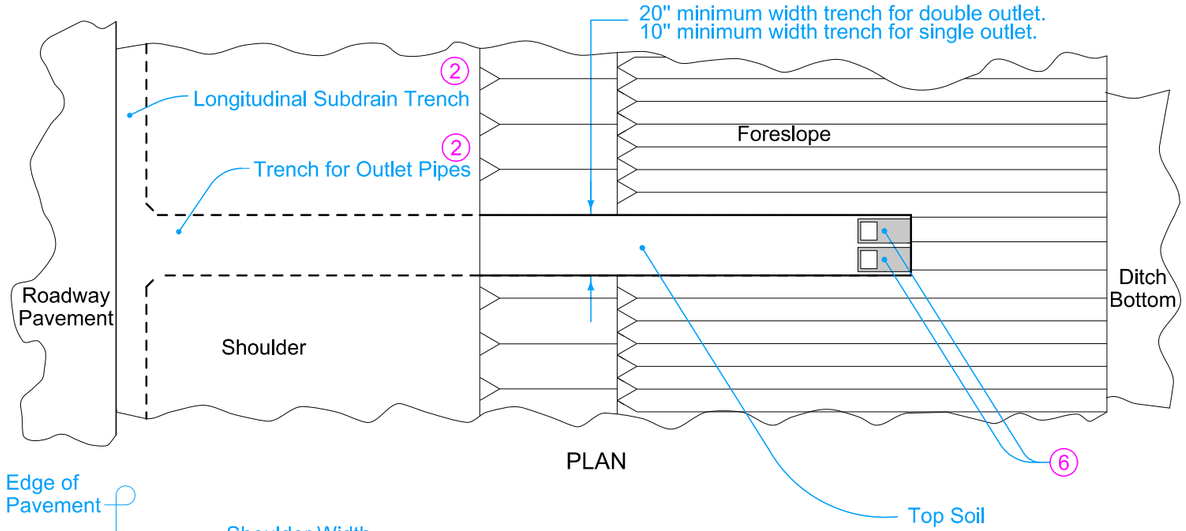
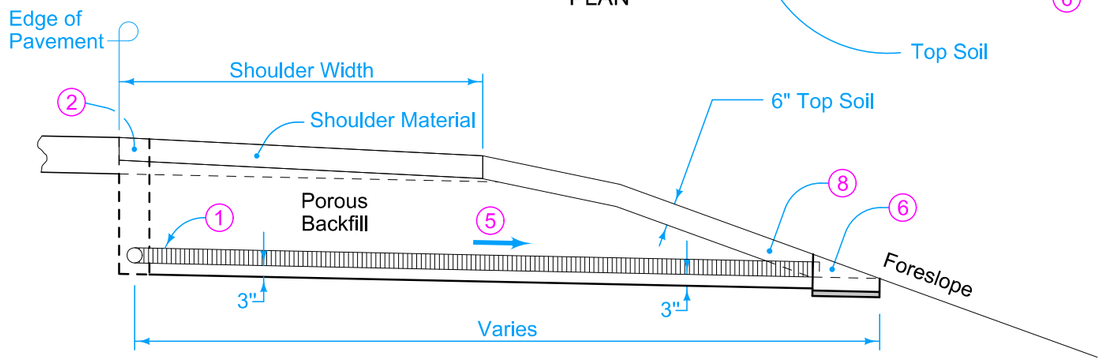
DESIGNER INFORMATION



