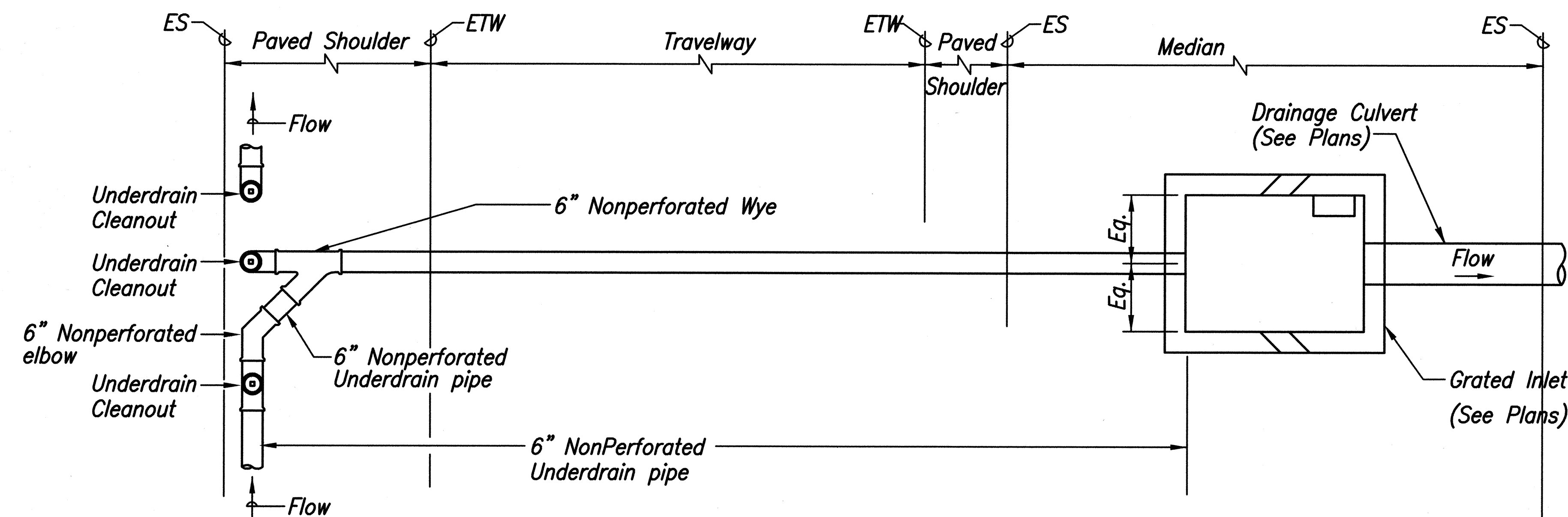
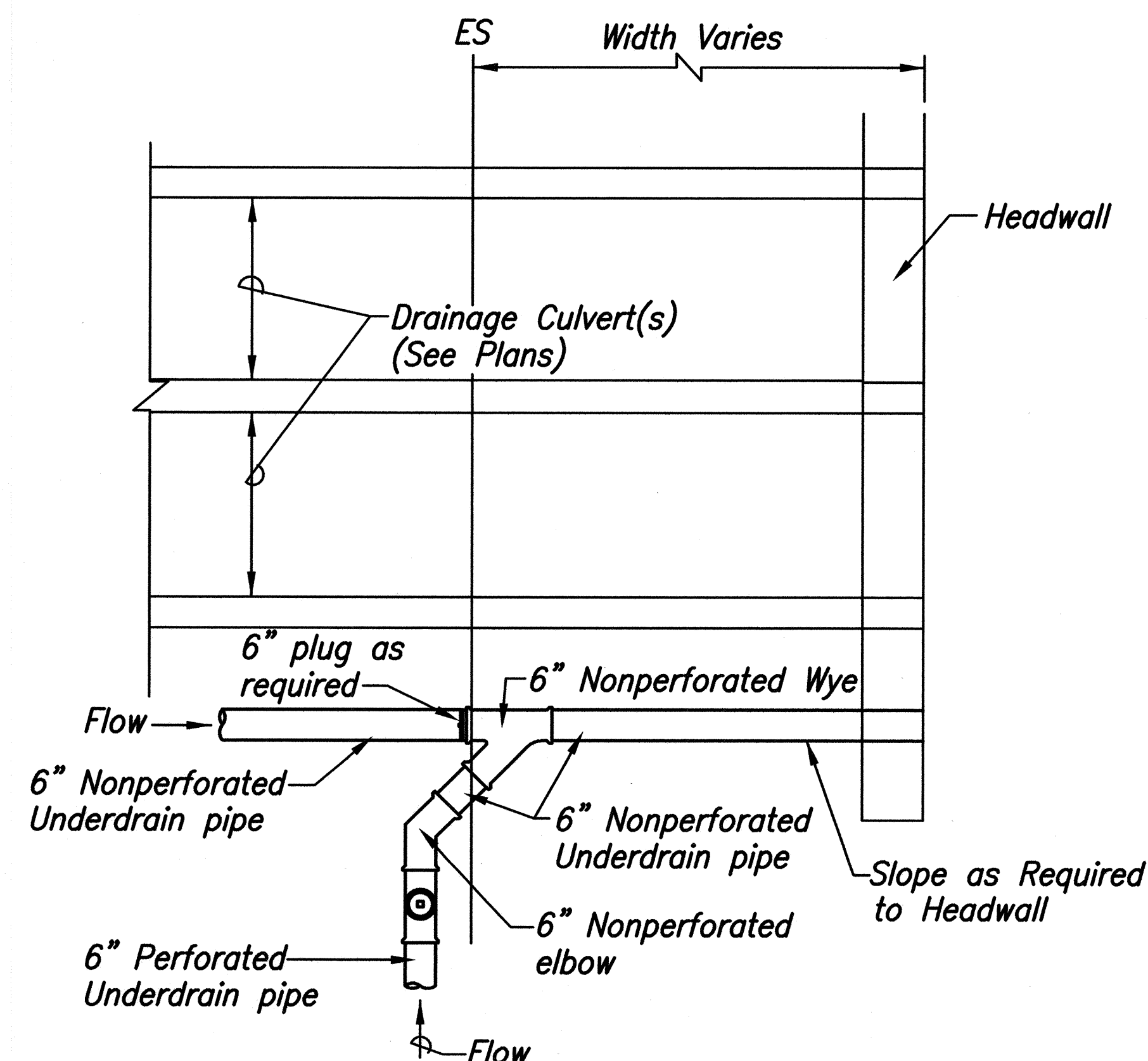
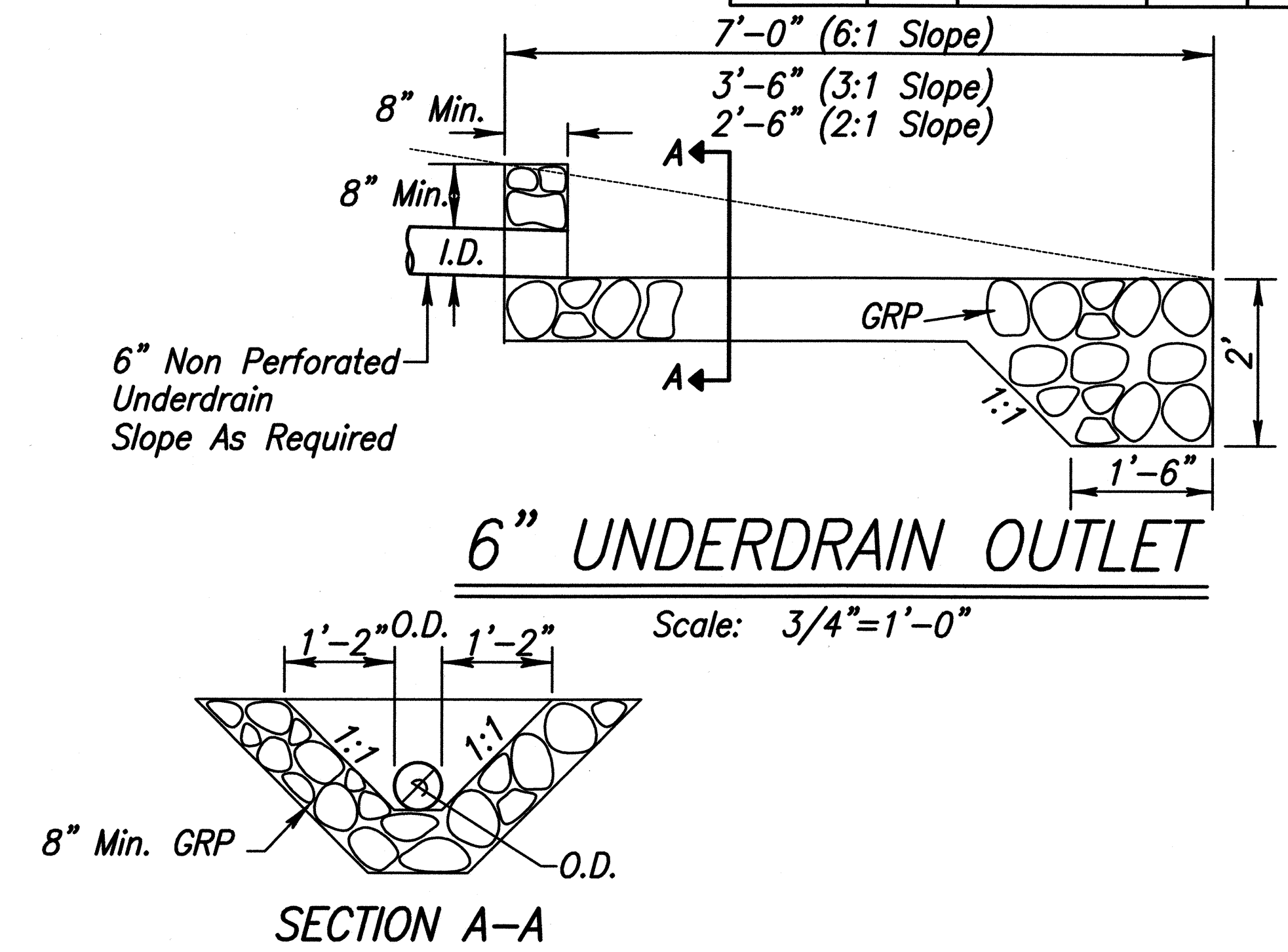


FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	62	180



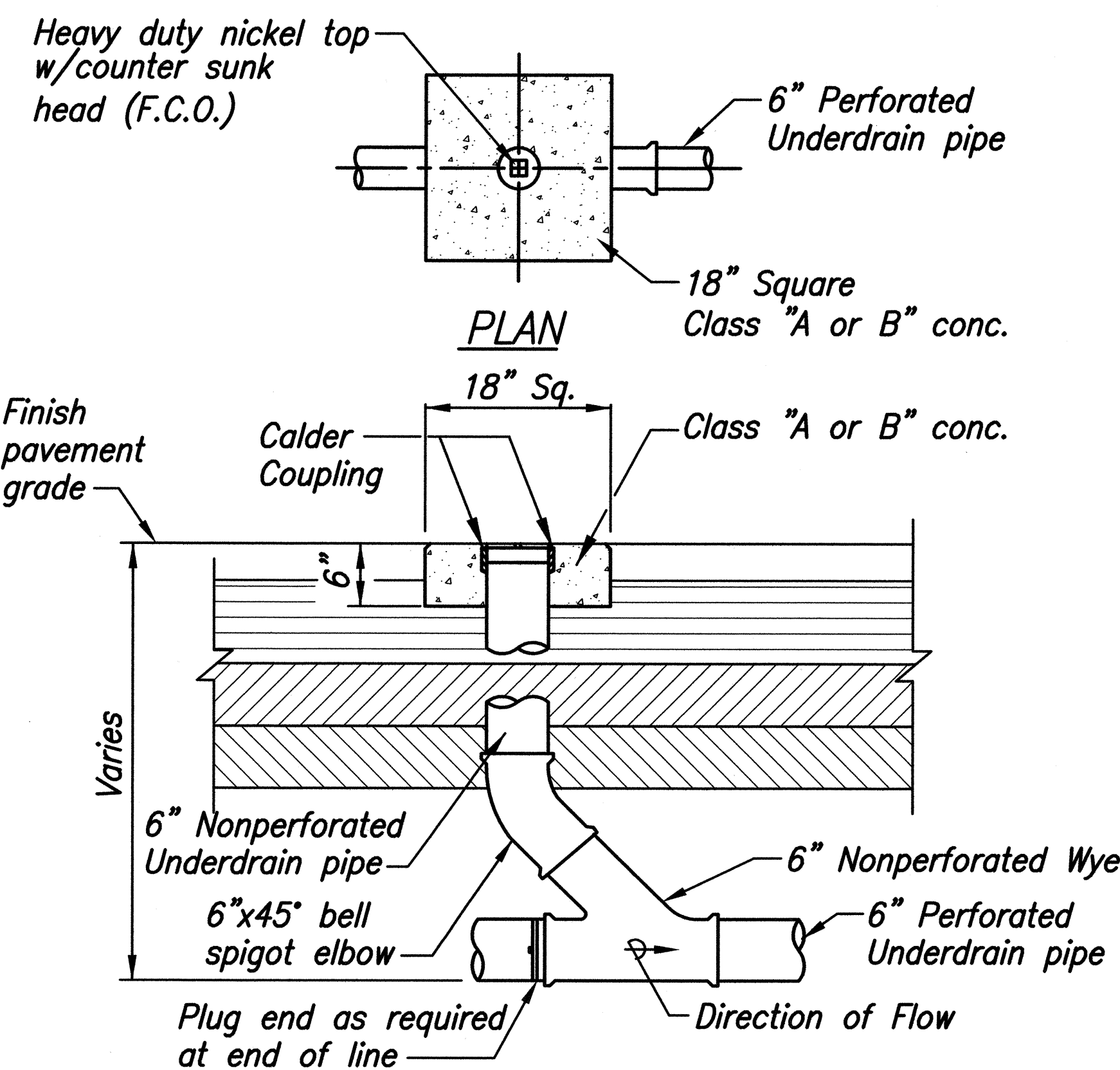
CONNECTION TO GRATED DROP INLET

Scale: 1/2"=1'-0"



