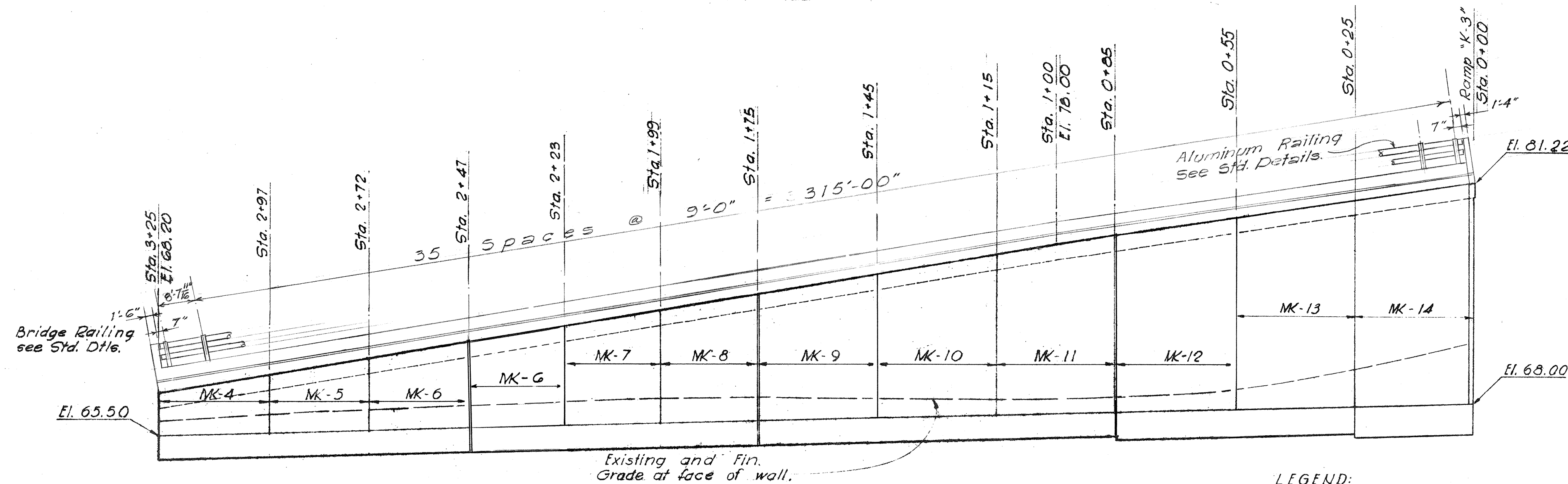
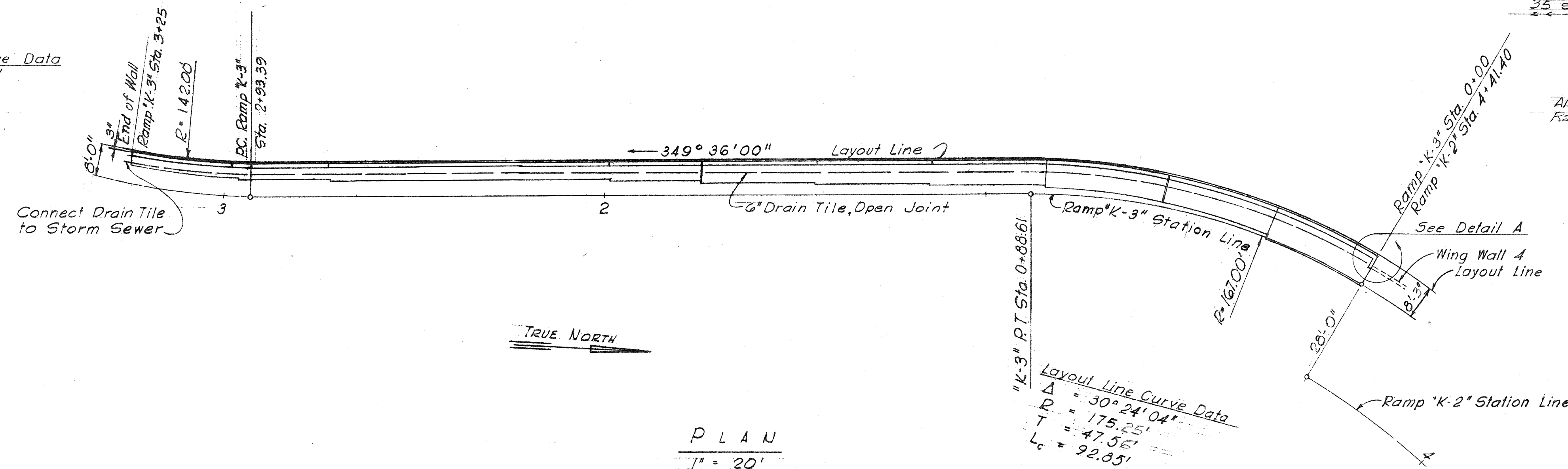


