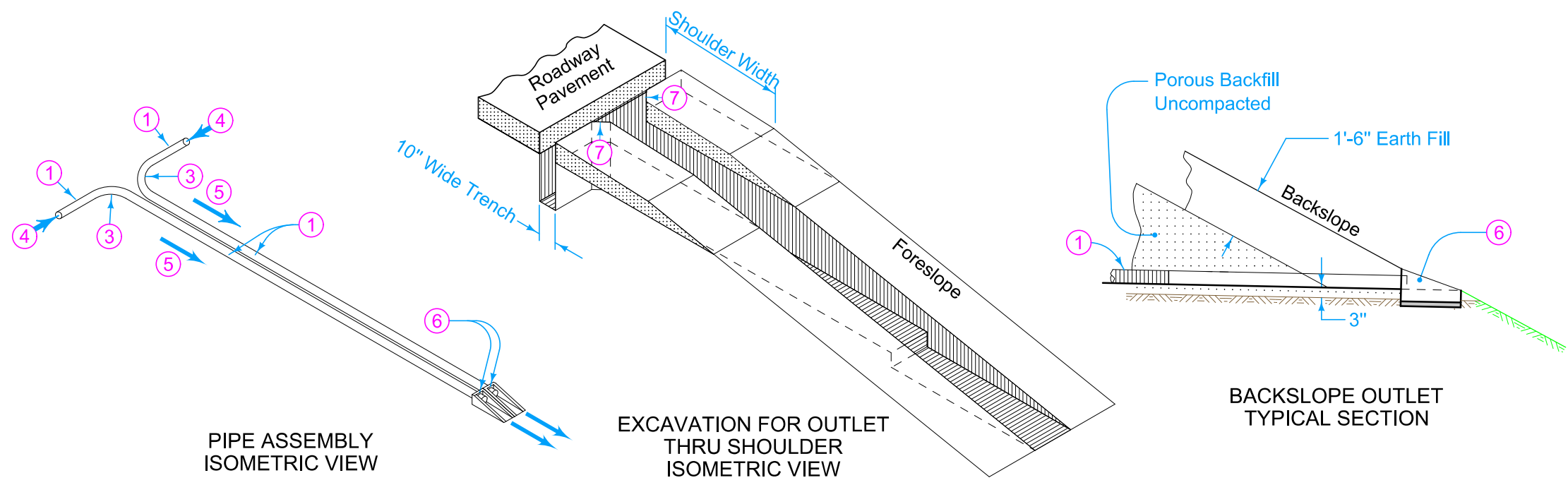


LONGITUDINAL AND TRANSVERSE OUTLETS



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.

