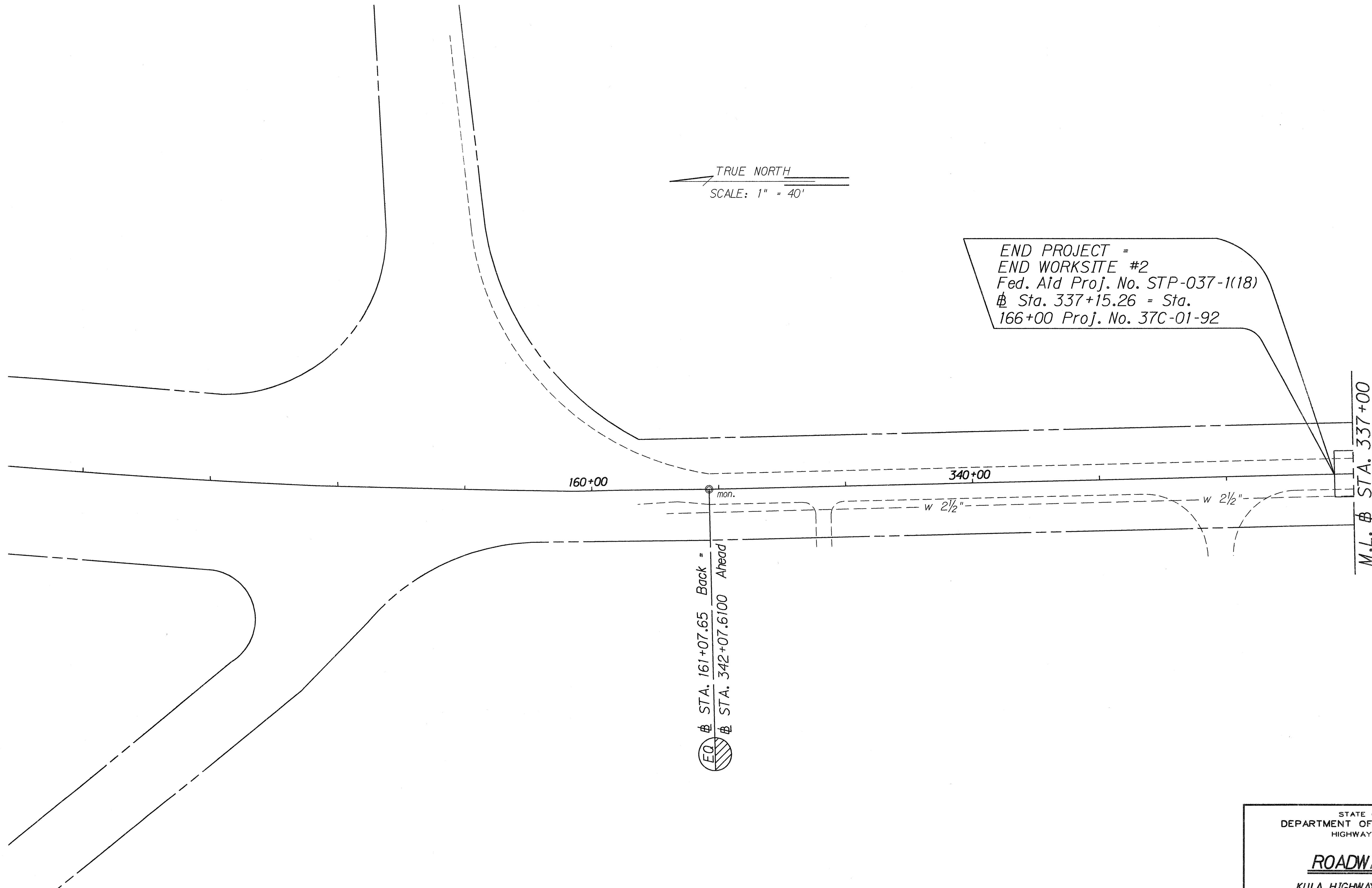


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-037-1(18)	1993	6	35



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
N. KULUPUEN	CHECKED BY	4-29-93

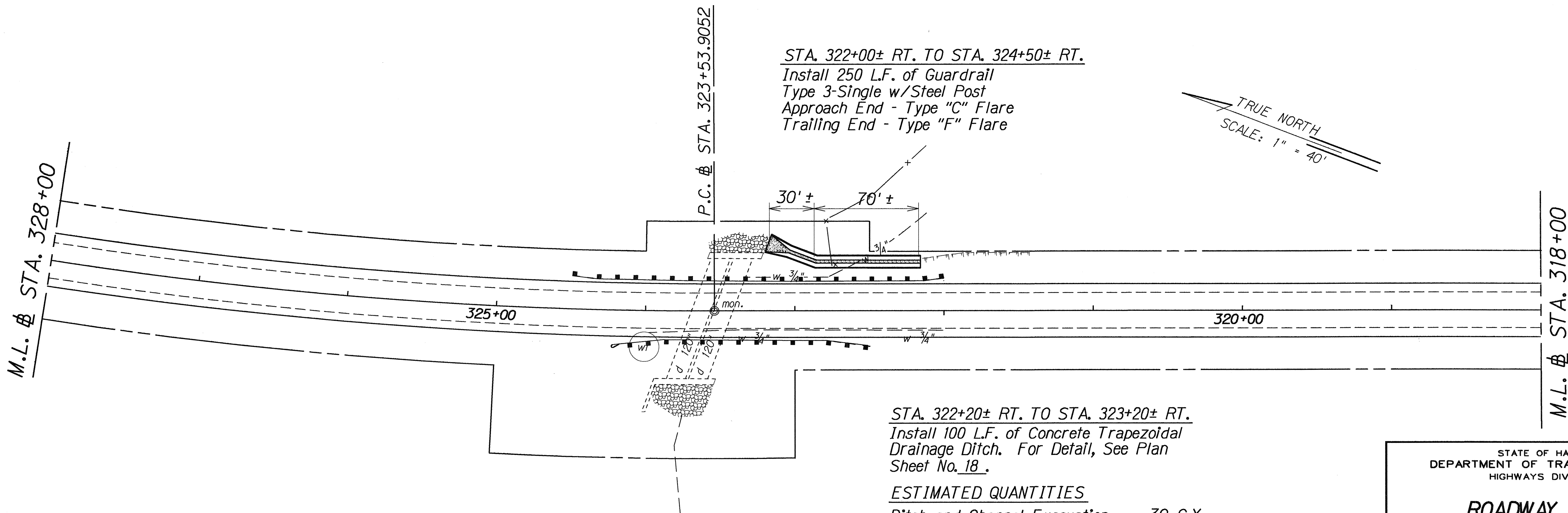
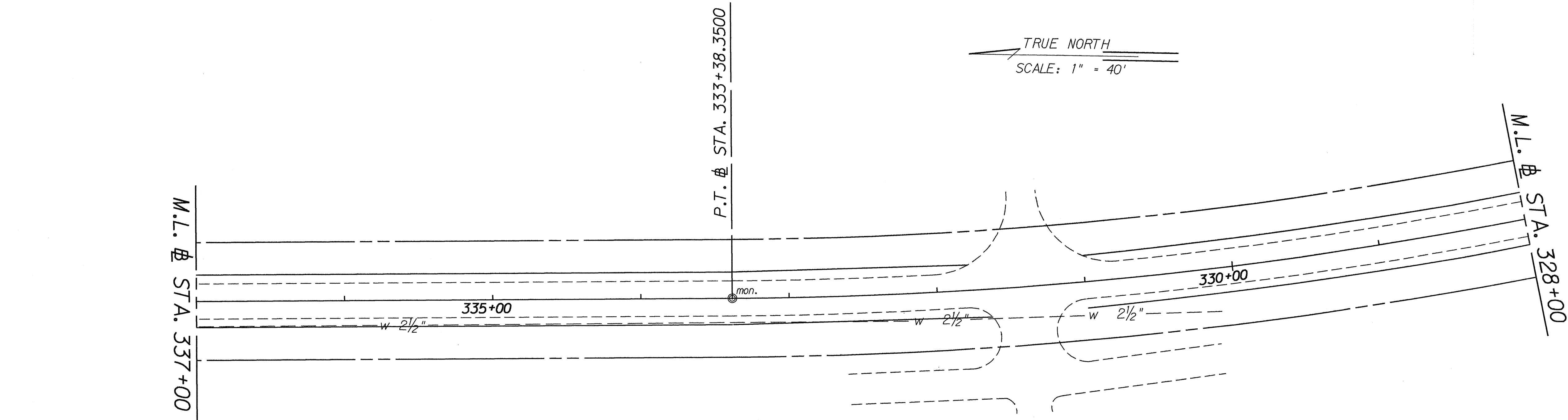
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN
KULA HIGHWAY RESURFACING
KULA JUNCTION TOWARDS LOWER KULA ROAD
FED. AID PROJECT NO. STP-037-1(18)

