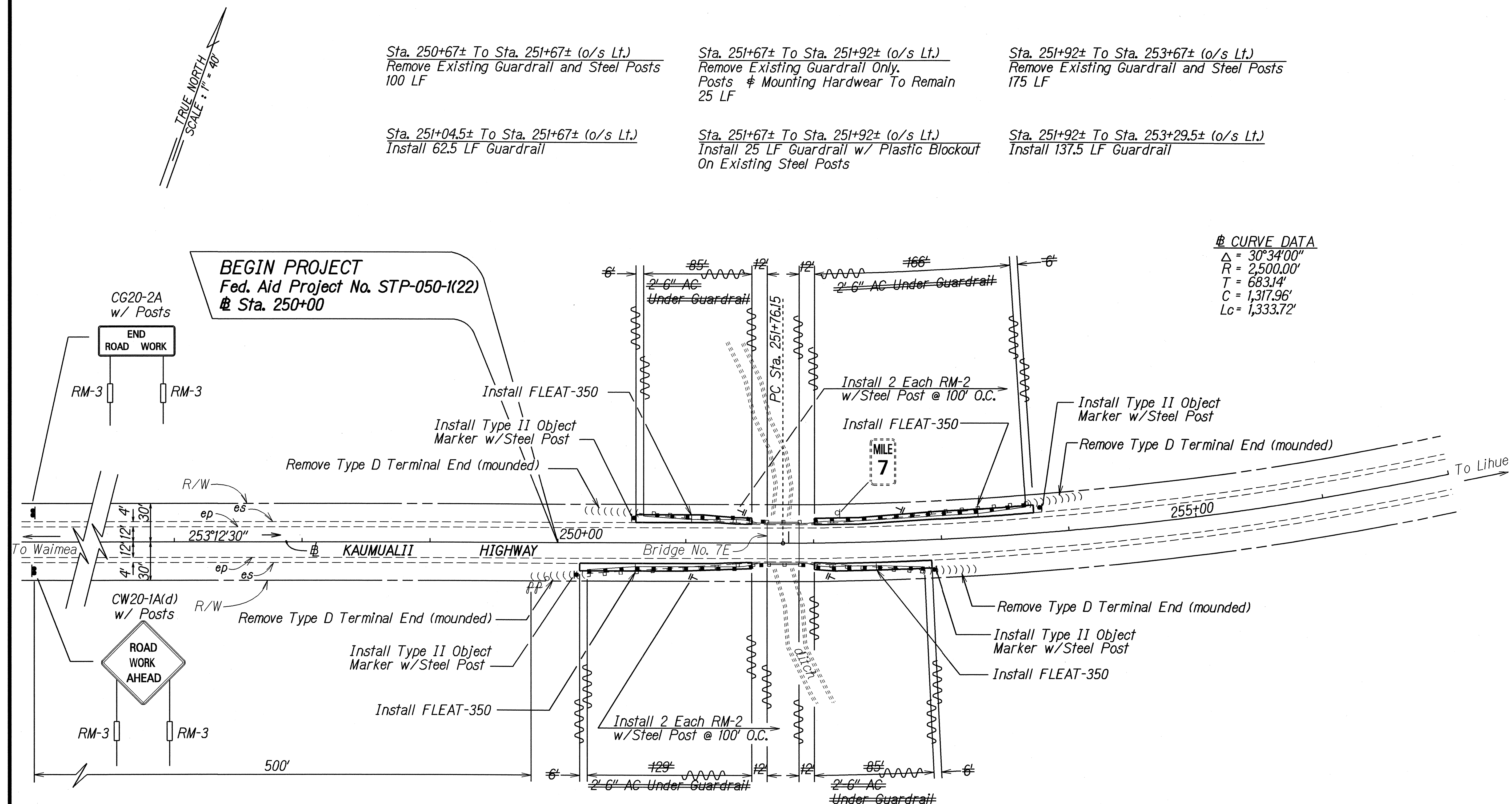


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-050-1(22)	2001	4	24



CURVE DATA
 $\Delta = 30^\circ 34' 00''$
 $R = 2,500.00'$
 $T = 683.14'$
 $C = 1,317.96'$
 $L_c = 1,333.72'$

LEGEND FOR AS-BUILT POSTINGS

~~~~~ Squiggly line for as-built deletion  
 ==00.00 Double line for as-built deletion  
 Roadway Text for as-built posting

Sta. 250+60.5± To Sta. 251+60.5± (o/s Rt.)  
 Install 100 LF Guardrail

Sta. 250+23± To Sta. 251+60.5± (o/s Rt.)  
 Remove Existing Guardrail and Steel Posts  
 137.5 LF

Sta. 251+60.5± To Sta. 251+85.5± (o/s Rt.)  
 Install 25 LF Guardrail w/ Plastic Blockout  
 On Existing Steel Posts

Sta. 251+60.5± To Sta. 251+85.5± (o/s Rt.)  
 Remove Existing Guardrail Only.  
 Posts & Mounting Hardware To Remain  
 25 LF

Sta. 251+85.5± To Sta. 252+48± (o/s Rt.)  
 Install 62.5 LF Guardrail

Sta. 251+85.5± To Sta. 252+85.5± (o/s Rt.)  
