

LEGEND:

A.C.	Asphalt Concrete	ELEV./EL.	Elevation	SMH	Sewer Manhole
BC	Bottom Curb	G.P.	Guard Post/Guy Post/Gate Post	SPR.	Sprinkler
BFP	Back Flow Preventer	H	Height	STA.	Station
BOT.	Bottom	ICV	Irrigation Control Valve	TC	Top Curb
BW	Bottom Wall	INV.	Invert	TW	Top Wall
C.B.	Catch Basin	MH	Manhole	U.P.	Utility Pole
C.L.	Chain Link	O/H	Overhead	U.P./S.L.	Utility Pole w/ Street Light
COL.	Column	PAV'T.	Pavement	W	Water
CONC.	Concrete	REF.	Reflector	WMH	Water Manhole
CRM	Concrete Rubble Masonry	S	Sewer	WV	Water Valve Box
D	Diameter or Drain	SDMH	Storm Drain Manhole	⊕	Boring Location
D.I.	Drain Inlet	S.L.	Street Light		
E/ELEC.	Electric	SLB	Street Light Box		

NOTES:

1. Azimuths and coordinates referred to Hawaii State Plane Coordinate System, NAD 83.
2. Benchmark: Referred to C#GS Disk, W-3, Top of Brass Disk, Elev.=6.09 ft., MSL.
3. Underground utility lines and/or structures, if shown, are provided for information only and are approximate. No guarantee is made on the accuracy or completeness of the information shown. The information shown may or may not be representative of actual field conditions. The underground utility lines and/or structures may or may not be present at the locations shown or other underground utility lines and/or structures not shown may be present. The user(s) of this topographic survey map shall verify the information before bidding. The user(s) shall re-verify the information, as needed, during construction.
4. As-built irrigation system is only shown for the staging area limits shown on Sht. C39. The Contractor is responsible for field verifying all as-built information.

AS-BUILT SPRINKLER SYSTEM NOTES:

1. Riser supports shall be 1/2"Ø or 3/4"Ø galvanized steel pipe or #6 reinforcing bar.
2. Pipe 4" diameter and larger shall be cast iron.
3. Line sizes up to and including 3" shall be galvanized steel pipe, copper pipe, or P.V.C. pipe, except that pipe in the roadway and shoulder areas shall be copper.

Number	Type	Pressure (psi)	Radius of Coverage	Flow (G.P.M.)	Spacings	Riser
J40	Jet-Part (P) or Full (F) Circle, 5/32" Nozzle	30	39	3.8	48'	3/4" I.P.S.
P40	Pop-Up Part (P) or Full Circle, 5/32" Nozzle	30	38	3.9	48'	3/4" I.P.S.

"PRESSURE" is the minimum pressure, in pounds per square inch, which is available at the base of the last head. The operating pressure of acceptable heads must not exceed this value when operating at the tabulated flow and radius.

"RADIUS OF COVERGENCE" is the minimum radius at the tabulated pressure.

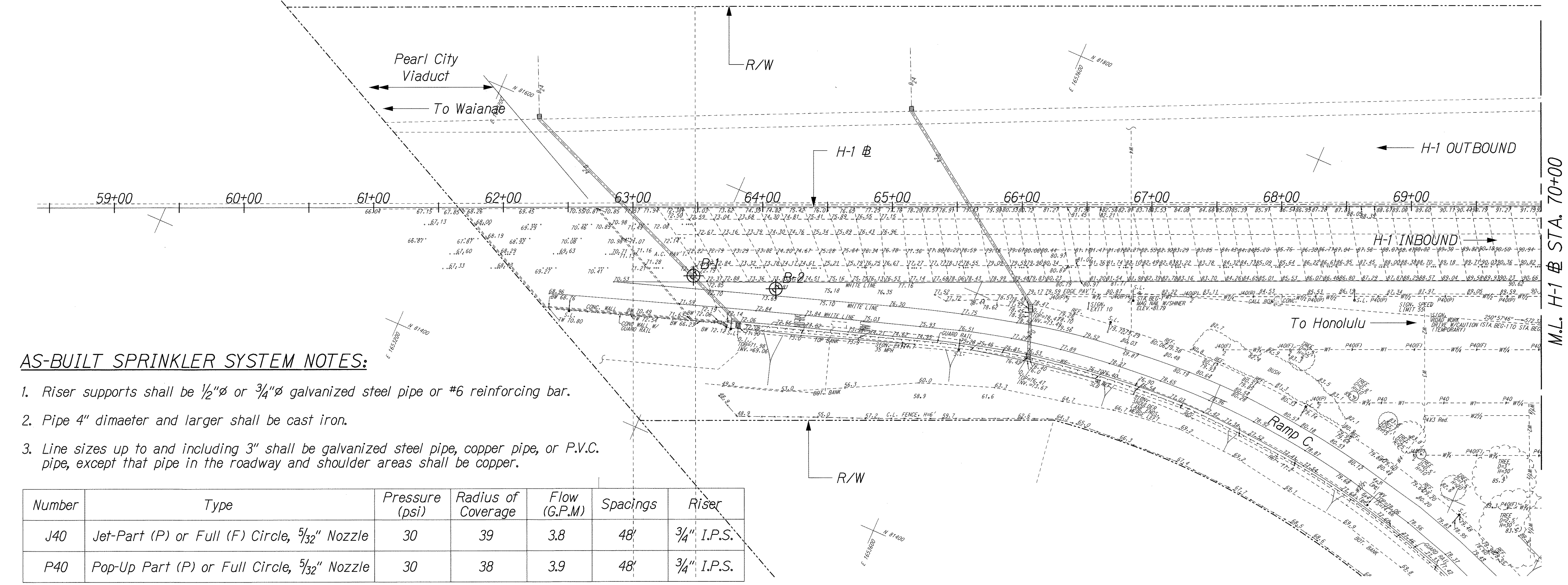
"FLOW" is the maximum flow, in gallons per minute, which is discharged at the tabulated pressure.

"SPACING" is the center to center spacing of sprinkler heads, unless otherwise noted.

2 Indicates height of riser (top of riser to finish grade) in feet. One (1) foot when no designation is shown, except for pop-ups where heads shall be installed flush with finish grade.

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(245)	2005	149	183

TRUE NORTH
SCALE: 1" = 40'



DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
CHECKED BY	_____
NO.	_____

16/COE H-1 REHAB/EXISTING/EX-01.dgn

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITIONS & BORINGS
@ STA. 63+00 TO 70+00