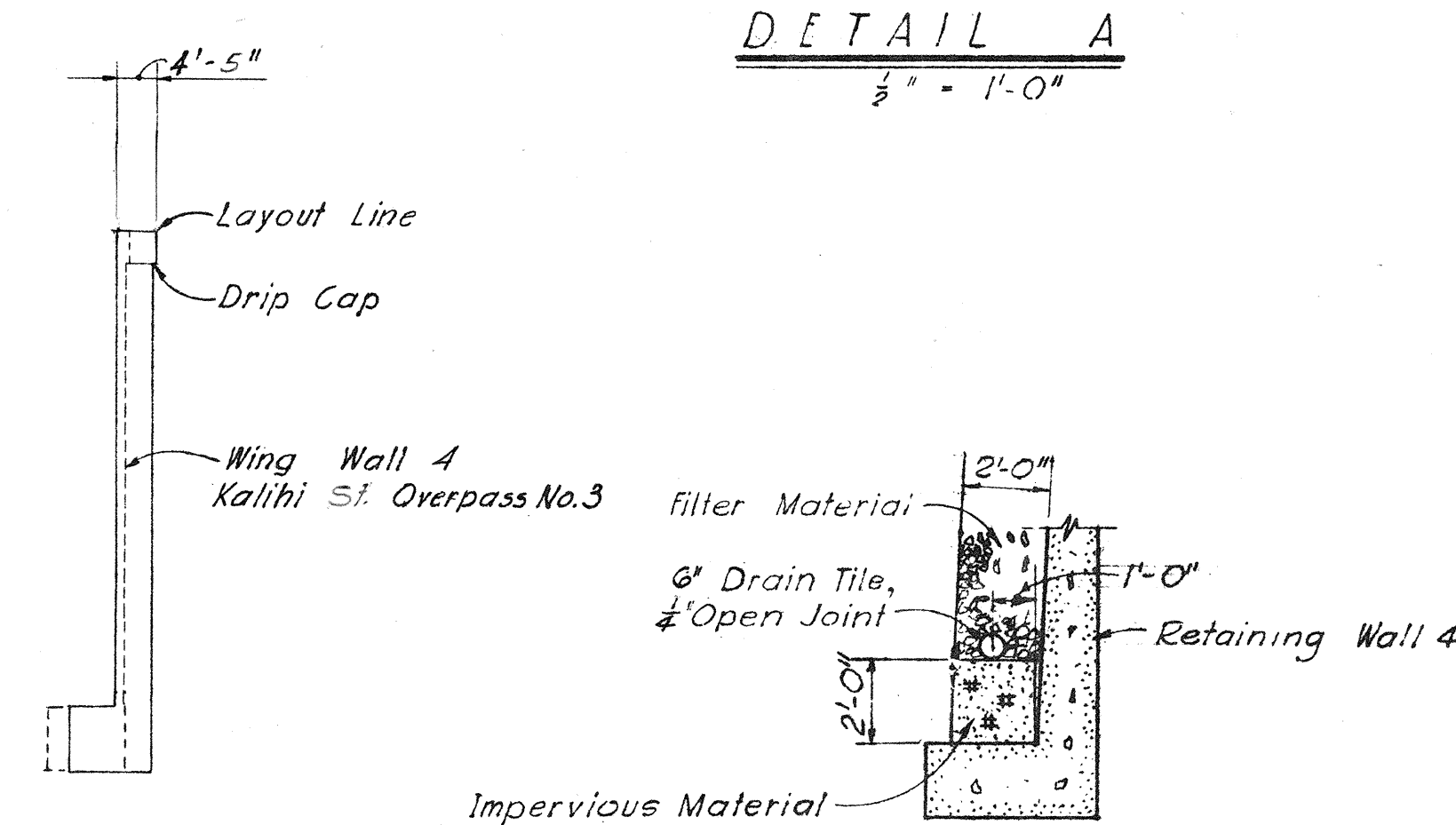
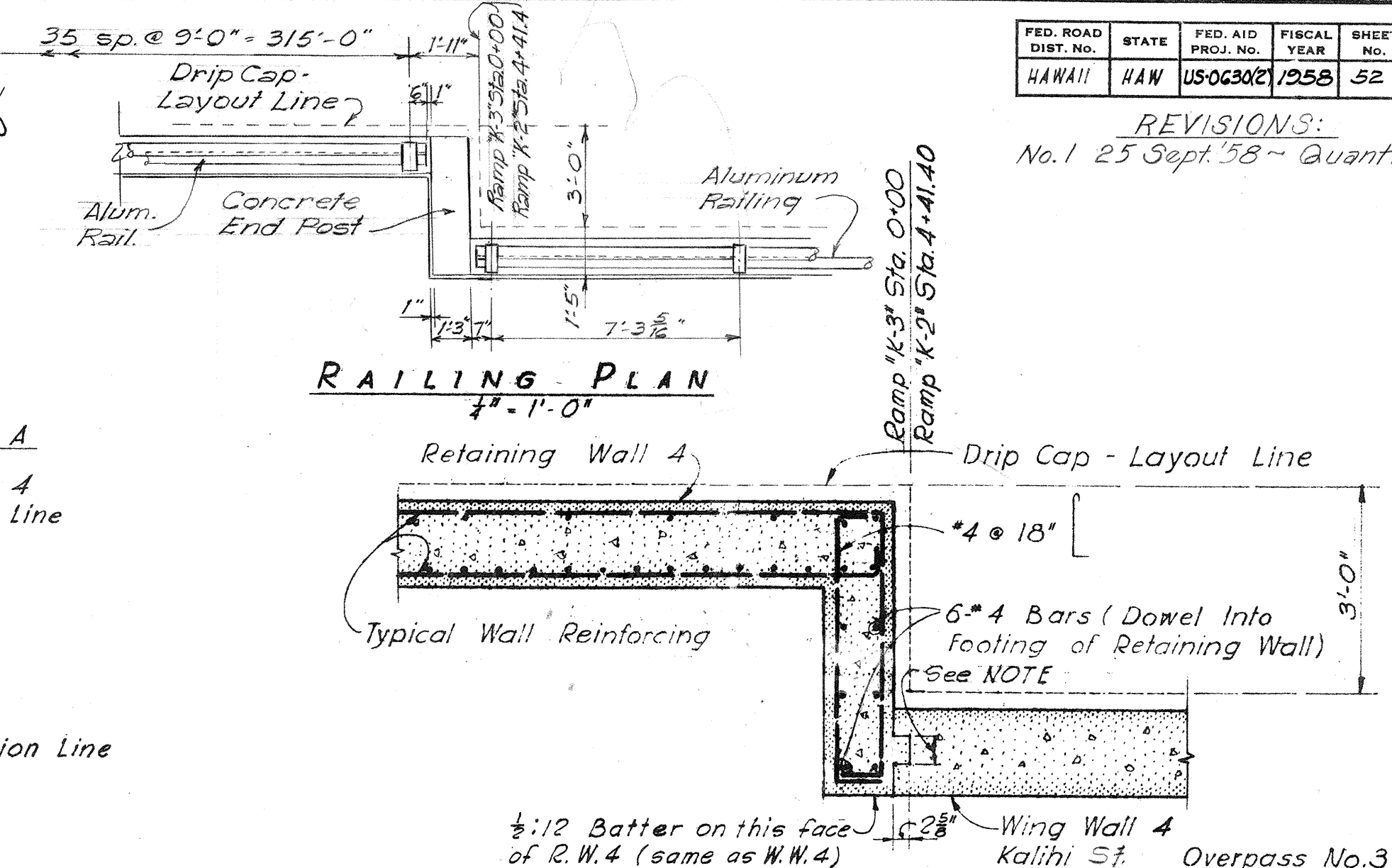
Layout Line Curve Data
 $\Delta = 12^\circ 04' 27''$
 $R = 142.00'$
 $T = 15.02'$
 $L_c = 29.92'$



ITEM	QUANTITY
Class A-1 Concrete	244.3 Cu. Yds.
Reinf. Steel	12,992 Lbs.
Structural Exc.	257.7 Cubic Yds.
Filter Material	147.7 Cubic Yds.
Aluminum Railing	325 Lin. Ft.

REVISION NO. 1

ELEVATION
RETAINING WALL 4 (TYPE "L-2")
 Horizontal 1" = 20' Vertical 1" = 5'-0"

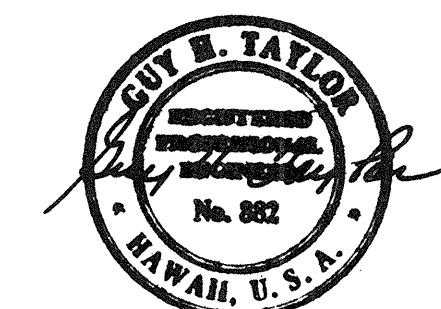


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	US06302	1958	52	103

REVISIONS:
 No. 1 25 Sept. 58 - Quantities.

REFERENCE DRAWINGS.

RETAINING WALL DETAILS.
 STANDARD DETAILS.
 TYPICAL DETAILS AND GENERAL STRUCTURAL NOTES.
 DETAIL ROADWAY PLAN.



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 TERRITORY OF HAWAII

RETAINING WALL 4

KALIHI STREET

US0630 (2)

