

PLANT LIST

KEY	NAME	QUANT.	HT.	CONT.	SPACING
	Tabebuia Donnell-Smithii	25	5'-7"	5 Gal.	As Indicated
	Plumeria Obtusa	13	4'-6"	5 Gal.	As Indicated
	Singapore Plumeria				
	Wedelia Trilobata	7450	12'-18"	1 Gal.	4' o.c.
	Grasseed Area	See Standard Specifications.			
	Ligustrum Texanum	311	10'-12"	1 qt.	8' o.c.
	Texas Privet				

** Length of runner. (Several per container.)

NOTE: No planting is required on 1:1 Rockcuts.

*** All Ligustrum shall be planted in median strip at 8' o.c. Plant single centerline row. Grass median strip.

GENERAL NOTES

- All pipes under pavement and risers are to be copper.
- All copper pipes shall be connected with solder type fittings of bronze casting or wrought copper-solder type fittings.
- In water piping diagrams (Details I-A to I-B inclusive) solder type fittings are shown. Pipes not noted copper are to be Galvanized Iron Screw Pipes and fittings not noted as copper are to be Galvanized Malleable Iron fittings.
- After complete installation of the sprinkler system, each sprinkler shall be adjusted to the satisfaction of the Engineer.
- Unless otherwise stipulated or directed by the Engineer, feeder lines shall be located 6" from its & to the back of concrete curb at the median strip and shoulder.
- A.C.V. = Angle Control Valve.
- Sprinkler heads along opposite edges of median strips shall be staggered.
- Average pressure at the mains = 50 psi.
- All water service lines shown in these plans exist and are not to be disturbed.
- Connection at Station 32+00 and 33+00 shall be made as indicated if sprinkler system for adjacent Lunalilo Freeway Project is in place. If not in place, thread and cap pipe and mark location with 1"x2"x12" redwood marker.

PROJECT No. U-072-1(10) & U-063-1(1)
SPRINKLER HEADS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	U-072-1(10) & U-063-1(1)	1963	45	45

Symbols	No.	Description	Pressure See Note 1	Flow See Note 2	Rad. of Cov. See Note 3	Quantity
	5-9F	Shrubbery Spray - Full Head	15	2.5	7	3
	5-10F	Shrubbery Spray - Full Head	20	3.0	10	2
	5-13F	Shrubbery Spray - Full Head	30	5.0	13	1
	5-8H	Shrubbery Spray - Half Head	10	1.0	8	134
	5-9H	Shrubbery Spray - Half Head	15	1.7	9	243
	5-10H	Shrubbery Spray - Half Head	20	2.5	10	115
	L-9F	Lawn Type - Full Head	15	2.5	9	14
	L-8H	Lawn Type - Half Head	10	1.0	8	1145
	L-10H	Lawn Type - Half Head	20	2.5	10	166
	P-15H	Pop-Up - Half Head	30	3.6	15	23
	L-8Q	Lawn Type - Quarter Head	10	0.9	8	6
	L-10F	Lawn Type - Full Head	20	3.0	10	214
	J-34	Jet Nozzle - Part Circle	35	2.8	34	21
TOTALS						2087

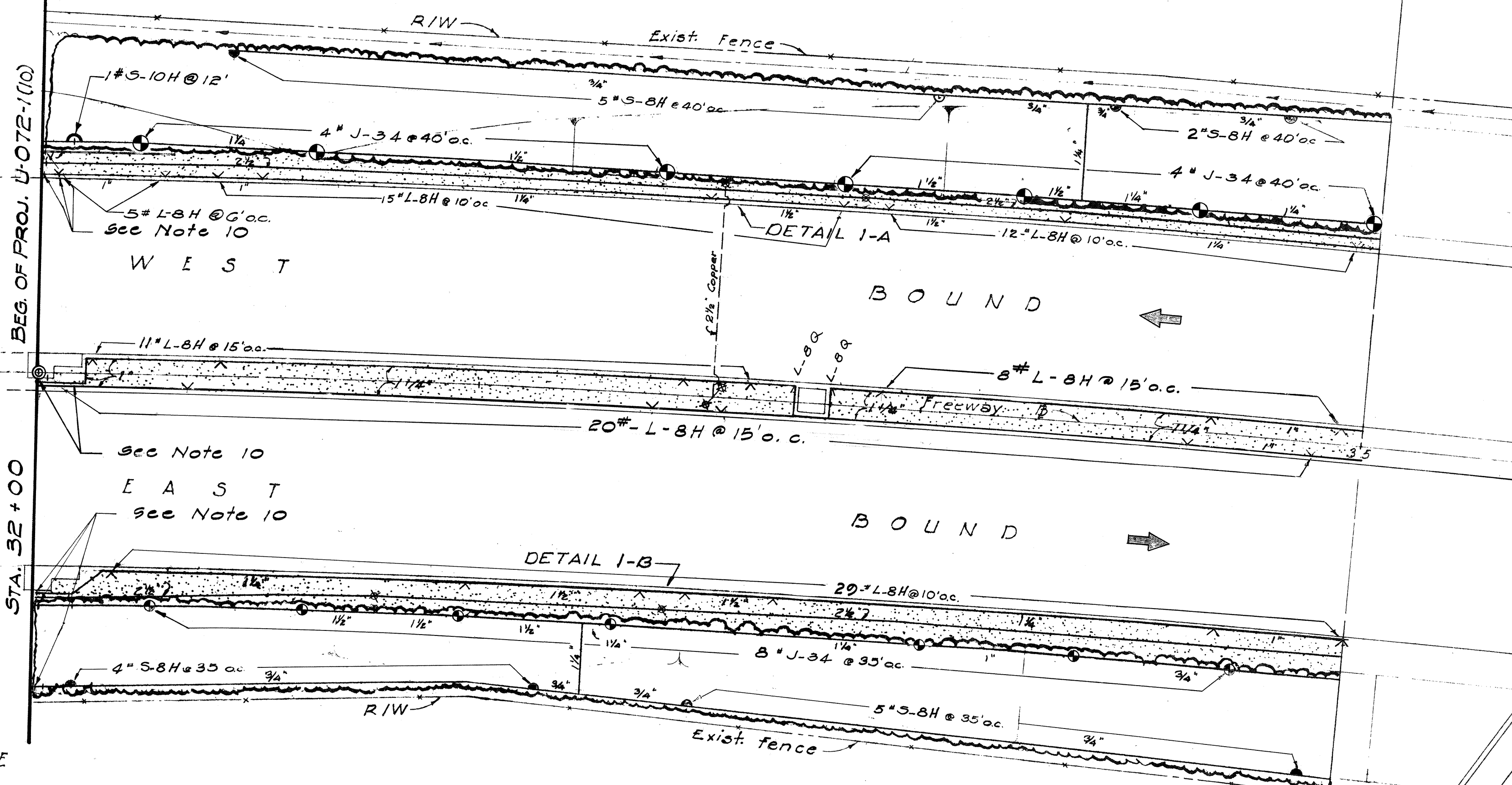
NOTE:

- "Pressure" is the minimum pressure, in pounds per square inch, which is available at the base of the last head. The operating pressure for acceptable heads must not exceed this value when operating at the tabulated flow and radius.
- "Flow" is the maximum flow, in gallons per minute, which is discharged at the tabulated pressure.
- "Radius of Coverage" is the minimum radius at the tabulated "pressure."

