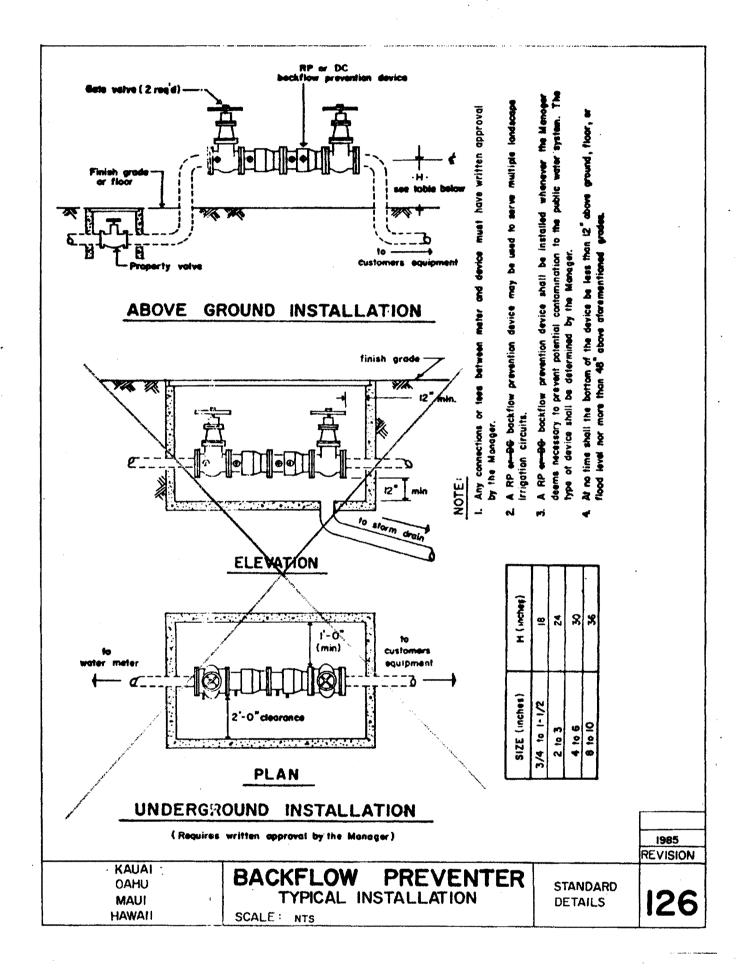
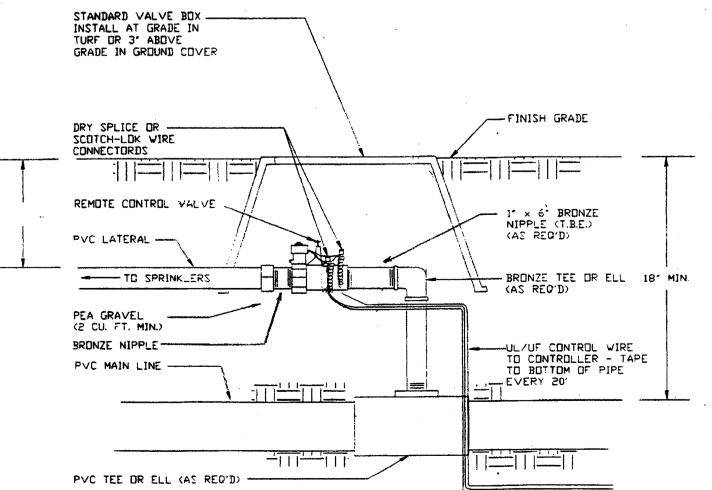


## TREE BUBBLER DETAIL



SEE PLANTING PLANS FOR LOCATION OF IRRIGATION EQUIPMENT SLAB.



## **REMOTE CONTROL VALVE DETAIL**

## IRRIGATION NOTES

1. CONTRACTOR SHALL INSPECT THE SITE CONDITIONS PRIOR TO COMMENCING WITH THE WORK. ANY DISCREPANCIES OR UNUSUAL CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER. BY COMMENCING WITH THE WORK, THE CONTRACTOR ACCEPTS THE EXISTING CONDITIONS AND RESPONSIBILITY FOR MAINTAINING THOSE CONDITIONS.