SHEET NO. 1 OF 1 SHEETS

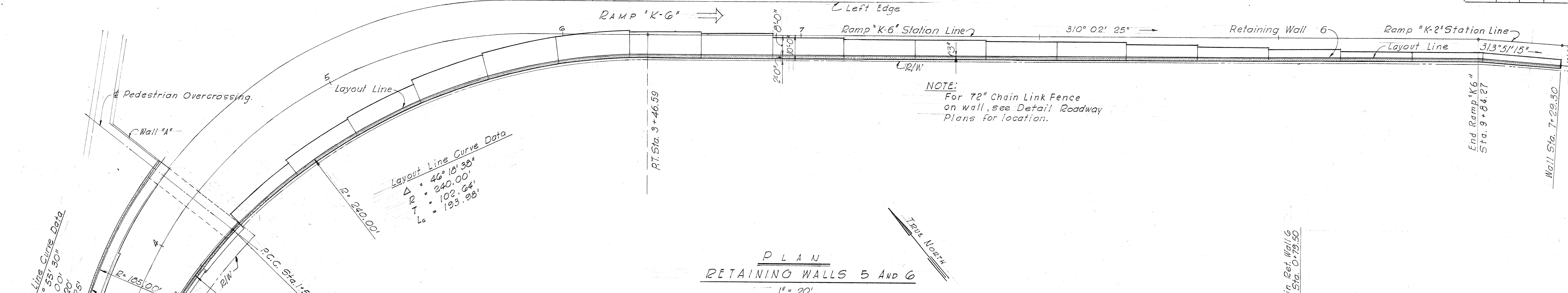
59 S 41. 52

59

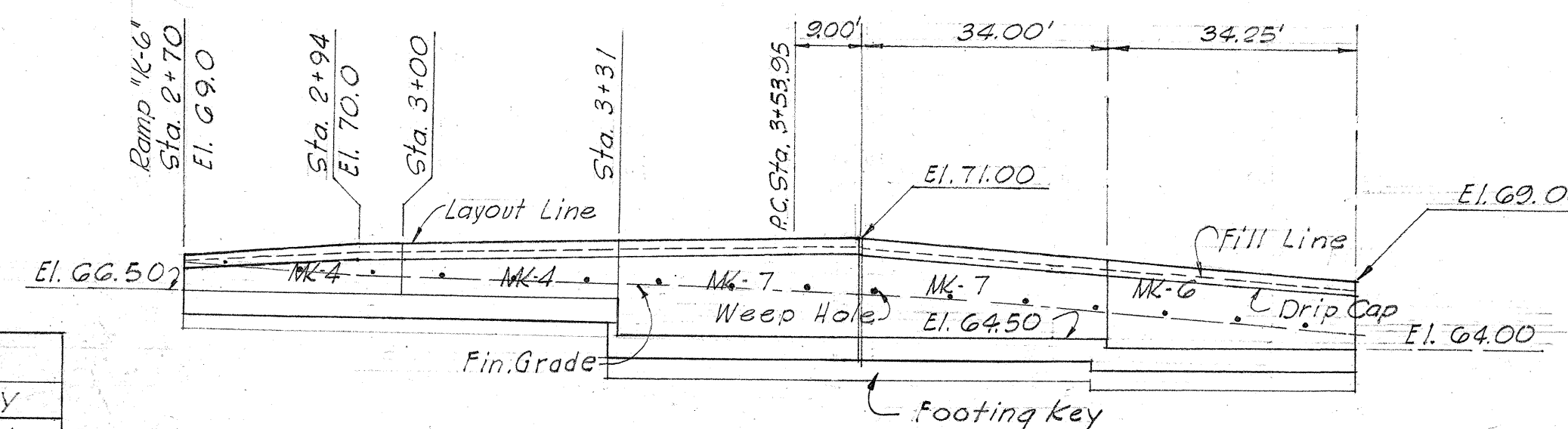
SURVEY PLOTTED BY	DATE
DRAWN BY	12/18/57
TRACED BY	
QUANTITIES CHECKED BY	
CHECKED BY	
NOTE BOOK NO.	

REVISIONS:
No. 1 25 Sept. 58 - Quantities Ret.
Walls #5, #6.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	U-072-1(7) UNIT 3	1958	35	80
		U-5-06300	1958	53	103

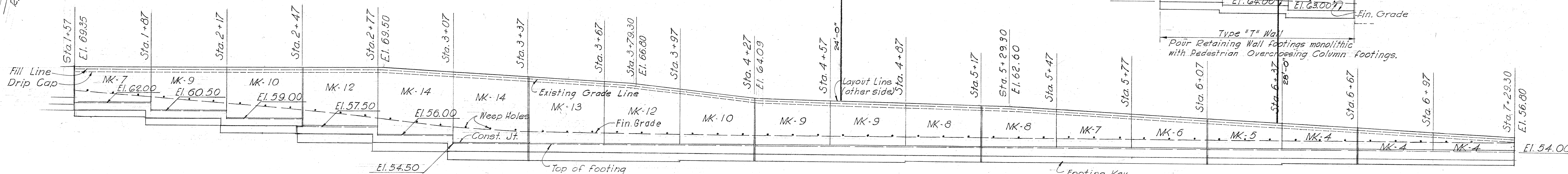


RETAINING WALL 5		
ITEM	QUANTITY	
Class A-1 Concrete	840 Cubic Yds.	87.05
Reinf. Steel	5,153.6 Lbs.	3,459.6
Structure Exc.	1066 Cubic Yds.	114.87
Filter Material	18.5 Cubic Yds.	17



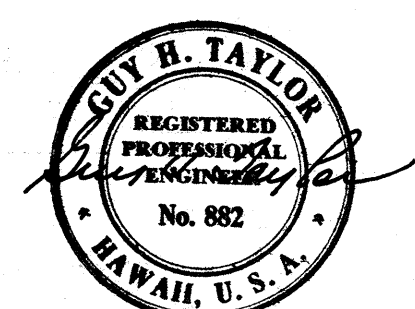
DETAIL A
1/2" = 1'-0"

REFERENCE DRAWINGS
Retaining Wall Details.
Standard Details.
Typical Details and General Structural Notes.



RETAINING WALL 6		
ITEM	QUANTITY	
Class A-1 Concrete	475.8 Cubic Yds.	508.6
Reinf. Steel	25,662 Lbs.	26,071
Structure Exc.	674 Cubic Yds.	736.77
Filter Material	22.9 Cubic Yds.	258

LEGEND
Indicates Contraction Joint
Indicates Expansion Joint



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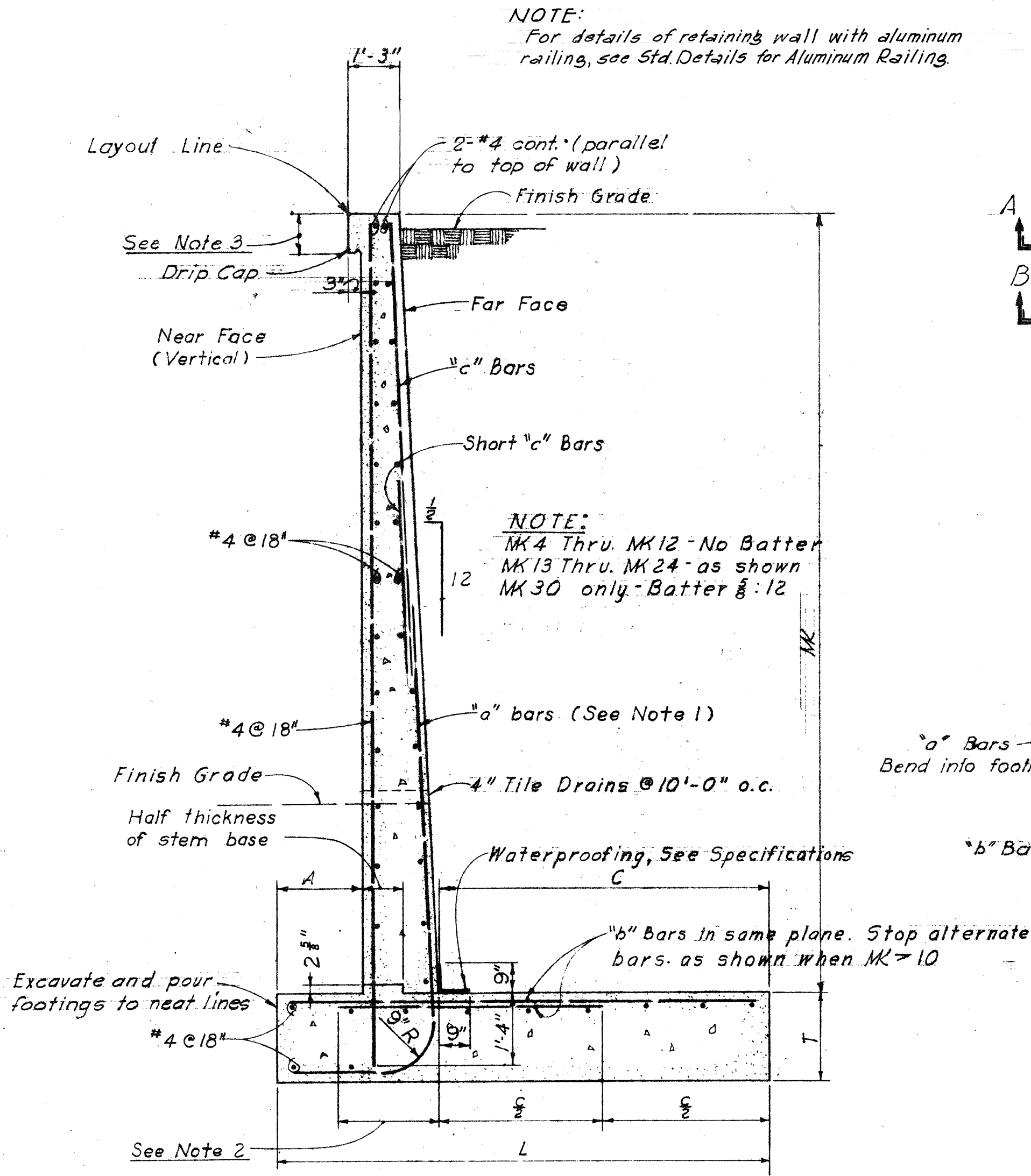
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

