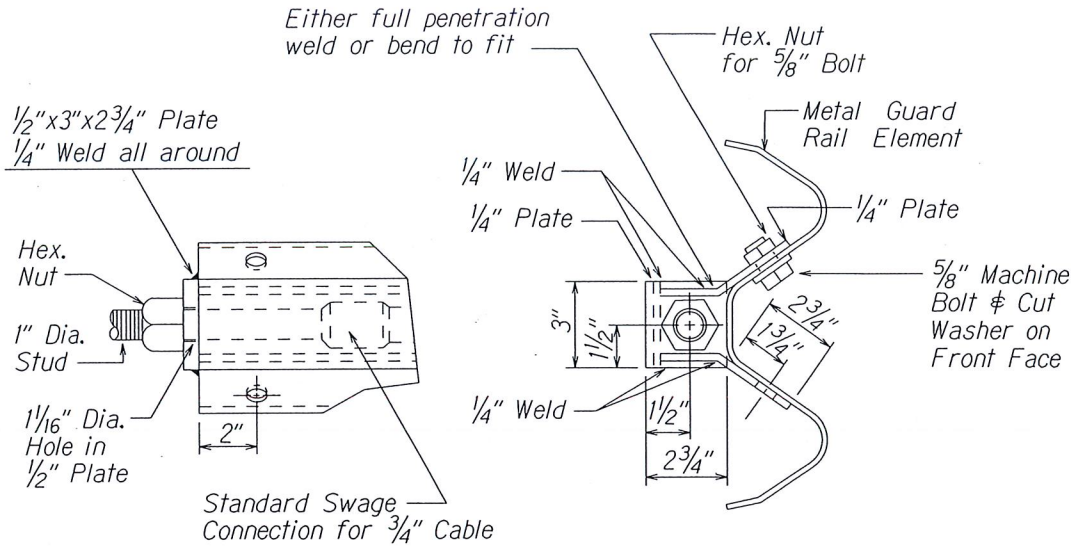
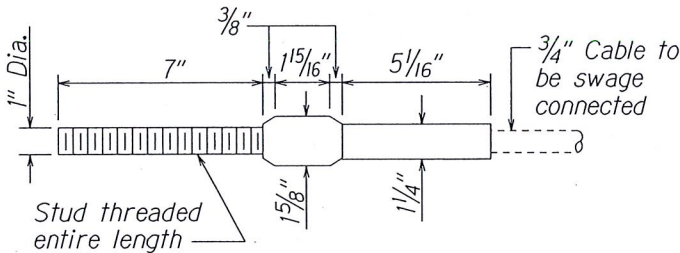


