

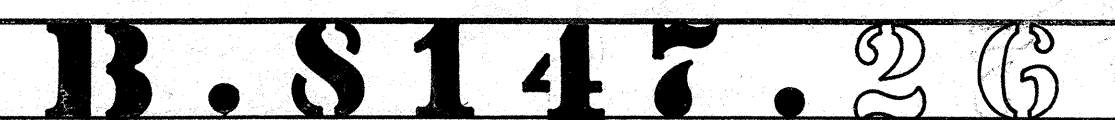
PALI HIGHWAY PROJECT NO. BU-061-I(7) UNIT 5
SUMMARY OF DRAINAGE STRUCTURES

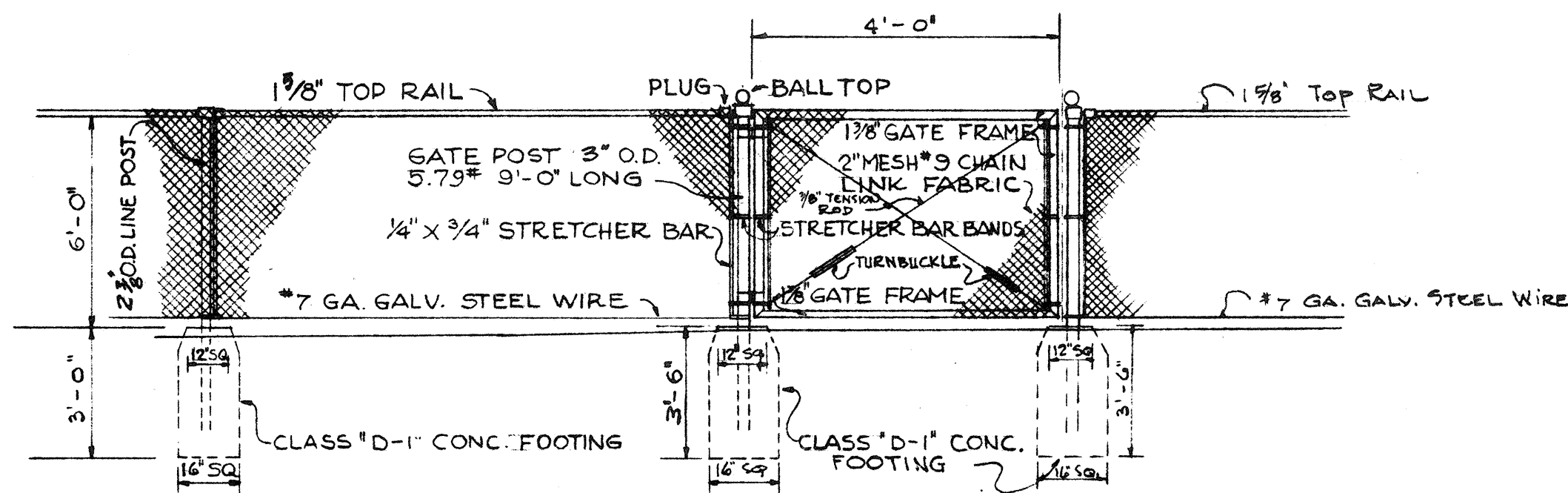
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FINANCIAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BU-061-I(7) UNIT 5	1960	25A	176

