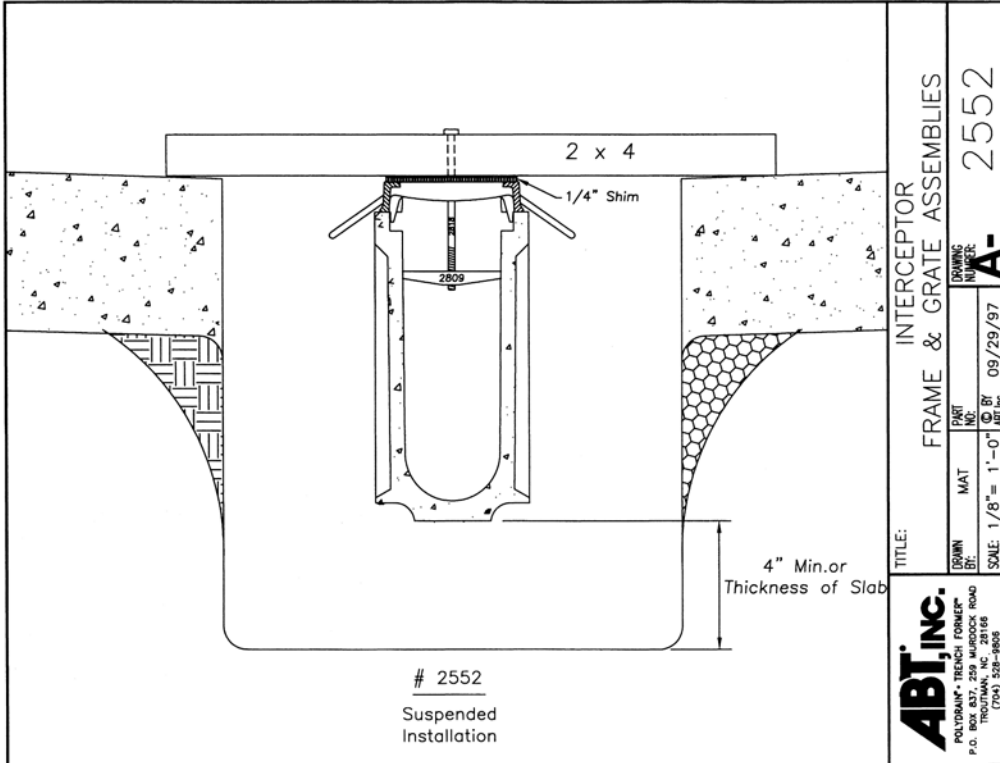


INTERCEPTOR

INSTALLATION GUIDE



ABT, INC.

TOOLS FOR INSTALLATION

Some or all of the tools may be required for your particular installation:

- 2 x 4 boards
- Abrasive blade (dry)
- Caulking gun
- Cold chisel
- Diamond blade & concrete Saw (wet)
- Drill and 1/4" or 3/8" masonry bit
- Duct Tape
- Grinder
- Large hammer
- Level
- Rubber mallet
- Sealant
- Shovel or spade
- Socket Set
- Square
- Stringline
- Toggles if hanging with longer bolts
- Vibrator
- Wooden or steel grade Stakes
- Wood Shims

SAFETY AND INSTALLATION TIPS

- **IMPORTANT - READ ALL INSTALLATION NOTES** pertaining to your particular type of installation **BEFORE** starting the job. *Avoid costly mistakes!*
- Trench excavation must allow for a minimum of 6 inches of concrete to be placed under and alongside the PolyDrain channel system. In all cases, the thickness of concrete must be equal to the thickness of the adjoining pavement.
- PolyDrain systems installed in asphalt pavement require the same concrete specifications as described above. As a rule of thumb, use same thickness as that required for gutter section.
- Place Interceptor grates on PolyDrain channels, masking the grate openings to prevent concrete from entering the channels (duct tape, plywood, etc.).
- Lay out the PolyDrain channels (in order of installation) parallel to the trench excavation prior to installation. Consult construction plans or shop drawings for correct numerical sequence. Each channel is marked with its corresponding channel number and arrows indicate the flow direction.
- Make pipe connections and set catch basins prior to channel installation.
- Begin installation at outlet or discharge end of each run and work upstream. Each side of every channel has an arrow indicating the direction of flow.
- If the system is to be installed in a structural or reinforced thick slab, follow the design engineer's recommendations for concrete and steel requirements.

