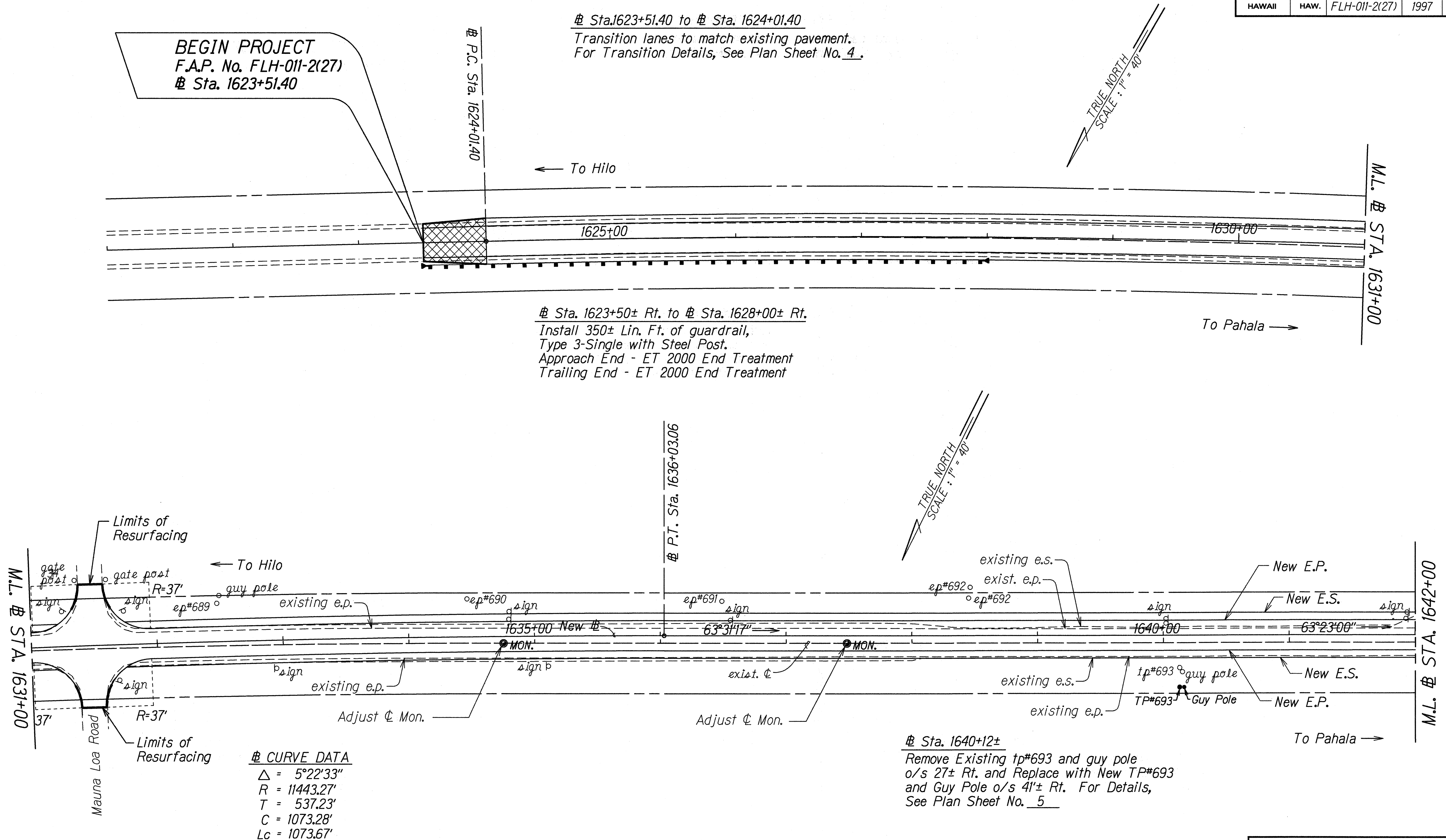


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FLH-011-2(27)	1997	7	46

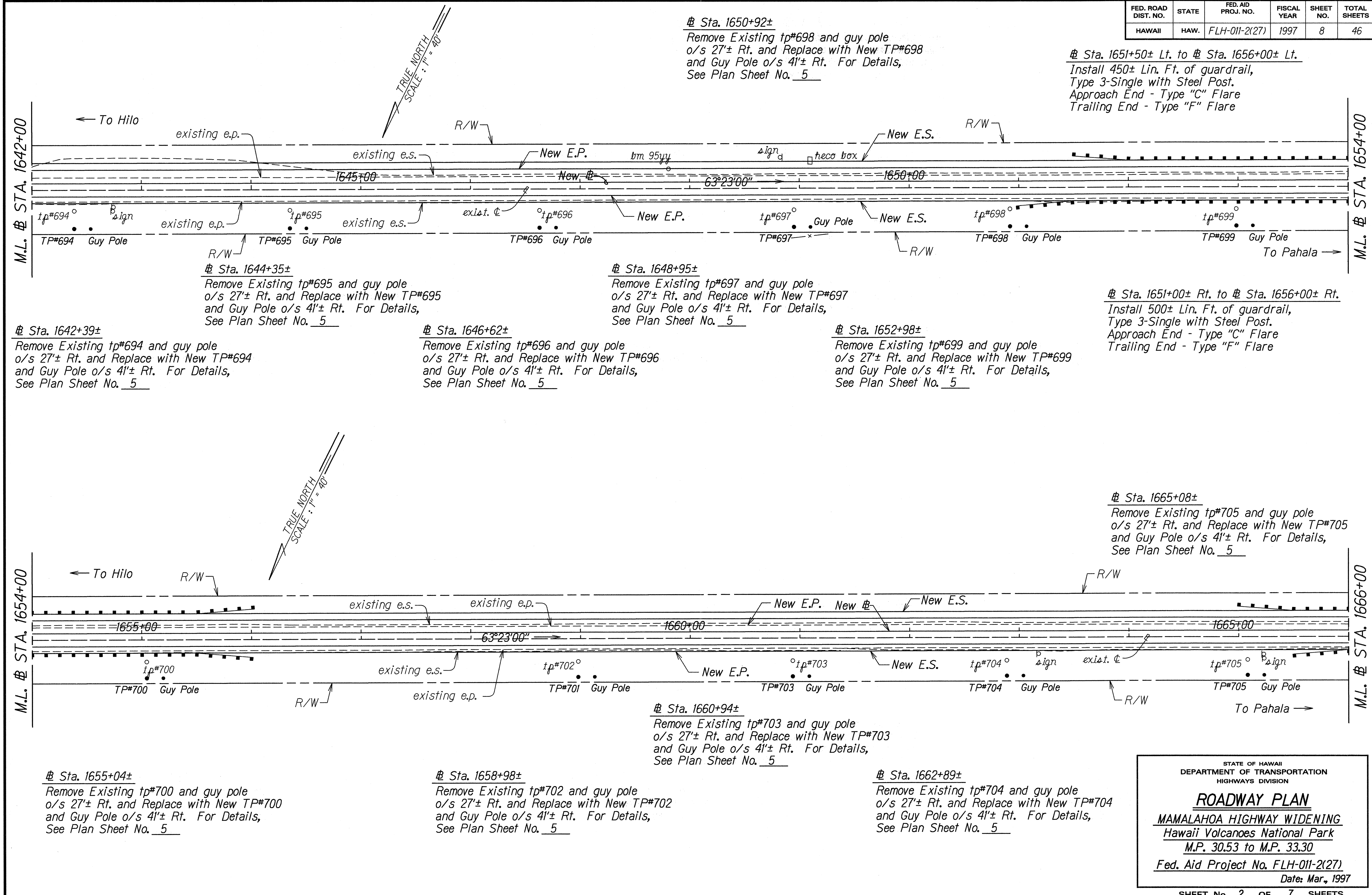


ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTED BY	DRAWN BY	13-24-97
QUANTITIES BY	TRACED BY	
CHECKED BY	DESIGNED BY	
	IN CHARGE	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN
MAMALAHOA HIGHWAY WIDENING
Hawaii Volcanoes National Park
M.P. 30.53 to M.P. 33.30
Fed. Aid Project No. FLH-011-2(27)
Date: Mar., 1997

