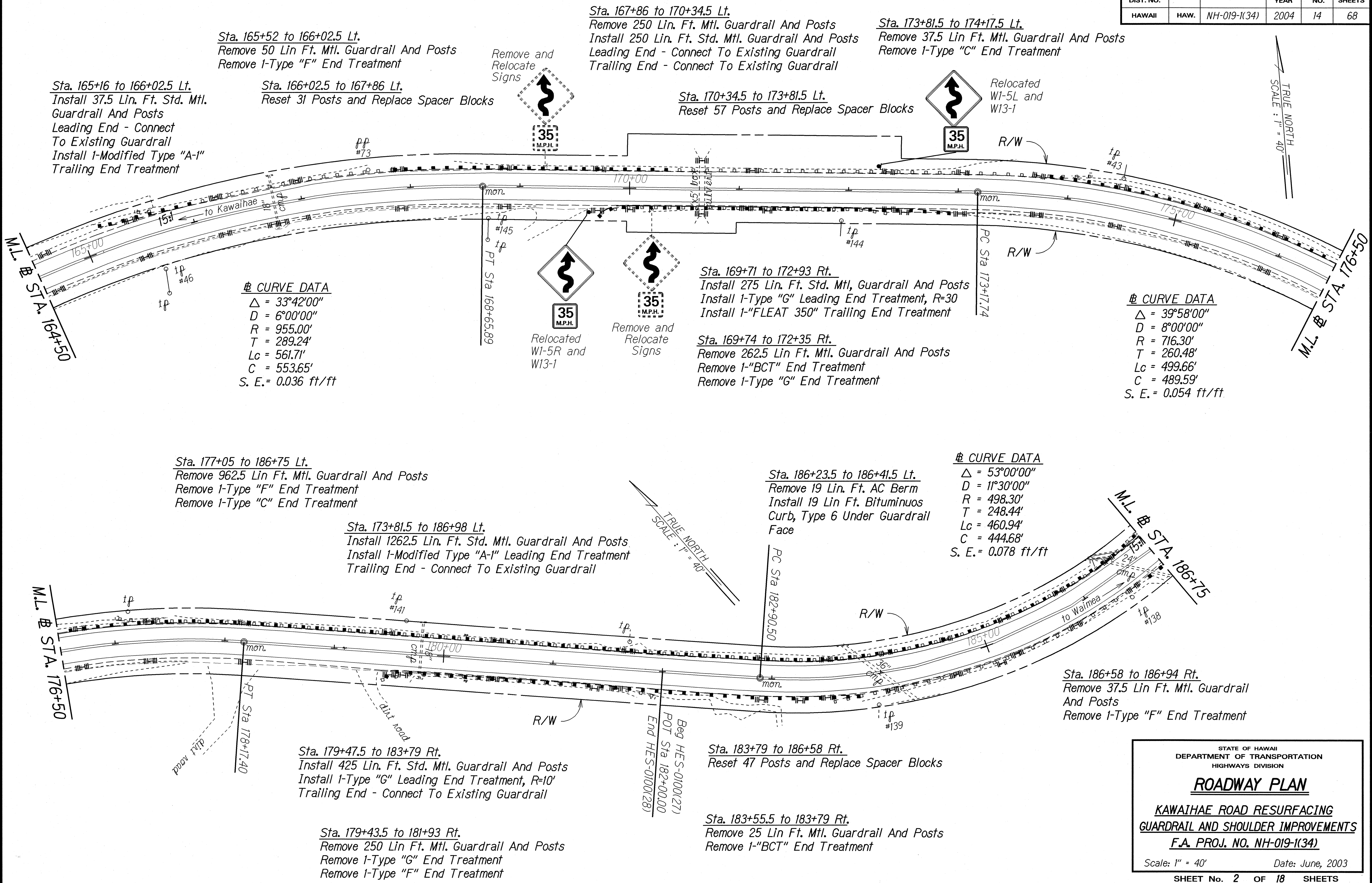


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	14	68

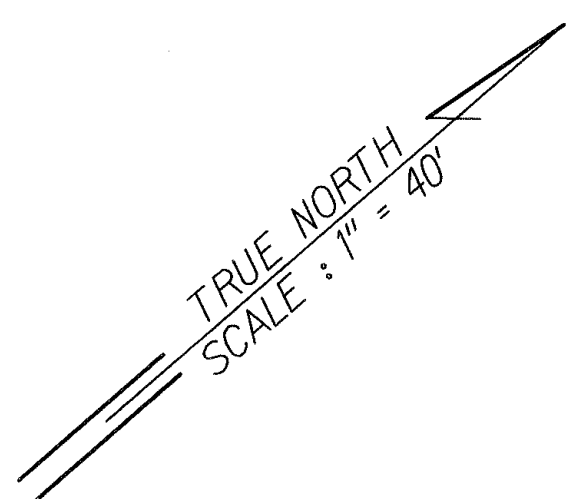


DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
DATE	4/16/02
NO.	1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN
KAWAIIHAE ROAD RESURFACING
GUARDRAIL AND SHOULDER IMPROVEMENTS
F.A. PROJ. NO. NH-019-1(34)
Scale: 1" = 40'
Date: June, 2003
SHEET No. 2 OF 18 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	15	68



M.L. # STA. 186+75
to Kawaihae

Sta. 186+58 to 187+43 Rt.
Install 37.5 Lin. Ft. Std. Mtl. Guardrail And Posts
Leading End - Connect To Existing Guardrail
Install 1-Modified Type "A-1" Trailing End Treatment

Sta. 192+93 to 193+24 Lt.
Remove 30 Lin. Ft. A/C, Berm
Install 30 Lin. Ft. Bituminous Berm, Type 6 Under Face of Guardrail

Sta. 192+93.5 to 193+86 Lt.
Remove 87.5 Lin. Ft. Mtl. Guardrail and post
Remove 1-Type "G" End Treatment
Sta. 192+30.5 to 193+86 Lt.
Install 100 Lin. Ft. Std. Mtl. Guardrail And Posts
Leading End - Connect To Existing Guardrail
Install 1-Modified Type "A-1" Trailing End Treatment

Sta. 196+70.5 to 197+09 Lt.
Remove 37.5 Lin. Ft. Mtl. Guardrail and post
Install 37.5 Lin. Ft. Std. Mtl. Guardrail And Post
Leading End - Connect To Existing Guardrail
Trailing End - Connect To Existing Guardrail

Sta. 193+86 to 196+70.5 Lt.
Reset 45 Posts and Replace Spacer Blocks

Sta. 197+09 to 200+21.5 Lt.
Reset 53 Posts and Replace Spacer Blocks

CURVE DATA
Δ = 78°01'00"
D = 11°20'04.1"
R = 505.50'
T = 409.47'
Lc = 688.31'
C = 636.36'
S. E. = 0.086 ft/ft

ADOPT A HIGHWAY LITTER CONTROL NEXT 2 MILES

Sta. 196+80.5 to 197+35 Rt.
Remove 50 Lin. Ft. Mtl. Guardrail And Posts
Remove 1-Type "F" End Treatment

Sta. 196+80.5 to 197+54.5 Rt.
Install 25 Lin. Ft. Std. Mtl. Guardrail And Posts
Leading End - Connect To Existing Guardrail
Install 1-Modified Type "A-1" Trailing End Treatment

Sta. 194+01 to 196+80.5 Rt.
Reset 47 Posts and Replace Spacer Blocks

Sta. 193+71.5 to 194+01 Rt.
Remove 25 Lin. Ft. Mtl. Guardrail And Posts
Remove 1-"BCT" End Treatment

193+71
Sta. 192+20 to 194+01 Rt.
Install 150 Lin. Ft. Std. Mtl. Guardrail And Posts
Install 1-"FLEAT 350" Leading End Treatment
Trailing End - Connect to Existing Guardrail

ADOPT A HIGHWAY LITTER CONTROL NEXT 2 MILES

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KAWAIHAE ROAD RESURFACING
GUARDRAIL AND SHOULDER IMPROVEMENTS
F.A. PROJ. NO. NH-019-1(34)