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

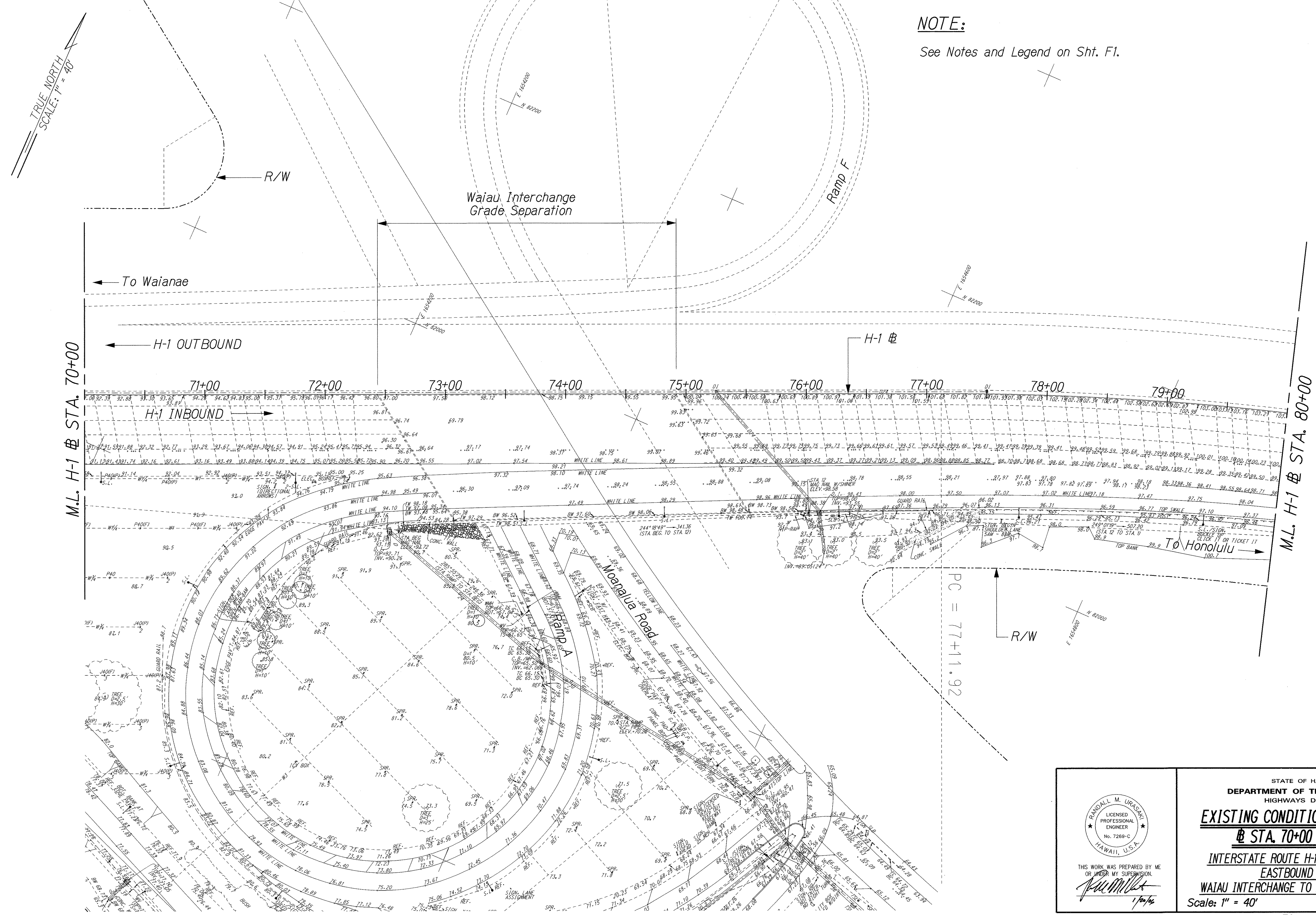
RANDALL M. URASAKI
LICENSED PROFESSIONAL ENGINEER
No. 7269-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

1/24/06

SHEET No. 149 OF 183

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-K(245)	2005	150	183



NOTE:
See Notes and Legend on Sht. F1.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DESIGNED BY		
CHECKED BY		
NOTED BY		

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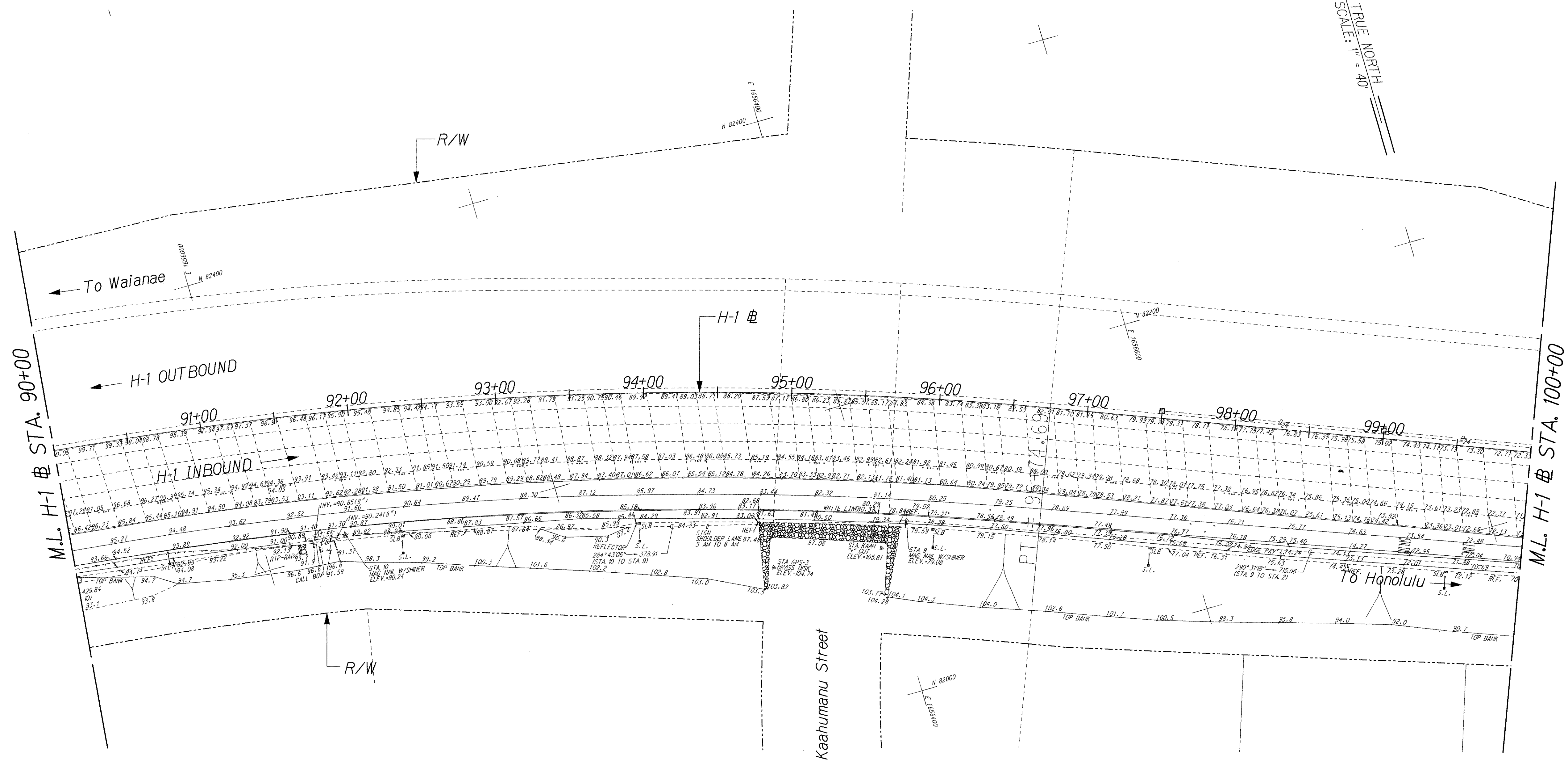
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITIONS & BORINGS
@ STA. 70+00 TO 80+00

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(245)	2005	152	183



NOTE:
See Notes and Legend on Sht. F1.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
TRACED BY		
DESIGNED BY		
CHECKED BY		
NAME		