TRUE NORTH
Scale 1"=20'

KALIHI
STREAM

BEG. OF PROJ. U-072-1(10)
STA. 32+00



EXISTING
STREAM
BRIDGE

KALIHI

DETAIL I-A

DETAIL I-B

DETAIL I-C

DETAIL I-D

DETAIL I-E

DETAIL I-F

DETAIL I-G

DETAIL I-H

DETAIL I-I

DETAIL I-J

DETAIL I-K

DETAIL I-L

DETAIL I-M

DETAIL I-N

DETAIL I-O

DETAIL I-P

DETAIL I-Q

DETAIL I-R

DETAIL I-S

DETAIL I-T

DETAIL I-U

DETAIL I-V

DETAIL I-W

DETAIL I-X

DETAIL I-Y

DETAIL I-Z

DETAIL I-AA

DETAIL I-AB

DETAIL I-AC

DETAIL I-AD

DETAIL I-AE

DETAIL I-AF

DETAIL I-AG

DETAIL I-AH

DETAIL I-AI

DETAIL I-AJ

DETAIL I-AK

DETAIL I-AL

DETAIL I-AM

DETAIL I-AN

DETAIL I-AO

DETAIL I-AP

DETAIL I-AQ

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DETAIL I-GV

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DETAIL I-GX

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DETAIL I-HB

DETAIL I-HC

DETAIL I-HD

DETAIL I-HE

DETAIL I-HF

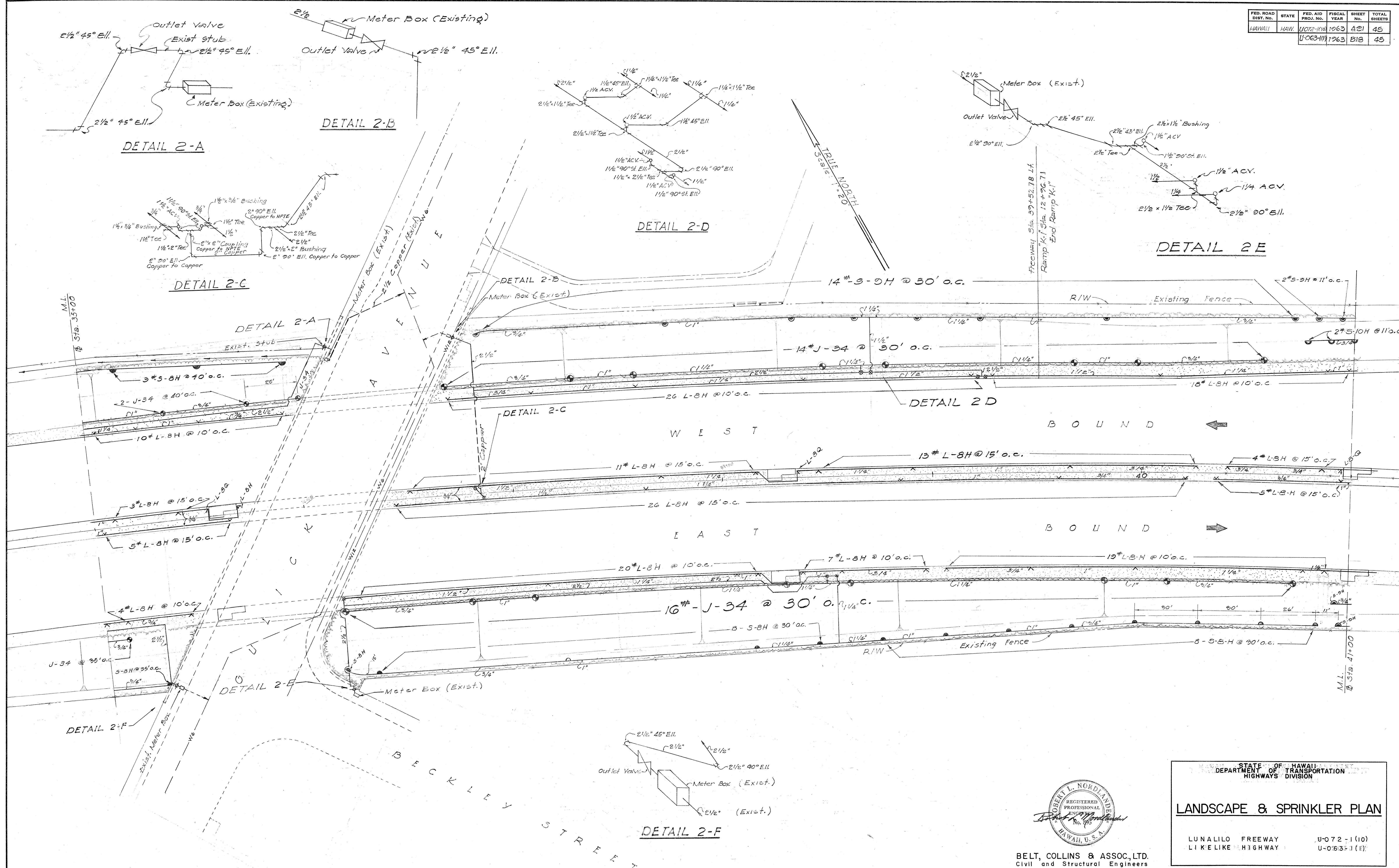
DETAIL I-HG

DETAIL I-HH

DETAIL I-HI

DETAIL I-HJ

FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOT SHE
HAWAII	HAW.	U072-1(10)	1963	A21	45
		U-063-1(1)	1963	B18	45



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY <i>P. Hirata</i>	" <i>3-57</i>
	DRAWN BY <i>R. Uematsu</i>	" <i>3-57</i>
	TRACED BY	"
NOTE BOOK	QUANTITIES BY <i>P. Hirata</i>	" <i>3-57</i>
	QUANTITIES CHECKED BY	"
No.	<i>B. Taguchi</i>	" <i>3-57</i>



A circular professional seal for Robert L. Nordlander, a Registered Professional Engineer in Hawaii, U.S.A. The seal contains the text "ROBERT L. NORDLANDER", "REGISTERED PROFESSIONAL ENGINEER", "No. 895", and "HAWAII, U. S. A.". A handwritten signature, "Robert L. Nordlander", is written across the seal.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE & SPRINKLER PLAN

