

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY <i>H. O.</i>	<i>3-56</i>
	DRAWN BY <i>E. Nishimatsu</i>	<i>4-56</i>
	TRACED BY <i>E. Kakumatsu</i>	<i>9-56</i>
	QUANTITIES BY <i>S. Kato</i>	<i>2-57</i>
NOTE BOOK No.	QUANTITIES CHECKED BY <i>E. Arakawa</i>	<i>4-57</i>
	CHECKED BY <i>R. L. Nordstrom</i>	<i>5-57</i>

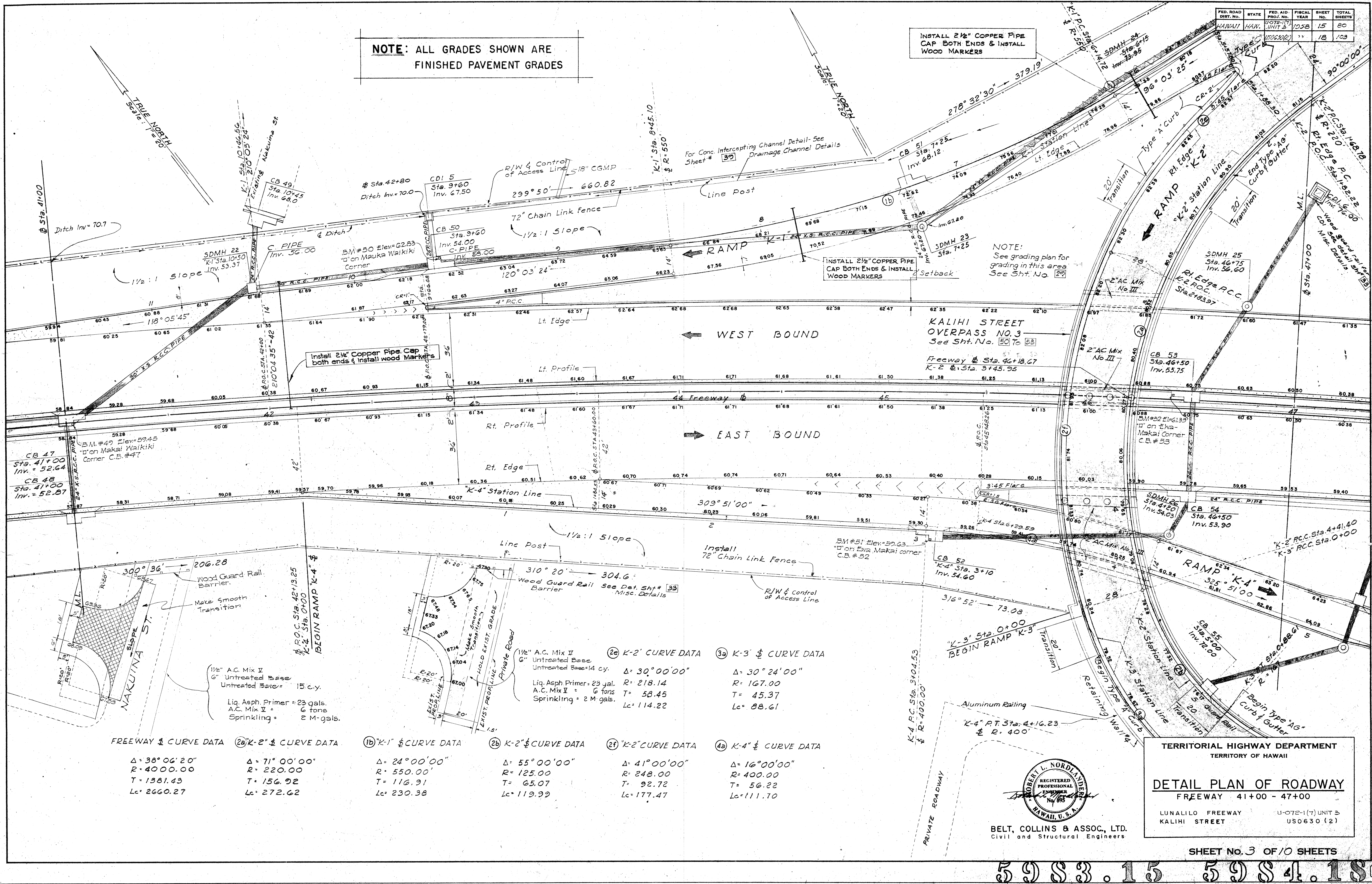
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