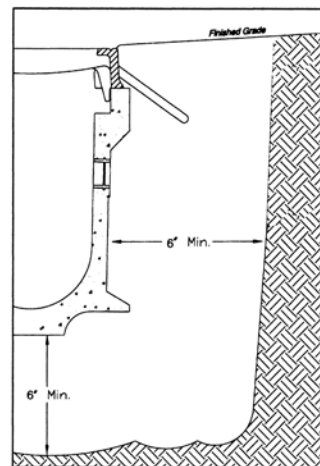
WARNING

When sawing or grinding sections of polymer concrete channel, wear gloves, protective eyeglasses and a respirator mask. Avoid breathing the airborne silica particles (created when sawing) as it may be harmful to your health. Protective eyeglasses or goggles should also be worn when drilling or chiseling.

EXCAVATION

Excavation must provide space for encapsulation concrete on ALL sides of the channel (minimum 6 inches or as shown on plans) and should be sloped approximately 0.6% downhill toward the catch basin (the same approximate slope as the PolyDrain itself). The encapsulation thickness (T) concrete test strength, reinforcement, and expansion joints must be made by the concrete design engineer.

Excavation for channels.

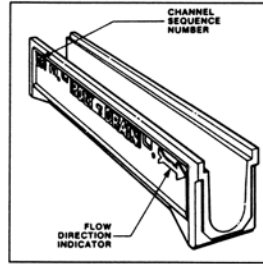


SYSTEM LAYOUT

Each channel displays a number on the outside indicating its numerical sequence in the system. Channels should be laid out, in numerical sequence, alongside the completed excavation.

Consult plans or shop drawings for the proper sequence.

Interceptor channel section



NOTE:

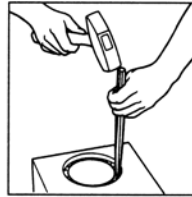
Always begin installation at outlet or discharge end of each run and work backwards (upstream). Each side of every channel has an arrow indicating the direction of flow. The arrow always points toward the outlet (downstream). Before actually installing the channels, you must follow the procedures for:

- Piping connections and preformed cutout removal;
- Catch basin installation; and
- Cutting polymer concrete and forming miter joints

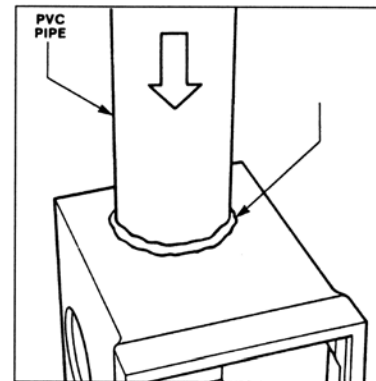
PIPING CONNECTIONS AND PREFORMED CUTOUT REMOVAL

All catch basins and selected channels are equipped with preformed cutouts for piping connections and channel/catch basin connections. These connections are prepared as follows:

1. Determine the cutout to be removed and mark with pencil.
2. Using a $\frac{1}{4}$ " or $\frac{3}{8}$ " masonry drill bit, drill holes around the perimeter on $\frac{1}{2}$ " - $\frac{3}{4}$ " centers.
3. Remove the remaining fins using a hammer and a cold chisel. A grinder may be used to dress or enlarge the hole for proper pipe or channel insertion.
4. Fit pipe or channel end into hole and apply a suitable sealant.
5. Preferably use a diamond tipped core bit of correct hole size.



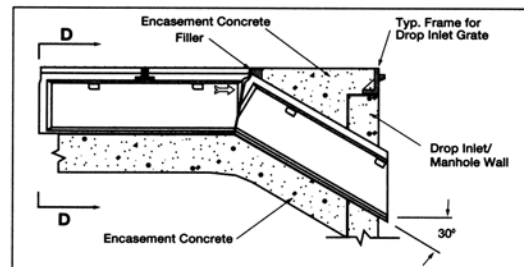
Remove fins after drilling holes around perimeter of cutout.



Fitting PVC pipe into catch basin.

