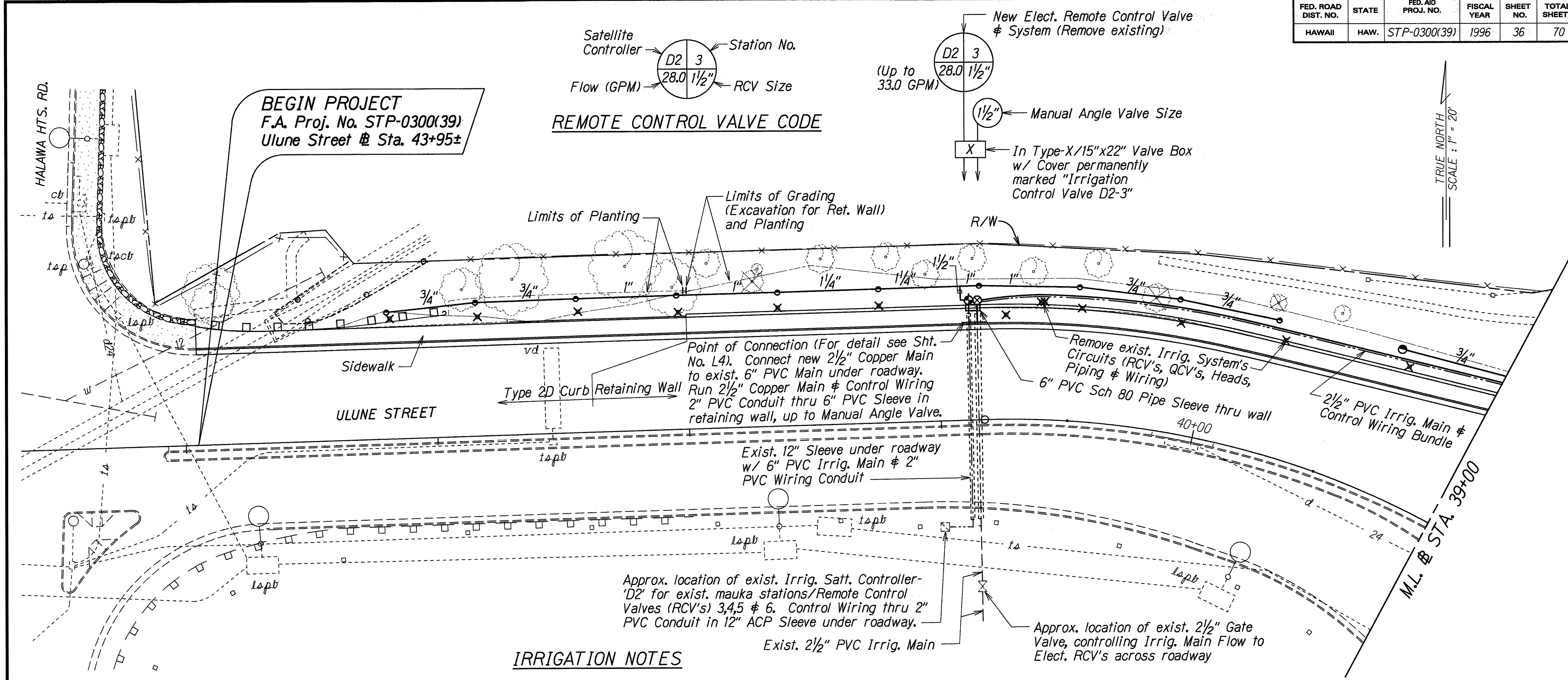
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(39)	1996	36	70