DETAIL PLAN OF ROADWAY
FREEWAY 41+00 - 47+00

LUNALILO FREEWAY
KALIHI STREET

U-072-1(7) UNIT 3
US0630 (2)

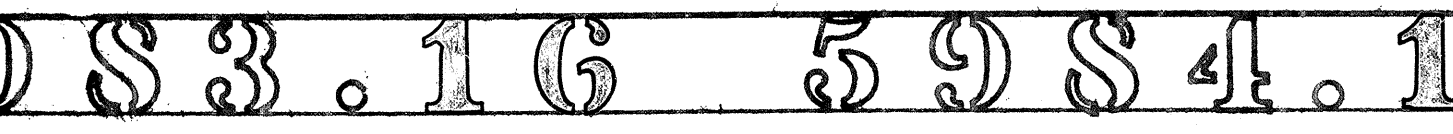
A circular professional engineer seal for Robert L. Nordlander. The outer ring contains the text "ROBERT L. NORDLANDER" at the top and "HAWAII, U. S. A." at the bottom. The inner circle contains the text "REGISTERED PROFESSIONAL ENGINEER" and "No. 895". A handwritten signature, "Robert L. Nordlander", is written across the seal.



CURVE DATA			
(2c)	(2d)	(2g)	(2h)
$\Delta = 35^{\circ}00'00''$	$\Delta = 23^{\circ}51'15''$	$\Delta = 36^{\circ}08'40''$	$\Delta = 23^{\circ}51'15''$
$R = 200.00$	$R = 400.00$	$R = 205.17$	$R = 200.00$
$T = 63.06$	$T = 84.49$	$T = 66.95$	$T = 59.14$
$L_c = 122.17$	$L_c = 166.53$	$L_c = 129.43$	$L_c = 116.57$

[illegible]

SHEET No. 4 OF 10 SHEETS



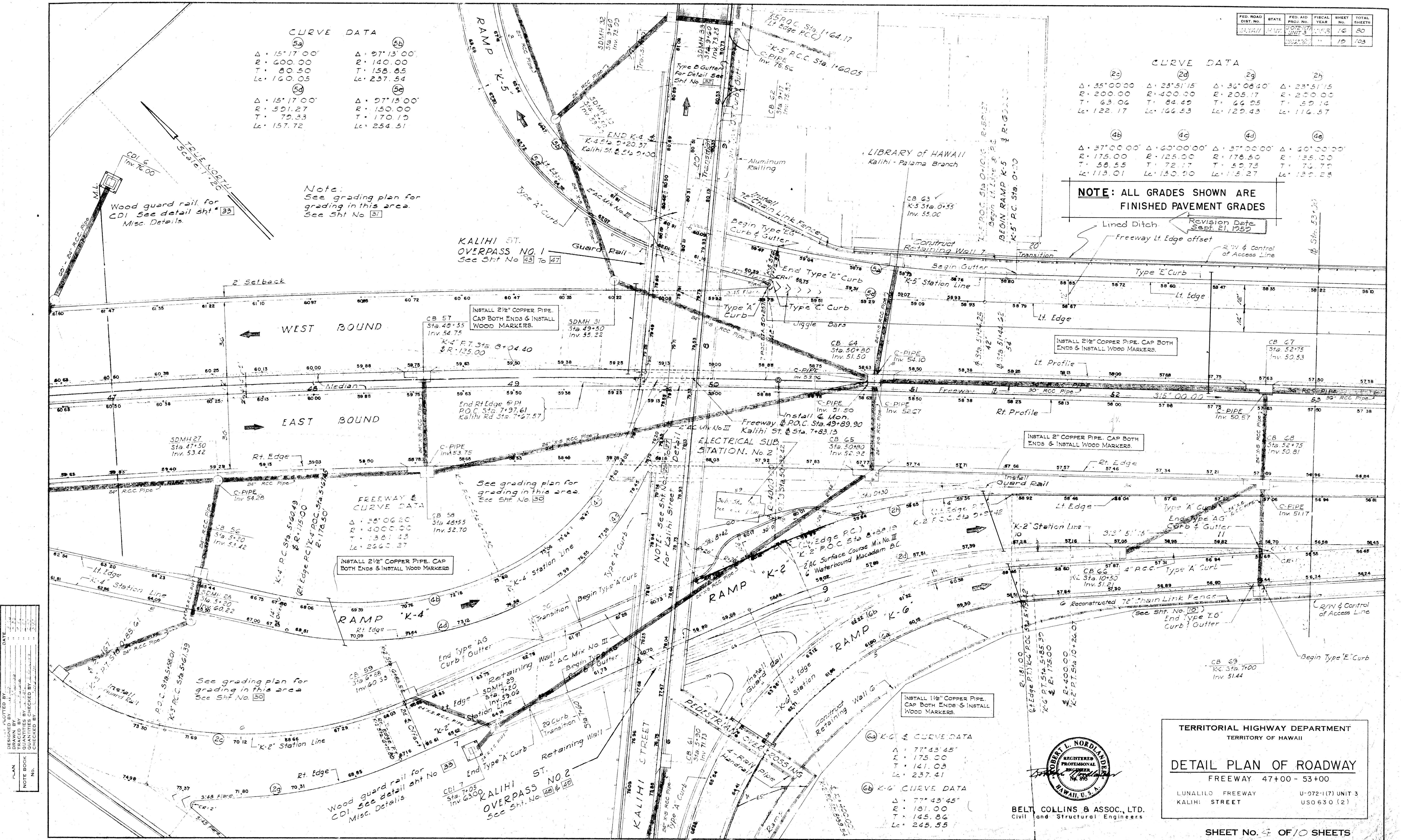
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
100-100	HI	100-100	1959	16	80
				19	103

