

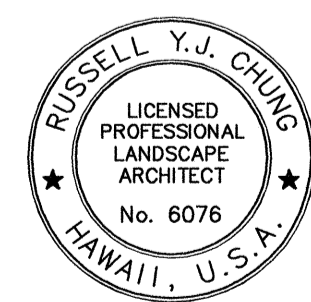
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-14	2016	25	43

PLANT NOTES:

1. Contractor shall field verify all plant quantities and dimensions prior to installation. Contractor shall determine quantities of plant materials to be provided. In all cases, Contractor shall install plant material on all areas affected by construction.
2. Contractor shall be responsible for locating and protecting existing utilities.
3. Prior to augering planting pit, all planting locations shall be staked out by Contractor for acceptance by Engineer. Do not plant until ground has been prepared and site is neat, orderly, and the Engineer accepts site for planting.
4. Notify Engineer of any discrepancies in plant locations.
5. Notify Engineer 30 days prior to planting operations. Contractor shall provide plant material as indicated in the plans and are subject to inspection and acceptance by the Engineer. All plant material not accepted by the Engineer will be subject to rejection.
6. The Engineer will inspect plants for acceptance upon delivery to the project. All plant material not accepted by the Engineer will be subject to rejection.
7. Plants shall meet size indicated by minimum height and spread. Plants shall be straight and uniformly shaped, unless unique or special characteristics are specified, and shall be undamaged, sound, healthy, vigorous and free of disease and insect infestation. Plants not conforming to these requirements on delivery to the project and at the end of the plant establishment period will be rejected.
8. Contractor shall be solely responsible for the complete removal and damages resulting from planting any plant species listed on the Hawaii Department of Agriculture 'Noxious Weed Rules' as defined in the statute, Hawaii Administrative Rules 4:68:1 or the 'Federal Noxious Weed List' as defined in Title 7 of the Code of Federal Regulations (CFR), parts 360 and 361.
9. All tree work must adhere to American National Standard Institute (or ANSI) - a300 Tree Care Standards and ANSI-z133 safety standards for tree work. If canopy pruning/trimming or root pruning/trimming of existing trees are required, work shall be contracted to arborists that have been certified in good standing as an ISA certified arborist for at least 5 years to assure that tree work is performed properly and trees are not damaged by practices such as topping, flush cuts, over-thinning, or climbing with spikes. Contractor shall submit a copy of the ISA arborist certification of good standing of 5 years, including current year, to the Engineer minimum 7 days prior to tree pruning. The cost of arborist services shall be considered incidental to Specification Section 619.
10. For the duration of construction within the drip line of trees to remain there must be: no changes, alterations or disturbance to the grade by adding fill, excavating or scraping except as noted on plans; no storage of construction material or equipment; no stockpiling of any construction material or any excavated material no disposal of any liquids (E.G. Concrete slush, gas, oil, paint); no vehicular traffic, equipment or excessive pedestrian traffic no attachment of any wires, ropes, lights, or any other such attachment other than those of protective nature to any tree to be preserved; and no cleaning of equipment or material under the canopy of any tree or group of trees to remain. For slopes flatter than 3H:1V, till top six-inches of soil to evenly incorporate fertilizer and amendments. For slopes steeper than 3H:1V, no tilling is required.
11. Provide and incorporate a two-inch layer of organic amendments unless site conditions prohibit the installation and incorporation of amendments as determined by the Engineer. Contractor shall provide amendments that can be applied without incorporation into the soil for sites which are prohibitive. Representative samples of soil from project site shall be submitted to Crop Nutrient Solutions Inc., the University of Hawaii Agricultural Extension Service or laboratory acceptable to the Engineer for analysis of required soil amendments. Test results and fertilization schedule shall be presented to the Engineer for review and acceptance before placing planting soil. Uniformly distribute fertilizer and amendments over planting areas as recommended by the soil analysis report.
12. Guy wires, flagging, stakes, windbreakers, etc. shall be maintained and replaced if necessary by the Contractor until the tree/shrub is able to stand by itself. The Contractor shall remove and dispose of these items at the end of plant establishment period.
13. Any planting that obstructs sight distance, signs or traffic lights shall be relocated or removed as determined by the Engineer.
14. Provide water for all plant material for the duration of the project, including plant establishment period. Water trees, shrubs, and all grassed areas. Water for planting shall not cause erosion damage to the slopes. The Contractor shall be responsible for repairing any damage caused by the watering of plants. The Contractor shall gradually decrease the amount of water being provided to the plant material 8 weeks prior to final acceptance of plantings.
15. Temporary irrigation shall be provided and installed by the Contractor for the duration of the project. Refer to Specification Sections 619.03(N), 641.03(E) and 641.03(F). Temporary irrigation system shall be considered incidental to Specification Sections 619 - Planting and 641 - Hydro-Mulch Seeding. The Contractor shall be responsible for locating and procuring the water source for the temporary irrigation system. The Contractor shall provide and maintain all equipment required to deliver water to the project site. Contractor shall also be responsible for obtaining all necessary permits and agreements for the source of water for the temporary irrigation system.
16. PID 47: Site contains stands of koa haole (*Citharexylum spinosum*). If demolition is required, Contractor shall demolish, remove, and dispose of koa haole in such a way as to minimize the spread of koa haole seeds. Removal of roots will not be required. Contractor shall present a demolition and removal plan to the Engineer for review and acceptance prior to clearing and grubbing operations.
17. Contractor shall be responsible for weeding and mowing throughout the 9-month plant establishment period. Refer to Specification Section 619 - Planting and Specification Section 641 - Hydro-Mulch Seeding.

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

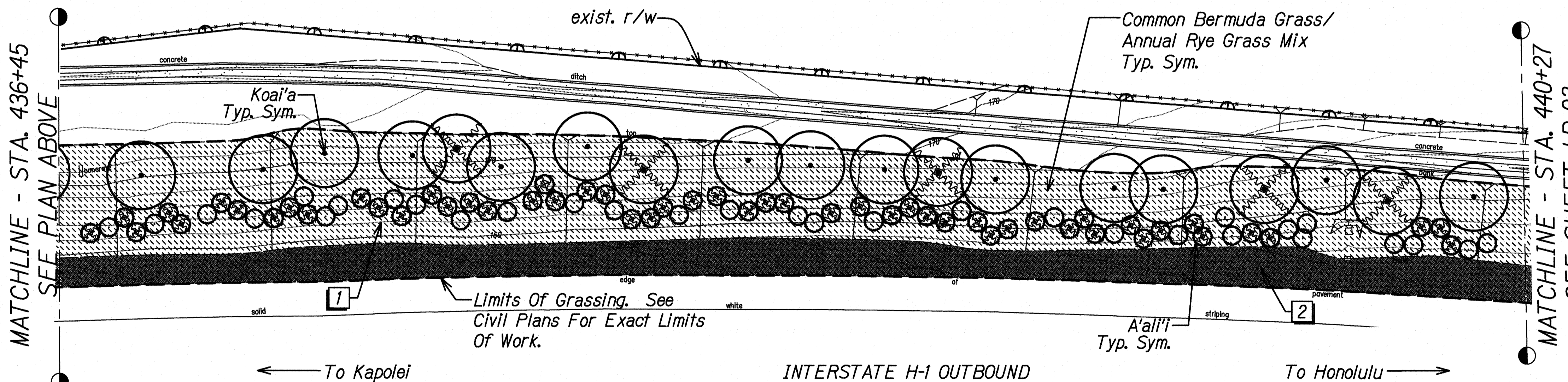
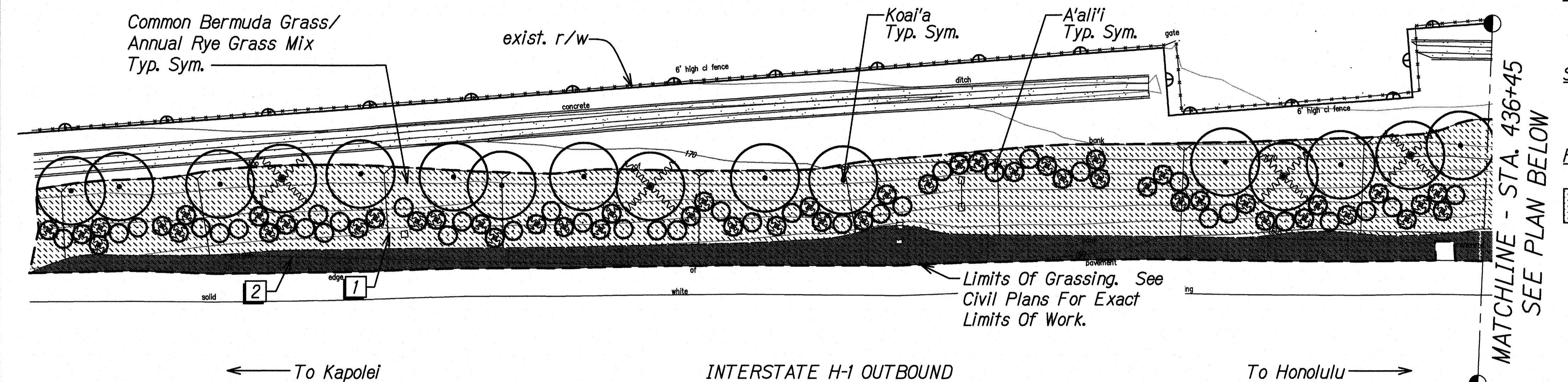
PHASE 6 ROOT REPAIR/REPLACEMENT 7/29/2015 8:59:46 AM

 <p>4/30/16 EXP. DATE</p> <p><i>Russell Y.J. Chung</i> This work was prepared by me or under my supervision.</p>	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION LANDSCAPING NOTES SLOPE IMPROVEMENTS FOR EROSION CONTROL AT VARIOUS SITES ON OAHU, PHASE 6 Project No. HWY-0-05-14 Scale: None Date: September 2015
	SHEET No. LP-01 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-14	2016	26	43

PLANT SCHEDULE PID 56

TREES	BOTANICAL NAME	COMMON NAME
	<i>Acacia koaia</i>	Koai'a
SHRUBS	BOTANICAL NAME	COMMON NAME
	<i>Dodonea viscosa</i>	A'ali'i
HYDRO-MULCH	BOTANICAL NAME	COMMON NAME
	<i>Cynodon dactylon</i>	Common Bermuda Grass
	<i>Lolium multiflorum</i>	Annual Rye Grass



LEGEND FOR AS-BUILT POSTINGS

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	Text for as-built posting

REFERENCE NOTES SCHEDULE PID 56

SYMBOL	DESCRIPTION
1	Install erosion control matting on slopes greater than 3H:1V. Install per manufacturer's instructions and recommendations
2	Provide and incorporate 2" layer soil amendments to existing soil. Incorporate additional amendments as recommended by soil analysis. See specifications for additional soil preparation procedures.