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FLH-011-2(27)	1997	8	46



SURVEY PLOTTED BY	DATE
DRAWN BY	13.13.97
TRACED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
066.george	
066.memo2	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

MAMALAHOA HIGHWAY WIDENING
Hawaii Volcanoes National Park
M.P. 30.53 to M.P. 33.30
Fed. Aid Project No. FLH-011-2(27)
Date: Mar., 1997

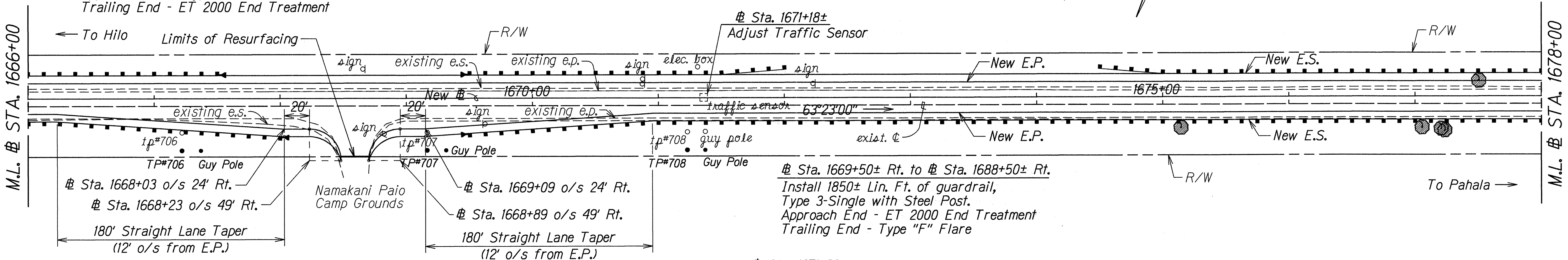
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FLH-011-2(27)	1997	9	46

Sta. 1665+00± Lt. to Sta. 1667+50± Lt.
Install 200± Lin. Ft. of guardrail,
Type 3-Single with Steel Post.
Approach End - ET 2000 End Treatment
Trailing End - Type "F" Flare

Sta. 1665+50± Rt. to Sta. 1668+00± Rt.
Install 200± Lin. Ft. of guardrail,
Type 3-Single with Steel Post.
Approach End - Type "C" Flare
Trailing End - ET 2000 End Treatment

Sta. 1669+50± Lt. to Sta. 1672+00± Lt.
Install 200± Lin. Ft. of guardrail,
Type 3-Single with Steel Post.
Approach End - Type "C" Flare
Trailing End - ET 2000 End Treatment

Sta. 1674+50± Lt. to Sta. 1682+50± Lt.
Install 800± Lin. Ft. of guardrail,
Type 3-Single with Steel Post.
Approach End - Type "C" Flare
Trailing End - Type "F" Flare



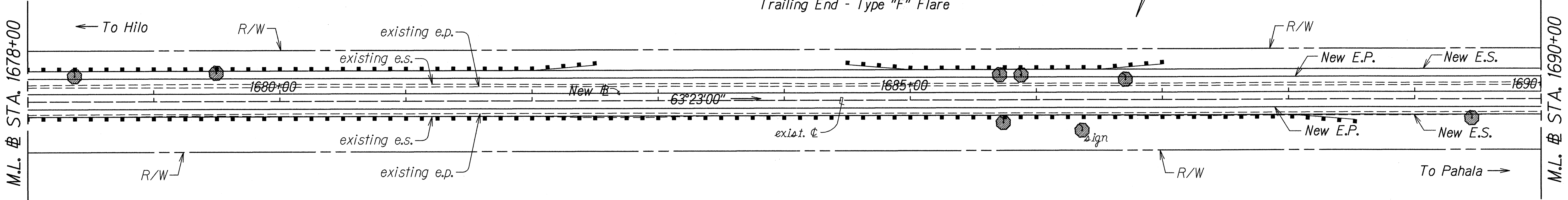
Sta. 1667+22±
Remove Existing tp#706 and guy pole
o/s 27'± Rt. and Replace with New TP#706
and Guy Pole, o/s 41'± Rt. For Details,
See Plan Sheet No. 5.