2. IRRIGATION SYSTEM SHOWN IS DIAGRAMMATIC AND SUBJECT TO CHANGES DUE TO ACTUAL LANDSCAPE LAYOUT AND UNANTICIPATED FIELD CONDITIONS. ADJUST ALL SYSTEMS TO ASSURE PROPER COVERAGE AND TO AVOID ANY CONFLICTS BETWEEN IRRIGATION SYSTEM, PLANTINGS, UTILITIES AND ARCHITECTURAL ELEMENTS.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE IRRIGATION WORK WITH THE OWNER, GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS OR TRADES, ESPECIALLY THE INSTALLATION OF SLEEVES, CONDUITS, ELECTRICAL LINES AND WATER CONNECTIONS.

4. CONTRACTOR SHALL INSTALL ALL EQUIPMENT ACCORDING TO LOCAL CODES AND PER MANUFACTURER'S SPECIFICATIONS.

5. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL TEST AND VERIFY THE ADEQUACY OF THE WORKING PRESSURE (PSI) AT THE POINT OF CONNECTION. THE MINIMUM STATIC PRESSURE SHALL BE 65 PSI. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER.

6. THE IRRIGATION SYSTEMS ARE DESIGNED TO OPERATE AT THE PRESSURE LISTED FOR THE HEAD TYPES OR DRIP LINES NOTED IN THE LEGEND. THE CONTRACTOR SHALL ADJUST ALL PRESSURE REGULATION CONTROLS ON EACH REMOTE CONTROL VALVE TO INSURE THAT ALL CIRCUITS OPERATE AT THE OPTIMUM PRESSURES AS NOTED IN THE LEGEND.

7. CONTRACTOR SHALL FLUSH AND CLEAN OUT ALL CIRCUITS PRIOR TO INSTALLATION OF NOZZLES, END CAPS, OR CONNECTIONS TO DRIP LINE HEADERS. THIS IS ESPECIALLY IMPORTANT FOR ALL DRIP LINE TUBING WHICH MUST BE THOROUGHLY FLUSHED PRIOR TO CONNECTION TO THE DRIP LINE HEADERS.

8. INSTALL ADJACENT PARALLEL PIPING/CONDUIT IN COMMON TRENCH WHENEVER PRACTICAL. ALL PIPING INSTALLED UNDER PAVED AREAS SHALL BE INSTALLED WITHIN A SLEEVE. ALL SLEEVES SHALL EXTEND A MINIMUM OF SIX INCHES (6") BEYOND THE EDGE OF PAVING.

9. ALL CONTROL WIRE PASSING UNDER PAVING OR THROUGH WALLS SHALL BE IN A CONDUIT; SIZE AS REQUIRED AND APPROVED.

10. CONTRACTOR SHALL INSURE THAT ALL PERSONNEL ON HIS CREW ARE FAMILIAR WITH ALL PLANS, DETAILS AND SPECIFICATIONS PRIOR TO INSTALLATION. ALL SPRINKLERS AND DRIP LINES SHALL BE INSTALLED AS DETAILED.

11. ALL EXISTING UTILITIES SHOWN ARE BASED UPON PLANS PROVIDED BY THE COUNTY OF MAUI. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THESE UTILITIES PRIOR TO WORKING IN ANY GIVEN AREA. ANY DAMAGED INCURRED AS A RESULT OF NEW CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES 10 DAYS PRIOR TO ANY EXCAVATION TO ALLOW THE COMPANIES TIME TO FLAG ANY KNOWN UTILITIES WHICH MAY BE IN THE AREA.

12. CONTRACTOR SHALL SUPPLY FOUR (4) EACH QUICK COUPLER KEYS WITH 3/4" HOSE SWIVEL ELBOWS TO MATCH THE QUICK COUPLER VALVES INSTALLED WITHIN THIS PROJECT.

