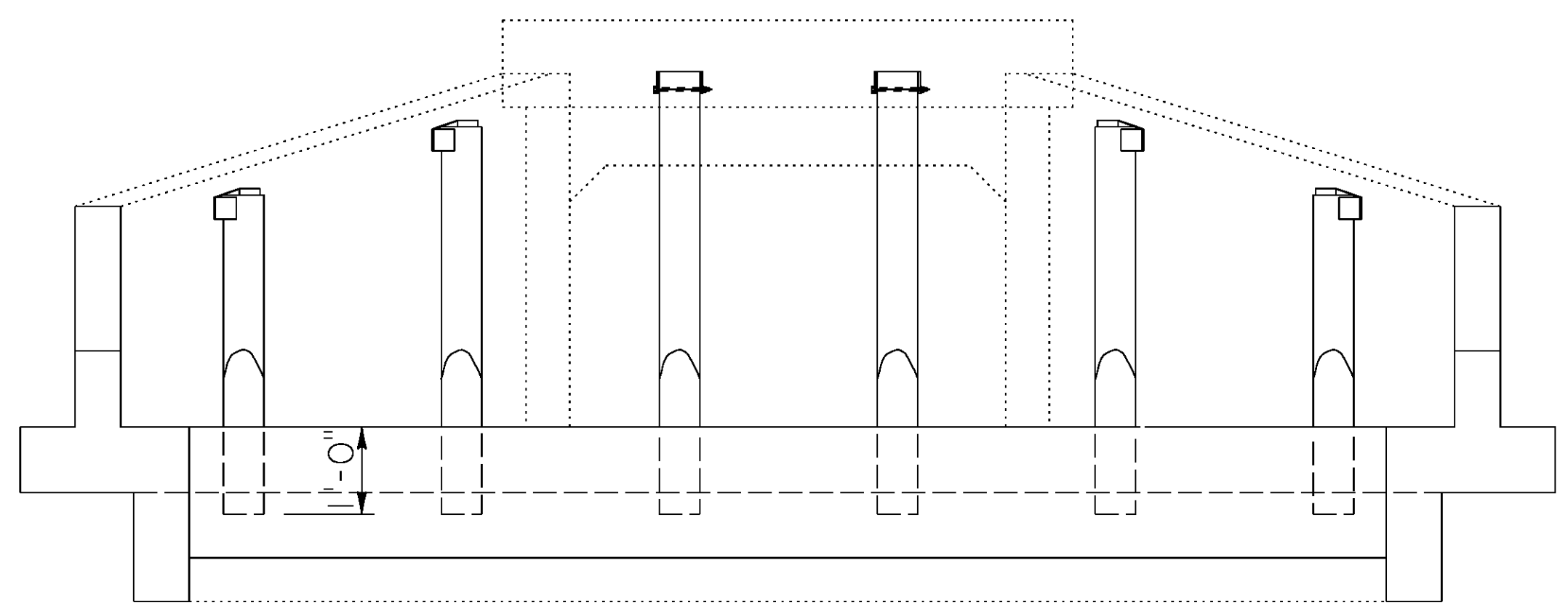
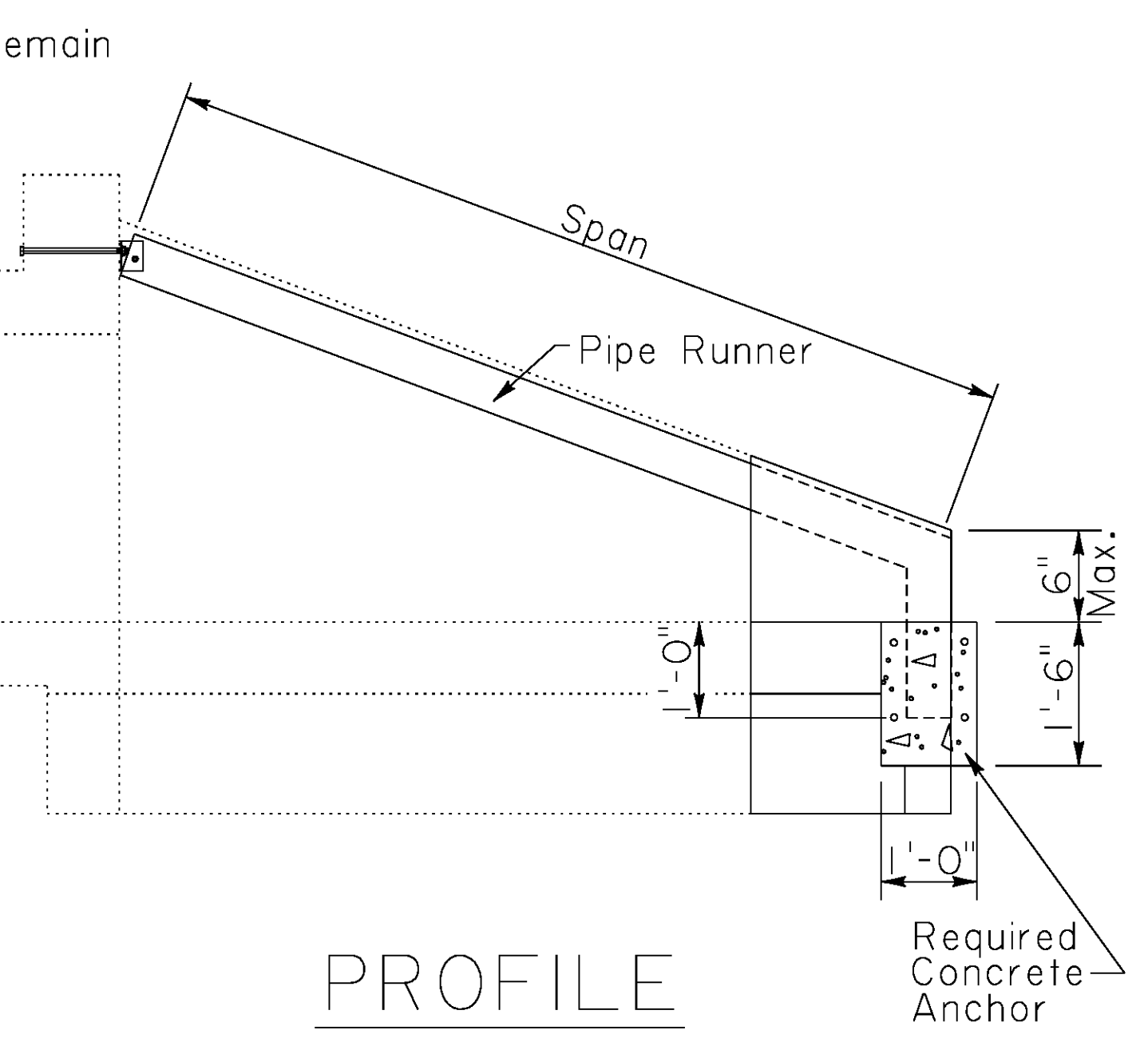