Sta. 1669+16±
Remove Existing tp#707 and guy pole
o/s 27'± Rt. and Replace with New TP#707
and Guy Pole, o/s 41'± Rt. For Details,
See Plan Sheet No. 5.

Sta. 1671+23±
Remove Existing tp#708 and guy pole, o/s 27'± Rt.
and Replace with New TP#708 and Guy Pole,
o/s 41'± Rt. Install New 2'x4' Pull Box. For Details,
See Plan Sheet No. 5.

Namakani Paio Camp Grounds
For Details of Intersection Improvements,
See Plan Sheet No. 5.

Sta. 1684+50± Lt. to Sta. 1687+00± Lt.
Install 250± Lin. Ft. of guardrail,
Type 3-Single with Steel Post.
Approach End - Type "C" Flare
Trailing End - Type "F" Flare

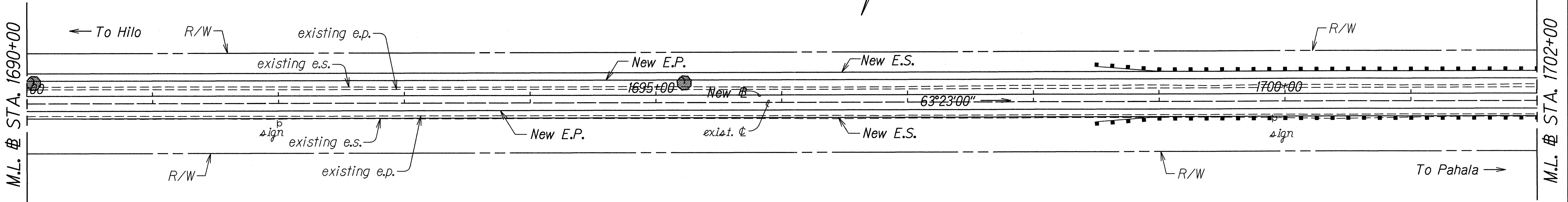


Legend
● Large Trees to be Removed
(or Relocated).

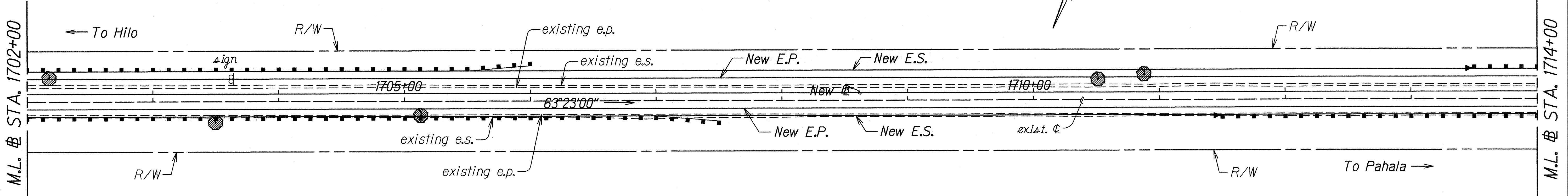
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
MAMALAHOA HIGHWAY WIDENING
Hawaii Volcanoes National Park
M.P. 30.53 to M.P. 33.30
Fed. Aid Project No. FLH-011-2(27)
Date: Mar., 1997

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FLH-011-2(27)	1997	10	46

Sta. 1698+50± Lt. to Sta. 1706+00± Lt.
 Install 750± Lin. Ft. of guardrail,
 Type 3-Single with Steel Post.
 Approach End - Type "C" Flare
 Trailing End - Type "F" Flare



Sta. 1698+50± Rt. to Sta. 1707+50± Rt.
 Install 900± Lin. Ft. of guardrail,
 Type 3-Single with Steel Post.
 Approach End - Type "C" Flare
 Trailing End - Type "F" Flare



