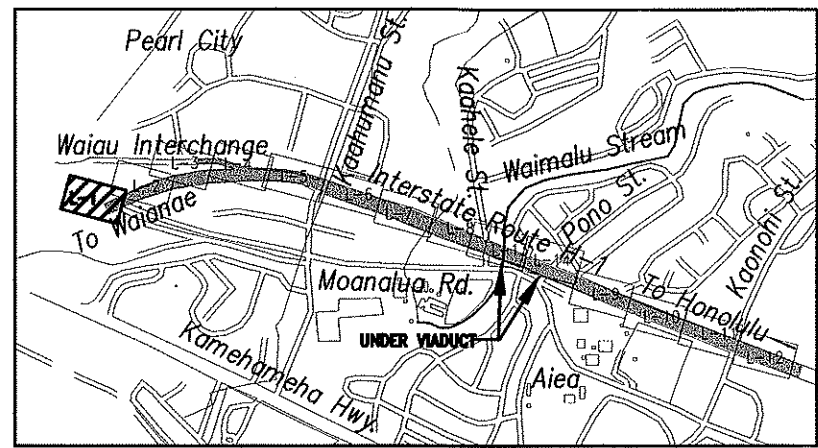


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 771	816



KEYMAP
NOT TO SCALE

METER FLOW REQUIREMENTS

(IRRIGATION ONLY)

Meter No. 5464907 Premise No. 1046322

	FIXTURE UNITS (FU)	GALLONS PER MINUTE (GPM)	GALLONS PER DAY (GPD)
A. PROPOSED IRRIGATION	00	00	000
B. TO BE REMOVED (DEMOLITION)	-2,800	-420	-12,600
C. TOTAL NET (A - B):	-2,800	420	-12,600
D. EXISTING TO REMAIN:	650	155	4,650
E. GRAND TOTAL (A + D)	650	155	4650

FOR ESTIMATING PURPOSES ONLY

DESCRIPTION OF WORK	ESTIMATE
IRRIGATION SERVICE	
EX. 4" METER	N/A
INSTALLATION CHARGE	
WATER SYSTEM FACILITIES CHARGES (WSFC)	
* CREDIT	
S/N	
S/N	
FIRE SERVICE	
METER	N/A
INSTALLATION CHARGE	N/A
ONE-TIME CHARGE	N/A
TOTAL \$	0

*CREDITS WILL BE DETERMINED WHEN THE BUILDING PERMIT APPLICATION IS SUBMITTED FOR BWS REVIEW AND APPROVAL.

THIS ESTIMATE IS SUBJECT TO CHANGE. A FORMAL WRITTEN QUOTATION MAY BE OBTAINED AND ALL PAYMENTS FOR THE CHARGES SHOWN ON THE QUOTATION MADE WITHIN 30 DAYS AFTER THE CONSTRUCTION PLAN IS APPROVED BY BWS. IF PAYMENTS ARE NOT RECEIVED WITHIN THE 30 DAY PERIOD, THE PROJECT WILL BE SUBJECT TO THE PREVAILING RATES.

EXISTING WATER METER 5464907
PREMISE NUMBER 1046322
NOT SHOWN BUT IS A 4" METER
LOCATED ON THE CORNER OF
MOANALUA ROAD AND HOOMALU
STREET. (APPROX 600 L.F. AWAY)

EXISTING 6" GATE VALVE OPERATING EXISTING SUB-MAIN,
VALVES AND PIPING DOWNSTREAM SHALL BE RETAINED.

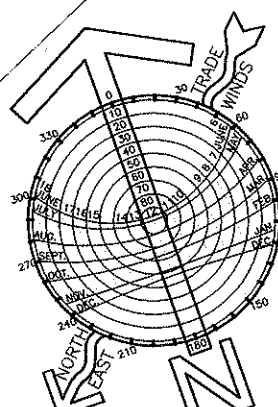
EXISTING 6" IRRIGATION MAIN TO BE RETAINED
REPAIR ANY DAMAGED CAUSED DUE TO NEW
CONSTRUCTION - TYPICAL

EXISTING 4" GATE VALVE OPERATING EXISTING
IRRIGATION SYSTEM WITHIN ON-RAMP INNER
CIRCLE AREA - TO BE RETAINED. REPAIR ANY
PART OF SYSTEM DAMAGED DUE TO NEW
CONSTRUCTION WITHIN AREA - TYPICAL

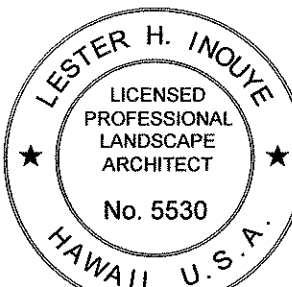
EXISTING POINT OF CONNECTION A FOR EXISTING
SYSTEM TO BE RETAINED.

10/16/03	OBTAINED CITY APPROVAL
DATE	REVISION

LANDSCAPE IRRIGATION PLAN - 1
SCALE: 1" = 20'



1" = 20'



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

SIGNATURE: *Lester H. Inoué*
EXPIRATION DATE OF THE LICENSE: April 30, 2004

APPROVED: *[Signature]*

Principal Executive
Maintenance Unit, BWS

7/8/03

Date

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE IRRIGATION PLAN-1

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII

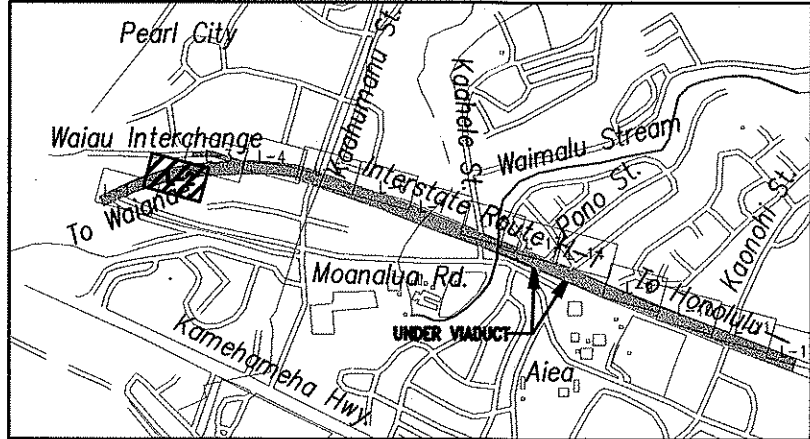
Scale: 1" = 20'

Date: Mar. 31, 2003

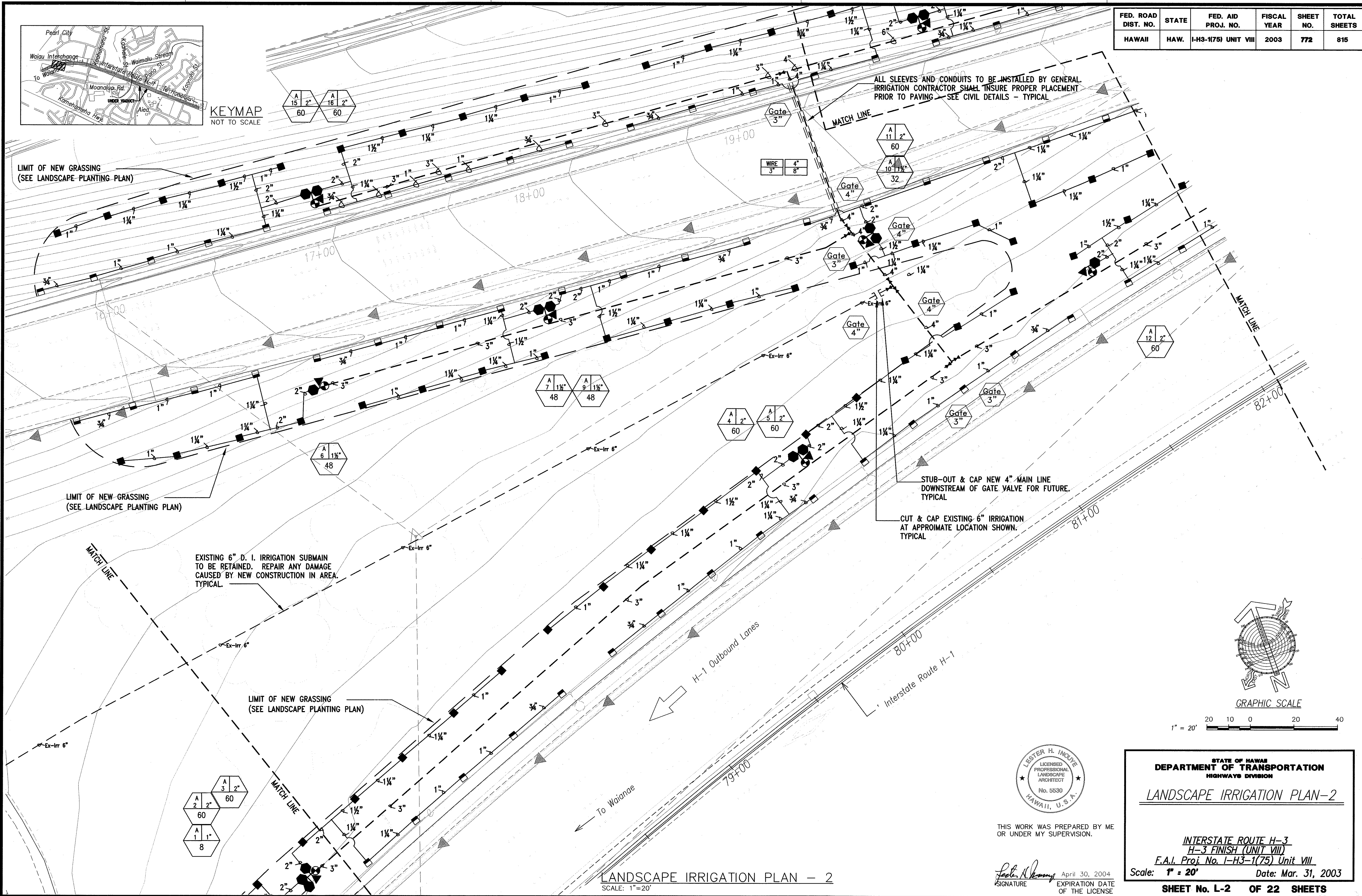
SHEET No. L.01 OF L.22 SHEETS

ADD. 771

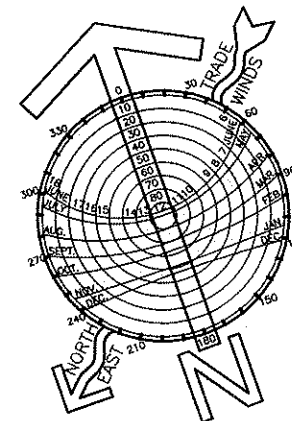
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	772	815



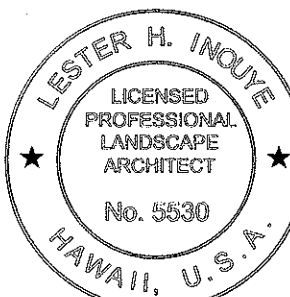
KEYMAP
NOT TO SCALE



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



1" = 20'



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

Signature: *Lester H. Inoué*
April 30, 2004
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

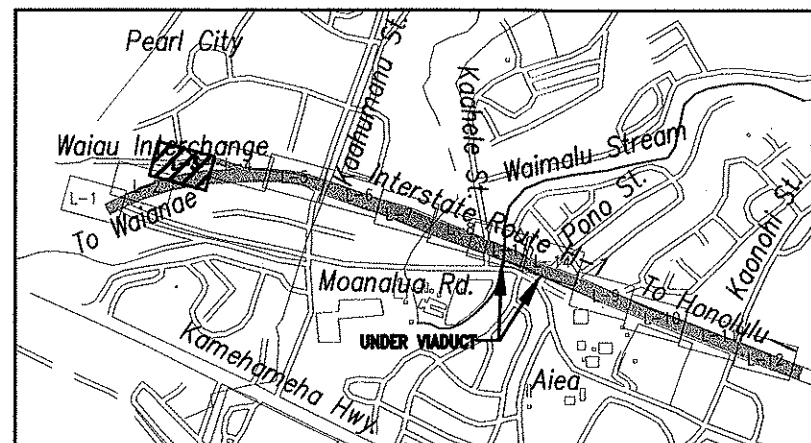
LANDSCAPE IRRIGATION PLAN-2

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII

Scale: 1" = 20' Date: Mar. 31, 2003

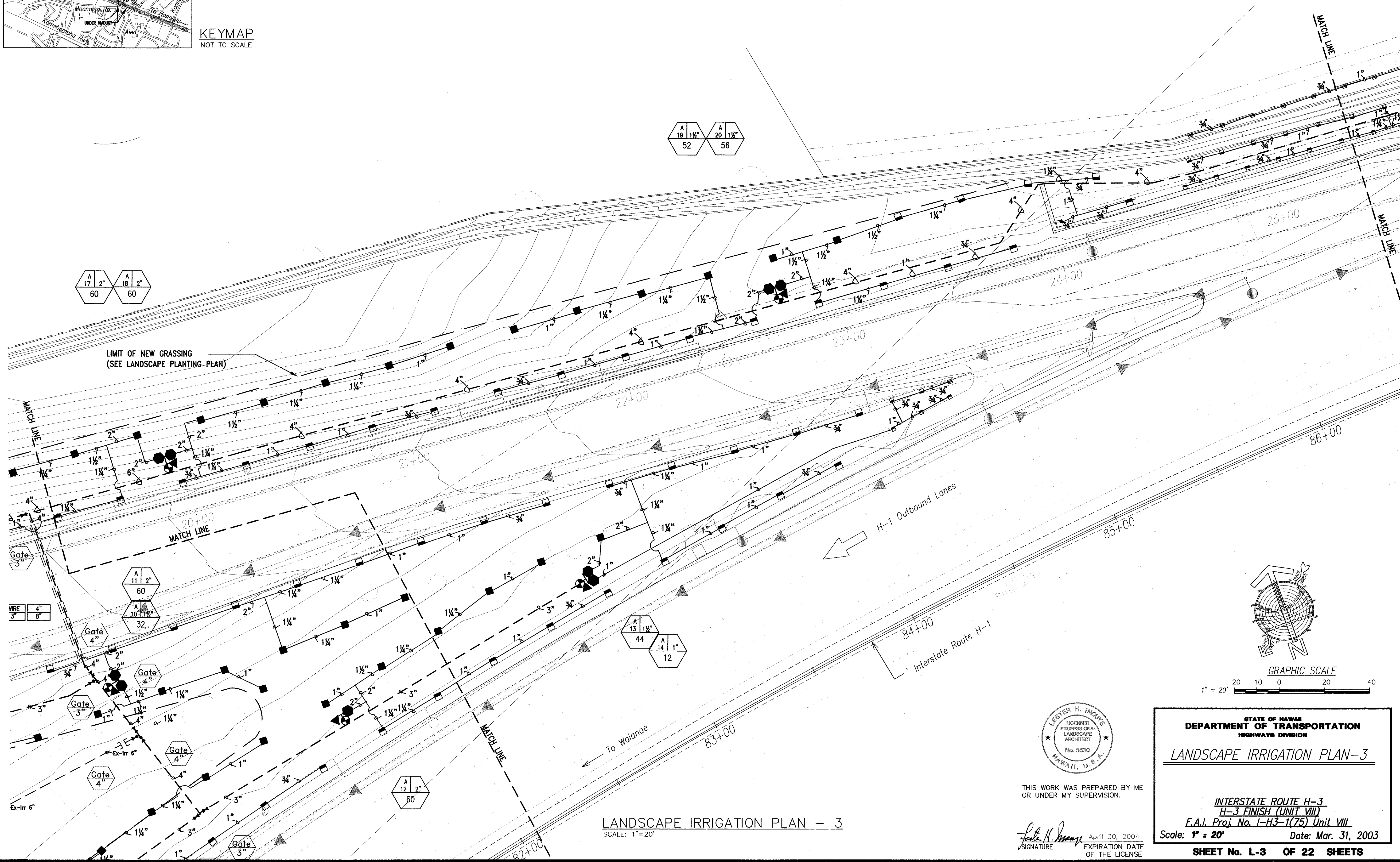
SHEET No. L-2 OF 22 SHEETS

LANDSCAPE IRRIGATION PLAN - 2
SCALE: 1"=20'

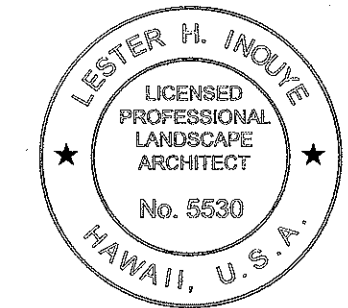
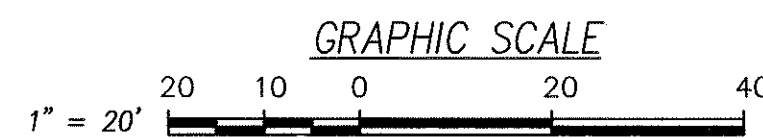
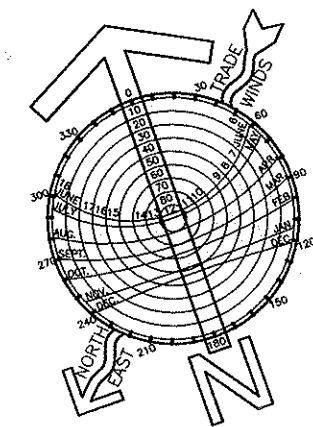


KEYMAP
NOT TO SCALE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	773	815



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



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

SIGNATURE *Lester H. Inoué* April 30, 2004
EXPIRATION DATE OF THE LICENSE

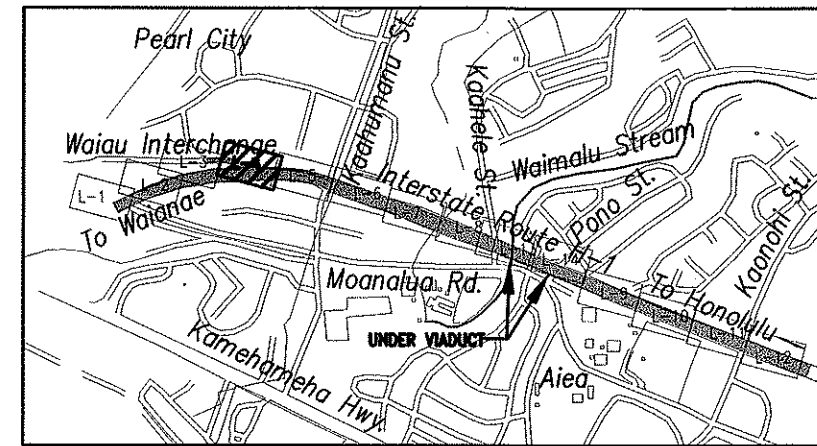
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE IRRIGATION PLAN-3

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII

Scale: 1" = 20' Date: Mar. 31, 2003

SHEET No. L-3 OF 22 SHEETS

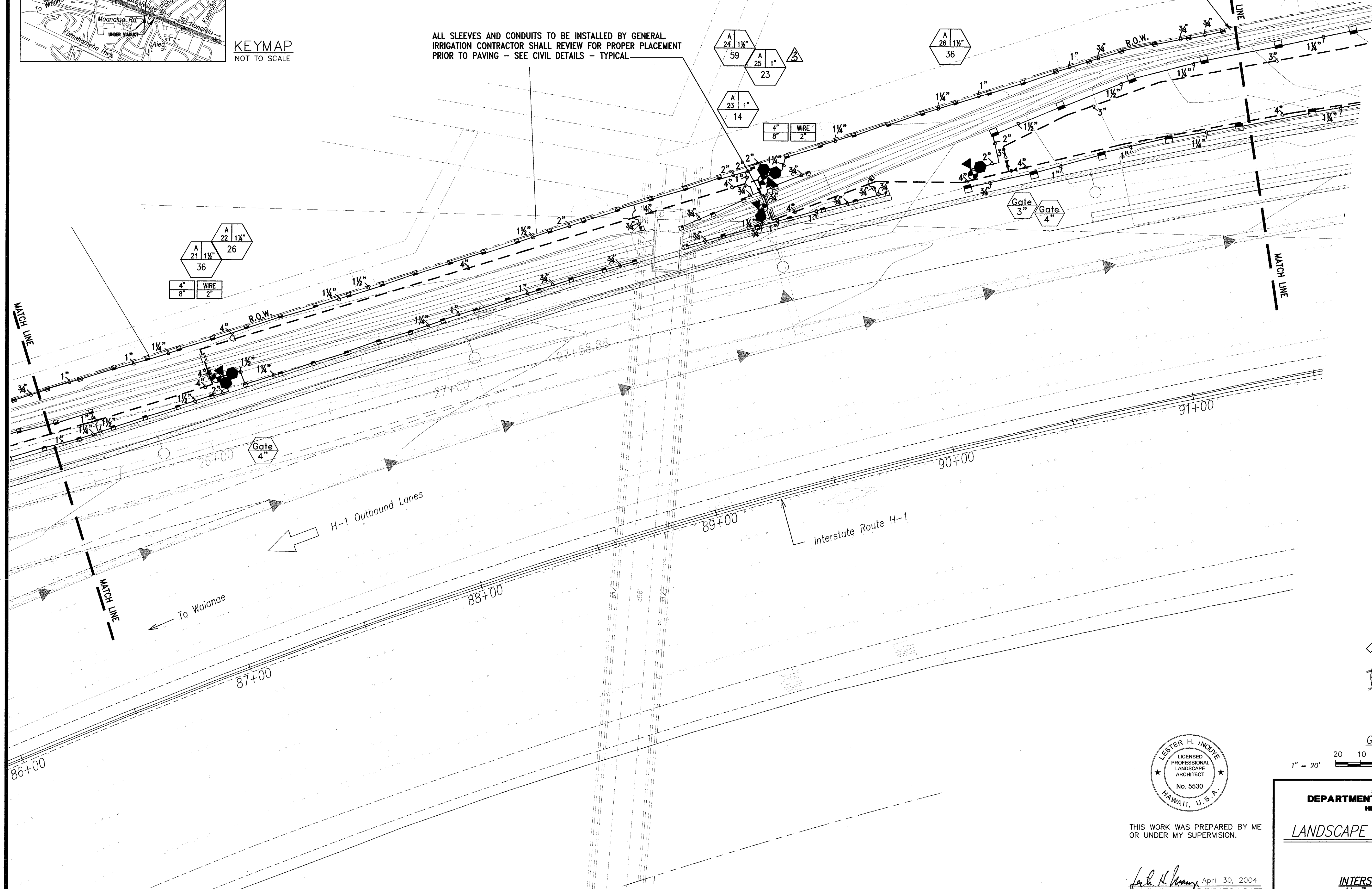


KEYMAP
NOT TO SCALE

ALL SLEEVES AND CONDUITS TO BE INSTALLED BY GENERAL IRRIGATION CONTRACTOR SHALL REVIEW FOR PROPER PLACEMENT PRIOR TO PAVING - SEE CIVIL DETAILS - TYPICAL

