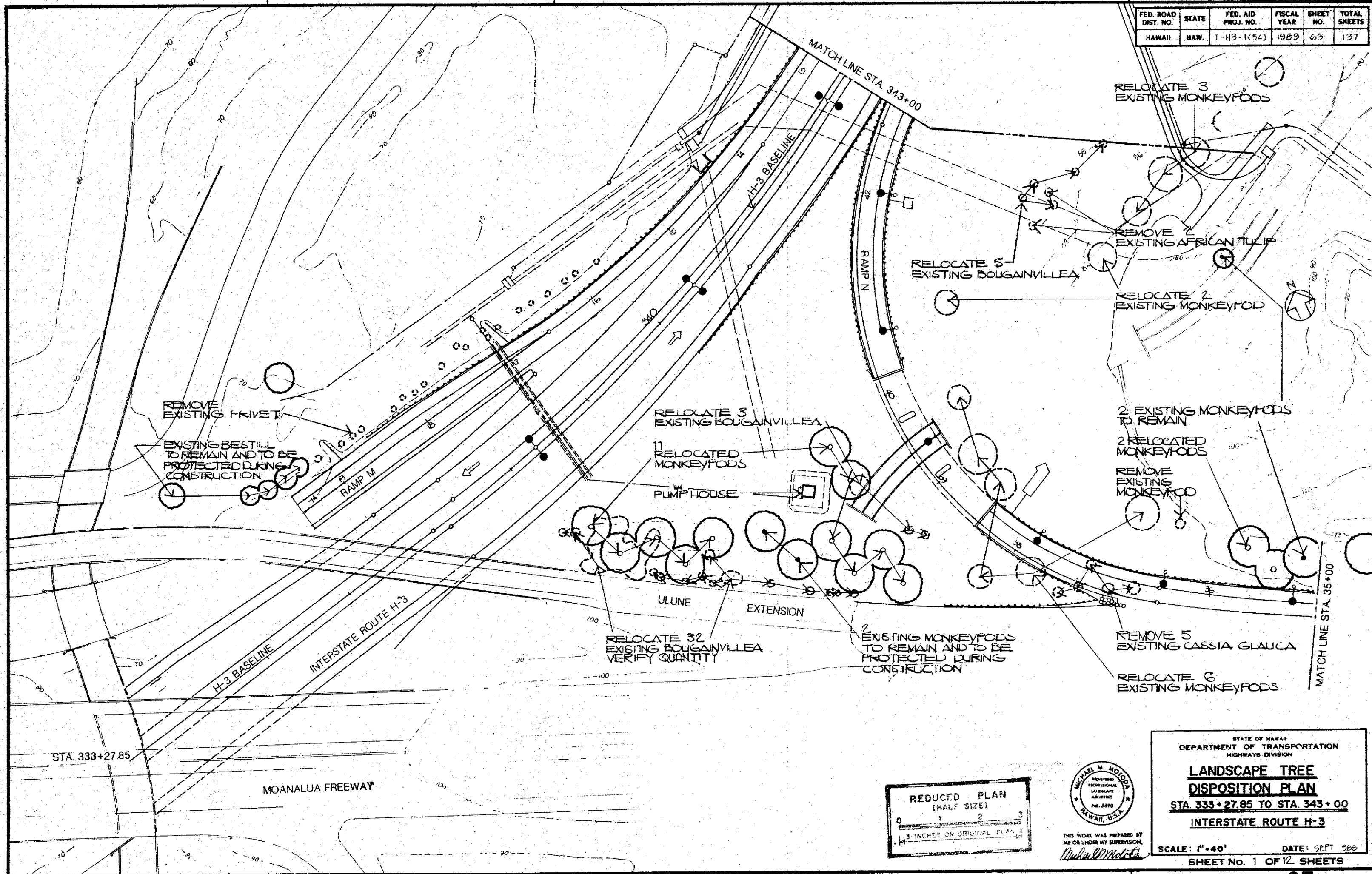
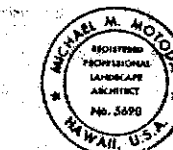


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1(54)	1989	63	137



ORIGINAL PLAN	DATE
DESIGNED BY	
DRAWN BY	
CHECKED BY	
NOTED BY	
NO.	

REDUCED PLAN
(HALF SIZE)
1/3 INCHES ON ORIGINAL PLAN



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Michael M. Moiola

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**LANDSCAPE TREE
DISPOSITION PLAN**

STA. 333+27.85 TO STA. 343+00

INTERSTATE ROUTE H-3

SCALE: 1"=40' DATE: SEPT 1988
SHEET No. 1 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1(54)	1989	65	137

NOTE:
LANDSCAPE PROJECT LIMITS
TO BE 30'-0" FROM EDGE OF
ROADWAY CLEAR & GRUB
EXISTING VEGETATION WITHIN
THIS AREA.

45
RAINBOW SHOWER
25 G.C.

WEDELIA
ROOTED CUTTINGS
@ 1'-0" O.C.

EXISTING BESTILLS
TO REMAIN AND TO BE
PROTECTED
DURING
CONSTRUCTION

LANDSCAPE
PROJECT LIMITS

MATCH LINE STA. 343+00

POLYDIVIDER

BERMUDA GRASS
HYDROMULCHING

AFRICAN TULIP
25 G.C.

10
MONKEYPOD
FIELD STOCK

40 RELOCATED
BOUGAINVILLEA

RAINBOW SHOWER
25 G.C.

WEDELIA
ROOTED CUTTINGS
@ 1'-0" O.C.

BERMUDA GRASS
HYDROMULCHING

POLYDIVIDER

PUMP HOUSE

RAMP M

ULUNE

EXTENSION

5
AFRICAN TULIP
25 G.C.

11 RELOCATED MONKEYPODS

2 EXISTING MONKEYPODS
TO REMAIN AND TO BE
PROTECTED DURING CONSTRUCTION

2 RELOCATED
MONKEYPODS

1 EXISTING
MONKEYPOD TO
REMAIN AND TO BE
PROTECTED DURING
CONSTRUCTION

MATCH LINE STA. 35+00

NOTE:
PLANTING AREAS INDICATED ON PLAN
THAT EXTEND BEYOND GRADING LIMITS
TO BE CLEARED AND GRUBBED OF
EXISTING VEGETATION UNLESS
INDICATED TO REMAIN. SEE CIVIL DWGS
FOR GRADING LIMITS.

