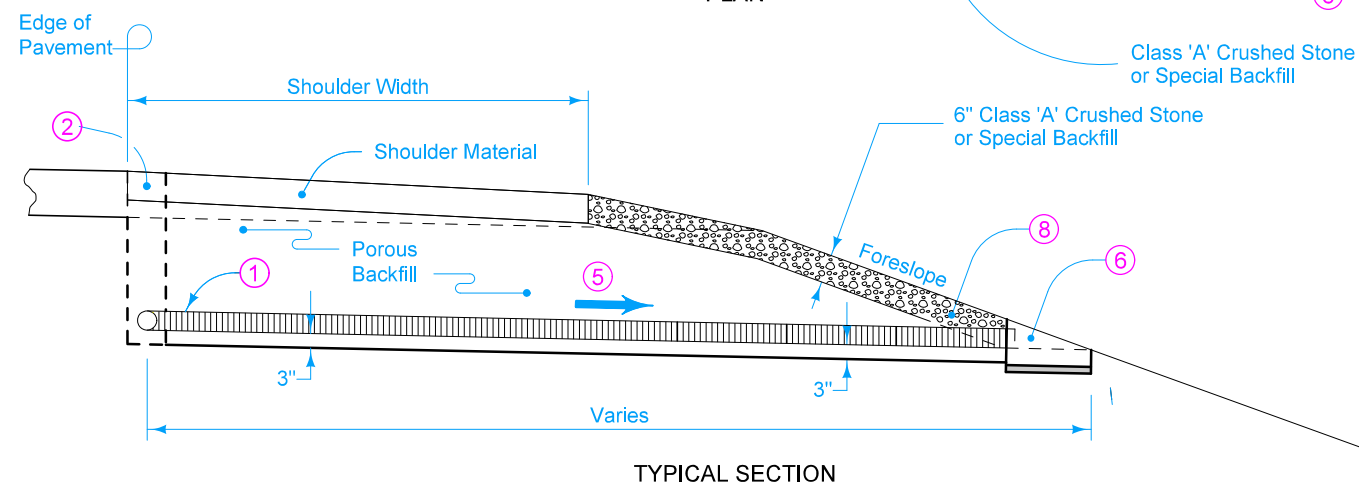
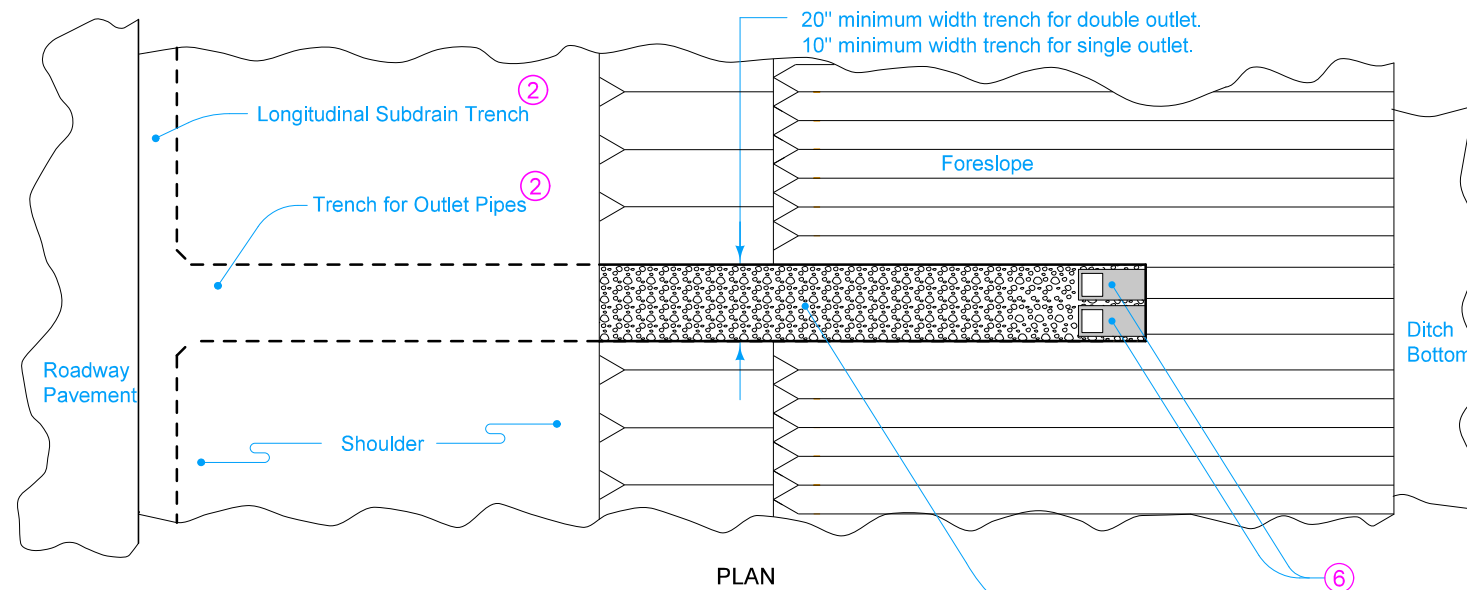