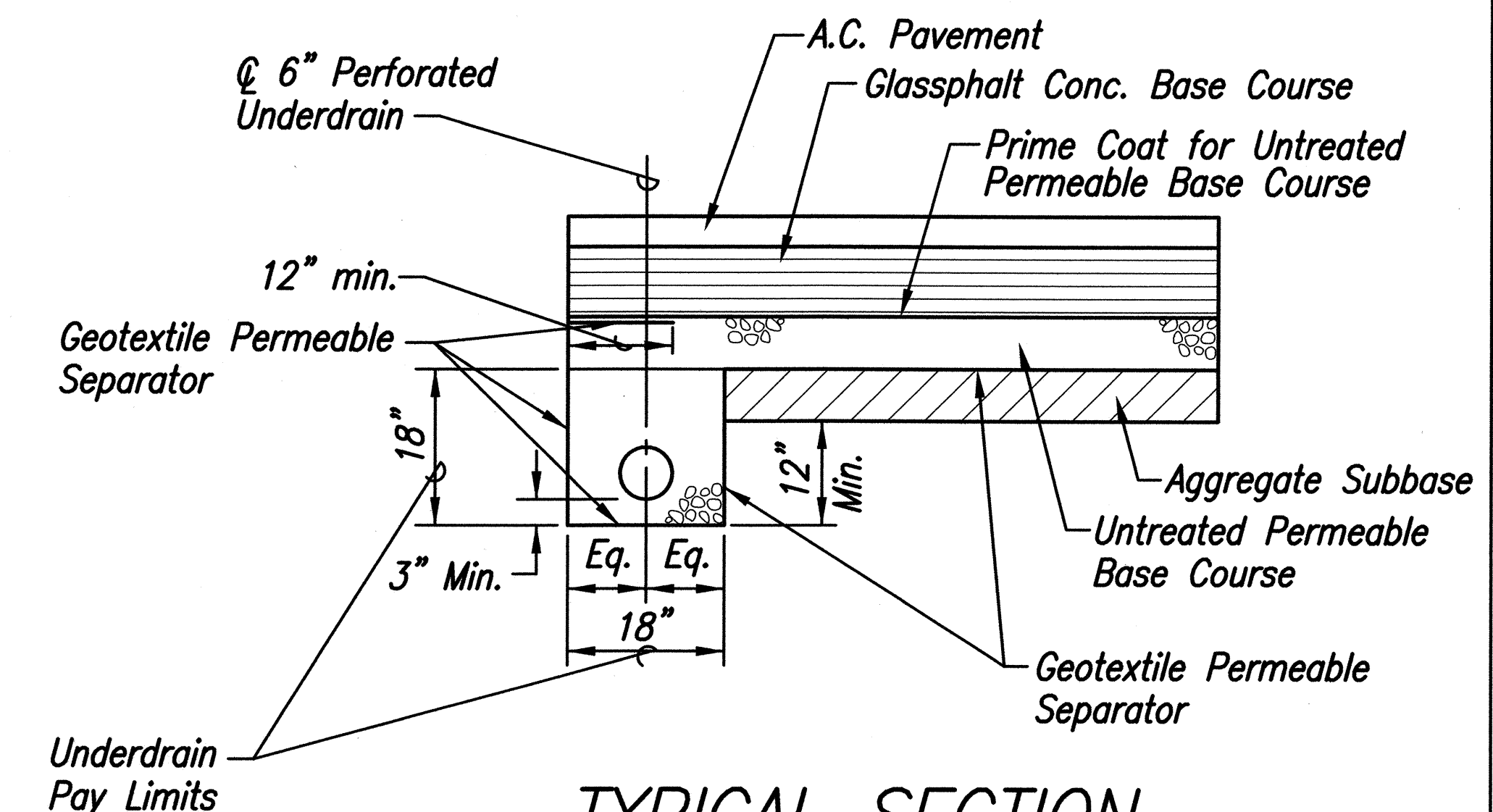
CONNECTION TO HEADWALL

Scale: 1/2"=1'-0"



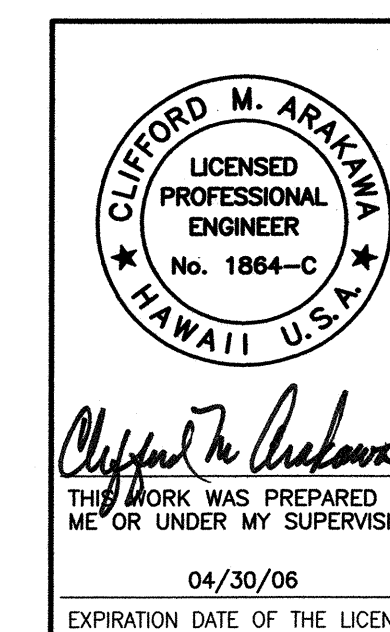
UNDERDRAIN CLEANOUT

Scale: 1"=1'-0"



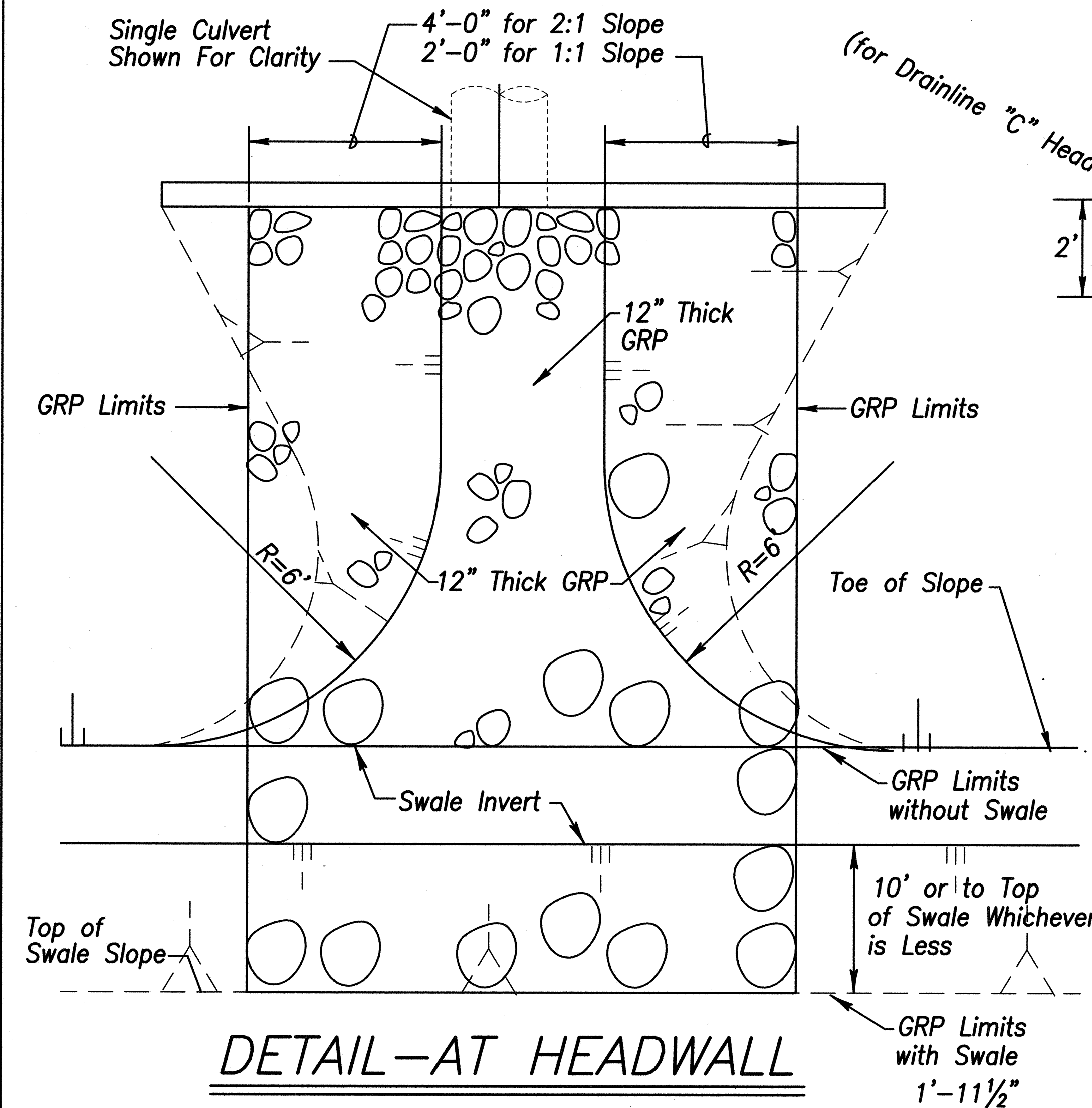
TYPICAL SECTION 6" PERFORATED UNDERDRAIN