 Remove Existing Guardrail and Steel Posts  
 100 LF

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**ROADWAY PLAN**  
**KAUMUALII HIGHWAY GUARDRAIL AND**  
**SHOULDER IMPROVEMENTS**  
**AT VARIOUS LOCATIONS**  
**Fed. Aid Proj. No. STP-050-1(22)**  
 Scale: 1" = 40' Date: August, 2000  
 SHEET No. 1 OF 11 SHEETS

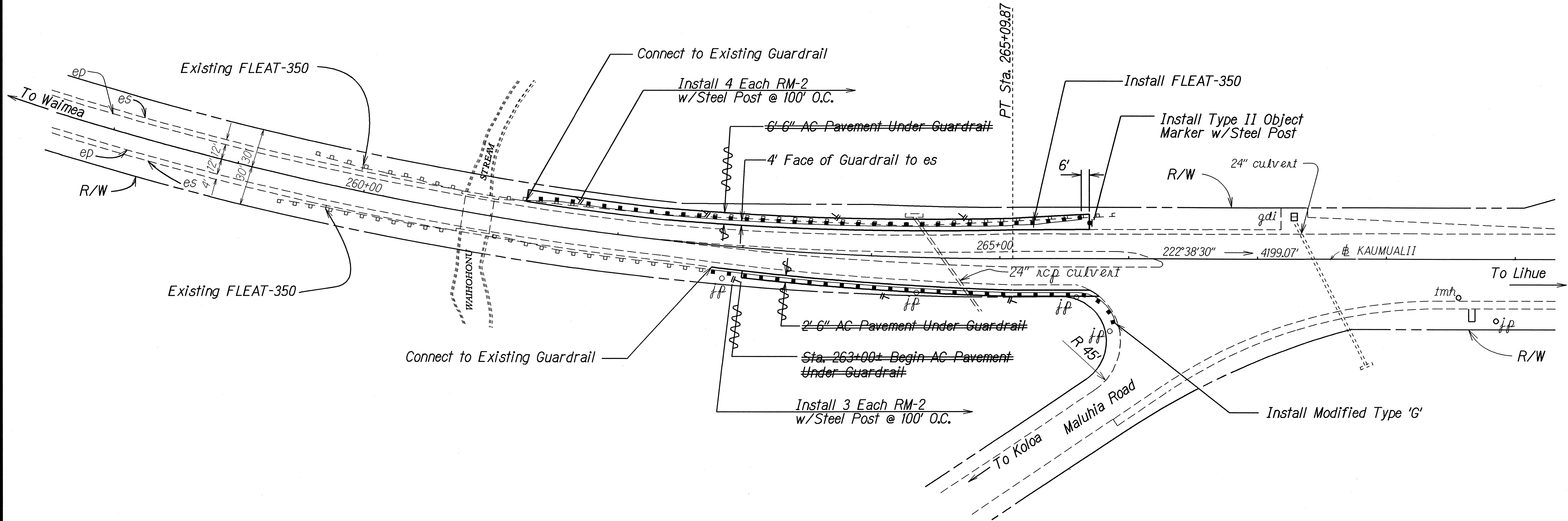
"AS-BUILT"

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-050-1(22)      | 2001        | 5         | 24           |

# CURVE DATA  
 $\Delta = 30^{\circ}34'00''$   
 $R = 2,500.00'$   
 $T = 683.14'$   
 $C = 1317.96'$   
 $L_c = 1333.72'$

Sta. 261+25± To Sta. 266+00± (o/s Lt.)  
 Remove Existing Guardrail and Steel Posts  
 Including Existing FLEAT-350  
 475 LF

Sta. 261+25± To Sta. 265+37.5± (o/s Lt.)  
 Install 412.5 LF Guardrail



Sta. 263+00± To Sta. 266+00± (o/s Rt.)  
 Install 337.5 LF Guardrail

Sta. 262+75± To Sta. 263+00± (o/s Rt.)  
 Install 25 LF Guardrail  
 w/8' Long Strong Posts

Sta. 262+75± To Sta. 266+00± (o/s Rt.)  
 Remove Existing Guardrail and Steel Posts  
 Including 225 LF Rub Rail  
 362.5 LF

| 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**  
**KAUMUALII HIGHWAY GUARDRAIL AND SHOULDER IMPROVEMENTS**  
**AT VARIOUS LOCATIONS**  
**Fed. Aid Proj. No STP-050-1(22)**  
Scale: 1" = 40'

Date: August, 2000  
SHEET No. 2 OF 11 SHEETS

|                   |      |
|-------------------|------|
| ORIGINAL PLAN     | DATE |
| SURVEY PLOTTED BY |      |
| DESIGNED BY       |      |
| TRACED BY         |      |
| NOTE BOOK         |      |
| QUANTITIES BY     |      |
| CHECKED BY        |      |

"AS-BUILT"

| FED. ROAD DIST. NO. | STATE | PROJ. NO.     | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|---------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-050-1(22) | 2001        | 6         | 24           |

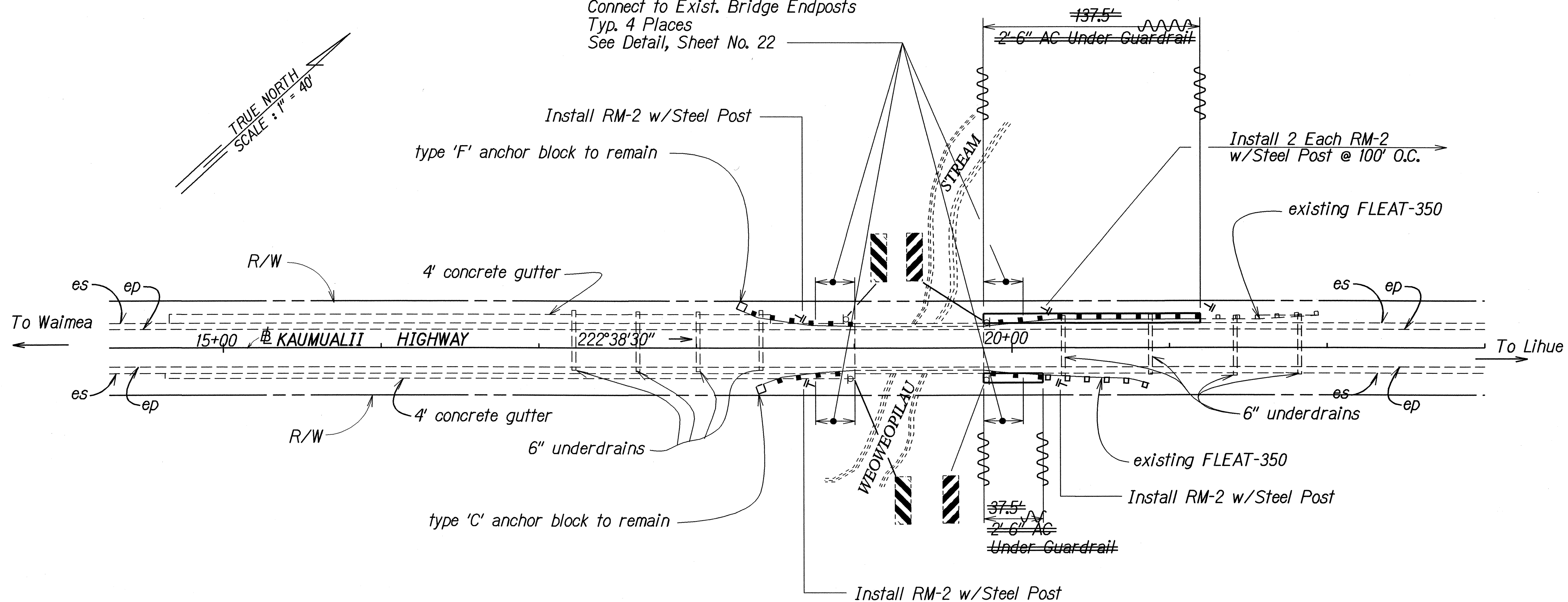
Sta. 18+25± To Sta. 19+00± (o/s Lt.)  
Remove Existing Guardrail and Steel Posts  
Including 50 LF Rubrail  
75 LF

Sta. 18+25± To Sta. 18+75± (o/s Lt.)  
Install 50 LF New Guardrail  
Connect to Existing Concrete Anchor Block.

Sta. 19+82.5± To Sta. 21+20± (o/s Lt.)  
