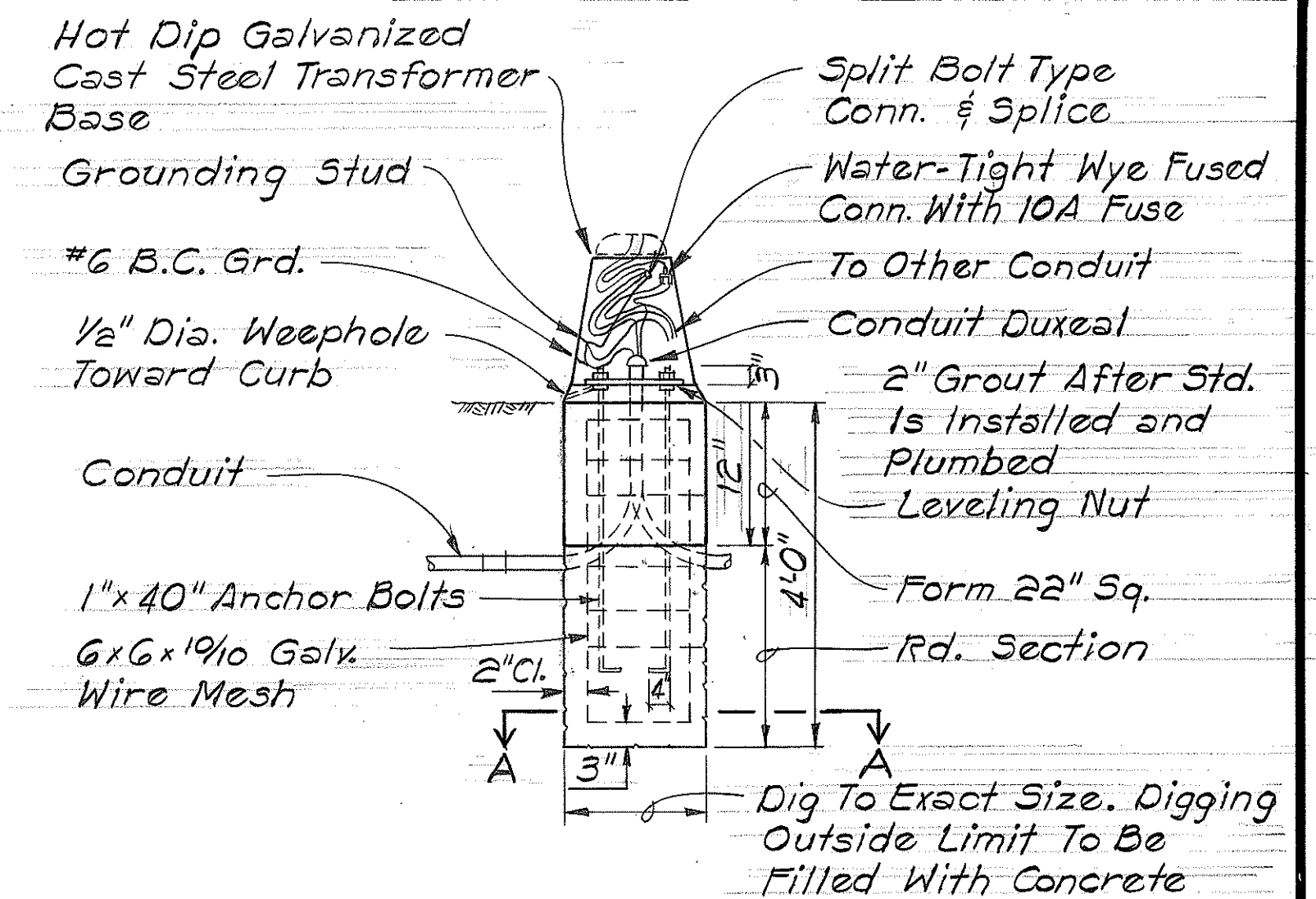
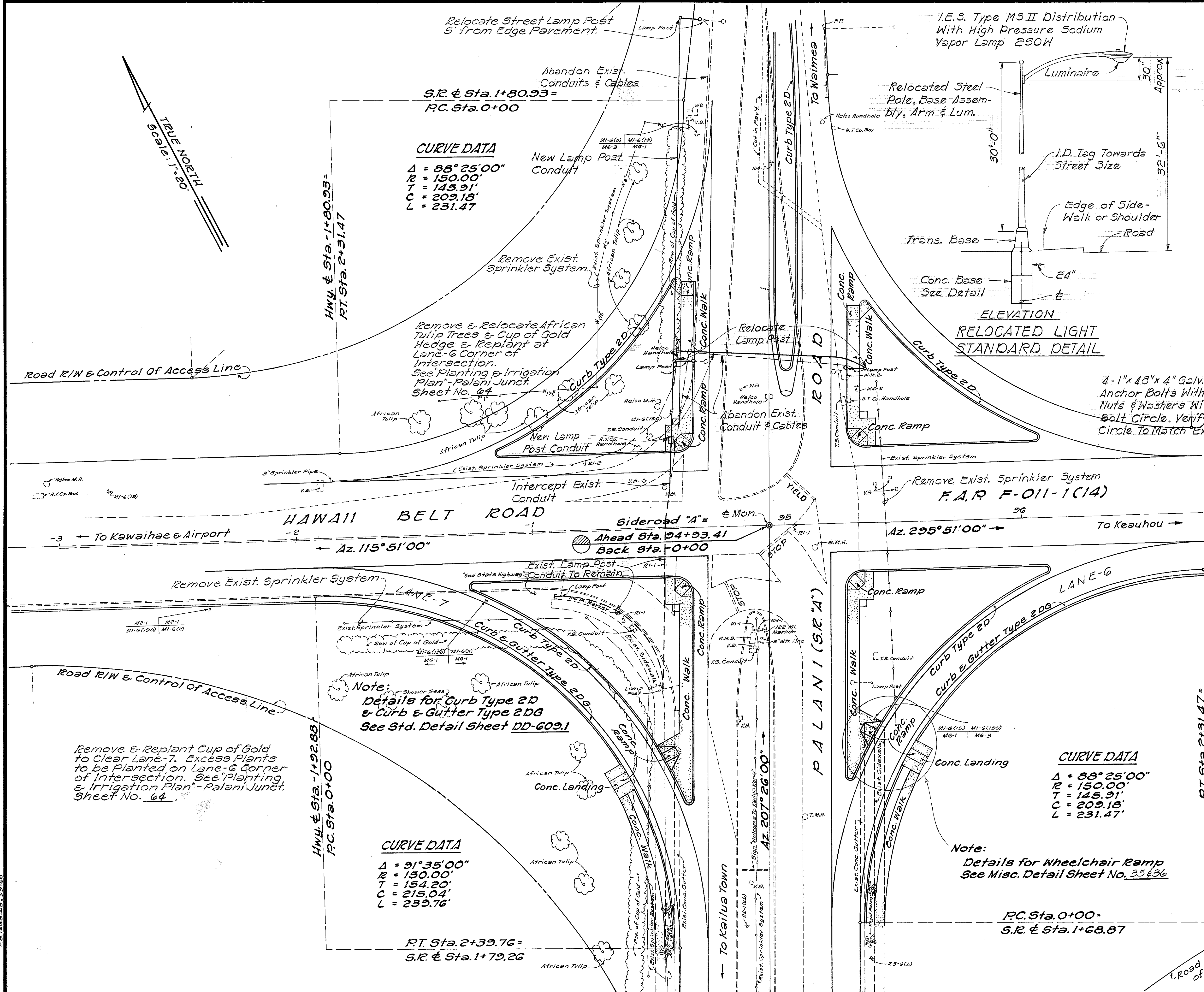
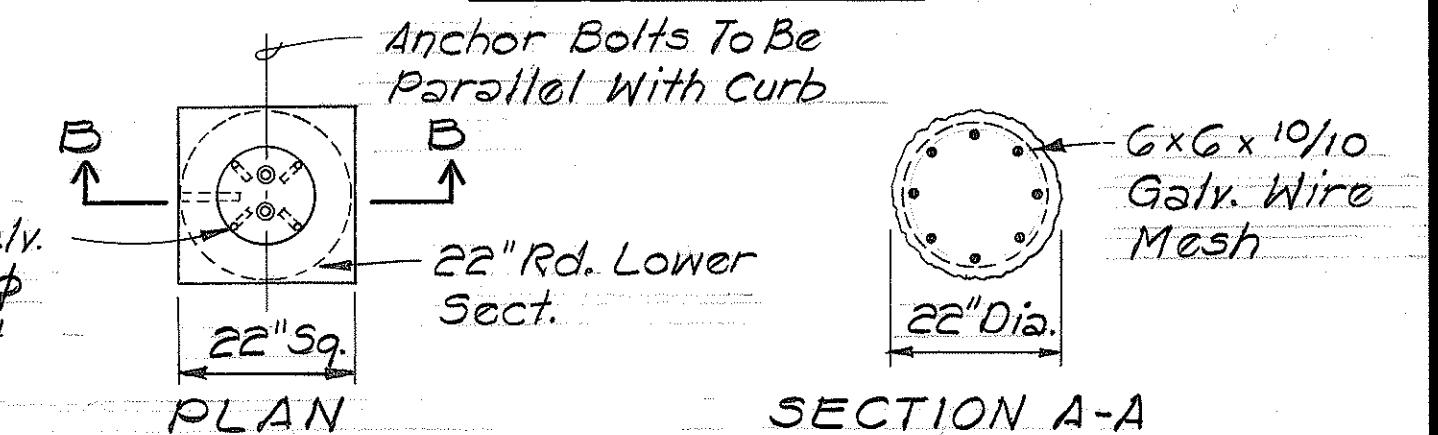