LANDSCAPE PLANTING PLAN PID 56
Scale: 1" = 20'-0"

4/30/16
Russell Y.J. Chung
This work was prepared by me or under my supervision.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE PLANTING PLAN
PID 56

SLOPE IMPROVEMENTS FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 6

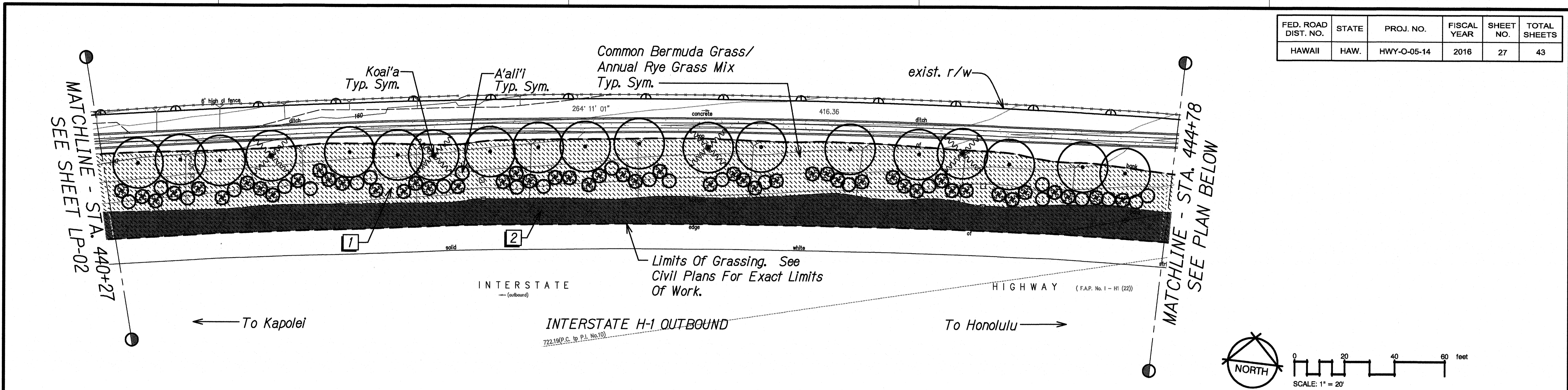
Project No. HWY-0-05-14
Scale: 1" = 20'-0" Date: September 2015

SHEET No. LP-02 OF 13 SHEETS

"AS-BUILT"

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 CHECKED BY: _____
 ORIGINAL PLAN: _____
 NOTE BOOK: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 PHASE 6 HOT REPAVEMENT LP-02 PID 56 AS-BUILDING 7/9/2020 5:58:33 PM

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-14	2016	27	43



PLANT SCHEDULE PID 56

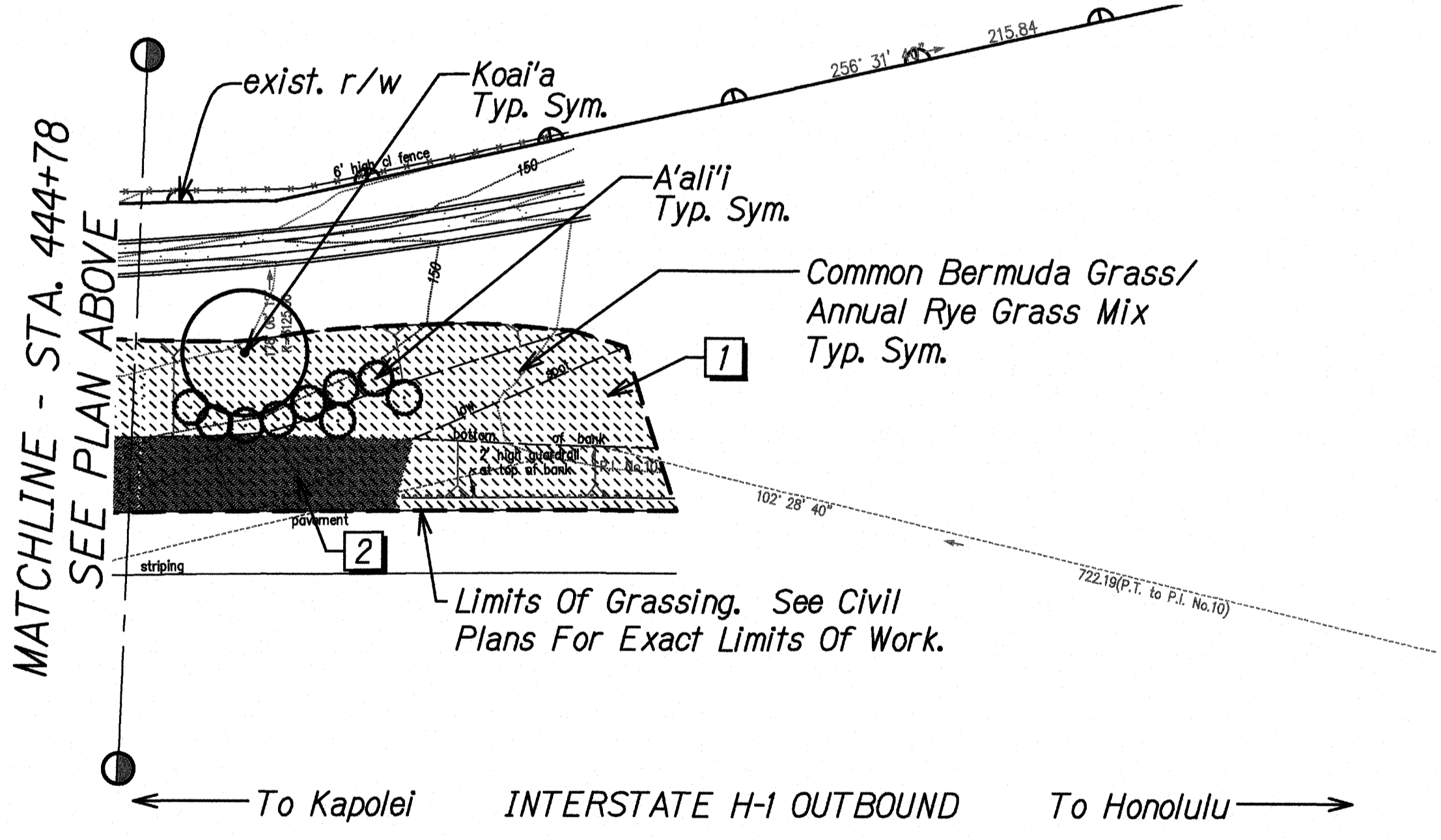
TREES	BOTANICAL NAME	COMMON NAME
	Acacia koaia	Koai'a
SHRUBS	BOTANICAL NAME	COMMON NAME
	Dodonea viscosa	A'al'i'i
HYDRO-MULCH	BOTANICAL NAME	COMMON NAME
	Cynodon dactylon	Common Bermuda Grass
	Lolium multiflorum	Annual Rye Grass

REFERENCE NOTES SCHEDULE PID 56

SYMBOL	DESCRIPTION
	Install erosion control matting on slopes greater than 3H:1V. Install per manufacturer's instructions and recommendations
	Provide and incorporate 2" layer soil amendments to existing soil. Incorporate additional amendments as recommended by soil analysis. See specifications for additional soil preparation procedures.

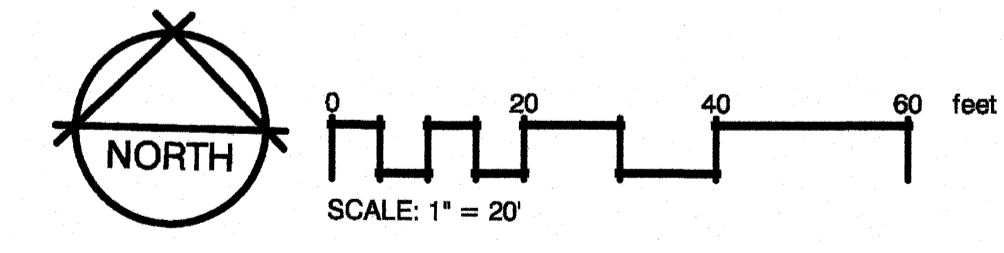
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Roadway	Text for as-built posting



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 CHECKED BY: []
 DATE: []
 REVISIONS: []
 NOTE BOOK NO.: []
 PROJECT NO.: []
 SHEET NO.: []

LANDSCAPE PLANTING PLAN PID 56
Scale: 1" = 20'-0"



4/30/16

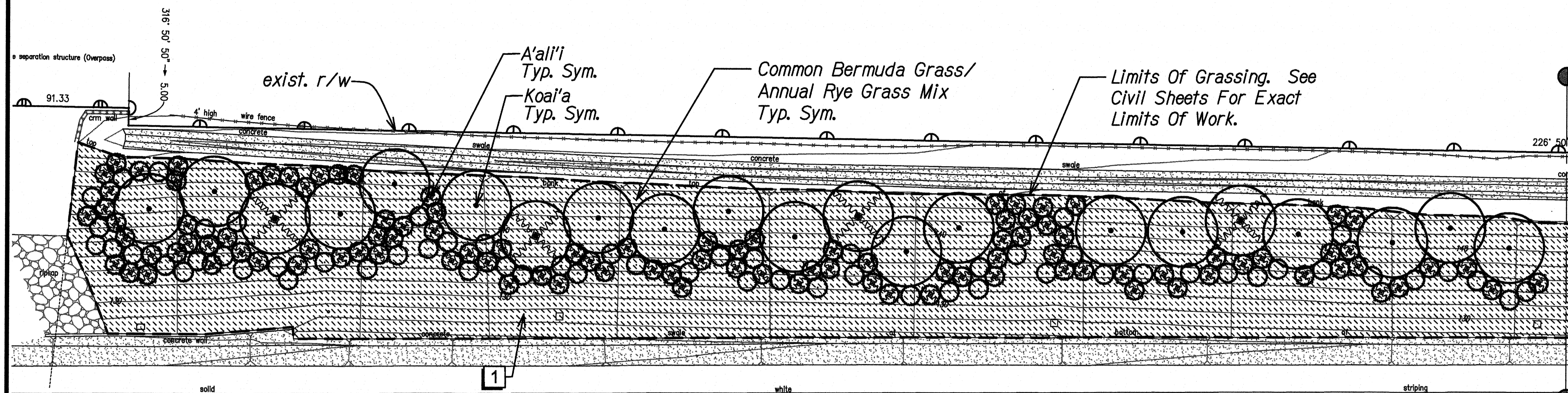
 This work was prepared by me or under my supervision.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

LANDSCAPE PLANTING PLAN
PID 56
 SLOPE IMPROVEMENTS FOR EROSION CONTROL
 AT VARIOUS SITES ON OAHU, PHASE 6
 Project No. HWY-0-05-14
 Scale: 1" = 20'-0" Date: September 2015

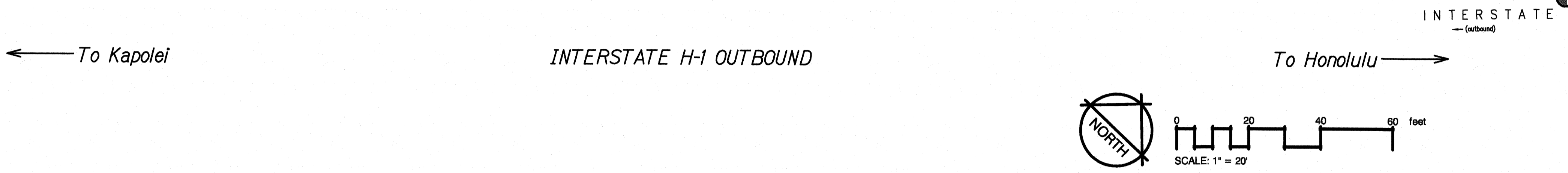
"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-05-14	2016	28	43



