

# ENGINEERING COMMUNIQUÉ

JAY R. SMITH MFG. CO.® ♦ MARCH, 2011 ♦ VOLUME 1- ISSUE 3



**From:**

## **THE SMITH ENGINEERING GROUP**

**PRODUCT ALERT: SQ-2-3591-8,**

### **Special Railway Drain**

This specialty product was designed for a railway tunnel project. An 8" PVC drainage pipe was routed between the rails just deep enough to be below the perpendicular support members. The invert of the pipe could be no deeper because of embedded rock. This piping was to be used for surface drainage between the rails. Since the 8" pipe was very shallow (8 -1/4" from the surface to the centerline of the buried piping), a drain was needed to mount over the pipe remaining shallow enough to be installed flush with the tunnel surface.

Smith Engineering designed a 24" (inch) square drain fabricated from 11 gauge steel with heavy duty cast iron grates. The drain body, grates and all components were galvanized cold coated. Four anchor tabs with punched holes (for the insertion of the rebar) and set screws were provided to secure the rebar. The outlet of the drain was designed with a 4-5/16" radius to mount on top of the pipe and dimensioned accordingly to be installed flush with the tunnel (drainage) surface. The PVC pipe was cut where the drain body mates with the pipe and a sealant applied for sealing purposes.

The unique features of this drain met the unusual requirements dictated by the design constraints associated with the track construction. The SQ-2-3591-8 was a viable solution for this application.

Please refer to the attached submittal drawing.



#### **SUSPENDED INTERCEPTORS:**

Whenever an interceptor is to be installed suspended in a floor slab independently or with a cradle, proper support is essential for safety & functional integrity of the installation. The support system shall be of sufficient strength and proper design for the purpose intended and shall be approved by the architect and structural engineer. Smith is not responsible for the design or recommendations of such supports. Upon request, Smith will provide the weight of the specific unit. Additional weight must be added to compensate for the weight of the grease/liquid when full and when functioning. This also applies to units with partial and fully enclosed cradles. The optional flange provided on units & cradles are for positioning in the concrete slab. Use of a structural support system is mandatory.



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LOCATION

# SPECIAL RAILWAY DRAIN

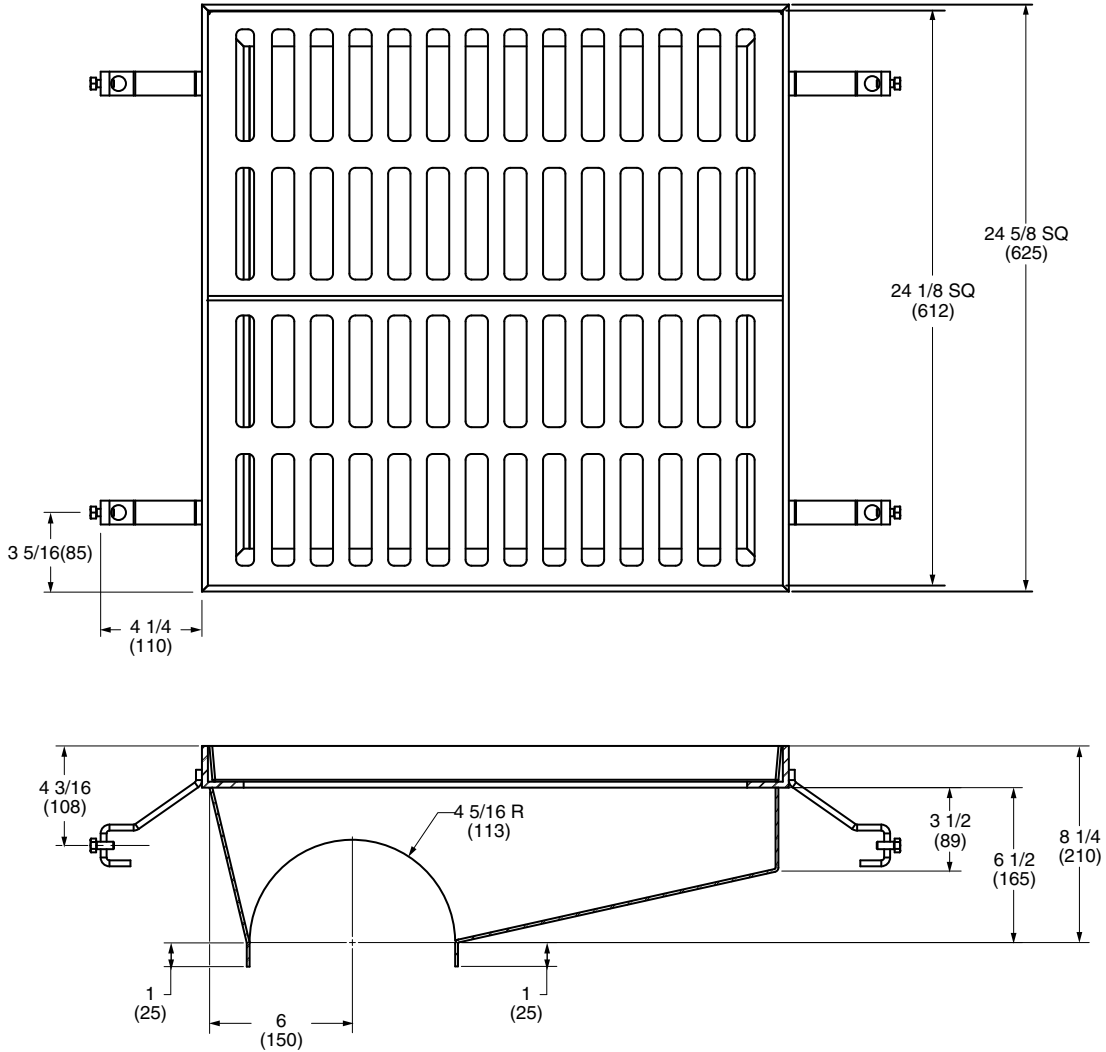


Fig. SQ-2-3591-8.....Fits Over 8(205) PVC Pipe

**REGULARLY FURNISHED:**

Fabricated 11 Gauge Steel Body with Anchor Tabs and Heavy Duty Cast Iron Grates. All Components Galvanize Coated Inside and Outside.

**OPTIONAL MATERIALS:**

- Ductile Iron Grate -M
- Stainless Steel Body-SS

**NOTE:** Dimensions shown in parentheses are in millimeters.

DRAWING NUMBER: SQ-2-3591-8  
 SIZE: A  
 SCALE: NONE  
 DATE: 12-7-05  
 APPROVED BY: CEL  
 CHECKED BY: CL  
 DRAWN BY: RN  
 FIGURE NUMBER: SQ-2-3591-8  
 DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE  
 WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

REV.	DATE	DESCRIPTION	BY	CKD. BY
A	2-23-06	Change Title Special Railway Drain	RN	JMcD

WEIGHT POUNDS	VOLUME CUBIC FEET

<b>FIGURE NUMBER</b>
<b>SQ-2-3591-8</b>