LUNALILO FREEWAY
LIKE LIKE HIGHWAY

U-0 7 2 - 1 (10)
U-0 6 3 3 - 1 (1)

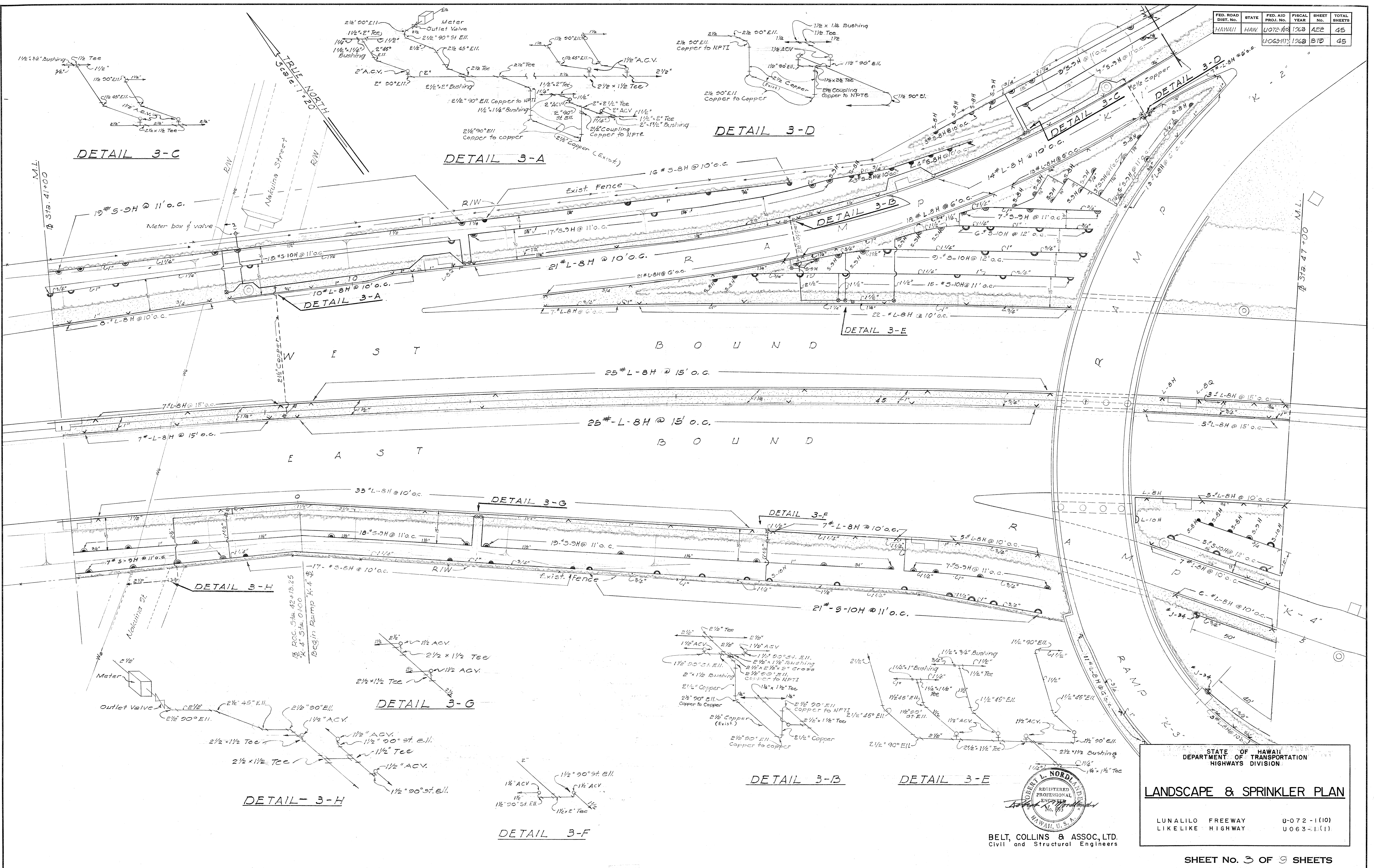
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Civil and Structural Engineers

SHEET No. 2 OF 9 SHEETS

A 21 B 18

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	U072-110	1968	A22	45
		U063-111	1968	B19	45



DATE	BY
4-57	W. J. Collins
5-57	W. J. Collins
6-57	W. J. Collins
7-57	W. J. Collins
8-57	W. J. Collins
9-57	W. J. Collins
10-57	W. J. Collins
11-57	W. J. Collins
12-57	W. J. Collins

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE & SPRINKLER PLAN

LUNALILO FREEWAY
LIKELIKE HIGHWAY

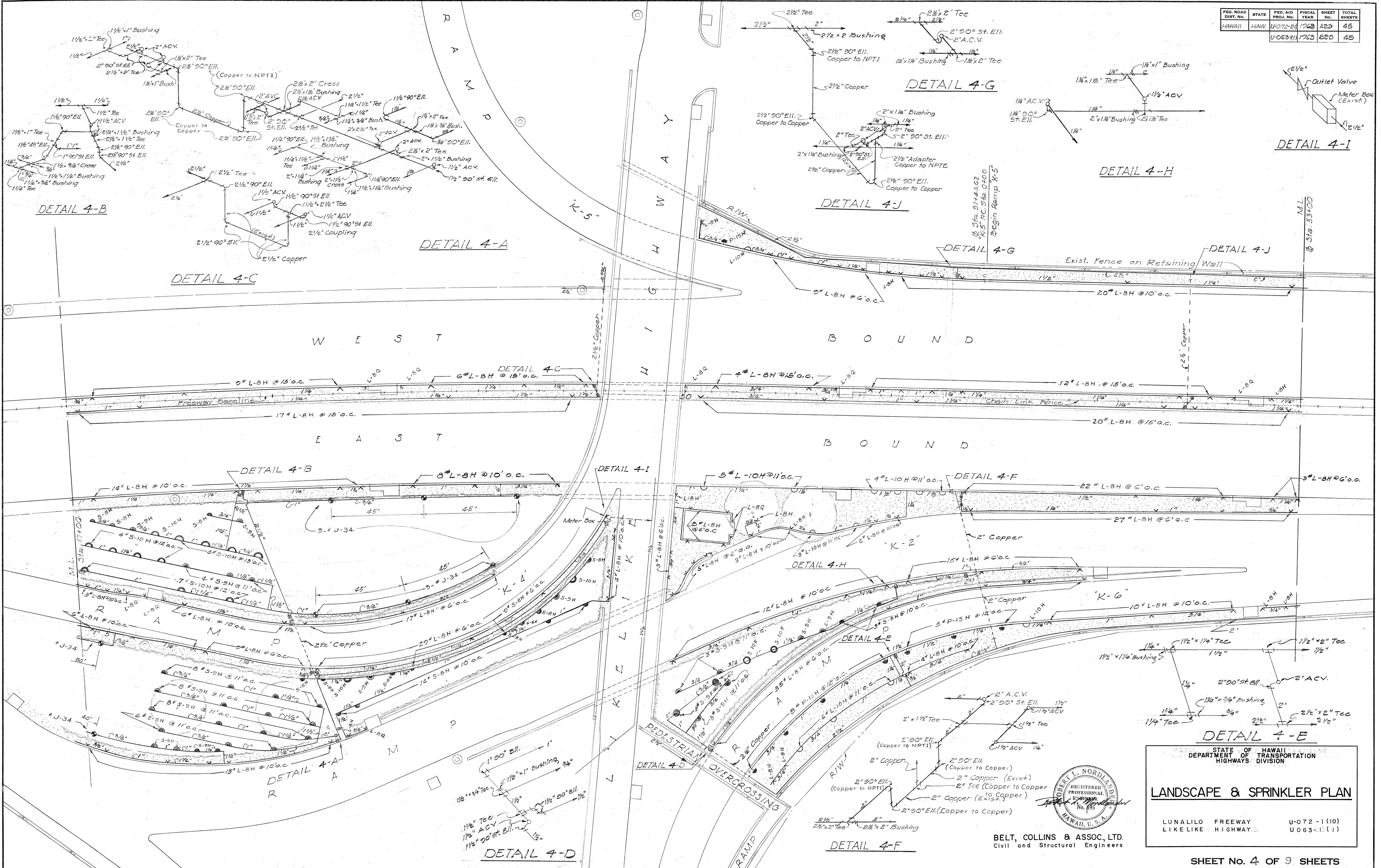
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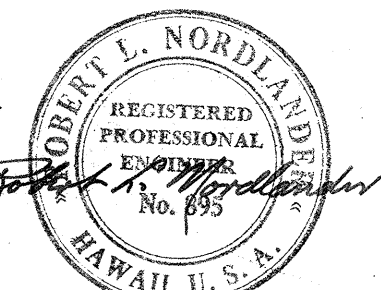
SHEET No. 3 OF 9 SHEETS