REDUCED PLAN
(HALF SIZE)

0 1 2 3
1/3 INCHES ON ORIGINAL PLAN



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

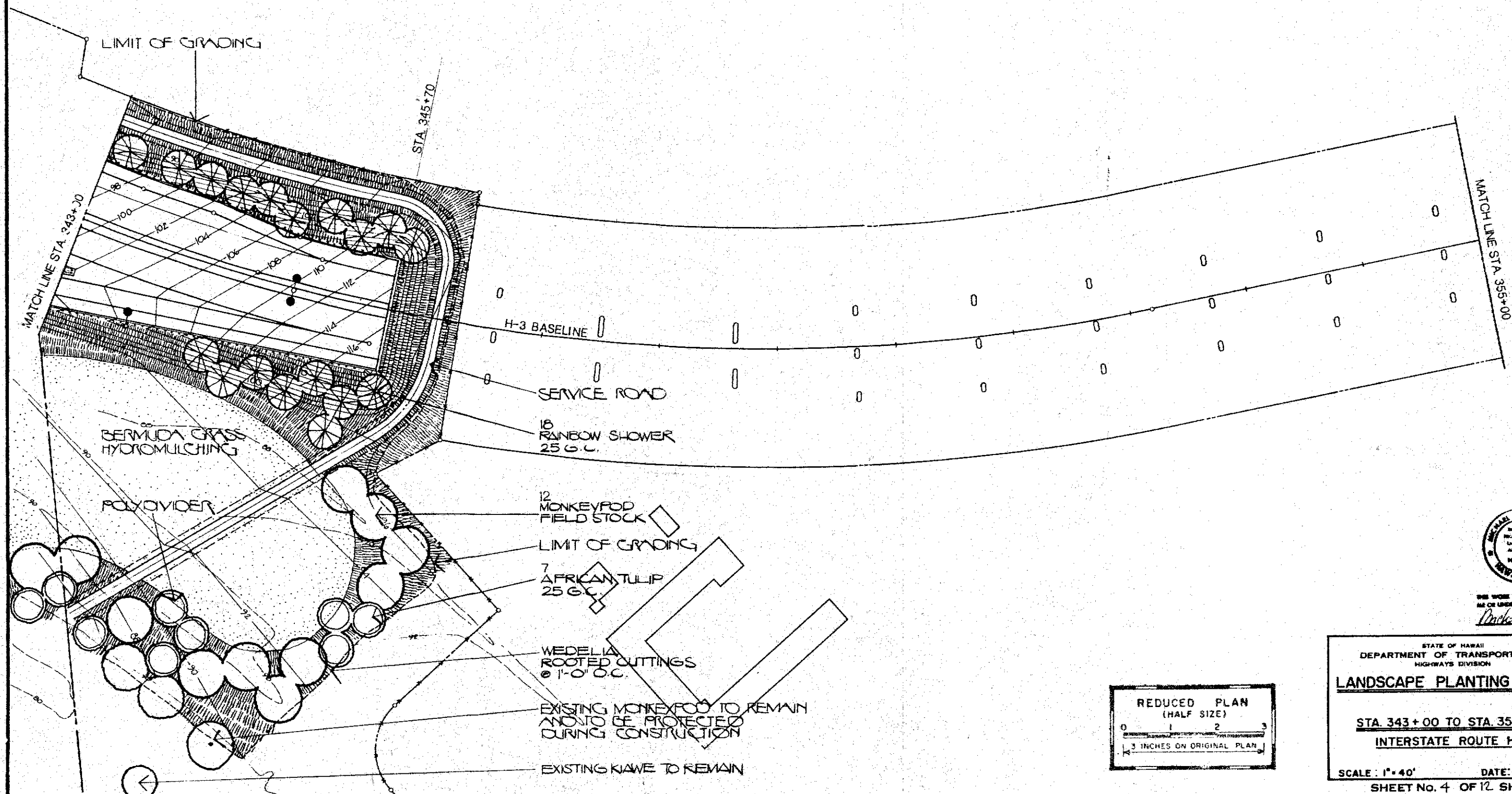
LANDSCAPE PLANTING PLAN

STA. 333+27.85 TO STA. 343+00
INTERSTATE ROUTE H-3

SCALE: 1" = 40' DATE: SEPT. 1989
SHEET NO. 3 OF 12 SHEETS

DATE	
BY	
CHECKED BY	
DESIGNED BY	
IN CHARGE	
PROJECT NO.	
DATE	

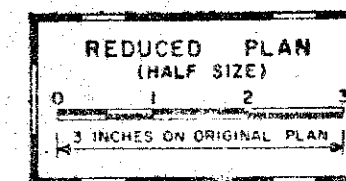
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	66	137