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-1(14)	1982	63	214



SECTION B-B



CONC. BASE DETAIL

HIGHWAY LIGHTING RELOCATION DETAIL

N.T.S.

LEGEND

- Existing Highway Lighting Conduits and Cables - Abandon or Remove As Directed, Except As Noted
 — New Highway Lighting Conduit and Cable. Conduit Shall Be PVC Schedule 80. Cable Shall Match Existing
 □ New Type A Highway Lighting Pullbox
 ○ Relocated Highway Lighting Standard and Luminaire

NOTE:

For Water Line Location
See "Plan - Palani Rd. Junction"
Sheet No. 10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

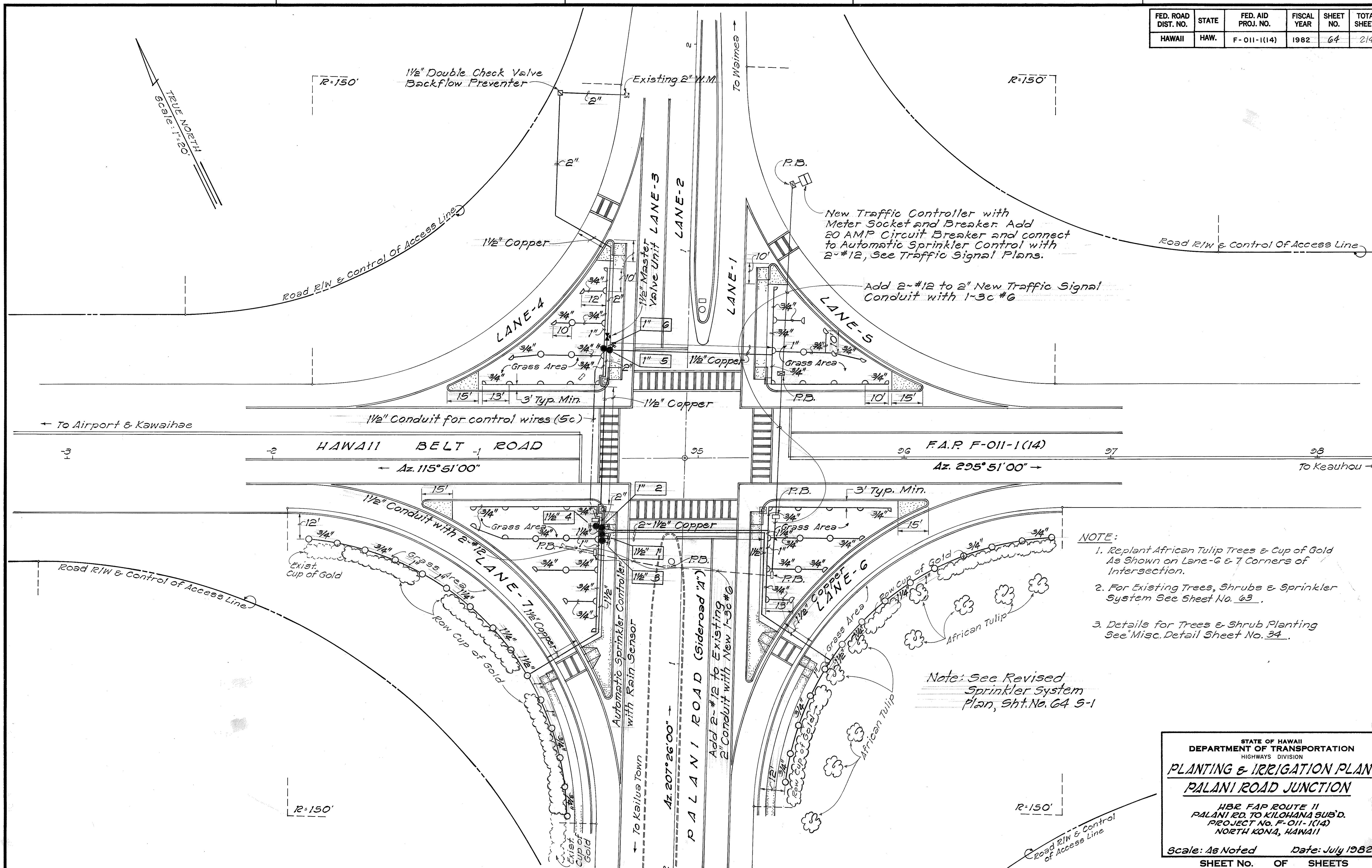
PLAN - HIGHWAY LIGHTING
AND LANDSCAPING
PALANI ROAD JUNCTION