Remove Existing Guardrail and Steel Posts  
Including 37.5 LF Rubrail  
137.5 LF

Sta. 20+07.5± To Sta. 21+20± (o/s Lt.)  
Install 112.5 LF New Guardrail  
Connect to Existing Guardrail

Install 25 LF Strong Post Modified  
Thrie Beam W/Transition  
Connect to Exist. Bridge Endposts  
Typ. 4 Places  
See Detail, Sheet No. 22



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

Sta. 18+37.5± To Sta. 18+75± (o/s Rt.)  
Install 37.5 LF New Guardrail  
Connect to Existing Concrete Anchor Block.

Sta. 18+37.5± To Sta. 19+00± (o/s Rt.)  
Remove Existing Guardrail and Steel Posts  
Including 37.5 LF Rubrail  
62.5 LF

Sta. 20+07.5± To Sta. 20+20± (o/s Rt.)  
Install 12.5 LF New Guardrail  
Connect to Existing Guardrail

Sta. 19+82.5± To Sta. 20+20± (o/s Rt.)  
Remove Existing Guardrail and Steel Posts  
Including 25 LF Rubrail  
37.5 LF

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**ROADWAY PLAN**

**KAUMUALII HIGHWAY GUARDRAIL AND SHOULDER IMPROVEMENTS AT VARIOUS LOCATIONS**

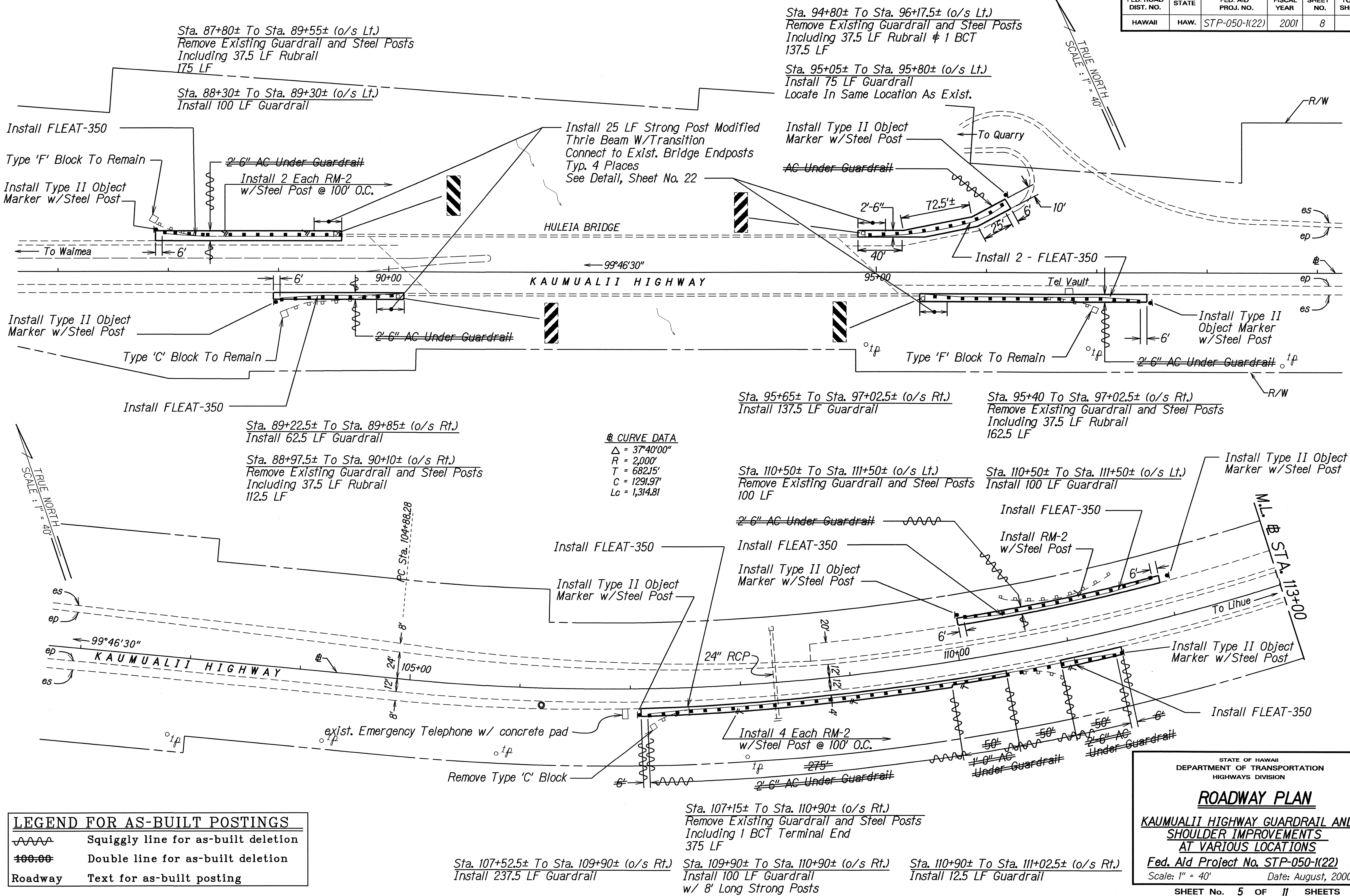
Fed. Aid Project No. STP-050-1(22)  
Scale: 1" = 40' Date: August, 2000

SHEET No. 3 OF 11 SHEETS

"AS-BUILT"

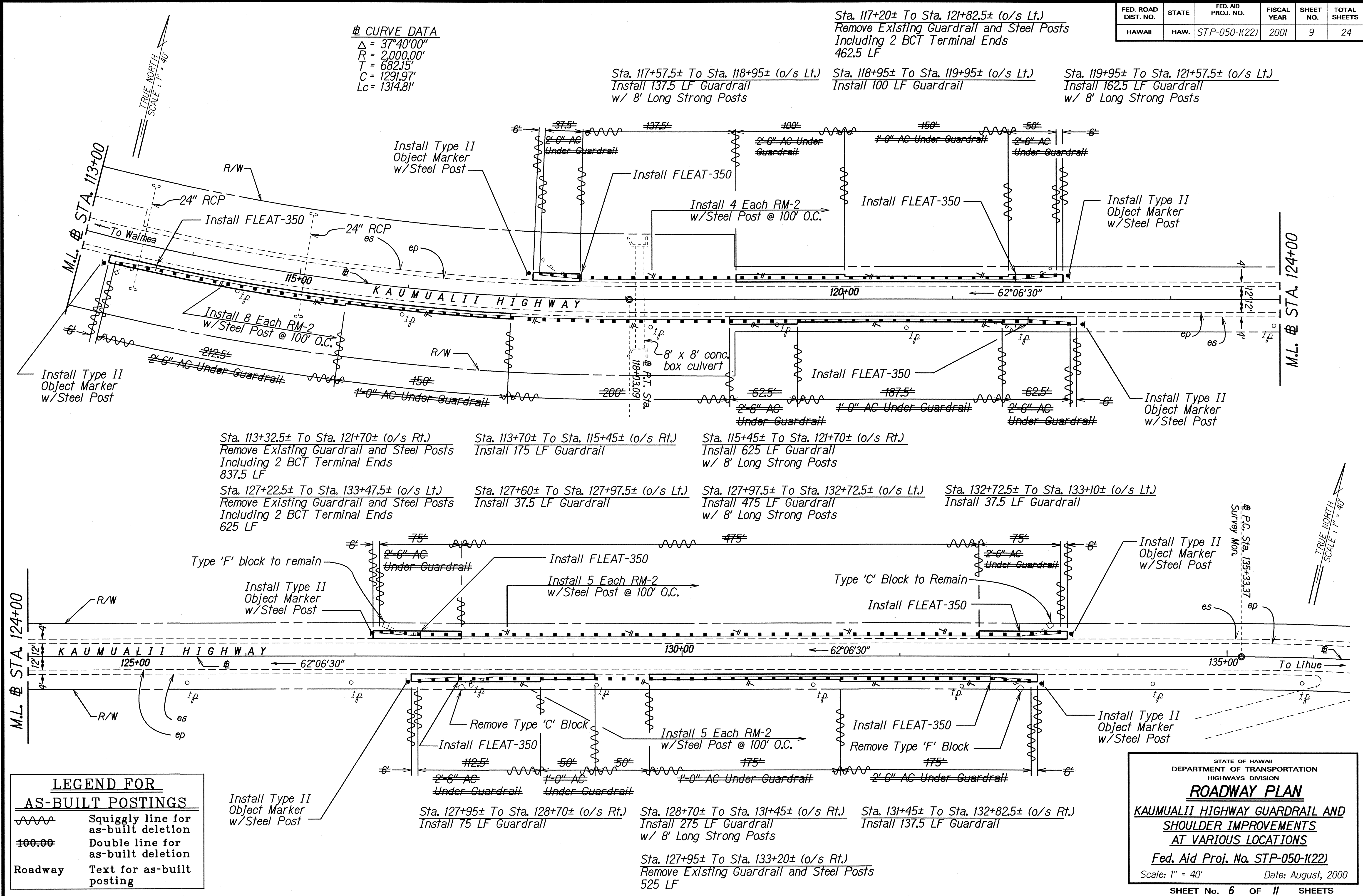


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-050-1(22)      | 2001        | 8         | 24           |



"AS-BUILT"

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-050-1(22)      | 2001        | 9         | 24           |