J:\COE H-1 REHAB\EXISTING\EX-04.dgn

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HIGHWAYS DIVISION

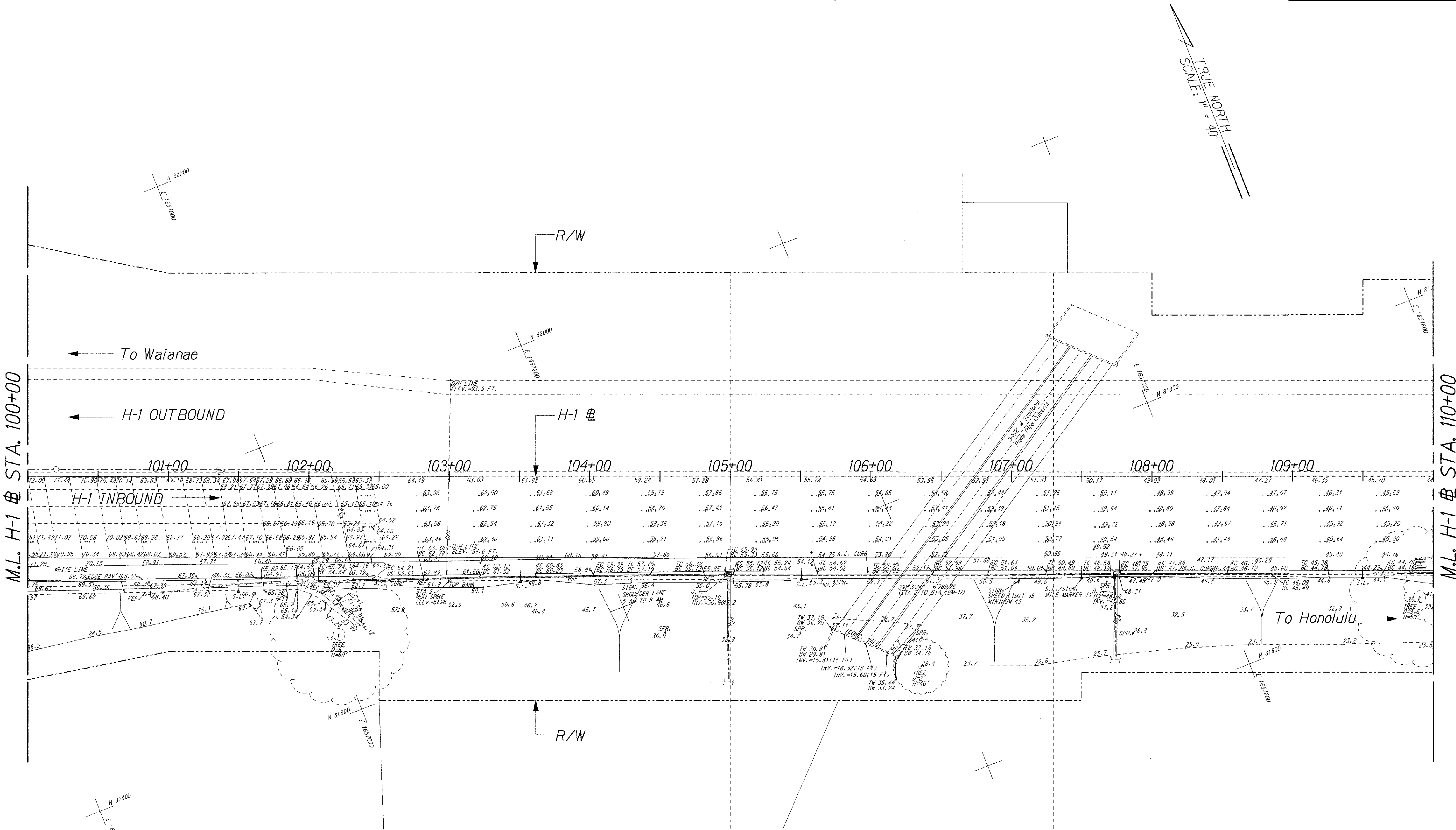
EXISTING CONDITIONS & BORINGS
@ STA. 90+00 TO 100+00

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

SHEET No. F4 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-K(245)	2005	153	183



NOTE:
See Notes and Legend on Sht. F1.

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	

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Randall M. Urasak

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

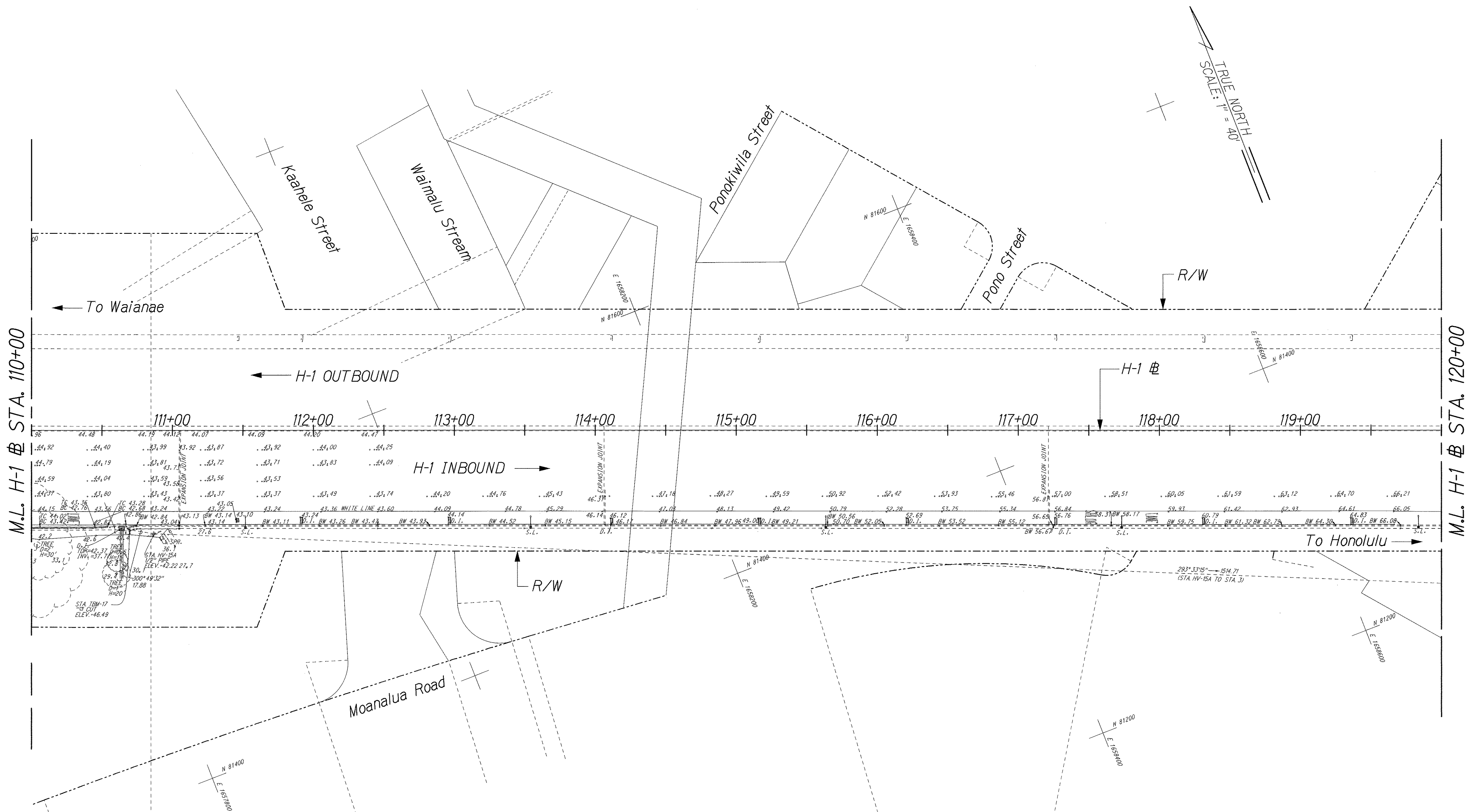
EXISTING CONDITIONS & BORINGS
@ STA. 100+00 TO 110+00

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

SHEET No. F5 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-K(245)	2005	154	183



NOTE:
See Notes and Legend on Sht. F1.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DESIGNED BY	DRAWN BY	
CHECKED BY	NOTED BY	
NO.		

