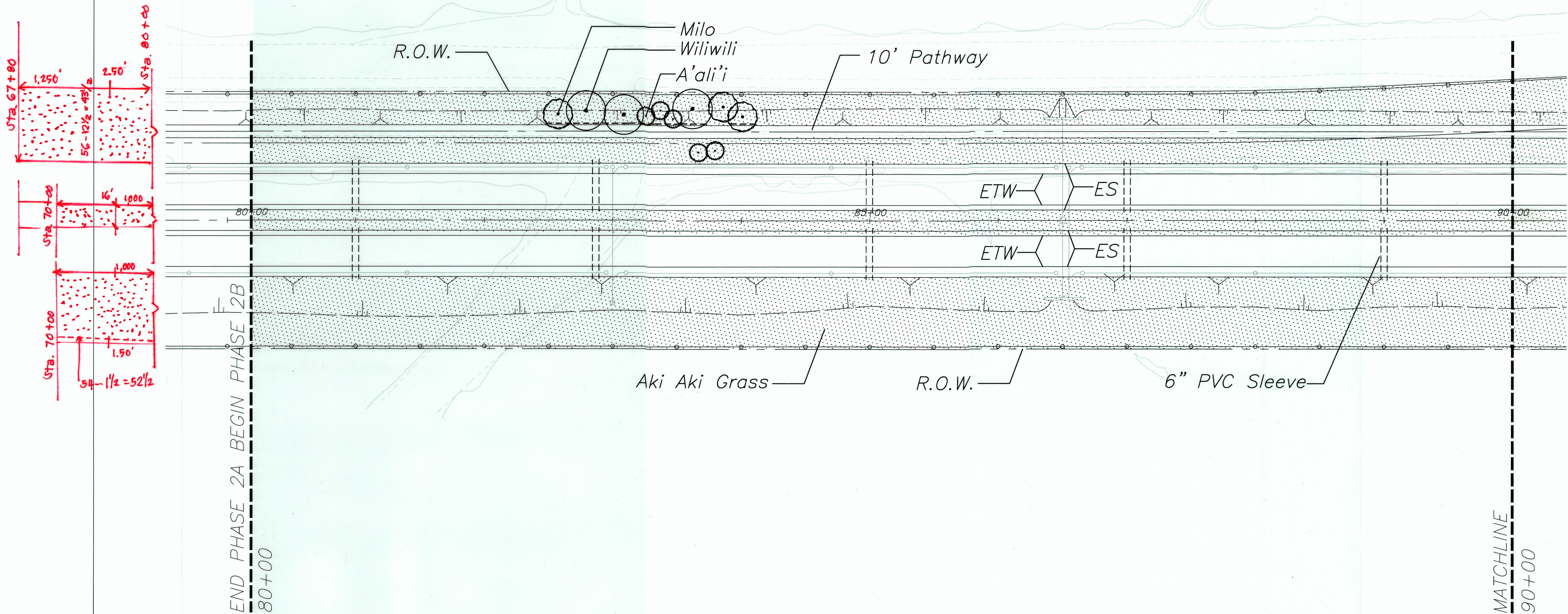
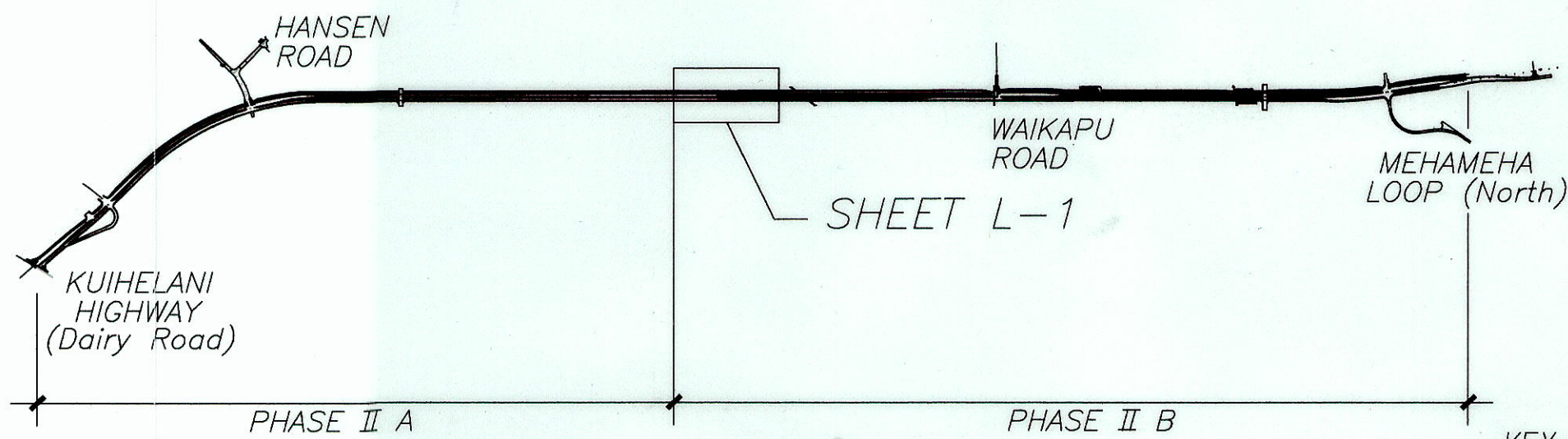


FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (5)	2003	166	189



NOTE:
CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS
WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN
30' TO THE EDGE OF ROAD TRAVELWAY



PLANT LIST	
EST. QTY.	COMMON NAME
5 EA.	A'ali'i
3 EA.	Milo
3 EA.	Wiliwili
121,700 SF.	Aki Aki Grass
1,505 CY.	Imported Screened Soil
121,700 SF.	Soil Ammendments
400 LF.	Irrigation Sleeves
120 LF.	Root Barrier
2 CY.	Cover Mulch



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING PLAN - STA. 80+00 TO 90+00

MOKULELE HIGHWAY WIDENING
Vicinity of Cane Haul Road

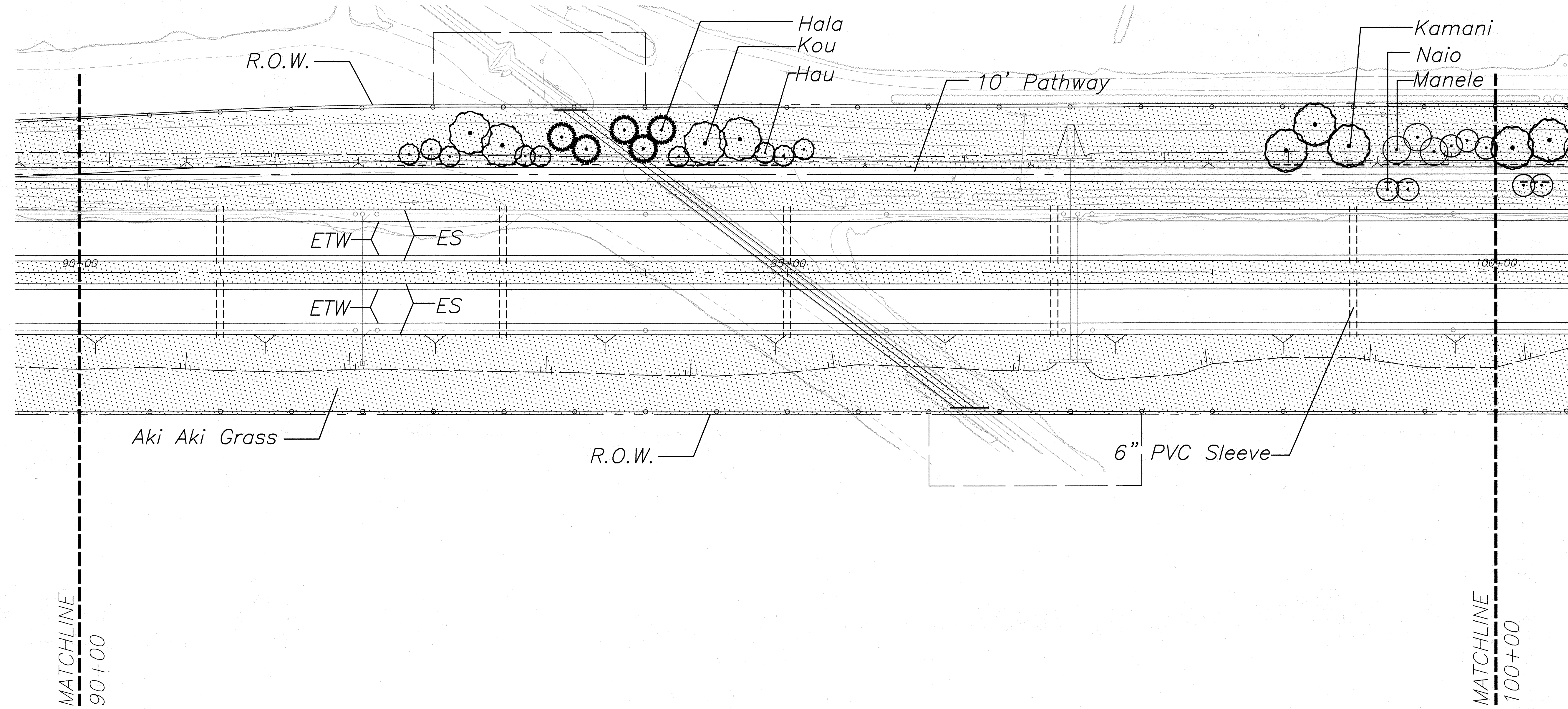
To
Maui Humane Society
Federal - Aid Project No. NH-0311(5)

Scale: 1" = 40' Date: June 2002

SHEET No. L-1 OF 15 SHEETS

"AS-BUILT"

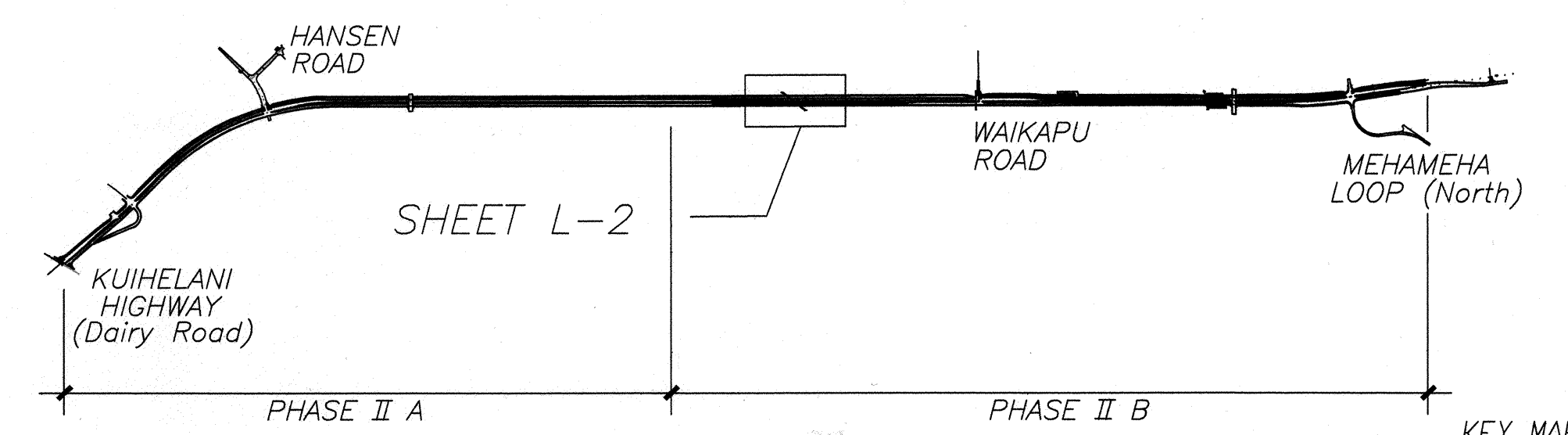
FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (5)	2003	167	189



MATCHLINE
90+00

MATCHLINE
100+00

NOTE:
CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS
WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN
30' TO THE EDGE OF ROAD TRAVELWAY



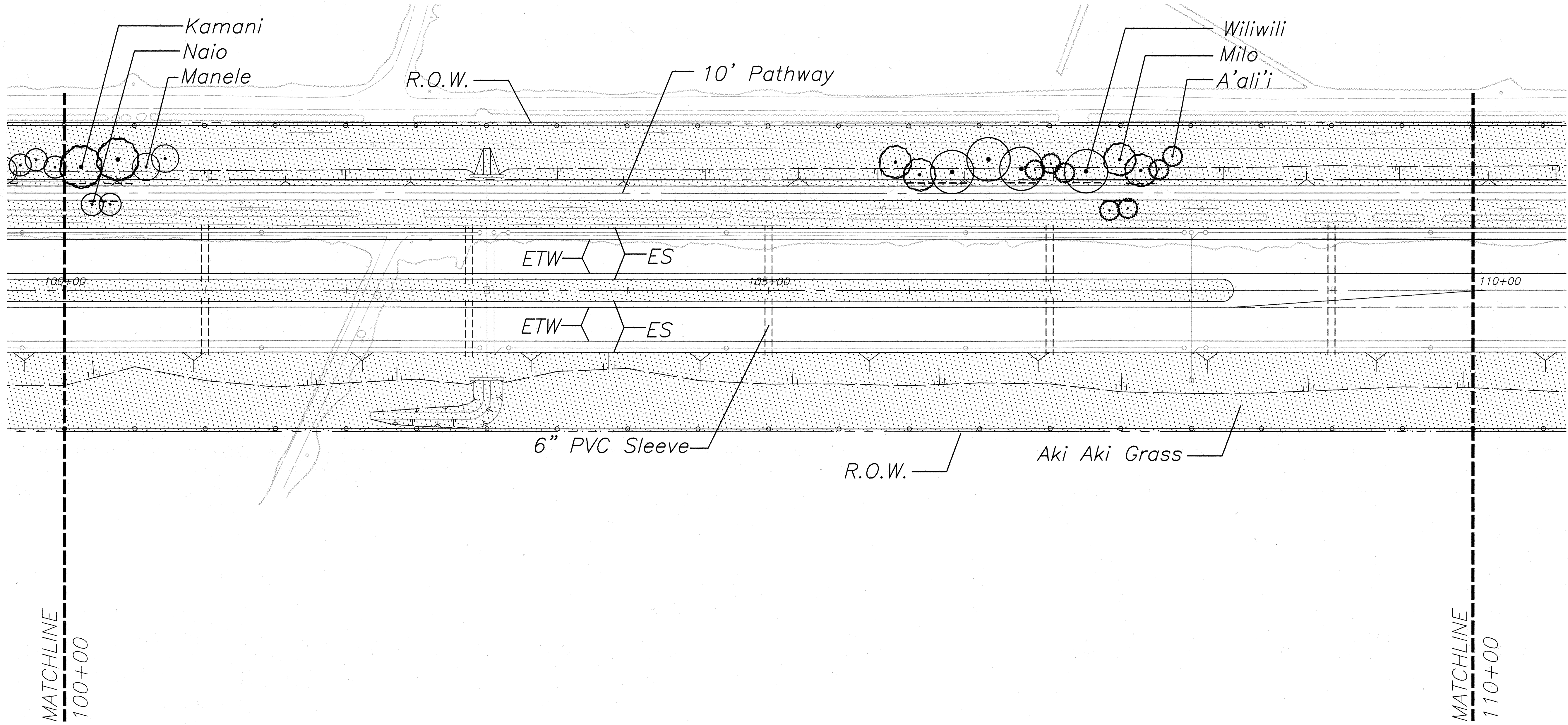
PLANT LIST	
EST. QTY.	COMMON NAME
5 EA.	Hala
9 EA.	Hau
4 EA.	Kou
3 EA.	Kamani
5 EA.	Naio
3 EA.	Manele
121,000 SF.	Aki Aki Grass
1,480 CY.	Imported Screened Soil
121,000 SF.	Soil Ammendments
400 LF.	Irrigation Sleeves
340 LF.	Root Barrier
5 CY.	Cover Mulch



