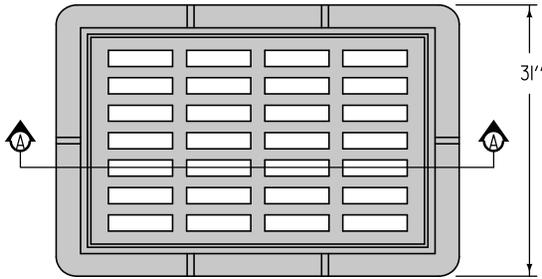
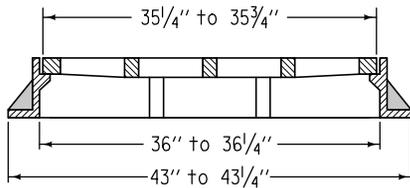


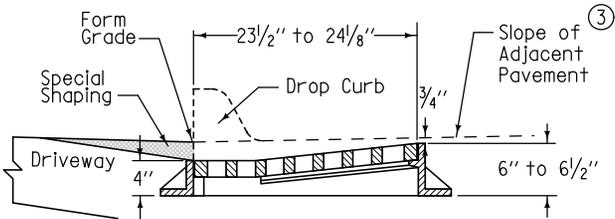
**TYPE Q** ①  
 Driveway Grate  
 (Minimum open area 370 in<sup>2</sup>)



PLAN

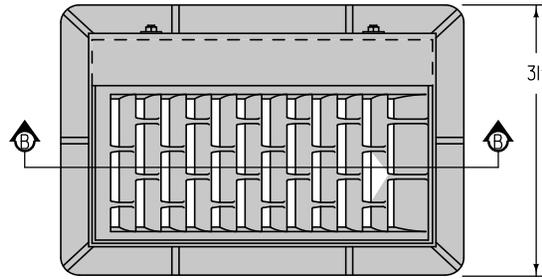


SECTION A-A



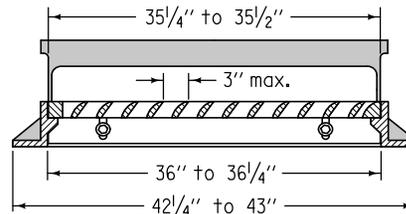
TYPICAL SECTION

**TYPE R** ②  
 Curb Inlet Grate  
 (Minimum open area 180 in<sup>2</sup>)

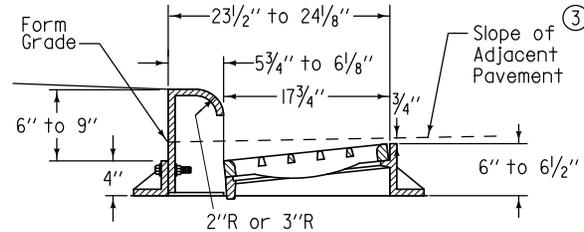


PLAN

← Flow



SECTION B-B



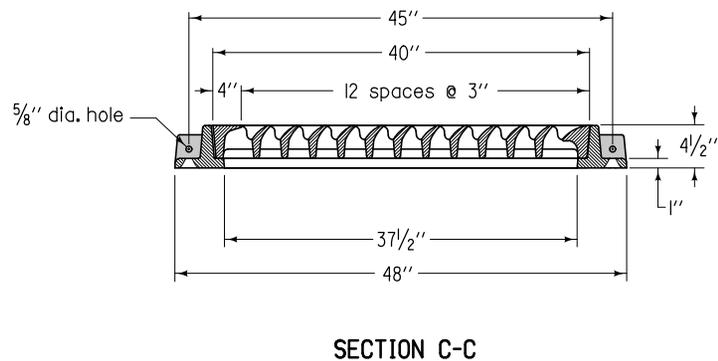
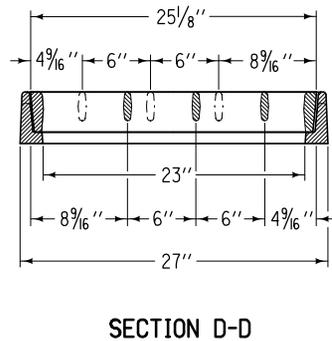
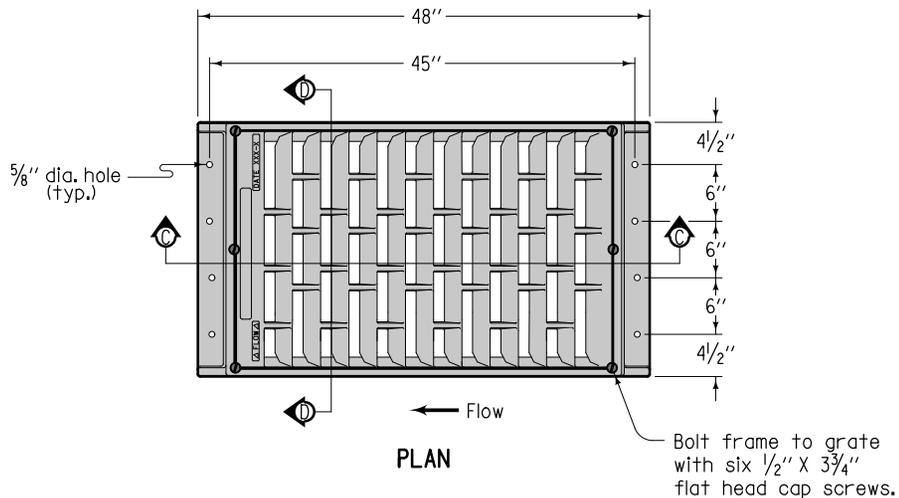
TYPICAL SECTION

- ① For use at curb drops for driveways. Use only when specified in the contract documents.
- ② Provide bicycle-safe vane-style grate. At low points, grates with vanes facing both directions of flow are allowed.
- ③ For details of boxout pavement, refer to SW-514.

FIGURE 6010.603 SHEET 1 OF 2

		REVISION
		2   04-17-12
<b>FIGURE 6010.603</b> STANDARD ROAD PLAN		<b>SW-603</b> SHEET 1 of 2
REVISIONS: Modified dimensions on Type "Q" and Type "R" grates.		
<i>Paul D. Wigand</i> SUDAS DIRECTOR		<i>Deanna Mayfield</i> DESIGN METHODS ENGINEER
<b>CASTINGS FOR GRATE INTAKES</b>		

TYPE S ②④  
 Barrier Intake Gate  
 (Minimum open area 300 in<sup>2</sup>)



② Provide bicycle-safe vane-style grate. At low points, grates with vanes facing both directions of flow are allowed.

④ Use ductile iron frame castings meeting the requirements of ASTM A 536.

Frame minimum weight = 220 lbs.  
 Grate minimum weight = 340 lbs.

FIGURE 6010.603 SHEET 2 OF 2

SUDAS Iowa Department of Transportation	REVISION	2	04-17-12
	FIGURE 6010.603	STANDARD ROAD PLAN	<b>SW-603</b>
REVISIONS: Modified dimensions on Type 'Q' and Type 'R' grates.			SHEET 2 of 2
Paul D. Wigand SUDAS DIRECTOR		Deanna Marfield DESIGN METHODS ENGINEER	
<b>CASTINGS FOR GRATE INTAKES</b>			