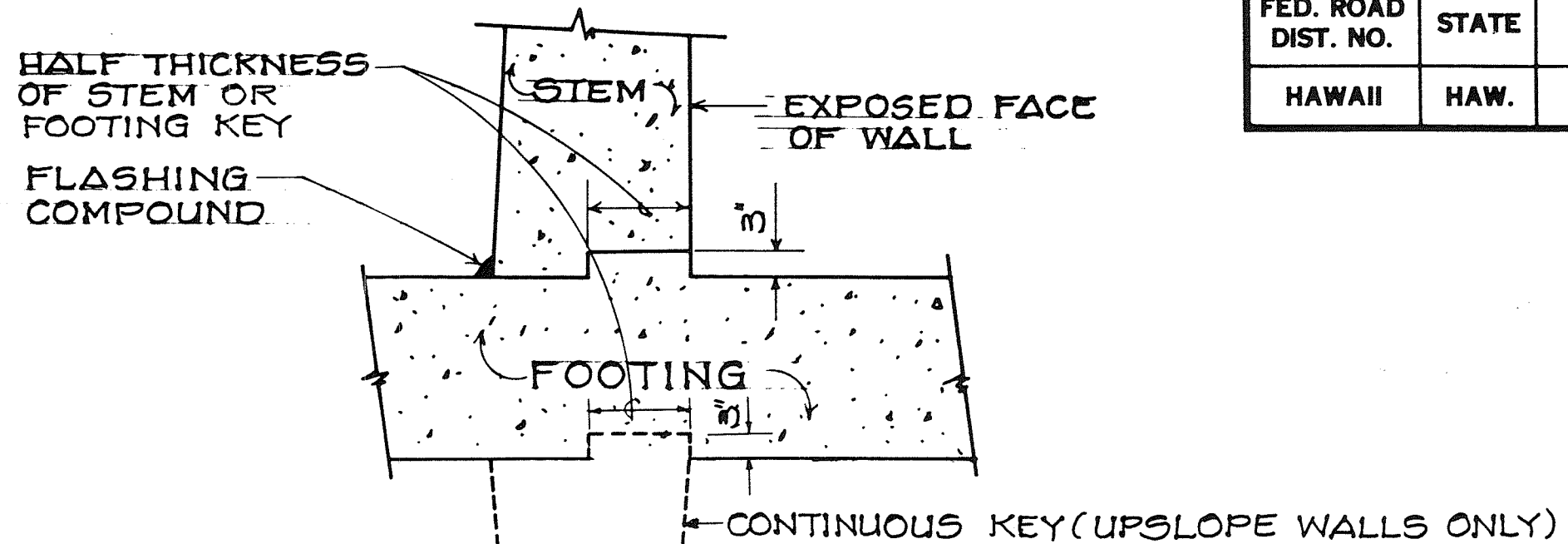
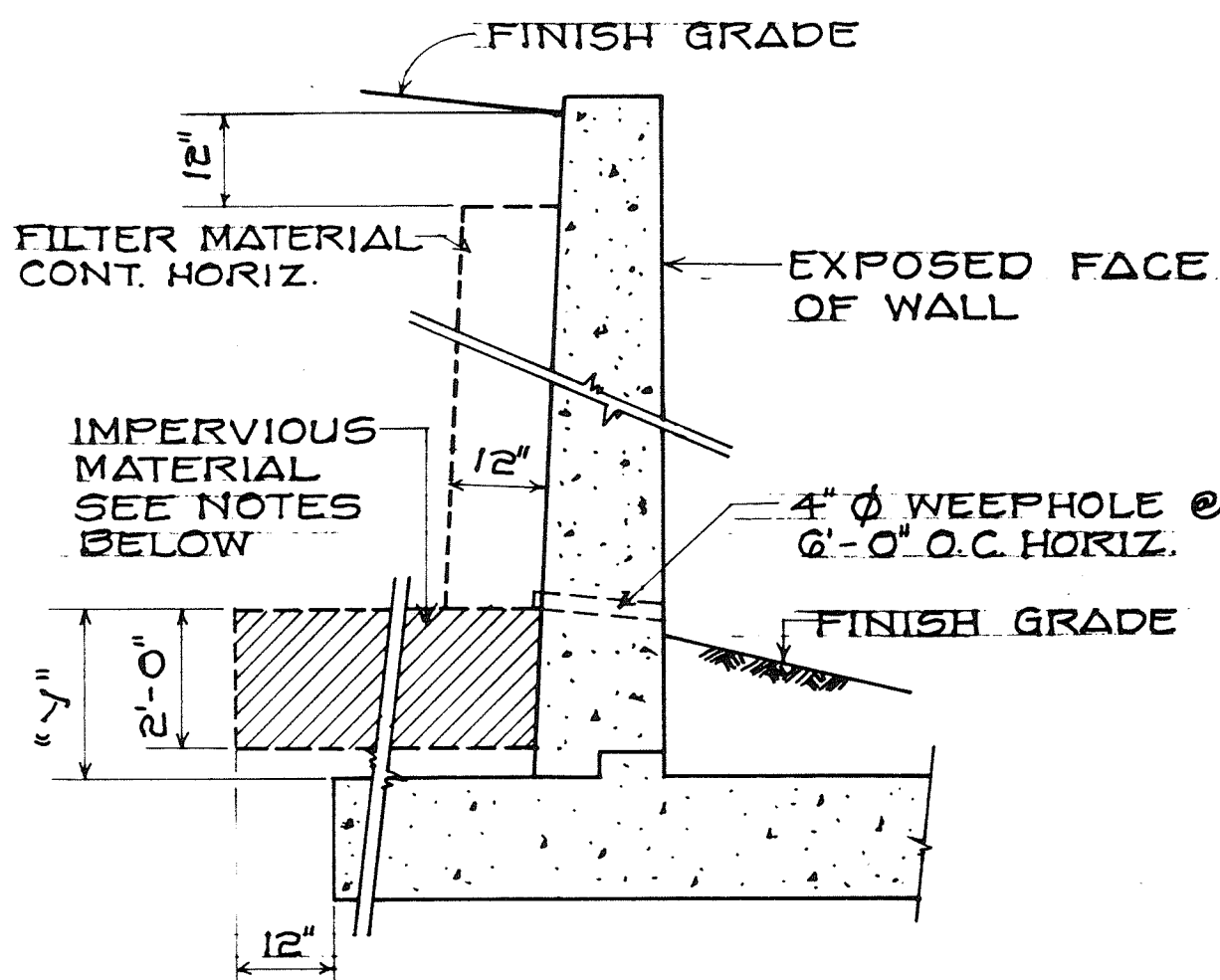