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING PLAN - STA. 90+00 TO 100+00

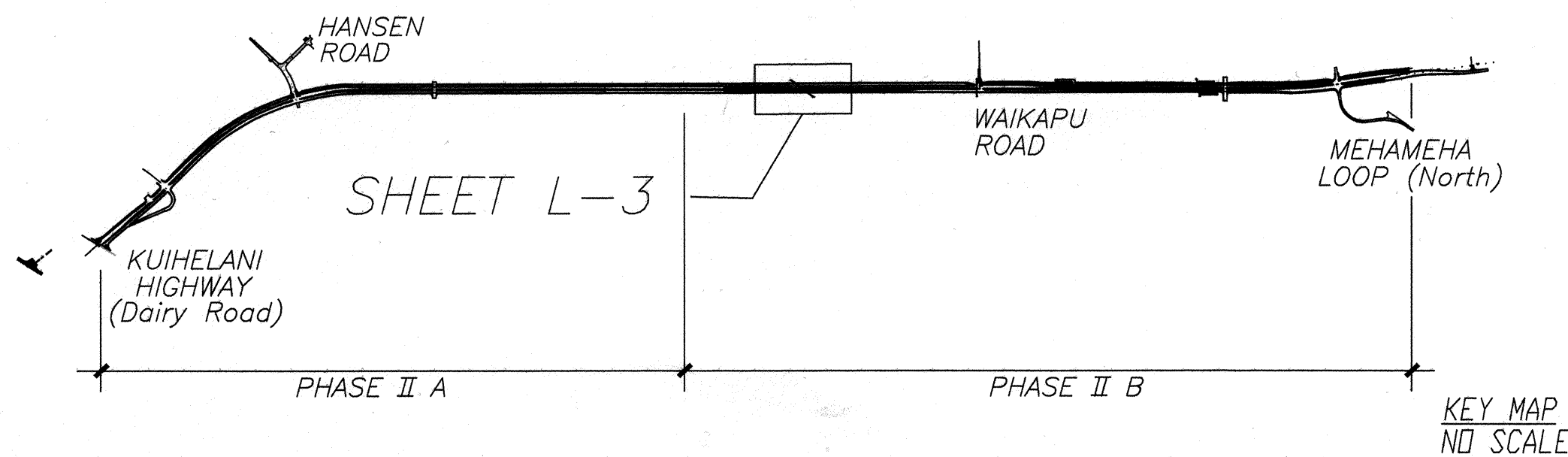
MOKULELE HIGHWAY WIDENING
Vicinity of Cane Haul Road
To
Maui Humane Society
Federal - Aid Project No. NH-0311(5)
Scale: 1" = 40' Date: June 2002
SHEET No. L-2 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (5)	2003	168	189

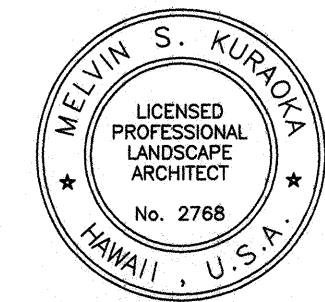


ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	TRACED BY	
	QUANTITIES BY	
	CHECKED BY	

NOTE:
CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS
WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN
30' TO THE EDGE OF ROAD TRAVELWAY



PLANT LIST	
EST. QTY.	COMMON NAME
7 EA.	A'ali'i
2 EA.	Kamani
2 EA.	Manele
4 EA.	Milo
2 EA.	Naio
4 EA.	Wiliwili
136,300 SF.	Aki Aki Grass
1,670 CY.	Improted Screened Soil
136,300 SF.	Soil Ammendments
425 LF.	Irrigation Sleeves
160 LF.	Root Barrier
4 CY.	Cover Mulch

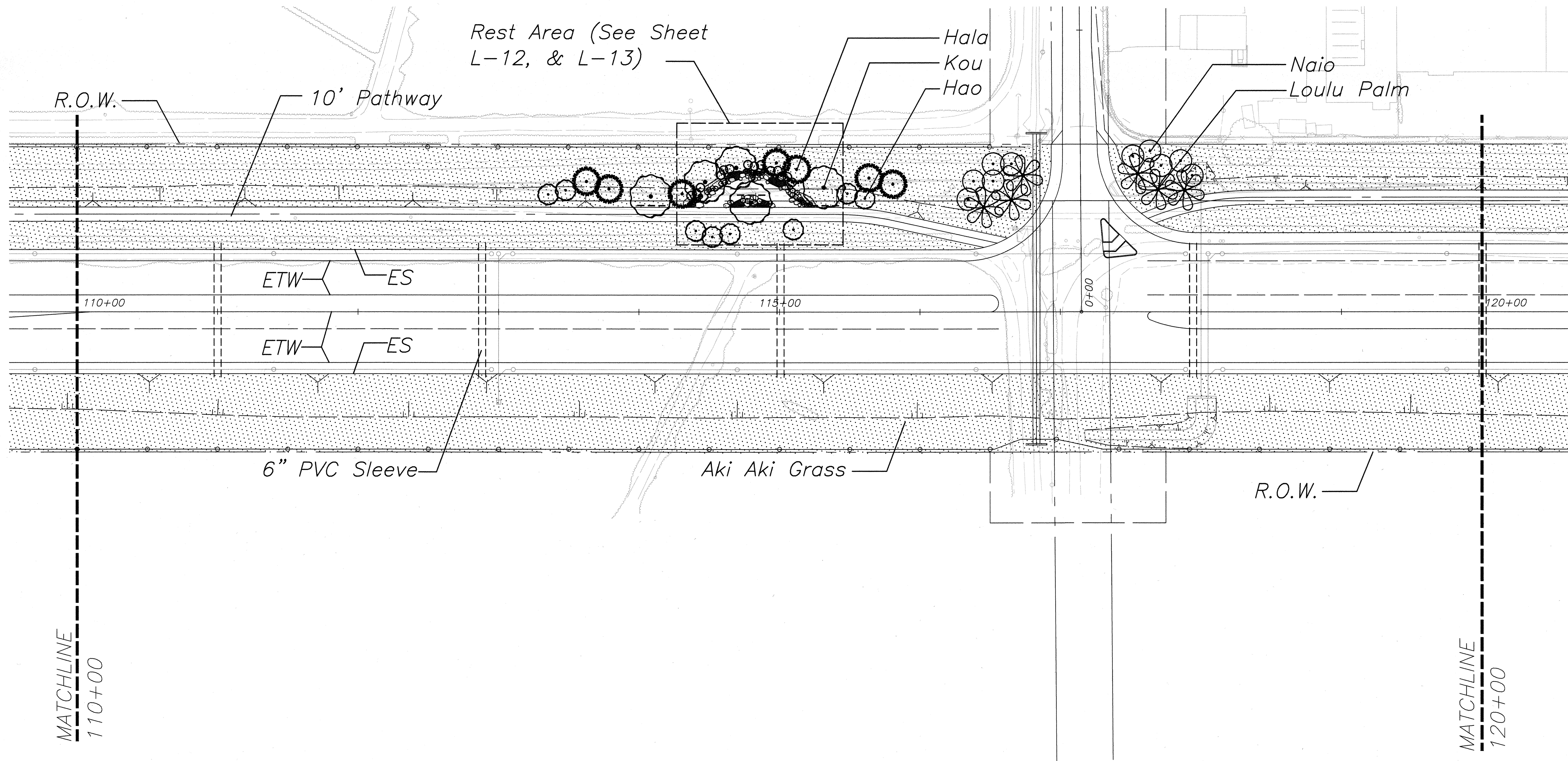


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ME OR UNDER MY SUPERVISION

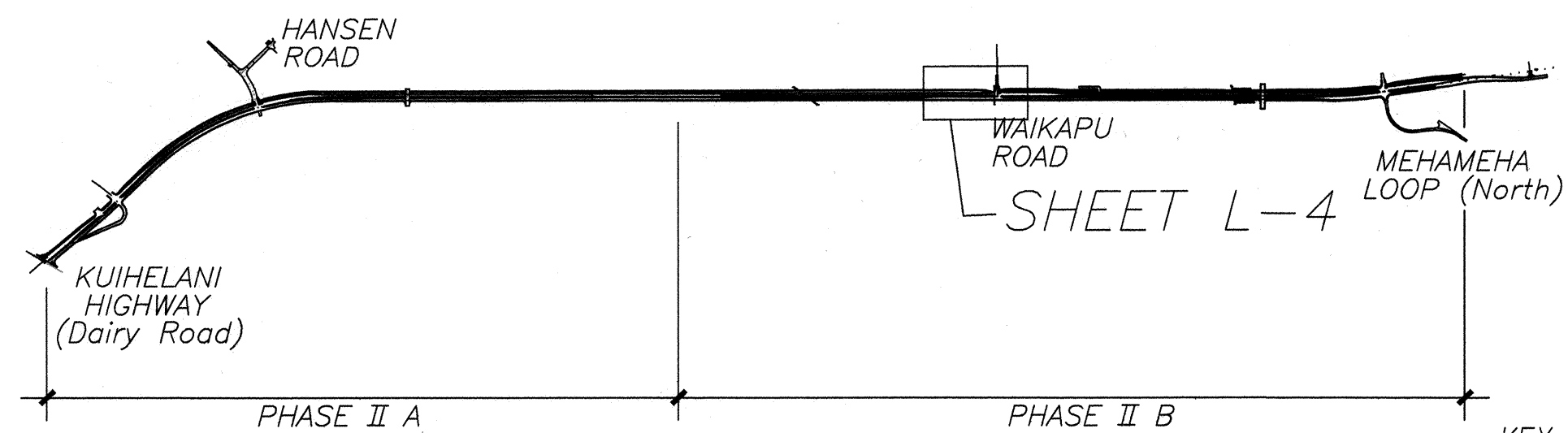
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING PLAN - STA. 100+00 TO 110+00

MOKULELE HIGHWAY WIDENING
Vicinity of Cane Haul Road
To
Maui Humane Society
Federal - Aid Project No. NH-0311(5)
Scale: 1" = 40' Date: June 2002
SHEET No. L-3 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (5)	2003	169	189



NOTE:
CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS
WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN
30' TO THE EDGE OF ROAD TRAVELWAY



KEY MAP
NO SCALE

PLANT LIST

EST. QTY.	COMMON NAME
7 EA.	Hala
5 EA.	Kou
8 EA.	Hao
10 EA.	Naio
6 EA.	Loulu Palm
114,100 SF.	Aki Aki Grass
1,400 CY.	Imported Screened Soil
114,100 SF.	Soil Ammendments
475 LF.	Irrigation Sleeves
220 LF.	Root Barrier
10 CY.	Cover Mulch
Note: See sheet L-14 for shrub and ground cover amount and type	



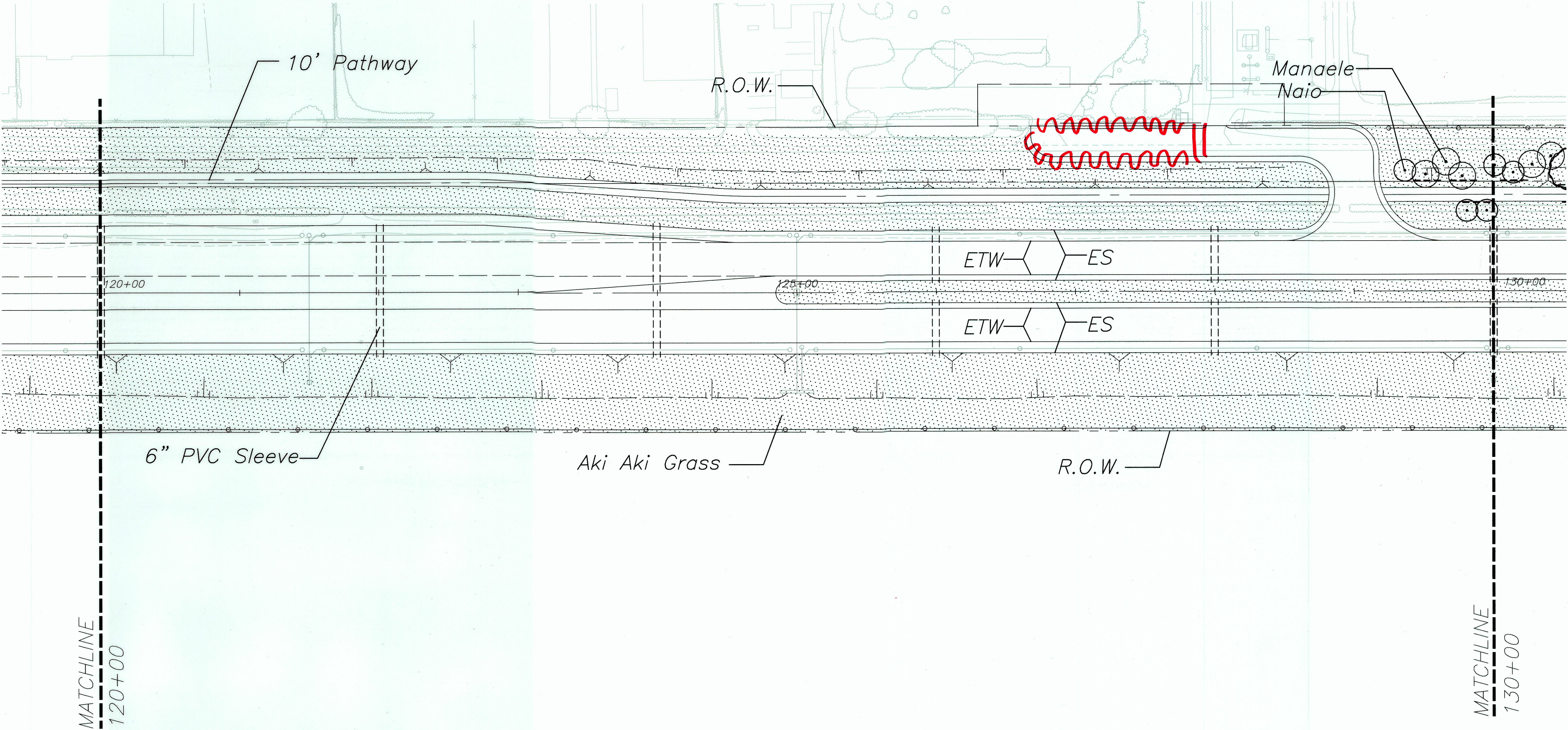
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING PLAN - STA. 110+00 TO 120+00