Scale: 1"=40'
Date: Aug., 1992

SHEET No. 1 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-037-1(18)	1993	7	35



STA. 322+50± LT. TO STA. 324+25± LT.
 Install 150 L.F. of Guardrail
 Type 3-Single w/Steel Post
 Approach End - BCT
 Trailing End - Type "F" Flare

STA. 322+20± RT. TO STA. 323+20± RT.
 Install 100 L.F. of Concrete Trapezoidal
 Drainage Ditch. For Detail, See Plan
 Sheet No. 18.

ESTIMATED QUANTITIES
 Ditch and Channel Excavation = 30 C.Y.
 Lined Trap. Drainage Ditch = 100 L.F.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
TRACED BY	DRAWN BY	
NOTE BOOK	CHECKED BY	
	QUANTITIES BY	
	CHECKED BY	
		4-29-93

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KULA HIGHWAY RESURFACING

KULA JUNCTION TOWARDS LOWER KULA ROAD

FED. AID PROJECT NO. STP-037-1(18)

Scale: 1"=40'
Date: Aug., 1992
SHEET No. 2 OF 12 SHEETS

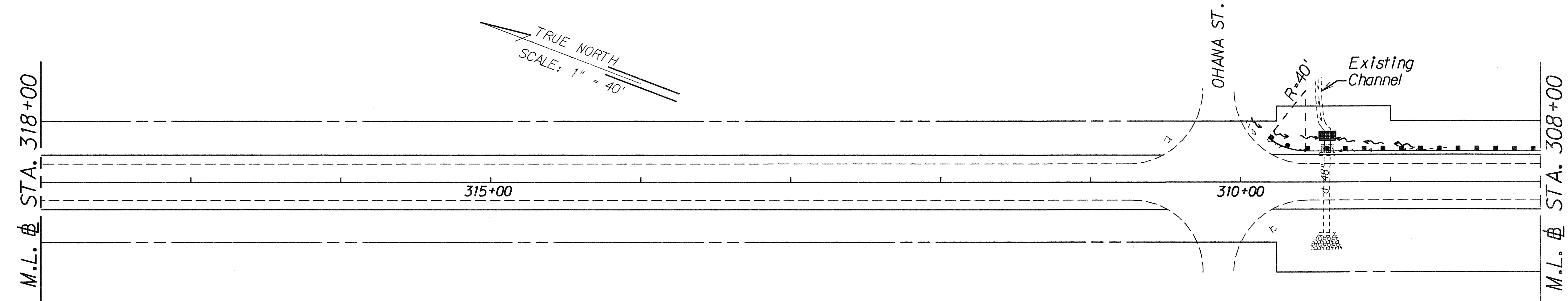
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-037-1(18)	1993	8	35

STA. 309+45 RT.

Extend Existing Culvert, Demolish Existing Headwall and GRP Apron, Construct New Concrete Headwall, Construct New GRP Inlet Apron. Grade Surrounding Area to Drain into New Inlet. Removal of Existing Berm and Grading of Swales shall Not be Paid for Separately, but shall be considered Incidental to the Various Contract Items. For Details, See Plan Sheet No 18.

ESTIMATED QUANTITIES

Structural Excavation = 10 C.Y.
Ditch and Channel Exc. = 20 C.Y.
Class "A" Conc. = 6 C.Y.
48" CSP, Sht. "4"=0.109" = 10 L.F.
GRP = 3 C.Y.

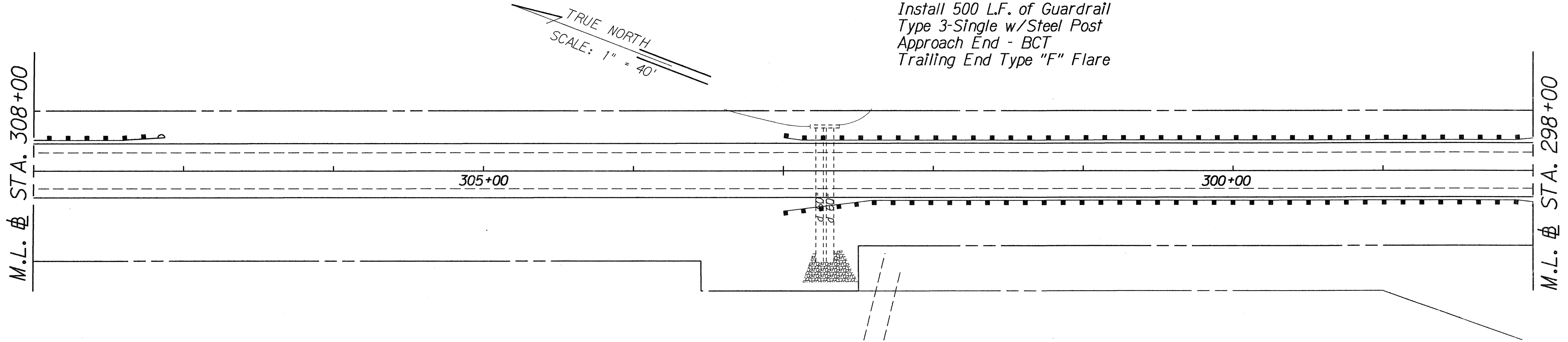


STA. 307+10± RT. TO STA. 309+85± RT.