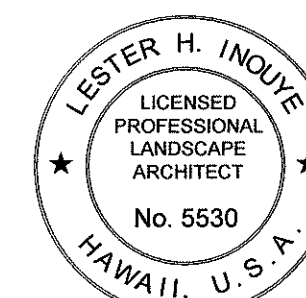
CONTRACTOR SHALL PROVIDE TEMPORARY IRRIGATION TO REESTABLISH VEGETATION BETWEEN DRAINAGE STRUCTURE AND FENCE AS NEEDED. REMOVE UPON COMPLETION OF PROJECT.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 774	815



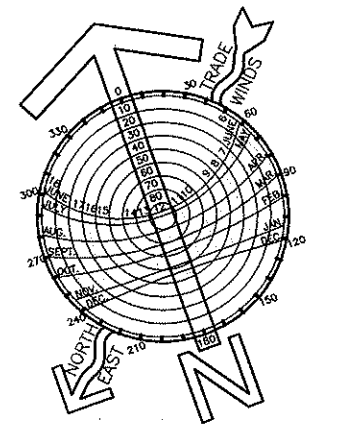
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____

LANDSCAPE IRRIGATION PLAN - 4
SCALE: 1" = 20'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Lester H. Inoué
SIGNATURE
April 30, 2004
EXPIRATION DATE OF THE LICENSE



1" = 20'

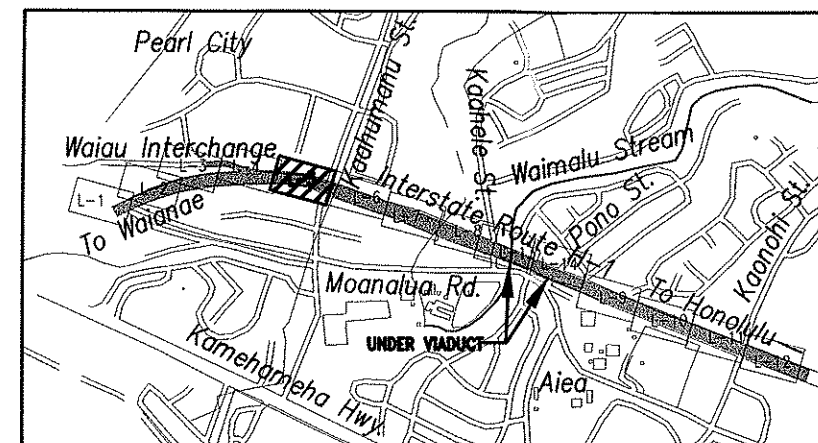
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE IRRIGATION PLAN-4

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII
Scale: 1" = 20' Date: Mar. 31, 2003

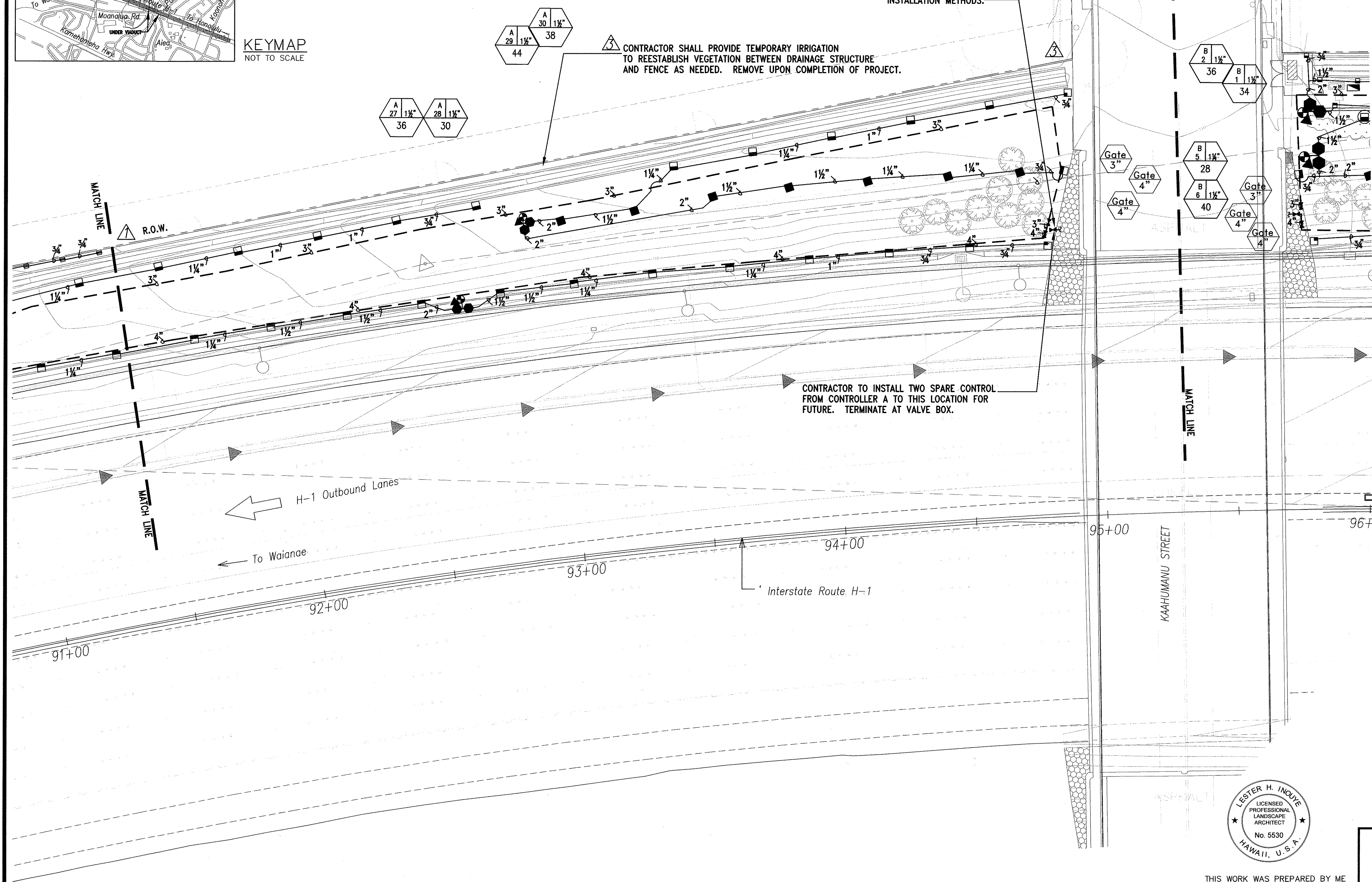
SHEET No. L-4 OF 22 SHEETS

ADD. 774



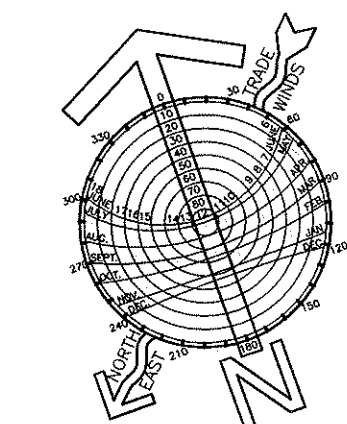
KEYMAP
NOT TO SCALE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 775	815



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

Lester H. Inoué
SIGNATURE
April 30, 2004
EXPIRATION DATE
OF THE LICENSE



1" = 20'

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

LANDSCAPE IRRIGATION PLAN - 5
SCALE: 1"=20'

6/20/03	Revised Irrigation System.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

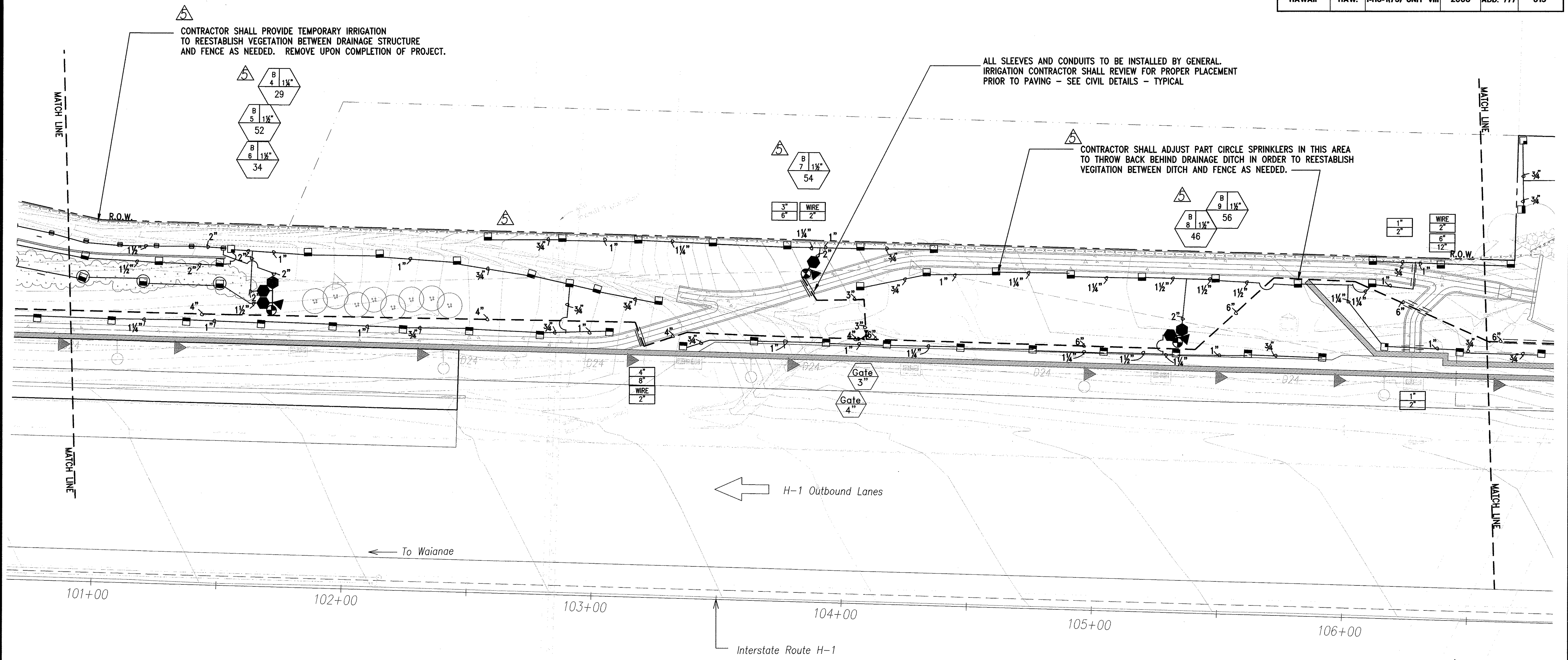
LANDSCAPE IRRIGATION PLAN-5

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII

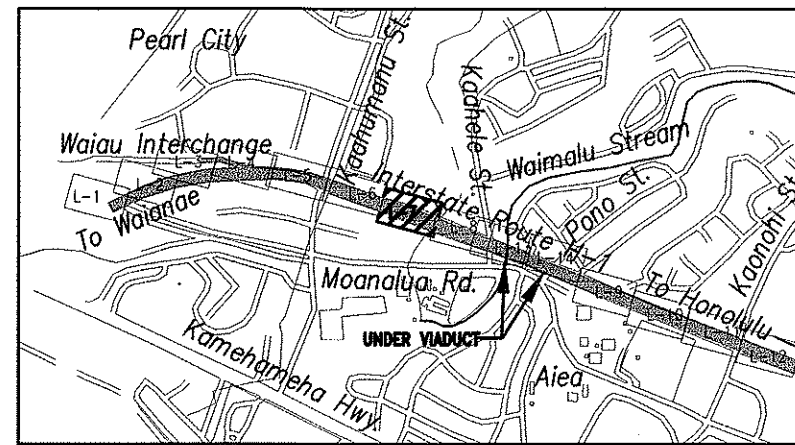
Scale: 1" = 20' Date: Mar. 31, 2003

L-5 SHEET No. L-5 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 777	815

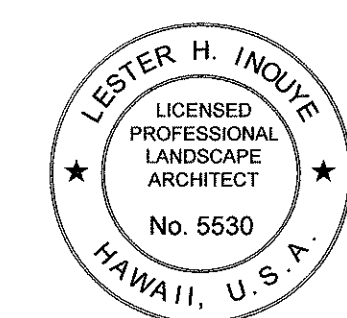


SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTED BY	
NO.	



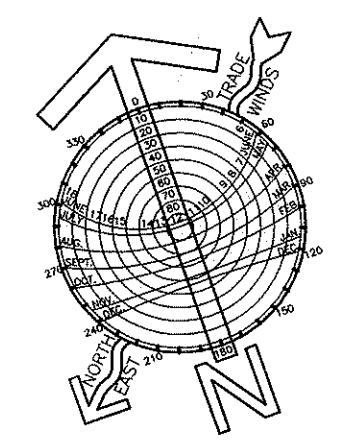
KEYMAP
NOT TO SCALE

LANDSCAPE IRRIGATION PLAN - 7
SCALE: 1"=20'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Lester H. Inoue April 30, 2004
SIGNATURE EXPIRATION DATE OF THE LICENSE



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

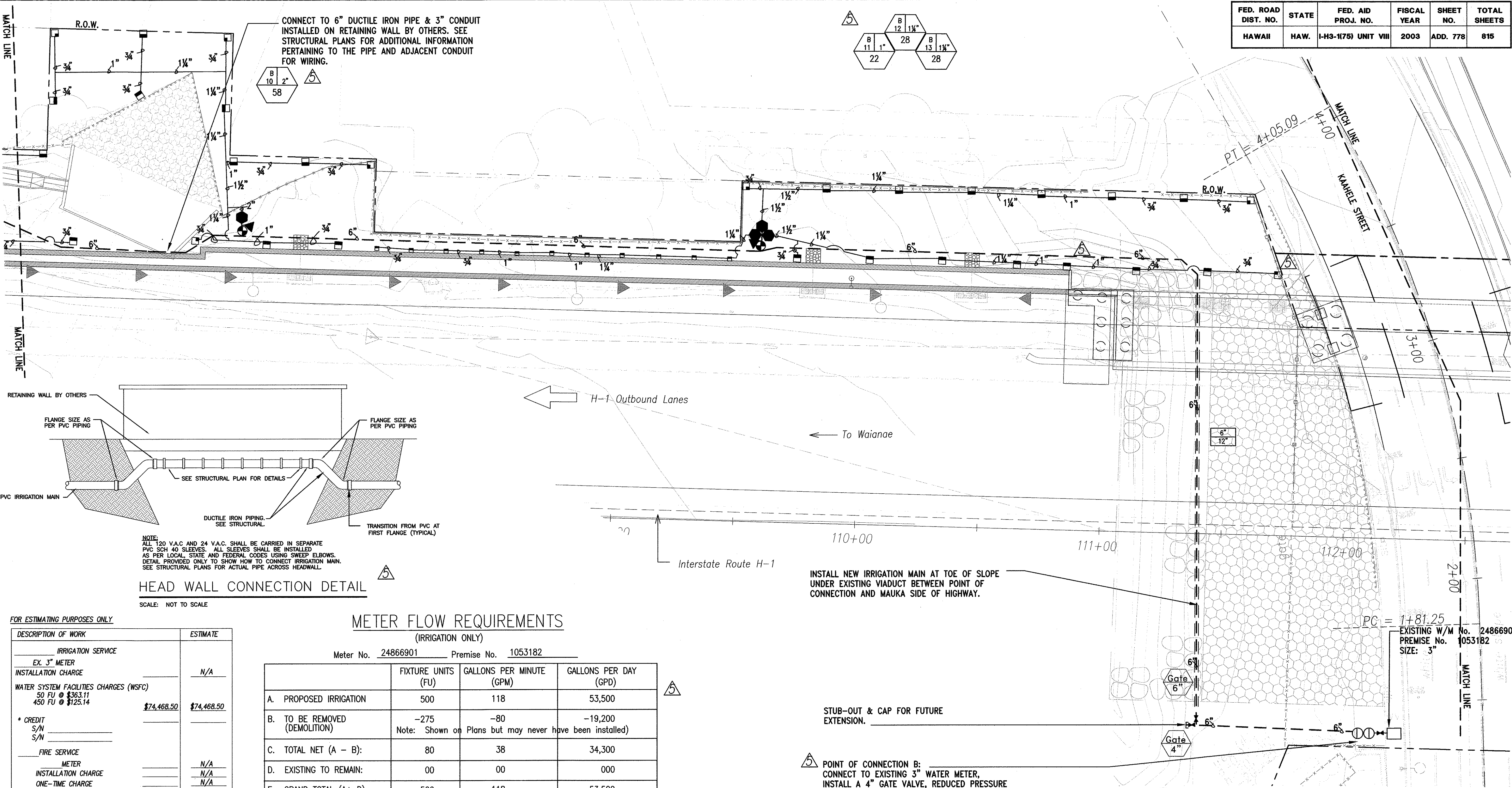
LANDSCAPE IRRIGATION PLAN-7

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII
Scale: 1" = 20' Date: Mar. 31, 2003

SHEET No. L-7 OF 22 SHEETS

10/16/03	Revised Irrigation System.
DATE	REVISION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 778	815



HEAD WALL CONNECTION DETAIL
SCALE: NOT TO SCALE

FOR ESTIMATING PURPOSES ONLY

DESCRIPTION OF WORK	ESTIMATE
IRRIGATION SERVICE	
EX. 3" METER	N/A
INSTALLATION CHARGE	
WATER SYSTEM FACILITIES CHARGES (WSFC)	
50 FU @ \$363.11	
450 FU @ \$125.14	\$74,468.50
* CREDIT	
S/N	
S/N	
FIRE SERVICE	
METER	N/A
INSTALLATION CHARGE	N/A
ONE-TIME CHARGE	N/A
TOTAL	\$74,468.50

*CREDITS WILL BE DETERMINED WHEN THE BUILDING PERMIT APPLICATION IS SUBMITTED FOR BWS REVIEW AND APPROVAL.

THIS ESTIMATE IS SUBJECT TO CHANGE. A FORMAL WRITTEN QUOTATION MAY BE OBTAINED AND ALL PAYMENTS FOR THE CHARGES SHOWN ON THE QUOTATION MADE WITHIN 30 DAYS AFTER THE CONSTRUCTION PLAN IS APPROVED BY BWS. IF PAYMENTS ARE NOT RECEIVED WITHIN THE 30 DAY PERIOD, THE PROJECT WILL BE SUBJECT TO THE PREVAILING RATES.

METER FLOW REQUIREMENTS (IRRIGATION ONLY)

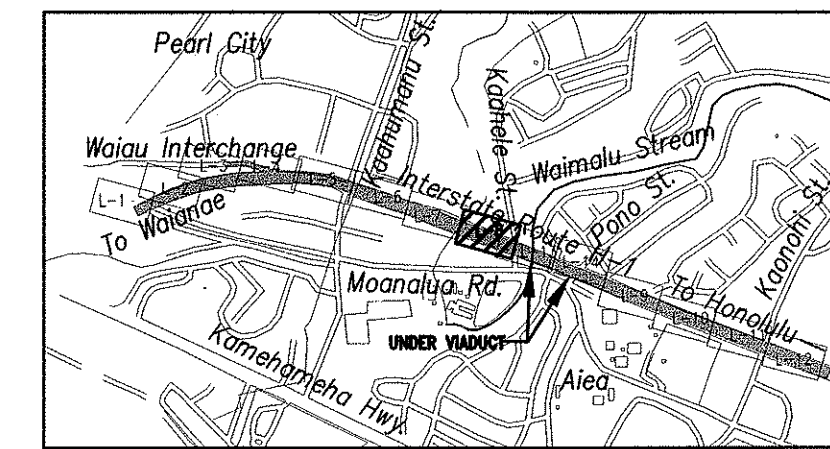
Meter No. 24866901 Premise No. 1053182

	FIXTURE UNITS (FU)	GALLONS PER MINUTE (GPM)	GALLONS PER DAY (GPD)
A. PROPOSED IRRIGATION	500	118	53,500
B. TO BE REMOVED (DEMOLITION)	-275	-80	-19,200
Note: Shown on Plans but may never have been installed			
C. TOTAL NET (A - B):	80	38	34,300
D. EXISTING TO REMAIN:	00	00	000
E. GRAND TOTAL (A+ D)	500	118	53,500

APPROVED:

Joseph W. Keenan
Principal Executive
Maintenance Unit, BWS

10/30/03
Date



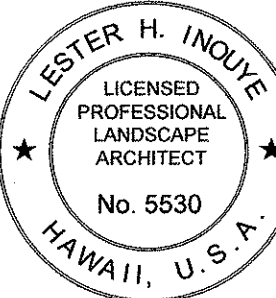
KEYMAP
NOT TO SCALE

LANDSCAPE IRRIGATION PLAN - 8
SCALE: 1"=20'

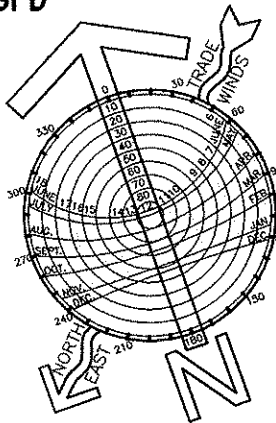
INSTALL NEW IRRIGATION MAIN AT TOE OF SLOPE UNDER EXISTING VIADUCT BETWEEN POINT OF CONNECTION AND MAUKA SIDE OF HIGHWAY.

STUB-OUT & CAP FOR FUTURE EXTENSION.

