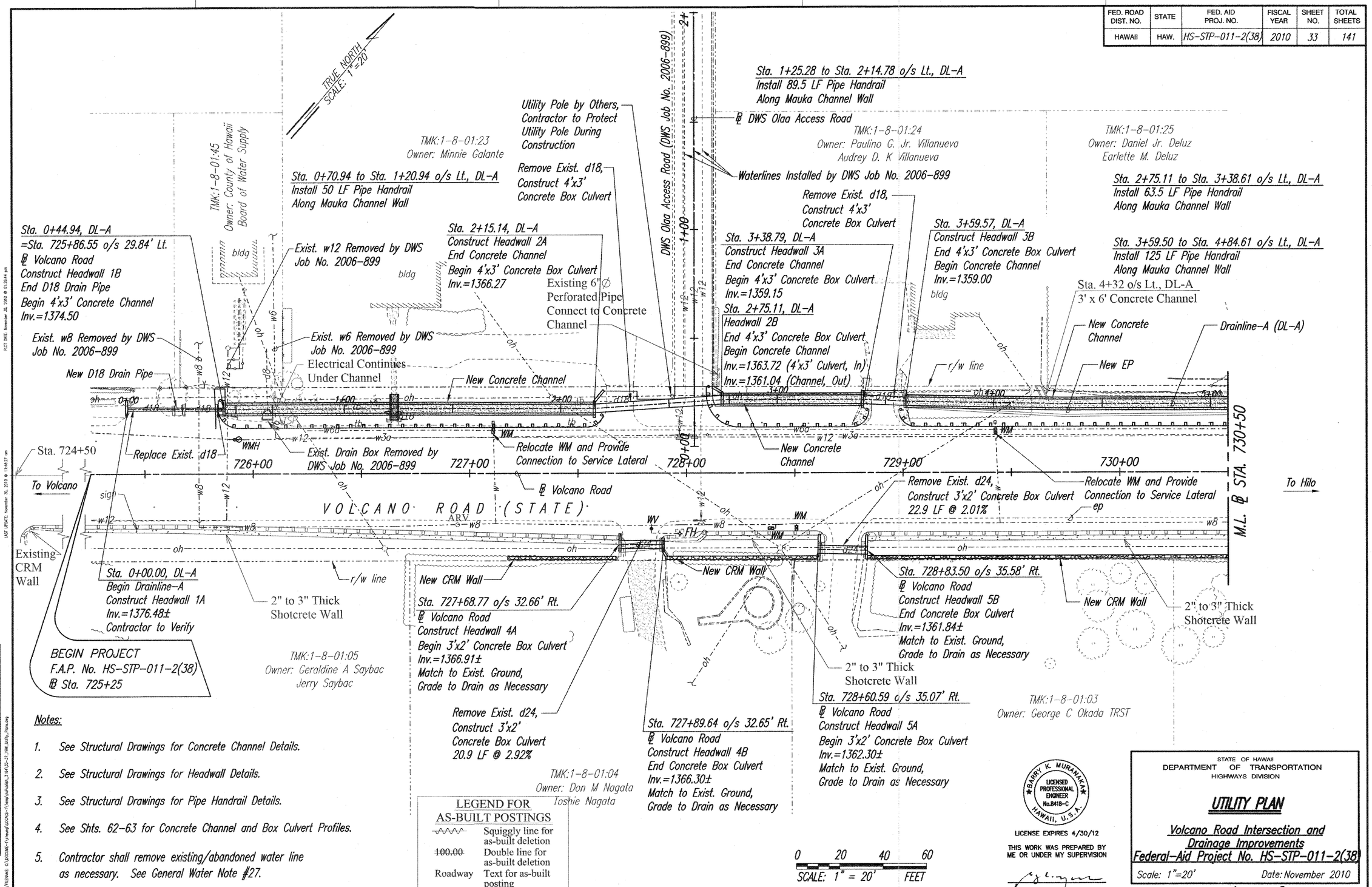
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HS-STP-011-2(38)	2010	33	141



Notes:

1. See Structural Drawings for Concrete Channel Details.
2. See Structural Drawings for Headwall Details.
3. See Structural Drawings for Pipe Handrail Details.
4. See Shts. 62-63 for Concrete Channel and Box Culvert Profiles.
5. Contractor shall remove existing/abandoned water line as necessary. See General Water Note #27.

LEGEND FOR AS-BUILT POSTINGS

~~	Squiggly line for as-built deletion
~~100.00~~	Double line for as-built deletion
Roadway	Text for as-built posting

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

BARRY K. MURAMAKA LICENSED PROFESSIONAL ENGINEER No.8418-C HAWAII, U.S.A.