Install 250 L.F. of Guardrail
Type 3-Single w/Steel Post
Approach End - BCT
Trailing End Type "G" Flare

STA. 297+75± RT. TO STA. 303+00± RT.

Install 500 L.F. of Guardrail
Type 3-Single w/Steel Post
Approach End - BCT
Trailing End Type "F" Flare



STA. 297+75± LT. TO STA. 303+00± LT.

Install 500 L.F. of Guardrail
Type 3-Single w/Steel Post
Approach End Type "C" Flare
Trailing End - BCT

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KULA HIGHWAY RESURFACING

KULA JUNCTION TOWARDS LOWER KULA ROAD

FED. AID PROJECT NO. STP-037-1(18)

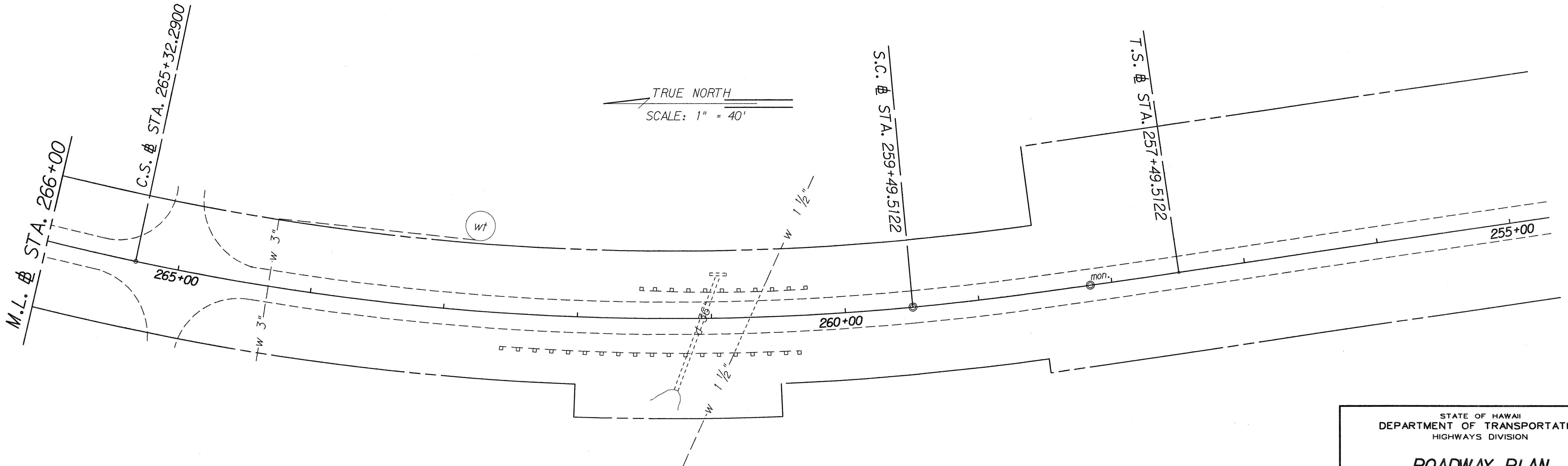
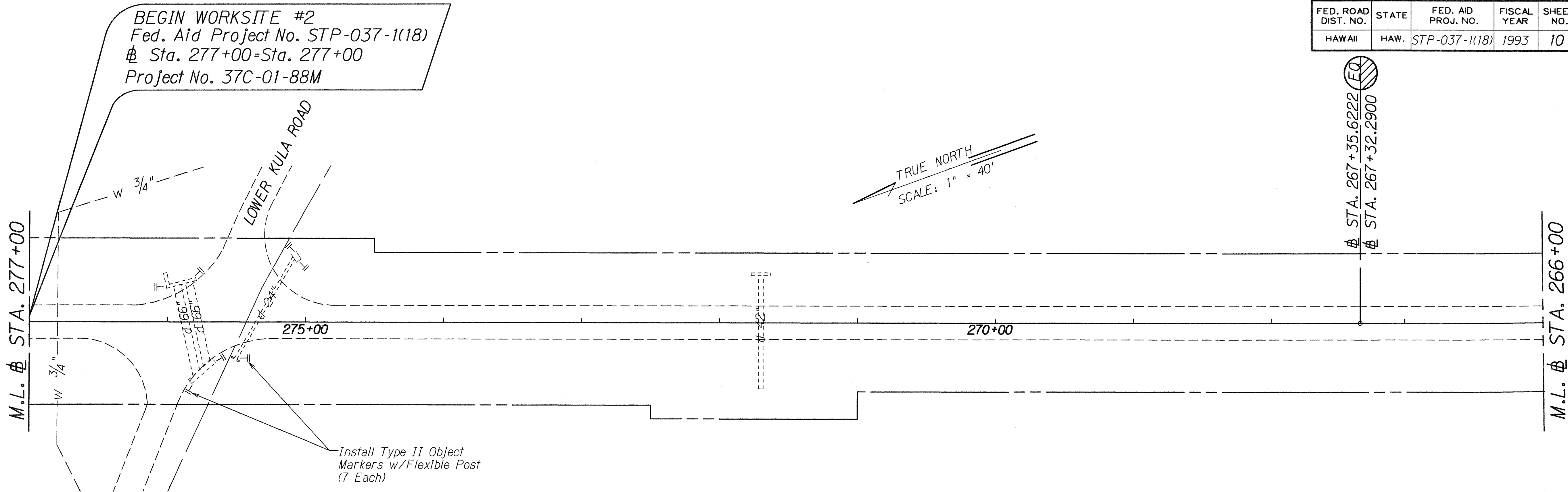
Scale: 1"=40' Date: Aug., 1992
SHEET No. 3 OF 12 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
NO. 1000000000	TRACED BY	
	QUANTITIES BY	
	CHECKED BY	4/29/93

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-037-1(18)	1993	10	35



STA. 267+35.6222
STA. 267+32.2900



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	TRACED BY	
	QUANTITIES BY	
	CHECKED BY	
		4-9-93