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITIONS & BORINGS
ST. 110+00 TO 120+00

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

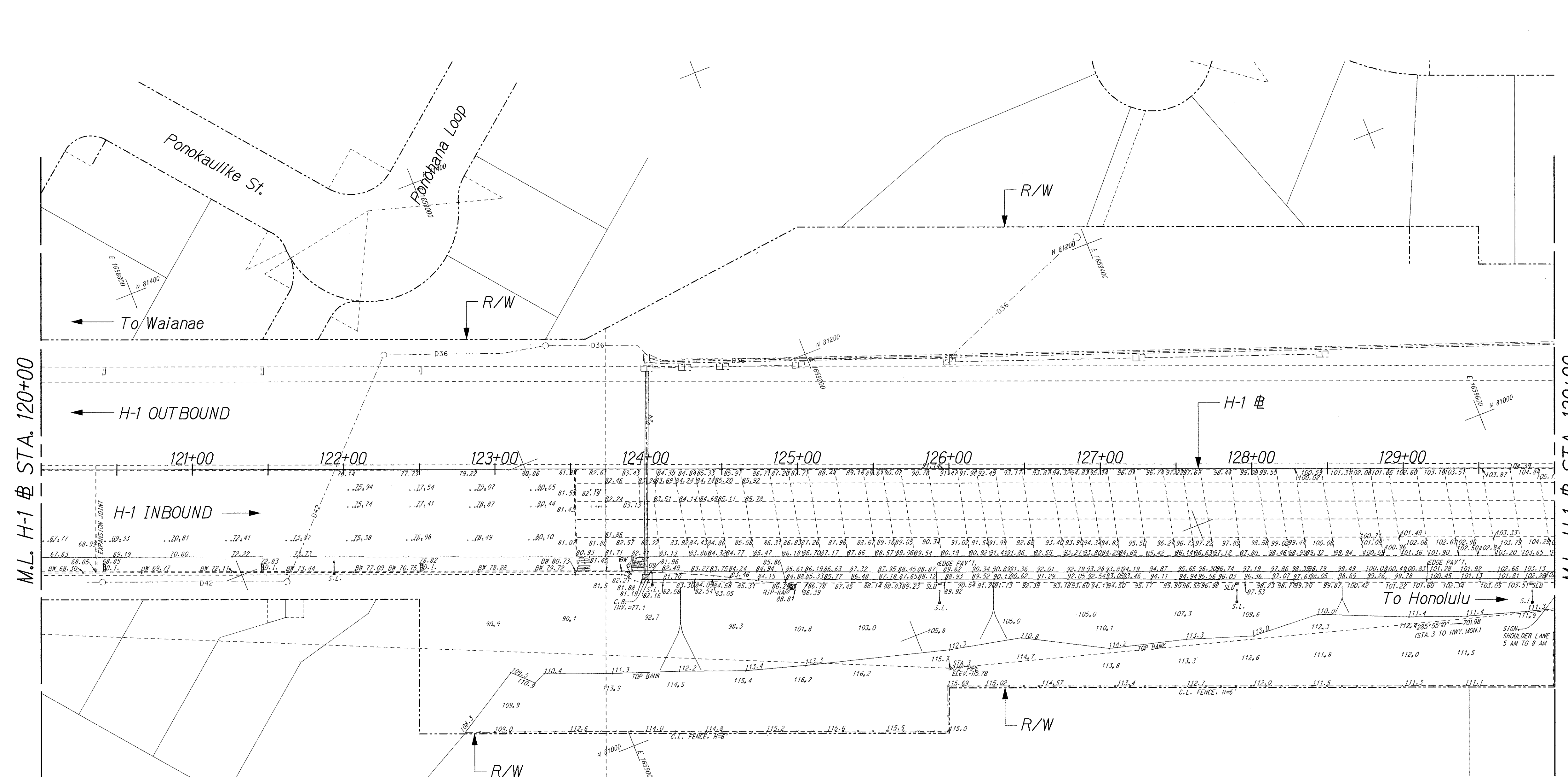
SHARDALL M. URASAKI
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HAWAII, U.S.A.

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1/24

SHEET No. F6 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-K(245)	2005	155	183



NOTE:
See Notes and Legend on Sht. F1.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DESIGNED BY		
CHECKED BY		
NO.		

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R. M. Urasaka
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITIONS & BORINGS
ST. 120+00 TO 130+00

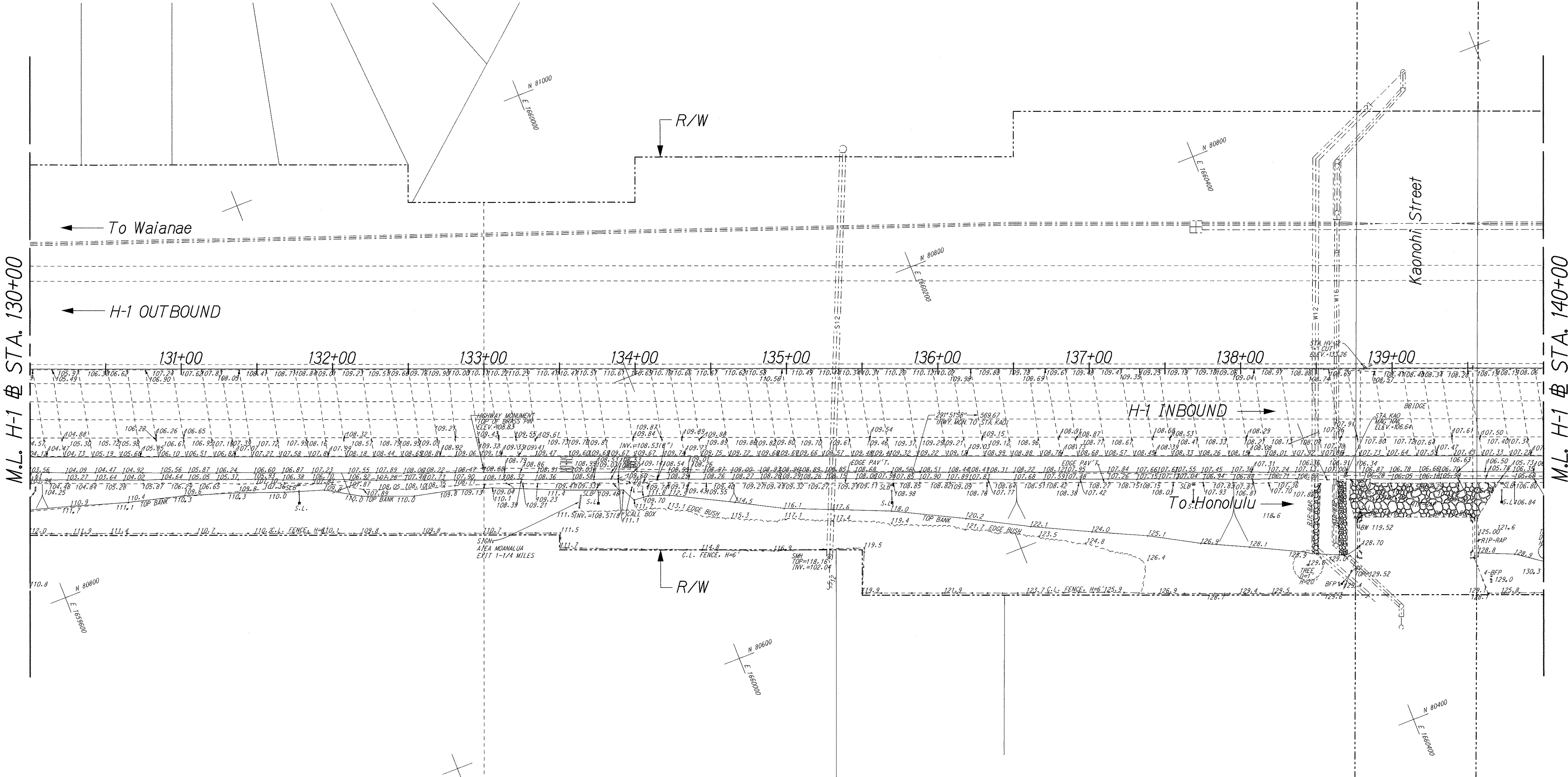
INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

