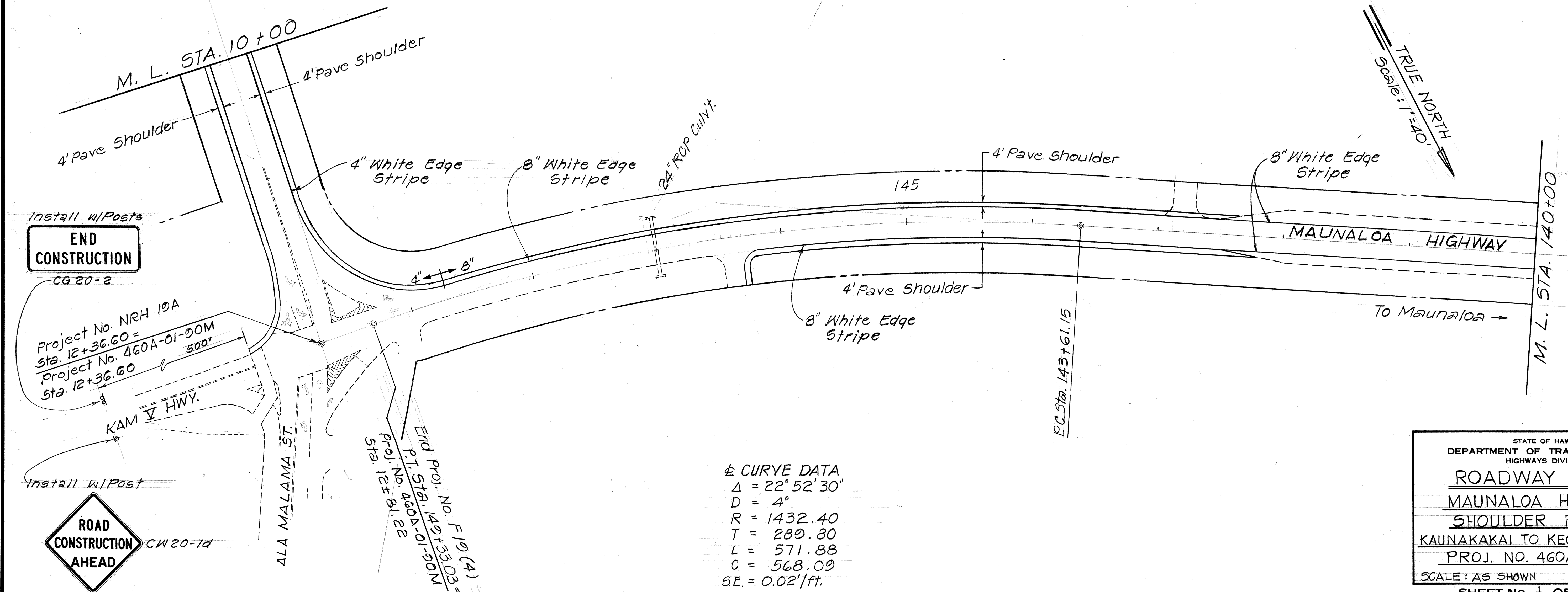
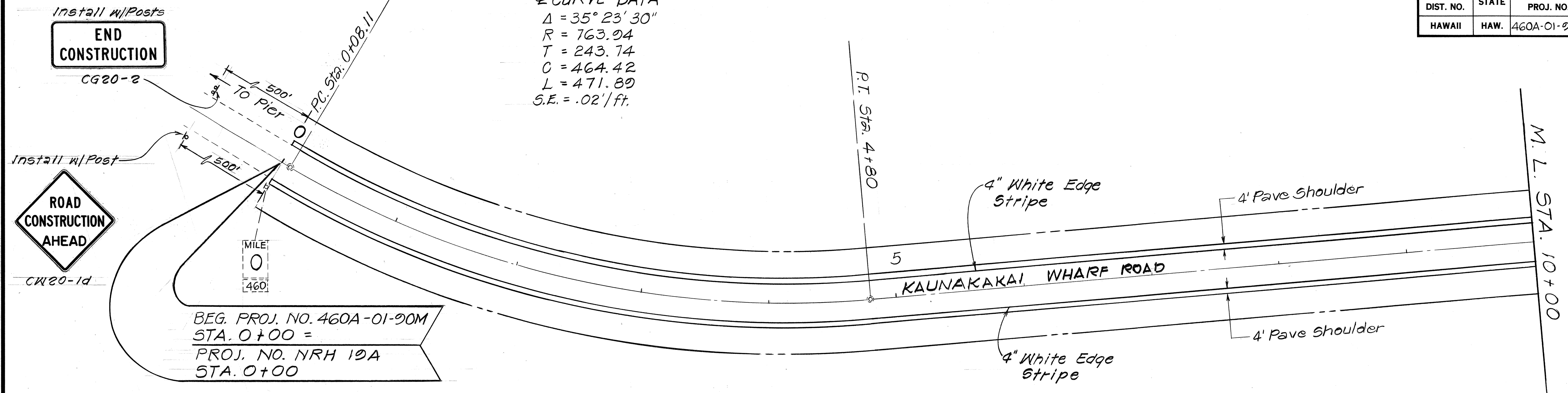