"AS-BUILT"

Sta. 140+85± To Sta. 142+72.5± (o/s Lt.)  
Remove Existing Guardrail and Steel Posts  
Including BCT Terminal End  
187.5 LF

Sta. 141+10± To Sta. 141+22.5± (o/s Lt.)  
Install 25 LF Guardrail

Sta. 141+22.5± To Sta. 141+85± (o/s Lt.)  
Install 62.5 LF Guardrail  
w/ 8' Long Strong Posts

Sta. 141+85± To Sta. 142+35± (o/s Lt.)  
Install 50 LF Guardrail

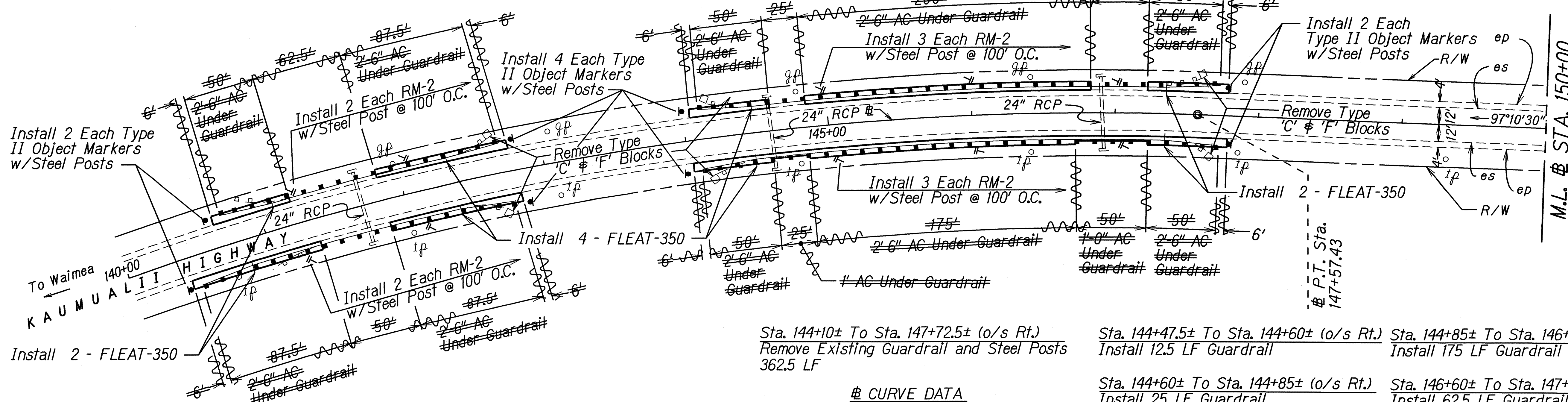
Sta. 144+10± To Sta. 147+72.5± (o/s Lt.)  
Remove Existing Guardrail and Steel Posts  
362.5 LF

Sta. 144+47.5± To Sta. 144+60± (o/s Lt.)  
Install 12.5 LF Guardrail

Sta. 144+60± To Sta. 144+85± (o/s Lt.)  
Install 25 LF Guardrail  
w/ 8' Long Strong Posts

Sta. 144+85± To Sta. 146+85± (o/s Lt.)  
Install 200 LF Guardrail

Sta. 146+85± To Sta. 147+35± (o/s Lt.)  
Install 50 LF Guardrail  
w/ 8' Long Strong Posts



Sta. 140+85± To 141+35± (o/s Rt.)  
Install 50 LF Guardrail

Sta. 141+35± To Sta. 141+85 (o/s Rt.)  
Install 50 LF Guardrail  
w/ 8' Long Strong Posts

Sta. 140+97.5± To Sta. 142+72.5± (o/s Rt.)  
Remove Existing Guardrail and Steel Posts  
Including BCT Terminal End  
175 LF

Sta. 141+85± To Sta. 142+35 (o/s Rt.)  
Install 50 LF Guardrail

Sta. 144+10± To Sta. 147+72.5± (o/s Rt.)  
Remove Existing Guardrail and Steel Posts  
362.5 LF

Sta. 144+47.5± To Sta. 144+60± (o/s Rt.)  
Install 12.5 LF Guardrail

Sta. 144+85± To Sta. 146+60± (o/s Rt.)  