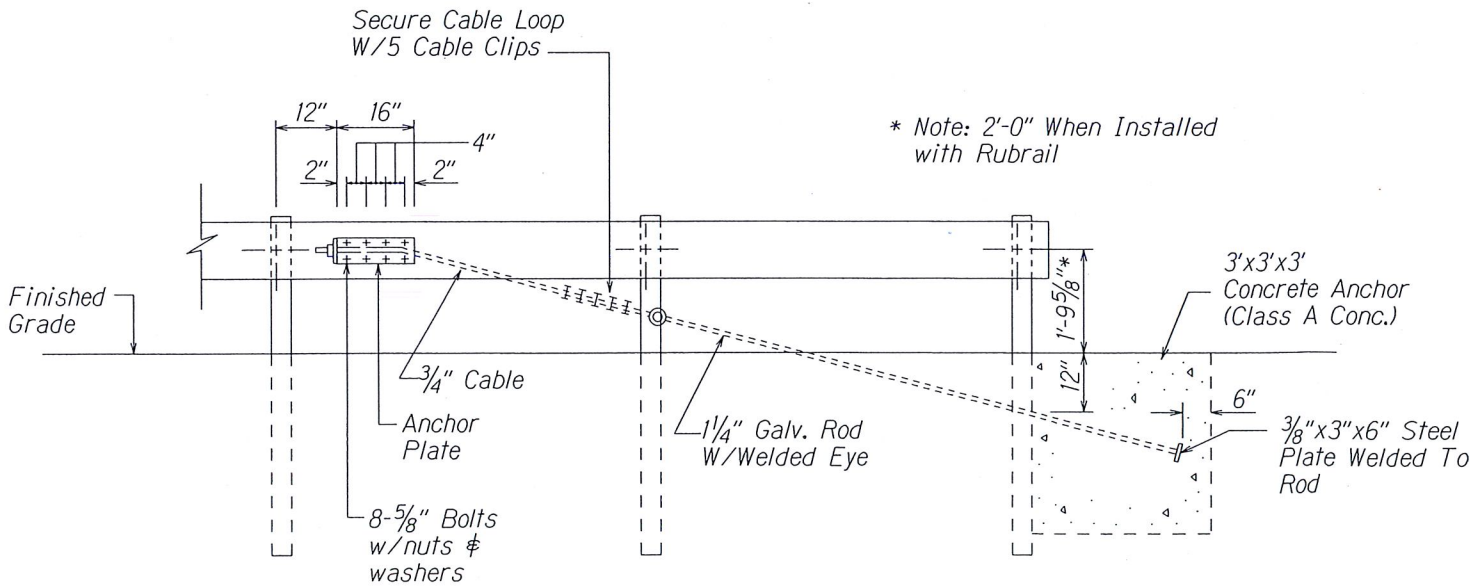
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0377(006)	2014	ADD14S-1	38



ANCHOR PLATE DETAILS

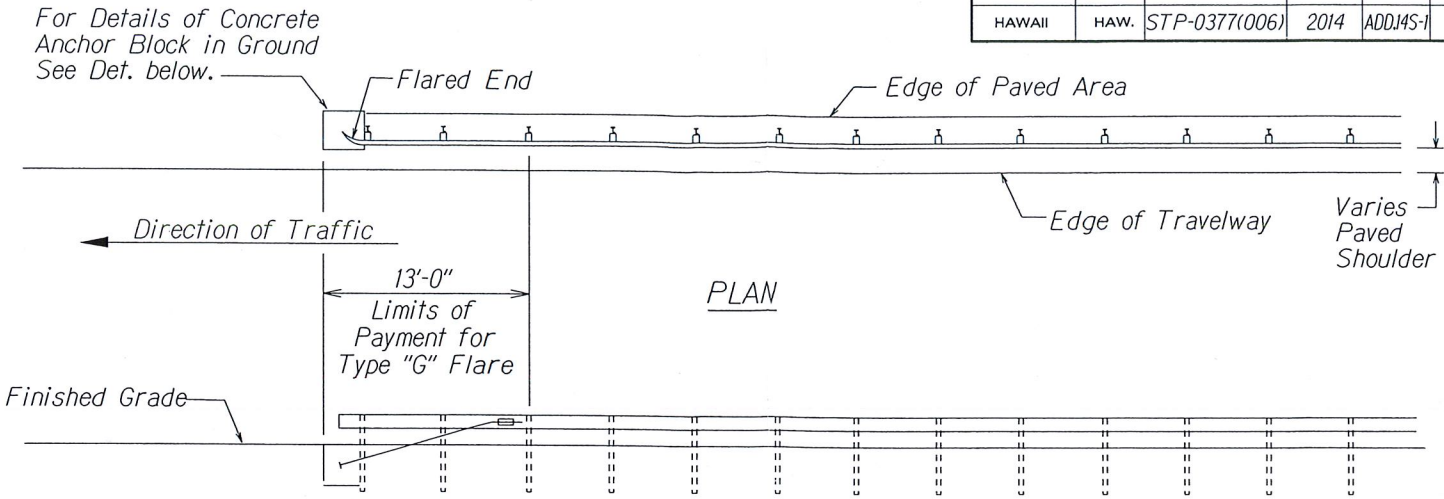


STANDARD SWAGED FITTING
AND STUD



ANCHOR BLOCK DETAIL

- Concrete, G.R.P., excavation, anchor rod and miscellaneous appurtenances necessary to anchor the guardrail ends shall be incidental to metal guardrail.