UBR FAP ROUTE 11
PALANI RD. TO KILOHANA SUB'D.
PROJECT No. F-011-1(14)
NORTH KONA, HAWAII

Scale: As Noted Date: June 1982

SHEET No. OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
HAWAII	HAW.	F-011-1(14)	1982	64	214



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY <i>4-4</i>	" <i>July '82</i>
	TRACED BY	"
NOTE BOOK	DESIGNED BY	"
	QUANTITIES BY	"
	CHECKED BY	"
No.		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANTING & IRRIGATION PLAN

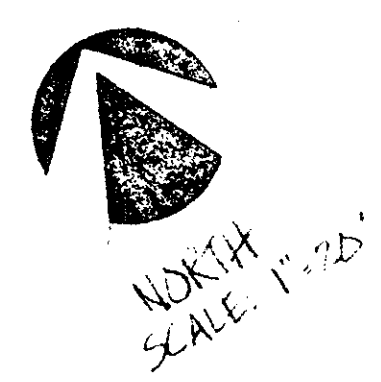
PALANI ROAD JUNCTION

HBR FAP ROUTE 11
PALANI RD. TO KILOHANA SUB'D.
PROJECT NO. F-011-1(14)
NORTH KONA, HAWAII

Scale: As Noted Date: July 1982

SHEET NO. OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-1(14)	1982	64S-1	214



VALVE NO.	VALVE WIRING IDENTIFICATION
1	ORANGE
2	BLUE
3	PURPLE
4	TAN
5	RED
6	WHITE
7	GREEN
MASTER VALVE	YELLOW
COMMON	BLACK

REF DETAIL 'A'
MAUKA MEDIAN STRIP

LEGEND

- ⊙ ⊙ ⊙ ... 'RAINBIRD' 1804 P186 SPRAY
 - ... 'RAINBIRD' 1804 P185 EST SPRAY
 - △ ... 'RAINBIRD' 1804 10PLA FLAT SPRAY
 - ⊗ ... 1/2" GATE VALVE
 - ⊙ ... 1/2" PRESS REGULATOR
 - ⋈ ... 1/2" DEC
 - ⊕ ... MASTER REV 1/2"
 - ⊞ ... C/L-B CONTROLLER
 - ⊙ ... REV (SIZE AS NOTED)
 - ⊞ ... G.P.S.
 - ⊞ ... REV SIZE
 - ⊞ ... STATION 110
- PER CURRENT SPECIFICATIONS

MATCHLINE
STR. 2+00

HAWAII BELT ROAD

DETAIL 'A'
MAUKA MEDIAN STRIP
SCALE: 1"=20'

AS-BUILT 3/21/84

ORIGINAL ON FILE WITH CONTRACTOR

IRRIGATION PLAN

PALANI ROAD JUNCTION
HBR FAP ROUTE 11, PROJECT FAP F-011-1(14)

1. PROPOSED REVISIONS: VALVES #1, 3
2. BACKFLOW INSTALLATION (DETAIL)
- * 3. MAUKA MEDIAN STRIP
- * 4. PROPOSED REVISION: VALVE #5
- ** 5. MAUKA MEDIAN STRIP: VALVE #7
- ** 6. VALVE #5 & 6: REUSED
7. AS-BUILT: VALVE WIRE IDENTIFICATION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANTING & IRRIGATION PLAN
PALANI ROAD JUNCTION