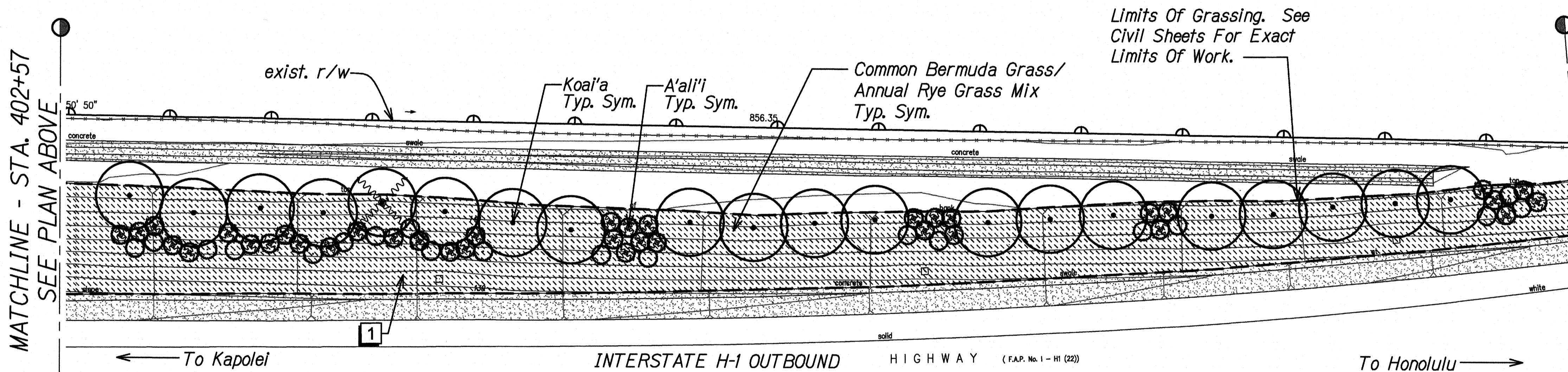
PLANT SCHEDULE PID 47

TREES	BOTANICAL NAME	COMMON NAME
●	Acacia koaia	Koal'a
SHRUBS	BOTANICAL NAME	COMMON NAME
○	Dodonea viscosa	A'al'i'i
HYDRO-MULCH	BOTANICAL NAME	COMMON NAME
▨	Cynodon dactylon	Common Bermuda Grass
▨	Lolium multiflorum	Annual Rye Grass



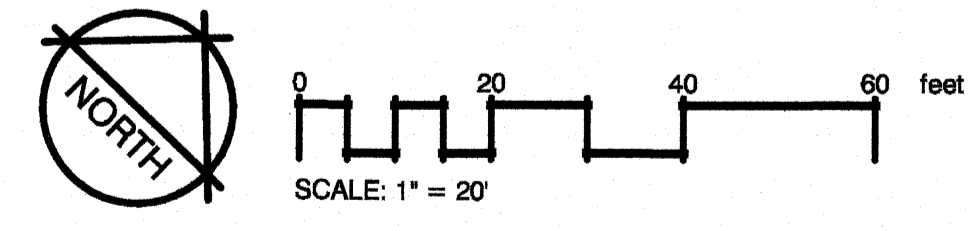
REFERENCE NOTES SCHEDULE PID 47

SYMBOL	DESCRIPTION
1	Install erosion control matting on slopes greater than 3H:1V. Install per manufacturer's instructions and recommendations



REFERENCE NOTES SCHEDULE PID 47

SYMBOL	DESCRIPTION
1	Install erosion control matting on slopes greater than 3H:1V. Install per manufacturer's instructions and recommendations



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE PLANTING PLAN
PID 47
SLOPE IMPROVEMENTS FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 6
Project No. HWY-O-05-14
Scale: 1" = 20'-0" Date: September 2015

SHEET No. LP-04 OF 13 SHEETS

RUSSELL Y.J. CHUNG
LICENSED PROFESSIONAL LANDSCAPE ARCHITECT
No. 6078
HAWAII, U.S.A.
4/30/16
This work was prepared by me or under my supervision.

LEGEND FOR AS-BUILT POSTINGS

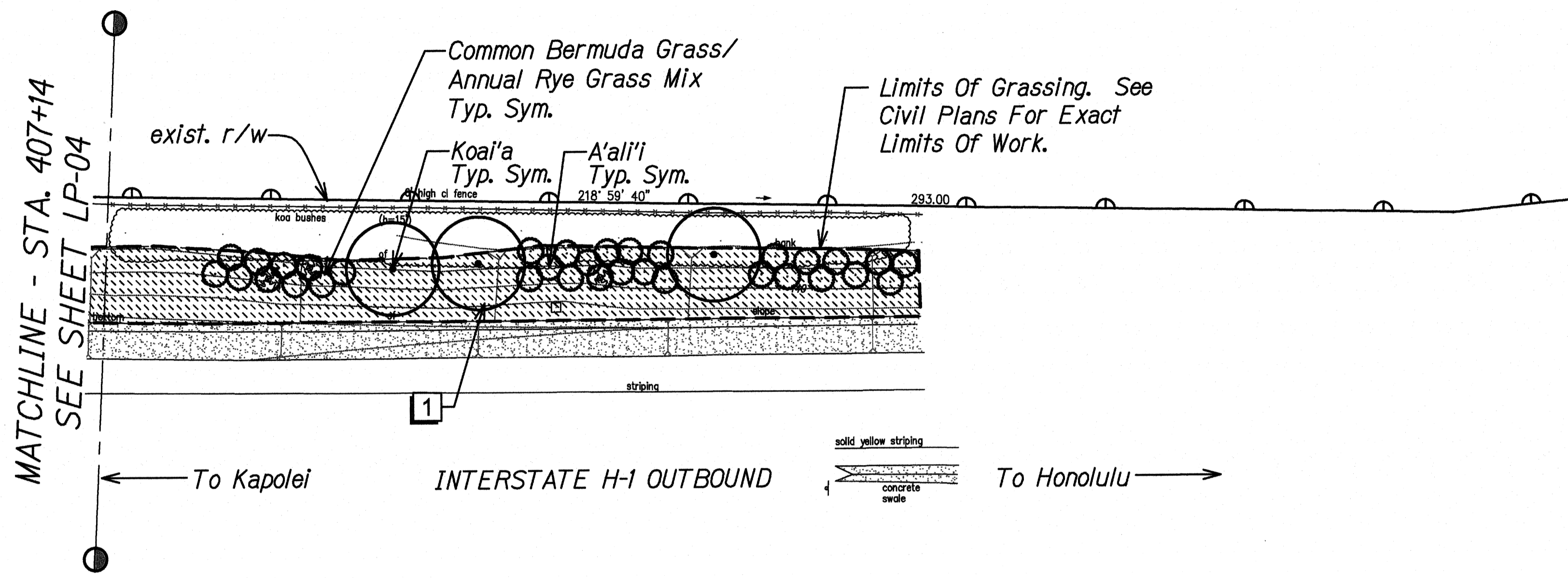
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**LANDSCAPE PLANTING PLAN PID 47**  
Scale: 1" = 20'-0"

ORIGINAL PLAN	DATE
REVISED BY	
DESIGNED BY	
CHECKED BY	

PHASE 6 H101 REPACKAGE LP-04 PID 47 AS-BUILDING 6/20/2015 8:45:27 AM

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-05-14	2016	29	43



**REFERENCE NOTES SCHEDULE PID 47**

<u>SYMBOL</u>	<u>DESCRIPTION</u>
1	Install erosion control matting on slopes greater than 3H:1V. Install per manufacturer's instructions and recommendations

**PLANT SCHEDULE PID 47**

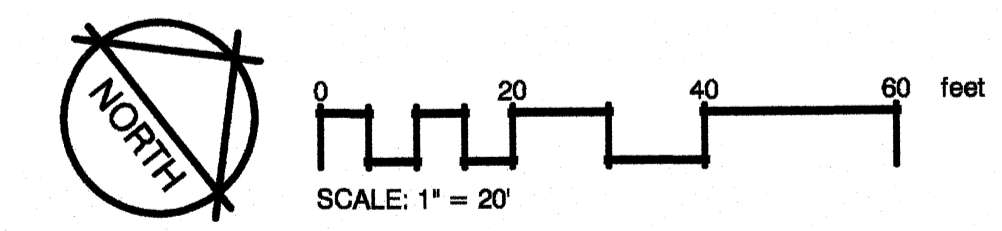
<u>TREES</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>
●	Acacia koaia	Koai'a
<u>SHRUBS</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>
○	Dodonea viscosa	A'all'i
<u>HYDRO-MULCH</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>
▨	Cynodon dactylon Lolium multiflorum	Common Bermuda Grass Annual Rye Grass

SURVEY PLOTTED BY	DATE
DRAWN BY	
PLACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
NO.	

PHASE 6 (HOT) REPAIRS - LP-05 - PID 47 - AS-BUILT (SWS) 02/20/2015 04:55:55 AM

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Roadway	Text for as-built posting

LANDSCAPE PLANTING PLAN PID 47
Scale: 1" = 20'-0"



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

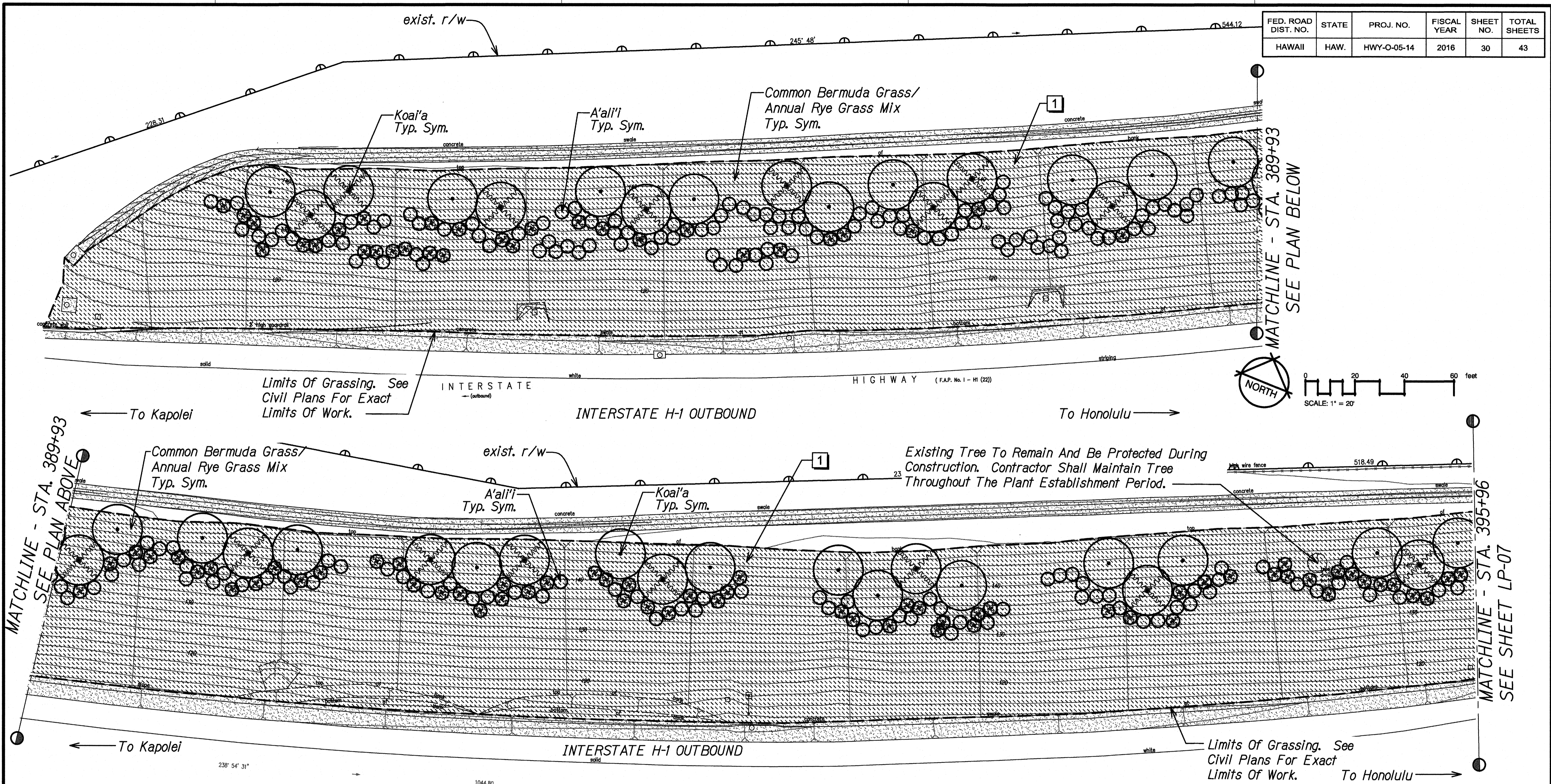
LANDSCAPE PLANTING PLAN

PID 47

SLOPE IMPROVEMENTS FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 6

Project No. HWY-O-05-14
Scale: 1" = 20'-0" Date: September 2015

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-14	2016	30	43



MATCHLINE - STA. 389+93
SEE PLAN ABOVE

MATCHLINE - STA. 389+93
SEE PLAN BELOW

MATCHLINE - STA. 395+96
SEE SHEET LP-07

PLANT SCHEDULE PID 48

TREES	BOTANICAL NAME	COMMON NAME
	<i>Acacia koaia</i>	Koai'a
SHRUBS	BOTANICAL NAME	COMMON NAME
	<i>Dodonea viscosa</i>	A'ai'i
HYDRO-MULCH	BOTANICAL NAME	COMMON NAME
	<i>Cynodon dactylon</i>	Common Bermuda Grass
	<i>Lolium multiflorum</i>	Annual Rye Grass