TYPE "G" FLARE END TERMINAL

NOTE:

Type "G" Modified End Terminal is a site specific end terminal with a taper and radial termini. A site specific detailed drawing is required for all Type "G" Modified End Terminal and must receive Engineer's approval.

The taper (flare rate) of the guardrail shall follow the latest edition of AASHTO'S Roadside Design Guide (currently, Table 5.6 - Suggested Flare Rate for Barrier Design, page 5-21; Jan. 1996 edition).

The radius of the radial termini is an Engineer's judgement based on the site evaluation. The Engineer shall consider safety (minimize the spearing & blunt end situation); degree and potential seriousness of the hazard; bicycle and pedestrian accessibility; maintenance equipment accessibility; Right-of-Way availability; the smallest radii the metal w-beam/thrie-beam railing can be constructed (check with supplier/contractor); posted speed limit; angle of vehicle impact; and aesthetics when designing the Type "G" Modified End Terminal.

During construction, the Contractor shall layout the proposed Type "G" Modified End Terminal and receive approval from the Construction Engineer prior to installation.

2-4-14 Additional Details of Guardrail End Terminal.

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GUARDRAIL DETAILS

KEKAULIKE AVENUE RESURFACING
Haleakala Crater Road to Kula Highway
Federal-Aid Project No. STP-0377(006)