A 22 B 19

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HAWAII	HAW.	U-072-1(10)	1963	A23	45
		U-063-1(1)	1963	B20	45



DATE	BY
3-57	DESIGNED BY
3-57	DRAWN BY
3-57	CHECKED BY
3-57	NOTED BY



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HIGHWAYS DIVISION

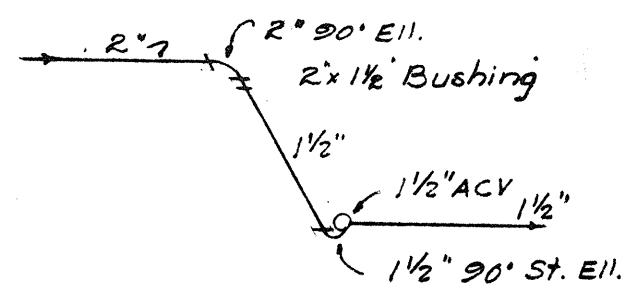
LANDSCAPE & SPRINKLER PLAN

LUNALILO FREEWAY
LIKE LIKE HIGHWAY

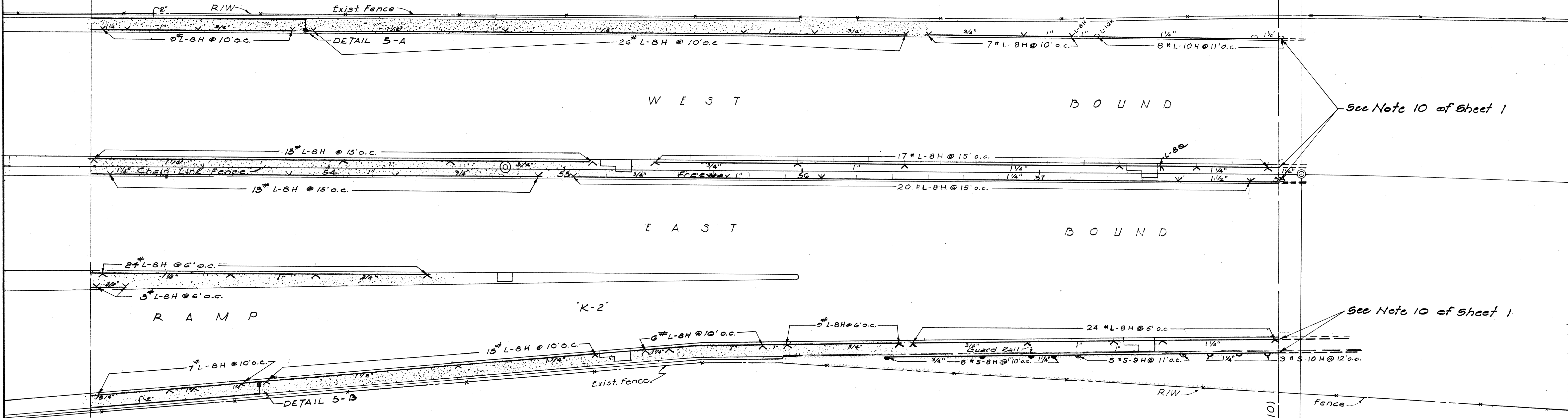
U-072-1(10)
U-063-1(1)

SHEET No. 4 OF 9 SHEETS

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HAWAII	HAW.	U-072-1(10)	1963	424	45
		U-063-1(1)	1963	221	45