Revised: 9/26/61

ITEM NO.		14(1)	46(1)	46(2)	48(1)	58(3)-I	58(4)-I	58(5)-I	59(7b)	59(7b)-I	59(8b)-II	62	58(1a)	59(7c)	15				ITEM NO.		14(1)	15	46(1)	46(2)	48(1)	58(3)-I	58(4)-I	58(5)-I	58(6)-I	59(7b)	59(7b)-II	59(8b)-II	62	65	57(4)	58(1)	58(1a)	59(7c)	116																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
ITEM		Structure Excavation other than at bridges	Class "A-1" Concrete, other than in bridges	Class "B-1" Concrete, other than in bridges	Reinforcing steel, other than in bridges	24 inch Class II Reinforced Conc. Culvert Pipe	24 inch Class II Reinforced Conc. Culvert Pipe	30 inch Class II Reinforced Conc. Culvert Pipe	24 inch Corrugated Galv. sheet metal Culvert Pipe - 14 Gauge	24 inch Corrugated Galv. sheet metal Culvert Pipe - 14 Gauge	30 inch Corrugated Galv. sheet metal Culvert Pipe - 14 Gauge	Cement Rubble Masonry	Type "B" C.I. Frame & Cover	24 inch Corrugated Galv. sheet metal Spillway 16 Gauge	Ditch and Channel Excavation				ITEM		Structure Excavation other than at bridges	Ditch and Channel Excavation	Class "A-1" Concrete, other than in bridges	Class "B-1" Concrete, other than in bridges	Reinforcing steel, other than in bridges	24 inch Class II Reinforced Conc. Culvert Pipe	24 inch Class II Reinforced Conc. Culvert Pipe	30 inch Class III Reinforced Conc. Culvert Pipe	30 inch Class II Reinforced Conc. Culvert Pipe	24 inch Corrugated Galv. sheet metal Culvert Pipe - 14 Gauge	24 inch Corrugated Galv. sheet metal Culvert Pipe - 14 Gauge	30 inch Corrugated Galv. sheet metal Culvert Pipe - 14 Gauge	Cement Rubble Masonry	Grouted Rubble Paving	Brickwall for Storm Drain Manholes	Type "A" C.I. Frame & Cover	Type "B" C.I. Frame & Cover	24 inch Corrugated Galv. sheet metal Spillway 16 Gauge	Pneumatic Mortar 2" to 2 1/2" Thick																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
UNIT USED		Cu.Yd.	Cu.Yd.	Cu.Yd.	Lb.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Cu.Yd.	Each	Lin.Ft.	Cu.Yd.				UNIT USED		Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.	Lb.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Lin.Ft.	Cu.Yd.	Cu.Yd.	Lin.Ft.	Each	Each	Lin.Ft.	Sq.Ft.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
STRUCTURES	C.B.# 17N	63.2 37.1	4.9 4.8	8.6	108						54		1						SDMH # 5N	121.8 52.5				2.9 3.7	110.8 3.7				72			72 7.8			4.0 5.2	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	C.B.# 18N	38.5 38.9	5.2 6.2		108						34 38		1						SDMH # 6N	157.0 47.7				1.4 4.5	106.6 4.3			152				149 15.8			4.0	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	C.B.# 19N	14.1 44.6	5.1 6.2		108						36.7 3.8		1						SDMH # 7N	39.4 35.7				2.4 4.8	120 4.5			132				135 13.8			4.0	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	C.B.# 20N	4.75 44.4	3.9 4.6		77	44					114 10.8		1						SDMH # 8N	313.7 544.5				2.5 2.7	132 4.3							500 50.6			4.0	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	C.B.# 21N	136.6 146.4	5.7 6.1		145	160					160 14.8		1						SDMH # 9N	195.6 247.8				2.7 2.7	165.7 4.2			160				154 14.8			4.0	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	C.B.# 22N	62.8 65.8	5.7 6.3		108						54 5.6		1						SDMH # 10N	160.1 445.8				2.2 4.5	137.1 9.8			136				137 13.6			4.0	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	C.B.# 23N	18.0 21.7	4.9 6.8		88 40.8						65.7 6.4		1						SDMH # 11N	33.4 28.7				2.6 3.4	112 4.8	84					84.7 8.2			7.0 4.0	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	C.B.# 24N	16.2 44.6	5.6 7.8		560 44.8						28.9 3.8		1						SDMH # 14N	173.0 497.8				2.6 3.3	140 4.5			108				101 10.8			4.0	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	C.B.# 25N	31.8 25.6	6.0 6.8		560 44.8						57.3 5.8		1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	C.B.# 26N	41.0 24.5	6.1 6.8		108				14		54 5.6		1	98 14.8					SDMH # 16N	145.0 161.8				2.4 2.7	138 4.2	172					171.8 17.8			4.0	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	C.B.# 27N	35.6 24.2	5.6 5.8		108	12					20.2 1.2		3 4	1					SDMH # 17N	113.1 46.7				0.7	31	120					119.8 12.8			5.0 5.2	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	C.B.# 28N	27.8 34.2	5.2 5.8		88 40.8		28				28.3 2.6		1						EXISTG. M.H. (NUUANU)	66.6 32.5			0.7		31			68					70.5 6.8			6.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	C.B.# 30N	27.1 26.7	4.8 6.3		108	12					15.9 1.8		1.5 2	1					SPLASH BOX # 1	34.0 27.8			3.7 2.2		8			28				28.5 2.6					1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	C.B.# 31N	22.0 23.0	3.0 4.1		55 7.7		32				28.8 3.8		1						C.D.I. # 1	58.3 53.6			0 1.4	2.3 1.7	35 2.9			72			83.6 7.2		7.4	8.0		1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	C.B.# 32N	27.6 28.8	6.6 7.5		145	16					12 1.4		2.7 2	1					OUTFALL CHANNEL	0.2 53.6 7.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								</