HBR FAP ROUTE 11
PALANI RD. TO KILOHANA SUB'D.
PROJECT No. F-011-1(14)
NORTH KONA, HAWAII

Scale: As Noted Date: July 1982

SHEET No. OF SHEETS

64S-1

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-1(14)	1982	65	214

GENRAL NOTES

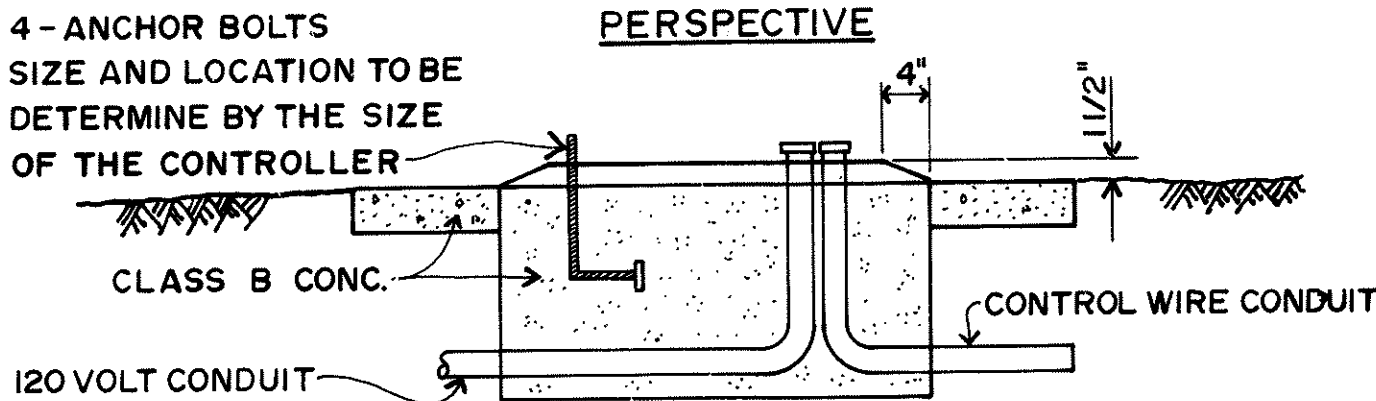
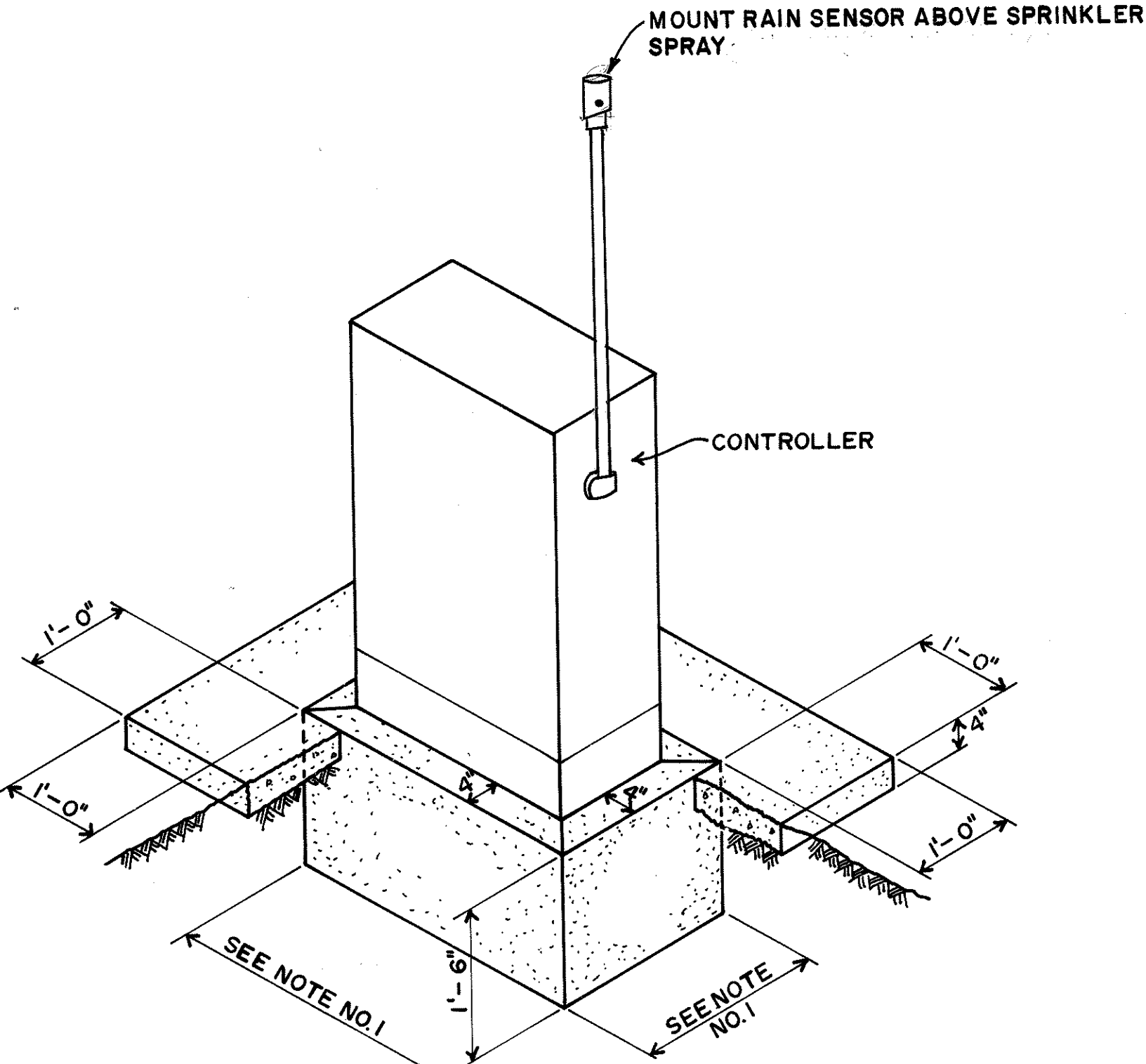
1. FINAL LOCATIONS OF VALVES AND AUTOMATIC CONTROLLER SHALL BE DETERMINED BY THE ENGINEER.
2. AUTOMATIC CONTROLLER SHALL BE PROGRAMED TO WATER EVERY OTHER DAY FOR 20 MINUTES EACH STATION USED. FOR PLANT ESTABLISHMENT CONTRACTOR TO SET WATERING SCHEDULE AS REQUIRED.

SPRINKLER SCHEDULE AND LEGEND

SYMBOL	TYPE SPRINKLER	FLOW RATE	OPERATING PRESSURE	COVERAGE	RISER CONNECTION	MATERIAL	ADJ. NOZZLE	TYPICAL SPACING
		G.P.M.	P.S.I.	FT.	I.P.S., IN.			FT.
○	P-14F LAWN POP-UP, 3" MIN. POP-UP	2.6 - 3.4	20	12 R	1/2 OR 3/4	BB OR PL	✓	15
◐	P-14H LAWN POP-UP, 3" MIN. POP-UP	1.5 - 2.0	20	12 R	1/2 OR 3/4	BB OR PL	✓	15
◑	P-14Q LAWN POP-UP, 3" MIN. POP-UP	0.8 - 1.5	20	12 R	1/2 OR 3/4	BB OR PL	✓	15