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KULA HIGHWAY RESURFACING
KULA JUNCTION TOWARDS LOWER KULA ROAD
FED. AID PROJECT NO. STP-037-1(18)

Scale: 1"=40' Date: Aug., 1992

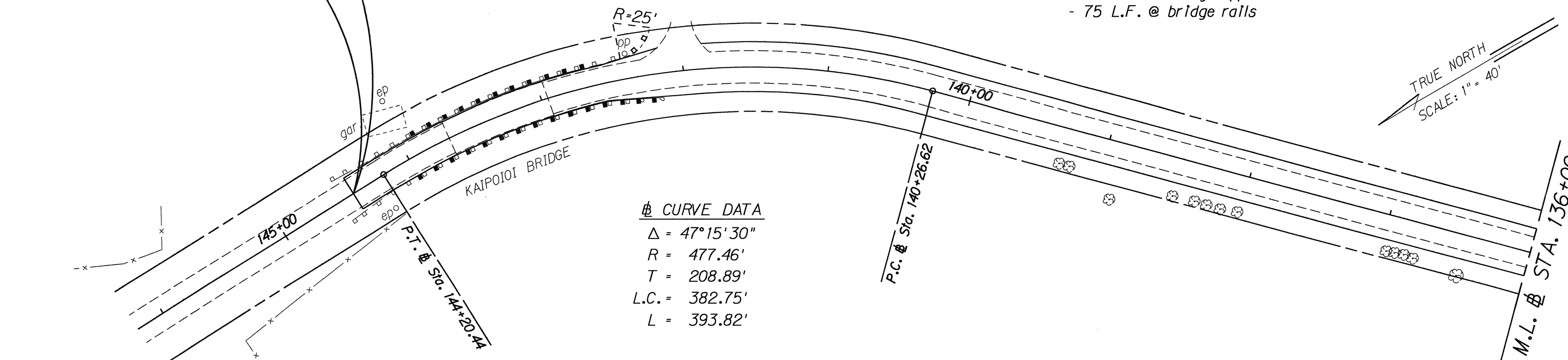
SHEET No. 5 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-037-1(18)	1993	11	35

END WORKSITE NO. #1
FED. AID PROJ. NO. STP-037-1(18) STA. 144+45
PROJ. NO. E-13A STA. 171+20

STA. 142+20 to STA. 144+45
Cold Plane and Resurface
For Detail, See Plan Sheet No. 5

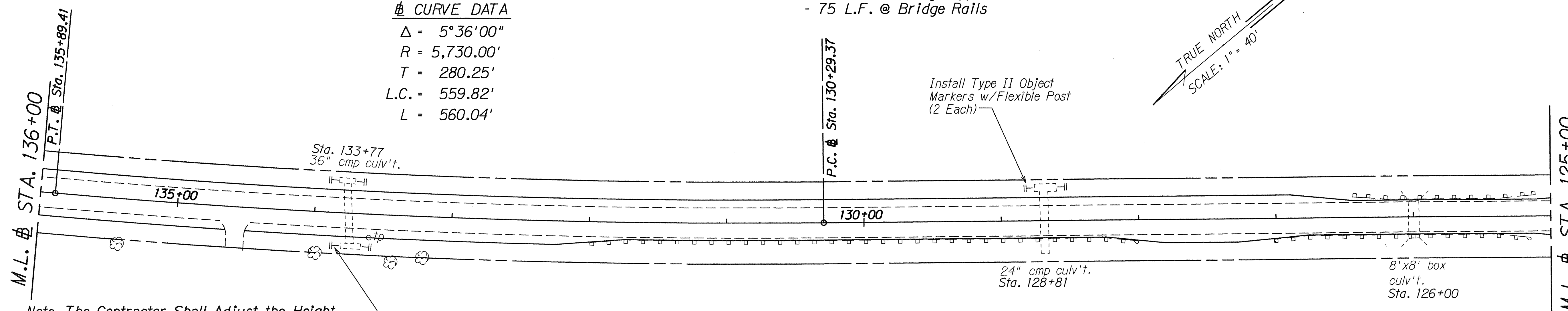
STA. 142+00± LT. to STA. 144+54± LT.
Remove existing W-beam rails, adjust existing posts,
Install Guardrail, Type 3 Thrie Beam, extend
guardrail at trailing end, provide transitions and relocate BCT.
Approx. quantities:
Thrie Beams - 62 L.F. @ bridge approaches
- 75 L.F. @ bridge rails



Δ
Δ = 47°15'30"
R = 477.46'
T = 208.89'
L.C. = 382.75'
L = 393.82'

STA. 142+29± RT. TO STA. 144+54± RT.
Remove Existing W-Beam Rails, Adjust Existing Posts,
Install Guardrail, Type 3 Thrie Beam and Transition
Thrie Beams into W-Beams where Required. For Details
of Thrie Beam Installation throughout the Bridge, See Plan
Sheet No. 19. Relocate Existing Mailbox as Required.
Approx. Quantities:
Thrie Beam - 62 L.F. @ Bridge Approaches
- 75 L.F. @ Bridge Rails

Δ
Δ = 5°36'00"
R = 5,730.00'
T = 280.25'
L.C. = 559.82'
L = 560.04'



Note: The Contractor Shall Adjust the Height of Existing Guardrail Post such that the Guardrail Element will be at the Required Height as Specified in the Contract or as Ordered by the Engineer. The Contractor shall Excavate and Compact the Ground Around the Post with Suitable Material. The Contractor shall Compact as Required by the Post Adjustment. The Contractor shall Replace Guardrails which are Damaged by the Contractor due to its Operation at No Cost to the State.

Install Type II Object Markers w/Flexible Post (4 Each)

Install Type II Object Markers w/Flexible Post (2 Each)