13. DEPTH OF COVER OVER ALL PIPING AND WIRING SHALL BE AS NOTED BELOW:

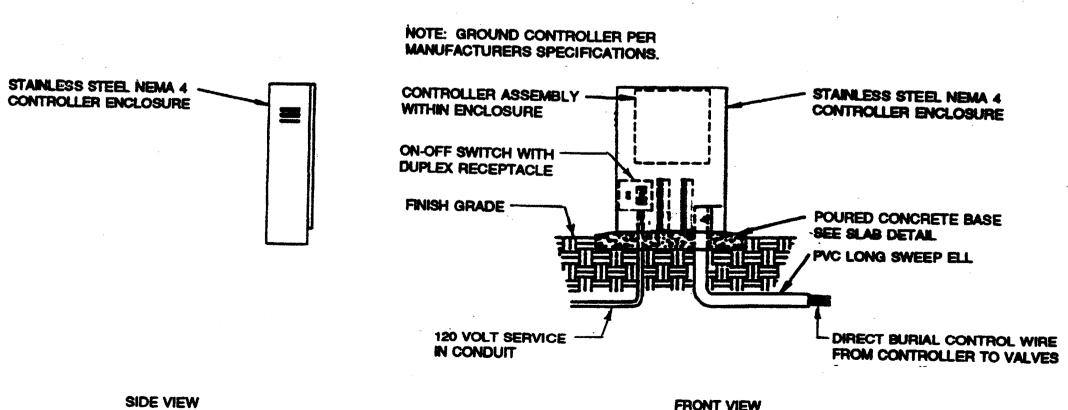
RRIGATION MAINS:	1
RRIGATION LATERALS TO TREE BUBBLERS:	1
RRIGATION DRIP HEADERS:	8
RRIGATION DRIP LINES:	4
4-VOLT WIRING:	1
20-VOLT WIRING:	2

14. CONTRACTOR SHALL FURNISH TWO SETS OF REPRODUCIBLE AS-BUILT PLAN UPON COMPLETION OF CONTRACT.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HI.	STP- 032-I (7)	2001	10	11

## IRRIGATION LEGEND

	SYMBOL	DESCRIPTION	COV. RAD. GPM PSI
	0	TREE BUBBLER ON 6" POP-UP WITH PRESSURE COMPENSATING SCREEN 6" POP-UP - FULL BUBBLER NOZZLE	RAIN BIRD 1806-8F-PCS-040 OR APPROVED EQUAL 360° 1' 0.40 30
		DRIP IRRIGATION EMITTER LINE	TORO DL2000 DRIP TUBING WITH ROOT GUARD MODEL RGP-212-10 OR EQUAL 0.53 GPH EMITTERS AT 12" SPACING WITH TORO COMPRESSION FITTINGS AS REQUIRED
	REDUCED PRESSURE TYPE BACKFL PREVENTION ASSEMBLY		FEBCO 835 SERIES OR EQUAL 1" SIZE
	Ø	DRIP IRRIGATION FILTER	AGRICULTURAL PRODUCTS, INC. MODEL 4E- 1" 150 MESH FILTER (NOTIFY MANUFACTURER OF SPECIFIC FLOW RANGE OF EACH FILTER AT TIME OF ORDER).
		PRESSURE REGULATION VALVE	GRISWOLD #2285 - 1" SIZE SET AT 50 PSI
		CONTROLLER, WITHIN A STAINLESS STEEL NEMA 4 PEDESTAL ENCLOSURE	RAIN BIRD ESP-8-C WITHIN A STRONG BOX MODEL SB-18-SS ENCLOSURE OR EQUAL
	•	REMOTE CONTROL VALVE, BRASS WITH PRESSURE REGULATION (SET 35 PSI)	RAIN BIRD EFB-CP-PRS-B, GRISWOLD DWS-PRV OR EQUAL
	•	QUICK COUPLER VALVES	1" , 2 PIECE WITH VINYL COVER LABELED "DO NOT DRINK"
	H	GATE VALVE, BRASS THREADED WITH CROSS HANDLE - 3" AND SMALLER	NIBCO T-113 OR EQUAL
		DRIP LINE AIR/VACUUM RELIEF VALVE	TORO YD-500-34 OR EQUAL
	<b>L</b>	DRIP LINE FLUSH VALVE	TORO CEFCH-H OR EQUAL
_		DRIP LINE HEADERS	CL 200 PVC PIPE (SEE SPEC'S)
•	dagamanagaman o da 40 Madalaha	IRRIGATION MAIN	SCH 40 PVC - 2" OR LESS LARGER (SEE SPEC'S)
		IRRIGATION LATERAL	CL 200 PVC PIPE (SEE SPEC'S)
,	29	GATE VALVE SIZE	
		VALVE LEGEND:	
	1 2 10	CONTROLLER	
		STATION NUMBER	
		VALVE SIZE	•
		G.P.M. THRU VALVE	



FRONT VIEW

my direct supervision and construction this project will be under my supervision

REVISION DATE DESCRIPTION STATE OF HAWAII DEPARTMENT OF TRANSPORTATION

> HIGHWAYS DIVISION IRRIGATION LEGEND, NOTES & DETAILS

KAAHUMANU AVENUE LANDSCAPE IMPROVEMENTS

PHASE 1 FROM LOND AVENUE TO HANA HIGHWAY

KAHULUI, MAUI, HAWAII

**CONTROLLER ENCLOSURE**