MOKULELE HIGHWAY WIDENING
Vicinity of Cane Haul Road
To
Maui Humane Society
Federal - Aid Project No. NH-0311(5)

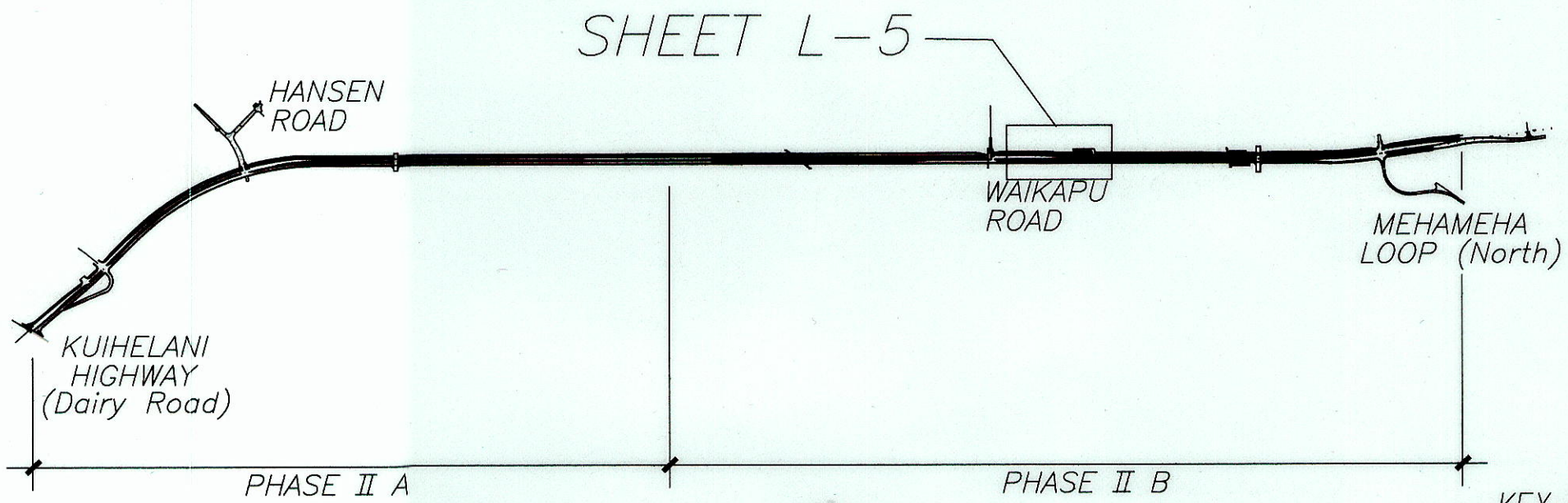
Scale: 1" = 40' Date: June 2002

SHEET No. L-4 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (5)	2003	170	189



NOTE:
CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS
WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN
30' TO THE EDGE OF ROAD TRAVELWAY



PLANT LIST	
EST. QTY.	COMMON NAME
3 EA.	Naio
3 EA.	Manele
119,400 SF.	Aki Aki Grass
1,460 CY.	Imported Screened Soil
119,400 SF.	Soil Ammendments
430 LF.	Irrigation Sleeves
60 LF.	Root Barrier
1 CY.	Cover Mulch



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING PLAN - STA. 120+00 TO 130+00

MOKULELE HIGHWAY WIDENING
Vicinity of Cane Haul Road

To
Maui Humane Society
Federal - Aid Project No. NH-0311(5)

Scale: 1" = 40' Date: June 2002

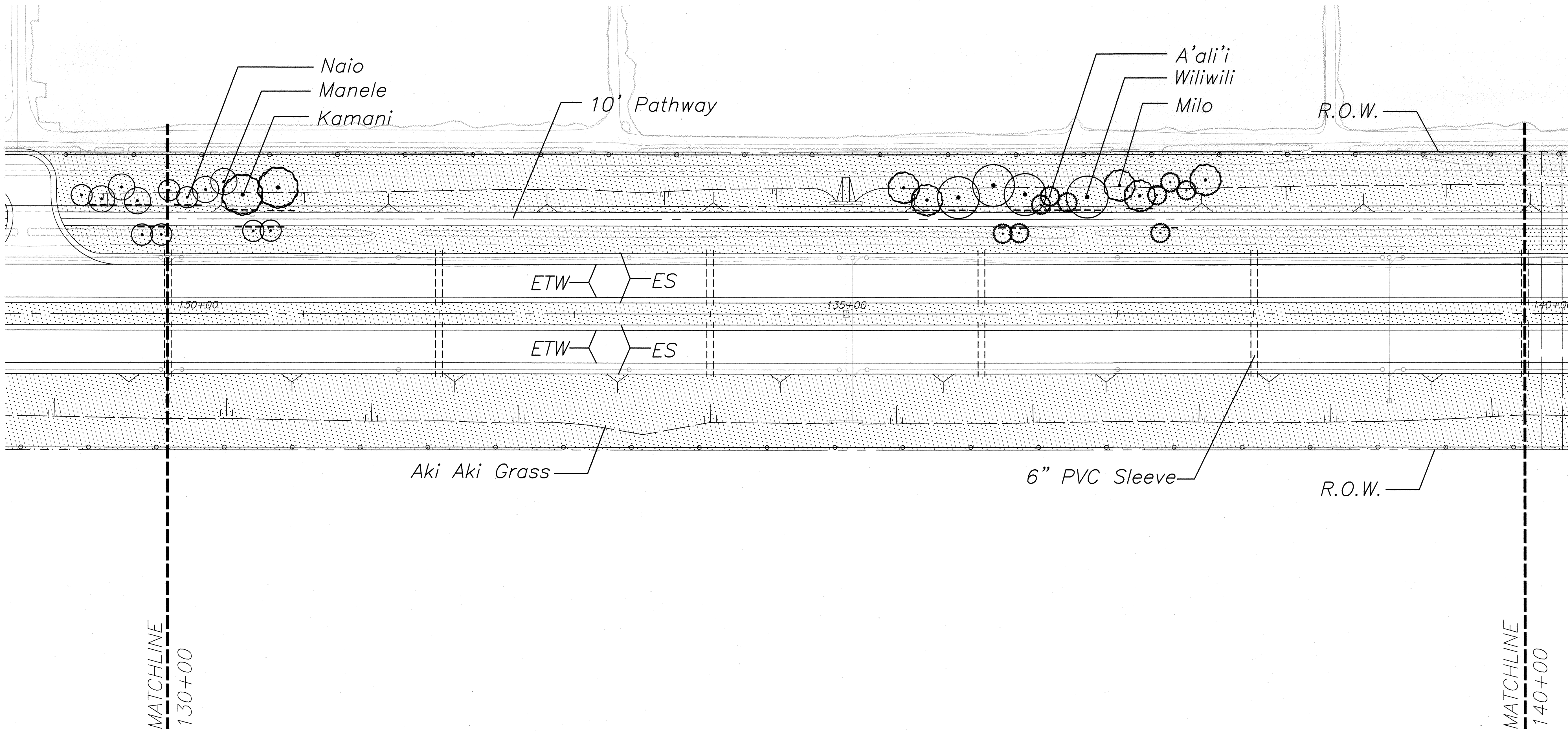
SHEET No. L-5 OF 15 SHEETS

THIS WORK WAS PREPARED BY
MEJOR UNDER MY SUPERVISION

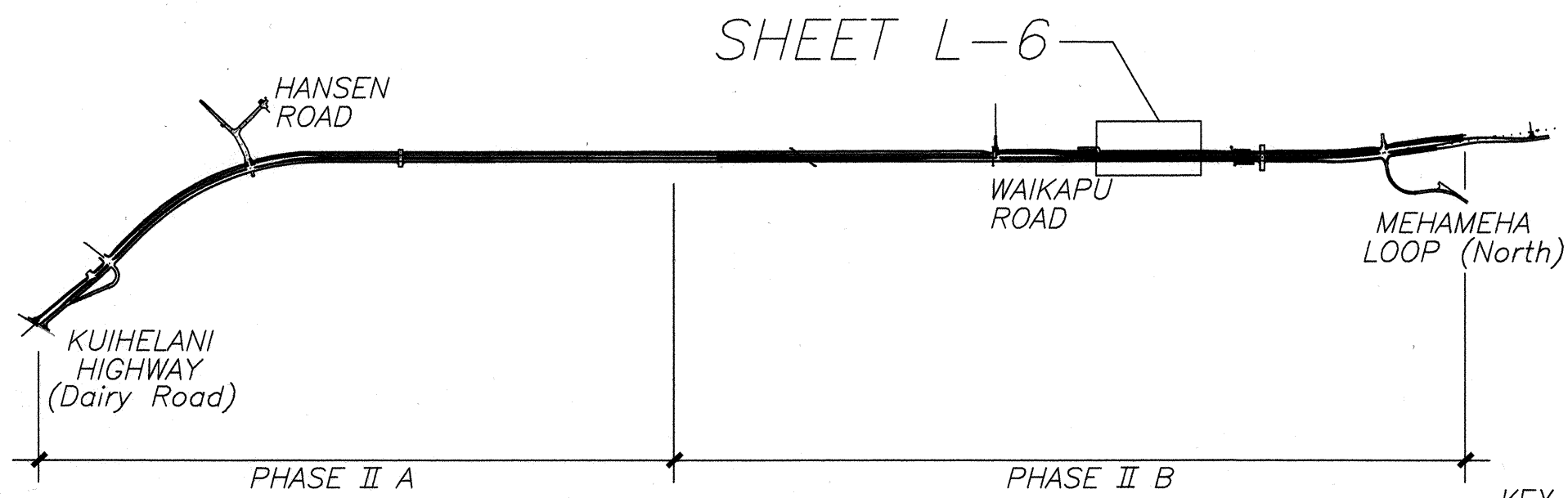
DATE	
DESIGNED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
NO.	

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (5)	2003	171	189



NOTE:
CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS
WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN
30' TO THE EDGE OF ROAD TRAVELWAY



PLANT LIST	
EST. QTY.	COMMON NAME
9 EA.	A'ali'i
2 EA.	Kamani
2 EA.	Manele
5 EA.	Milo
4 EA.	Naio
4 EA.	Wiliwili
139,000 SF.	Aki Aki Grass
1,720 CY.	Imported Screened Soil
139,000 SF.	Soil Ammendments
400 LF.	Irrigation Sleeves
260 LF.	Root Barrier
5 CY.	Cover Mulch



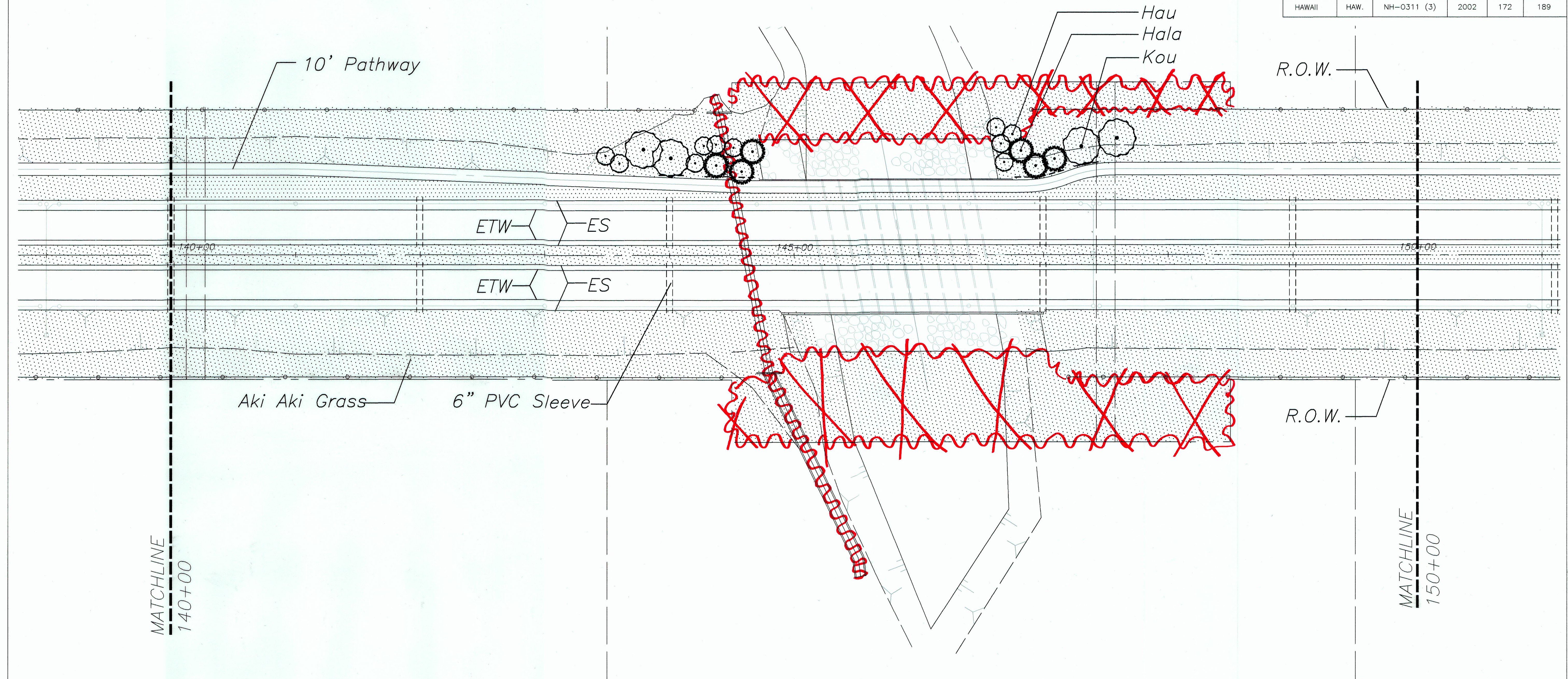
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING PLAN - STA. 130+00 TO 140+00