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

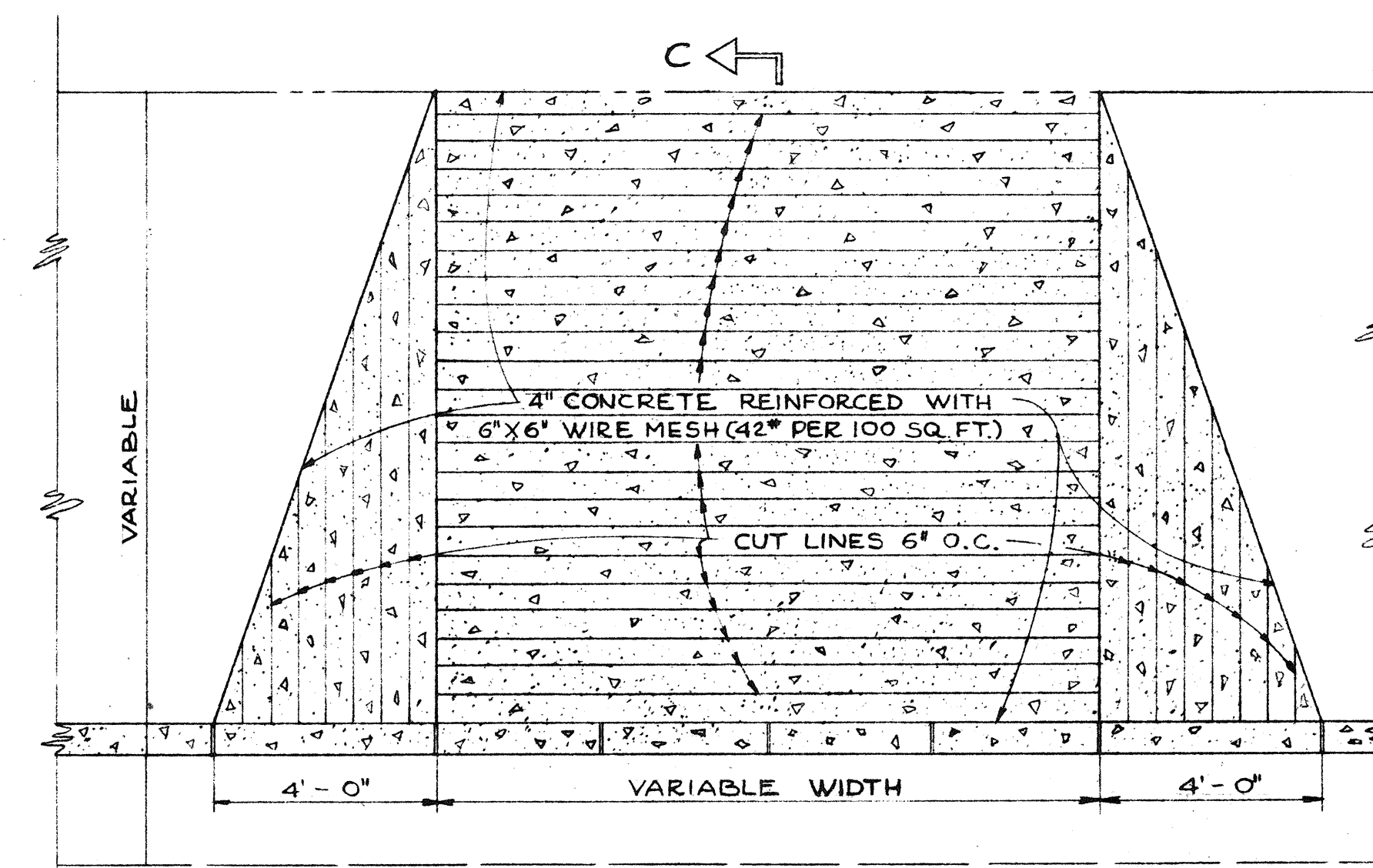




NOTE: FENCE DETAILS NOT SHOWN ARE TO BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND DETAIL AT RIGHT.