SURVEY	DATE
PLAN	
DESIGNED BY	
QUANTITIES BY	
NOTE BOOK	
CHECKED BY	



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Michael A. Motoda



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE PLANTING PLAN

STA. 343+00 TO STA. 355+00

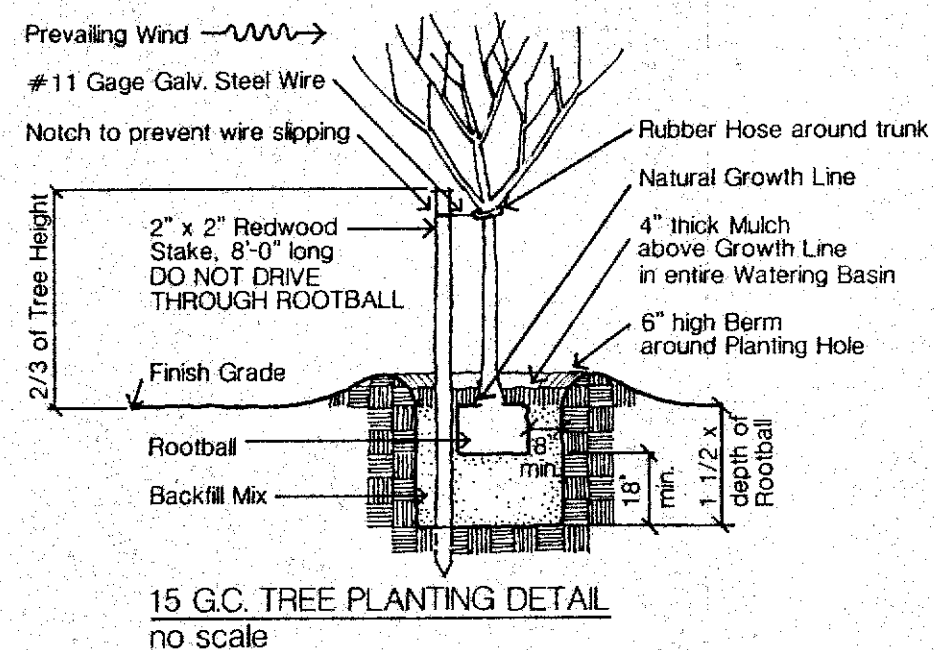
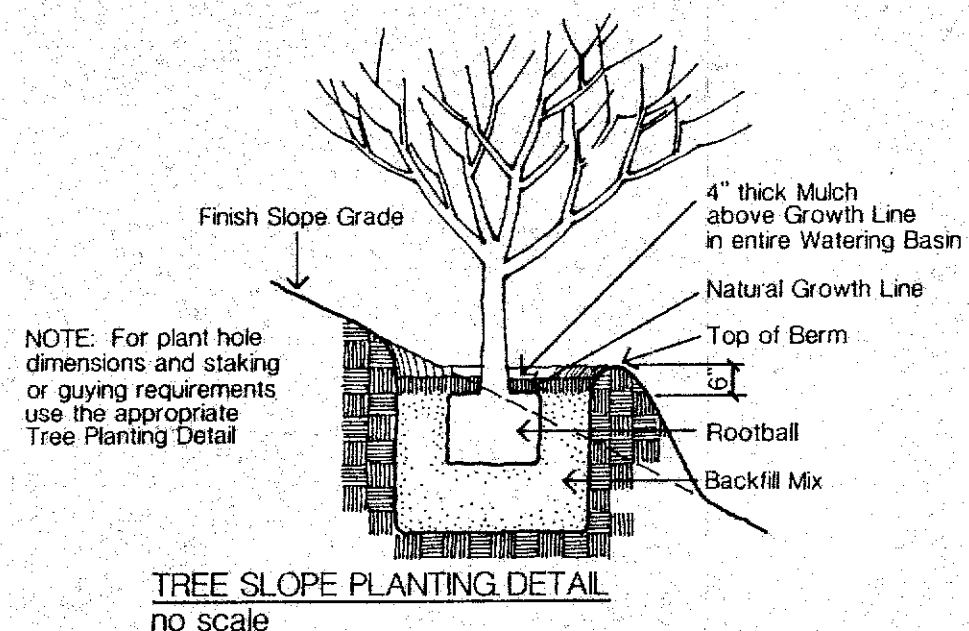
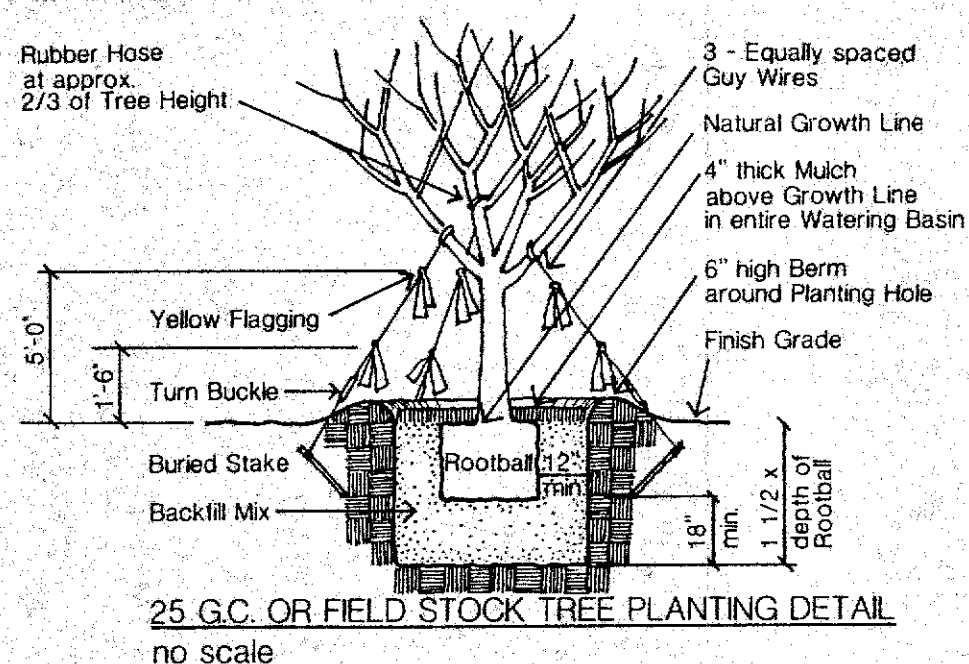
INTERSTATE ROUTE H-3

SCALE: 1"=40' DATE: SEPT 1988

SHEET No. 4 OF 12 SHEETS

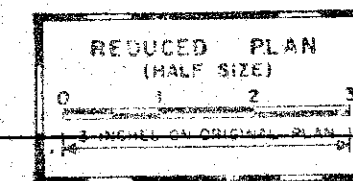
PLANT LIST

QUANTITY	BOTANICAL NAME COMMON NAME	DESCRIPTION
TREES		
63	Cassia javanica X C. fistula Rainbow Shower	25 G.C., 10'-0" high, 6'-0" spread, 3" caliper
22	Samanea saman Monkeypod	Field Stock, 12'-0" high, 10'-0" spread, 1'-0" caliper
23	Spathoda campanulata African Tulip	Field Stock, 12'-0" high, 6'-0" spread, 6" caliper
GROUND COVERS AND GRASSES		
104,400 s.f.	Cynodon dactylon Bermuda Grass	Hydromulching
226,150 s.f.	Wedelia trilobata Wedelia	Rooted Cuttings at 12' o.c.
RELOCATED TREES AND SHRUBS		
40	Bougainvillea spectabilis Bougainvillea	Verify quantity / size of shrubs on site
13	Samanea saman Monkeypod	Verify quantity / size of trees on site
MISCELLANEOUS		
1,660 l.f.	Polydivider	
6,038 c.y.	Imported planting soil	6" deep layer
2,053 c.y.	Soil amendment	See specifications