MOKULELE HIGHWAY WIDENING
Vicinity of Cane Haul Road
To
Maui Humane Society
Federal - Aid Project No. NH-0311(5)

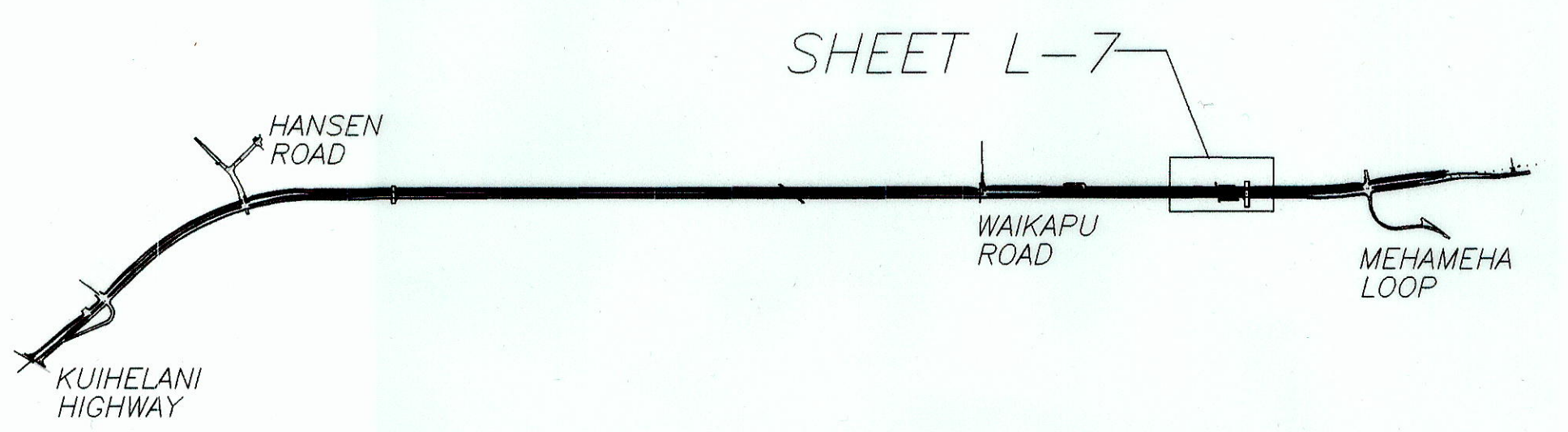
Scale: 1" = 40' Date: June 2002

SHEET No. L-6 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (3)	2002	172	189



SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
NO.	



PLANT LIST	
EST. QTY.	COMMON NAME
6 EA.	Hala
10 EA.	Hau
4 EA.	Kou
126,100 SF.	Aki Aki Grass
1,540 CY.	Imported Screened Soil
126,100 SF.	Soil Ammendments
320 LF.	Irrigation Sleeves
120 LF.	Root Barrier
4 CY.	Cover Mulch

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANTING PLAN - STA. 140+00 TO 150+00

MOKULELE HIGHWAY WIDENING
Vicinity of Cane Haul Road

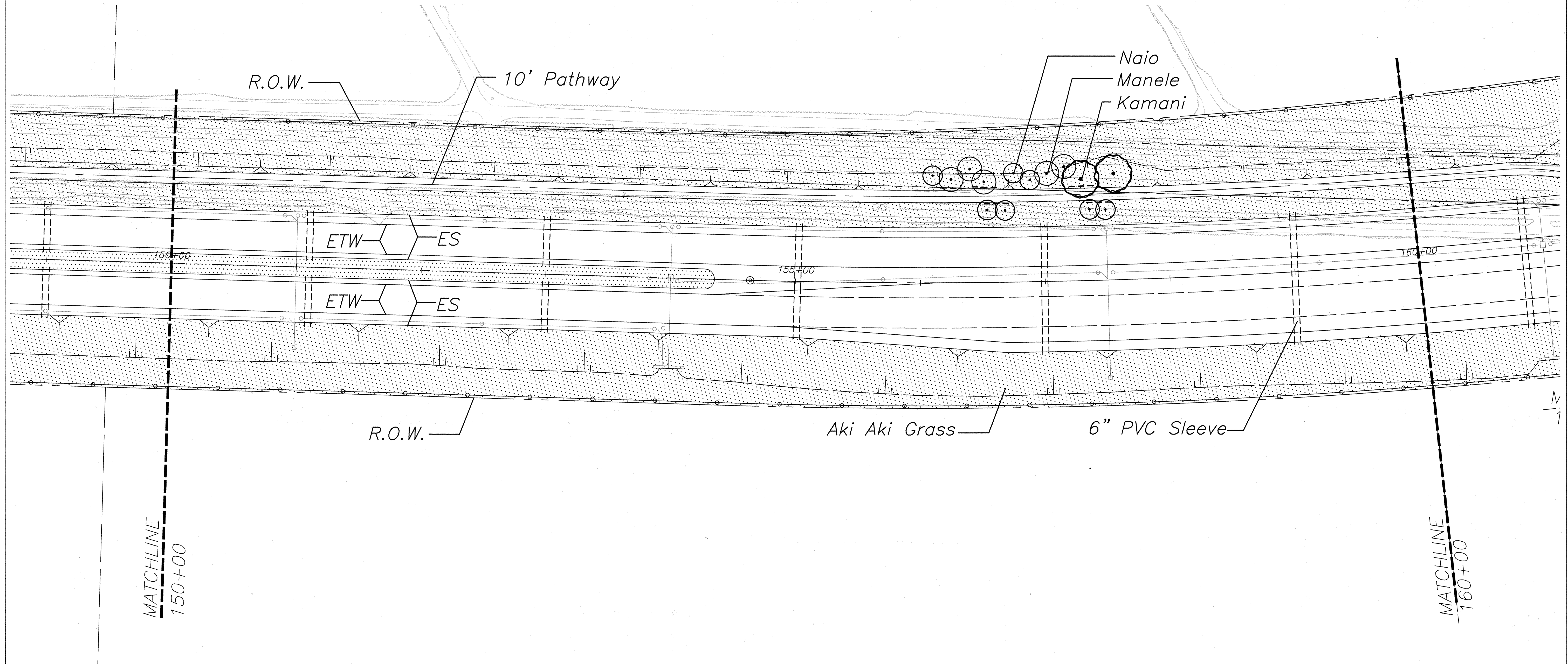
To
Maui Humane Society
Federal - Aid Project No. NH-0311(3)

Scale: 1" = 40' Date: May 2002

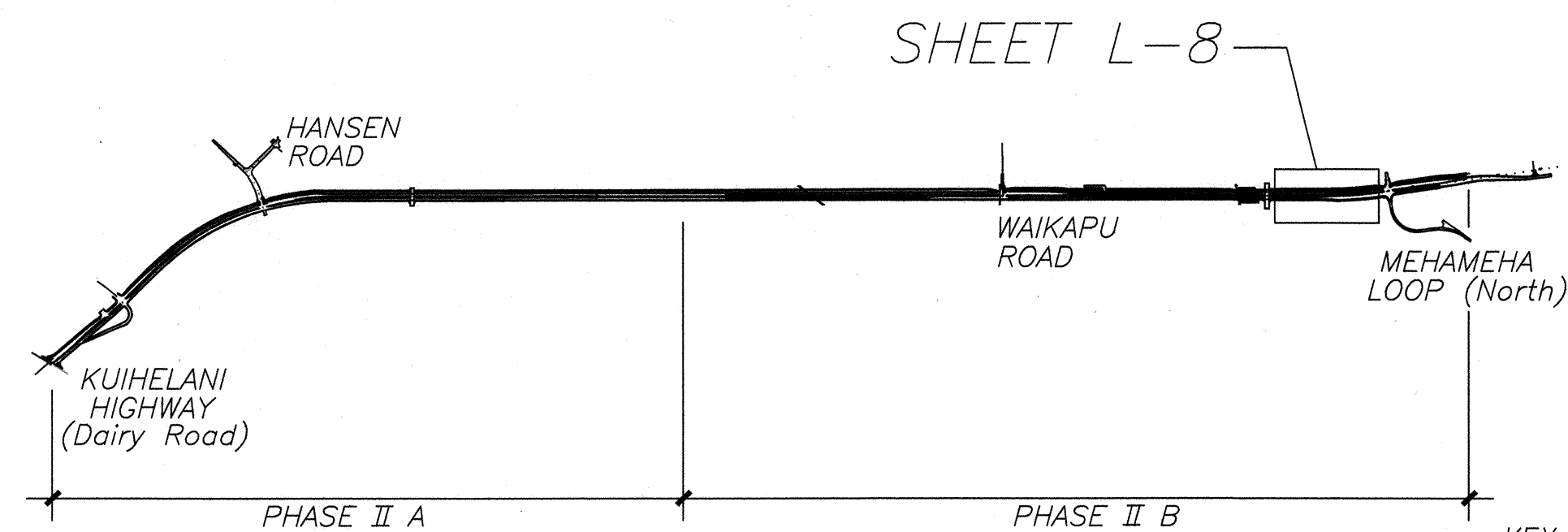
SHEET No. L-7 OF 15 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (5)	2003	173	189



NOTE:
CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS
WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN
30' TO THE EDGE OF ROAD TRAVELWAY



PLANT LIST	
EST. QTY.	COMMON NAME
7 EA.	Naio
5 EA.	Manele
2 EA.	Kamani
75,300 SF.	Aki Aki Grass
920 CY.	Imported Screened Soil
75,300 SF.	Soil Ammendments
450 LF.	Irrigation Sleeves
100 LF.	Root Barrier
3 CY.	Cover Mulch



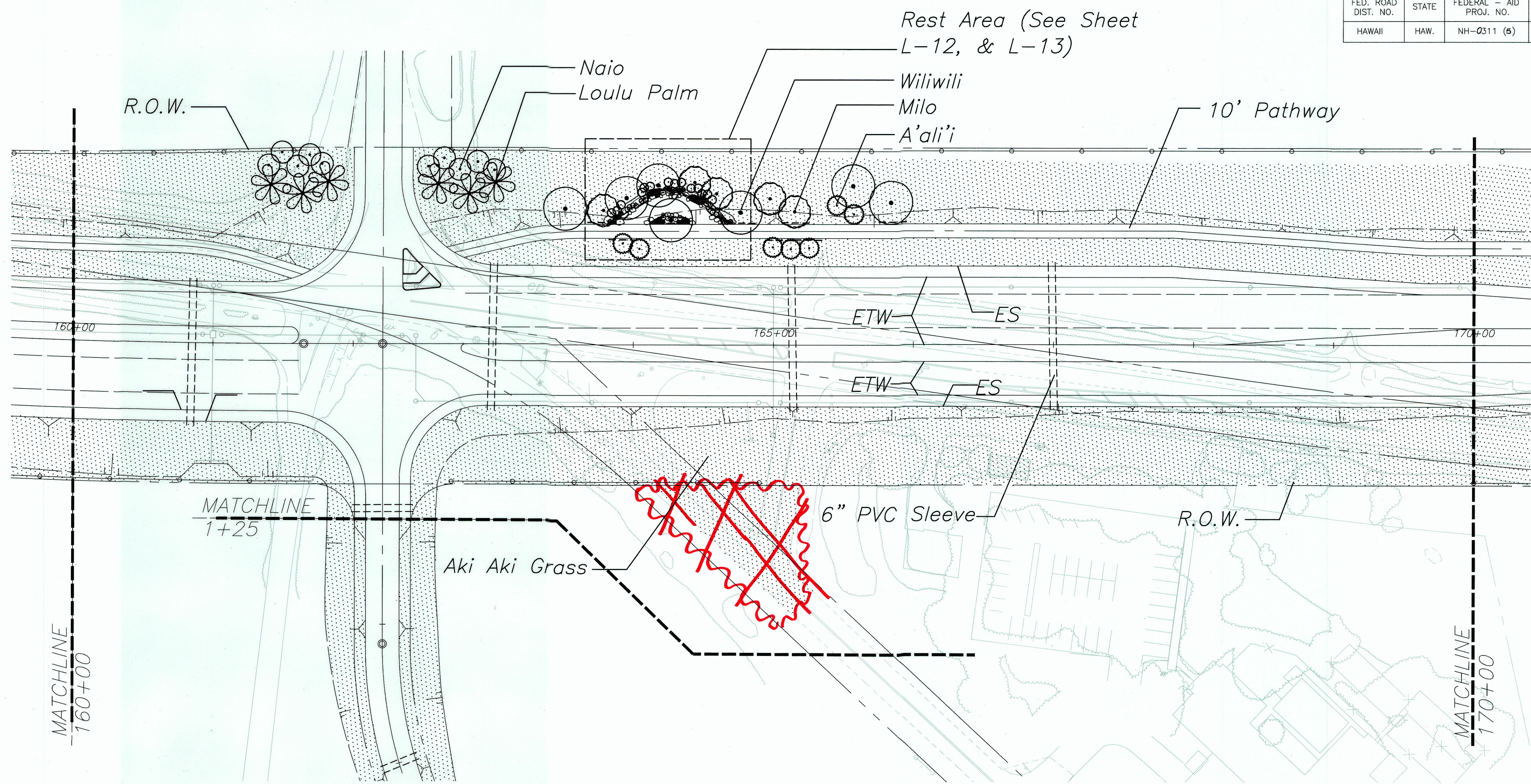
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING PLAN - STA. 150+00 TO 160+00

MOKULELE HIGHWAY WIDENING
Vicinity of Cane Haul Road
To
Mau Humane Society
Federal - Aid Project No. NH-0311(5)