VERTICAL MITER DETAIL

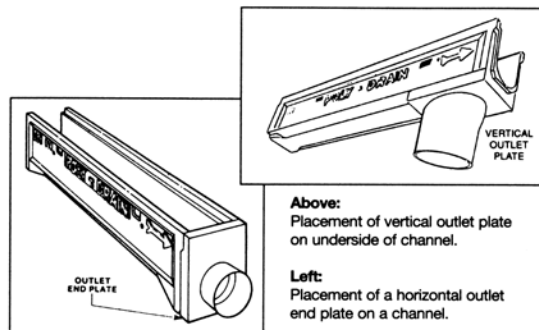
The prefabricated special channels allow the outlet to enter a standard catch basin. Place filler piece and solid covers on channel. Tape or seal to hold in place. Place front end against last grated channel in the run (also precut). Set outlet end against inlet wall and secure during concrete placement.



HORIZONTAL AND VERTICAL OUTLET END PLATES AND CLOSED END PLATES

Horizontal and Vertical Outlet End Plates with PVC outlets cast into them are constructed to fit the downstream end of selected channels. Horizontal Outlet End Plates may be modified to fit the upstream channel end by sawing the tongue off the channel and the End Plate then bonding them together with a suitable adhesive.

Closed End Plates fit either the upstream or the downstream end of the channels.

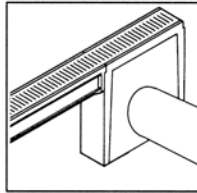


Above:
Placement of vertical outlet plate on underside of channel.

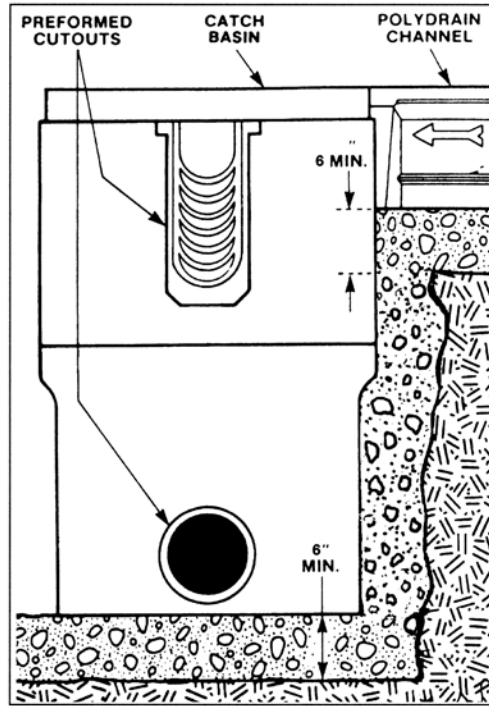
Left:
Placement of a horizontal outlet end plate on a channel.

POLYMER CONCRETE CATCH BASIN INSTALLATION

- Locate positions for catch basins and excavate. Remember, the depth of the bedding concrete must be equivalent to the pavement thickness (T) but not less than 6".
- Determine which preformed cutouts are to be used and remove prior to placing catch basin in position.
- Pour bedding concrete and set catch basin on top as soon as concrete is stiff enough to support it. Set catch basin to proper grade and alignment using stringline or level.
- Install pipe connections.
- Backfill with concrete around the sides of the catch basin up to the channel excavation level.



Typical 900 Series Catch Basin installation.

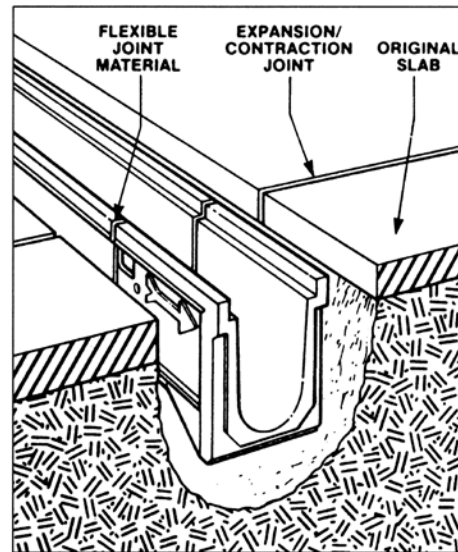


Detail of catch basin installation.

INSTALLATION OF CHANNELS ACROSS EXPANSION/CONTRACTION JOINTS

Follow this procedure when installing a channel across an expansion/contraction joint:

1. If possible, space expansion/contraction joints to the nearest 1 meter interval corresponding with the channel tongue and groove joint
2. If 1 meter interval is unacceptable, mark the channel where it crosses the expansion/contraction joint and saw the channel in two at that point.
3. Separate the two channel pieces by a width equivalent to the width of the expansion/contraction joint itself.
4. Fill this space with flexible joint material. Consult plans or engineer for recommendations on which type of caulk to use for your particular situation.