Scale: 3/4"=1'-0"

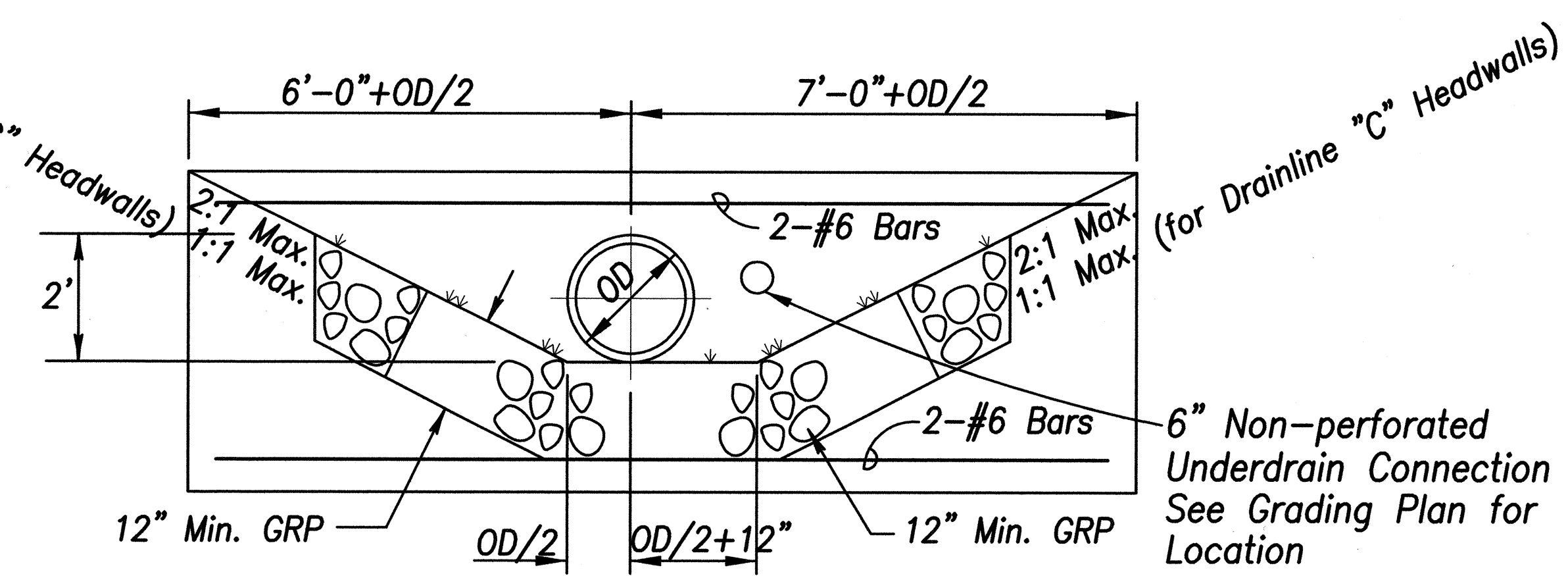


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MISCELLANEOUS DETAILS
MOKULELE HIGHWAY WIDENING
Vicinity of Kealia Pond Driveway
To
Piilani Highway
Federal - Aid Project No. NH-A311(4)
Scale: AS NOTED Date: July 2005
SHEET No. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	63	180



