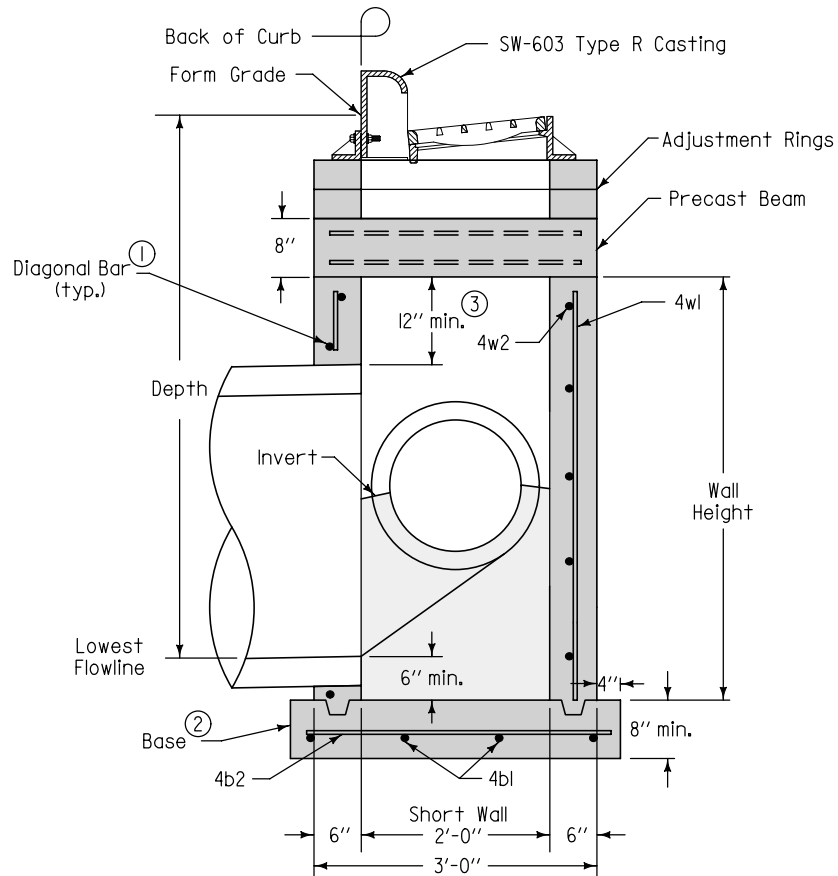
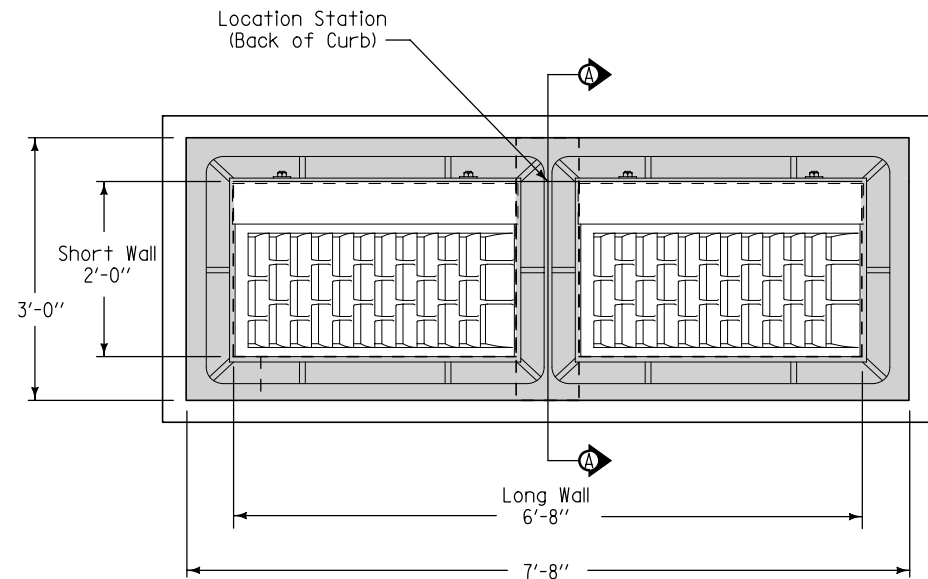


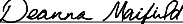
- ① Install four #4 diagonal bars at all pipe openings.
- ② Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.
- ③ 12 inch minimum wall height above all pipes.

