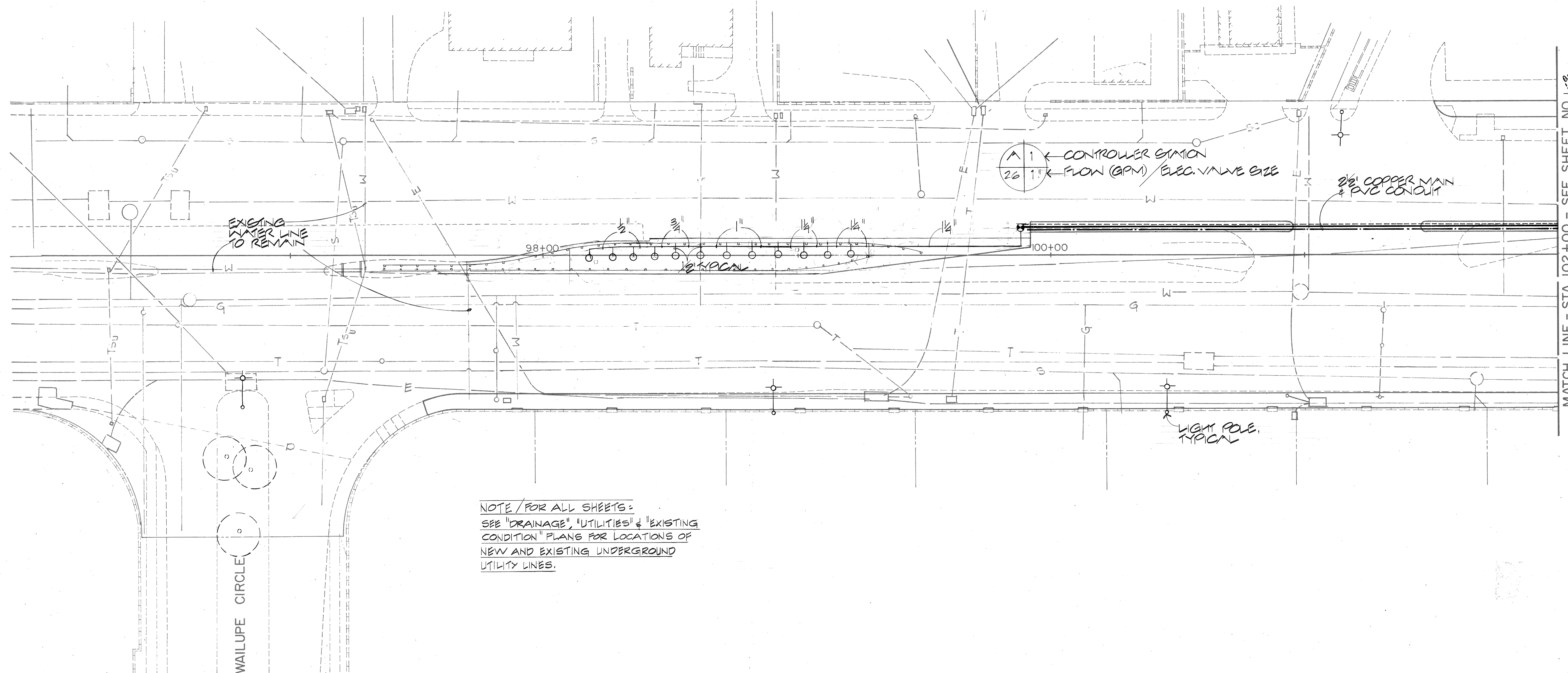
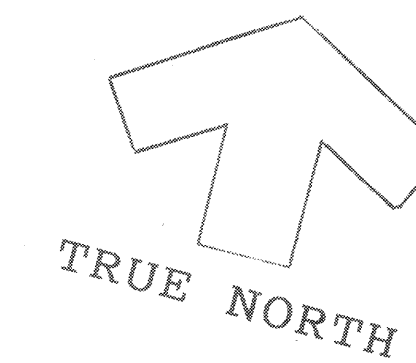


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)-A	1990	141	186



NOTE / FOR ALL SHEETS:
SEE "DRAINAGE", "UTILITIES" & "EXISTING
CONDITION" PLANS FOR LOCATIONS OF
NEW AND EXISTING UNDERGROUND
UTILITY LINES.

PARTIAL IRRIGATION SYSTEM
(STATION 96+00 TO STATION 102+00)
SCALE: 1"=20'-0"



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
Kevin K. F. Lau
Signature

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

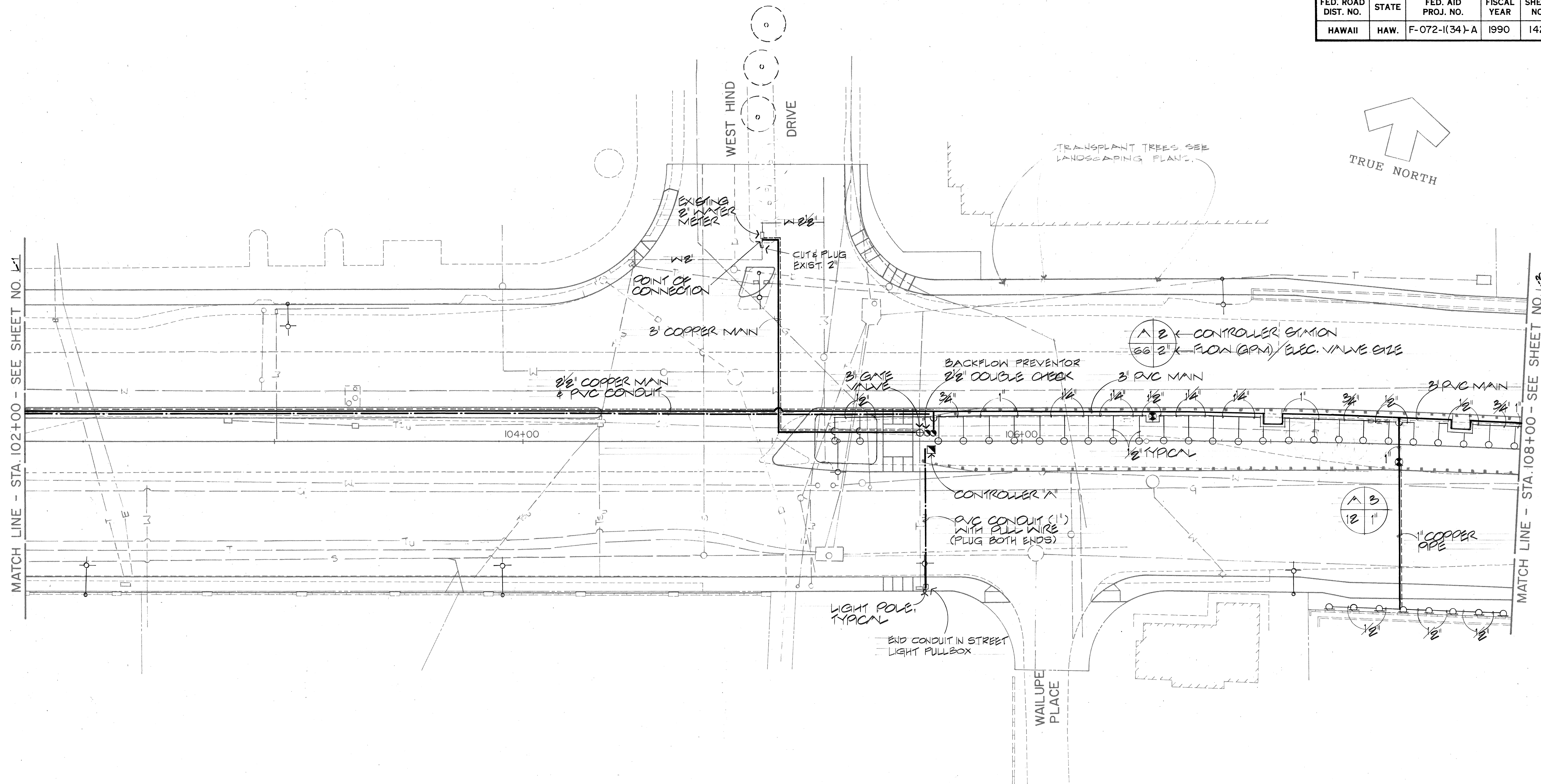
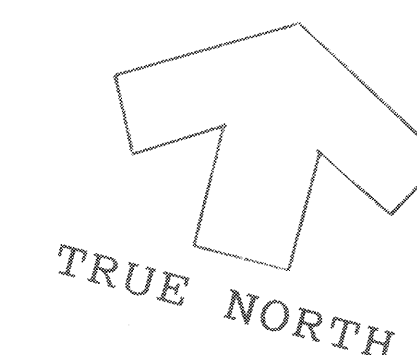
PARTIAL IRRIGATION SYSTEM
STA. 96+00 TO 102+00

KALANIANA'OLE HIGHWAY
Analii Street to East Hind Drive
FA. Project No. F-072-1(34)-A

SCALE: 1" = 20' DATE: 7/2/90
SHEET NO. 141 OF 186 SHEETS

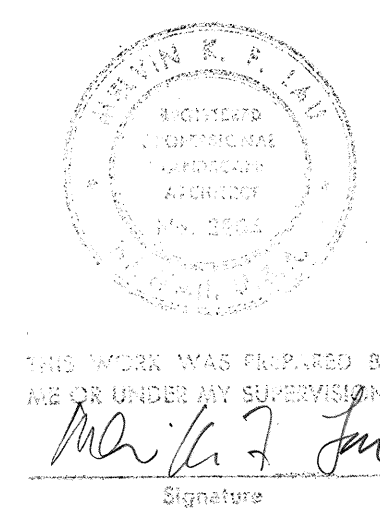
ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)-A	1990	142	186



