FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	2	108

STANDARD PLANS SUMMARY

STANDARD PLAN NO.	TITLE	DATE
B-01 ●	NOTES & MISCELLANEOUS DETAILS	05/31/07
B-03 ●	BACKFILL DETAILS AT EARTH RETAINING STRUCTURES	05/31/07
B-12	PRESTRESSED CONCRETE PILES & COMPRESSION	05/31/07
	SPLICE CAN DETAILS	
B-12A	PRESTRESSED CONCRETE PILES, PILE &	05/31/07
	COMPRESSION SPLICE CAN DETAILS & NOTES	
B-12B	PILE INTERACTION DIAGRAM	05/31/07
B-13	PRESTRESSED CONCRETE PILE BUILD-UP DETAILS	05/31/07
D-01	CATTLE GATE	05/31/07
D-02	CHAIN LINK FENCE WITH TOPRAIL	05/31/07
D-03 ●	CHAIN LINK FENCE WITHOUT TOPRAIL	05/31/07
D-04	WIRE FENCE WITH METAL POSTS	05/31/07
D-05 ●	TYPICAL DETAILS OF CURBS AND/OR GUTTERS	05/31/07
D-06	TYPICAL DETAIL OF REINFORCED CONCRETE DROP	05/31/07
	DRIVEWAY	
D-07 ●	CENTERLINE AND REFERENCE SURVEY MONUMENTS	05/31/07
D-08 ●	STREET SURVEY MONUMENT	05/31/07
D-15 ●	CONCRETE SIDEWALK	05/31/07
D-16	P.C.C. BUS PAD	05/31/07
D-17	P.C.C. BUS PAD	05/31/07
D-18 ●	P.C.C. PAVEMENT LAYOUT	05/31/07
D-19 ●	P.C.C. PAVEMENT W/ PERMEABLE BASE JOINT DETAILS	05/31/07
D-20 ●	P.C.C. PAVEMENT W/ PERMEABLE BASE JOINT DETAILS	05/31/07
D-21 ●	P.C.C. LONGITUDINAL JOINT DETAILS	05/31/07
D-22 ●	P.C.C. CONNECTION TO CURBS AND GUTTERS	05/31/07
D-23 ●	JOINTS	05/31/07
L-01	TREE PLANTING	08/16/06
L-02	TREE PLANTING	08/16/06
L-03	TREE TRANSPLANTING	08/16/06
L-04	PALM PLANTING	08/16/06
L-05	SHRUB PLANTING	08/16/06
L-06	LANDSCAPE DETAILS	08/16/06
L-07	LANDSCAPE DETAILS	08/16/06
L-08	LANDSCAPE DETAILS	08/16/06
L-09	LANDSCAPE DETAILS	08/16/06
L-10	LANDSCAPE DETAILS	08/16/06
L-11	PLANTING NOTES	08/16/06
L-12	IRRIGATION DETAILS	08/16/06
L-13	IRRIGATION DETAILS	08/16/06
L-14	IRRIGATION DETAILS	08/16/06
L-15	IRRIGATION DETAILS	08/16/06
L-16	IRRIGATION DETAILS	08/16/06
L-17	IRRIGATION DETAILS	08/16/06
L-18	IRRIGATION DETAILS	08/16/06
L-19	IRRIGATION DETAILS	08/16/06
L-20	IRRIGATION DETAILS	08/16/06
L-21	IRRIGATION DETAILS	08/16/06
L-22	IRRIGATION DETAILS	08/16/06
L-23	IRRIGATION DETAILS	08/16/06
L-24	IRRIGATION NOTES	08/16/06

STANDARD PLAN NO.	TITLE	DATE
H-01A	TYPE A CATCH BASIN	05/31/07
H-01B	TYPE B CATCH BASIN	05/31/07
H-01C	TYPE C CATCH BASIN	05/31/07
H-01D	TYPE D CATCH BASIN	05/31/07
H-01E	CATCH BASIN SECTIONS	05/31/07
H-02A	TYPE A1 CATCH BASIN	05/31/07
H-02B	TYPE B2 CATCH BASIN	05/31/07
H-02C	TYPE C1 CATCH BASIN	05/31/07
H-02D	TYPE D1 CATCH BASIN	05/31/07
H-02E	CATCH BASIN SECTION	05/31/07
H-03	TYPE A, B, AND C STORM DRAIN MANHOLE	05/31/07
H-04	TYPE D STORM DRAIN MANHOLE	05/31/07
H-05	TYPICAL REINFORCING DETAILS FOR DRAINAGE	05/31/07
	STRUCTURES	
H-06 ●	TYPICAL REINFORCING DETAILS FOR DRAINAGE	05/31/07
	STRUCTURES	
H-07 ●	CATCH BASIN AND MANHOLE CASTINGS	05/31/07
H-08 ●	TYPE 1A-9 AND 1A-9P GRATED DROP INLET	05/31/07
H-09	TYPE 2A-9 AND 2A-9P GRATED DROP INLET	05/31/07
H-10 ●	TYPE A-9 OR A-9P STEEL FRAMES	05/31/07
H-11 ●	TYPE A-9 AND A-9P STEEL GRATES	05/31/07
H-12	TYPE 61614P AND 1211214P GRATED DROP INLET	05/31/07
H-13	TYPE 61616P AND 1211216P GRATED DROP INLET	05/31/07
H-14	TYPE 61214P GRATED DROP INLET	05/31/07
H-15	TYPE 1211214, 1211214P, 1211216, 1211216P STEEL	05/31/07
	FRAME AND GRATES	
H-16	TYPE 61614, 61614P, 61616, 61616P STEEL FRAME	05/31/07
	AND GRATES	
H-17	TYPE 61214 STEEL FRAMES AND GRATES	05/31/07
H-18	TYPE 61214P STEEL GRATES	05/31/07
H-19	TYPE 61614B STEEL FRAME AND GRATES	05/31/07
H-20	CEMENT RUBBLE MASONRY STRUCTURES	05/31/07
H-21	CONCRETE AND CEMENT RUBBLE MASONRY STRUCTURES	05/31/07
H-22	INLET/OUTLET STRUCTURE	05/31/07
H-23	INLET/OUTLET STRUCTURE	05/31/07
H-24	FLARED END SECTION FOR CULVERTS	05/31/07
H-25	FLARED END SECTION FOR CULVERTS	05/31/07
H-26	CONCRETE SPILLWAY INLET	05/31/07
H-27 ●	CAP COUPLING DETAILS STANDARD JOINT	05/31/07
H-28 ●	REINFORCED CONCRETE COLLAR & JACKET	05/31/07
H-29	UNDERDRAIN CLEANOUT STEEL FRAME AND COVER	05/31/07
H-30	UNDERDRAIN CONNECTION TO DRAINAGE STRUCTURE	05/31/07
TE-01 ●	SIGN HEIGHT AND LOCATION	07/11/08
TE-1A ●	SIGN INSTALLATION	07/11/08
TE-02A	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
⚠ TE-02B	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-02C	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-03A ●	GALVANIZED SQUARE TUBE SIGN POST MOUNTING	05/31/07
TE-03B ●	GALVANIZED SQUARE TUBE SIGN POST MOUNTING	05/31/07
TE-04 ●	REGULATORY SIGNS	07/11/08
TE-05 ●	WARNING SIGNS	07/11/08
TE-06 ●	MISCELLANEOUS SIGNS	07/11/08
TE-07 ●	CONSTRUCTION SIGNS	07/11/08
TE-08 ●	MISCELLANEOUS INTERSECTION SIGNS	07/11/08

STANDARD PLAN NO.	TITLE	DATE
TE-09 ●	BIKE ROUTE SIGN & SUPPLEMENTARY PLATES	07/11/08
TE-10	INTERSTATE ROUTE MARKER	07/11/08
TE-11 ●	STATE ROUTE MARKER AND AUXILIARY MARKERS	07/11/08
TE-12 ●	STATE ROUTE MARKER AND BORDER DETAIL FOR	07/11/08
	GUIDE SIGNS	
TE-12A ●	ROUTE SIGN ASSEMBLIES	07/11/08
TE-13 ●	STREET NAME SIGN ON MAST ARM	07/11/08
TE-14 ●	MISCELLANEOUS REFLECTOR MARKERS	07/11/08
TE-15 ●	OBJECT MARKERS	07/11/08
TE-16 ●	MILE POSTS	07/11/08
TE-17A	CANTILEVER OVERHEAD SIGN ELEVATION & DETAILS	05/31/07
TE-17B	CANTILEVER SIGN FRAME DETAIL AND SECTION	05/31/07
TE-17C	CANTILEVER SIGN FRAME DETAIL	05/31/07
TE-17D	CANTILEVER SIGN FRAME SECTION	05/31/07
TE-17E	CANTILEVER SIGN FRAME DETAILS	05/31/07
TE-18A	TWO POST OVERHEAD SIGN FRAME ELEVATIONS	05/31/07
TE-18B	TWO POST SIGN FRAMING PLAN SECTION	05/31/07
TE-18C	TWO POST SIGN FRAMING SECTIONS AND DETAILS	05/31/07
TE-18D	TWO POST SIGN FRAME DETAILS	05/31/07
TE-18E	TWO POST SIGN FRAME DETAILS	05/31/07
TE-19A	OVERHEAD SIGN FRAMING SCHEDULE	05/31/07
TE-19B ●	SIGN POST DRILLED SHAFT FOUNDATION	05/31/07
TE-19C ●	SPREAD FOOTING	05/31/07
TE-19D ●	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.1 ●	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.2 ●	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.3	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.4	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.5	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19E ●	ANCHORAGE DETAILS	05/31/07
TE-19F ●	ANCHORAGE DETAILS	05/31/07
TE-19G ●	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
TE-19H	LUMINAIRE WALKWAY SUPPORT	05/31/07
TE-19J	FIXED MESSAGE LUMINAIRE SUPPORT	05/31/07
TE-19K ●	MISCELLANEOUS SIGN DETAILS	05/31/07
TE-19L ●	MISCELLANEOUS SIGN DETAILS	05/31/07
TE-19M ●	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
TE-20 ●	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20A ●	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20B ●	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20C	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-21A ●	SIGN BREAKAWAY MOUNTS	05/31/07
TE-21B ●	SIGN BREAKAWAY MOUNTS	05/31/07
TE-22 ●	LAMINATED ALUMINUM SIGN PANELS (OVERHEAD)	05/31/07
TE-23 ●	LAMINATED ALUMINUM SIGN PANELS (GROUND MOUNTED)	07/11/08
TE-24 ●	SOLID ALUMINUM EXTRUDED SIGN PANEL AND	05/31/07
	ACCESSORY DETAILS	

STANDARD PLAN NO.	TITLE	DATE
TE-25 ●	GUIDE SIGNS LUMINAIRE MOUNTINGS	05/31/07
TE-26 ●	RAISED PAVEMENT MARKERS AND STRIPING	07/11/08
TE-27 ●	RAISED PAVEMENT MARKERS AND STRIPING	07/11/08
TE-28 ●	ENTRANCE AND EXIT PAVEMENT MARKINGS	07/11/08
TE-28A ●	MISCELLANEOUS PAVEMENT MARKINGS	07/11/08
TE-29 ●	PAVEMENT ARROWS AND SYMBOLS	07/11/08
TE-30 ●	PAVEMENT ALPHABETS, NUMBERS & SYMBOLS	07/11/08
TE-31 ●	PAVEMENT ALPHABETS, NUMBERS & SYMBOLS	07/11/08
TE-32	TYPE I & II TRAFFIC SIGNAL SYSTEM MISC. DETAILS	05/31/07
TE-33	TYPE II TRAFFIC SIGNAL SYSTEM	08/16/06
TE-33A.1	TYPE II TRAFFIC SIGNAL STANDARD	05/31/07
TE-33A.2	TYPE II TRAFFIC SIGNAL STANDARD	05/31/07
TE-34	LOOP DETECTOR DETAILS	07/11/08
TE-35	LOOP DETECTORS & DUCT DETAILS	07/11/08
TE-36 ●	TRAFFIC SIGNAL DETAILS	07/11/08
TE-37 ●	PULLBOX & COVER DETAILS	07/11/08
TE-37A ●	TYPE "A" TRAFFIC PULLBOX	05/31/07
TE-37B ●	TYPE "A" TRAFFIC PULLBOX REINFORCING	05/31/07
TE-37C ●	TYPE "B" TRAFFIC PULLBOX	05/31/07
TE-37D ●	TYPE "B" TRAFFIC PULLBOX REINFORCING	05/31/07
TE-37E ●	TYPE "B" TRAFFIC PULLBOX FOUNDATION	05/31/07
TE-37F ●	TYPE "C" TRAFFIC PULLBOX	05/31/07
TE-37G ●	TYPE "C" TRAFFIC PULLBOX REINFORCING	05/31/07
TE-37H ●	TYPE "C" TRAFFIC PULLBOX FOUNDATION	05/31/07
TE-37J ●	TRAFFIC PULLBOX COVER AND DETAILS	05/31/07
TE-38	TYPE III TRAFFIC SIGNAL STANDARD	05/31/07
TE-38A.1	TYPE III TRAFFIC SIGNAL STANDARD	05/31/07
TE-38A.2	TYPE III TRAFFIC SIGNAL STANDARD	05/31/07
TE-39	METAL GUARDRAIL CONNECTION TO CONCRETE BARRIER	07/11/08
TE-40	CONCRETE BARRIER TRANSITION	05/31/07
TE-40A	CONCRETE BARRIER TRANSITION SECTIONS	05/31/07
TE-41	GUARDRAIL TYPE 4 (RIGID BARRIER)	05/31/07
TE-42 ●	PORTABLE CONCRETE BARRIER	05/31/07
TE-43 ●	PORTABLE CONCRETE BARRIER	05/31/07
TE-44	GUARDRAIL TYPE 4 MISCELLANEOUS DETAILS	07/11/08
TE-45 ●	BARRICADES	07/11/08
TE-46	DELINEATION & PAVEMENT MARKINGS AT NARROW	07/11/08
	BRIDGES	
TE-47	HIGHWAY LIGHT STANDARD	05/31/07

NOTE:
STANDARD PLANS APPLICABLE TO THIS PROJECT ARE INDICATED BY A "●" NEXT TO THE STANDARD PLAN NO. (For Example: D-07 ●)

02/07/14 ⚠ Deleted Standard Plans TE-02A, TE-02B, and TE-02C

MINGXUN DING — LICENSED PROFESSIONAL ENGINEER — No. 9246-C — HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

Scale: None — Date: August 2013

SHEET No. 1 OF 1 SHEETS

ADD. 2

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	4	108

NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY

1. The Contractor shall obtain a Permit to Perform Work Upon State Highway from the Hawaii District, State Highways, at 50 Makaala Street, Hilo, prior to commencement of work within the State highway right-of-way.

