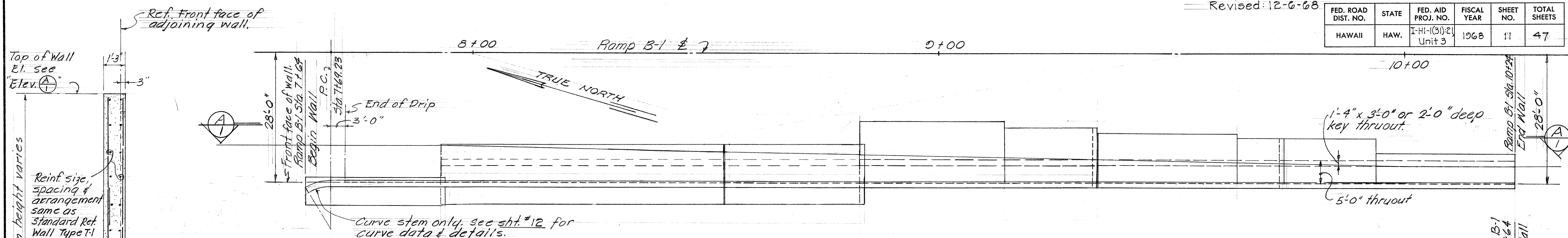


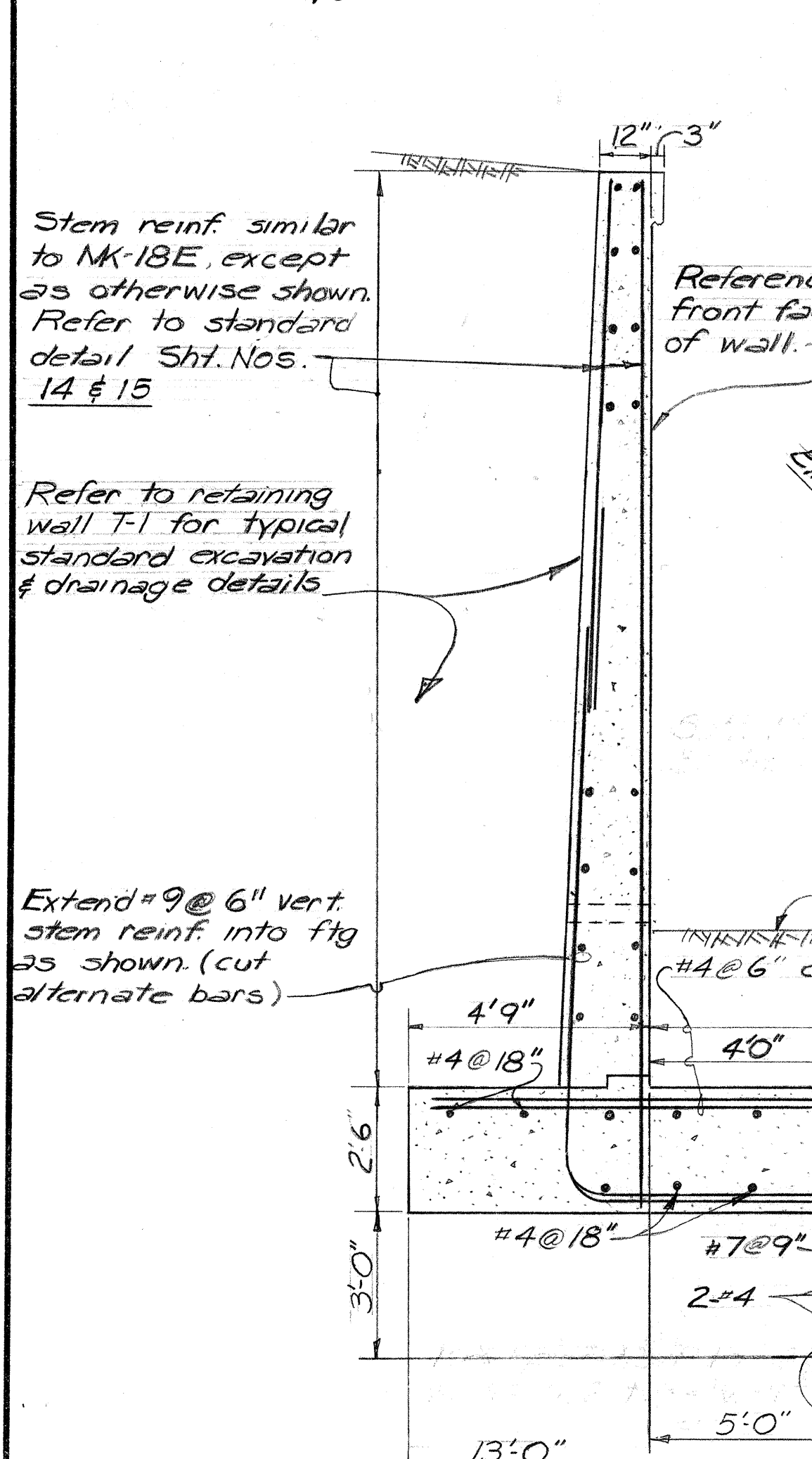
Revised 12-6-68

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(3)21 Unit 3	1968	11	47

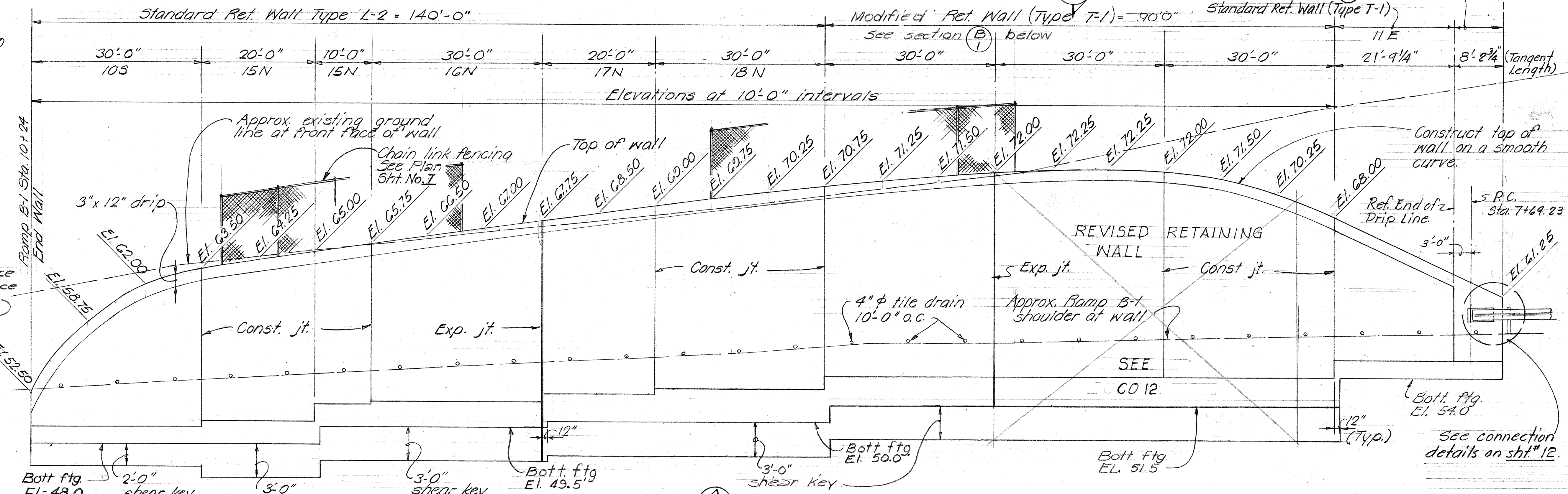


PLAN - RETAINING WALL NO B-1 Scale: 1"=10'-0"

TYP. SECTION (C) (SPECIAL RET. WALL) Scale: 3/8"=1'-0"



TYPICAL SECTION (B) (Modified R.W. Type T-1) Scale 3/8"=1'-0"



ELEVATION (A) - RETAINING WALL NO B-1

Scale: Horiz: 1"=10'-0"
Vert: 1"=5'-0"

NOTE:
Stationing of above Plan View and Elevation View (A) is reversed.

ESTIMATED QUANTITIES	
CONCRETE	473 CY
REINF. STEEL	38,100 LBS
STRUCT. EXCAVATION	1,238 CY
FILTER MATERIAL	110 CY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL No. B-1
INTERSTATE ROUTE HI
PELE ST. TO VICTORIA ST.
F.A.I. Proj. No. I-HI-1(3)21, Unit 3

Scale: As Shown Date: Aug. 1968
SHEET No. 1 OF 5 SHEETS

Revised: 12-6-68

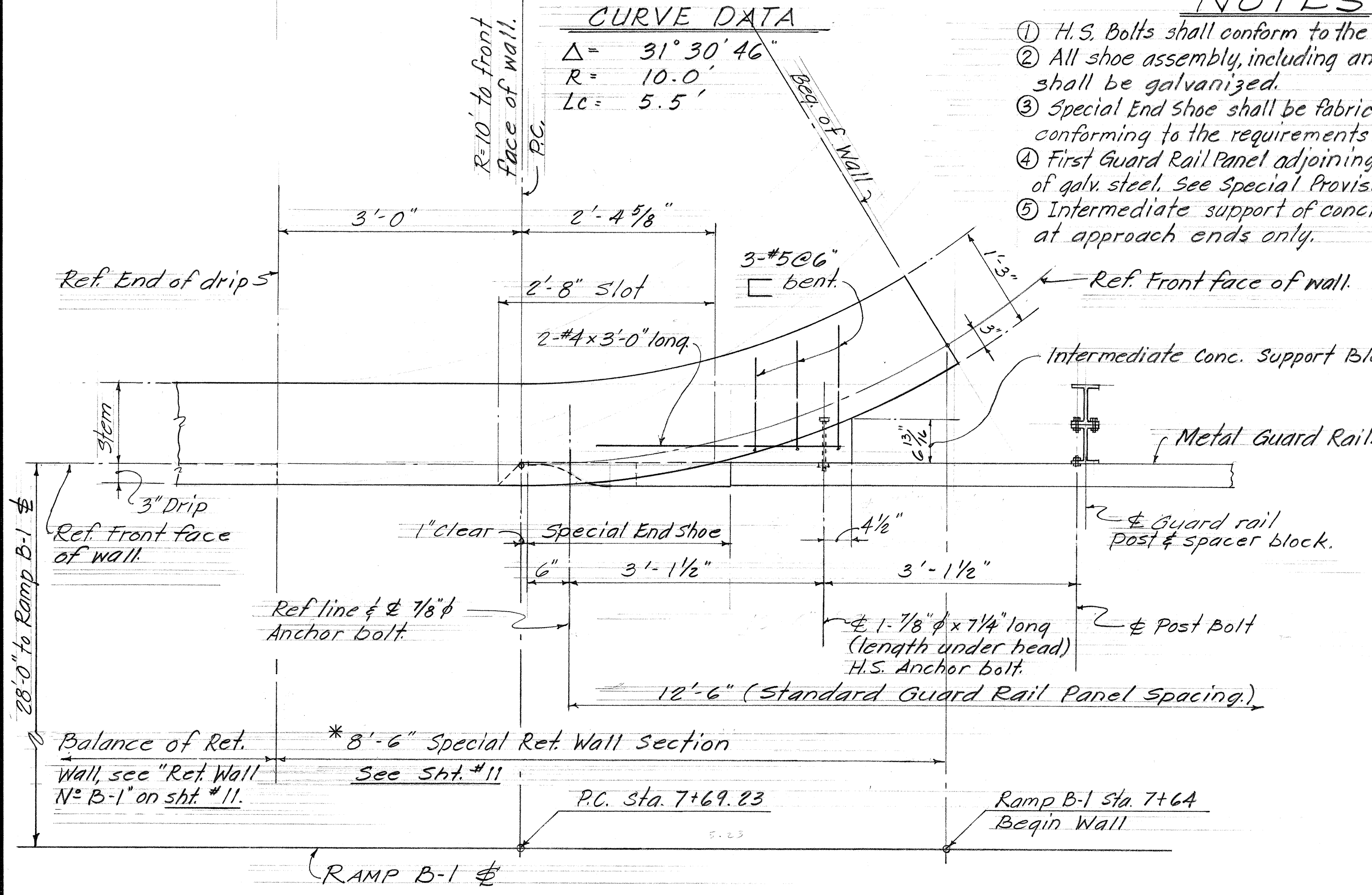
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(31)21 Unit 3	1968	12	47

NOTES

- H.S. Bolts shall conform to the requirements of ASTM A-325.
- All shoe assembly, including anchor bolts, nuts and washers, shall be galvanized.
- Special End Shoe shall be fabricated from 10 gage steel conforming to the requirements of AASHTO 180.
- First Guard Rail Panel adjoining "Special End Shoe" shall be of galv. steel. See Special Provisions for requirements.
- Intermediate support of concrete block shall be installed at approach ends only.