Install 175 LF Guardrail

Sta. 144+60± To Sta. 144+85± (o/s Rt.)  
Install 25 LF Guardrail  
w/ 8' Long Strong Posts

Sta. 146+60± To Sta. 147+22.5± (o/s Rt.)  
Install 62.5 LF Guardrail  
w/ 8' Long Strong Posts

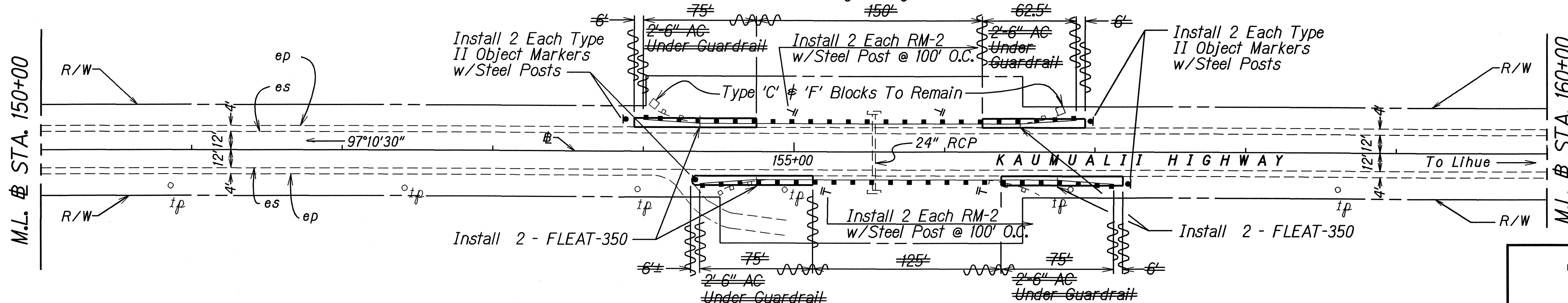
**CURVE DATA**  
Δ = 35°04'00"  
R = 2,000.00'  
T = 631.88'  
C = 1,205.04'  
Lc = 1,224.06'

Sta. 154+00± To Sta. 156+87.5± (o/s Lt.)  
Remove Existing Guardrail and Steel Posts  
287.5 LF

Sta. 154+37.5± To Sta. 154+75± (o/s Lt.)  
Install 37.5 LF Guardrail

Sta. 154+75± To Sta. 156+25± (o/s Lt.)  
Install 150 LF Guardrail  
w/ 8' Long Strong Posts

Sta. 156+25± To Sta. 156+50± (o/s Lt.)  
Install 25 LF Guardrail



Sta. 154+75± To 155+12.5± (o/s Rt.)  
Install 37.5 LF Guardrail

Sta. 155+12.5± To Sta. 156+37.5± (o/s Rt.)  
Install 125 LF Guardrail  
w/ 8' Long Strong Posts

Sta. 156+37.5± To Sta. 156+75± (o/s Rt.)  
Install 37.5 LF Guardrail

Sta. 154+50± To Sta. 156+62.5± (o/s Rt.)  
Remove Existing Guardrail and Steel Posts  
Including 2 - BCT Terminal Ends  
212.5 LF

# **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**  
**KAUMUALII HIGHWAY GUARDRAIL AND**  
**SHOULDER IMPROVEMENTS**  
**AT VARIOUS LOCATIONS**  
**Fed. Aid Proj. No. STP-050-1(22)**  
Scale: 1" = 40' Date: August, 2000  
SHEET No. 7 OF 11 SHEETS

"AS-BUILT"

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-050-1(22)      | 2001        | 11        | 24           |

Sta. 160+52.5± To Sta. 162+15± (o/s Lt.)  
Remove Existing Guardrail and Steel Posts  
162.5 LF

Sta. 161+27.5± To Sta. 161+52.5± (o/s Lt.)  
Install 25 LF Guardrail  
w/ 8' Long Strong Posts

Sta. 166+50± To Sta. 169+12.5± (o/s Lt.)  
Remove Existing Guardrail and Steel Posts  
Including 2 BCT Terminal Ends  
262.5 LF

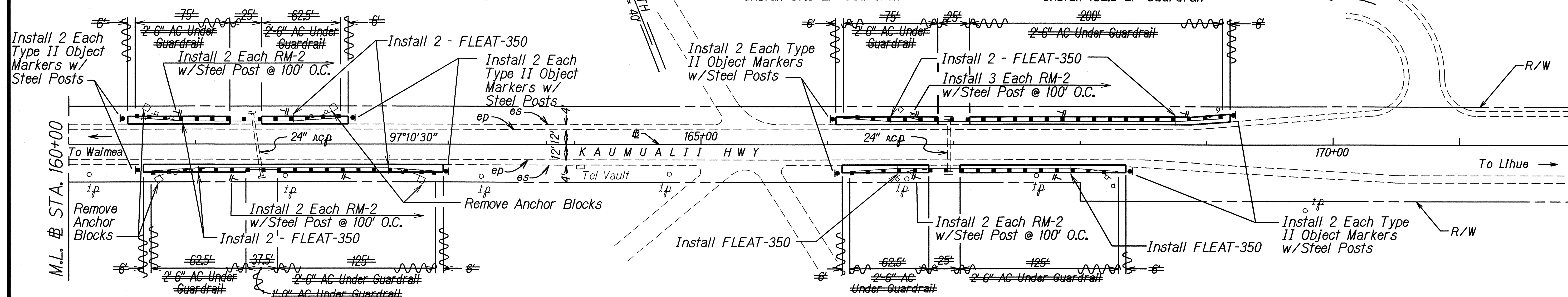
Sta. 166+87.5± To Sta. 167+12.5± (o/s Lt.)  
Install 25 LF Guardrail  
w/ 8' Long Strong Posts

Sta. 160+90± To Sta. 161+27.5± (o/s Lt.)  
Install 37.5 LF Guardrail

Sta. 161+52.5± To Sta. 161+77.5± (o/s Lt.)  
Install 25 LF Guardrail

Sta. 166+50± To Sta. 166+87.5± (o/s Lt.)  
Install 37.5 LF Guardrail

Sta. 167+12.5± To Sta. 168+75± (o/s Lt.)  
Install 162.5 LF Guardrail



Sta. 160+65± To Sta. 162+90± (o/s Rt.)  
Remove Existing Guardrail and Steel Posts  
225 LF

Sta. 161+27.5± To Sta. 161+65± (o/s Rt.)  
Install 37.5 LF Guardrail  
w/ 8' Long Strong Posts

Sta. 166+30± To Sta. 168+30± (o/s Rt.)  