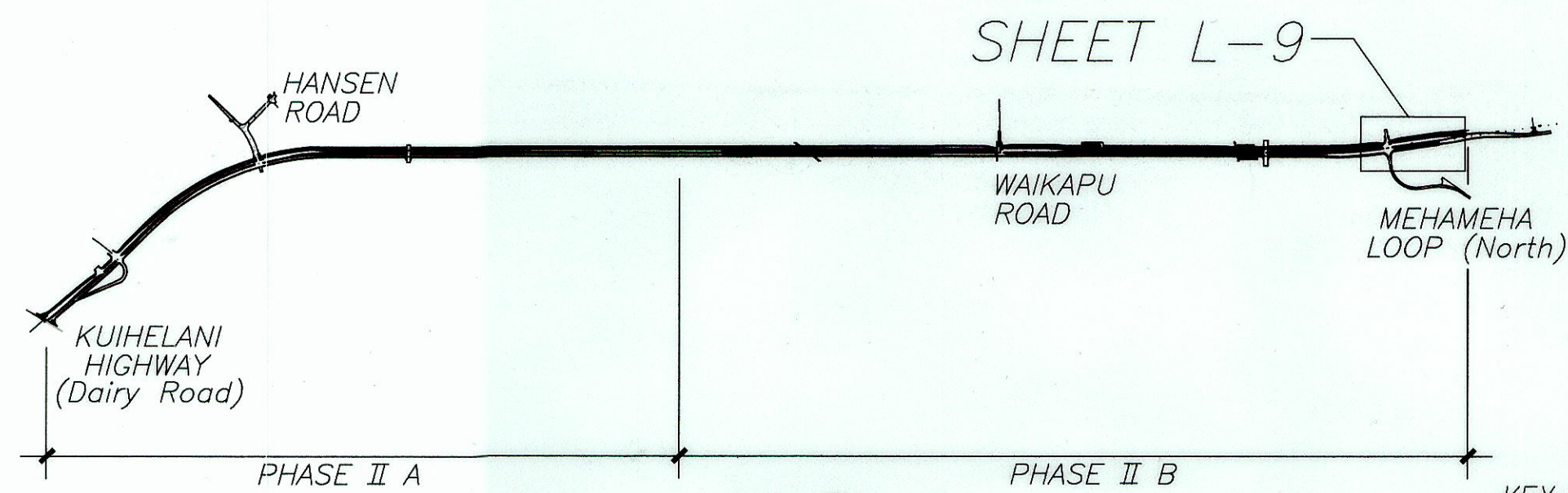
Scale: 1" = 40' Date: June 2002

SHEET No. L-8 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (5)	2003	174	189



NOTE:
CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS
WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN
30' TO THE EDGE OF ROAD TRAVELWAY



PLANT LIST	
EST. QTY.	COMMON NAME
7 EA.	A'ali'i
6 EA.	Loulu Palm
5 EA.	Milo
10 EA.	Naio
7 EA.	Wiliwili
143,300 SF.	Aki Aki Grass
1,750 C.Y.	Imported Screened Soil
143,300 SF.	Soil Ammendments
380 LF.	Irrigation Sleeves
220 LF.	Root Barrier
10 CY.	Cover Mulch
Note: See sheet L-14 for shrub and ground cover amount and type	

"AS-BUILT"



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING PLAN - STA. 160+00 TO 170+00

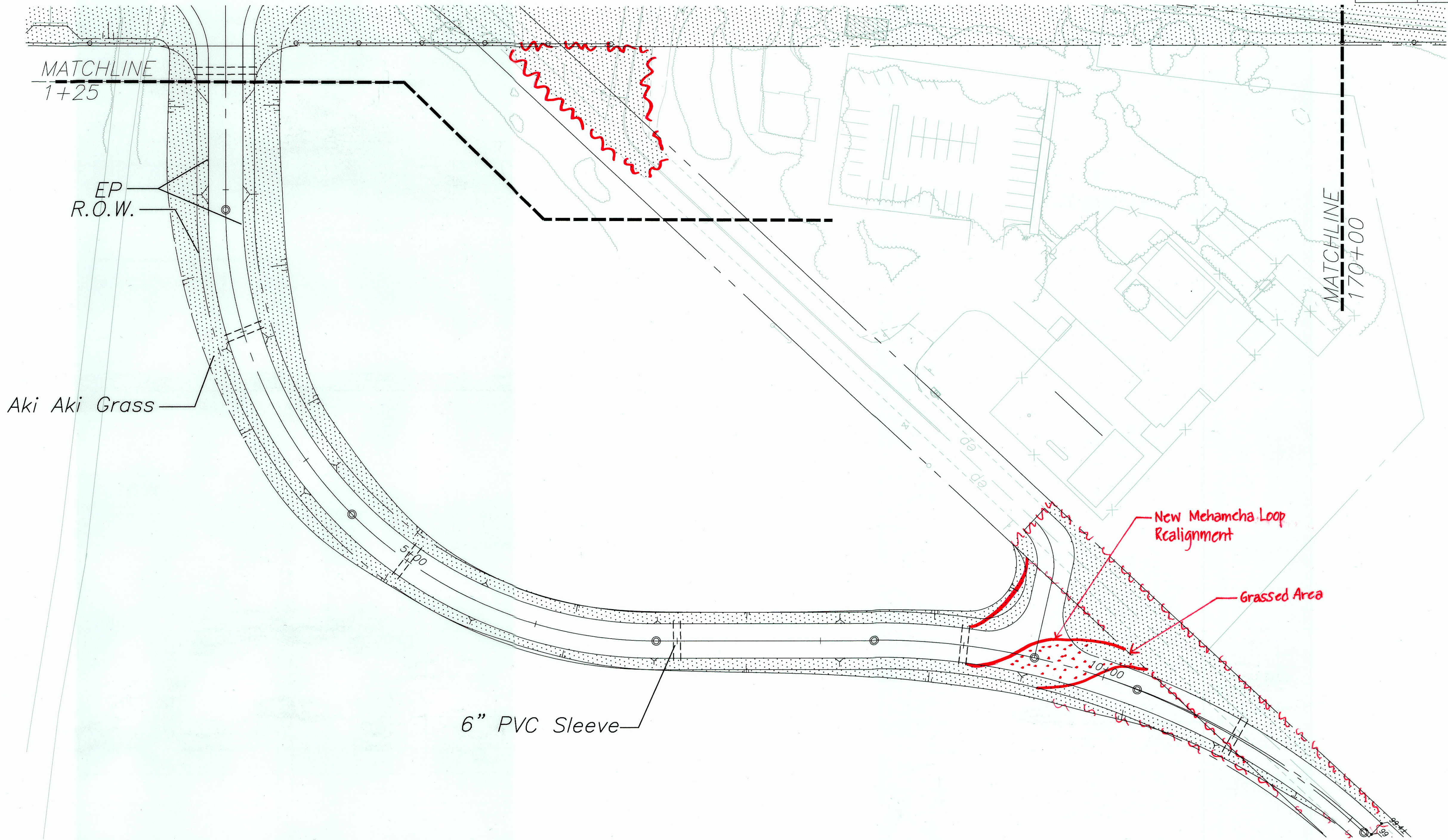
MOKULELE HIGHWAY WIDENING
Vicinity of Cane Haul Road

To
Maui Humane Society
Federal - Aid Project No. NH-0311(5)

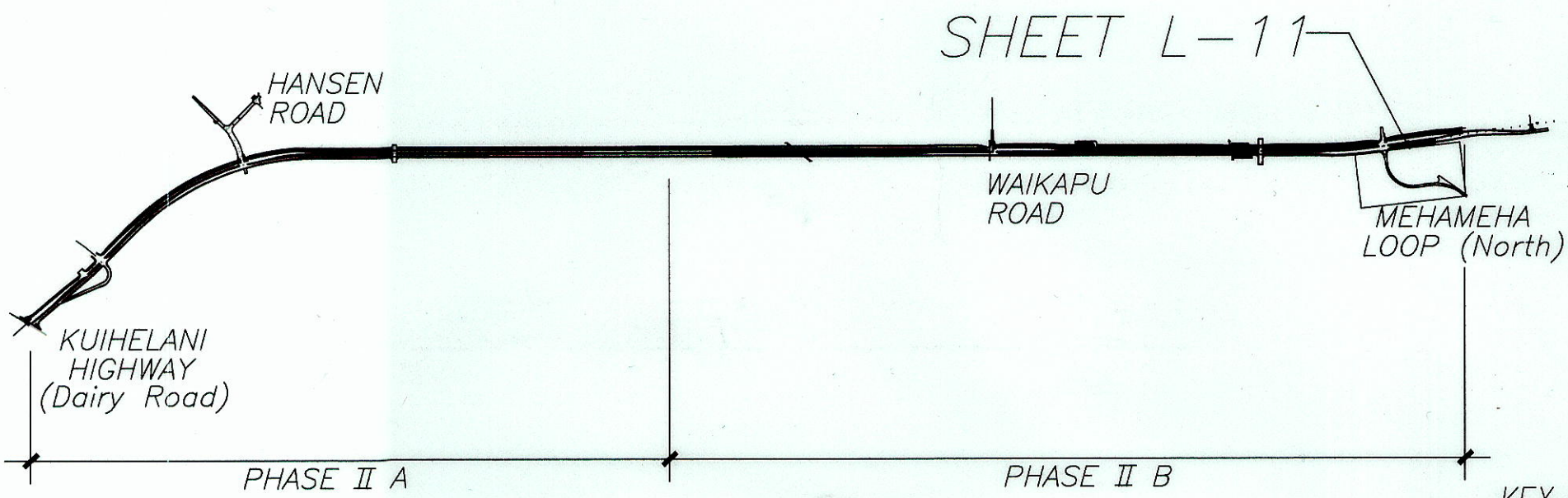
Scale: 1" = 40' Date: June 2002

SHEET No. L-9 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (5)	2003	176	189



NOTE:
CONTRACTOR SHALL NOT PLANT TREES OR SHRUBS
WITH 4" CALIPER TRUNK OR GREATER CLOSER THAN
30' TO THE EDGE OF ROAD TRAVELWAY



PLANT LIST	
EST. QTY.	COMMON NAME
37,700 SF.	Aki Aki Grass
465 C.Y.	Imported Screened Soil
37,700 SF.	Soil Ammendments
180 LF.	Irrigation Sleeves



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING PLAN MEHAMEHA LOOP - STA. 1+25 TO 11+00

MOKULELE HIGHWAY WIDENING
Vicinity of Cane Haul Road
To
Maui Humane Society
Federal - Aid Project No. NH-0311(5)

Scale: 1" = 40' Date: June 2002

SHEET No. L-11 OF 15 SHEETS

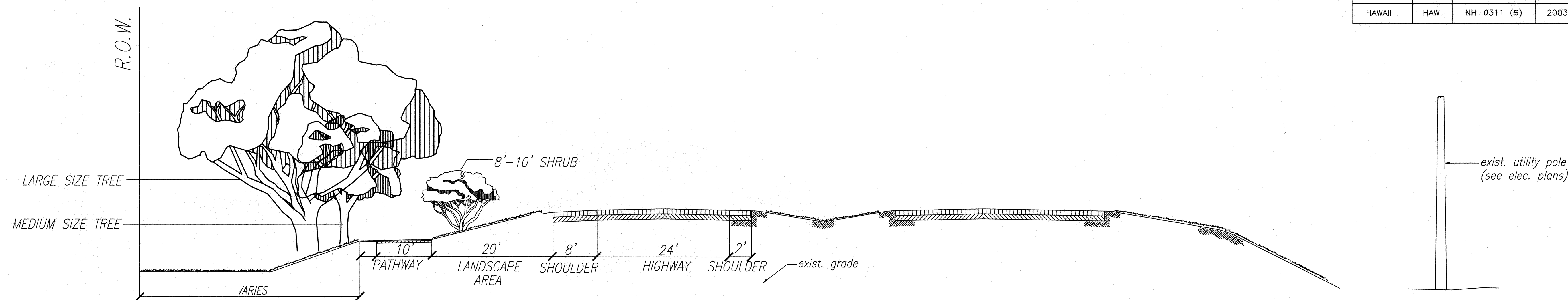
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	

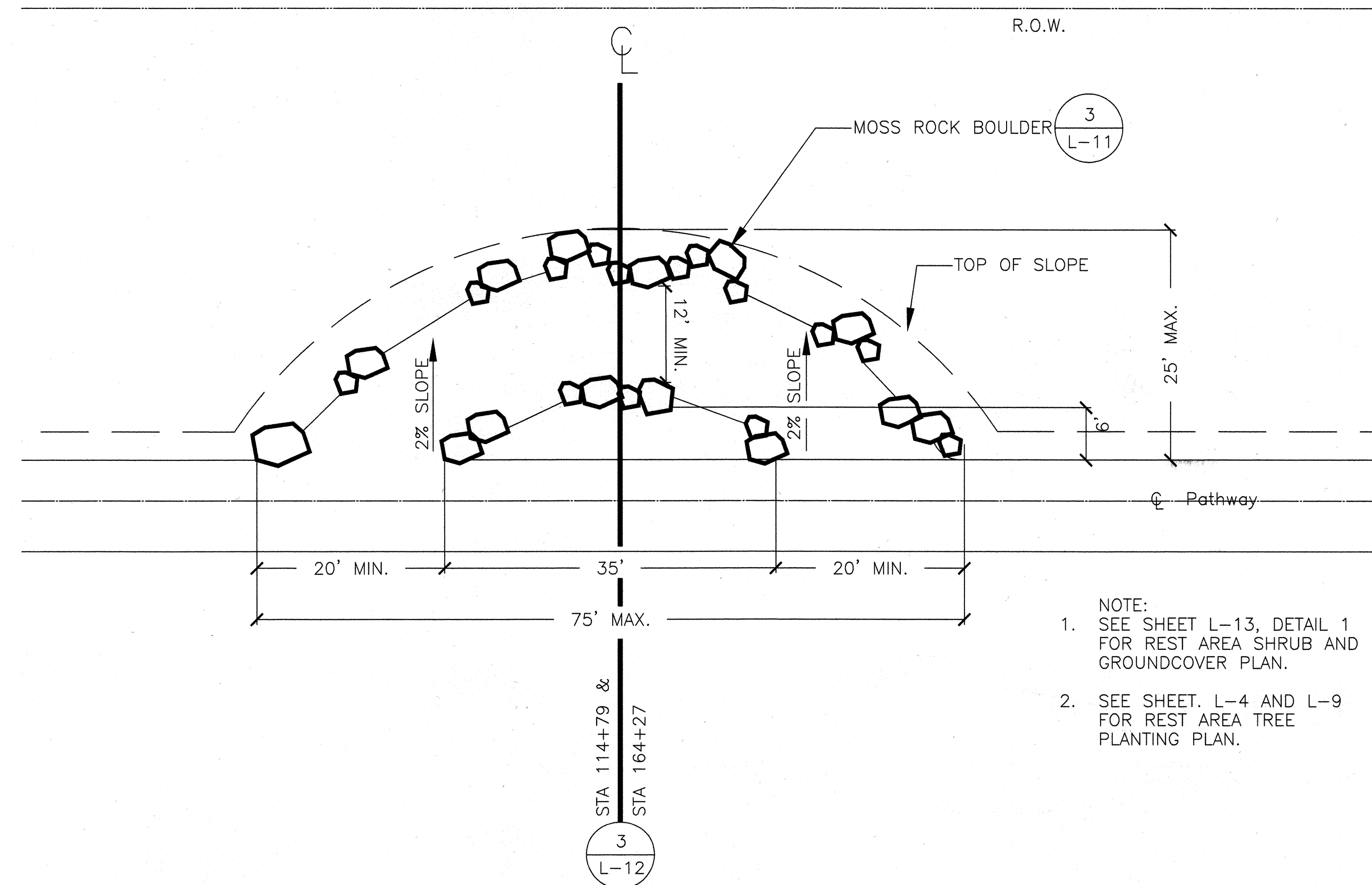
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"AS-BUILT"