F-FULL CIRCLE
H-HALF CIRCLE
Q-QUARTER CIRCLE

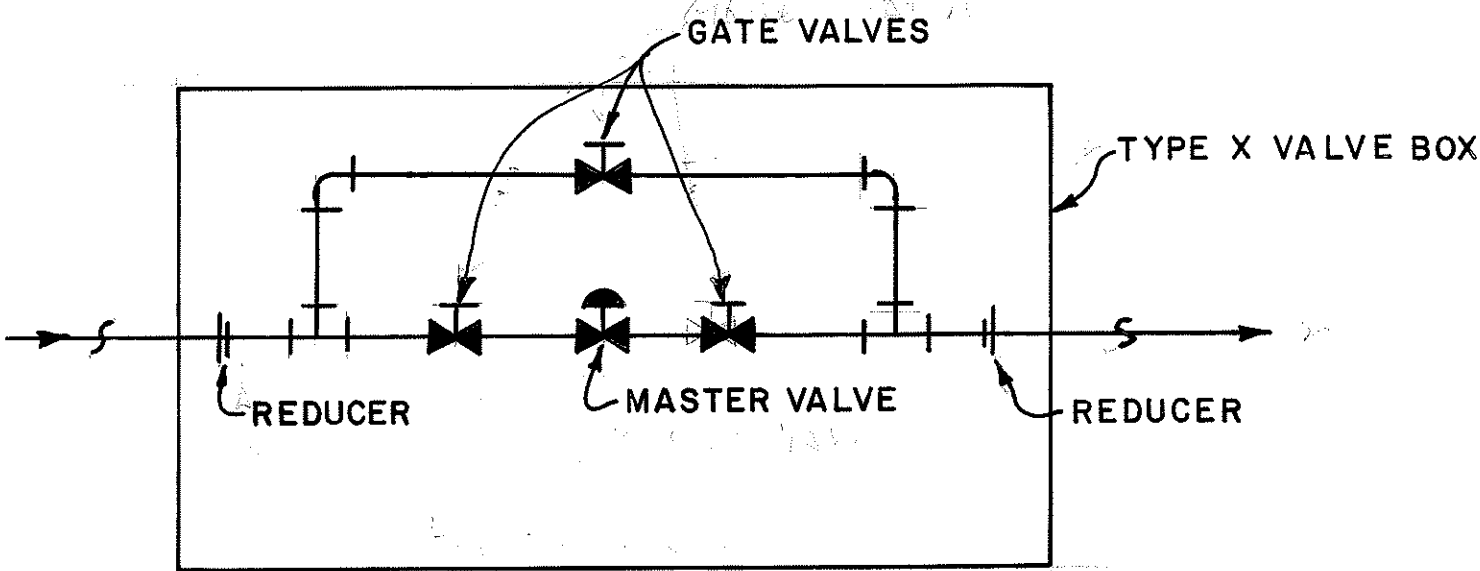
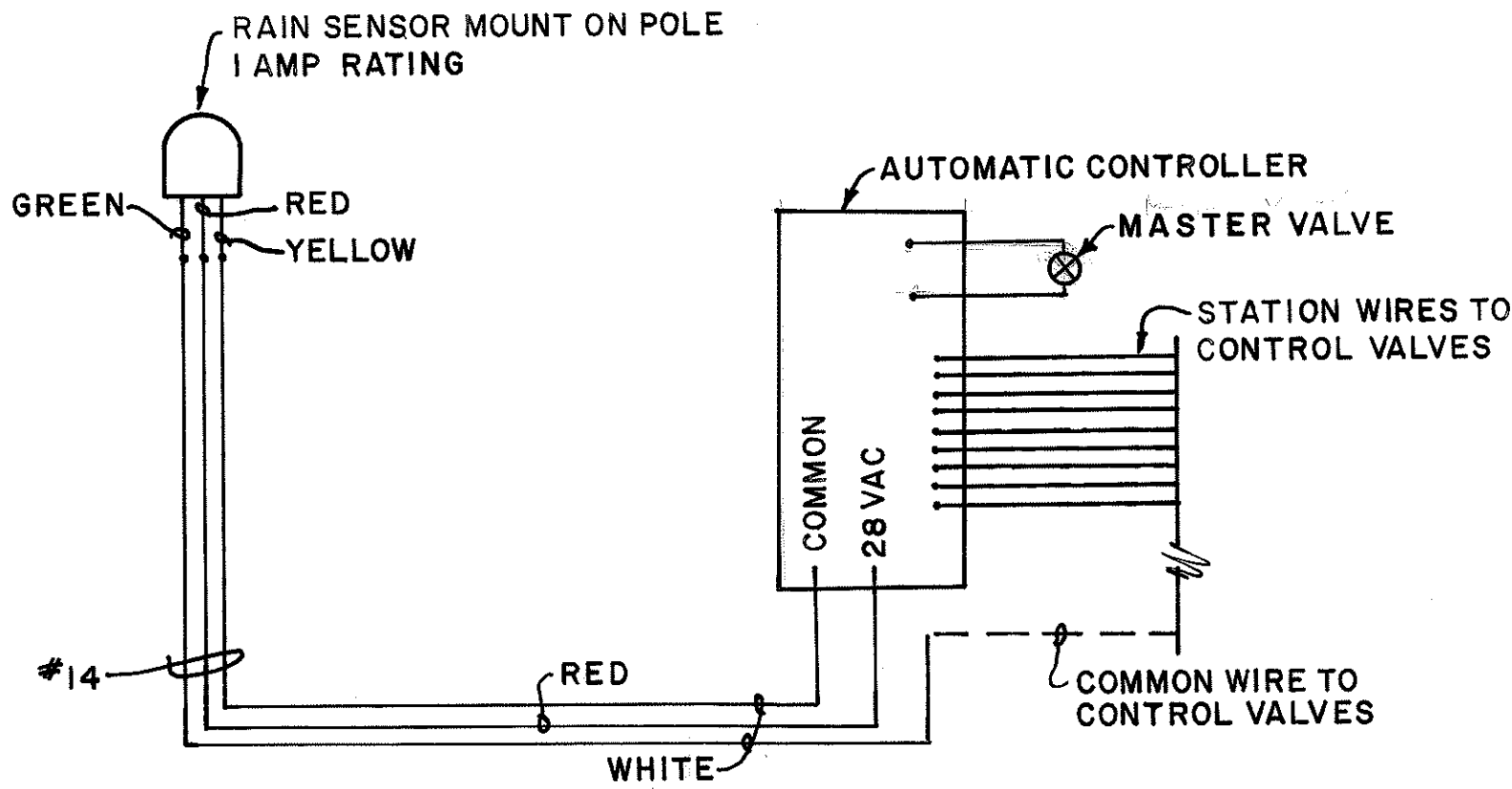
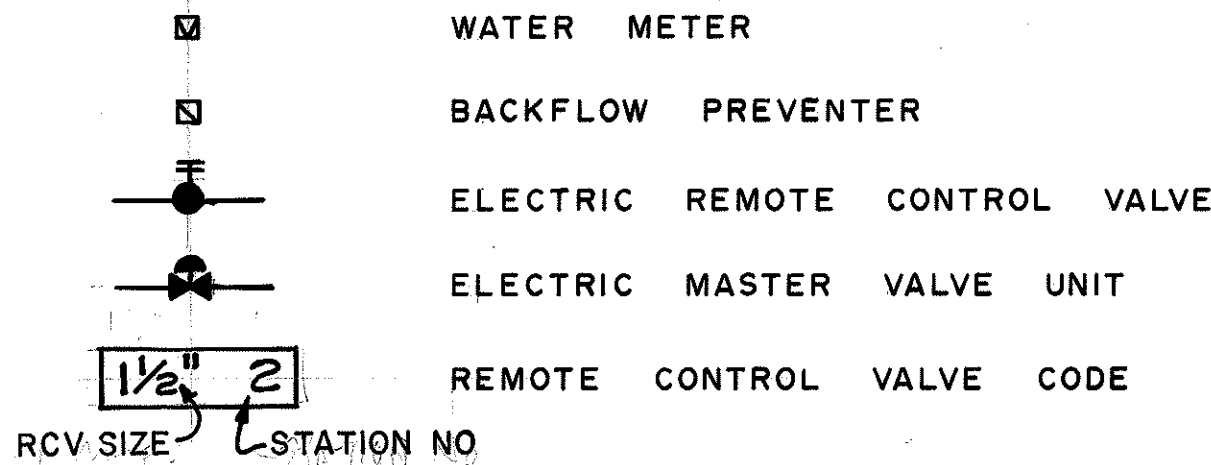
R-RADIUS
BB-BRASS OR BRONZE
PL-PLASTIC



PEDESTAL MOUNTED CONTROLLER DETAIL

NOTE: 1. DIMENSIONS TO BE DETERMINED BY THE SIZE OF THE CONTROLLER CABINET TO BE FURNISHED. CONTRACTOR MAY USE MANUFACTURER'S INSTALLATION RECOMMENDATIONS WITH APPROVAL OF THE ENGINEER.

IRRIGATION LEGEND



MASTER VALVE UNIT

NOTE: INSTALLATION SHALL BE SIMILAR TO REMOTE CONTROL VALVE DETAIL. MASTER VALVE SHALL BE OF THE SAME SPECIFICATIONS AS REMOTE CONTROL VALVE.

