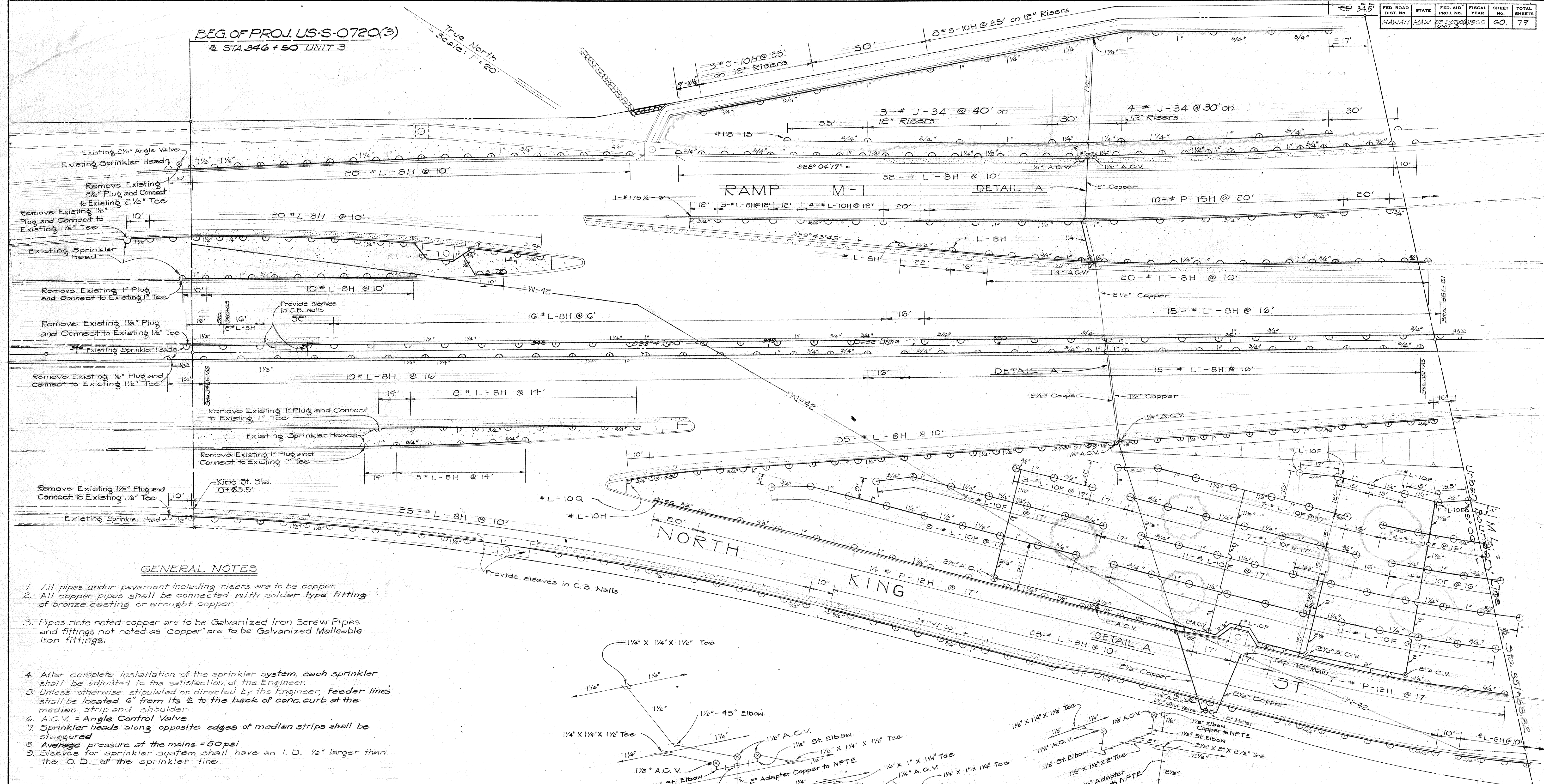


BEG. OF PROJ. US-S-0720(3)
@ STA. 346 + 50 UNIT 3

True North
Scale: 1" = 20'



GENERAL NOTES

1. All pipes under pavement including risers are to be copper.
2. All copper pipes shall be connected with solder type fitting of bronze casting or wrought copper.
3. Pipes not noted copper are to be Galvanized Iron Screw Pipes and fittings not noted as "copper" are to be Galvanized Malleable Iron fittings.
4. After complete installation of the sprinkler system, each sprinkler shall be adjusted to the satisfaction of the Engineer.
5. Unless otherwise stipulated or directed by the Engineer, feeder lines shall be located 6" from its E to the back of conc. curb at the median strip and shoulder.
6. A.C.V. = Angle Control Valve.
7. Sprinkler heads along opposite edges of median strips shall be staggered.
8. Average pressure at the mains = 50 psi.
9. Sleeves for sprinkler system shall have an I.D. 1/8" larger than the O.D. of the sprinkler line.

