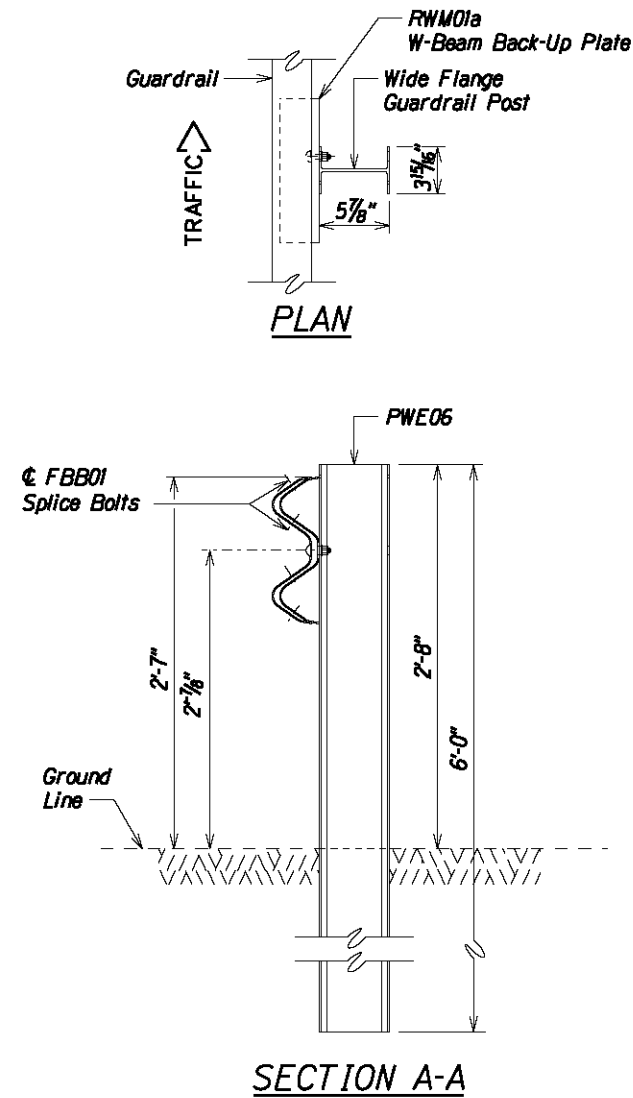
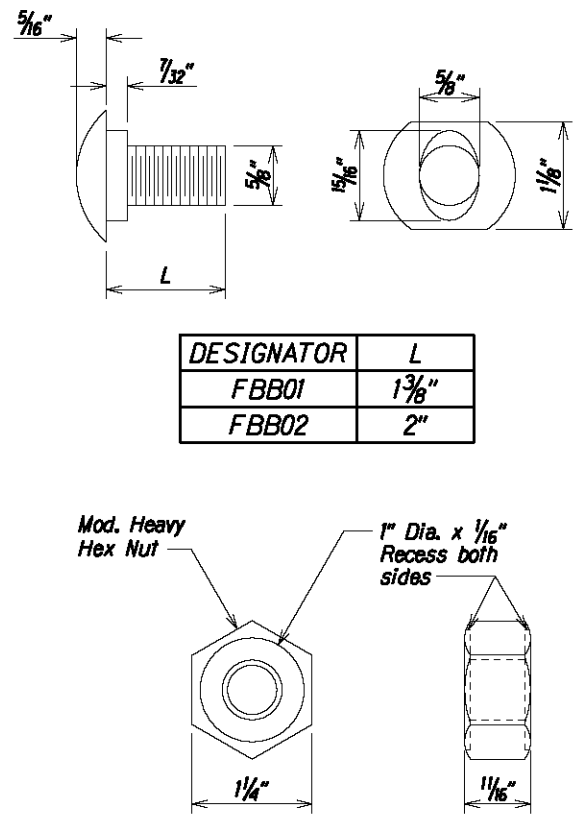
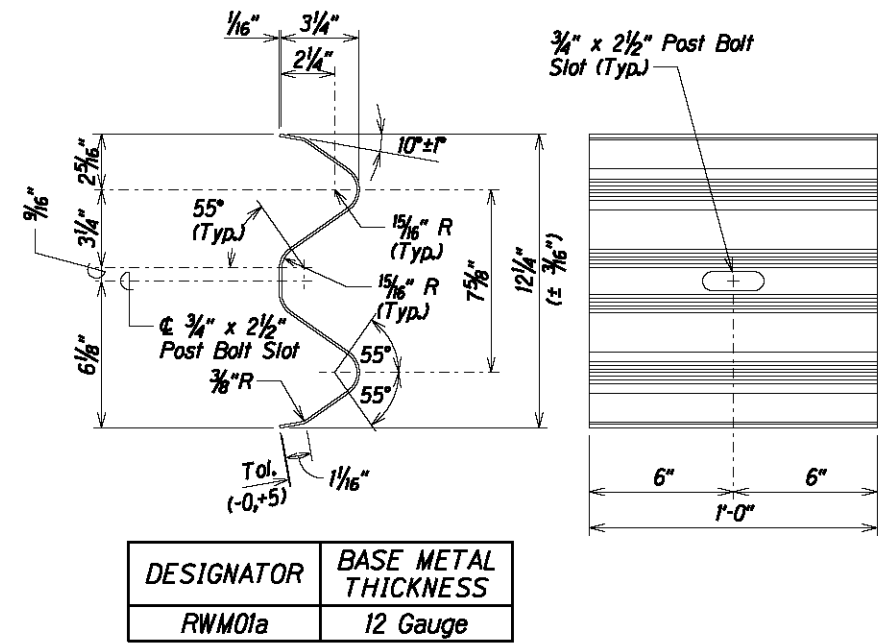