2. Construction and restoration of all existing highway facilities within State right-of-way shall be done in accordance with all applicable sections of the 2005 Standard Specifications for Road and Bridge Construction, and the Specifications for Installation of Miscellaneous Improvements within State Highways, of the State Highways Division.

3. Work may be performed only between the hours of 8:30 a.m. and 3:00 p.m., Monday through Friday, except holidays, unless otherwise permitted by the Engineer.

4. The Contractor shall provide, install, and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective items, and shall take necessary precautions for the protection, convenience, and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the "Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways", adopted by the Director of Transportation, and the current U.S. Federal Highway Administration "Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI - Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility and Incident Management Operations" and NCHRP 350.

5. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way, except at locations designated in writing and approved by the Engineer.

6. The Contractor shall be required to provide adequate, safe, non-skid bridging material over the trench, including shoring, when trenching in pavement areas to handle all types of vehicular traffic. Smooth riding tapers shall be provided for pavement transitions and advanced warning signs shall be posted. Prior to installing such bridging material, the Contractor shall submit drawings stamped by a licensed structural engineer to the Engineer for acceptance. ⚠

7. No trench shall be opened more than 200 feet in advance of the installed and tested pipe and/or ductline. No jumps or spaces will be permitted unless approved in writing by the Engineer.

8. Drainage within the project limits shall be maintained at all times to allow freeflow.

9. All regulatory, guide and construction signs and barricades shall be high intensity reflective sheeting.

10. All fill slopes that do not meet the clear zone requirements set forth by the latest edition of the AASHTO Roadside Design Guide shall be shielded by NCHRP Report 350 and HDOT approved devices.

11. The Contractor shall inform the State DOT Highway Hawaii District Permit Office at 933-8866 at least five (5) working days prior to any lane closures or changes to lane closures.

COLD PLANING NOTES

1. All saw cutting work shall be considered incidental to Cold Planing.

2. The Contractor shall compact the existing aggregate base in accordance with Section 304 - Aggregate Base Course. This preparation work shall be considered incidental to the new Asphalt Concrete Base Course, and will not be paid for separately.

3. If a vertical pavement drop-off exists at the end of each day's cold planing and paving, the Contractor shall provide a wedge with a 48:1 transition taper for transverse drop-off and no steeper than 6:1 for longitudinal drop-off, as approved by the Engineer. This work shall be considered incidental to Cold Planing.

4. The Contractor shall lower manholes prior to Cold Planing, backfill with hot mix and re-adjust after final paving. This work shall be considered incidental to Manhole Adjustments.

5. Unless otherwise shown on plans, the Contractor shall remove asphalt concrete from existing gutters and swales and shall exercise caution in doing so. The Contractor shall be held liable for any damage caused to the gutters and swales by this removal. This work shall be considered incidental to Cold Planing.

PUBLIC HEALTH, SAFETY, AND CONVENIENCE NOTES

1. The Contractor shall observe and comply with all Federal, State, and Local laws required for the protection of public health and safety and environmental quality.

2. The Contractor, at his own expense, shall keep the project and its surrounding areas free from dust nuisance. The work shall be in conformance with the air pollution control standards and regulations of the State Department of Health. The County may require supplementary measures as necessary.

3. No Contractor shall perform any trenching operation so as to cause falling rocks, soil or debris in any form to fall, slide or flow onto adjoining properties, streets or natural water-courses. Should such violations occur, the cost incurred for any remedial action by the Director, DOT shall be payable by the Contractor.

4. The Contractor shall provide, install and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective facilities and shall take all necessary precautions for the protection, convenience, and safety of the public. The Contractor shall apply for a construction permit with a noise pollution control plan if work should extend beyond permitted working hours.

ARCHAEOLOGICAL NOTES:

1. In the event that an archaeological or historic structure within the work area is inadvertently damaged during construction, cease work in the vicinity of the site and notify the Engineer and the State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources of the damage. SHPD will determine the appropriate mitigation measures.

2. In the event that a previously unknown archaeological feature is exposed by construction, cease work in the vicinity of the new feature and notify the Engineer, the SHPD, and the Hawaii County Planning Department of the new discovery.

3. In the event that previously unknown human remains are exposed by construction, cease all work in the area of the remains, and protect the area with an appropriate material. Notify HDOT and the SHPD at 692-8015.

4. ⚠ If any lava tube is uncovered during earthwork operations, the Contractor shall cease all ground work in the area and immediately notify the Archaeological Monitor and the Engineer. With or without the help of the Archaeological Monitor, the Engineer will assess the situation. If the Engineer has any doubts as to the extent and/or significance of the discovery, the Engineer will contact the appropriate regulatory agency (e.g., State Historic Preservation Division).

MINGXUN DING LICENSED PROFESSIONAL ENGINEER No. 9248-C HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14	⚠	Added note 4 to Archaeological Notes
02/07/14	⚠	Amended note 6 of Notes for Construction Within State Right-of-Way

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES - 1

Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

Scale: None Date: August 2013

SHEET No. 2 OF 3 SHEETS

ADD. 4

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	20	108

GENERAL NOTES FOR TRAFFIC CONTROL PLAN

1. The Permitee Shall Make Minor Adjustments At Intersections, Driveways, Bridges, Structures, Etc., To Fit Field Conditions.

2. Cones Or Delineators Shall Be Extended To A Point Where They Are Visible To Approaching Traffic.

3. Traffic Control Devices Shall Be Installed Such That The Sign Or Device Farthest From The Work Area Is Placed First. The Others Shall Then Be Placed Progressively Toward The Work Area.

4. Regulatory And Warning Signs Within The Construction Zone That Are In Conflict With The Traffic Control Plans Shall Be Removed Or Covered.

5. Flaggers And/Or Police Officers Shall Be In Sight Of Each Other Or In Direct Communication At All Times.

6. When Required By The Issuing Office, The Permittee Shall Install A Flashing Arrow Signal As Shown On The Traffic Control Plans.

7. Sign Spacing (D), Taper Lengths (T) And Spacing Of Cones Or Delineators Shall Be As Shown In Table 1, Unless Otherwise Noted On The Traffic Control Plans.

8. All Traffic Lanes Shall Be A Minimum Of 10-Feet Wide.

9. All Construction Warning Signs Shall Be Promptly Removed Or Covered Whenever The Message Is Not Applicable Or Not In Use.

10. The Backs Of All Signs Used For Traffic Control Shall Be Appropriately Covered To Preclude The Display Of Inapplicable Sign Messages (I.E., When Signs Have Messages On Both Faces).

13. Driveways Shall Be Kept Open Unless The Owners Of The Property Using The Right-Of-Way Are Otherwise Provided For Satisfactorily. Further, The Permittee Shall Control Traffic Going In And Out Of Driveways.

14. Buffer And Taper Areas On Approach To Any Work Area Shall Be Kept Clear Of Vehicles And Equipment.

15. At The End of Each Day's Work, Or As Soon As The Work Is Completed, The Permittee Shall Remove All Traffic Control Devices No Longer Needed To Permit Free And Safe Passage Of Public Traffic. Removal Shall be In The Reverse Order Of Installation.

16. Replace Existing Faded Or Obliterated Pavement Markings That Are Necessary For Safe Traffic Flow In The Construction Area, With Temporary Or Permanent Markings Before Opening The Roadway To Public Traffic Each Day.

17. All Work Zone Traffic Control Devices Shall Comply With The "Statewide Guideline For Work Zone Traffic Control Devices," Dated September 13, 2000.

18. Construction Lasting Three (3) Days Or Longer Throughout The Project Corridor Shall Require Long-Term Construction Warning Signs And Regulatory Speed Limit Signs, See The HDOT Work Zone Signing Plan, Notes $ Details.

GENERAL NOTES FOR TRAFFIC CONTROL PLAN (Cont'd.)

19. Work May Be Performed Only Between The Hours Of 8:30 a.m. And 3:00 p.m., Monday Through Friday, Except State Holidays, Unless When Otherwise Approved In Writing By The HDOT Director.

    During Work Hours, Written Approval By The HDOT Director Shall Be Required For Any Of The Following:
    - Street Closures
    - Ramp Closures
    - Lane Closures Of More Than One (1) Lane.

⚠ 20. The Contractor Shall Submit The Site-Specific Traffic Control Plan(s) Intended For Use During Construction To The State Of Hawaii Department Of Transportation's District Engineer, With The Traffic Notification, A Minimum Of Three (3) Weeks Prior To The Scheduled Start Of The Associated Construction Activites For Review And Approval. Construction May Not Proceed Until The District Engineer Has Approved The Site-Specified Traffic Control Plan(s).

21. Include A Signed Certification Statement Affirming That The Site-Specific Traffic Control Plan(s) Submitted To HDOT Has Been Prepared Under The Direction Or Supervision Of A Licensed Professional Engineer, Is In Compliance With The Current HDOT And FHWA Standards, And Is An Appropriate Application Of Traffic Control Measures For The Construction Work To Be Performed.

TABLE 1 FOR TRAFFIC CONTROL PLAN

POSTED SPEED LIMIT (M.P.H.)	SIGN SPACING (L) (FEET)	TAPER LENGTH (T) (FEET)		LONGITUDINAL BUFFER SPACE (B) (FEET)	SPACING OF CONES OR DELINEATORS (FEET)		
		W = 12' OR LESS *	W = GREATER THAN 12' *		TAPER	TANGENT	WORK AREA
20	250	200	W X 17	35	20	20	10
25	250	200	W X 17	55	25	25	10
30	250	250	W X 20	85	30	30	10
35	250	250	W X 20	120	35	35	10
40	500	350	W X 30	170	40	40	10
45	500	550	W X 45	220	45	45	10
50	1000	600	W X 50	280	50	50	10
55	1000	700	W X 55	335	55	55	10

* W = WIDTH OF LANE OR OFFSET

MINGXUN DING LICENSED PROFESSIONAL ENGINEER No. 9246-C HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14 ⚠ Amended note 20 of General Notes for Traffic Control Plan

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES FOR TRAFFIC CONTROL

Keaau-Pahoa Road Intersection Improvements at Old Government Road Federal-Aid Project No. HSIP-0130(031)