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-20M	1990	4	23

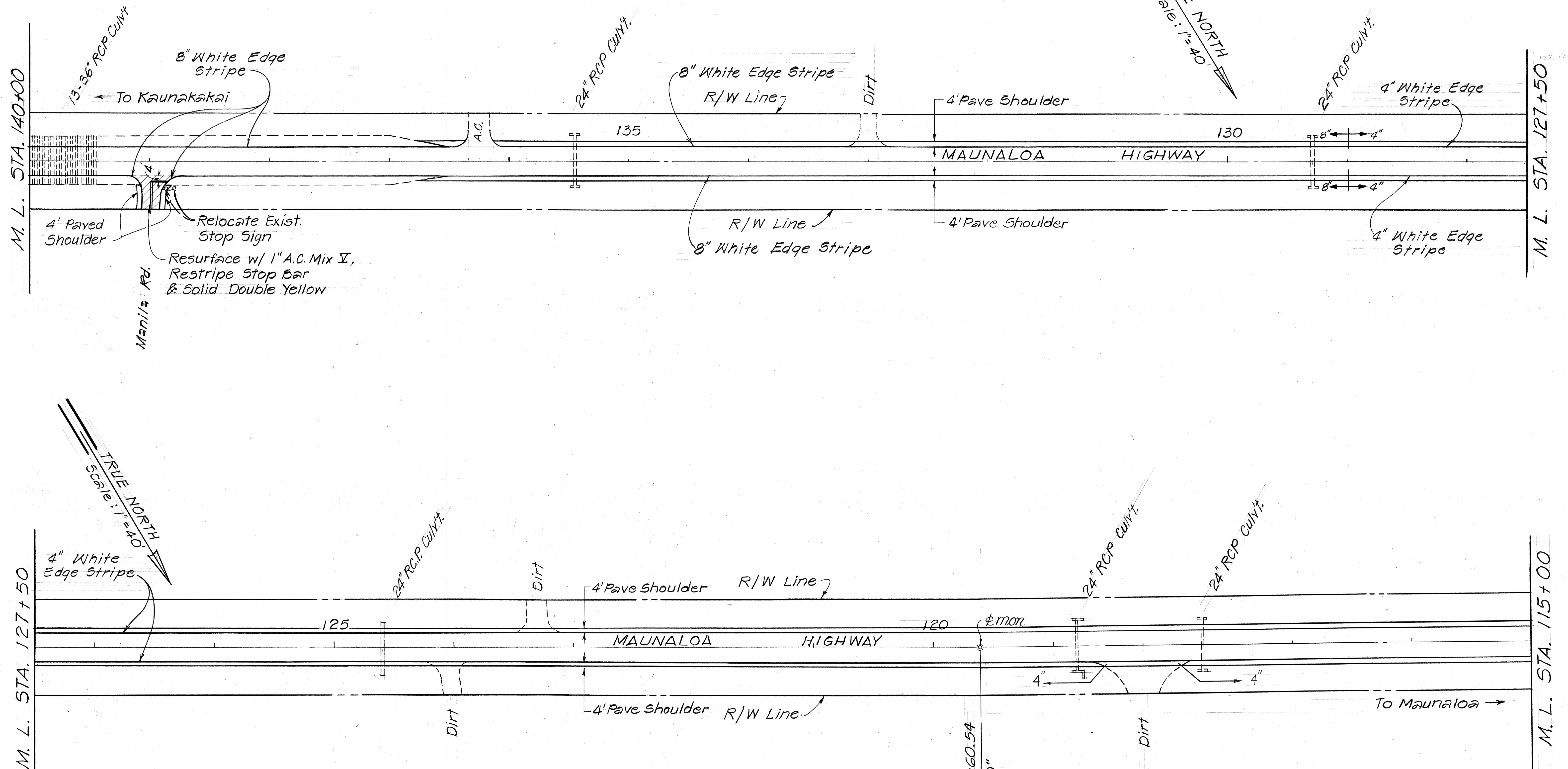
± CURVE DATA
 $\Delta = 35^\circ 23' 30''$
 $R = 763.24$
 $T = 243.74$
 $C = 464.42$
 $L = 471.80$
 $S.E. = .02'/ft.$