LICENSE EXPIRES 4/30/12

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY PLAN

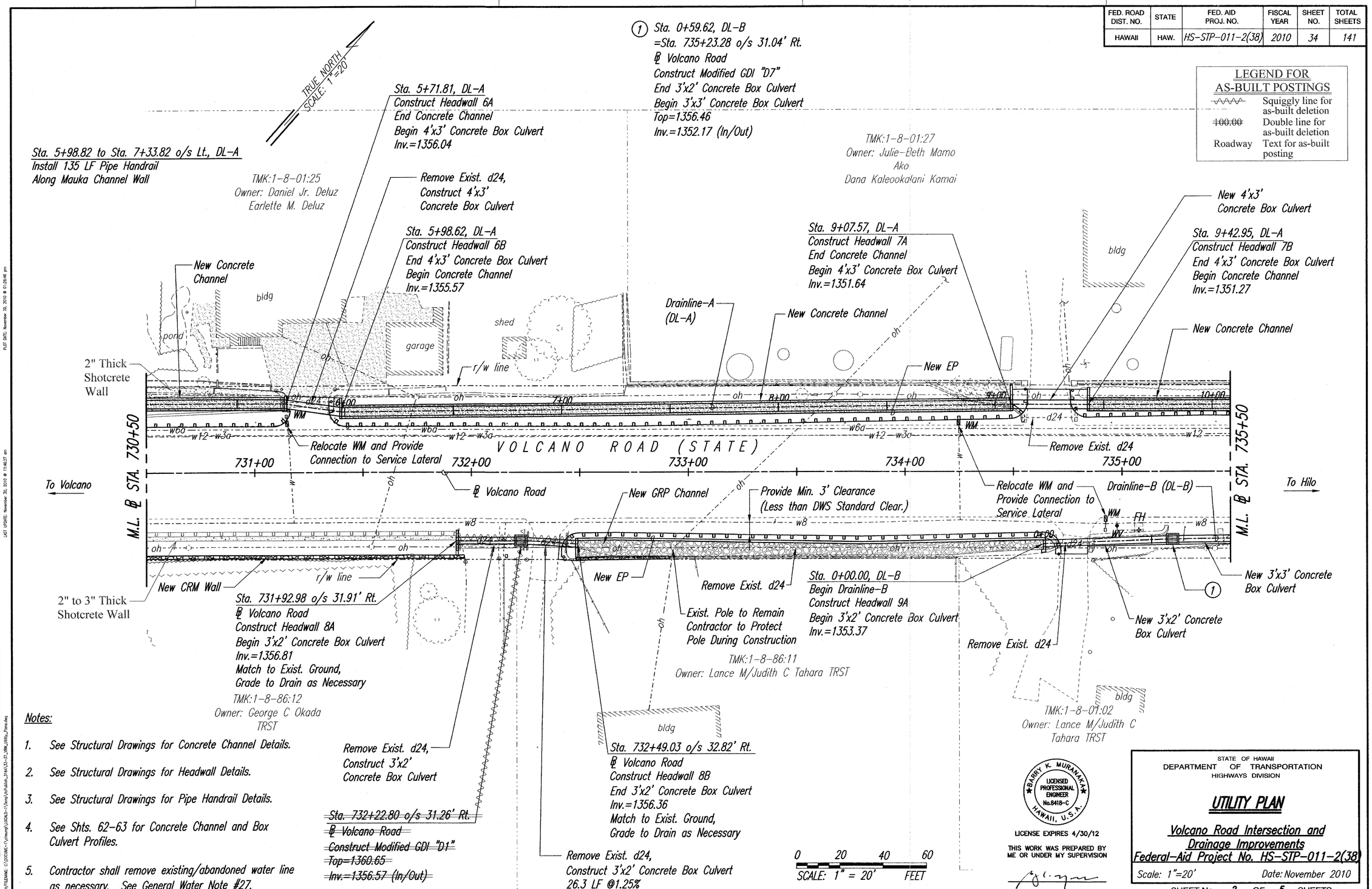
Volcano Road Intersection and Drainage Improvements
Federal-Aid Project No. HS-STP-011-2(38)

Scale: 1"=20' Date: November 2010

SHEET No. 1 OF 5 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HS-STP-011-2(38)	2010	34	141



LEGEND FOR AS-BUILT POSTINGS

~~	Squiggly line for as-built deletion
~~100.00~~	Double line for as-built deletion
Roadway	Text for as-built posting

Notes:

1. See Structural Drawings for Concrete Channel Details.
2. See Structural Drawings for Headwall Details.
3. See Structural Drawings for Pipe Handrail Details.
4. See Shts. 62-63 for Concrete Channel and Box Culvert Profiles.
5. Contractor shall remove existing/abandoned water line as necessary. See General Water Note #27.

~~Sta. 732+22.80 o/s 31.26' Rt.~~
~~℄ Volcano Road~~
~~Construct Modified GDI "D1"~~
~~Top=1360.65~~
~~Inv.=1356.57 (In/Out)~~