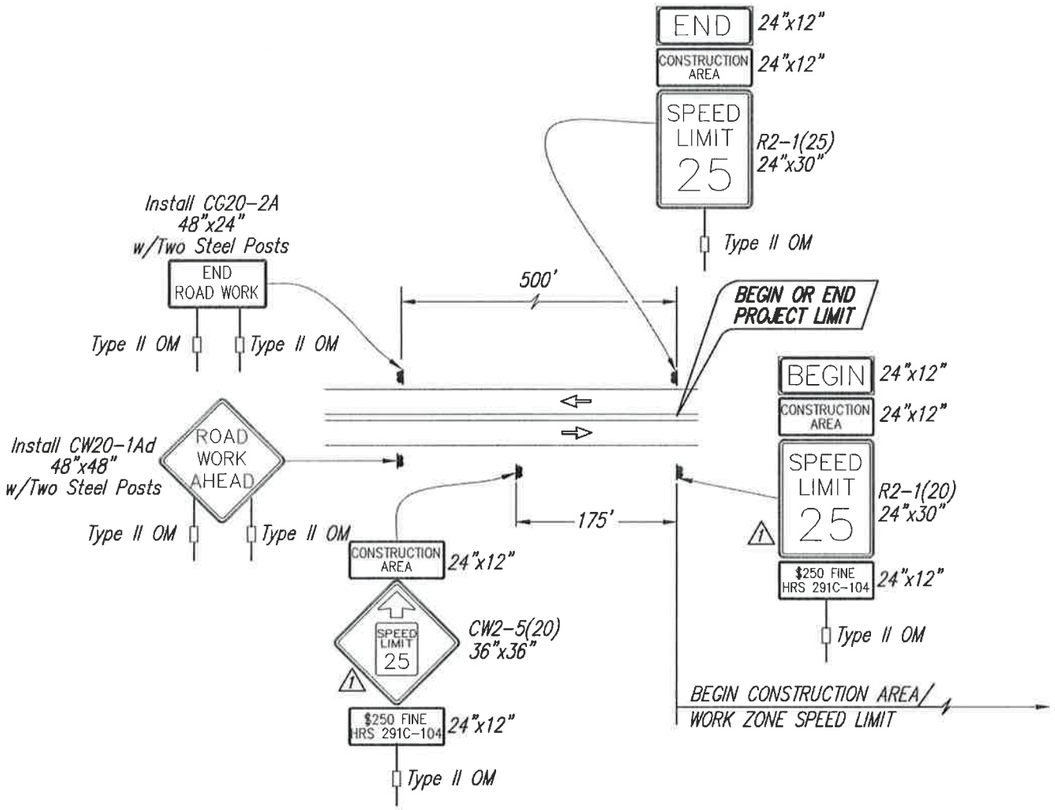
Scale: None Date: August 2013

SHEET No. 1 OF 1 SHEETS

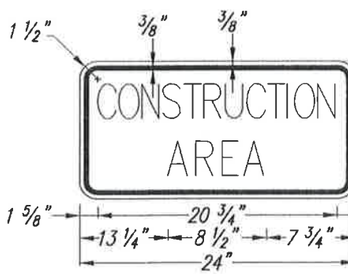
ADD. 20

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

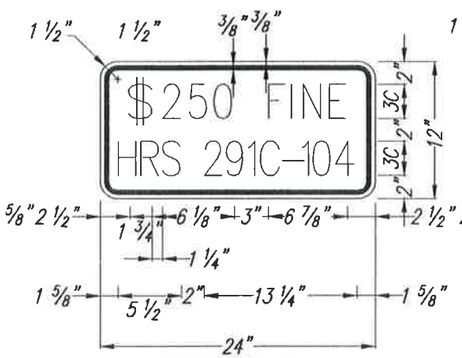
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	21	108



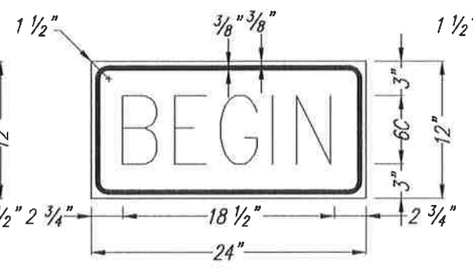
TYPICAL DETAIL FOR CONSTRUCTION SIGNS
ON TWO LANE OR MULTILANE UNDIVIDED LOW SPEED HIGHWAY



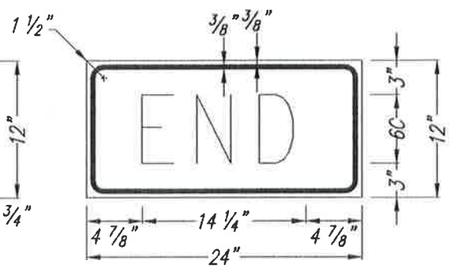
LEGEND: BLACK
BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: WHITE



LEGEND: BLACK
BACKGROUND: ORANGE



LEGEND: BLACK
BACKGROUND: ORANGE

Work Zone Notes:

1. *This Work Zone Sign Plan is intended for use on long-term stationary work zones/construction phases (3 days or more). All work zones or construction phases less than 3 days duration will use Traffic Control Plans shown in Section 645 of the Special Provisions.*
2. *All Existing Regulatory speed limit signs with posts within the work zone/project limit shall be removed and replaced with work zone speed limit sign assemblies (R2-1(20) and CW2-5(20) with "CONSTRUCTION AREA" and "$250 FINE HRS 291C-104" Supplemental Signs).*
3. *Construction sign assemblies shall be installed on both the approaching and trailing ends of each work zone as shown on this plan.*
4. *Each construction warning sign shall have a minimum of two (2) Type II OM. Each work zone speed limit assembly shall have a minimum of one (1) Type II OM. Installation of each Type II OM shall be considered incidental to Item No. 645.1000, Traffic Control.*
5. *Upon the completion of all physical work or as directed by the Engineer, all construction signs and work zone speed limit assemblies shall be removed. All speed limit signs and posts that were existing at the start of the project within the work zone/project limits shall be restored back to their original locations and configurations.*
6. *Placement of construction signs shall not obstruct the path of pedestrians and bicyclists.*
7. *The removal and restoration of existing regulatory speed limit signs with new posts along with the installation, maintenance and removal of work zone speed limit sign assemblies shall be considered incidental to Item No. 645.1000 – Traffic Control.*
8. *The installation, maintenance and removal of work zone speed limit sign assemblies shall be paid for under Item No. 645.1000 – Traffic Control.*
9. *The work zone speed limit signs shall be new and become the property of the State and shall be delivered at a location designated by the Engineer.*

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

MINGXUN DING
LICENSED PROFESSIONAL ENGINEER
NO. 9246-C
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14	⚠1	Revised Speed Limit to 25mph

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOW SPEED UNDIVIDED HIGHWAY WORK ZONE SIGNING PLAN AND DETAILS

Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

Scale: None Date: August 2013

SHEET No. 1 OF 1 SHEETS

ADD. 21

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	22	108

ROAD WORK 1500 FT
CW20-1A(1500) 48"x48"
ROAD CLOSED AHEAD
CW20-3D 48"x48"
1000'
Pahoa Rd.
500'
Bypass (130)
500'
500'
ROAD WORK AHEAD
CW20-1Ad 48"x48"
220' BUFFER
DETOUR AHEAD
CW20-2D 48"x48"
CG20-2a 48"x24"
END ROAD WORK
END DETOUR
CM4-8a 24"x18"
CUSTOM-1 48"x8"
PAHOA BYPASS RD
DETOUR
CM4-9 30"x24"
Contractor to Cover Existing Sign While Detour is in Effect
PAHOA VILLAGE NEXT RIGHT
TRUE NORTH SCALE: 1" = 80'
R11-2 48"x30"
ROAD CLOSED
Mounted on Type III Barricades
NO LEFT TURN
R3-2A 48"x36"
Proposed Roundabout
Pahoa Marketplace
R11-2 48"x30"
ROAD CLOSED
Mounted on Type III Barricades
R11-3 60"x30"
Mounted on Type III Barricades
ROAD CLOSED LOCAL TRAFFIC ONLY
W1-6(L) 36"x18"
CUSTOM-1 48"x8"
KEEAU-PAHOA RD
DETOUR
CM4-9R 30"x24"
Pahoa Bypass Road (130)
CW3-3 48"x48"
Woodland Center
CUSTOM-1 48"x8"
KEEAU-PAHOA RD
DETOUR
CM4-9R 30"x24"
CUSTOM-2 48"x24"
NO RIGHT TURN AHEAD ONTO KEEAU-PAHOA RD.
DETOUR
CM4-9R 30"x24"
R2-1(25) 24"x36"
SPEED LIMIT 25
Portable Traffic Signal System*
250'
Kahakai Boulevard (County)
CUSTOM-1 48"x8"
PAHOA BYPASS RD
DETOUR
CM4-9L 30"x24"
BE PREPARED TO STOP
CW20-7b 48"x48"
SPEED LIMIT 25
R2-1(25) 24"x36"
DETOUR AHEAD
CW20-2D 48"x48"
SPEED LIMIT 25
CW20-1Ad 48"x48"
ROAD WORK AHEAD
Old Pahoa Road (County)
1000'
CW3-3 48"x48"
KEA'AU KALAPANA
CUSTOM-3 48"x24"
CG20-2a 48"x24"
END ROAD WORK
CM4-8a 24"x18"
END DETOUR
Mounted on Type III Barricades
ROAD CLOSED
R11-2 48"x30"
CUSTOM-1 48"x8"
KEEAU-PAHOA RD
DETOUR
CM4-9R 30"x24"
CG20-2a 48"x24"
END ROAD WORK
END DETOUR
CM4-8a 24"x18"
Pahoa Bypass Rd. (130)
CW20-1A(1500) 48"x48"
ROAD WORK 1500 FT
CW20-3D 48"x48"
ROAD CLOSED AHEAD
CW20-1Ad 48"x48"
ROAD WORK AHEAD

LEGEND

- Traffic Sign
- Type III Barricade
- Portable Concrete Barrier
- Direction of Traffic Flow
- Portable Traffic Signal System (*see note below)

*Contractor is responsible for designing and operating the Portable Traffic Signal System. See Section 623A of the Special Provisions for details.

0 80 160 240
HORIZ: 1" = 80' FEET

TRAFFIC CONTROL PLAN
Scale: 1" = 80'

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

02/07/14 ⚠1 Added Left Turn Detour Sign

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN

Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

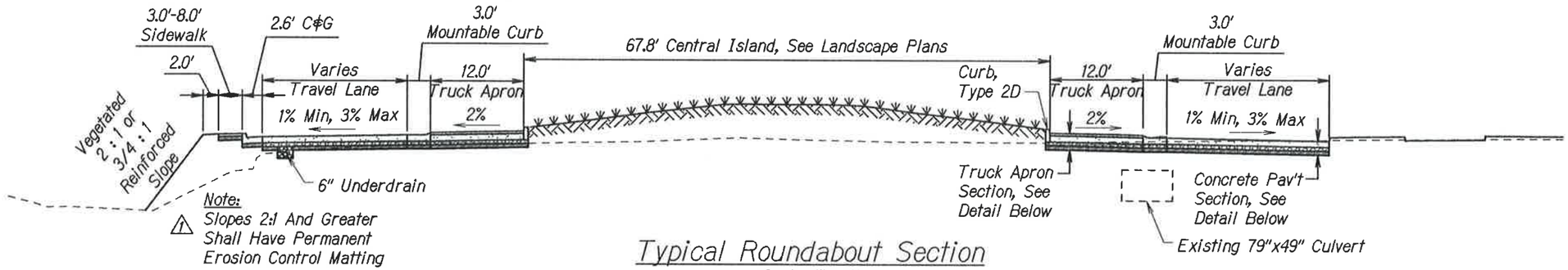
Scale: 1" = 80' Date: August 2013

SHEET No. 1 OF 1 SHEETS

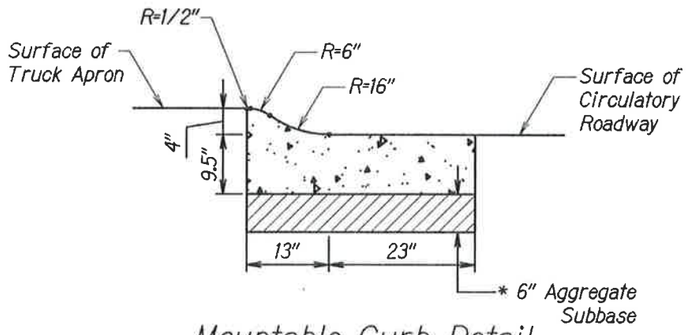
MINGXUN DING LICENSED PROFESSIONAL ENGINEER NO. 9246-C HAWAII, U.S.A.
LICENSE EXPIRES 4/30/14
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

ADD. 22

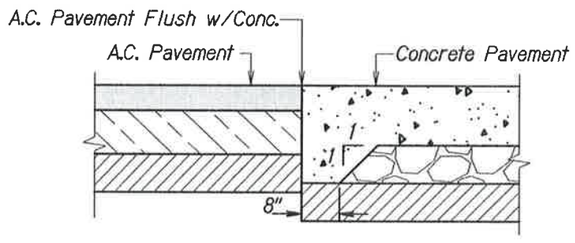
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	25	108



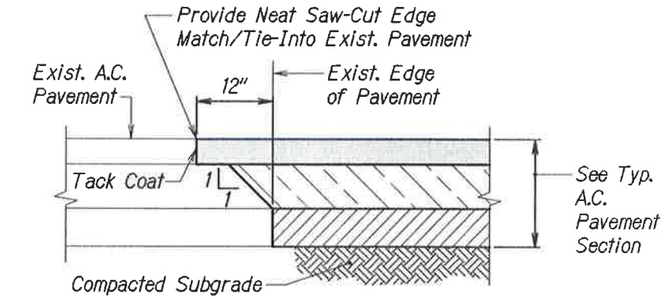
Typical Roundabout Section
Scale: 1" = 8'



Mountable Curb Detail
Not to Scale

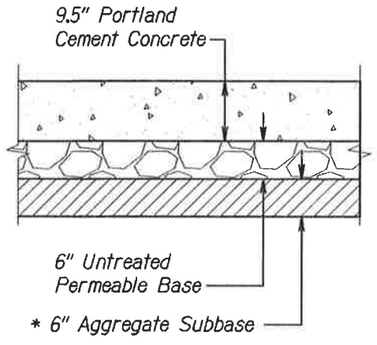


New Concrete to Existing AC Connection Detail
Not to Scale

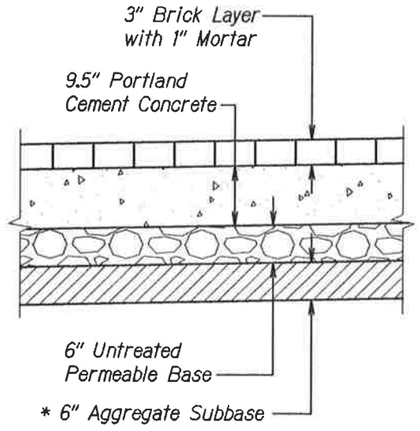


Notes:
1. New Construction Shall Be Equal Or Better Than Existing In Thickness & In Quality.
2. Pavement Slope Shall Match Existing Pavement Slope So As To Provide Smooth Riding Connection.