± CURVE DATA
 $\Delta = 22^\circ 52' 30''$
 $D = 4'$
 $R = 1432.40$
 $T = 280.80$
 $L = 571.88$
 $C = 568.00$
 $S.E. = 0.02'/ft.$

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
KAUNAKAKAI TO KEONELELE AVE.
PROJ. NO. 460A-01-20M
SCALE: AS SHOWN DATE: OCT. 1989
SHEET NO. 1 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-20M	1990	5	23

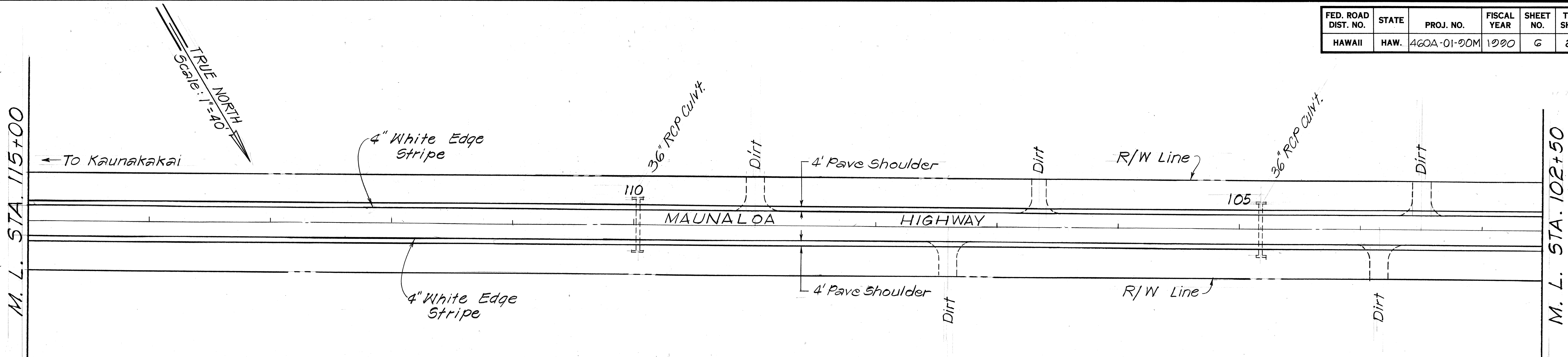


ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

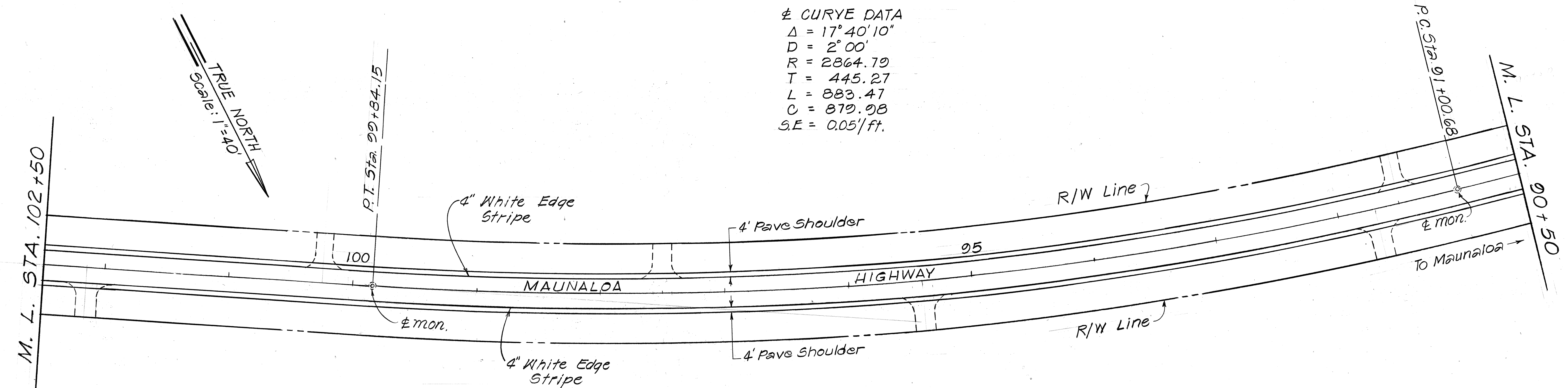
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
KAUNAKAKAI TO KEONELELE AVE.
PROJ. NO. 460A-01-20M
SCALE: AS SHOWN DATE: OCT. 1990
SHEET No. 2 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-20M	1990	6	23