REFERENCE NOTES SCHEDULE PID 48

SYMBOL	DESCRIPTION
	Install erosion control matting on slopes greater than 3H:1V. Install per manufacturer's instructions and recommendations

LANDSCAPE PLANTING PLAN PID 48
Scale: 1" = 20'-0"

LEGEND FOR AS-BUILT POSTINGS

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	Double line for as-built deletion
Roadway	Text for as-built posting

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	
DATE	

PHASE 6 H10T REPACKAGE - LP-06-PID 48-AS-BUILDING 8/20/2015 8:47:08 AM

"AS-BUILT"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

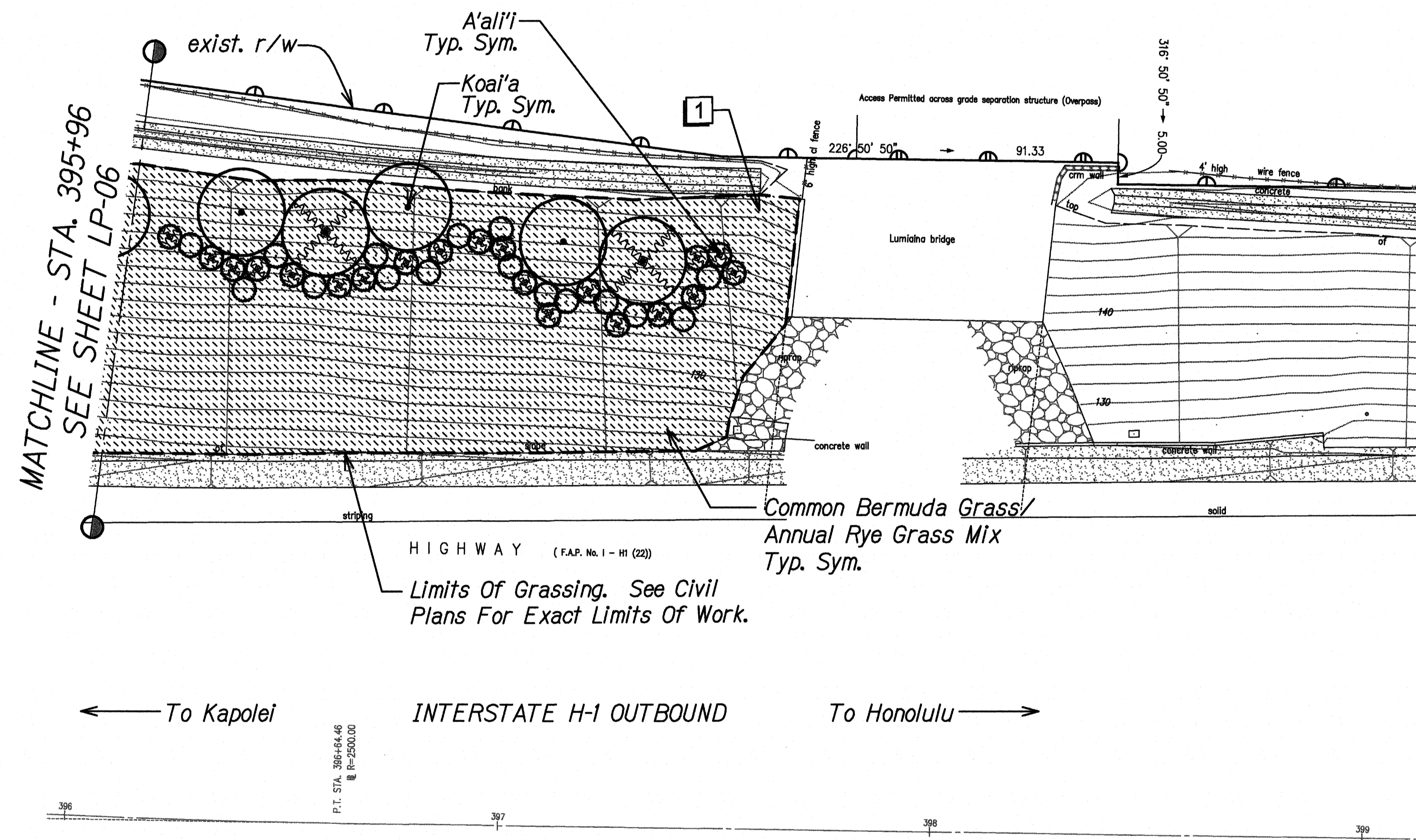
LANDSCAPE PLANTING PLAN
PID 48

SLOPE IMPROVEMENTS FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 6
Project No. HWY-0-05-14
Scale: 1" = 20'-0" Date: September 2015

SHEET No. LP-06 OF 13 SHEETS

RUSSELL Y.J. CHUNG
LICENSED PROFESSIONAL LANDSCAPE ARCHITECT
No. 8078
HAWAII, U.S.A.
4/30/16
DATE
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-14	2016	31	43



PLANT SCHEDULE PID 48

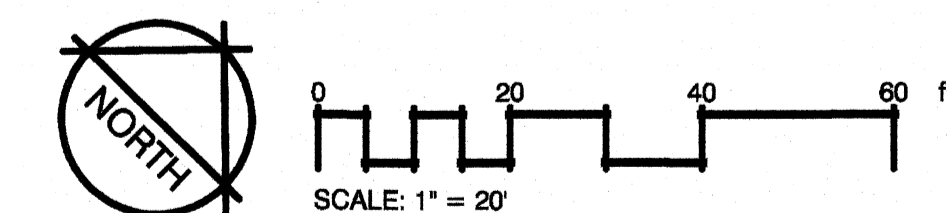
TREES	BOTANICAL NAME	COMMON NAME
○	<i>Acacia koaia</i>	Koai'a
SHRUBS	BOTANICAL NAME	COMMON NAME
⊙	<i>Dodonea viscosa</i>	A'ali'i
HYDRO-MULCH	BOTANICAL NAME	COMMON NAME
▨	<i>Cynodon dactylon</i>	Common Bermuda Grass
▩	<i>Lolium multiflorum</i>	Annual Rye Grass

REFERENCE NOTES SCHEDULE PID 48

SYMBOL	DESCRIPTION
1	Install erosion control matting on slopes greater than 3H:1V. Install per manufacturer's instructions and recommendations

LEGEND FOR AS-BUILT POSTINGS	
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Roadway	Text for as-built posting

**LANDSCAPE PLANTING PLAN PID 48**  
Scale: 1" = 20'-0"



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**LANDSCAPE PLANTING PLAN**  
**PID 48**

SLOPE IMPROVEMENTS FOR EROSION CONTROL  
AT VARIOUS SITES ON OAHU, PHASE 6  
Project No. HWY-0-05-14  
Scale: 1" = 20'-0" Date: September 2015

SHEET No. LP-07 OF 13 SHEETS

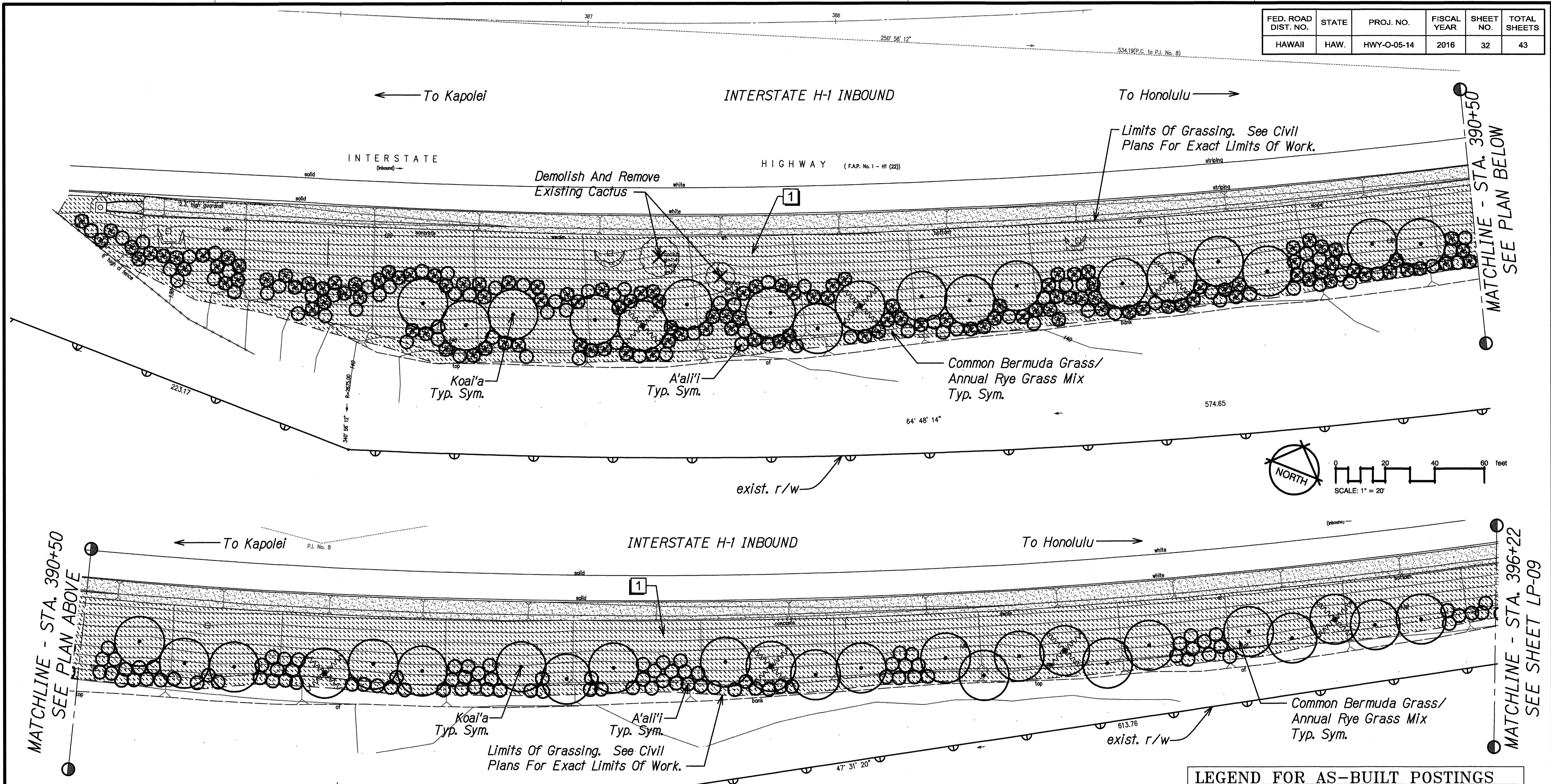
4/30/16  
DATE  
This work was prepared by me or under my supervision.