Scale: 1" = 40' Date: June, 2003

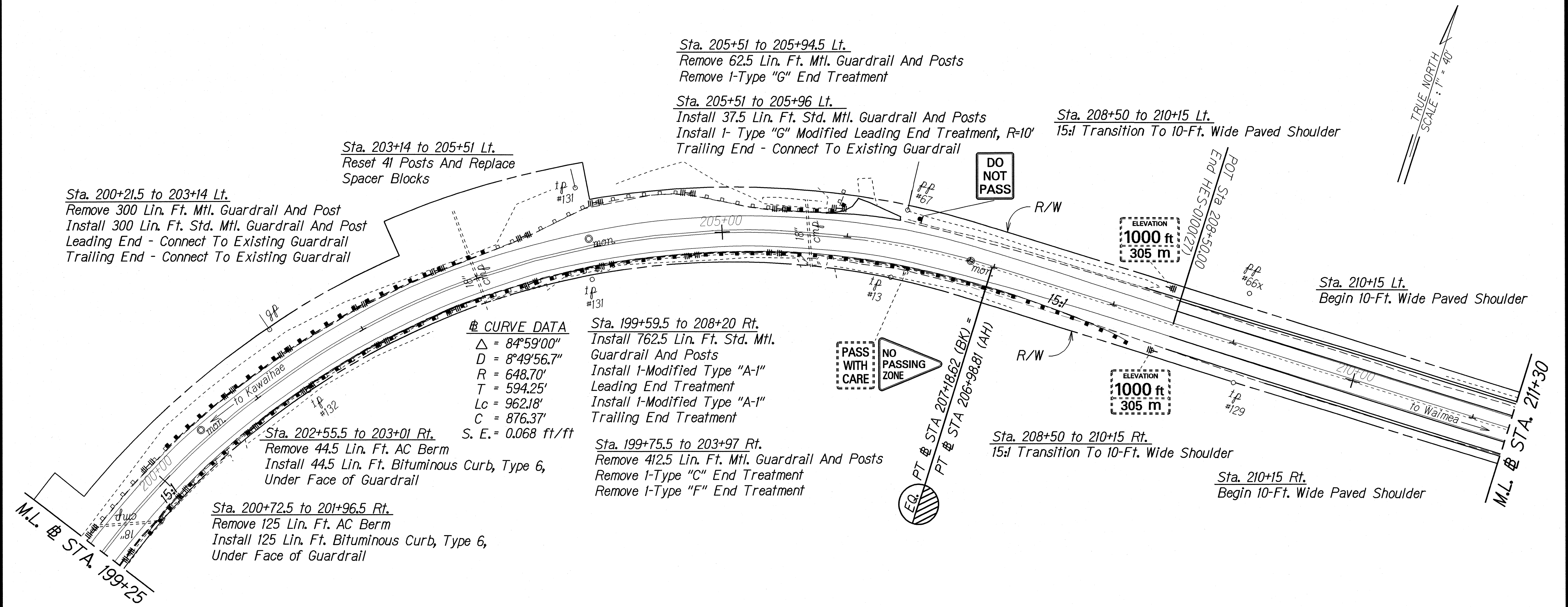
SHEET No. 3 OF 18 SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO. 257	

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"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	16	68



QUANTITY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
NUMBER	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

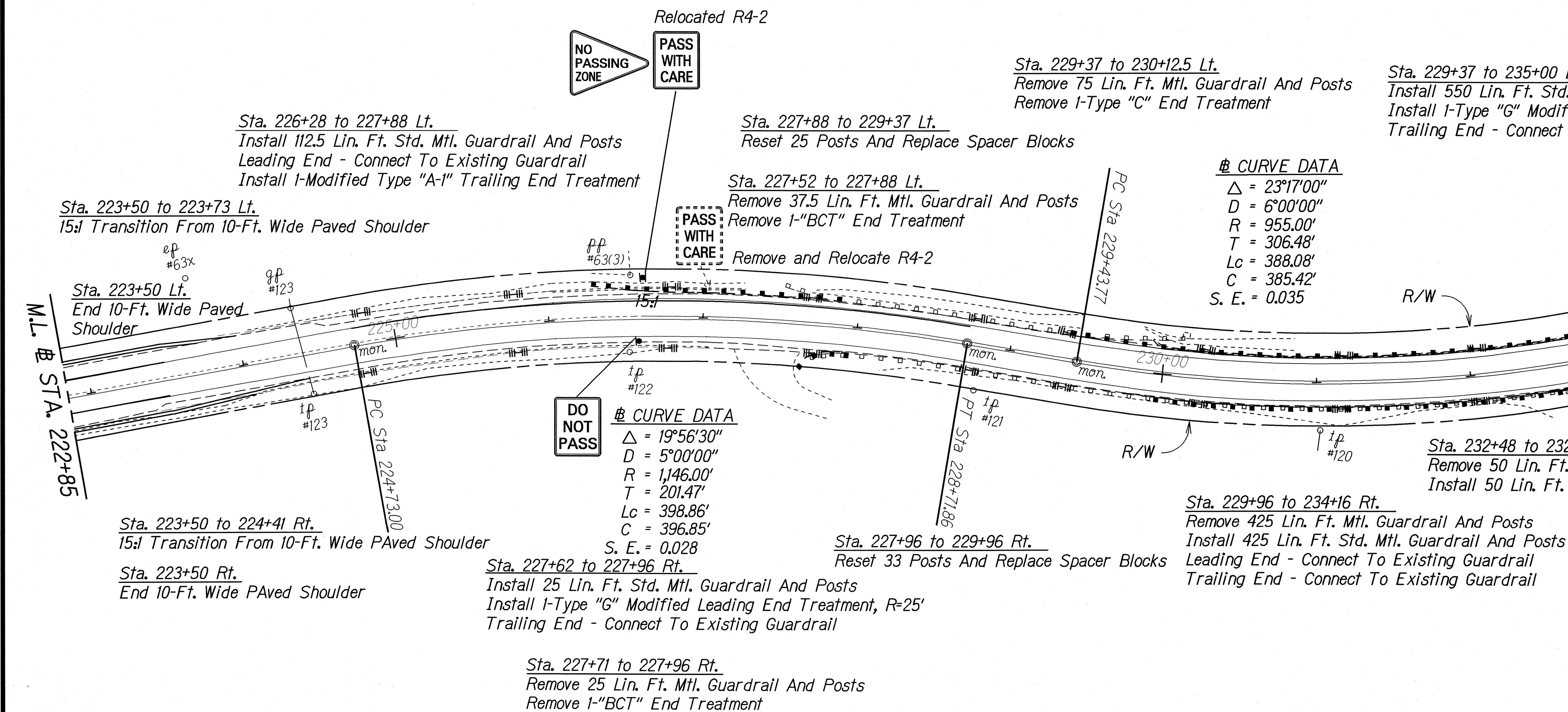
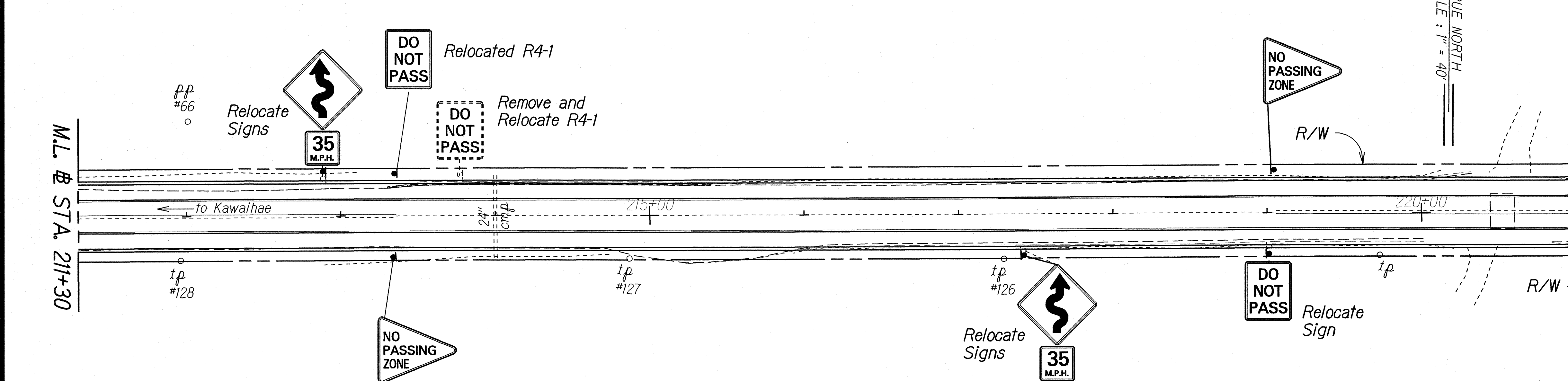
ROADWAY PLAN