POINT OF CONNECTION B:
CONNECT TO EXISTING 3" WATER METER, INSTALL A 4" GATE VALVE, REDUCED PRESSURE BACKFLOW PREVENTION UNIT AND ALL DOWNSTREAM PIPING AS SHOWN. PEAK FLOW: 118 GPM AVERAGE DAILY DEMAND: 53,500 GPD



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.



April 30, 2004
EXPIRATION DATE OF THE LICENSE

10/31/03
DATE

REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE IRRIGATION PLAN-8

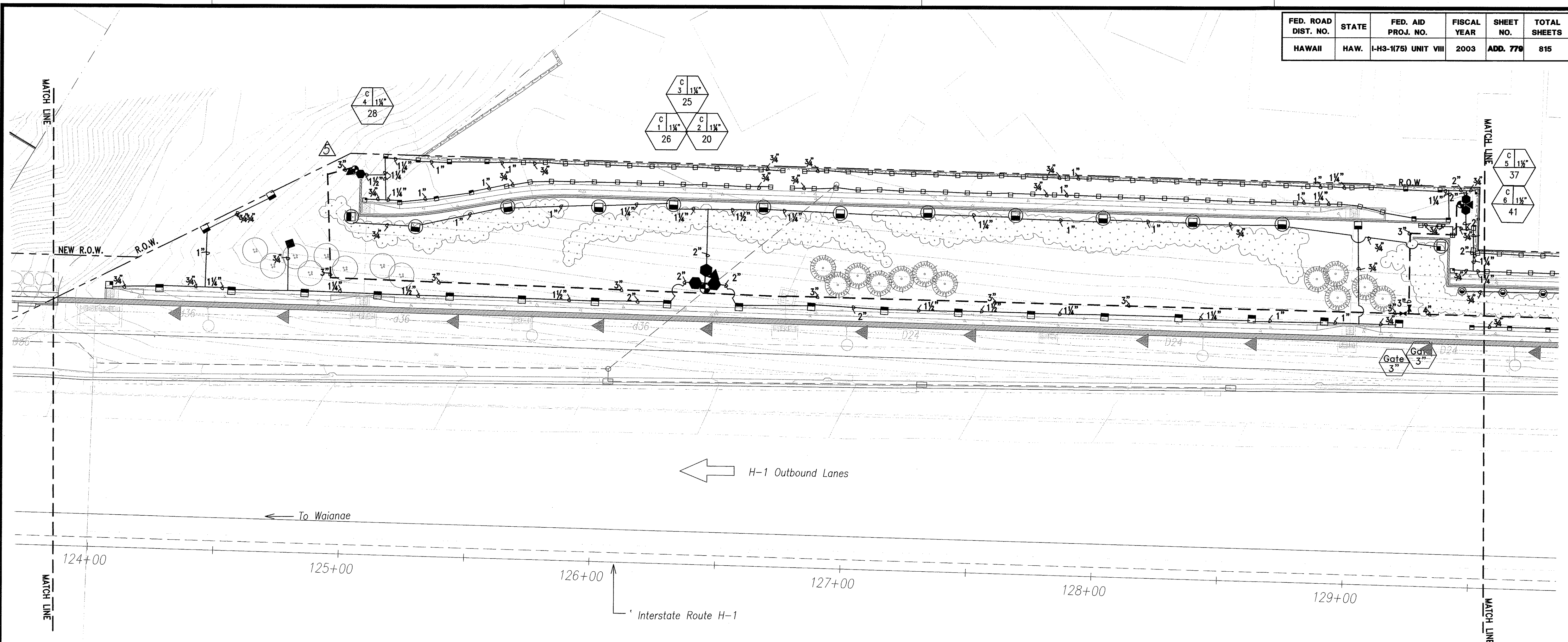
INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII

Scale: 1" = 20' Date: Mar. 31, 2003

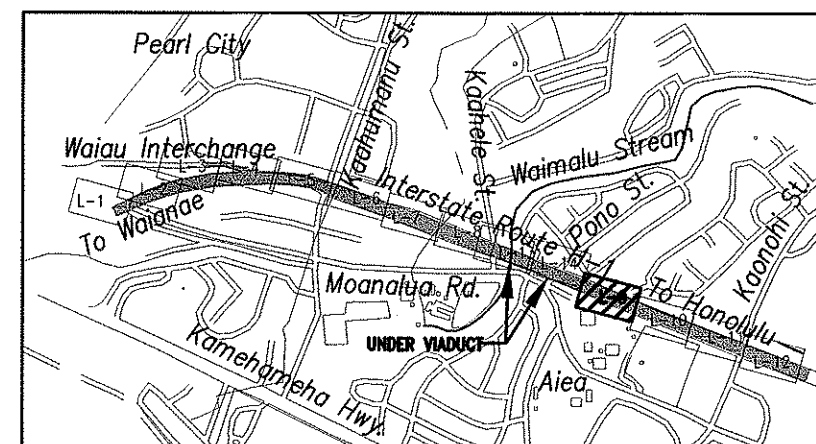
SHEET No. L-8 OF 22 SHEETS

ADD. 778

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 779	815

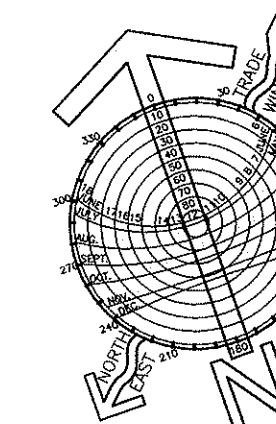


DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____

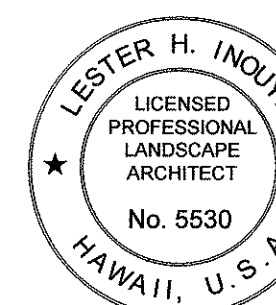


KEYMAP
NOT TO SCALE

LANDSCAPE IRRIGATION PLAN - 9
SCALE: 1"=20'



GRAPHIC SCALE



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

Lester H. Inoué April 30, 2004
SIGNATURE EXPIRATION DATE
OF THE LICENSE

10/16/03	Modified Irrigation System.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

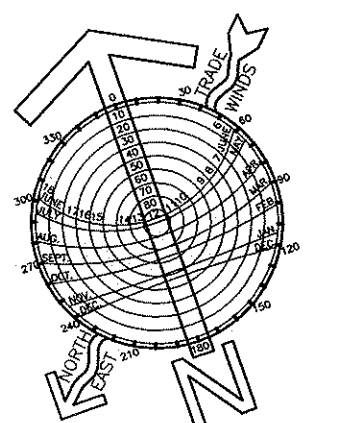
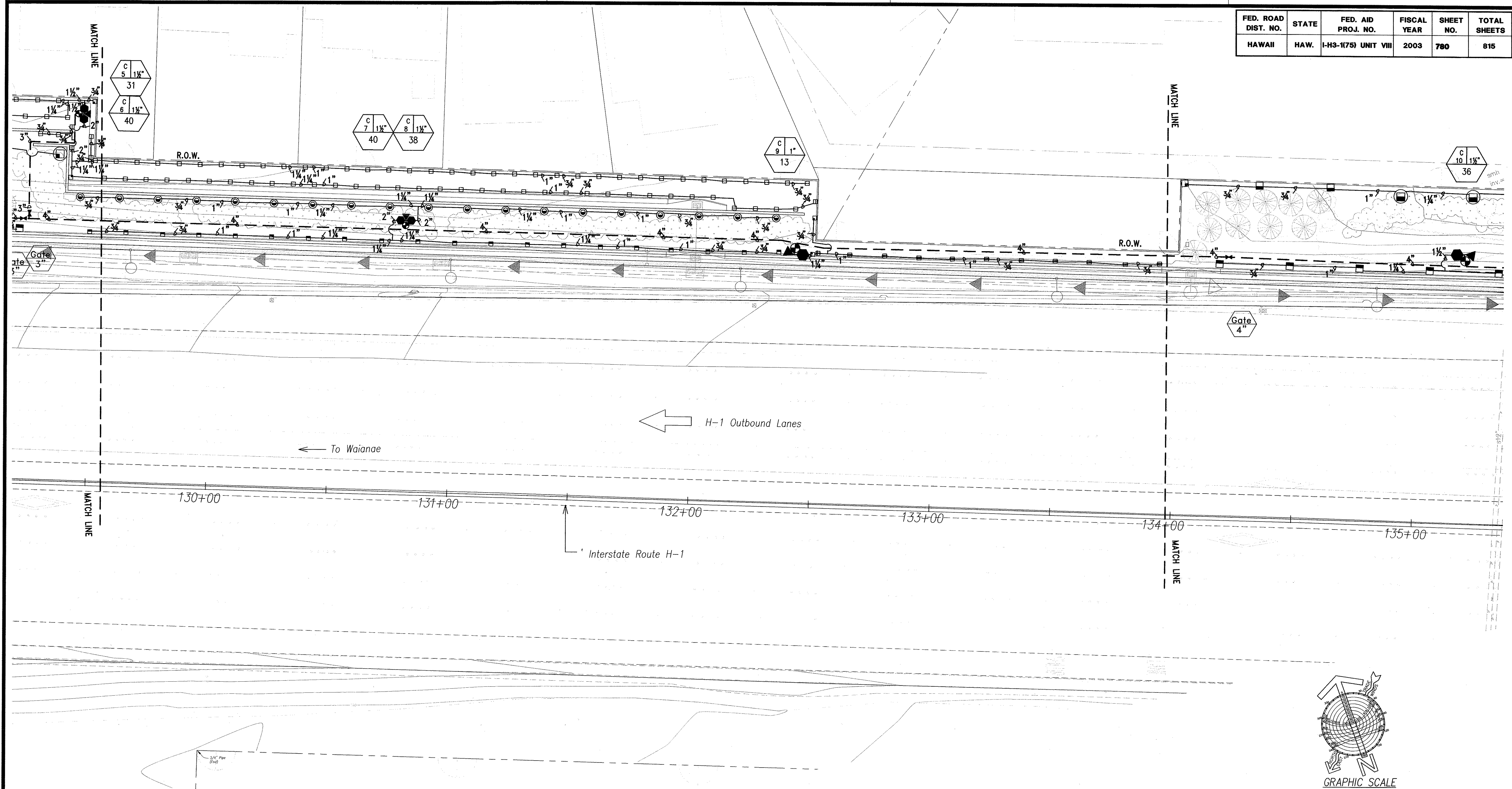
LANDSCAPE IRRIGATION PLAN-9

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII

Scale: 1" = 20'
Date: Mar. 31, 2003

SHEET No. L-9 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	780	815

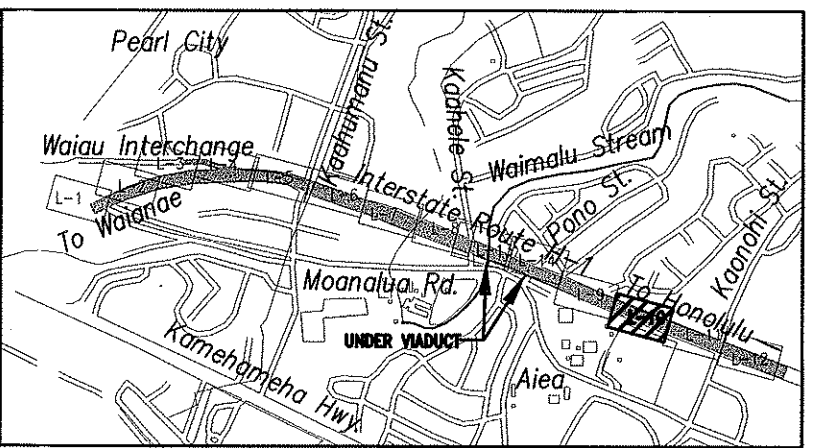


1" = 20'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Lester H. Inouye
SIGNATURE
April 30, 2004
EXPIRATION DATE OF THE LICENSE



KEYMAP
NOT TO SCALE

LANDSCAPE IRRIGATION PLAN - 10
SCALE: 1"=20'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE IRRIGATION PLAN-10

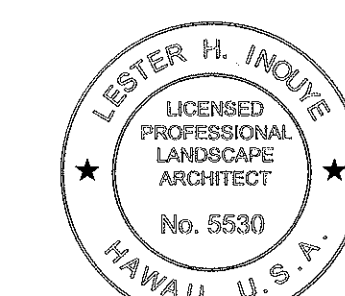
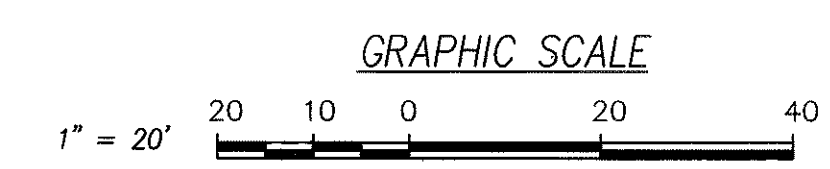
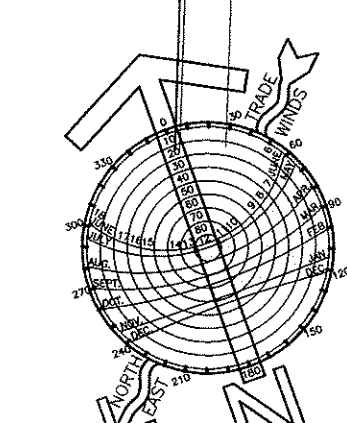
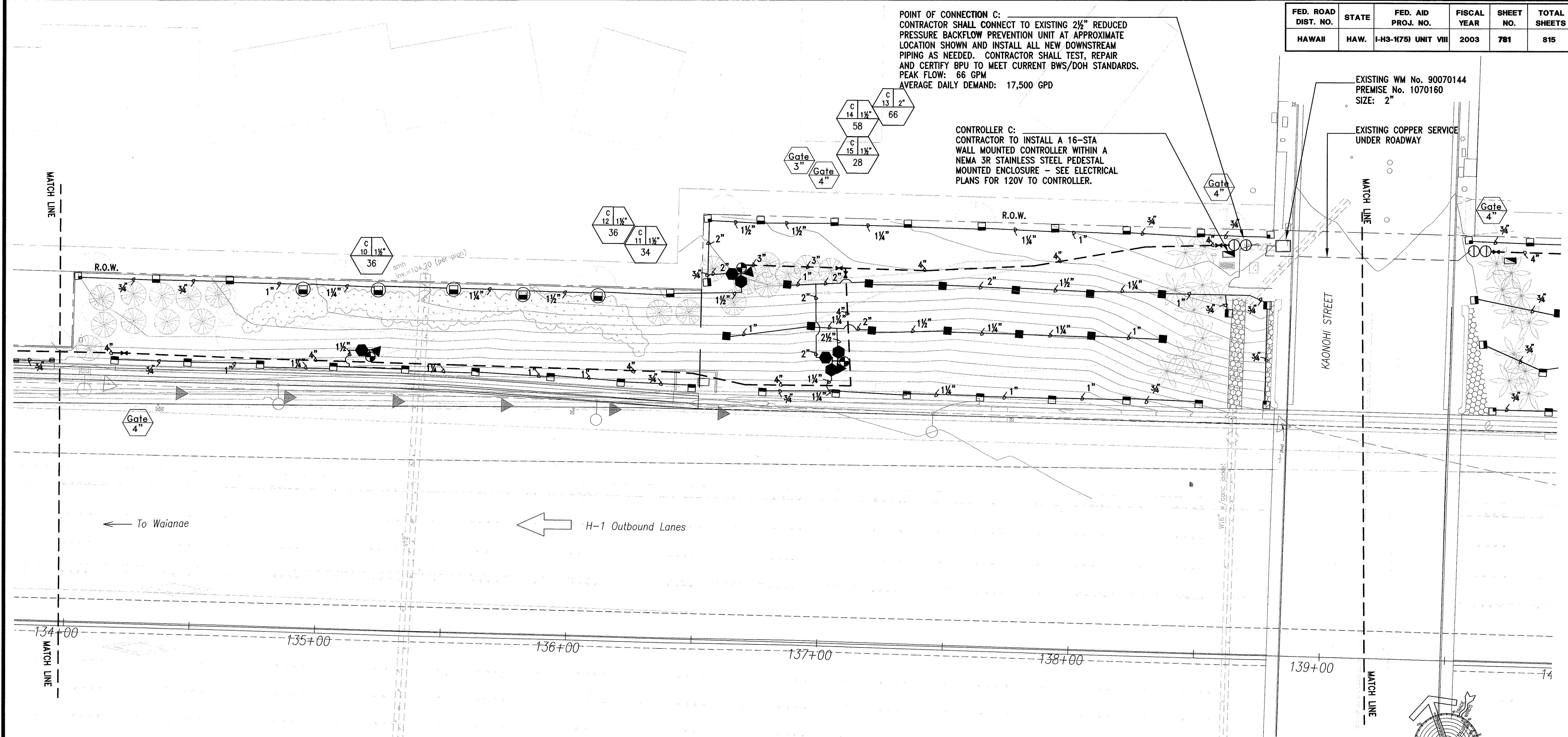
INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII

Scale: 1" = 20' Date: Mar. 31, 2003

SHEET No. L-10 OF 22 SHEETS

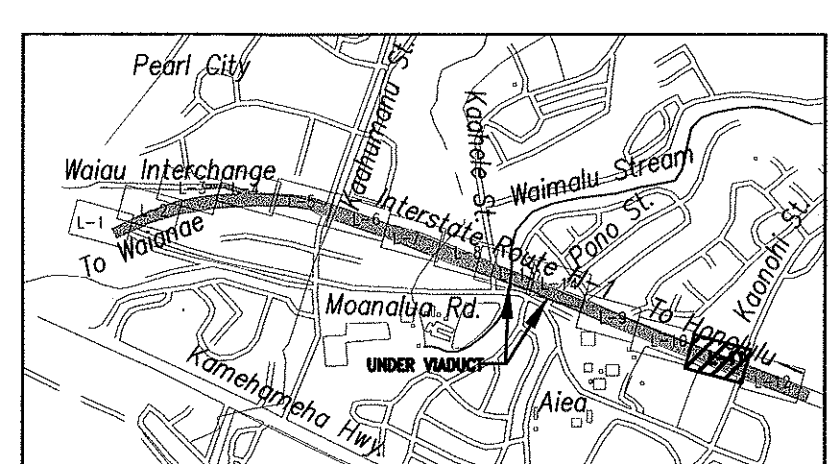
ORIGINAL PLAN	DATE
NOTED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	781	815



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE: *Lester H. Inoué* April 30, 2004
EXPIRATION DATE OF THE LICENSE



KEYMAP
NOT TO SCALE

LANDSCAPE IRRIGATION PLAN - 11
SCALE: 1"=20'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE IRRIGATION PLAN-11

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII

Scale: 1" = 20' Date: Mar. 31, 2003

SHEET No. L-11 OF 22 SHEETS

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

HAWAIIAN WATER SUPPLY SYSTEMS

DIST. NO.	STATE	PROJ. NO.	YEAR	NO.	SH.
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 782	8

EXISTING COPPER SERVICE UNDER ROADWAY

Meter No. 90070144
Premise No. 1070160
Size: 2"

POINT OF CONNECTION D:
CONTRACTOR SHALL CONNECT TO EXISTING 2½" REDUCED PRESSURE BACKFLOW PREVENTION UNIT AT APPROXIMATE LOCATION SHOWN AND INSTALL ALL NEW DOWNSTREAM PIPING AS NEEDED. CONTRACTOR SHALL TEST, REPAIR AND CERTIFY BPU TO MEET CURRENT BWS/DOH STANDARDS.
PEAK FLOW: 64 GPM
AVERAGE DAILY DEMAND: 8,700 GPD

CONTROLLER D:
CONTRACTOR TO INSTALL A 16-STA WALL MOUNTED CONTROLLER WITHIN A NEMA 3R STAINLESS STEEL PEDESTAL MOUNTED ENCLOSURE - SEE ELECTRICAL PLANS FOR 120V TO CONTROLLER.









STUB-OUT & CAP FOR FUTURE EXTENSION.
CONTRACTOR TO INSTALL 6 SPARE CONTROL FROM CONTROLLER D TO STUB-OUT FOR FUTURE USE. TERMINATE IN VALVE BOX.

FOR ESTIMATING PURPOSES ONLY


DESCRIPTION OF WORK	ESTIMATE
IRRIGATION SERVICE	
EX. 2" METER	N/A
INSTALLATION CHARGE	
WATER SYSTEM FACILITIES CHARGES (WSFC)	

*CREDITS WILL BE DETERMINED WHEN THE BUILDING PERMIT APPLICATION IS SUBMITTED FOR BWS REVIEW AND APPROVAL.

* NOTE: THE EXISTING FLOW OF 65 GPM (200 FU) IS THE EXCEEDS THE NEW PEAK FLOW

LANDSCAPE IRRIGATION PLAN - 12
SCALE: 1"=20'



 THIS WORK WAS PREPARED BY ME
 OR UNDER MY SUPERVISION.