24\" culv't.
Sta. 128+81

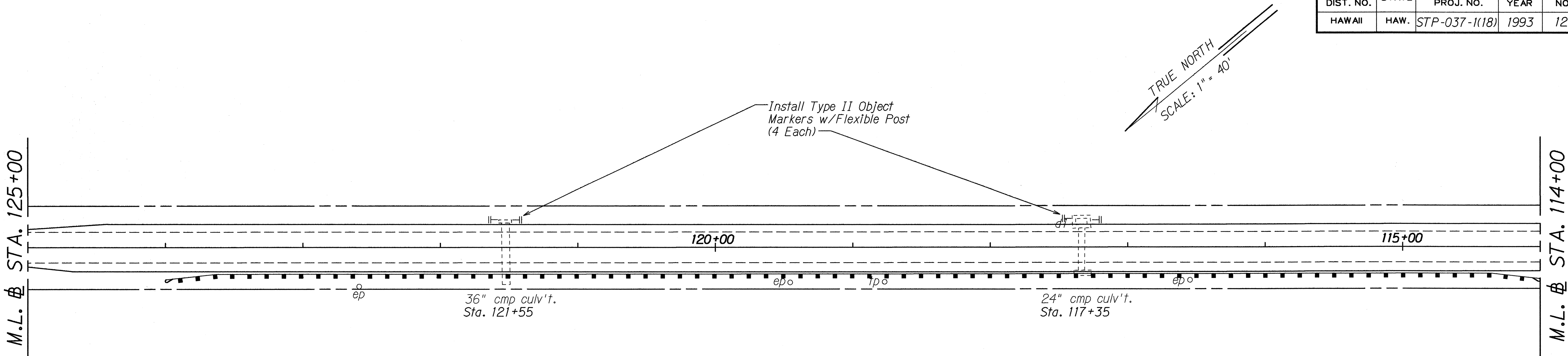
8'x8' box
culv't.
Sta. 126+00

STA. 128+00 LT. to STA. 132+00 LT.
Adjust Guardrail Posts

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
IN CHARGE	

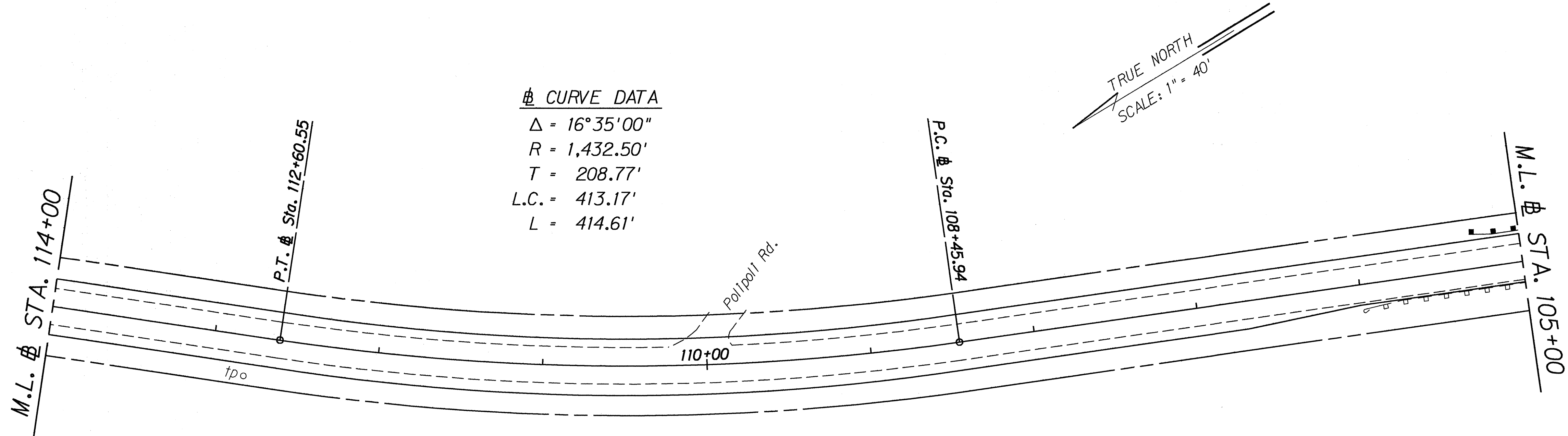
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
KULA HIGHWAY RESURFACING
Kekaulike to Kula Sanatorium
Fed. Aid Project No. STP-037-1(18)
Scale: 1" = 40' Date: Aug., 1992
SHEET No. 6 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-037-1(18)	1993	12	35



STA. 114+00± LT. - STA. 124+00± LT.
 Install 950 L.F. of Guardrail
 Type 3-Single w/Steel Post
 Approach End - BCT
 Trailing End - BCT

CURVE DATA
 $\Delta = 16^{\circ}35'00''$
 $R = 1,432.50'$
 $T = 208.77'$
 $L.C. = 413.17'$
 $L = 414.61'$



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
NO. 1111111111	TRACED BY	
	QUANTITIES BY	
	CHECKED BY	4/2/92

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

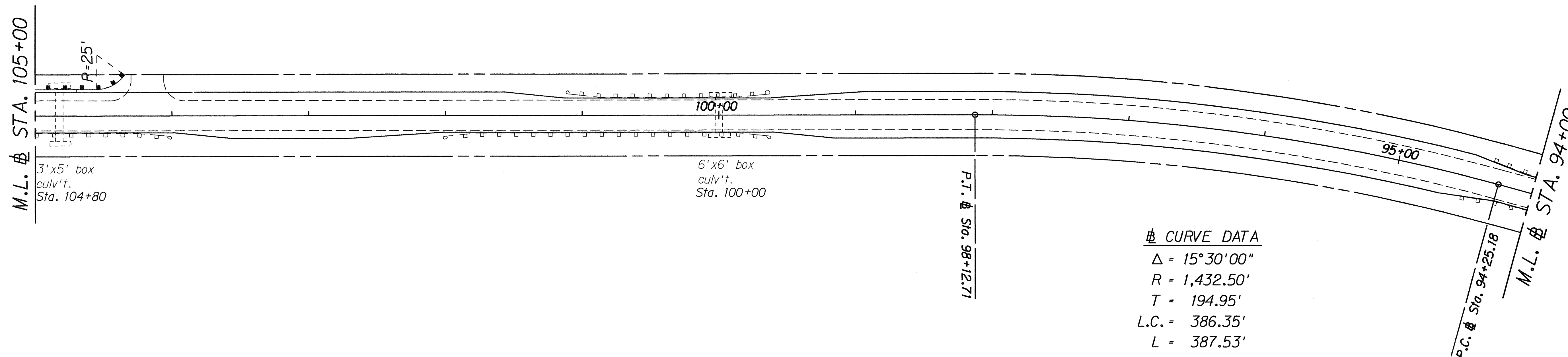
ROADWAY PLAN
KULA HIGHWAY RESURFACING
Kekaulike to Kula Sanatorium
Fed. Aid Project No. STP-037-1(18)

Scale: 1"=40'
Date: Aug., 1992
SHEET No. 7 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-037-1(18)	1993	13	35

STA. 104+30 - STA. 105+30 RT.
Install 100 L.F. of Guardrail
Type 3 Single w/ Steel Post
Approach End - Modified Type
"G" Flare w/ Rounded End
Trailing End - Type "F" Flare

