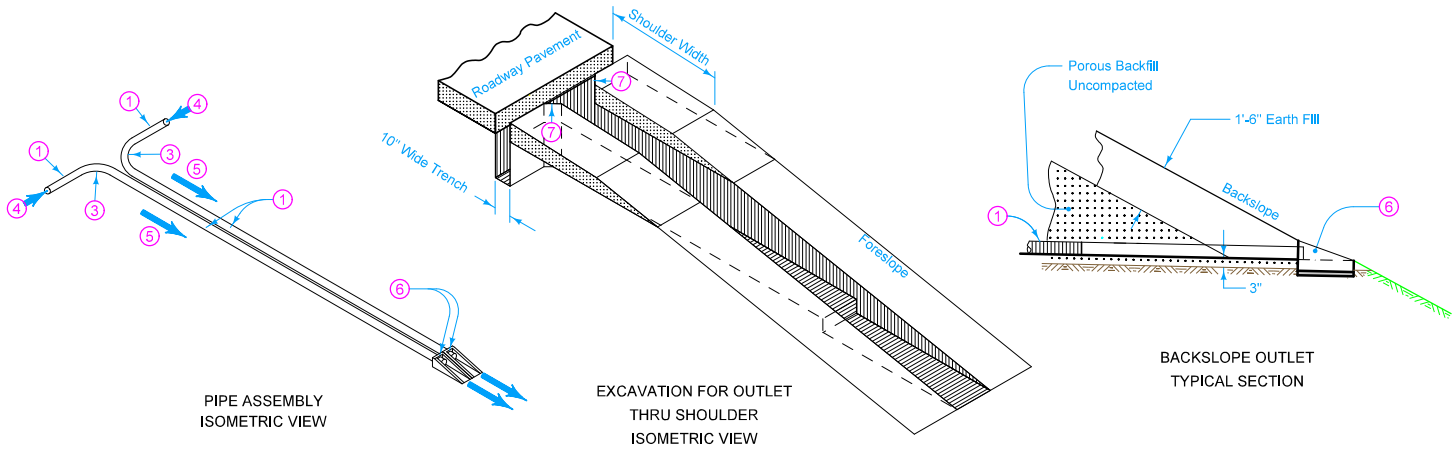


TYPICAL SECTION
LONGITUDINAL AND TRANSVERSE OUTLETS



Extend subdrain 3 inches minimum (6 inches maximum) into precast subdrain headwall. Connect using one of the following methods:
 -Grouted connection using a non-shrink grout complying with Materials I.M. 491.13.
 -Gasketed connection approved by the Engineer.

