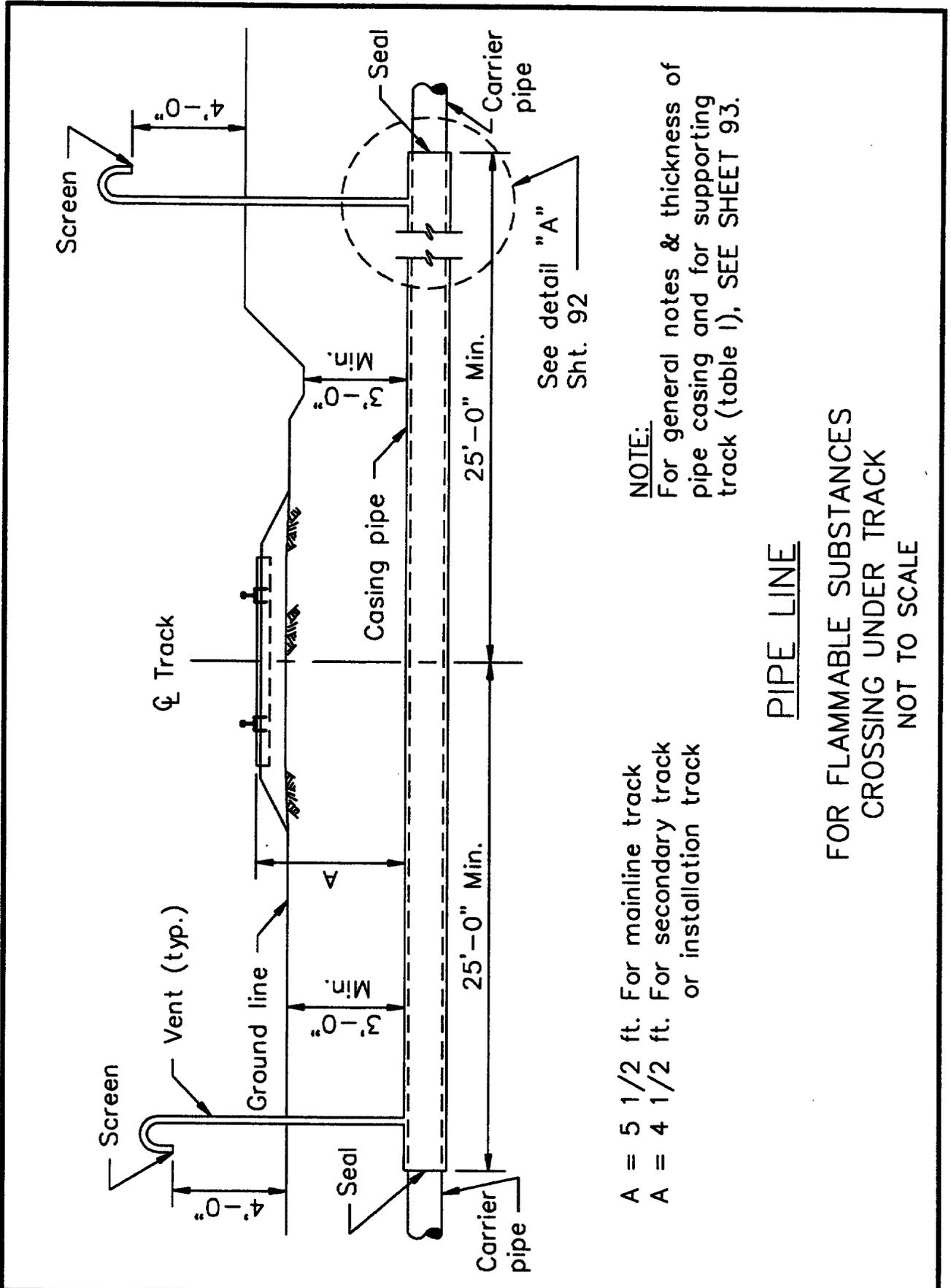


NOTE: ALL LETTERING SHALL BE 1/8" MINIMUM HEIGHT.