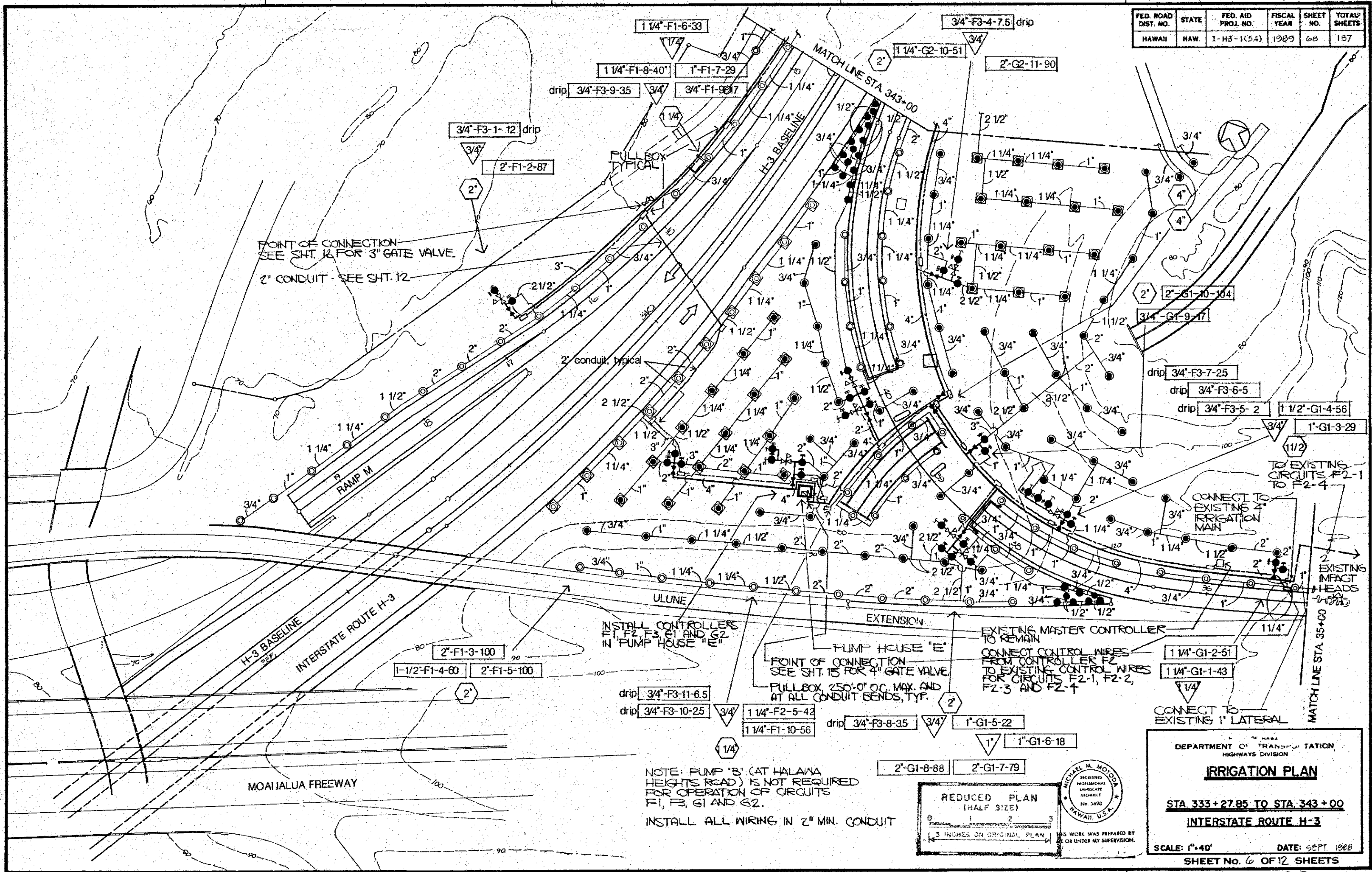
GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES, MEASUREMENTS AND SITE CONDITION, INCLUDING LOCATION OF ALL EXISTING UTILITIES.
2. PLANTING WILL NOT COMMENCE UNTIL THE PLANTING AREA IS PREPARED TO FINISH GRADE.
3. PRIOR TO TREE HOLE EXCAVATION ALL PLANTING LOCATIONS SHALL BE STAKED OUT BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
4. TREE HOLES SHALL BE AT LEAST TWO TIMES THE DIAMETER AND ONE AND ONE HALF TIMES THE DEPTH OF THE ROOTBALL OR THE ROOTBALL DIMENSIONS PLUS THE MINIMUM CLEARANCES SHOWN ON THE PLANS, WHICHEVER IS GREATER.
5. IF CORAL, ROCK, HARD PAN OR UNSUITABLE MATERIAL IS ENCOUNTERED WHILE EXCAVATING FOR THE PLANTING HOLE, THE MATERIAL SHALL BE BROKEN UP OR REMOVED AT LEAST 12 INCHES BEYOND THE NORMAL DIMENSIONS OF THE HOLE AS DIRECTED BY THE ENGINEER.
6. BACKFILL MIX SHALL CONSIST OF 3 PARTS OF SOIL, 1 PART OF MANURE AND 1 PART OF ORGANIC SOIL AMENDMENT.
7. MULCH SHALL BE PLACED OVER THE ENTIRE WATERING BASIN WITHIN 2 WEEKS AFTER PLANTING.
8. GUY WIRES, FLAGGING, STAKES, WINDBREAKS, ETC. SHALL BE MAINTAINED AND REPLACED IF NECESSARY BY THE CONTRACTOR UNTIL THE TREE IS ABLE TO STAND BY ITSELF. WHEN IT BECOMES UNNECESSARY THE CONTRACTOR SHALL REMOVE AND DISPOSE.
9. GUY WIRE SHALL BE NO. 11 GAGE GALVANIZED STEEL WIRE FOR TREES 3 INCHES IN DIAMETER OR LESS AND NO. 9 GAGE FOR TREES OVER 3 INCHES IN DIAMETER.
10. ORGANIC SOIL CONDITIONERS, MULCH, GUY WIRES & TURN BUCKLES, YELLOW FLAGGING TAPES, STAKES, RUBBER HOSE, BACKFILL MIX AND WINDBREAKS SHALL BE CONSIDERED INCIDENTAL TO PLANTING AND TRANSPLANTING OF TREES AND WILL NOT BE MEASURED FOR PAYMENT.
11. SECTION 619 - PLANTING AND TRANSPLANTING OF THE LATEST DEPARTMENT OF TRANSPORTATION 'STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION', AS AMENDED IS APPLICABLE TO THESE DETAILS.



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1(54)	1989	68	137

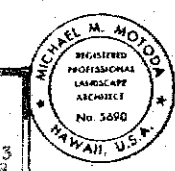
DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
APPROVED BY	



NOTE: PUMP "B" (AT HALAWA HEIGHTS ROAD) IS NOT REQUIRED FOR OPERATION OF CIRCUITS F1, F3, G1 AND G2.