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.			19	53



4
19 TYPICAL STEM/FOOTING KEY DETAIL FOR REINFORCED CONCRETE WALLS
NO SCALE



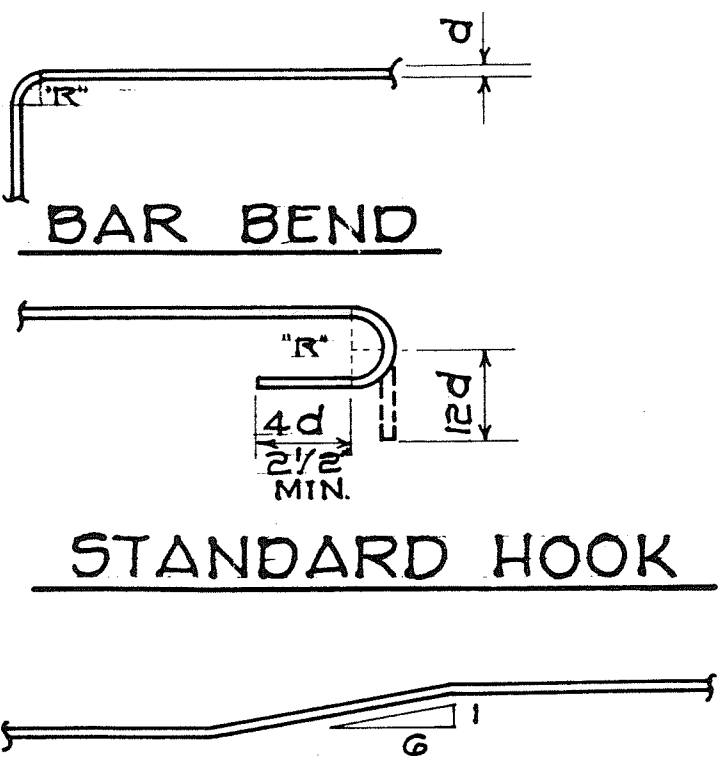
REINFORCED CONCRETE WALL

NOTES:~ IMPERVIOUS MATERIAL

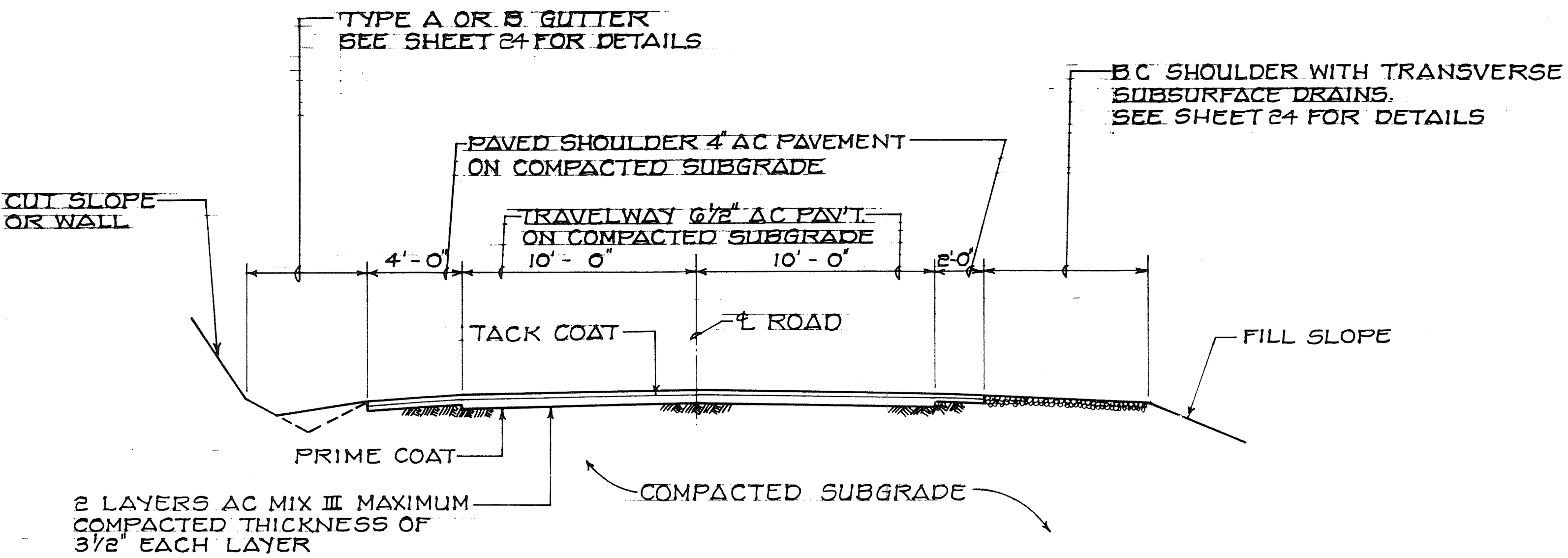
1. IMPERVIOUS MATERIAL AS APPROVED BY THE ENGINEER SHALL BE INCIDENTAL TO STRUCTURE BACKFILL WHEN "y" IS 2'-0" OR LESS, ALL BACKFILL BELOW WEEPHOLE LEVEL SHALL BE IMPERVIOUS MATERIAL.
2. THE SUBGRADE UPON WHICH FILTER MATERIAL IS TO BE PLACED SHALL BE MADE AS IMPERVIOUS AS POSSIBLE BY PNEUMATIC TAMPING OR OTHER APPROVED METHODS.