IRRIGATION NOTES

REMOVAL, PRE-INSTALLATION AND PREPARATION PERIOD

1. Contractor shall verify locations and conditions of existing irrigating systems/components to be removed, including utilities, structures, features or areas that might be adversely affected, and protect the latter from destruction and damage.
2. If necessary, Contractor shall request that the Engineer set up a field meeting with the Oahu District plumber/staff and Panasonic Building manager/staff to identify, clarify, expedite and simplify removal/installation operations.
3. Contractor shall notify Engineer of removal start date. Engineer shall notify Oahu District plumber and Panasonic Building manager; if they desire, the Oahu District plumber or Associated Panasonic Building personnel may salvage components before removal date.
4. Remove existing systems and components as shown on plans.
5. Make reasonable preparations for expediting and simplifying installation, especially related to:
   a. Water source/mains.
   b. Controller/control wiring/electric remote control valves.
   c. Points-of-connection P.O.C.
   d. Pipe sleeves through retaining wall and drainage channel.
   e. Lateral piping over drainage pipe.
6. Mark location and placement of sleeves, conduits, mains and laterals under pavements and through walls, before these are constructed.
7. Notify Engineer immediately, for corrective action when error or omission in the contract documents are discovered.
8. Obtain and pay for necessary permits and certificates required for this work.
9. During removal and installation period, shut off water and deactivate controller programs for stations/areas affected.
10. Suggested procedure checklist of Main Point-of-Connection, at outbound roadside, Station 40+85, as follows:
    a. Shut existing gate valve to main; deactivate controller program for existing RCV's D2/3, 4, 5 & 6.
    b. Cut, cap and mark location.
    c. Salvage and identify existing control wiring.
    d. Excavate for new retaining wall.
    e. Connect new 2 1/2" PVC main to existing 6" PVC main; run 2 1/2" PVC main and 2" PVC conduit/control wiring over retaining wall footing, through 6" PVC sleeve in wall, up to manual angle valve and RCV D2/3.

INSTALLATION

11. Irrigation system shown on plans are diagrammatic only and subject to appropriate adjustments due to unanticipated field conditions.
12. Request approval from Engineer of final locations of points-of-connection, main lines, valves, valve boxes and heads.
13. Install irrigation system components as shown and specified on plans and details.
14. Insure that installation of materials and workmanship performance conforms to manufacturer's instructions; where specifications exceed such instruction's, specifications shall govern.

(CONTINUE NOTES NEXT SHEET)

ORIGINAL PLAN | NOTE BOOK dhl.russ.lhcr lhcripl01.dgn No.
SURVEY PLOTTED BY ____ DATE 4/22/96
DRAWN BY A. Nomura
TRACED BY
DESIGNED BY R. Kapololu
QUANTITIES BY
CHECKED BY