CURVE DATA	
(53)	(56)
$\Delta = 15^{\circ}17'00''$ $R = 600.00$ $T = 80.50$ $Lc = 160.05$	$\Delta = 27^{\circ}13'00''$ $R = 140.00$ $T = 158.85$ $Lc = 257.54$
(54)	(55)
$\Delta = 15^{\circ}17'00''$ $R = 591.27$ $T = 79.33$ $Lc = 157.72$	$\Delta = 27^{\circ}13'00''$ $R = 150.00$ $T = 170.15$ $Lc = 254.51$

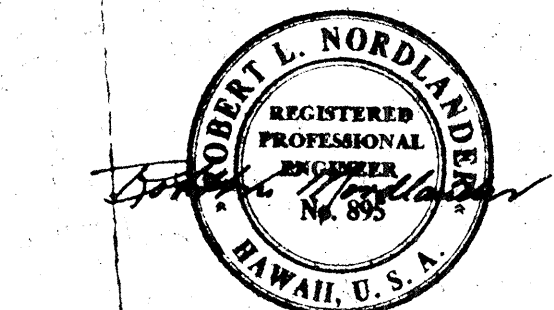
CURVE DATA			
(29)	(28)	(29)	(28)
$\Delta = 35^{\circ}00'00''$ $R = 200.00$ $T = 63.06$ $Lc = 122.17$	$\Delta = 23^{\circ}51'15''$ $R = 400.00$ $T = 84.49$ $Lc = 166.53$	$\Delta = 36^{\circ}08'40''$ $R = 205.17$ $T = 66.95$ $Lc = 129.43$	$\Delta = 23^{\circ}51'15''$ $R = 200.00$ $T = 84.49$ $Lc = 116.57$
(46)	(45)	(46)	(45)
$\Delta = 37^{\circ}00'00''$ $R = 175.00$ $T = 58.55$ $Lc = 113.01$	$\Delta = 40^{\circ}00'00''$ $R = 125.00$ $T = 72.17$ $Lc = 130.90$	$\Delta = 37^{\circ}00'00''$ $R = 175.50$ $T = 59.73$ $Lc = 115.27$	$\Delta = 40^{\circ}00'00''$ $R = 135.00$ $T = 73.77$ $Lc = 135.28$