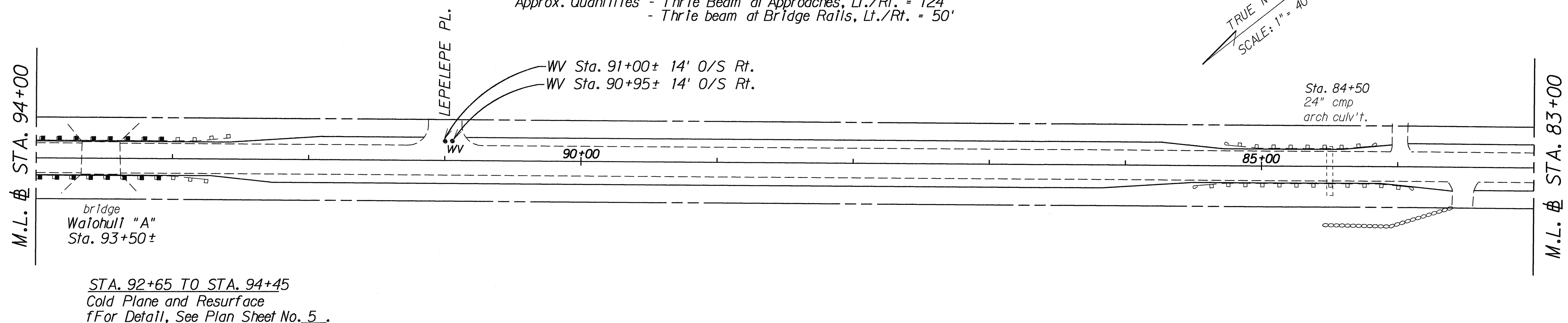
TRUE NORTH
SCALE: 1" = 40'



STA. 92+58 TO STA. 94+33 RT. AND
STA. 92+76 TO STA. 94+51 LT.

Remove Existing W-Beam Rails, Adjust Existing
Post Heights, Install Guardrail, Type 3 Thrie Beam
Provide Transition. For Details of Thrie Beam
on the Bridge Rails, See Plan Sheet No. 19.
Approx. Quantities - Thrie Beam at Approaches, Lt./Rt. = 124'
- Thrie beam at Bridge Rails, Lt./Rt. = 50'

TRUE NORTH
SCALE: 1" = 40'



STA. 92+65 TO STA. 94+45
Cold Plane and Resurface
For Detail, See Plan Sheet No. 5.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	
		4-29-93

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

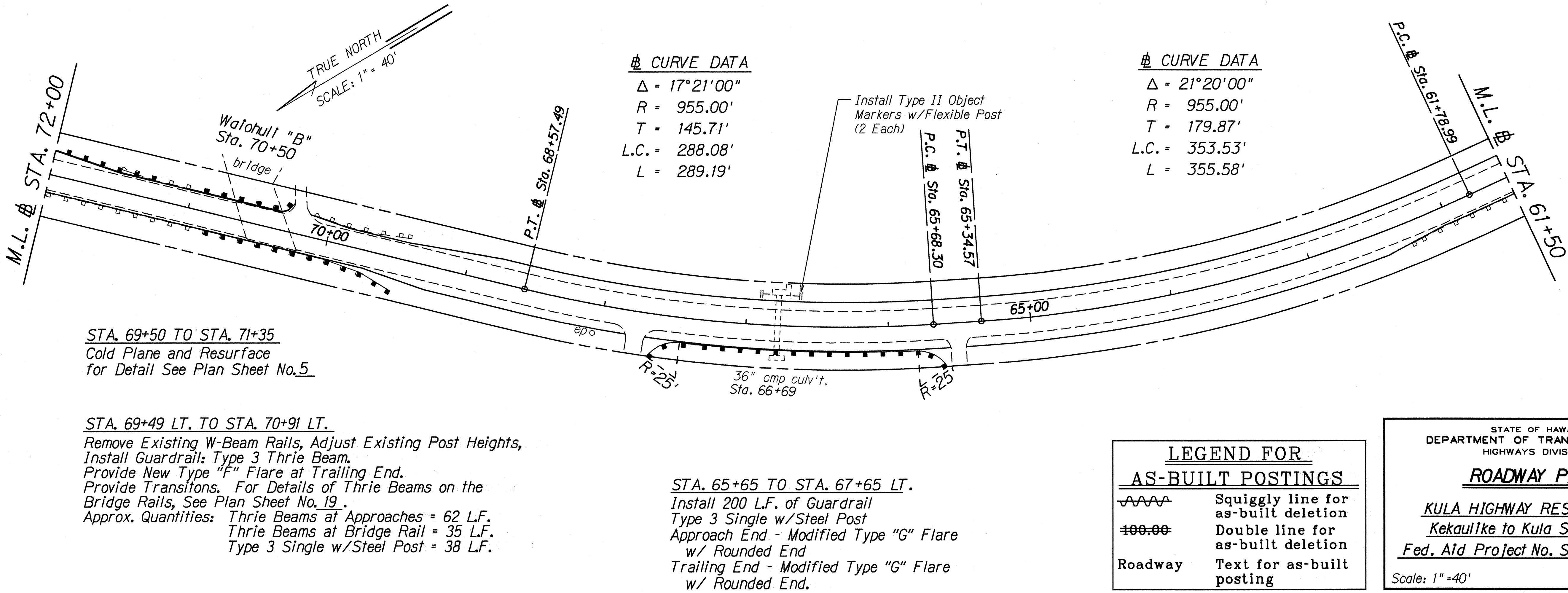
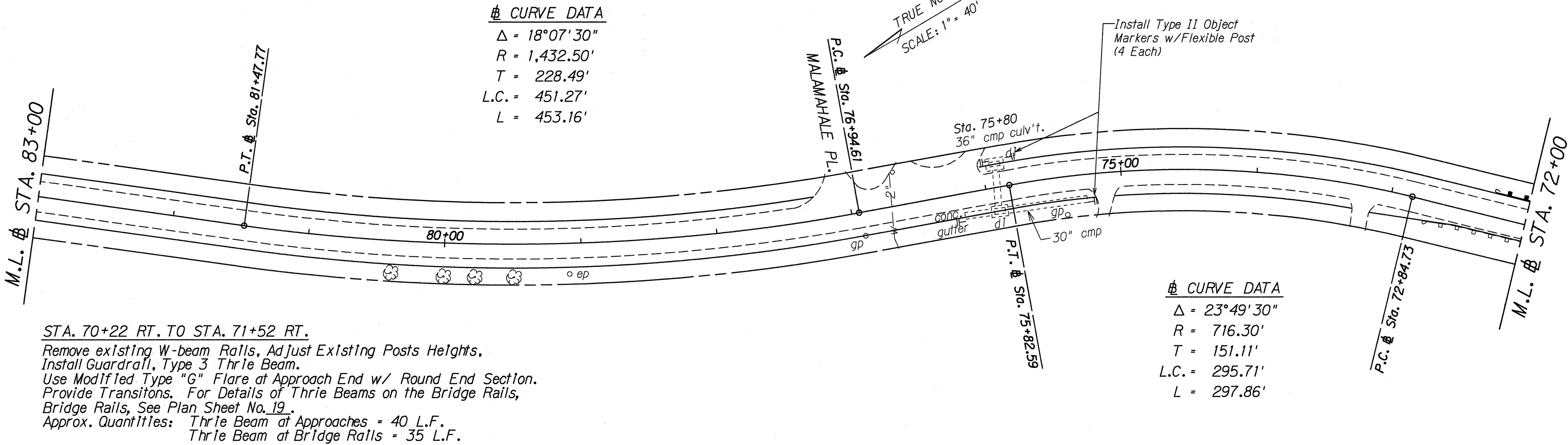
ROADWAY PLAN