PLANT LIST

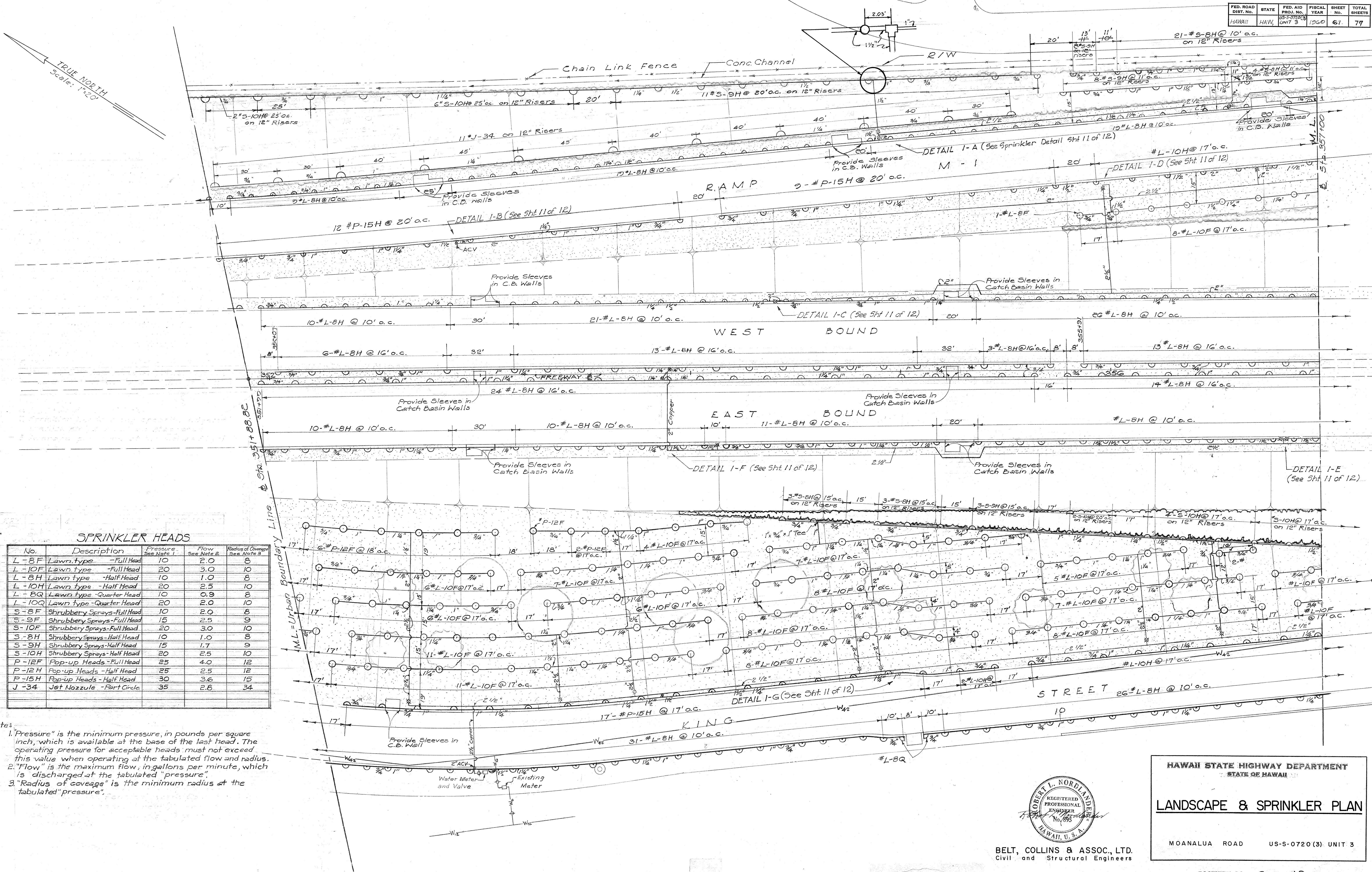
KEY	NAME	QUANT.	HT.	CONT.	SPACING
	Cybistax, Donnell-Smithii Gold Tree	33	5'-7"	5 gal.	As indicated
	Cassia javanica fistula Rainbon Shoner	25	5'-7"	5 gal.	
	Cassia glauca Kelomona	8,830	12"-18"	1 gal.	
	Ficus ramantaces Waipahu Creeping Fig				
	Grassed Area		See Specs		
	Ligustrum Texanum Texas Privet	***445	10"-12"	1 qt.	8' o.c. (E of near Highway Lighting Sub-Station #1)
	Mexican Creeper Pale Pink or White Variety	22	12"-18"	1 gal.	8' o.c.

* Contractor shall provide 7 each of the following colors: Pale Yellow, Golden Yellow, Apricot, and 8 of Watermelon Pink. Colors within each tree group shall be mixed.
** Length of runner (Several per container)
NOTE: No Planting is required on 1:1 Rock cut.
*** All Ligustrum shall be planted in median strip at 8' O.C. Plant single centerline row except between Sts. 15 to 24+50 (Median Fencing) where plant double, staggered row (12' from each side of fence). Grass median strip.