NOTE: ALL GRADES SHOWN ARE FINISHED PAVEMENT GRADES

Revision Date Sept. 21, 1959



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
PLAN	
NOTE BOOK	



BELT, COLLINS & ASSOC., LTD.
Civil and Structural Engineers

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

DETAIL PLAN OF ROADWAY
FREEWAY 47+00 - 53+00

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

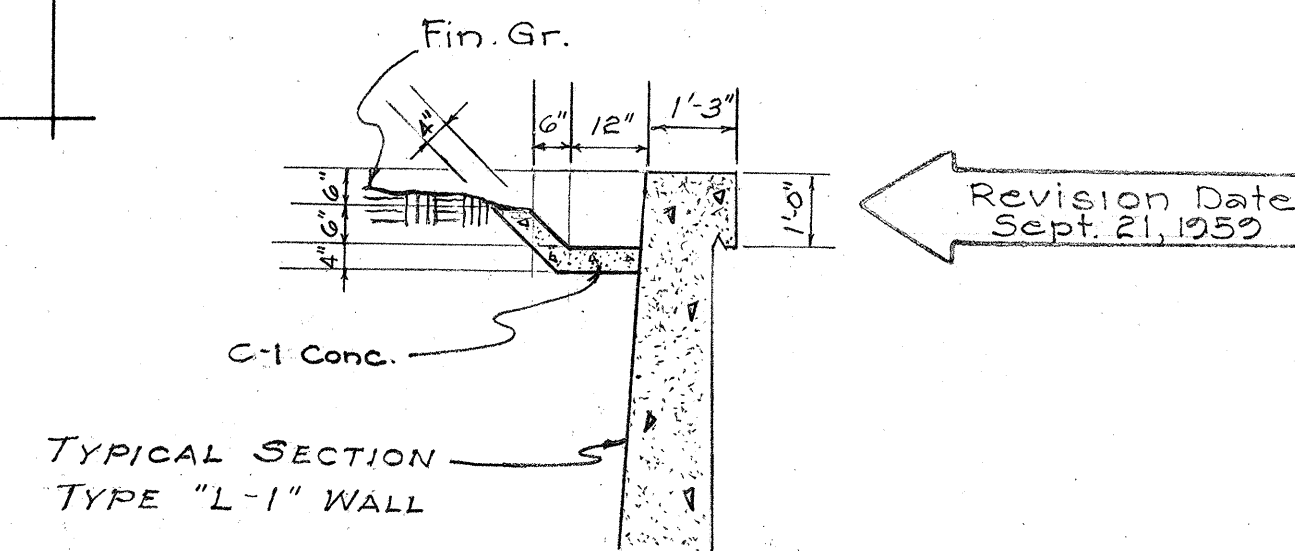
SHEET No. 4 OF 10 SHEETS

5983.16 5984.19

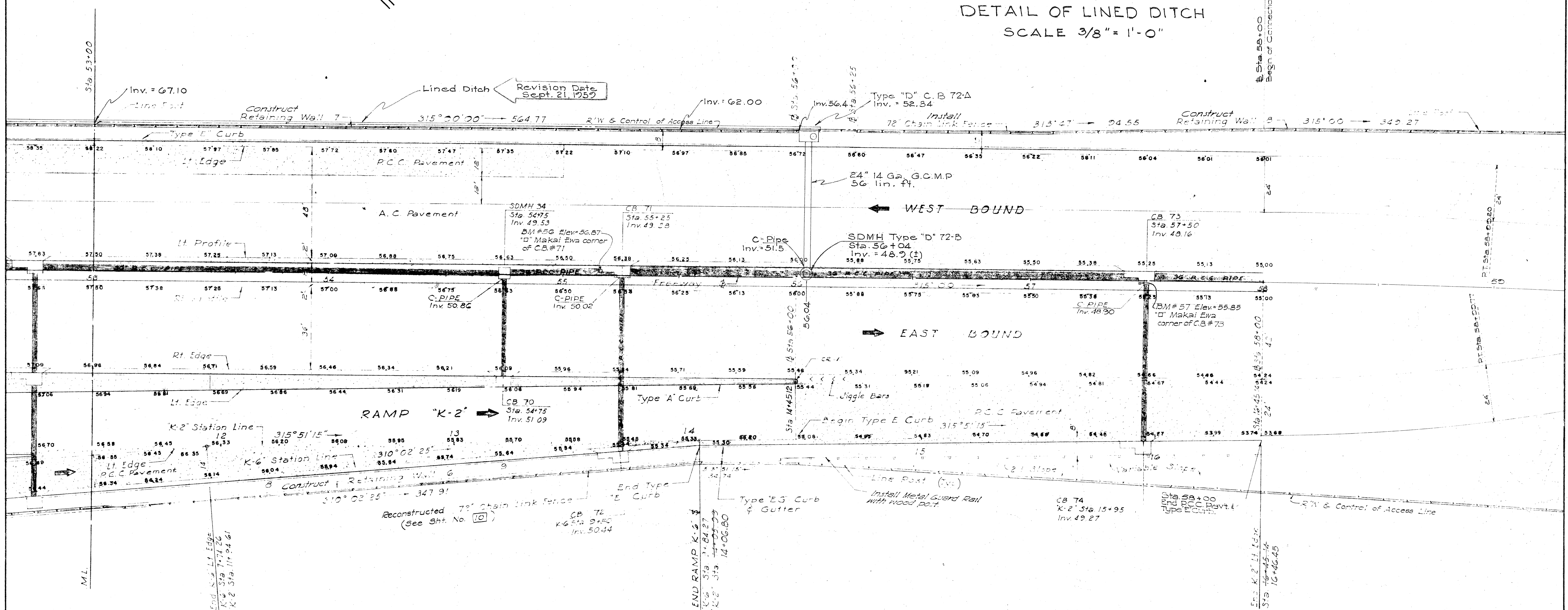
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
144-111	144-111	100-111	1958	17	80
				20	103

Revised: Sept. 21, 1959
Added mauka Lined Ditch,
C.B. Manhole, 24" Culvert
Sta. 56+04.