Scale: NTS Date: February, 2014

SHEET No. 1 OF 1 SHEETS

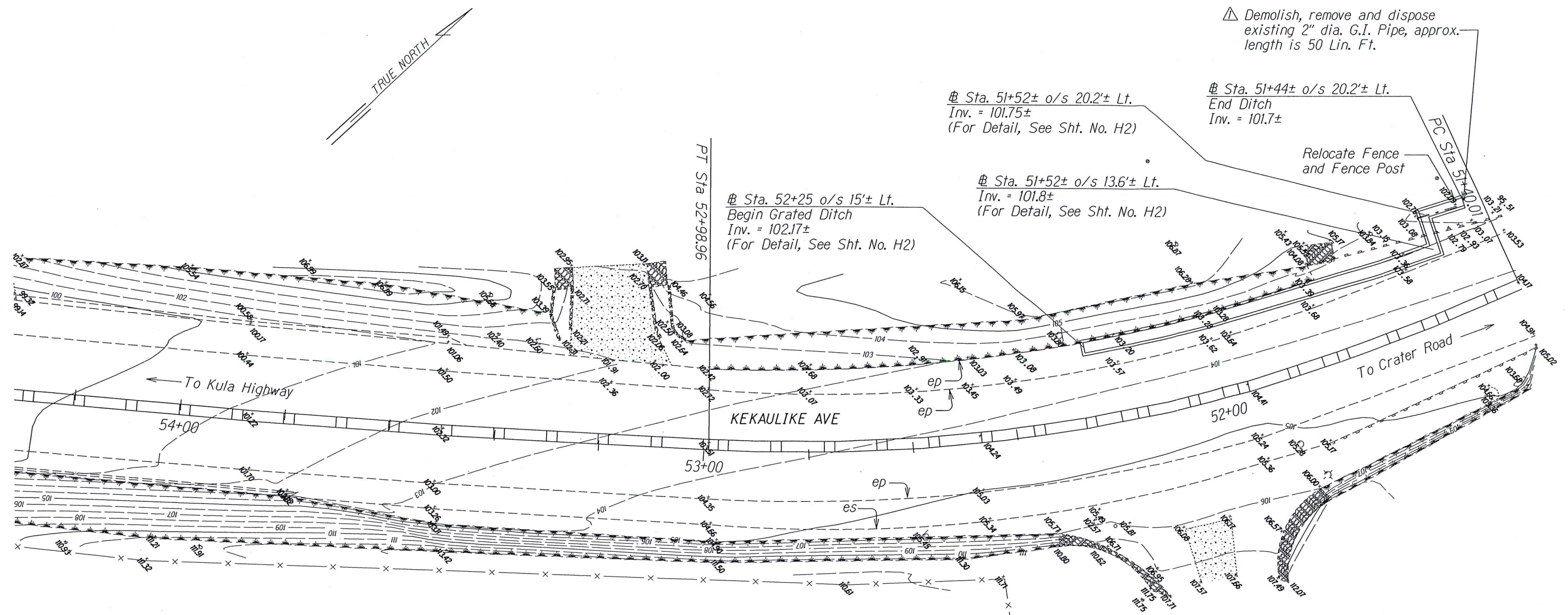
ADD. 14S-1

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

1411001/guardrail/te59/rev01 (Standard Plan TE-59 r11/03/89)



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0377(006)	2014	ADD.15	38



Notes:

1. Existing drainage systems will be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to accomplish maintenance of flow. The cost shall be incidental to the various Contract Items.

2. The Contractor shall verify the locations of all existing culverts and utilities in the field. Any existing culverts and utilities damaged during construction shall be repaired or replaced by the Contractor at his own expense.

3. Chamfer all exposed concrete edges 1".

4. Demolishing, Removing, and Disposing existing water line shall not be paid for separately, but shall be considered incidental to the various contract items.

5. All exposed finish grade shall be hydromulched. The work shall be considered incidental to the various Contract Items.


6. Concrete shall be Class A unless otherwise noted.

7. Relocating existing fence and fence post shall not be paid for separately, but shall be considered incidental to the various Contract Items.

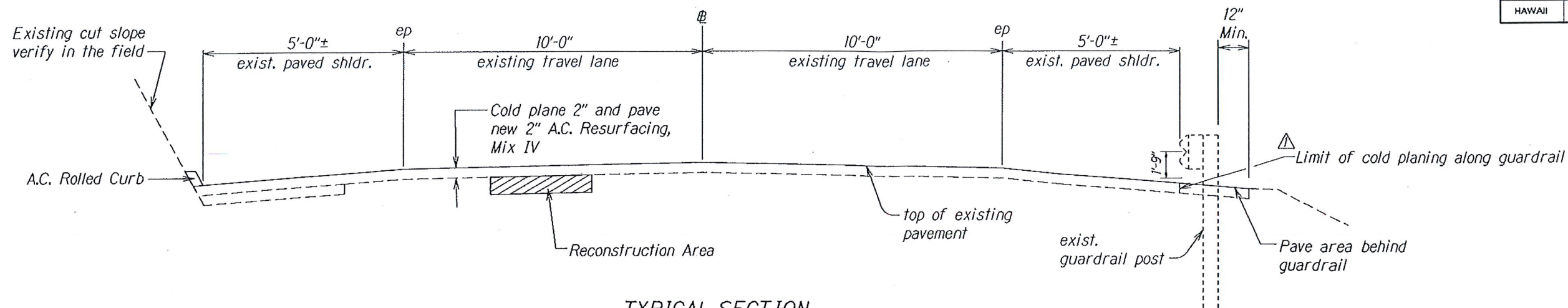
8. Removing and reinstalling existing guard rail for drainage structure installation shall not be paid for separately, but shall be considered incidental to the various Contract Items.

9. The location of the ditch at Sta. 51+52± is approximate. The ditch shall be located to pass between the existing guardrail posts. The Contractor shall lay out the grated ditch and determine the length "L" of the end grate prior to fabricating grates. The end grate on the segment between Sta. 52+20 and 51+52± Lt. and between Sta. 51+52 to Sta. 51+52 Lt. shall use Dimension "L" on Drainage Sheets H3 and H4. This shall be considered incidental to the Grated Ditch.