DETAIL-AT HEADWALL

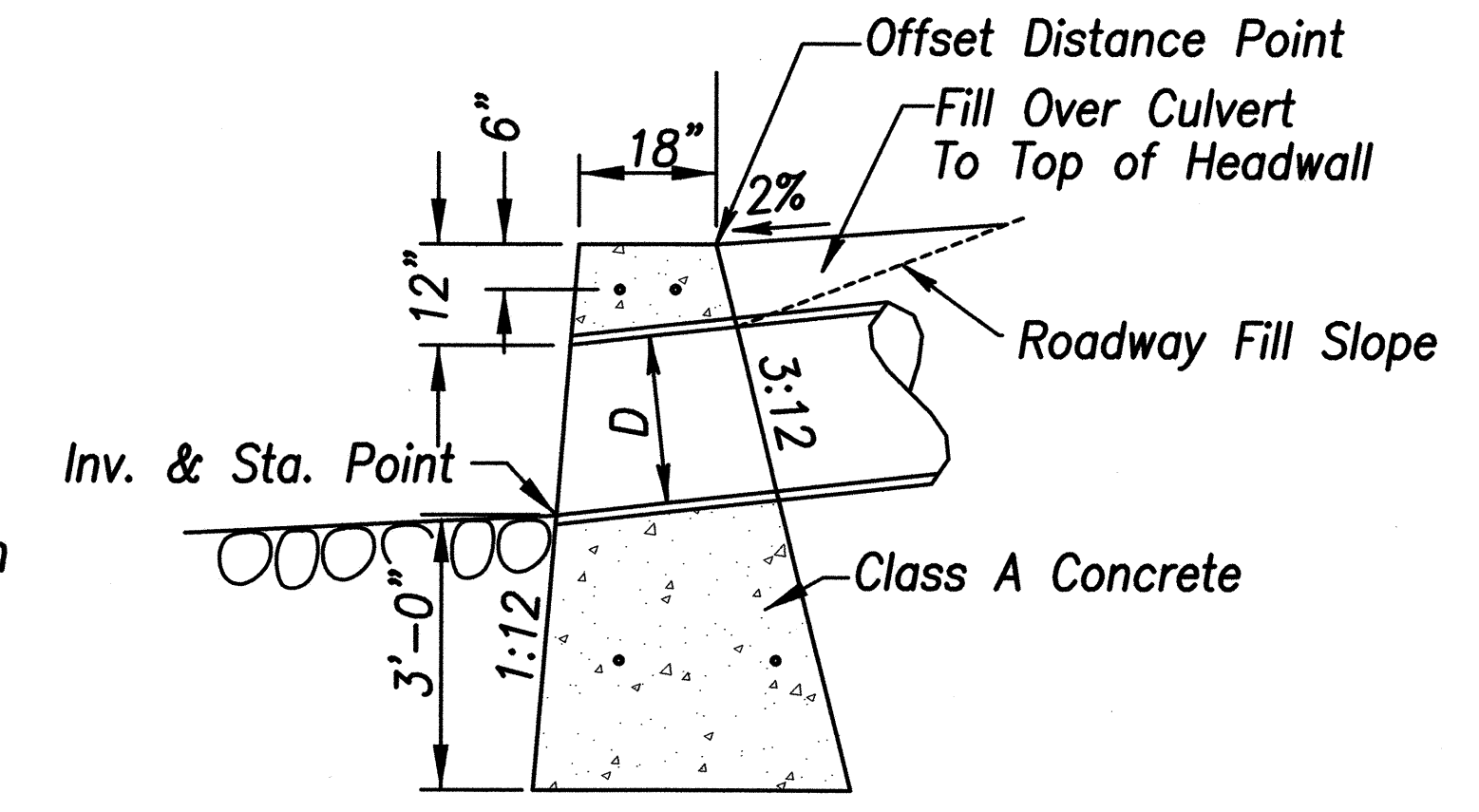


ELEVATION
Scale: 1/2"=1'-0"

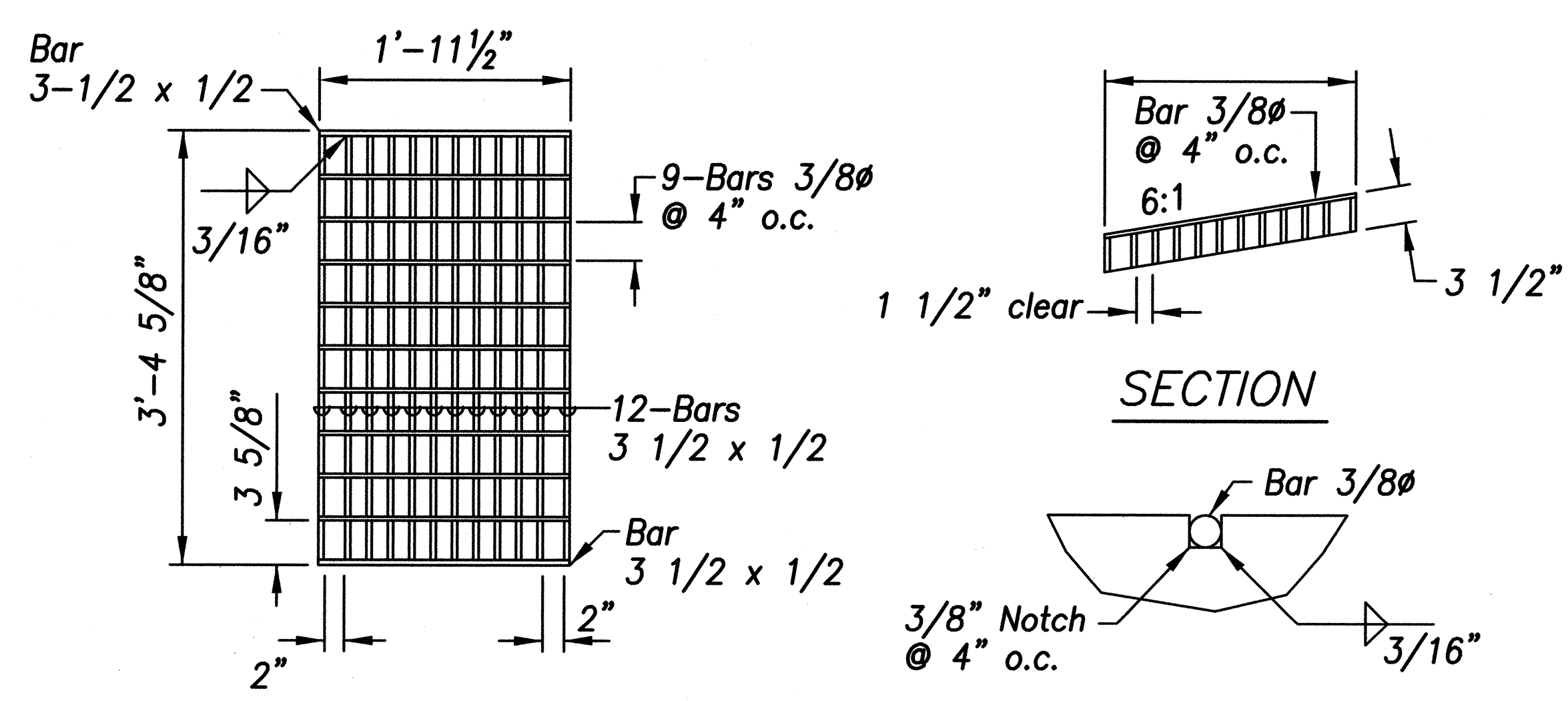
FOR SINGLE PIPE DRAIN

CONCRETE HEADWALL DETAILS

Scale: 1/2"=1'-0"