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FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-K(245)	2005	156	183

TRUE NORTH
SCALE: 1" = 40'



NOTE:
See Notes and Legend on Sht. F1.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
TRACED BY	DRAWN BY	
DESIGNED BY	CHECKED BY	
NOTED BY		

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STATE OF HAWAII
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HIGHWAYS DIVISION

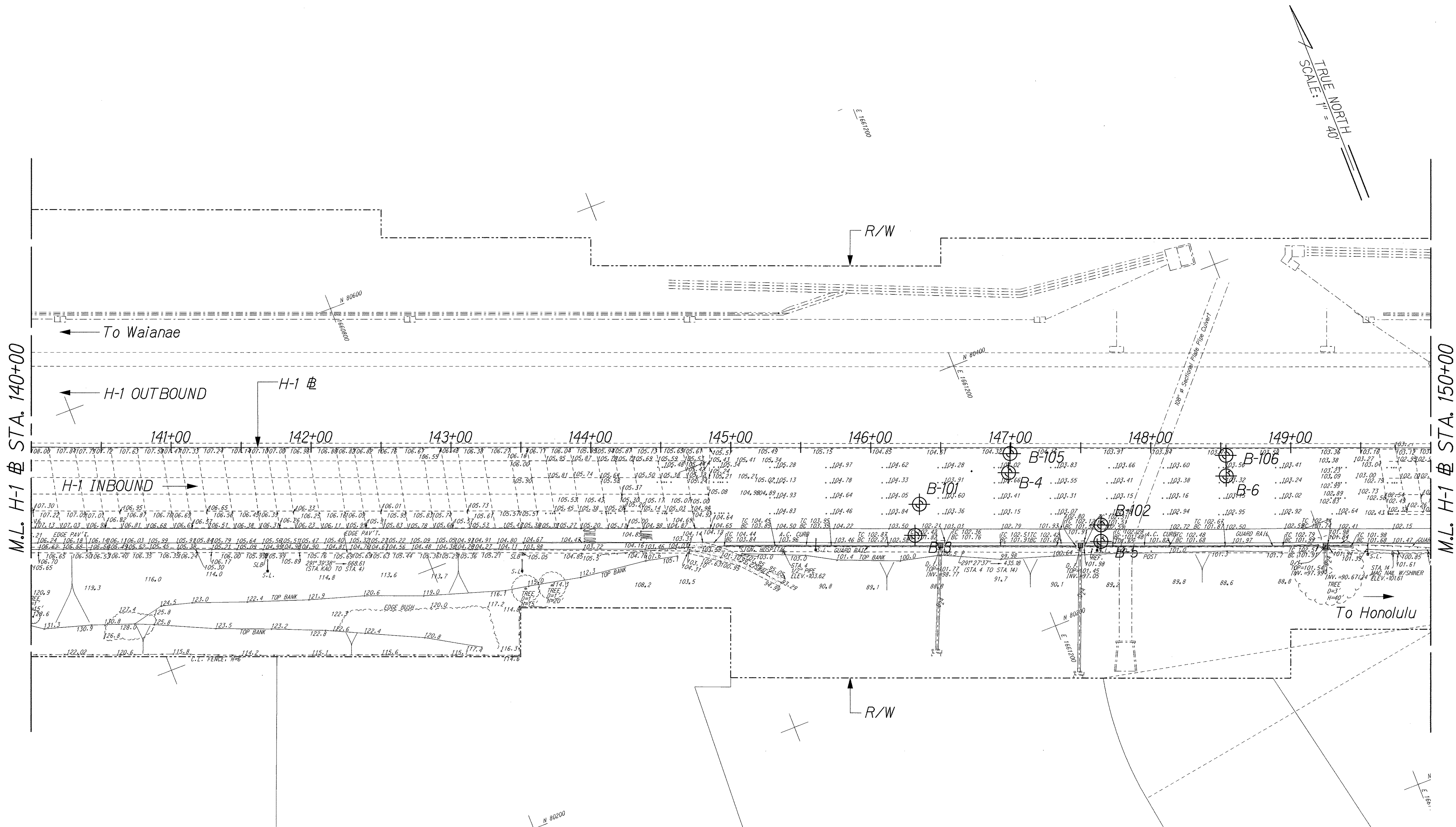
EXISTING CONDITIONS & BORINGS
@ STA. 130+00 TO 140+00

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

SHEET No. F8 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-K(245)	2005	157	183



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
TRACED BY		
DESIGNED BY		
CHECKED BY		
NO.		

NOTE:
See Notes and Legend on Sht. F1.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITIONS & BORINGS
STA. 140+00 TO 150+00

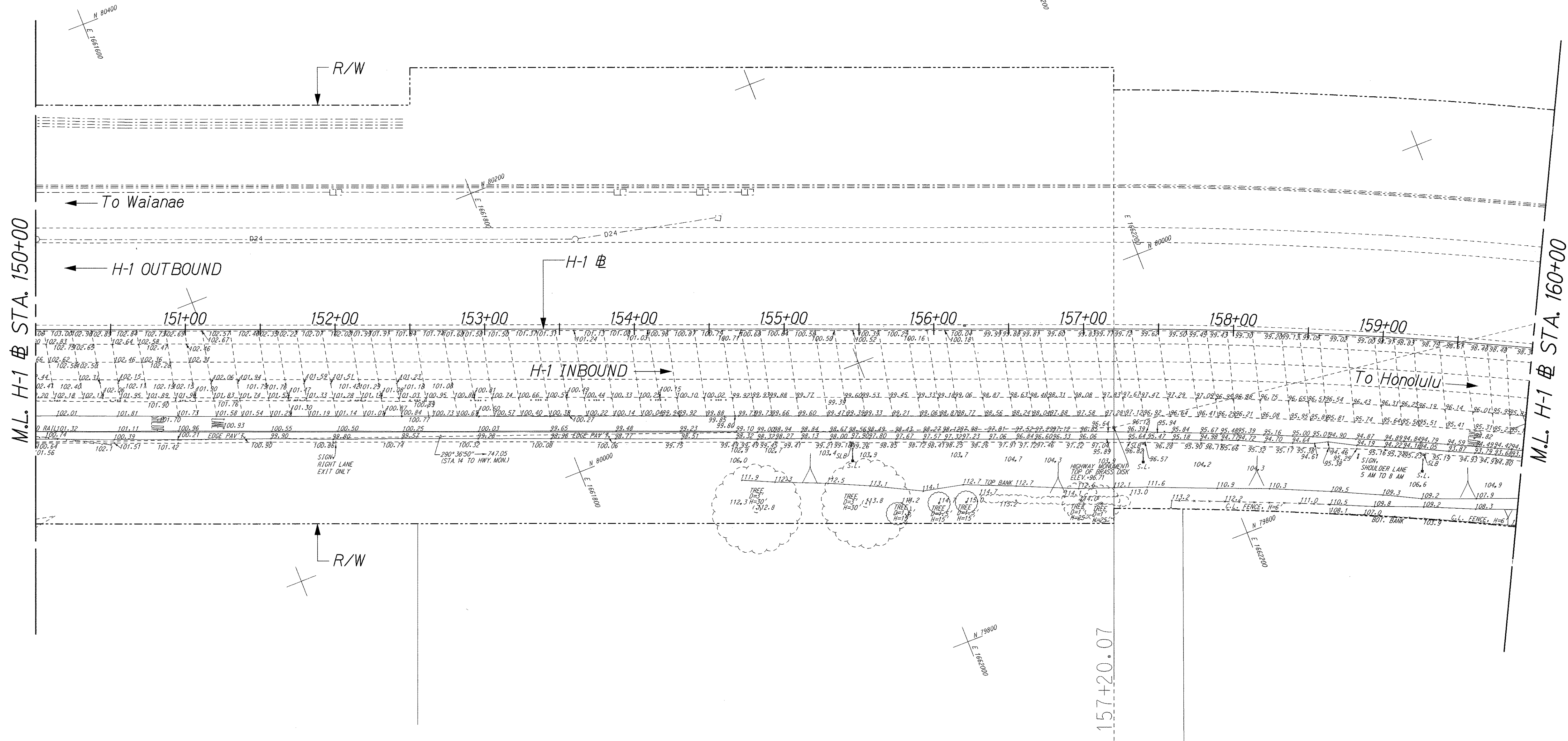
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EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