NOTE: ALL GRADES SHOWN ARE
FINISHED PAVEMENT GRADES



DETAIL OF LINED DITCH SCALE 3/8" = 1'-0"



ORIGINAL PLAN	DATE
DESIGNED BY	
DRAWN BY	
CHECKED BY	
QUANTITIES CHECKED BY	
NOTED BY	



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Civil and Structural Engineers

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

DETAIL PLAN OF ROADWAY FREEWAY 53+00 - 59+00

LUNALILO FREEWAY U-072-1(17) UNIT 3
KALIHI STREET US-0630 (2)

SHEET No. 5 OF 10 SHEETS

59 S 3 1 7 59 S 4 2 11 23

NOTE: ALL GRADES SHOWN ARE
FINISHED PAVEMENT GRADES

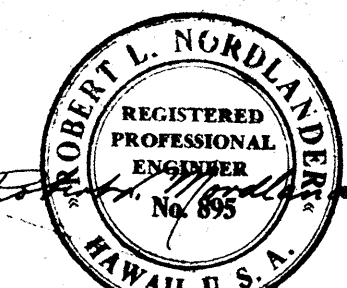
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII HAW.		1058	19	80	
		US-063002		22	103

(1a) "K-1" CURVE DATA $\Delta = 47^{\circ}12'24"$ $R = 500.00$ $T = 218.48$ $Lc = 411.98$	(2a) "K-2" CURVE DATA $\Delta = 30^{\circ}00'00"$ $R = 218.14$ $T = 58.45$ $Lc = 114.22$	(4a) "K-4" CURVE DATA $\Delta = 37^{\circ}00'00"$ $R = 178.50$ $T = 59.73$ $Lc = 115.27$
(1c) "K-1" CURVE DATA $\Delta = 42^{\circ}09'00"$ $R = 536.00$ $T = 204.56$ $Lc = 394.31$	(2f) "K-2" CURVE DATA $\Delta = 41^{\circ}00'00"$ $R = 248.00$ $T = 92.72$ $Lc = 177.47$	(4e) "K-4" CURVE DATA $\Delta = 60^{\circ}00'00"$ $R = 133.00$ $T = 76.79$ $Lc = 139.28$
(2a) "K-2" CURVE DATA $\Delta = 71^{\circ}00'00"$ $R = 220.00$ $T = 156.92$ $Lc = 272.62$	(4b) "K-4" CURVE DATA $\Delta = 37^{\circ}00'00"$ $R = 175.00$ $T = 58.55$ $Lc = 113.05$	(5b) "K-5" CURVE DATA $\Delta = 97^{\circ}13'00"$ $R = 140.00$ $T = 158.85$ $Lc = 237.54$
	(4c) "K-4" CURVE DATA $\Delta = 60^{\circ}00'00"$ $R = 125.00$ $T = 72.17$ $Lc = 130.90$	(5e) "K-5" CURVE DATA $\Delta = 97^{\circ}13'00"$ $R = 150.00$ $T = 170.19$ $Lc = 254.51$

NOTE:
SEE GRADING PLAN for
grading in this area.
Sht. No. 31

INSTALL 2 1/2" COPPER PIPE.
CAP BOTH ENDS & INSTALL
WOOD MARKERS.

INSTALL 2 1/2" COPPER PIPE.
CAP BOTH ENDS & INSTALL
WOOD MARKERS.



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TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