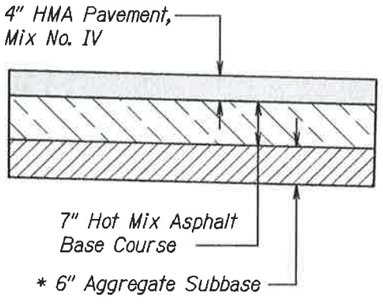
New AC to Existing AC Connection Detail
Not to Scale



Concrete Pavement Section Detail
Not to Scale



Truck Apron Section Detail
Not to Scale



AC Pavement Section Detail
Not to Scale

* The 6" Subbase Layer can be Eliminated in Areas where Hard Basalt Rock is Encountered at the depth where the Aggregate Subbase should be placed. However, the Untreated Permeable Base and Asphalt Concrete Base are still required. Refer to Boring Locations and Logs on Sheets B-1 to B-4 for Approximate Locations of Rock.

0 8 16 24
HORIZ: 1" = 8' FEET

MINGXUN DING
LICENSED PROFESSIONAL ENGINEER
NO. 9248-C
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

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02/07/14 ⚠1 Revised Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL SECTIONS
ROUNDABOUT & PAVEMENT STRUCTURE

Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

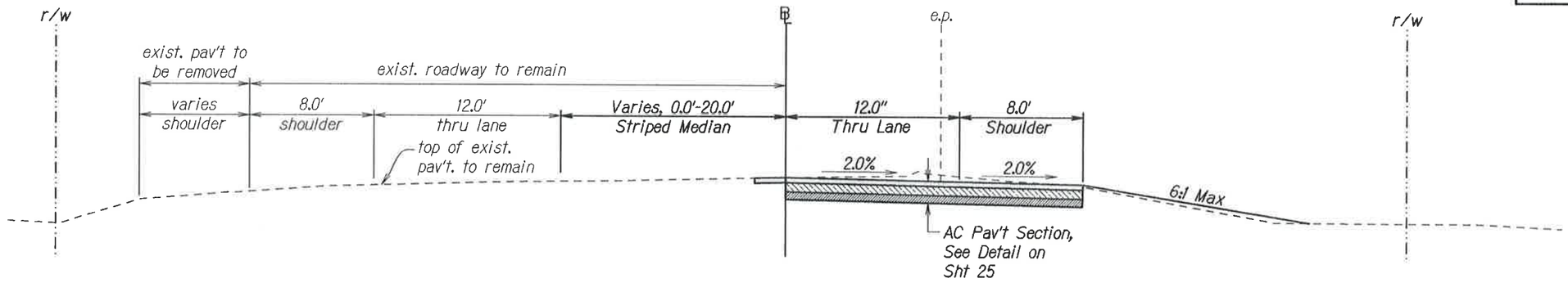
Scale: 1" = 8', NTS Date: August 2013

SHEET No. 1 OF 5 SHEETS

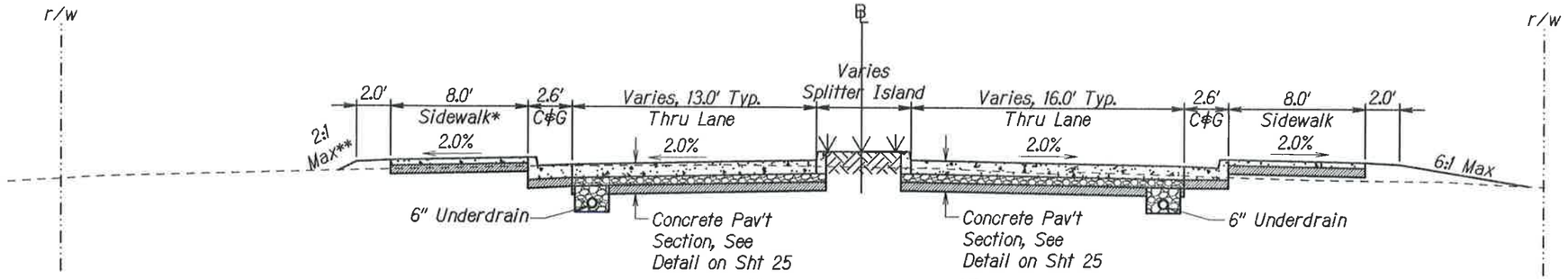
ADD. 25

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

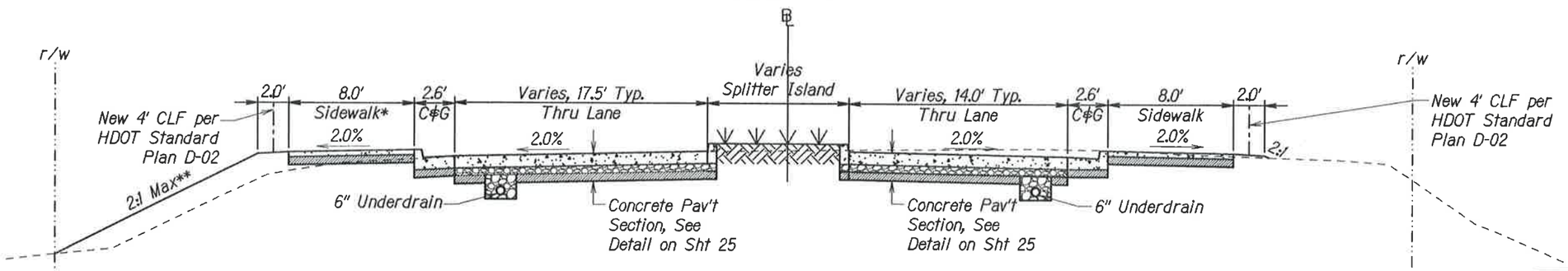
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	26	108



Route 130 New ℄
Sta 9+00 to Sta 13+38.96
Scale: 1" = 4'



Route 130 New ℄
Sta 13+38.96 to Sta 16+37.36
Scale: 1" = 4'



Route 130 New ℄
Sta 17+77.43 to Sta 20+16.45
Scale: 1" = 4'

* 3.0' Sidewalk from Sta 16+72.67 to Sta 17+49.79

** 3/4:1 Reinforced Slope from Sta 16+55.46 to Sta 17+51.72, See Sheet 22 for Typical Reinforced Slope Section.

⚠

Note:
Slopes 2:1 And Greater Shall Have Permanent Erosion Control Matting

0 4 8 12
HORIZ: 1" = 4' FEET

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

MINGXUN DING
LICENSED PROFESSIONAL ENGINEER
NO. 9246-C
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14 ⚠ Revised Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

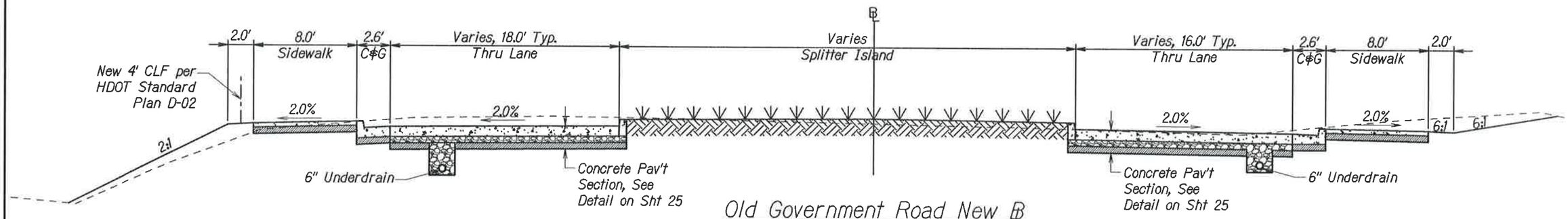
TYPICAL SECTIONS
PAHOA BYPASS ROAD ROUTE 130
Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

Scale: 1" = 4' Date: August 2013

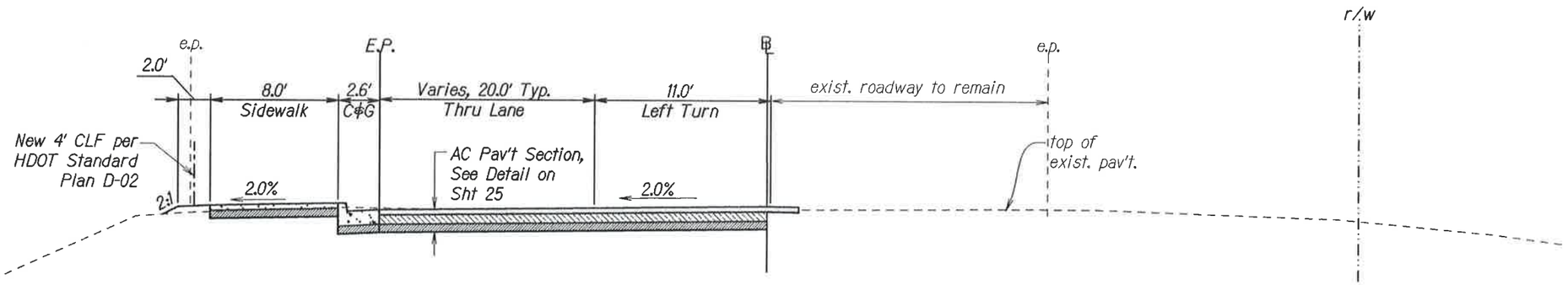
SHEET No. 2 OF 5 SHEETS

ADD. 26

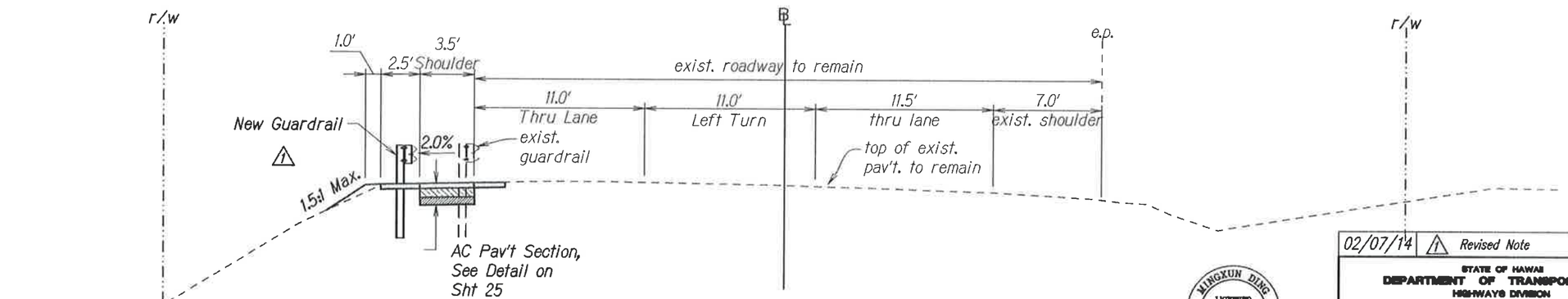
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	27	108



Old Government Road New ℄
Sta 0+69.83 to Sta 1+29.11
Scale: 1" = 4'



Old Government Road New ℄
Sta 2+20.00 to Sta 3+07.68
Scale: 1" = 4'



Old Government Road New ℄
Sta 3+07.68 to Sta 5+34.33
Scale: 1" = 4'

0 4 8 12
HORIZ: 1" = 4' FEET

Note:
Slopes 2:1 And Greater
Shall Have Permanent
Erosion Control Matting

MINGXUN DING
LICENSED PROFESSIONAL ENGINEER
NO. 9245-C
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14	⚠1	Revised Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL SECTIONS
OLD GOVERNMENT ROAD
Keaau-Pahoa Road Intersection Improvements at Old Government Road Federal-Aid Project No. HSIP-0130(031)