Legend

● Large Trees to be Removed
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STATE OF HAWAII
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 HIGHWAYS DIVISION

ROADWAY PLAN

MAMALAHOA HIGHWAY WIDENING
Hawaii Volcanoes National Park
M.P. 30.53 to M.P. 33.30

Fed. Aid Project No. FLH-011-2(27)
Date: Mar., 1997

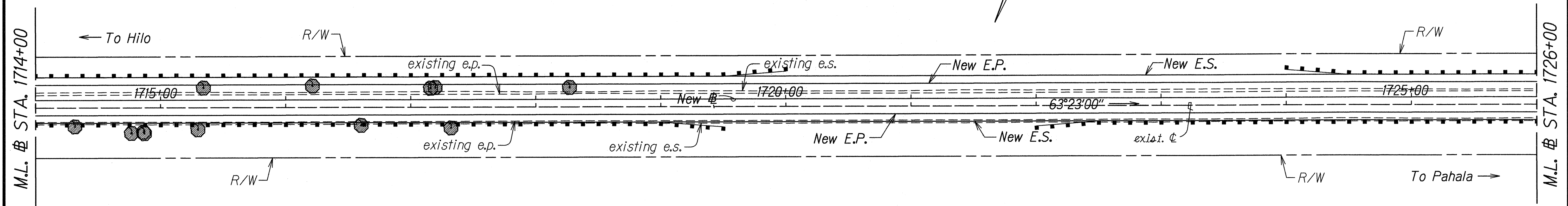
SHEET No. 4 OF 7 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY J. Masumoto	7/23/97
QUANTITIES BY	CHECKED BY	
N. Masumoto		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FLH-011-2(27)	1997	11	46

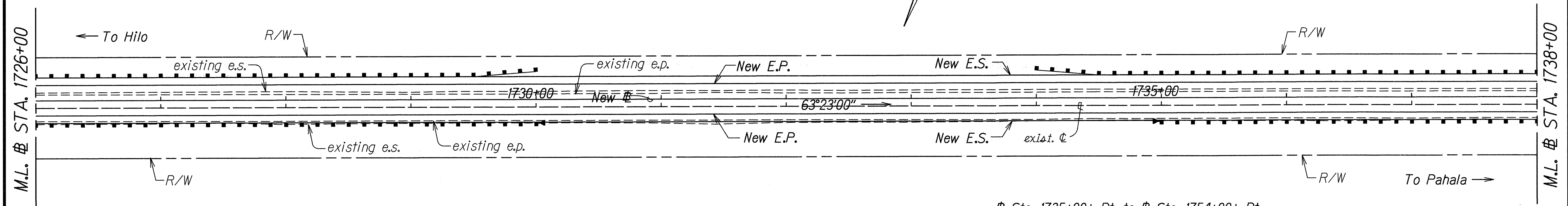
Sta. 1713+50± Lt. to Sta. 1720+00± Lt.
 Install 600± Lin. Ft. of guardrail,
 Type 3-Single with Steel Post.
 Approach End - Type "C" Flare
 Trailing End - ET 2000 End Treatment

Sta. 1724+00± Lt. to Sta. 1730+00± Lt.
 Install 600± Lin. Ft. of guardrail,
 Type 3-Single with Steel Post.
 Approach End - Type "C" Flare
 Trailing End - Type "F" Flare



Sta. 1711+50± Rt. to Sta. 1719+50± Rt.
 Install 750± Lin. Ft. of guardrail,
 Type 3-Single with Steel Post.
 Approach End - ET 2000 End Treatment
 Trailing End - Type "F" Flare

Sta. 1722+00± Rt. to Sta. 1730+00 ±Rt.
 Install 750± Lin. Ft. of guardrail,
 Type 3-Single with Steel Post.
 Approach End - Type "C" Flare
 Trailing End - ET 2000 End Treatment



Sta. 1734+00± Lt. to Sta. 1739+50± Lt.
 Install 550± Lin. Ft. of guardrail,
 Type 3-Single with Steel Post.
 Approach End - Type "C" Flare
 Trailing End - Type "F" Flare