SHEET No. F9 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-K(245)	2005	158	183

TRUE NORTH
SCALE: 1" = 40'



NOTE:
See Notes and Legend on Sht. F1.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
TRACED BY		
DESIGNED BY		
CHECKED BY		
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITIONS & BORINGS
@ STA. 150+00 TO 160+00

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

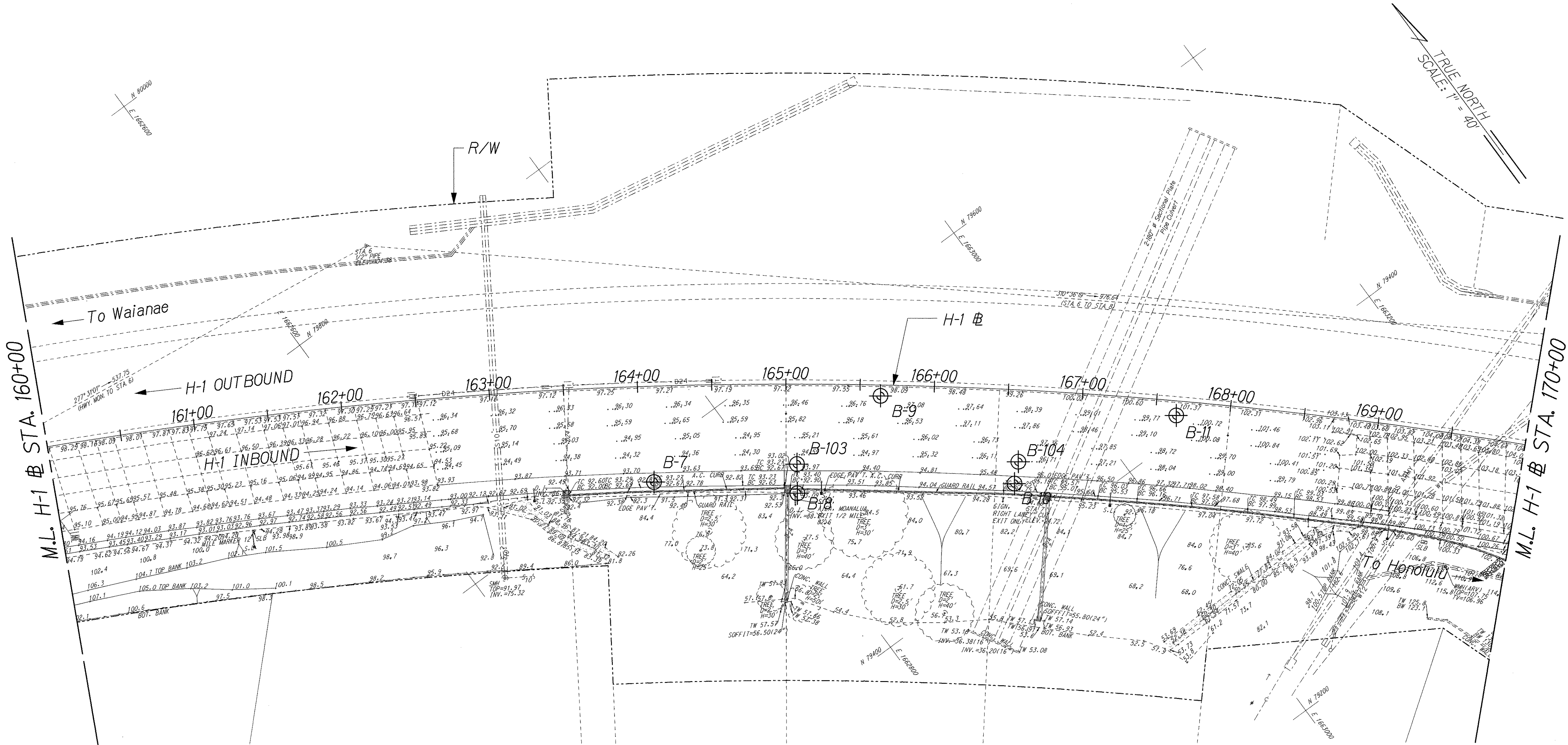
RANDALL M. URASAKI
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SHEET No. F10 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-K(245)	2005	159	183



NOTE:
See Notes and Legend on Sht. F1.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DESIGNED BY	_____	_____
CHECKED BY	_____	_____
NOTED BY	_____	_____

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITIONS & BORINGS
STA. 160+00 TO 170+00

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

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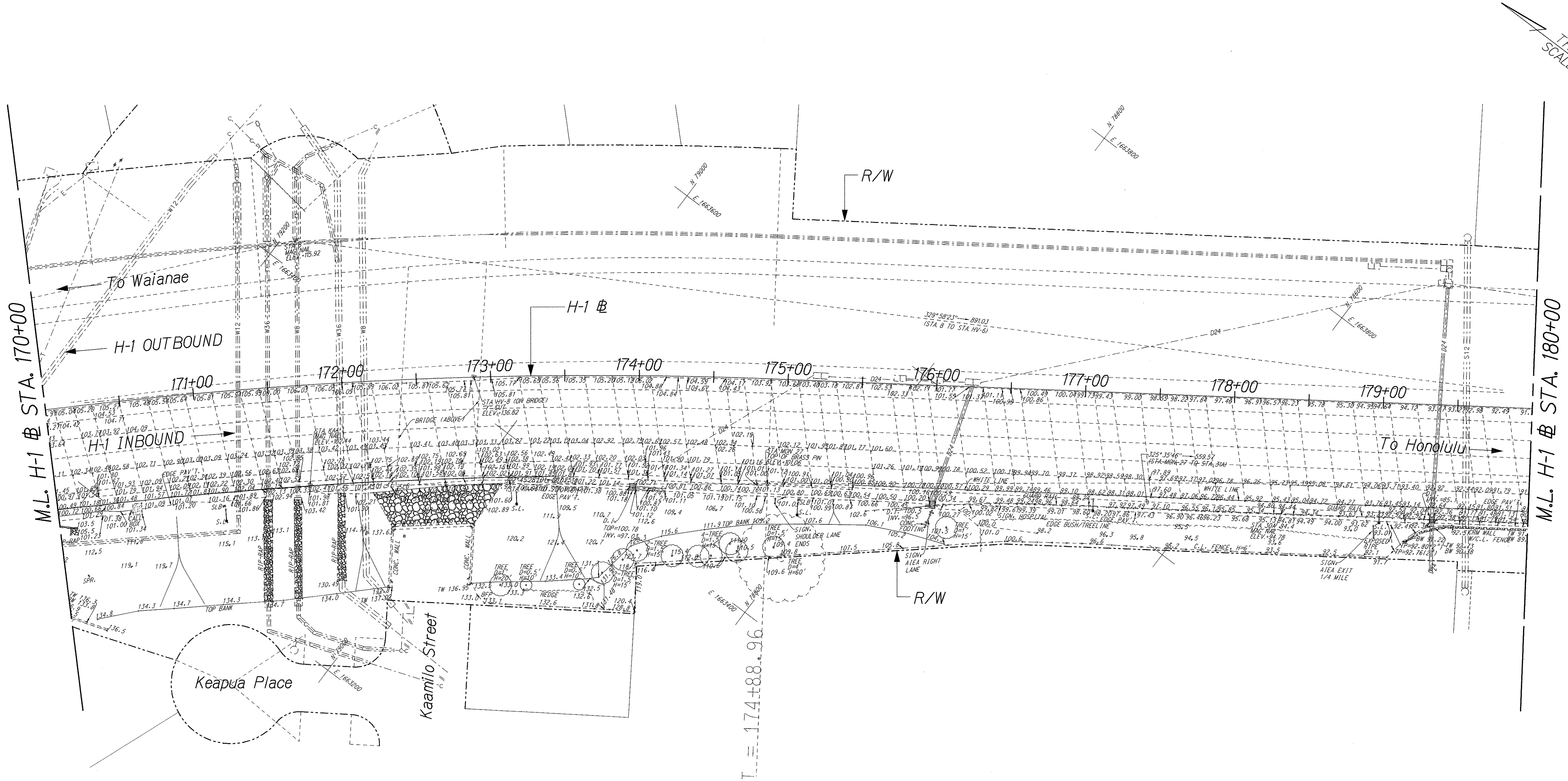
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITIONS & BORINGS
STA. 160+00 TO 170+00

