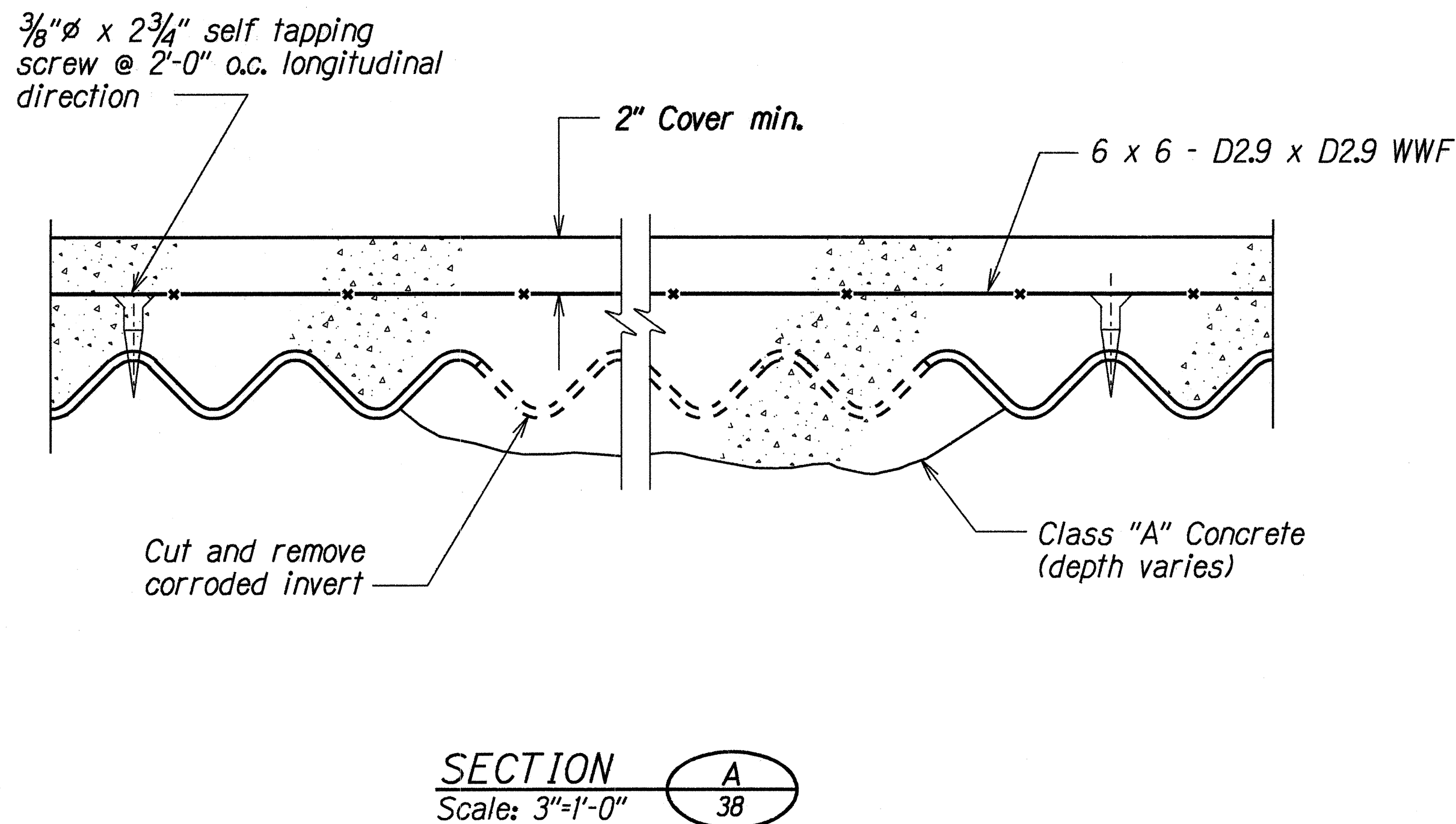
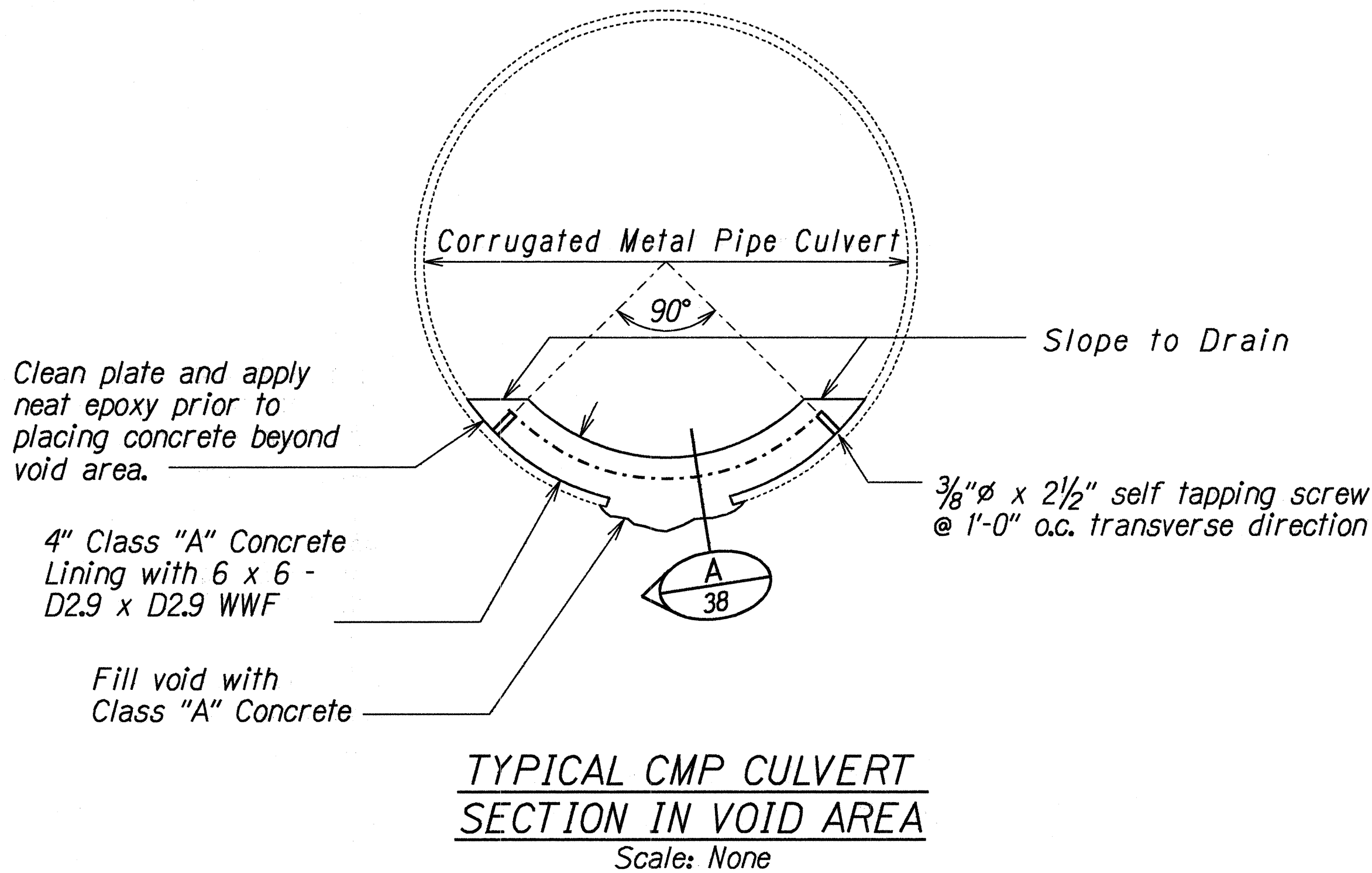


