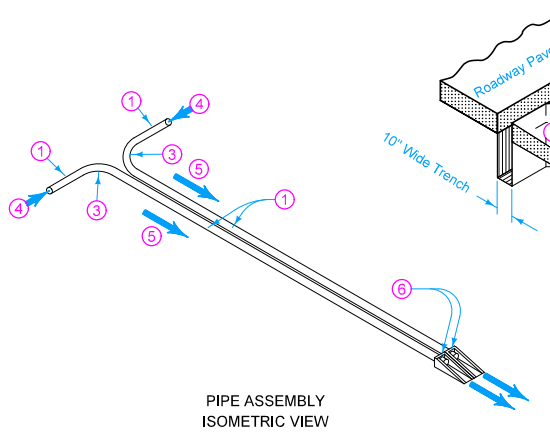
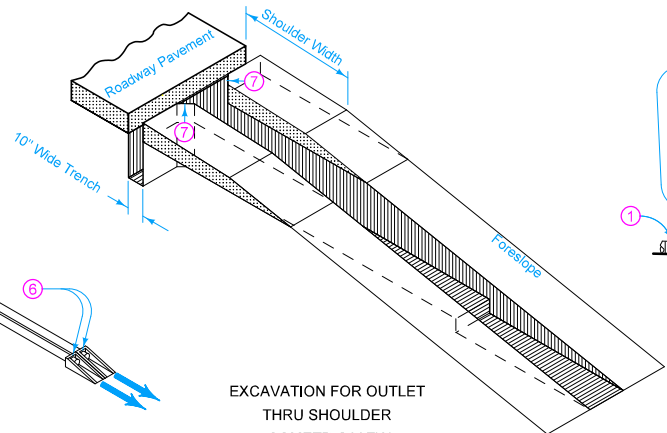


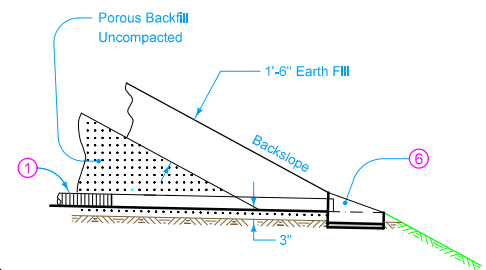
TYPICAL SECTION  
LONGITUDINAL AND TRANSVERSE OUTLETS



PIPE ASSEMBLY  
ISOMETRIC VIEW



EXCAVATION FOR OUTLET  
THRU SHOULDER  
ISOMETRIC VIEW



BACKSLOPE OUTLET  
TYPICAL SECTION

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.

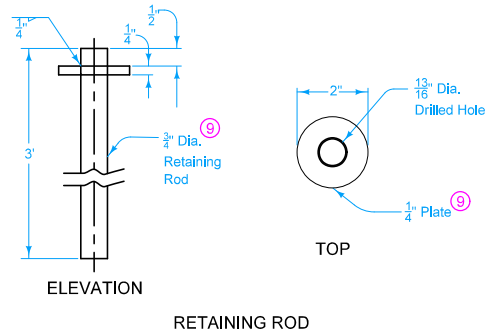
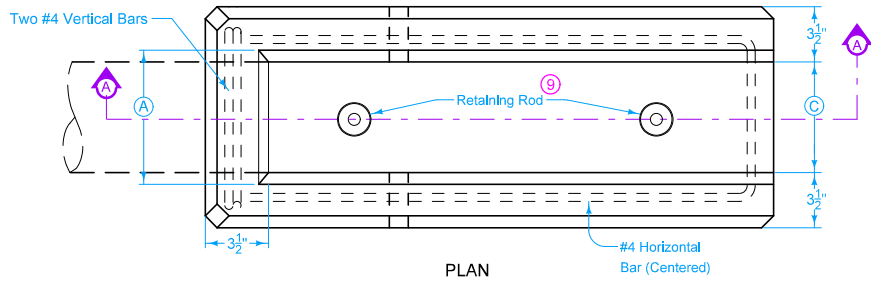
Possible Contract Item:  
Subdrain Outlet, DR-306