INSTALL ALL WIRING IN 2" MIN. CONDUIT

REDUCED PLAN
(HALF SIZE)
3 INCHES ON ORIGINAL PLAN



DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IRRIGATION PLAN

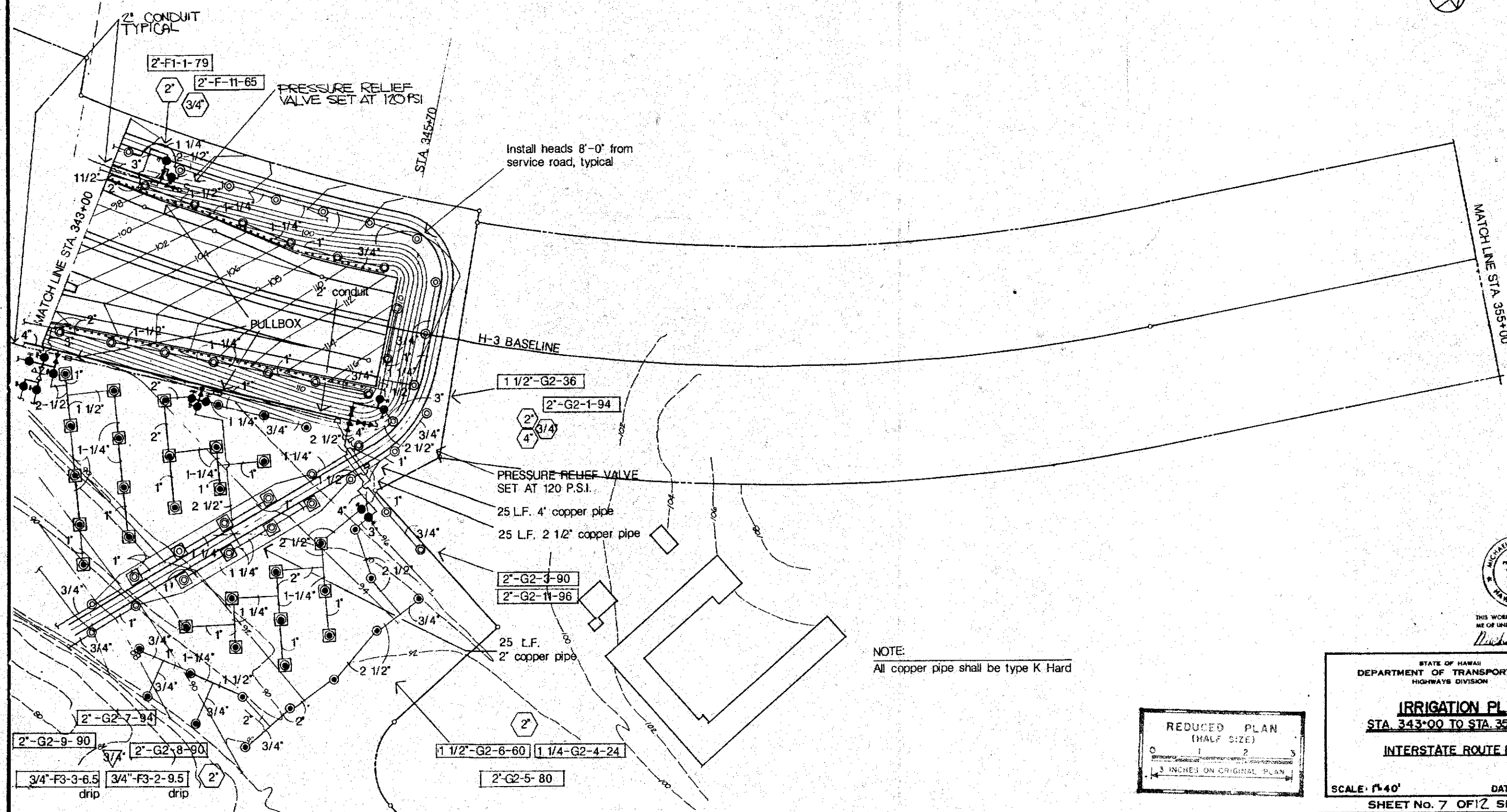
STA 333+27.85 TO STA 343+00

INTERSTATE ROUTE H-3

SCALE: 1"=40' DATE: SEPT 1988

SHEET No. 6 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1(54)	1989	69	137



NOTE:
All copper pipe shall be type K Hard

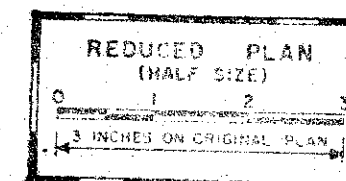


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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IRRIGATION PLAN
STA. 343+00 TO STA. 355+00
INTERSTATE ROUTE H-3

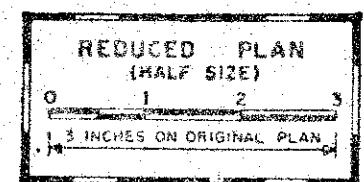
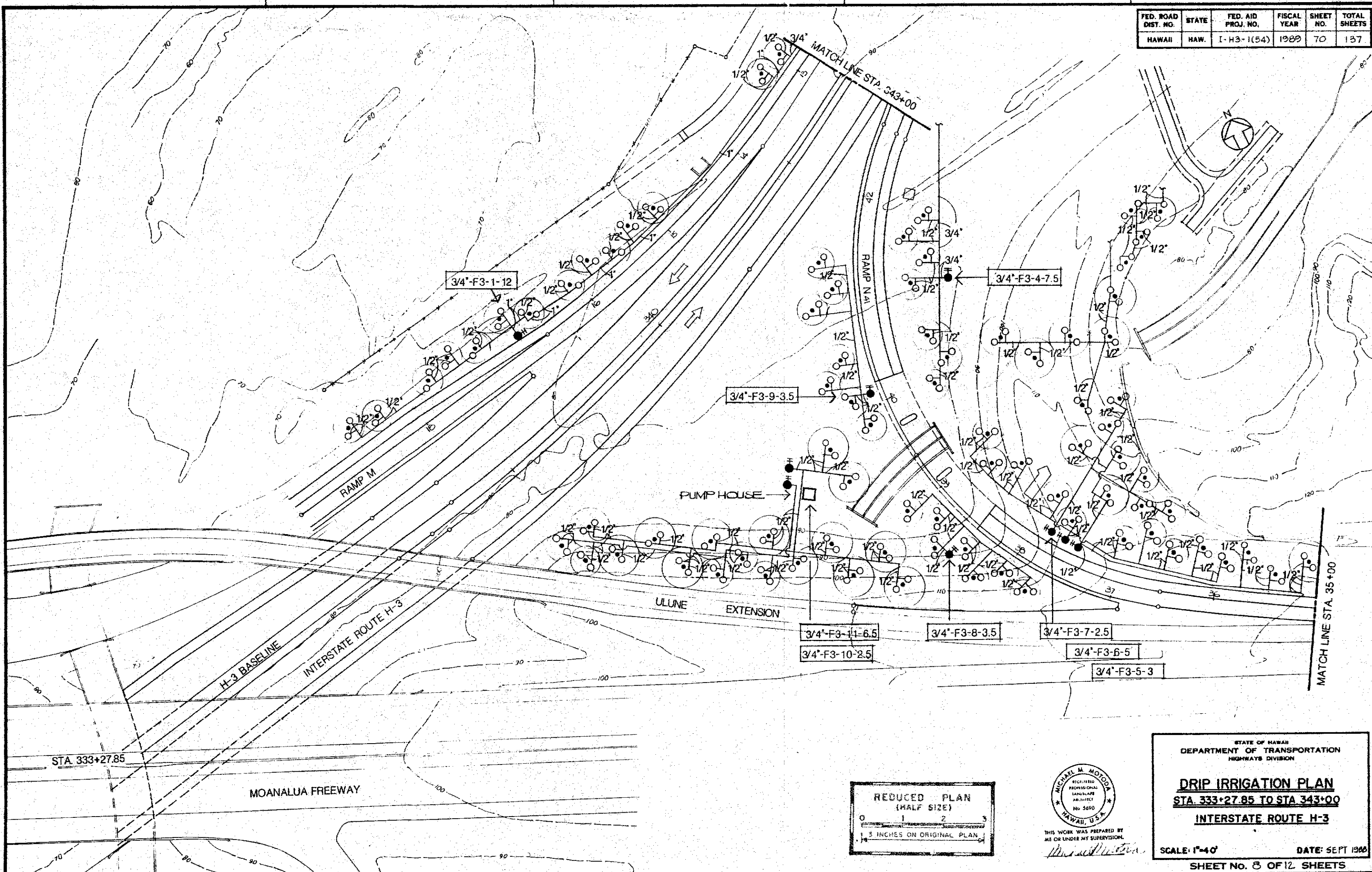
SCALE: 1"=40' DATE: SEPT 1989
SHEET No. 7 OF 12 SHEETS