CURVE DATA

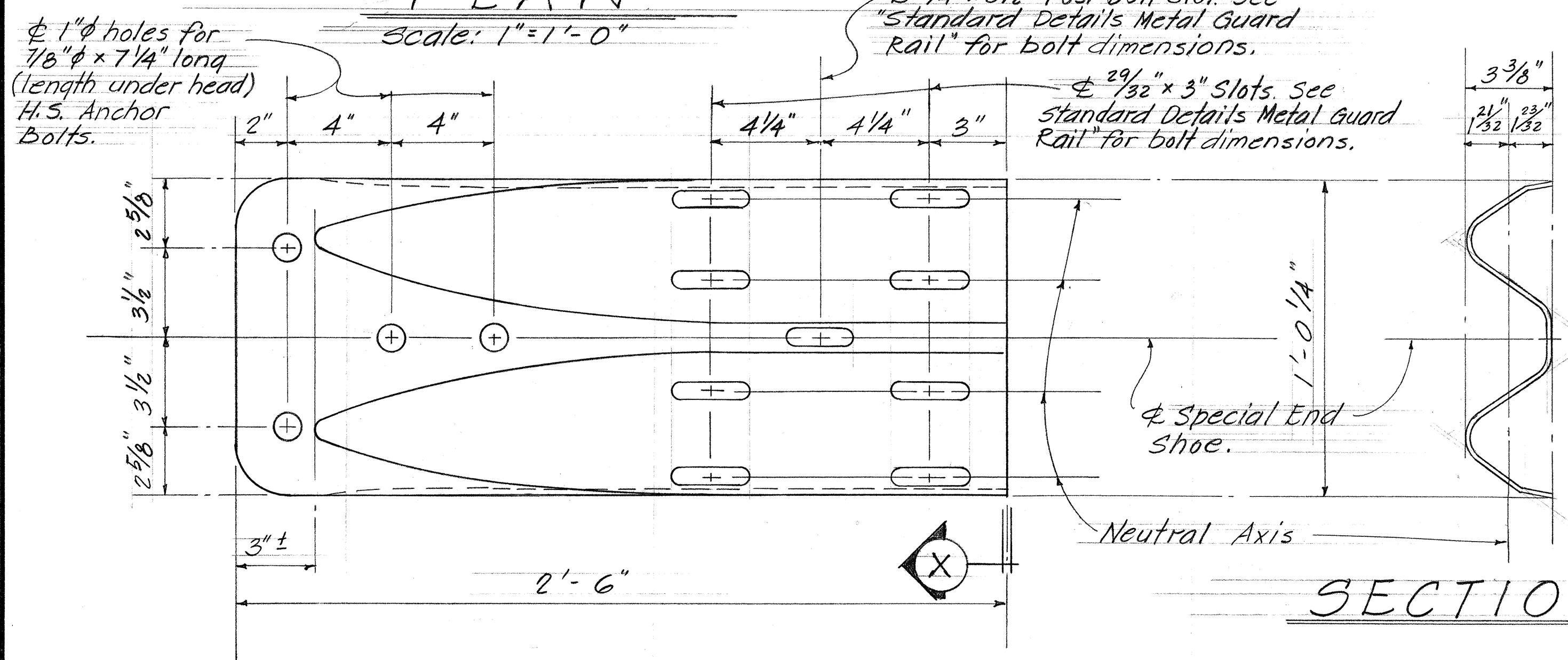
$\Delta = 31^\circ 30' 46''$
 $R = 10.0'$
 $Lc = 5.5'$



* Length given along front face of wall.

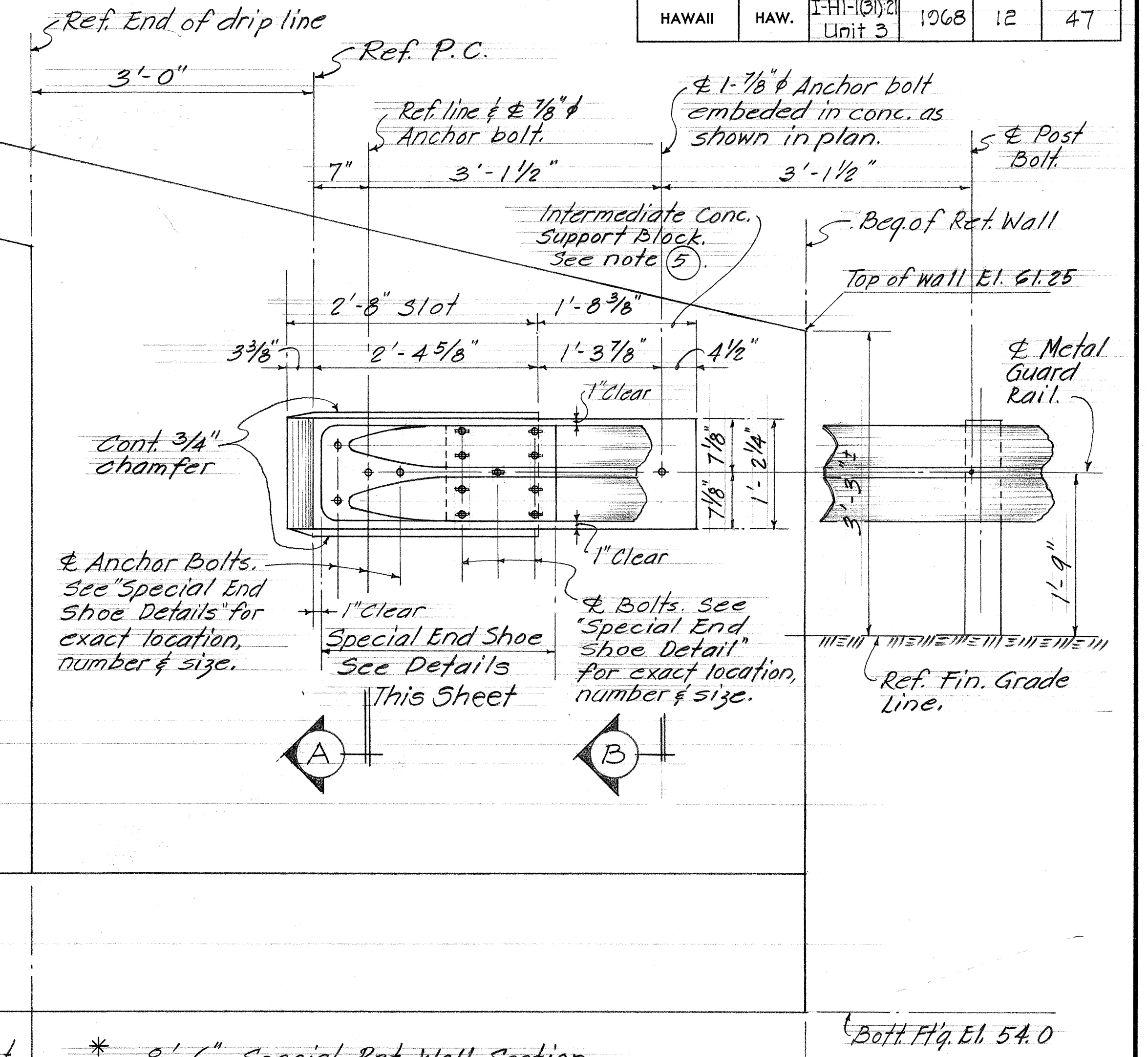
PLAN

Scale: 1" = 1'-0"



SPECIAL END SHOE DETAILS

Scale: 3" = 1'-0"

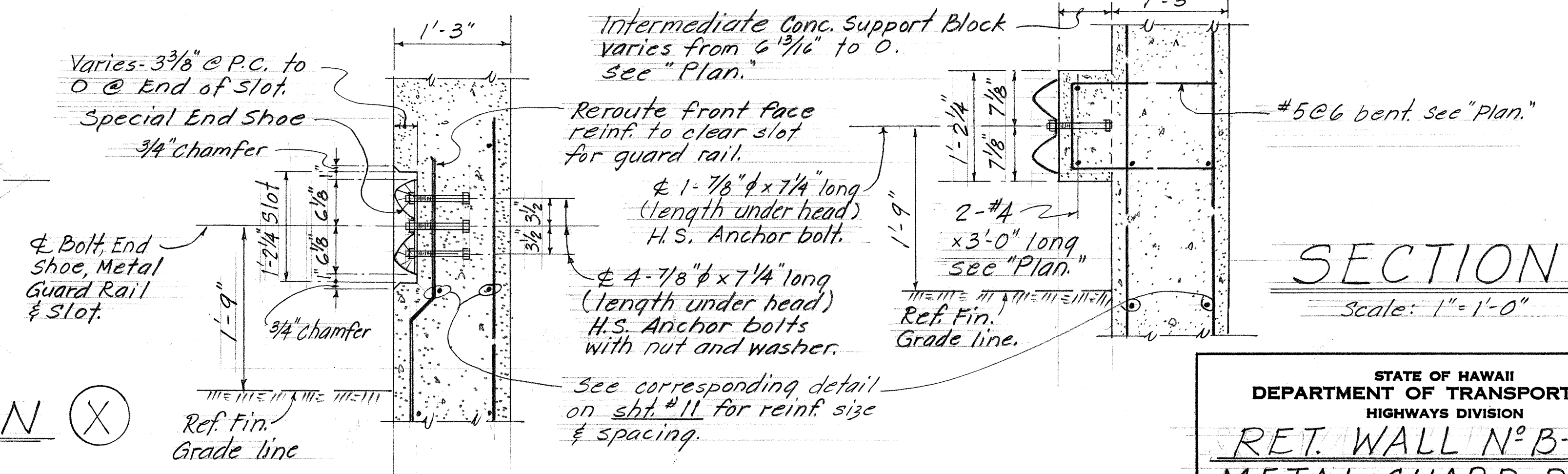


Balance of Ret. Wall, see "Ret. Wall N° B-1" on sht. #11.

* 8'-6" Special Ret. Wall Section. See sheet #11 for "Typ. Section Thru Special Ret. Wall."

ELEVATION

Scale: 1" = 1'-0"



SECTION (B)

Scale: 1" = 1'-0"

SECTION (A)

Scale: 1" = 1'-0"

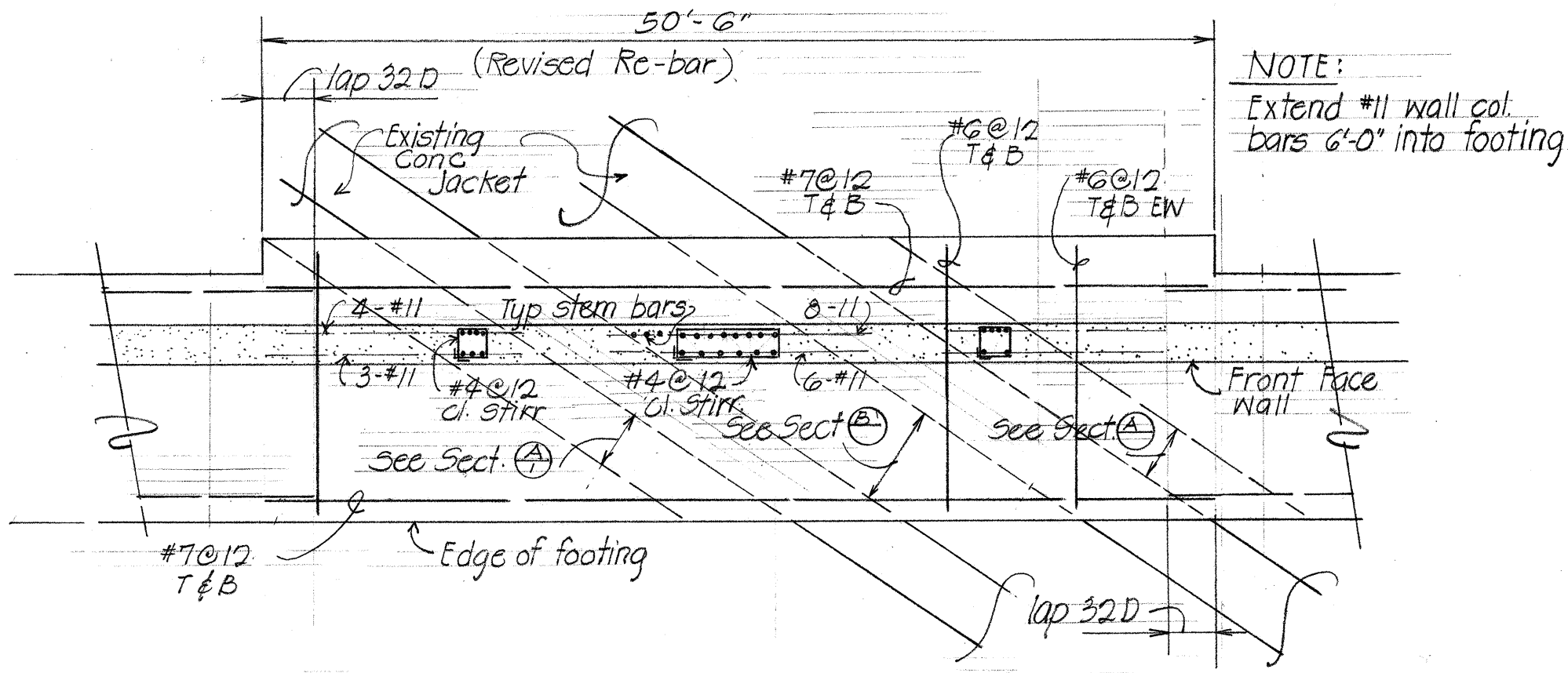
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RET. WALL N° B-1 TO METAL GUARD RAIL CONNECTION DETAILS