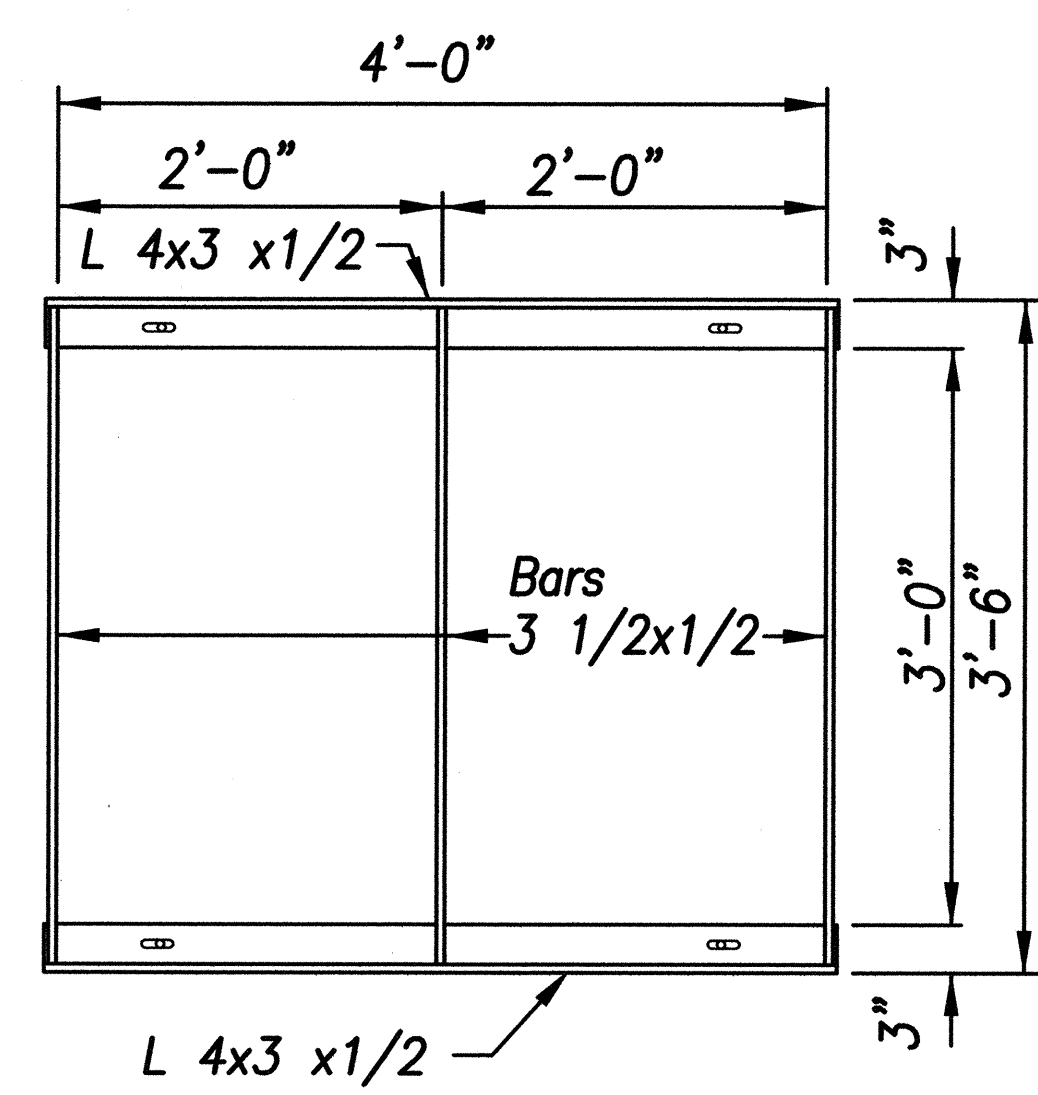
SECTION



GRATE

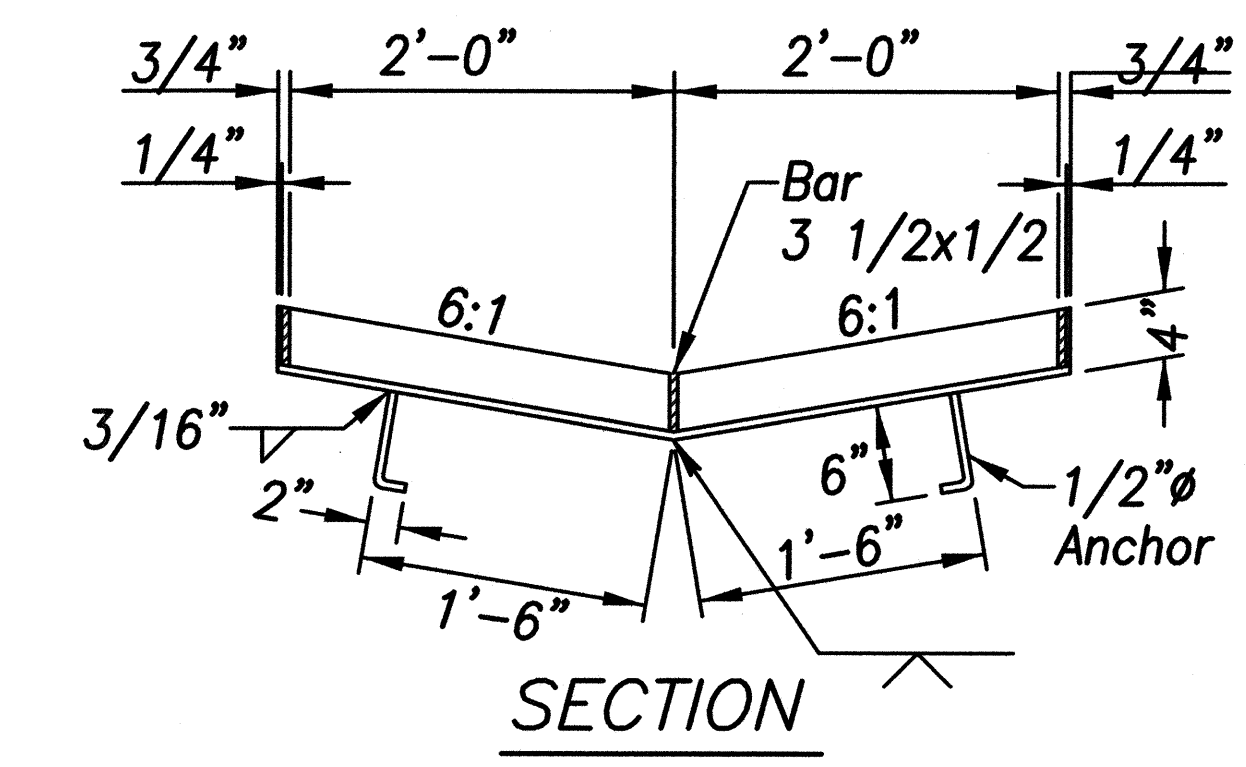
TYPE 61614P STEEL FRAME AND GRATES

Scale: 1"=1'-0"



PLAN

FRAME



GENERAL NOTES

1. Frames and Grates shall be hot dip galvanized after fabrication
2. All welds 3/8" unless otherwise noted

CLIFFORD M. ARAKAWA
LICENSED PROFESSIONAL ENGINEER
No. 1864-C
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
04/30/06
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