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
APPROVED BY	
ORIGINAL PLAN	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	70	137

DATE	BY
DESIGNED BY	CHECKED BY
NOTED BY	
QUANTITIES BY	
ORIGINAL PLAN	



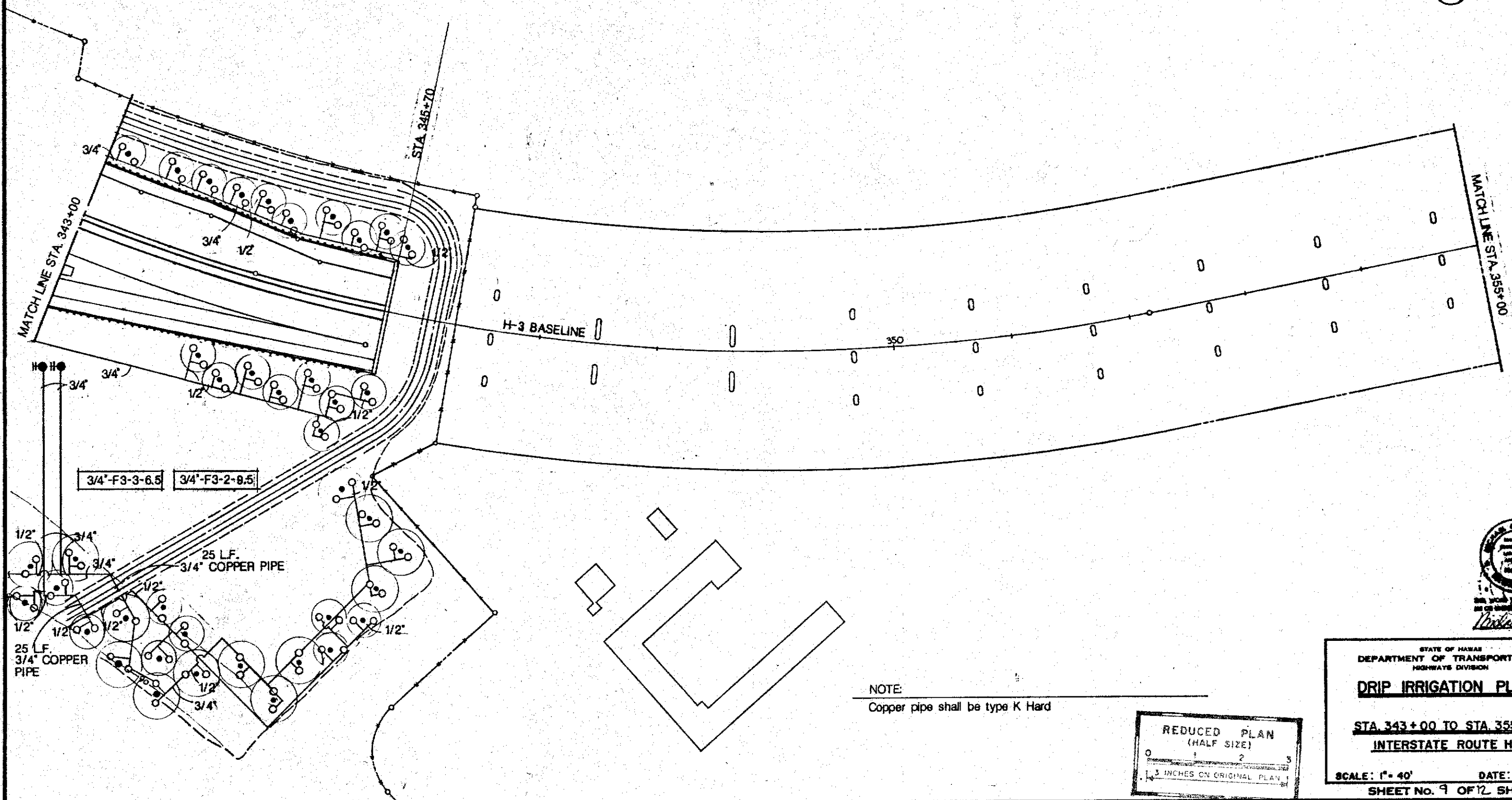
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRIP IRRIGATION PLAN
STA. 333+27.85 TO STA 343+00
INTERSTATE ROUTE H-3

SCALE: 1"=40'
DATE: SEPT 1988
SHEET NO. 8 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1(54)	1989	71	127



DATE	...
DESIGNED BY	...
CHECKED BY	...
NOTED BY	...
ORIGINAL PLAN	...

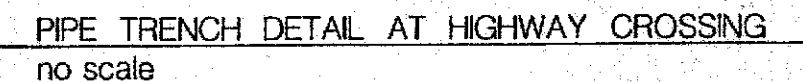
NOTE:
Copper pipe shall be type K Hard

REDUCED PLAN
(HALF SIZE)
3 INCHES ON ORIGINAL PLAN



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
DRIP IRRIGATION PLAN
STA. 343+00 TO STA. 355+00
INTERSTATE ROUTE H-3
SCALE: 1" = 40' DATE: SEPT 1989
SHEET NO. 9 OF 12 SHEETS

The diagram illustrates a test setup for backfill material. A vertical container is filled with backfill material (indicated by diagonal hatching). A copper pipe is positioned vertically within the container, with a wiring in conduit (indicated by a circle with a cross) attached to it. The container is surrounded by backfill material. Above the container, there are layers of pavement and base coarse. The height of the backfill material is labeled as 3'-0" min. The height of the container is labeled as 3" min.