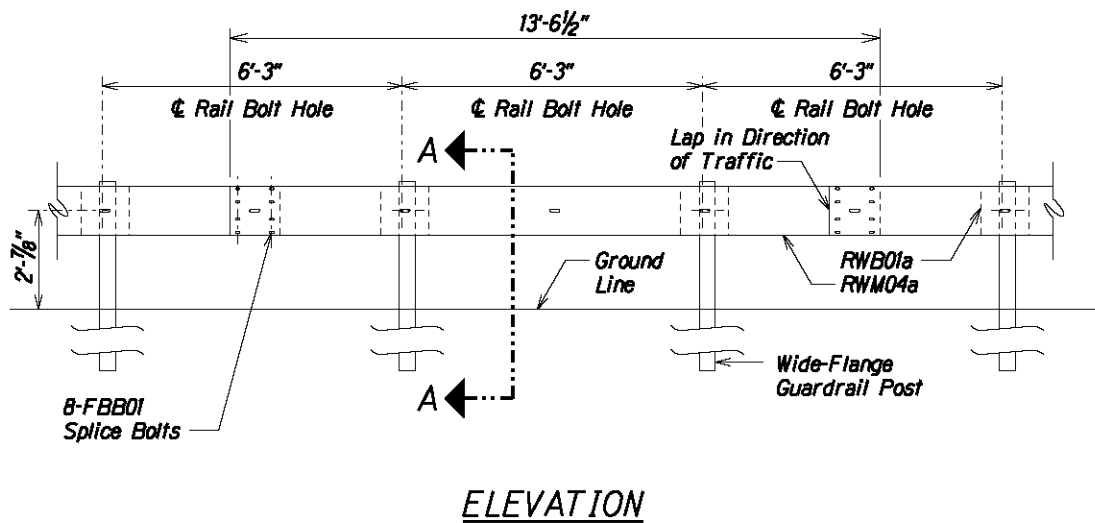
**WIDE-FLANGE GUARDRAIL POST
(PWE06)**



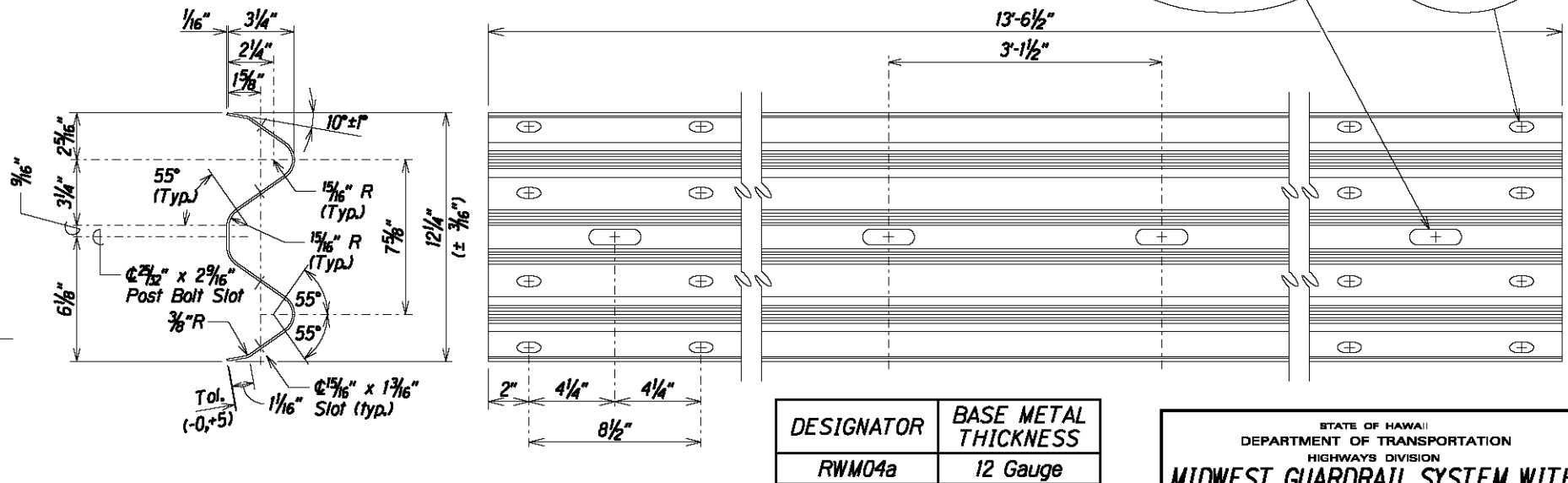
**GUARDRAIL BOLTS AND
RECESSED NUT**



W-BEAM BACK-UP PLATE (RWM01a)



**MIDWEST GUARDRAIL SYSTEM WITH
NO BLOCKOUTS (SGR41)**



4 SPACE W-BEAM GUARDRAIL (RWM04a)

DATE	9/4/20	Delete Midwest Guardrail System with No Blockouts (SGR41).
REVISION		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**MIDWEST GUARDRAIL SYSTEM WITH
NO BLOCKOUTS**

KULA HWY. & PILANI HWY. GDRAIL & SHLDR. IMPROVTS.
Vicinity of Aapua Pkwy. to Omaopio Rd. & N. Kihei Rd. to Lipoa Pkwy.