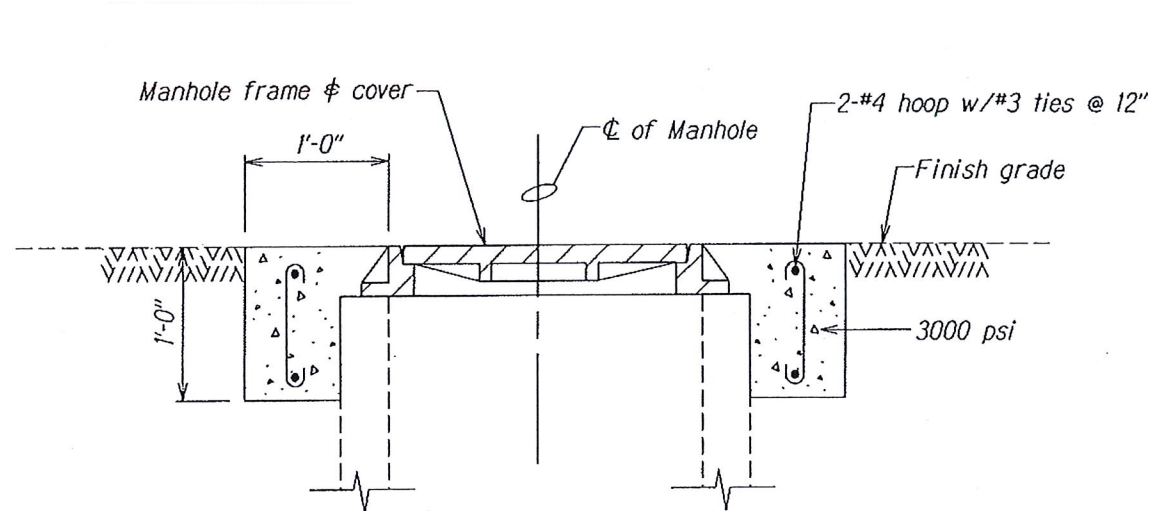


	2-4-14	Existing waterline to be removed.
	DATE	REVISION
<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p><u>DRAINAGE PLAN</u></p> <p><u>KEKAULIKE AVENUE RESURFACING</u> <u>HALEAKALA CRATER RD. TO KULA HIGHWAY</u></p> <p><u>Project No. STP-0377(006)</u></p> <p>Scale: 1" = 10' Date: April 2013</p>		
SHEET No. 11 OF 4 SHEETS		

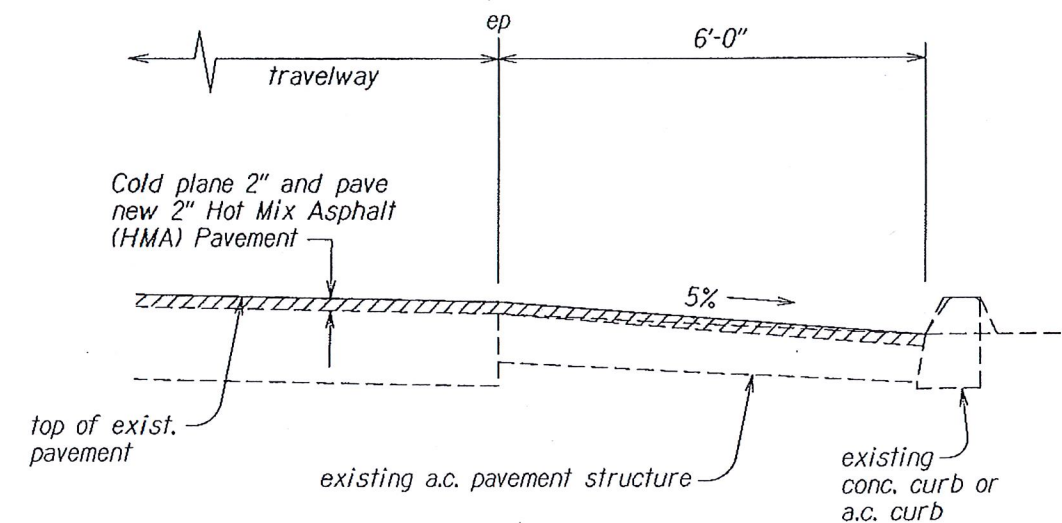
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0377(006)	2014	ADD.6	38