Remove Existing Guardrail and Steel Posts  
Including 2 BCT Terminal Ends  
200 LF

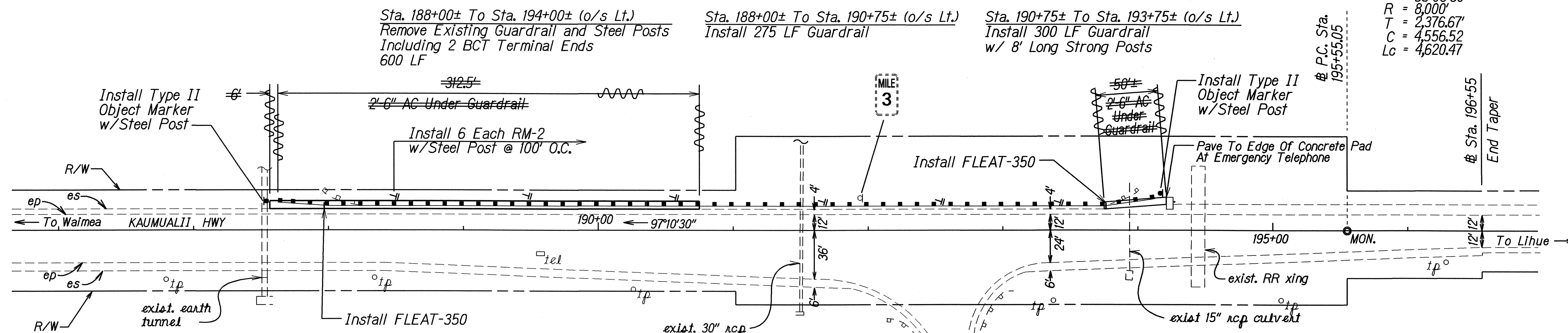
Sta. 166+80± To Sta. 167+05± (o/s Rt.)  
Install 25 LF Guardrail  
w/ 8' Long Strong Posts

Sta. 161+02.5± To Sta. 161+27.5± (o/s Rt.)  
Install 25 LF Guardrail

Sta. 161+65± To Sta. 162+52.5± (o/s Rt.)  
Install 87.5 LF Guardrail

Sta. 166+55± To Sta. 166+80± (o/s Rt.)  
Install 25 LF Guardrail

Sta. 167+05± To Sta. 167+92.5± (o/s Rt.)  
Install 87.5 LF Guardrail



# CURVE DATA  
Δ = 33°05'30"  
R = 8,000'  
T = 2,376.67'  
C = 4,556.52  
Lc = 4,620.47

# P.C. Sta.  
195+55.05

# Sta. 196+55  
End Taper

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

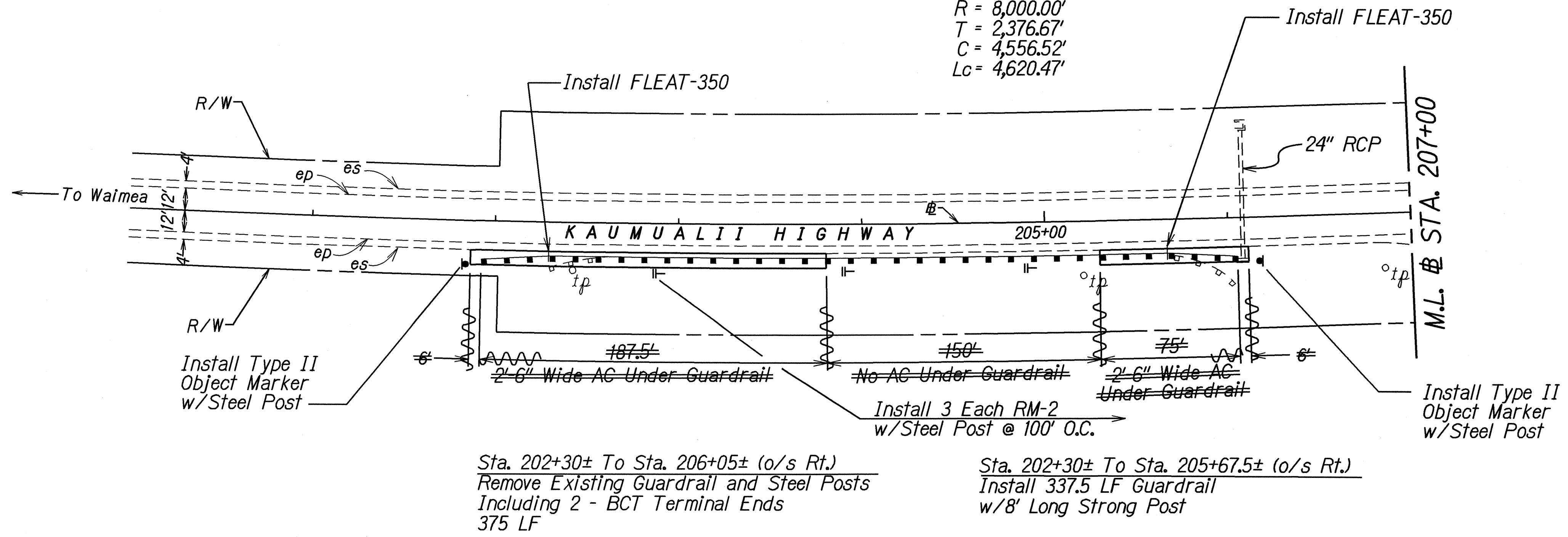
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**ROADWAY PLAN**  
**KAUMUALII HIGHWAY GUARDRAIL AND SHOULDER IMPROVEMENTS**  
**AT VARIOUS LOCATIONS**  
Fed. Aid Proj. No. STP-050-1(22)  
Scale: 1" = 40'      Date: August, 2000  
SHEET No. 8 OF 11 SHEETS

"AS-BUILT"

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-050-1(22)      | 2001        | 12        | 24           |

TRUE NORTH  
SCALE: 1" = 40'

**Δ CURVE DATA**  
 $\Delta = 33^{\circ}05'30''$   
 $R = 8,000.00'$   
 $T = 2,376.67'$   
 $C = 4,556.52'$   
 $L_c = 4,620.47'$



**Δ CURVE DATA**  
 $\Delta = 33^{\circ}05'30''$   
 $R = 8,000.00'$   
 $T = 2,376.67'$   
 $C = 4,556.52'$   
 $L_c = 4,620.47'$

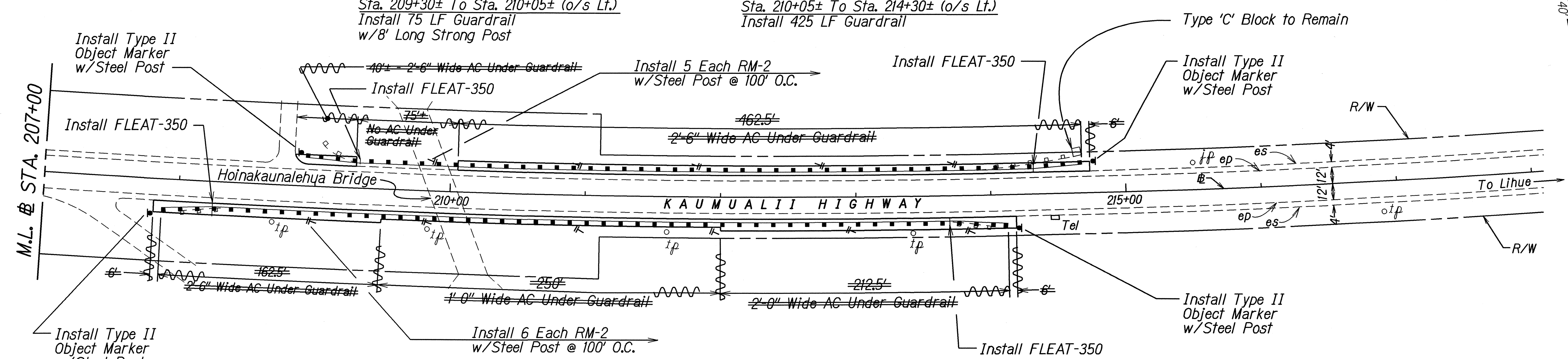
Sta. 202+30± To Sta. 206+05± (o/s Rt.)  
