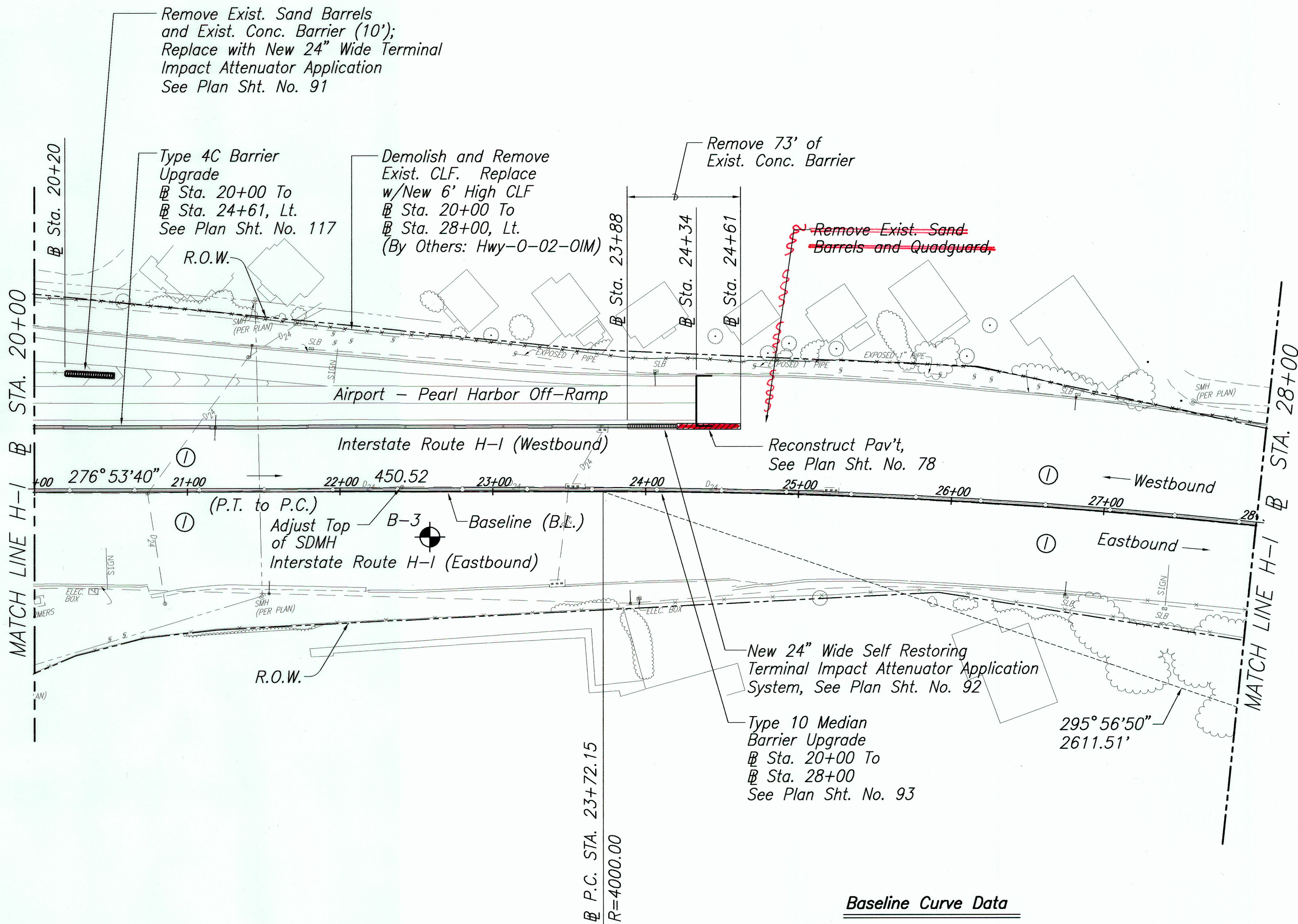






FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H1H-01-00M	2003	81	234

TRUE NORTH  
SCALE: 1"=40'