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

BARRY K. MURANAKA
LICENSED PROFESSIONAL ENGINEER
No.8418-C
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/12

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY PLAN

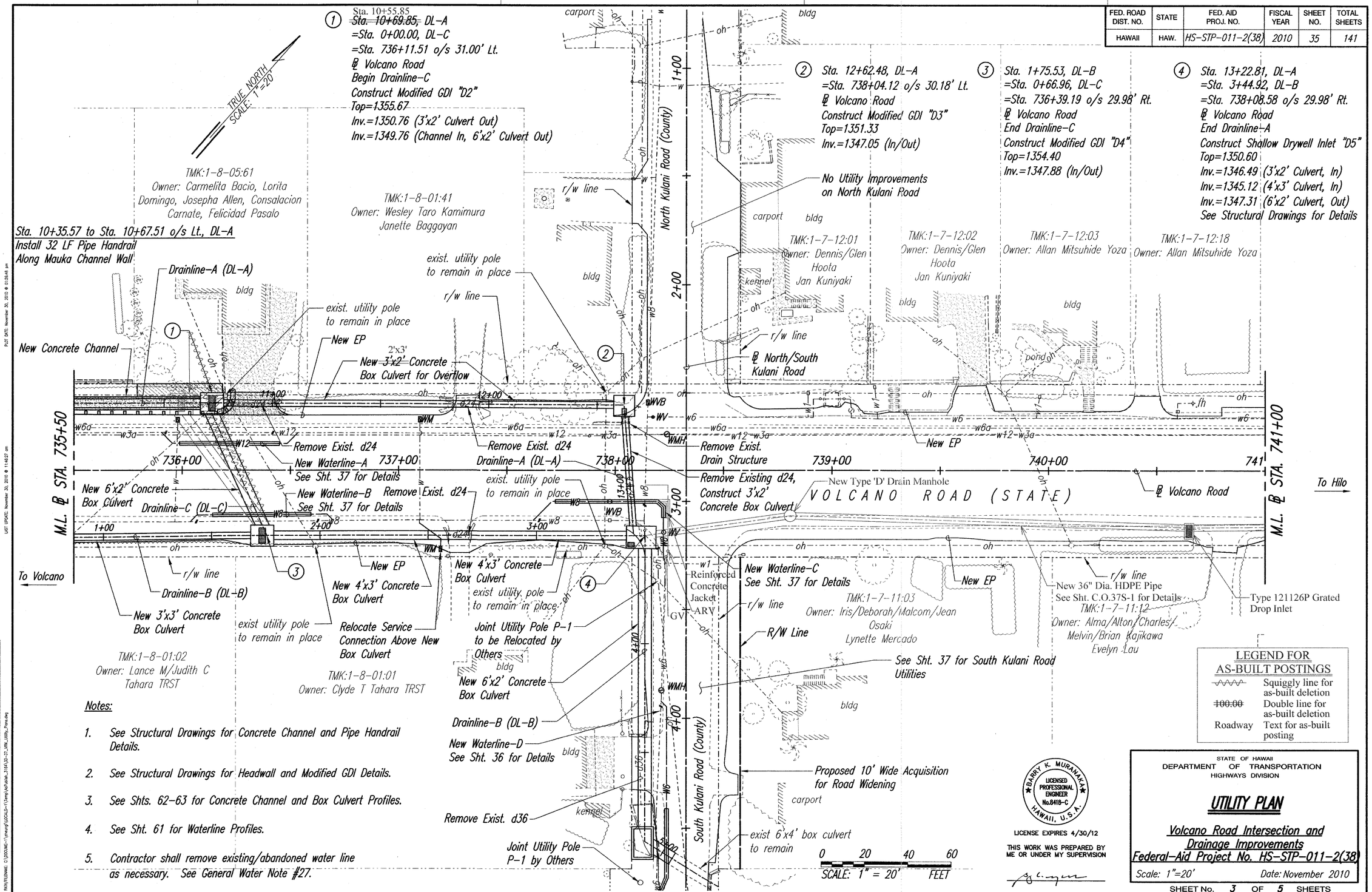
Volcano Road Intersection and Drainage Improvements
Federal-Aid Project No. HS-STP-011-2(38)

Scale: 1"=20' Date: November 2010

SHEET No. 2 OF 5 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HS-STP-011-2(38)	2010	35	141



Notes:

1. See Structural Drawings for Concrete Channel and Pipe Handrail Details.
2. See Structural Drawings for Headwall and Modified GDI Details.
3. See Shts. 62-63 for Concrete Channel and Box Culvert Profiles.
4. See Sht. 61 for Waterline Profiles.
5. Contractor shall remove existing/abandoned water line as necessary. See General Water Note #27.

LEGEND FOR AS-BUILT POSTINGS

~~	Squiggly line for as-built deletion
~~100.00~~	Double line for as-built deletion
Roadway	Text for as-built posting