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-K(245)	2005	160	183



NOTE:

See Notes and Legend on Sht. F1.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
TRACED BY		
DESIGNED BY		
CHECKED BY		
N.		

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HIGHWAYS DIVISION

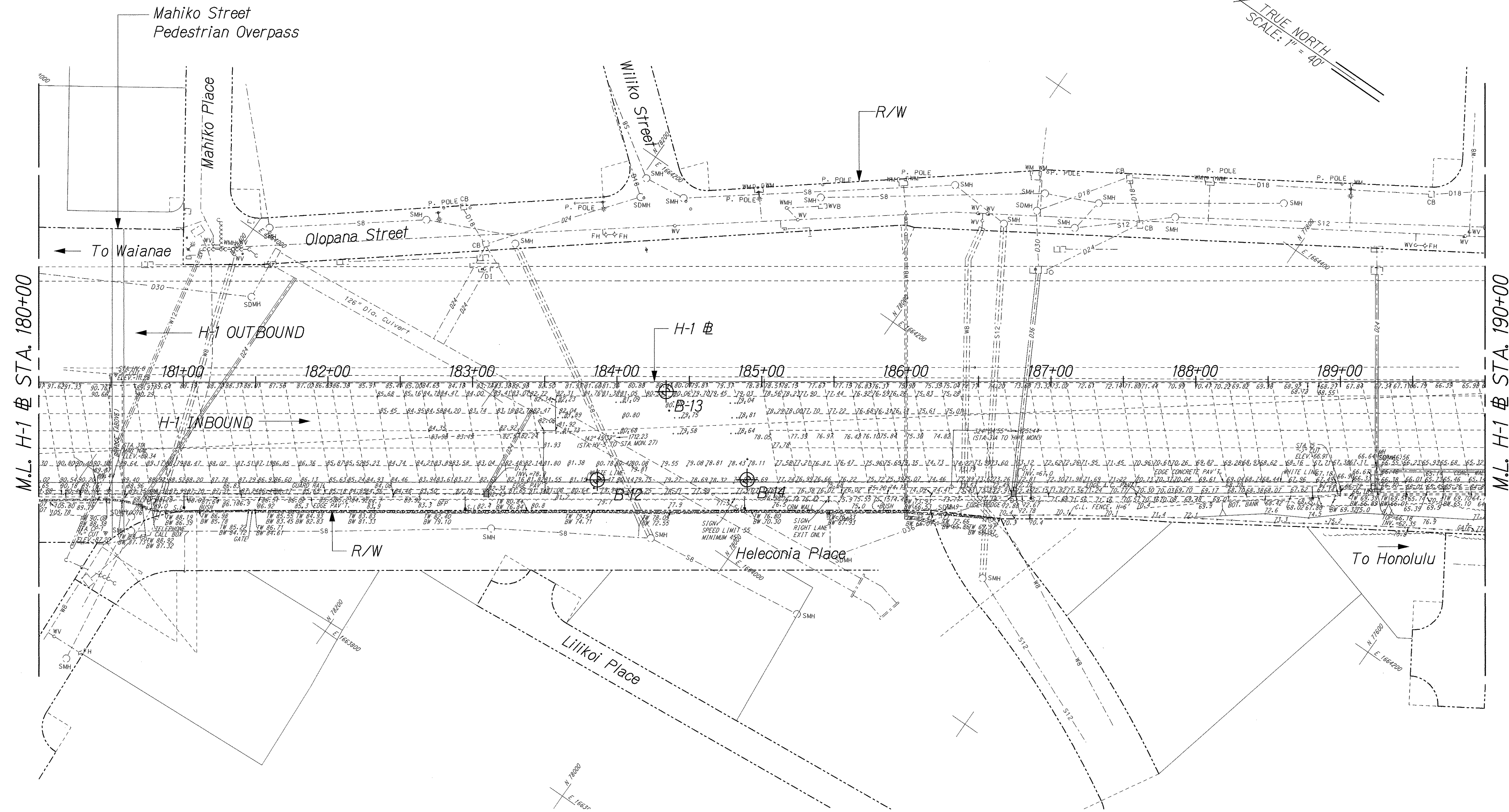
EXISTING CONDITIONS & BORINGS
@ STA. 170+00 180+00

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

SHEET No. F12 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-K245	2005	161	183



TRUE NORTH
SCALE: 1" = 40'

M.L. H-1 @ STA. 180+00

M.L. H-1 @ STA. 190+00

NOTE:
See Notes and Legend on Sht. F1.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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DESIGNED BY		
CHECKED BY		
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J:\COE H1 REHAB\EXISTING\EX-13.dgn