Scale: 1" = 4' Date: August 2013

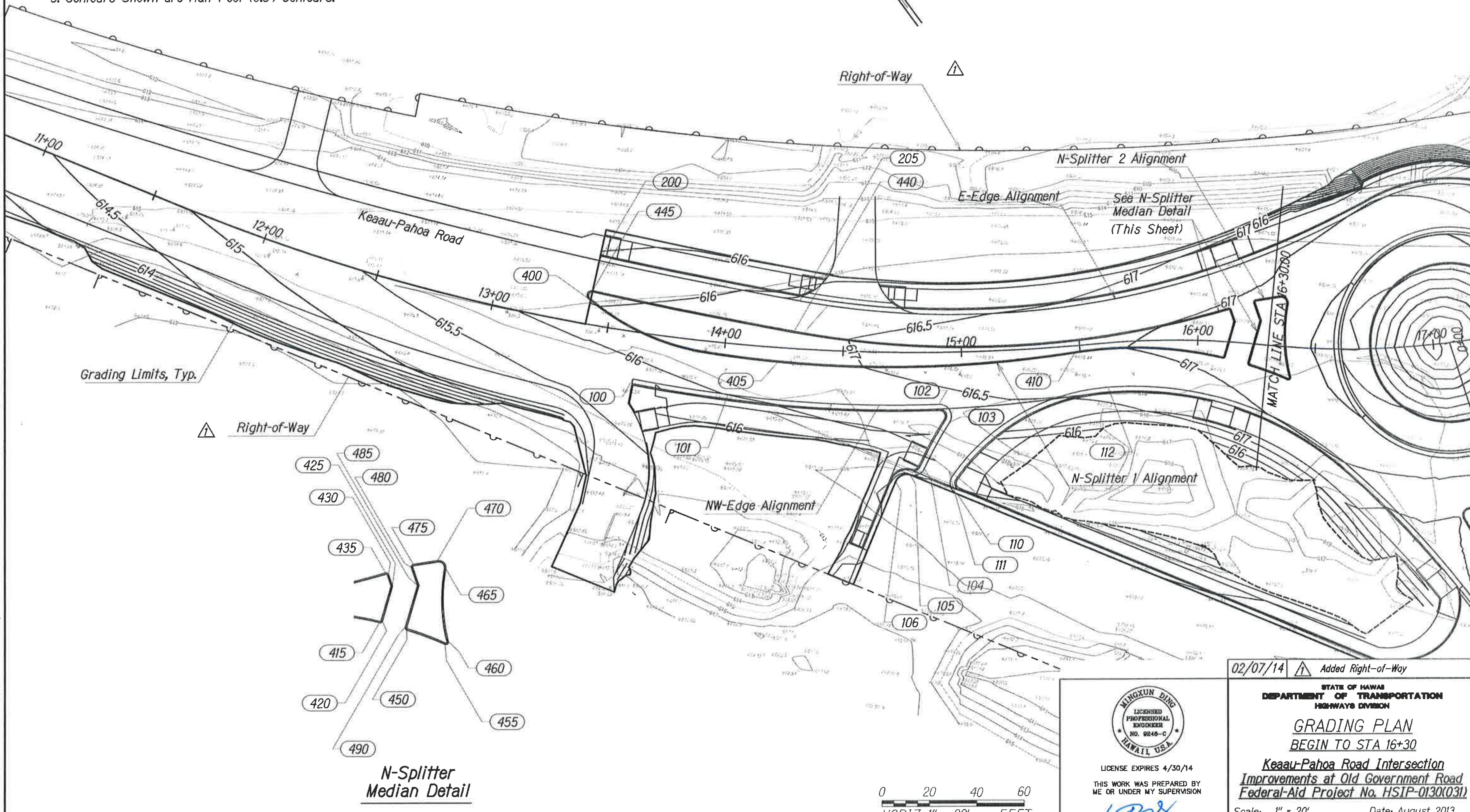
SHEET No. 3 OF 5 SHEETS

ADD. 27

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	35	108

NOTES:
1. See Staking Data Sheets 30-34 for Coordinate and Elevation Information.
2. All Alignments, Points and Curves on Curb and Gutter are at Lip of Gutter. Barrier Curb Points are at Bottom Face of Curb.
3. Contours Shown are Half-Foot (0.5') Contours.



MINGXUN DING LICENSED PROFESSIONAL ENGINEER NO. 9246-C HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

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02/07/14 ⚠1 Added Right-of-Way

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GRADING PLAN

BEGIN TO STA 16+30

Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

Scale: 1" = 20' Date: August 2013

SHEET No. 1 OF 2 SHEETS

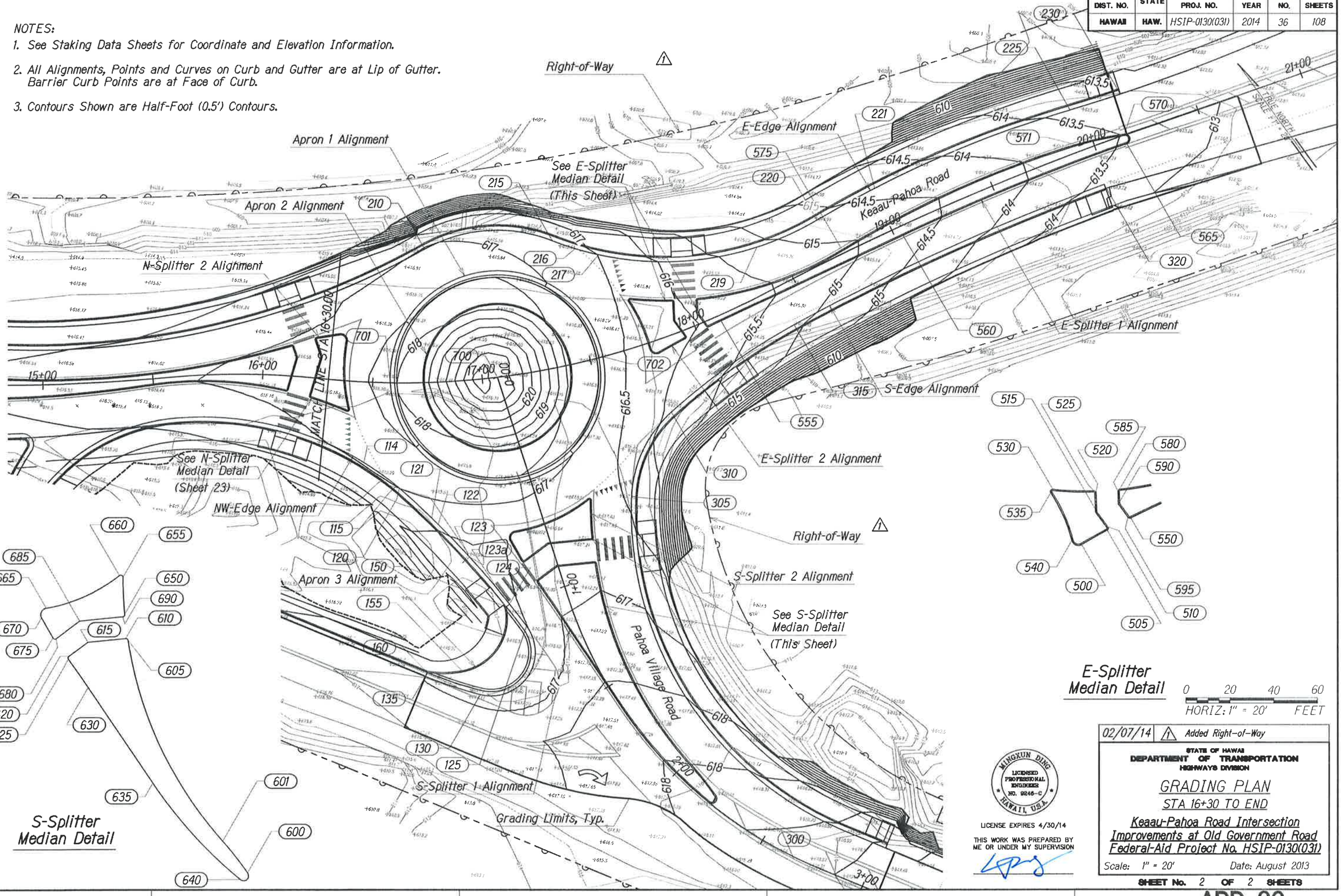
ADD. 35

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	36	108

NOTES:

1. See Staking Data Sheets for Coordinate and Elevation Information.
2. All Alignments, Points and Curves on Curb and Gutter are at Lip of Gutter. Barrier Curb Points are at Face of Curb.
3. Contours Shown are Half-Foot (0.5') Contours.



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

02/07/14 | 1 | Added Right-of-Way

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GRADING PLAN
STA 16+30 TO END

Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

Scale: 1" = 20' Date: August 2013

SHEET No. 2 OF 2 SHEETS

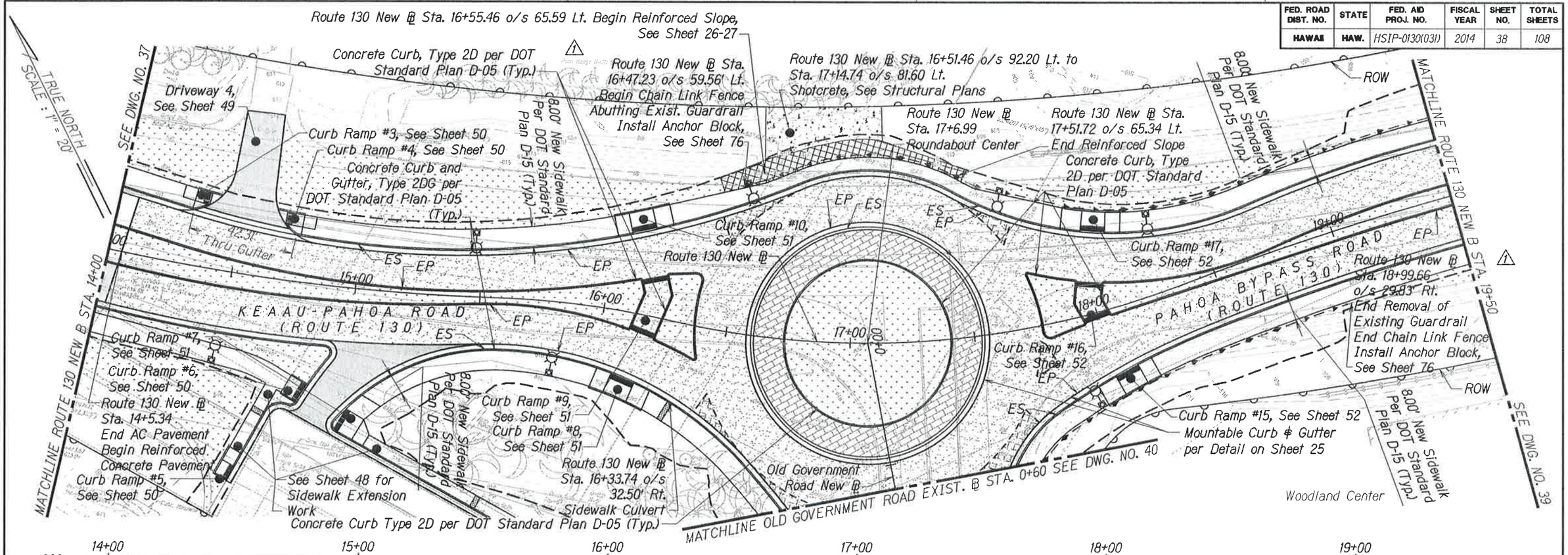
MINGXUN DING
LICENSED PROFESSIONAL ENGINEER
NO. 9246-C
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

ADD. 36

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	38	108



Notes:
1. Spot Elevations on Profile are at 50' Spacing, Typical

LEGEND

- 9.5" Portland Cement Concrete, 6" Untreated Permeable Base, 6" Aggregate Subbase
- 4" Asphaltic Concrete, 7" Asphalt Concrete Base, 6" Aggregate Subbase
- Sidewalk Culvert, See Sheet 77 for Details
- Truck Apron, See Sheet 25 for Details
- Guardrail, See Sheet 74 for Details
- 4'-High Chain Link Fence per HDOT Standard Plan D-02 with 5' max post spacing
- Right of Way
- Light Pole, See Electrical Plans
- Limits of Grading
- Reinforced Slope, See Sheet 22 for Detail
- Landscaping, See Landscape Plans

ROADWAY PLAN & PROFILE
ROUTE 130 STA 14+00 TO STA 19+50

Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 4'

0 20 40 60
HORIZ: 1" = 20' FEET
0 4 8 12
VERT: 1" = 4' FEET

MINGXUN DING
LICENSED PROFESSIONAL ENGINEER
NO. 9246-C
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14	⚠1	Amended Callouts to Include Anchor Block Installation

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN & PROFILE
ROUTE 130 STA 14+00 TO STA 19+50
Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