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

LAND TRANSPORTATION FACILITIES DIVISION

SPRINKLER SYSTEM DETAILS

PALANI ROAD JUNCTION

HBR FAP ROUTE II

PALANI ROAD TO KILOHANA SUB'D.

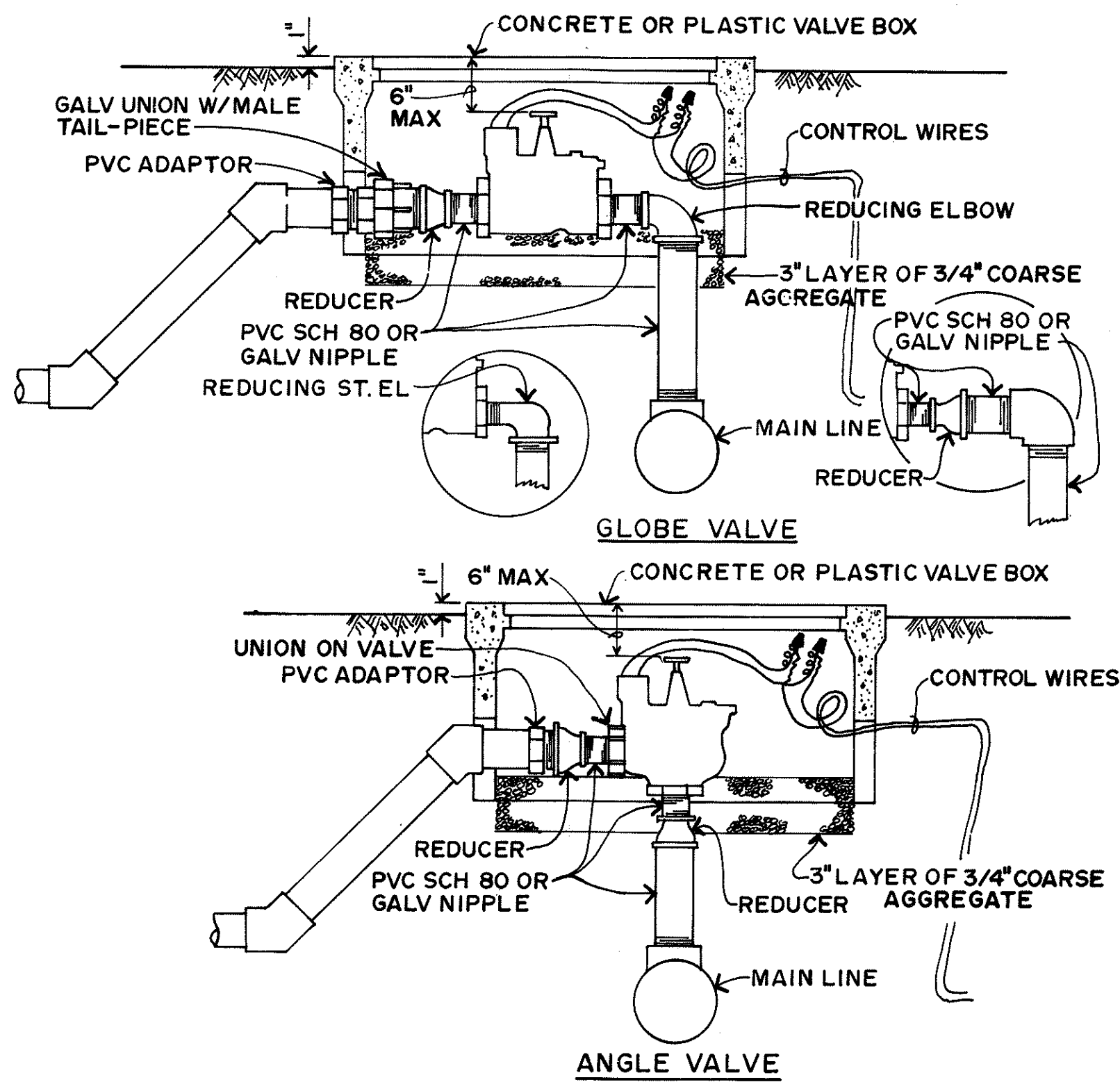
PROJECT NO. F-011-1(14)