DETAIL PLAN OF ROADWAY

KALIHI ST. 7+00 - 12+00

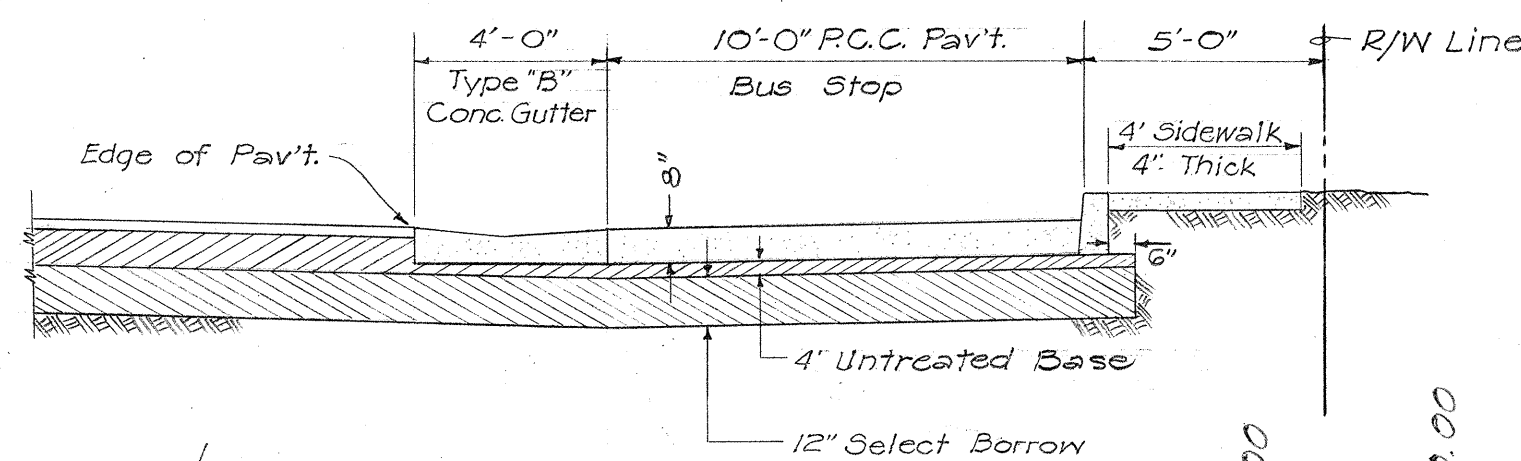
KALIHI STREET US 0630 (2)
LUNALILO FREEWAY U-072-1(7) UNIT 3

SHEET NO. 8 OF 10 SHEETS

59 S 3.19 59 S 4.22

DESIGNED BY	DATE
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	No.
NOTE BOOK	No.

FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
HAWAII	HAW.	US0630(2)	1958	23	103



SECTION of BUS STOP
SCALE: $\frac{1}{4}" = 1'-0"$

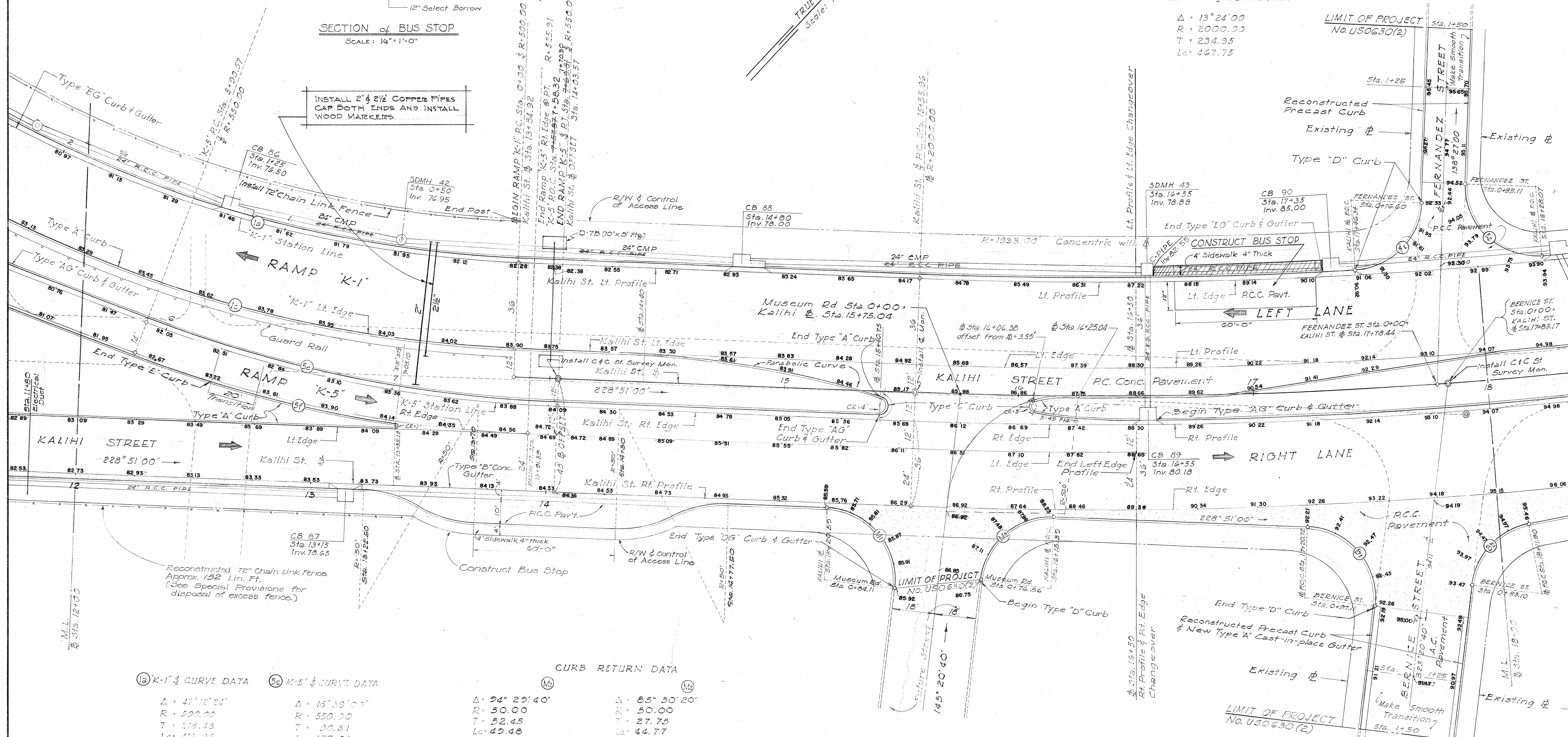
INSTALL 2" & 2 1/2" COPPER PIPES
CAP BOTH ENDS AND INSTALL
WOOD MARKERS.