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
TRACED BY	
DESIGNED BY	
QUANTIFIED BY	
CONCHECKED BY	

PHASE 6 HOT REPAVEMENT LP-07 PID 48 AS-BUILDING 8/20/2015 8:14:44 AM

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-05-14	2016	32	43



**PLANT SCHEDULE PID 109**

TREES	BOTANICAL NAME	COMMON NAME
○	Acacia koaia	Koal'a
SHRUBS	BOTANICAL NAME	COMMON NAME
○	Dodonea viscosa	A'al'i'i
HYDRO-MULCH	BOTANICAL NAME	COMMON NAME
▨	Cynodon dactylon	Common Bermuda Grass
▨	Lolium multiflorum	Annual Rye Grass

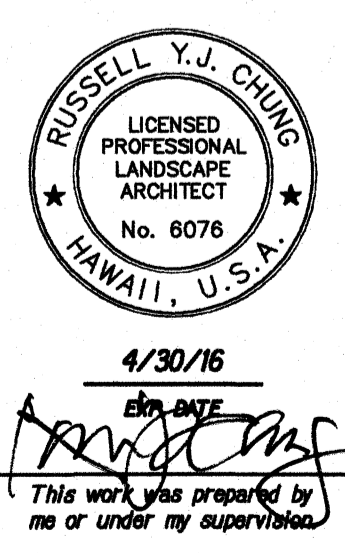
**REFERENCE NOTES SCHEDULE PID 109**

SYMBOL	DESCRIPTION
1	Install erosion control matting on slopes greater than 3H:1V. Install per manufacturer's instructions and recommendations.

**LANDSCAPE PLANTING PLAN PID 109**  
Scale: 1" = 20'-0"

**LEGEND FOR AS-BUILT POSTINGS**

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Roadway	Text for as-built posting



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LANDSCAPE PLANTING PLAN
PID 109

SLOPE IMPROVEMENTS FOR EROSION CONTROL
AT VARIOUS SITES ON OAHU, PHASE 6

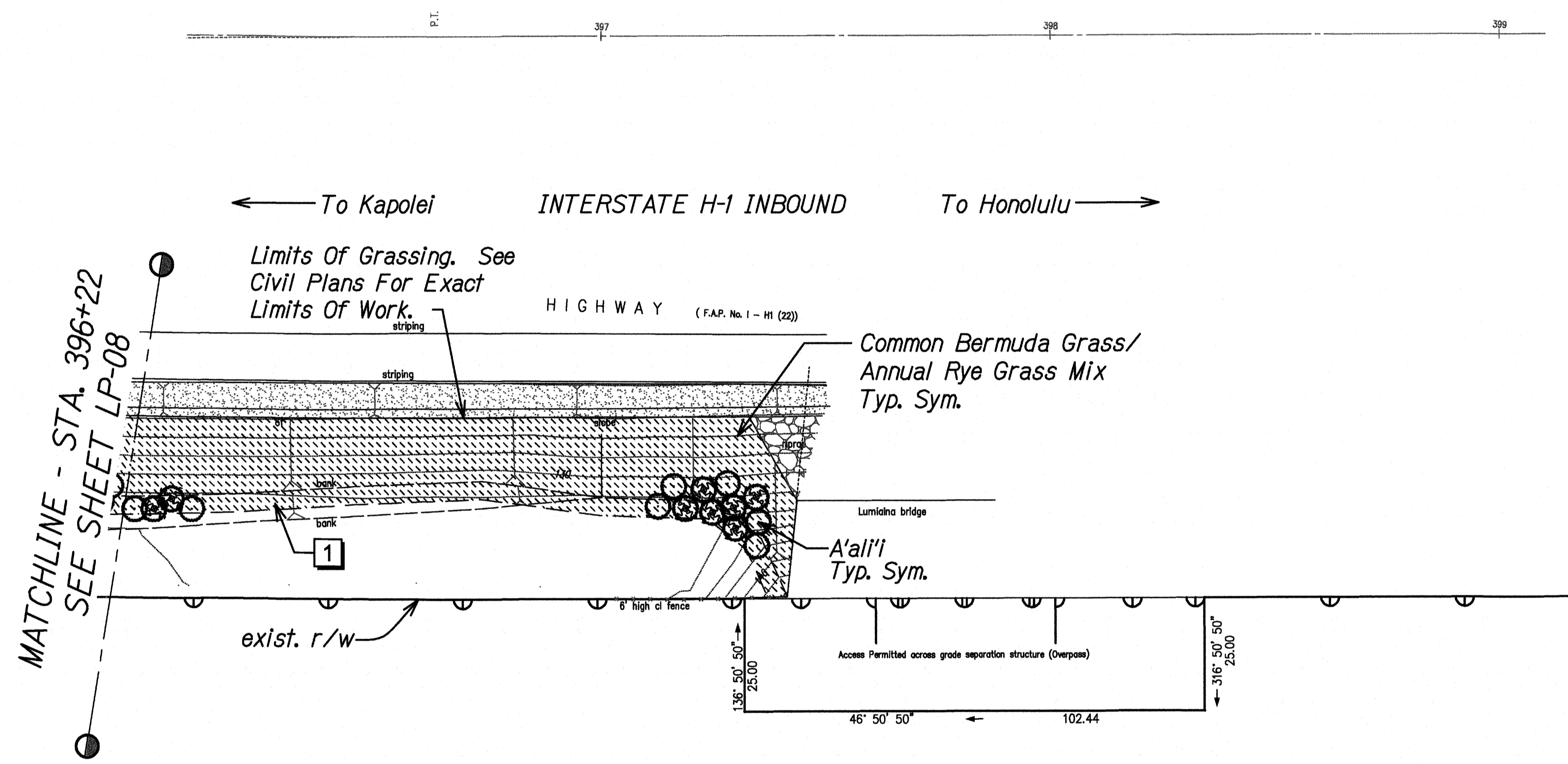
Project No. HWY-O-05-14
Date: September 2015

SHEET No. LP-08 OF 13 SHEETS

"AS-BUILT"

SURVEY PLOTTED BY: _____ DATE: _____
 PLAN CHECKED BY: _____
 ORIGINAL PLAN REACHED BY: _____
 NOTE BOOK QUANTITIES BY: _____
 CHECKED BY: _____
 PHASE 6 HOT REPACKAGE LP-08 PID 109 AS-BUILDING 8/20/2015 8:49:00 AM

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-14	2016	33	43



PLANT SCHEDULE PID 109

SHRUBS	BOTANICAL NAME	COMMON NAME
○	<i>Dodonea viscosa</i>	A'all'i
HYDRO-MULCH	BOTANICAL NAME	COMMON NAME
▨	<i>Cynodon dactylon</i>	Common Bermuda Grass
▨	<i>Lolium multiflorum</i>	Annual Rye Grass

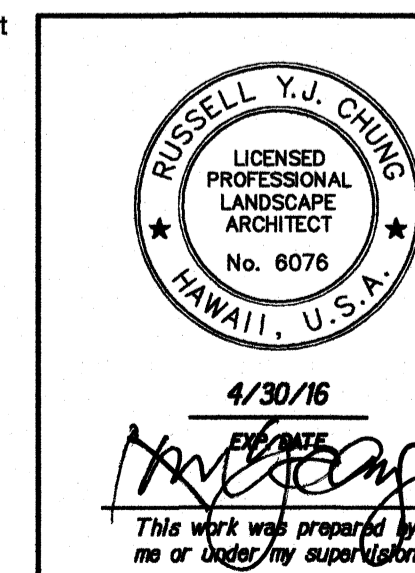
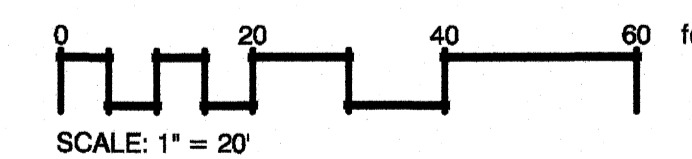
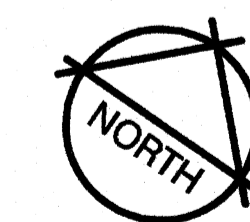
REFERENCE NOTES SCHEDULE PID 109

SYMBOL	DESCRIPTION
1	Install erosion control matting on slopes greater than 3H:1V. Install per manufacturer's instructions and recommendations.

LEGEND FOR AS-BUILT POSTINGS	
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Roadway	Text for as-built posting

**LANDSCAPE PLANTING PLAN PID 109**

Scale: 1" = 20'-0"



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**LANDSCAPE PLANTING PLAN**  
**PID 109**

SLOPE IMPROVEMENTS FOR EROSION CONTROL  
AT VARIOUS SITES ON OAHU, PHASE 6  
Project No. HWY-0-05-14  
Scale: 1" = 20'-0" Date: September 2015