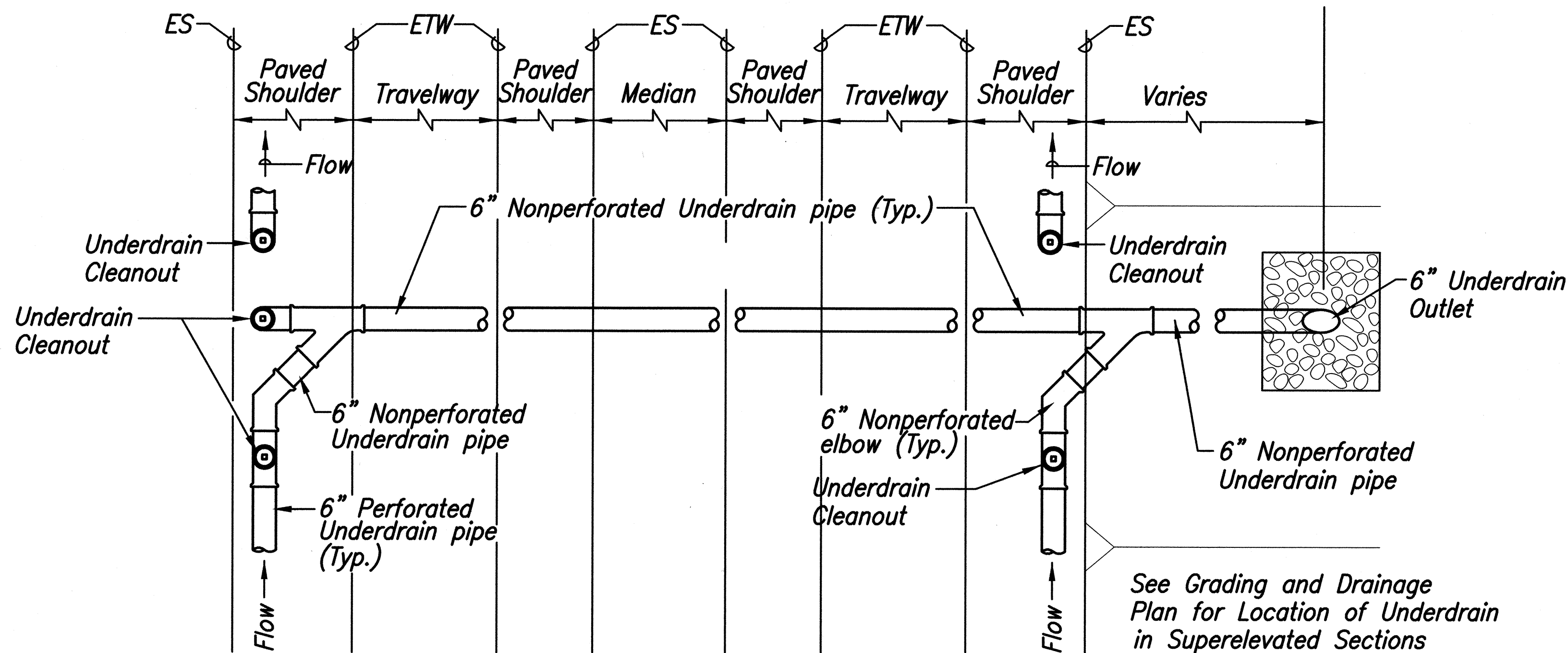
MISCELLANEOUS DETAILS

MOKULELE HIGHWAY WIDENING

Vicinity of Kealia Pond Driveway
To
Piilani Highway
Federal - Aid Project No. NH-A311(4)
Scale: AS NOTED Date: July 2005

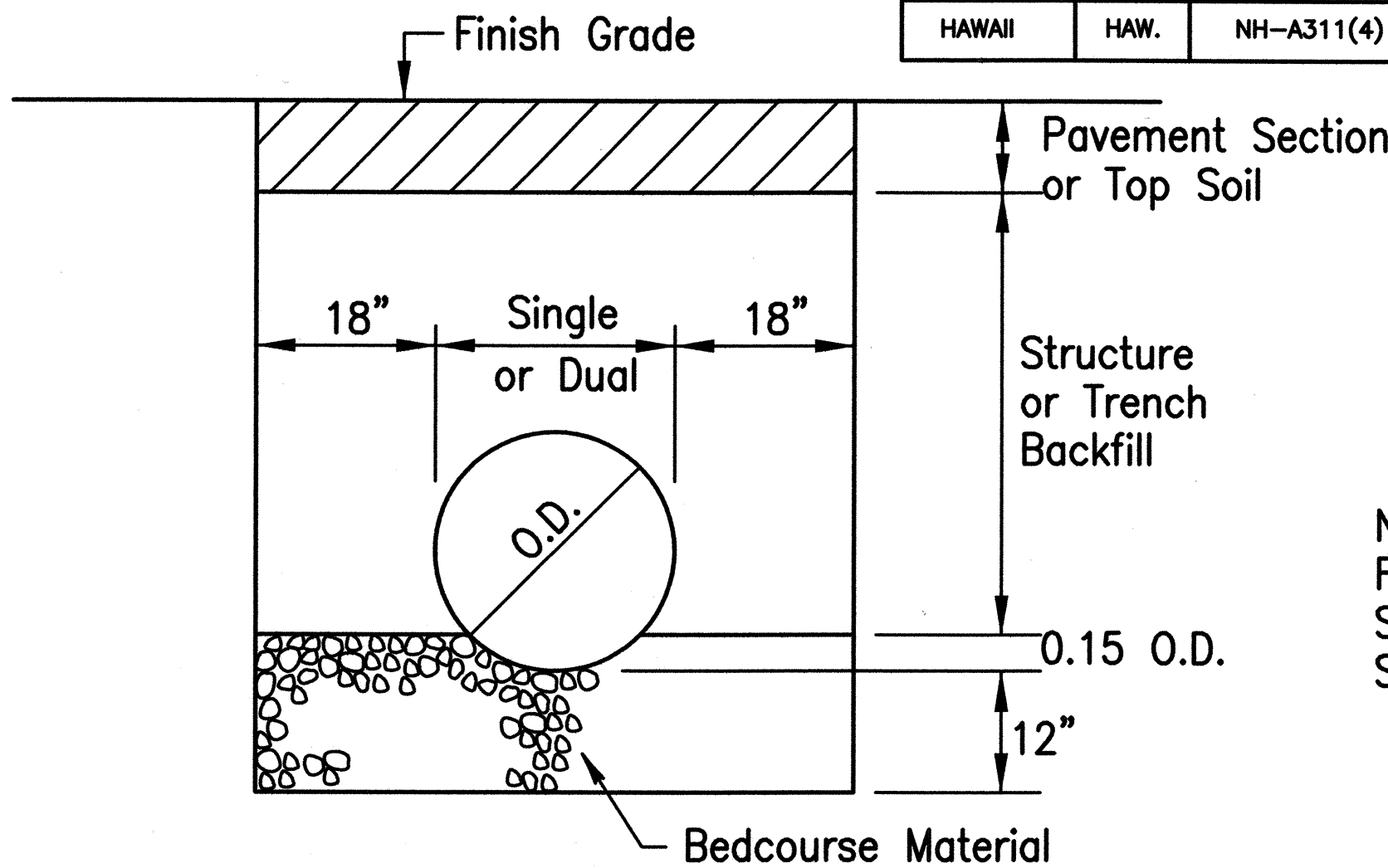
SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	64	180



CONNECTION TO UNDERDRAIN OUTLET

Scale: Not to Scale

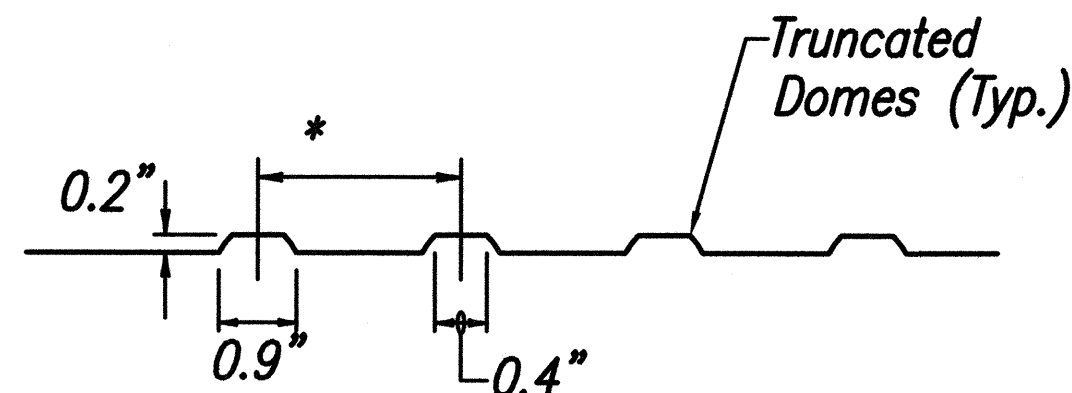


TYPICAL CULVERT TRENCH SECTION

Scale: 3/4"=1'-0"