 Remove Existing Guardrail and Steel Posts  
 Including 2 - BCT Terminal Ends  
 375 LF

Sta. 202+30± To Sta. 205+67.5± (o/s Rt.)  
 Install 337.5 LF Guardrail  
 w/8' Long Strong Post

Sta. 209+05± To Sta. 214+67.5± (o/s Lt.)  
 Remove Existing Guardrail and Steel Posts  
 Including 1 - BCT Terminal End  
 562.5 LF

Sta. 209+30± To Sta. 210+05± (o/s Lt.)  
 Install 75 LF Guardrail  
 w/8' Long Strong Post

Sta. 210+05± To Sta. 214+30± (o/s Lt.)  
 Install 425 LF Guardrail



Sta. 208+25± To Sta. 209+50± (o/s Rt.)  
 Install 125 LF Guardrail

Sta. 209+50± To Sta. 213+75 (o/s Rt.)  
 Install 425 LF Guardrail  
 w/8' Long Strong Post

Sta. 208+00± To Sta. 214+00± (o/s Rt.)  
 Remove Existing Guardrail and Steel Posts  
 Including 2 BCT Terminal Ends  
 600 LF

**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**  
**KAUMUALII HIGHWAY GUARDRAIL AND**  
**SHOULDER IMPROVEMENTS**  
**AT VARIOUS LOCATIONS**  
 Fed. Aid Proj. No. STP-050-1(22)

Scale: 1" = 40'      Date: August, 2000

SHEET No. 9 OF 11 SHEETS

|               |      |
|---------------|------|
| DESIGNED BY   | DATE |
| DRAWN BY      |      |
| CHECKED BY    |      |
| IN CHARGE     |      |
| NOTED BY      |      |
| QUANTITIES BY |      |
| CHECKED BY    |      |

TRUE NORTH  
SCALE: 1" = 40'

"AS-BUILT"

Sta. 228+95± To Sta. 232+45± (o/s Lt.)  
Remove Existing Guardrail and Steel Posts  
Including 2 BCT Terminal Ends  
350 LF

Sta. 228+95± To Sta. 229+82.5± (o/s Lt.)  
Install 87.5 LF Guardrail

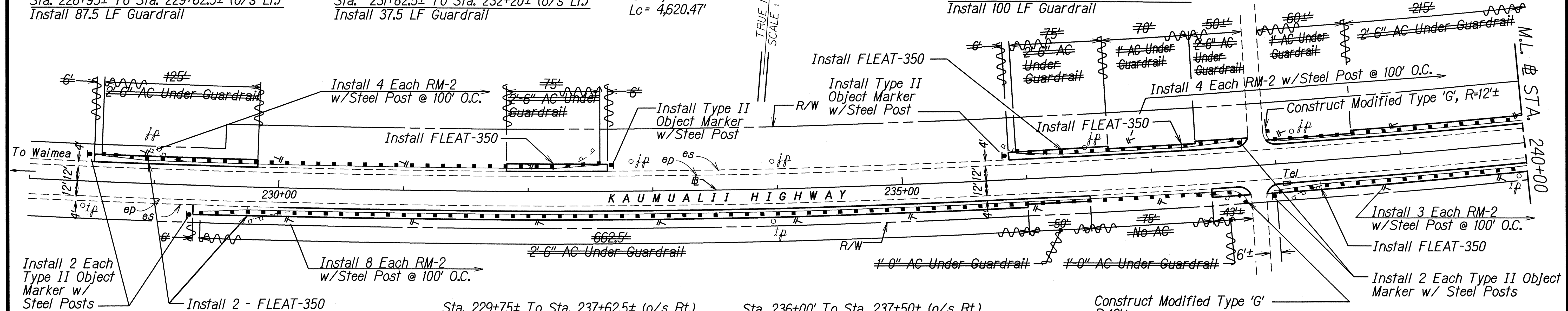
Sta. 229+82.5± To Sta. 231+82.5± (o/s Lt.)  
Install 200 LF Guardrail  
w/ 8' Long Strong Posts

Sta. 231+82.5± To Sta. 232+20± (o/s Lt.)  
Install 37.5 LF Guardrail

**CURVE DATA**  
 $\Delta = 33^{\circ}05'30''$   
 $R = 8,000.00'$   
 $T = 2,376.67'$   
 $C = 4,556.52'$   
 $L_c = 4,620.47'$

Sta. 235+80± To Sta. 237+67.5± (o/s Lt.)  
Remove Existing Guardrail and Steel Posts  
Including 2 BCT Terminal Ends  
187.5 LF

Sta. 236+30± To Sta. 237+30± (o/s Lt.)  
Install 100 LF Guardrail



Sta. 238+00± To Sta. 240+50± (o/s Lt.)  
Remove Existing Guardrail and Steel Posts  
Including 2 BCT Terminal Ends  
250 LF

Sta. 237+90± To Sta. 240+15± (o/s Lt.)  
Install 225 LF Guardrail

Sta. 229+75± To Sta. 237+62.5± (o/s Rt.)  
Remove Existing Guardrail and Steel Posts  
Including 2 BCT Terminal Ends  
787.5 LF

Sta. 229+75± To Sta. 236+00± (o/s Rt.)  