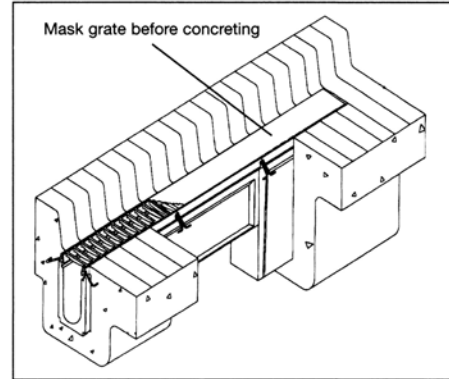


Channel installed across an expansion/contract joint.

GRATING INSTALLATION PRIOR TO CONCRETING

With all installation methods, Interceptor grates and frames must be in place prior to final concreting since they must be anchored into the surrounding concrete.

Place frame and grates onto channels, insuring anchor lugs are installed in all 4 corners of the frame. Mask grate openings to prevent concrete from entering the channels during placement.

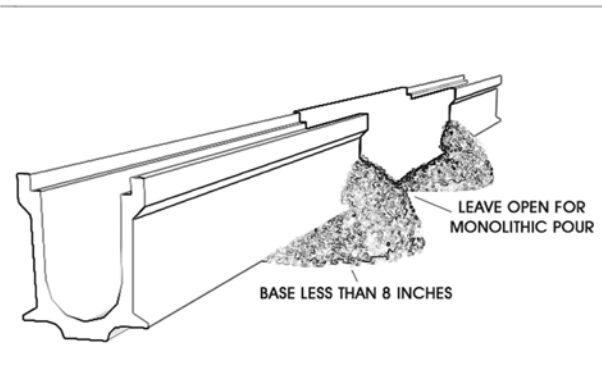
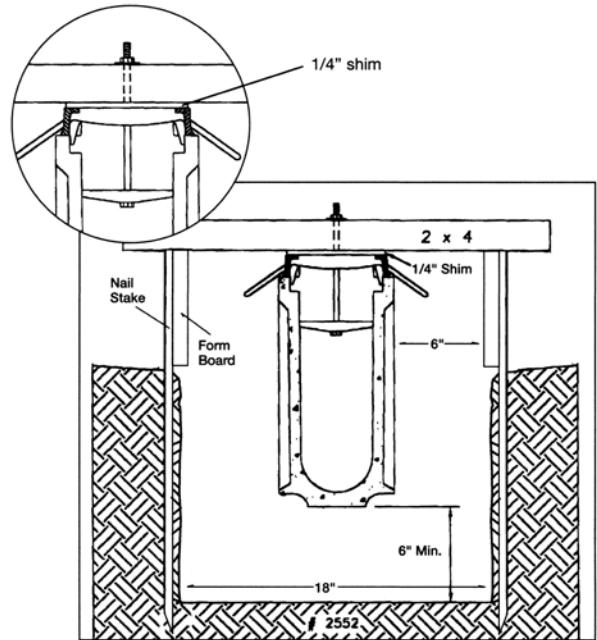


CHANNEL INSTALLATION BY SUSPENSION METHOD

This method is best suited for retrofit installations where an existing surface can serve to suspend the channel sections or in new construction where forming lumber is in place.

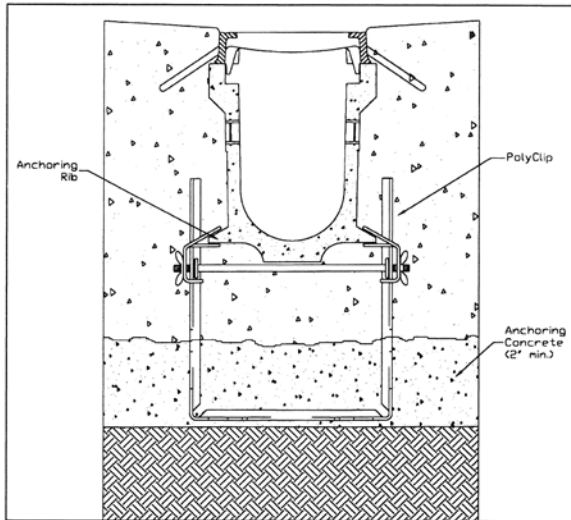
Place Interceptor grates onto the channels, installing 4 anchor lugs on the corners of the grates located at the channels' midpoint. Mask grate openings to prevent concrete from entering the channels during placement.

