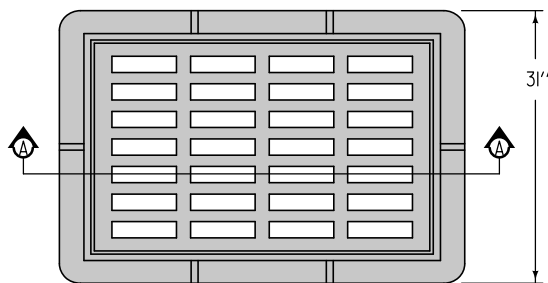
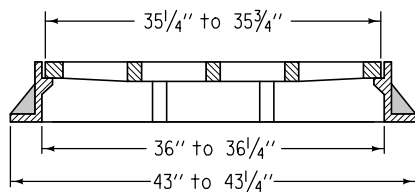


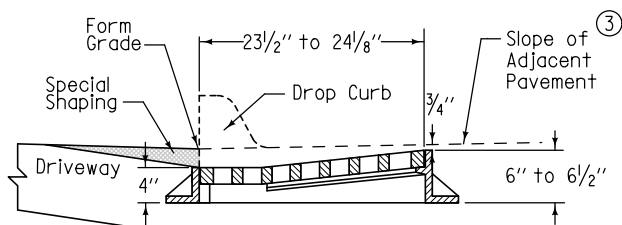
TYPE Q ^①
Driveway Gate
(Minimum open area 370 in²)



PLAN

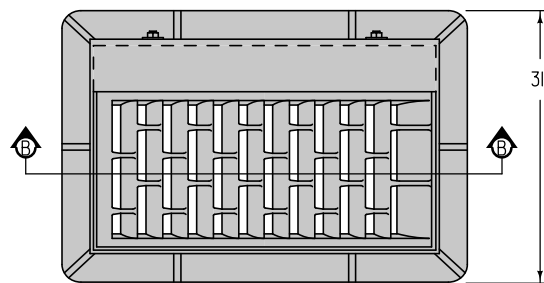


SECTION A-A

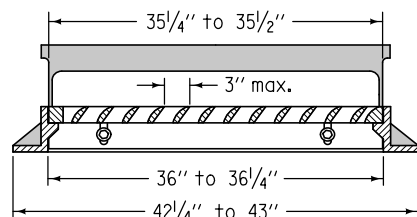


TYPICAL SECTION

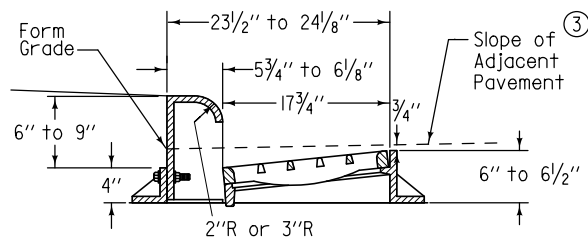
TYPE R ^②
Curb Inlet Gate
(Minimum open area 180 in²)



