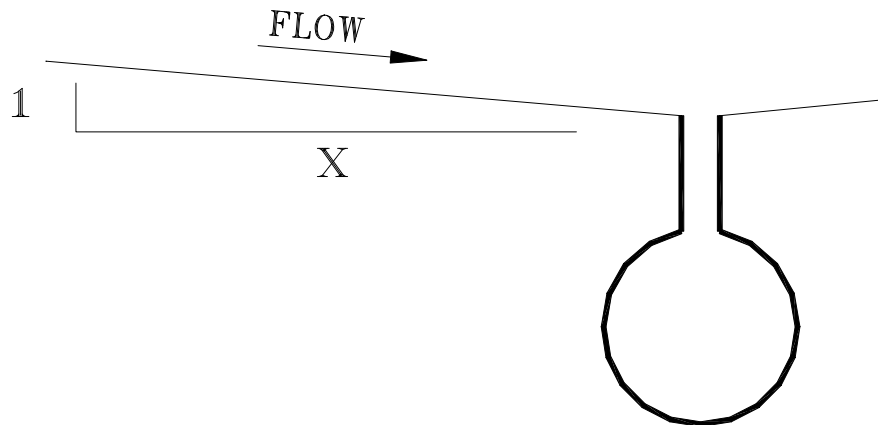


DURASLOT[®] Inlet Hydraulics

DURASLOT surface drains have the same inlet hydraulics as that of CMP slotted type drains. A 1 3/4" wide opening runs the length of the pipe and special coupler bands provide for a continuous slot. For curb and gutter applications or flow in a triangular channel, the inlet acts as an orifice and the AISI Handbook¹ method can be used.

In most applications the slot is utilized to intercept sheet flow moving approximately perpendicular to the length of the slot. In this case the slot acts as a weir. Some studies have been done by FHWA and CalTrans for this type of application. Their studies indicated that at water depths ranging from 0.38in to 0.56in the slot can accommodate 0.025 CFS of water with no bypass. At a test system capacity of 0.04 CFS there was a small amount of bypass that occurred. To conclude a 'rule of thumb' has evolved. For conditions where sheet flow velocity is not extremely high (an exception would be a steep slope down to the slot), a slotted inlet of this type will handle a maximum of 0.04 cfs/foot of slot length.

The basic geometry of the testing layout – Grade = 1:X



¹ American Iron and Steel Institute – Handbook of Steel Drainage and Highway Construction Products, 5th ed., 1994, pages 218-223.