5
19 DETAILS~ PLACEMENT OF FILTER MATERIAL AND IMPERVIOUS MATERIAL FOR RETAINING WALL
NO SCALE

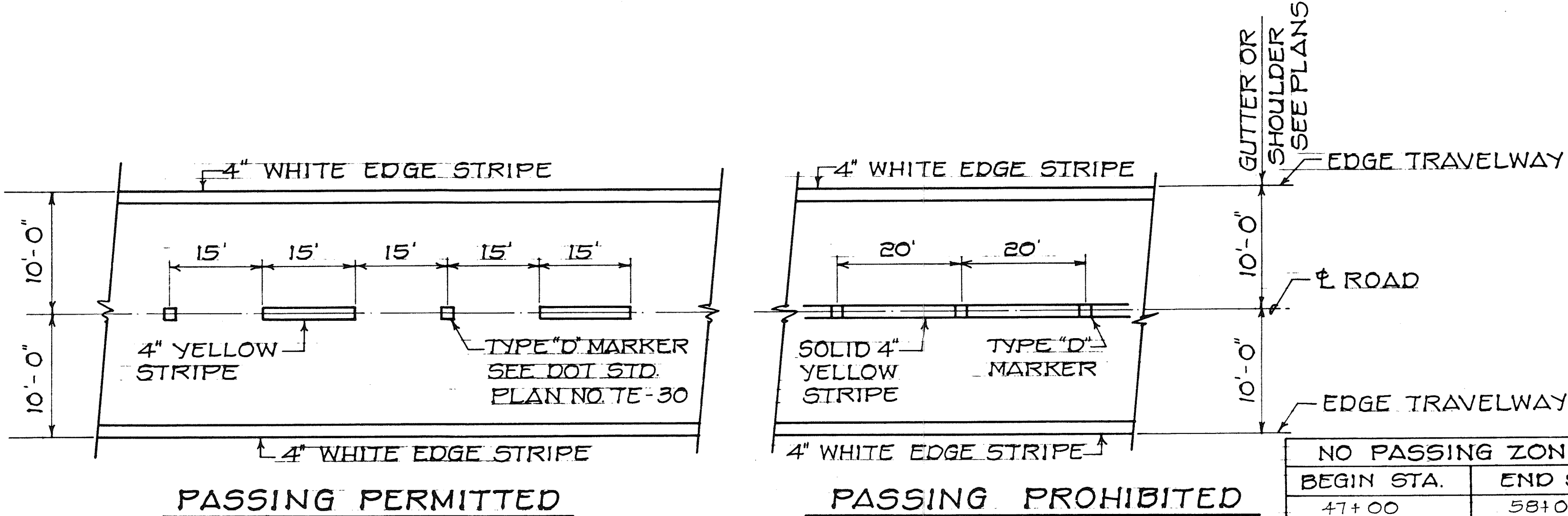
BAR SIZE	"R"
# 3, #4, #5	2/2'd'
# 6, #7, #8	3'd'
# 9, #10, #11	4'd'