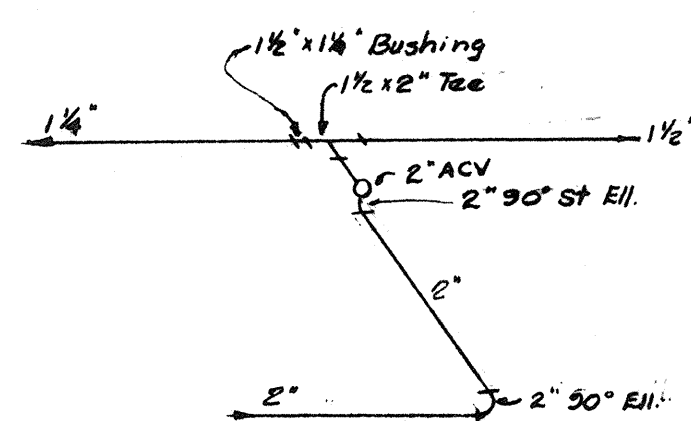


DETAIL 5-A



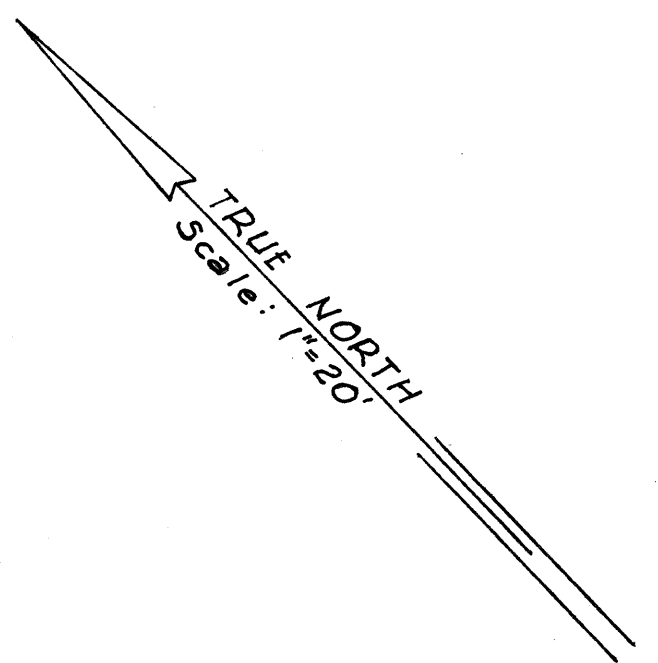
See Note 10 of Sheet 1

See Note 10 of Sheet 1

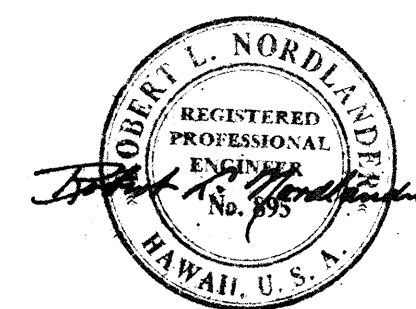


DETAIL 5-B

STA. 58+00- END OF PROJ. NO. U-072-1(10)
RC. 512.58+09.98



SURVEY PLOTTED BY	DATE
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CHECKED BY	



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HIGHWAYS DIVISION

LANDSCAPE & SPRINKLER PLAN

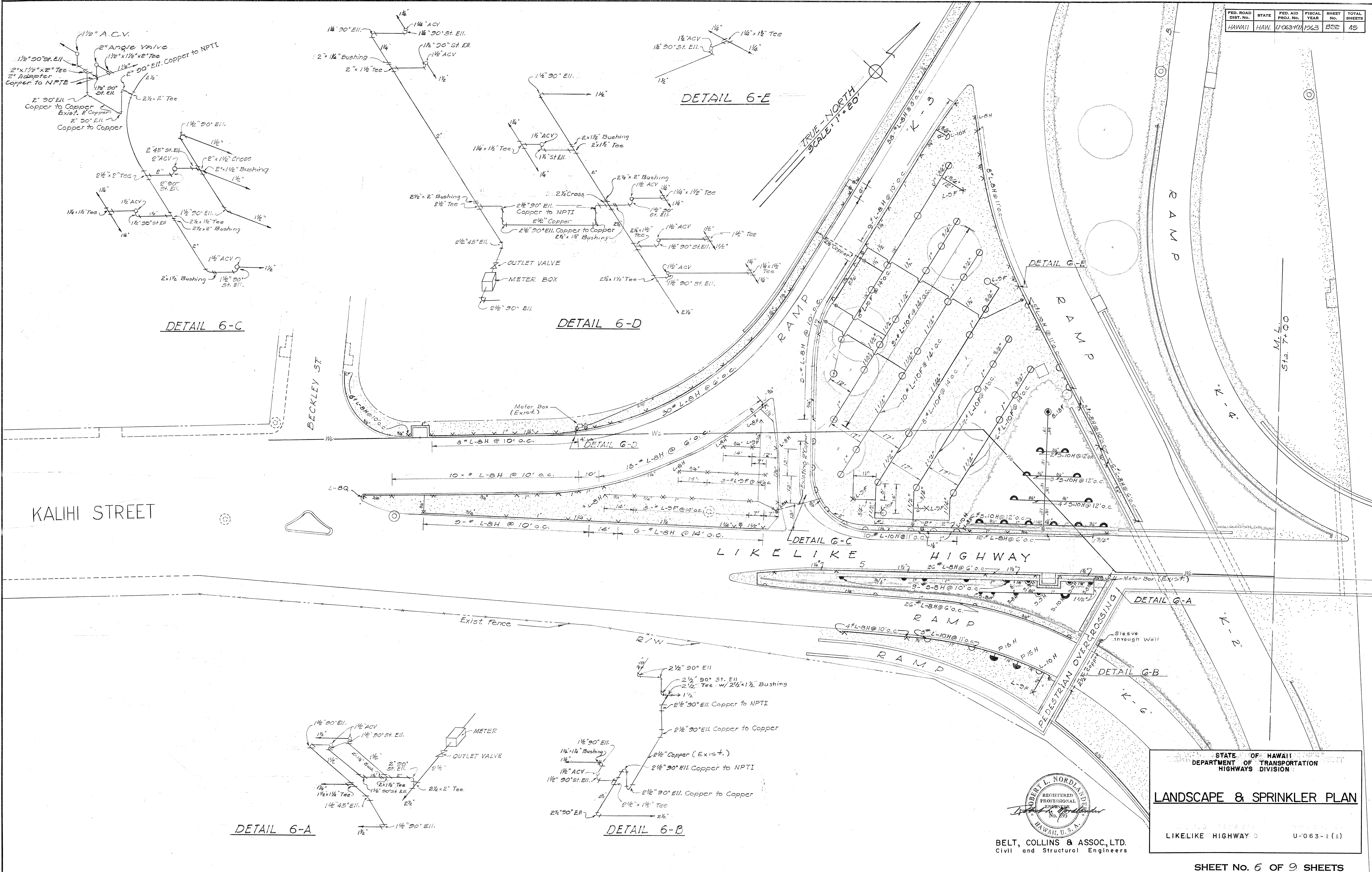
LUNALILO FREEWAY
LIKE LIKE HIGHWAY

U-072-1(10)
U-063-1(1)

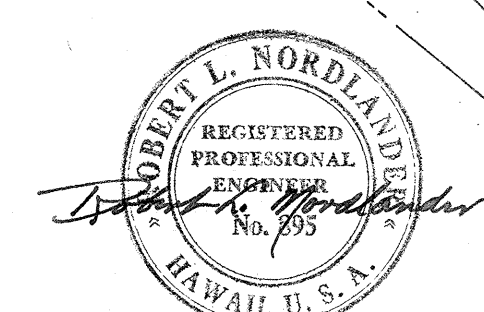
SHEET No. 5 OF 9 SHEETS

A 24 B 21

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	U-063-101	1963	822	45



ORIGINAL PLAN	DATE
DESIGNED BY	3-57
DRAWN BY	3-57
CHECKED BY	3-57
NOTED BY	3-57
QUANTITIES CHECKED BY	3-57
NO.	