NORTH KONA, HAWAII

SCALE: AS NOTED

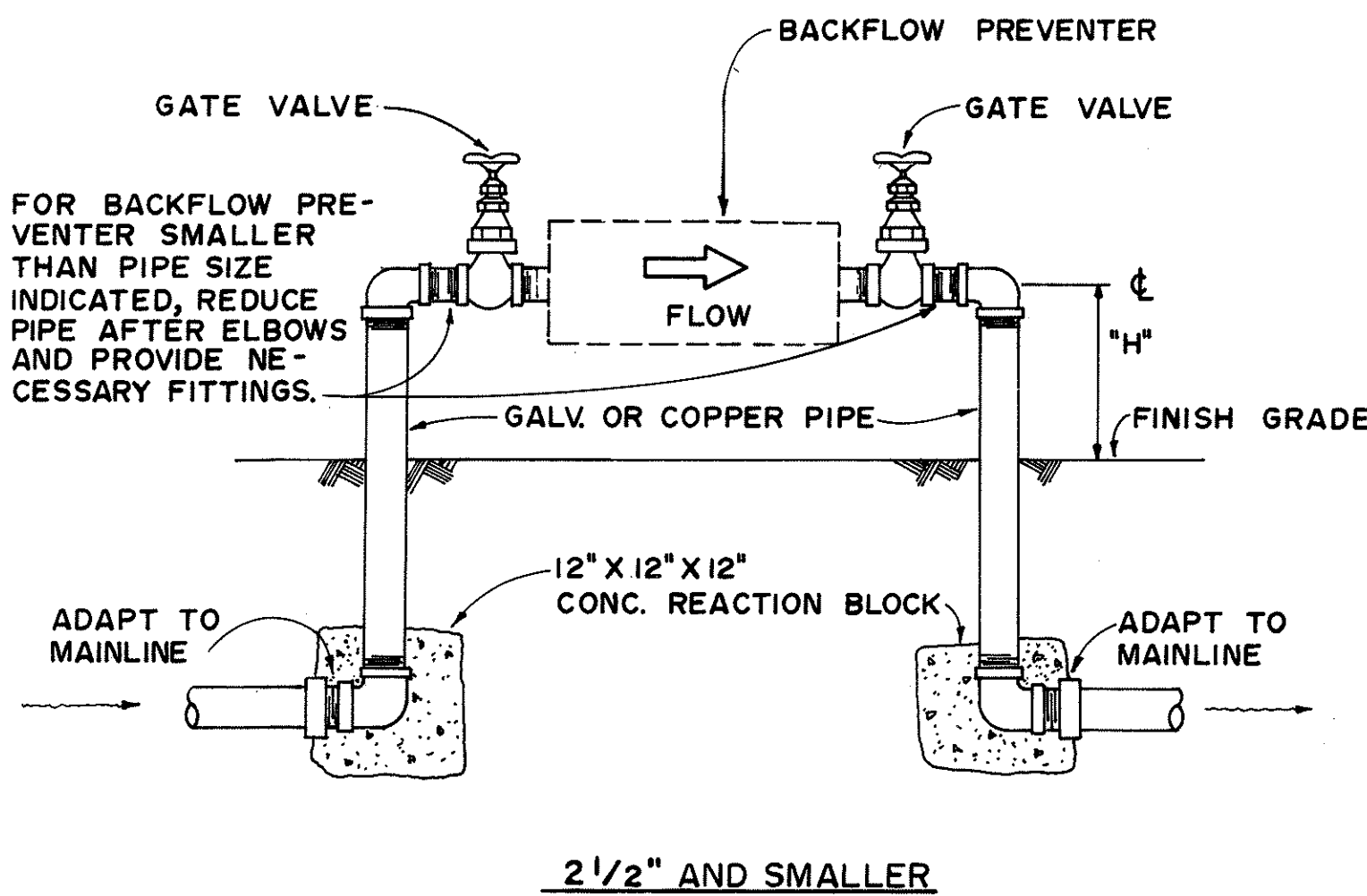
DATE: AUG. 1982

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-1(14)	1982	66	214



TYPICAL CONTROL VALVE DETAIL

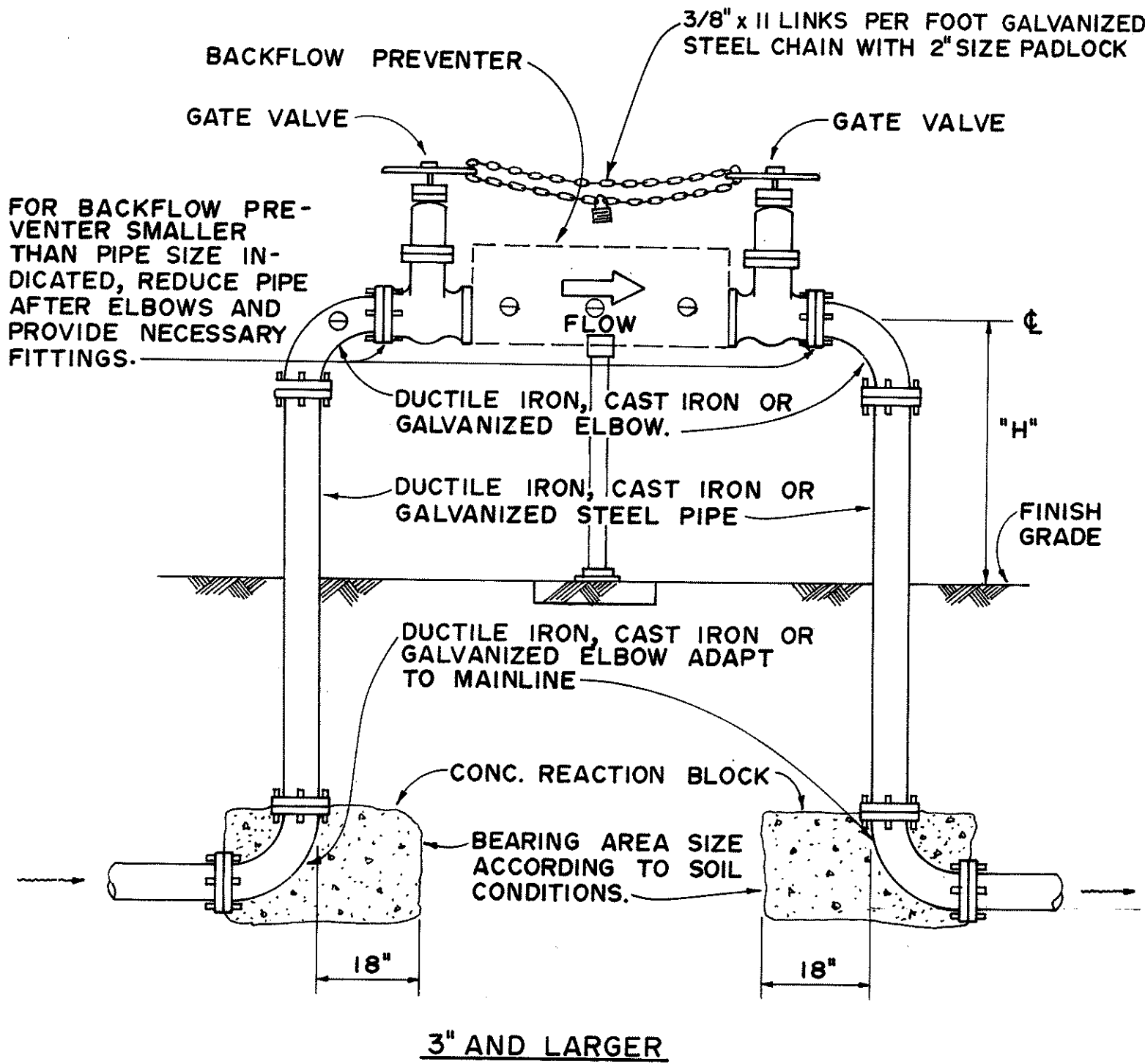
NOTE: A 2" MINIMUM CLEARANCE SHALL BE REQUIRED ON ALL SIDES OF THE VALVE.