TRUE NORTH
Scale: 1"=20'

KALIHI ST. B CURVE DATA

$$\begin{aligned}\Delta &= 13^{\circ}24'00 \\ R &= 2000.00 \\ T &= 234.95 \\ Lc &= 467.75\end{aligned}$$

LIMIT OF PROJECT
No. 1150630(2)



(1a) K-1" CURVE DATA $\Delta = 47^{\circ}12'24"$ $R = 500.00$ $T = 218.43$ $Lc = 411.06$	(5c) K-5" CURVE DATA $\Delta = 16^{\circ}39'00"$ $R = 550.00$ $T = 90.31$ $Lc = 179.03$	(M1) $\Delta = 24^{\circ}29'40"$ $R = 30.00$ $T = 52.45$ $Lc = 42.48$	(M2) $\Delta = 85^{\circ}30'20"$ $R = 30.00$ $T = 27.73$ $Lc = 44.77$
(1c) K-1" CURVE DATA $\Delta = 42^{\circ}09'00"$ $R = 536.00$ $T = 206.36$ $Lc = 334.31$	(5f) K-5" CURVE DATA $\Delta = 15^{\circ}39'00"$ $R = 525.01$ $T = 86.36$ $Lc = 171.19$	(B1) $\Delta = 34^{\circ}29'40"$ $R = 30.00$ $T = 32.45$ $Lc = 42.48$	(B2) $\Delta = 72^{\circ}06'20"$ $R = 30.00$ $T = 21.84$ $Lc = 37.75$
		(F1) $\Delta = 64^{\circ}56'46"$ $R = 30.00$ $T = 27.46$ $Lc = 44.43$	(F2) $\Delta = 91^{\circ}23'44"$ $R = 30.00$ $T = 34.15$ $Lc = 51.00$

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

DETAIL PLAN OF ROADWAY

KALIHU ST. 12+00 - 18+00

KALIHU STREET ROAD USO 630 (2)

SHEET No. 9 OF 10 SHEETS

59 § 4.23 27

A circular professional engineer seal for Robert L. Nordlander. The outer ring contains the name "ROBERT L. NORDLANDER" at the top and "HAWAII" at the bottom. The inner circle contains the text "REGISTERED PROFESSIONAL ENGINEER" and "No. 895". A signature is written across the seal.