Install 625 LF Guardrail

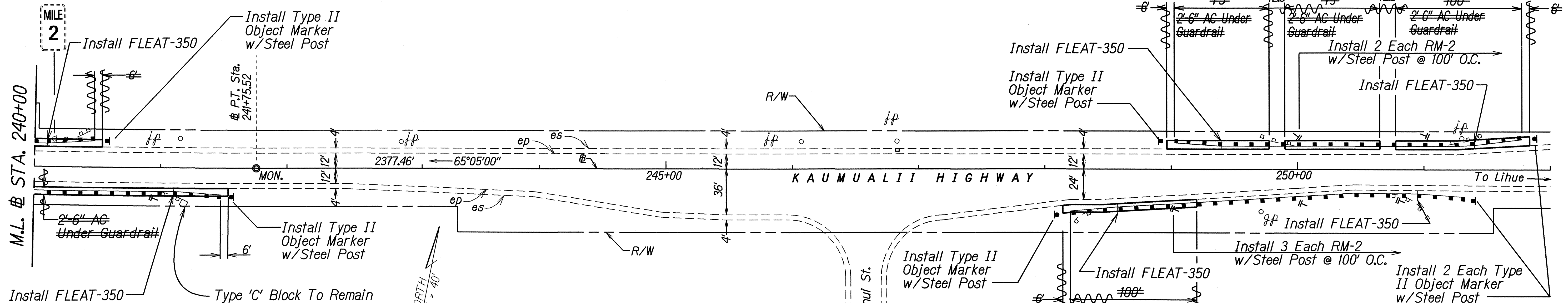
Sta. 236+00± To Sta. 237+50± (o/s Rt.)  
Install 150 LF Guardrail  
w/ 8' Long Strong Posts

Sta. 237+50± To Sta. 237+75± (o/s Rt.)  
Install 25 LF Guardrail

Sta. 238+10± To Sta. 241+22.5± (o/s Rt.)  
Remove Existing Guardrail and Steel Posts  
Including 1 BCT Terminal End  
312.5 LF

Sta. 249+70± To Sta. 251+45± (o/s Lt.)  
Remove Existing Guardrail and Steel Posts  
Including 1 BCT Terminal End  
175 LF

Sta. 249+40± To Sta. 251+40± (o/s Lt.)  
Install 200 LF Guardrail



Sta. 238+35± To Sta. 241+10± (o/s Rt.)  
Install 275 LF Guardrail

#### LEGEND FOR AS-BUILT POSTINGS

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

Sta. 248+57.5± To Sta. 249+20± (o/s Rt.)
Install 62.5 LF Guardrail

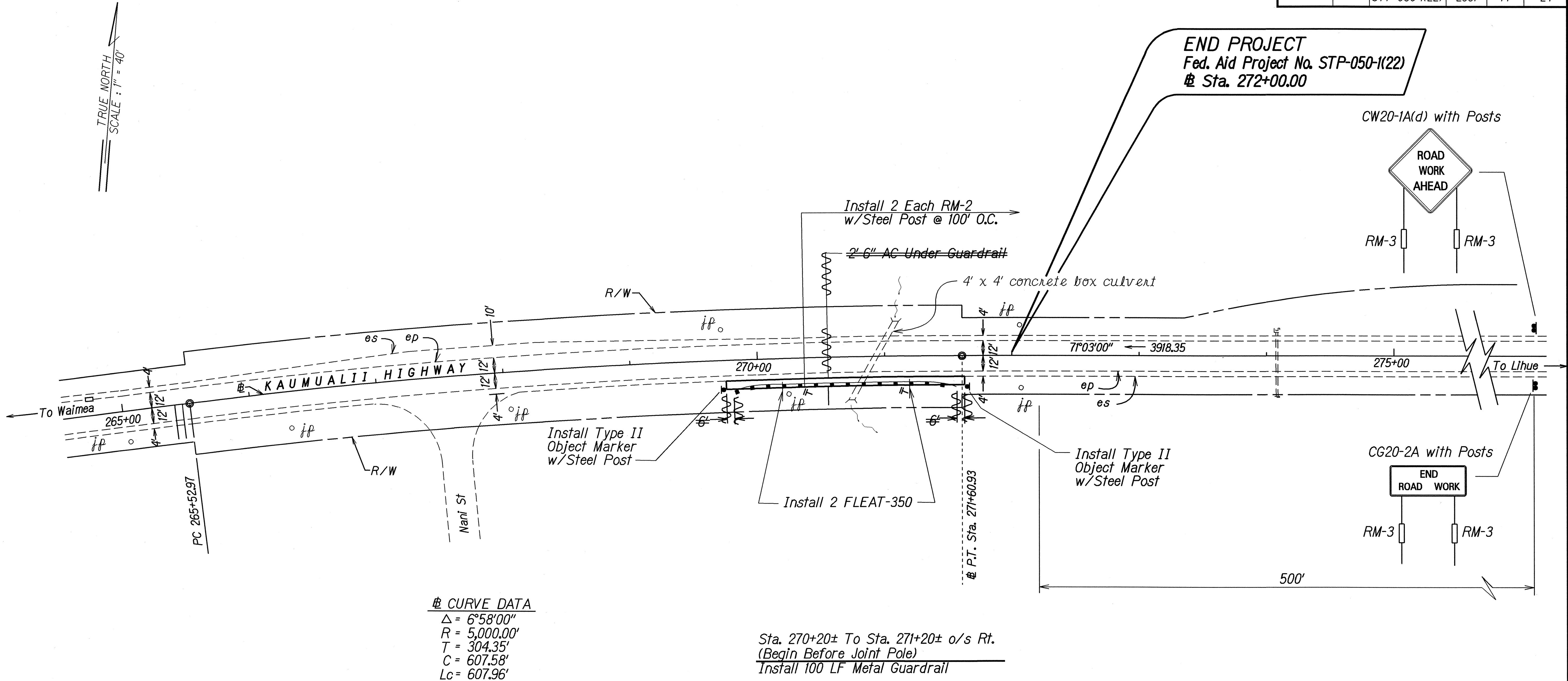
Sta. 248+20± To Sta. 251+07.5± (o/s Rt.)
Remove Existing Guardrail and Steel Posts
Including 2 BCT Terminal Ends
287.5 LF

Sta. 249+20± To Sta. 250+95± (o/s Rt.)
Install 175 LF Guardrail
w/ 8' Long Strong Posts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
**KAUMUALII HIGHWAY GUARDRAIL AND
SHOULDER IMPROVEMENTS**
AT VARIOUS LOCATIONS
Fed. Aid Proj. No STP-050-1(22)
Scale: 1" = 40' Date: August, 2000
SHEET No. 10 OF 11 SHEETS

"AS-BUILT"

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | STP-050-1(22) | 2001 | 14 | 24 |



| | |
|---------------|------|
| DESIGNED BY | DATE |
| DRAWN BY | |
| CHECKED BY | |
| APPROVED BY | |
| NOTED 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
KAUMUALII HIGHWAY GUARDRAIL AND
SHOULDER IMPROVEMENTS
AT VARIOUS LOCATIONS
Fed. Aid Proj. No. STP-050-1(22)
Scale: 1" = 40' Date: August, 2000
SHEET No. 11 OF 11 SHEETS