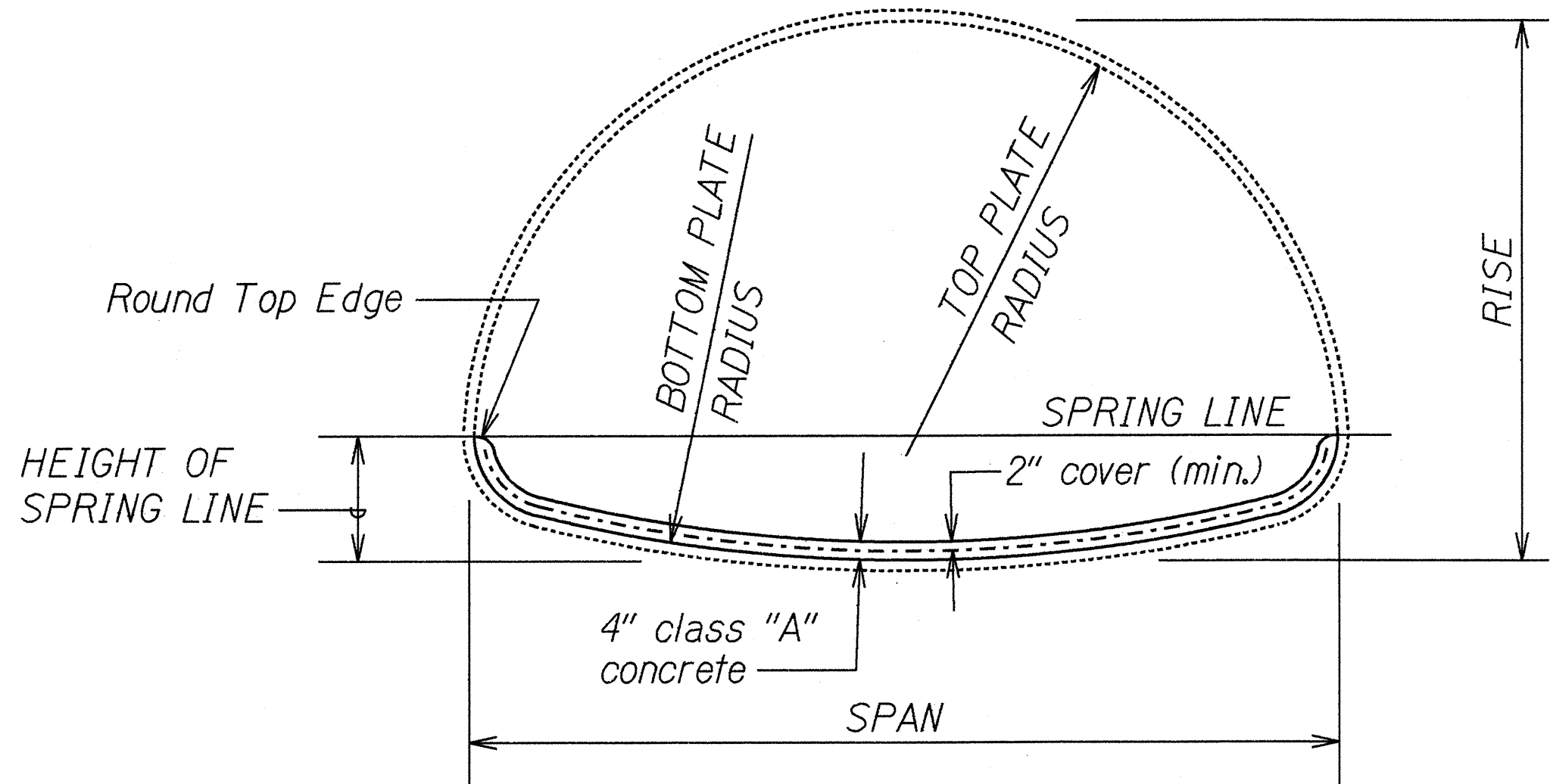
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	19F-01-97M	1997	38	42