DETAIL A

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII
LANDSCAPE & SPRINKLER PLAN
MOANALUA ROAD US-S-0720(3) UNIT 3

8526.60



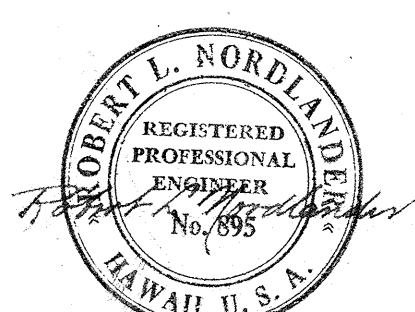
SPRINKLER HEADS

No.	Description	Pressure See Note 1	Flow See Note 2	Radius of Coverage See Note 3
L-8F	Lawn type - Full Head	10	2.0	8
L-10F	Lawn type - Full Head	20	3.0	10
L-8H	Lawn type - Half Head	10	1.0	8
L-10H	Lawn type - Half Head	20	2.5	10
L-8Q	Lawn type - Quarter Head	10	0.9	8
L-10Q	Lawn type - Quarter Head	20	2.0	10
S-8F	Shrubbery Sprays - Full Head	10	2.0	8
S-9F	Shrubbery Sprays - Full Head	15	2.5	9
S-10F	Shrubbery Sprays - Full Head	20	3.0	10
S-8H	Shrubbery Sprays - Half Head	10	1.0	8
S-9H	Shrubbery Sprays - Half Head	15	1.7	9
S-10H	Shrubbery Sprays - Half Head	20	2.5	10
P-12F	Pop-up Heads - Full Head	25	4.0	12
P-12H	Pop-up Heads - Half Head	25	2.5	12
P-15H	Pop-up Heads - Half Head	30	3.6	15
J-34	Jet Nozzles - Part Circle	35	2.8	34

Notes:

1. "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.
2. "Flow" is the maximum flow, in gallons per minute, which is discharged at the tabulated "pressure".
3. "Radius of coverage" is the minimum radius at the tabulated "pressure".

DATE: 3-27
 DESIGNED BY: G. H. H. H.
 DRAWN BY: G. H. H. H.
 QUANTITIES BY: R. H. H. H.
 CHECKED BY: G. H. H. H.
 NO. 8-27



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 Civil and Structural Engineers

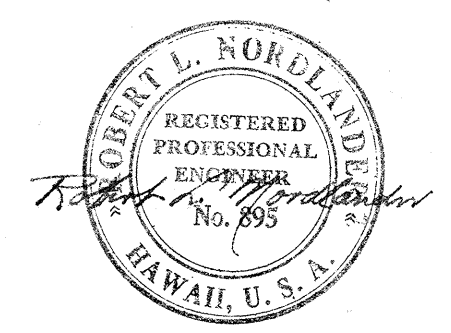
HAWAII STATE HIGHWAY DEPARTMENT
 STATE OF HAWAII

LANDSCAPE & SPRINKLER PLAN

MOANALUA ROAD US-0720(3) UNIT 3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	US-0720(3)	1960	62	79
		BU-072-1(2)	1960	90	115
		BU-065-1(1)	1960	87	115

SURVEY PLOTTED BY	DATE
PLAN	3-57
TRACED BY	3-57
QUANTITIES CHECKED BY	3-57
NOTE BOOK NO.	3-57



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Civil and Structural Engineers