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY PLAN

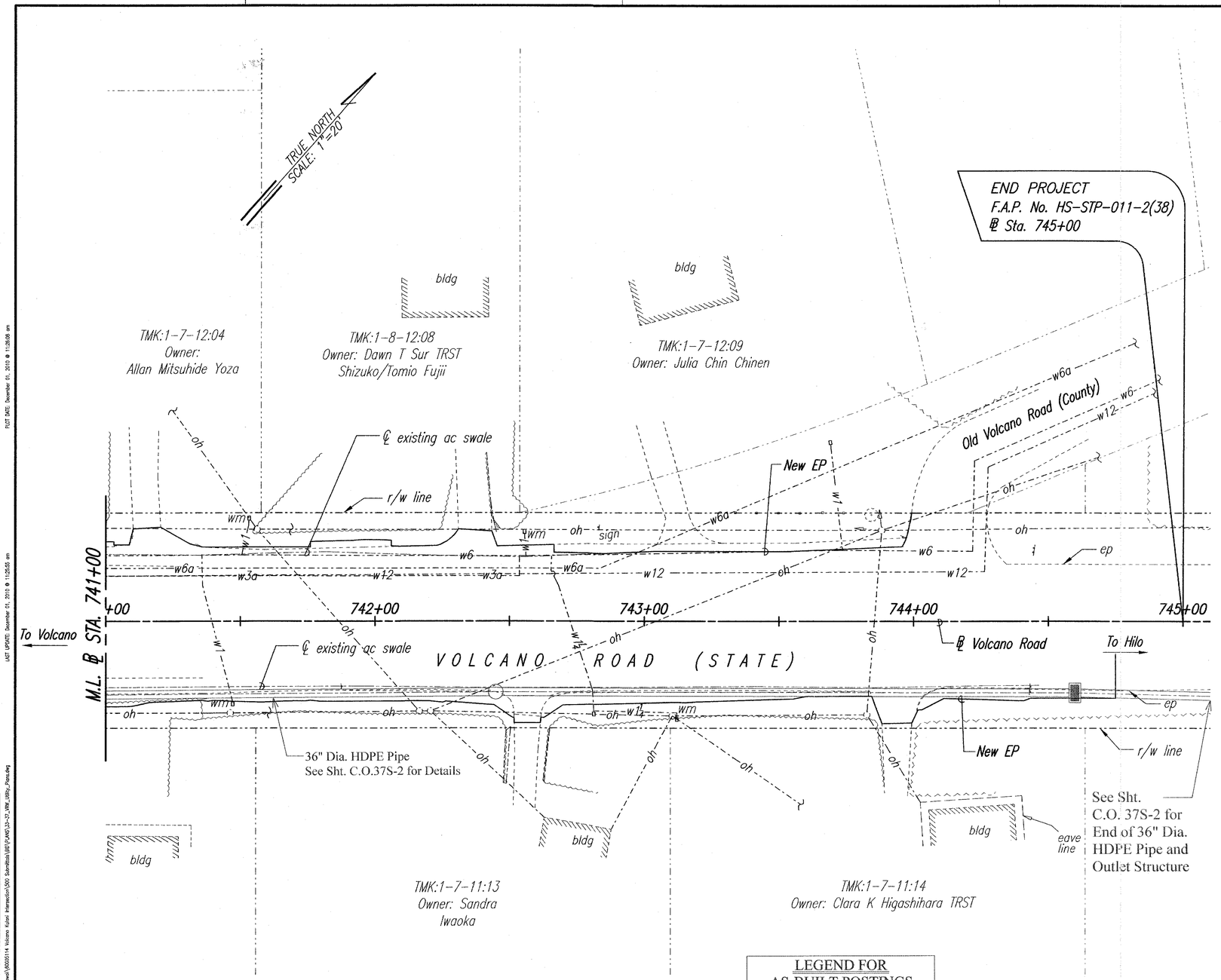
Volcano Road Intersection and Drainage Improvements
Federal-Aid Project No. HS-STP-011-2(38)

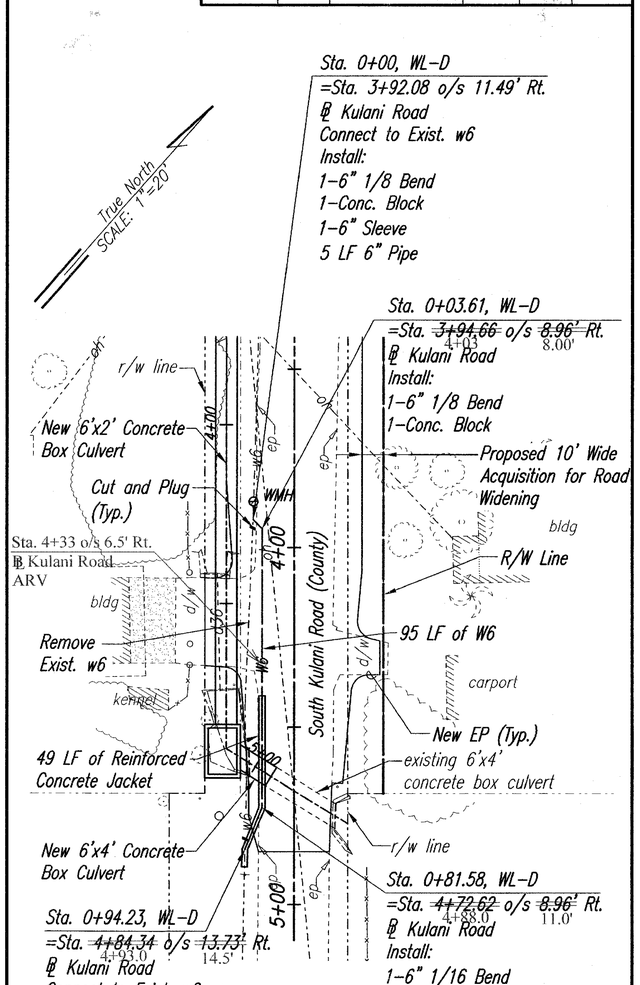
Scale: 1"=20' Date: November 2010

SHEET No. 3 OF 5 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HS-STP-011-2(38)	2010	36	141





Waterline - D

Scale: 1"= 20'-0"

Note:
Contractor shall remove existing/abandoned water line as necessary. See General Water Note #27.