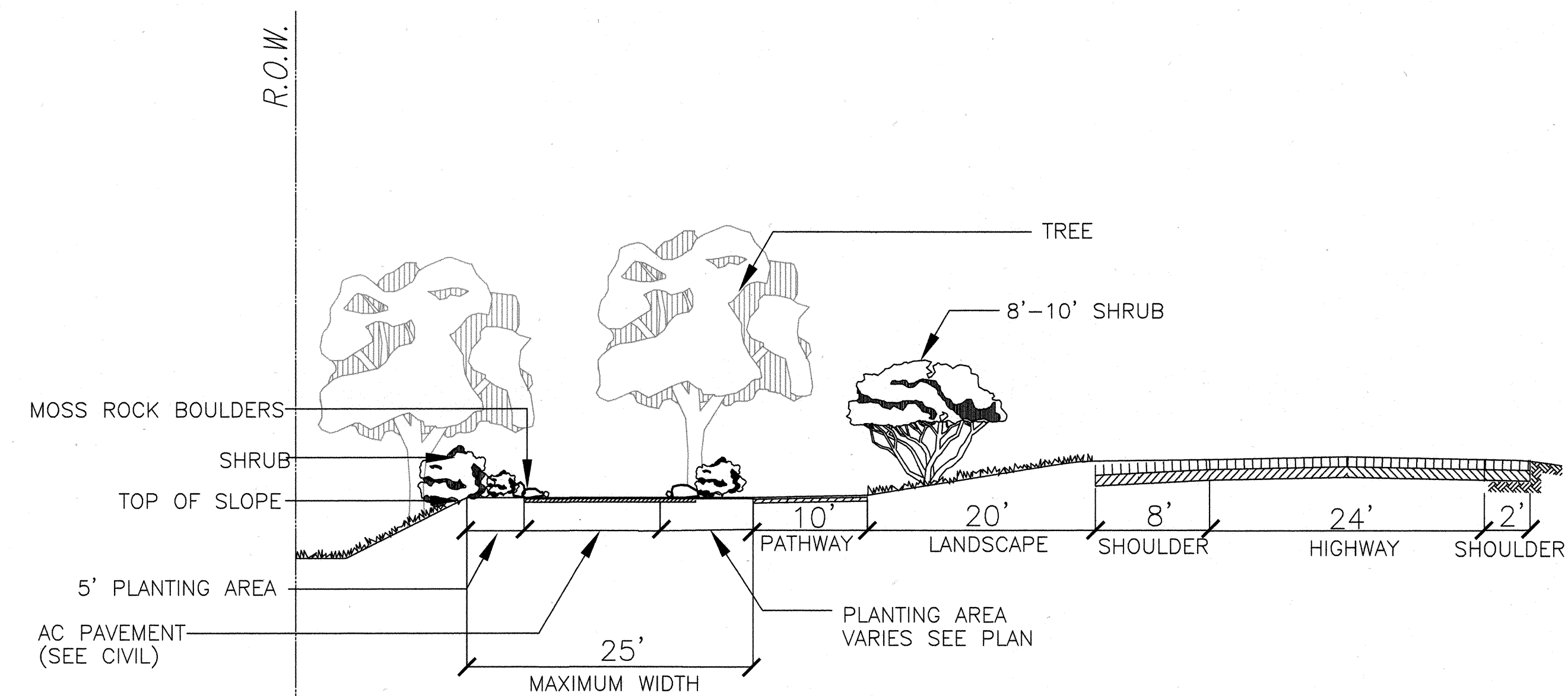
FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (5)	2003	177	189



1 TYPICAL SECTION ON TREE CLUSTER AREAS-MOKULELE HIGHWAY
L-12 SCALE: 1" = 10'



2 TYPICAL REST AREA LAYOUT PLAN
L-12 SCALE: 1" = 10'



3 TYPICAL REST AREA SECTION
L-12 SCALE: 1" = 10'

- NOTE:
- SEE SHEET L-13, DETAIL 1 FOR REST AREA SHRUB AND GROUNDCOVER PLAN.
 - SEE SHEET. L-4 AND L-9 FOR REST AREA TREE PLANTING PLAN.

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



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL ROAD SECTIONS

MOKULELE HIGHWAY WIDENING
Vicinity of Cane Haul Road
To
Maui Humane Society
Federal - Aid Project No. NH-0311(5)

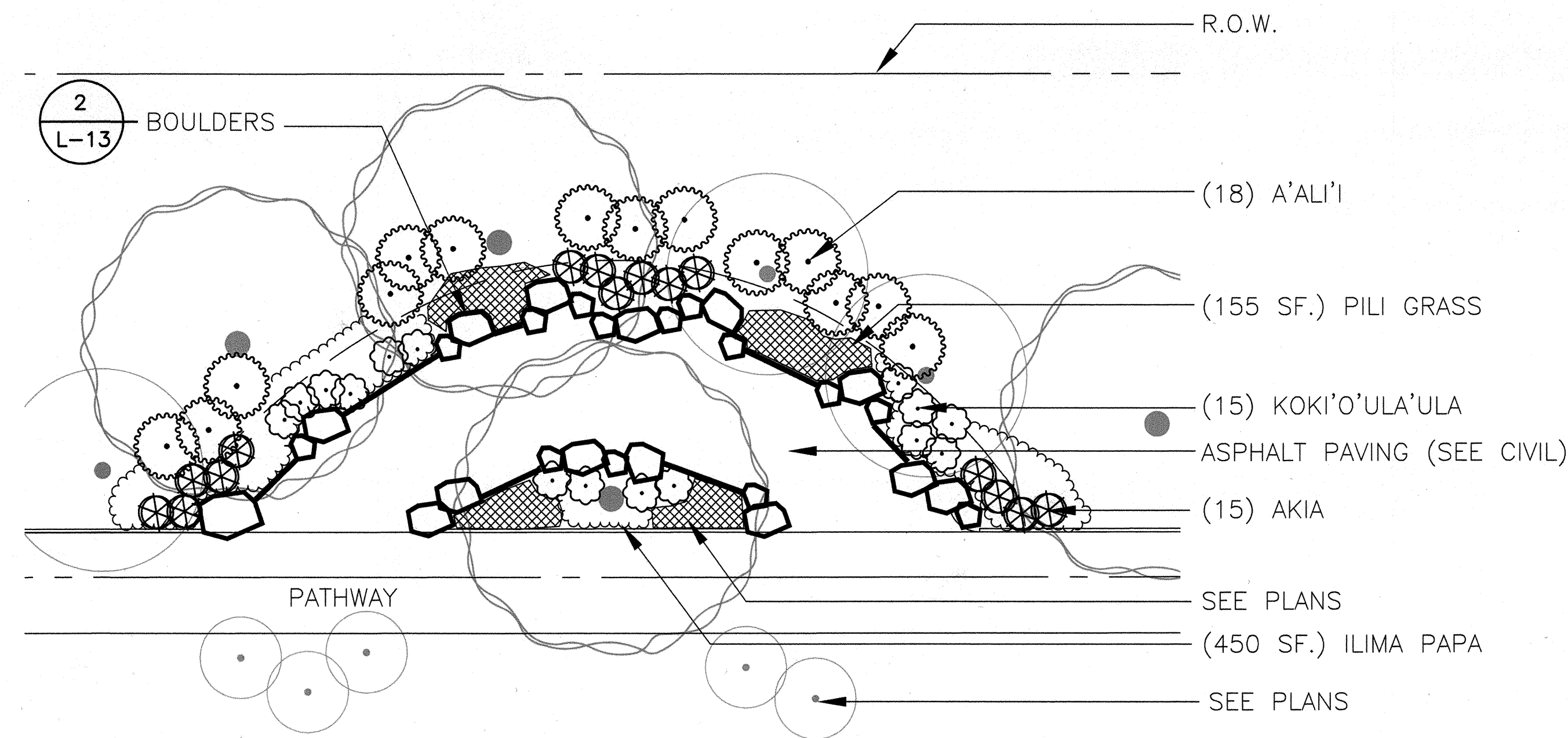
Scale: 1" = 40' Date: June 2002

SHEET No. L-12 OF 15 SHEETS

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

[Signature]

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (5)	2003	178	189



NOTE: SEE SHEET L-4, L-9 FOR TREE PLANTING PLAN

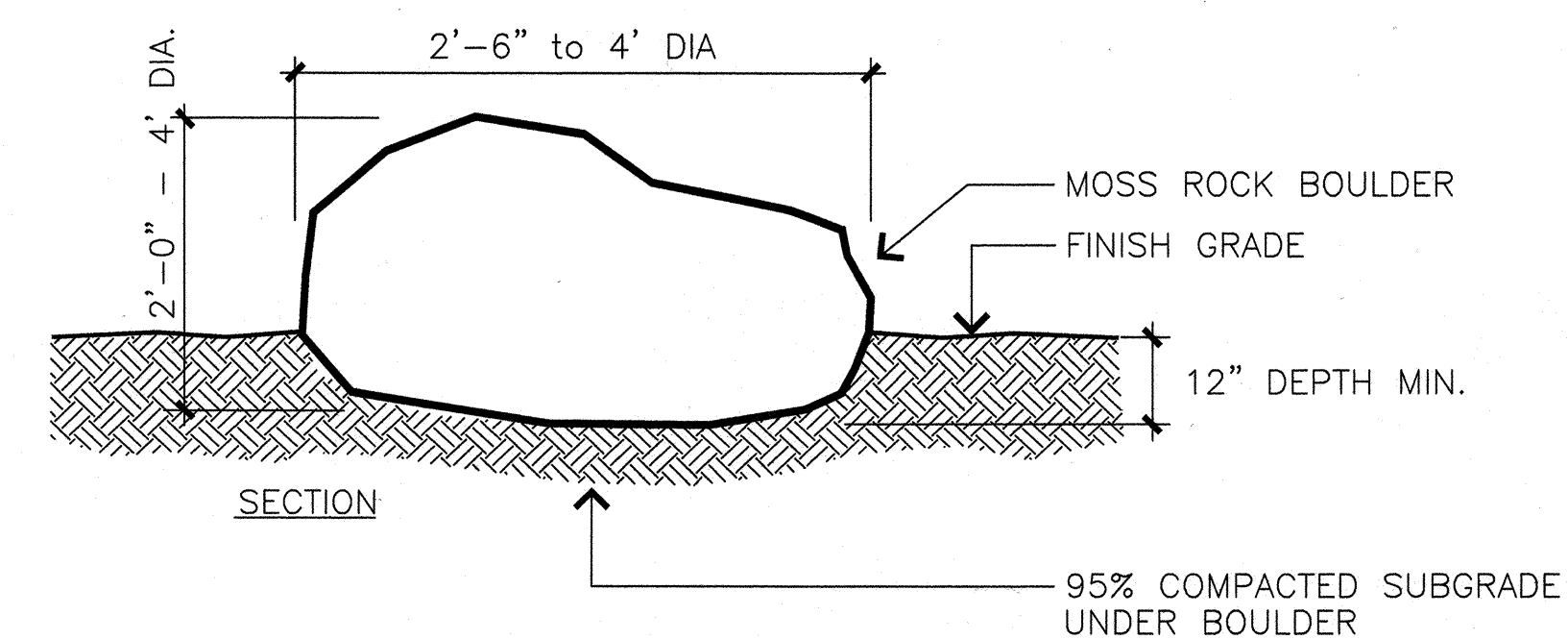
1 REST AREA SHRUB & GROUNDCOVER PLAN AT STA. 114+79 AND 164+27
L-13 SCALE: 1" = 10'

NOTE:

1. BOULDERS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER AT ITS SOURCE PRIOR TO TRANSPORTING TO THE PROJECT SITE.
2. BOULDERS SHALL BE SET IN THE PRESENCE OF AND WITH APPROVAL FROM THE ENGINEER.