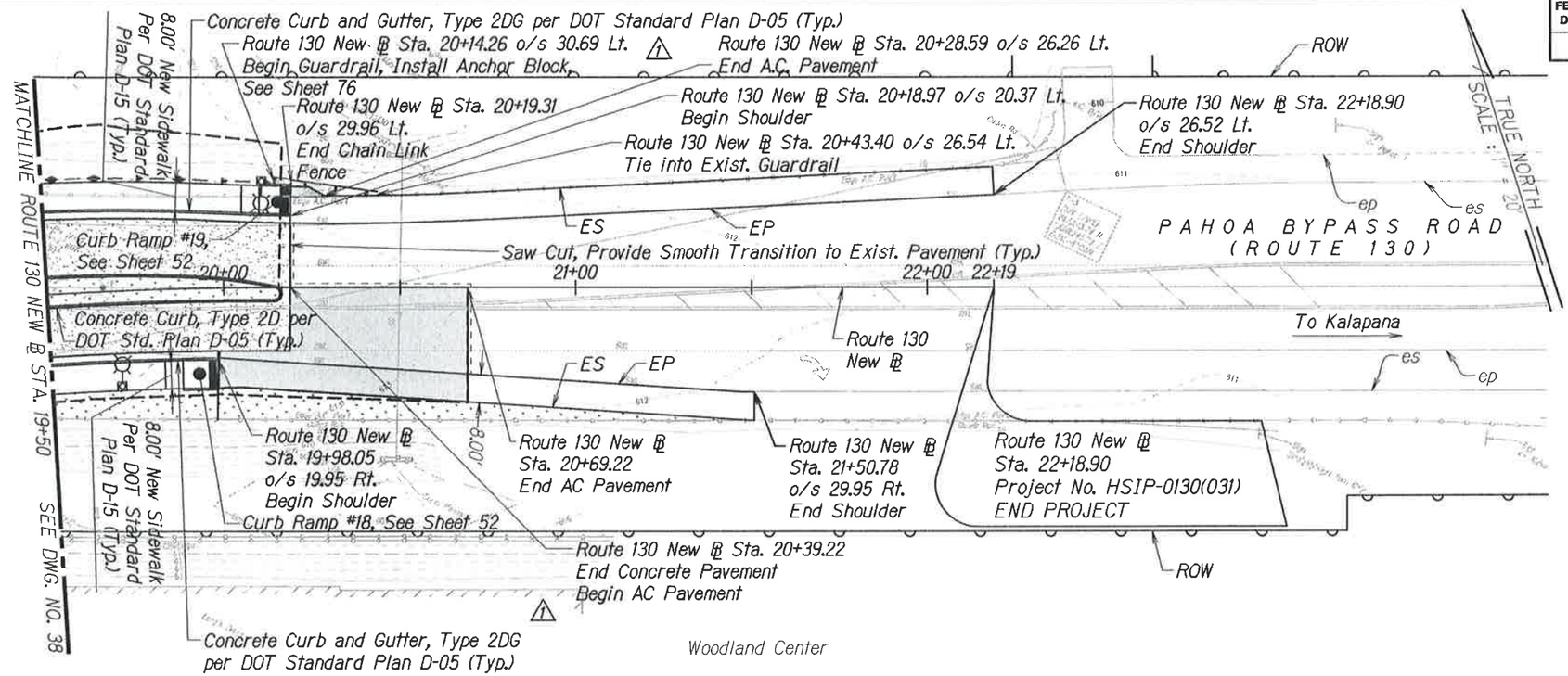
Scale: As Shown Date: August 2013

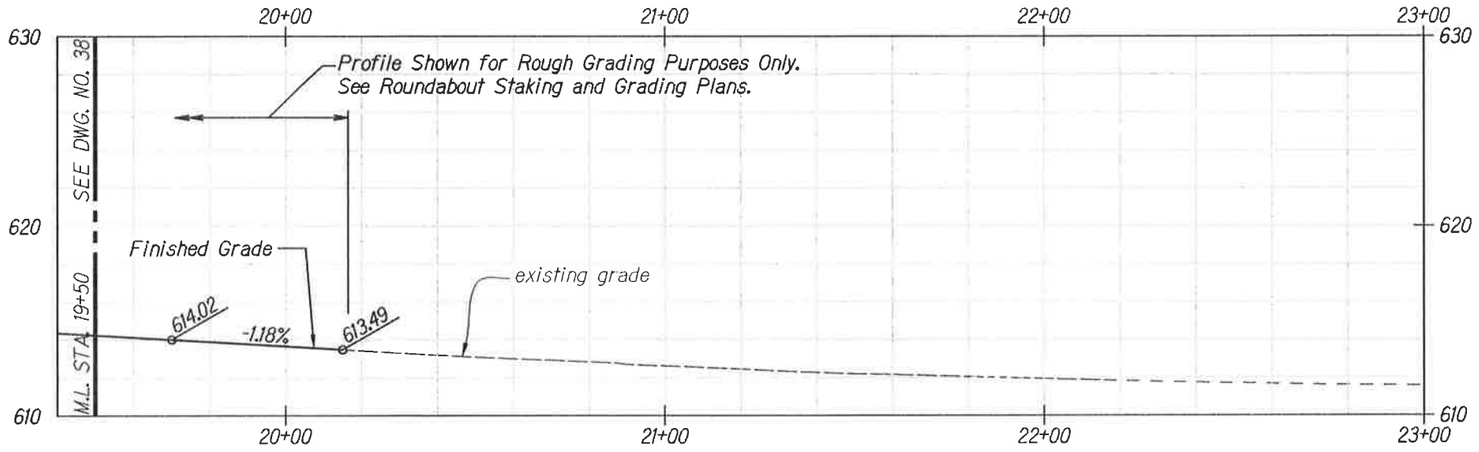
SHEET No. 2 OF 4 SHEETS

ADD. 38

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	39	108





Notes:
1. Spot Elevations on Profile are at 50' Spacing, Typical

LEGEND

- 9.5" Portland Cement Concrete, 6" Untreated Permeable Base, 6" Aggregate Subbase
- 4" Asphaltic Concrete, 7" Asphalt Concrete Base, 6" Aggregate Subbase
- Sidewalk Culvert, See Sheet 77 for Details
- Truck Apron, See Sheet 25 for Details
- Guardrail, See Sheet 74 for Details
- 4'-High Chain Link Fence per HDOT Standard Plan D-02 with 5' max spacing
- Right of Way
- Limits of Grading
- Light Pole, See Electrical Plans
- Landscaping, See Landscape Plans

ROADWAY PLAN & PROFILE
ROUTE 130 STA 19+50 TO STA 22+00

Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 4'

0 20 40 60
HORIZ: 1" = 20' FEET
0 4 8 12
VERT: 1" = 4' FEET

MINGXUN DING
LICENSED PROFESSIONAL ENGINEER
NO. 9246-C
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14	1	Deleted Callout
02/07/14	1	Amended Callout to Include Anchor Block Installation

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN & PROFILE
ROUTE 130 STA 19+50 TO STA 22+00
Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

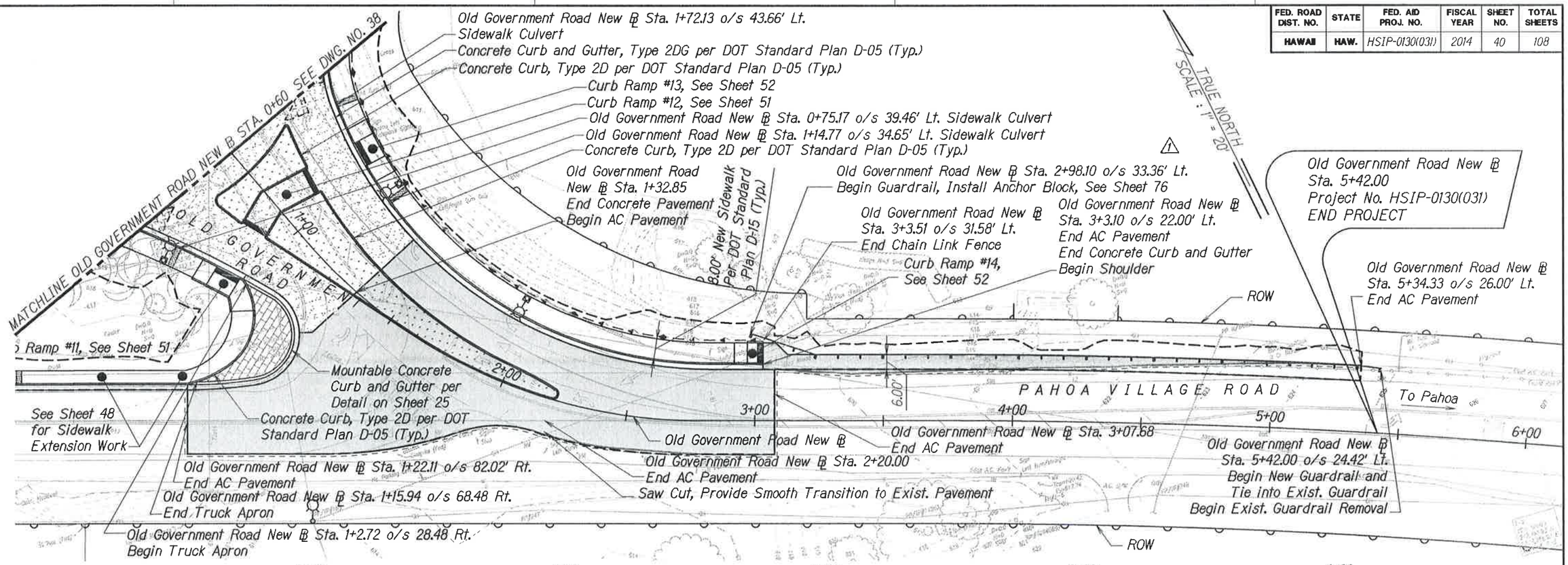
Scale: As Shown Date: August 2013

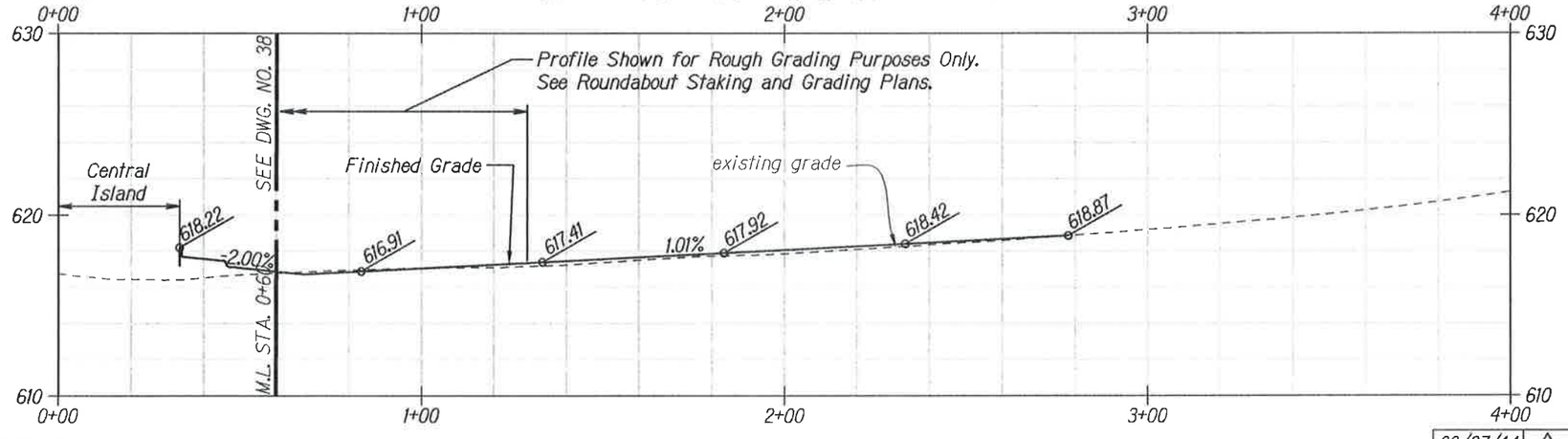
SHEET No. 3 OF 4 SHEETS

ADD. 39

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	40	108





Notes:
1. Spot Elevations on Profile are at 50' Spacing, Typical

LEGEND

- 9.5" Portland Cement Concrete, 6" Untreated Permeable Base, 6" Aggregate Subbase
- 4" Asphaltic Concrete, 7" Asphalt Concrete Base, 6" Aggregate Subbase
- Transition 2" Coldplane, See Sheet 25 for Details
- Sidewalk Culvert, See Sheet 77 for Details
- Truck Apron, See Sheet 25 for Details
- Guardrail, See Sheet 74 for Details
- 4'-High Chain Link Fence per HDOT Standard Plan D-02 with 5' max post spacing
- Right of Way
- Limits of Grading
- Light Pole, See Electrical Plans
- Landscaping, See Landscape Plans

ROADWAY PLAN & PROFILE
OLD GOV'T ROAD STA 0+60 TO END

Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 4'

0 20 40 60
HORIZ: 1" = 20' FEET
0 4 8 12
VERT: 1" = 4' FEET

MINGXUN DING
LICENSED PROFESSIONAL ENGINEER
NO. 9246-C
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14	1	Amended Callout to Include Anchor Block Installation

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN & PROFILE
OLD GOV'T ROAD STA 0+60 TO END
Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