**Baseline Curve Data**

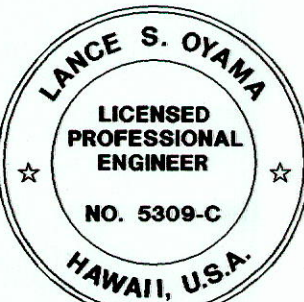
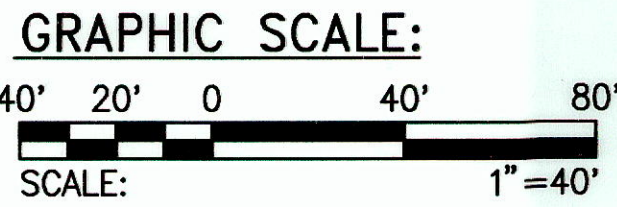
$\Delta$	=	38°06'20"
$\Delta/2$	=	19°03'10"
R	=	4000.00'
T	=	1363.31'
Ch	=	2611.51'
Lc	=	2660.27'

**LEGEND**

Approximate Boring Location

*Note:*  
For locations of new light standards, see elec. dwgs.

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTEBOOK	
QUANTITIES BY	
CHECKED BY	
No.	



THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION.  
*Lance S. Oyama*  
SIGNATURE  
APRIL 30, 2004  
EXPIRATION DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