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

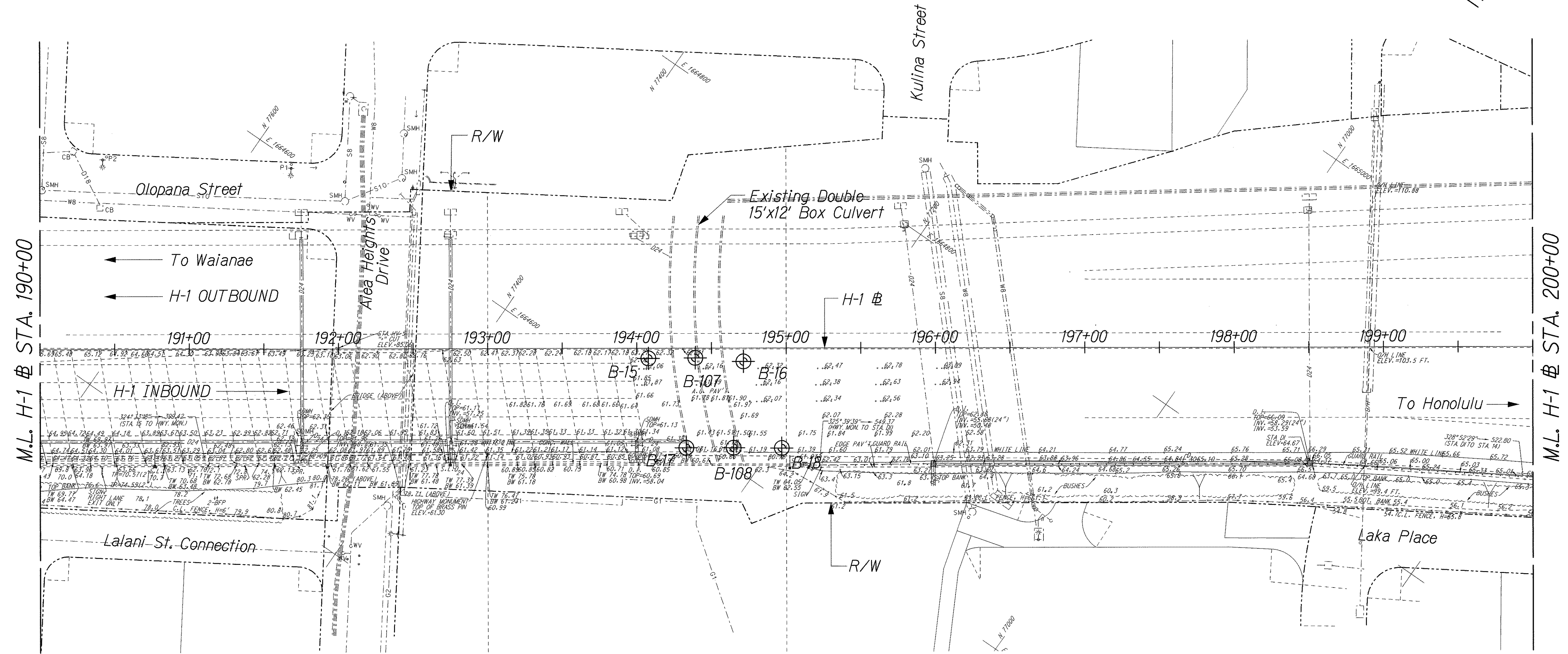
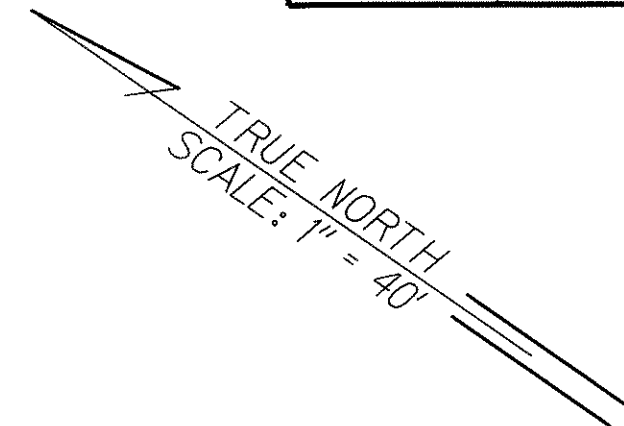
EXISTING CONDITIONS & BORINGS
@ STA. 180+00 TO 190+00

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

SHEET No. F13 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-H1-K(245)	2005	162	183



NOTE:
See Notes and Legend on Sht. F1.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	DESIGNED BY	
	CHECKED BY	

\\CDE\H1 REHAB\EXISTING\EX-14.dgn

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Randall M. Urasak

STATE OF HAWAII
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HIGHWAYS DIVISION

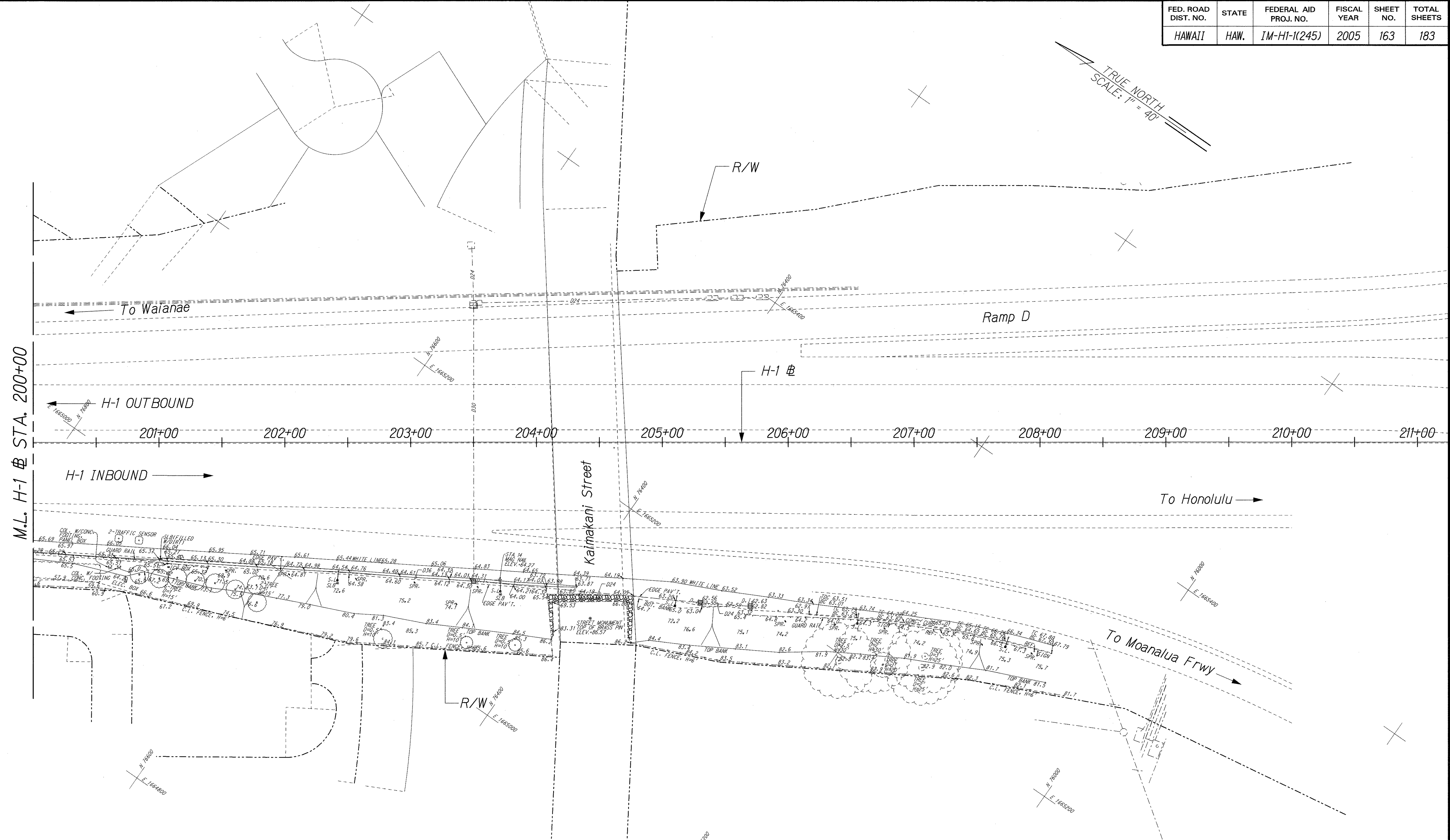
EXISTING CONDITIONS & BORINGS
@ STA. 190+00 TO STA. 200+00

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

SHEET No. F14 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-K(245)	2005	163	183



NOTE:
See Notes and Legend on Sht. F1.

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING CONDITIONS & BORINGS
@ STA. 200+00 TO END PROJECT

INTERSTATE ROUTE H-1 REHABILITATION
EASTBOUND LANES
WAI'AU INTERCHANGE TO KAIMAKANI STREET

Scale: 1" = 40' Date: Jan. 24, 2006

SHEET No. F15 OF 15 SHEETS