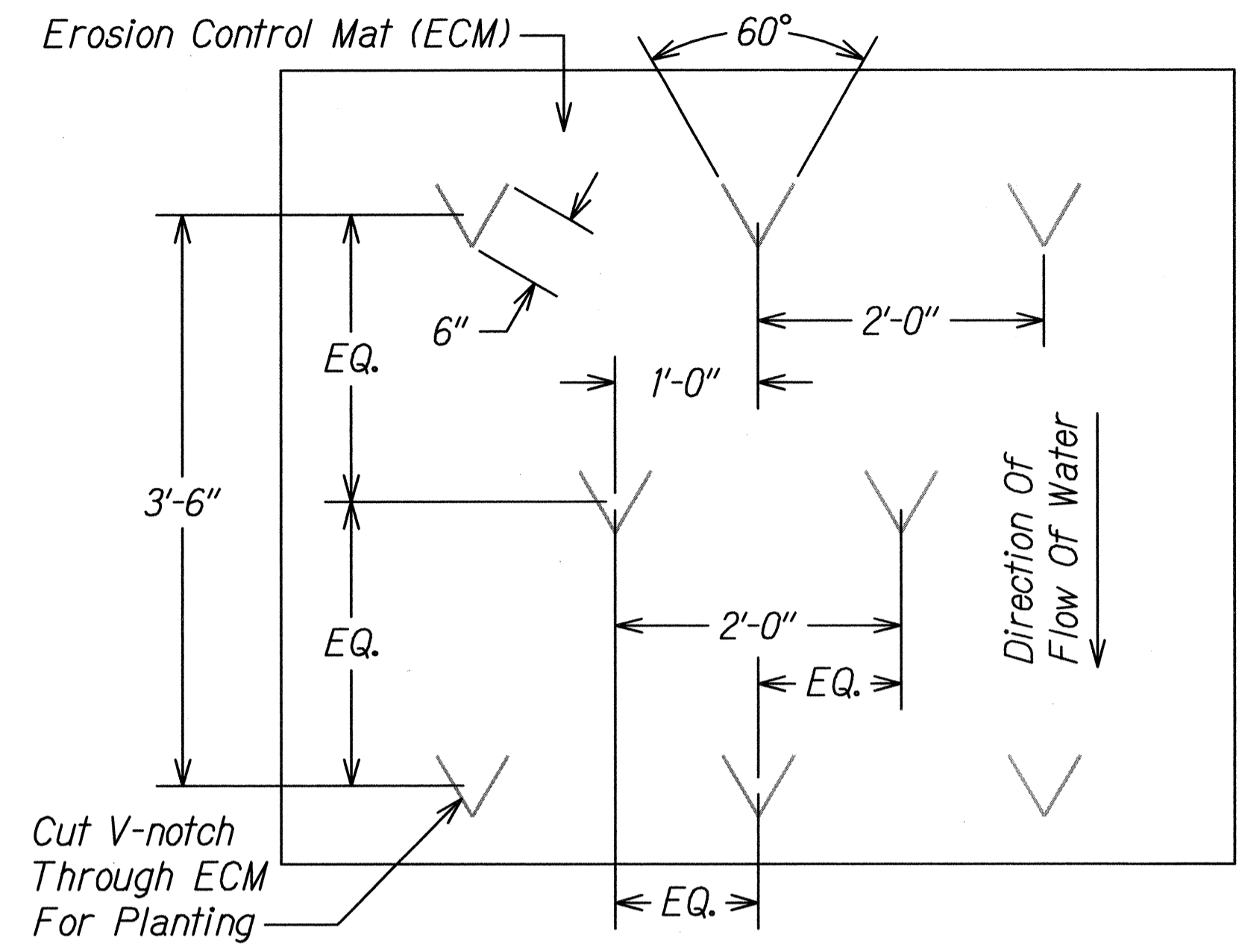
SHEET No. LP-09 OF 13 SHEETS

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

PHASE 6 HDOT REPACKAGE LP-09 PID 109 AS-BUILDING 8/20/2015 8:50:39 AM

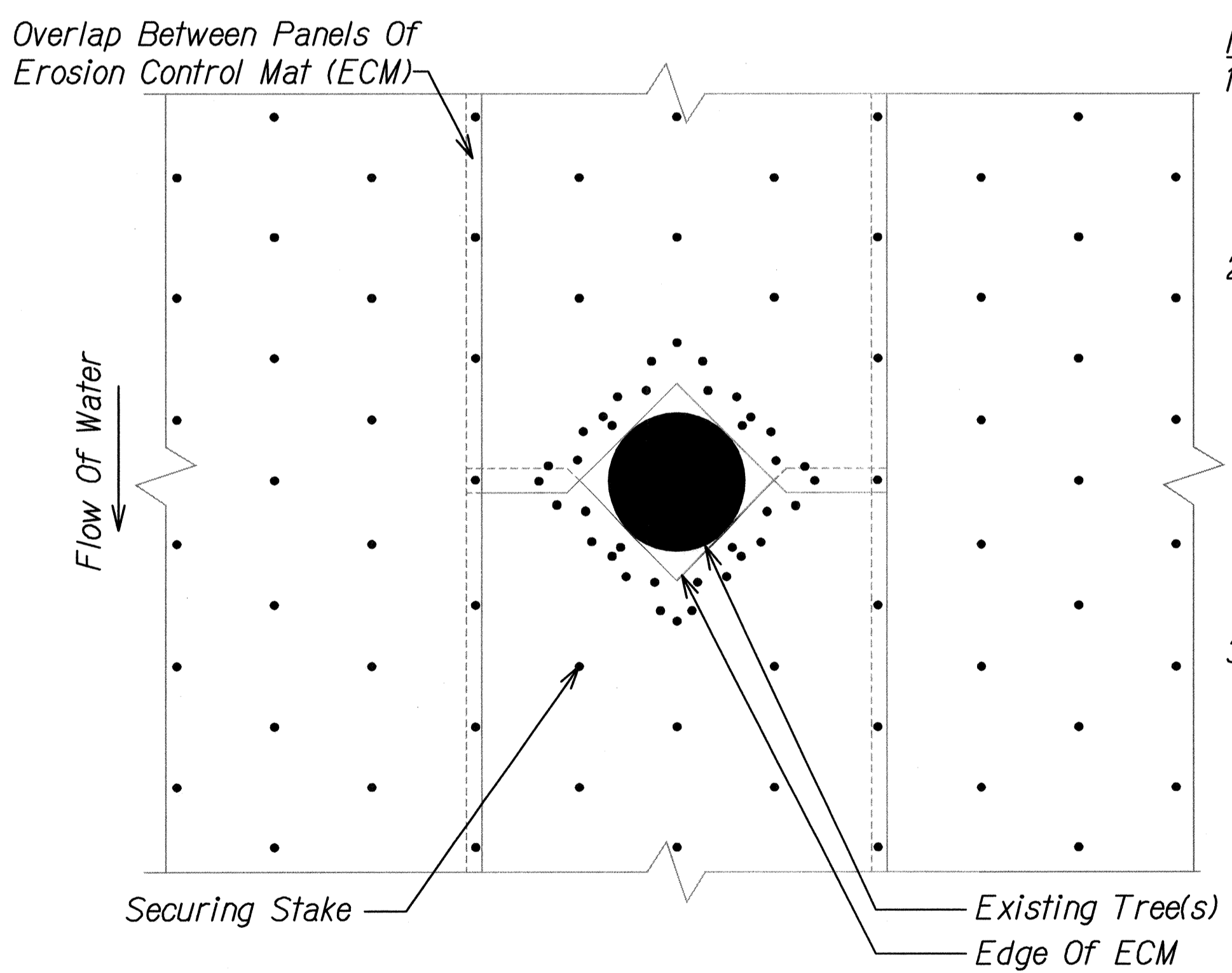
AS-BUILT

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-05-14	2016	34	43



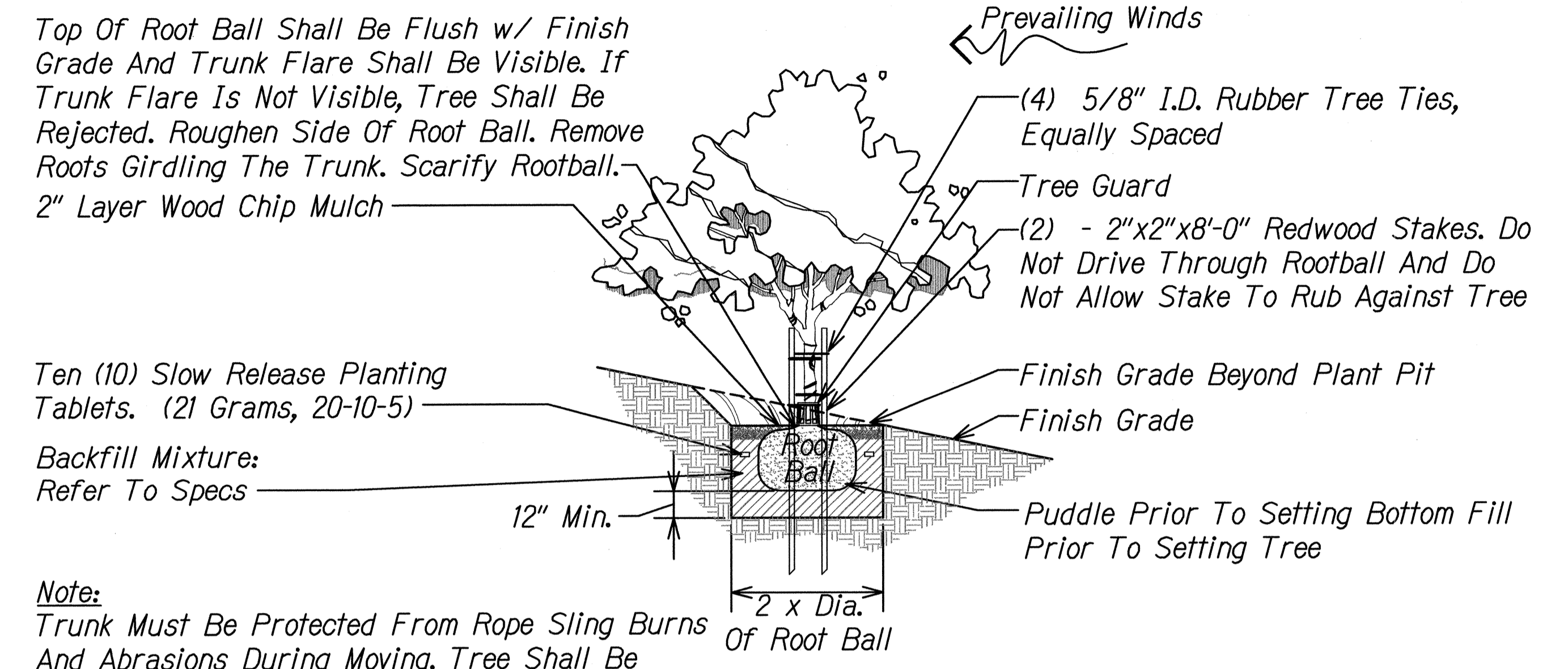
- Notes:**
1. Install Erosion Control Mat (ECM) In Accordance With The Contract Documents Or Per Manufacturer's Standard Guidelines For Trenching, Overlaps, And Stapling. Consult The ECM Manufacturer's Installation Guidelines For Full Installation Details.
  2. Install The Live Plant Material Using A V-notch Design Approved Or Recommended By The ECM Manufacturer.
  3. Contractor Shall Remove Soil Material From V-Shaped Opening For Planting Pit.
  4. After Placing Tree, Shrub, Or Ground Cover In Planting Pit, Backfill Pit And Compact Soil. Secure ECM Flaps Back Down To The Soil With Securing Stakes Per ECM Manufacturer's Recommendations.