ROADWAY PLAN

INTERSTATE ROUTE H-1 REHABILITATION  
OLA LANE TO KALIHI STREET  
PROJECT NO. H1H-01-00M

Scale: 1"=40'      Date: October 31, 2002

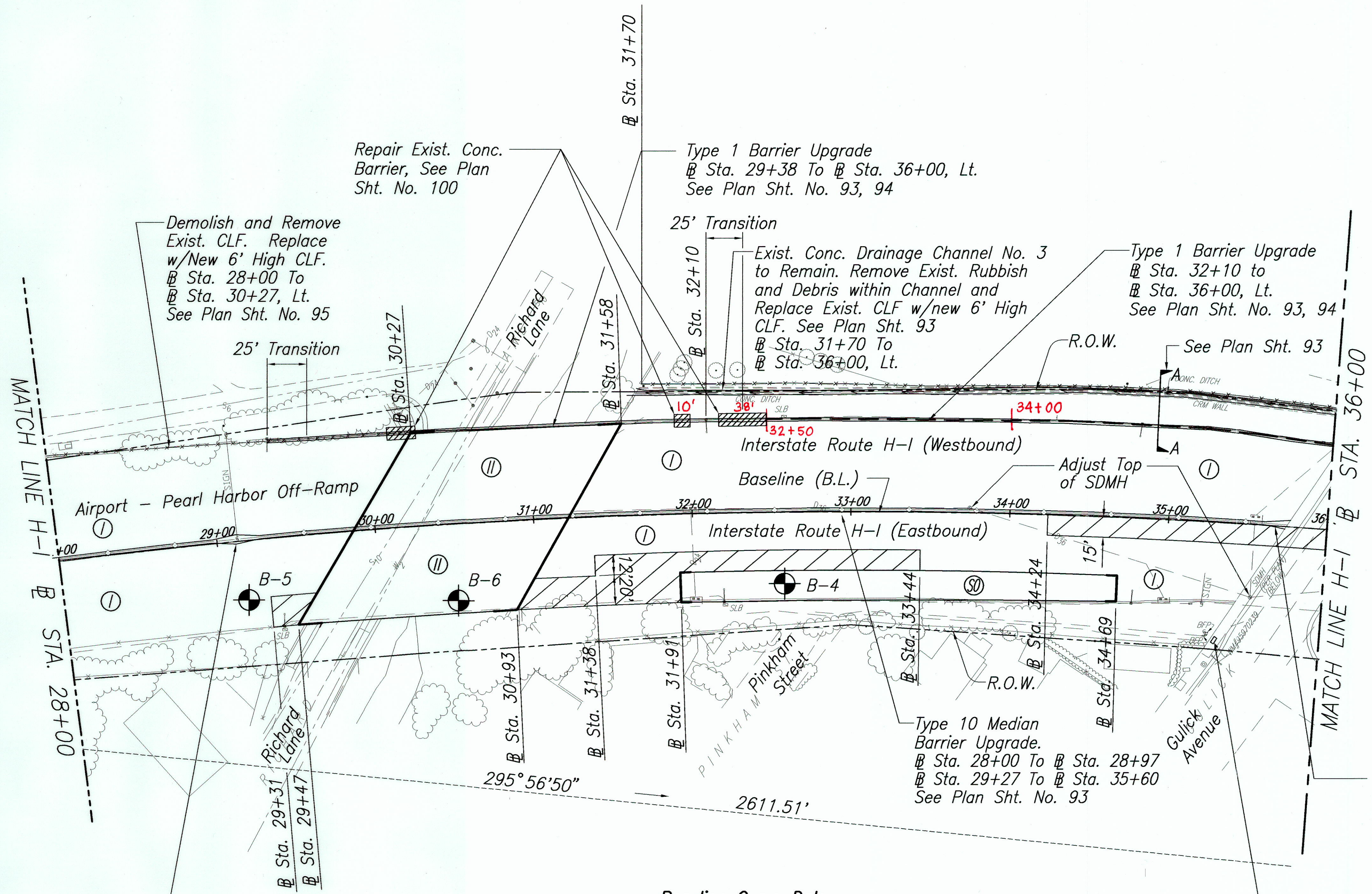
SHEET No. C-12 OF C-59 SHEETS

**"AS-BUILT"**



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H1H-01-00M	2003	82	234

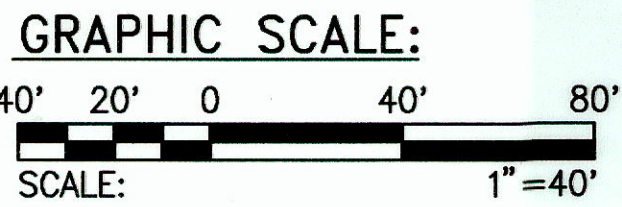
TRUE NORTH  
SCALE: 1"=40'



B.W.S. FLOW REQUIREMENTS			
P/ID 1030049 (M/N): 02701267 2" Meter			
	Fixture Units (FU)	Gallons Per Minute (GPM)	Gallons Per Day (GPD)
A. Proposed Domestic:	0	0	0
B. Proposed Irrigation:	110	46	2,700
C. Total Proposed:	110	46	2,700
D. Demolition:	None	0	0
E. Net Total:	110	46	2,700
F. Existing To Remain:	0	0	0
G. Grand Total:	110	46	2,700

Notes:  
1. Irrigation will occur during non-peak hours.  
2. Exist. flows calculated from as-built dwgs.

SURVEY PLOTTED BY _____	DATE _____
DRAWN BY _____	DESIGNED BY _____
NOTED BY _____	QUANTITIES BY _____
CHECKED BY _____	



Baseline Curve Data	
$\Delta$	= 38° 06' 20"
$\Delta/2$	= 19° 03' 10"
R	= 4000.00'
T	= 1363.31'
Ch	= 2611.51'
Lc	= 2660.27'

P/ID 1030049  
F-WM# 02701267  
For Irrigation, see  
Landscape Dwgs.

LANCE S. OYAMA  
LICENSED PROFESSIONAL ENGINEER  
NO. 5309-C  
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

*Lance S. Oyama*  
SIGNATURE

APRIL 30, 2004  
EXPIRATION DATE

**LEGEND**

Approximate Boring Location

Note:  
For locations of new light standards, see elec. dwgs.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY PLAN**

INTERSTATE ROUTE H-1 REHABILITATION  
OLA LANE TO KALIHI STREET  
PROJECT NO. H1H-01-00M

Scale: 1"=40'      Date: October 31, 2002

SHEET No. C-13 OF C-59 SHEETS

LANCE S. OYAMA  
LICENSED PROFESSIONAL ENGINEER  
NO. 5309-C  
HAWAII, U.S.A.