RETAINING WALLS 5 & 6

LUNALILO FREEWAY U-072-1(7) UNIT 3
KALIHI STREET USO 630 (2)

SURVEY PLOTTED BY	DATE
DESIGNED BY	4/3/1951
TRACED BY	
QUANTITIES BY	
CHECKED BY	
NOTE BOOK	
No.	

REVISIONS:
No. 1-25, Sept. '58 - Reinf. diagram.

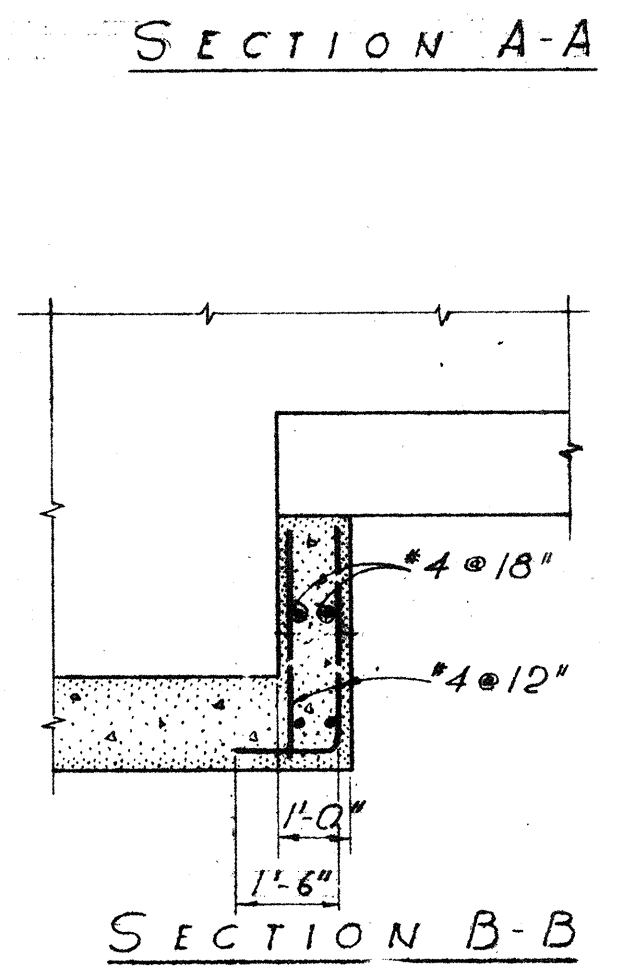
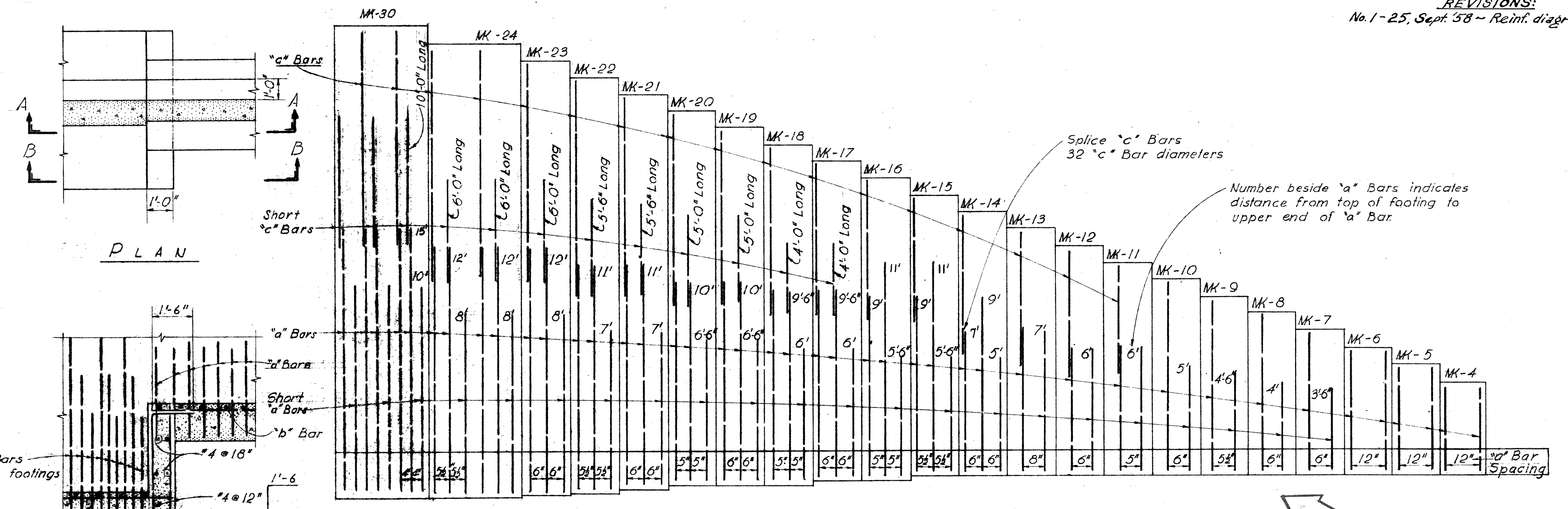


NOTE 1:
Spacing given in schedule is at base of stem.

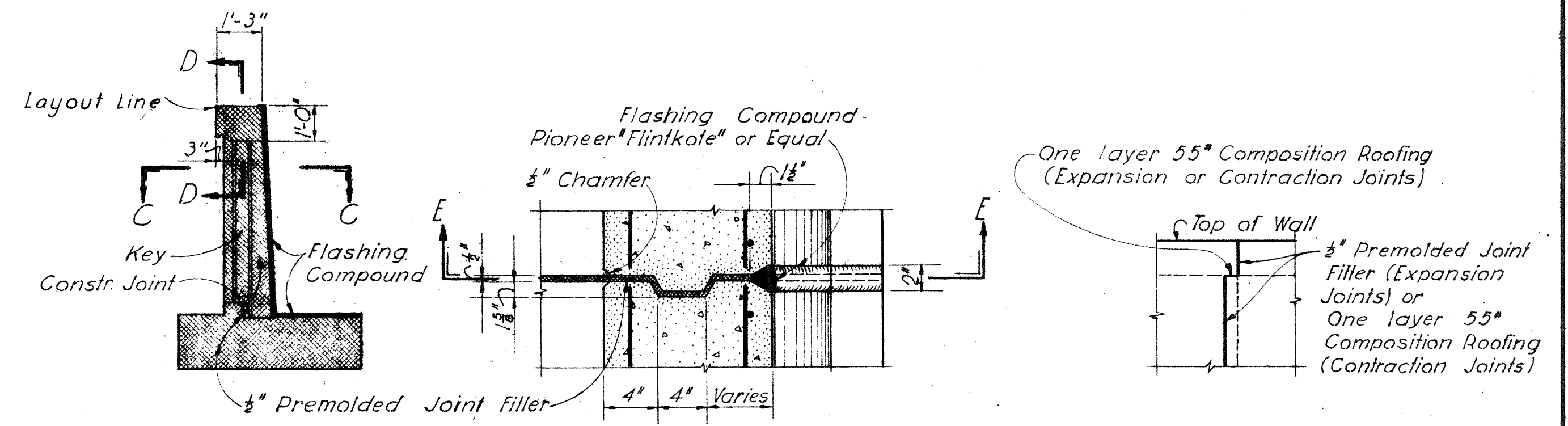
NOTE 2:
For MK-16' or less, extend all "b" Bars to toe. For MK-17' and over, extend alternate "b" Bars 32 diameters.