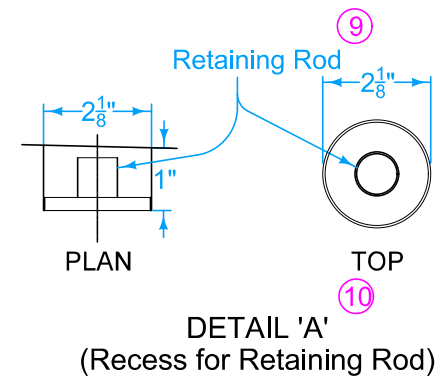
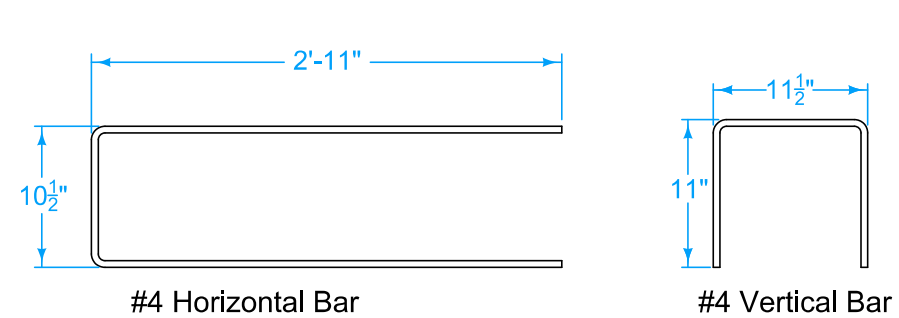
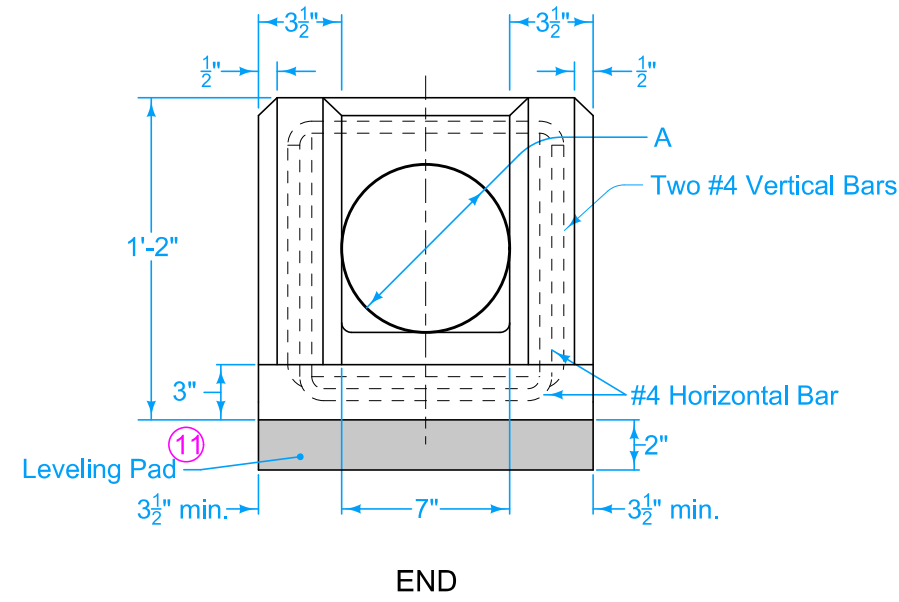
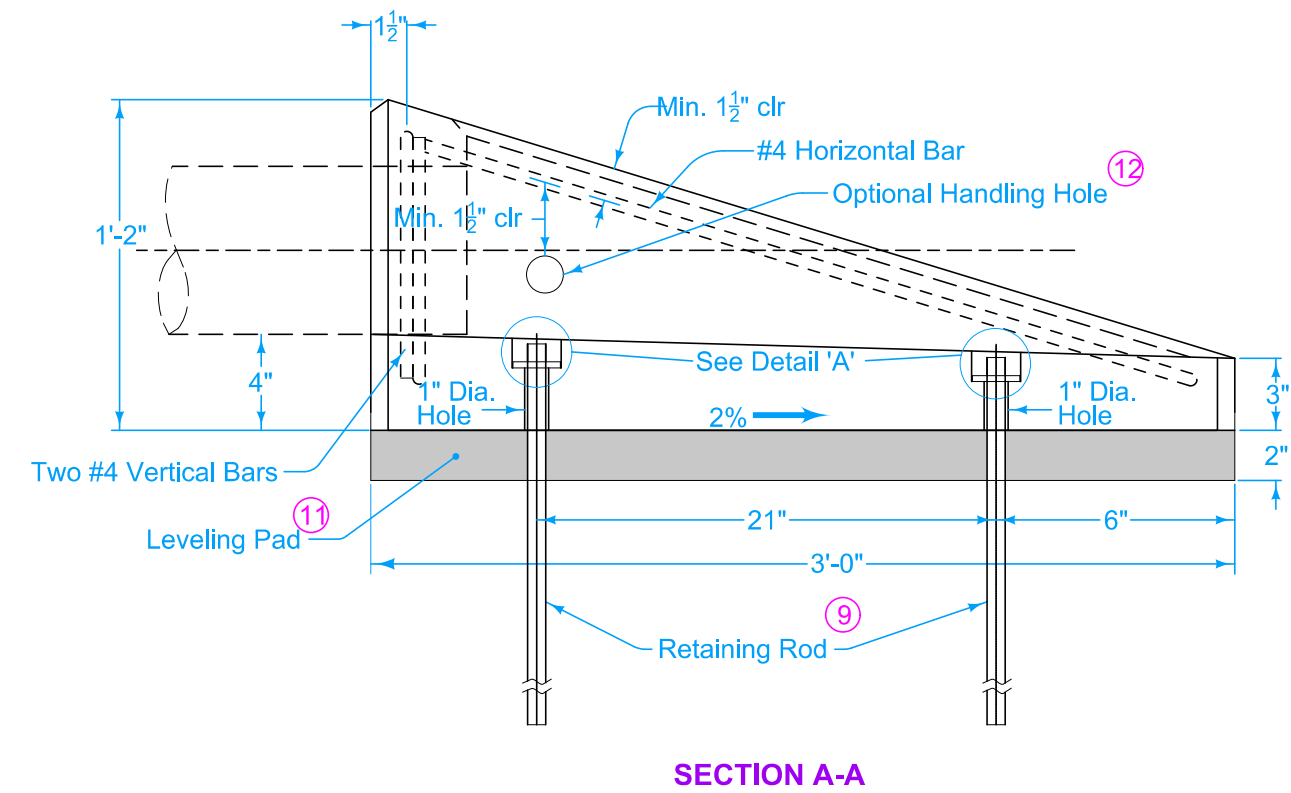
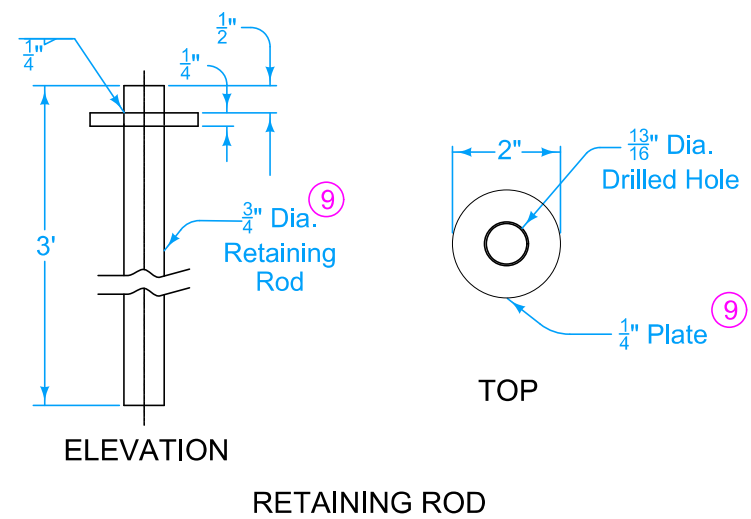
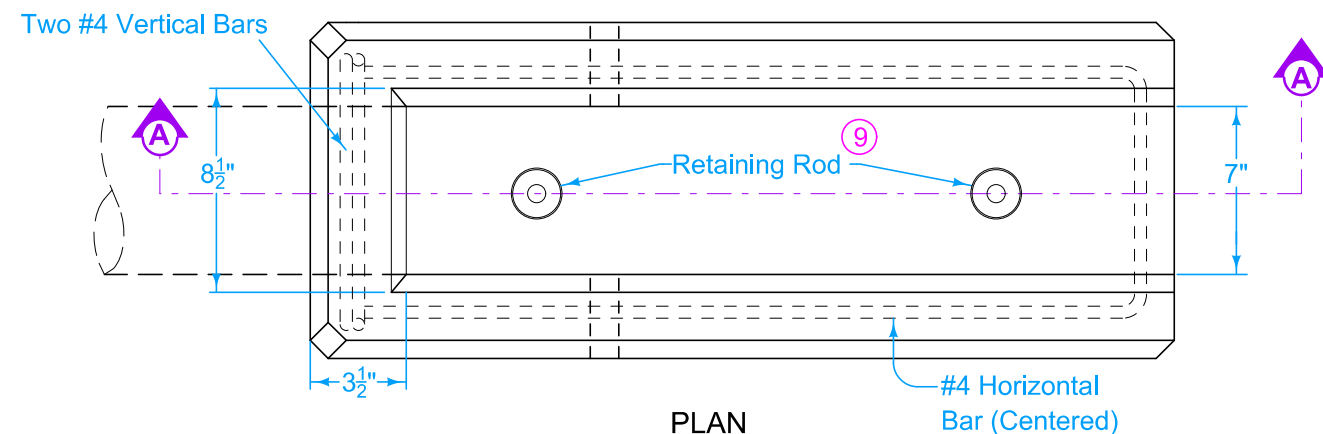
Shape adjacent slope to match slope of precast subdrain headwall.

- (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 Top Soil over outlet and carefully compact to avoid damaging outlet pipe.

Possible Contract Item:  
Subdrain Outlet, DR-306

Possible Tabulation:  
104-5C  
104-9

<b>IOWA DOT</b> <b>STANDARD ROAD PLAN</b>	REVISION	
	2	10-17-23
	<b>DR-306</b>	
SHEET 1 of 2		
REVISIONS: Change from granular cap to top soil cap.		
APPROVED BY DESIGN METHODS ENGINEER		
<b>PRECAST CONCRETE HEADWALL FOR SUBDRAIN OUTLETS</b>		



- 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
A	5"	7"

**IOWA DOT**

**STANDARD ROAD PLAN**

REVISIONS: Change from granular cap to top soil cap.

APPROVED BY DESIGN METHODS ENGINEER

**PRECAST CONCRETE HEADWALL FOR SUBDRAIN OUTLETS**

REVISION

2	10-17-23
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**DR-306**

SHEET 2 of 2