Lester H. Inouye April 30, 2004
 SIGNATURE EXPIRATION DATE
 OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

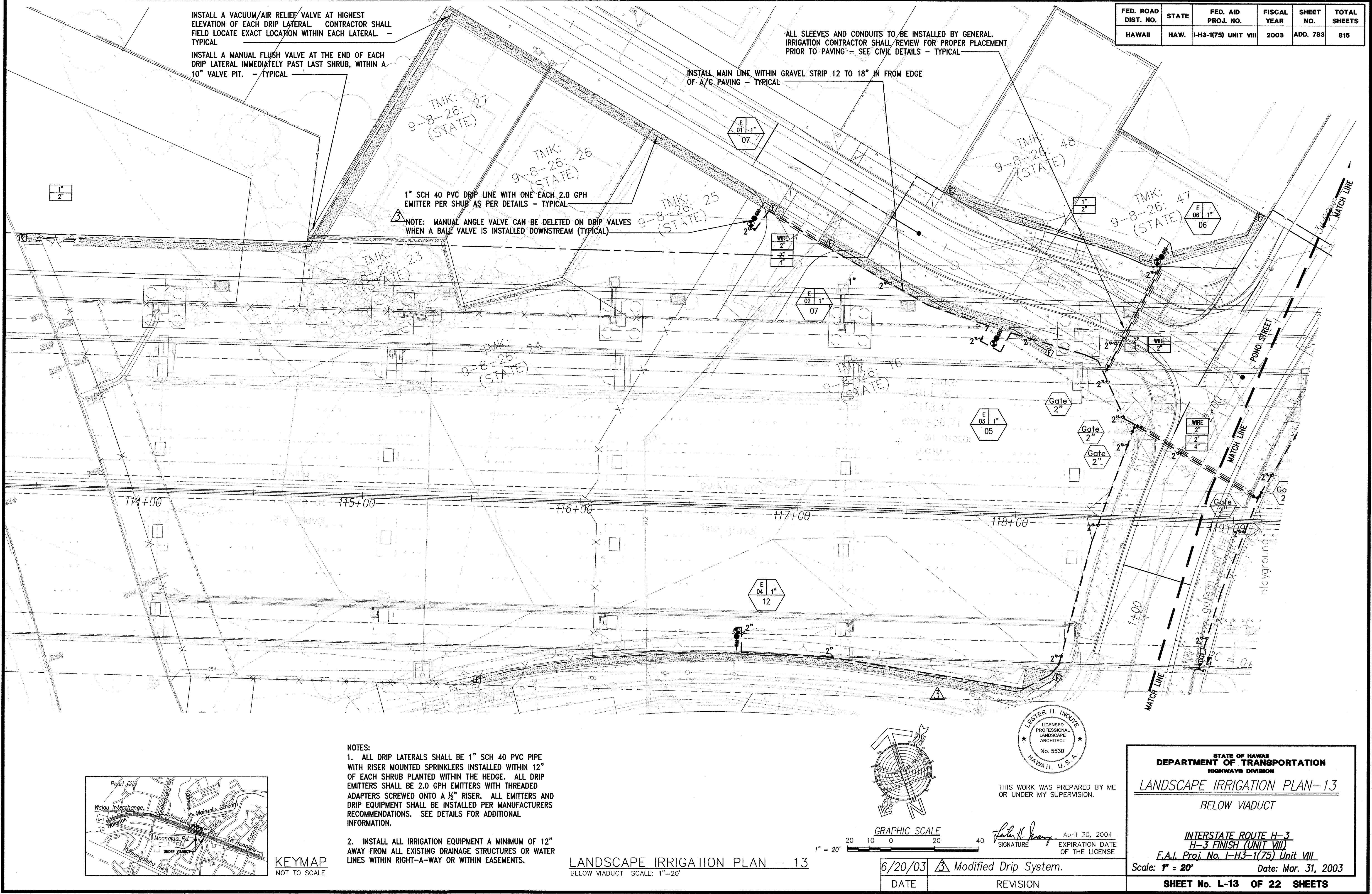
LANDSCAPE IRRIGATION PLAN-12

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII

Scale: 1" = 20' Date: Mar. 31, 2003

SHEET No. L12 OF L22 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 783	815



INSTALL A VACUUM/AIR RELIEF VALVE AT HIGHEST ELEVATION OF EACH DRIP LATERAL. CONTRACTOR SHALL FIELD LOCATE EXACT LOCATION WITHIN EACH LATERAL. - TYPICAL

INSTALL A MANUAL FLUSH VALVE AT THE END OF EACH DRIP LATERAL IMMEDIATELY PAST LAST SHRUB, WITHIN A 10" VALVE PIT. - TYPICAL

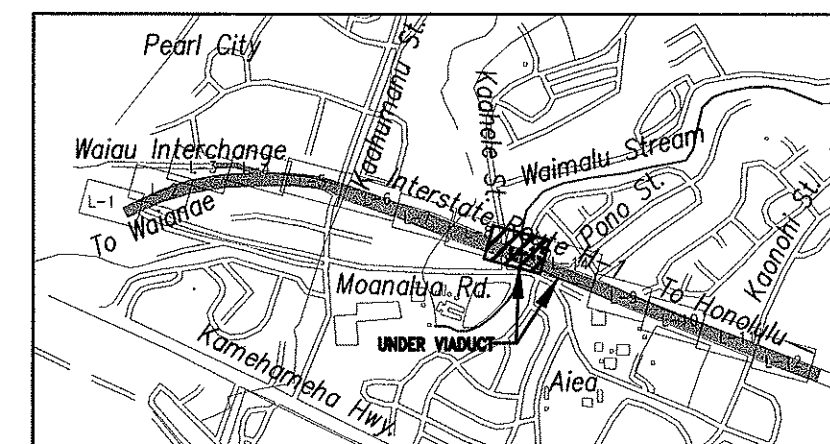
ALL SLEEVES AND CONDUITS TO BE INSTALLED BY GENERAL IRRIGATION CONTRACTOR SHALL REVIEW FOR PROPER PLACEMENT PRIOR TO PAVING - SEE CIVIL DETAILS - TYPICAL

INSTALL MAIN LINE WITHIN GRAVEL STRIP 12 TO 18" IN FROM EDGE OF A/C PAVING - TYPICAL

1" SCH 40 PVC DRIP LINE WITH ONE EACH 2.0 GPH EMITTER PER SHRUB AS PER DETAILS - TYPICAL

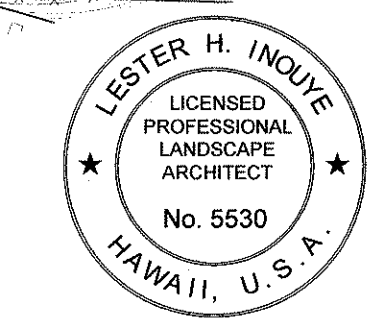
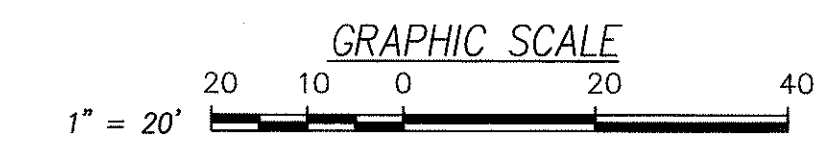
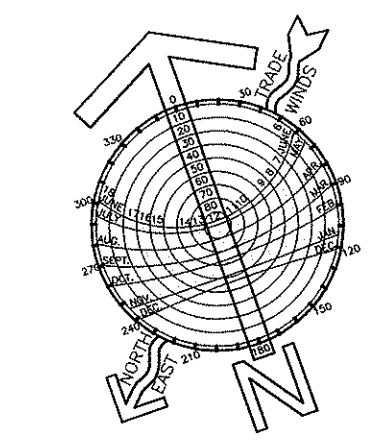
NOTE: MANUAL ANGLE VALVE CAN BE DELETED ON DRIP VALVES WHEN A BALL VALVE IS INSTALLED DOWNSTREAM (TYPICAL)

- NOTES:
- ALL DRIP LATERALS SHALL BE 1" SCH 40 PVC PIPE WITH RISER MOUNTED SPRINKLERS INSTALLED WITHIN 12" OF EACH SHRUB PLANTED WITHIN THE HEDGE. ALL DRIP EMITTERS SHALL BE 2.0 GPH EMITTERS WITH THREADED ADAPTERS SCREWED ONTO A 1/2" RISER. ALL EMITTERS AND DRIP EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS. SEE DETAILS FOR ADDITIONAL INFORMATION.
 - INSTALL ALL IRRIGATION EQUIPMENT A MINIMUM OF 12" AWAY FROM ALL EXISTING DRAINAGE STRUCTURES OR WATER LINES WITHIN RIGHT-OF-WAY OR WITHIN EASEMENTS.



KEYMAP
NOT TO SCALE

LANDSCAPE IRRIGATION PLAN - 13
BELOW VIADUCT SCALE: 1"=20'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE: *Lester H. Inoué* April 30, 2004
EXPIRATION DATE OF THE LICENSE

6/20/03	Modified Drip System.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE IRRIGATION PLAN-13
BELOW VIADUCT

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII
Scale: 1" = 20' Date: Mar. 31, 2003

SHEET No. L-13 OF 22 SHEETS
ADD. 783

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

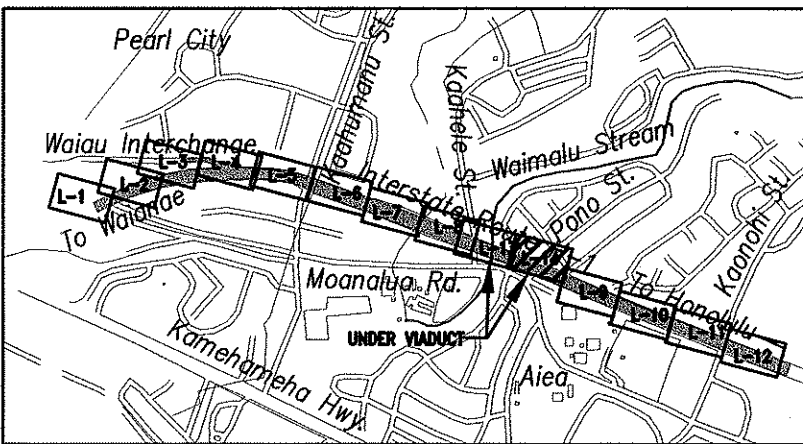
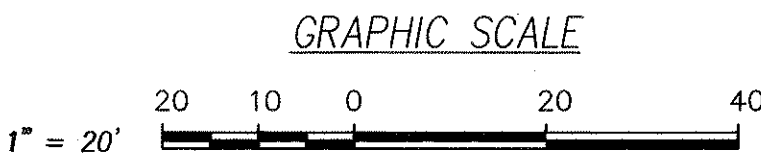
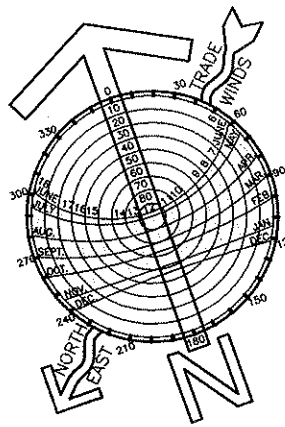
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 784	816

- NOTES:
- ALL DRIP LATERALS SHALL BE 1" SCH 40 PVC PIPE WITH RISER MOUNTED SPRINKLERS INSTALLED WITHIN 12" OF EACH SHRUB PLANTED WITHIN THE HEDGE. ALL DRIP EMITTERS SHALL BE 2.0 GPH EMITTERS WITH THREADED ADAPTERS SCREWED ONTO A 1/2" RISER. ALL EMITTERS AND DRIP EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS. SEE DETAILS FOR ADDITIONAL INFORMATION.
 - ALL IRRIGATION SYSTEMS SHALL BE INSTALLED A MINIMUM OF 12" AWAY FROM ANY DRAINAGE STRUCTURE OR WATER LINE WITHIN RIGHT-OF-WAY OR EASEMENTS.

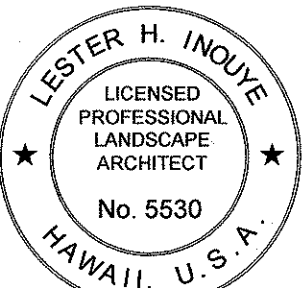
APPROVED: 

James W. Kahan
Principal Executive
Maintenance Unit, BWS

7/3/03
Date



KEYMAP
NOT TO SCALE



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

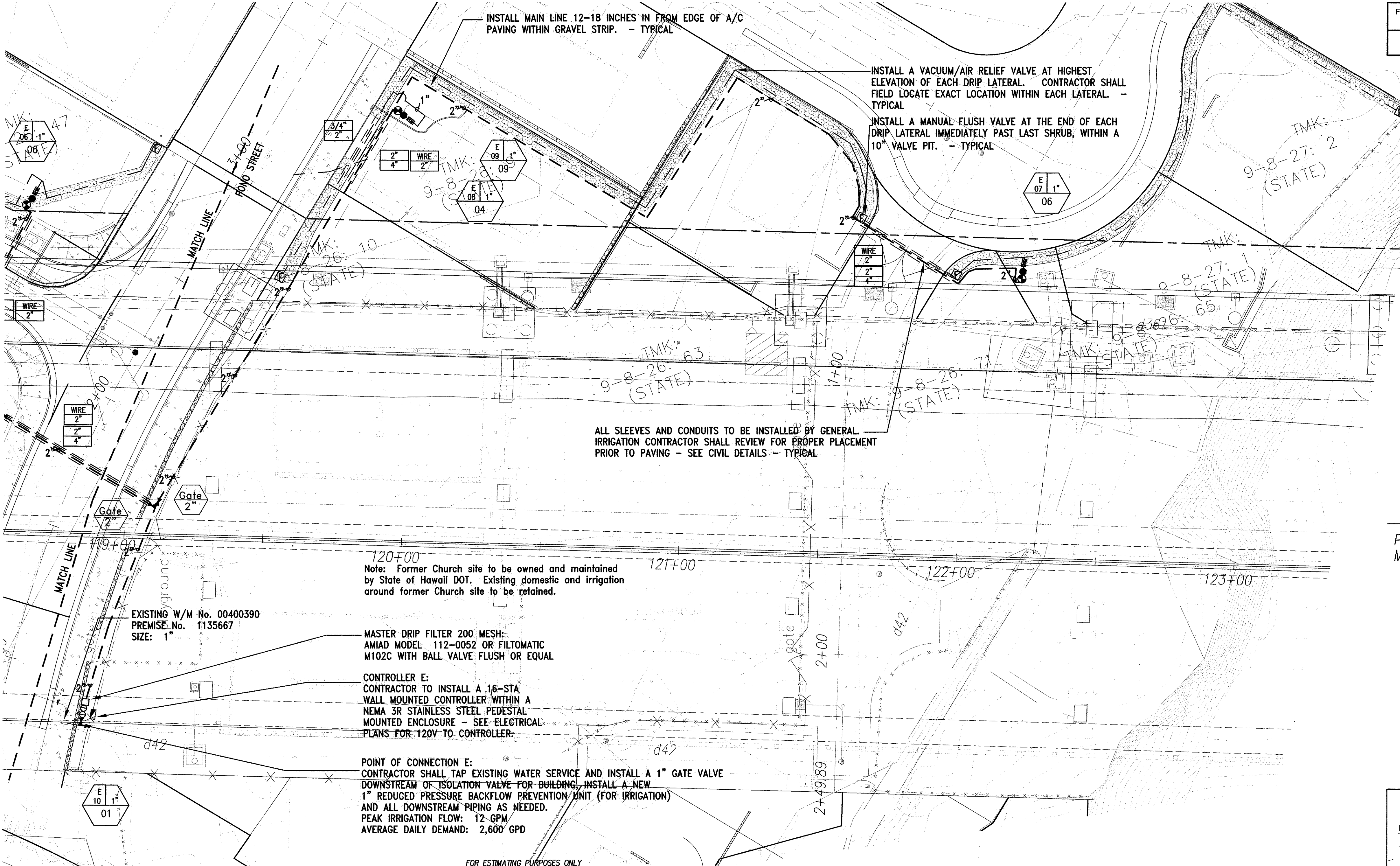
Lester H. Inoué
SIGNATURE
April 30, 2004
EXPIRATION DATE
OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
LANDSCAPE PLANTING PLAN-14
BELOW VIADUCT

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII
Scale: 1" = 20' Date: Mar. 31, 2003

SHEET No. L.14 OF L.22 SHEETS

ADD. 784



METER FLOW REQUIREMENTS (IRRIGATION ONLY)

Meter No. 00400390 Premise No. 1135667


	FIXTURE UNITS (FU)	GALLONS PER MINUTE (GPM)	GALLONS PER DAY (GPD)
A. PROPOSED IRRIGATION	18	12	2,600
B. TO BE REMOVED (DEMOLITION)	00	00	000
C. TOTAL NET (A - B):	18	12	-0000-2,600
D. EXISTING TO REMAIN:	00	00	0000
E. GRAND TOTAL (C + D)	18	12	2,600

FOR ESTIMATING PURPOSES ONLY

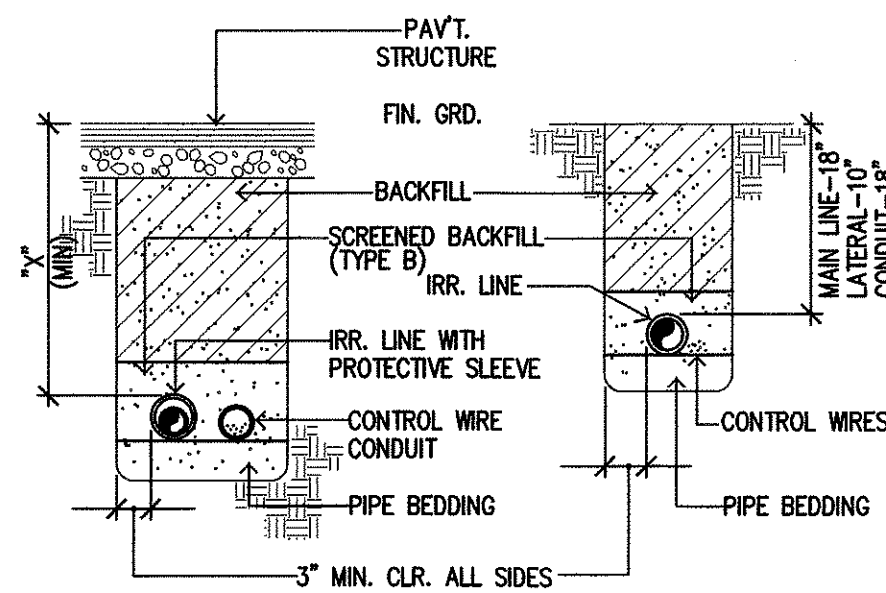
DESCRIPTION OF WORK	ESTIMATE
IRRIGATION SERVICE	
EX. 1" METER	
INSTALLATION CHARGE	N/A
WATER SYSTEM FACILITIES CHARGES (WSFC)	
20 fu @ \$363.11	\$7,262.20
* CREDIT	
S/N	
S/N	
FIRE SERVICE	
METER	
INSTALLATION CHARGE	N/A
ONE-TIME CHARGE	N/A
TOTAL	\$ 7,262.20

*CREDITS WILL BE DETERMINED WHEN THE BUILDING PERMIT APPLICATION IS SUBMITTED FOR BWS REVIEW AND APPROVAL.
THIS ESTIMATE IS SUBJECT TO CHANGE. A FORMAL WRITTEN QUOTATION MAY BE OBTAINED AND ALL PAYMENTS FOR THE CHARGES SHOWN ON THE QUOTATION MADE WITHIN 30 DAYS AFTER THE CONSTRUCTION PLAN IS APPROVED BY BWS. IF PAYMENTS ARE NOT RECEIVED WITHIN THE 30 DAY PERIOD, THE PROJECT WILL BE SUBJECT TO THE PREVAILING RATES.

LANDSCAPE IRRIGATION PLAN - 14
BELOW VIADUCT SCALE: 1"=20'

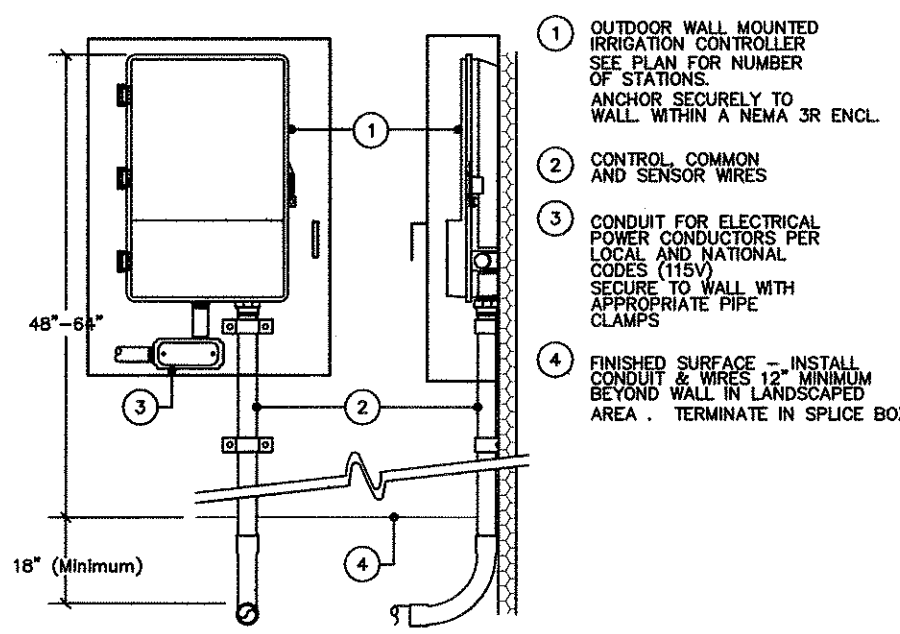
10/16/03	 OBTAINED CITY APPROVAL
DATE	REVISION

DESIGNED BY	DATE
CHECKED BY	
DRAWN BY	
NOTED BY	
ORIGINAL PLAN	
NO. 1	

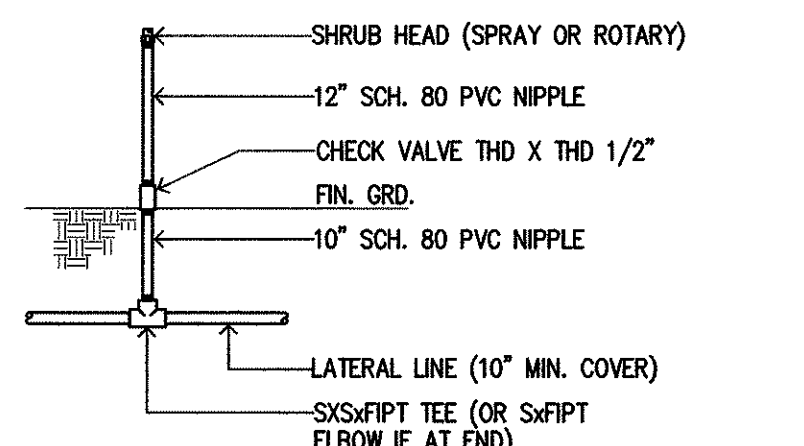


UNDER PAVT. IN LANDSCAPED AREA
NOTE: 7" DEPTH SHALL BE 36" MIN. UNDER VEHICULAR PAVEMENT, OR 18" MIN. FOR MAINS & 10" MIN. FOR LATERALS WHEN UNDER WALKWAYS.