INTERSTATE ROUTE H1
PELE ST. TO VICTORIA ST.
F.A.I. Proj. N° I-HI-1(31)21, UNIT 3
Scale as shown Date: Dec. 1968

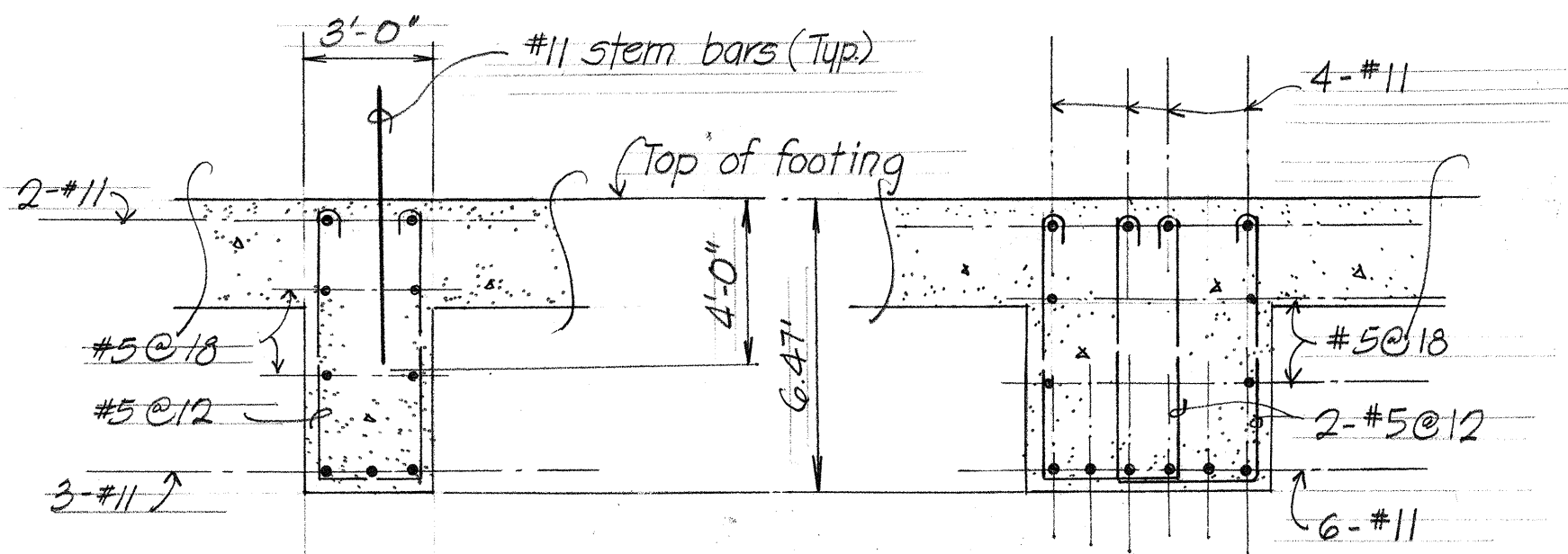
SHEET No. 2 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(3):21 Unit 3	1969	C0125-1	47



PLAN - REINF LAYOUT

Scale: 1/8" = 1'-0"

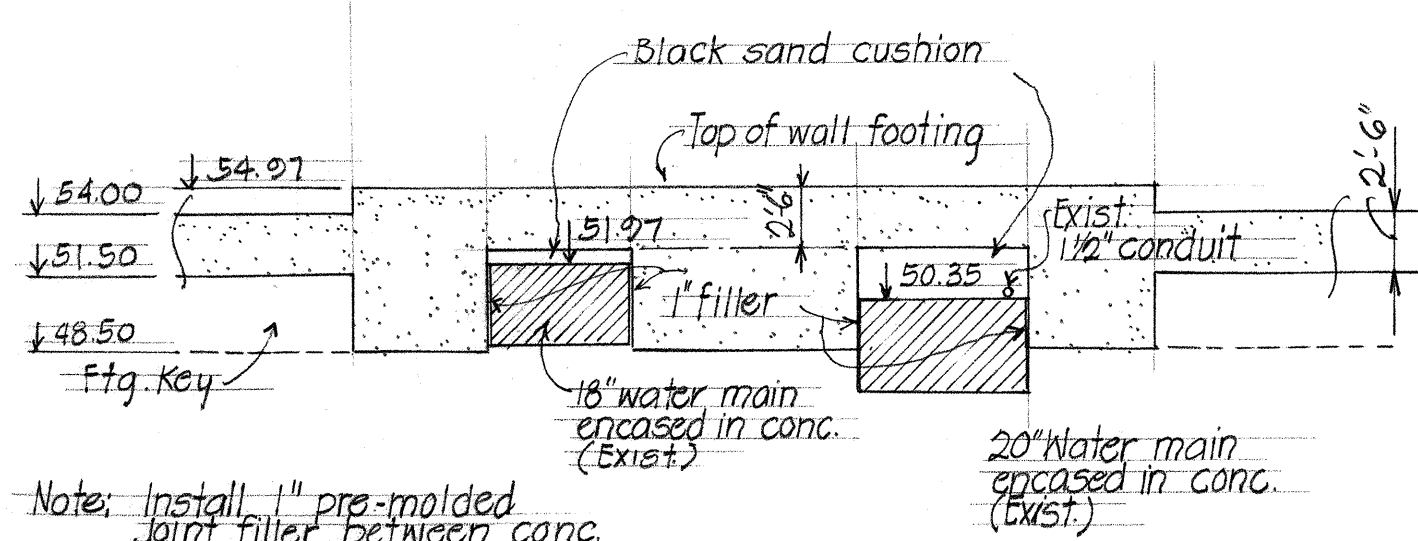
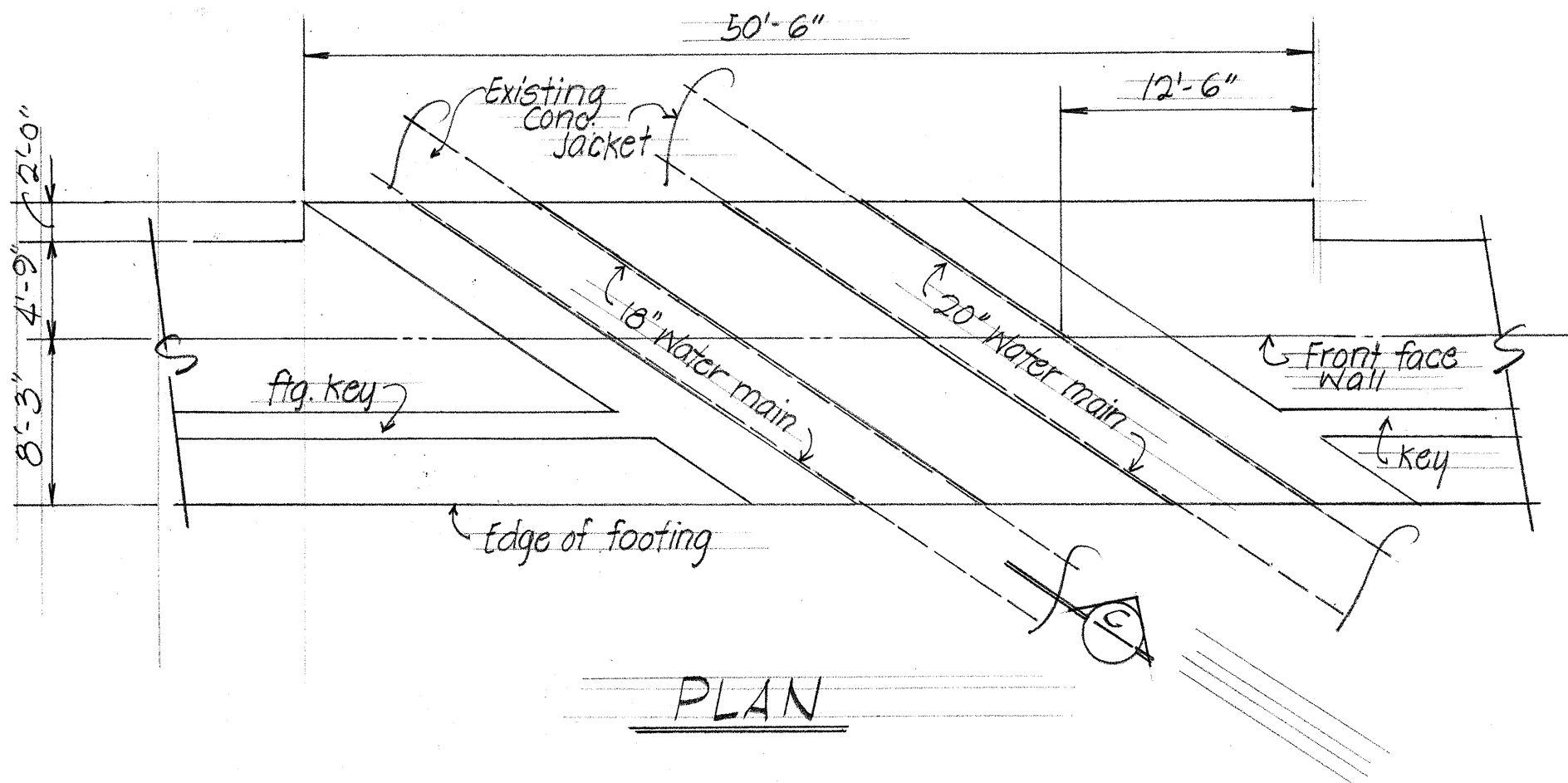


SECT. (A)

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

SECT. (B)