PLAN



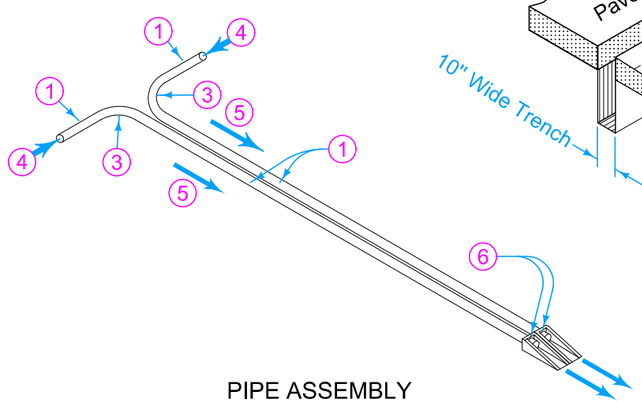
TYPICAL SECTION

LONGITUDINAL AND TRANSVERSE OUTLETS

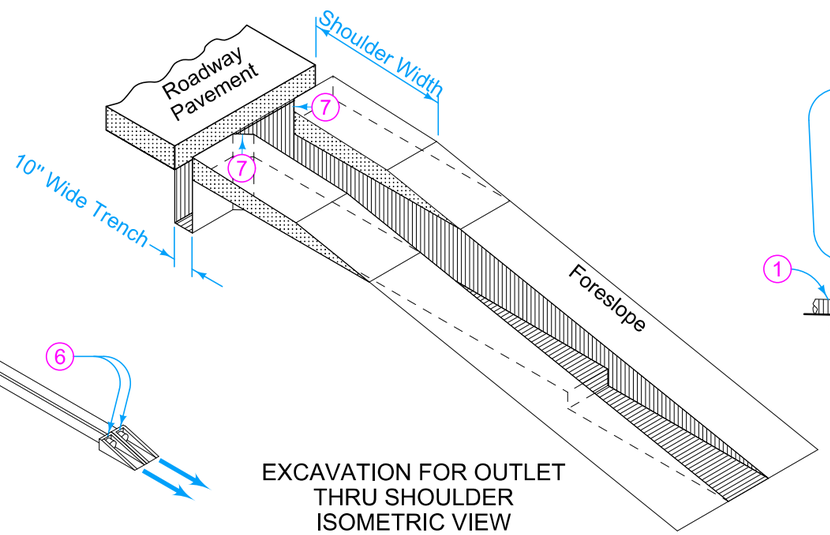
Extend subdrain 3 inches minimum (6 inches maximum) into precast subdrain headwall. Connect using one of the following methods:
-Grouted connection using a non-shrink grout complying with Materials I.M. 491.13.
-Gasketed connection approved by the Engineer.

Shape adjacent slope to match slope of precast subdrain headwall.

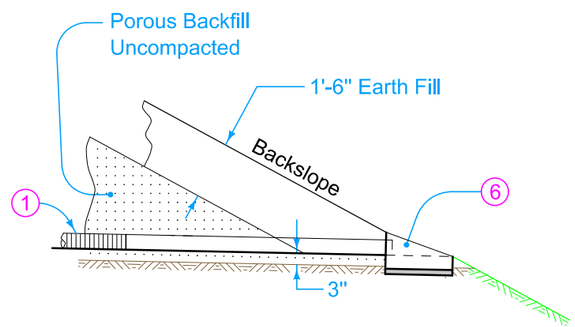
1. Perforated Subdrain (Polyethylene Corrugated Tubing).
2. On projects where existing shoulder material is removed, replace the shoulder material according to Article 2502.03, C of the Standard Specifications.
3. 'Y' or 'T' connection will not be allowed. Place subdrain on 1 foot minimum radius.
4. 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 Top Soil over outlet and carefully compact to avoid damaging outlet pipe.



PIPE ASSEMBLY
ISOMETRIC VIEW



EXCAVATION FOR OUTLET
THRU SHOULDER
ISOMETRIC VIEW



BACKSLOPE OUTLET
TYPICAL SECTION

Possible Contract Item:
Subdrain Outlet, DR-306

Possible Tabulation:
104-5C
104-9

IOWA DOT

STANDARD ROAD PLAN

REVISION	
2	10-17-23

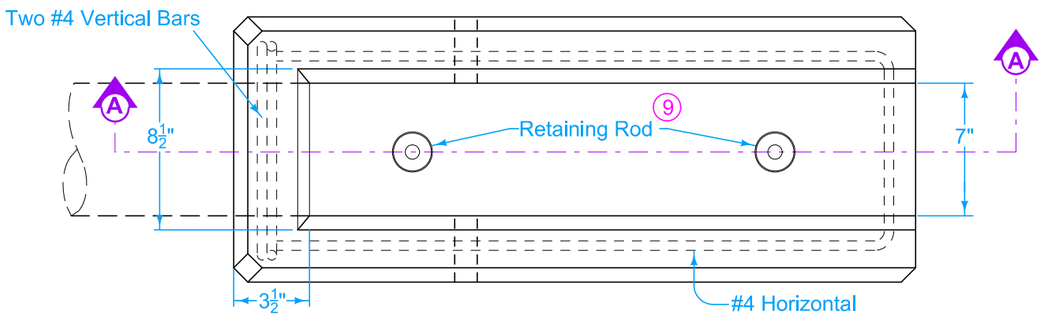
DR-306

SHEET 1 of 2

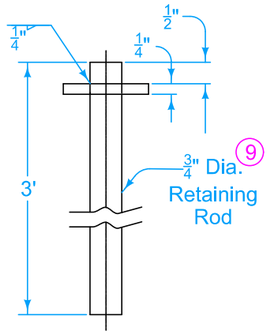
REVISIONS: Change from granular cap to top soil cap.