DET TRENCHING
SHT NOT TO SCALE

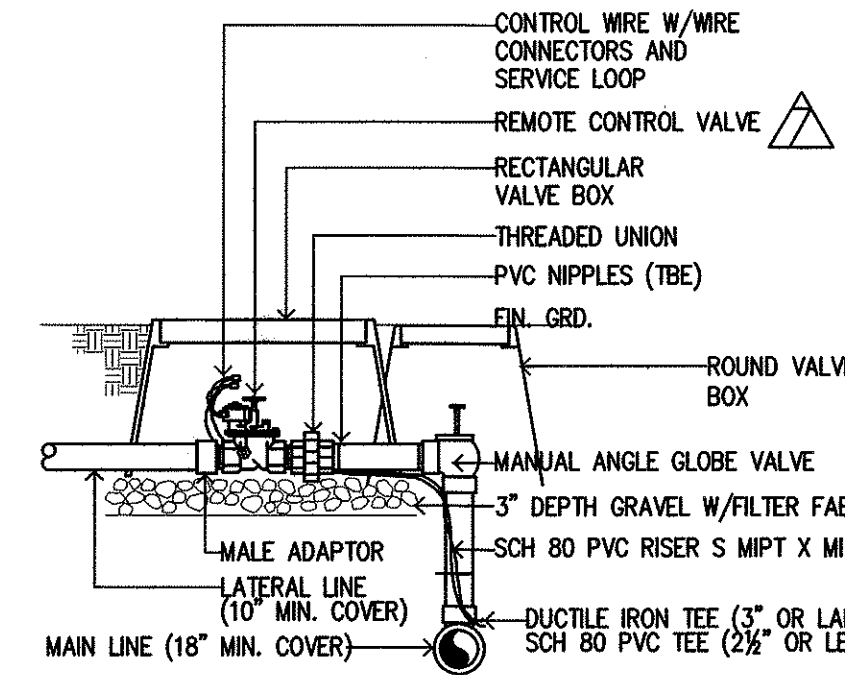


SECTION/ELEVATION FRONT
SECTION/ELEVATION RIGHT-SIDE
DET CONTROLLER WALL MOUNT
SHT NOT TO SCALE



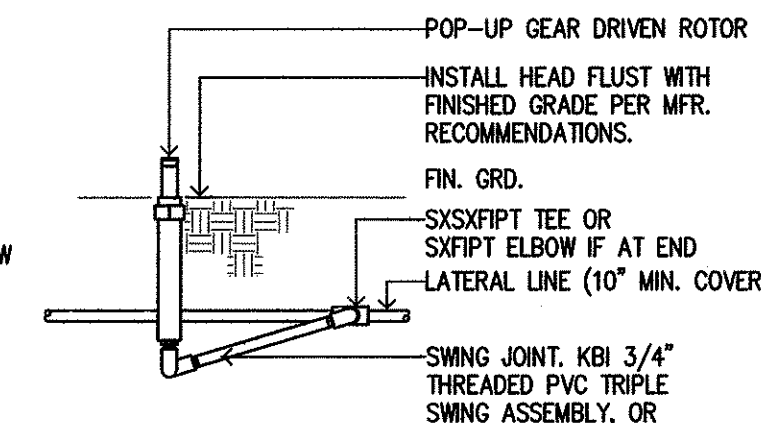
NOTE: HEAD SHALL BE INSTALLED 12" CLR. FROM ROAD OR FENCE. DO NOT INSTALL NEXT TO ROAD IF NO GUARD RAIL.

DET SHRUB HEAD
SHT NOT TO SCALE



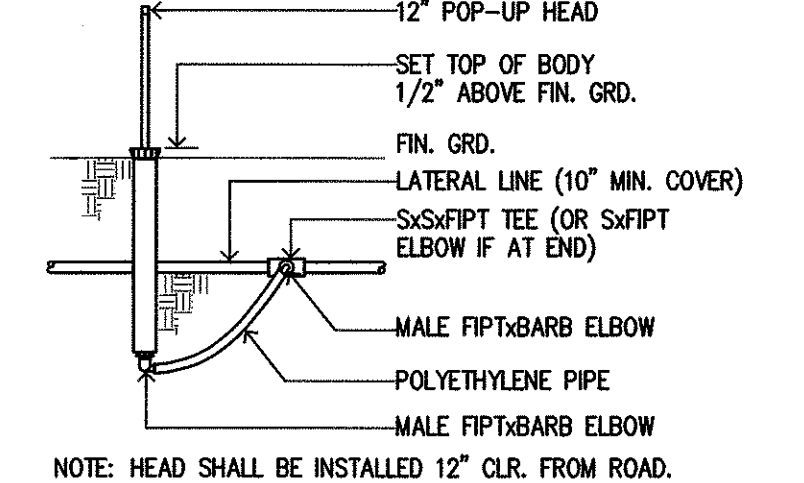
NOTE: 1. TOP OF VALVE BOX SHALL BE FLUSH WITH FIN. GRD. IN GRASS, 2" ABOVE GRADE IN GROUND COVER.
2. PROVIDE REDUCER BUSHINGS AS REQ'D.

DET REMOTE CONTROL VALVE-A/C
SHT NOT TO SCALE



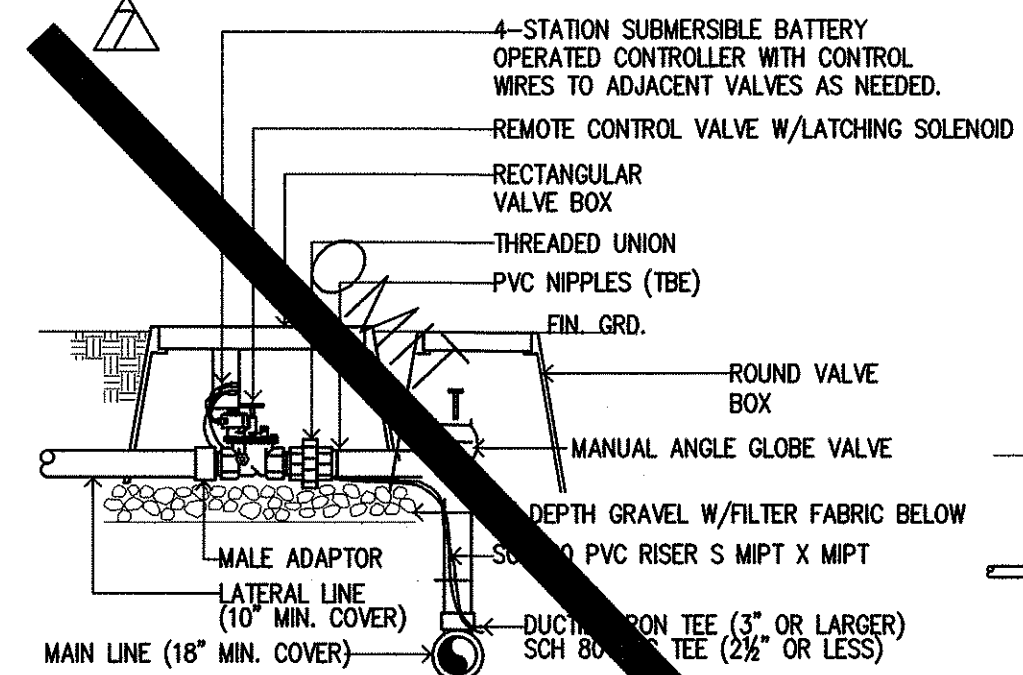
NOTE: HEAD SHALL BE INSTALLED 12" CLR. FROM EDGE OF BUILDING OR ROAD AND 6" AWAY FROM WALKWAYS.

DET POP-UP GEAR DRIVEN ROTOR
SHT NOT TO SCALE



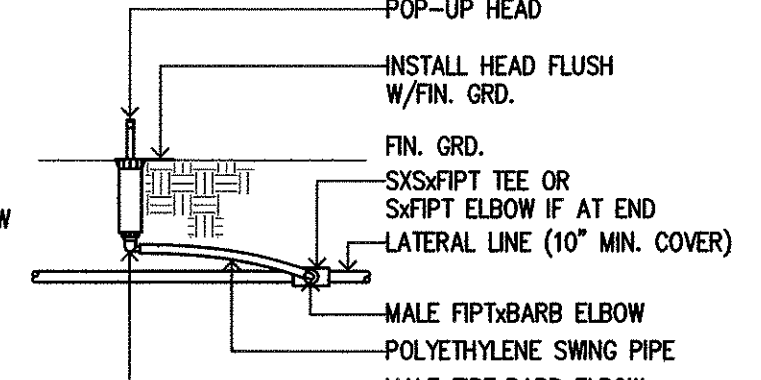
NOTE: HEAD SHALL BE INSTALLED 12" CLR. FROM ROAD.

DET 12" POP-UP HEAD
SHT NOT TO SCALE



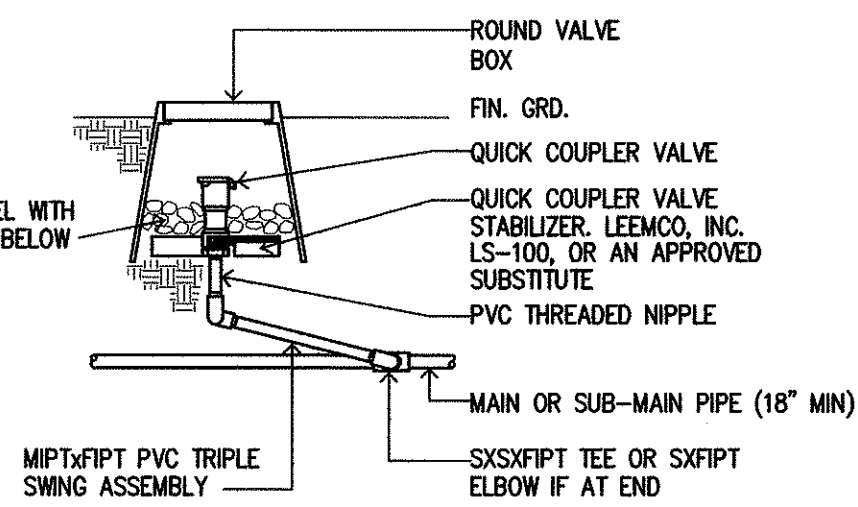
NOTE: 1. TOP OF VALVE BOX SHALL BE FLUSH WITH FIN. GRD. IN GRASS, 2" ABOVE GRADE IN GROUND COVER.
2. PROVIDE REDUCER BUSHINGS AS REQ'D.

DET REMOTE CONTROL VALVE-BATTERY
SHT NOT TO SCALE

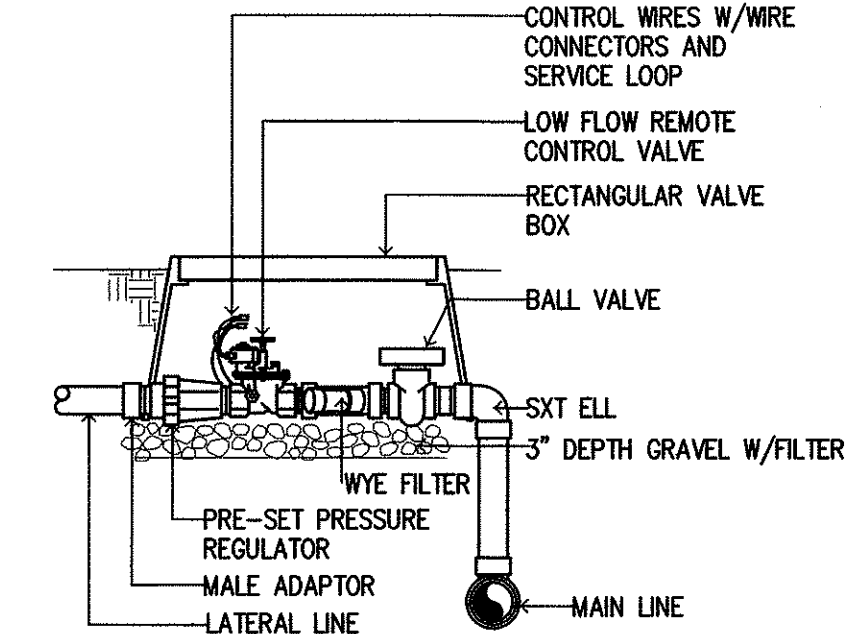


NOTE: HEAD SHALL BE INSTALLED 12" CLR. FROM BLDG. FACE AND 6" CLR. FROM EDGE OF WALK OR GRAVEL STRIP

DET 4" POP-UP HEAD
SHT NOT TO SCALE

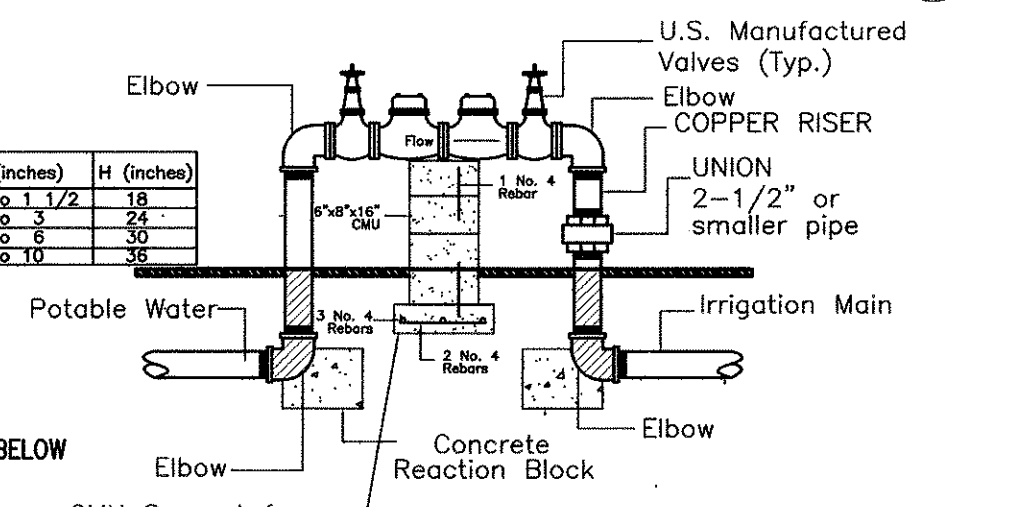


DET QUICK COUPLER VALVE
SHT NOT TO SCALE



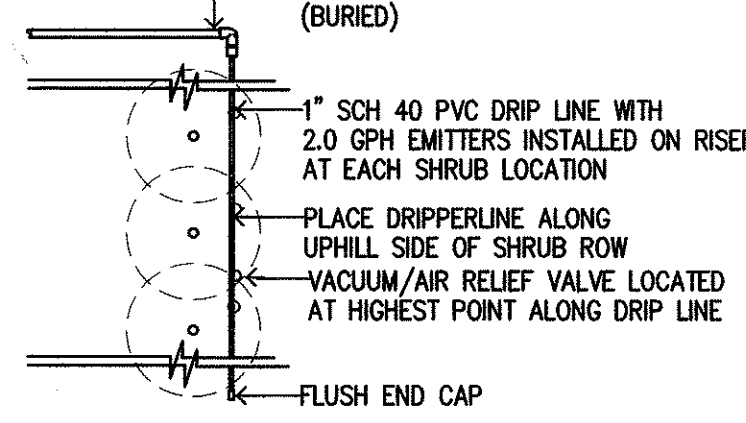
NOTE: 1. TOP OF VALVE BOX SHALL BE 1/2" ABOVE FIN. GRD.
2. PROVIDE REDUCER BUSHINGS AS REQ'D.

DET DRIP VALVE ASSEMBLY
SHT NOT TO SCALE



Note: Use Flanged Fittings on 3" and Larger Pipe, Adapt Inlet and Outlet Fittings to Main Line as Required.

DET REDUCED PRESSURE BACKFLOW DETAIL
SHT NOT TO SCALE



NOTE: MONITOR AND MODIFY AS REQ'D. DRIPPERLINE PLACEMENT TO INSURE THAT ANY SALT ACCUMULATION IS PUSHED OUTSIDE OF DRIP LINE AND EXTENT OF SHRUB ROOTS.

DET EMITTER DRIP LINE
SHT NOT TO SCALE

IRRIGATION MATERIAL SCHEDULE		
SYMBOL	DESCRIPTION	MANUFACTURER/ CATALOG NUMBER
	IRRIGATION CONTROLLER OUTDOOR WALL MOUNTED	2 EA HUNTER ICC-3200M, AND 3 EA HUNTER ICC-1600M SERIES WITHIN A STRONGBOX NEMA 3R ENCLOSURE
	REMOTE CONTROL VALVE	RAIN BIRD EFB-CP-PRS-B, HUNTER HBV-X01E-P SERIES OR ACCEPTABLE EQUAL, SIZE AS NOTED
	MANUAL ANGLE VALVE	CHAMPION 200 SERIES OR EQUAL (SAME SIZE AS LARGEST DOWNSTREAM REMOTE CONTROL VALVE).
	GATE VALVE (FULL LINE SIZE)	NIBCO T-113 OR APPROVED EQUAL, 3" OR LESS EPOXY COATED AWWA RESILIENT SEAT 4" OR LARGER
	IRRIGATION MAINLINE - PVC	SCH 40 PVC 3" OR SMALLER WITH WARNING TAPE SDR-21 25' OR LARGER WITH WARNING TAPE (SIZE AS SHOWN - SEE SPEC'S - 18" MIN. DEPTH)
	IRRIGATION LATERAL	CLASS 200 PVC, SIZE AS NOTED, 10" MIN. DEPTH
	PVC SLEEVE UNDER PAVEMENT	SCH 80 PVC PIPE (SIZE AS NOTED) 24" DEPTH
	WIRE RACEWAY W/PULL WIRE	SCH 80 PVC PIPE (SIZE AS NOTED) 24" DEPTH
	IRRIGATION LATERAL OR MAIN HDPE TUBING ABOVE GRADE	DR-11.5, HDPE TUBING SIZE AS SHOWN
	MASTER DRIP FILTER 200 MESH WITH MANUAL FLUSH VALVE	AMIAI 1-1201-1151-XXX 1" 200 MESH SCREEN
	FLUSH VALVE	NETAFIM TLO50MFV-1 (1/2") MPT FLUSH VALVE
	AIR RELIEF VALVE	NETAFIM A/VRV (1/2" MPT) INSTALL AT HIGH POINT
	DRIP EMITTER 2.0 GPH	RAIN BIRD SBT-20PC 1/2" EMITTER (1 PER SHRUB)
	QUICK COUPLER VALVE	RAIN BIRD #5 LVC OR EQUIVALENT SWING JOINT, 1" SEE DETAIL
	GATE VALVE SIZE	GATE VALVE OR MANUAL ANGLE VALVE SIZE
	SLEEVE SIZE	PIPE SIZE (TOP) WITHIN SLEEVE SIZE (BOTTOM)
	CONDUIT RACEWAY SIZE	CONDUIT RACEWAY FOR 24V WIRING (INSTALL ONE EXTRA WIRE THROUGH RACEWAY FOR FUTURE USE)
CONTROLLER No. _____		VALVE SIZE
STATION NUMBER _____		FLOW THROUGH VALVE (GPM)

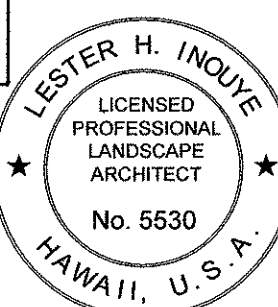
IRRIGATION NOTES

- IRRIGATION SYSTEMS ARE DIAGRAMMATIC AND SUBJECT TO MINOR ADJUSTMENTS DUE TO UNANTICIPATED FIELD CONDITIONS. IRRIGATION HEADS SHALL BE INSTALLED WHERE SHOWN, ADJUSTMENTS TO HEAD PLACEMENT MAY BE MADE IN THE FIELD ONLY TO AVOID OBSTACLES OR TO IMPROVE COVERAGE. HEADS SHALL NOT BE SPACED FURTHER THAN SHOWN ON THE DRAWINGS. VALVES SHALL BE INSTALLED IN THE VICINITY OF THE LOCATIONS SHOWN AND BE ACCESSIBLE FOR SERVICE AND USE. AVOID CONFLICTS WITH PLANTINGS, UTILITIES AND ARCHITECTURAL ELEMENTS.
- PRIOR TO EXCAVATION FOR IRRIGATION LINES, THE CONTRACTOR SHALL VERIFY IN THE FIELD THE EXACT LOCATION AND DEPTH OF ALL UTILITIES IN THE AREA AND EXERCISE CAUTION WHEN EXCAVATING.
- COORDINATE WITH OTHER TRADES TO INSURE INSTALLATION OF IRRIGATION LINES AND APPURTENANCES. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO COORDINATE WITH OTHER CONTRACTORS ON THE JOB TO INSURE THEIR INSTALLATION AND TO PROVIDE PROPER CLEARANCES FOR CONNECTIONS. THIS IS ESPECIALLY IMPORTANT FOR ALL SLEEVES & CONDUITS. THAT MAY BE REQUIRED.
- SEE LANDSCAPE PLANS & GEOTECHNICAL PLANS FOR LOCATIONS OF EROSION CONTROL MATTING. SEE CIVIL PLANS FOR AREAS OF 2:1 & 1.5:1 MAX. SLOPES. IRRIGATION CONTRACTOR IS RESPONSIBLE TO INSTALL SPRINKLER SYSTEM PRIOR TO INSTALLATION OF EROSION CONTROL MATTING. ONCE EROSION CONTROL MATTING IS INSTALLED, IRRIGATION CONTRACTOR IS RESPONSIBLE TO CAREFULLY PUNCH HOLES IN THE EROSION CONTROL MATTING TO EXPOSE POP-UP SPRINKLER HEADS AND VALVES.
- REFER TO ELECTRICAL DRAWINGS FOR 120V WIRING TO CONTROLLERS.
- THE IRRIGATION SYSTEM DESIGN IS BASED ON A MINIMUM STATIC PRESSURE OF 80 PSI AT POINT OF CONNECTION PRIOR TO ANY BACKFLOW PREVENTION UNITS. TEST THE PRESSURE AT THE NEAREST FIRE HYDRANT AND REPORT THE RESULTS TO THE LANDSCAPE ARCHITECT.
- INSTALL THE IRRIGATION CONTROLLERS AS NOTED ON THE DRAWINGS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR, TOGETHER WITH THE APPROPRIATE OWNER'S REPRESENTATIVE, SHALL PROGRAM THE CONTROLLER TO ACCOMMODATE THE LANDSCAPE AND SITE REQUIREMENTS.
- IRRIGATION SYSTEMS SHALL BE OPERATED DURING "OFF PEAK" EVENING HOURS. OPERATION DURING OTHER TIMES SHALL BE WITH THE APPROVAL OF THE PROJECT MANAGER.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1175) UNIT VIII	2003	ADD. 785	815