Federal-Aid Project No. STP-0900(100)

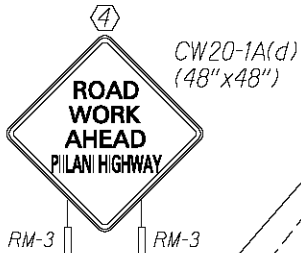
Scale: NTS Date: April, 2020

SHEET No. 3 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0900(100)	2020	ADD.16	28

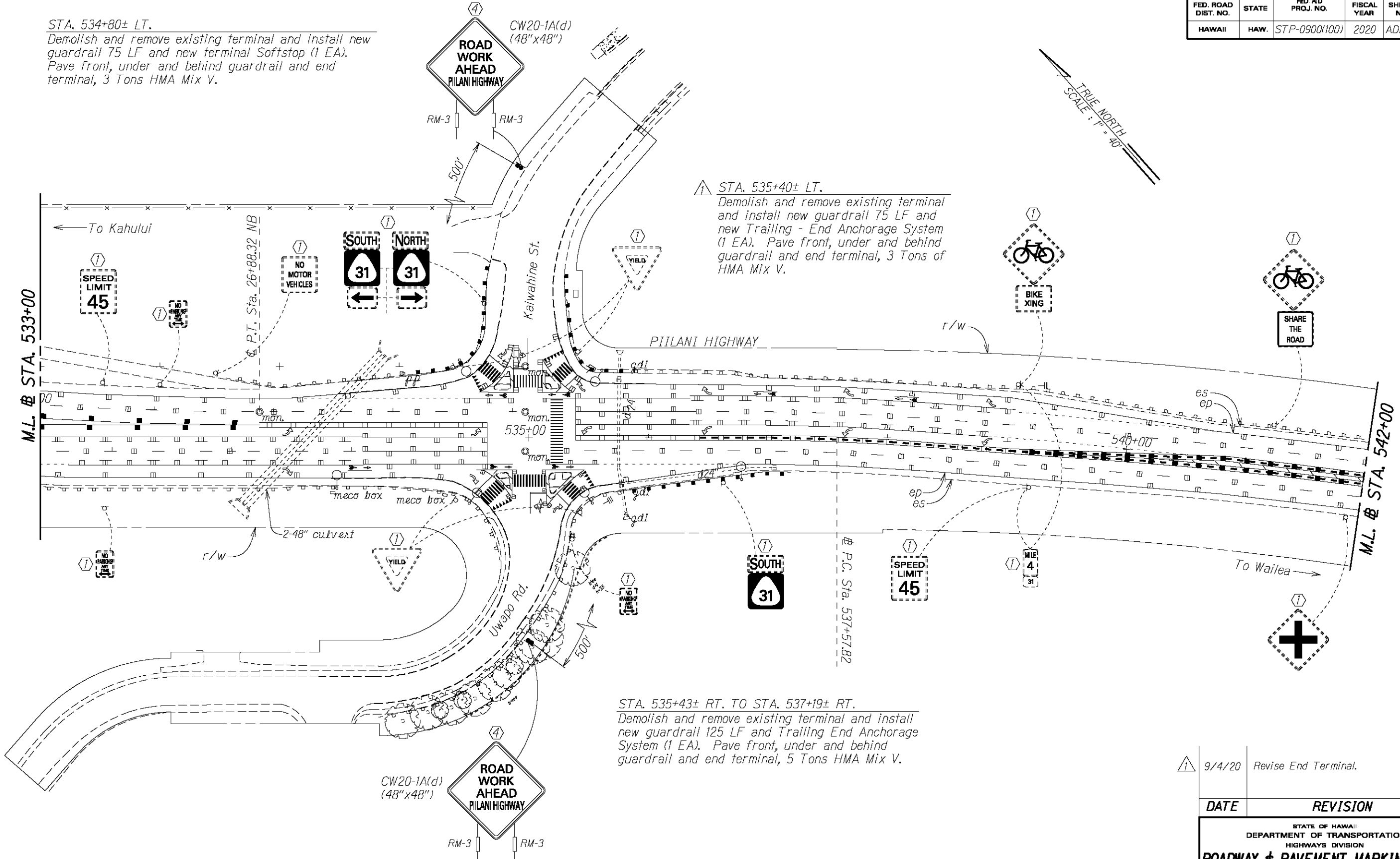
STA. 534+80± LT.

Demolish and remove existing terminal and install new guardrail 75 LF and new terminal Softstop (1 EA).
Pave front, under and behind guardrail and end terminal, 3 Tons HMA Mix V.



△ STA. 535+40± LT.

Demolish and remove existing terminal and install new guardrail 75 LF and new Trailing - End Anchorage System (1 EA). Pave front, under and behind guardrail and end terminal, 3 Tons of HMA Mix V.



STA. 535+43± RT. TO STA. 537+19± RT.

Demolish and remove existing terminal and install new guardrail 125 LF and Trailing End Anchorage System (1 EA). Pave front, under and behind guardrail and end terminal, 5 Tons HMA Mix V.

KEY:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Remove Exist. Sign(s) & Post(s)
- ③ Remove Exist. & Install New Sign(s) & Post(s)
- ④ Install New Sign(s) & Post(s)

△ 9/4/20	Revise End Terminal.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ROADWAY & PAVEMENT MARKING PLAN	
KULA HIGHWAY & PIILANI HIGHWAY	
GUARDRAIL & SHOULDER IMPROVEMENTS	
Vicinity of A'apueo Parkway to Omaopio Road and North Kihei Road to Lipoa Parkway	
Federal-Aid Project No. STP-0900(100)	
Scale: 1" = 40'	Date: April, 2020
SHEET No. 3 OF 15 SHEETS	

SURVEY PLOTTED BY	DATE
DRAWN BY	3/20
CHECKED BY	
NOTE BOOK	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0900(100)	2020	ADD.17	28