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII

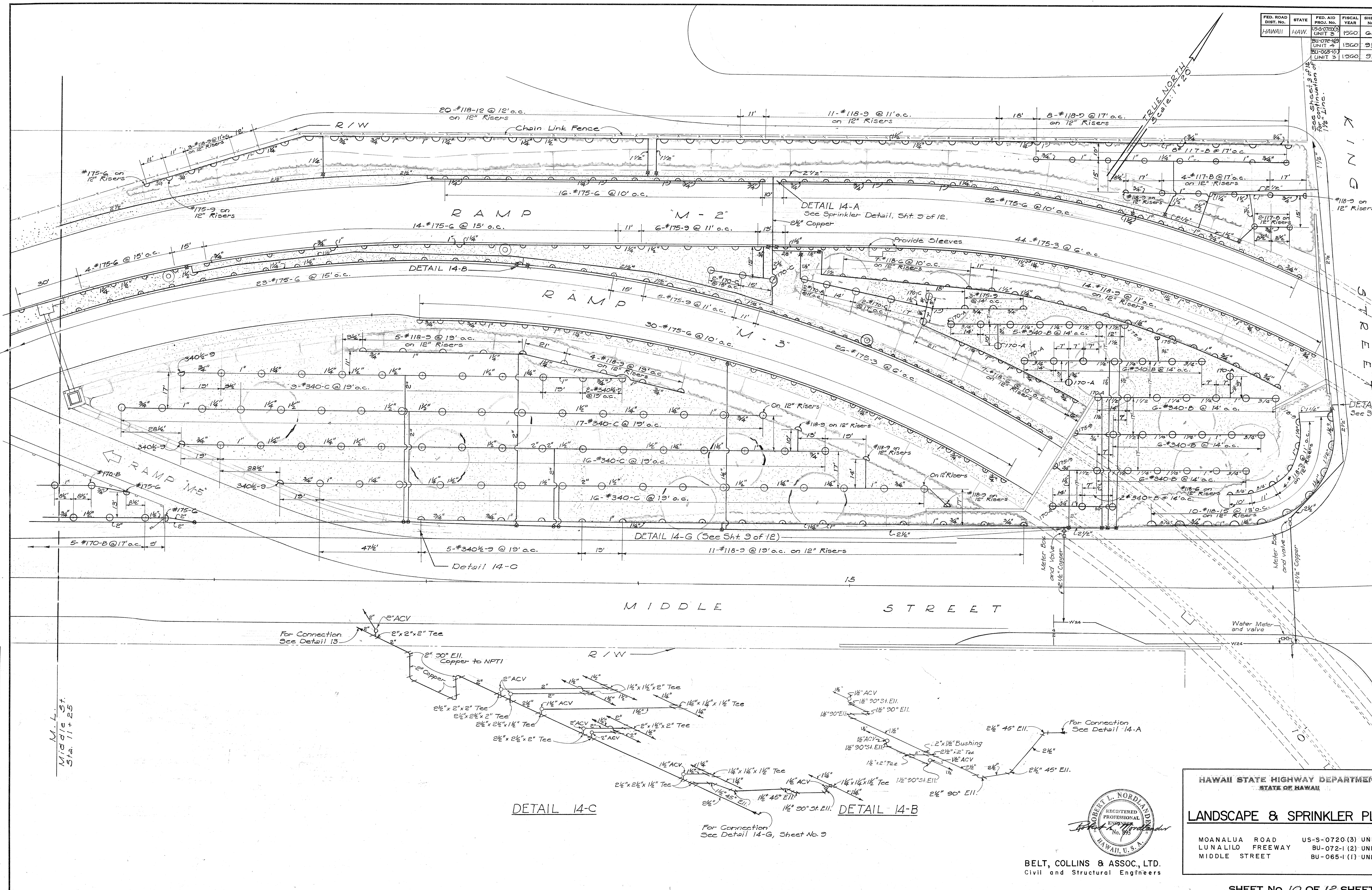
LANDSCAPE & SPRINKLER PLAN

MOANALUA ROAD US-S-0720(3) UNIT 3
LUNALILO FREEWAY BU-072-1(2) UNIT 4
MIDDLE STREET BU-065-1(1) UNIT 3

SHEET No. 3 OF 12 SHEETS

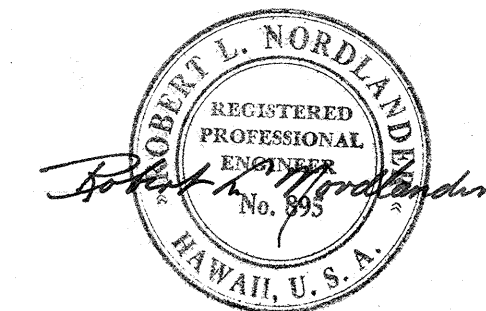
\$526.62 \$174.90 \$161.84 130

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	US-50720(3) UNIT 3	1960	65	79
		BU-072-1(2) UNIT 4	1960	95	118
		BU-065-1(1) UNIT 3	1960	91	115



ORIGINAL PLAN	DATE
DRAWN BY: E. M. M. M.	3-57
QUANTITIES CHECKED BY: D. C. C.	3-57
CHECKED BY: E. M. M. M.	3-57

M.L. St.
Sta. 11 + 25



HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII

LANDSCAPE & SPRINKLER PLAN

MOANALUA ROAD US-5-0720(3) UNIT 3
LUNALILO FREEWAY BU-072-1(2) UNIT 4
MIDDLE STREET BU-065-1(1) UNIT 3

BELT, COLLINS & ASSOC., LTD.
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
US-0720(3)	HAW.	BU-072-1(2)	1960	64	79
		BU-065-1(1)	1960	96	118
		BU-065-1(1)	1960	98	118

DETAIL 1-A

DETAIL 1-B

DETAIL 1-C

DETAIL 1-D

DETAIL 1-E

DETAIL 1-F

DETAIL 1-G

DETAIL 2-E

DETAIL 2-G

DETAIL 2-D

DETAIL 2-C

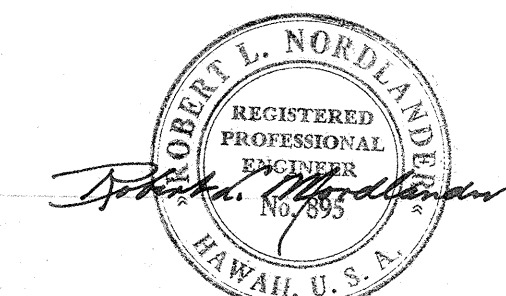
DETAIL 2-J

DETAIL 2-K

DETAIL 2-H

DETAIL 2-I

DESIGNED BY	DATE
DRAWN BY	3-57
CHECKED BY	3-57
QUANTITIES CHECKED BY	3-57
NOTE BOOK	
No.	