PLAN

Minimum reinforcing in wall extension (vertical direction) is #4 bars @ 12". Maximum wall height of extension is 3'-6".



ELEVATION



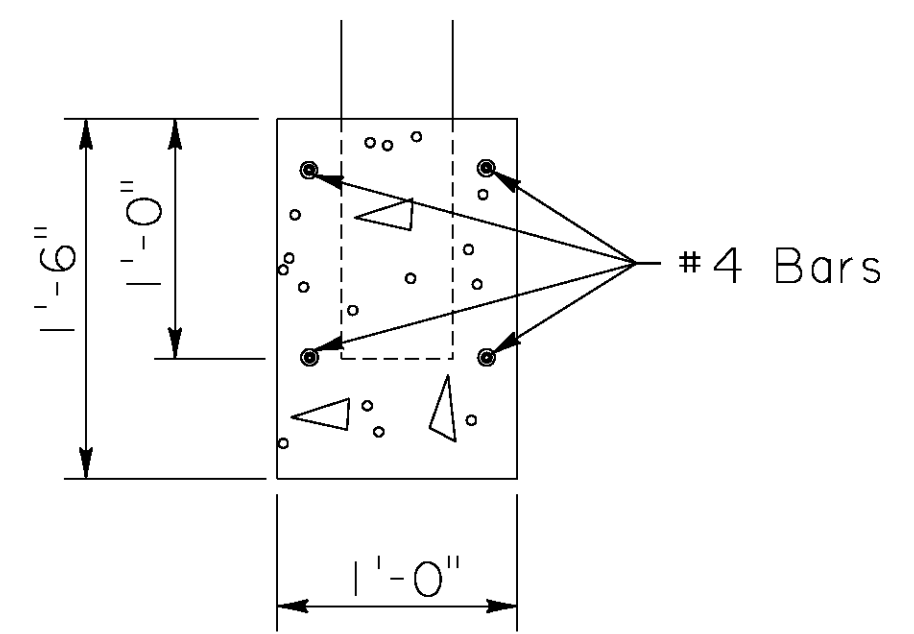
PROFILE

- 1) Slope of pipe runners ( $S_L:1$ ) shall match the existing wingwall slope.
- 2) Pipe Runners shall be galvanized steel pipe conforming to ASTM A53, Type E or S, Grade B, 35ksi; or ASTM A501, 36ksi. Pipe Runner diameters and strengths for various maximum spans are:

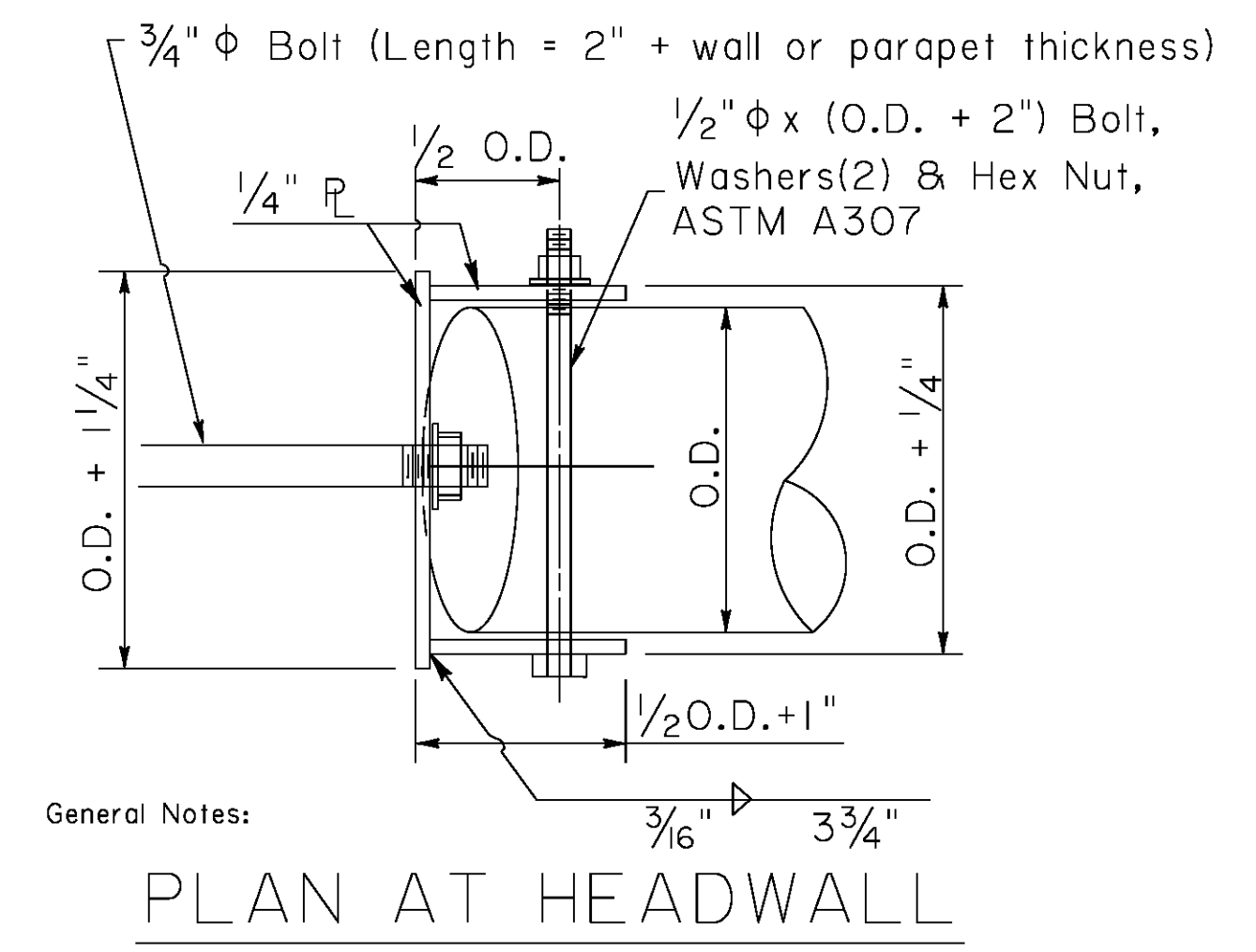
Nominal Diameter	Strength/Schedule	Maximum* Span	Outside Diameter	Wall Thickness	Weight Per Foot
3"	XS/80	14'-5"	3.5"	0.300"	10.25 lbs
3 1/2"	Std/40	15'-6"	4.0"	0.226"	9.11 lbs
3 1/2"	XS/80	20'-4"	3.548"	0.318"	12.50 lbs
4"	Std/40	20'-10"	4.5"	0.237"	10.78 lbs
4"	XS/80	27'-8"	4.5"	0.337"	14.98 lbs
5"	Std/40	35'-4"	5.563"	0.258"	14.62 lbs
5"	XS/80	48'-2"	5.563"	0.375"	20.78 lbs
6"	Std/40	55'-1"	6.625"	0.280"	18.97lbs
6"	XS/80	79'-0"	6.625"	0.432"	28.57lbs

\* Pipe Runners are designed for a traversing load of 1,800 pounds at yield.