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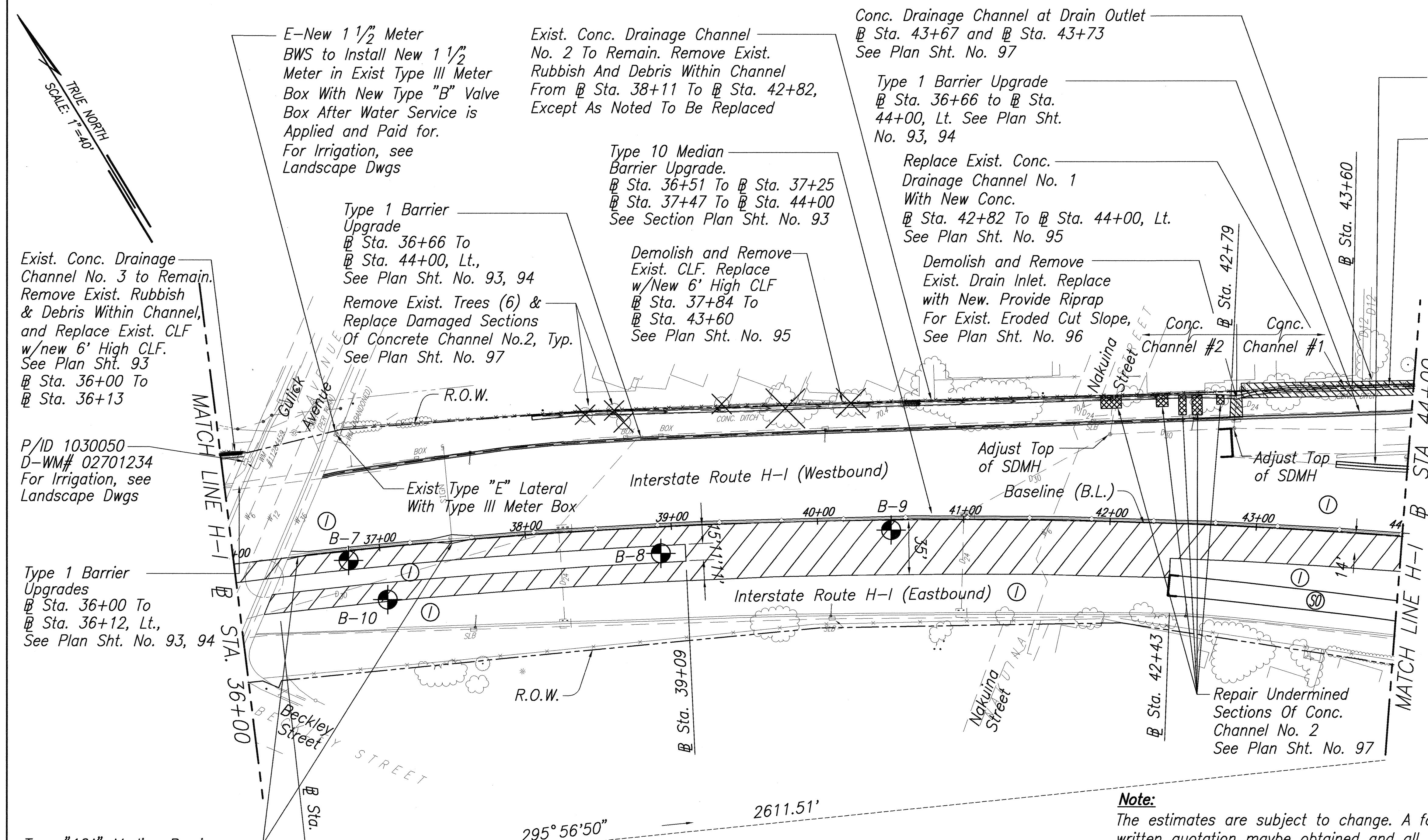
*Lance S. Oyama*  
SIGNATURE

APRIL 30, 2004  
EXPIRATION DATE

"AS-BUILT"



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H1H-01-00M	2003	83	234



Exist. Conc. Drainage Channel No. 3 to Remain. Remove Exist. Rubbish & Debris Within Channel, and Replace Exist. CLF w/new 6' High CLF. See Plan Sht. 93  
Sta. 36+00 To Sta. 36+13

P/ID 1030050  
D-WM# 02701234  
For Irrigation, see Landscape Dwgs

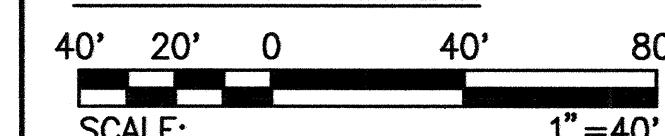
Type 1 Barrier Upgrades  
Sta. 36+00 To Sta. 36+12, Lt.,  
See Plan Sht. No. 93, 94

Type "10A" Median Barrier  
Sta. 36+36 To Sta. 36+51  
Sta. 37+35 To Sta. 37+65  
See Plan Sht. Nos. 93, 116

#### Baseline Curve Data

$\Delta = 38^{\circ}06'20''$   
 $\Delta/2 = 19^{\circ}03'10''$   
 $R = 4000.00'$   
 $T = 1363.31'$   
 $Ch = 2611.51'$   
 $Lc = 2660.27'$