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HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII

LANDSCAPE & SPRINKLER PLAN

MOANALUA ROAD US-S-0720(3) UNIT 3
MIDDLE STREET BU-072-1(2) UNIT 4
LUNALILOV FREEWAY BU-065-1(1) UNIT 3

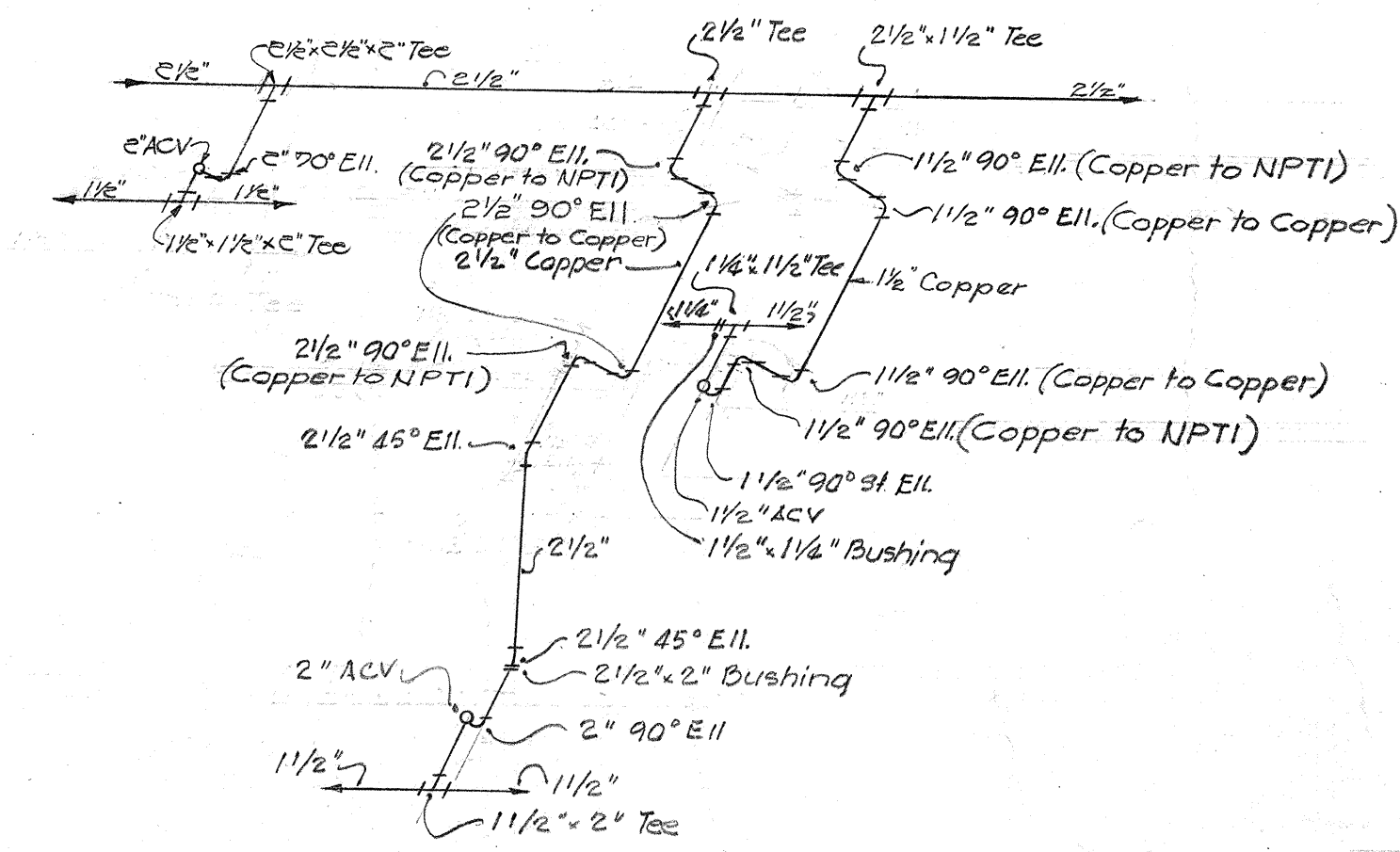