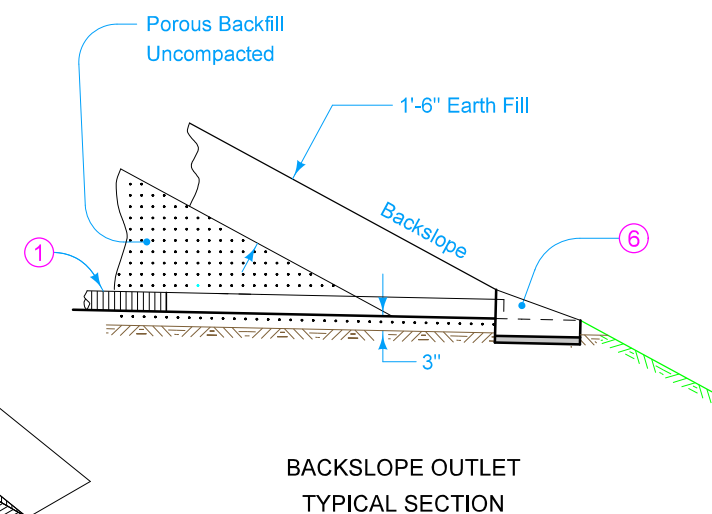
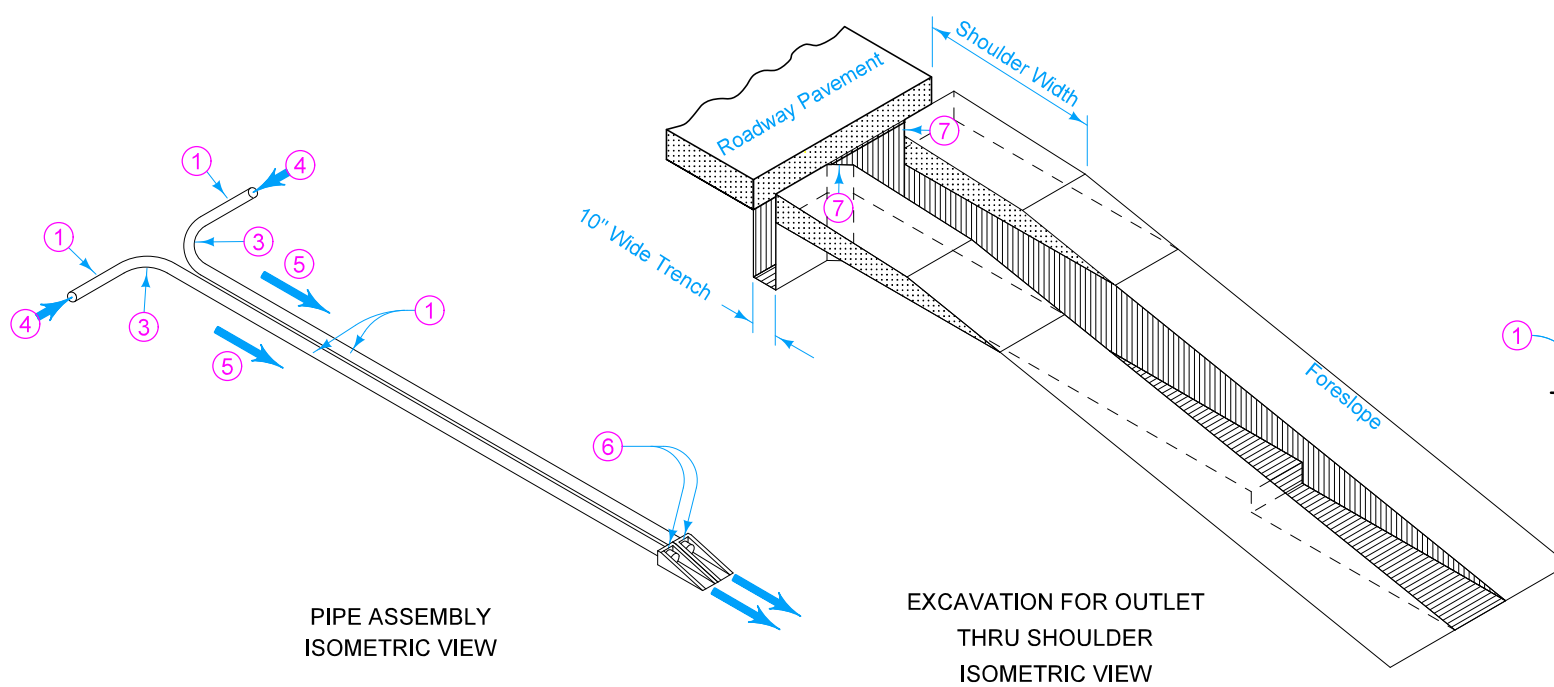