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



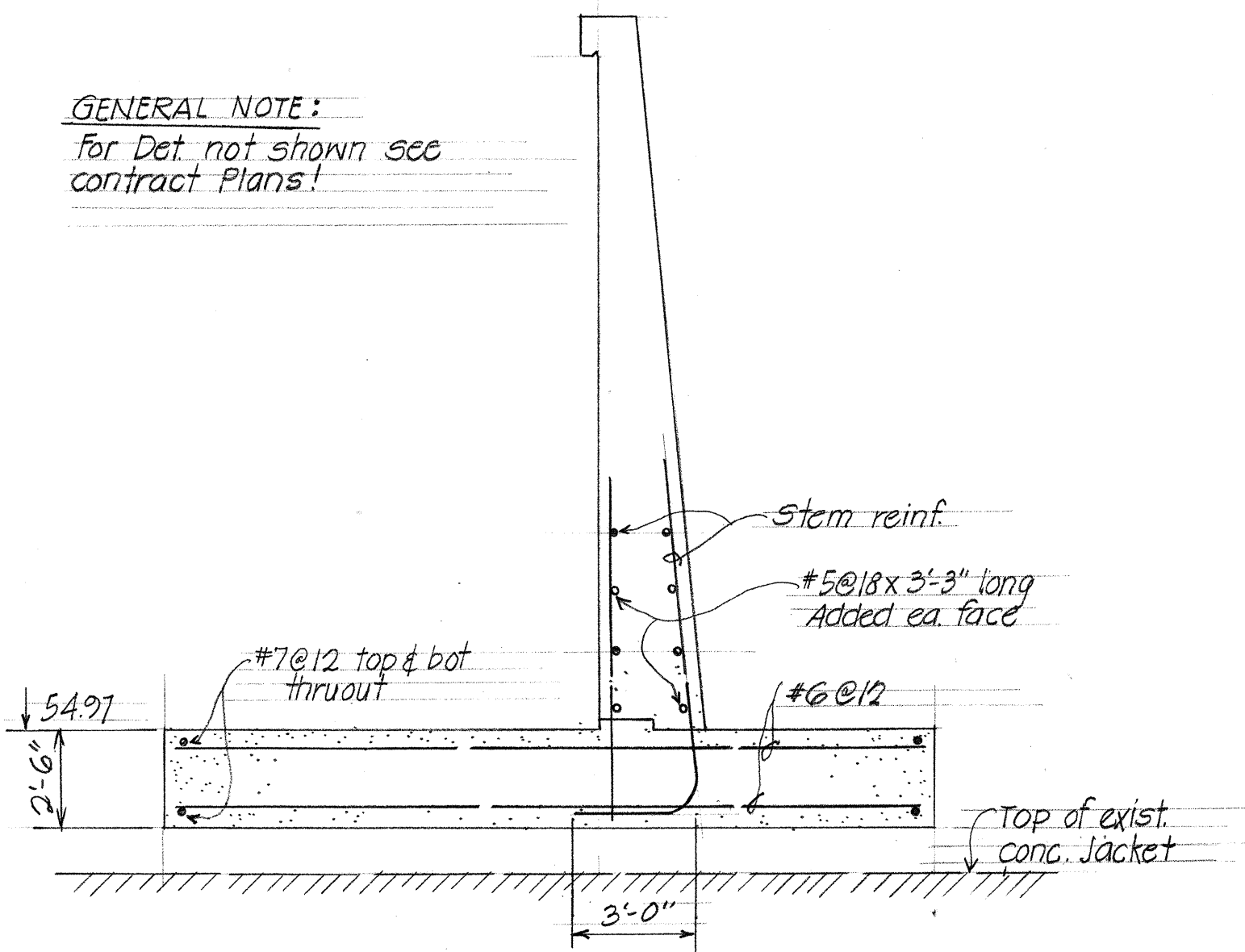
SECTION @ FRONT FACE RET. WALL

DETAIL AT EXISTING WATER MAINS

RAMP B-1 STA. 8+06± TO 8+40±

Scale: 1/8" = 1'-0"

GENERAL NOTE:
For Det. not shown see
contract Plans!



SECT. (C) (Parallel to 4 Water Main)

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

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
CHECKED BY	_____
NOTE BOOK	_____
No.	_____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL No B-1
INTERSTATE ROUTE HI
PELE ST. TO VICTORIA ST
F&I Proj. No I-HI-1(3):21 Unit 3

Scale: As Shown Date: _____
SHEET No. 2A OF 5 SHEETS

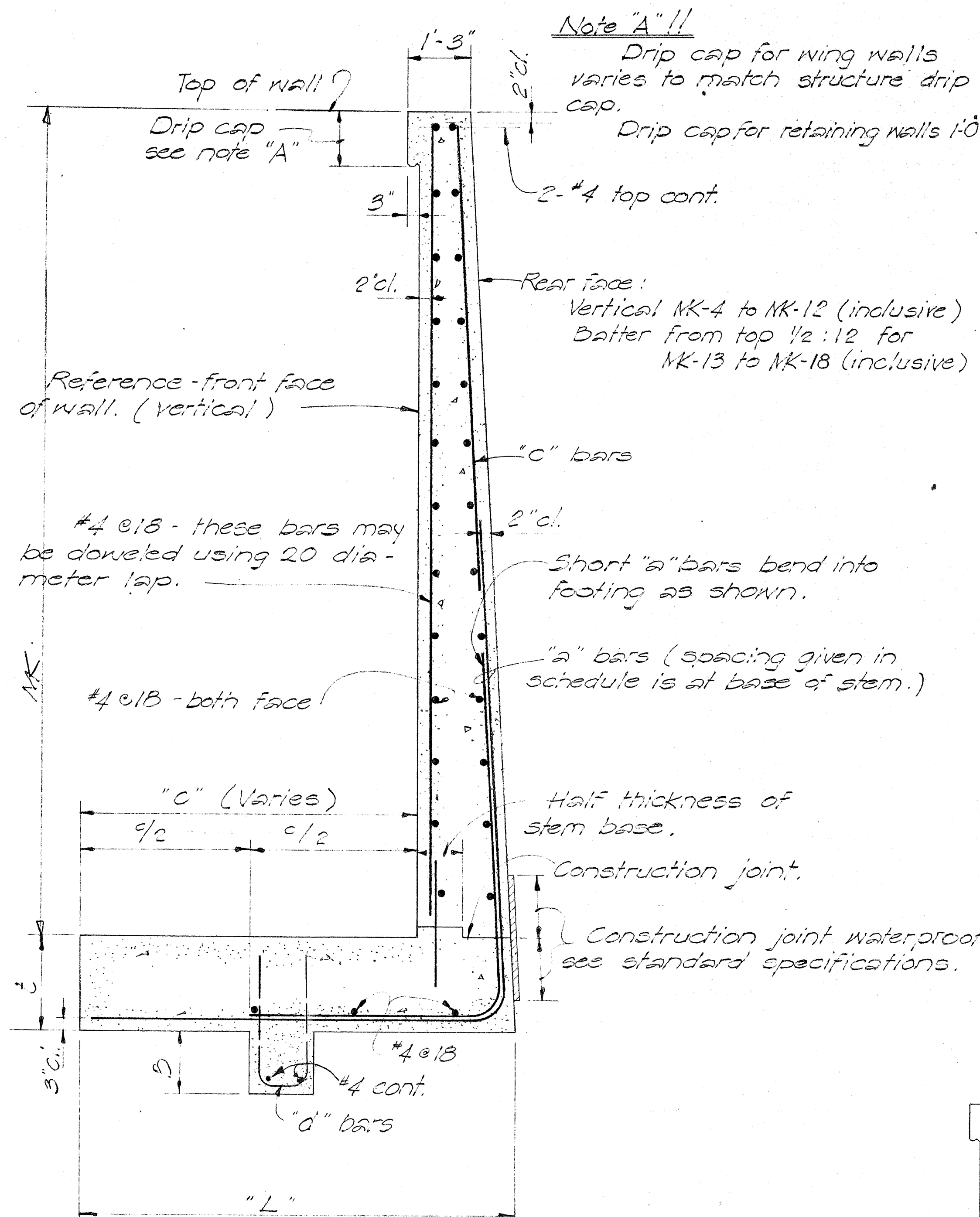
C01251

Revised: 12-68

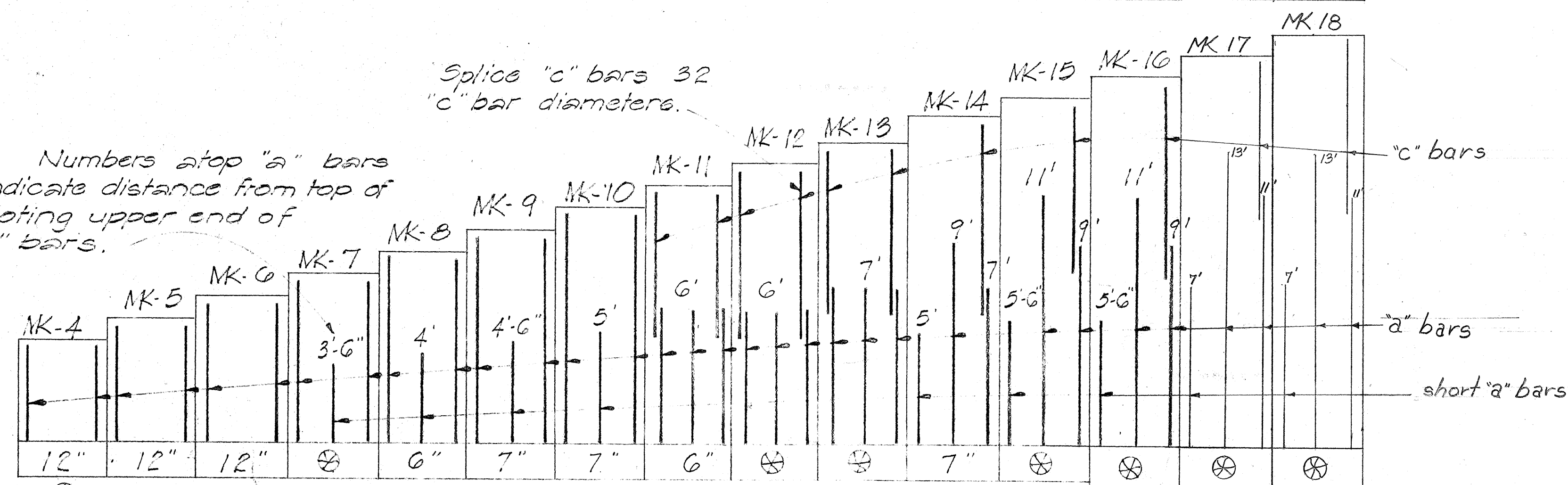
TYPE L-2 WALL SCHEDULE OF DIMENSIONS AND REINFORCING STEEL

Maximum "NK"	4 S	5 S	6 S	7 S	8 S	9 S	10 S	11 S	12 S	13 S	14 S	15 S	16 S
L	2.5'	3.0'	3.75'	4.5'	5.75'	6.5'	8.0'	8.75'	10.0'	11.5'	12.5'	13.75'	15.0'
t	14"	14"	15"	15"	18"	18"	18"	21"	24"	24"	27"	30"	33"
"a"	#3@12	#3@12	#4@12	#4@9	#4@6	#5@7	#6@7	#6@6	#7@6	#6@6	#7@7	#7@6	#8@7
"c"	—	—	—	—	—	—	#4	#4	#4	#4	#4	#4	#5
B	See Wall Elevation												
"d"	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@10	#4@10	#4@10	#4@10

Maximum "NK"	4 N	5 N	6 N	7 N	8 N	9 N	10 N	11 N	12 N	13 N	14 N	15 N	16 N	17 N	18 N
L	2.5'	3.0'	3.5'	4.25'	5.0'	5.75'	6.5'	7.5'	8.75'	9.0'	9.75'	10.75'	11.75'	13.0'	14.5'
t	14"	14"	14"	14"	14"	14"	14"	14"	18"	18"	21"	24"	27"	30"	36"
"a"	#3@12	#3@12	#4@12	#4@7	#4@6	#5@7	#6@7	#6@6	#7@7	#7@7	#7@7	#7@7	#7@6	#7@5"	#7@4"
"c"	—	—	—	—	—	—	—	#4	#4	#4	#4	#4	#4	#5	#6
"B"	See Wall Elevation														
"d"	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@10	#4@10	#4@10	#6@10"	#6@10"



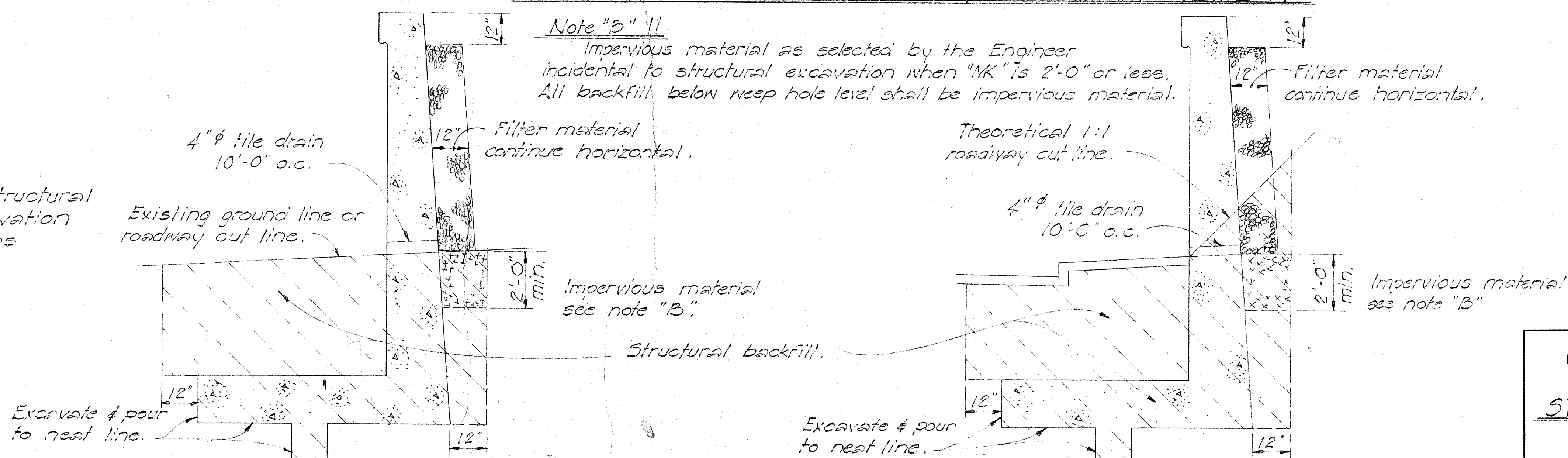
Numbers atop "a" bars indicate distance from top of footing upper end of "a" bars.