Scale: As Shown Date: August 2013

SHEET No. 4 OF 4 SHEETS

ADD. 40

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

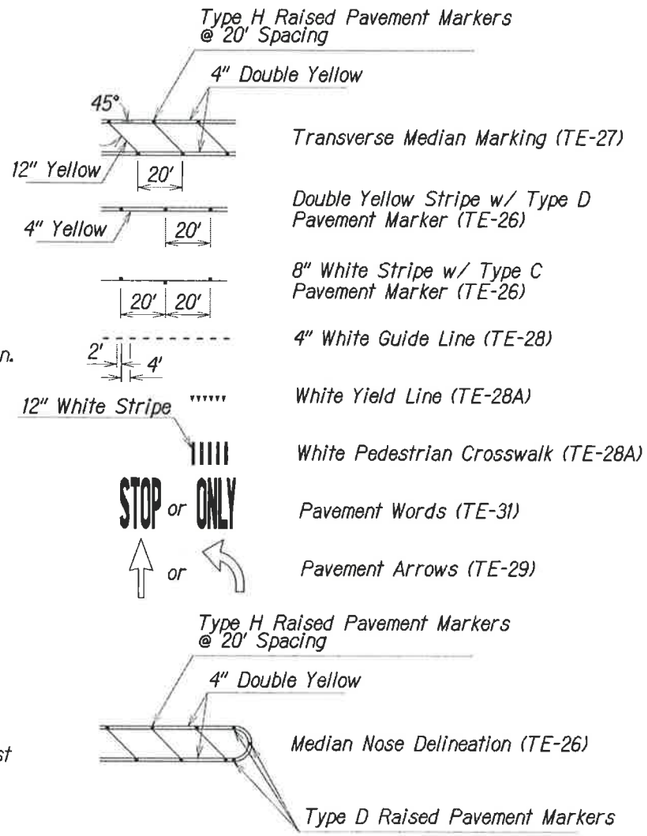
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	59	108

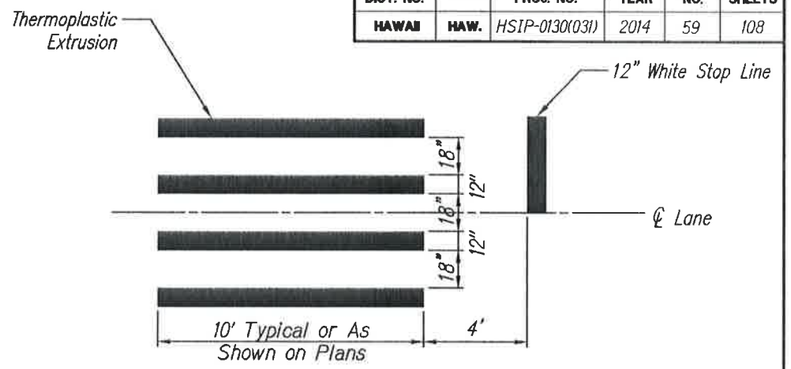
PAVEMENT MARKING & SIGNAGE NOTES

1. Layout of pavement markings and signage shall be done by the Contractor and approved by the Engineer prior to any installation work.
2. Exist pavement markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. Costs shall be incidental to the various pavement marking items.
3. Raised pavement markers shall not be installed within crosswalks.
4. Final locations of all signs shall be approved by the Engineer prior to any installation work.
5. Exist signs not shown on these plans shall remain as posted unless otherwise directed by the Engineer. Removal and disposal of existing signs and/or posts as designated on these plans shall be incidental to the various signing items.
6. Final locations of all Stop Lines shall be approved by the Engineer prior to installation.
7. All pavement markings shall be as noted on the legend or plans.
8. All preformed pavement marking tapes over existing pavement shall be applied with an approved primer as recommended by the tape manufacturer and as approved by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.
9. Removal of Exist Delineators and Posts as directed by the Engineer shall be considered incidental to the various signing items.
10. Exist signs that are to be replaced shall not be removed until new signs are installed as replacements, or the messages are no longer necessary.
11. Backing for all new regulatory and warning signs shall not be spliced.
12. All sign panels shall conform to Section 629 to 631 of Special Provisions and the latest editions and amendments of the following FHWA publications:
    a. "Manual on Uniform Traffic Control Devices for Street and Highways" (MUTCD)
    b. "Standard Highway Signs"
    c. "Standard Alphabets for Highway Signs"
13. The Contractor shall erect at the beginning of the project and at the end of the project advance construction warning signs as indicated on the plans or as directed by the Engineer for the duration of the highway project and shall be maintained by the Contractor. These signs shall be placed in addition to the required traffic control signs called for in Section 645-Work Zone Traffic Control. The advance construction warning signs shall be new and become the property of the State. The Contractor shall remove, clean, and deliver the signs and posts to the Oahu District Baseyard or as directed by the Engineer at the end of the project.
14. All signs, except Destination Signs, shall be installed on square tube posts, unless otherwise noted. No flanged channel posts shall be allowed.
15. Sign posts shall be painted with yellow reflective paint, except where located behind guardrails. Such paint work shall be considered incidental to sign items.
16. Contractor shall mark the back of all signs using labels and equipment provided by the State. Payment shall be considered incidental to sign items.
17. Contractor shall submit Shop Drawings to the Engineer for acceptance prior to fabricating, Destination, Street Name, Supplemental Street Name, and Non-Standard signs.

⚠

LEGEND





TYPICAL CROSSWALK STRIPING
Not to Scale

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

LICENSED PROFESSIONAL ENGINEER NO. 9246-C MINGXUN DING HAWAII U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14	⚠ Added notes 14, 15, 16, and 17 to Paving Marking & Signage Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING AND SIGNAGE NOTES AND LEGEND

Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

Scale: None Date: August 2013

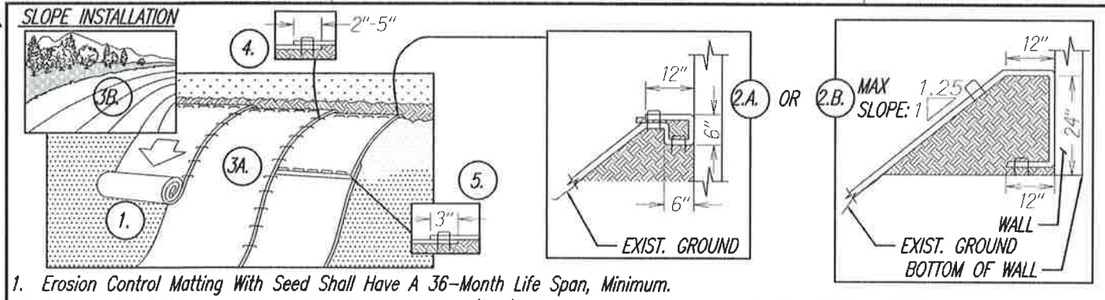
SHEET No. 1 OF 1 SHEETS

ADD. 59

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2014	68	108

EROSION CONTROL MATTING (ECM)

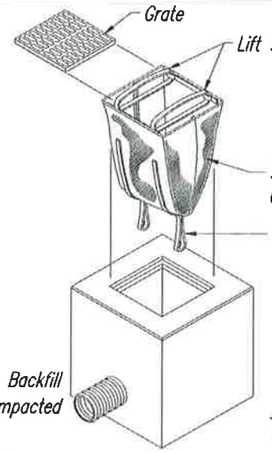
Scale: Not to Scale



1. Erosion Control Matting With Seed Shall Have A 36-Month Life Span, Minimum.
2. Prepare Soil Before Installing Erosion Control Matting (ECM), Including Any Necessary Application Of Lime, Fertilizer, And Seed
3. Anchor The ECM Using 2.A. Or 2.B.:
   - 3.A. Begin At The Top Of The Slope By Anchoring The ECM In A 6" Deep x 8" Wide Trench With Approximately 12" Of ECM Extended Beyond The Up-Slope Portion Of The Trench. Anchor The ECM With A Row Of Staples/Stakes Approximately 12" Apart In The Bottom Of The Trench. Backfill And Compact The Trench After Stapling. Apply Seed To Compacted Soil And Fold Remaining 12" Portion Of ECM Back Over Seed And Compacted Soil. Secure ECM Over Compacted Soil With A Row Of Staples/Stakes Spaced Approximately 12" Apart Across The Width Of The ECM.
   - 3.B. Begin At The Top Of The Slope By Anchoring The ECM In A 6" Deep x 6" Wide Trench With Remainder Of ECM Extended Beyond The Up-Slope Portion Of The Trench. Anchor The ECM With A Row Of Staples/Stakes Approximately 12" Apart In The Bottom Of The Trench. Backfill And Compact The Trench After Stapling. Apply Seed To Compacted Soil And Fold Remaining Portion Of ECM Back Over Seed And Compacted Soil. Secure ECM Over Compacted Soil With A Row Of Staples/Stakes Spaced Approximately 12" Apart Across The Width Of The ECM.
4. Roll The ECM (A.) Down Or (B.) Horizontally Across The Slope. ECM Will Unroll With Appropriate Side Against The Soil Surface. All ECM Must Be Securely Fastened To Soil Surface By Placing Staples/Stakes In Appropriate Locations As Shown In The Staple Pattern Guide. When Using The DOT System, Staples/Stakes Should Be Placed Through Each Of The Colored Dots Corresponding To The Appropriate Staple Pattern.
5. The Edges Of Parallel ECM Must Be Stapled With Approximately 2" – 5" Overlap Depending On ECM Type. Do Not Leave Gap.
6. Consecutive ECM Spliced Down The Slope Must Be Placed End Over End (Shingle Style) With An Approximate 3" Overlap. Staple Through Overlapped Area, Approximately 12" Apart Across Entire ECM Width.
   *In Loose Soil Conditions, The Use Of Staple Or Stake Lengths Greater Than 6" (15 cm) May Be Necessary To Properly Secure The ECM.
7. Bury Side And Bottom Edges Of The ECM, 4" – 6" Minimum.
8. Extend ECM Down Slope S Minimum Distance Of 2' Beyond Graded Area. See GRADING PLAN Sheet 35-36. For Limits Of Area Of Slope Protection.

FILTER BAG FOR GRATED DRAIN INLET

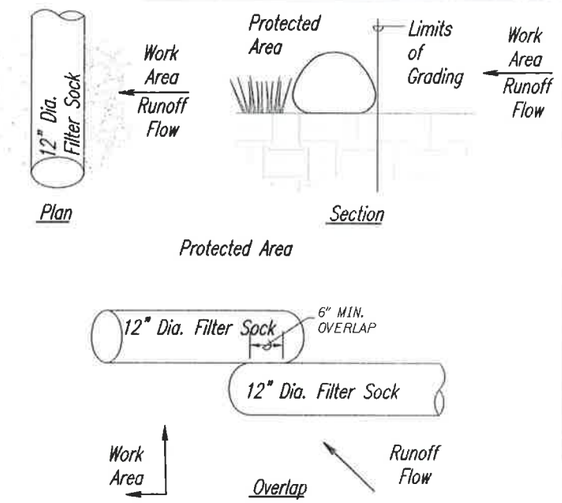
Scale: Not to Scale



Notes:
1. The Contractor Shall Remove Filters During Times of Above Normal Rainfall Events and Replace Them When Event Has Passed.
2. The Contractor Shall Remove All Accumulated Sediment and Debris From Vicinity of Unit After Each Storm Event. The Sediment Bag Should be Checked After Each Storm Event and at Regular Intervals. If the Containment Area is More Than 1/3 Full of Sediment, the Unit Must be Emptied.

FILTER SOCK

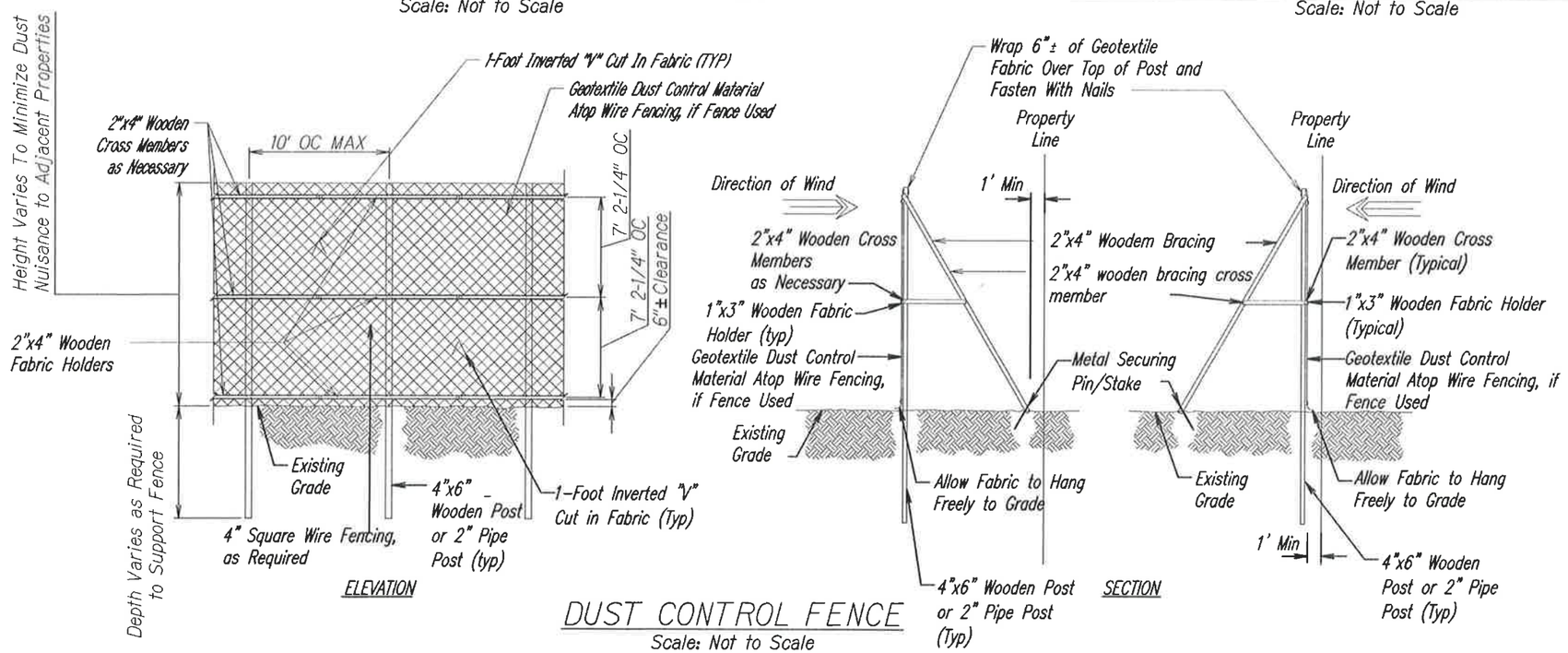
Scale: Not to Scale



Notes:
1. Installation, Inspection, Maintenance and Removal of Compost Filter Socks Shall be Done in Accordance With Manufacturer's Recommendations.
2. Provide Necessary Training for Personnel Who Will be Responsible for Implementation of BMPs.