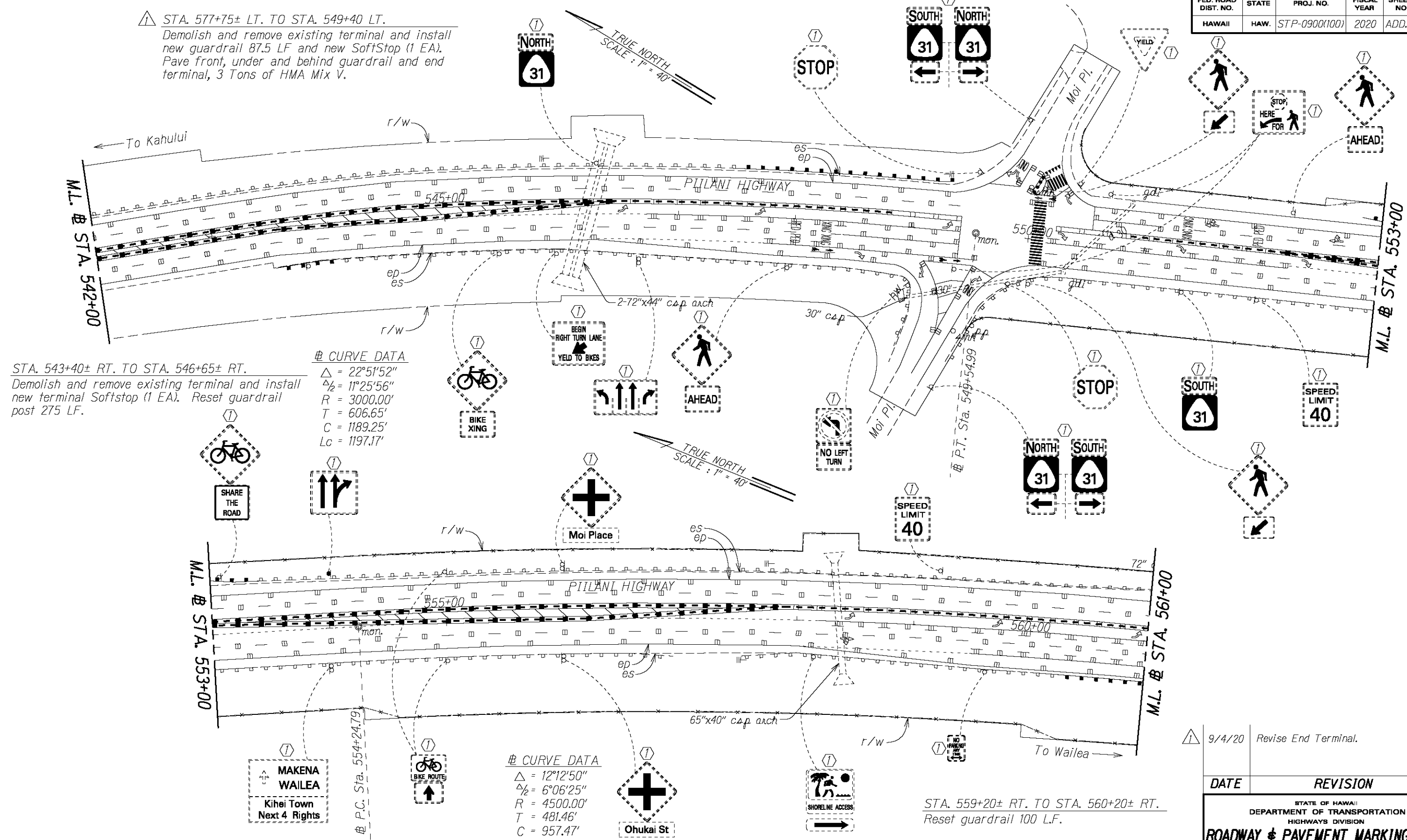
△ STA. 577+75± LT. TO STA. 549+40 LT.
Demolish and remove existing terminal and install new guardrail 87.5 LF and new SoftStop (1 EA).
Pave front, under and behind guardrail and end terminal, 3 Tons of HMA Mix V.

STA. 543+40± RT. TO STA. 546+65± RT.
Demolish and remove existing terminal and install new terminal Softstop (1 EA). Reset guardrail post 275 LF.

△ STA. 553+00± LT.
Demolish and remove existing end terminal and install new Trailing - End Anchorage System (1 EA).

CURVE DATA
Δ = 22°51'52"
Δ/2 = 11°25'56"
R = 3000.00'
T = 606.65'
C = 1189.25'
Lc = 1197.17'

CURVE DATA
Δ = 12°12'50"
Δ/2 = 6°06'25"
R = 4500.00'
T = 481.46'
C = 957.47'
Lc = 959.28'



- KEY:
- ① Exist. Sign(s) & Post(s) to Remain
 - ② Remove Exist. Sign(s) & Post(s)
 - ③ Remove Exist. & Install New Sign(s) & Post(s)
 - ④ Install New Sign(s) & Post(s)

DATE	REVISION
9/4/20	Revise End Terminal.