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	

PARTIAL IRRIGATION SYSTEM
 (STATION 102+00 TO STATION 108+00)
 SCALE: 1"=20'-0"

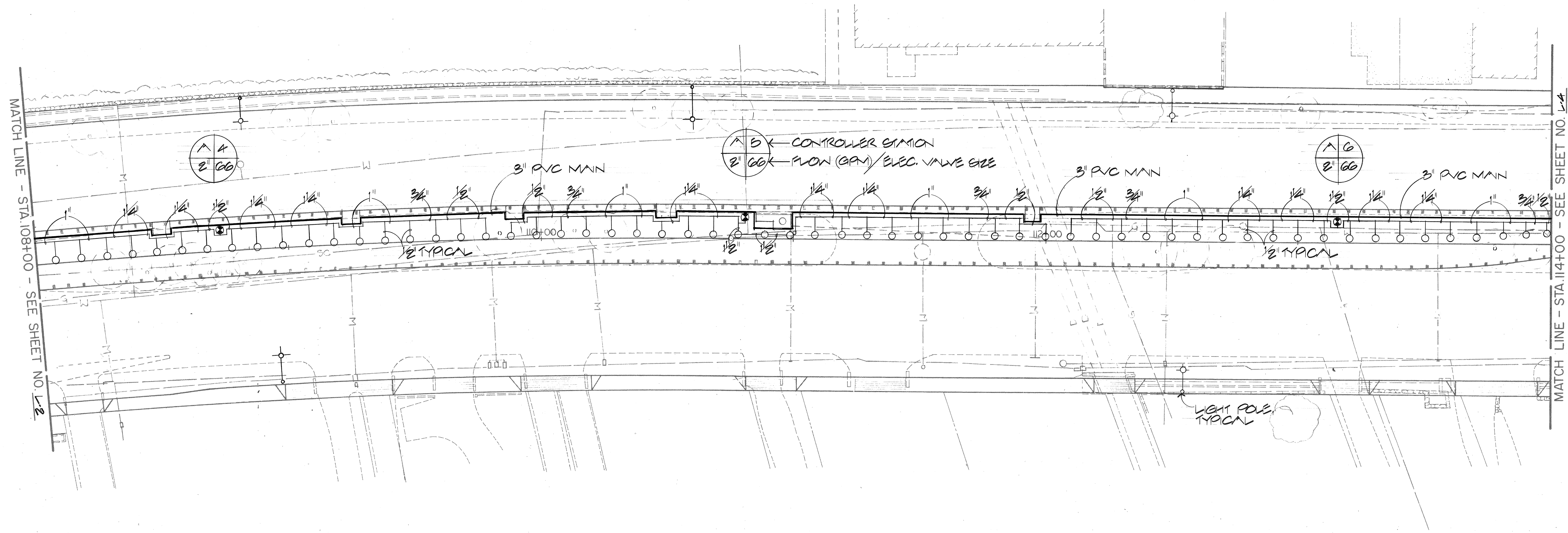
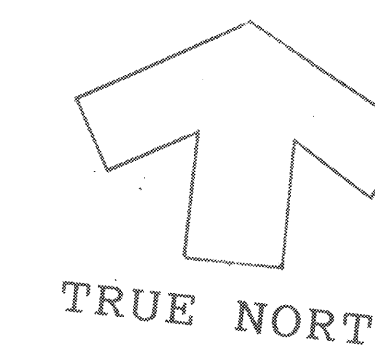


STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

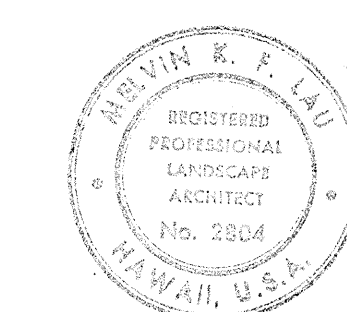
PARTIAL IRRIGATION SYSTEM
 STA. 102+00 TO 108+00
 KALANIANA'OLE HIGHWAY
 Analii Street to East Hind Drive
 F.A. Project No. F-072-1(34)-A

SCALE: 1" = 20'
 DATE: 7/2/90
 SHEET No. 142 OF 186 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)-A	1990	143	186



PARTIAL IRRIGATION SYSTEM
 (STATION 108+00 TO STATION 114+00)
 SCALE: 1"=20'-0"



THIS WORK WAS PREPARED BY
 ME OR UNDER MY SUPERVISION.
Mei K. T. Tan
 Signature

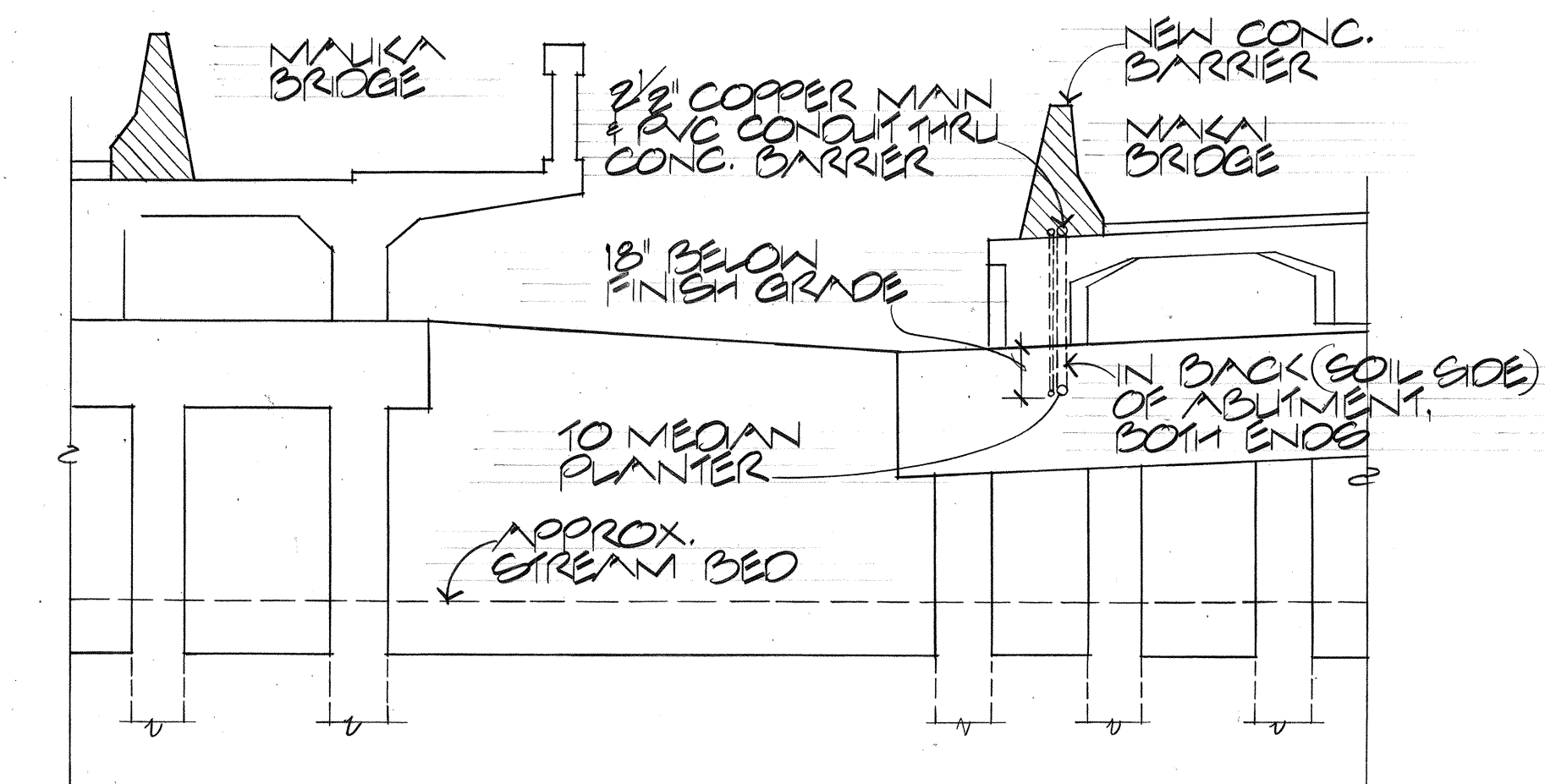
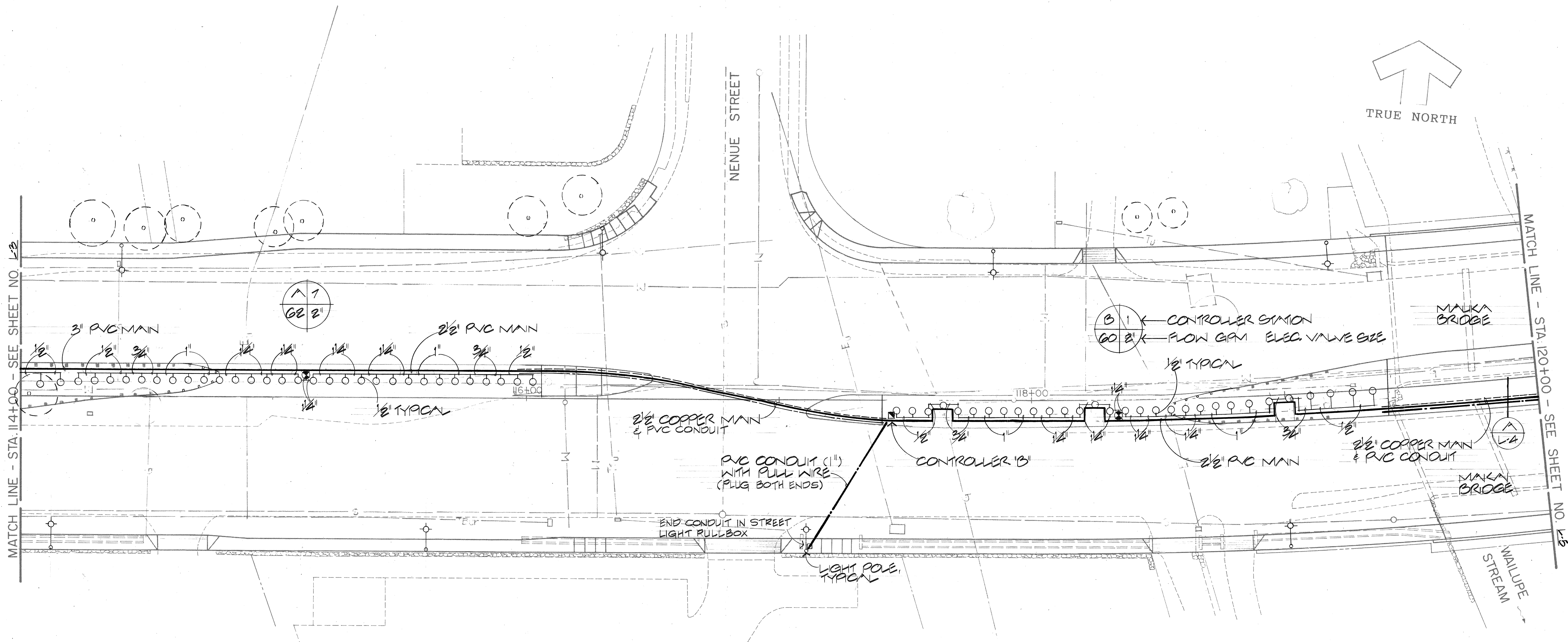
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PARTIAL IRRIGATION SYSTEM
 STA. 108+00 TO 114+00
 KALANIANA'OLE HIGHWAY
 Anali Street to East Hind Drive
 F.A. Project No. F-072-1(34)-A