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

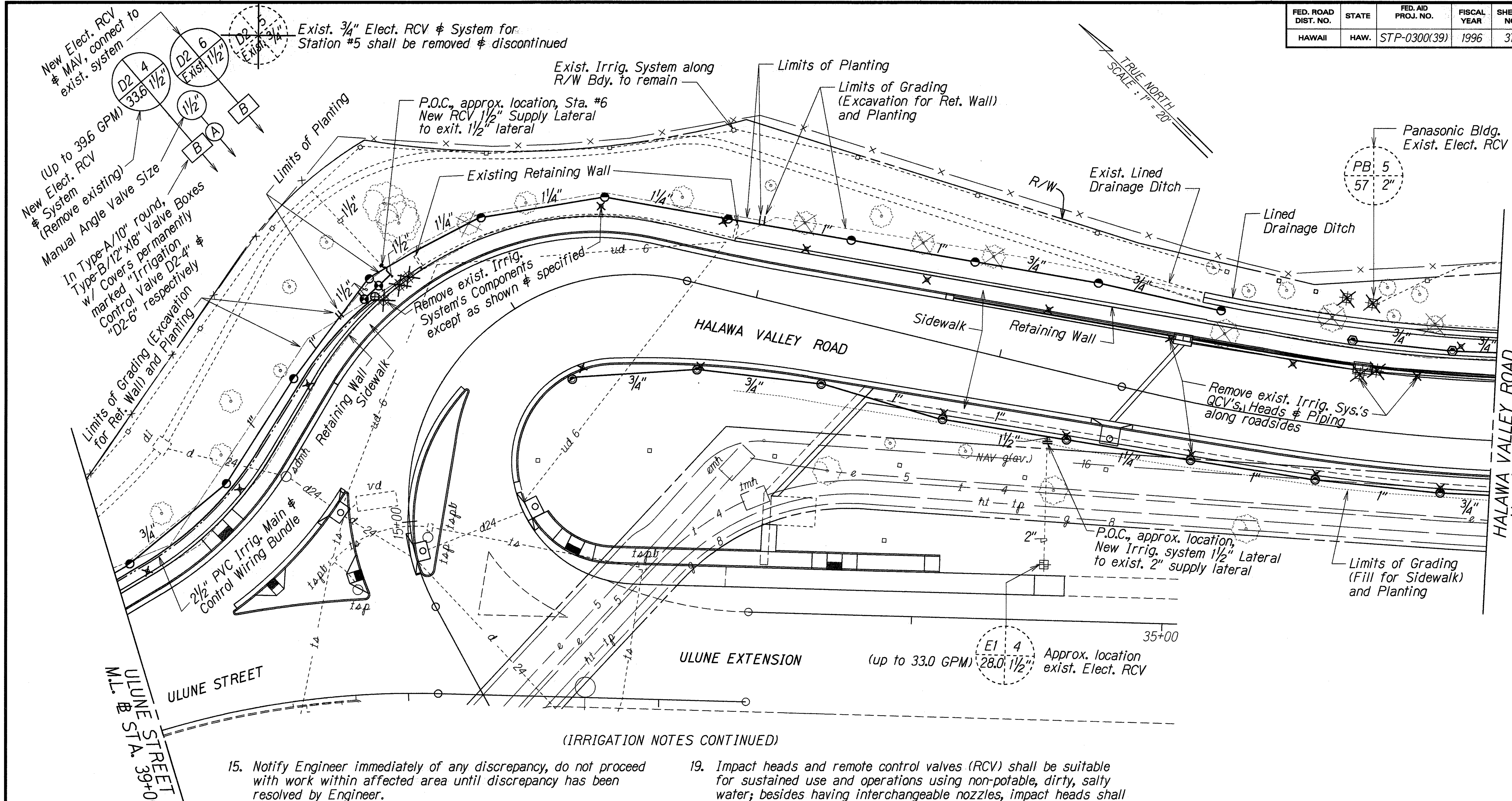
IRRIGATION PLAN

ULUNE STREET IMPROVEMENTS
Halawa Hts. Rd. to Halawa Valley Rd.
And
HALAWA VALLEY RD. IMPROVEMENTS
Ulune St. to Iwaiwa St.
Fed. Aid Project No. STP-0300(39)

Scale: 1" = 20' Date: May, 1996

SHEET No. L1 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(39)	1996	37	70



(IRRIGATION NOTES CONTINUED)

15. Notify Engineer immediately of any discrepancy, do not proceed with work within affected area until discrepancy has been resolved by Engineer.

16. Make necessary adjustments to insure safe, adequate coverage, even distribution, no runoff erosion, and no overspray onto adjacent sidewalks and roadway.

17. Provide piping between heads with minimum sizes as shown on plans.

18. Provide 4" minimum horizontal separation between parallel pipes installed in same trench at same depth; insure that parallel piping does not cross; provide 4" minimum vertical separation between crossing pipes; insure no direct contact between pipes or between pipes and structures.

19. Impact heads and remote control valves (RCV) shall be suitable for sustained use and operations using non-potable, dirty, salty water; besides having interchangeable nozzles, impact heads shall operate with low pressure, low gallonage, high wind tolerance, self-flushing, throw-distance controllable, part circle adjustable arc and matched precipitation rates; besides having pressure compensating nozzles, rotor 12" pop-up heads shall be high wind tolerant, vandal-proofed, throw-distance reducible and with easy arc adjustment; the remote control valves shall be contamination proof, self-flushing, and flow controlling with manual internal and external bleeds.