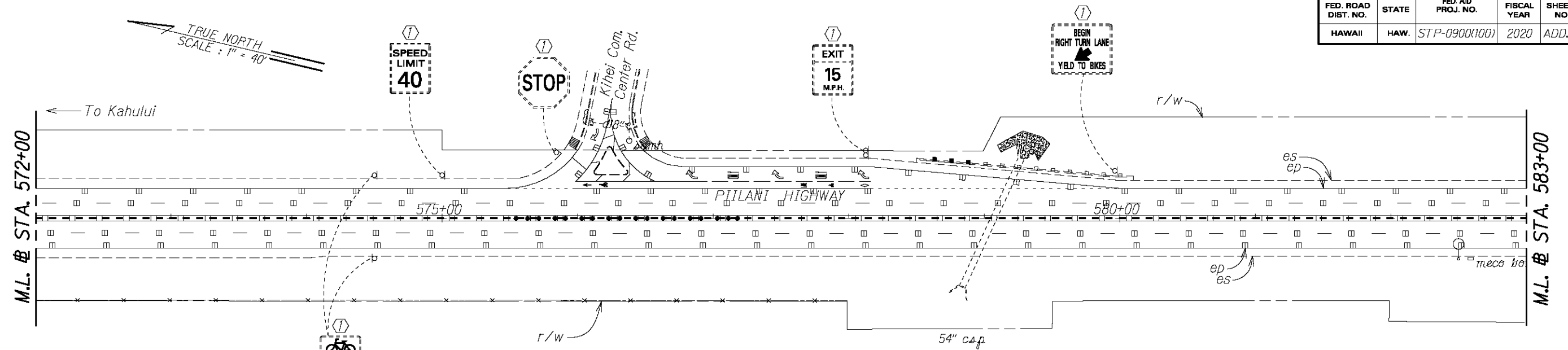
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY & PAVEMENT MARKING PLAN

KULA HIGHWAY & PIILANI HIGHWAY
GUARDRAIL & SHOULDER IMPROVEMENTS
Vicinity of A'apueo Parkway to Omaopio Road
and North Kihei Road to Lipoa Parkway
Federal-Aid Project No. STP-0900(100)
Scale: 1" = 40' Date: April, 2020

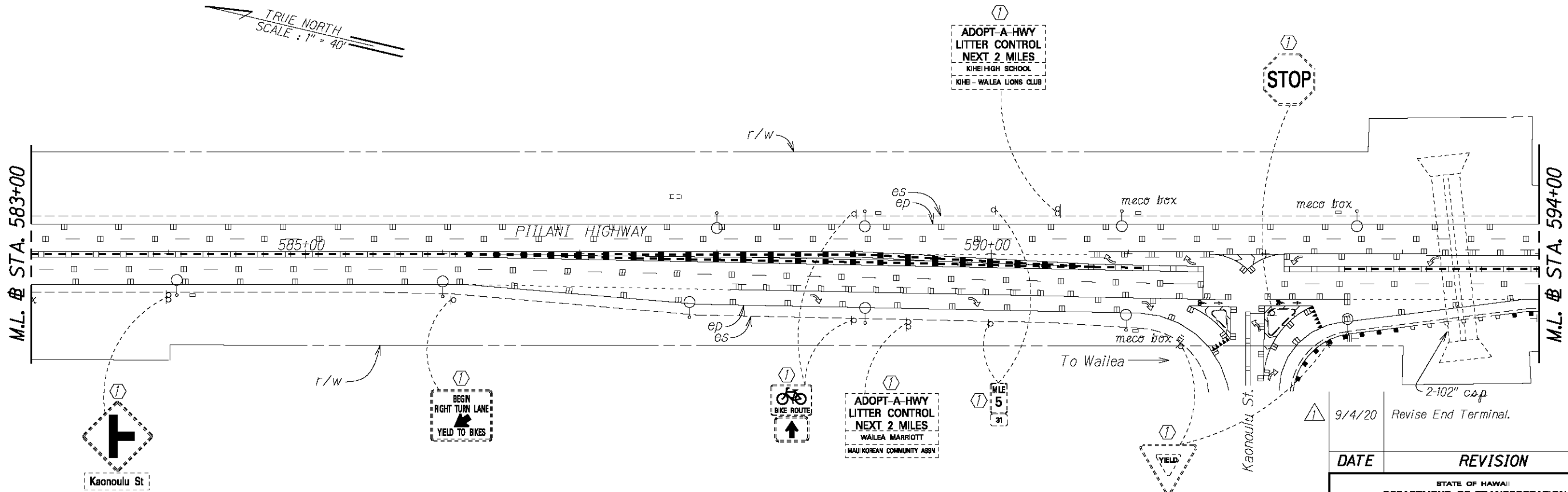
SHEET No. 4 OF 15 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0900(100)	2020	ADD.19	28



△ STA. 578+40± LT. TO STA. 580+48± LT.
Demolish and remove existing terminal and install new guardrail 37.5 LF and new Trailing End Anchorage System (1 EA).

STA. 593+85± RT. TO STA. 594+23± RT.
Demolish and remove existing terminal and install new terminal Softstop (1 EA)



△ STA. 592+25± RT.
Demolish and remove existing terminal and install new guardrail 100 LF. Pave front, under and behind guardrail and new terminal Softstop 1 EA, 3 Tons of HMA Mix V.

STA. 593+00 RT. TO STA. 593+50 RT.
Reset guardrail 50 LF.

- KEY:
- ① Exist. Sign(s) & Post(s) to Remain
 - ② Remove Exist. Sign(s) & Post(s)
 - ③ Remove Exist. & Install New Sign(s) & Post(s)
 - ④ Install New Sign(s) & Post(s)

DATE	REVISION
9/4/20	Revise End Terminal.
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ROADWAY & PAVEMENT MARKING PLAN	
KULA HIGHWAY & PII LANI HIGHWAY GUARDRAIL & SHOULDER IMPROVEMENTS Vicinity of A'apueo Parkway to Omaopio Road and North Kihel Road to Lipoa Parkway Federal-Aid Project No. STP-0900(100)	
Scale: 1" = 40' Date: April, 2020	
SHEET No. 6 OF 15 SHEETS	

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0900(100)	2020	ADD.21	28

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

ORIGINAL PLAN	DATE
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

KEY:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Remove Exist. Sign(s) & Post(s)
- ③ Remove Exist. & Install New Sign(s) & Post(s)
- ④ Install New Sign(s) & Post(s)