NOTE 3:
Height of Drip Cap varies for Wing Walls, pour to match Structure Drip Cap
Height for Retaining Wall Drip Cap = 1'-0"

TYPICAL SECTION
TYPE "T" WALL



FOOTING STEP DETAILS

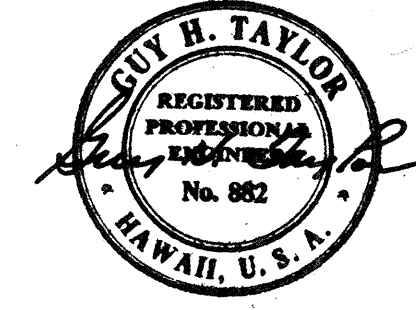


TYPICAL JOINT DETAILS

NOTE:
Contraction Joint detail is similar except that one layer 55" Composition Roofing shall be used in place of Premolded Joint Filler, and the joint shall extend through the stem only.

REFERENCE DRAWINGS
RETAINING WALL DETAILS II
TYPICAL DETAILS AND GENERAL STRUCTURAL NOTES

TYPE "T" WALL SCHEDULE		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	30
MK		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	30
A		6"	6"	6"	12"	12"	12"	12"	12"	12"	12"	15"	18"	21"	24"	24"	24"	27"	30"	33"	36"	39"	5'-3"
L		2.5'	3.0'	3.5'	4.0'	4.5'	5.0'	5.5'	6.0'	6.5'	7.0'	7.75'	8.25'	9.0'	9.75'	10.5'	11.5'	12.5'	13.5'	14.5'	15.25'	16.0'	18'-0"
T		18"	18"	18"	18"	18"	18"	18"	18"	18"	18"	18"	18"	21"	21"	24"	24"	24"	27"	30"	31"	33"	36"
"c" Bars										4	4	4	4	4	4	4	5	5	6	6	7	7	7
"a" Bars		3@12"	3@12"	4@12"	3@6"	4@6"	4@5 1/2"	5@6"	5@5 1/2"	6@6"	6@8"	6@6"	6@5 1/2"	7@6"	7@6"	8@6"	8@5"	9@6"	9@5 1/2"	10@6"	10@5 1/2"	11@4"	
"b" Bars		3@12"	3@12"	3@12"	3@12"	3@12"	4@11"	5@12"	5@10"	5@6"	6@8"	6@6"	6@5 1/2"	7@6"	7@5"	9@6"	9@5"	10@6"	10@5 1/2"	11@6"	11@5 1/2"	11@6"	



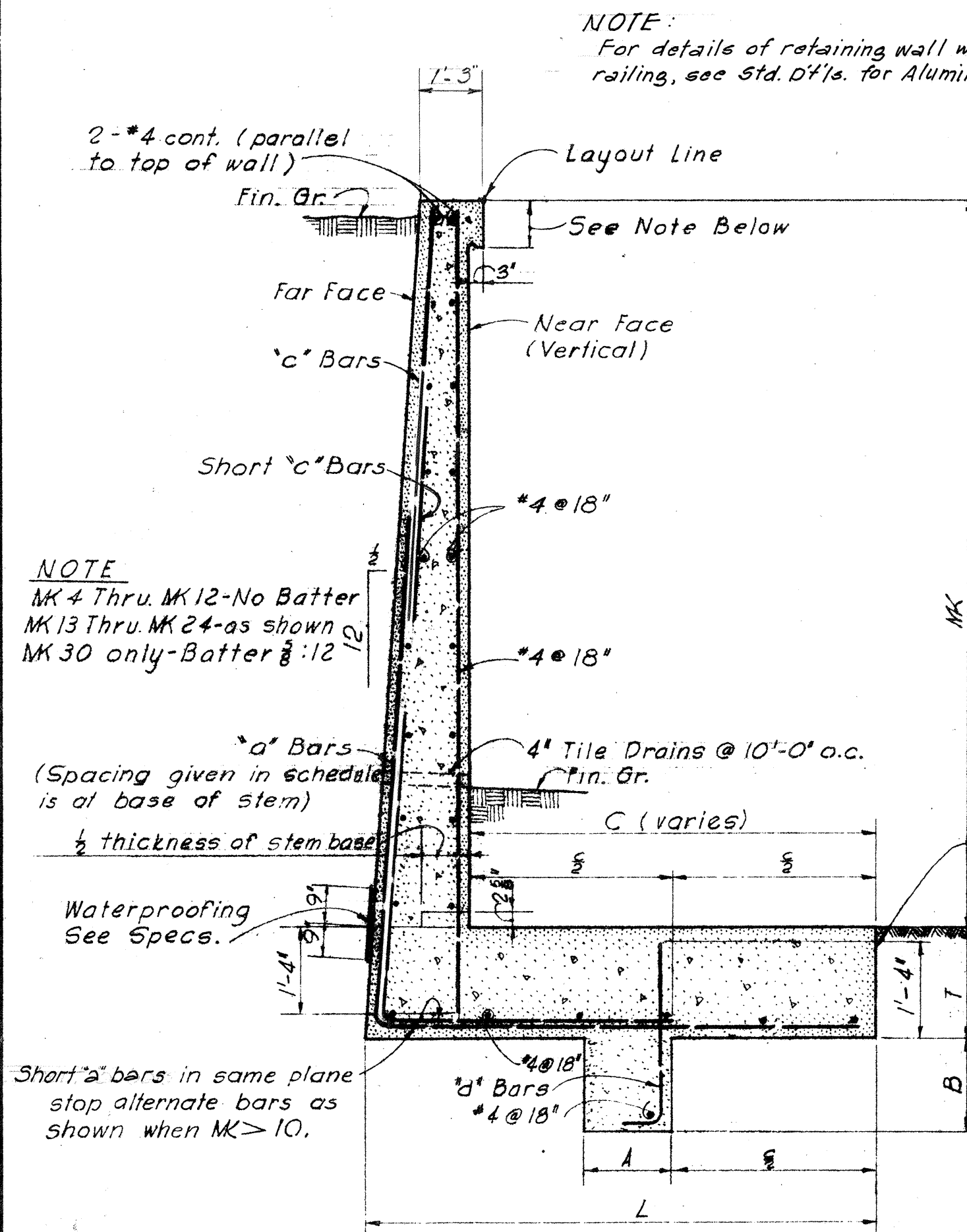
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TERRITORY OF HAWAII