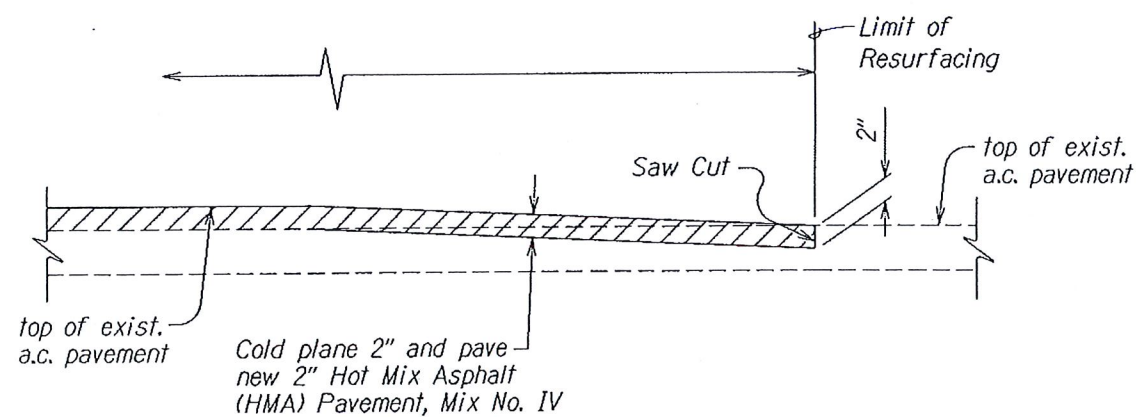
TYPICAL SECTION
Not To Scale



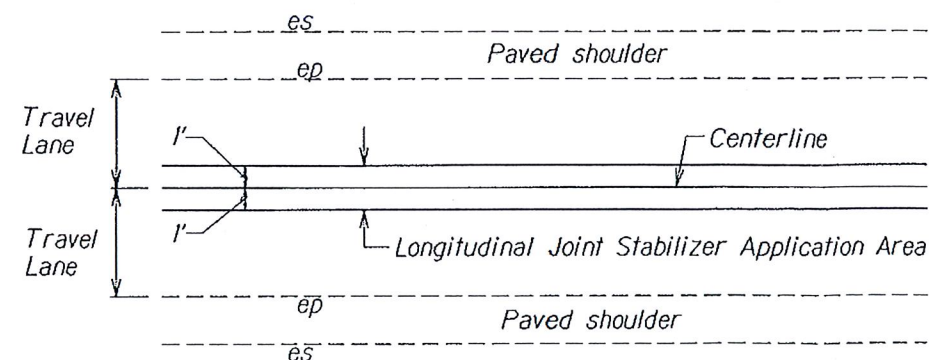
DETAIL - CONCRETE COLLAR FOR
ADJUSTMENTS OF MANHOLES AND VALVE BOX
Not To Scale



TYPICAL DETAIL COLD PLANING OF
EXISTING A.C. PAVEMENT @ CONC. CURB OR A.C. CURB
Scale: $\frac{3}{4}$ " = 1'-0"



COLD PLANED LONGITUDINAL TRANSITION
AT BEGIN AND END OF PROJECT
Not to Scale



TYPICAL SECTION FOR
LONGITUDINAL JOINT STABILIZER
Not To Scale

2-10-14 Limit of cold planing along guardrail.

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL SECTIONS & DETAILS
KEKAULIKE AVENUE RESURFACING
Haleakala Crater Road to Kula Highway
Federal-Aid Project No. STP-0377(006)
Scale: As Shown Date: August, 2012

SHEET No. 1 OF 2 SHEETS

ADD. 6

ORIGINAL PLAN	DATE	8/12
SURVEY PLOTTED BY	DATE	8/12
DESIGNED BY	DATE	8/12
NOTES	DATE	8/12
QUANTITIES BY	DATE	8/12
CHECKED BY	DATE	8/12