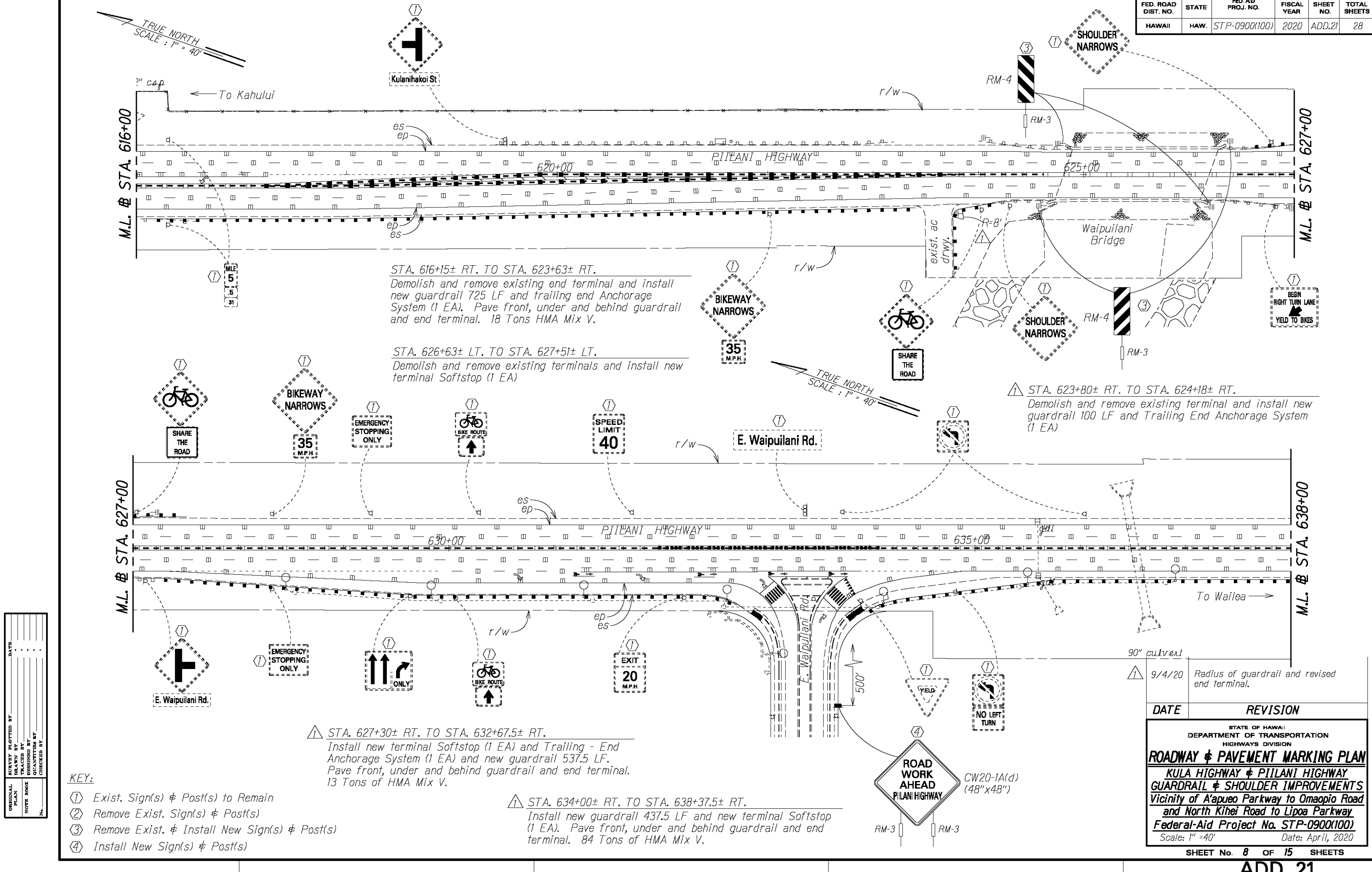
④ STA. 627+30± RT. TO STA. 632+67.5± RT.
Install new terminal Softstop (1 EA) and Trailing - End Anchorage System (1 EA) and new guardrail 537.5 LF.
Pave front, under and behind guardrail and end terminal. 13 Tons of HMA Mix V.

④ STA. 634+00± RT. TO STA. 638+37.5± RT.
Install new guardrail 437.5 LF and new terminal Softstop (1 EA). Pave front, under and behind guardrail and end terminal. 84 Tons of HMA Mix V.

④ 9/4/20 Radius of guardrail and revised end terminal.