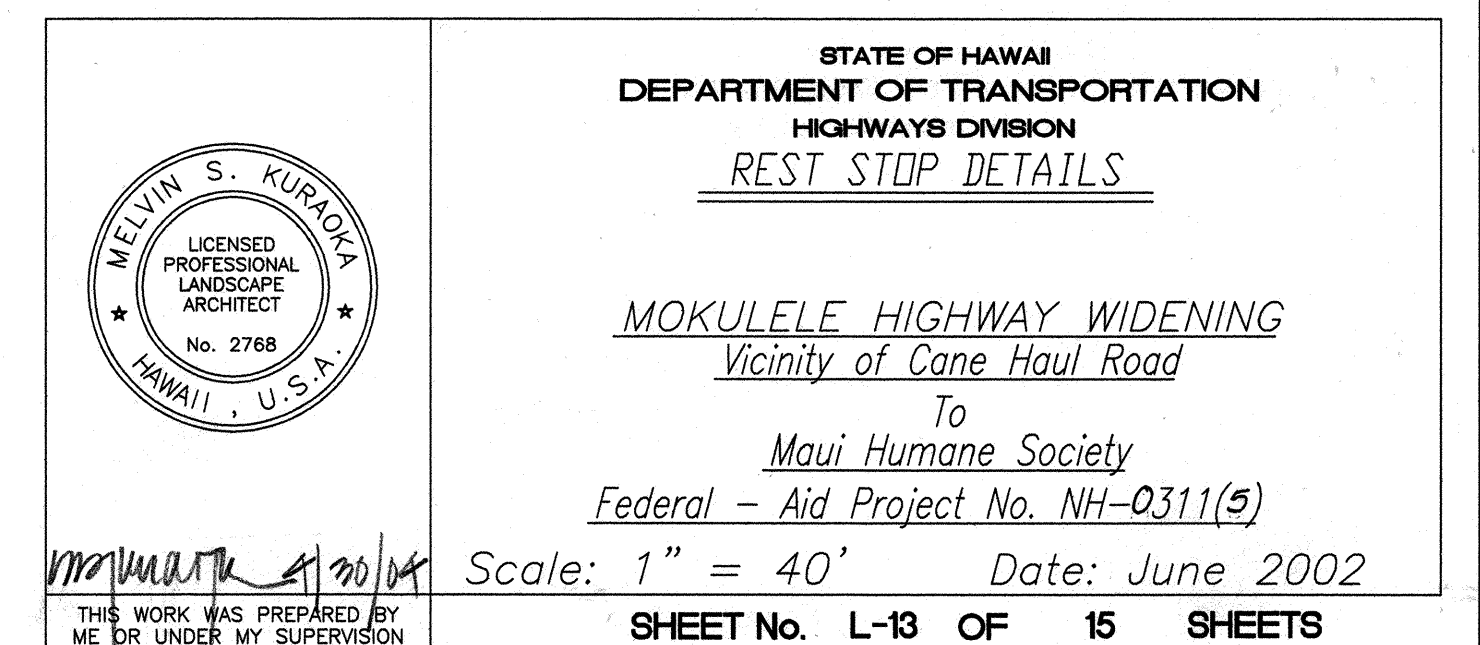
APPROXIMATE REST STOP BOULDER SIZES

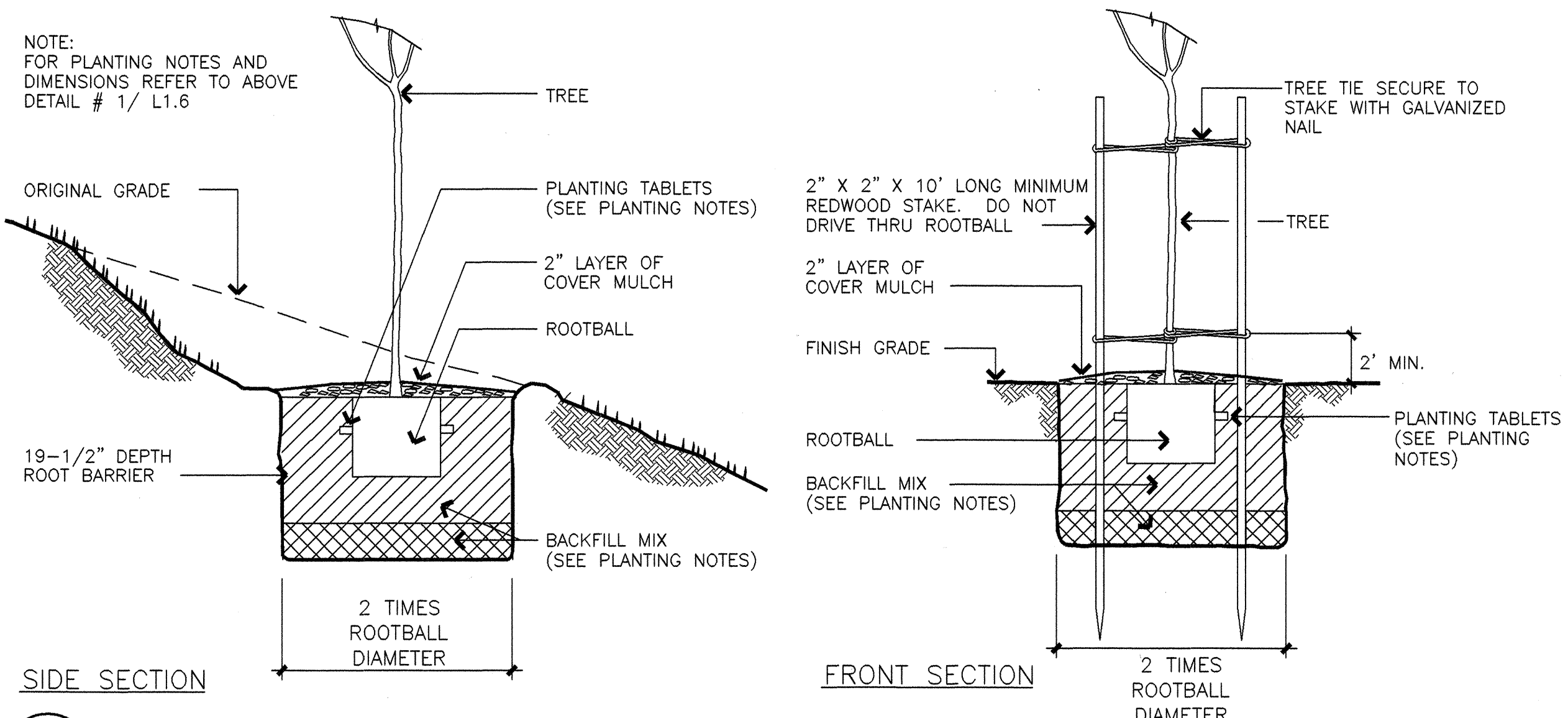
# OF BOULDERS	9	8	11
DIAMETER	4'	3'	2'-6"



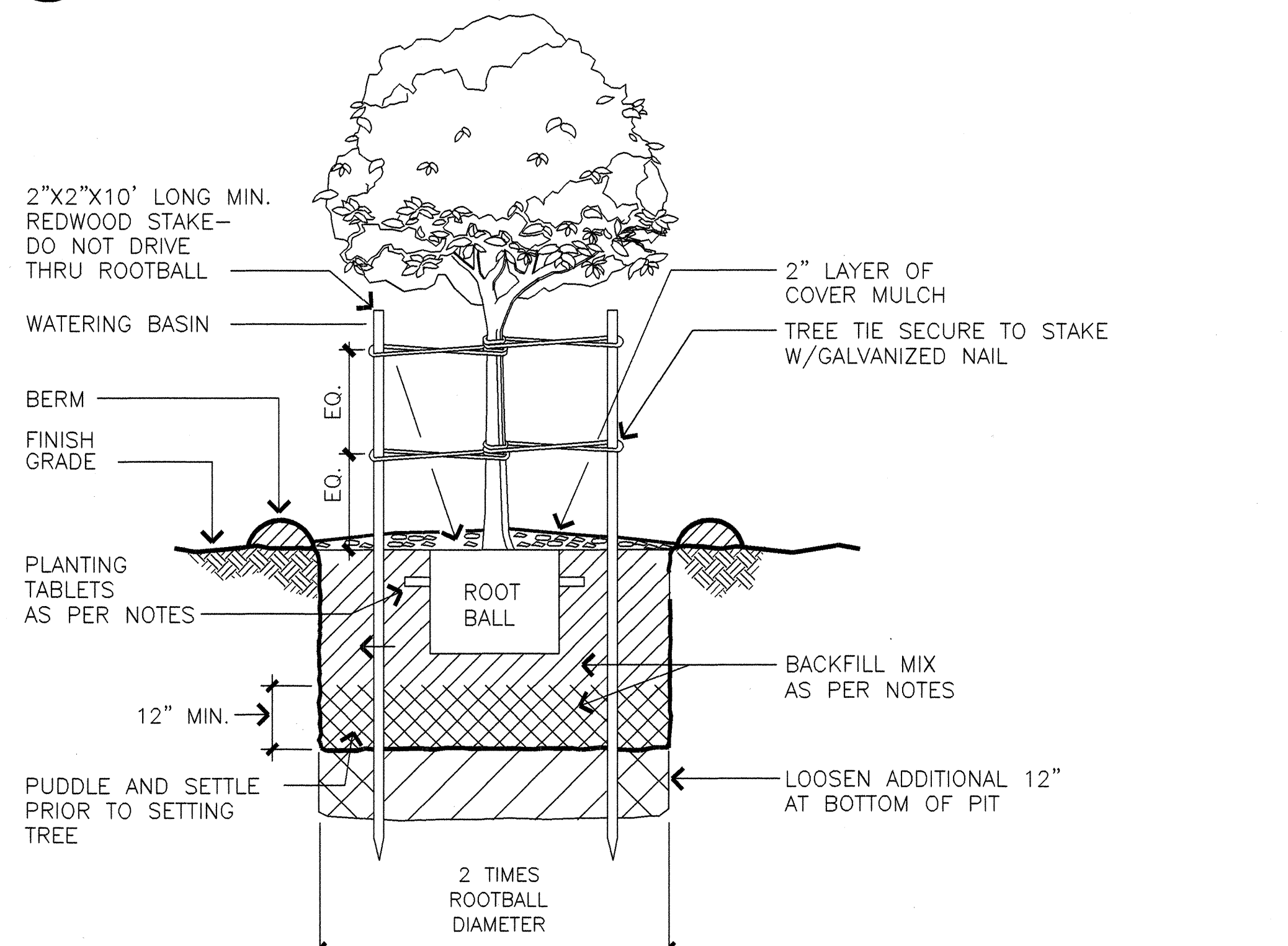
2 MOSS ROCK BOULDER DETAIL
L-14 NOT TO SCALE

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

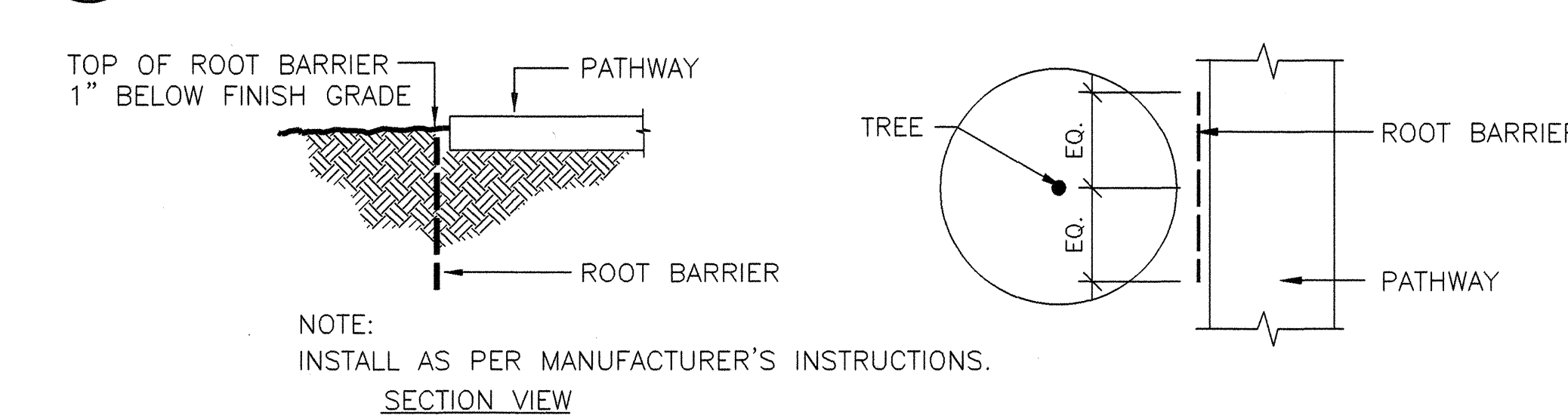




1 TREE PLANTING AND STAKING ON SLOPE
L-14 NOT TO SCALE



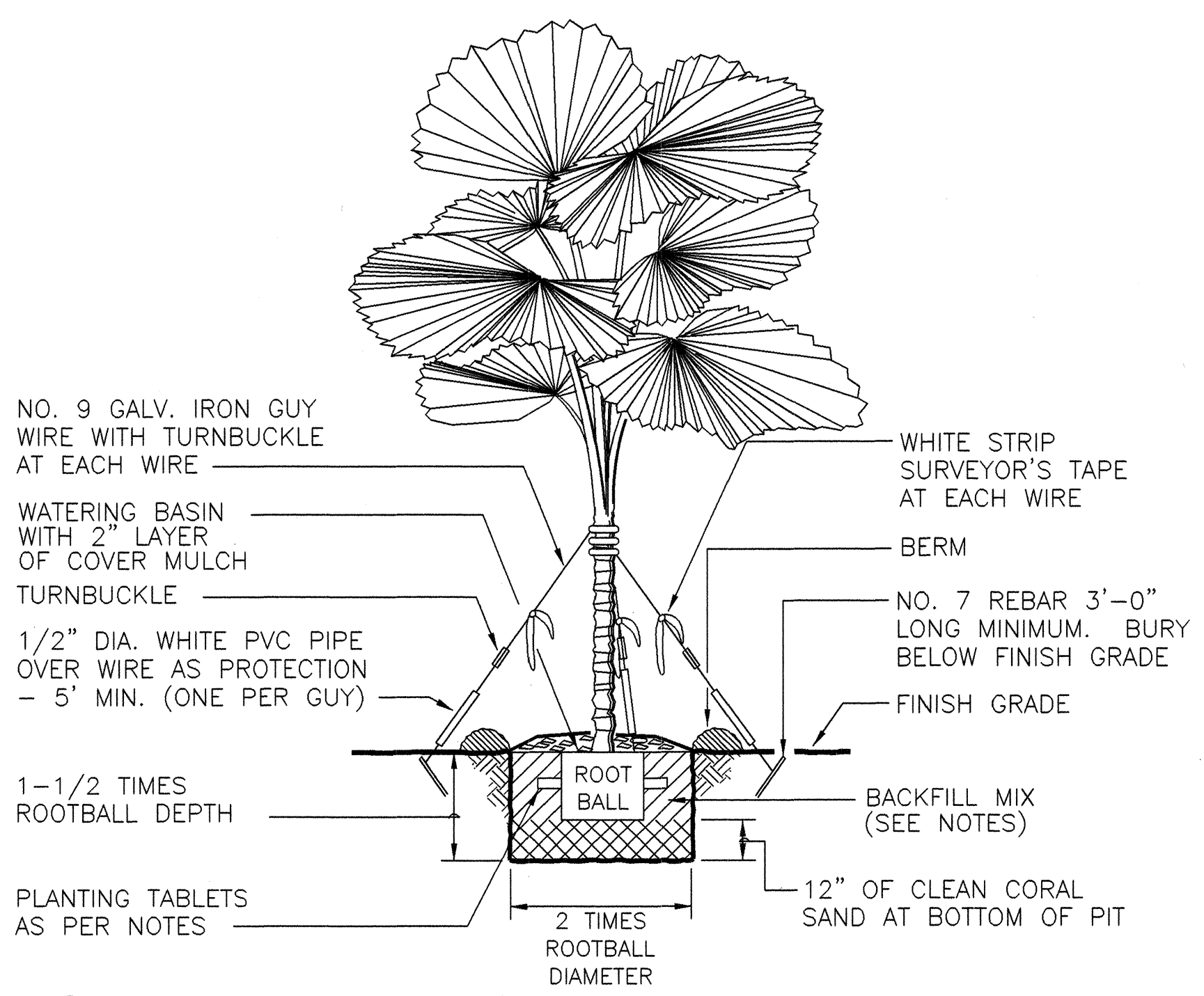
2 TREE PLANTING AND STAKING
L-14 NOT TO SCALE