VERTICAL REINFORCING STEEL ARRANGEMENT

Note "B" 11

Impervious material as selected by the Engineer incidental to structural excavation when "NK" is 2'-0" or less. All backfill below weep hole level shall be impervious material.



CASE I

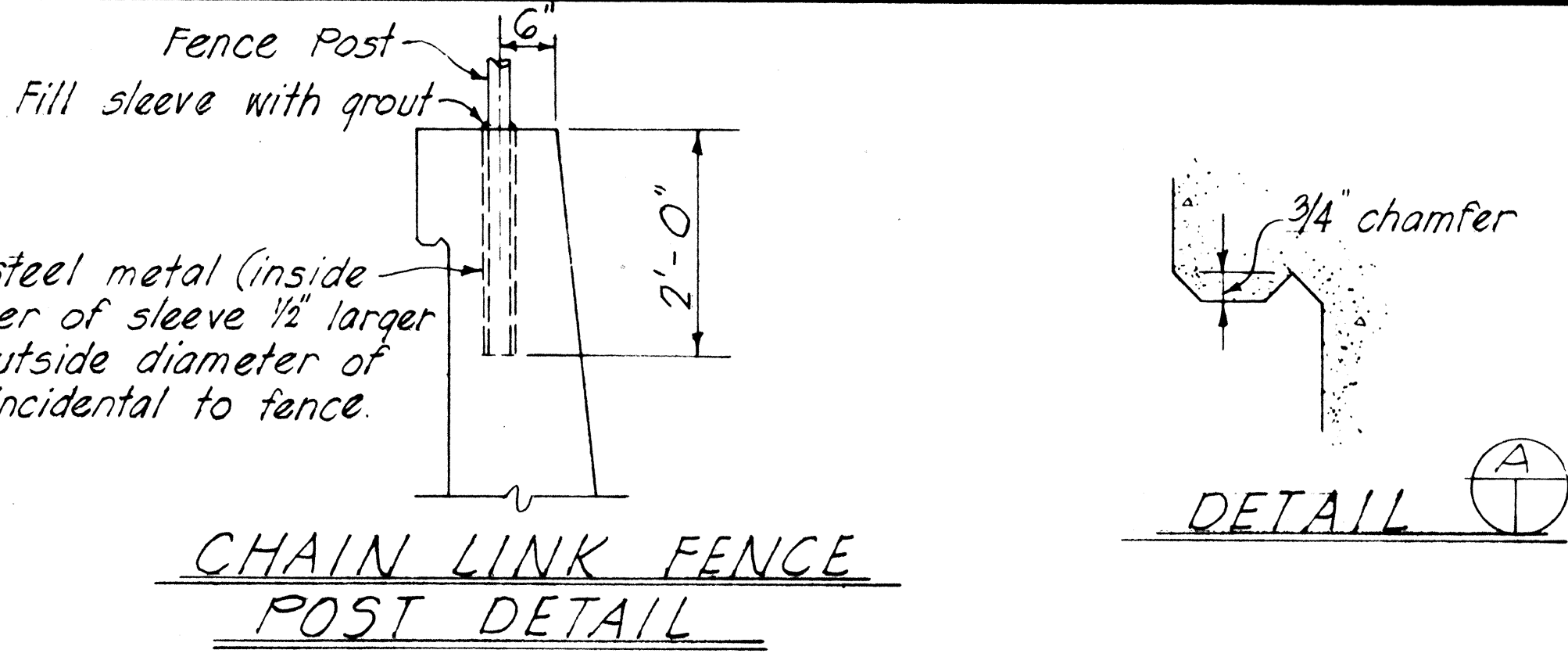
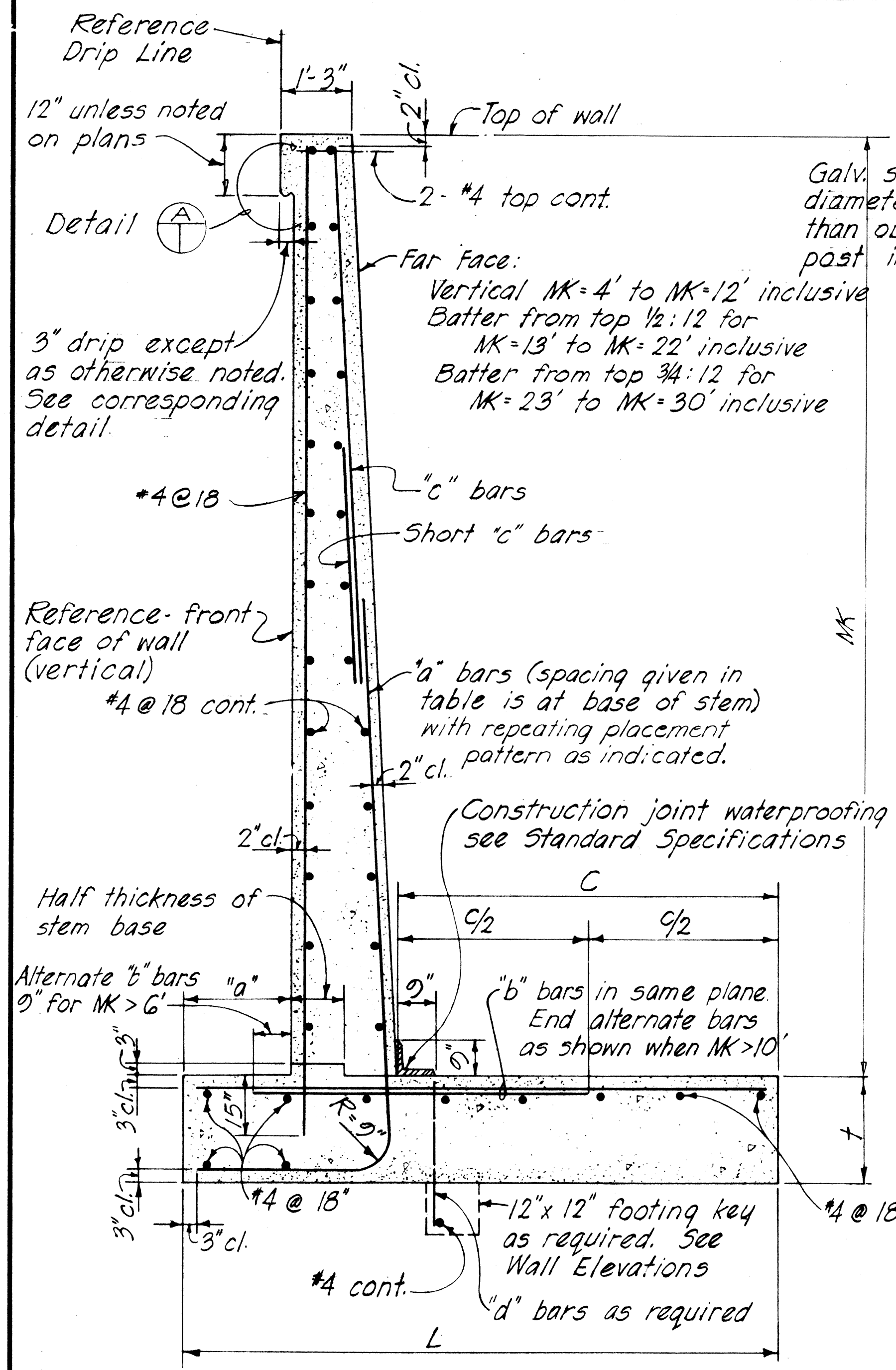
STRUCTURAL EXCAVATION & DRAINAGE DETAIL

CASE II

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD RETAINING WALL
TYPE L-2

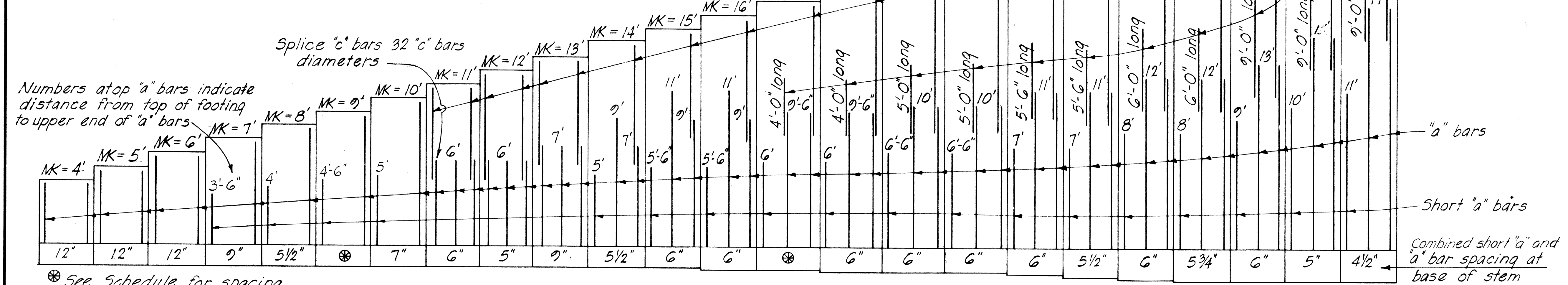
DATE: OCT, 1968
SHEET No. 3 OF 5 SHEETS



Maximum "MK"	4E	5E	6E	7E	8E	9E	10E	11E	12E	13E	14E	15E	16E	17E	18E	19E	20E	21E	22E	23E	24E	26E	28E	30E
a	6"	6"	6"	12"	12"	12"	12"	12"	12"	12"	15"	18"	21"	24"	24"	24"	27"	30"	33"	36"	39"	54"	60"	72"
t	14"	14"	14"	14"	14"	14"	14"	18"	18"	18"	18"	18"	21"	21"	24"	24"	24"	27"	30"	31"	33"	36"	39"	42"
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'	20.0'	21.0'
"a" bars	#3@12"	#3@12"	#4@12"	#4@9"	#4@5½"	#5@7"	#6@7"	#6@6"	#6@5"	#7@9"	#6@5½"	#7@6"	#8@6"	#8@5¾"	#9@6"	#9@6"	#10@6"	#10@6"	#10@5½"	#10@6"	#10@5¾"	#11@6"	#11@5"	#11@4½"
"b" bars	#3@12"	#3@12"	#3@12"	#3@9"	#4@11"	#4@7"	#5@7"	#5@6"	#5@5"	#7@9"	#6@5½"	#7@6"	#8@6"	#7@5¾"	#8@6"	#9@6"	#10@6"	#10@6"	#10@5½"	#10@6"	#10@5¾"	#11@6"	#11@5"	#11@4½"
"c" bars								#4	#4	#4	#4	#4	#5	#5	#5	#6	#6	#6	#7	#7	#7	#7	#7	#7
"d" bars	#3@12"	#3@12"	#3@12"	#3@12"	#4@18"	#4@15"	#4@15"	#4@12"	#4@11"	#4@9"	#5@12"	#5@12"	#5@10"	#5@9"	#5@9"	#5@8"	#6@10"	#6@9"	#7@12"	#7@11"	#7@10"	#7@	#7@	#7@6"