LEGEND FOR AS-BUILT POSTINGS	
~~	Squiggly line for as-built deletion
~~100.00~~	Double line for as-built deletion
Roadway	Text for as-built posting

0 20 40 60
SCALE: 1" = 20' FEET

0 5 10 15
SCALE: 1" = 5' FEET

BARRY K. MURANAKA
LICENSED PROFESSIONAL ENGINEER
No.8418-C
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/12

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY PLAN

Volcano Road Intersection and Drainage Improvements
Federal-Aid Project No. HS-STP-011-2(38)

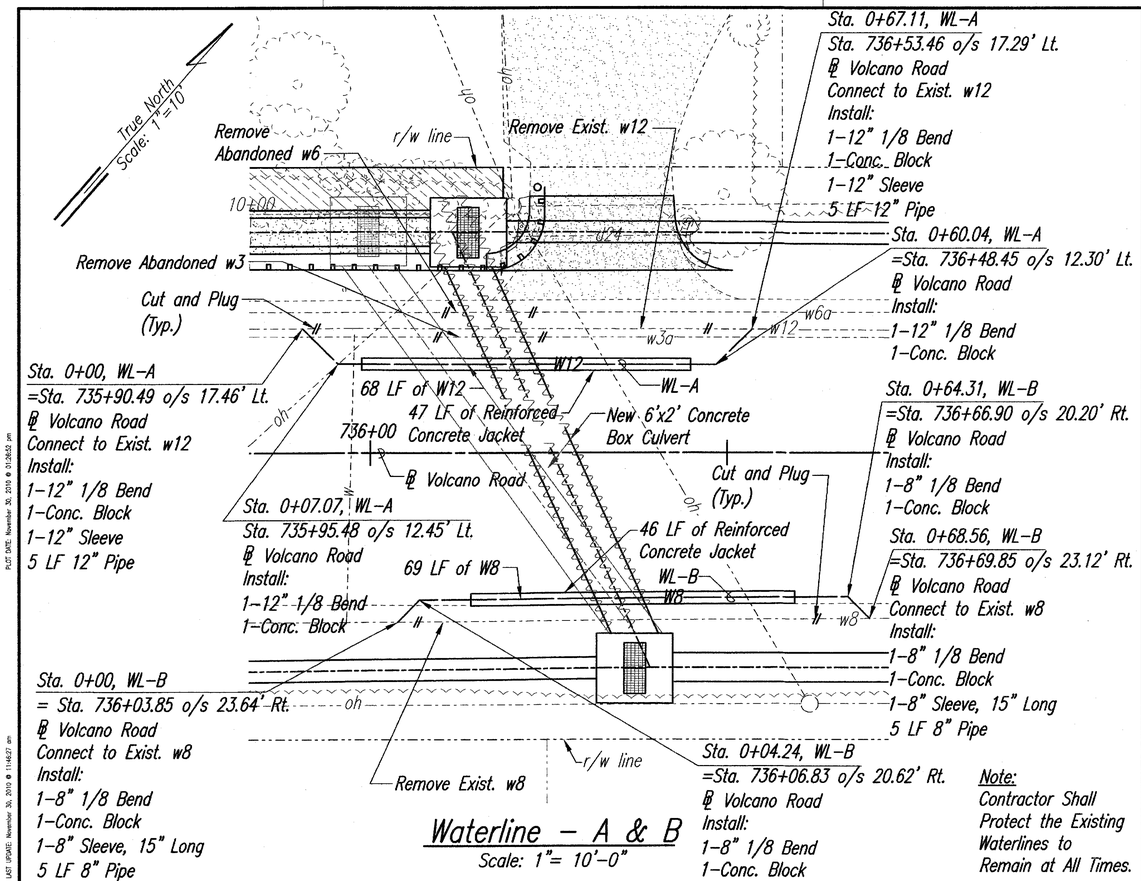
Scale: 1"=20' Date: November 2010

SHEET No. 4 OF 5 SHEETS

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

PLOT DATE: December 01, 2010 @ 11:26:06 am
LAST UPDATE: December 01, 2010 @ 11:25:55 am
PATH/FILENAME: \\server\pwd\c\pwd\Projects\Hawaii\0000514 Volcano Kulani Intersection\500 Submittals\BR\PLANS\23-27_WW_UtilityPlans.dwg

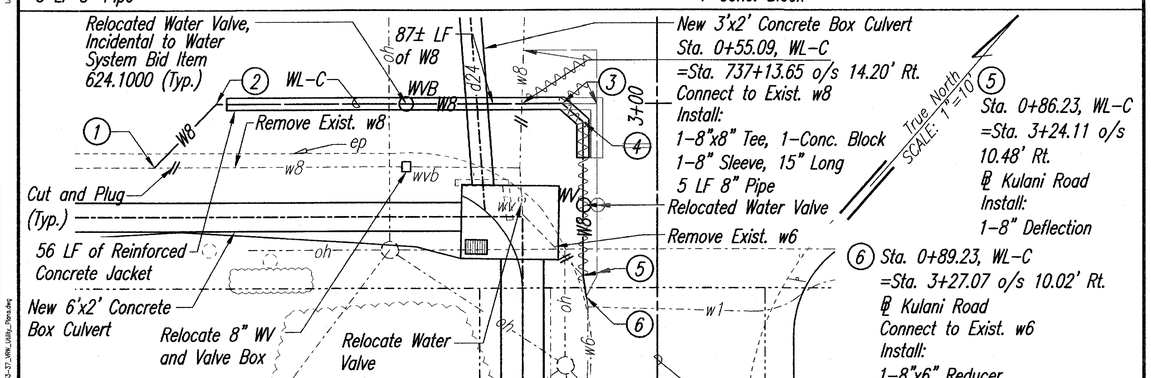
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HS-STP-011-2(38)	2010	37	141



Waterline - A & B

Scale: 1"= 10'-0"

Note:
Contractor Shall Protect the Existing Waterlines to Remain at All Times.