KAWAIHAE ROAD RESURFACING
GUARDRAIL AND SHOULDER IMPROVEMENTS

F.A. PROJ. NO. NH-019-1(34)

Scale: 1" = 40' Date: June, 2003

SHEET No. 4 OF 18 SHEETS



STA. 222+85
 PC Sta 224+73.00
 TP #123
 TP #122
 DO NOT PASS
 CURVE DATA
 $\Delta = 19^\circ 56' 30''$
 $D = 5^\circ 00' 00''$
 $R = 1,146.00'$
 $T = 201.47'$
 $L_c = 398.86'$
 $C = 396.85'$
 $S. E. = 0.028$
 PT Sta 228+71.86
 TP #121
 mon.
 R/W
 TP #120
 Sta. 223+50 to 224+41 Rt.
 15-l Transition From 10-Ft. Wide Paved Shoulder
 Sta. 223+50 Rt.
 End 10-Ft. Wide Paved Shoulder
 Sta. 227+62 to 227+96 Rt.
 Install 25 Lin. Ft. Std. Mtl. Guardrail And Posts
 Install I-Type "G" Modified Leading End Treatment, R=25'
 Trailing End - Connect To Existing Guardrail
 Sta. 227+96 to 229+96 Rt.
 Reset 33 Posts And Replace Spacer Blocks
 Sta. 229+96 to 234+16 Rt.
 Remove 425 Lin. Ft. Mtl. Guardrail And Posts
 Install 425 Lin. Ft. Std. Mtl. Guardrail And Posts
 Leading End - Connect To Existing Guardrail
 Trailing End - Connect To Existing Guardrail
 Sta. 232+48 to 232+48 Rt.
 Remove 50 Lin. Ft.
 Install 50 Lin. Ft.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

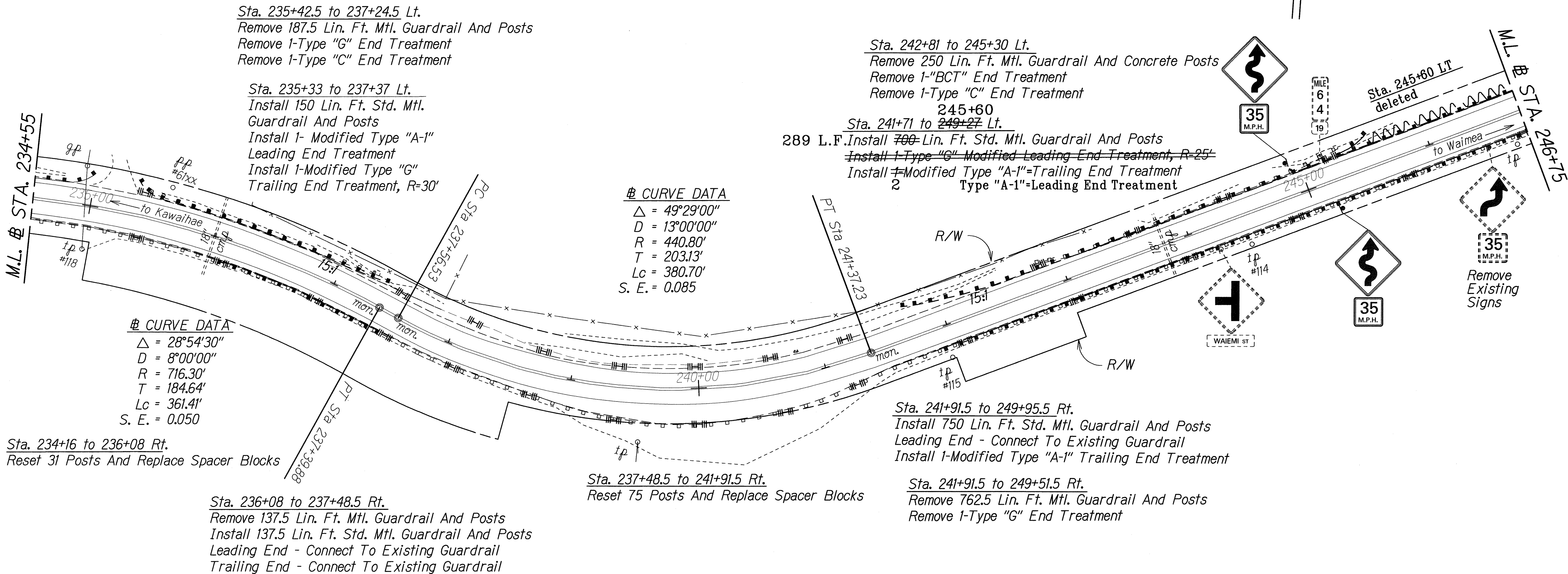
ROADWAY PLAN

KAWAIHAE ROAD RESURFACING
GUARDRAIL AND SHOULDER IMPROVEMENTS
F.A. PROJ. NO. NH-019-1(34)

Scale: 1" = 40' Date: June, 2003

SHEET No. 5 OF 18 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-K(34)	2004	18	68



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

**KAWAIHAE ROAD RESURFACING
GUARDRAIL AND SHOULDER IMPROVEMENTS**

F.A. PROJ. NO. NH-019-K(34)

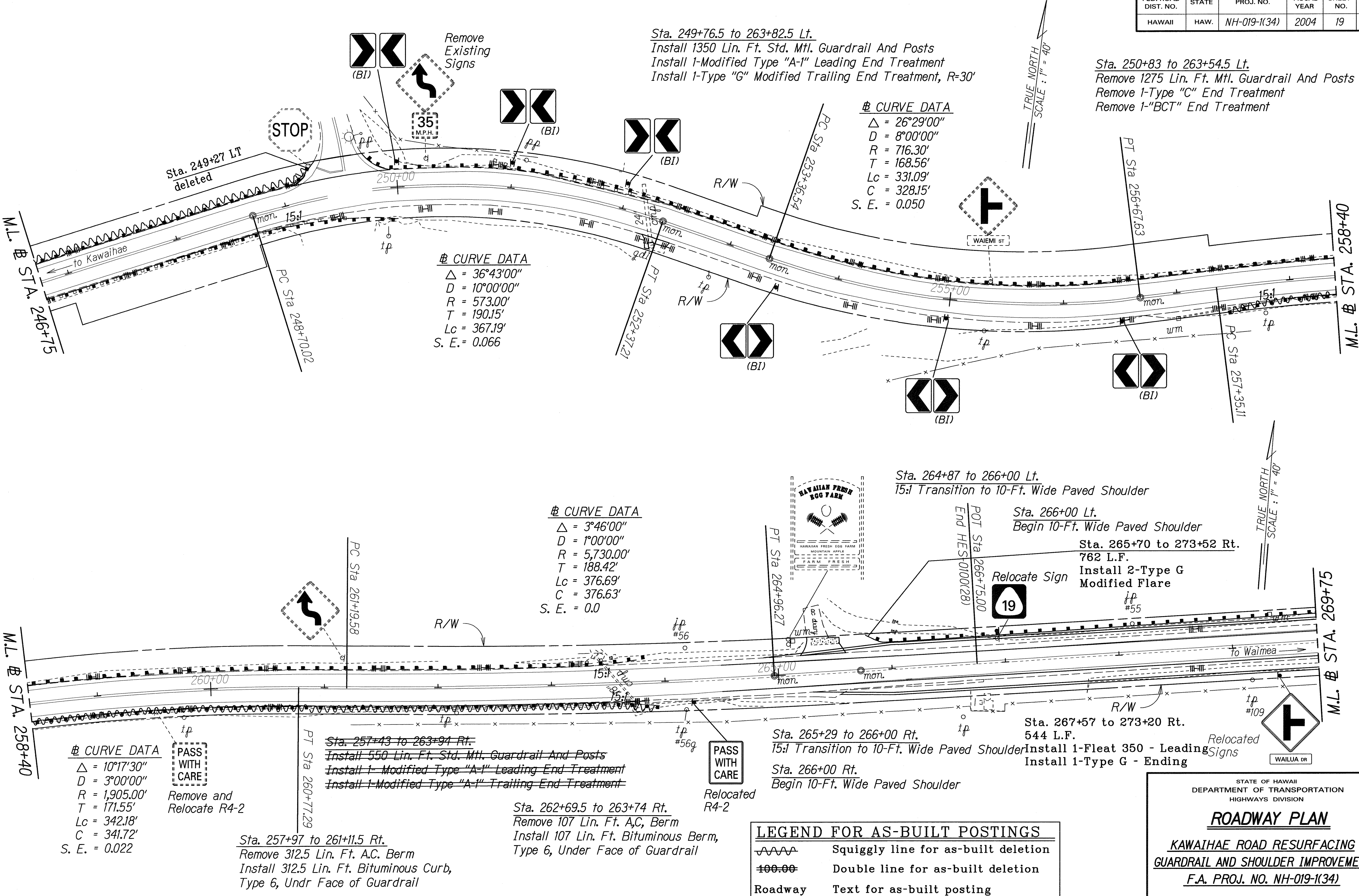
Scale: 1" = 40' Date: June, 2003

SHEET No. 6 OF 18 SHEETS

ORIGINAL PLAN	DATE
DESIGNED BY	
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
DATE	