**TYPICAL PLANTING THROUGH ECM** 1  
 Scale: Not to Scale LP-10/LP-10



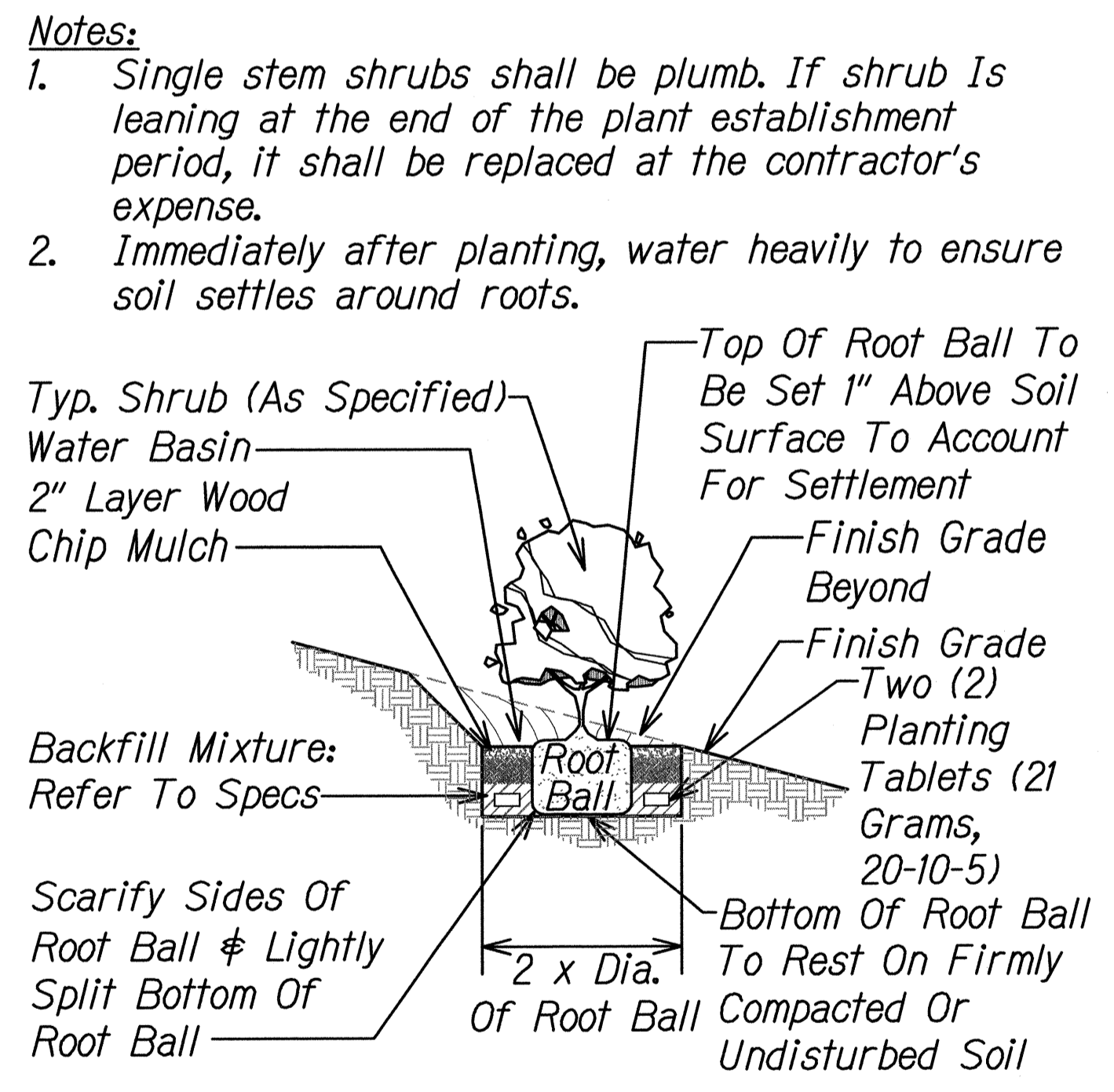
- Notes:**
1. Contractor Shall Join Overlapping Sections Of Erosion Control Mat (ECM) Using Methods Approved Or Recommended By The ECM Manufacturer.
  2. Contractor Shall Create An Opening Around The Circumference Of Each Existing Tree To Ensure ECM Maintains Direct Contact With The Ground Surface. For Densely Growing Trees, ECM Openings May Be Created To Encompass Multiple Trees. Contractor Shall Create Opening In ECM Using Methods Approved Or Recommended By The Manufacturer.
  3. Contractor Shall Secure ECM With Combination Of Stakes And Percussion Anchors. Stake Placement May Require Modification In The Field Due To Root Location, Trunk Structure, Or Other Obstacles. Contractor Shall Install Additional Stakes To Ensure ECM Maintains Direct Contact With Ground Surface. Refer To Erosion Control Plans For Stake And Anchor Placement.
  4. When Placing Matting Between Clusters Of Existing Trees, Contractor May Install ECM Around Cluster If Spacing Between Trees Is 12 Inches Or Less With Engineer's Approval. Contractor Shall Plant Ground Cover Where Space Permits Between Trees Or As Directed By The Engineer.

**TYPICAL ECM INSTALLATION AROUND EXISTING TREES** 2  
 Scale: Not to Scale LP-10/LP-10

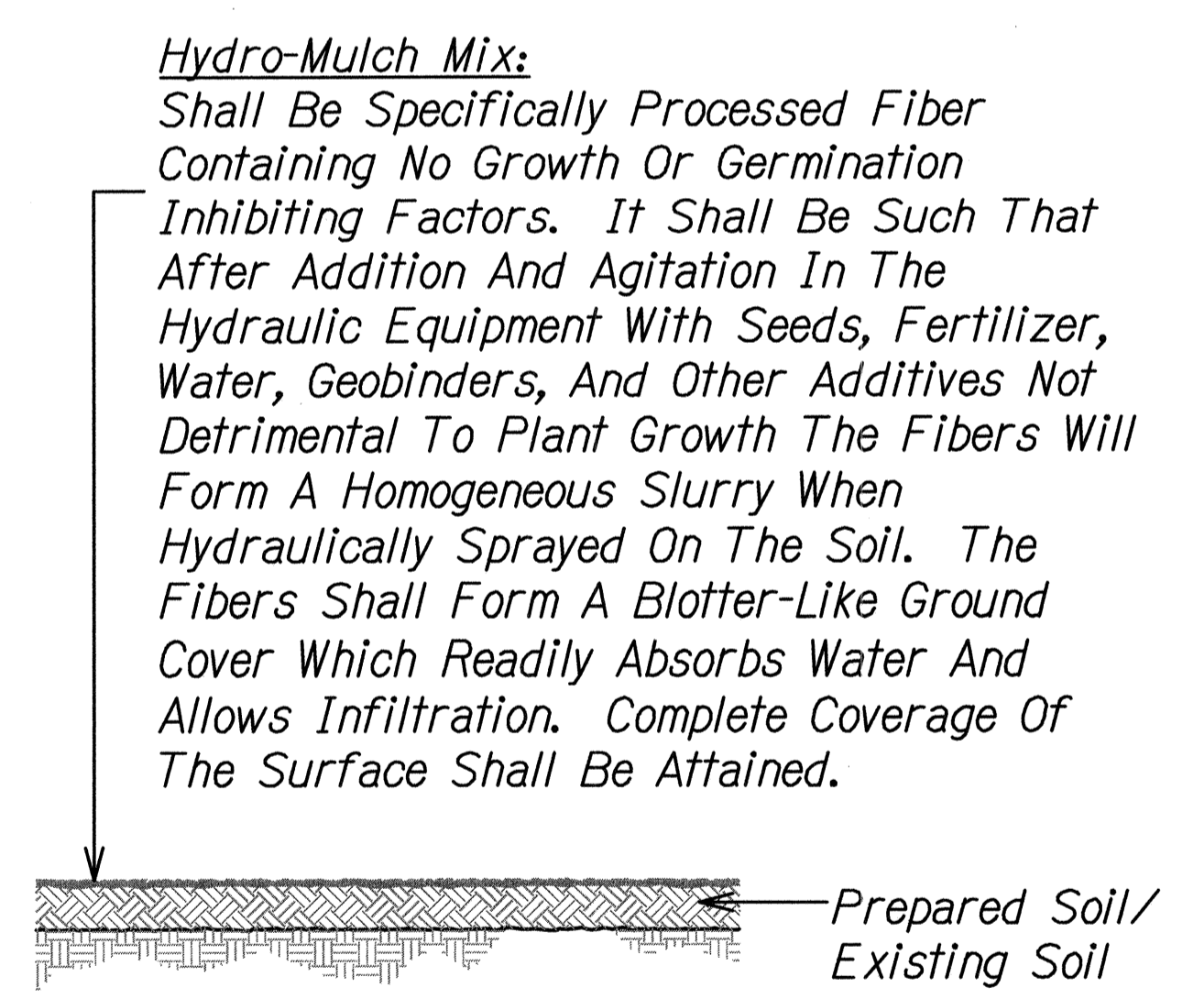


- Notes:**
- Top Of Root Ball Shall Be Flush w/ Finish Grade And Trunk Flare Shall Be Visible. If Trunk Flare Is Not Visible, Tree Shall Be Rejected. Roughen Side Of Root Ball. Remove Roots Girdling The Trunk. Scarify Rootball.
- Trunk Must Be Protected From Rope Sling Burns And Abrasions During Moving. Tree Shall Be Plumb. If Tree Is Leaning At The End Of The Plant Establishment Period, The Tree Shall Be Replaced At The Contractor's Expense.

**TREE PLANTING ON SLOPE** 3  
 Scale: Not to Scale LP-10/LP-10



**SHRUB PLANTING ON SLOPE** 4  
 Scale: Not to Scale LP-10/LP-10



**HYDRO-MULCH DETAIL** 5  
 Scale: Not to Scale LP-10/LP-10

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
CHECKED BY	_____
NOTE BOOK	_____
QUANTITIES BY	_____
CHECKED BY	_____
N.	_____

PHASE 6 ROOT REPAIR PACKAGE LP-10, DETAILS DWG. 7/26/2015 6:06:43 PM

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 This work was prepared by me or under my supervision.

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**LANDSCAPE PLANTING  
 DETAILS**

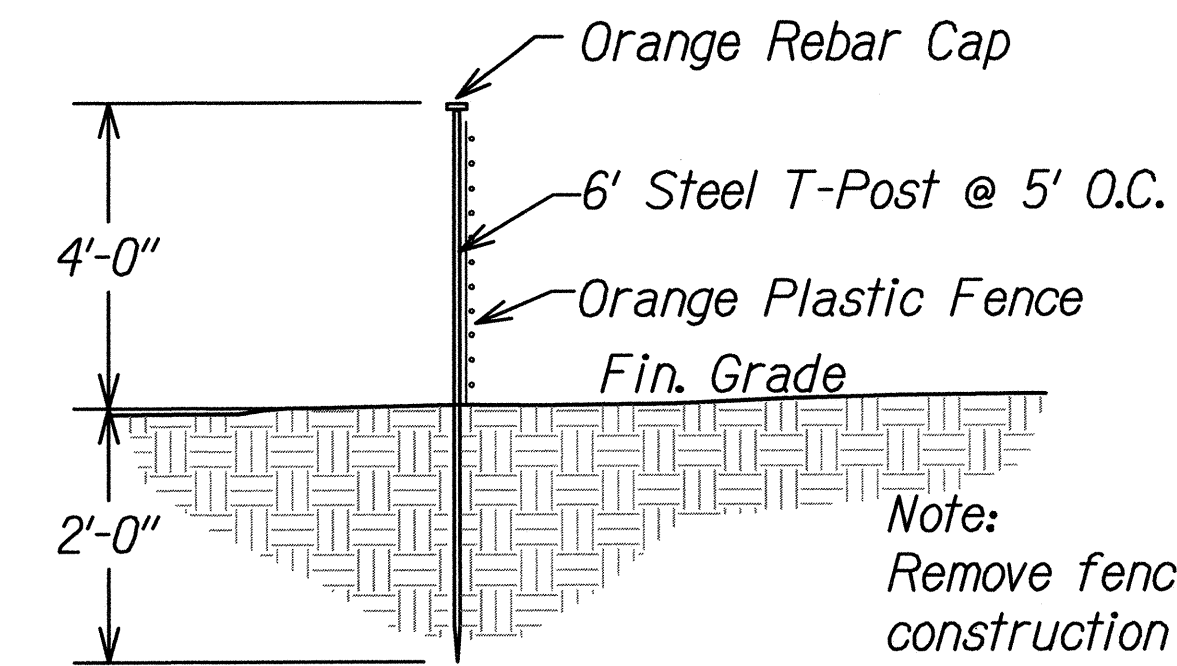
SLOPE IMPROVEMENTS FOR EROSION CONTROL  
 AT VARIOUS SITES ON OAHU, PHASE 6