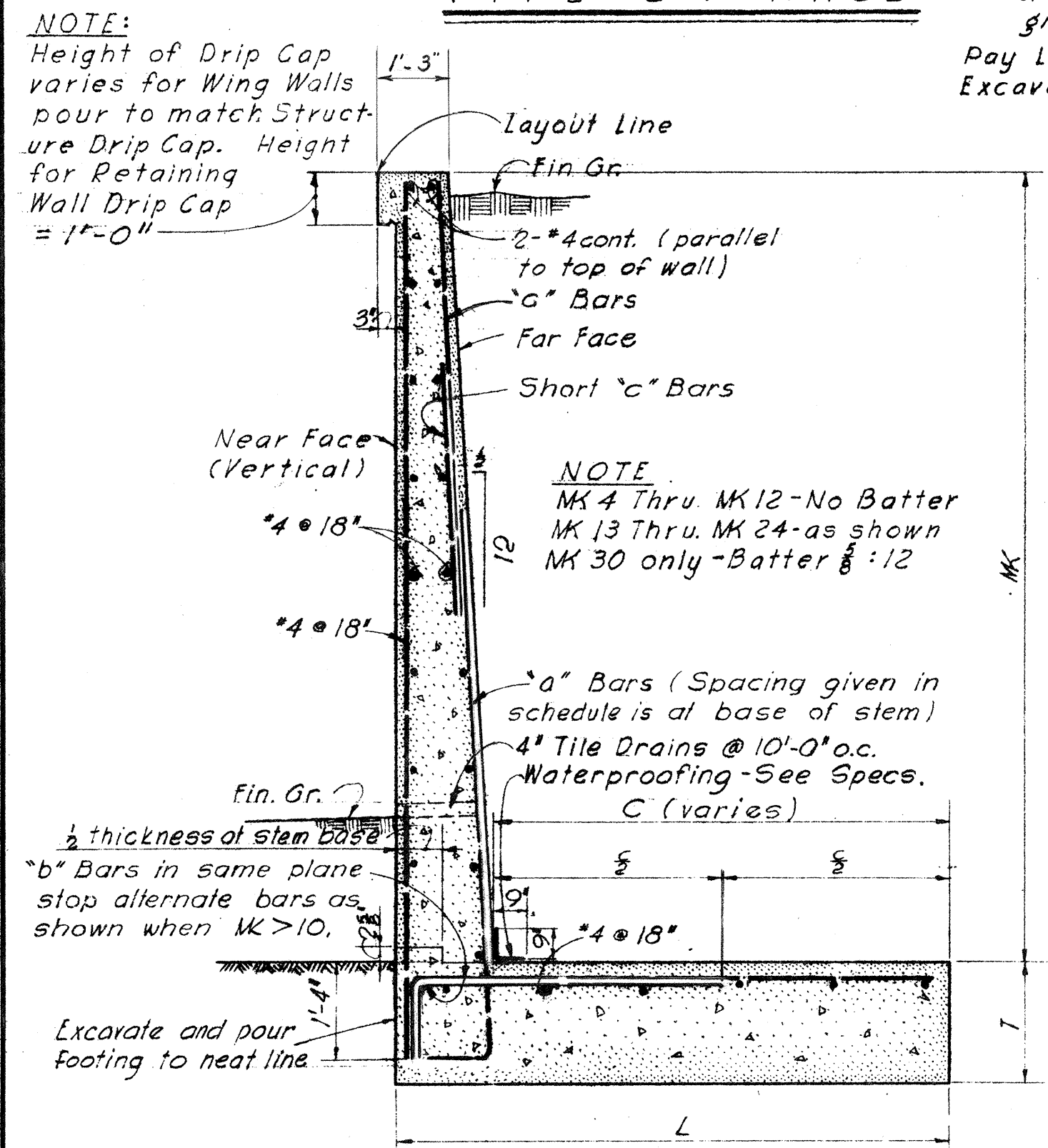
RETAINING WALL DETAILS I

LUNALILO FREEWAY U-072-1(7) UNIT 3

KALIHI STREET US 0630(2)



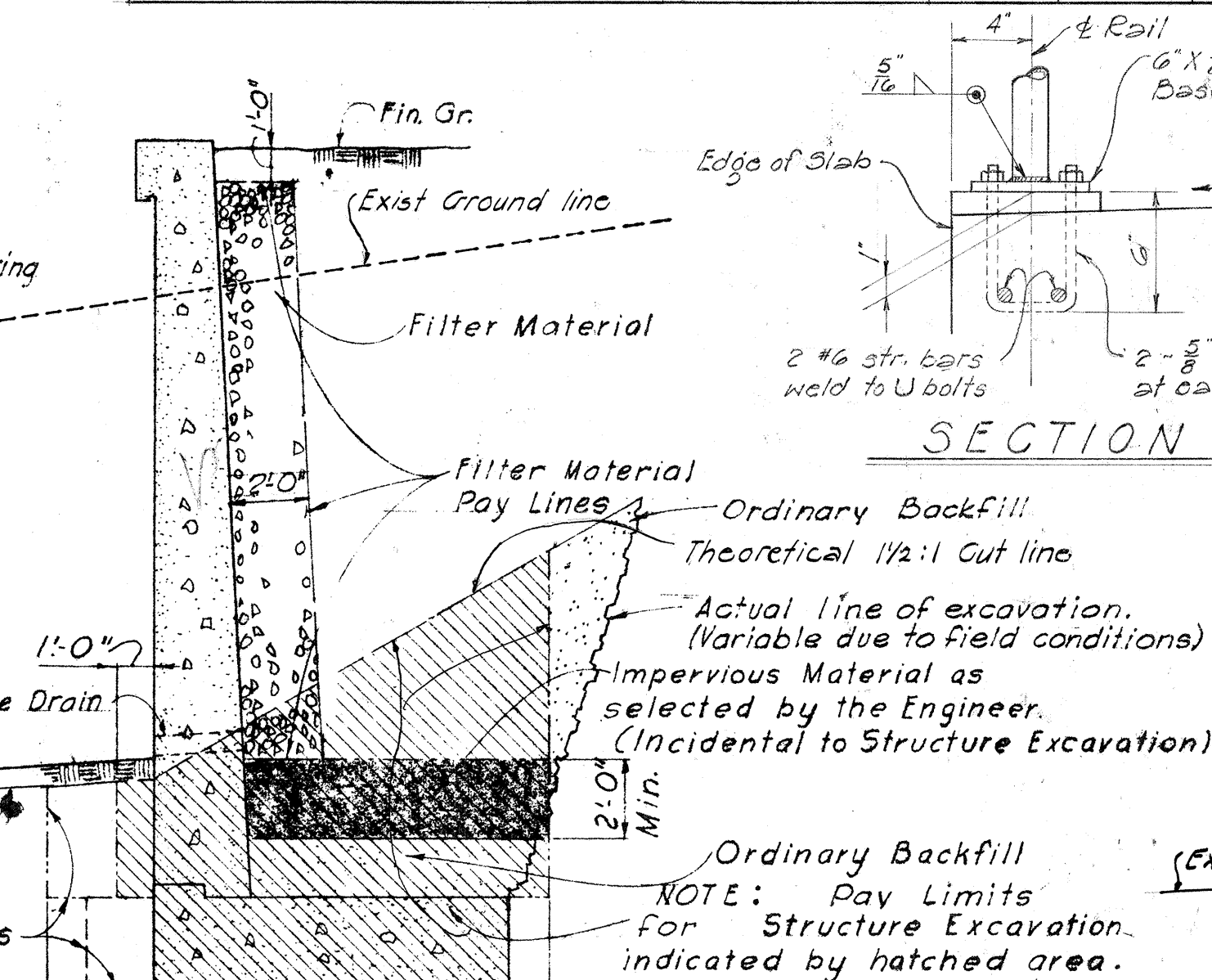
TYPICAL SECTION
TYPE "L-1" WALL



TYPICAL SECTION
TYPE "L-2" WALL

TYPE "L-1" WALL SCHEDULE

MK	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
L	3.5'	4.5'	5.5'	6.5'	7.5'	8.0'	8.5'	9.5'	10.0'	10.5'	11.0'	12.0'	12.5'	13.5'	14.0'	15.0'	16.0'	17.5'
T	18"	18"	18"	18"	18"	18"	18"	18"	18"	18"	18"	20"	22"	24"	24"	26"	28"	30"
A	12"	14"	14"	14"	14"	16"	16"	18"	20"	20"	20"	24"	24"	24"	24"	24"	24"	24"
B	12"	14"	14"	14"	14"	16"	16"	18"	20"	20"	20"	24"	24"	26"	26"	28"	28"	30"
'c' Bars																		
'a' Bars	#3	#3	#4	#3	#4	#4	#5	#5	#6	#6	#6	#6	#6	#7	#7	#8	#8	#9
Short 'a' Bars																		
Spacing of type 'a' bars at base of stem (c to c.)	12	12	12	6"	6"	5 1/2"	6"	5"	6"	8"	6"	5 1/2"	5"	6"	5"	6"	5"	6"
'd' Bars	#3 @ 12"	#3 @ 12"	#3 @ 12"	#3 @ 12"	#3 @ 12"	#3 @ 10"	#4 @ 12"	#4 @ 10"	#4 @ 12"	#4 @ 12"	#4 @ 12"	#4 @ 11"	#4 @ 10"	#5 @ 12"	#5 @ 10"	#6 @ 10"	#6 @ 10"	#7 @ 12"