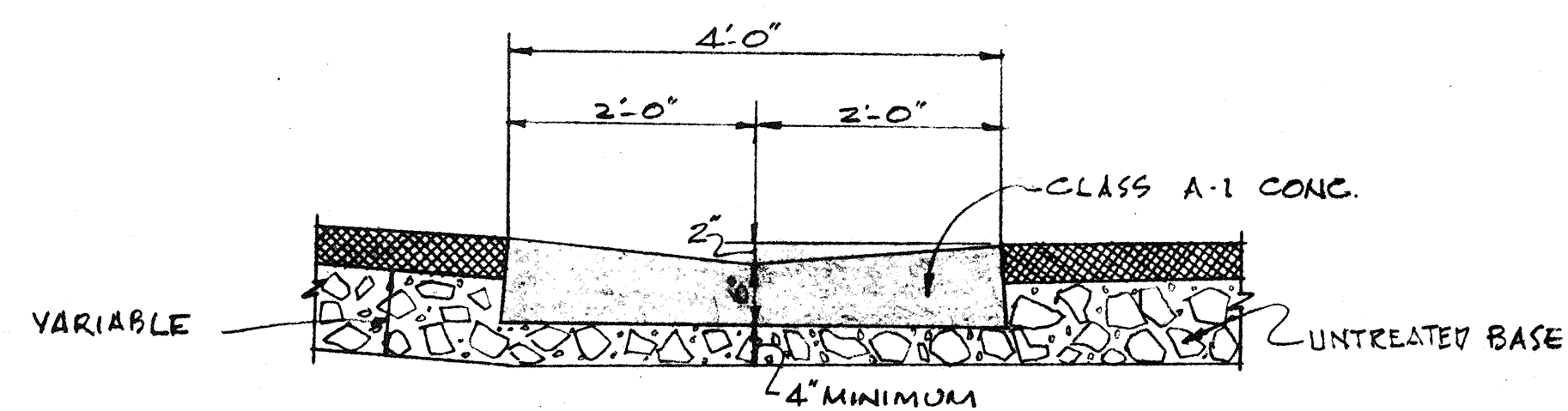
ELEVATION OF CHAIN LINK GATE
NO SCALE.

NOTE: GATE LATCH AND LOCK, FLUSH PLATE AND ANCHOR AND PLUNGER BAR SHALL BE INSTALLED WITH GATE. GATE FRAMES SHALL BE MITERED AT CORNERS AND WELDED.