IRRIGATION SPRINKLER SCHEDULE

HEAD SYMBOL	ANGLE	MANUFACTURER/ CATALOG NUMBER	G.P.M.	P.S.I.	RAD.
	90°	RAIN BIRD PA-BS-LA SERIES OR HUNTER SRS-00-15A SERIES OR ACCEPTABLE EQUAL	0.24	30	8'
	120°	PA-BS-SAM-PRS-BQ	0.30	30	8'
	180°	PA-BS-SAM-PRS-BH	0.50	30	8'
	240°	PA-BS-SAM-PRS-BTT	0.70	30	8'
	270°	PA-BS-SAM-PRS-BTQ	0.76	30	8'
	360°	PA-BS-SAM-PRS-BF	1.00	30	8'
	90°	RAIN BIRD PA-BS-15X SERIES OR HUNTER SRS-00-15A SERIES OR ACCEPTABLE EQUAL	0.85	30	15'
	120°	PA-BS-SAM-PRS-15T	1.10	30	15'
	180°	PA-BS-SAM-PRS-15H	1.65	30	15'
	240°	PA-BS-SAM-PRS-15TT	2.30	30	15'
	270°	PA-BS-SAM-PRS-15TQ	2.60	30	15'
	360°	PA-BS-SAM-PRS-15F	3.60	30	15'
	90°	RAIN BIRD 1804-SAM-PRS-BX SERIES OR HUNTER INST-04-CV-7A SERIES OR ACCEPTABLE EQUAL	0.24	30	8'
	120°	1804-SAM-PRS-BT	0.30	30	8'
	180°	1804-SAM-PRS-BH	0.50	30	8'
	240°	1804-SAM-PRS-BTT	0.70	30	8'
	270°	1804-SAM-PRS-BTQ	0.76	30	8'
	360°	1804-SAM-PRS-BF	1.00	30	8'
	90°	RAIN BIRD 1804-SAM-PRS-15X SERIES OR HUNTER INST-04-CV-15A SERIES OR ACCEPTABLE EQUAL	0.85	30	15'
	120°	1804-SAM-PRS-15T	1.10	30	15'
	180°	1804-SAM-PRS-15H	1.65	30	15'
	240°	1804-SAM-PRS-15TT	2.30	30	15'
	270°	1804-SAM-PRS-15TQ	2.60	30	15'
	360°	1804-SAM-PRS-15F	3.60	30	15'
	90°	HUNTER PGP-XXX-XLA OR TORO S7004B-XX-XLLA OR RAINBIRD 5000-S-LA SERIES OR ACCEPTABLE EQUAL	1.70	40	24'
	180°	PGP-ADJ-4LA	1.90	40	27'
	240°	PGP-ADJ-7LA	1.90	40	27'
	360°	PGP-360-7LA	3.90	40	37'
	180°	PGS-ADJ-5LA	1.90	40	27'
	360°	PGS-360-7LA	3.90	40	37'



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Signature: *Lester H. Inoue* April 30, 2004
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

LANDSCAPE IRRIGATION DETAILS NOTES & SCHEDULE

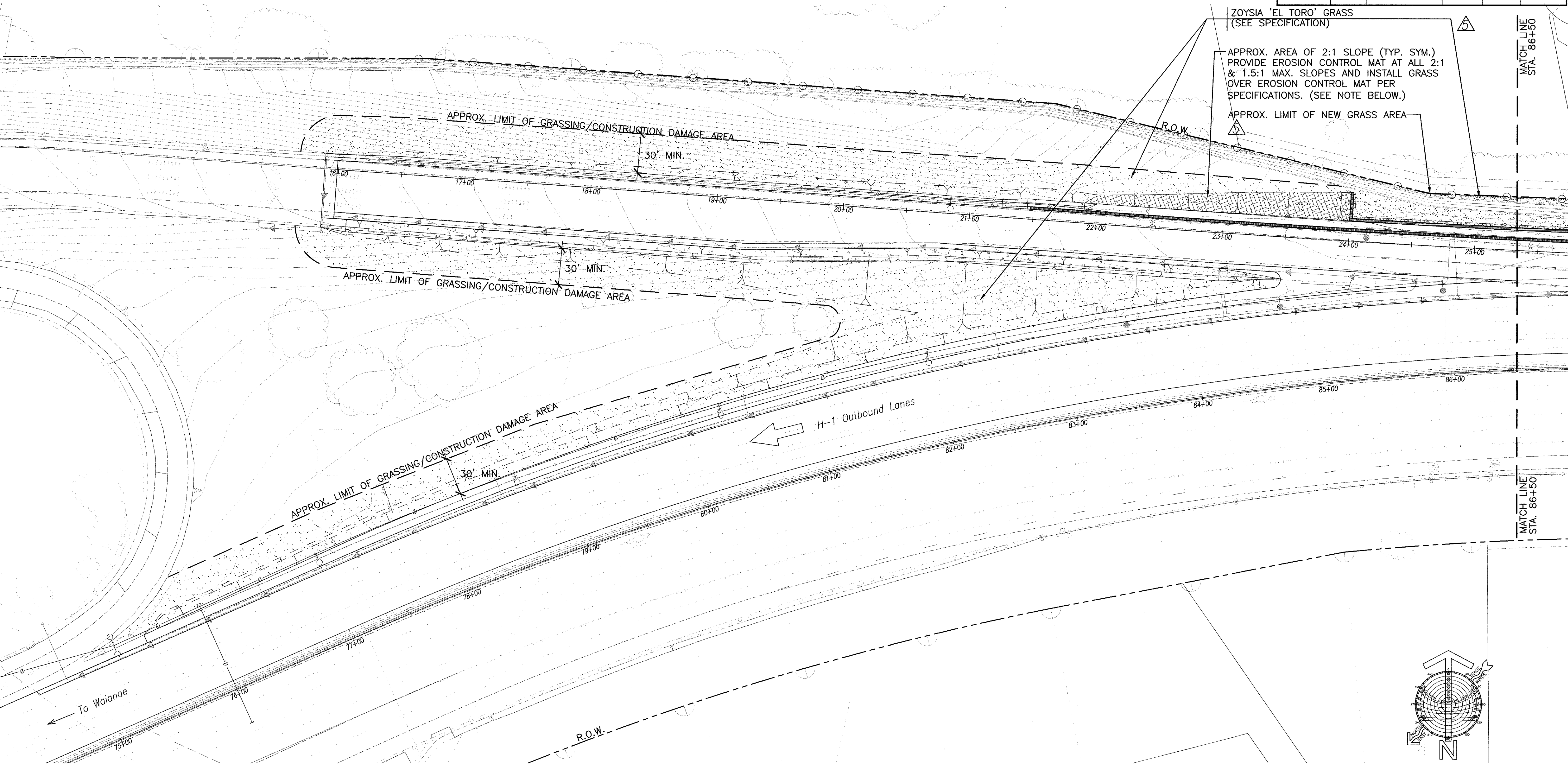
INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1175) Unit VIII
Scale: AS SHOWN Date: Mar. 31, 2003

SHEET No. L-15 OF 22 SHEETS

ADD. 785

SURVEY PLATTED BY _____	DATE _____
DRAWN BY _____	_____
TRACED BY _____	_____
DESIGNED 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.	I-H3-1(75) UNIT VIII	2003	ADD. 786	815



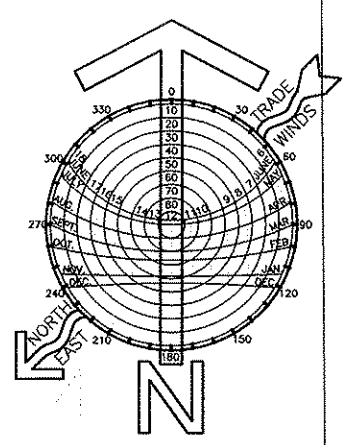
ZOYSIA 'EL TORO' GRASS
(SEE SPECIFICATION)

APPROX. AREA OF 2:1 SLOPE (TYP. SYM.)
PROVIDE EROSION CONTROL MAT AT ALL 2:1
& 1.5:1 MAX. SLOPES AND INSTALL GRASS
OVER EROSION CONTROL MAT PER
SPECIFICATIONS. (SEE NOTE BELOW.)

APPROX. LIMIT OF NEW GRASS AREA

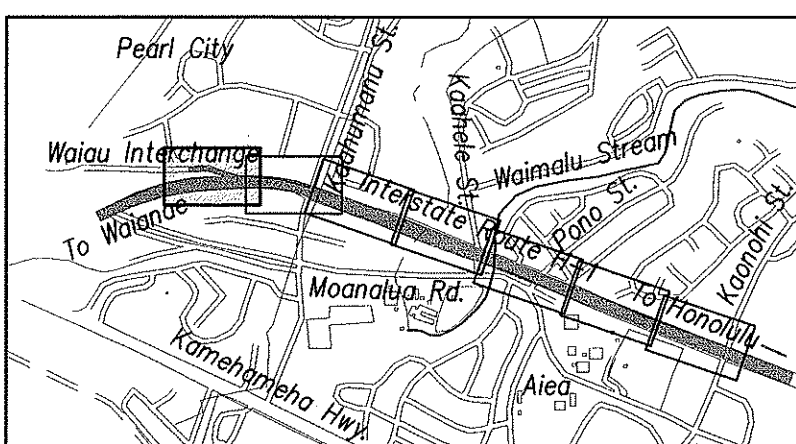
MATCH LINE
STA. 86+50

MATCH LINE
STA. 86+50



1" = 40'

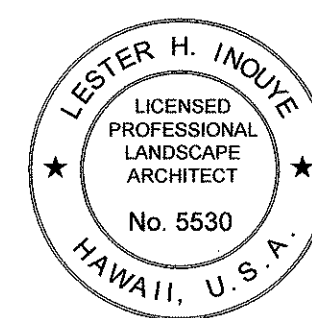
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	



KEYMAP
NOT TO SCALE

- Notes:
1. Install 4" layer of planting soil and provide grass w/in right-of-way and/or grassing limit per plans, details, & specifications Section 618-Grassed Surfaces & Section 617-Planting Soil unless otherwise noted on the plan.
 2. See Geotechnical Plans and specification Section 663 "Erosion Control Matting" for erosion control matting. Prior to installing erosion control matting, contractor to install sprinkler system & planting soil per specifications. Once erosion control matting is installed, landscape contractor is responsible to carefully punch holes in the erosion control matting to install grass plugs manually into ground at 12" on center and staple plugs per details & specification.
 3. See Civil Plans for exact areas of 1.5:1 & 2:1 Max. slopes.

- GRASS KEY:
- NEW GRASS AREA
 - NEW GRASS AREA OVER EROSION CONTROL MATTING



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

Signature: *Lester H. Inoué*
April 30, 2004
EXPIRATION DATE OF THE LICENSE

LANDSCAPE PLANTING PLAN - 1
SCALE: 1"=40'

10/16/03	Revised Grassing Requirements.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

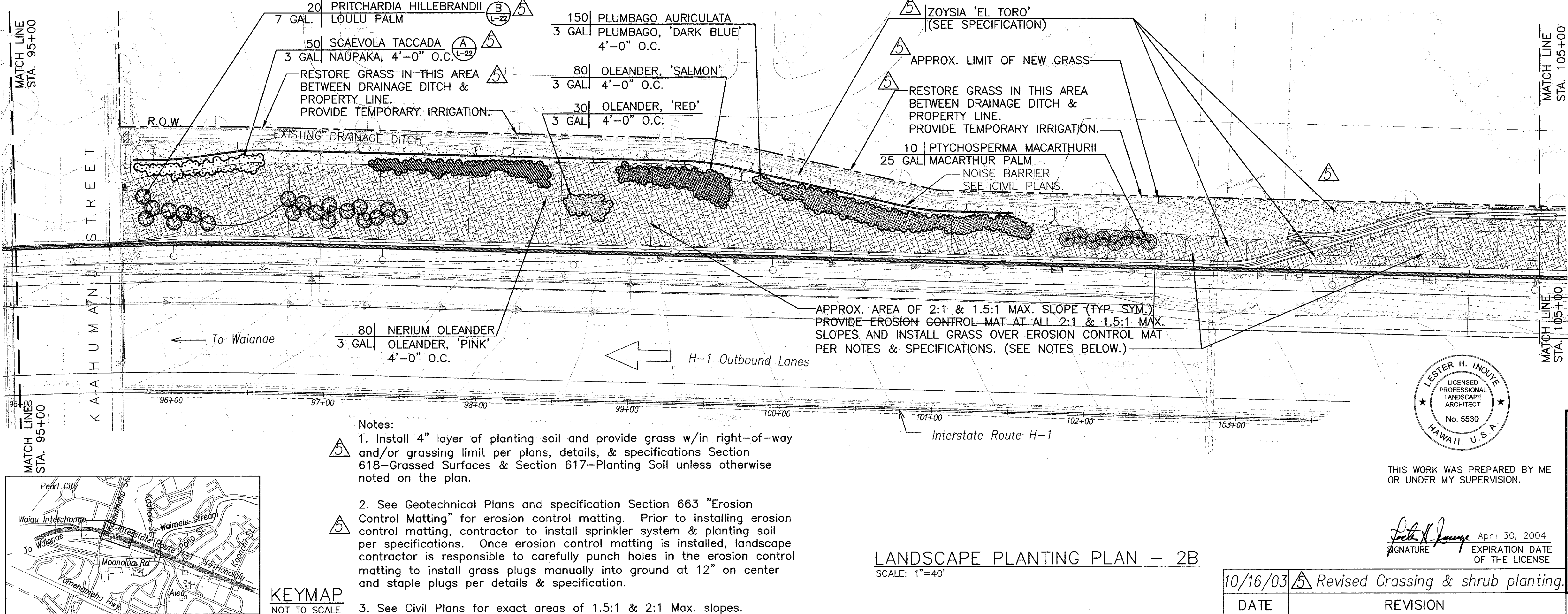
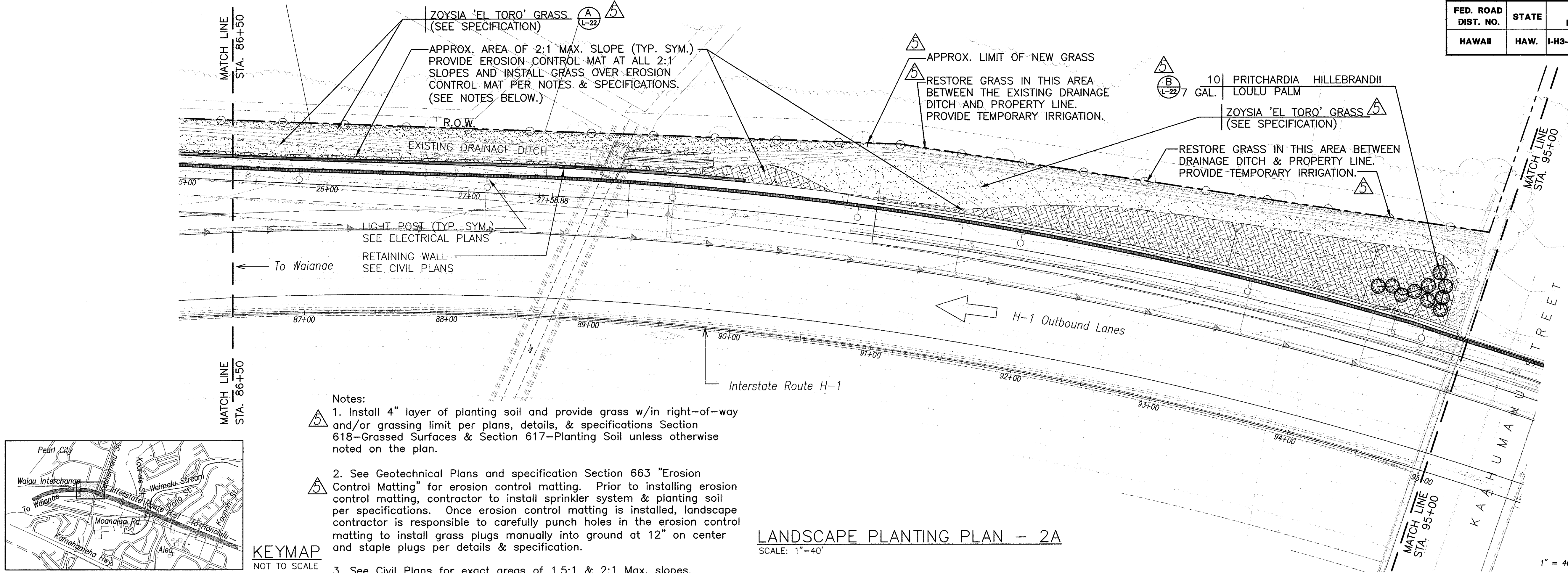
LANDSCAPE PLANTING PLAN-1

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII

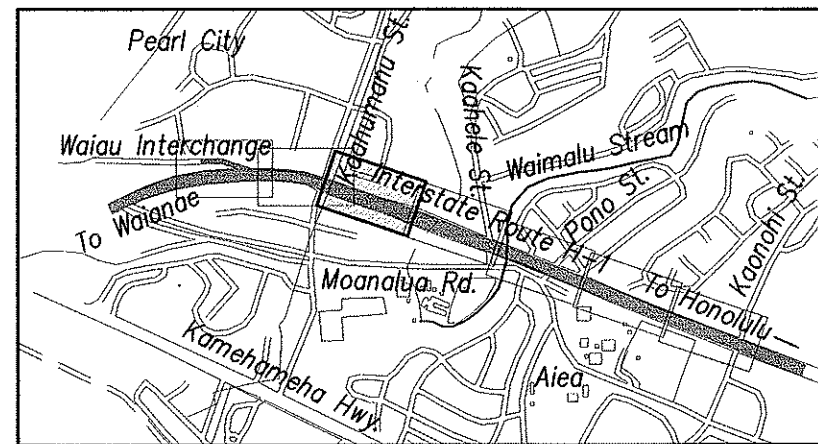
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SHEET No. L-16 OF 22 SHEETS

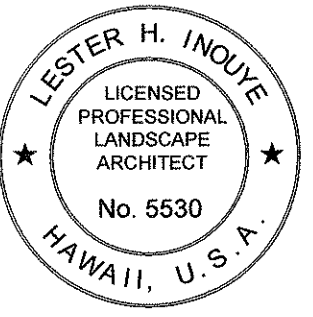
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HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 787	815



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



KEYMAP
NOT TO SCALE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Signature: *Lester H. Inoue* April 30, 2004
EXPIRATION DATE OF THE LICENSE

10/16/03	Revised Grassing & shrub planting.
DATE	REVISION

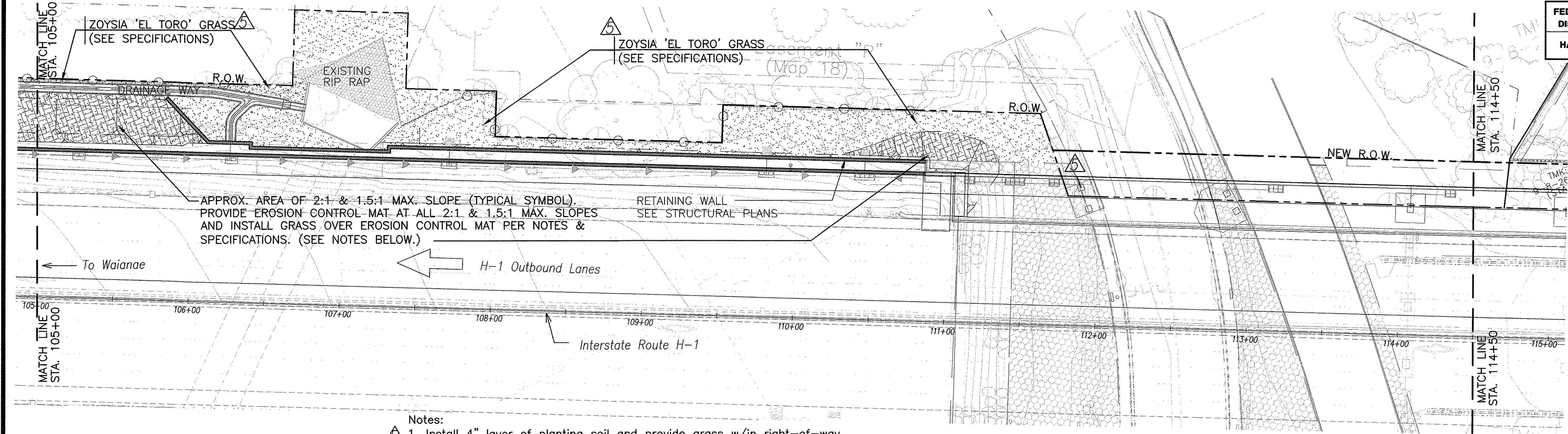
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE PLANTING PLAN-2

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII
Scale: 1" = 40' Date: Mar. 31, 2003

SHEET No. L-17 OF 22 SHEETS

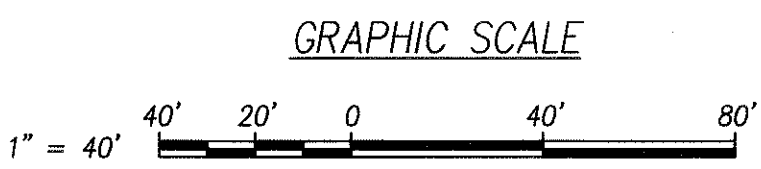
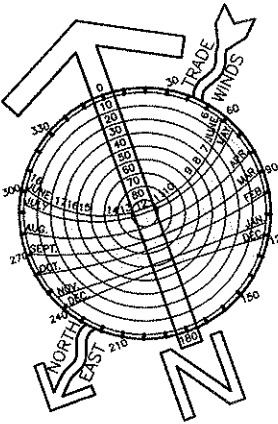
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HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 788	815



GRASS KEY:

[Pattern] NEW GRASS AREA

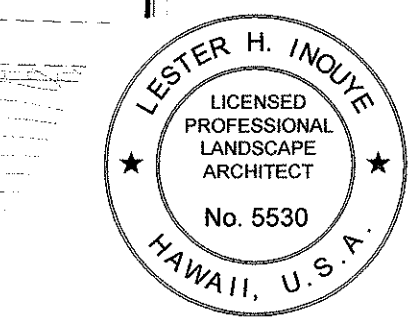
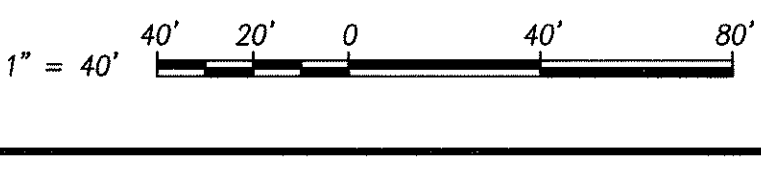
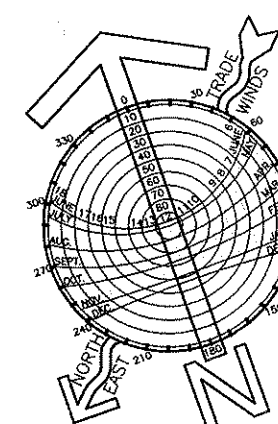
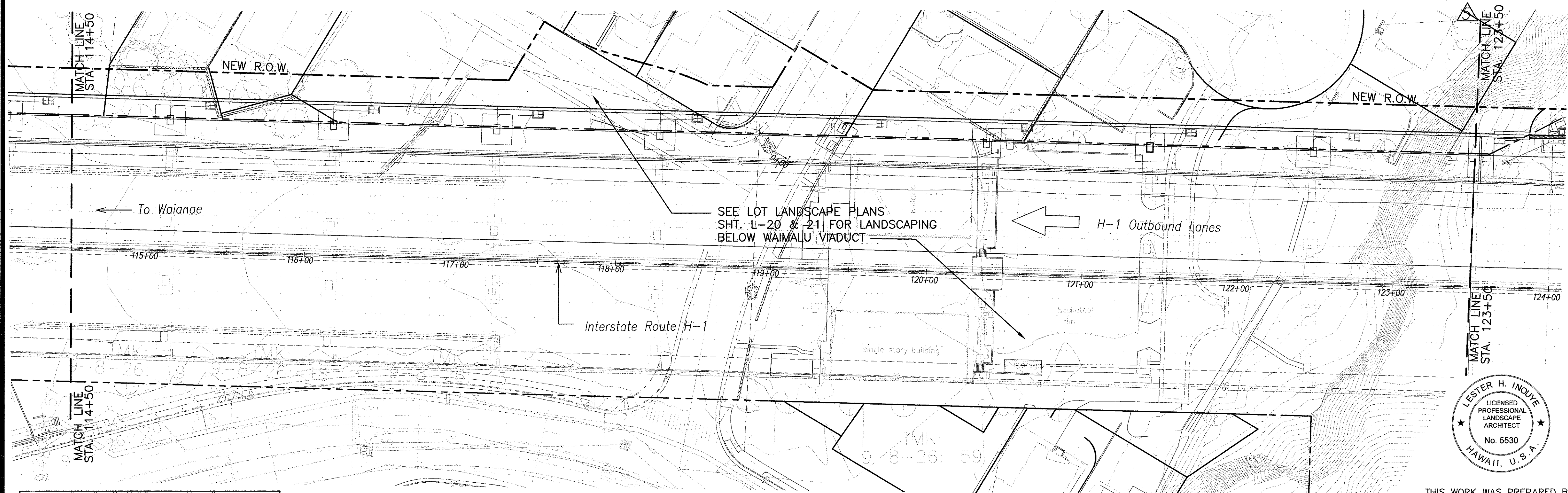
[Pattern] NEW GRASS AREA OVER EROSION CONTROL MATTING



- Notes:
1. Install 4" layer of planting soil and provide grass w/in right-of-way and/or grassing limit per plans, details, & specifications Section 618-Grassed Surfaces & Section 617-Planting Soil unless otherwise noted on the plan.
 2. See Geotechnical Plans and specification Section 663 "Erosion Control Matting" for erosion control matting. Prior to installing erosion control matting, contractor to install sprinkler system & planting soil per specifications. Once erosion control matting is installed, landscape contractor is responsible to carefully punch holes in the erosion control matting to install grass plugs manually into ground at 12" on center and staple plugs per details & specification.
 3. See Civil Plans for exact areas of 1.5:1 & 2:1 Max. slopes.

LANDSCAPE PLANTING PLAN - 3A

SCALE: 1"=40'



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Signature: *Lester H. Inoue*
 April 30, 2004
 EXPIRATION DATE OF THE LICENSE

LANDSCAPE PLANTING PLAN - 3B

SCALE: 1"=40'

10/16/03	Revised Grassing Requirements.
DATE	REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

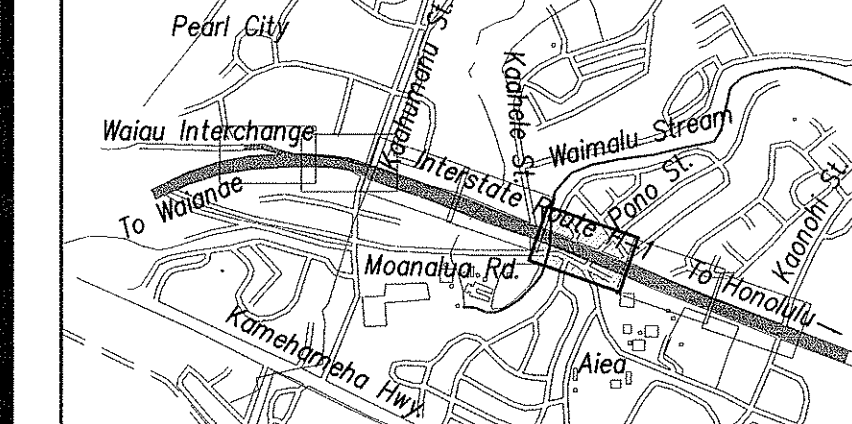
LANDSCAPE PLANTING PLAN-3

INTERSTATE ROUTE H-3
 H-3 FINISH (UNIT VIII)
 F.A.I. Proj. No. I-H3-1(75) Unit VIII

Scale: 1" = 40' Date: Mar. 31, 2003

SHEET No. L-18 OF 22 SHEETS

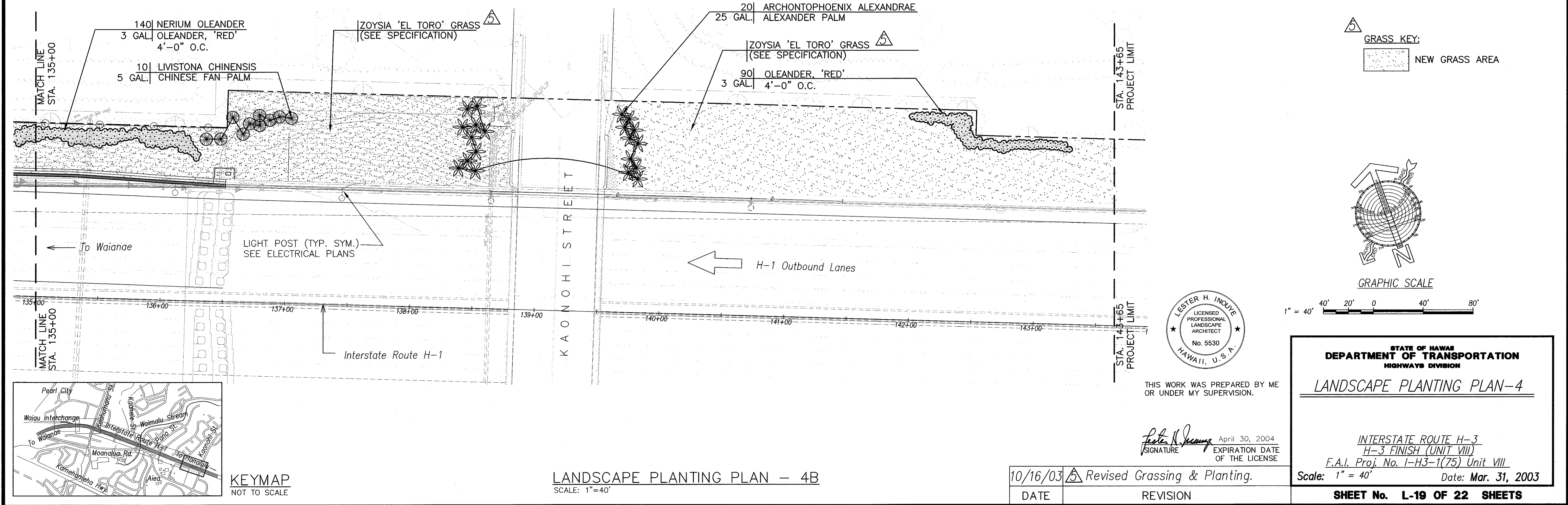
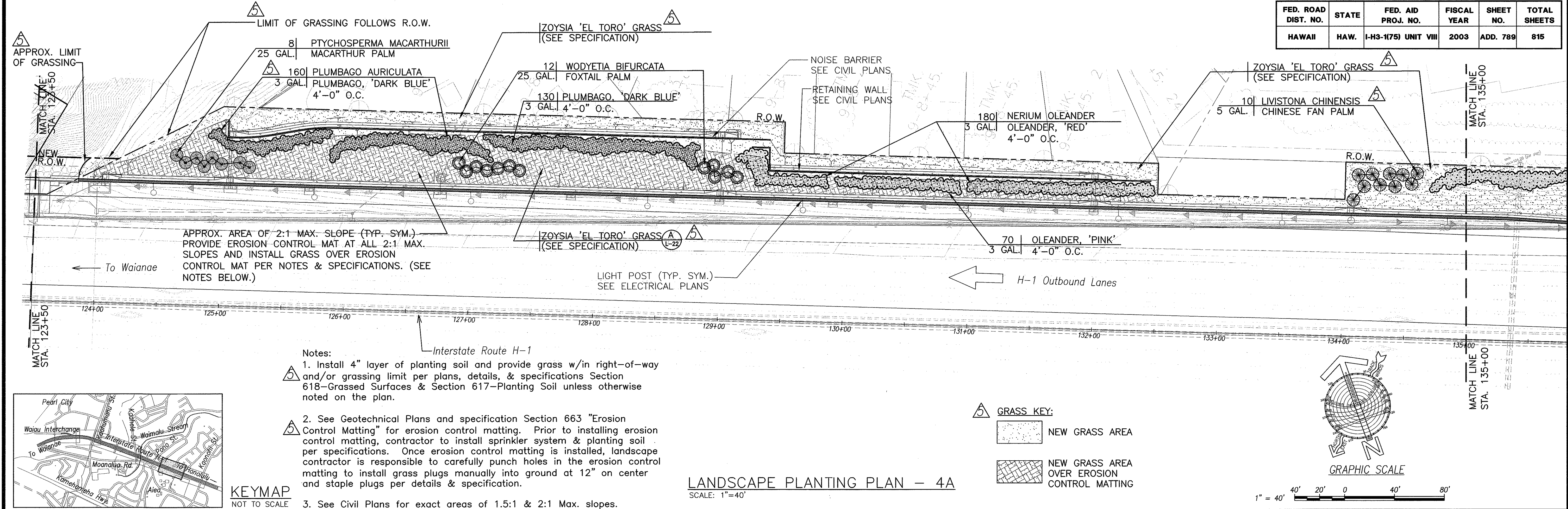
DESIGNED BY	DATE
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



KEYMAP

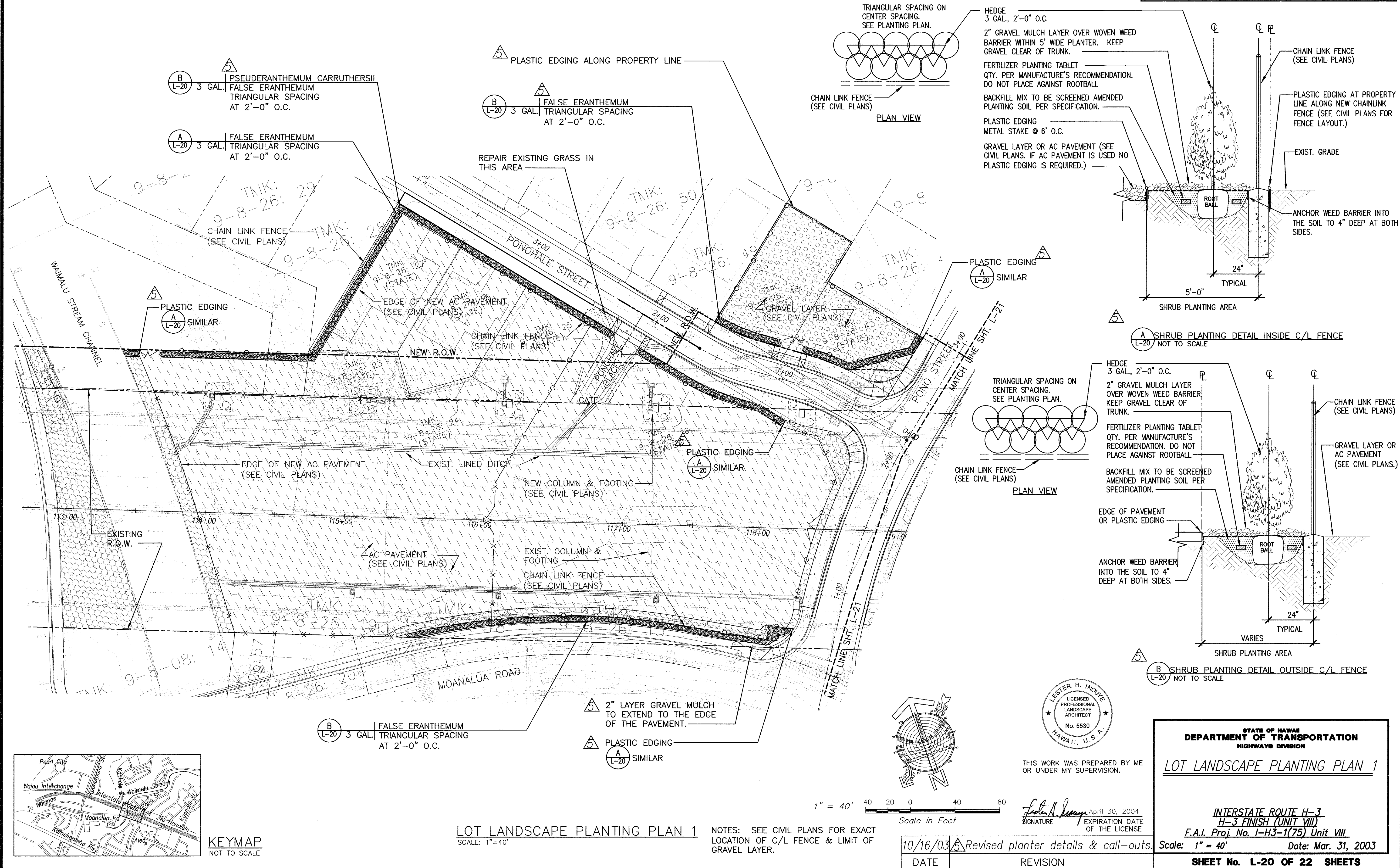
NOT TO SCALE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 789	815

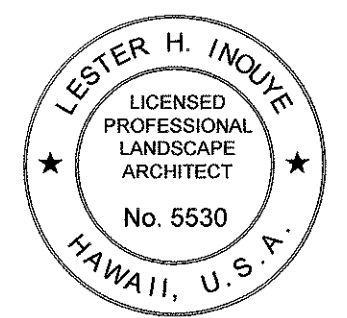
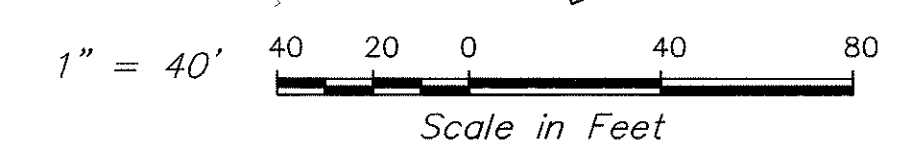
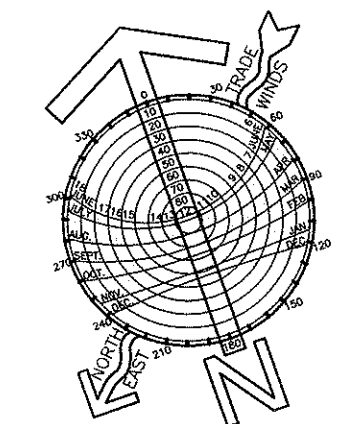
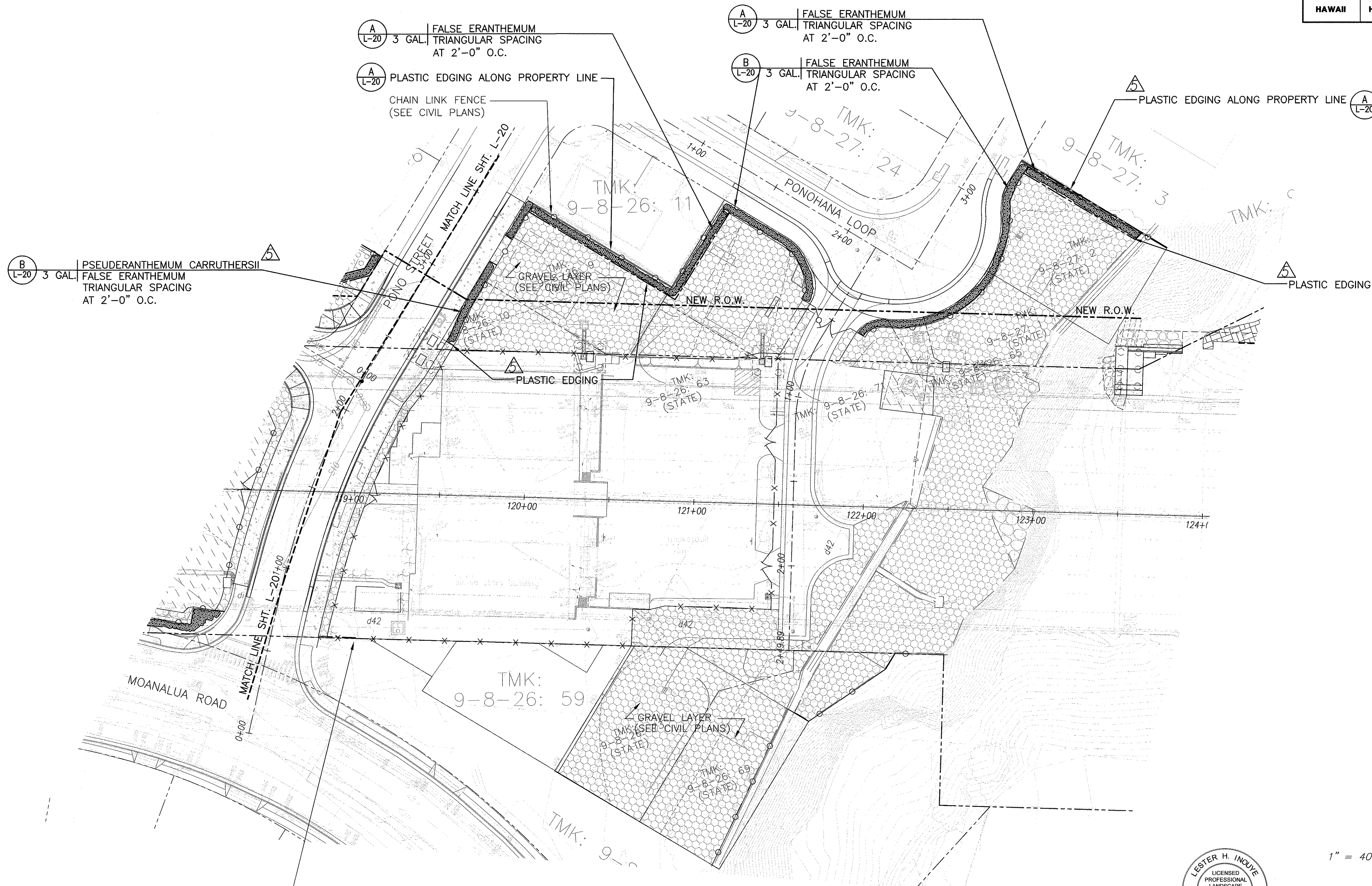


ORIGINAL PLAN	DATE
DRAWN BY	DESIGNED BY
NOTED BY	CHECKED BY
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	790	815



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	791	815

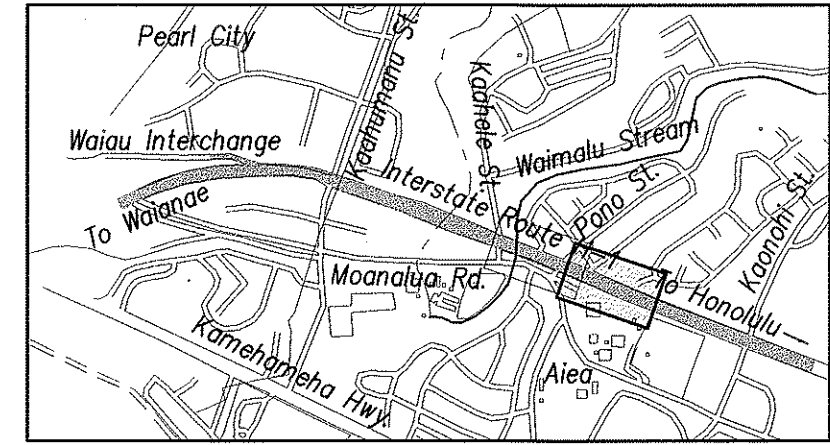


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Lester H. Inoué April 30, 2004
SIGNATURE EXPIRATION DATE OF THE LICENSE

NOTES: SEE CIVIL PLANS FOR EXACT LOCATION OF C/L FENCE & LIMIT OF GRAVEL LAYER.