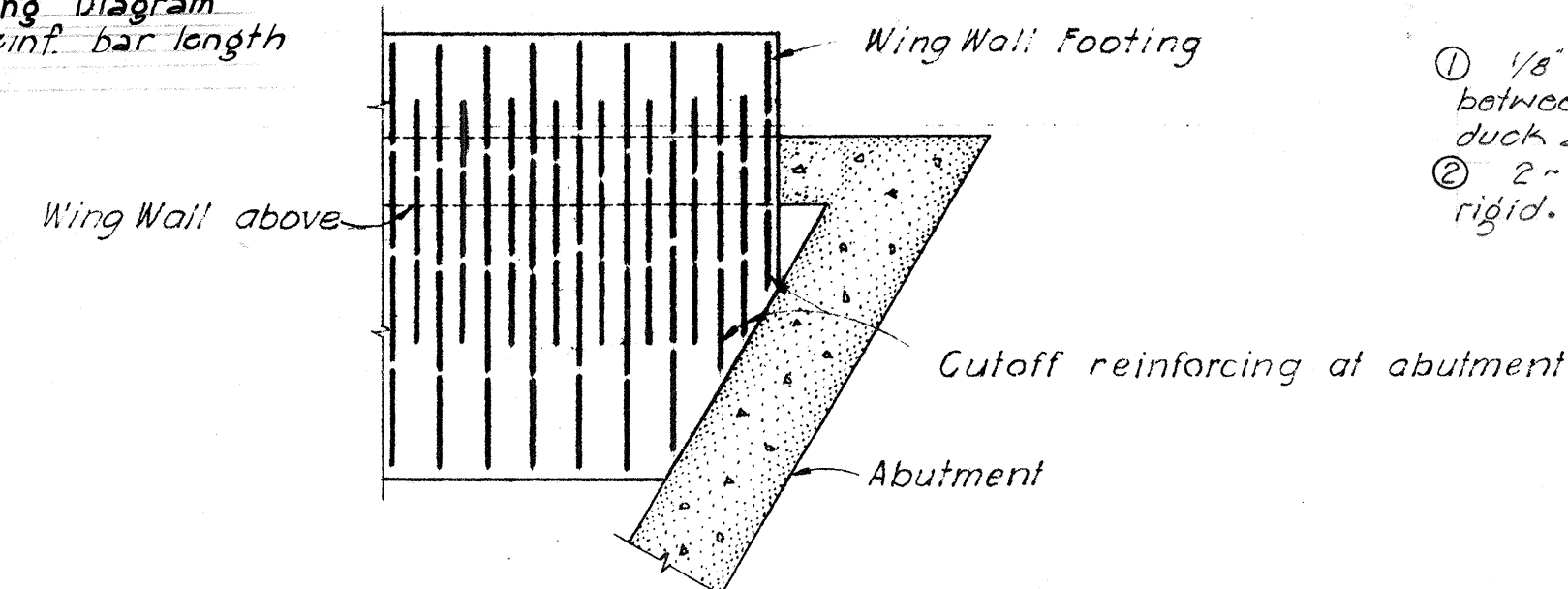


CASE II

TYPICAL DETAILS - LIMITS OF STRUCTURAL
EXC. TYPE "T" OF "L-2" WALLS

TYPE "L-2" WALL SCHEDULE

MK	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L	3.5'	4.0'	4.5'	4.5'	5.0'	5.5'	6.0'	6.5'	7.5'	8.0'	9.0'	10.0'	11.0'	12.25'	13.5'	14.75'	16.0'
T	18"	18"	18"	18"	18"	18"	18"	18"	20"	20"	22"	22"	24"	24"	24"	24"	24"
'c' Bars																	
'a' Bars	#3 @ 12"	#3 @ 12"	#4 @ 12"	#3 @ 6"	#4 @ 6"	#4 @ 5 1/2"	#5 @ 6"	#5 @ 5"	#6 @ 6"	#6 @ 8"	#6 @ 6"	#6 @ 5 1/2"	#6 @ 5"	#7 @ 6"	#7 @ 5"	#8 @ 6"	#8 @ 5"
'b' Bars	#3 @ 12"	#3 @ 12"	#4 @ 12"	#3 @ 6"	#4 @ 6"	#4 @ 5 1/2"	#5 @ 6"	#5 @ 5"	#6 @ 6"	#6 @ 8"	#6 @ 6"	#6 @ 5 1/2"	#6 @ 5"	#7 @ 6"	#7 @ 5"	#8 @ 6"	#8 @ 5"



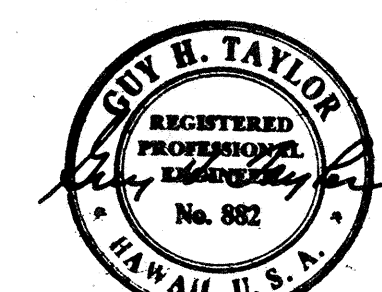
WING WALL FOOTING CUTOFF DETAIL
No Scale

RAILING NOTES

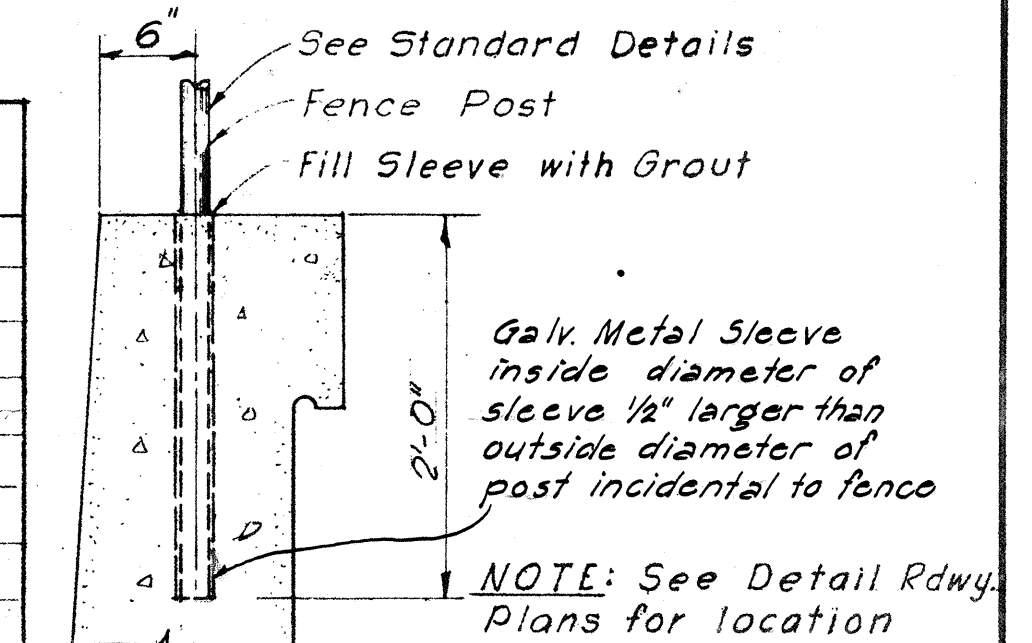
- 1/8" Fabric bearing pad or 1/8" canvas duck and red lead between base plate and seat. For method of placing canvas duck and red lead see Sect. 44.3(F)(6) of the Std. Specs.
- 2-5/8" Galv. U bolts at each post. Make anchor unit rigid. Assemble by using base plate as template.

