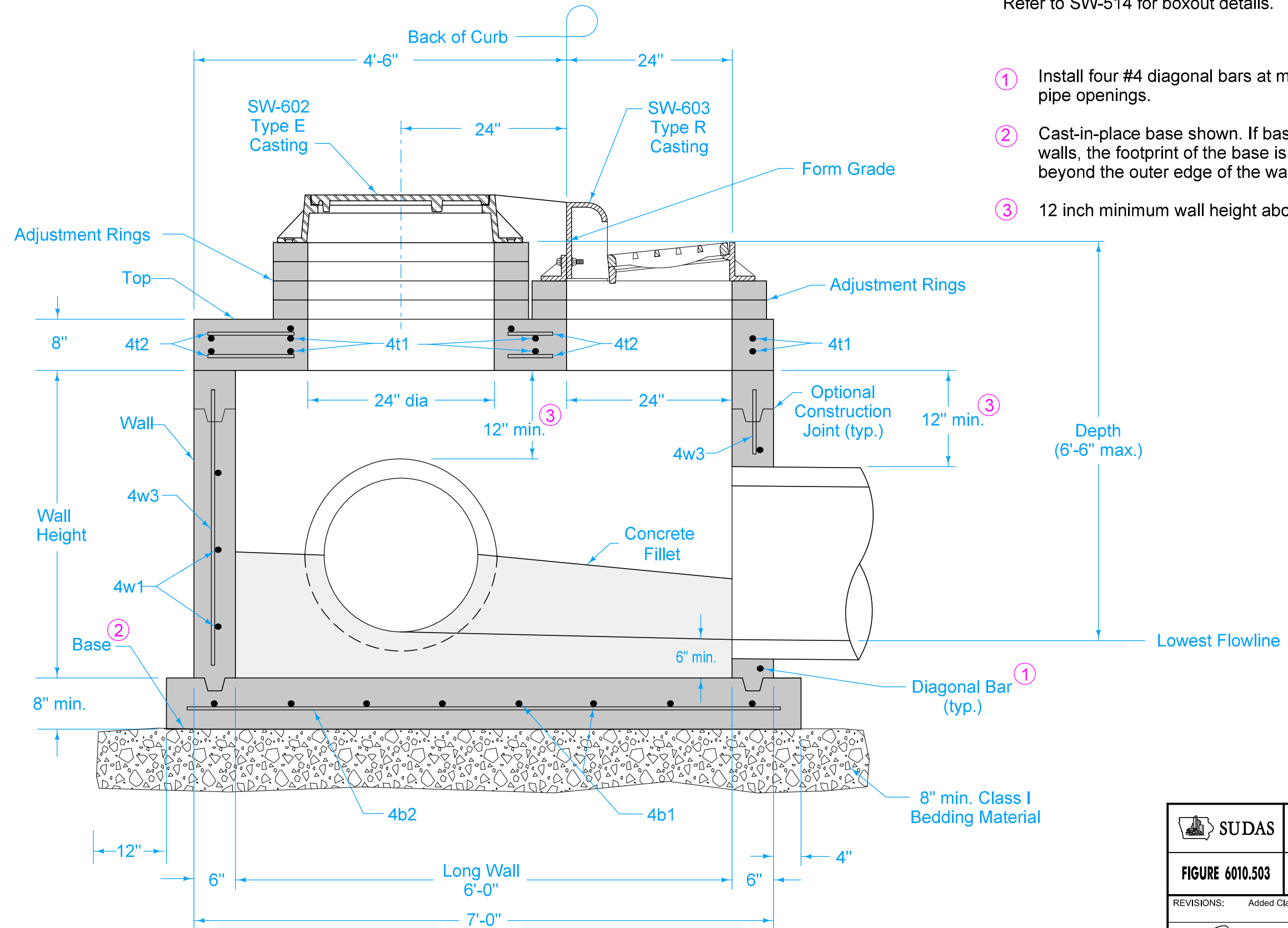


Refer to SW-514 for boxout details.



- ① Install four #4 diagonal bars at manhole opening and 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.