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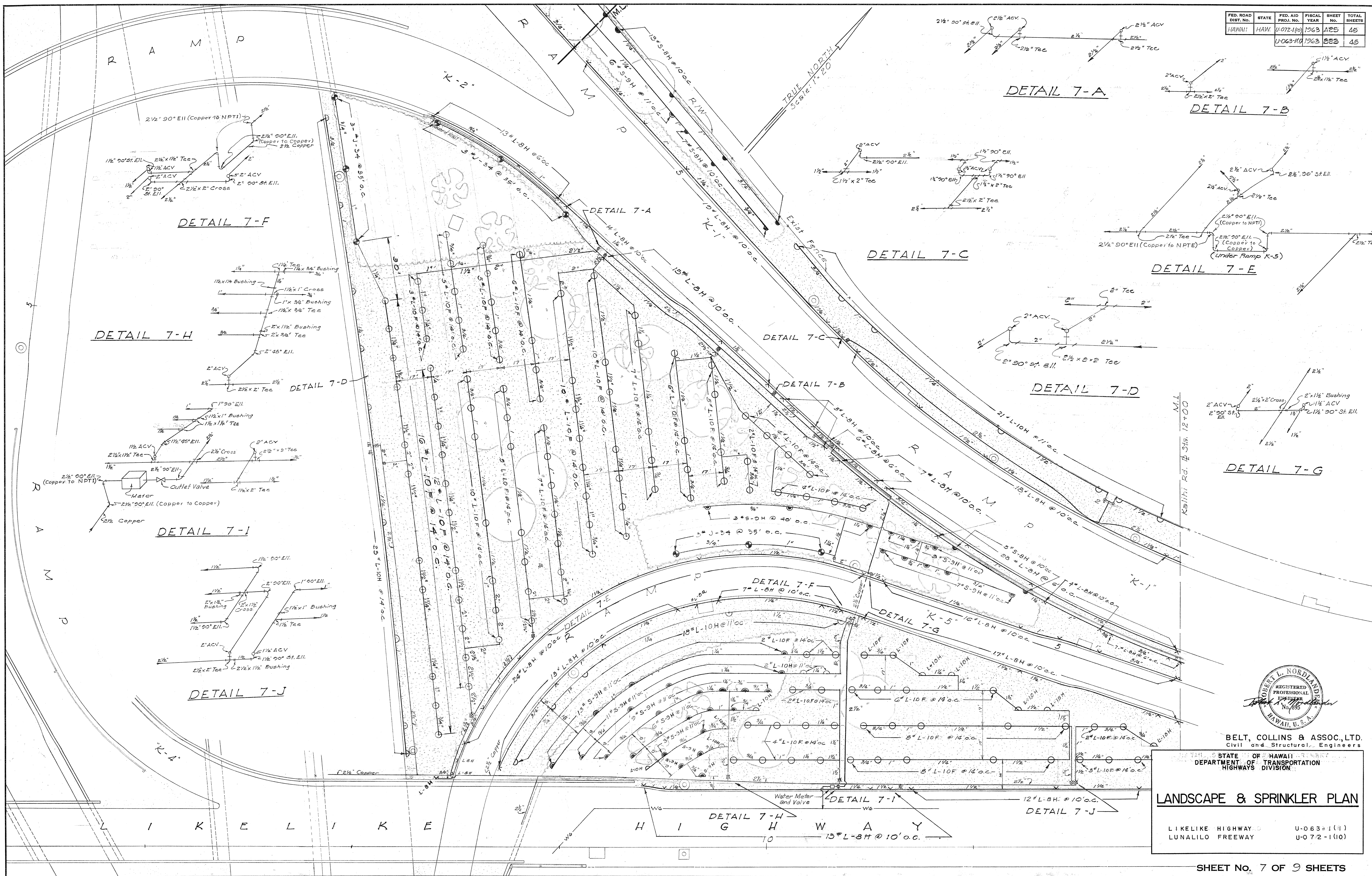
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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE & SPRINKLER PLAN

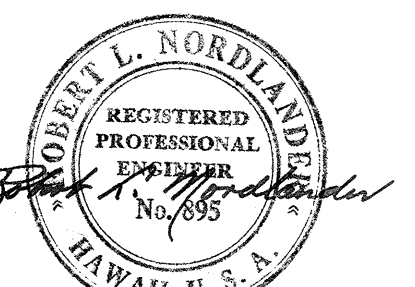
LIKELIKE HIGHWAY

U-063-1 (1)

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HAWAII	HAW.	U-072-1(10)	1963	A25	45
		U-063-1(1)	1963	B23	45



SURVEY PLOTTED BY	DATE
3-57	3-57
DRIVEN BY	3-57
3-57	3-57
TRACED BY	3-57
3-57	3-57
QUANTITIES CHECKED BY	
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CHECKED BY	
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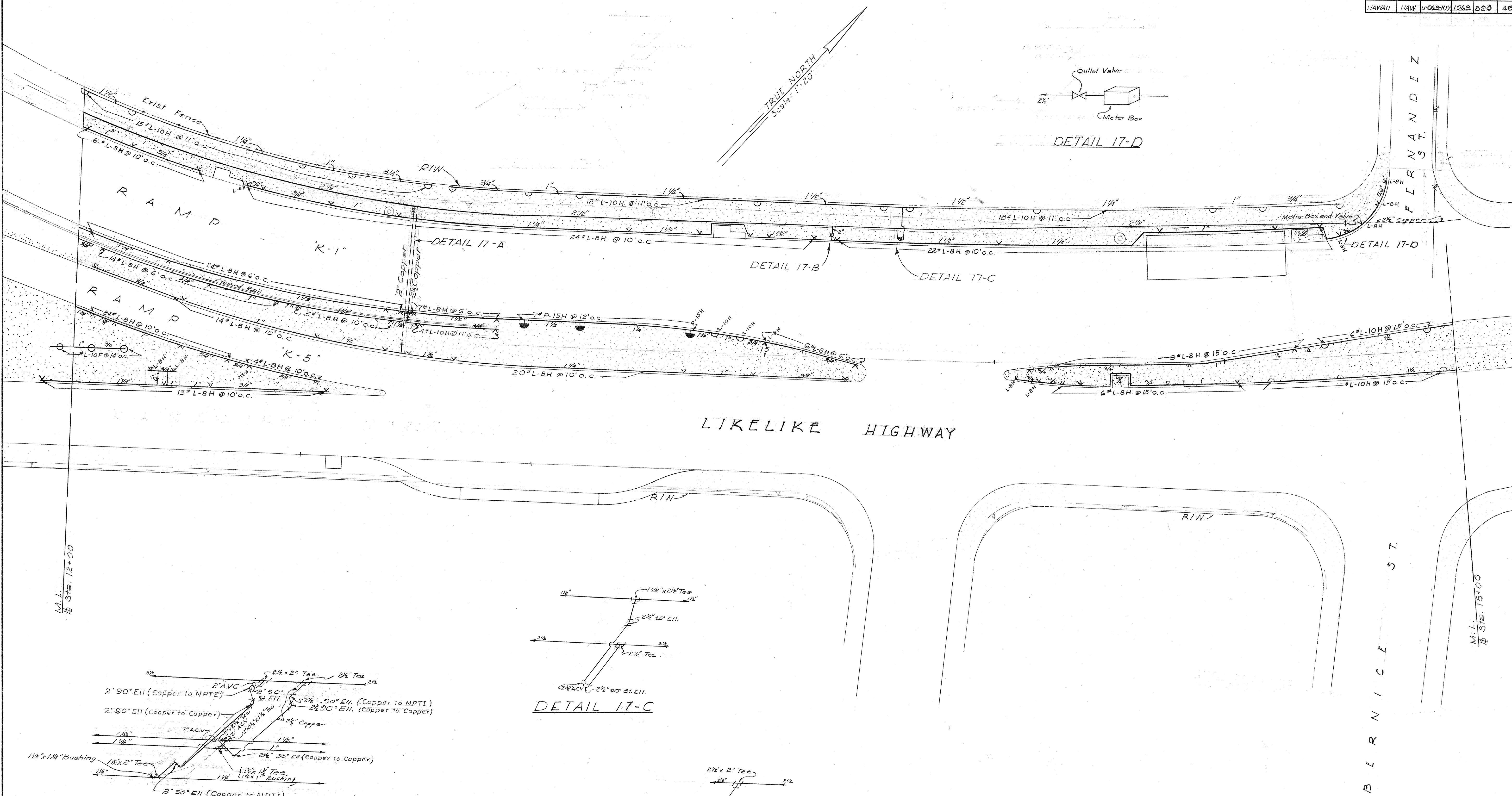
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