Waterline - C

Scale: 1"= 10'-0"

(1) Sta. 0+00, WL-C
=Sta. 737+62.24 o/s 22.95' Rt.
℄ Volcano Road
Connect to Exist. w8
Install:
1-8" 1/8 Bend
1-Conc. Block
1-8" Sleeve, 15" Long
5 LF 8" Pipe

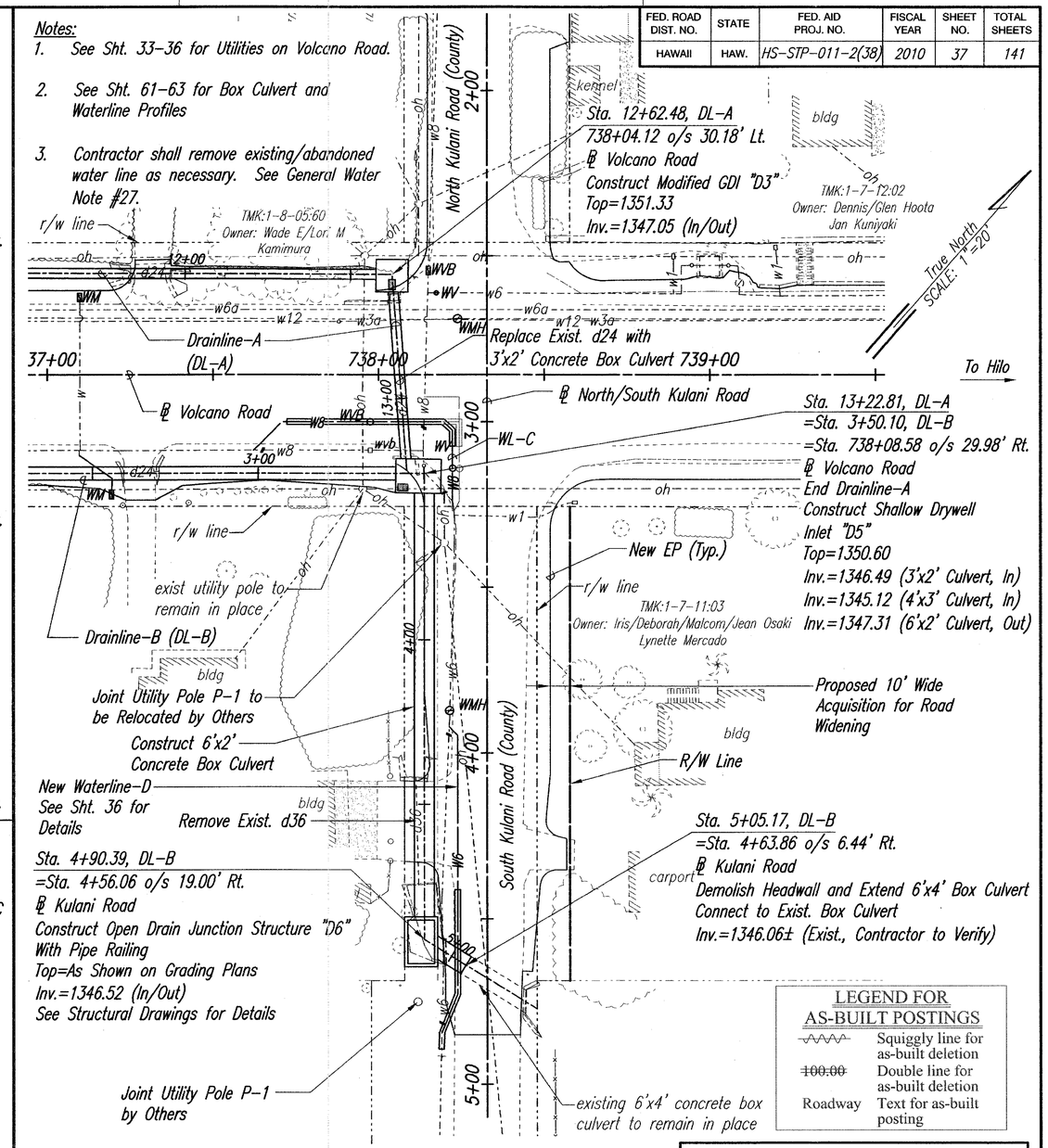
(2) Sta. 0+12.30, WL-C
=Sta. 737+70.88 o/s 14.20' Rt.
℄ Volcano Road
Install:
1-8" 1/8 Bend
1-Conc. Block

(3) Sta. 0+60.82, WL-C
=Sta. 3+00.00 o/s 13.36' Rt.
℄ Kulani Road
Install:
1-8" ~~1/8 Bend~~ Tee
1-Conc. Block

~~(4) Sta. 0+64.64, WL-C~~
~~=Sta. 3+02.52 o/s 10.49' Rt.~~
~~℄ Kulani Road~~
~~Install:~~
~~1-8" 1/8 Bend~~
~~1-Conc. Block~~

Notes:

1. See Sht. 33-36 for Utilities on Volcano Road.
2. See Sht. 61-63 for Box Culvert and Waterline Profiles
3. Contractor shall remove existing/abandoned water line as necessary. See General Water Note #27.