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IRRIGATION LEGEND AND DETAILS

INTERSTATE ROUTE H-3

SCALE: AS SHOWN DATE: SEPT. 1988

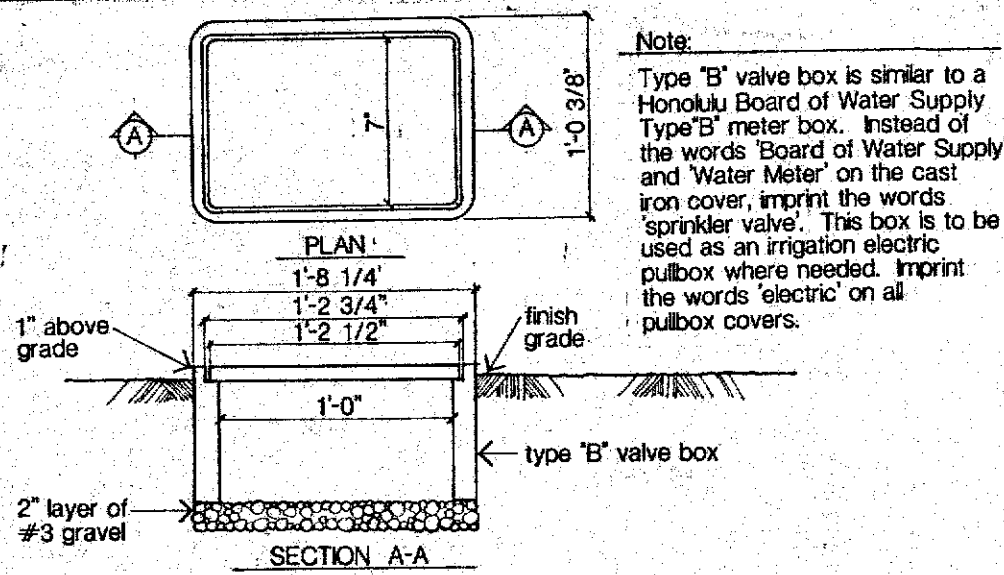
SHEET No. 10 OF 12 SHEETS

REDUCED PLAN
(HALF SIZE)

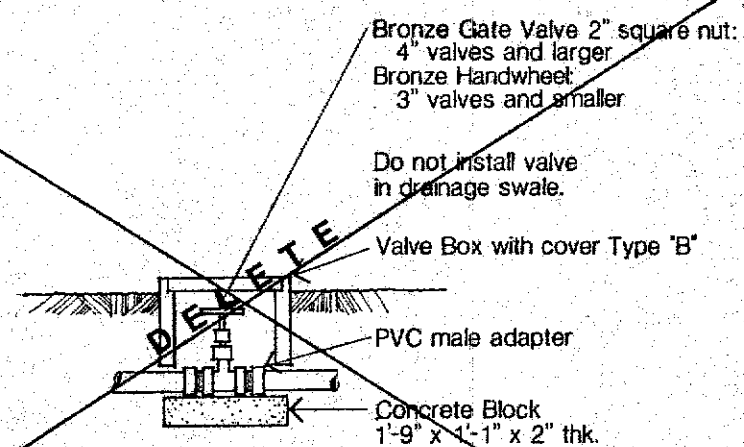
3 INCHES ON ORIGINAL PLAN

ORIGINAL PLAN	SURVEY DRAWN BY	DATE
NOTE BOOK	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

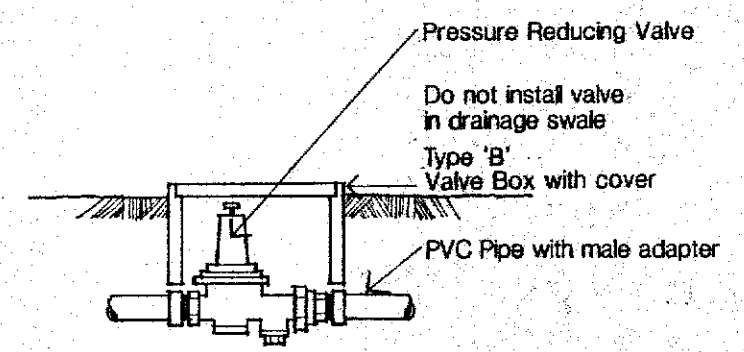
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(54)	1989	73	137



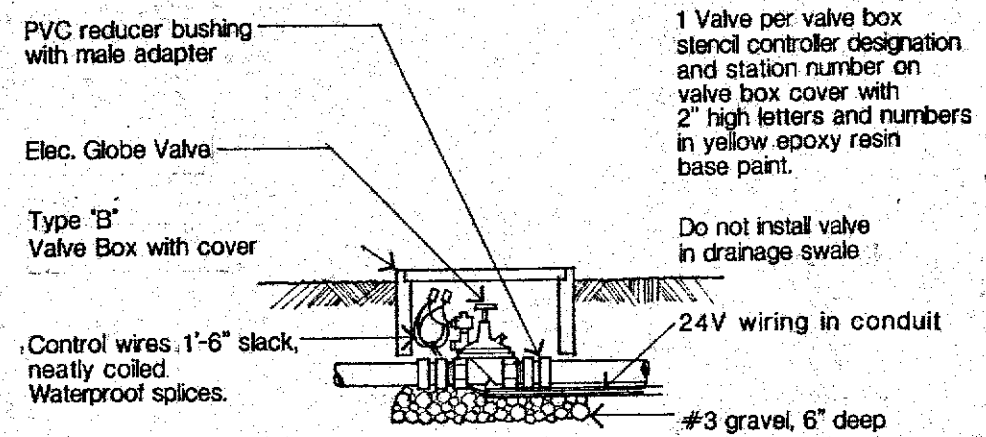
TYPE B VALVE BOX INSTALLATION DETAIL
no scale