GENERAL NOTES:

- Contractor shall ensure adequate bypass drainage until Culvert has been completely repaired and accepted by the Engineer.
- The concrete placed in the culvert shall be allowed to cure for a minimum of 48 hours before water is allowed to flow on the invert.
- The culvert surface to be in contact with the concrete shall be clean and dry to the satisfaction of the Engineer. Badly corroded sections shall be cut and removed, provided the structural integrity of the culvert is not compromised. Epoxy Bonding Compound shall be neatly applied to the clean metal surface prior to placing concrete.
- The welded wire fabric steel reinforcement shall be placed two inches above the crest of corrugations by welding to self tapping screws. The screws shall be drilled and tapped to the sectional plate culvert at two feet on centers longitudinally and 1'-0" transversely. If lapping of the welded wire fabric is necessary, it shall be lapped a minimum of six inches.
- The welded wire fabric, screws and epoxy bonding compound shall not be paid for separately but shall be considered incidental to Item 603.0000 Culvert Repairs, Various Locations
- The concrete culvert lining shall be scored $\frac{3}{4}$ " deep laterally along the crest of corrugations, 10 feet on center. (Control Joint)



DETAILS OF CONCRETE CULVERT LINING

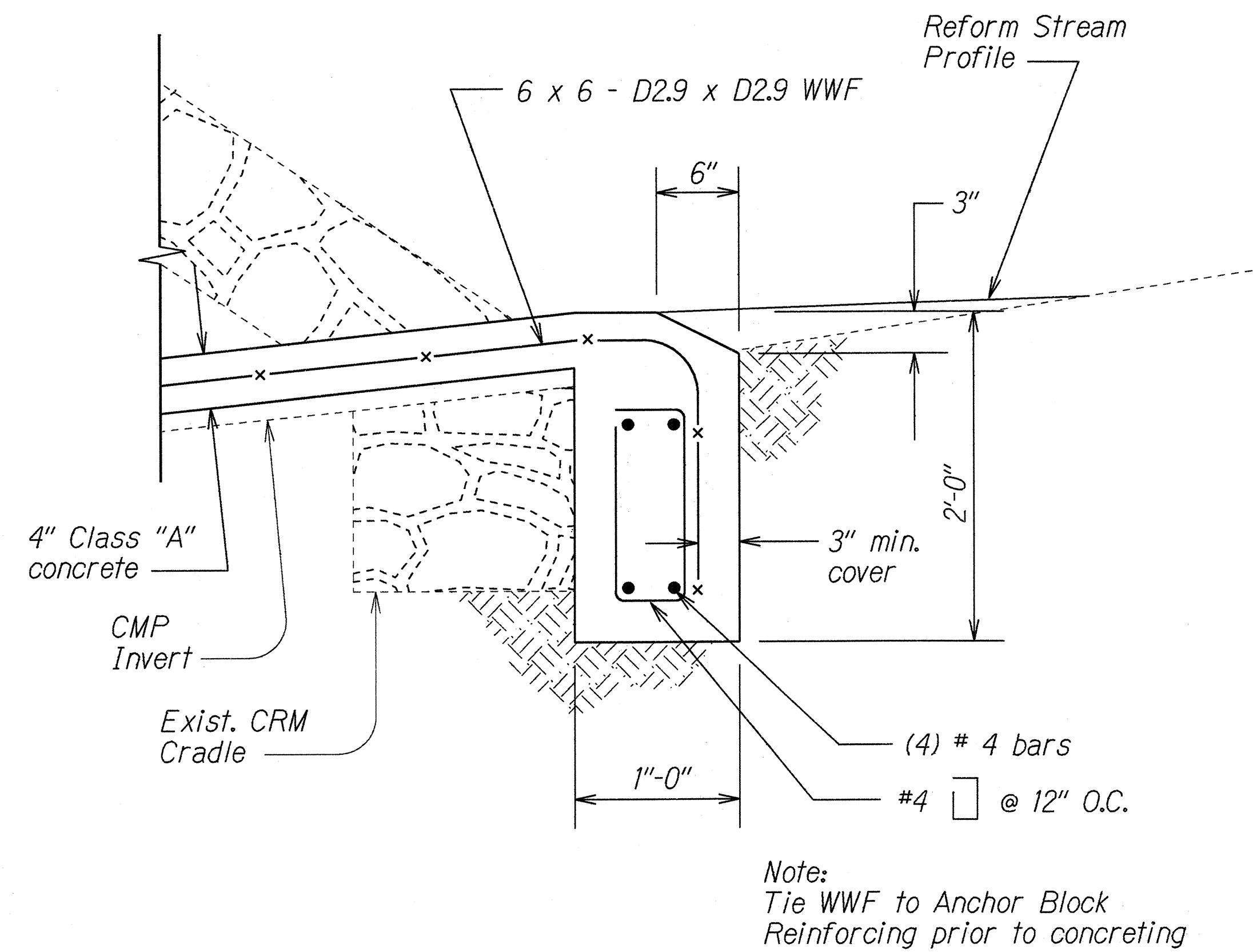
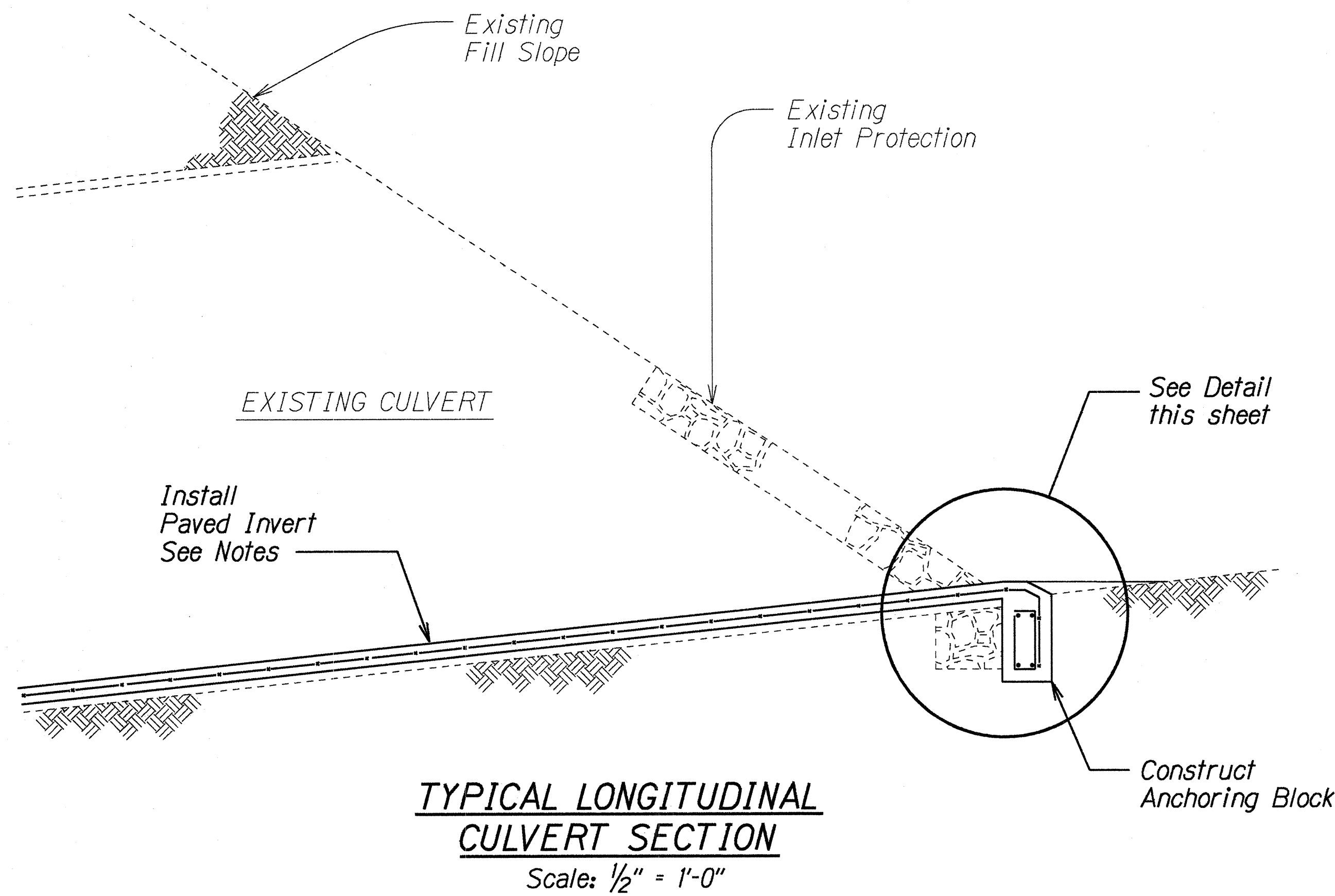