# DESIGNER INFORMATION



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

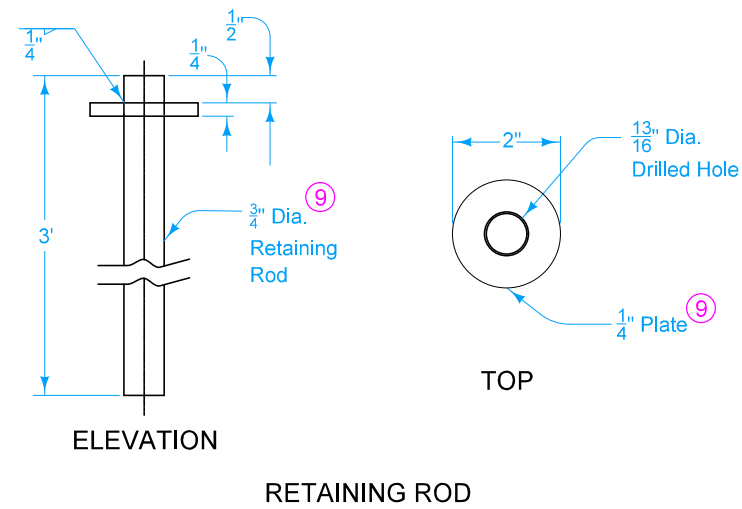
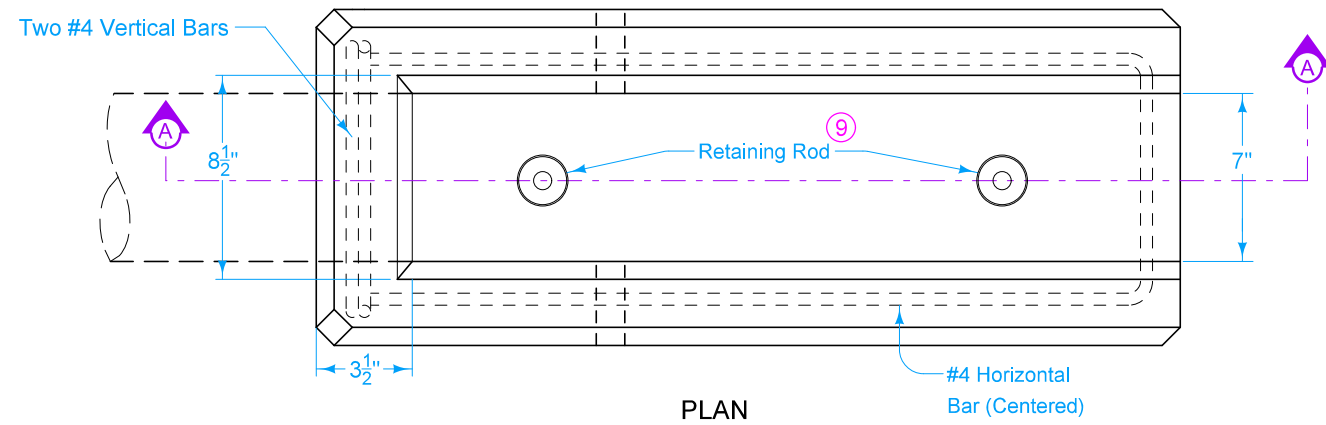
	REVISION	
	1	10-16-18
DR-306		
SHEET 1 of 2		