Secure 2" x 4" boards across channel using the Interceptor suspension method device, one assembly at each Red Dot. Position assembled channels in place, inserting remaining 4 anchor lugs into the outside corners of the grates. Secure 2" x 4" to supporting surface to prevent lift during concrete placement. Place and consolidate concrete under and around channels, then finish to proper grade. 2" x 4"s can be removed once concrete has become stiff enough to finish.



CHANNEL INSTALLATION BY BEDDING SLURRY METHOD WITH POLYWING HANGERS

When form boards are available, position form boards at final grade with a distance just greater than the channels between them. Using wing hangers, assemble hangers to channels and suspend them from the form boards (the wing hangers drop the channel allowing for placement of the Interceptor later). Place concrete around channels just above the anchoring rib on the channel. Remove hangers and form boards once concrete has cured. Place Interceptor grates on the channels, as described in the previous section, prior to final concrete placement.



CHANNEL INSTALLATION WITH POLYCLIP

The PolyClip consists of two securing clips (one for each side of the channel):

1. a "U" shaped, no-float support leg that maintains proper channel height and prevents channel floatation during the concrete pour; and
1. a threaded crossrod that keeps the PolyClip secured to the channel.

PolyClips are installed at the channel joints. Height adjustment is made by loosening the wingnut and sliding brackets up or down the U-legs. Tightening the wingnut fixes the height while, at the same time, drawing the channels together for a tight joint. Channels can then be secured to the subgrade either by pouring a non-structural anchor slab or by driving two rebar stakes (#3 or #4) through preformed holes in the U-leg.

Place Interceptor grates on the channels, as described in the previous section, prior to final concreting.

FINAL CONCRETING

NOTE:

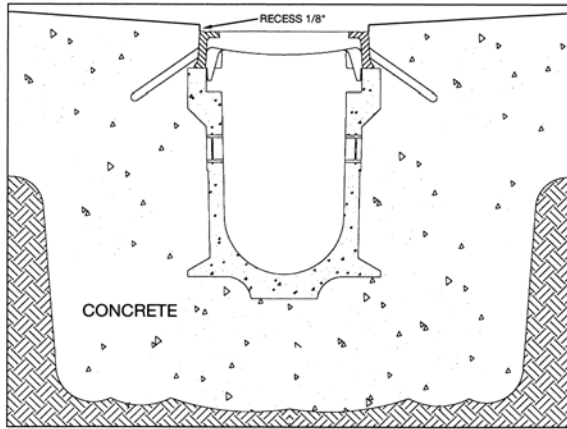
Concrete must conform to minimum standards for thickness (6" minimum) and must be placed following the same procedure whether the finished surface will be asphalt pavement or concrete.

REMINDER:

Concrete should be placed in the trench in a manner so as not to disturb the properly aligned channel system. **DO NOT CHUTE CONCRETE DIRECTLY AGAINST CHANNELS!**

USE OF A V-BOARD OVER THE CHANNELS MAY HELP INSURE UNIFORM PLACEMENT OF CONCRETE ON BOTH SIDES OF THE CHANNELS.

The top edge of the channels may be used as a screed rail during concrete placement. If a light, motorized vibratory screed is used, it is necessary to first make a placement of concrete to a height of approximately $\frac{1}{2}$ " above the lower anchoring rib of the channel. Then allow the concrete to set up before placing next layer and placing screed on channel edge.



It is recommended the finish level of the concrete be between $\frac{1}{8}$ " above the top of the grates to level with the top of the grate (or as shown on plans).

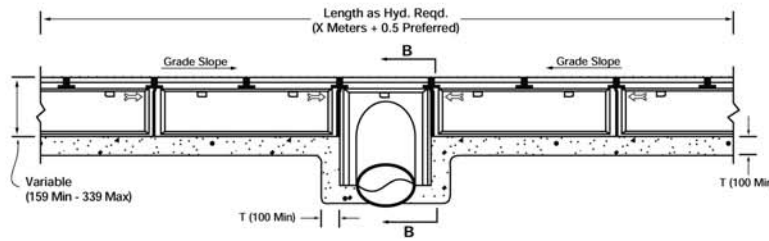
The finished cross slope to the trench should provide positive drainage flow into the channel system.