PLAN



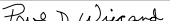



SECTION B-B

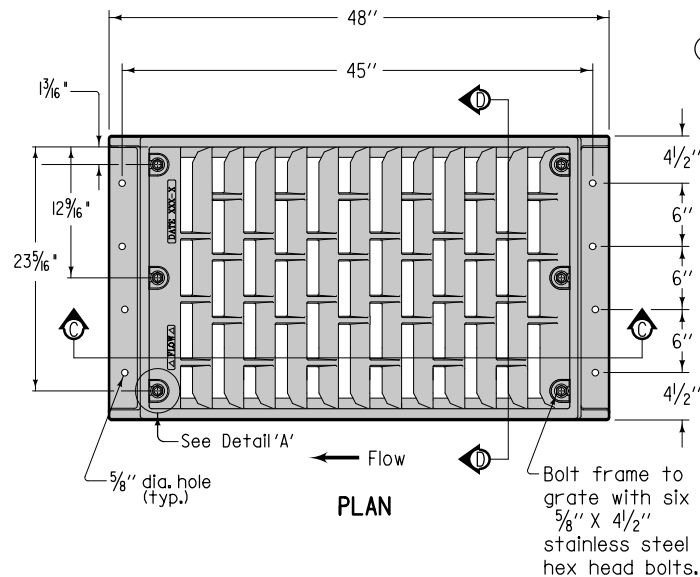
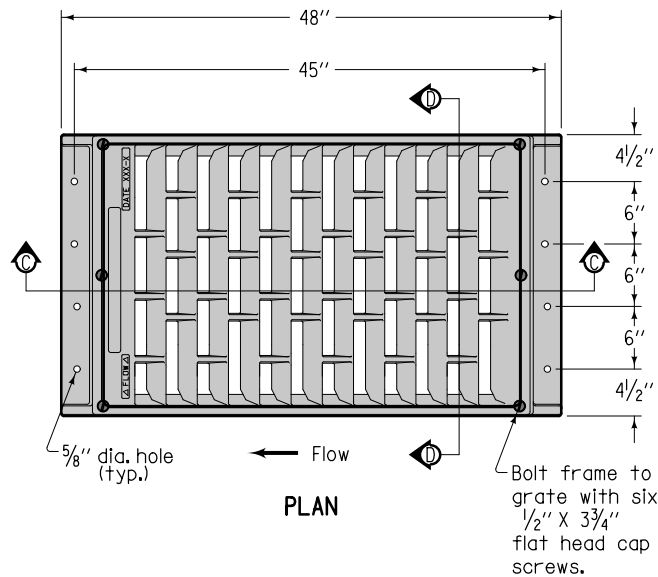


TYPICAL SECTION

- 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.

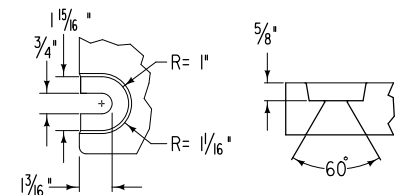
 SUDAS	 Iowa Department of Transportation	REVISION	
		3	04-16-13
		FIGURE 6010.603 STANDARD ROAD PLAN	
		SW-603	
		SHEET 1 of 2	
REVISIONS: Added second option for Type S Gate.			
 SUDAS DIRECTOR		 DESIGN METHODS ENGINEER	
CASTINGS FOR GRATE INTAKES			

TYPE S ②④
Barrier Intake Gate
(Minimum open area 300 in²)

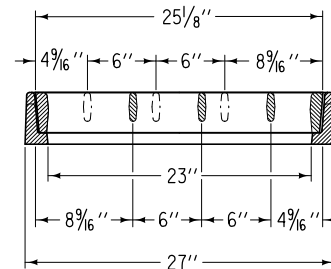
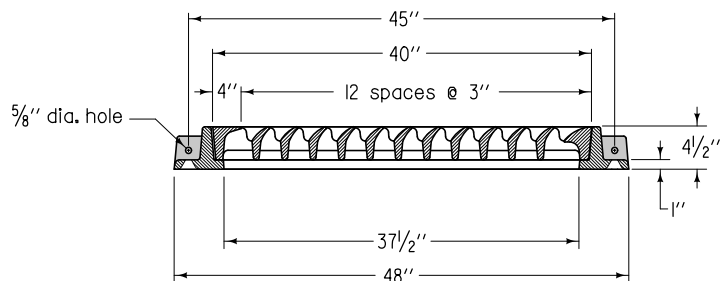






- ② Provide bicycle-safe vane-style grate. At low points, grates with vanes facing both directions of flow are allowed. The Contractor has the choice of which Type S Grate to use.
- ④ Use ductile iron frame castings meeting the requirements of ASTM A 536.

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



DETAIL 'A'
Bolt Slot Detail



 SUDAS	 Iowa Department of Transportation	REVISION	
		3	04-16-13
		FIGURE 6010.603	
		STANDARD ROAD PLAN	
		SW-603	
		SHEET 2 of 2	
		REVISIONS: Added second option for Type S Grate.	
 SUDAS DIRECTOR		 DESIGN METHODS ENGINEER	
CASTINGS FOR GRATE INTAKES			