Project No. HWY-O-05-14  
 Scale: As Shown Date: September 2015

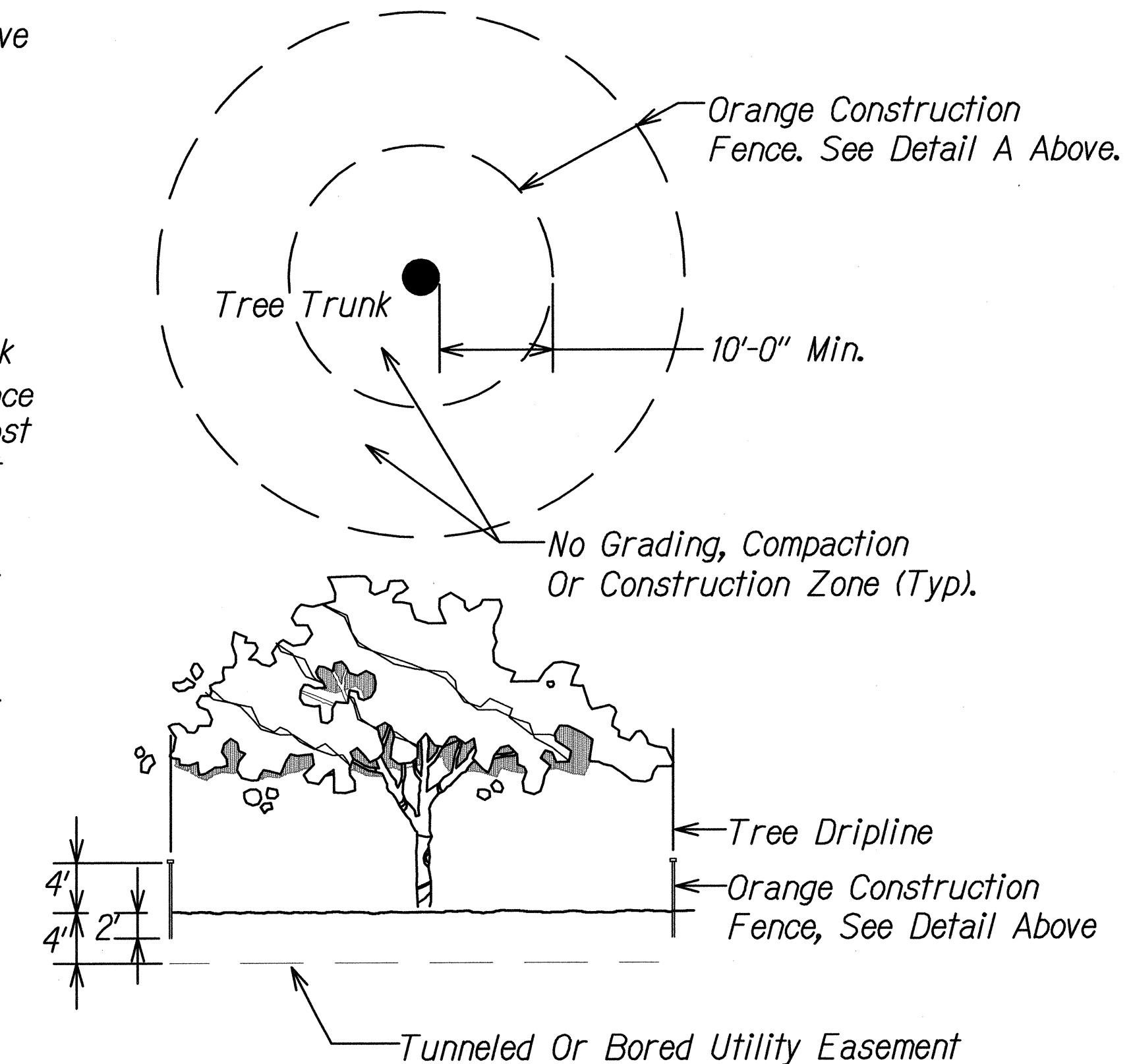
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-05-14	2016	35	43

**TREE PROTECTION ZONE:**

- All trees identified on the plans to be protected. All trees 24" caliper or greater (as measured at 4½ feet height) shall be protected. If trees other than those designated for removal are damaged beyond survival condition as determined by the Engineer, the Contractor shall remove such trees and replace with a tree of the same species and size and maintain for the duration of the construction or 12 months whichever is greater at no cost to the State.
- The recommended tree protection zone should be located at the outer drip line of the canopy of the tree. However, the minimum protection zone around a tree should be at least 10 feet from the external surface of the tree's trunk. For all palms, the minimum protection zone should be at least 10 feet from the external surface of the palm's trunk. Fence location may be adjusted as directed by the Engineer.
- All underground utilities and irrigation lines should be routed outside of the tree protection zone. If utilities must traverse the tree protection zone, they shall be tunneled or bored at a depth of 4 feet or greater within the tree protection zone. Above grade temporary irrigation lines may be routed through the tree protection zone at the discretion of the Engineer.
- All protected trees shall be listed on the demolition, landscape, grading and utilities plans. If there is a discrepancy with all plans, Contractor shall contact Engineer immediately.
- Protective fences shall be erected around trees identified on plan or trees with a trunk diameter greater than 24 inches (as measured at a height of 4 ½ feet). Protective fence shall be 4 feet high orange plastic mesh or approved equivalent supported on steel t-post a minimum of 6 feet long. Protective fence shall surround tree at a minimum of 10 feet from tree trunk with steel t-post at a minimum of 5 feet on center. Fence shall be installed prior to any demolition work and shall remain in place until site work is completed. Signs shall be posted on all four sides to read "TREE PROTECTION ZONE [TPZ] - NO GRADE CHANGE, STORAGE OR EQUIPMENT PERMITTED WITHIN TPZ."
- For the duration of construction within the drip line of the trees to remain there must be:
  - No changes, alteration or disturbance to the grade by adding fill, excavating or scraping except as noted on plans;
  - No storage on construction materials or equipment;
  - No stockpiling of any construction materials or excavated materials;
  - No disposal of any liquids (e.g. concrete slurry, gas, oil, paint);
  - No vehicular traffic, equipment or excessive pedestrian traffic;
  - No attachment of any wires, ropes, lights or any other such attachment other than those of a protective nature to any tree to be preserved; and
  - No cleaning of equipment or material under the canopy of any tree or group of trees to be preserved
- Auger tunneling, not trenching, shall be used where possible for utility placement within the drip line of the tree. If trenching is necessary it shall be hand dug within the drip line of the tree.

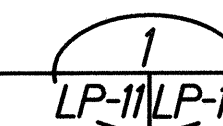


**DETAIL A - ORANGE CONSTRUCTION FENCE**  
NOT TO SCALE



**TREE PROTECTION**

Scale: Not to Scale



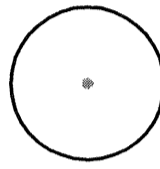

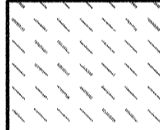
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
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NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
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PHASE 6 ROOT REPAIR PACKAGE - L.P. DETAIL 11.DWG 7/23/2015 6:55:05 AM

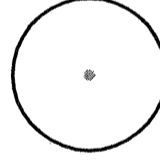

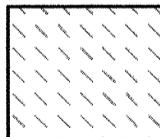
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>LANDSCAPE PLANTING</b> <b>DETAILS</b> SLOPE IMPROVEMENTS FOR EROSION CONTROL AT VARIOUS SITES ON OAHU, PHASE 6 Project No. HWY-0-05-14 Scale: As Shown      Date: September 2015
	4/30/16  This work was prepared by me or under my supervision.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-05-14	2016	36	43

**PLANT SCHEDULE - PID 47**

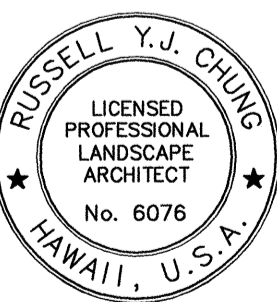
<u>TREES</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>	<u>CAL</u>	<u>HEIGHT</u>	<u>REMARKS</u>
	<i>Acacia koaia</i>	Koai'a	15 Gal	1" Cal	4'-6'	
<u>SHRUBS</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>			<u>REMARKS</u>
	<i>Dodonea viscosa</i>	A'al'i'i	1 Gal			Bushy
<u>HYDRO-MULCHING</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>			<u>REMARKS</u>
	<i>Cynodon dactylon</i> <i>Lolium multiflorum</i>	Common Bermuda Grass Annual Rye Grass	Seed Seed			See specs for grass seeding rates See specs for grass seeding rates

**PLANT SCHEDULE - PID 48**

<u>TREES</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>	<u>CAL</u>	<u>HEIGHT</u>	<u>REMARKS</u>
	<i>Acacia koaia</i>	Koai'a	15 Gal	1" Cal	4'-6'	
<u>SHRUBS</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>			<u>REMARKS</u>
	<i>Dodonea viscosa</i>	A'al'i'i	1 Gal			Bushy
<u>HYDRO-MULCHING</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>			<u>REMARKS</u>
	<i>Cynodon dactylon</i> <i>Lolium multiflorum</i>	Common Bermuda Grass Annual Rye Grass	Seed Seed			See specs for grass seeding rates See specs for grass seeding rates

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

PHASE 6 FOOT REPAIR PACKAGE LP-12 PLANT LIST.DWG 7/23/2015 9:04:08 AM



4/30/16  
EXP. DATE

*R. Chung*  
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

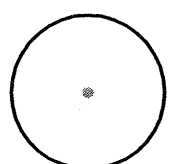
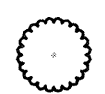
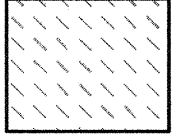
**LANDSCAPE PLANTING LIST**

SLOPE IMPROVEMENTS FOR EROSION CONTROL  
AT VARIOUS SITES ON OAHU, PHASE 6  
Project No. HWY-O-05-14

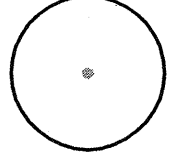
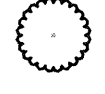
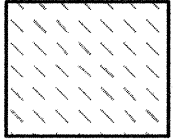
Scale: None Date: September 2015

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-O-05-14	2016	37	43

**PLANT SCHEDULE - PID 56**

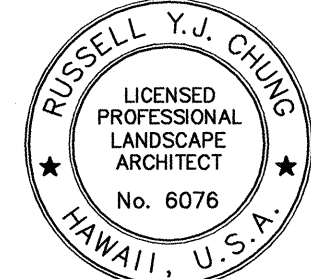
<u>TREES</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>	<u>CAL</u>	<u>HEIGHT</u>	<u>REMARKS</u>
	<i>Acacia koaia</i>	Koai'a	15 Gal	1" Cal	4'-6'	
<u>SHRUBS</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>			<u>REMARKS</u>
	<i>Dodonea viscosa</i>	A'al'i'i	1 Gal			Bushy
<u>HYDRO-MULCHING</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>			<u>REMARKS</u>
	<i>Cynodon dactylon</i> <i>Lolium multiflorum</i>	Common Bermuda Grass Annual Rye Grass	Seed Seed			See specs for grass seeding rates See specs for grass seeding rates

**PLANT SCHEDULE - PID 109**

<u>TREES</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>	<u>CAL</u>	<u>HEIGHT</u>	<u>REMARKS</u>
	<i>Acacia koaia</i>	Koai'a	15 Gal	1" Cal	4'-6'	
<u>SHRUBS</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>			<u>REMARKS</u>
	<i>Dodonea viscosa</i>	A'al'i'i	1 Gal			Bushy
<u>HYDRO-MULCHING</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>			<u>REMARKS</u>
	<i>Cynodon dactylon</i> <i>Lolium multiflorum</i>	Common Bermuda Grass Annual Rye Grass	Seed Seed			See specs for grass seeding rates See specs for grass seeding rates

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
NOTE BOOK	
QUANTITIES BY	
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N.	

PHASE 6 FOOT REPAIR PACKAGE LP-13 PLANT LIST.DWG 7/23/2015 8:56:09 AM



4/30/16  
*[Signature]*  
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**LANDSCAPE PLANTING LIST**

SLOPE IMPROVEMENTS FOR EROSION CONTROL AT VARIOUS SITES ON OAHU, PHASE 6  
Project No. HWY-O-05-14  
Scale: None Date: September 2015

SHEET No. LP-13 OF 13 SHEETS