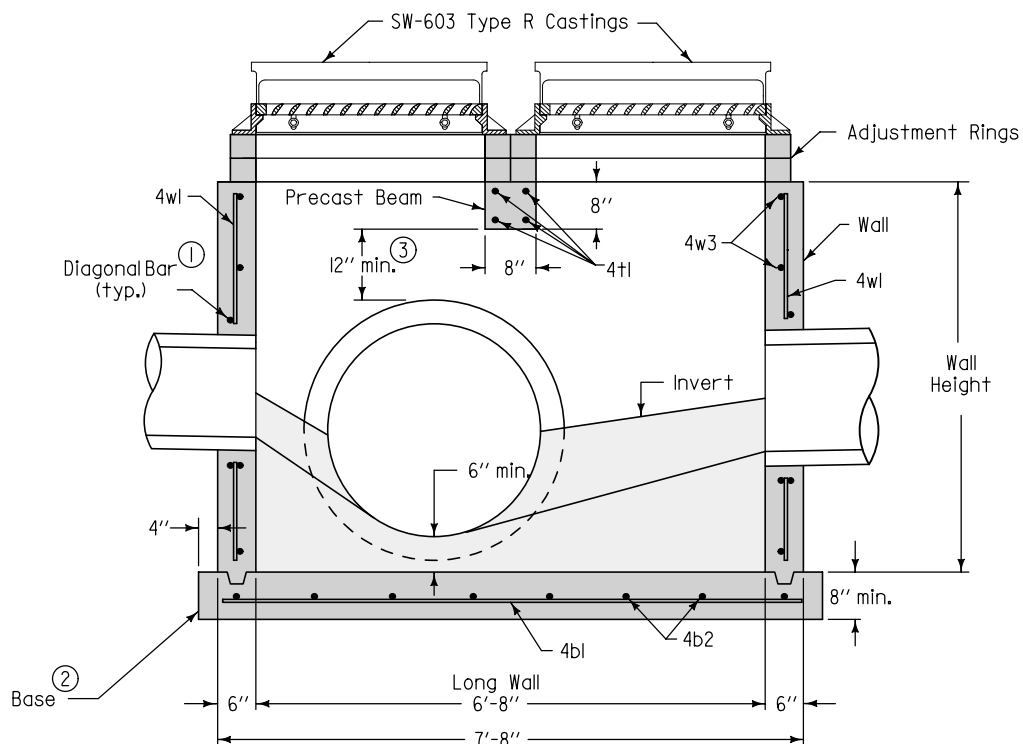


SECTION A-A



PLAN

 SUDAS	 Iowa Department of Transportation	REVISION	
		NEW	04-21-09
		SW-505	
FIGURE 6010.505	STANDARD ROAD PLAN	SHEET 1 of 2	
REVISIONS: New. Replaces SUDAS Figure 6030.5.			
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DOUBLE GRATE INTAKE			



TYPICAL SECTION

- ① Install four #4 diagonal bars at all pipe openings.
- ② Cast-in-place base shown. If base is precast integral with walls, the footprint of the base is not required to extend beyond the outer edge of the walls.
- ③ 12 inch minimum wall height above all pipes.

REINFORCING BAR LIST

Mark	Size	Location	Shape	Count	Length	Spacing
4t1	4	Beam	—	4	2'-8"	4"
4b1	4	Base	—	4	7'-10"	10"
4b2	4	Base	—	8	3'-2"	12"
4w1	4	Walls	—	20	Wall Height minus 4"	12"
4w2	4	Long Walls	—	Varies	7'-4"	12"
4w3	4	Short Walls	—	Varies	2'-8"	12"

MAXIMUM PIPE DIAMETERS

Pipe Location	Precast Structure	Cast-in-place Structure
Short Wall	15"	18"
Long Wall	60"	66"

SUDAS	Iowa Department of Transportation	REVISION	
		NEW	04-21-09
		SW-505	
FIGURE 6010.505 STANDARD ROAD PLAN		SHEET 2 of 2	
REVISIONS: New. Replaces SUDAS Figure 6030.5.			
SUDAS DIRECTOR		DESIGN METHODS ENGINEER	
DOUBLE GRATE INTAKE			