Maximum "MK"	4R	5R	6R	7R	8R	9R	10R	11R	12R	13R	14R	15R	16R	17R	18R	19R	20R	21R	22R	23R	24R	26R	28R	30R
a	6"	6"	6"	12"	12"	12"	12"	12"	12"	12"	15"	18"	21"	21"	21"	21"	24"	24"	27"	30"	33"	39"	39"	51"
t	14"	14"	14"	14"	14"	14"	14"	18"	18"	18"	18"	18"	18"	18"	18"	21"	21"	21"	21"	24"	24"	27"	30"	36"
L	2.5'	3.0'	3.5'	4.0'	4.5'	5.0'	5.5'	6.0'	6.5'	7.75'	7.75'	8.25'	8.75'	9.25'	9.75'	10.25'	10.5'	11.0'	11.5'	12.0'	13.0'	14.0'	15.0'	
"a" bars	#3@12"	#3@12"	#4@12"	#4@9"	#4@5½"	#5@6"	#6@7"	#6@6"	#6@5"	#7@9"	#6@5½"	#7@6"	#8@6"	#8@6"	#9@6"	#9@6"	#10@6"	#10@6"	#10@5½"	#10@6"	#10@5¾"	#11@6"	#11@5"	#11@4½"
"b" bars	#3@12"	#3@12"	#3@12"	#3@9"	#4@11"	#4@6"	#5@7"	#5@6"	#5@5"	#7@9"	#6@5½"	#7@6"	#7@6"	#8@6"	#9@6"	#9@6"	#10@6"	#10@6"	#10@5½"	#10@6"	#10@5¾"	#10@6"	#10@5"	#10@4½"
"c" bars								#4	#4	#4	#4	#4	#5	#5	#5	#6	#6	#6	#7	#7	#7	#7	#7	#7
"d" bars	#3@12"	#3@12"	#3@12"	#3@12"	#4@18"	#4@15"	#4@15"	#4@12"	#4@11"	#4@9"	#5@12"	#5@12"	#5@10"	#5@9"	#5@9"	#5@8"	#6@10"	#6@9"	#7@12"	#7@11"	#7@10"	#7@	#7@	#7@6"

WALL SECTION



VERTICAL REINFORCING STEEL ARRANGEMENT

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

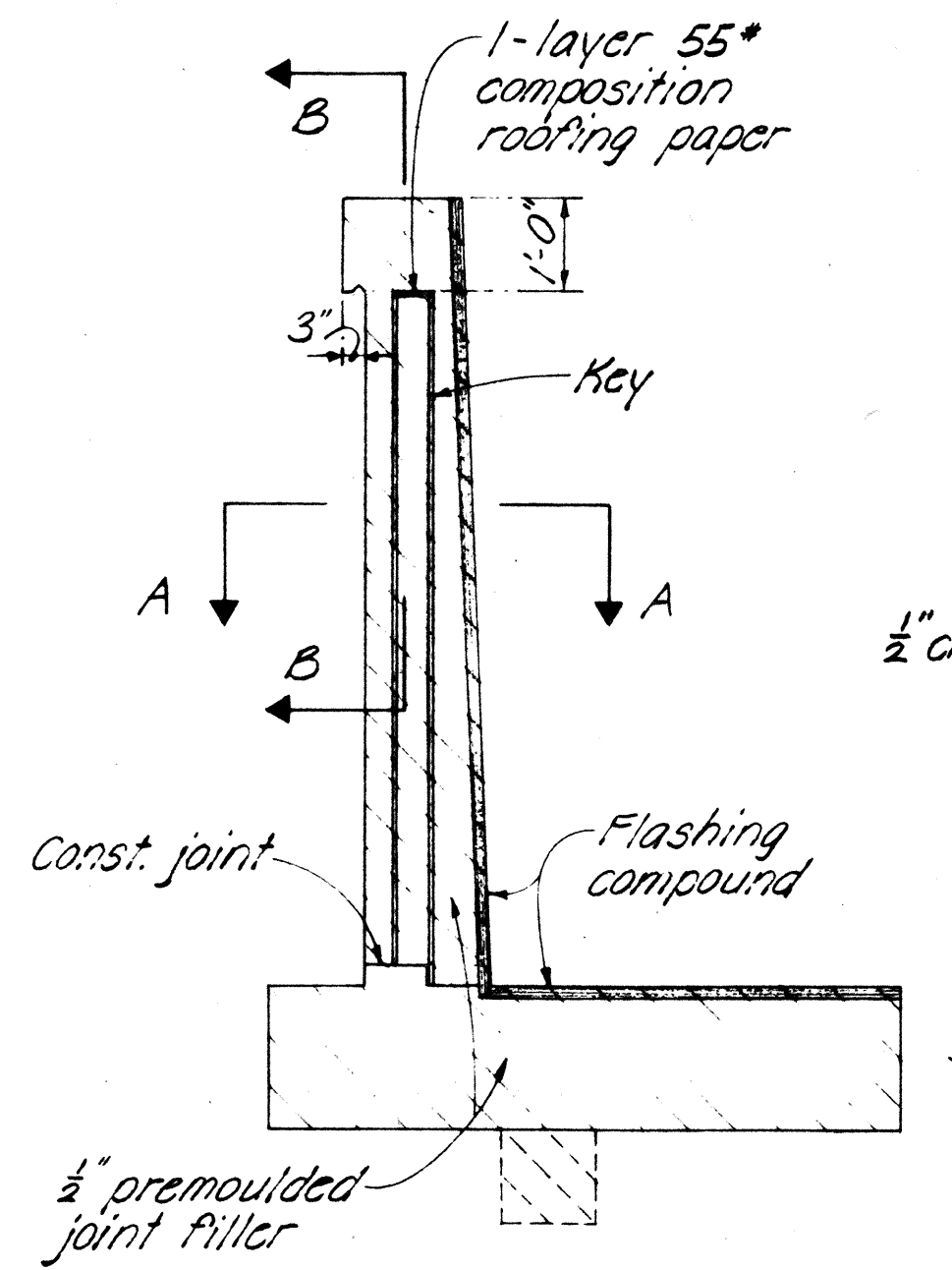
STANDARD DETAILS
 RETAINING WALL TYPE T-1

SCALE As NOTED DATE: OCT. 1968
 SHEET No. 4 OF 5 SHEETS

SURVEY BY: _____
 DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 DESIGNED BY: _____
 NOTE BOOK: _____
 QUANTITIES BY: _____
 NO. _____

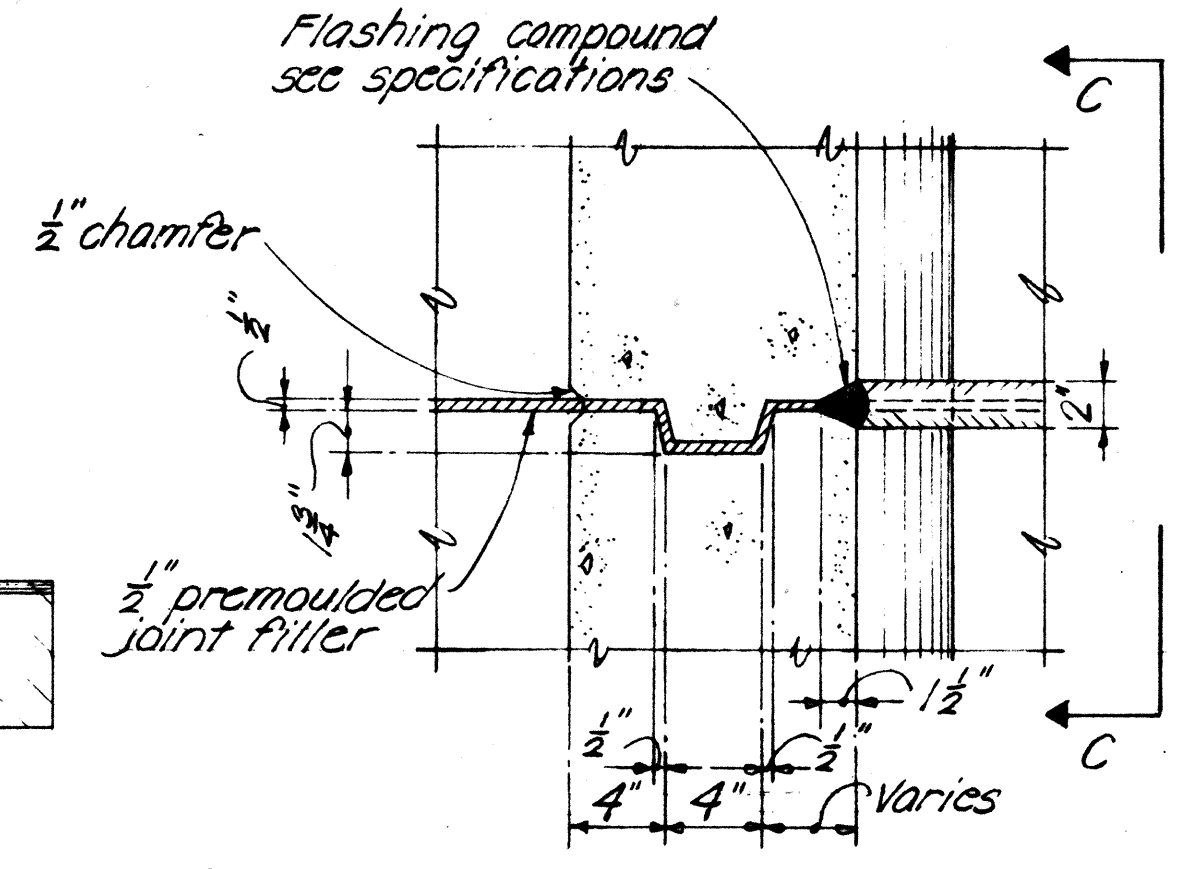
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CH-11(30-2)	1968	15	47