LOT LANDSCAPE PLANTING PLAN 2
SCALE: 1"=40'



KEYMAP
NOT TO SCALE

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

10/16/03	Revised 5' wide planter.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

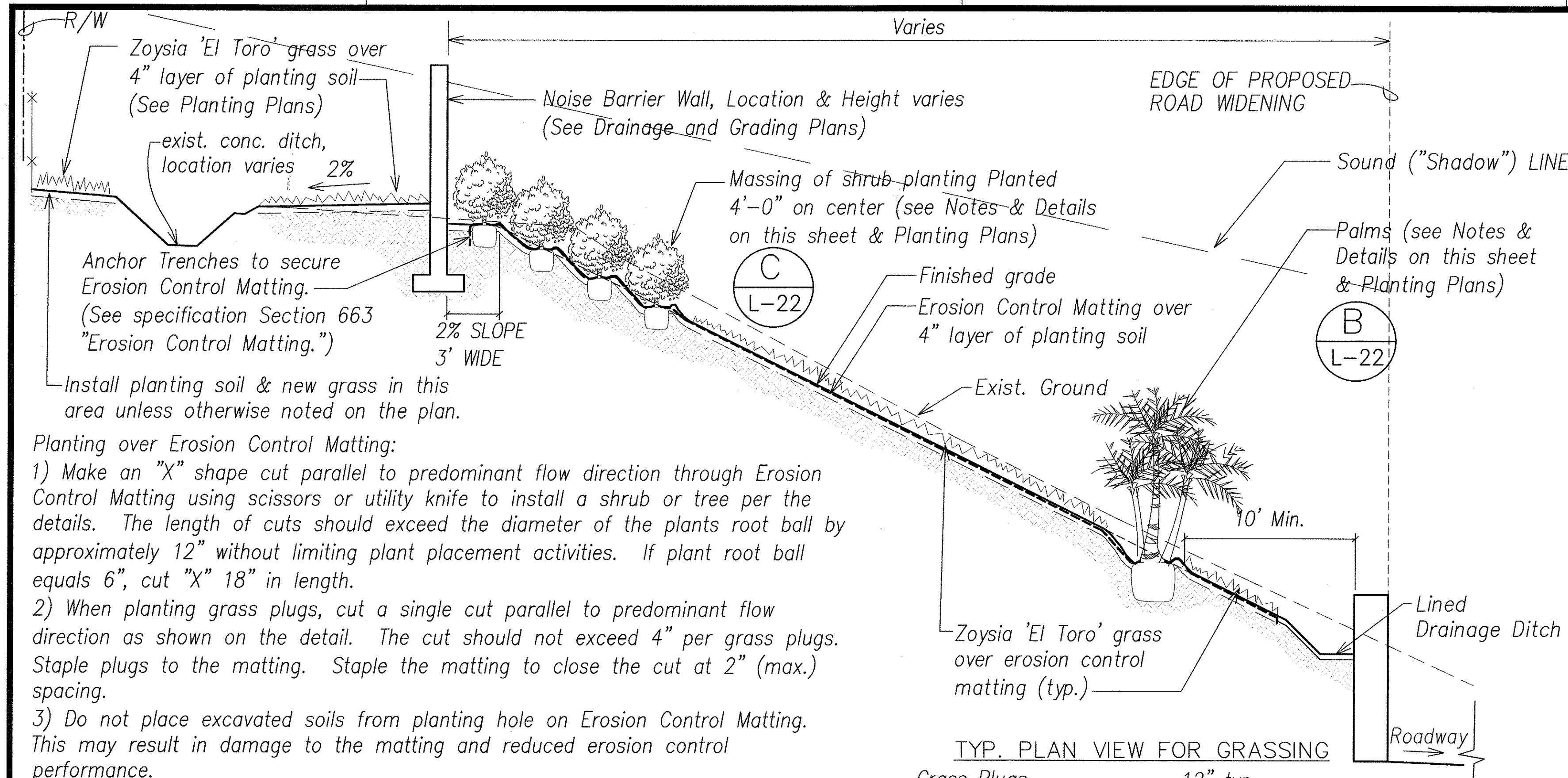
LOT LANDSCAPE PLANTING PLAN 2

INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII

Scale: 1" = 40' Date: Mar. 31, 2003

SHEET No. L-21 OF 22 SHEETS

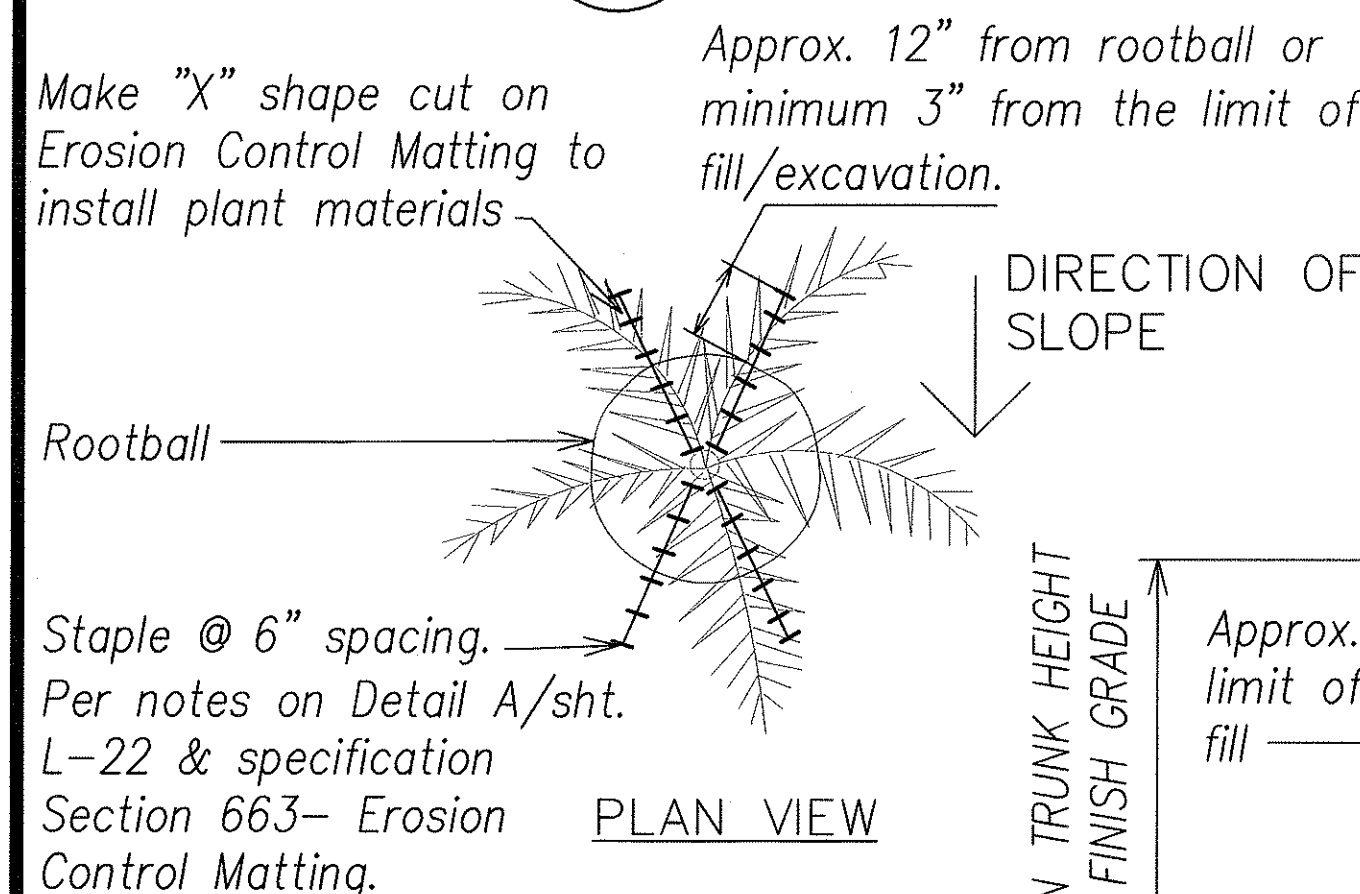
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(75) UNIT VIII	2003	ADD. 792	815



Planting over Erosion Control Matting:

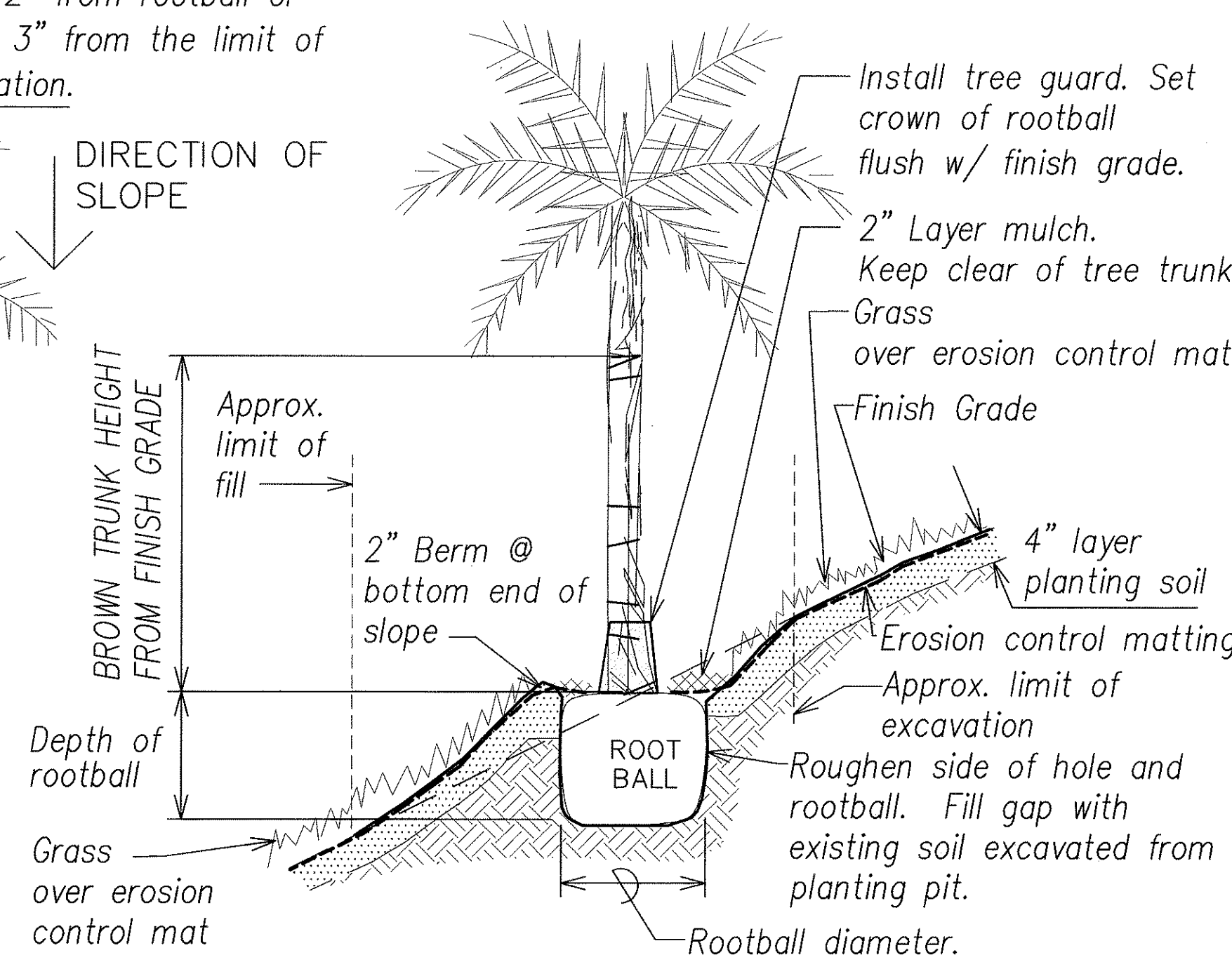
- 1) Make an "X" shape cut parallel to predominant flow direction through Erosion Control Matting using scissors or utility knife to install a shrub or tree per the details. The length of cuts should exceed the diameter of the plants root ball by approximately 12" without limiting plant placement activities. If plant root ball equals 6", cut "X" 18" in length.
- 2) When planting grass plugs, cut a single cut parallel to predominant flow direction as shown on the detail. The cut should not exceed 4" per grass plugs. Staple plugs to the matting. Staple the matting to close the cut at 2" (max.) spacing.
- 3) Do not place excavated soils from planting hole on Erosion Control Matting. This may result in damage to the matting and reduced erosion control performance.
- 4) After planting plant fold flaps of the matting back into place. Staple the matting to close the cut around the stem/trunk of the plant as close as possible without damaging plant. Continue placing staples every 6" working outwards until all cuts have been securely fastened & closed. See Detail B/L-22.
- 5) Contractor is responsible to install additional Erosion Control Matting, if necessary, to protect all exposed soil due to mounding associated with plants rootball installation.

A TYPICAL LANDSCAPE SECTION W/ 2:1 & 1.5:1 MAX. SLOPES
L-22 not to scale

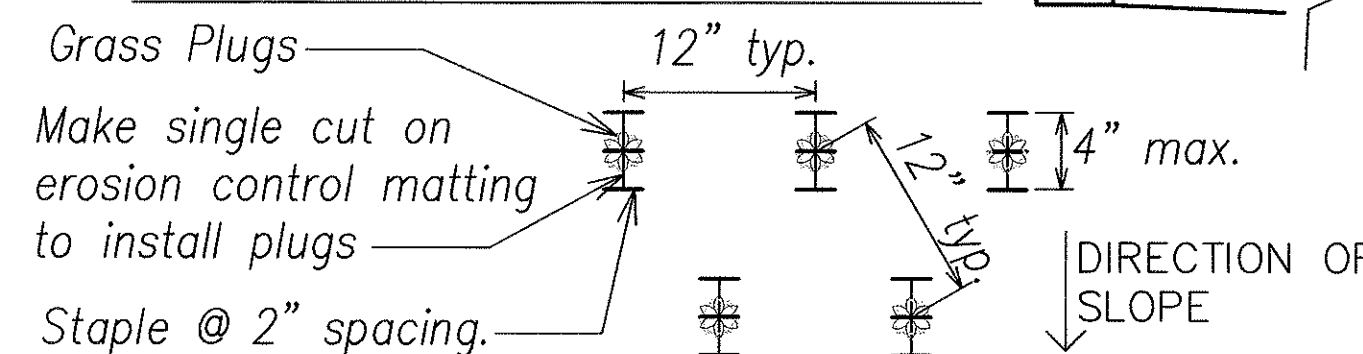


- Notes:
1. See also notes on Detail A/sht. L-22 & specification Section 663-Erosion Control Matting for requirements for cutting & stapling of erosion control matting.
 2. If required, backfill Mix to be planting soil per specification.

B TREE PLANTING DETAIL (ON SLOPE)
L-22 not to scale



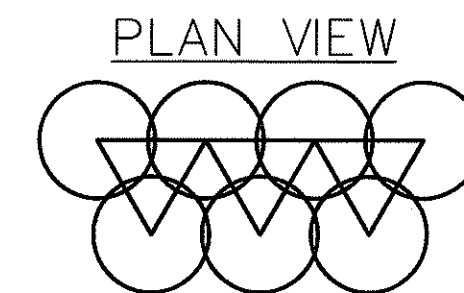
TYP. PLAN VIEW FOR GRASSING



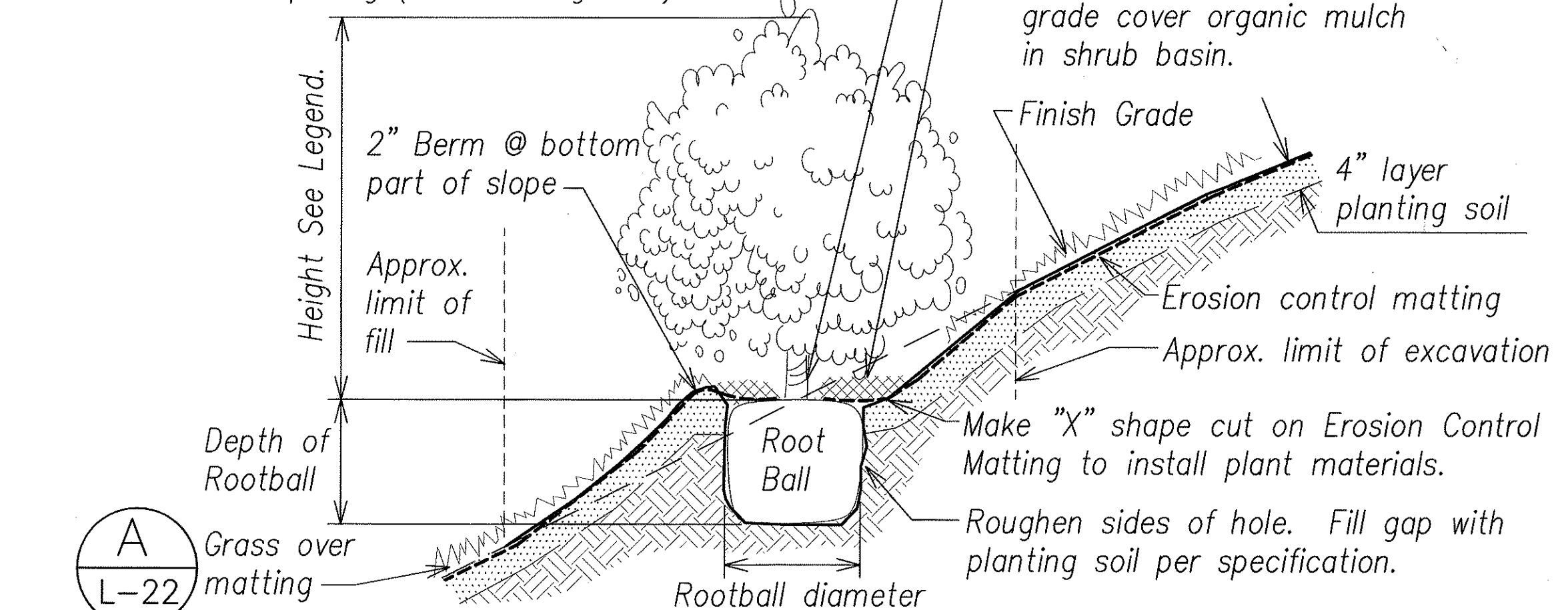
Note: Triangular spacing at 12" on center.

GENERAL PLANTING NOTES

1. All work shall be performed by persons familiar with planting work and under the supervision of a qualified planting foreman. Work in progress is to be coordinated with the Engineer as areas become available for planting.
2. The Contractor is to verify the location of all on-site utilities (including irrigation piping and wiring) before commencing the work. The Contractor shall also be responsible for the repair of any damaged utilities.
3. Plant material location shown on plans is diagrammatic and will be subject to adjustment in the field by the Engineer. It is the intent of the design for the tree plantings to appear in natural clusters, not in straight lines (unless otherwise noted). Graphic symbols on plans do not necessarily represent individual plant material quantities.
4. Quantities shown on the landscape legend are for the convenience of the Contractor. It is the responsibility of the contractor to provide and install the necessary landscape materials in quantities sufficient to fulfill the design at the spacing/depth specified and in the locations shown on the Planting Plans.
5. The Contractor shall stake all tree locations in the field for approval by the Engineer.
6. Tree and shrub pits shall be dug prior to moving plants to their respective locations. All tree pits shall be water tested prior to planting to assure that water will drain. Notify Engineer in writing of all soil or drainage conditions encountered during planting operations which the Contractor considers detrimental to growth of plant material.
7. The Contractor shall take all reasonable precautions to coordinate work and to minimize damage to completed grading, irrigation, and related work.



Note: Triangular spacing on center spacing (See Planting Plan)



C SHRUB PLANTING DETAIL (ON SLOPE)
L-22 not to scale

PLANTING MATERIALS LEGEND

QTY.	COMMON NAME	BOTANICAL NAME	REMARKS
30	Loulu Palm	Pritchardia hillebrandii	7 gal. 2' Brown Trunk Ht.
12	Fox Tail Palm	Wodyetia bifurcata	25 gal. 3' Brown Trunk Ht.
20	Alexander Palm	Archontophoenix alexandreae	25 gal. 3' Brown Trunk Ht.
20	Chinese Fan Palm	Livistona chinensis	5 gal. 18" Brown Trunk Ht.
18	Macarthur Palm	Ptychosperma macarthurii	25 gal. 3' Brown Trunk Ht.
SHRUBS	COMMON NAME	BOTANICAL NAME	MIN. SIZE MIN. HEIGHT MIN. SPREAD
440	Oleander 'Red'	Nerium oleander 'Red'	3 gal. can 24" 12"
150	Oleander 'Pink'	Nerium oleander 'Pink'	3 gal. can 24" 12"
80	Oleander 'Salmon'	Nerium oleander 'Salmon'	3 gal. can 24" 12"
50	Naupaka	Scaevola Taccada	3 gal. can 24" 12"
440	Plumbago	Plumbago Auriculata	3 gal. can 24" 12"
1,470	False Eranthemum	Pseuderanthemum carruthersii	3 gal. can 24" 12"

QTY.	GROUND COVER / MISCELLANEOUS MATERIALS	DESCRIPTION	REMARKS
200,000 S.F.	Zoysia 'El Toro' grass	Sprigs (See specification.)	
90,000 S.F.	Zoysia 'El Toro' grass	Punch holes in the erosion control matting & install grass into ground at 12" on center (See Notes & Specifications.)	
800 L.F.	Plastic Edging	6.5" Ht. edging, metal stake @ 6' O.C. (See Specifications.)	
50 C.Y.	Gravel	2" layer over weed barrier @ planter bed under the Viaduct	
4,500 C.Y.	Planting soil	4" layer (See Specifications.)	

Note: The quantities indicated on the planting plan & legend are approximate. The Planting Plans shall have precedence over the Plant Legend.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE: Lester H. Inoué, April 30, 2004, EXPIRATION DATE OF THE LICENSE

10/16/03	Revised Details & Legend.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
LANDSCAPE PLANTING NOTES
LEGEND & DETAILS
INTERSTATE ROUTE H-3
H-3 FINISH (UNIT VIII)
F.A.I. Proj. No. I-H3-1(75) Unit VIII
Scale: AS SHOWN Date: Mar. 31, 2003
SHEET No. L-22 OF 22 SHEETS