SCALE: 1"=20' DATE: 7/2/90
 SHEET NO. 143 OF 15 SHEETS

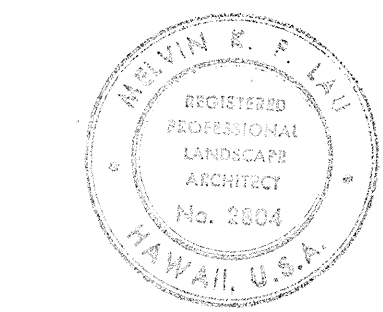
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
NOTED BY	
CHECKED BY	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)-A	1990	144	186



COPPER MAIN & PVC CONDUIT DETAIL
 NO SCALE

PARTIAL IRRIGATION SYSTEM
 (STATION 114+00 TO STATION 120+00)
 SCALE: 1"=20'-0"



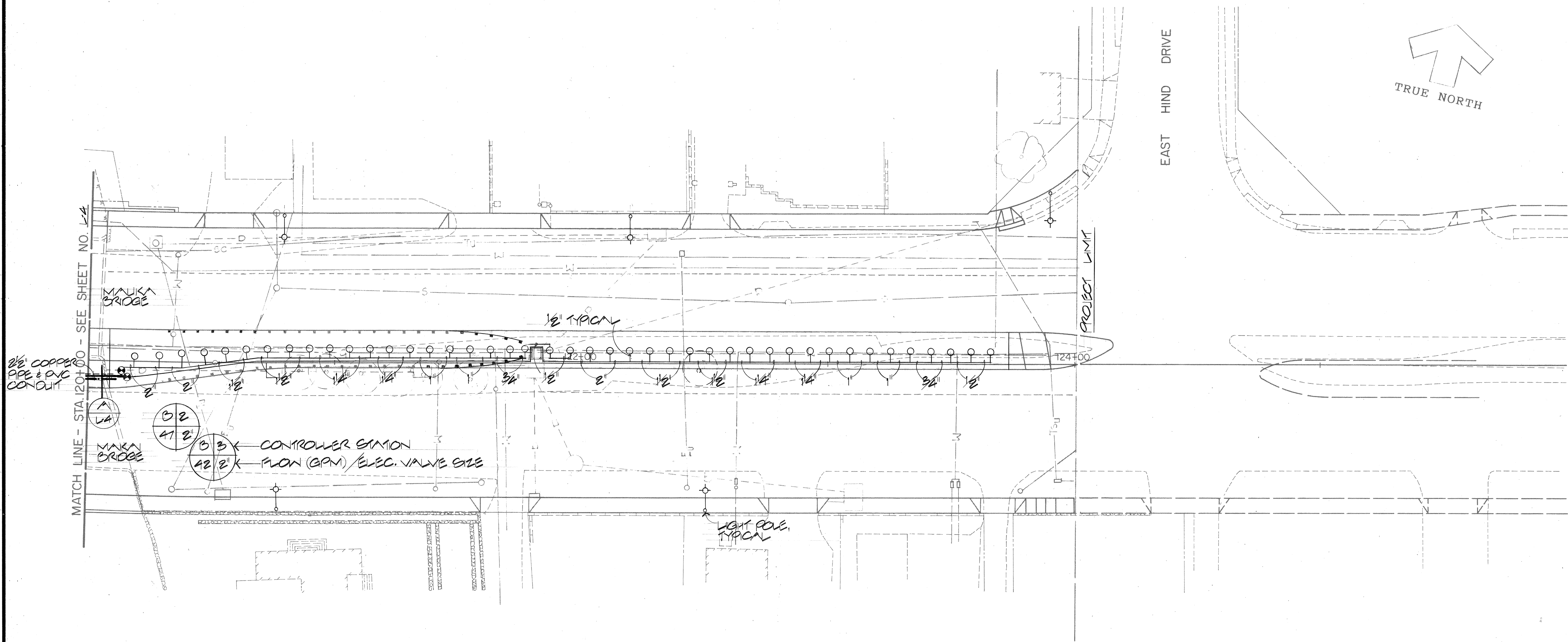
THIS WORK WAS PREPARED BY
 ME OR UNDER MY SUPERVISION.
Kevin E. F. Liu
 Signature

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PARTIAL IRRIGATION SYSTEM
 STA. 114+00 TO 120+00
 KALANIANA'OLE HIGHWAY
 Anahulu Street to East Hind Drive
 F.A. Project No. F-072-1(34)-A
 SCALE: 1" = 20' DATE: 7/2/90
 SHEET No. 144 OF 15 SHEETS

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)-A	1990	145	186



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

PARTIAL IRRIGATION SYSTEM
 (STATION 120+00 TO STATION 124+00)
 SCALE: 1"=20'-0"



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 ME OR UNDER MY SUPERVISION.
Melvin K. F. Lau
 Signature

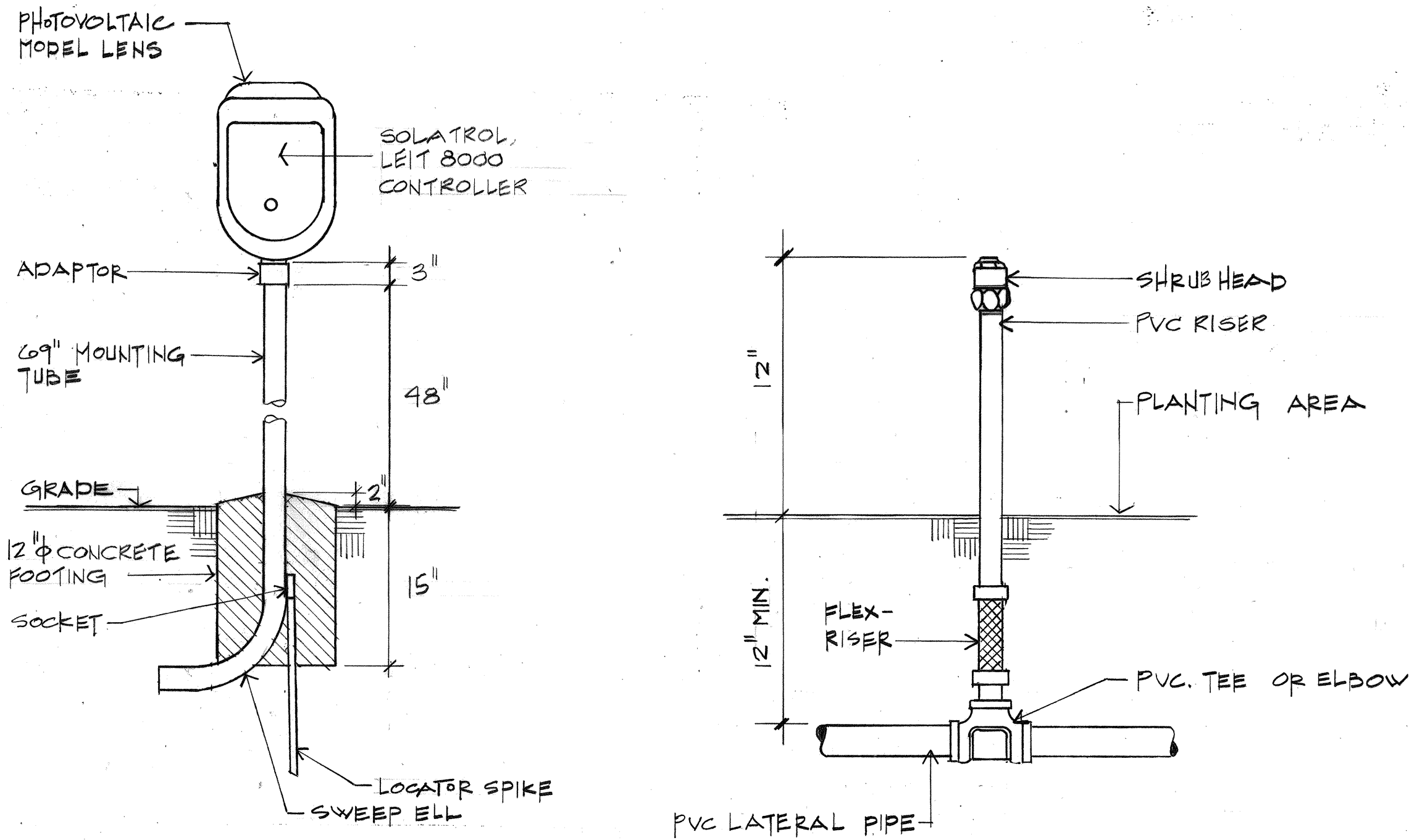
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