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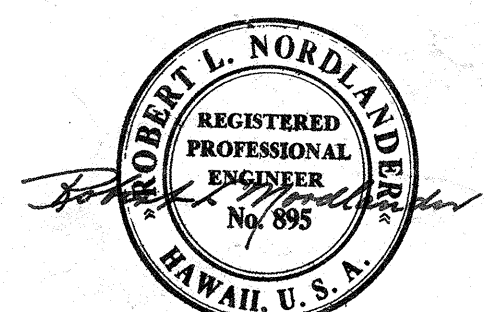
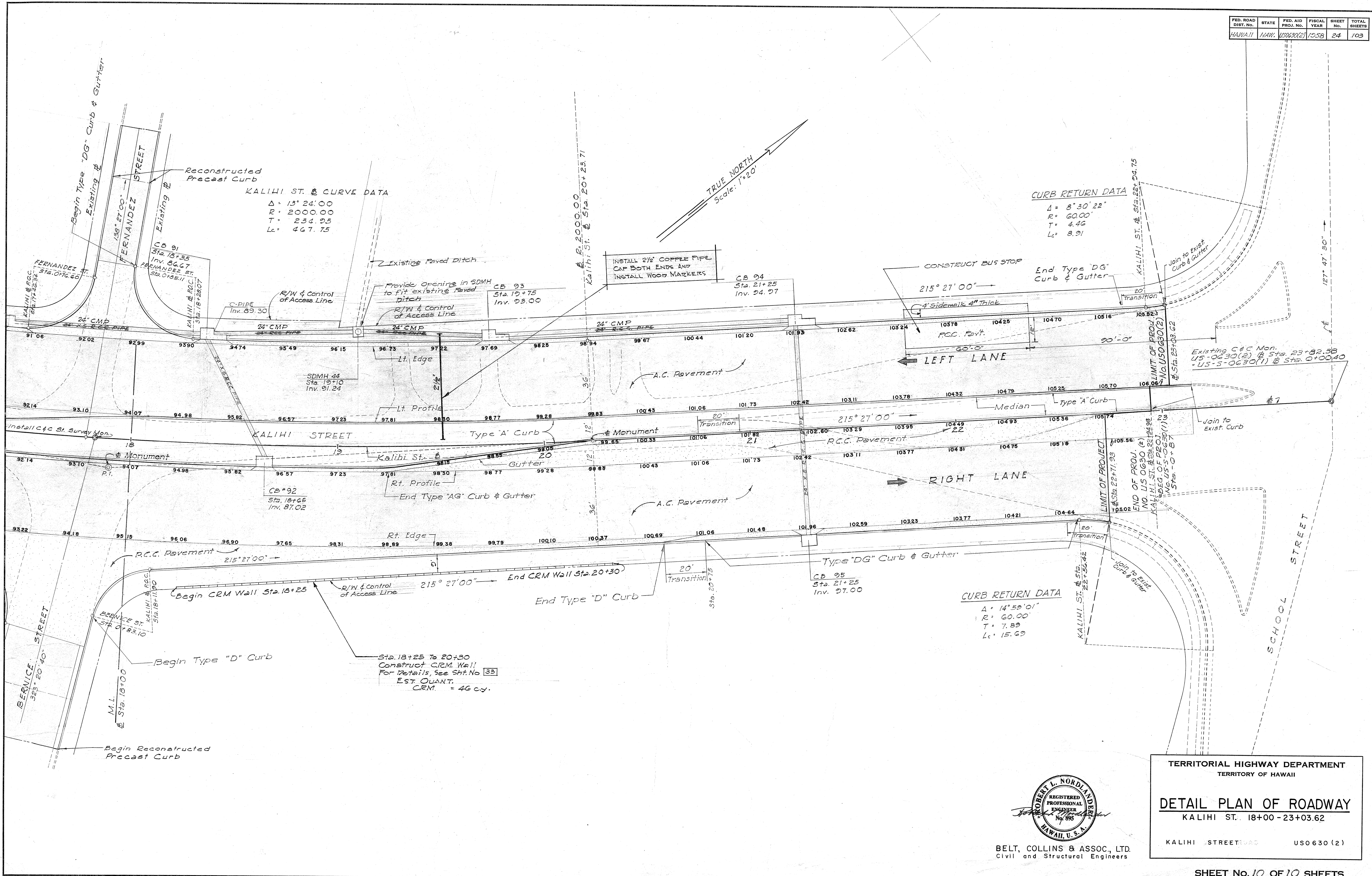
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	W. L. L.	12-52
	B. Nishimura	12-52
	K. Hishiguchi	12-52
NOTE BOOK	S. Kato	2-57
No.	QUANTITIES CHECKED BY <u>E. Arakawa</u>	2-57
	QUANTITIES CHECKED BY <u>S. L. Nordlander</u>	2-57

PRINTED ON DIEPO 1000H CLEARPRINT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	US0630(2)	1958	24	103

DATE	10-56
SURVEY PLOTTED BY	W. J. Maw
DRAWN BY	W. J. Maw
TRACED BY	W. J. Maw
QUANTITIES CHECKED BY	W. J. Maw
CHECKED BY	W. J. Maw

ORIGINAL PLAN	No.
NOTE BOOK	No.



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TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

DETAIL PLAN OF ROADWAY
KALIHI ST. 18+00-23+03.62

KALIHI STREET
US0630 (2)

SHEET No. 10 OF 10 SHEETS

5984.24