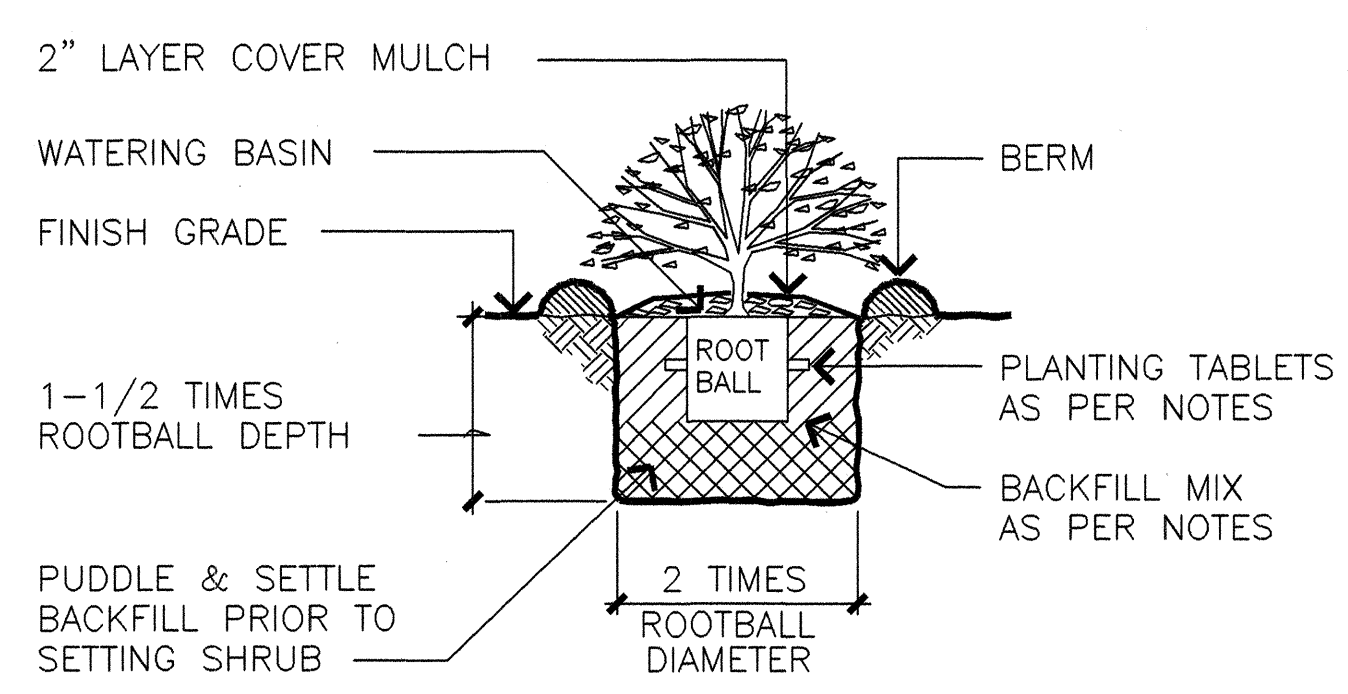
3 ROOT BARRIER DETAIL
L-14 NOT TO SCALE

MATERIALS LIST				FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
				HAWAII	HAW.	NH-0311 (3)	2003	179	189
QUANTITY	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS					
12 EA.	PALMS LOULU PALM	PRITCHARDIA ARECINA	FS.	8-10' BTH., 6' SPREAD					
18 EA.	TREES WILIWILI	ERYTHRINA SANDWICENSIS	25 GAL.	8' HT., 4' SPREAD, 2 1/2" CAL.					
9 EA.	KAMANI	CALOPHYLLUM INOPHYLLUM	25 GAL.	8' HT., 4' SPREAD, 2 1/2" CAL.					
18 EA.	HALA	PANDANUS TECTORIUS	45 GAL.	8-10' HT., 6' SPREAD					
13 EA.	TRUE KOU	CORDIA SUBCORDATA	25 GAL.	8' HT., 4' SPREAD, 2 1/2" CAL.					
15 EA.	MANELE	SAPINDUS SAPONARIA	25 GAL.	8' HT., 4' SPREAD, 2 1/2" CAL.					
34 EA.	HAU	HIBISCUS TILIACEUS	15 GAL.	6' HT., 3' SPREAD, 1 1/2" CAL.					
8 EA.	HAO	RAUVOLFIA SANDWICENSE	15 GAL.	6' HT., 3' SPREAD, 1 1/2" CAL.					
17 EA.	MILO	THESPIESIA POPULNEA	15 GAL.	6' HT., 3' SPREAD, 1 1/2" CAL.					
41 EA.	SHRUBS NAIO	MYOPORUM SANDWICENSE	3 GAL.	18" HT., 8" SPREAD					
46 EA.	A'ALI'I	DODONAEA VISCOSA (USE NATIVE VARIETY)	3 GAL.	18" HT., 8" SPREAD					
30 EA.	KOKI'O'ULA'ULA	HIBISCUS CLAYI	3 GAL.	18" HT., 8" SPREAD					
30 EA.	AKIA	WIKSTROEMIA UVI-URSI	3 GAL.	18" HT., 8" SPREAD					
460 EA.	GROUND COVER 'ILIMA PAPA	SIDA FALLAX	1 GAL.	8" HT., 8" SPREAD, 18" O.C.					
1,247,400 SF 360 EA.	GRASSES AKI'AKI PILI	SPOROBOLUS VIRGINICUS HETEROPOGON CONTORTUS	STOLONS 1 GAL.	SEE SPECIFICATIONS 18" HT., 12" O.C.					
15,290 C.Y. 1,247,400 SF. 56 EA. 4,000 LF. 45 C.Y. 1,600 LF.	MISCELLANEOUS MATERIALS IMPORTED SCREENED SOIL SOIL AMENDMENTS MOSS ROCK BOULDER IRRIGATION SLEEVES COVER MULCH ROOT BARRIER	4" DEPTH 'TYPAR' BIO-BARRIER		SEE SPECIFICATIONS SEE SPECIFICATIONS SEE SPECIFICATIONS 6" PVC PIPE SEE SPECIFICATIONS SEE SPECIFICATIONS					

NOTES:
1. QUANTITIES SHOWN ON PLANT LIST ARE FOR REFERENCE ONLY. VERIFY ACTUAL QUANTITIES AS SHOWN ON PLAN.
2. SEE SHEET L 0.2 FOR PLANTING NOTES.



4 PALM PLANTING DETAIL
L-14 NOT TO SCALE



5 SHRUB PLANTING DETAIL
L-14 NOT TO SCALE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLANTING DETAILS & PLANT LIST

MOKULELE HIGHWAY WIDENING
Vicinity of Cane Haul Road
To
Maui Humane Society
Federal - Aid Project No. NH-0311(3)

Scale: 1" = 40' Date: June 2002

SHEET No. L-14 OF 15 SHEETS

MELVIN S. KURIOKA
LICENSED PROFESSIONAL LANDSCAPE ARCHITECT
No. 2768
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0311 (5)	2003	180	189

SPECIAL CONDITIONS AND NOTES

THE FOLLOWING NOTES ARE PROVIDED TO INFORM THE CONTRACTOR OF SPECIFIC REQUIREMENTS, DIRECTIONS, INSPECTIONS, ETC. WHICH SHALL BE REQUIRED TO COMPLY WITH THE TERMS OF THE CONTRACT. THE CONTRACTOR SHALL REFER TO THE HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION (1994) AND THE SPECIAL PROVISIONS WHILE REVIEWING THE WORK INDICATED ON THE PLANS MENTIONED BELOW.

1. PLANTING PLANS

- A. SUBMIT ALL NECESSARY SAMPLES AND DOCUMENTS TO ENGINEER PRIOR TO THE START OF WORK, I.E. CERTIFICATE OF PLANTS, MATERIALS, FERTILIZER AND WEEDING SCHEDULE, ETC. REFER TO SPECIFICATIONS SECTION 619.02(A), 619.02(B), 619.02(C), 619.02(D), AND 619.02(G)
- B. EXISTING DEBRIS AND PLANTS SHALL BE REMOVED. REFER TO SPECIFICATIONS 619.03(A), 619.03(H)(1), AND 619.03(H)(4).
- C. IMPORTED PLANTING SOIL AND ORGANIC SOIL AMENDMENTS SHALL BE REQUIRED. REFER TO SPECIFICATIONS 619.03(A).
- D. THE CONTRACTOR SHALL MEET THE MINIMUM ACCEPTABLE STANDARDS FOR PLANT SIZE. REFER TO SPECIFICATIONS 619.02(C) AND THE "REMARKS" COLUMN OF THE PLANT LIST FOR MINIMUM REQUIREMENTS.
- E. EXCAVATION FOR PLANT HOLES SHALL BE REQUIRED. PROPER PREPARATION OF PLANT HOLES WILL BE MONITORED. SEE SPECIFICATIONS 619.03(A), 619.03(D) AND 201.
- F. A MINIMUM THIRTY-SIX (36) MONTH PLANT ESTABLISHMENT PERIOD IS REQUIRED. REFER TO SECTION 619.03(I).
- G. FORMAL INSPECTIONS BY THE ENGINEER WILL BE HELD WITH THE CONTRACTOR TO VERIFY COMPLIANCE TO THE CONTRACT AS LISTED IN SECTION 619.03(J)
- H. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER WRITTEN CERTIFICATION THAT ALL NATIVE HAWAIIAN PLANT MATERIALS SPECIFIED HAVE BEEN PROPAGATED FROM SEED OR PLANT STOCKS ORIGINALLY FROM THE EAST MAUI REGION.

2. TEMPORARY IRRIGATION

- A. THE CONTRACTOR SHALL SEEK AND SECURE A POTABLE OR NON-POTABLE WATER SOURCE FOR TEMPORARY IRRIGATION OF ALL LANDSCAPE AREAS WITHIN THE PROJECT LIMITS DURING THE CONTRACT PERIOD. ALL REQUIRED PERMITS, FEES AND CHARGES FOR SECURING, TRANSPORTING AND USING THE WATER SHALL BE BORN BY THE CONTRACTOR.
- B. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEERS FOR REVIEW AND APPROVAL FROM AN ENVIRONMENTAL TESTING LABORATORY, A WATER QUALITY ANALYSIS REPORT OF WATER SAMPLES TAKEN FROM THE PROPOSED WATER SOURCE.
- C. THE CONTRACTOR SHALL PROVIDE A TEMPORARY IRRIGATION SYSTEM APPROVED BY THE ENGINEER TO PROVIDE SUPPLEMENTAL WATER TO ALL LANDSCAPE AREAS WITHIN THE PROJECT LIMITS THROUGHOUT THE PLANTING AND THE PLANT ESTABLISHMENT PERIOD. REFER TO SECTION 619 PLANTING AND TRANSPLANTING.

THE FOLLOWING PROCEDURES SHALL BE FOLLOWED:

- a. AFTER THE CONTRACT HAS BEEN AWARDED TO THE CONTRACTOR, SUBMIT A PLAN FOR THE TEMPORARY IRRIGATION SYSTEM FOR APPROVAL BY THE ENGINEER. APPROVAL WILL BE BASED ON COMPLIANCE TO THE IRRIGATION PERFORMANCE REQUIREMENTS LISTED BELOW, ITEM NO. 3.

THE APPROVED IRRIGATION SYSTEM PLAN SHALL BE INSTALLED OR MADE AVAILABLE FOR A FIELD TEST IN THE PRESENCE OF THE ENGINEER. MAKE ALL NECESSARY ADJUSTMENTS TO THE SYSTEM IN ACCORDANCE TO THE PERFORMANCE REQUIREMENTS AND AS DIRECTED BY THE ENGINEER. CONTACT THE ENGINEER IN WRITING ONE WEEK IN ADVANCE TO ARRANGE A DAY AND TIME OF THE FIELD TEST.

THE TYPE OF IRRIGATION SYSTEM TO BE PROVIDED IS AT THE CONTRACTOR'S DISCRETION SO LONG AS IT MEETS THE IRRIGATION PERFORMANCE REQUIREMENTS LISTED BELOW.

- D. 6" PVC SLEEVES UNDER THE ROADWAY ARE INDICATED ON THE LANDSCAPE PLANS FOR USE BY THE CONTRACTOR IF SO DESIRED.

3. TEMPORARY IRRIGATION PERFORMANCE REQUIREMENTS

- A. THE INTENT OF THE TEMPORARY IRRIGATION SYSTEM (OR METHOD) IS TO PROVIDE A RELIABLE AND REGULATED SOURCE OF SUPPLEMENTAL WATER TO NEW PLANTING AREAS TO OPTIMIZE PLANT GROWTH AND ROOT DEVELOPMENT DURING THE PLANTING AND PLANT ESTABLISHMENT PERIOD.

- B. REGULATE IRRIGATION TO ENSURE ACTIVE GROWTH KEEPING AREAS MOIST BUT NOT SATURATED. REGULATE IRRIGATION TO AVOID MISTING AND OVERSPRAYING AS WELL AS TO AVOID EROSION AND GULLYING.
- C. THE FREQUENCY AND QUANTITY OF IRRIGATION WATER SHALL BE GRADUALLY REDUCED AND EVENTUALLY ELIMINATED AT THE END OF THE PLANT ESTABLISHMENT PERIOD TO ACCLIMATIZE THE PLANTS TO ENABLE THEM TO SURVIVE UNDER NATURAL CONDITIONS.
- D. THROUGH OUT THE INITIAL PLANTING PERIOD AND THE FIRST 90 DAYS OF THE PLANT ESTABLISHMENT PERIOD, WATER DAILY. APPLY APPROXIMATELY 1/4 INCH OF WATER IN A 10-15 MINUTE RUN TIME.
- E. REDUCE THE FREQUENCY OF WATERING DURING THE PLANT ESTABLISHMENT PERIOD TO EVERY OTHER DAY FROM DAY 91 TO DAY 365 (OR END OF 12 MONTHS) OF THE PLANT ESTABLISHMENT PERIOD. APPLY AT THE SAME RATE ABOVE. MONITOR FOR ANY SIGNS OF DROUGHT STRESS AND ADJUST AS NECESSARY.
- F. FROM DAY 366 TO DAY 913 (OR END OF 30 MONTHS) OF THE PLANT ESTABLISHMENT PERIOD, FURTUR REDUCE THE FREQUENCY OF WATERING TO EVERY THIRD DAY. MAINTAIN THE SAME RATE AS ABOVE. MONITOR AND ADJUST AS REQUIRED.
- G. FROM DAY 914 TO DAY 1096 (OR END 36 MONTHS) OF THE PLANT ESTABLISHMENT PERIOD REDUCE THE FREQUENCY OF WATERING TO ONCE A WEEK. APPLY AT THE SAME RATE ABOVE. MONITOR FOR ANY SIGNS OF DROUGHT STRESS AND ADJUST AS NECESSARY.
- H. AT THE FINAL ACCEPTANCE AND COMPLETION OF THE PROJECT THE TEMPORARY IRRIGATION SYSTEM (OR METHOD) SHALL BE SHUT-OFF, DISMANTLED AND REMOVED.

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

	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <u>SPECIAL CONDITIONS & NOTES</u>
	<u>MOKULELE HIGHWAY WIDENING</u> <u>Vicinity of Cane Haul Road</u> To <u>Maui Humane Society</u> <u>Federal - Aid Project No. NH-0311(5)</u>
	Scale: 1" = 40' Date: June 2002
	SHEET No. L-15 OF 15 SHEETS

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