PARTIAL IRRIGATION SYSTEM
 STA. 120+00 TO 126+00
 KALANIANA'OLE HIGHWAY
 Anali'i Street to East Hind Drive
 F.A. Project No. F-072-1(34)-A

SCALE: 1"=20'
 DATE: 7/2/90

SHEET No. 145 OF 186 SHEETS

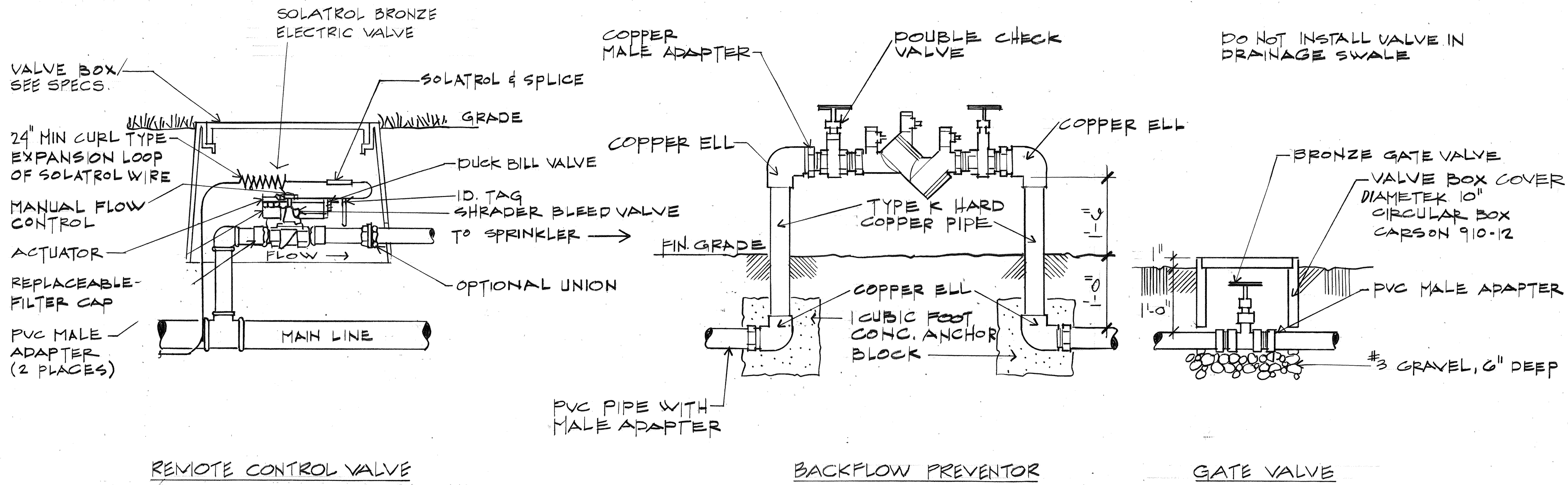
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)-A	1990	146	186



AUTOMATIC CONTROLLER

SHRUB HEAD

IRRIGATION DETAILS
NO SCALE

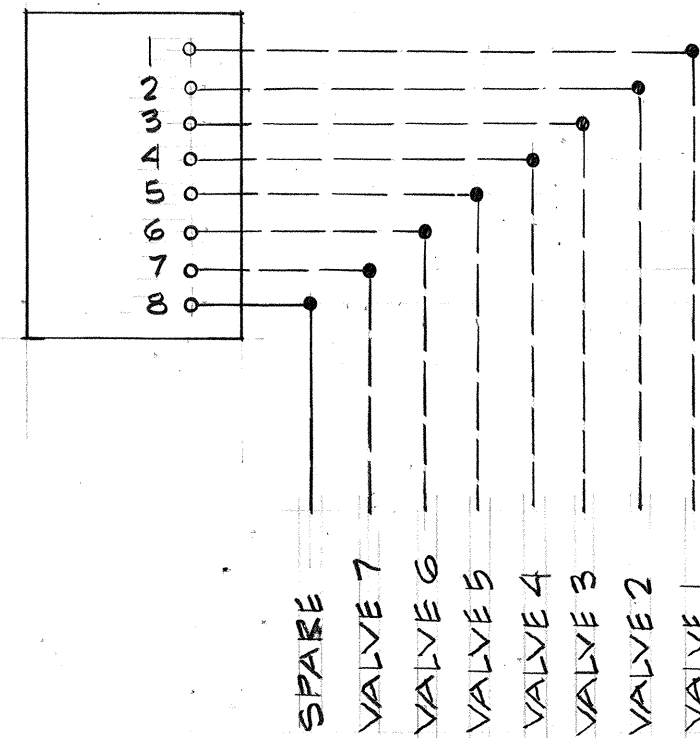


REMOTE CONTROL VALVE

BACKFLOW PREVENTOR

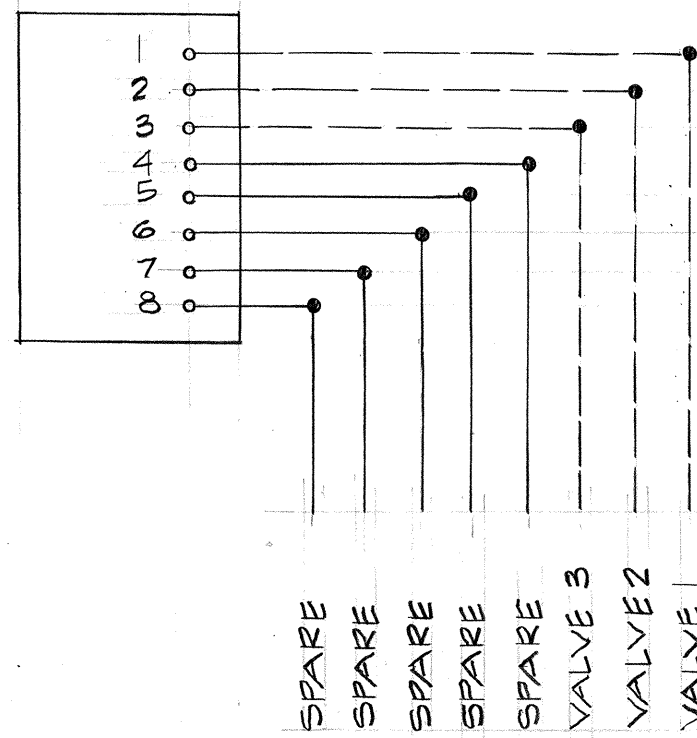
GATE VALVE

CONTROLLER "A"
STA. 105+65



CONTROLLER WIRING DIAGRAM

CONTROLLER "B"
STA. 117+45



ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	



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ME OR UNDER MY SUPERVISION.
Marvin R. F. Lau
Signature

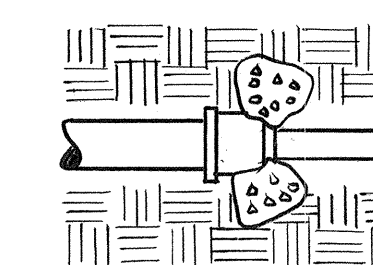
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IRRIGATION DETAILS

KALANIANOLE HIGHWAY
WAILUPE CIRCLE TO EAST HIND DRIVE
F.A. PROJECT NO. F-072(34)-A

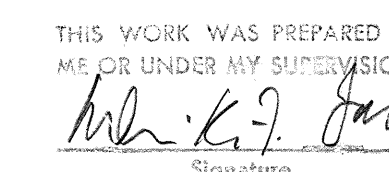
SCALE AS SHOWN DATE: 7/2/90

SHEET No. 146 OF 15 SHEETS

[illegible]

PIPE SIZE	1 1/4"	1 1/2"	2"	2 1/2"	3"
TEES & CROSSES	0.50	0.50	0.50	0.50	1.00
90° BEND	0.50	0.50	0.50	0.75	1.25
45° BEND	0.50	0.50	0.50	0.50	0.75

1. FINAL LOCATIONS OF VALVES, CONTROLLERS & SUPPLY LINES SHALL BE DETERMINED BY THE ENGINEER.
2. CONCRETE REACTION BLOCKS SHALL BE CLASS "B" CONCRETE
3. MINIMUM LINE SIZE BETWEEN SPRINKLER HEADS SHALL BE AS SHOWN ON THE PLANS.
4. NO ROCKS OR SHARP OBJECTS ONE INCH OR LARGER SHALL BE USED IN BACKFILL MATERIAL FOR TRENCHES
5. CONTRACTOR SHALL ADJUST ALL SPRINKLER HEADS FOR PROPER COVERAGE IF ADJUSTMENTS ARE MADE, NOTIFY ENGINEER OF SUCH ACTION.
6. LINE SIZE UP TO & INCLUDING 3" SHALL BE PVC PIPE, EXCEPT PIPE UNDER PAVED AREAS SHALL BE COPPER
7. ALL LINES UNDER ROADWAY, SIDEWALKS & OTHER PAVED AREAS SHALL BE INSTALLED PRIOR TO ANY PAVING WORK.
8. ALL WIRES LOCATED UNDER ANY PAVING SHALL BE INSTALLED IN PVC SCH. 40 CONDUITS. SIZE OF CONDUITS SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. CONTRACTOR SHALL ALSO SUBMIT "AS-BUILT" ELECTRICAL DRAWINGS.
9. CONTRACTOR SHALL FURNISH & INSTALL "METALIC SOUNDING TAPE" IN TRENCHES OF ALL MAIN LINES PER MANUFACTURERS INSTRUCTIONS.