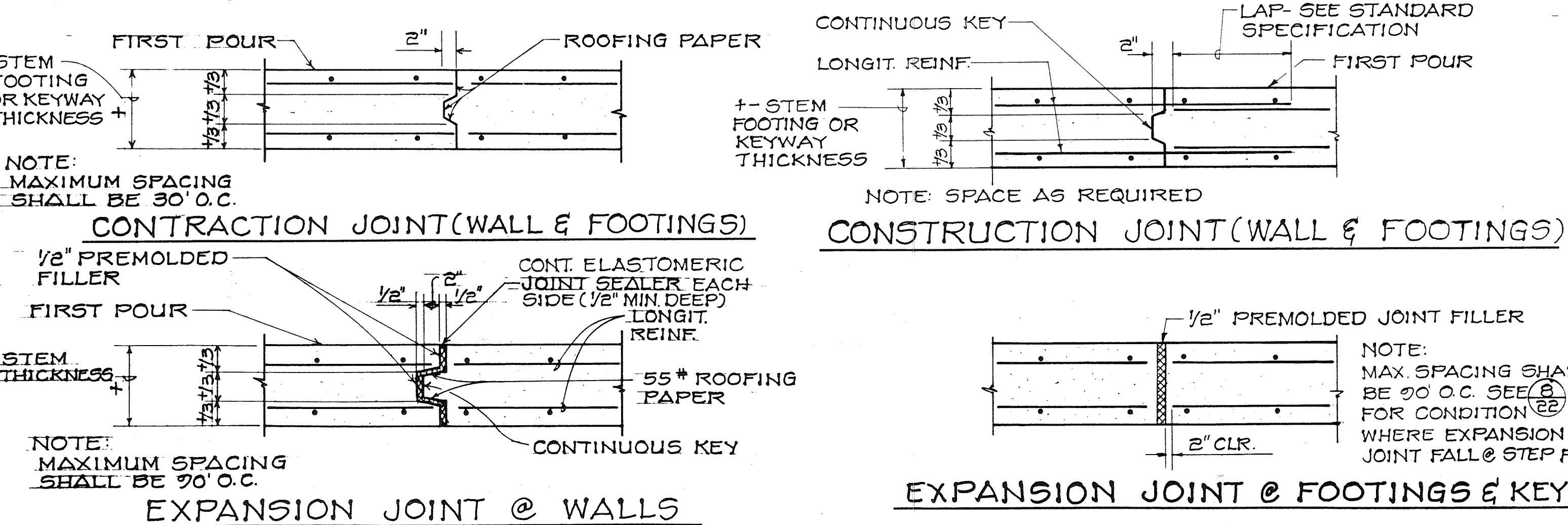
BAR OFFSET



1
19 TYPICAL PAVEMENT SECTION~ MAIN ACCESS ROAD
SCALE: 1/4" = 1'-0"



2
19 TYPICAL PAVEMENT MARKING DETAIL
NO SCALE



3
19 REINFORCED CONCRETE WALL AND FOOTING JOINT DETAILS
NO SCALE

6
19 TYPICAL REBAR BENDING DETAILS
NO SCALE

ROYCE S. FUKUNAGA
REGISTERED PROFESSIONAL ENGINEER
No. 2107-C
HAWAII, U.S.A.