LANDSCAPE & SPRINKLER PLAN

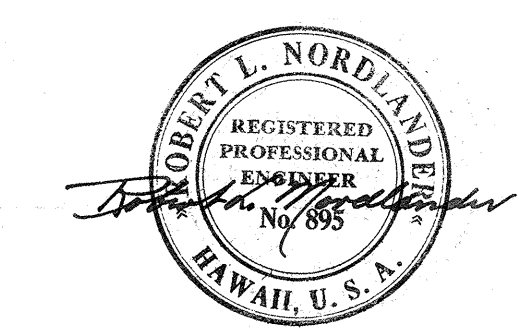
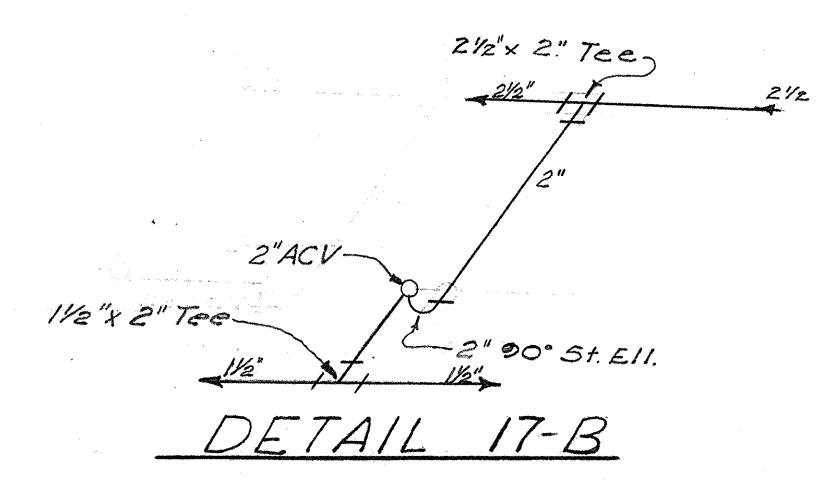
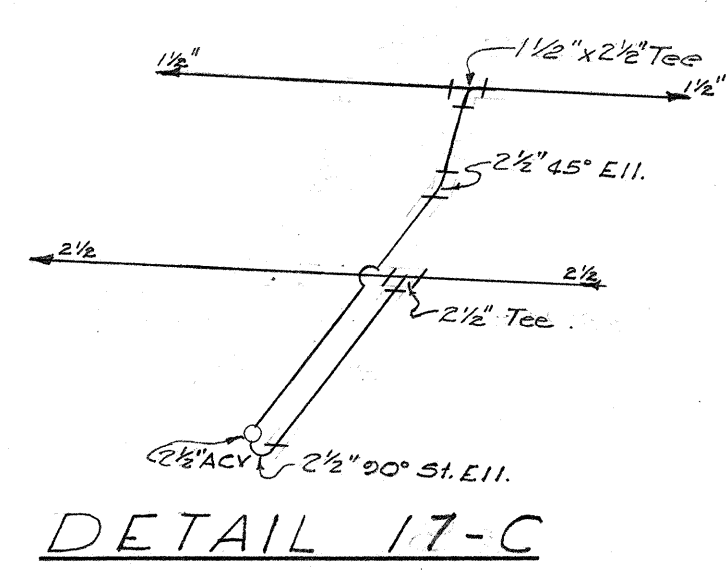
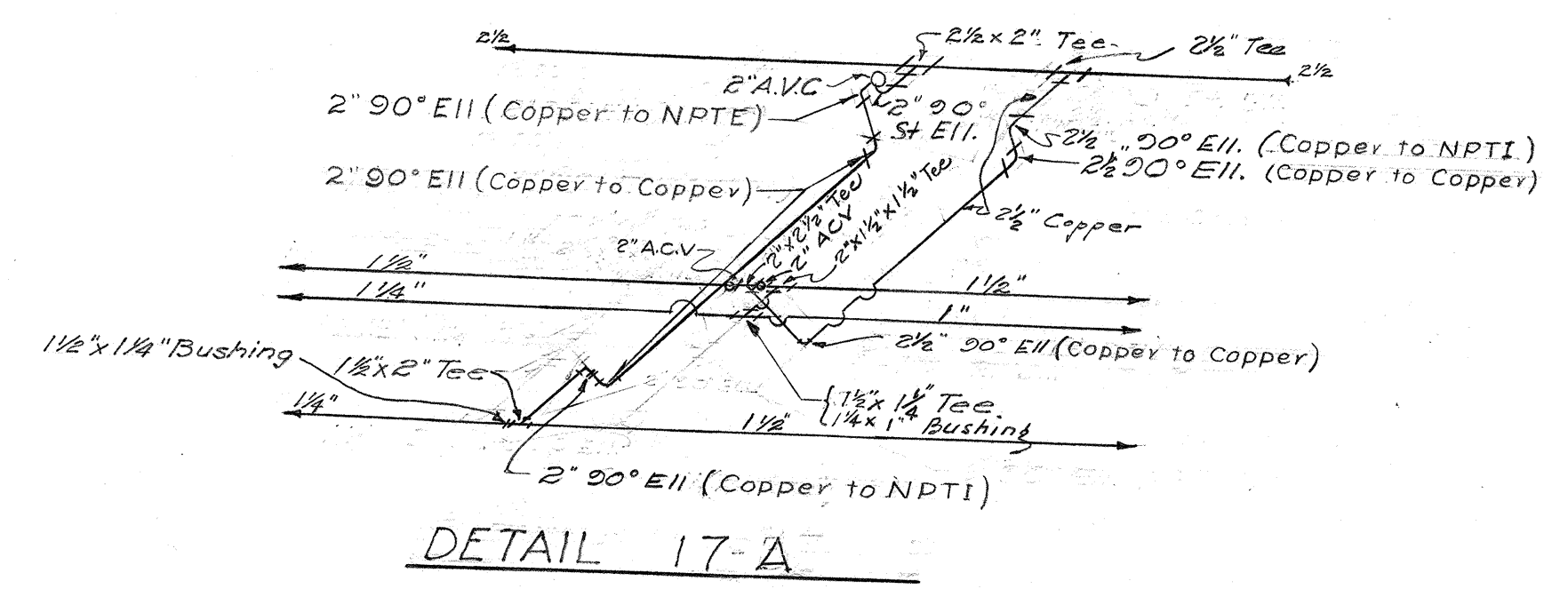
LIKELIKE HIGHWAY U-063-1(1)
LUNALILO FREEWAY U-072-1(10)