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.

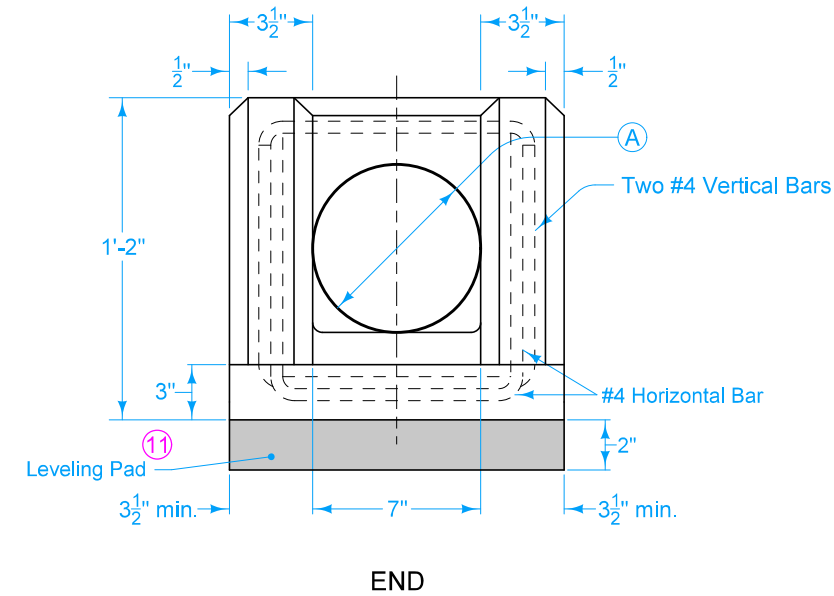
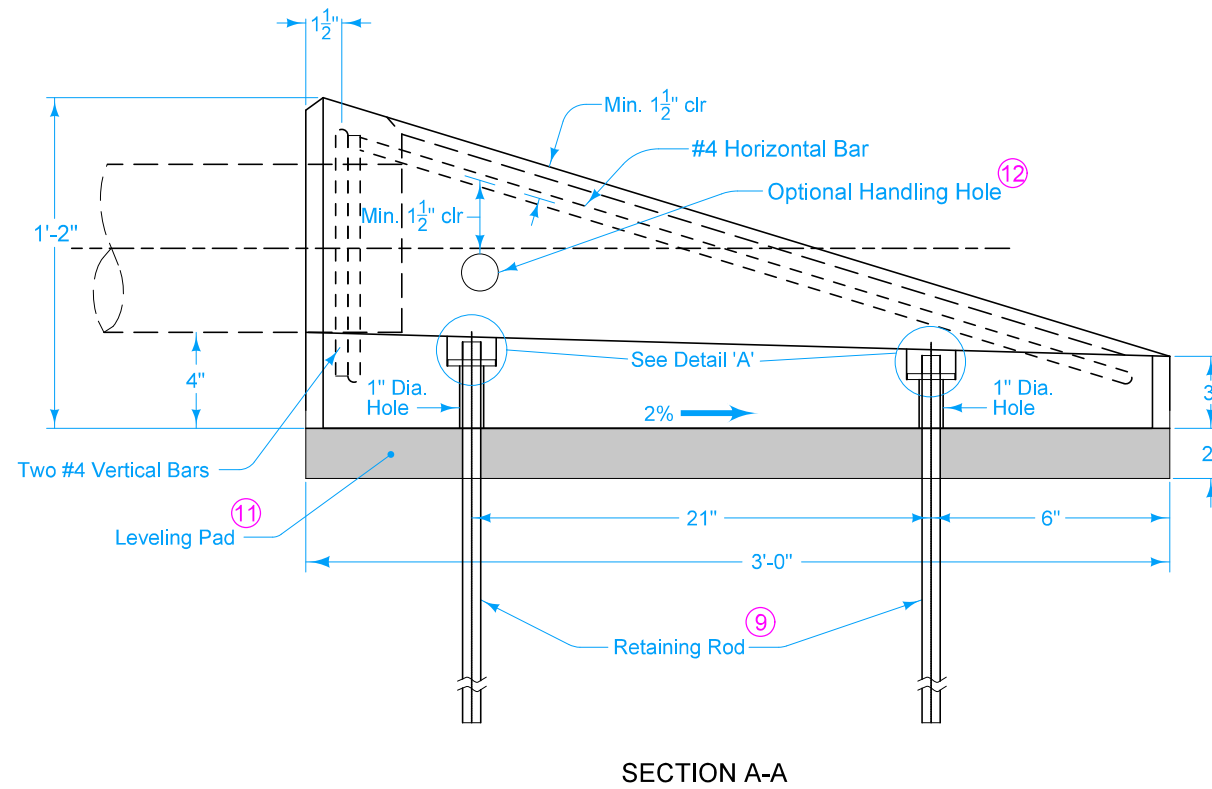
*Shawn Miller*  
APPROVED BY DESIGN METHODS ENGINEER