Sta. 1735+00± Rt. to Sta. 1754+00± Rt.
 Install 1850± Lin. Ft. of guardrail,
 Type 3-Single with Steel Post.
 Approach End - ET 2000 End Treatment
 Trailing End - Type "F" Flare

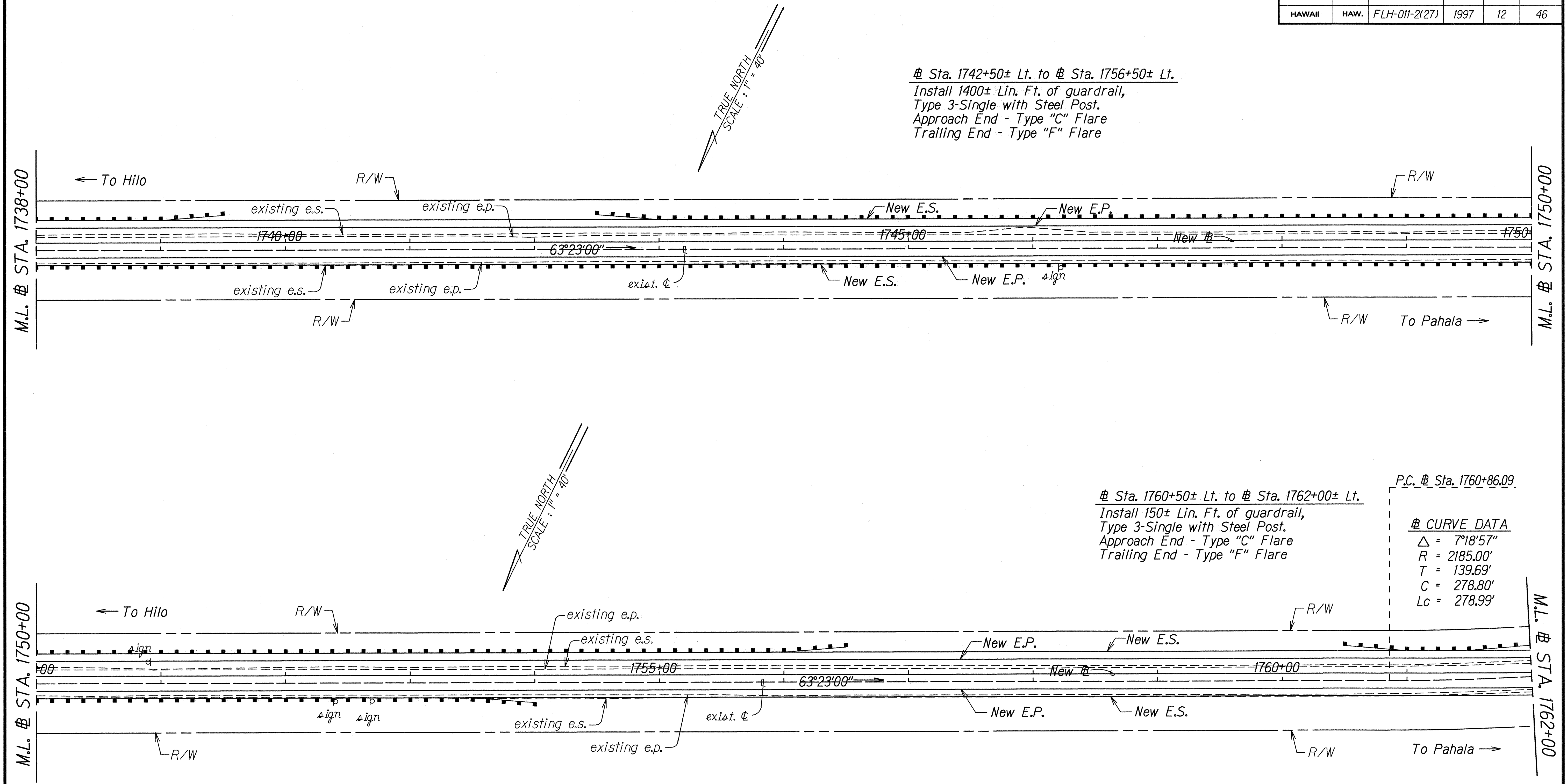
Legend
 ● Large Trees to be Removed
 (or Relocated).