- 3) For culverts with horizontal openings of 60" and less a single pipe runner is required. For larger culverts multiple pipe runners are required. The maximum pipe runner spacing is 30".
- 4) Exposed corners shall be chamfered 3/4".

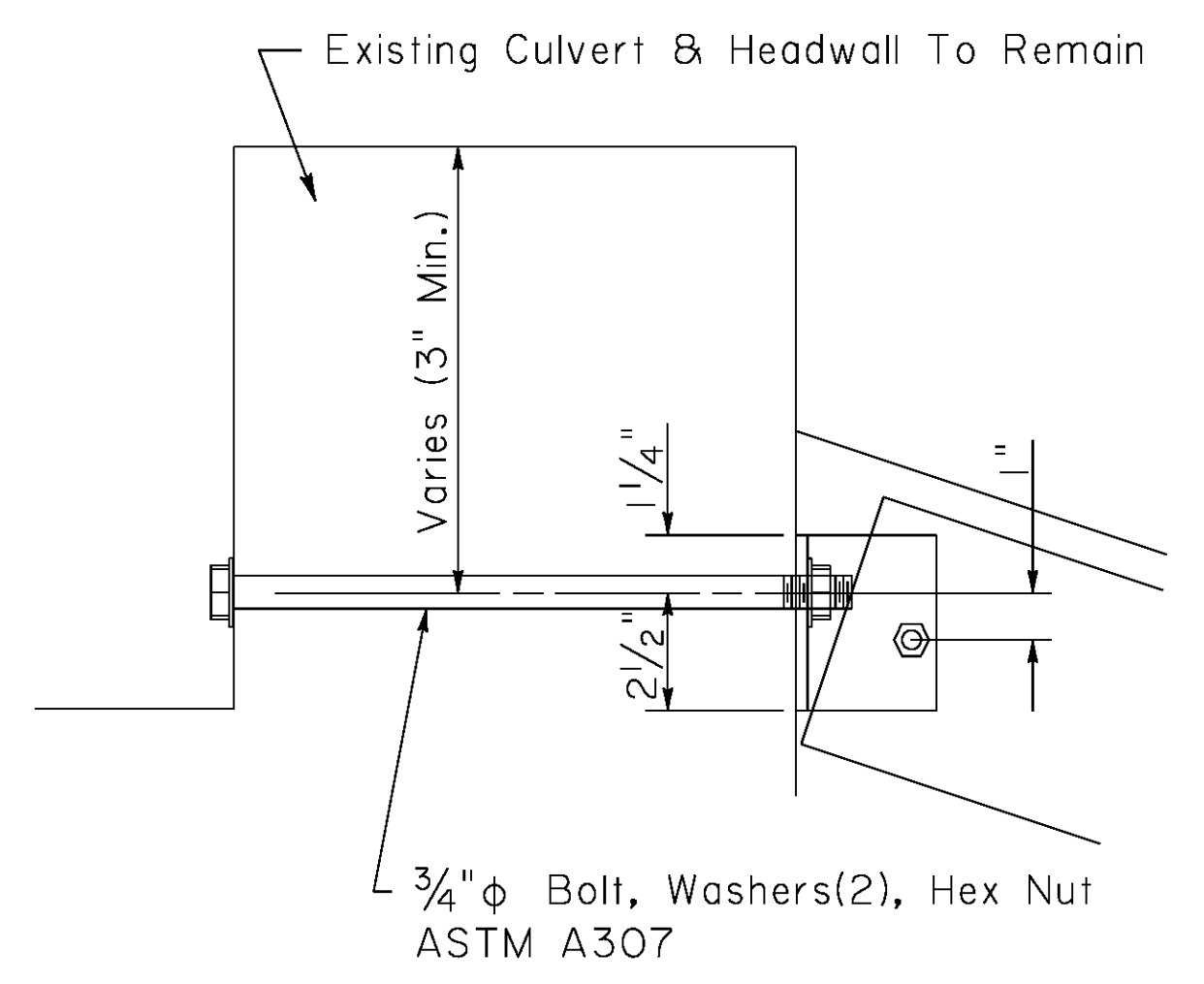


CONCRETE ANCHOR



General Notes:

PLAN AT HEADWALL



ELEVATION AT HEADWALL