PRECAST CONCRETE HEADWALL  
FOR SUBDRAIN OUTLETS

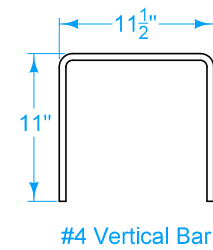
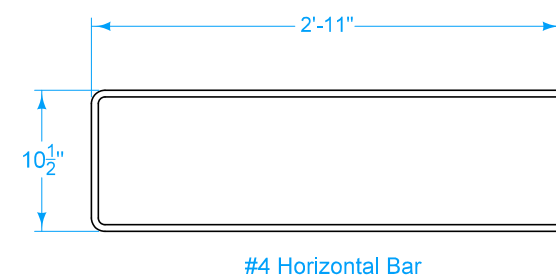
Comply with Section 2419 of the Standard Specifications.



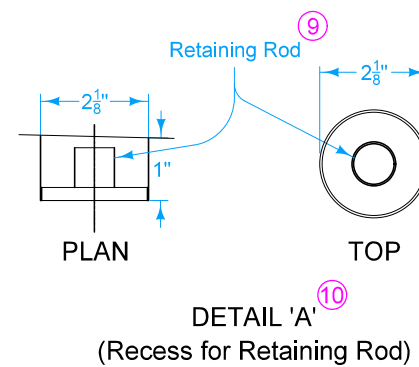
- ⑨ ASTM A36 Steel galvanized according to ASTM A123 or ASTM F2329 after shop welding is complete.
- ⑩ After installing retaining rod, fill recess with bituminous material complying with ASTM C990 to prevent moisture infiltration.
- ⑪ Granular material complying with Section 4133 of the Standard Specifications.
- 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
Ⓐ	5"	7"



BENT BAR SHAPES



 <b>STANDARD ROAD PLAN</b>	REVISION	
	1	10-16-18
	<b>DR-306</b> 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**