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ROADWAY PLAN
 MAMALAHOA HIGHWAY WIDENING
 Hawaii Volcanoes National Park
 M.P. 30.53 to M.P. 33.30
 Fed. Aid Project No. FLH-011-2(27)
 Date: Mar., 1997

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY J. Matsunaga/G. Kawamata	12-19-97
OFF/George	TRACED BY J. Ohta	
N. Shindoh	QUANTITIES BY	
	CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FLH-011-2(27)	1997	12	46



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	12/19/97
degeorge	TRACED BY	
3/10/00	QUANTITIES BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

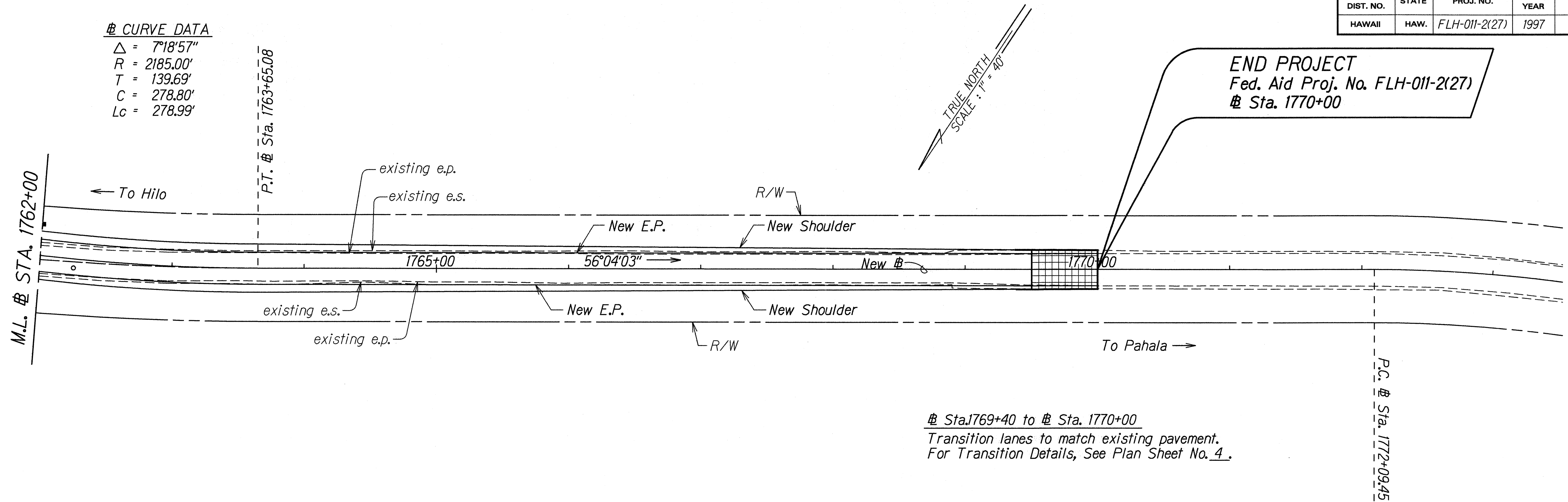
MAMALAHOA HIGHWAY WIDENING
Hawaii Volcanoes National Park
M.P. 30.53 to M.P. 33.30

Fed. Aid Project No. FLH-011-2(27)
Date: Mar., 1997

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FLH-011-2(27)	1997	13	46

CURVE DATA

Δ = 7°18'57"
R = 2185.00'
T = 139.69'
C = 278.80'
Lc = 278.99'



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	1419-97
06600000	TRACED BY	
06600000	QUANTITIES BY	
06600000	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

MAMALAHOA HIGHWAY WIDENING

Hawaii Volcanoes National Park

M.P. 30.53 to M.P. 33.30

Fed. Aid Project No. FLH-011-2(27)

Date: Mar., 1997