SHEET No. 7 OF 5 SHEETS

SPRINKLER SUMMARY
ESTIMATED QUANTITIES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)-A	1990	148	186

SYSTEM NO.	ITEM NO.	IRRIGATION SYSTEM WILL BE PAID BY LUMP SUM UNDER \$16,010.00																																REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	VALVE LOCATION	1" COPPER PIPE	2 1/2" COPPER PIPE	3" COPPER PIPE	1/2" PVC PIPE	3/4" PVC PIPE	1" PVC PIPE	1 1/4" PVC PIPE	1 1/2" PVC PIPE	2" PVC PIPE	2 1/2" PVC PIPE	3" PVC PIPE	5-1/2" (H & F) SPRINKLER HEAD	1" REMOTE CONTROL VALVE W/ VALVE BOX	2" REMOTE CONTROL VALVE W/ VALVE BOX	3" GATE VALVE W/ VALVE BOX	2 1/2" DOUBLE CHECK VALVE BACKFLOW PREVENTOR	AUTOMATIC CONTROLLER (8 STATIONS)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

* SUBMIT SPARE EQUIPMENT TO THE ENGINEER (VALVE BOXES NOT REQUIRED).

ORIGINAL PLAN	DATE
NOTED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	



THIS WORK WAS PREPARED BY ME UNDER MY SUPERVISION.
M. E. F. Lau
Signature

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

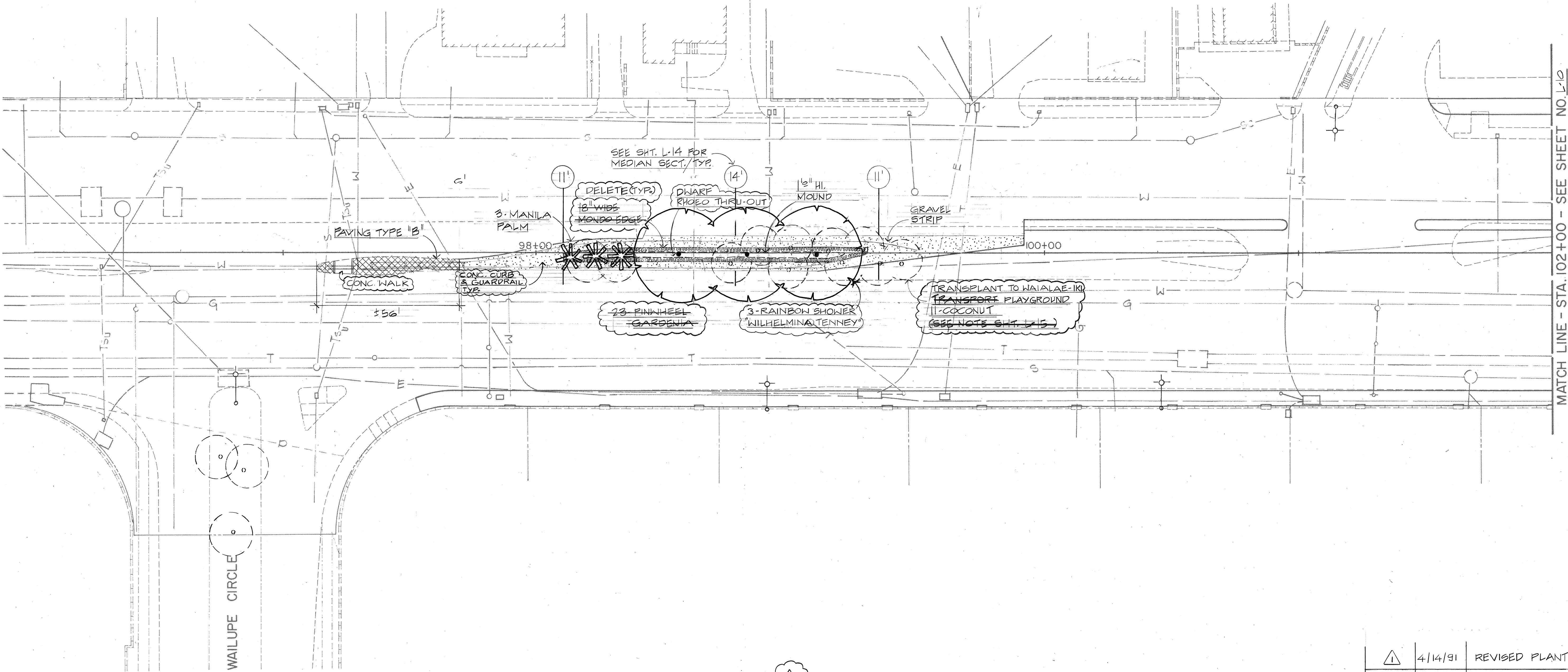
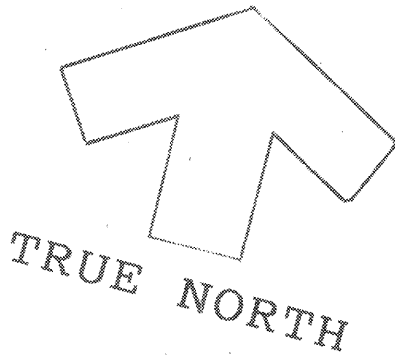
SPRINKLER SUMMARY

KALANIANA'OLE HIGHWAY
WAILUPE CIRCLE TO EAST HIND DRIVE
F.A. PROJECT NO. F-072-1(34)-A

NO SCALE DATE: 7/2/90

SHEET NO. 148 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)-A	1990	149	186




 PARTIAL PLANTING PLAN
 SCALE: 1" = 20'

SYMBOL	DATE	REVISION
	4/14/91	REVISED PLANTING

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

PARTIAL PLANTING PLAN

STA. 96+00 TO 102+00

KALANIANA'OLE HIGHWAY

Ana'ii Street to East Hind Drive

FA. Project No. F-072-1(34)-A

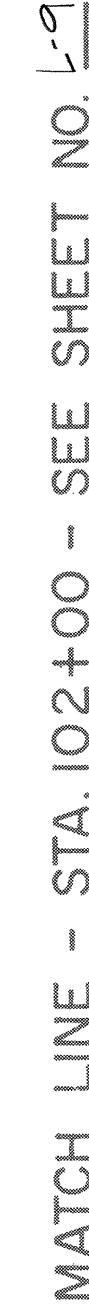
SCALE: 1" = 20'

DATE: 7/2/90

SHEET No. 149 OF 186 SHEETS

CO. 149

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



WRIGHT LINE - S/A. 108+00 - SEE SHEET NO. L-11

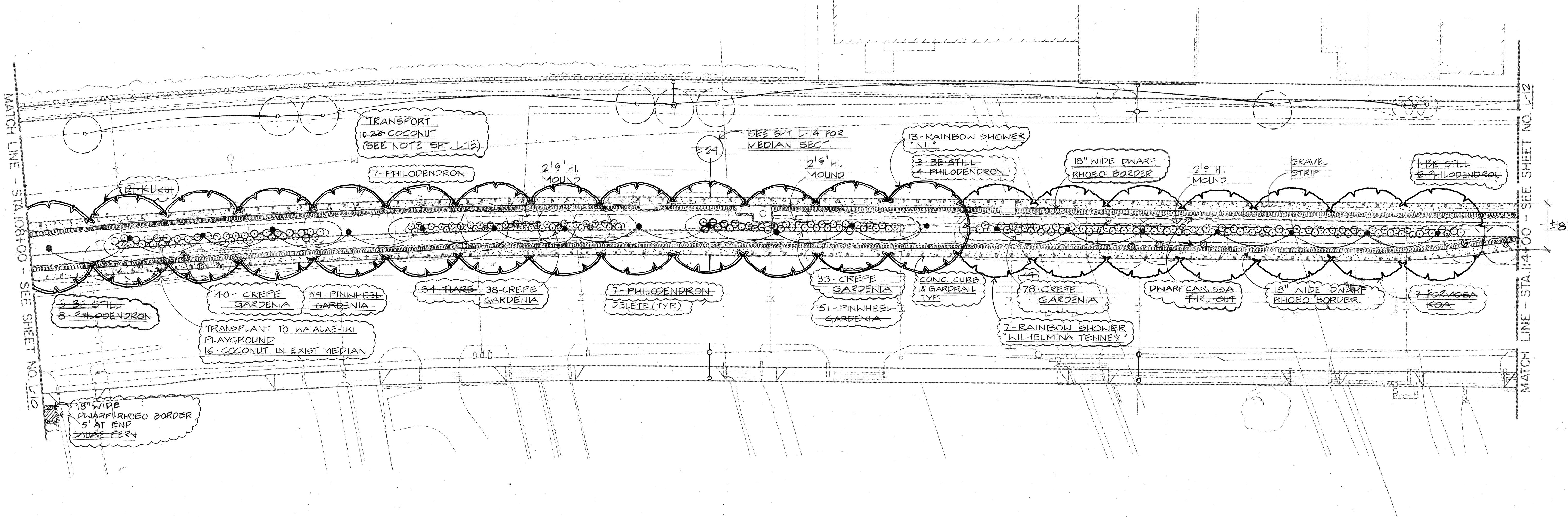
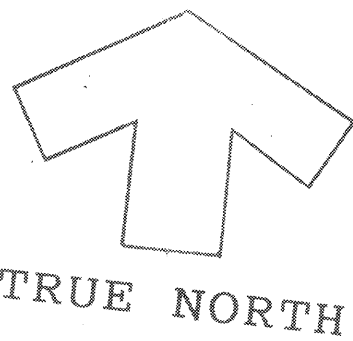


THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
W. K. F. Jan
Signature

SCALE: 1" = 20' DATE: 7/2/90
SHEET No. 10 OF 15 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTE BOOK	DRAWN BY _____	_____
	TRACED BY _____	_____
	DESIGNED BY _____	_____
	QUANTITIES BY _____	_____
NO. _____	CHECKED BY _____	_____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)-A	1990	151	186



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


PARTIAL PLANTING PLAN
 SCALE: 1" = 20'

△	4/14/91	REVISED PLANTING.
SYMBOL	DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

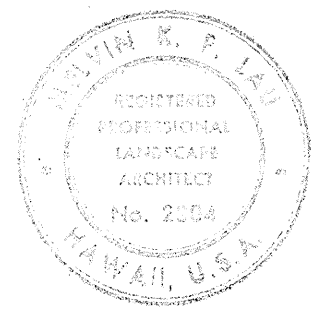
PARTIAL PLANTING PLAN

STA. 108+00 TO 114+00

KALANIANA'OLE HIGHWAY
Anoii Street to East Hind Drive
F.A. Project No. F-072-1(34)-A

SCALE: 1" = 20' DATE: 7/2/90

SHEET No. 151 OF 15 SHEETS

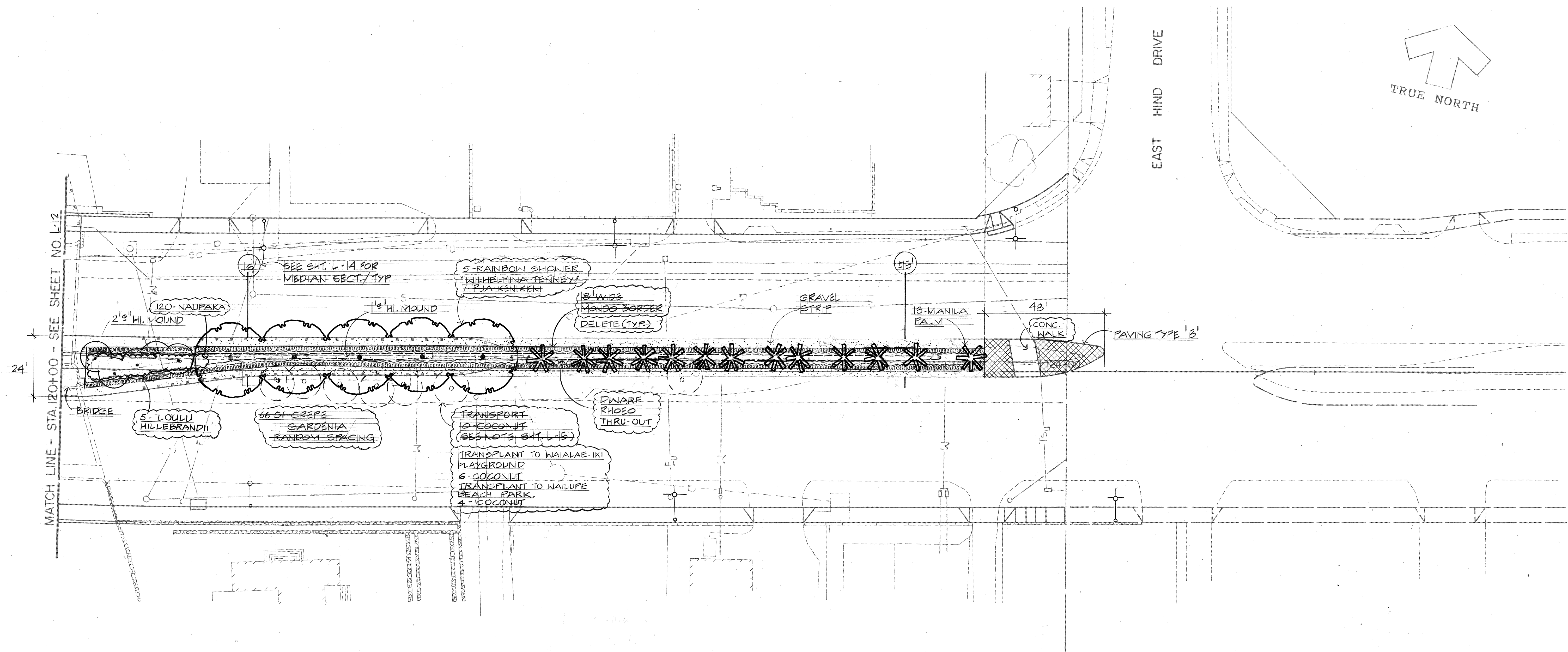


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

K. K. K.

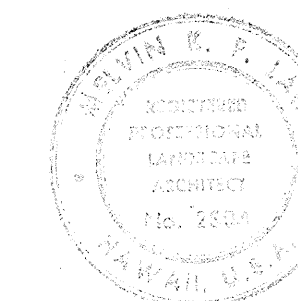
Signature

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-1(34)-A	1990	153	186



△
PARTIAL PLANTING PLAN
SCALE: 1" = 20'

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
W. K. J. Fan
Signature

△	4/14/91	REVISED PLANTING.
SYMBOL	DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PARTIAL PLANTING PLAN

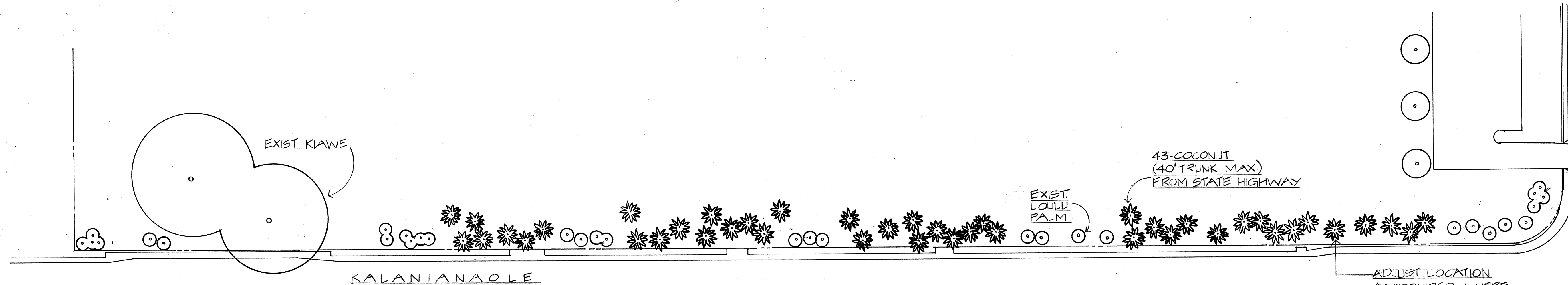
STA. 120+00 TO 126+00

KALANIANA'OLE HIGHWAY
Anali Street to East Hind Drive
FA Project No. F-072-1(34)-A

