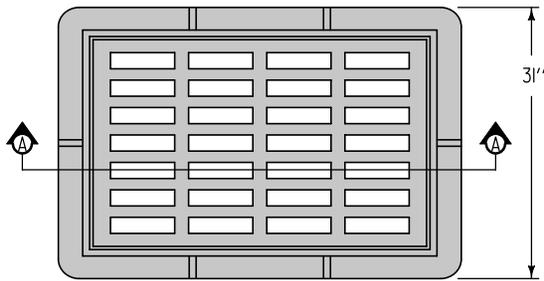
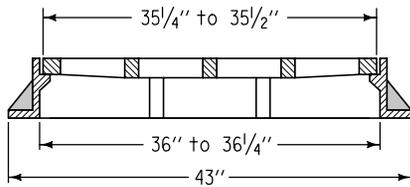


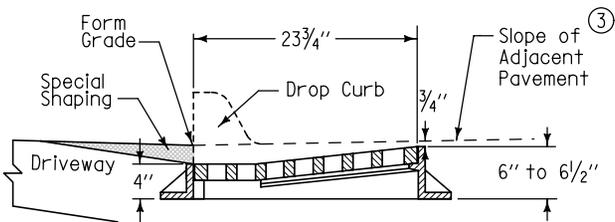
TYPE Q ①
 Driveway Grate
 (Minimum open area 370 in²)



PLAN

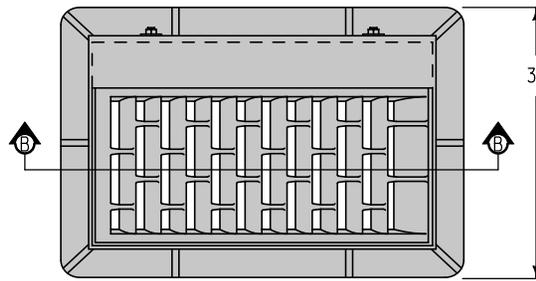


SECTION A-A

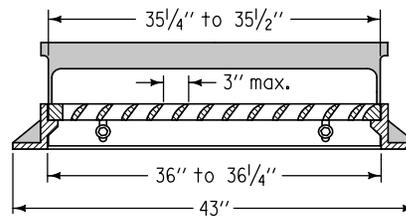


TYPICAL SECTION

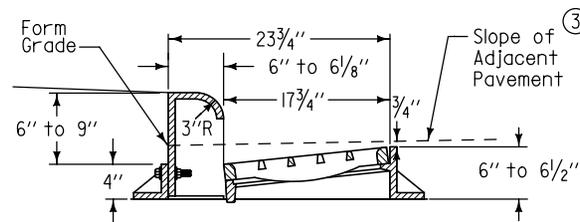
TYPE R ②
 Curb Inlet Grate
 (Minimum open area 180 in²)



PLAN



SECTION B-B



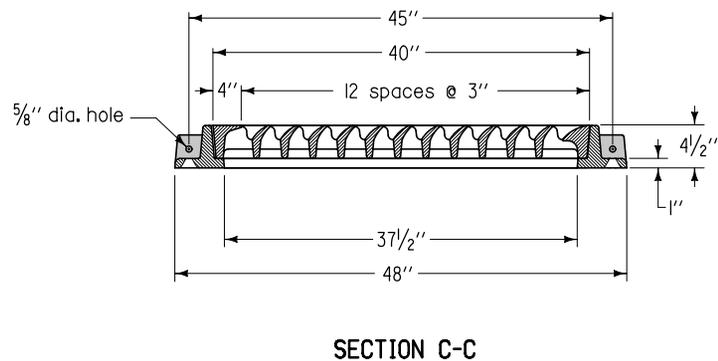
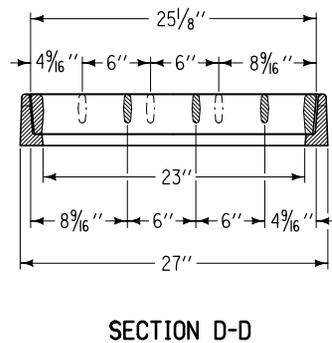
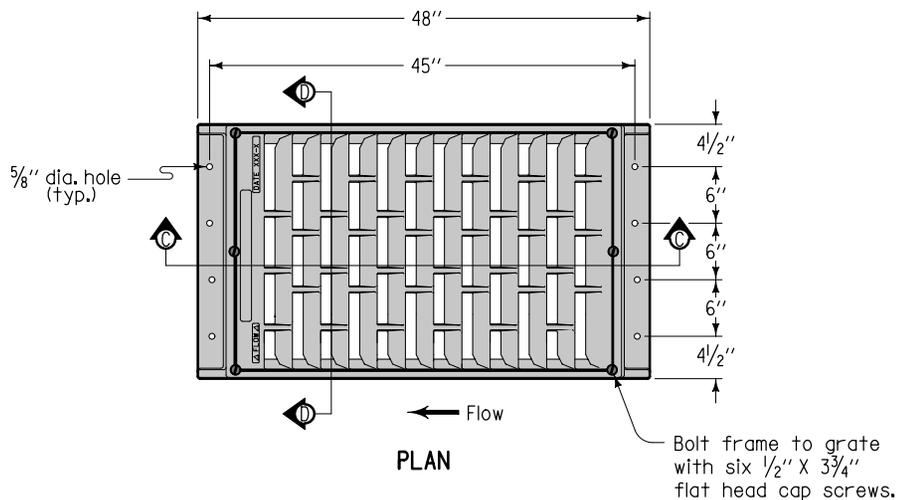
TYPICAL SECTION

- ① For use at curb drops for driveways. Use only when specified in the contract documents.
- ② Provide bicycle-safe vane-style grate with offset longitudinal ribs between vanes. 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

SUDAS Iowa Department of Transportation	REVISION	10-20-09
	1	
FIGURE 6010.603 STANDARD ROAD PLAN		SW-603 SHEET 1 of 2
REVISIONS: Added Type S grate to sheet 2. Modified notes 2 and 4. Added shading.		
SUDAS DIRECTOR		Deanna Mailfield 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 with offset longitudinal ribs between vanes. 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
		1 10-20-09
FIGURE 6010.603 STANDARD ROAD PLAN		SW-603
		SHEET 2 of 2
REVISIONS: Added Type S grate to sheet 2. Modified notes 2 and 4. Added shading.		
 SUDAS DIRECTOR	 Deanna Mailfield	DESIGN METHODS ENGINEER
CASTINGS FOR GRATE INTAKES		