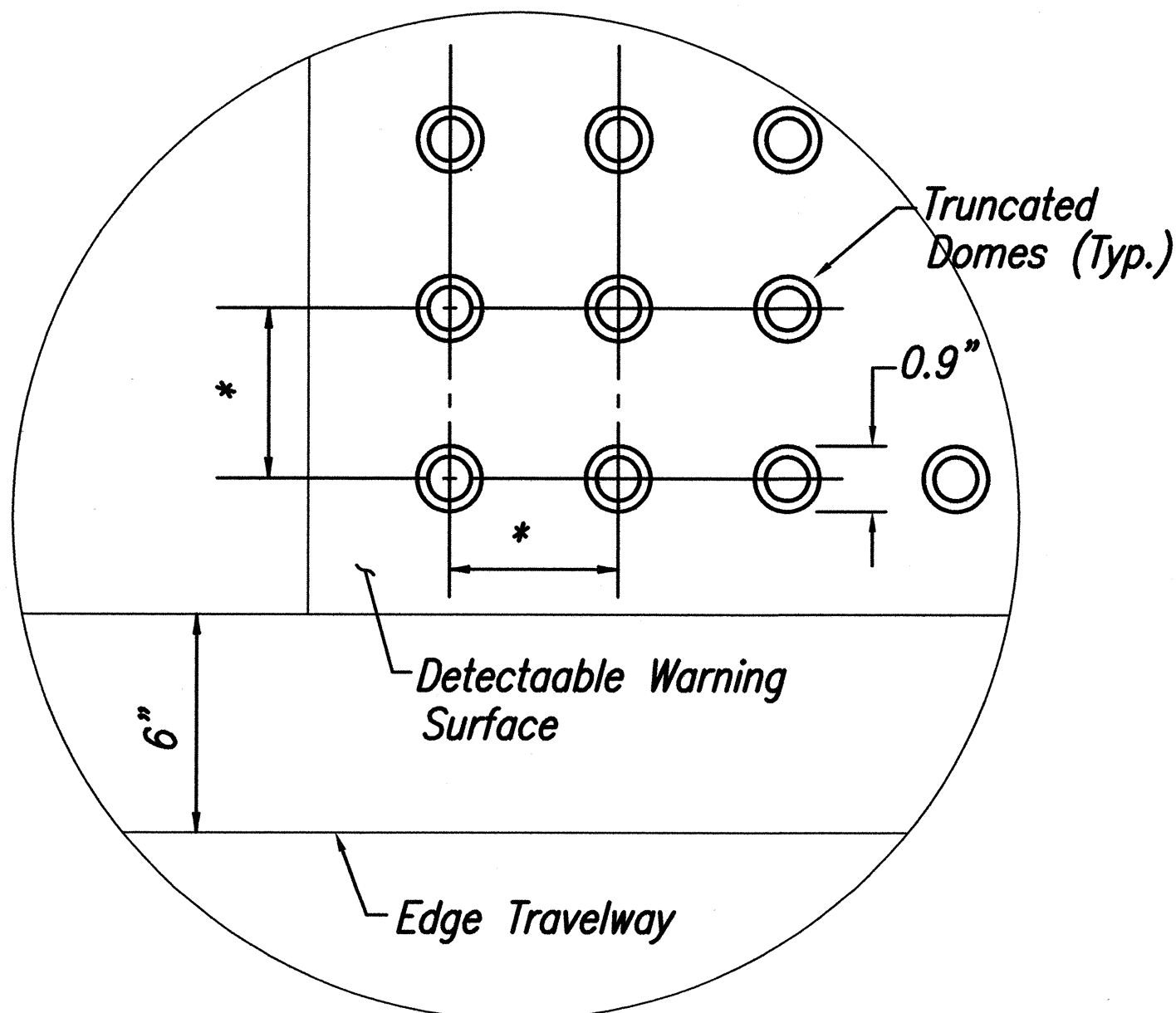
Detectable Warning Notes:

1. Detectable warnings shall be 24 inches in the direction of travel and extend the full width of the pathway.
2. Truncated domes shall have a diameter of 0.9 inch at the bottom, a diameter of 0.4 inch at the top, a height of 0.2 inch and a center-to-center spacing of 2.35 inches measured along one side of a square arrangement.
3. Domes shall be aligned on a square grid in the predominant direction of travel to permit wheels to roll between the domes.
4. There shall be a minimum of 70 percent contrast in light reflectance between the detectable warning and an adjoining surface, or the detectable warning shall be "safety yellow".
5. The material used to provide visual contrast shall be an integral part of the detectable warning surface.
6. The detectable warning shall be located so that the edge nearest the curb line or other potential hazard is 6 to 8 inches from the curb line or other potential hazard, such as a reflecting pool edge or the edge of a transit platform.
7. Install detectable warnings at all new curb ramps. Payment for the detectable warnings shall not be paid seperately, but shall be considered incidental to the curb ramp items.
8. Detectable warning will not be paid for separately but will be considered incidental to the various contract items.



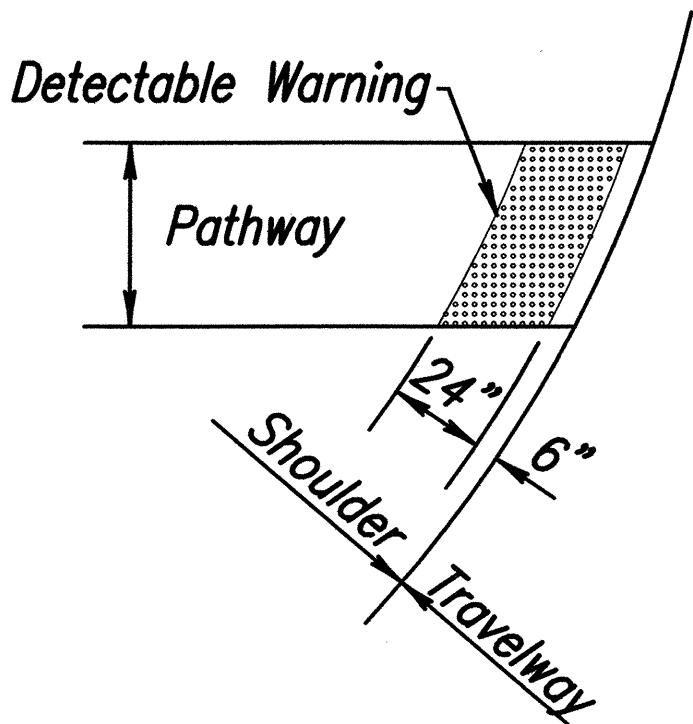
SECTION

* 1.6" minimum to 2.4" maximum



ENLARGEMENT DETECTABLE WARINING DETAIL

Not to Scale



PLAN PATHWAY CROSSINGS AT ROADWAYS

Not to Scale

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	CHECKED BY	
	QUANTITIES BY	
	CHECKED BY	
No.		

CLIFFORD M. ARAKAWA
LICENSED PROFESSIONAL ENGINEER
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STATE OF HAWAII
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MISCELLANEOUS DETAILS

MOKULELE HIGHWAY WIDENING
Vicinity of Kealia Pond Driveway
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SHEET No. 3 OF 3 SHEETS