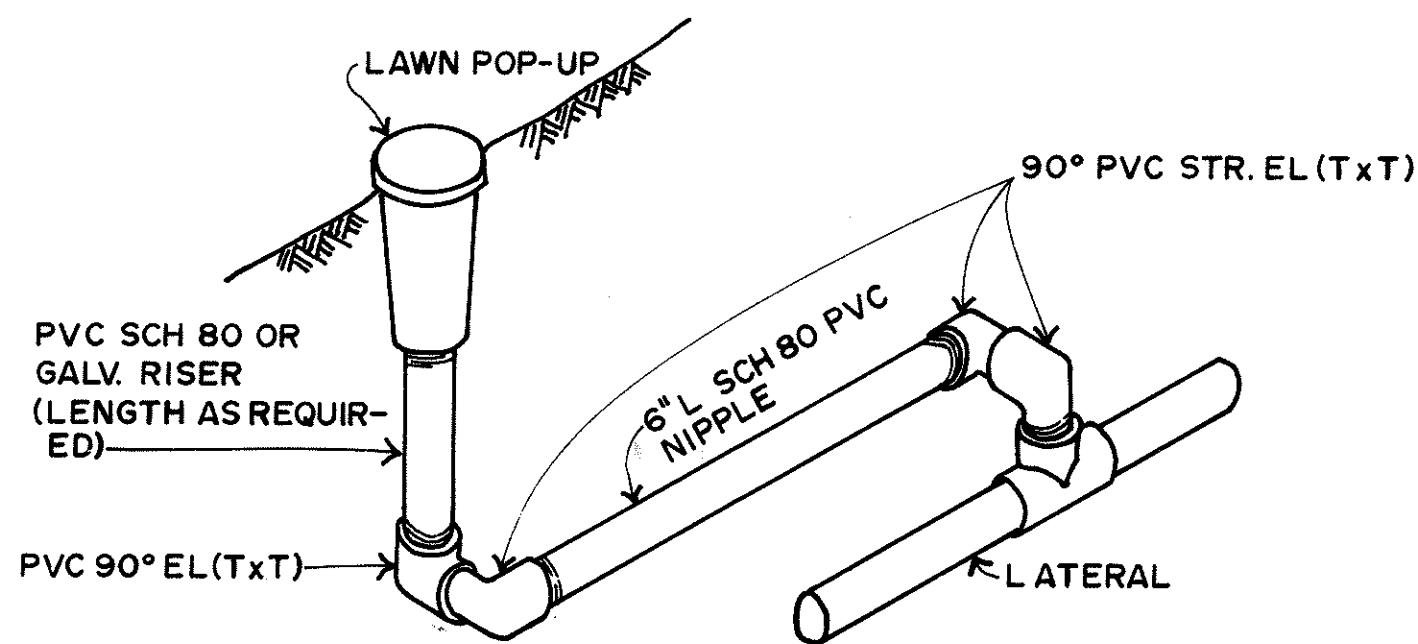
BACKFLOW PREVENTION UNIT DETAIL

- NOTES:
- ONLY ONE TYPE OF PIPE AND FITTINGS SHALL BE USED.
 - BACKFLOW PREVENTION UNIT SHALL BE PRIME COATED AND PAINTED WITH TWO COATS OF DARK GREEN ENAMEL PAINT TO THE FINISH GRADE.
 - DUCTILE IRON, CAST IRON OR GALVANIZED PIPE BELOW FINISH GRADE SHALL BE PAINTED WITH TWO COATS OF ASPHALT PAINT.
 - THERE SHALL BE NO OBSTRUCTION WITHIN A DISTANCE OF TWO (2) FEET SURROUNDING THE BACKFLOW PREVENTION UNIT.

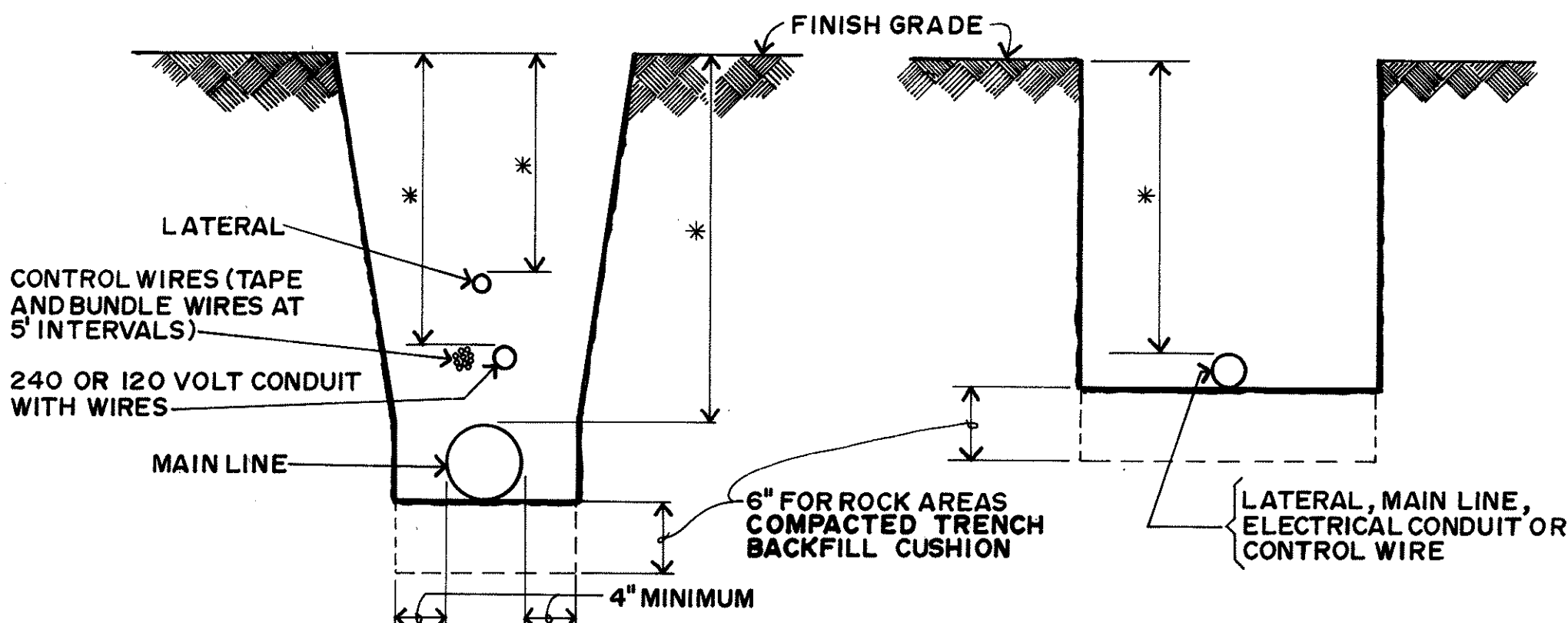
SIZE OF PIPE	"H"
3/4" - 1 1/2"	18"
2" - 3"	24"
4" - 6"	30"



3" AND LARGER



LAWN POP UP SPRINKLER DETAIL



	MINIMUM * COVER
SPRINKLER LATERALS	12"
SPRINKLER MAINS	12"
1/2" TO 2 1/2"	18"
3" OR 4"	24"
OVER 4"	30"
ELECTRICAL CONDUIT	24"
CONTROL WIRES	18"

TRENCH DETAIL

- NOTES:
- PIPES UNDER ROADWAY SHALL HAVE MINIMUM COVER OF 24 INCHES AND SHALL NOT BE IN THE ROADWAY STRUCTURE.
 - THERE SHALL BE A 3" MINIMUM CLEARANCE BETWEEN CONTROL WIRE BUNDLE, CONDUIT, MAIN AND LATERAL LINES.
 - THE WIDTH OF THE TRENCH SHALL BE AS NARROW AS PRACTICAL TO FACILITATE INSTALLATION. APPROXIMATELY TWICE THE OUTSIDE DIAMETER OF THE PIPE WITH A MINIMUM OF 6".

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

SPRINKLER SYSTEM DETAILS
PALANI ROAD JUNCTION

HBR FAP ROUTE 11
PALANI ROAD TO KILOHANA SUB'D.
PROJECT NO. F-011-1(14)
NORTH KONA, HAWAII

SCALE: AS NOTED DATE: AUG. 1982

SHEET NO. OF SHEETS