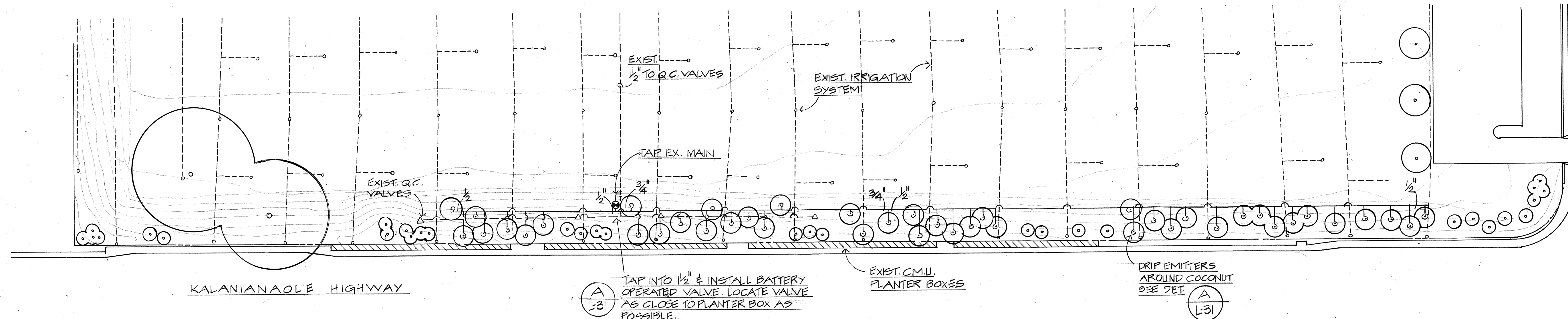
SCALE: 1"=20' DATE: 7/2/90

SHEET No. 113 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-(34)-A	1991		

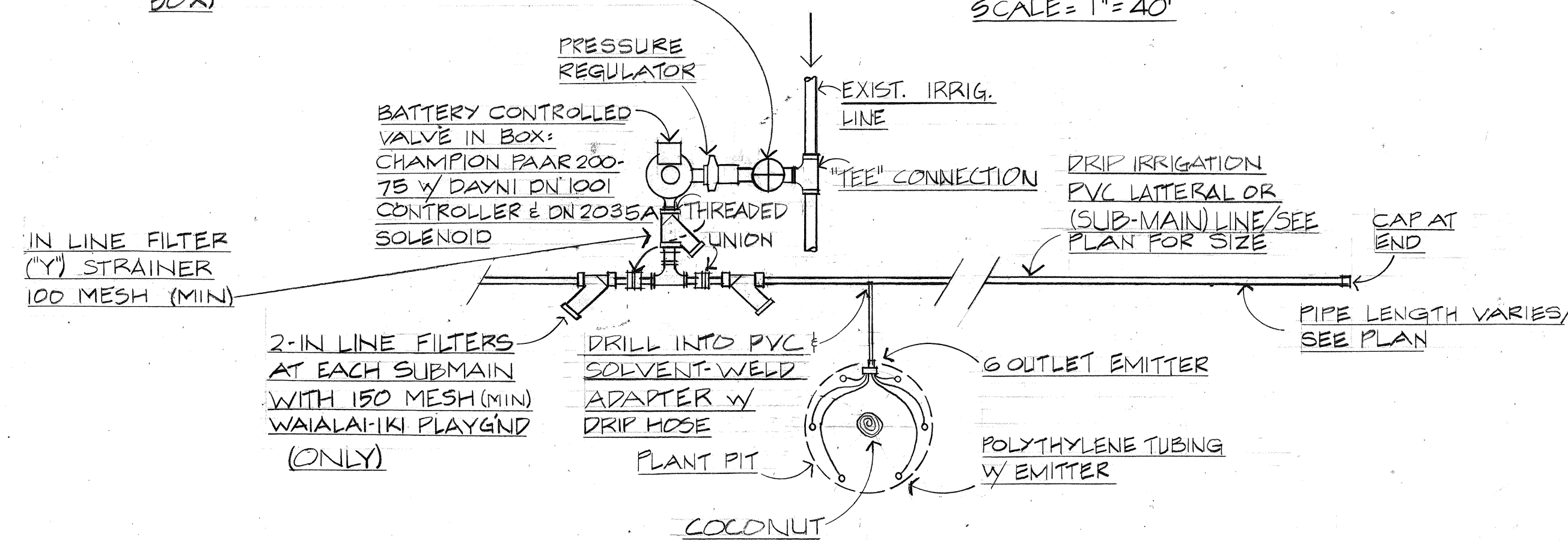


WAIALAE-IKI PLAYGROUND / PLANTING PLAN
SCALE = 1"=40'

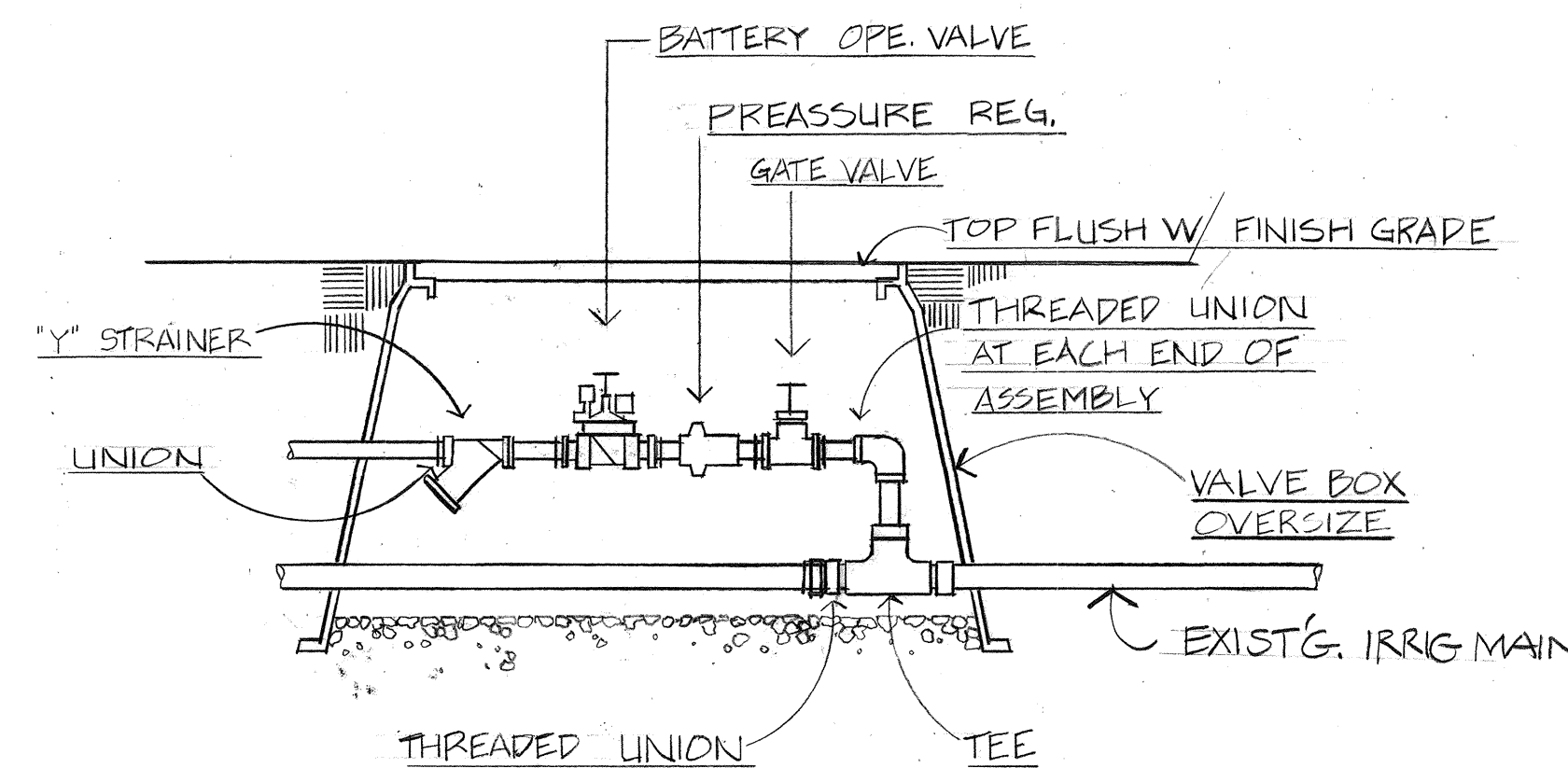


INSTALL GATE VALVE BETWEEN MAIN (EXIST'G) AND DRIP SYSTEM IN TYPE 'A' BOX (OR ALL IN ONE LARGE BOX)

WAIALAE-IKI PLAYGROUND / DRIP IRRIGATION PLAN
SCALE = 1"=40'



DRIP IRRIGATION-TYPICAL LAYOUT
NO SCALE



DETAIL VALVE (SECTION)
NO SCALE

KALANIANA'OLE HIGHWAY WIDENING.
PROPOSED COCONUT RELOCATION PLAN
(FROM STATE HIGHWAY TO C & C, DEPT. OF PARKS & REC.)
MAR. 13, 1991