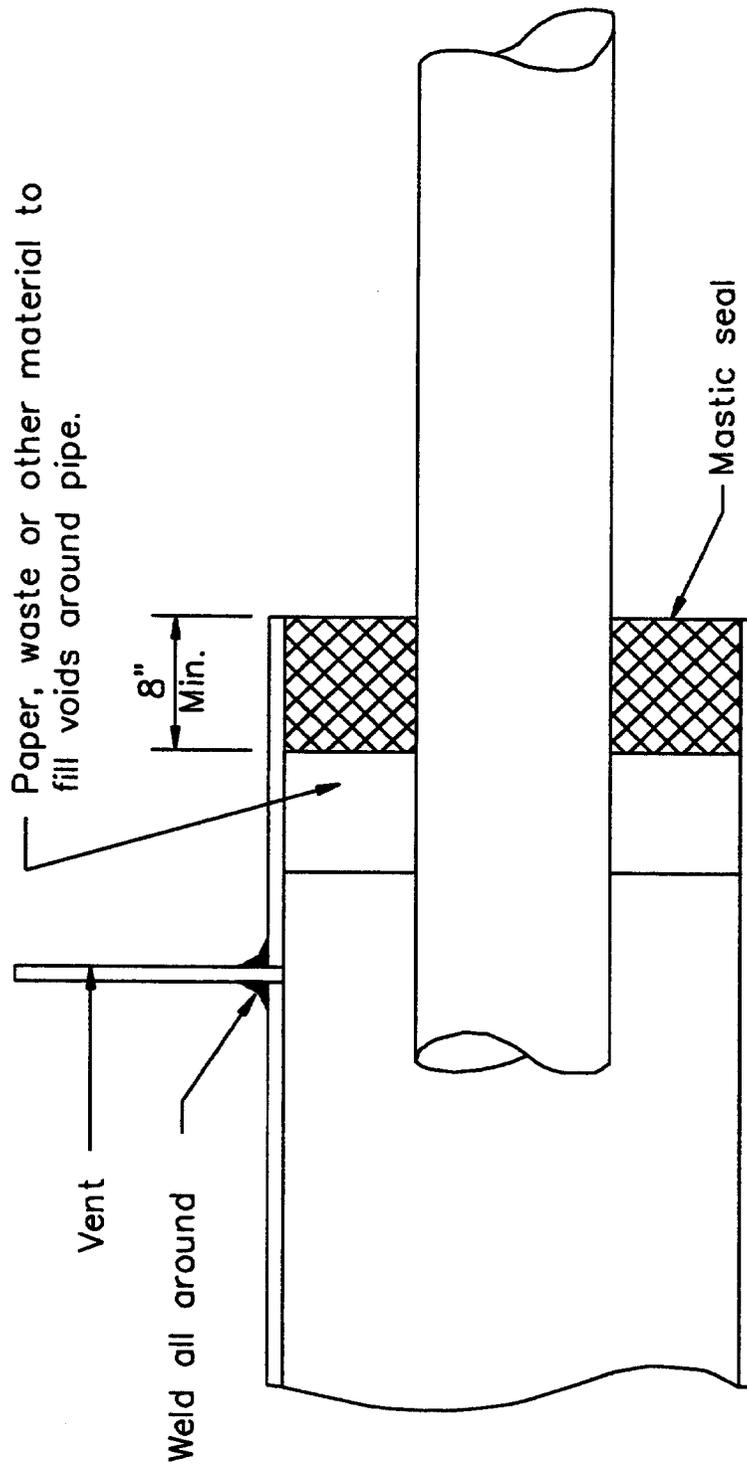
A = 5 1/2 ft. For mainline track  
 A = 4 1/2 ft. For secondary track  
 or installation track

NOTE:  
 For general notes & thickness of  
 pipe casing and for supporting  
 track (table I), SEE SHEET 93.

See detail "A"  
 Sht. 92

PIPE LINE  
 FOR FLAMMABLE SUBSTANCES  
 CROSSING UNDER TRACK  
 NOT TO SCALE

NOTE: ALL LETTERING SHALL BE 1/8" MINIMUM HEIGHT.



NOTE: Pipe line for flammable substances crossing under track. See sheet 91.

DETAIL "A"  
NOT TO SCALE

**TABLE 1**  
**THICKNESS OF PIPE CASTING**  
**FOR SUPPORTING TRACK**

INSIDE DIAMETER	CORRUGATED STEEL PIPE	SMOOTH STEEL PIPE
INCHES	U.S. STD. GAGE No.	MIN. THICK- NESS INCHES
4 TO 10	14	1/8
12	14	3/16
15,18	14	1/4
21,24	12	1/4
30,36	10	5/16

**GENERAL NOTES**

1. Distance from bottom of track to top of pipe or casing shall be not less than 4-1/2 ft. Distance from ground surface or ditch bottom to top of casing shall not be less than 3 ft.
2. Pipe lines under railway tracks shall be encased in a larger pipe or conduit called the casing pipe, in accordance with these specifications and as indicated on Sht. 91.
3. When practicable, pipe lines may be installed under tracks by boring or jacking.
4. Pipe lines shall be located, where practicable, to cross tracks at approximately right angles thereto. Pipe lines placed under railway bridges or closer than 25 feet to any portion of a railroad bridge must be buried beneath the ground enclosed within an approved casing.
5. Crossings, where possible, shall be located where the ground surface slopes downward away from the railway.
6. Any replacement of a carrier pipe or a casing pipe shall be considered a new installation, subject to the requirements of these specifications.

**CASINGS -**

1. The casing pipe and joints shall be of metal and shall be of rigid, leak-proof construction. Thickness of pipe shall conform to the requirements of table 1 and shall have joints of either screw, welded or riveted type. Casing shall be galvanized or shall be dipped in preservative material and thoroughly coated inside and outside. If preservative material cannot be used inside of casing, then the casing shall be at least one gage or 1/16" thicker than otherwise required.
2. The inside diameter of the casing pipe shall be at least 2 inches greater than the largest outside diameter of the carrier pipe, joints or couplings. It shall, in all cases, be great enough to allow the carrier pipe to be removed subsequently without disturbing the casing pipe or roadbed.
3. Casing will extend a minimum distance of 25 feet on each side of center line of track, measured at right angles, or to toe of fill where fill extends beyond 25 feet, unless otherwise authorized by the Cont. officer. If additional tracks are constructed in the future, the casing shall be extended correspondingly.
4. Casing shall be so installed as to prevent formation of a waterway under the railway. It shall have uniform bearing throughout its length and shall slope toward one end.
5. Casing pipe shall be so constructed as to prevent leakage of any matter from the casing throughout its length under track and right of way, except at ends of casing where ends are left open, or through vent pipes when ends are sealed to outside of carrier pipe.
6. Where ends of casing are at or above ground surface and above high water level they may be left open, providing drainage is afforded in such a manner that leakage will be conducted away from railway tracks or structure. Where proper drainage is not provided, the ends of casing shall be sealed.
7. Where ends of casing are below ground, they shall be suitably sealed to outside of carrier pipe.
8. Casing pipe, when sealed, shall be properly vented at both ends with vent pipes of sufficient diameter to permit free evaporation of water or moisture and to prevent internal pressures, but in no case shall they be less than 2 inches in diameter. Vent pipes shall be welded to top of casing and shall extend not less than 4 feet above ground surface as shown on Sht. 92. The outlets shall be properly screened. at their tops.