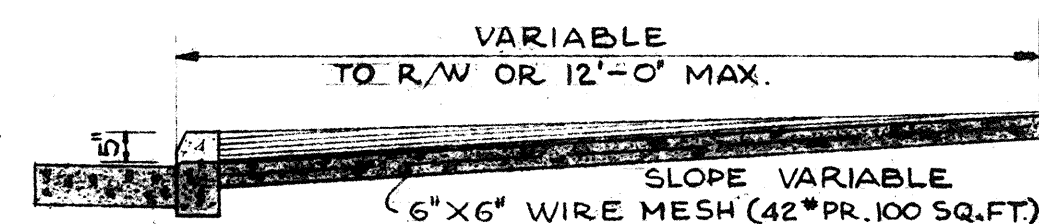


PLAN

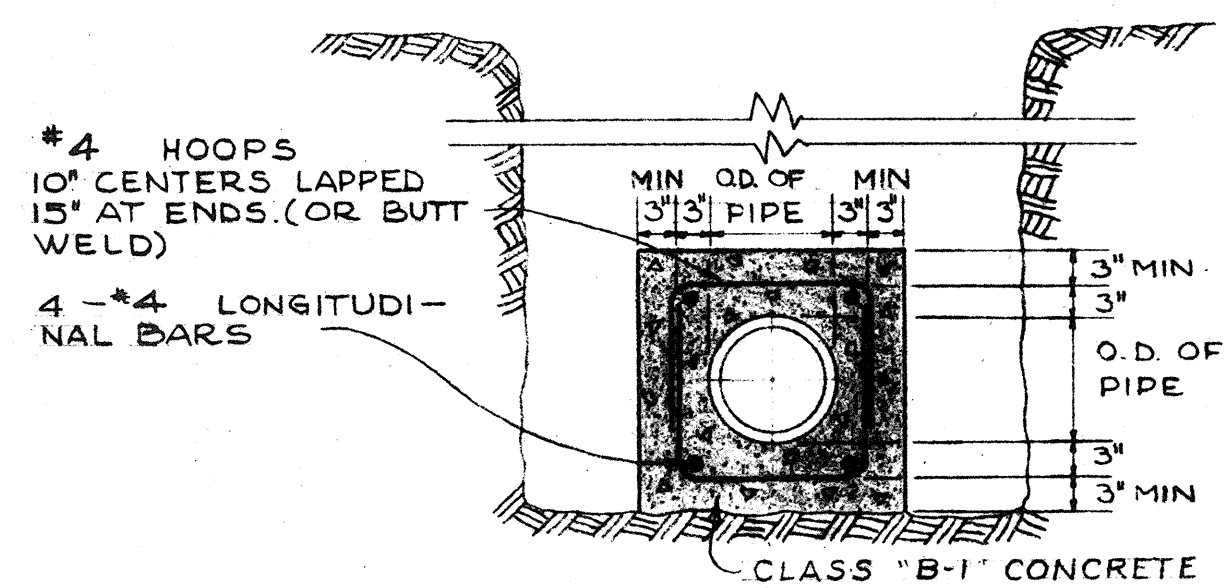
DETAIL OF REINFORCED CONCRETE DROP DRIVEWAY
NO SCALE.



DETAIL OF TYPE "B" CONC. GUTTER
SCALE: 3/4" = 1'-0"