Possible Tabulation:  
104-5C  
104-9

<b>IOWA DOT</b>	REVISION	
	New	10-17-17
<b>STANDARD ROAD PLAN</b>		<b>DR-306</b>
		SHEET 1 of 2

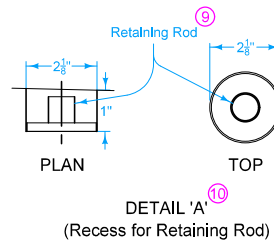
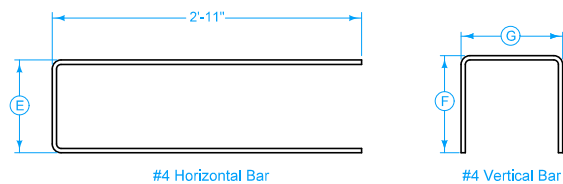
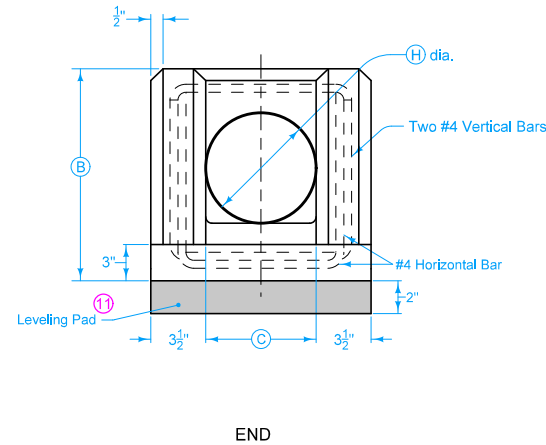
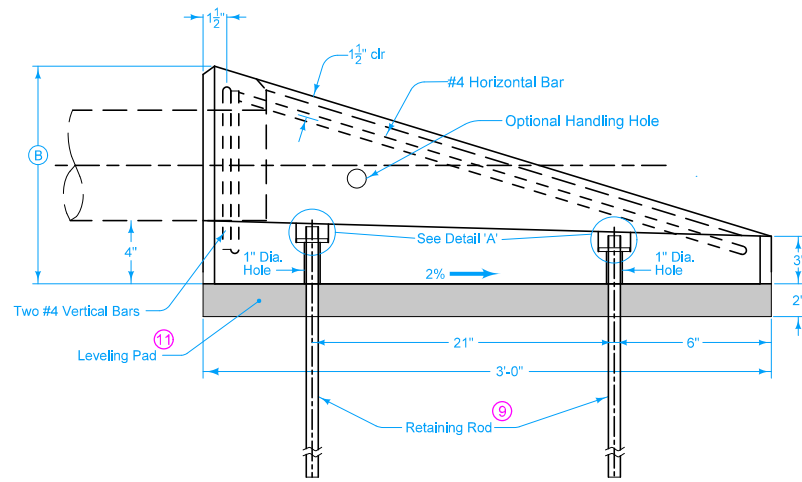
REVISIONS: New.  
*Brian Smith*  
APPROVED BY DESIGN METHODS ENGINEER

**PRECAST CONCRETE HEADWALL  
FOR SUBDRAIN OUTLETS**



Comply with Section 2419 of the Standard Specifications.

- ⑨ ASTM A36 Steel galvanized according to ASTM A123 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.



DIMENSIONS	4" DIA PIPE	6" DIA PIPE
(A)	6 1/2"	8 1/2"
(B)	1'-0"	1'-2"
(C)	5"	7"
(E)	8 1/2"	10 1/2"
(F)	9"	11"
(G)	9 1/2"	11 1/2"
(H)	5"	7"

<b>IOWA DOT</b>	REVISION	
	New	10-17-17
<b>STANDARD ROAD PLAN</b>	<b>DR-306</b>	
SHEET 2 of 2		
REVISIONS: New.		
<i>Brian Smith</i> APPROVED BY DESIGN METHODS ENGINEER		
<b>PRECAST CONCRETE HEADWALL FOR SUBDRAIN OUTLETS</b>		