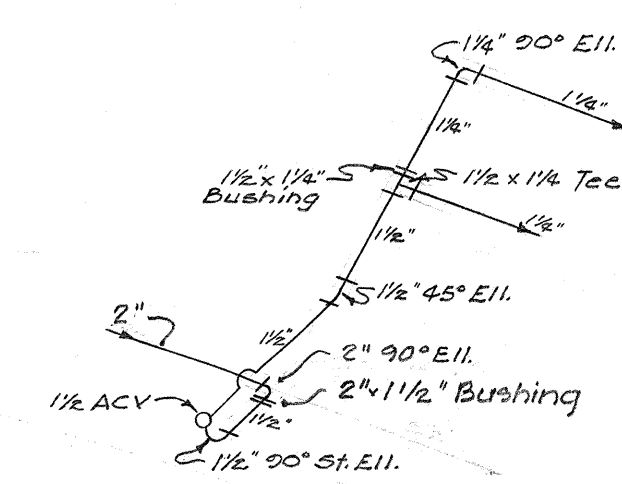
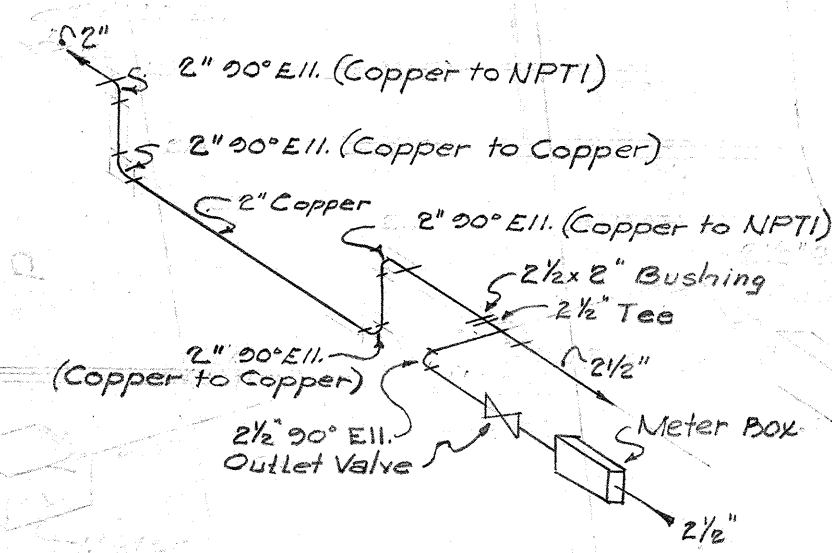
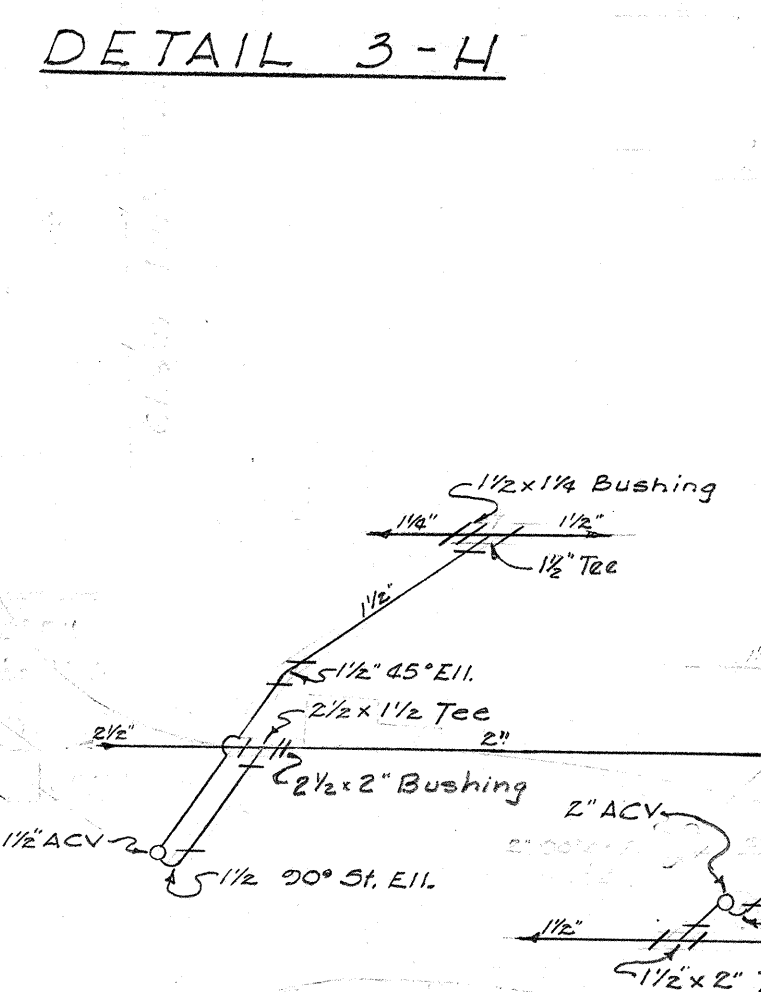
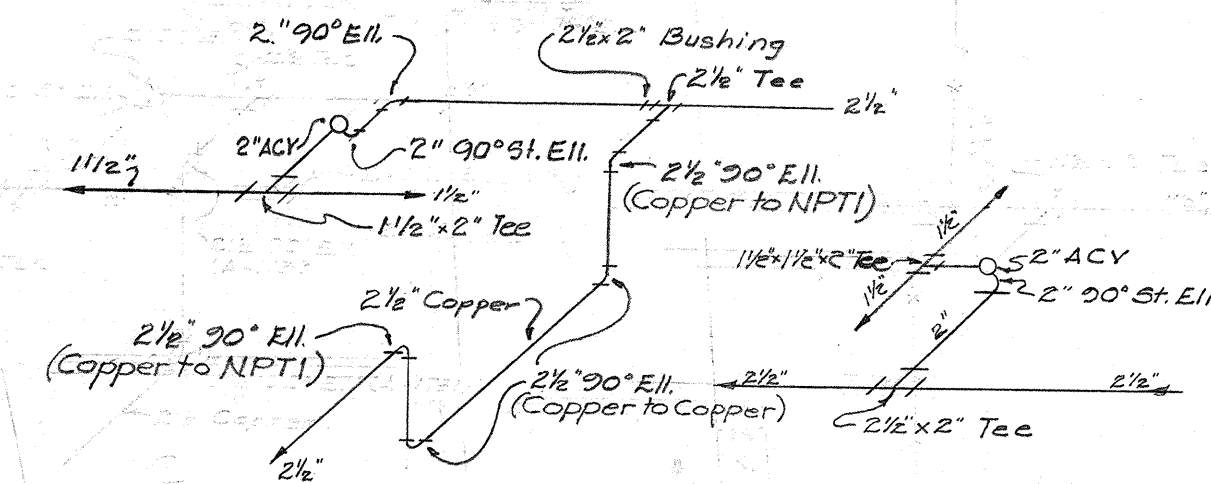
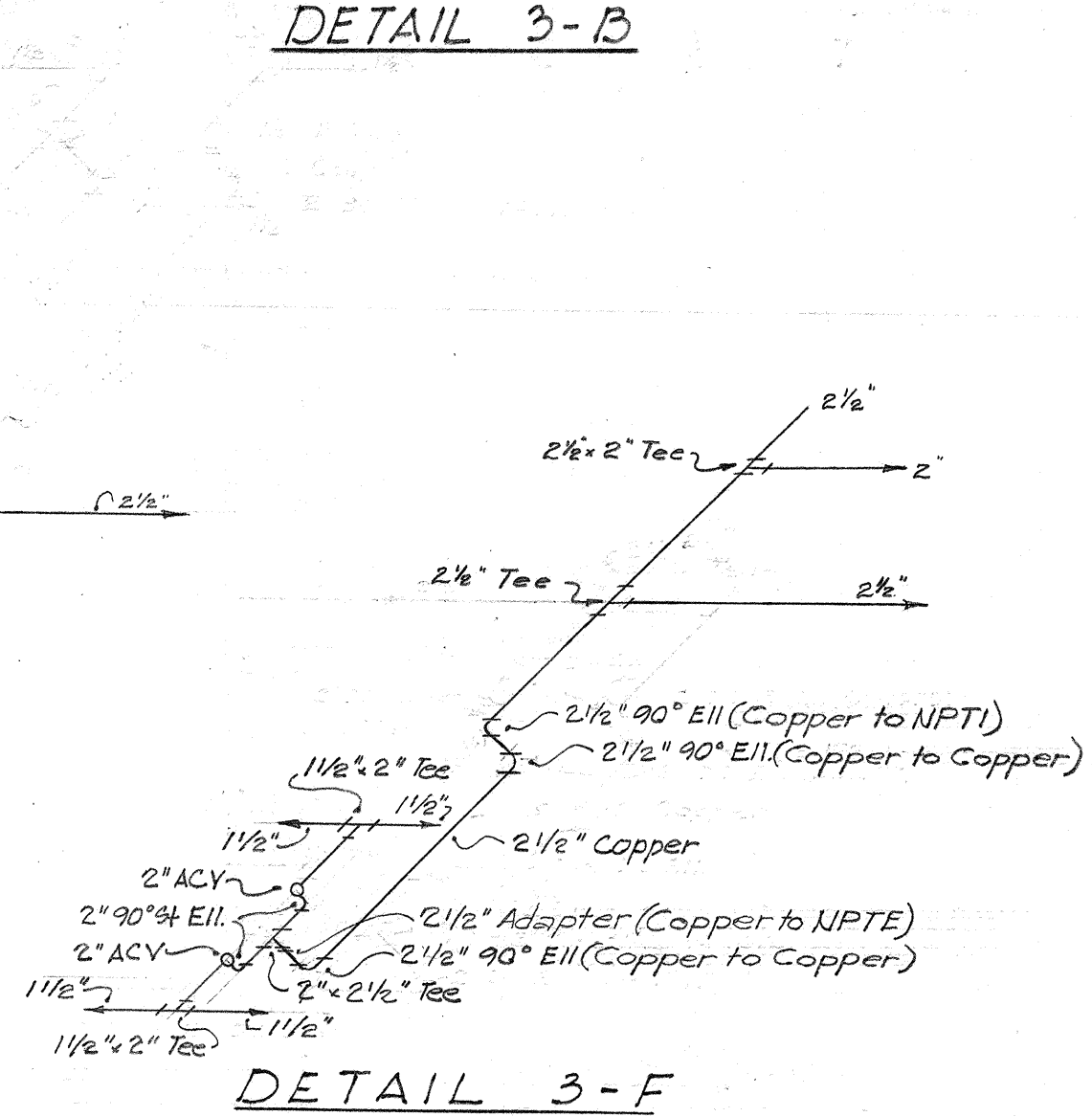
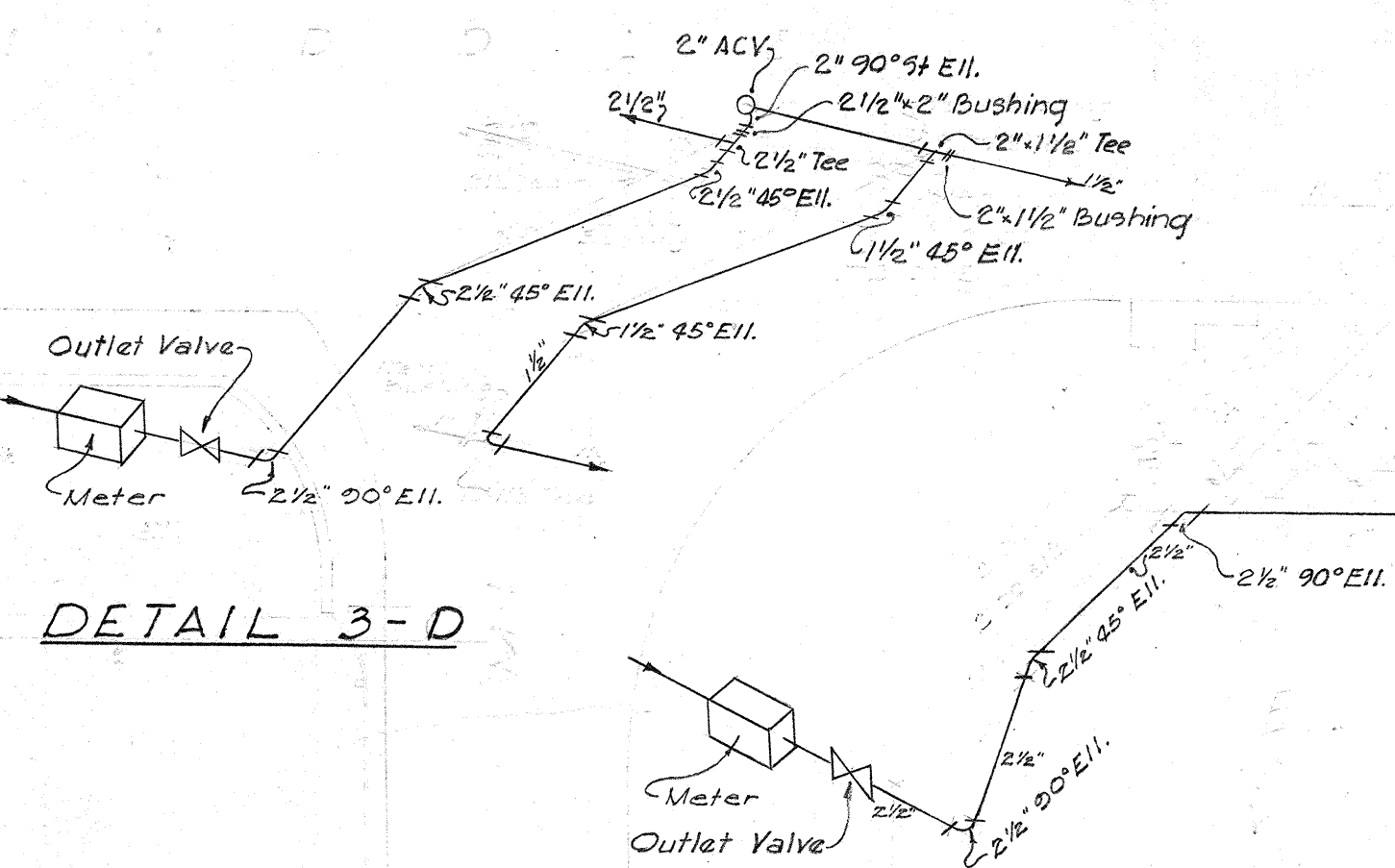
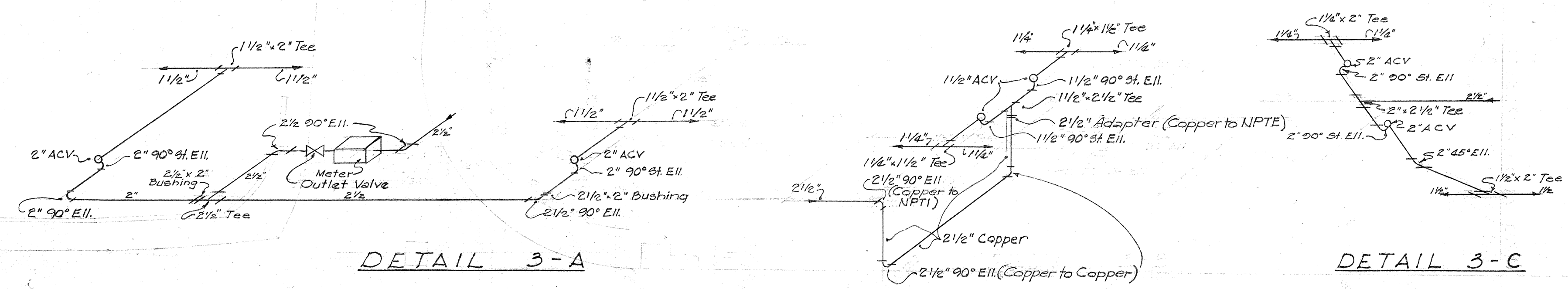
SHEET No. 11 OF 12 SHEETS

\$526.64

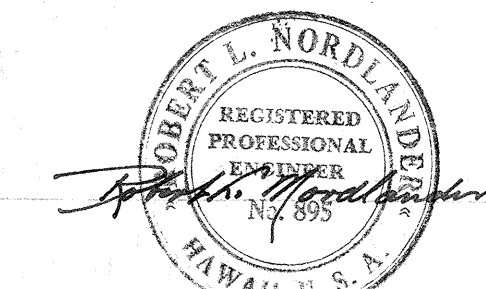
\$174.96

\$161.92

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	US-0720(3)	1960	65	79
		BU-072-1(2)	1960	97	118
		BU-065-1(1)	1960	93	115



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
QUANTITIES CHECKED BY	
NOTE BOOK	
No.	



HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII

LANDSCAPE & SPRINKLER PLAN

MOANALUA ROAD
LUNALILO FREEWAY
MIDDLE STREET

US-S-0720 (3) UNIT 3
BU-072-1 (2) UNIT 4
BU-065-1 (1) UNIT 3

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