REFERENCE DRAWINGS

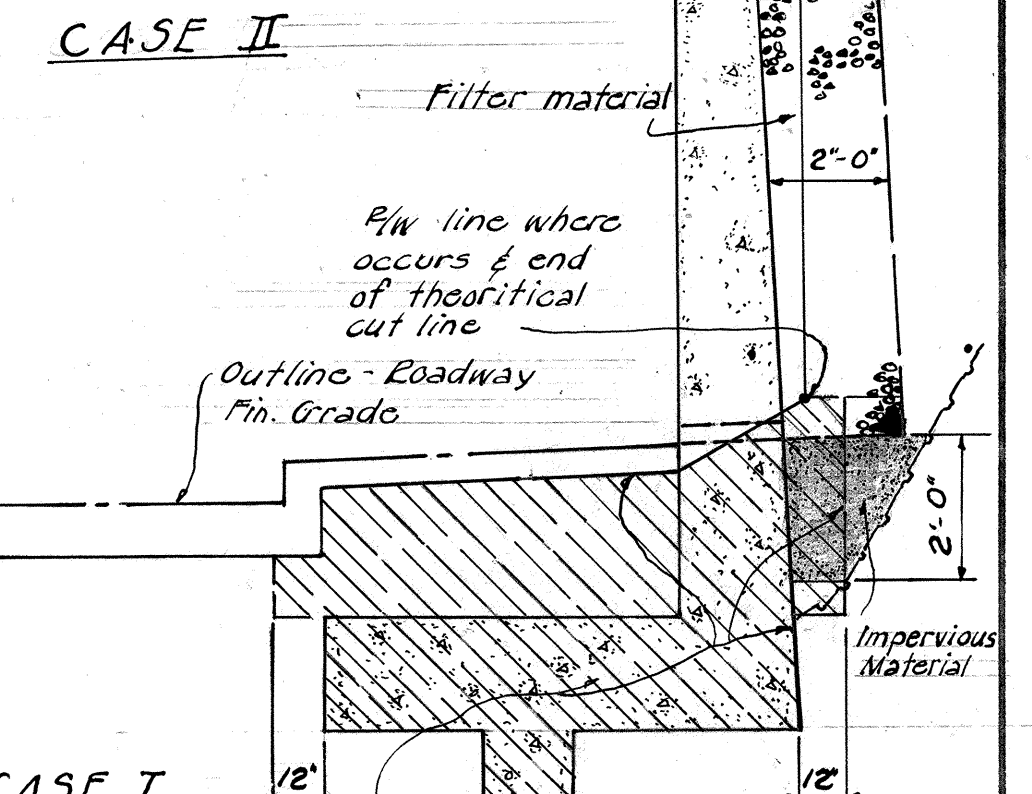
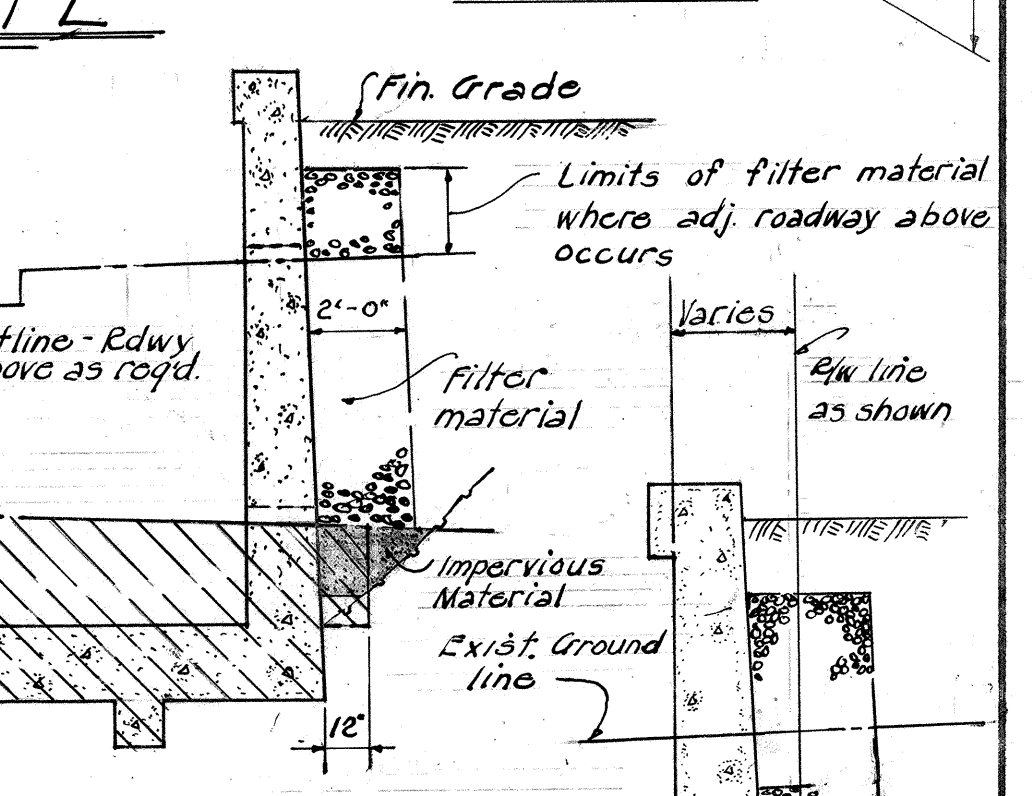
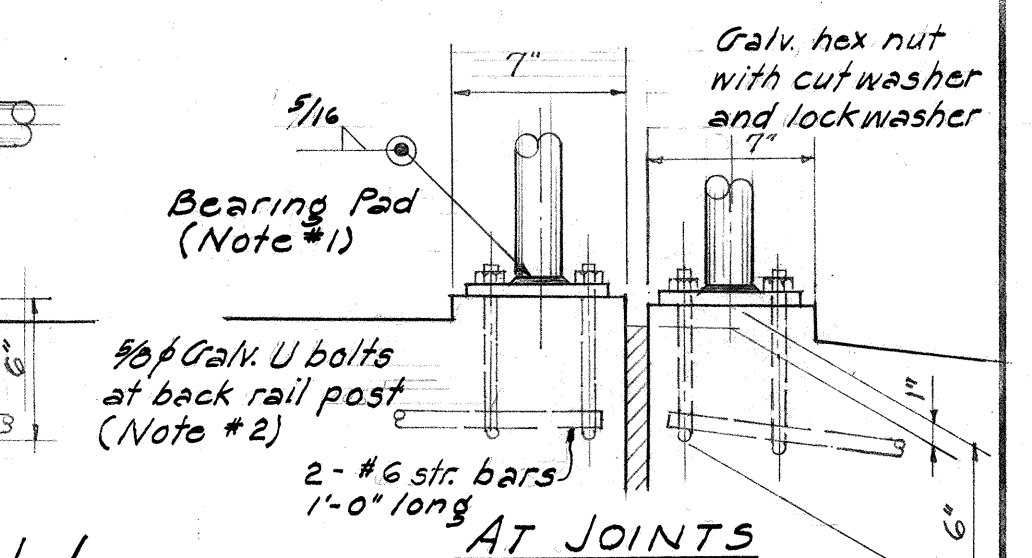
RETAINING WALL DETAIL I
TYPICAL DETAILS AND GENERAL
STRUCTURAL NOTES



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CHAIN LINK FENCE POST DETAIL



TYP. DET. - LIMITS OF STRUCTURAL
EXC. AT WALL TYPE L-1

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
RETAINING WALL DETAILS II
LUNALILO FREEWAY U-072-1(7) UNIT 3
KALIHI STREET US0 630(2)