South Kulani Road

Scale: 1"= 20'-0"

0 10 20 40
SCALE: 1" = 10' FEET

0 20 40 60
SCALE: 1" = 20' FEET

LEGEND FOR AS-BUILT POSTINGS

~~	Squiggly line for as-built deletion
~~100.00~~	Double line for as-built deletion
Roadway	Text for as-built posting

BARRY K. MURANAKA LICENSED PROFESSIONAL ENGINEER No.8418-C HAWAII, U.S.A.

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY PLAN

Volcano Road Intersection and Drainage Improvements
Federal-Aid Project No. HS-STP-011-2(38)

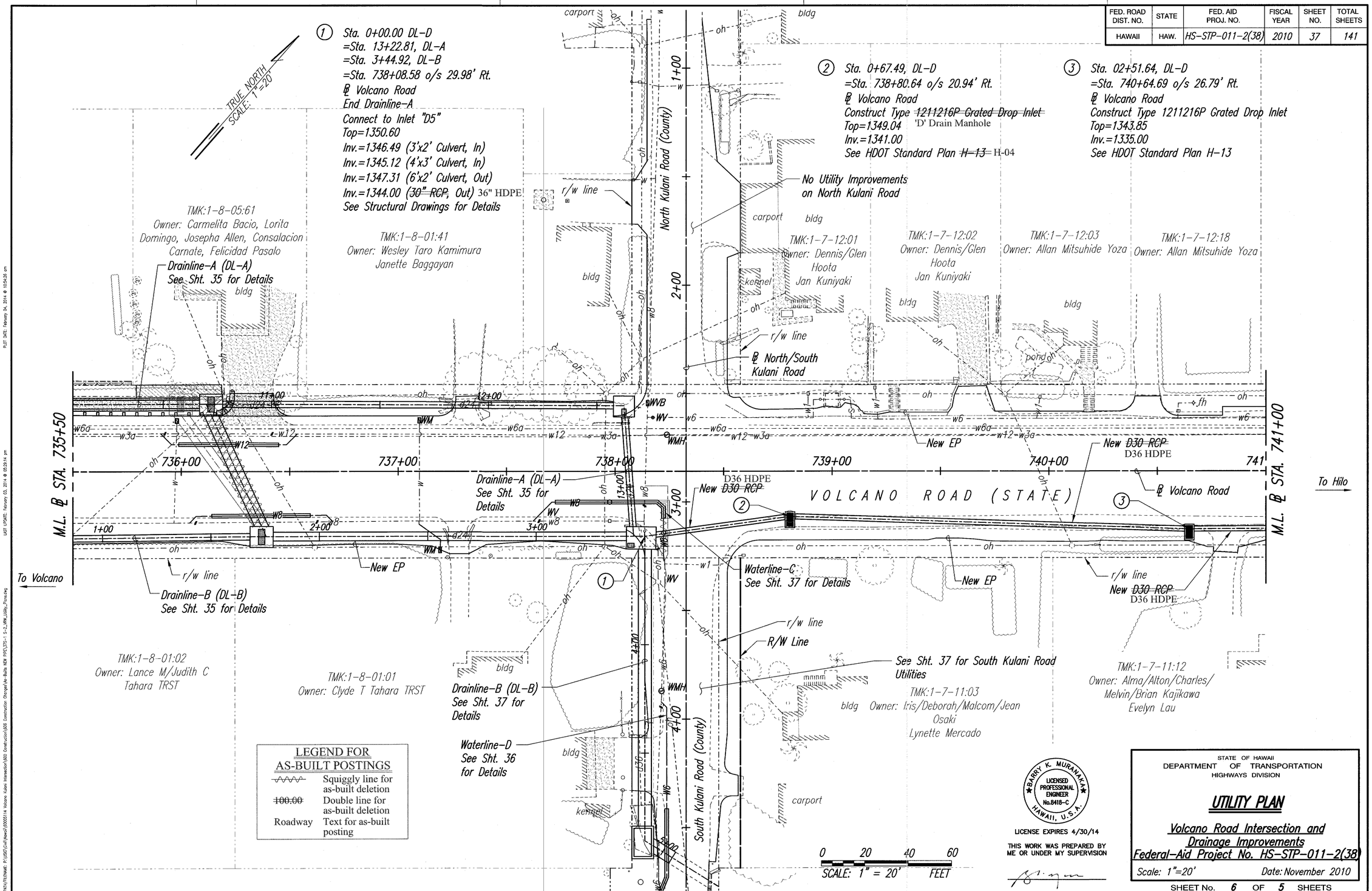
Scale: 1"=20' Date: November 2010

SHEET No. 5 OF 5 SHEETS

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

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HS-STP-011-2(38)	2010	37	141