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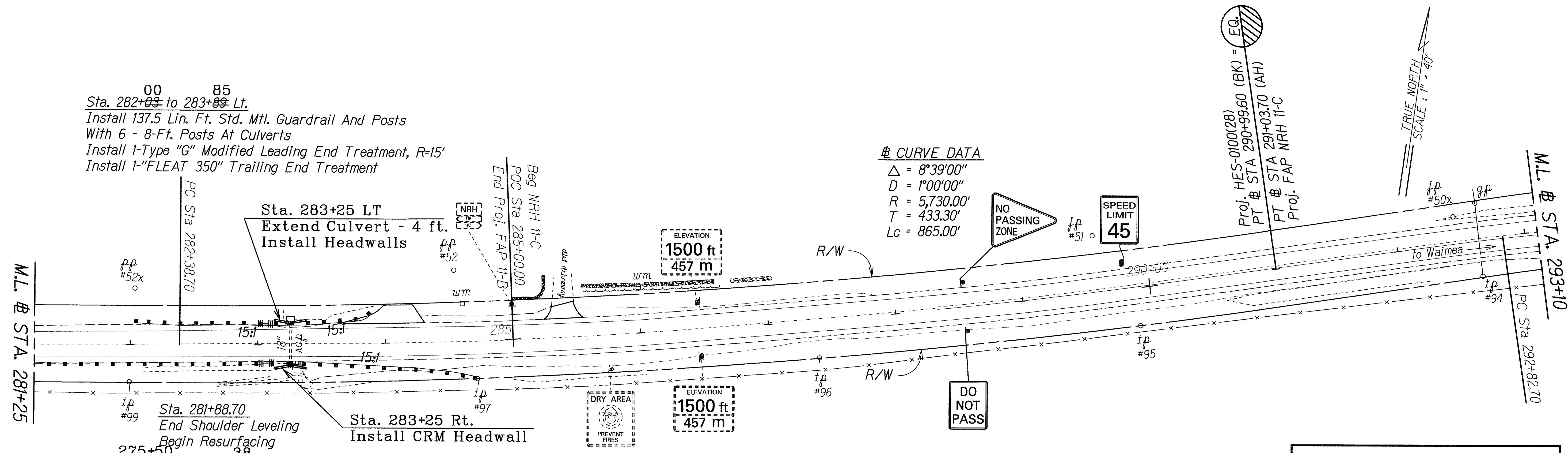
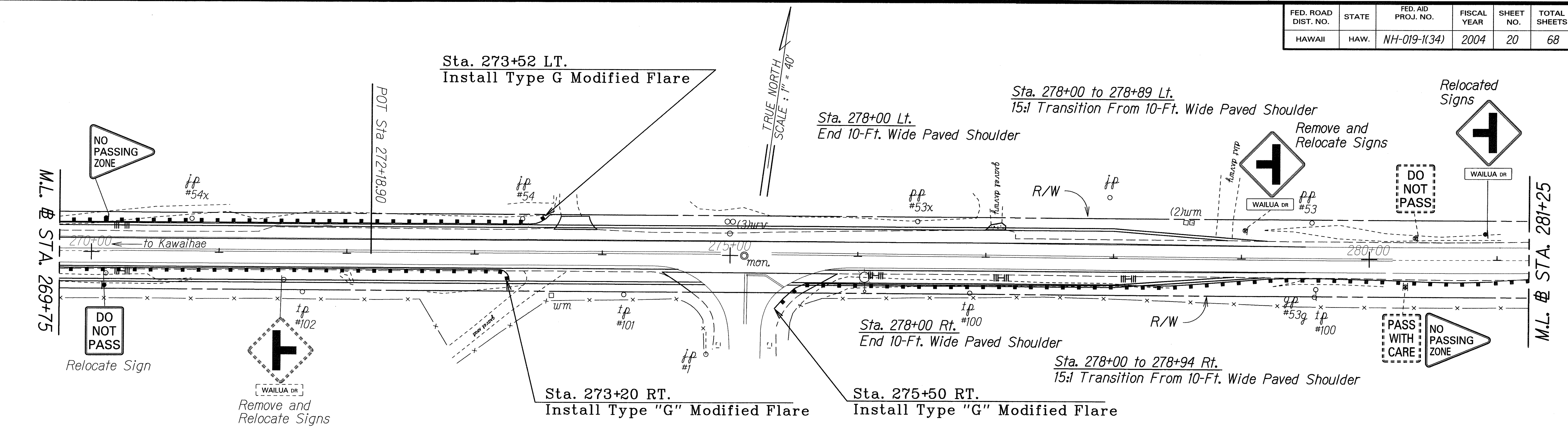
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	19	68



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

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	20	68



CURVE DATA

Δ	= 8°39'00"
D	= 1°00'00"
R	= 5,730.00'
T	= 433.30'
Lc	= 865.00'

LEGEND FOR AS-BUILT POSTINGS

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

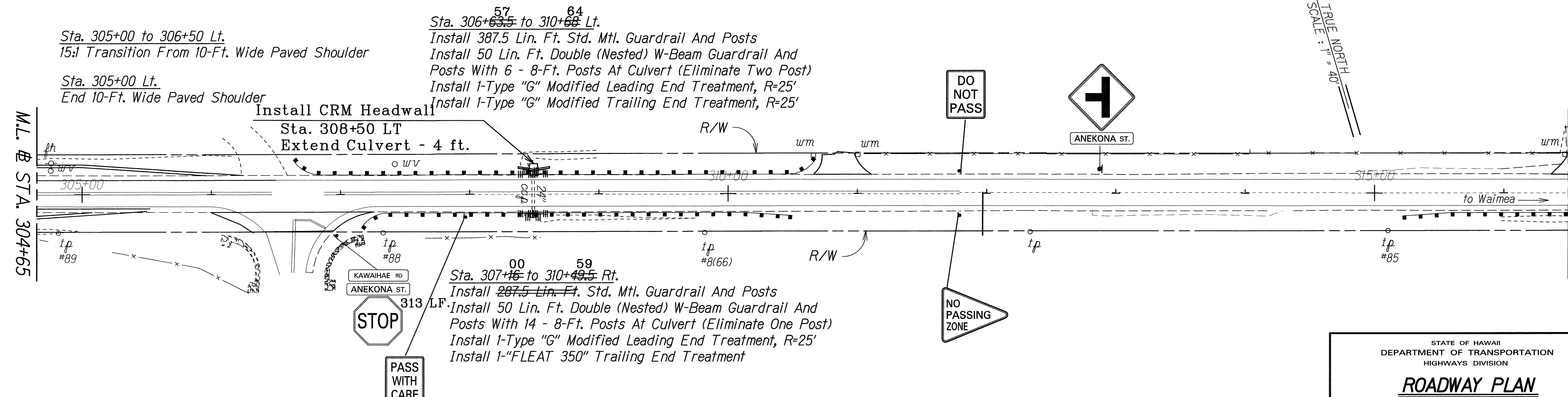
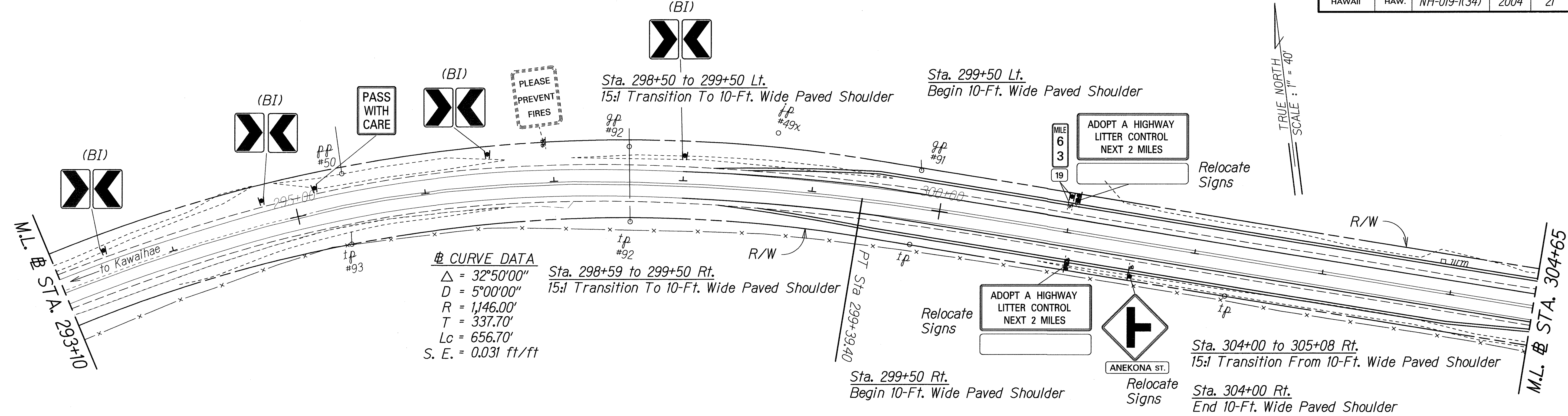
ROADWAY PLAN
KAWAIHAE ROAD RESURFACING
GUARDRAIL AND SHOULDER IMPROVEMENTS
F.A. PROJ. NO. NH-019-1(34)
Scale: 1" = 40' Date: June, 2003
SHEET No. 8 OF 18 SHEETS

DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
APPROVED BY	_____
NOTED BY	_____
DESIGNED BY	_____
CHECKED BY	_____
APPROVED BY	_____
NOTED BY	_____
DESIGNED BY	_____
CHECKED BY	_____
APPROVED BY	_____
NOTED BY	_____

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"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	21	68



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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KAWAIHAE ROAD RESURFACING
GUARDRAIL AND SHOULDER IMPROVEMENTS

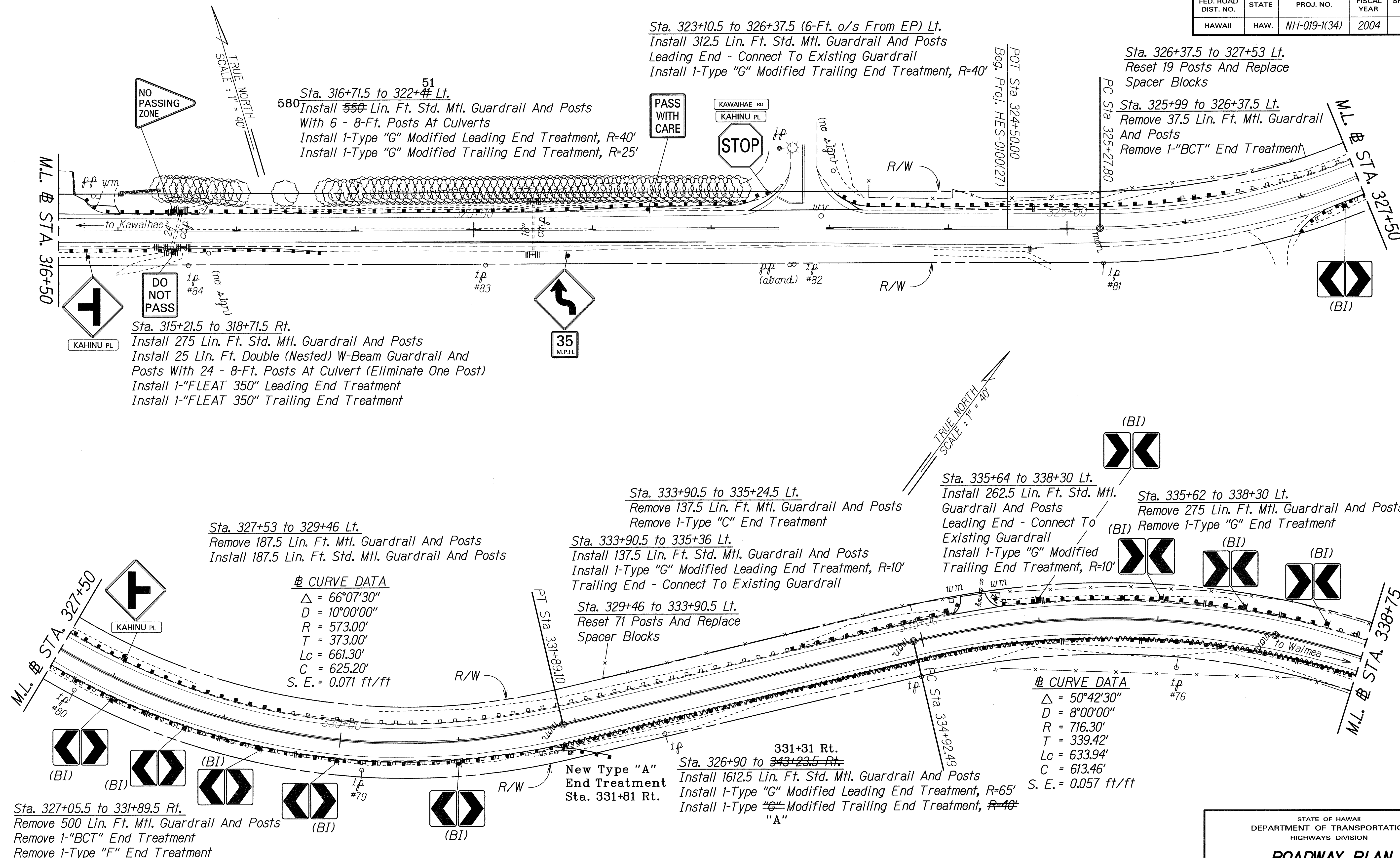
F.A. PROJ. NO. NH-019-1(34)

Scale: 1" = 40" Date: June, 2003

SHEET No. 9 OF 18 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	22	68



ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

asbuilt2008 4kawaspi0.dgn

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KAWAIHĀE ROAD RESURFACING
GUARDRAIL AND SHOULDER IMPROVEMENTS
F.A. PROJ. NO. NH-019-1(34)

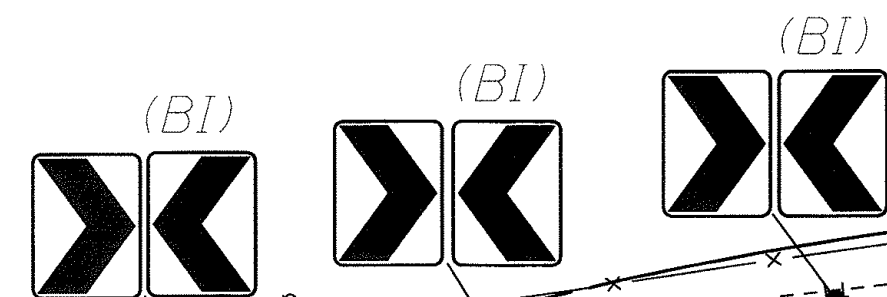
Scale: 1" = 40' Date: June, 2003

SHEET No. 10 OF 18 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	23	68

Sta. 338+30 to 341+36 Lt.
Reset 51 Posts And Replace Spacer Blocks



§ CURVE DATA
 $\Delta = 50^\circ 42' 30''$
 $D = 8^\circ 00' 00''$
 $R = 716.30'$
 $T = 339.42'$
 $Lc = 633.94'$
 $C = 613.46'$
 $S. E. = 0.057 \text{ ft/ft}$

Sta. 341+36 to 346+18.5 Lt.
Remove 487.5 Lin. Ft. Mtl. Guardrail And Posts
Remove 1-"BCT" End Treatment