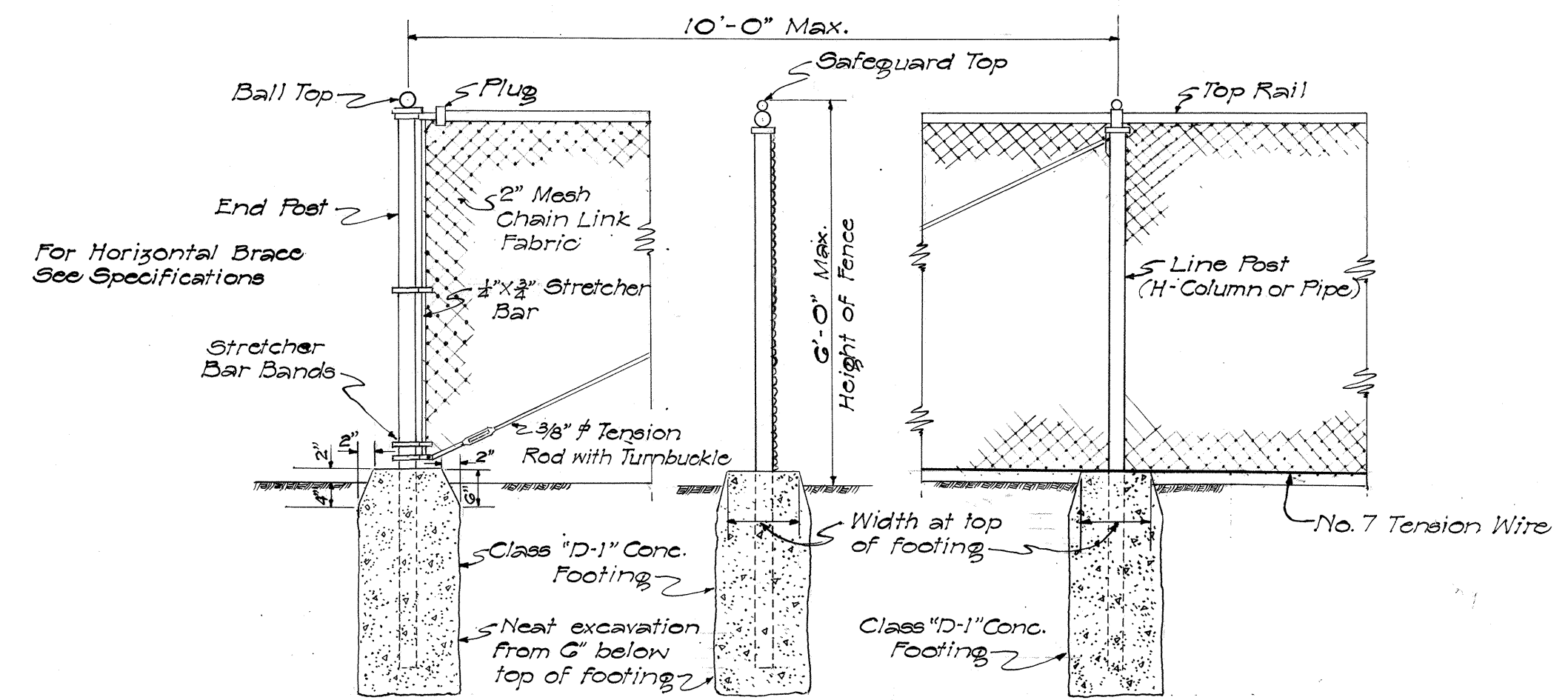


SECTION C-C

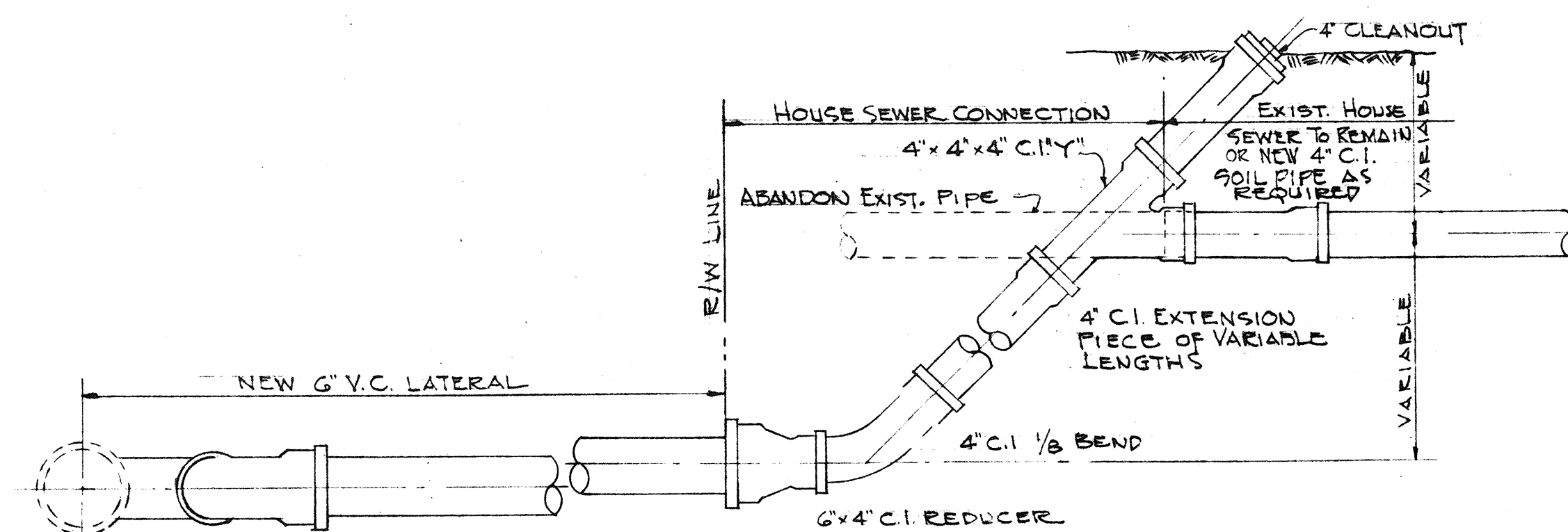


DETAIL OF CONCRETE JACKET FOR SEWER, STORM DRAIN & UTILITY LINES
SCALE: 1 1/2" = 1'-0"

FOR DETAIL OF WATER LINE CONCRETE JACKET SEE SHT. 014736



END POST ELEV. TYPICAL SECTION LINE POST ELEV.
DETAIL OF CHAIN LINK FENCE
Scale: 1/2" = 1'-0"



TYPICAL DETAIL OF HOUSE SEWER CONNECTION
SCALE: 3/4" = 1'-0"



LAW & WILSON • TUDOR • TOWILL
ARCHITECTS • ENGINEERS • SURVEYORS
James B. Wilson
REGISTERED ENGINEER
DATE JUL 3 1957

APPROVED:
E. A. Lova
ENGINEER, DIVISION OF SEWERS
0-3-59
DATE

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII
PALI HIGHWAY
PROJECT NO. BU-061-1(7) UNIT 5
MISCELLANEOUS DETAILS

SCALE: AS NOTED SEPT. 1959

SHEET No. 4 OF 4 SHEETS

B.S147.27

DATE
SERVED BY
PLAN
DRAWN BY
TRACED BY
NOTE BOOK
QUANTITIES CHECKED BY
NO.