TYPICAL SECTION

SUDAS	IOWA DOT	REVISION	
		3	04-21-20
FIGURE 6010.503	STANDARD ROAD PLAN	SW-503	
		SHEET 1 of 2	

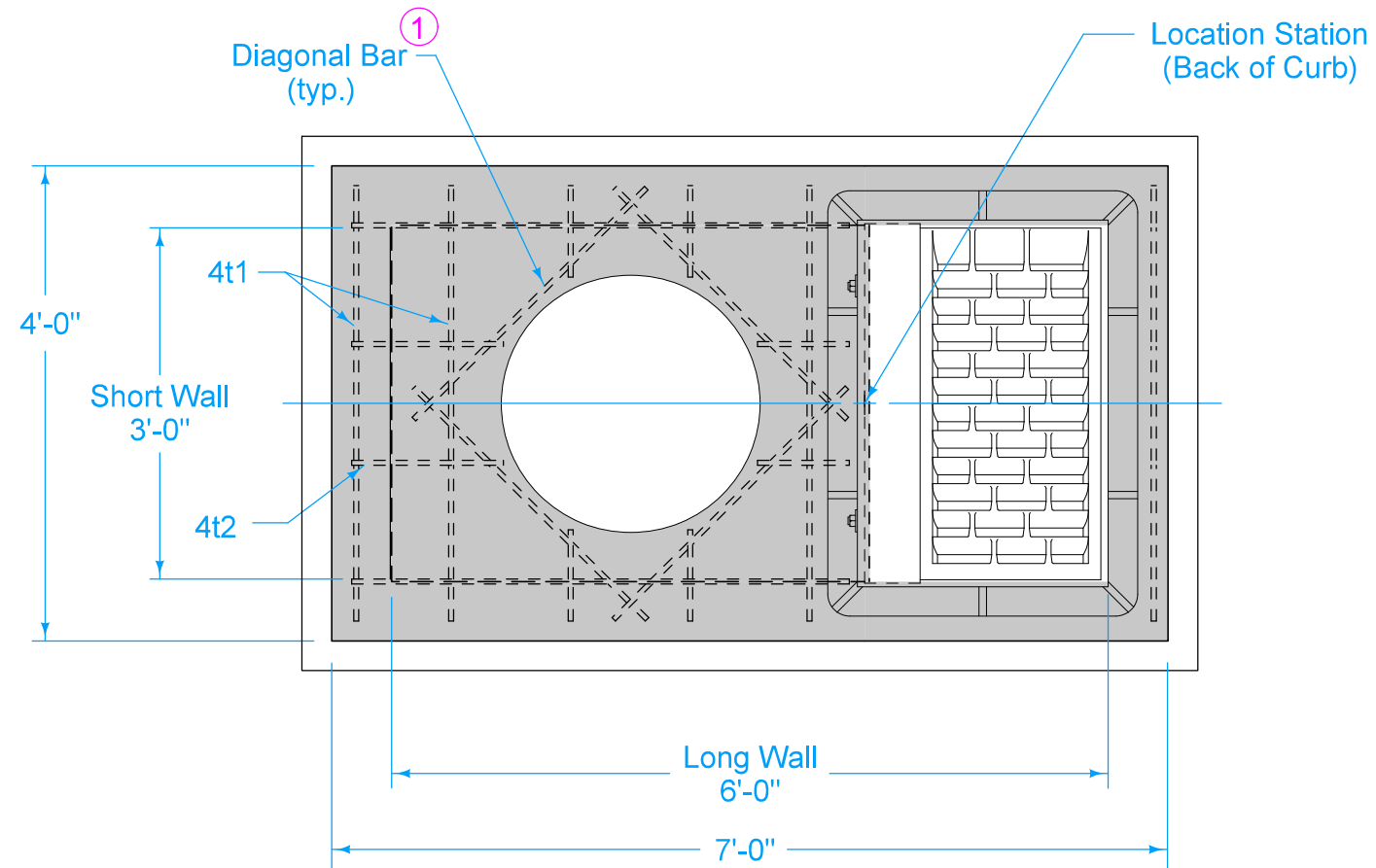
REVISIONS: Added Class I Bedding Material.

Paul D. Wrigand
 SUDAS DIRECTOR

Stuart Miller
 DESIGN METHODS ENGINEER

**SINGLE GRATE INTAKE
WITH MANHOLE**

① Install four #4 diagonal bars at manhole opening and at all pipe openings.



PLAN

REINFORCING BAR LIST

Mark	Size	Location	Shape	Count	Length	Spacing
4t1	4	Top	—	12	3'-8"	12"
4t2	4	Top	—	8	4'-2"	12"
4b1	4	Base	—	7	4'-2"	13"
4b2	4	Base	—	5	7'-2"	10"
4w1	4	Short Walls	—	Varies	3'-8"	12"
4w2	4	Long Walls	—	Varies	6'-8"	12"
4w3	4	Walls	—	18	Wall Height minus 4"	13"

MAXIMUM PIPE DIAMETERS

Pipe Location	Precast Structure	Cast-in-place Structure
Short Wall	24"	30"
Long Wall	30"	36"

FIGURE 6010.503 SHEET 2 OF 2

		REVISION	
		3	04-21-20
FIGURE 6010.503	STANDARD ROAD PLAN	SW-503	
SHEET 2 of 2			
REVISIONS: Added Class I Bedding Material.			
 SUDAS DIRECTOR		 DESIGN METHODS ENGINEER	
SINGLE GRATE INTAKE WITH MANHOLE			