Sta. 341+36 to 347+70 Lt.
Install 600 Lin. Ft. Std. Mtl. Guardrail And Posts
Install 1-"FLEAT 350" Leading End Treatment
Trailing End - Connect To Existing

§ CURVE DATA
 $\Delta = 9^\circ 47' 00''$
 $D = 2^\circ 00' 00''$
 $R = 2,865.00'$
 $T = 245.20'$
 $Lc = 489.20'$
 $C = 488.61'$
 $S. E. = 0.020 \text{ ft/ft}$

§ CURVE DATA
 $\Delta = 6^\circ 45' 00''$
 $D = 3^\circ 00' 00''$
 $R = 1,910.00'$
 $T = 112.90'$
 $Lc = 225.00'$
 $S. E. = 0.021 \text{ ft/ft}$

Sta. 353+55 to 354+50 Lt.
15:1 Transition To 10-Ft. Wide Paved Shoulder

Sta. 354+50 Lt.
Begin 10-Ft. Wide Paved Shoulder

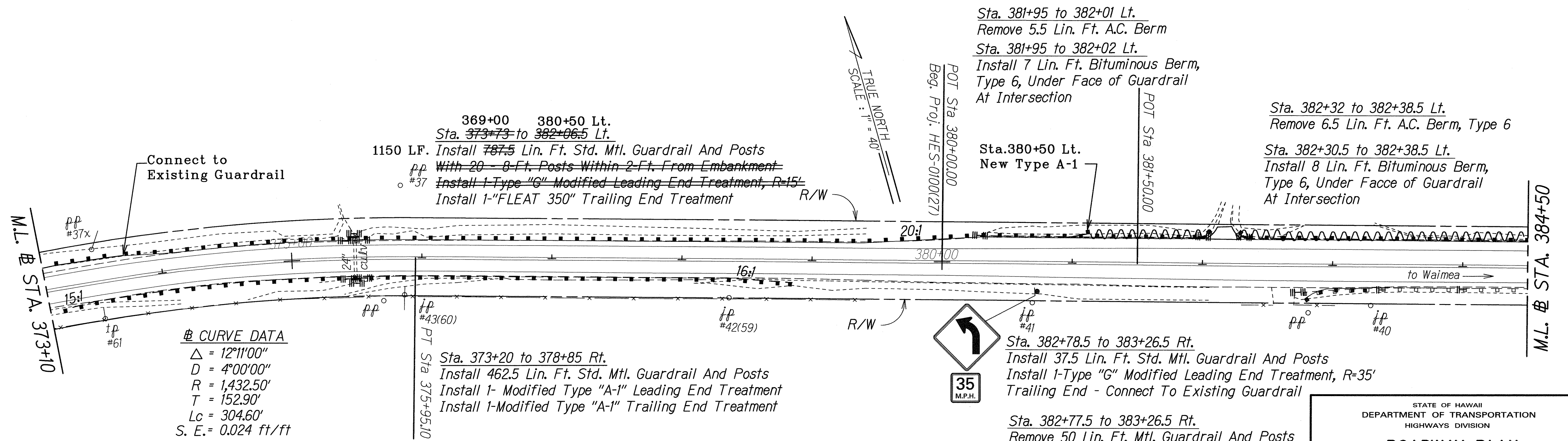
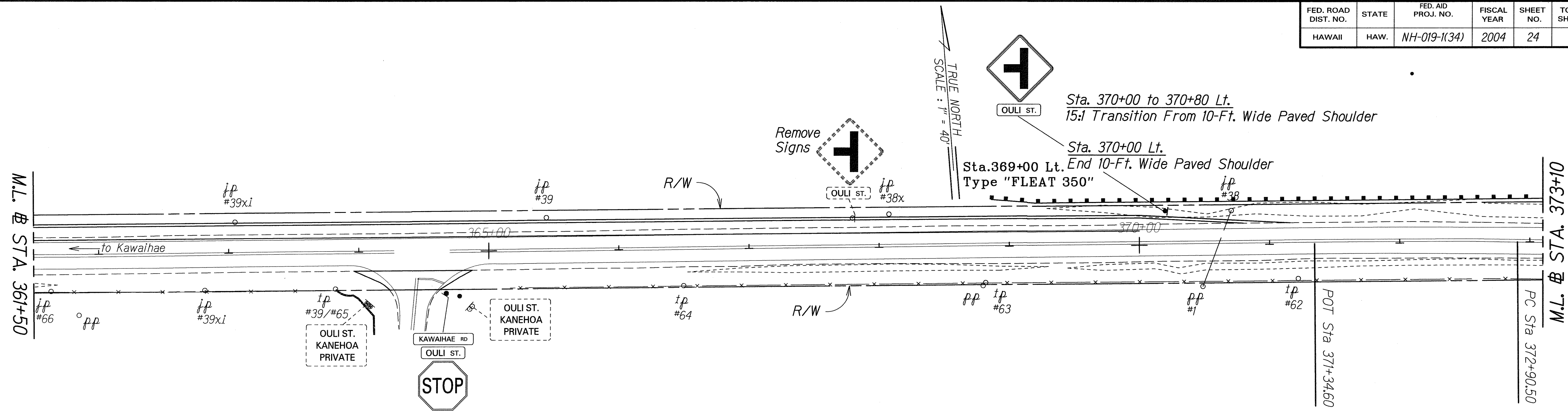
LEGEND FOR AS-BUILT POSTINGS
 Squiggly line for as-built deletion
 Double line for as-built deletion
Roadway Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
KAWAIHAE ROAD RESURFACING
GUARDRAIL AND SHOULDER IMPROVEMENTS
F.A. PROJ. NO. NH-019-1(34)
Scale: 1" = 40' Date: June, 2003
SHEET No. 11 OF 18 SHEETS

"AS-BUILT"

23

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	24	68



CURVE DATA
 $\Delta = 12^{\circ}11'00''$
 $D = 4^{\circ}00'00''$
 $R = 1,432.50'$
 $T = 152.90'$
 $L_c = 304.60'$
 $S. E. = 0.024 \text{ ft/ft}$

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KAWAIIHAE ROAD RESURFACING GUARDRAIL AND SHOULDER IMPROVEMENTS

F.A. PROJ. NO. NH-019-1(34)