APPROVED BY DESIGN METHODS ENGINEER

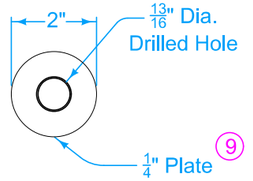
PRECAST CONCRETE HEADWALL FOR SUBDRAIN OUTLETS



PLAN

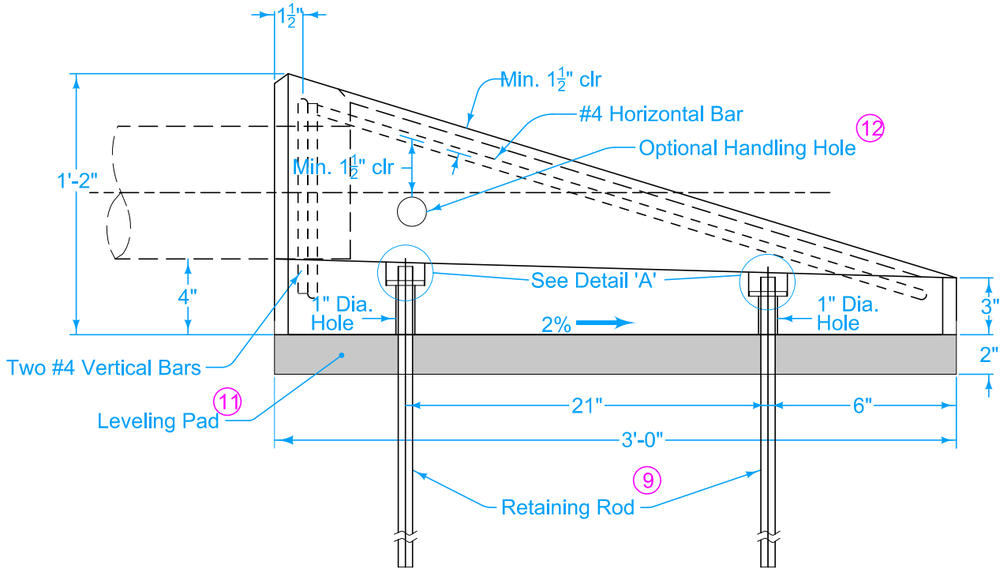


ELEVATION

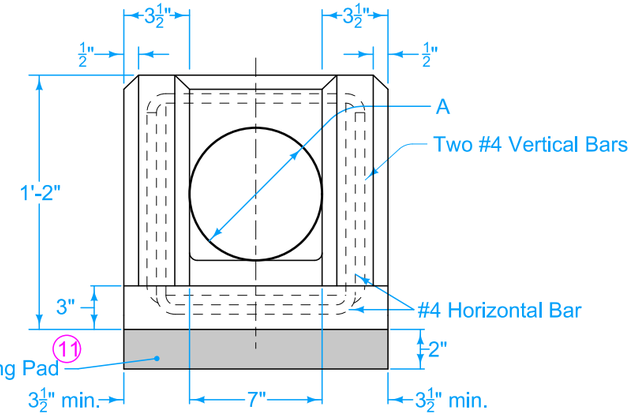


TOP

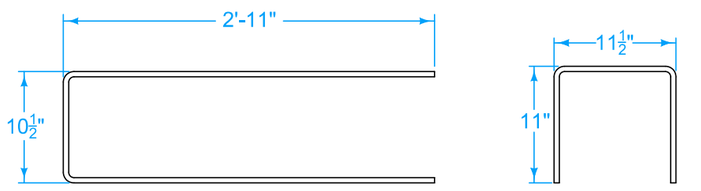
RETAINING ROD



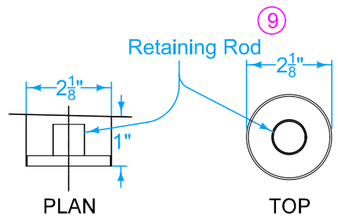
SECTION A-A



END



BENT BAR SHAPES



DETAIL 'A'
(Recess for Retaining Rod)

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

REVISION	
2	10-17-23

DR-306

SHEET 2 of 2

REVISIONS: Change from granular cap to top soil cap.

APPROVED BY DESIGN METHODS ENGINEER

PRECAST CONCRETE HEADWALL FOR SUBDRAIN OUTLETS