#### GRAPHIC SCALE:



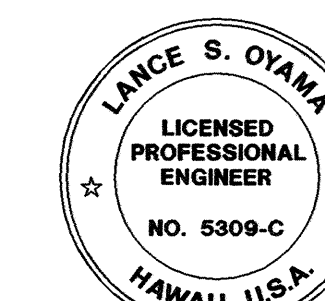
B.W.S. FLOW REQUIREMENTS			
P/ID 1030050 (M/N): 02701234 2" Meter			
	Fixture Units (FU)	Gallons Per Minute (GPM)	Gallons Per Day (GPD)
A. Proposed Domestic:	0	0	0
B. Proposed Irrigation:	70	34	600
C. Total Proposed:	70	34	600
D. Demolition:	None	0	0
E. Net Total:	70	34	600
F. Existing To Remain:	0	0	0
G. Grand Total:	70	34	600

Notes:  
1. Irrigation will occur during non-peak hours.  
2. Exist. flows calculated from as-built dwgs.

#### Note:

The estimates are subject to change. A formal written quotation maybe obtained and all payments for the charges shown on the quotation made within 30 days after the construction plan is approved by BWS. If payments are not received within 30 days prior, the project will be subject to the prevailing rates.

Credits will be determined when the building permit applications is submitted for BWS review and appoval.



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Signature: *Lance S. Oyama*  
Date: APRIL 30, 2004

#### LEGEND

Approximate Boring Location

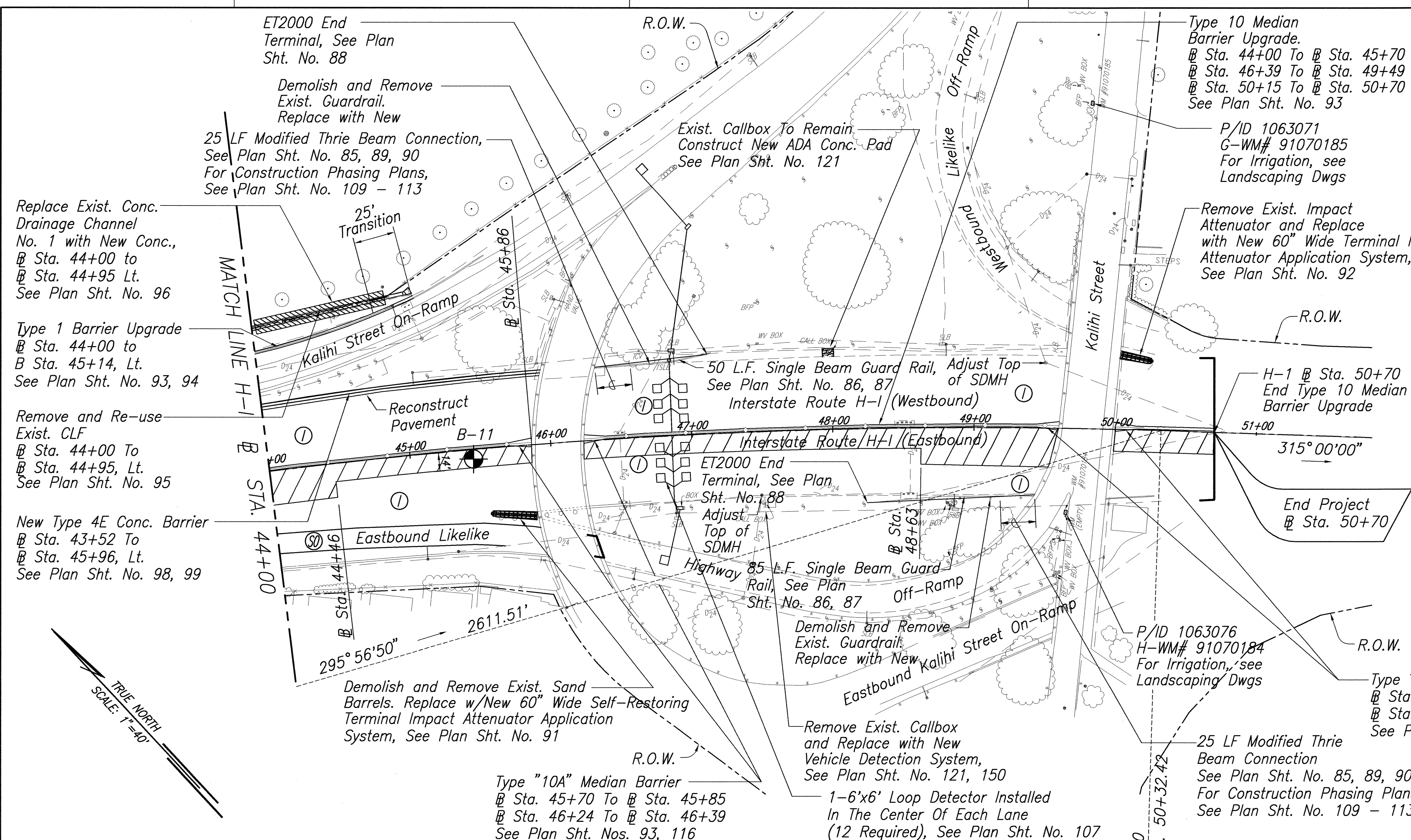
#### Note:

For locations of new light standards, see elec. dwgs.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ROADWAY PLAN	
INTERSTATE ROUTE H-1 REHABILITATION OLA LANE TO KALIHI STREET PROJECT NO. H1H-01-00M	
Scale: 1"=40'	Date: October 31, 2002
SHEET No. C-14 OF C-59 SHEETS	



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H1H-01-00M	2003	84	234

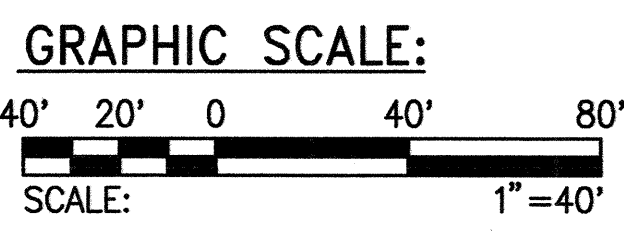


B.W.S. FLOW REQUIREMENTS			
P/ID 1063076 (M/N): 9170184 2" Meter			
	Fixture Units (FU)	Gallons Per Minute (GPM)	Gallons Per Day (GPD)
A. Proposed Domestic:	0	0	0
B. Proposed Irrigation:	130	50	4,600
C. Total Proposed:	130	50	4,600
D. Demolition:	None	0	0
E. Net Total:	130	50	4,600
F. Existing To Remain:	0	0	0
G. Grand Total:	130	50	4,600

Notes:  
 1. Irrigation will occur during non-peak hours.  
 2. Exist. flows calculated from as-built dwgs.

Baseline Curve Data

$\Delta = 38^{\circ}06'20''$   
 $\Delta/2 = 19^{\circ}03'10''$   
 $R = 4000.00'$   
 $T = 1363.31'$   
 $Ch = 2611.51'$   
 $Lc = 2660.27'$



G - WM# 91070185	
DESCRIPTION OF WORK	ESTIMATE
2" Meter Installation Charge	\$225.00 NA
Water System Facilities Charges (Transmission & Storage)	
50 F.U. X \$620.85	\$31,042.50
120 F.U. X \$220.29	\$26,434.80
Fire Service Meter Installation Charge One-Time Charge	NA NA NA
<b>TOTAL</b>	<b>\$57,702.30</b>

B.W.S. FLOW REQUIREMENTS			
P/ID 1063071 (M/N): 91070185 2" Meter			
	Fixture Units (FU)	Gallons Per Minute (GPM)	Gallons Per Day (GPD)
A. Proposed Domestic:	0	0	0
B. Proposed Irrigation:	170	58	13,600
C. Total Proposed:	170	58	13,600
D. Demolition:	175	60	14,070
E. Net Total:	-(5)	-(2)	-(470)
F. Existing To Remain:	0	0	0
G. Grand Total:	170	58	13,600

Notes:  
 1. Irrigation will occur during non-peak hours.  
 2. Exist. flows calculated from as-built dwgs.

**Note:**  
 The estimates are subject to change. A formal written quotation maybe obtained and all payments for the charges shown on the quotation made within 30 days after the construction plan is approved by BWS. If payments are not received within 30 days prior, the project will be subject to the prevailing rates.

Credits will be determined when the building permit applications is submitted for BWS review and approval.

**LEGEND**

Approximate Boring Location

**Note:**  
 For locations of new light standards, see elec. dwgs.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
 SIGNATURE: *Lance S. Oyama* EXPIRATION DATE: APRIL 30, 2004

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**ROADWAY PLAN**

INTERSTATE ROUTE H-1 REHABILITATION  
 OLA LANE TO KALIHI STREET  
 PROJECT NO. H1H-01-00M

Scale: 1"=40' Date: October 31, 2002

**SHEET No. C-15 OF C-59 SHEETS**