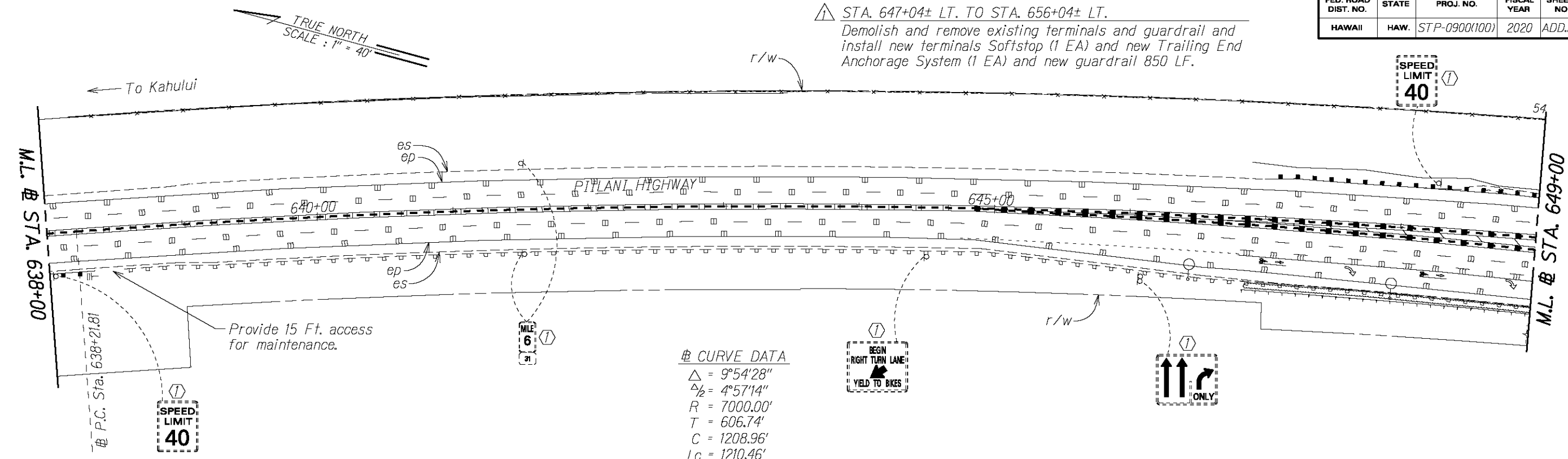
DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY & PAVEMENT MARKING PLAN
KULA HIGHWAY & PIILANI HIGHWAY
GUARDRAIL & SHOULDER IMPROVEMENTS
Vicinity of A'apueo Parkway to Omaopio Road
and North Kihei Road to Lipoa Parkway
Federal-Aid Project No. STP-0900(100)
Scale: 1" = 40'
Date: April, 2020
SHEET No. **8** OF **15** SHEETS

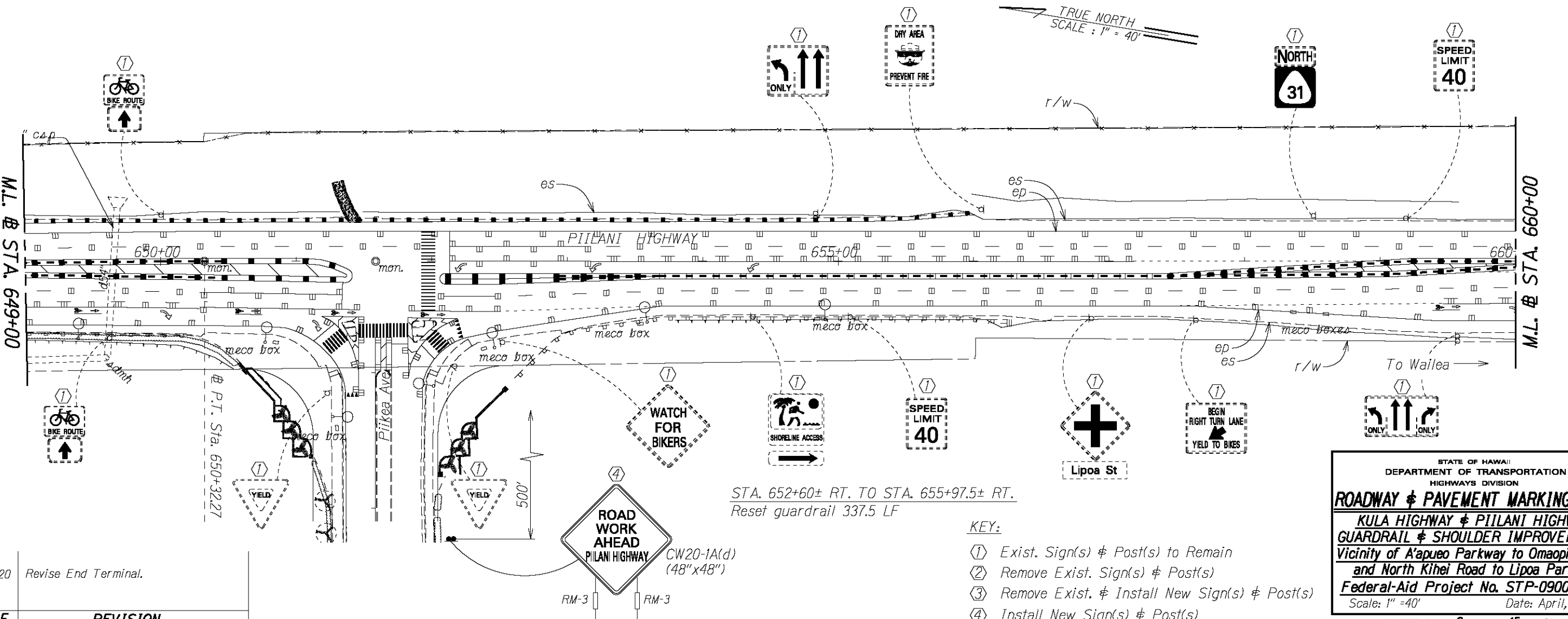


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0900(100)	2020	ADD.22	28

△ STA. 647+04± LT. TO STA. 656+04± LT.
Demolish and remove existing terminals and guardrail and install new terminals Softstop (1 EA) and new Trailing End Anchorage System (1 EA) and new guardrail 850 LF.