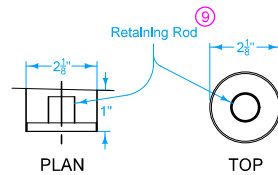
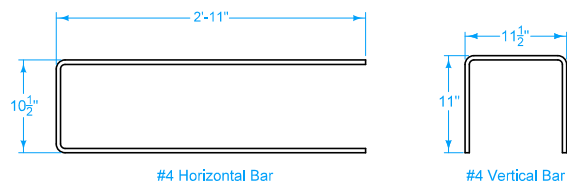
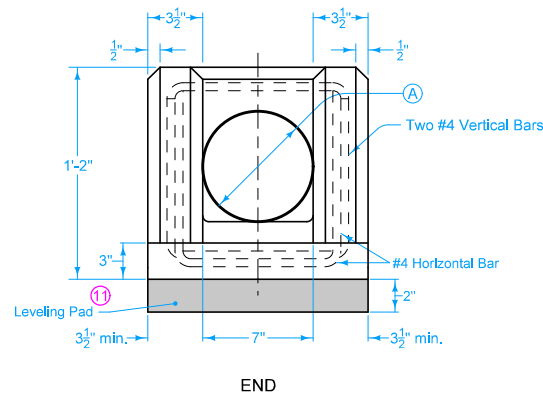
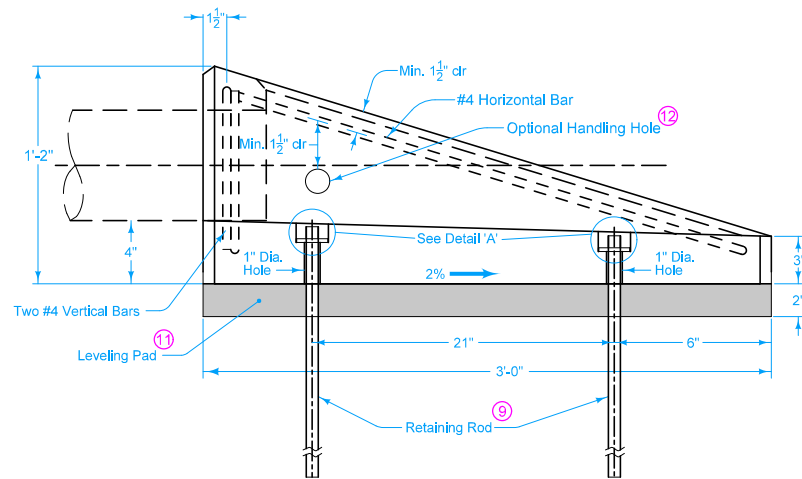
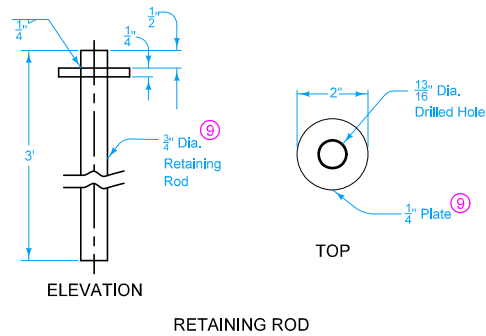
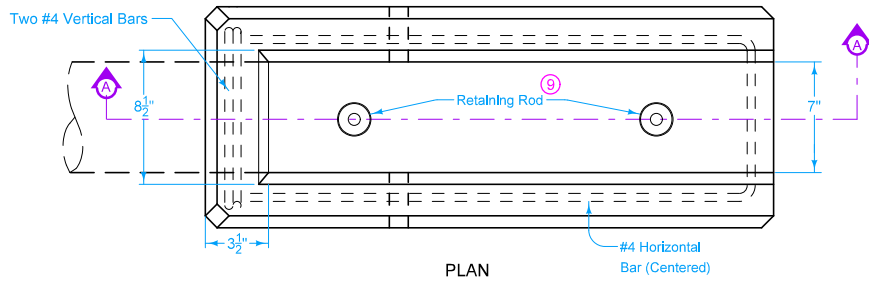
Shape adjacent slope to match slope of precast subdrain headwall.

- ① Perforated Subdrain (Polyethylene Corrugated Tubing).
- ② On projects where existing shoulder material is removed, replace the shoulder material according to Article 2502.03, C of the Standard Specifications.
- ③ 'Y' or 'T' connection will not be allowed. Place subdrain on 1 foot minimum radius.
- ④ Direction of flow.
- ⑤ 6 inch minimum drop in elevation between longitudinal subdrain and outlet. 12 inch minimum drop for projects using recycled PCC subbase.
- ⑥ Precast concrete headwall.
- ⑦ Bevel the trench to provide a minimum of 3 inches of porous backfill surrounding all portions of subdrain pipe.
- ⑧ Place class 'A' crushed stone or Special Backfill over outlet and carefully compact to avoid damaging outlet pipe.

Possible Contract Item:
Subdrain Outlet, DR-306

Possible Tabulation:
104-5C
104-9

| | | |
|---|---------------|--------------|
| IOWA DOT | REVISION | |
| | 1 | 10-16-18 |
| | DR-306 | |
| STANDARD ROAD PLAN | | SHEET 1 of 2 |
| REVISIONS: Modified drawing on sheet 2 to allow one size headwall to be cast. Modified circle note 9 and added circle note 12 on sheet 2. | | |
| APPROVED BY DESIGN METHODS ENGINEER | | |
| PRECAST CONCRETE HEADWALL FOR SUBDRAIN OUTLETS | | |



Comply with Section 2419 of the Standard Specifications.

- ⑨ ASTM A36 Steel galvanized according to ASTM A123 or ASTM F2329 after shop welding is complete.
- ⑩ After installing retaining rod, fill recess with bituminous material complying with ASTM C990 to prevent moisture infiltration.
- ⑪ Granular material complying with Section 4133 of the Standard Specifications.
- ⑫ Maximum diameter 2 inches. Fill hole with soil tight plug after placing headwall and before placing backfill.

| DIMENSION | 4" DIA PIPE | 6" DIA PIPE |
|-----------|-------------|-------------|
| ⑩ | 5" | 7" |

| | |
|---|---------------|
| STANDARD ROAD PLAN | REVISION |
| | 1 10-16-18 |
| | DR-306 |
| SHEET 2 of 2 | |
| REVISIONS: Modified drawing on sheet 2 to allow one size headwall to be cast. Modified circle note 9 and added circle note 12 on sheet 2. | |
| APPROVED BY DESIGN METHODS ENGINEER | |
| PRECAST CONCRETE HEADWALL FOR SUBDRAIN OUTLETS | |