20. Furnish and install "metallic sounding tape" in main line trenches according to manufacturer's instructions.

21. Provide trench backfill material without rocks or sharp objects 1" or larger.

(CONTINUE NOTES NEXT SHEET)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IRRIGATION PLAN

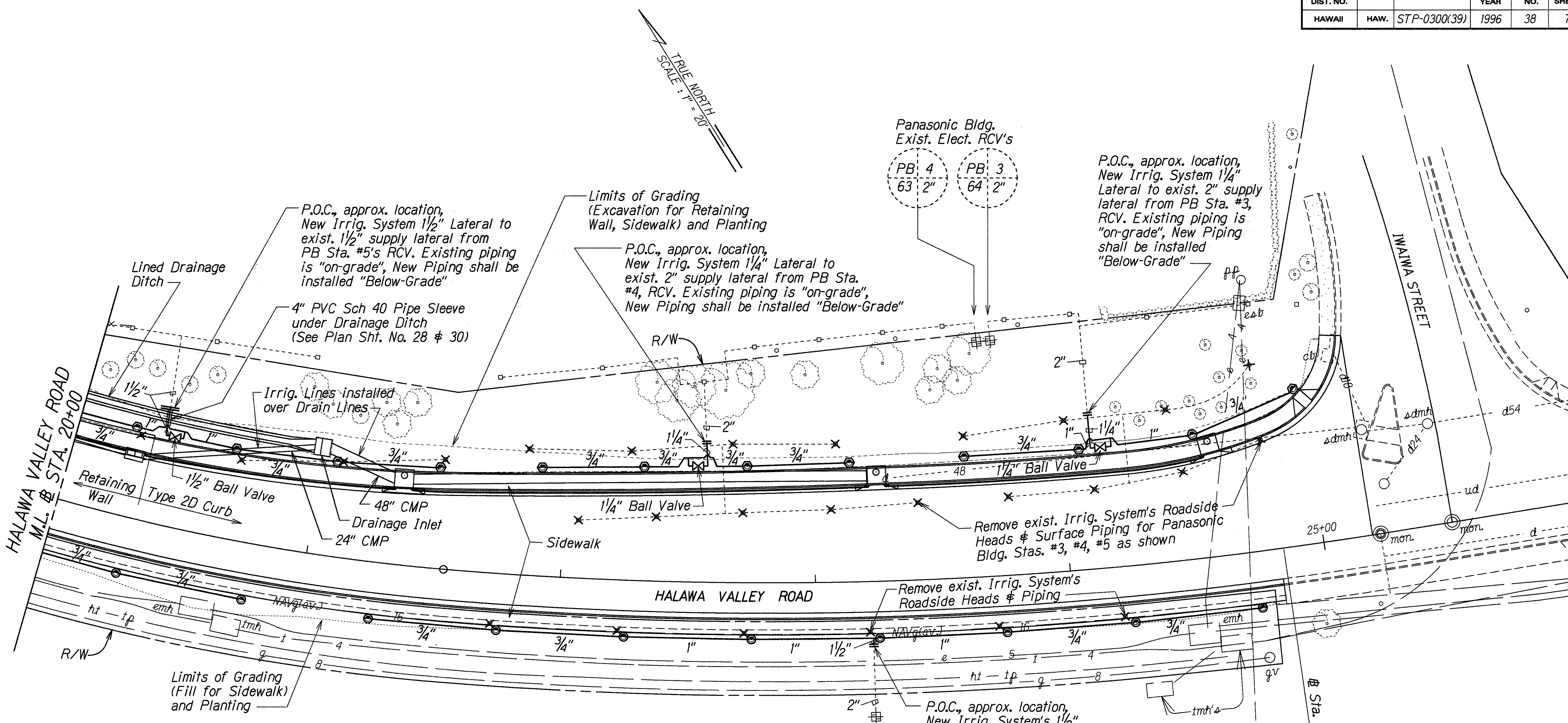
ULUNE STREET IMPROVEMENTS
Halawa Hts. Rd. to Halawa Valley Rd.
And
HALAWA VALLEY RD. IMPROVEMENTS
Ulune St. to Iwaiwa St.
Fed. Aid Project No. STP-0300(39)

Scale: 1" = 20' Date: May, 1996

SHEET No. L2 OF 8 SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY A. Nomura | TRACED BY | DESIGNED BY R. Kapololu | QUANTITIES BY | CHECKED BY | DATE 4/22/96

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0300(39)	1996	38	70



(IRRIGATION NOTES CONTINUED)

22. Request Engineer inspect/approve Field Test #1 and other irrigation Installation Period contract work upon completion, before start of planting operations and planting period.

23. Correct deficiencies and discrepancies until Engineer approves.

POST-INSTALLATION

24. Arrange and pay for repair of damages caused by his operations, to utilities, structures, features or areas.

25. Adjust irrigation valves and heads to provide the safest, most efficient, and effective coverage possible; adjust the location, coverage arc degree and radius of irrigation heads, as necessary to eliminate dry areas and overspray; adjust impact heads' riser-angle to compensate for slope gradient, to insure adequate coverage with minimum spray trajectory angle, eliminating/minimizing wind-caused overspray.

26. Request Engineer approve watering schedule recommendations as follows:
    - Preferred Times: 10:00 AM to 2:00 PM
    - Expanded Times: 8:00 AM to 4:00 PM
    - Maximum Times: 6:00 AM to 6:00 PM during summer months only.

27. Request Engineer inspect/approve Field Test #2 and other irrigation Post-Installation period contract work upon completion at the end of the Plant Establishment Period.

28. Correct deficiencies and discrepancies until Engineer approves and irrigation contract work is accepted.

ORIGINAL PLAN	
SURVEY PLOTTED BY	
DRAWN BY	A. Nomura
TRACED BY	
DESIGNED BY	R. Kapololu
QUANTITIES BY	
CHECKED BY	
NOTE BOOK	dhlrusslhor dhrirp03.dgn
DATE	4/23/96

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IRRIGATION PLAN

ULUNE STREET IMPROVEMENTS
Halawa Hts. Rd. to Halawa Valley Rd.
And
HALAWA VALLEY RD. IMPROVEMENTS
Ulune St. to Iwaiwa St.
Fed. Aid Project No. STP-0300(39)

Scale: 1" = 20' Date: May, 1996

SHEET No. L3 OF 8 SHEETS