△ CURVE DATA
 $\Delta = 9^{\circ}54'28''$
 $\Delta/2 = 4^{\circ}57'14''$
 $R = 7000.00'$
 $T = 606.74'$
 $C = 1208.96'$
 $Lc = 1210.46'$



STA. 652+60± RT. TO STA. 655+97.5± RT.
Reset guardrail 337.5 LF

- KEY:
- ① Exist. Sign(s) & Post(s) to Remain
 - ② Remove Exist. Sign(s) & Post(s)
 - ③ Remove Exist. & Install New Sign(s) & Post(s)
 - ④ Install New Sign(s) & Post(s)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY & PAVEMENT MARKING PLAN

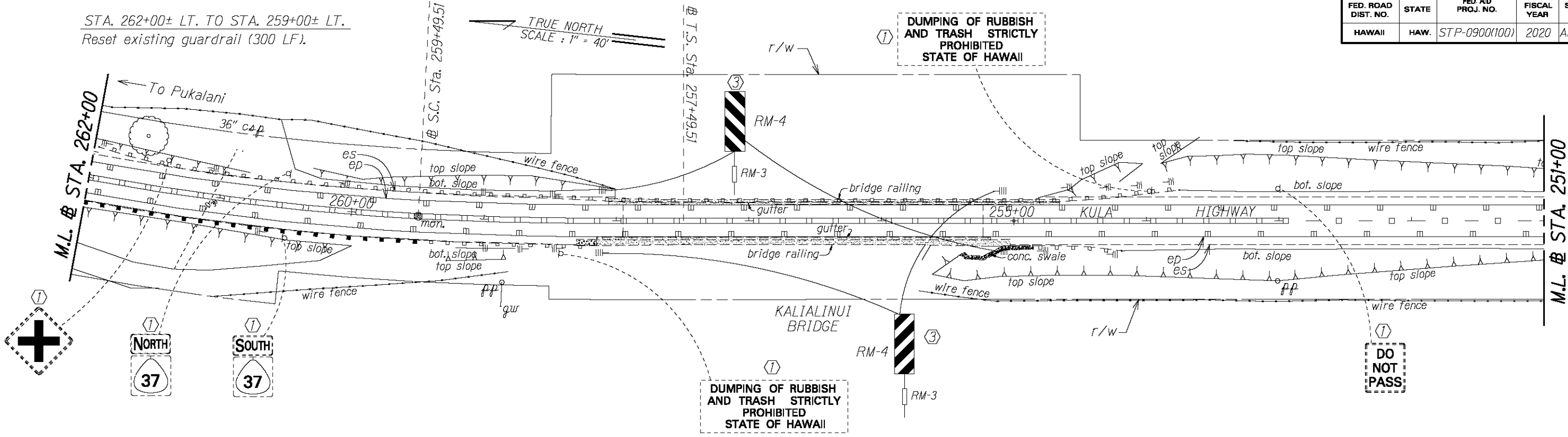
KULA HIGHWAY & PILI HIGHWAY
GUARDRAIL & SHOULDER IMPROVEMENTS
Vicinity of A'apueo Parkway to Omaopio Road
and North Kihei Road to Lipoa Parkway
Federal-Aid Project No. STP-0900(100)
Scale: 1" = 40'
Date: April, 2020

SHEET No. 9 OF 15 SHEETS

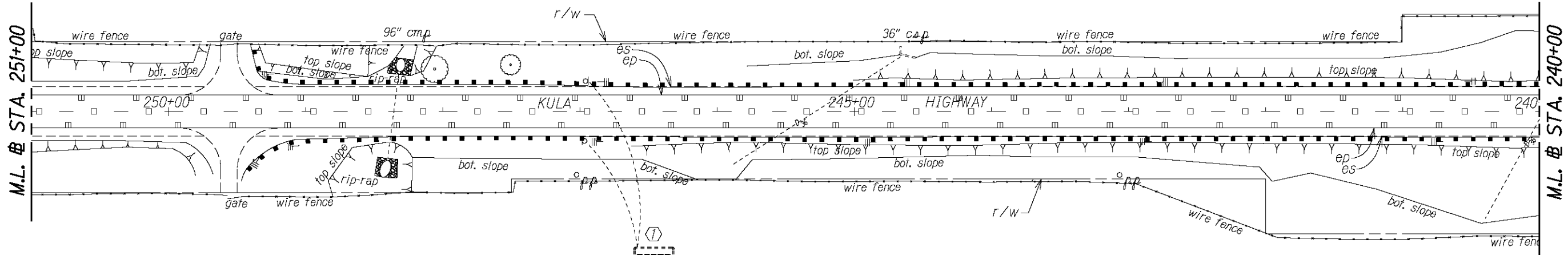
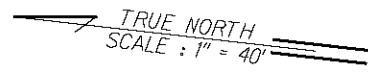
SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

△	9/4/20	Revise End Terminal.
DATE	REVISION	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0900(100)	2020	ADD.27	28



1 STA. 249+40± LT. TO STA. 234+20± LT.
Demolish and remove existing guardrail and install new guardrail (1512.5 LF) and install Trailing End Anchorage System (1 EA) and new approach terminal Softstop 1 (EA). Pave front, under and behind guardrail and end terminal. 37 Tons HMA Mix V.



1 STA. 249+57.5± RT. TO STA. 234+20± RT.
Demolish and remove existing guardrail and install new guardrail (1537.5 LF) and install new approach terminal Softstop (1 EA) and new Trailing - End Anchorage System (1 EA). Pave front, under and behind guardrail and end terminal. 37 Tons HMA Mix V.



- KEY:
- 1 Exist. Sign(s) & Post(s) to Remain
 - 2 Remove Exist. Sign(s) & Post(s)
 - 3 Remove Exist. & Install New Sign(s) & Post(s)
 - 4 Install New Sign(s) & Post(s)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY & PAVEMENT MARKING PLAN

**KULA HIGHWAY & PIILANI HIGHWAY
GUARDRAIL & SHOULDER IMPROVEMENTS
Vicinity of A'apueo Parkway to Omaopio Road
and North Kihei Road to Lipoa Parkway
Federal-Aid Project No. STP-0900(100)**

Scale: 1" = 40' Date: April, 2020

SHEET No. 14 OF 15 SHEETS

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

1	9/4/20	Revise End Terminal.
DATE	REVISION	