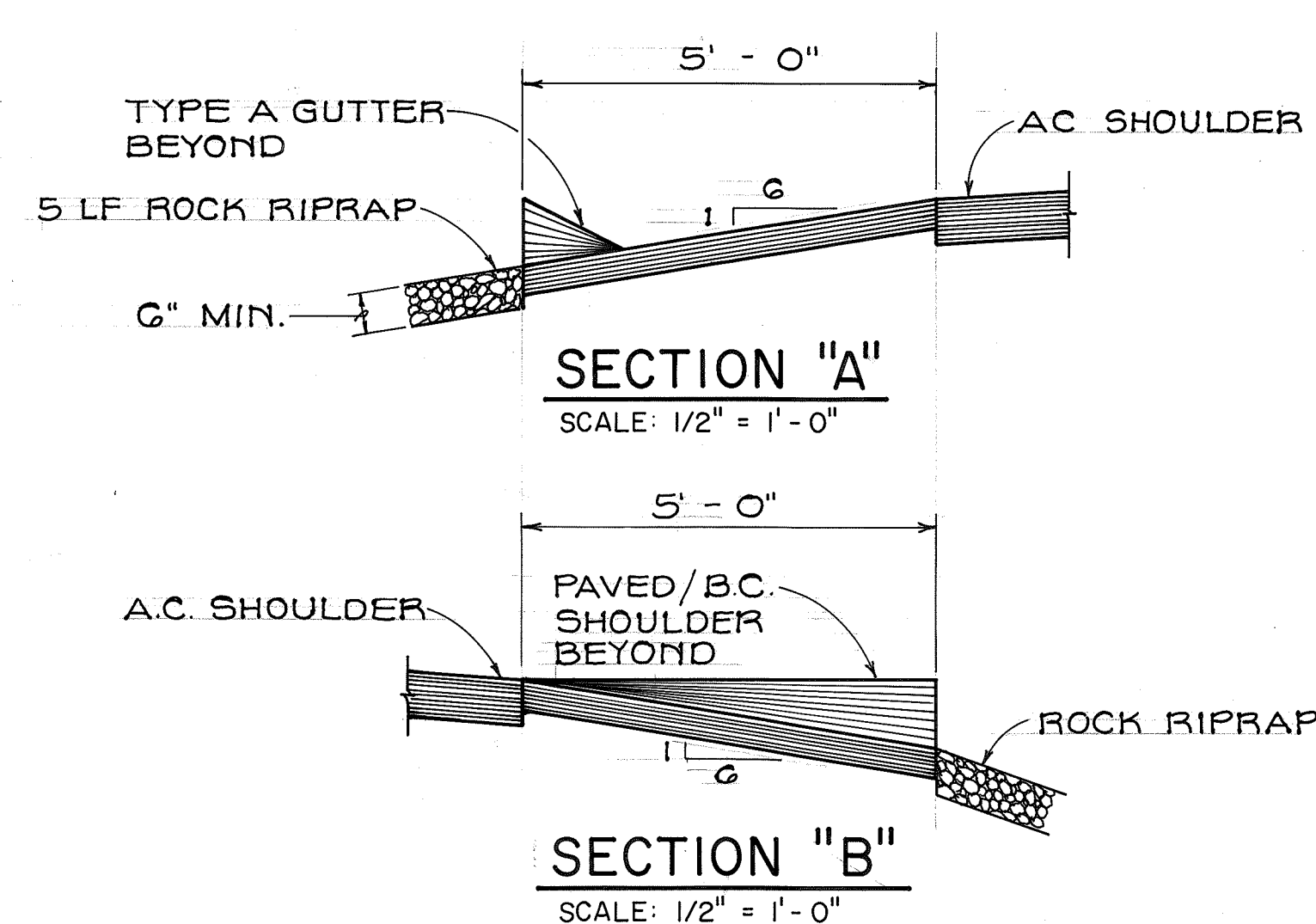
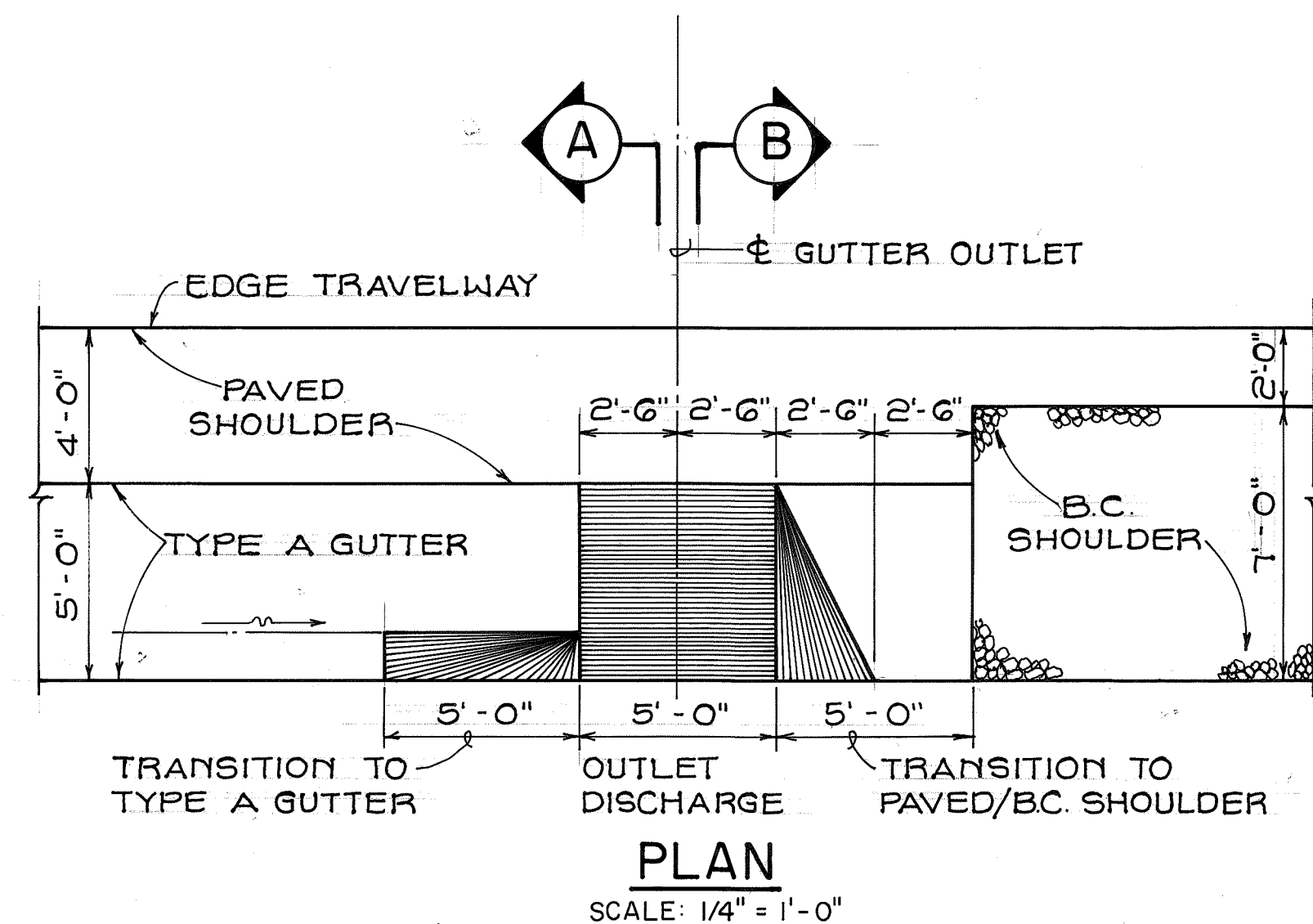
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS

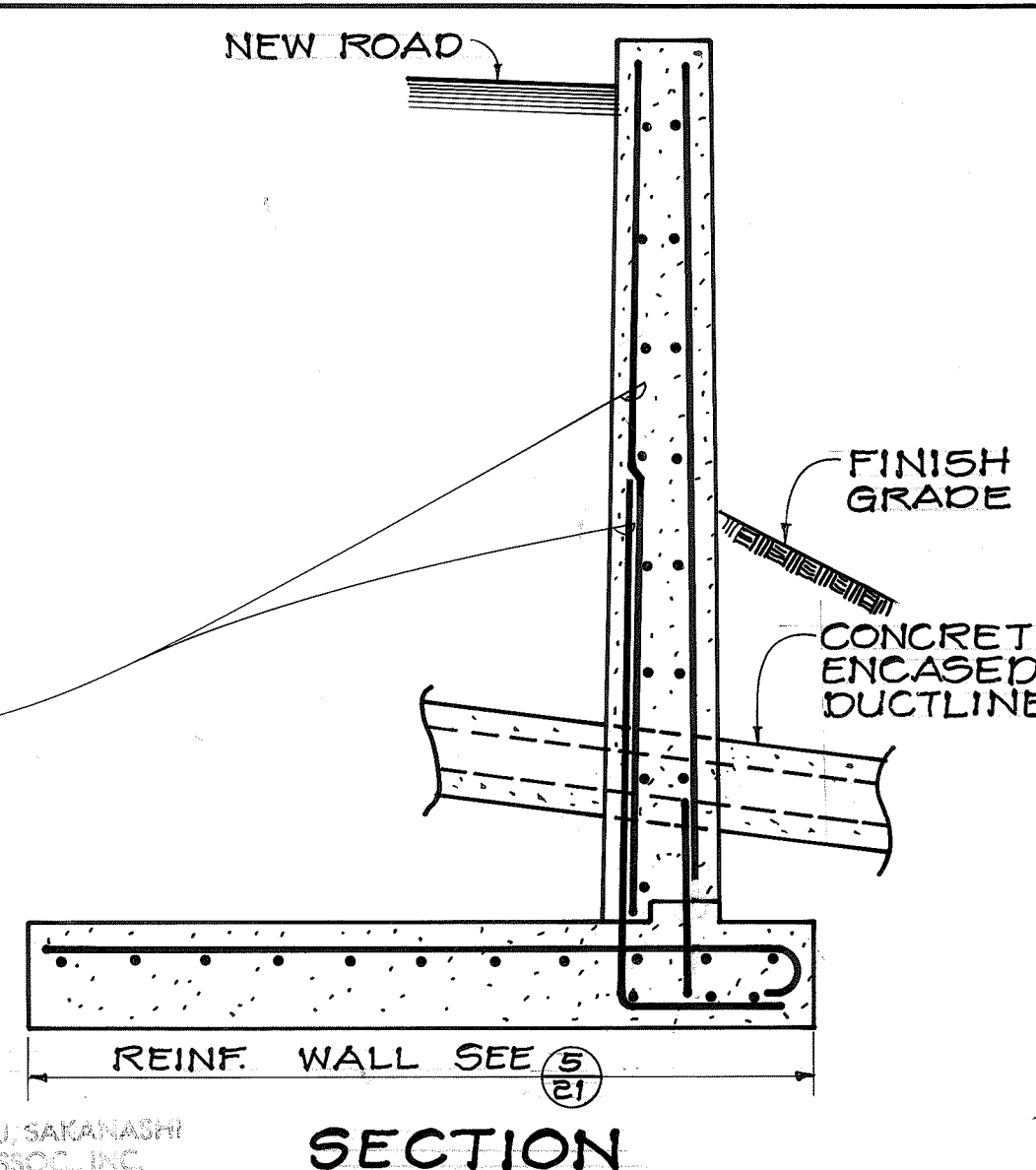
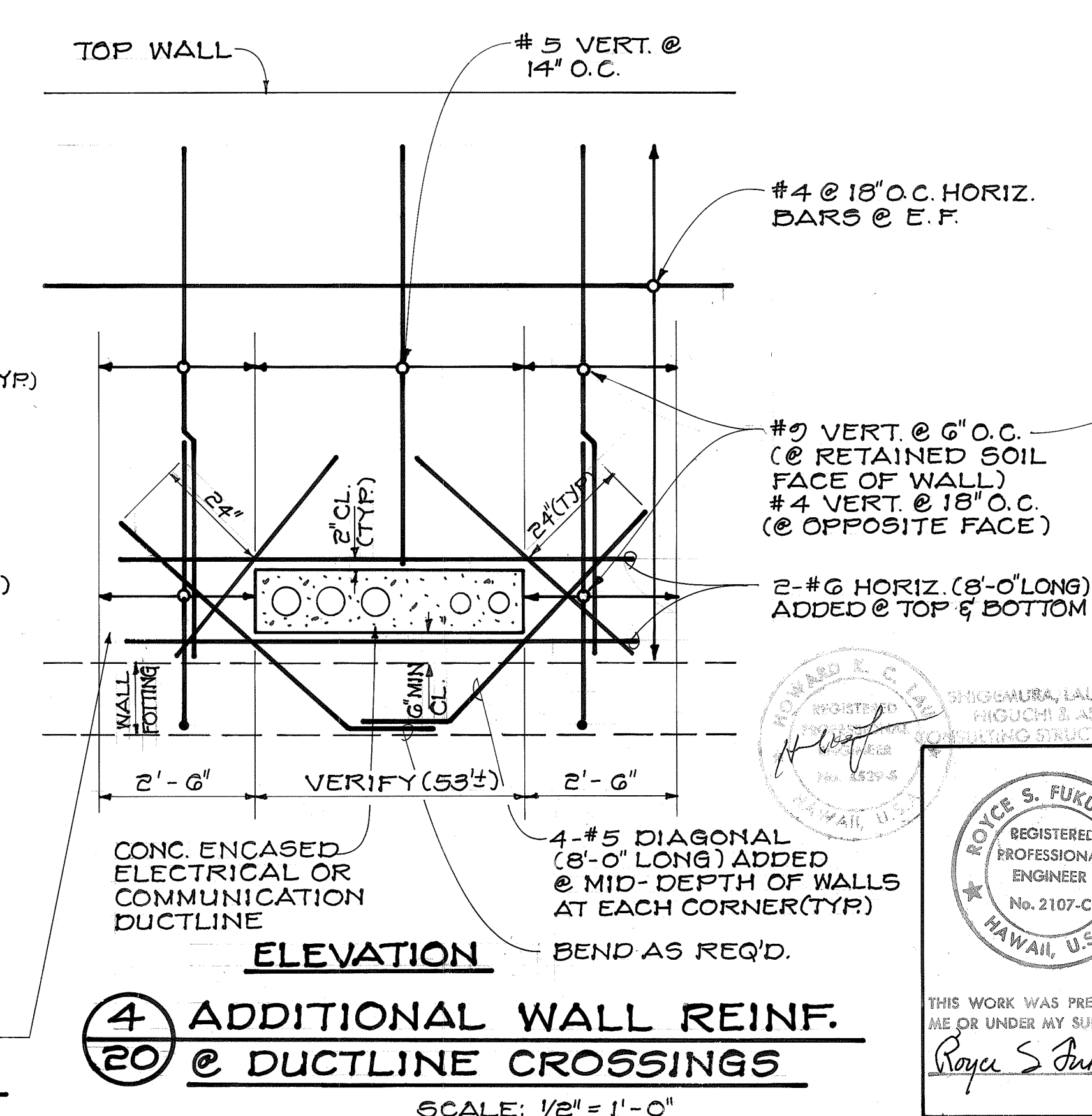
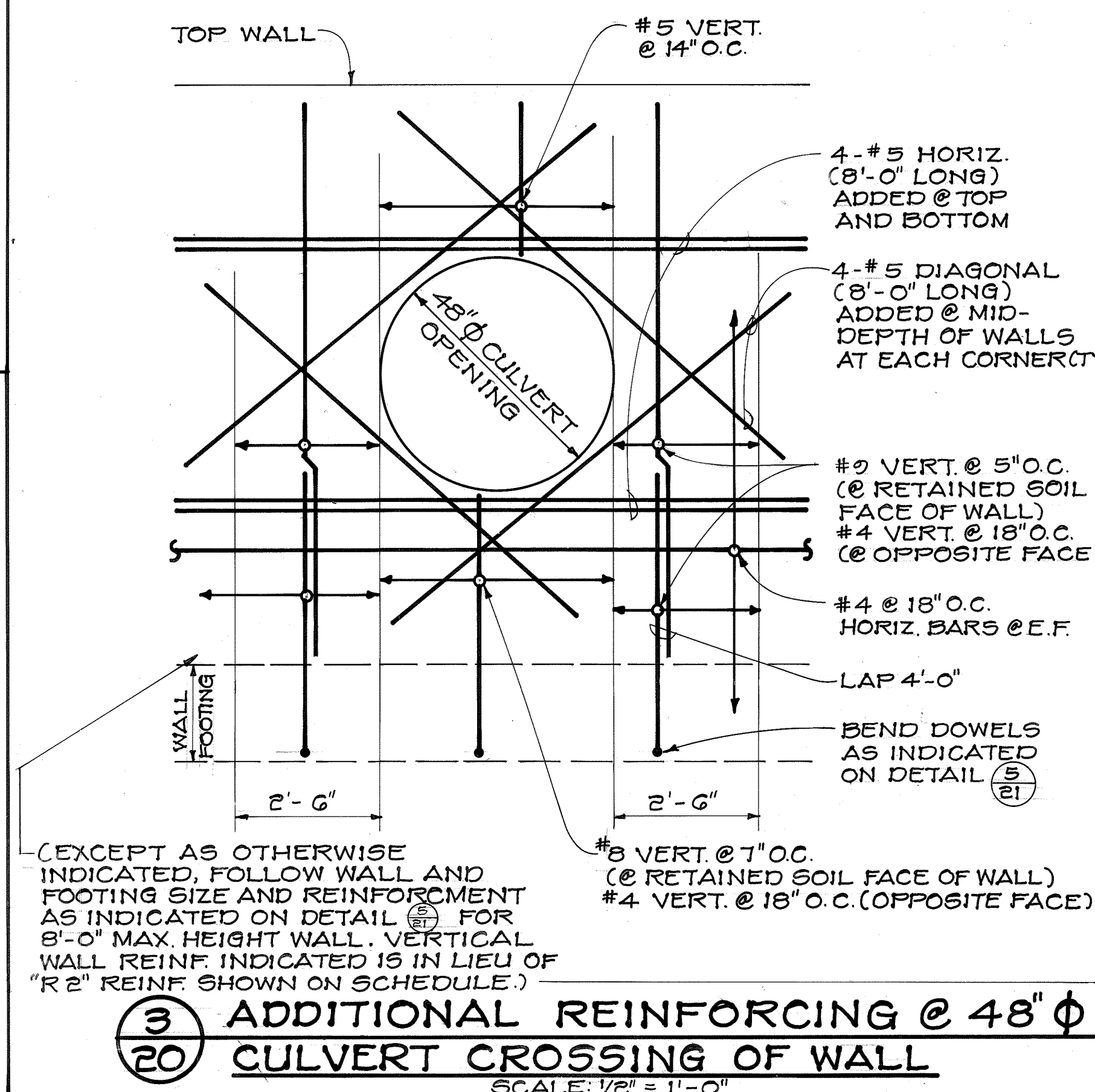
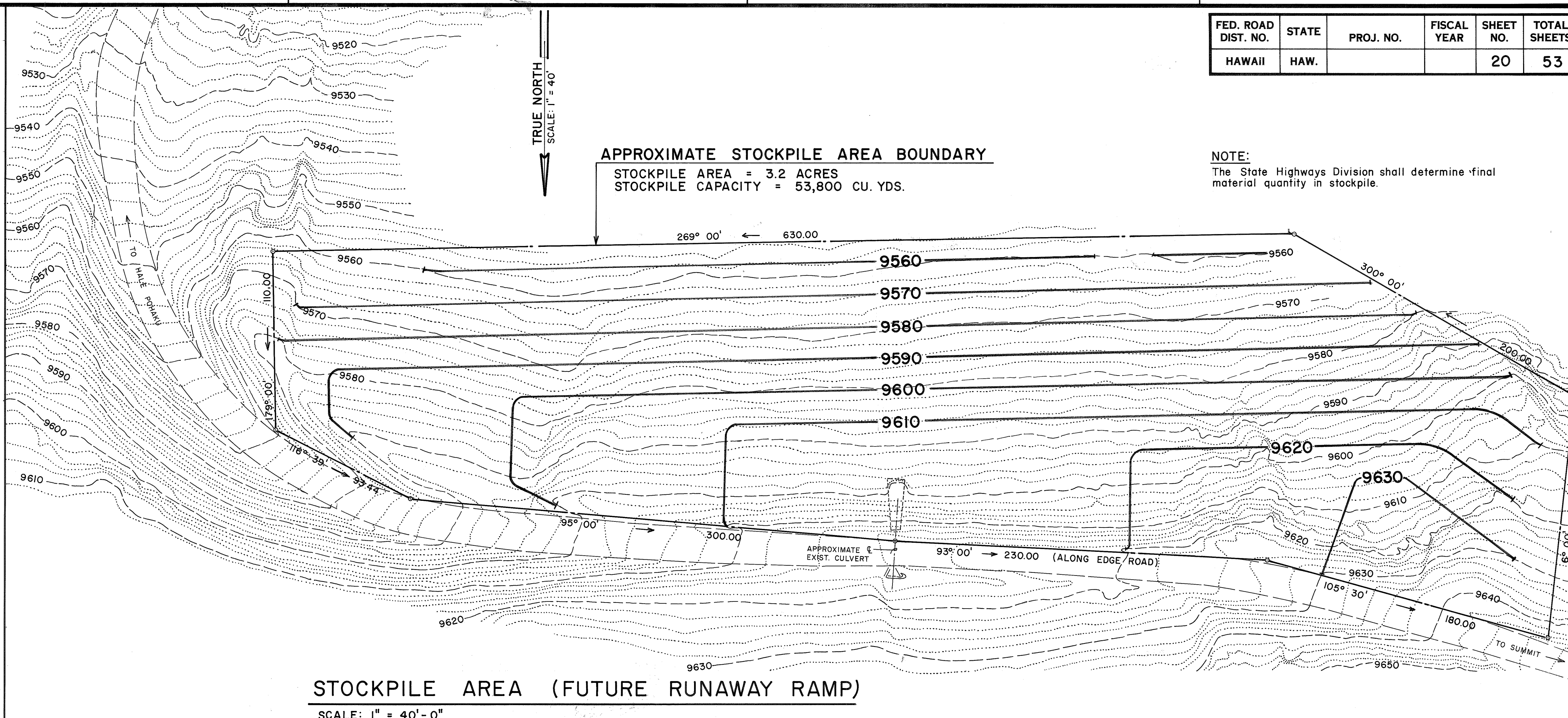
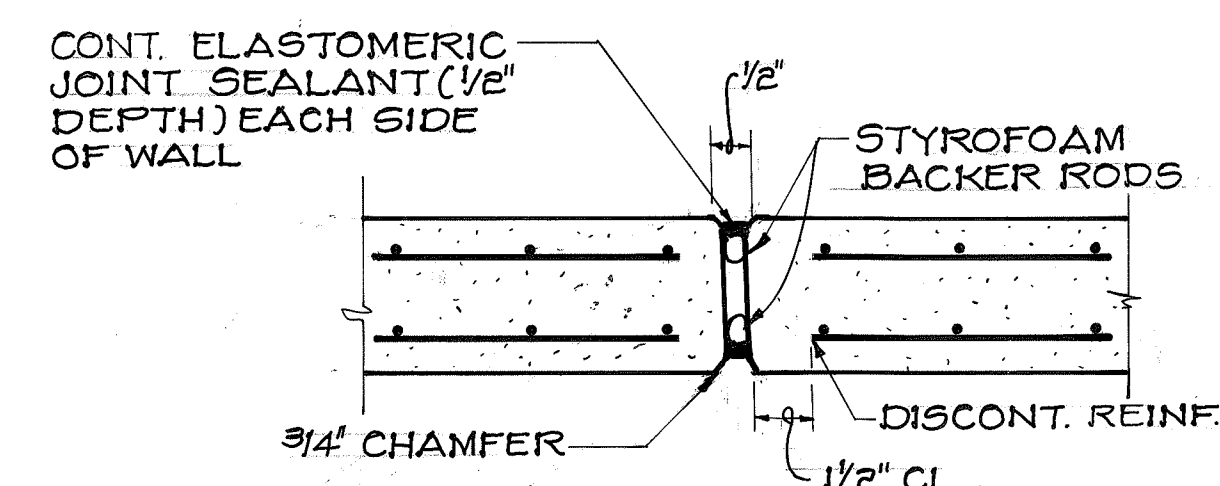
MAUNA KEA OBSERVATORY ACCESS ROAD
PHASE III - B
PROJECT NO.
SCALE: AS SHOWN

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.			20	53

NOTE:
The State Highways Division shall determine final material quantity in stockpile.



1
20 GUTTER OUTLET DETAIL
SCALE AS SHOWN



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS

MAUNA KEA OBSERVATORY ACCESS ROAD
PHASE III - B
PROJECT NO. HWY-H-
SCALE AS SHOWN