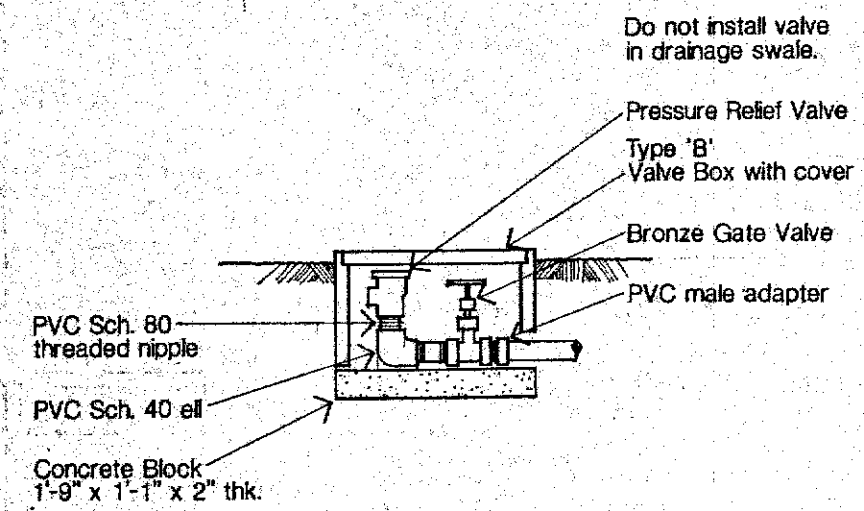
GATE VALVE INSTALLATION DETAIL
no scale



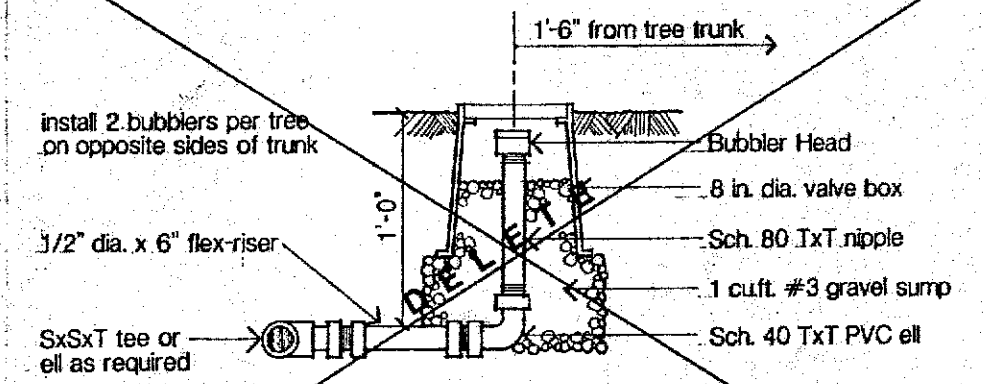
PRESSURE REDUCING VALVE INSTALLATION DETAIL
no scale



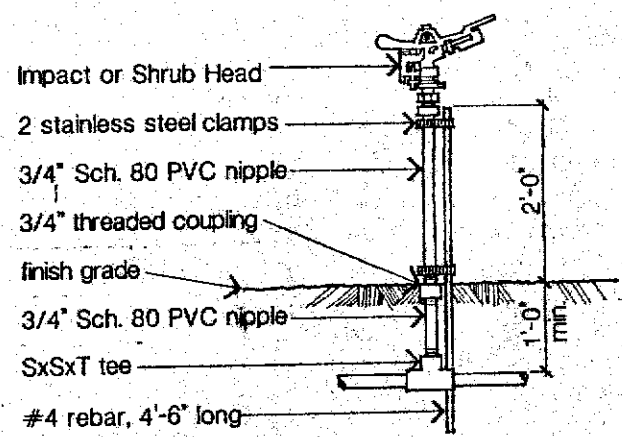
ELECTRIC VALVE INSTALLATION DETAIL
no scale



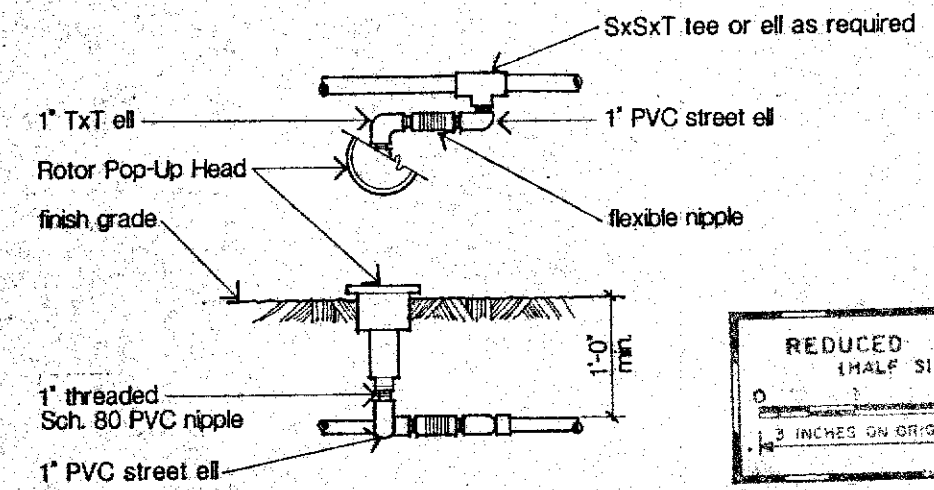
RELIEF VALVE INSTALLATION DETAIL
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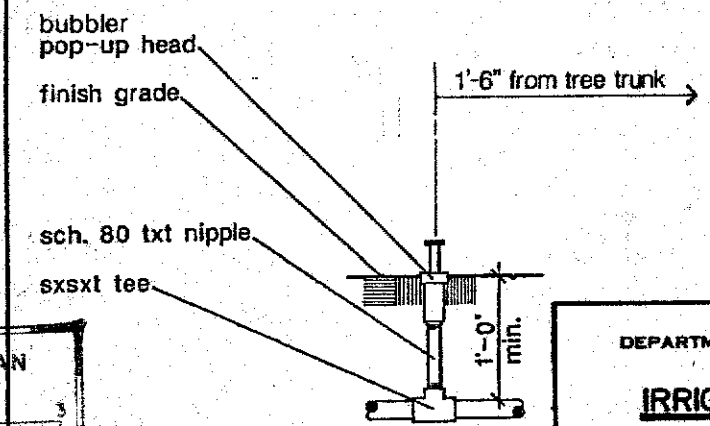
BUBBLER INSTALLATION DETAIL
no scale



IMPACT OR SHRUB HEAD INSTALLATION DETAIL
no scale

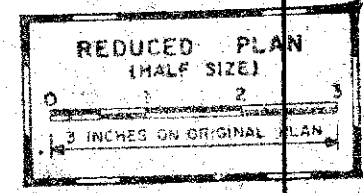


ROTOR POP-UP HEAD INSTALLATION DETAIL
no scale



6" BUBBLER POP-UP HEAD INSTALLATION DETAIL
no scale

DATE	
BY	
CHECKED BY	
DESIGNED BY	
QUANTITIES BY	
NOTED BY	
ORIGINAL PLAN	
NO.	



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IRRIGATION DETAILS

INTERSTATE ROUTE H-3

SCALE: AS SHOWN DATE: SEPT 1988

SHEET NO. 11 OF 12 SHEETS