June 1968
Sept 1968

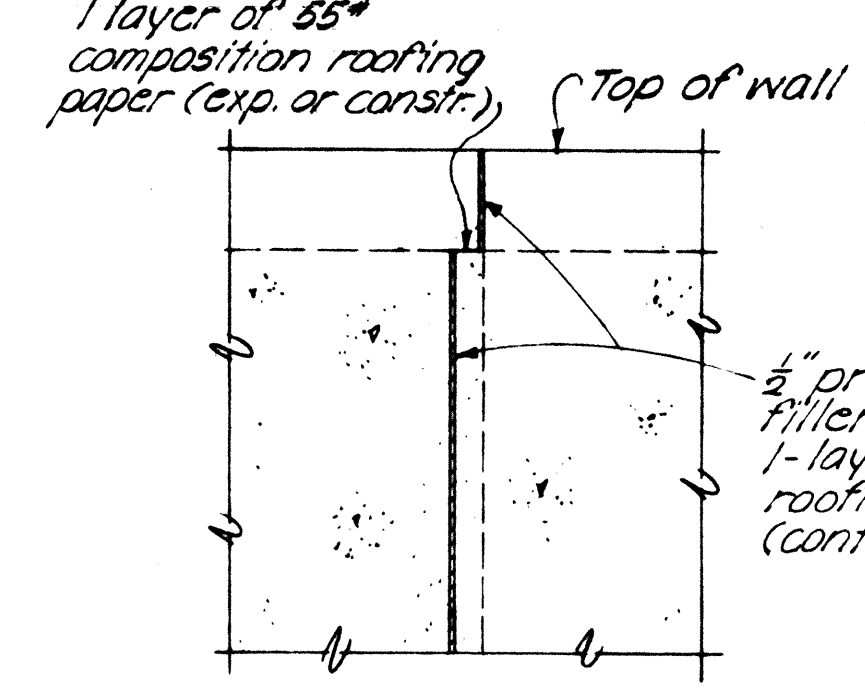


JOINT ELEVATION

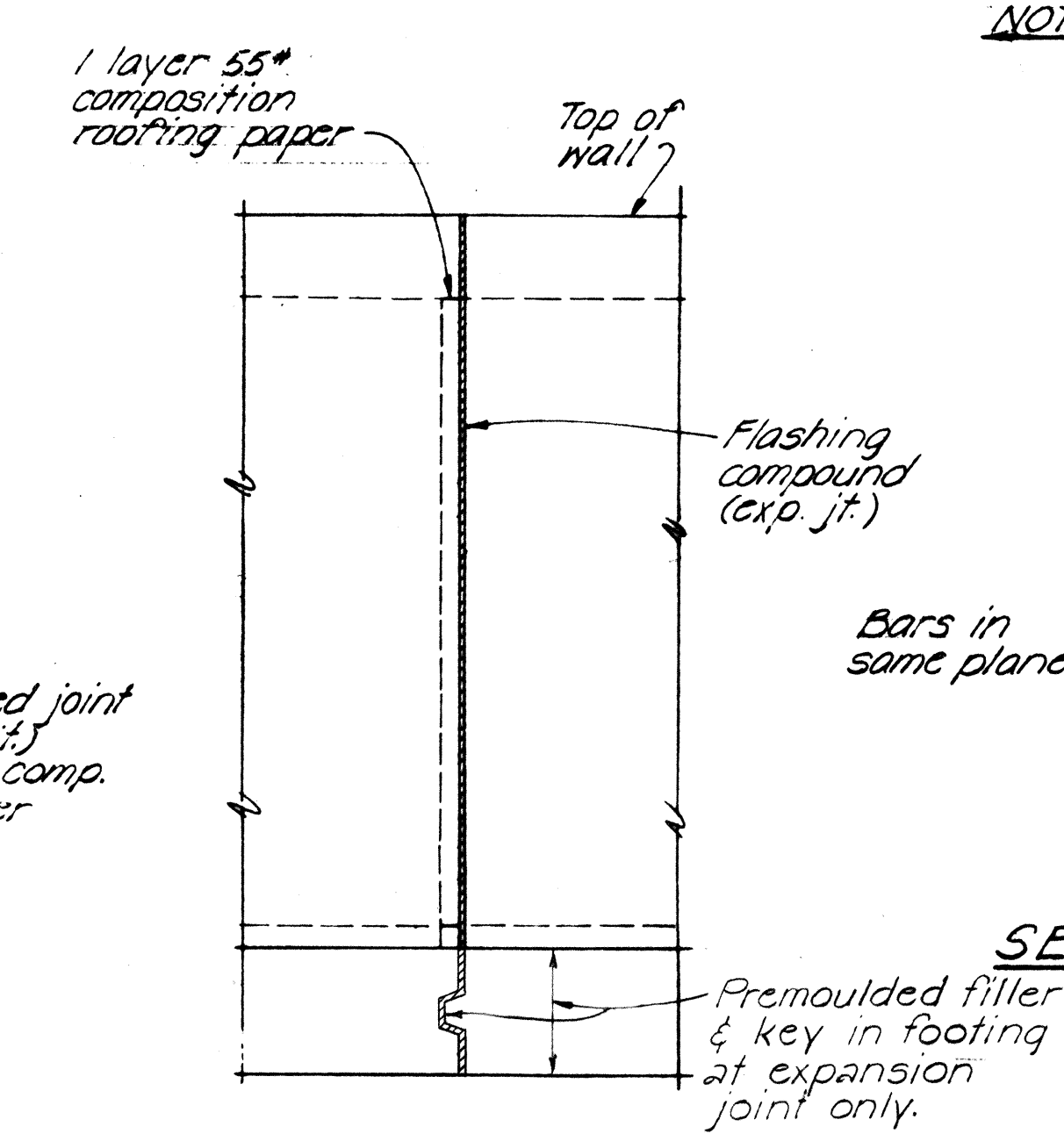
NOTE
Spacing of joints
Expansion = 90'-0" max.
Contraction = 30'-0" max. except where conc. railing or curb occurs 26'-8" max. (match with railing joint above.)
For alternate contraction joint and control joint details - See Standard Bridge Details.



SECTION A-A

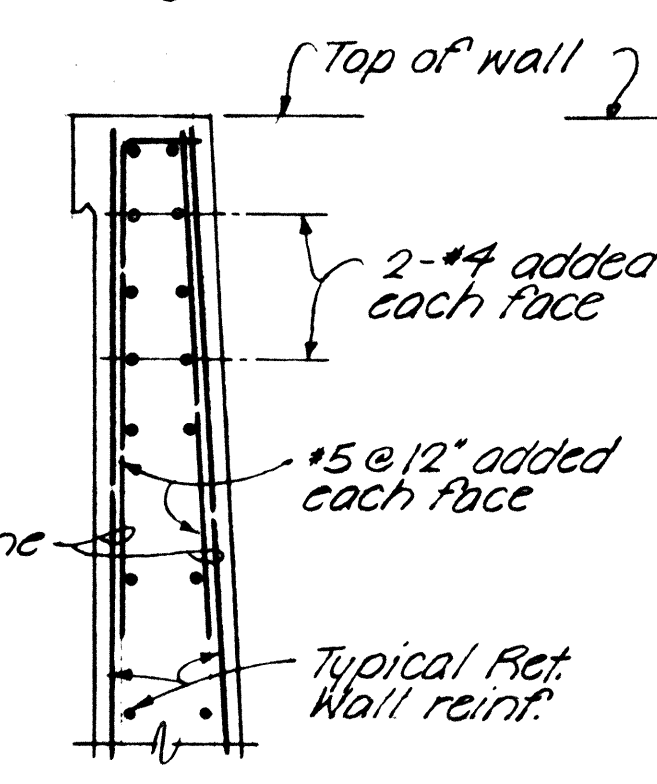


SECTION B-B

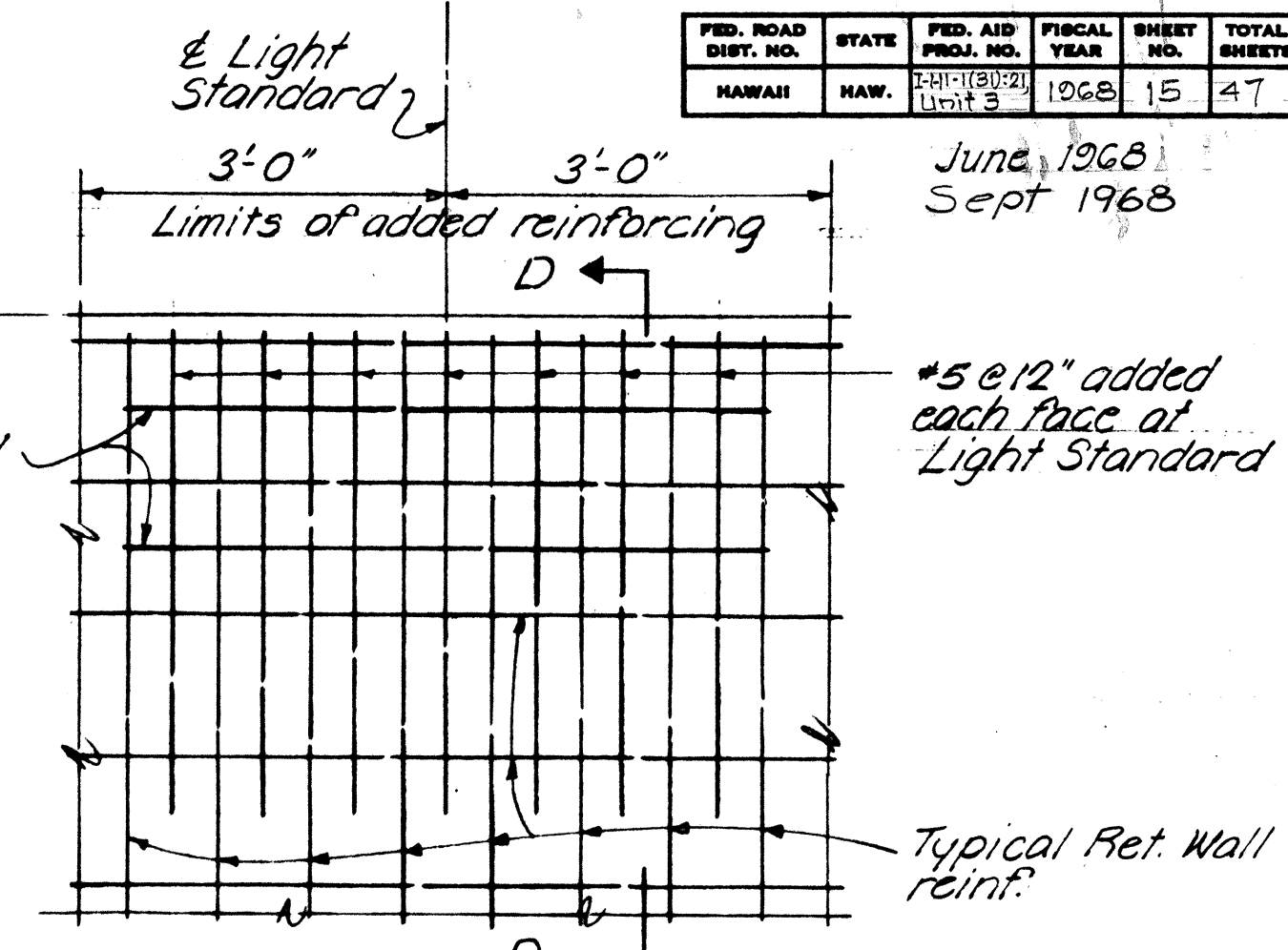


SECTION C-C

NOTE:
Limits of added reinf.
Height 0'-18' L = 2'-6"
Height 19'-30' L = 6'-0"