BARRY K. MURAMAKA
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HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

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HIGHWAYS DIVISION

UTILITY PLAN

Volcano Road Intersection and Drainage Improvements
Federal-Aid Project No. HS-STP-011-2(38)

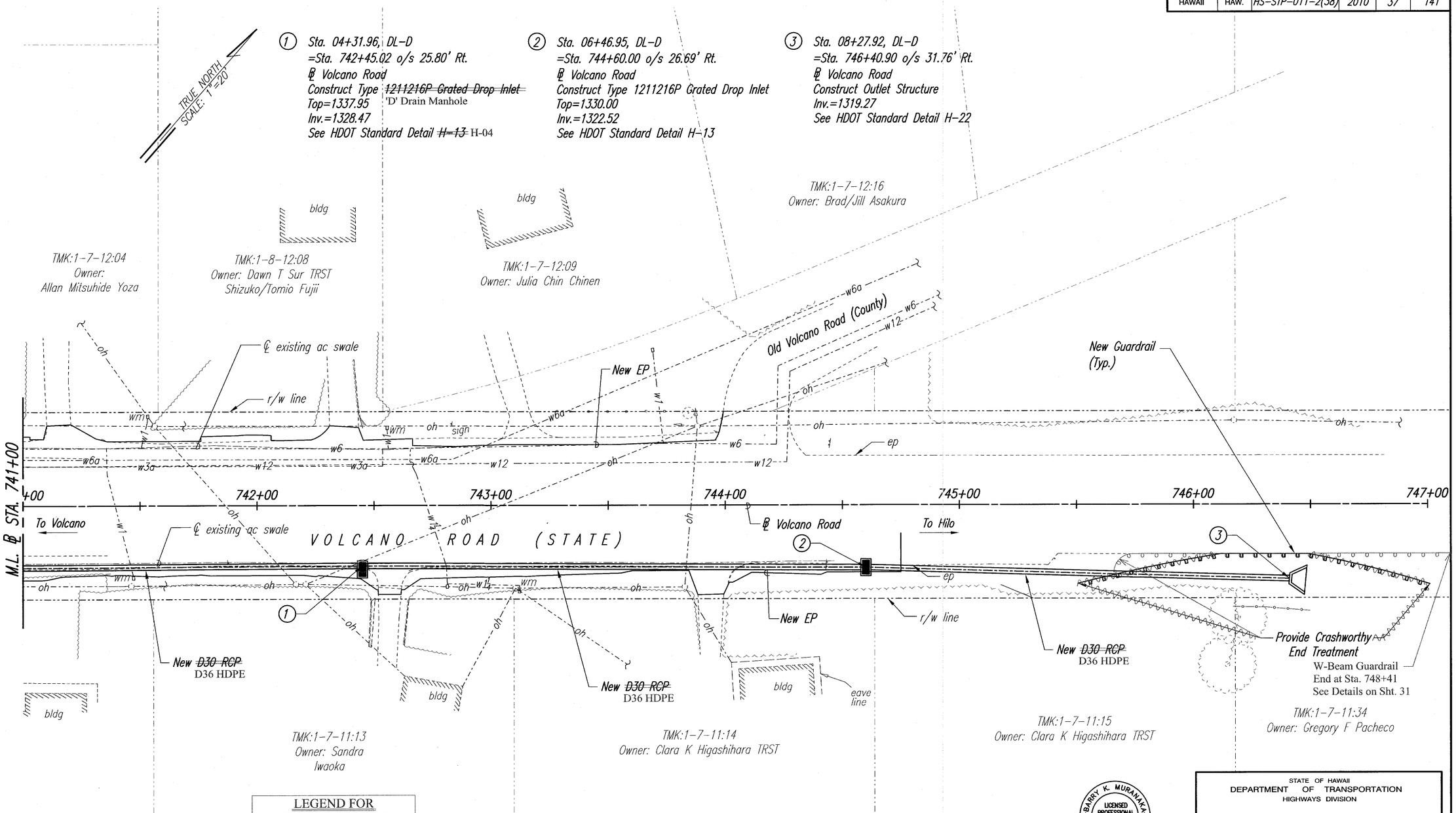
Scale: 1"=20' Date: November 2010

SHEET No. 6 OF 5 SHEETS

"AS-BUILT"

C.O.37S-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HS-STP-011-2(38)	2010	37	141



LEGEND FOR AS-BUILT POSTINGS	
~~	Squiggly line for as-built deletion
~~100.00~~	Double line for as-built deletion
Roadway	Text for as-built posting

0 20 40 60
SCALE: 1" = 20' FEET

0 5 10 15
SCALE: 1" = 5' FEET

BARRY K. MURANAKA
LICENSED PROFESSIONAL ENGINEER
No.8418-C
HAWAII, U.S.A.

LICENSE EXPIRES 4/30/14

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY PLAN

Volcano Road Intersection and Drainage Improvements
Federal-Aid Project No. HS-STP-011-2(38)

Scale: 1"=20' Date: November 2010

SHEET No. 7 OF 5 SHEETS

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

"AS-BUILT"

C.O.37S-2