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS
HAWAII BELT ROAD RESURFACING
MUD LANE TO HONOKA'A
PROJECT NO. 19F-01-97M
Scale: Noted Date: April, 1997
SHEET No. 1 OF 2 SHEETS

ORIGINAL PLAN	SURVEY PLATTED BY	DATE
NOTED BOOK	DRAWN BY	
DESIGNED BY	CHECKED BY	
APPROVED BY		

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	19F-01-97M	1997	39	42



CULVERT REPAIR LOCATIONS				
MILE POST	STATION NO. ***	SIZE	L (lf)	APPROX. VOLUME OF CONCRETE *(cy)
49.85	519+50	54"	110	6
49.28	549+81	15'10" x 9'10"	100	27
48.38	597+28	54"	120	7
47.80	627+64	9'6" x 6'5"	128	22
46.78	681+50	114"	122	14
45.08	770+80	6'1" x 4'7"	60	7
44.62	794+50	48"	60	3
43.54	851+70	78"	114	9
			TOTAL	95 cy

*** State Project No. F-019-1(1)
 * Amounts may vary. All Materials and Labor necessary to Pave Inverts shall be considered incidental to Item 647 - Culvert Repairs, Various Locations

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DRAWN BY		
DESIGNED BY		
CHECKED BY		
NOTED BY		
APPROVED BY		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS
HAWAII BELT ROAD RESURFACING
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PROJECT NO. 19F-01-97M
Scale: Noted Date: April, 1997
SHEET No. 2 OF 2 SHEETS