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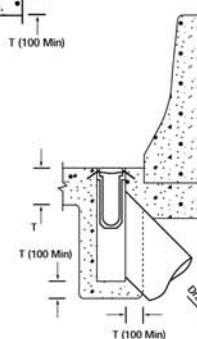
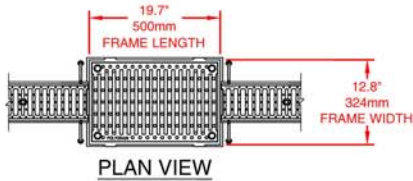
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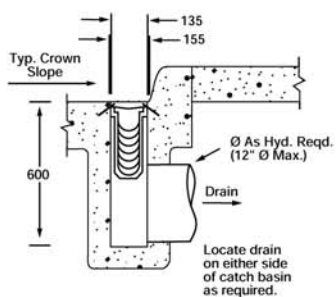
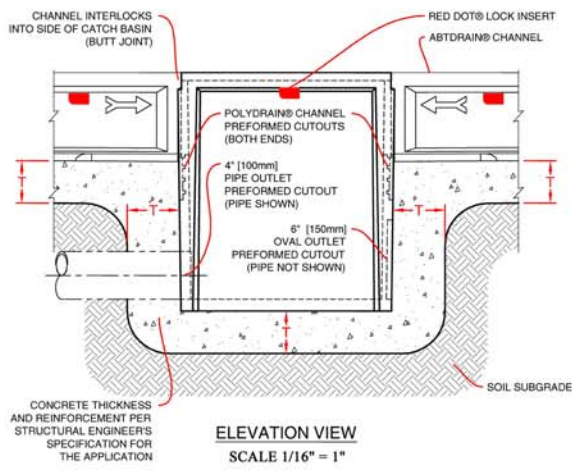
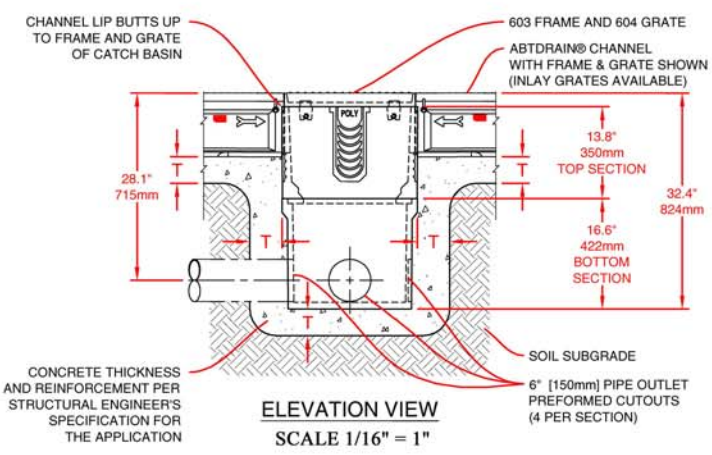
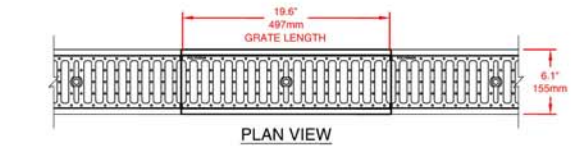
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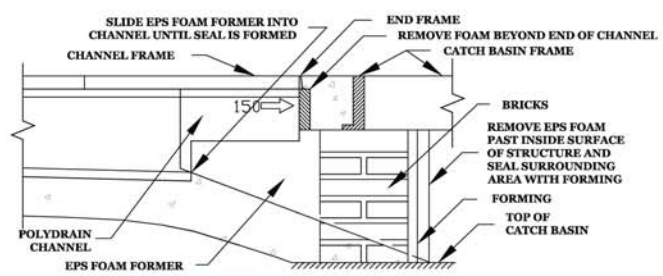
610 Large Catch Basin



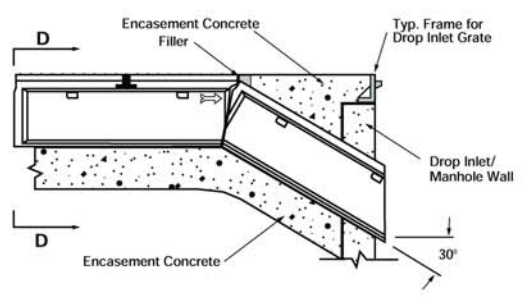
900 Series Small Catch Basin



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