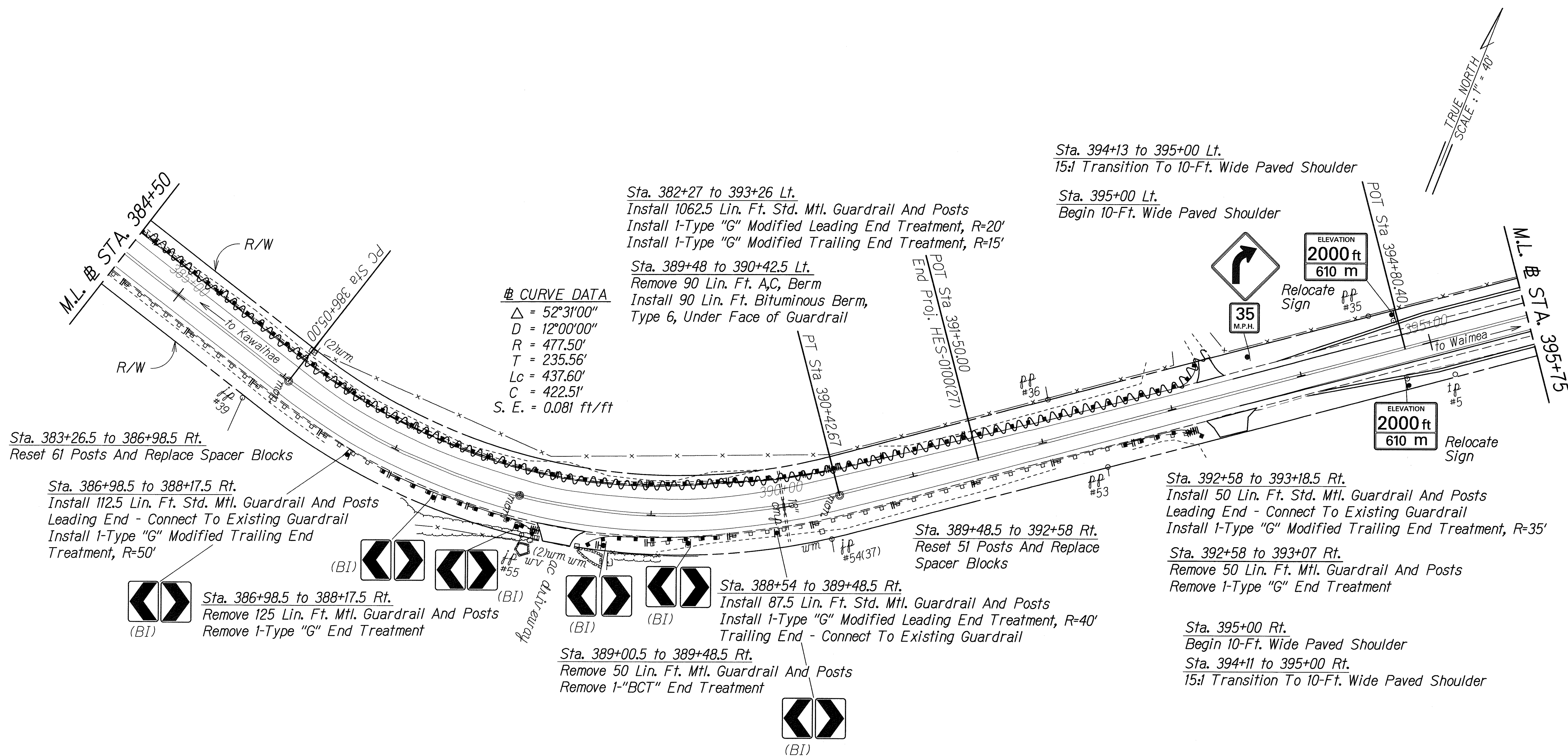
Scale: 1" = 40' Date: June, 2003

SHEET No. 12 OF 18 SHEETS

ORIGINAL PLAN	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
NOTED BY	
APPROVED BY	

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	25	68



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
4/10/03	DESIGNED BY	
N. 20/01	QUANTITIES BY	
	CHECKED BY	

asbuilt2008 4kavapl3.dgn

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KAWAIHAE ROAD RESURFACING
GUARDRAIL AND SHOULDER IMPROVEMENTS

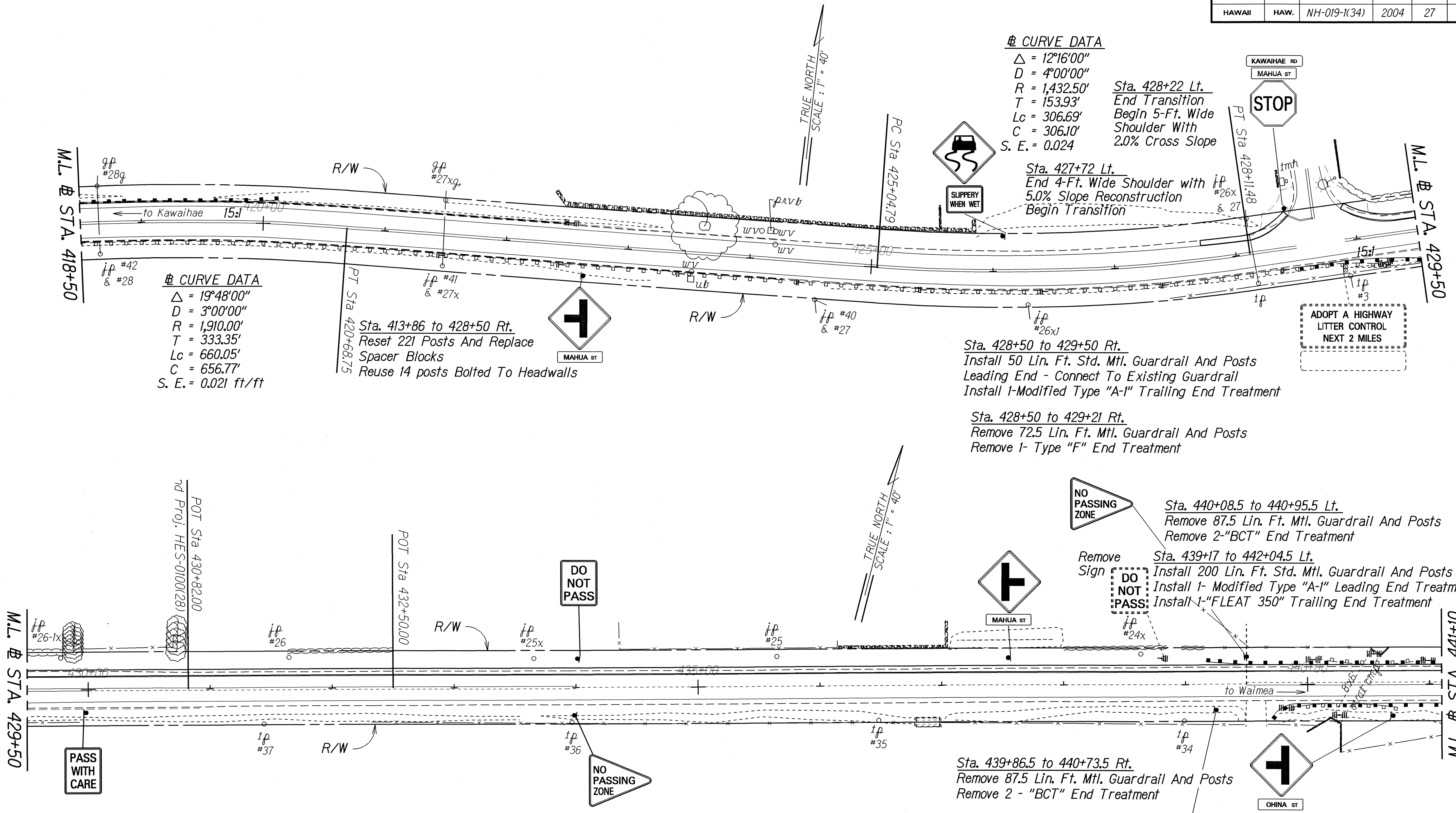
F.A. PROJ. NO. NH-019-1(34)

Scale: 1" = 40' Date: June, 2003

SHEET No. 13 OF 18 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	27	68

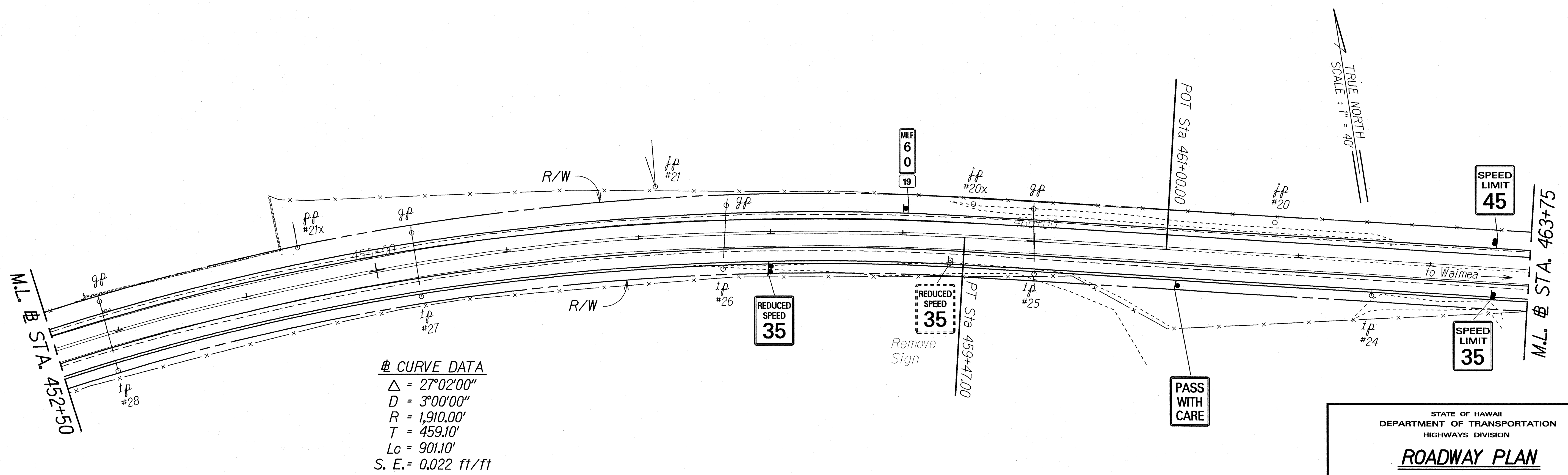
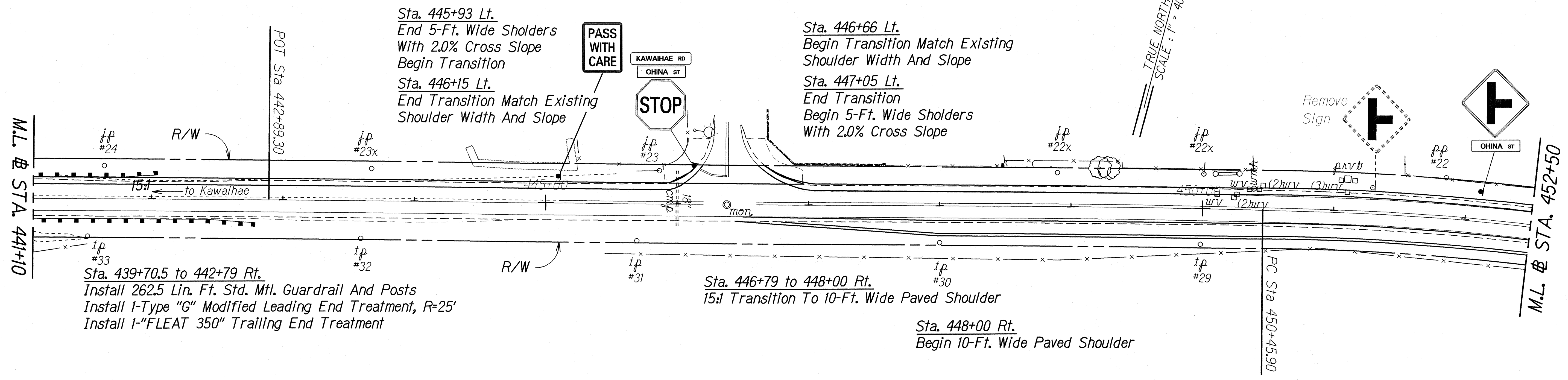


DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
ORIGINAL PLAN	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ROADWAY PLAN
 KAWAIIHAE ROAD RESURFACING
 GUARDRAIL AND SHOULDER IMPROVEMENTS
 F.A. PROJ. NO. NH-019-1(34)
 Scale: 1" = 40' Date: June, 2003
 SHEET No. 15 OF 18 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(34)	2004	28	68



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

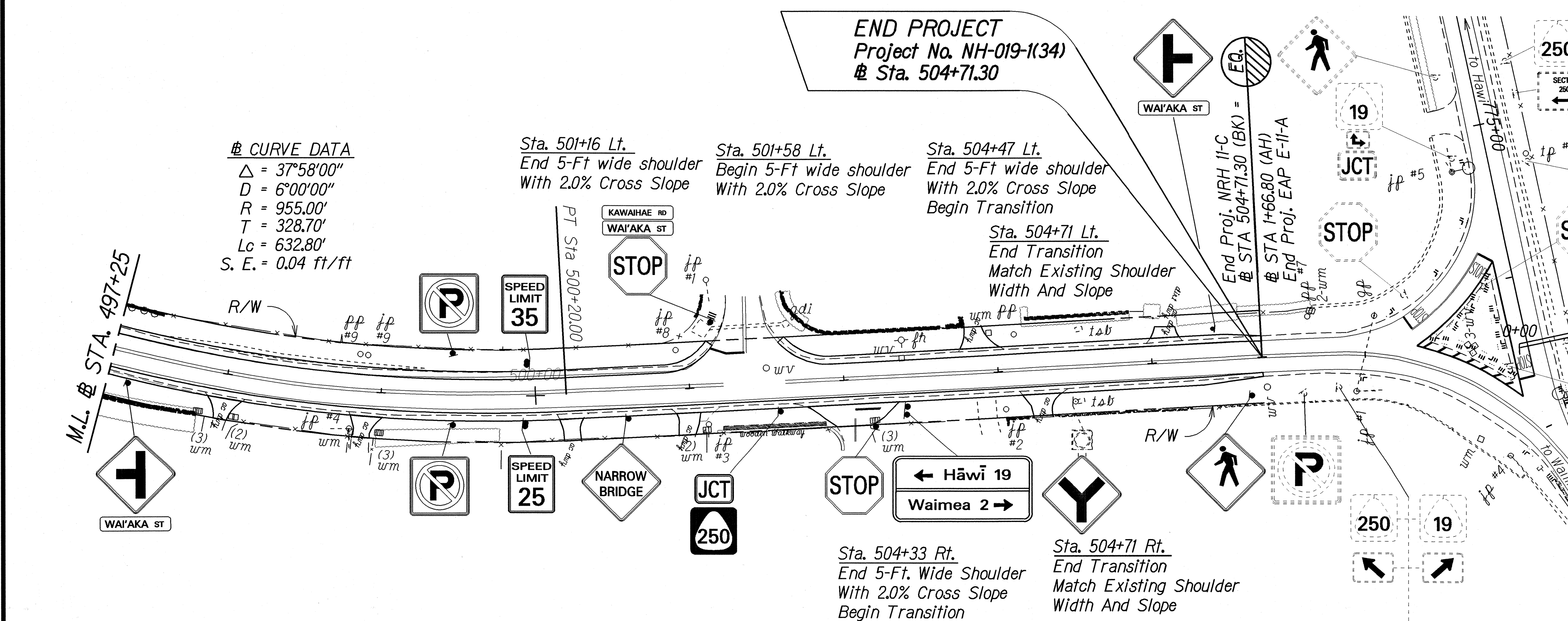
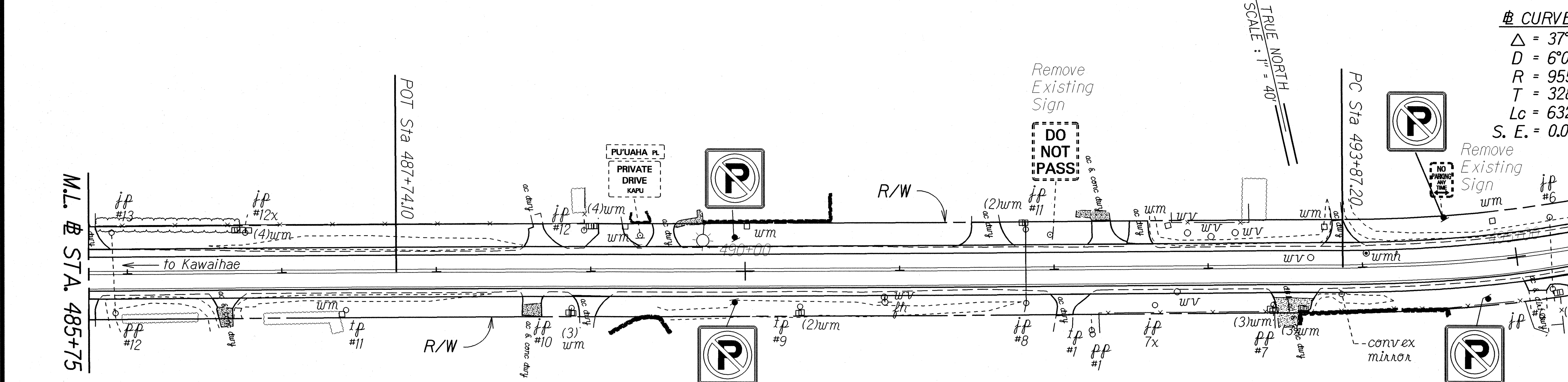
ROADWAY PLAN

KAWAIHAE ROAD RESURFACING GUARDRAIL AND SHOULDER IMPROVEMENTS

F.A. PROJ. NO. NH-019-1(34)

Scale: 1" = 40' Date: June, 2003

SHEET No. 16 OF 18 SHEETS



WAI'AKA ST

NARROW BRIDGE

STOP

SPEED LIMIT 25

JCT

250

HAWAII 19

Waimea 2

Y

P

250

19

250

19

Sta. 504+33 Rt.
End 5-Ft. Wide Shoulder
With 2.0% Cross Slope
Begin Transition

Sta. 504+71 Rt.
End Transition
Match Existing Shoulder
Width And Slope