KULA HIGHWAY RESURFACING
Kekaulike to Kula Sanatorium
Fed. Aid Project No. STP-037-1(18)

Scale: 1" = 40' Date: Aug., 1992

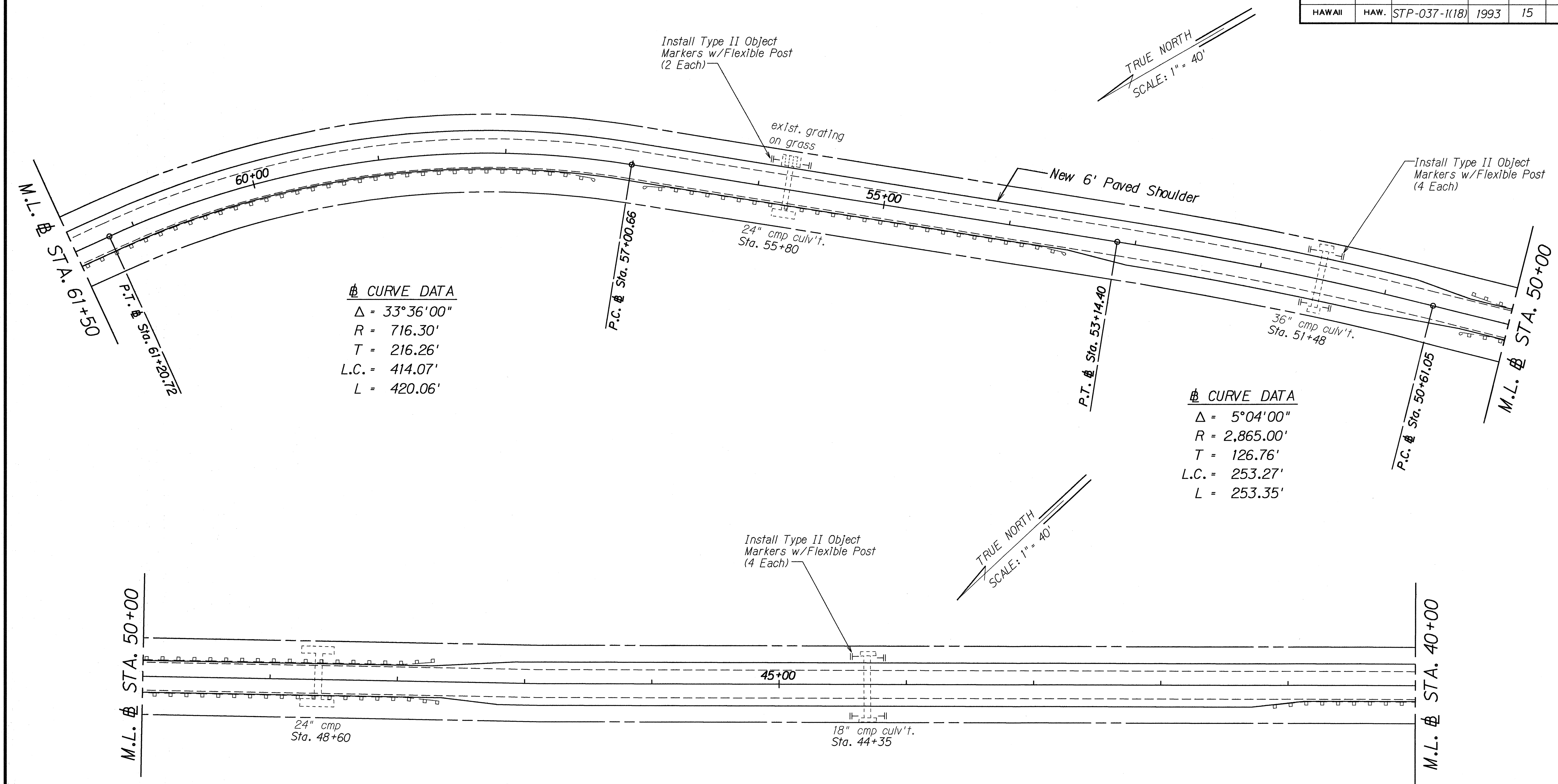
SHEET No. 8 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-037-1(18)	1993	14	35



SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	
NO.	4-29-93

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-037-1(18)	1993	15	35



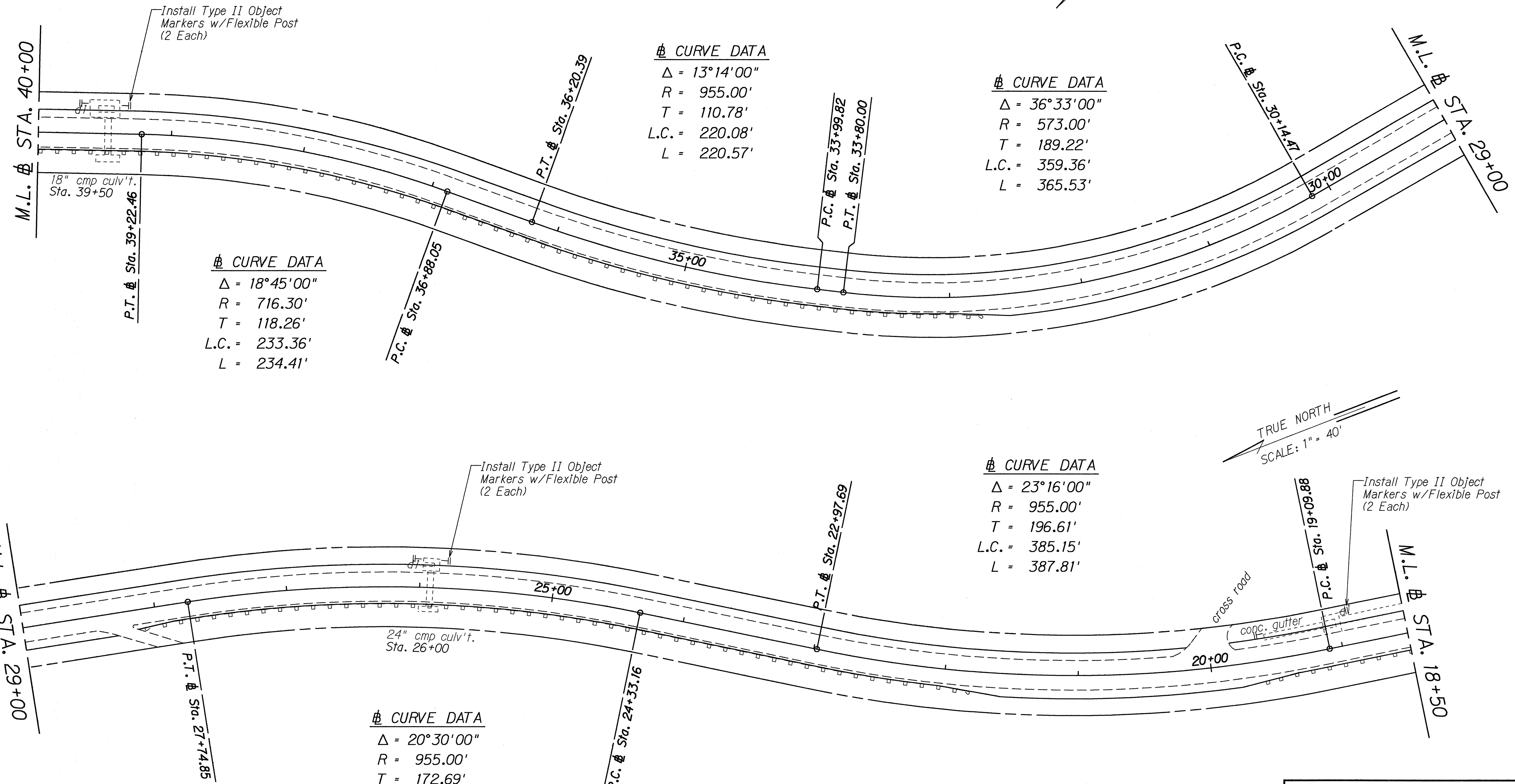
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
N. MULLENBACH	CHECKED BY	4-29-92

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN
KULA HIGHWAY RESURFACING
Kekaulike to Kula Sanatorium
Fed. Aid Project No. STP-037-1(18)

Scale: 1"=40'
Date: Aug., 1992
SHEET No. 10 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-037-1(18)	1993	16	35



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
QUANTITIES BY	CHECKED BY	
4/9/93		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

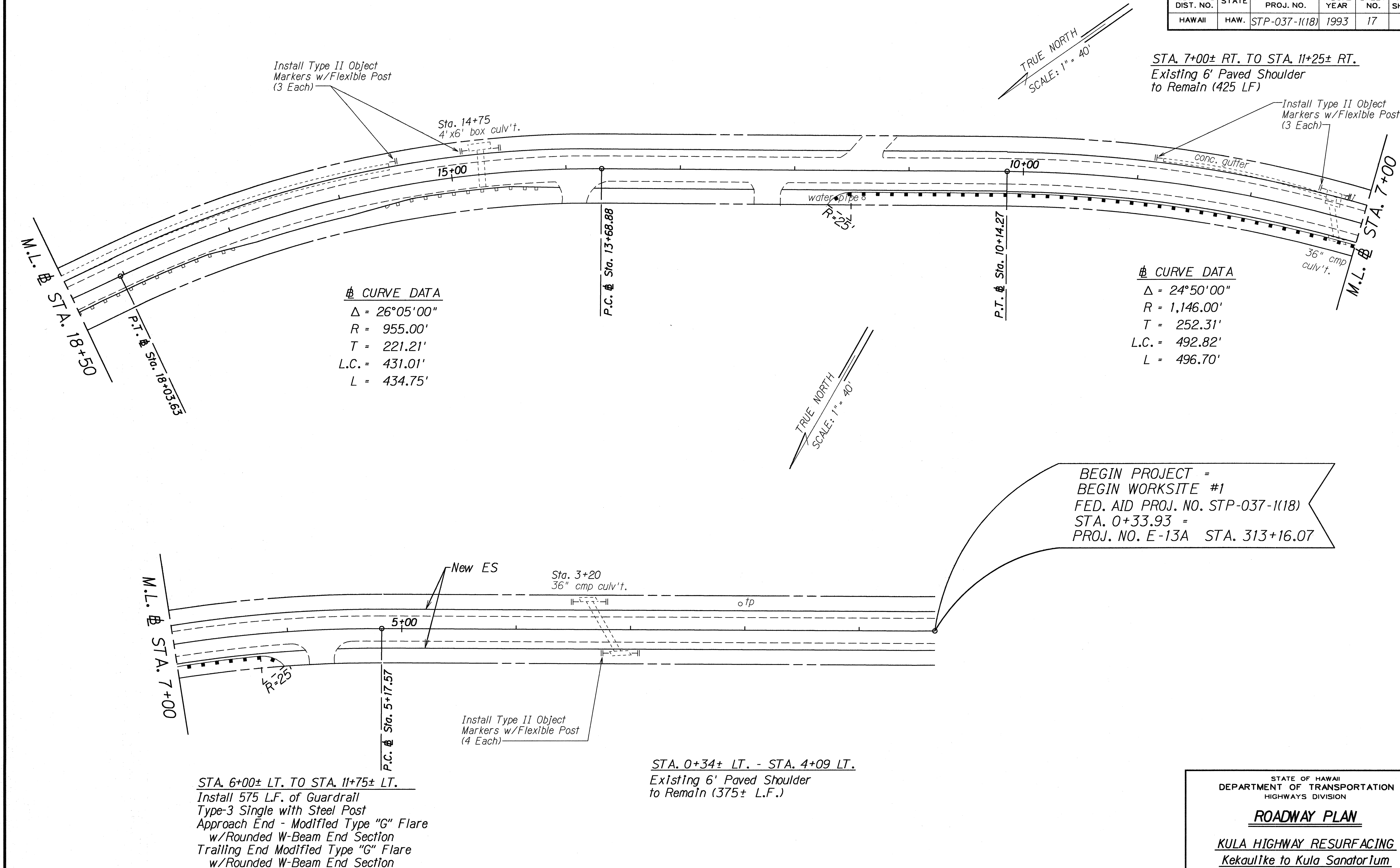
ROADWAY PLAN

KULA HIGHWAY RESURFACING
Kekaulike to Kula Sanatorium
Fed. Aid Project No. STP-037-1(18)

Scale: 1"=40' Date: Aug., 1992

SHEET No. 11 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-037-1(18)	1993	17	35



SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
DATE	4-28-93

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KULA HIGHWAY RESURFACING
Kekaulike to Kula Sanatorium
Fed. Aid Project No. STP-037-1(18)

Scale: 1"=40' Date: Aug., 1992
SHEET No. 12 OF 12 SHEETS