DUST CONTROL FENCE

Scale: Not to Scale



Notes:
1. Cross Members and Posts of the Wooden Fence Frame Shall be Held Together With Galvanized Steel Flathead Screws.
2. Wooden Fabric Holders Shall Fasten the Geotextile Fabric to the Wooden Fence Frame with Galvanized Steel Flathead Screws; Wire Ties Shall be Used if Pipe Posts are Used.
3. Wooden Bracing Pieces Shall be Attached to the Wooden Fence Frame With Galvanized Steel Flathead Screws.
4. Height of Fence Shall be Field-adjusted by the Contractor to Keep the Project Area and Surrounding Area Free From Dust Nuisance as Indicated in Grading Note 3.
5. Appropriate Depth of Wooden or Pipe Fence Frame Posts Shall be Determined in Field by the Contractor.
6. Dust Control Fence shall be located outside of clear zone.

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

MINGXUN DING LICENSED PROFESSIONAL ENGINEER NO. 9248-C HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14	⚠	Added ECM Detail; Rearragned Sheet

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EROSION CONTROL DETAILS

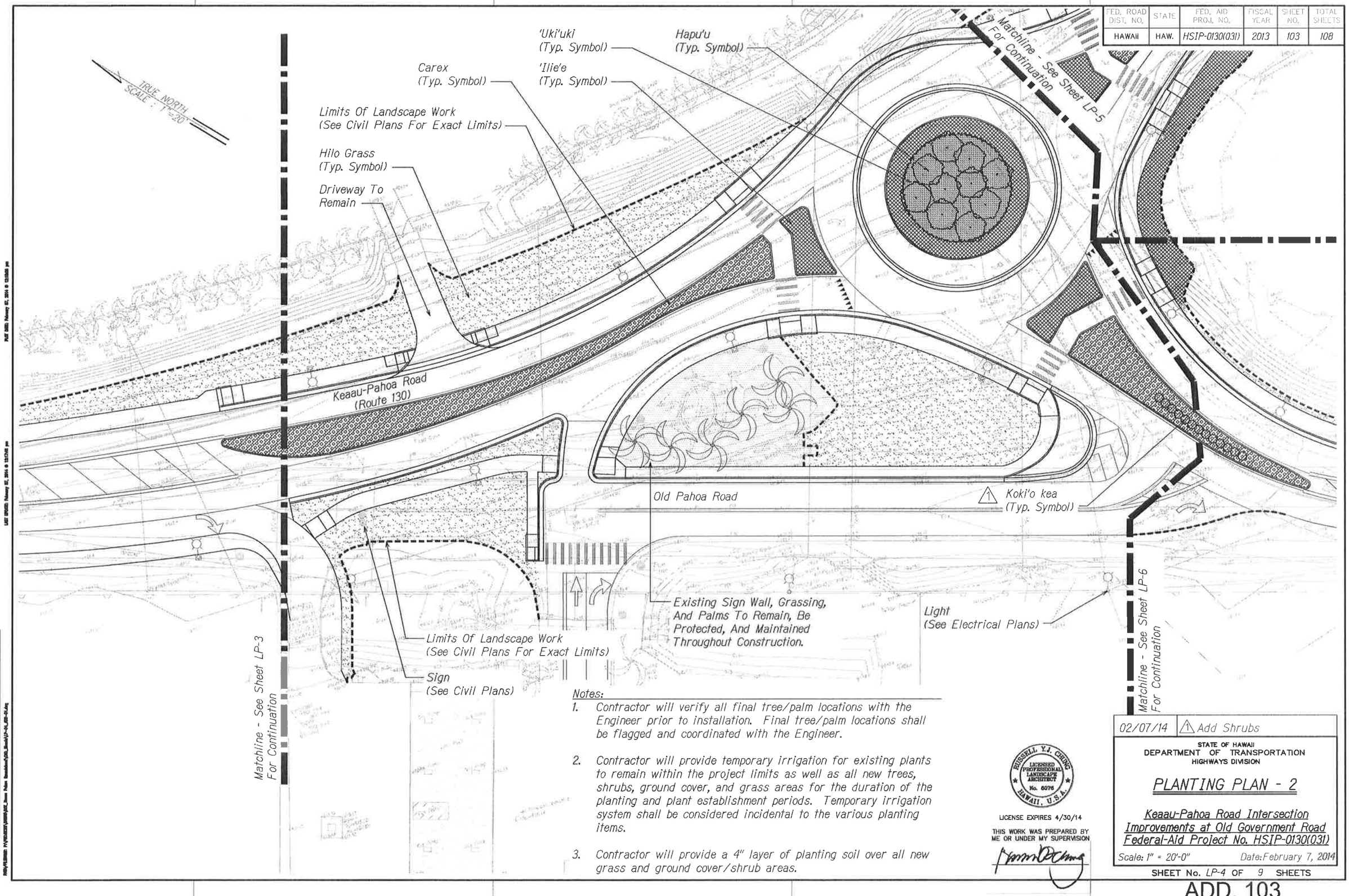
Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

Scale: None Date: August 2013

SHEET No. 1 OF 1 SHEETS

ADD. 68

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2013	103	108



Notes:

1. *Contractor will verify all final tree/palm locations with the Engineer prior to installation. Final tree/palm locations shall be flagged and coordinated with the Engineer.*

2. *Contractor will provide temporary irrigation for existing plants to remain within the project limits as well as all new trees, shrubs, ground cover, and grass areas for the duration of the planting and plant establishment periods. Temporary irrigation system shall be considered incidental to the various planting items.*

3. *Contractor will provide a 4" layer of planting soil over all new grass and ground cover/shrub areas.*

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

RUSSELL Y.J. CHUNG
LICENSED PROFESSIONAL LANDSCAPE ARCHITECT
No. 5076
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14	1 Add Shrubs

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANTING PLAN - 2

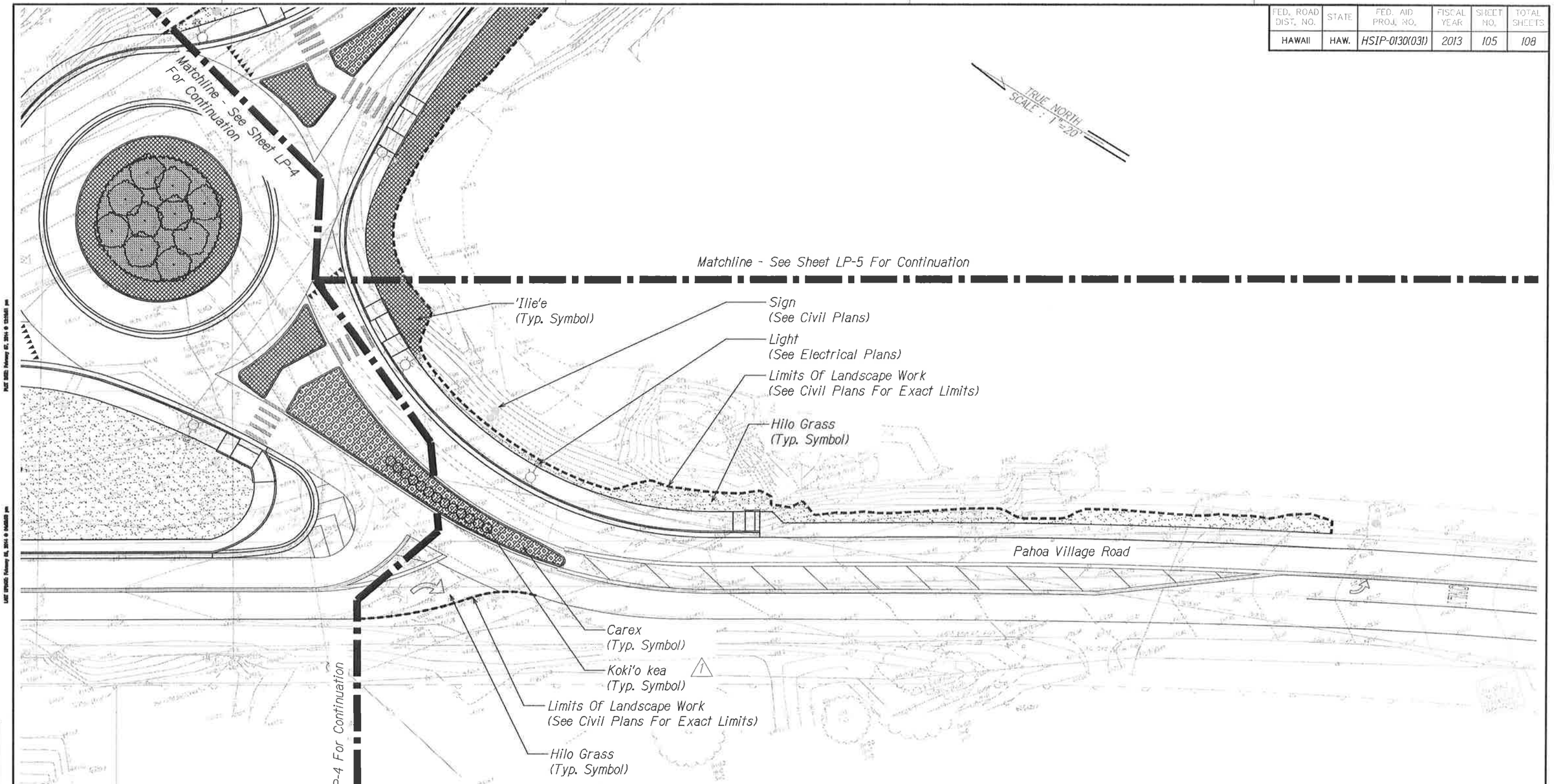
Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

Scale: 1" = 20'-0" Date: February 7, 2014

SHEET No. LP-4 OF 9 SHEETS

ADD. 103

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2013	105	108



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

Notes:

1. *Contractor will verify all final tree/palm locations with the Engineer prior to installation. Final tree/palm locations shall be flagged and coordinated with the Engineer.*

2. *Contractor will provide temporary irrigation for existing plants to remain within the project limits as well as all new trees, shrubs, ground cover, and grass areas for the duration of the planting and plant establishment periods. Temporary irrigation system shall be considered incidental to the various planting items.*

3. *Contractor will provide a 4" layer of planting soil over all new grass and ground cover/shrub areas.*

RUSSELL Y.J. CHUNG
LICENSED PROFESSIONAL LANDSCAPE ARCHITECT
No. 6076
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14	1 Add Shrubs

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANTING PLAN - 4

Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

Scale: 1" = 20'-0" Date: February 7, 2014

SHEET No. LP-6 OF 9 SHEETS

ADD. 105

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-0130(031)	2013	108	108

PLANT SCHEDULE

NATIVE TREES	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
	CIBOTIUM GLAUCUM	HAPU'U	FIELD STOCK	4'-6' T.H.	

SHRUBS	BOTANICAL NAME	COMMON NAME	CONT	REMARKS
1	HIBISCUS WAIMEAE	KOKI'O KEA	3 GAL.	BUSHY

SHRUB AREAS	BOTANICAL NAME	COMMON NAME	CONT	REMARKS
	DIANELLA SANDWICENSIS	'UKI'UKI	6" POTS	18" O.C. TRIANGULAR SPACING

GROUND COVERS	BOTANICAL NAME	COMMON NAME	CONT	REMARKS
	CAREX WAHUENSIS	CAREX	6" POTS @ 12" OC	
	PLUMBAGO ZEYLANICA	'ILIE'E	4" POTS @ 18" OC	

GRASSES	BOTANICAL NAME	COMMON NAME	CONT	REMARKS
	PASPALUM CONJUGATUM	HILO GRASS	SPRIGS	

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

RUSSELL Y.J. CHUNG
LICENSED PROFESSIONAL LANDSCAPE ARCHITECT
No. 6076
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

02/07/14	1 Add Shrubs

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANT SCHEDULE

Keaau-Pahoa Road Intersection Improvements at Old Government Road
Federal-Aid Project No. HSIP-0130(031)

Scale: NONE Date: February 7, 2014

SHEET No. LP-9 OF 9 SHEETS

ADD. 108