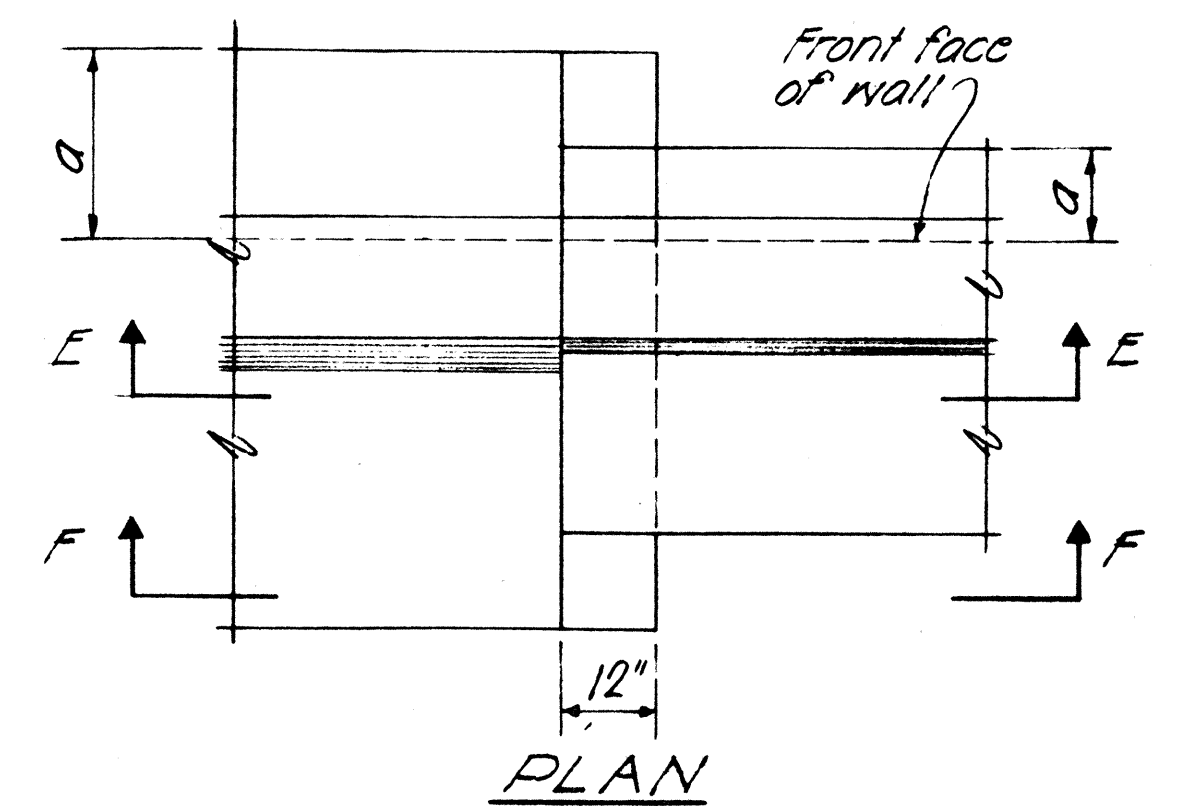
SECTION D-D



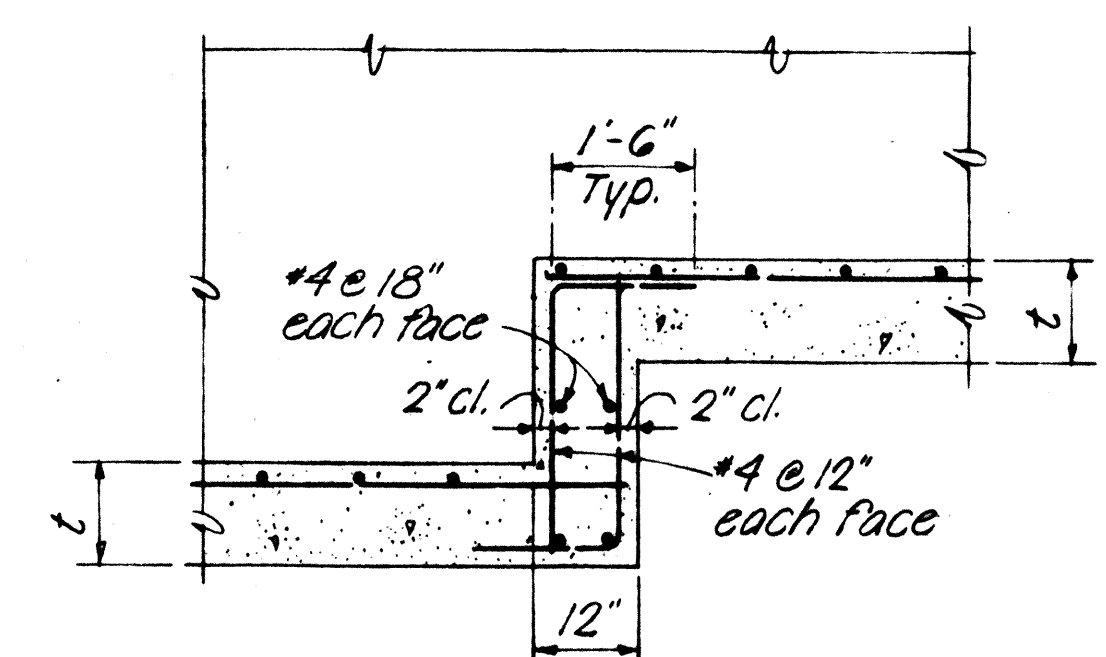
ELEVATION

TYPICAL ADDED REINFORCEMENT
AT LIGHT STANDARD BASE No Scale

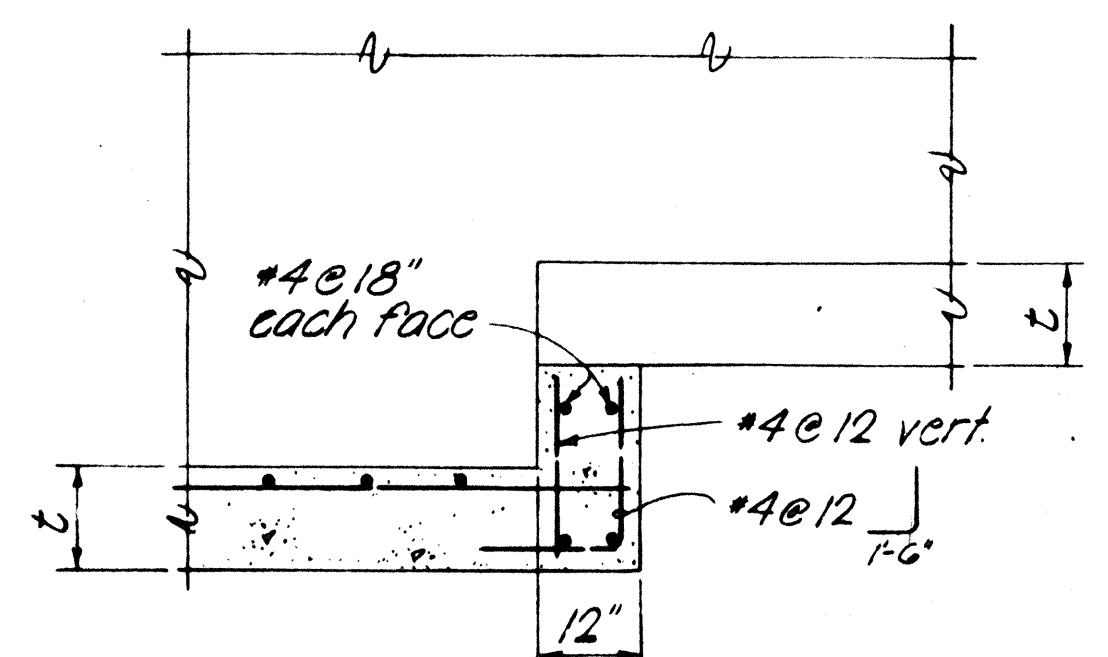
Revised 12-6-68



PLAN



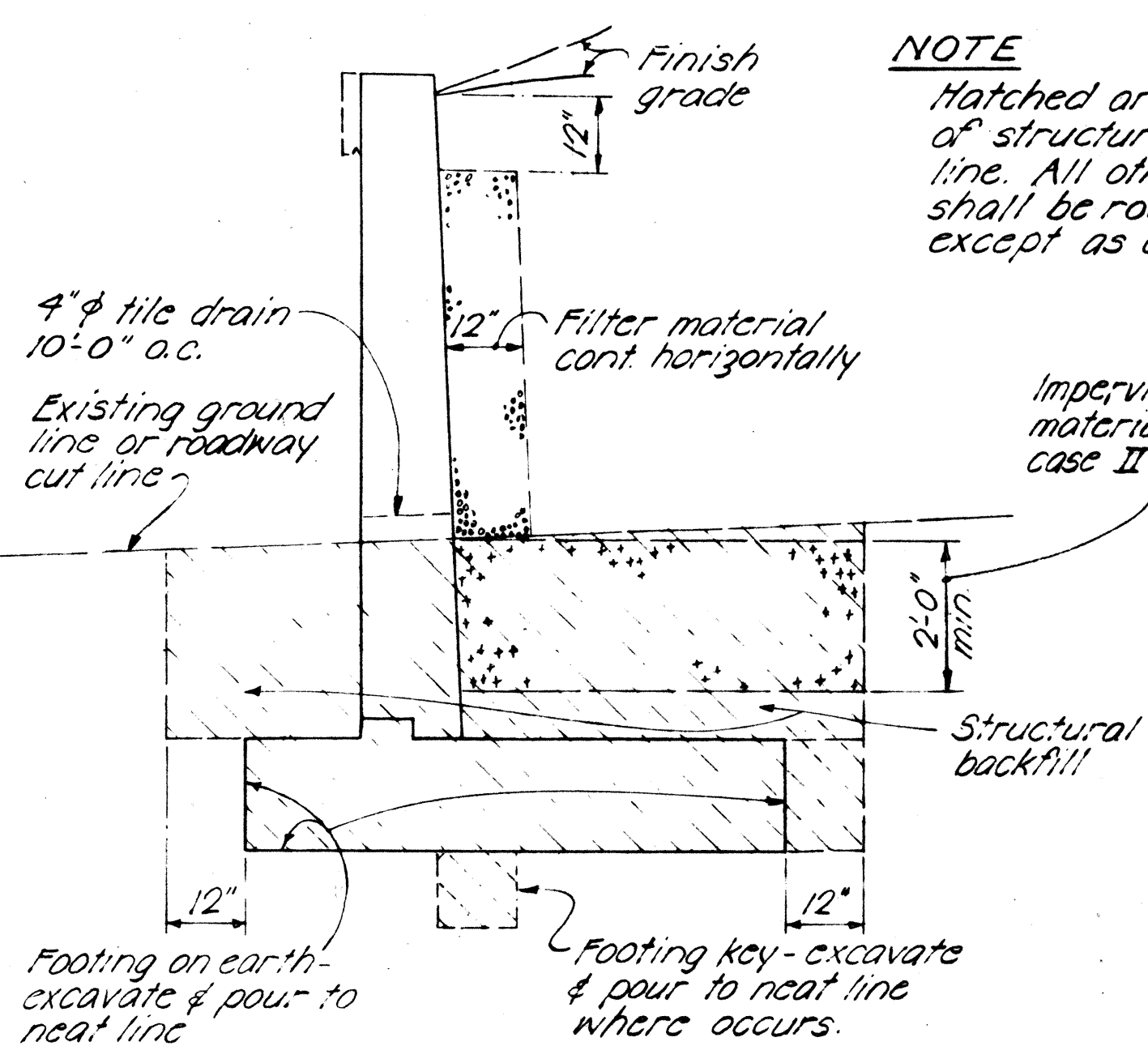
SECTION E-E



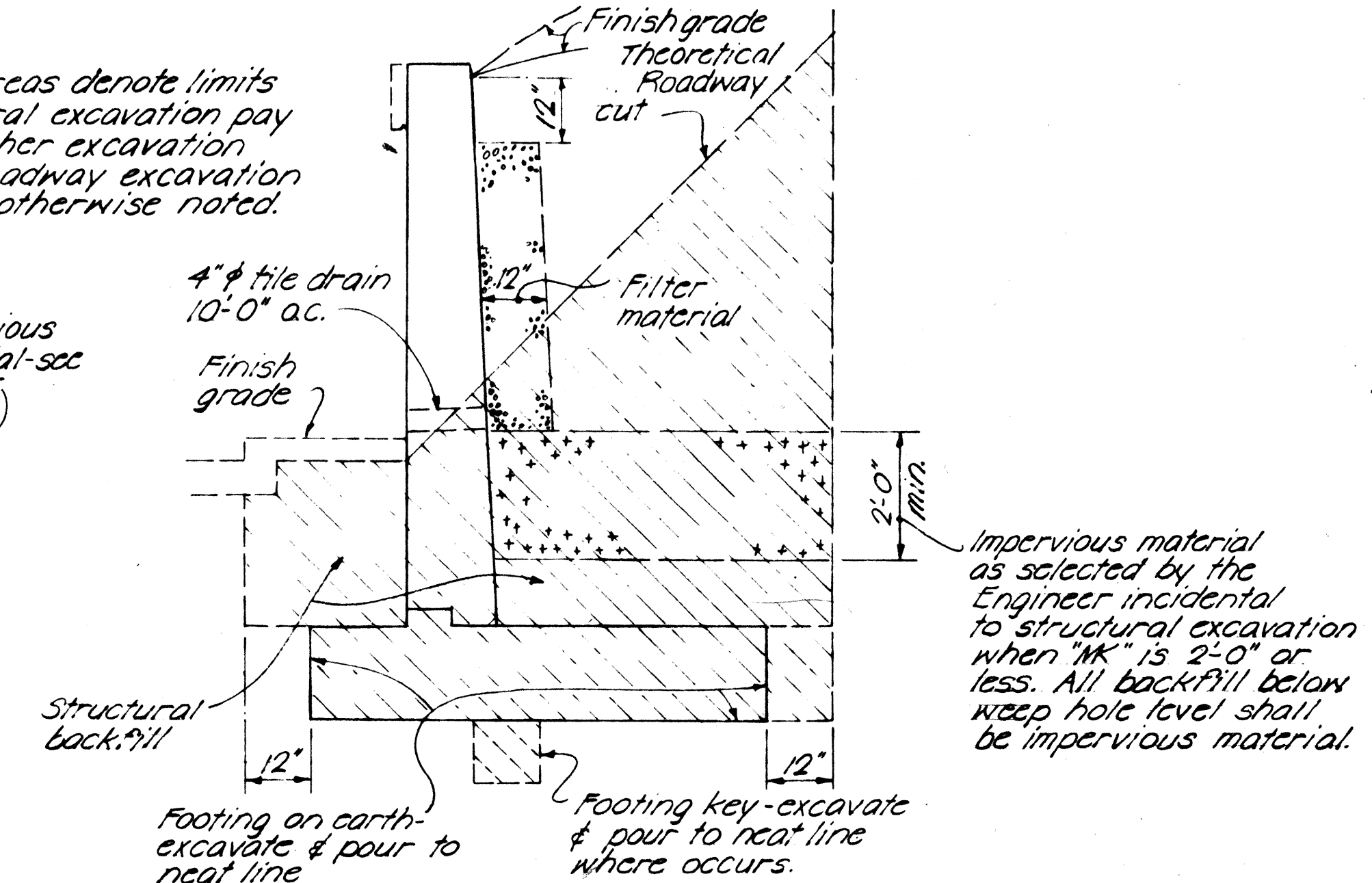
SECTION F-F

FOOTING STEP-UP DETAILS No Scale

NOTE
Hatched areas denote limits of structural excavation pay line. All other excavation shall be roadway excavation except as otherwise noted.



CASE I



CASE II

STRUCTURAL EXCAVATION & DRAINAGE DETAILS No Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
RETAINING WALL TYPE T-1

SCALE As NOTED DATE: OCT. 1968
SHEET No. 5 OF 5 SHEETS

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