SHEET No. 7 OF 9 SHEETS

FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
HAWAII	HAW.	U-063-101	1963	224	45



DATE	3-27
DESIGNED BY	D. Collins
DRAWN BY	E. W. Collins
CHECKED BY	D. Collins
QUANTITIES CHECKED BY	D. Collins
NOTE BOOK	
No.	



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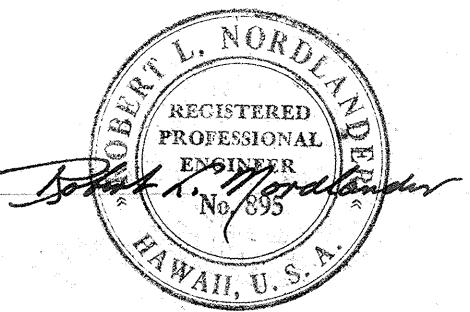
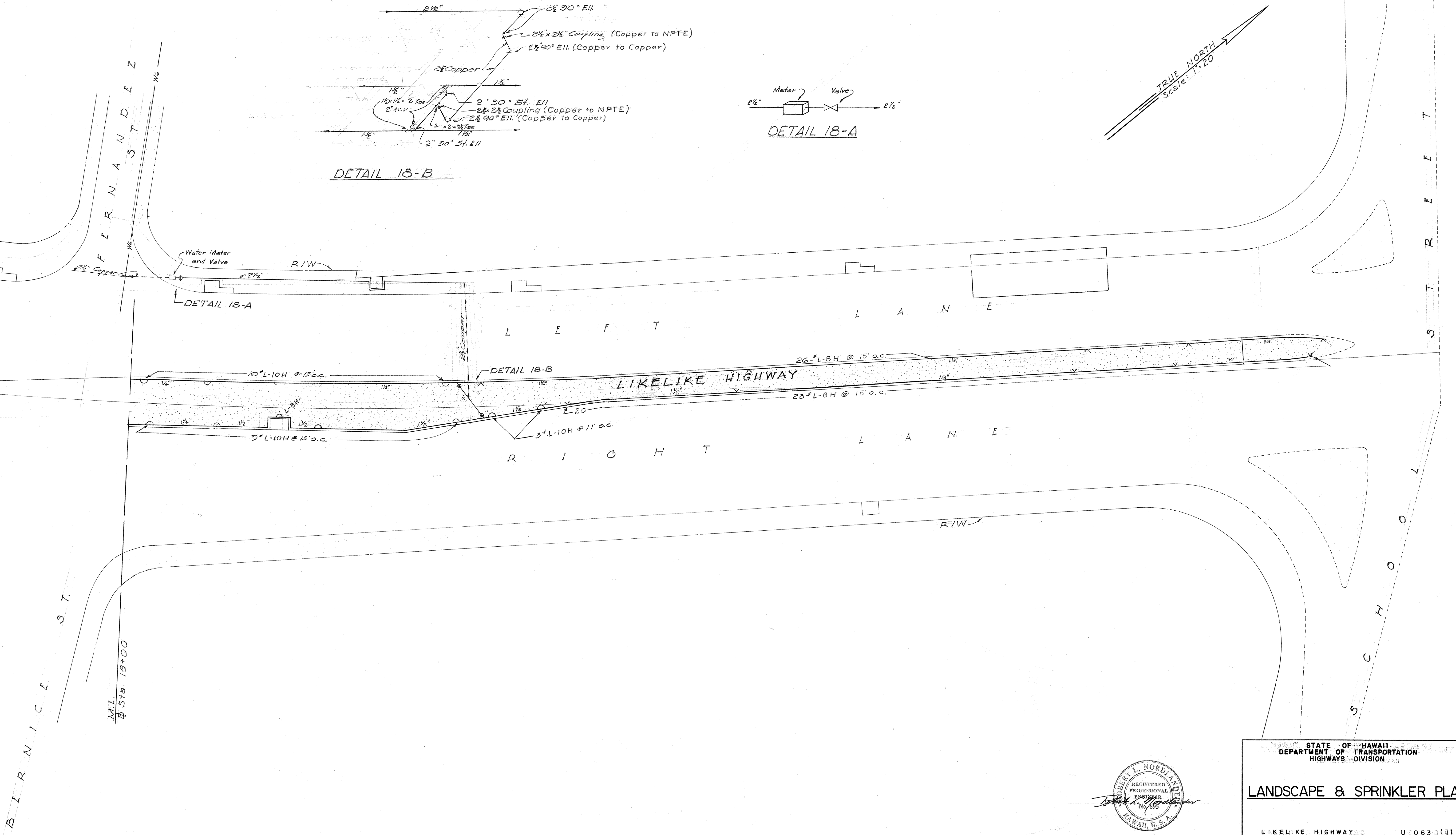
LANDSCAPE & SPRINKLER PLAN
LIKELIKE FREEWAY
LIKELIKE HIGHWAY
U-063-1(1)

SHEET No. 8 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
HAWAII	HAW.	U-063-1(4)	1963	825	45

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LANDSCAPE & SPRINKLER PLAN

LIKELIKE HIGHWAY U-063-1(4)