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WAIALAE-IKI PLAYGROUND
PLANTING & IRRIGATION PLAN

KALANIANA'OLE HIGHWAY

F.A. PROJECT NO. F-072-1(34)-A

SCALE AS SHOWN DATE - 4/23/91

SHEET No. 131 OF SHEETS

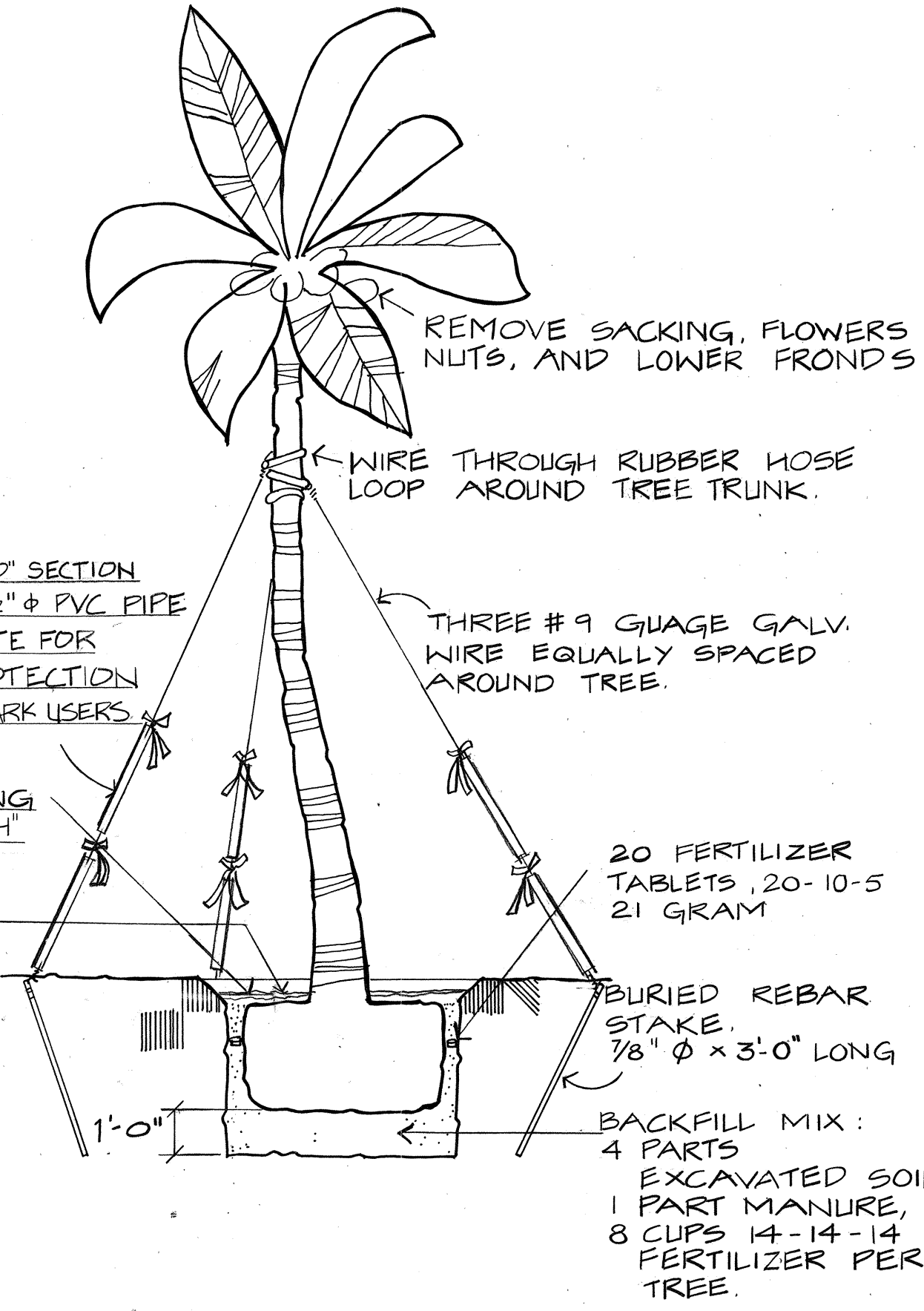
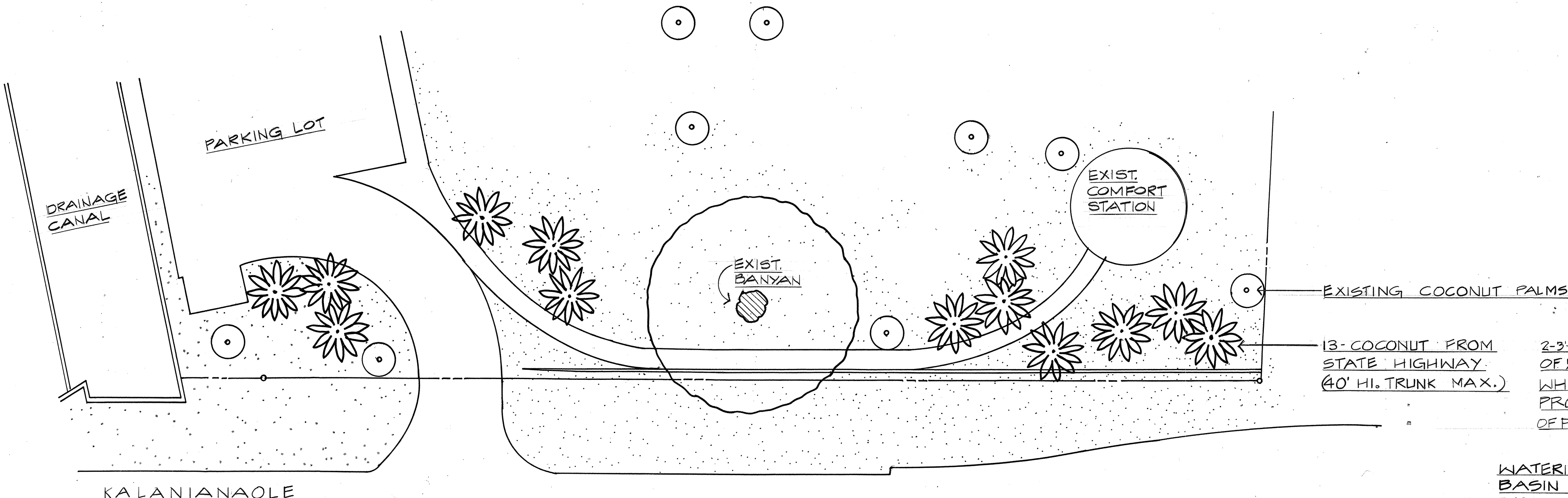
APPROVED BY: SHTS. L-31 & L-32

For Steven A. Lau 6-27-91
DIRECTOR DATE
DEPT. OF PARKS & RECREATION

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
Melvin K. F. Lau

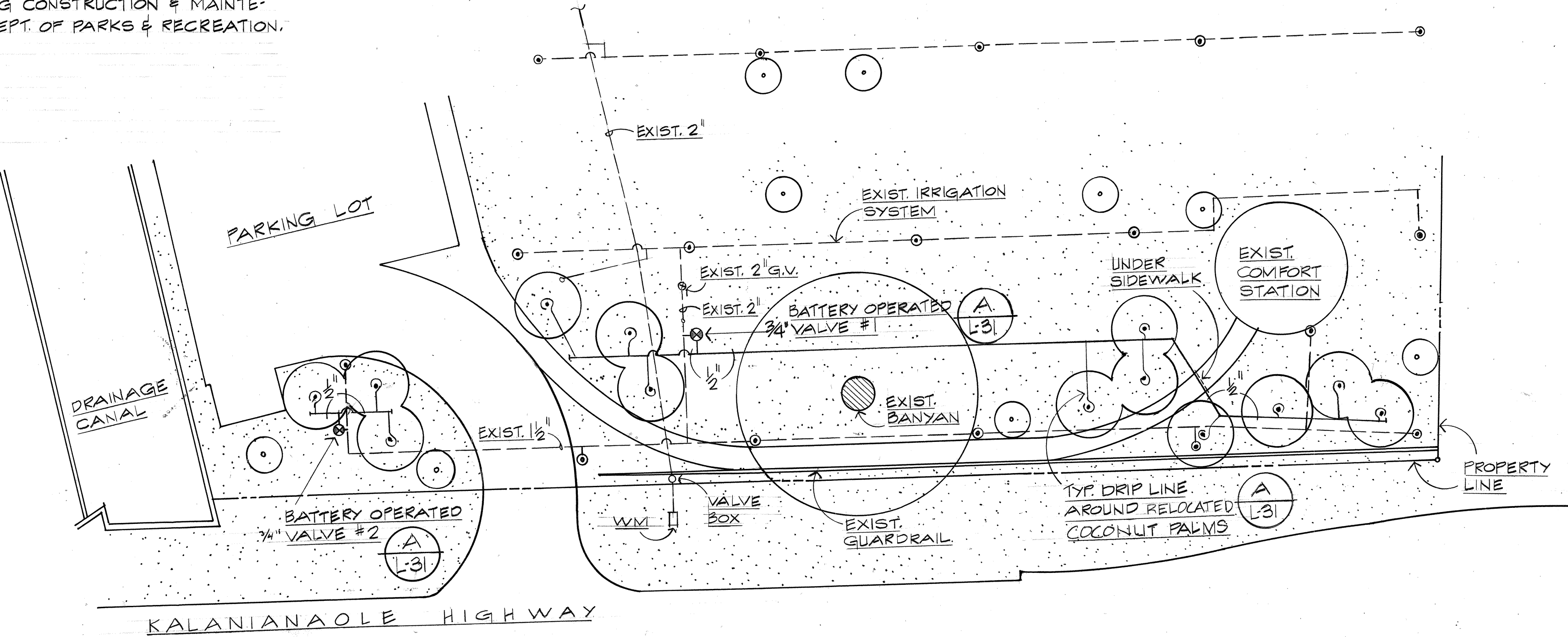
C.O. 153 S-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-072-(34)-A	1991		



- NOTE: WAILALAE IKI PLAYGROUND & WAILUPE B.P.
1. PRIOR TO EXCAVATING PLANT PITS, STAKE-OUT LOCATIONS OF ALL COCONUTS FOR APPROVAL.
 2. VERIFY LOCATIONS OF EXIST. IRRIGATION & WATER LINES & MAINTAIN 10' MIN. PLANTING CLEARANCE.
 3. MAINTAIN COCONUTS FOR 90 DAYS MIN. AFTER TRANSPLANTING IS COMPLETED IN EACH AREA.
 4. REMOVE ALL THAT DO NOT SURVIVE DURING 90 DAY PERIOD.
 5. REPAIR ALL DAMAGES CAUSED DURING CONSTRUCTION & MAINTENANCE PERIOD TO SATISFACTION OF DEPT. OF PARKS & RECREATION.

WAILUPE BEACH PARK / PLANTING PLAN
SCALE = 1" = 20'



WAILUPE BEACH PARK / IRRIGATION PLAN
SCALE = 1" = 20'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WAILUPE BEACH PARK
PLANTING & IRRIGATION PLAN

KALANIANA'OLE HIGHWAY

F.A. PROJECT NO. F-072-(34)-A
SCALE AS SHOWN DATE = 4/23/91

SHEET No. 1-32 OF SHEETS

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

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