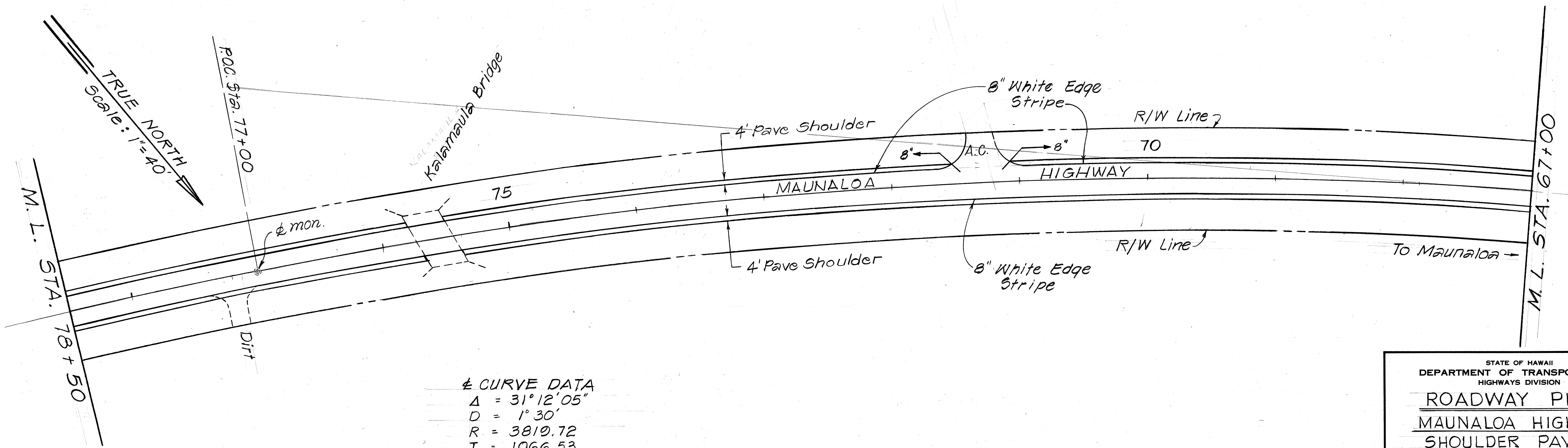
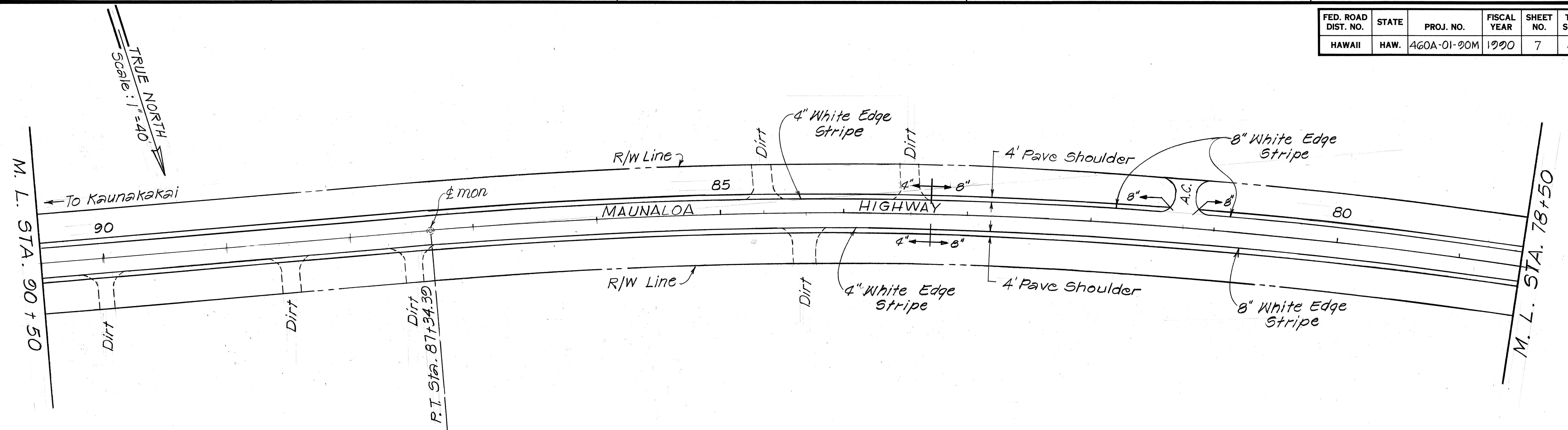
± CURVE DATA
 $\Delta = 17^\circ 40' 10''$
 $D = 2^\circ 00'$
 $R = 2864.79$
 $T = 445.27$
 $L = 883.47$
 $C = 879.98$
 $SE = 0.05'/ft.$



SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
NOTED BY	
CHECKED BY	
NO.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
MAUNALO A HIGHWAY
SHOULDER PAVING
KAUNAKAKAI TO KEONELELE AVE.
PROJ. NO. 460A-01-20M
SCALE: AS SHOWN DATE: OCT. 1989
SHEET NO. 3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-00M	1990	7	23

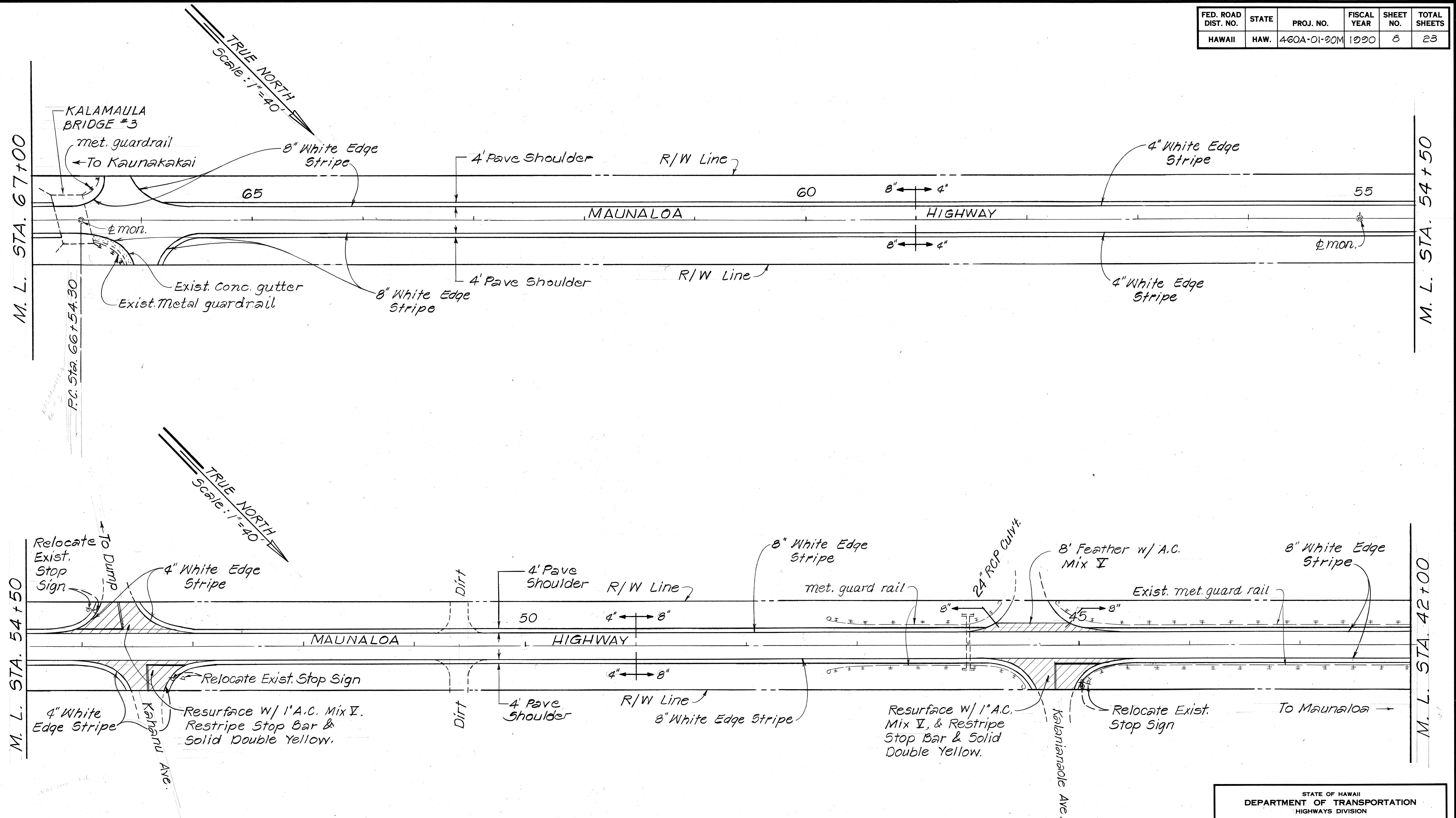


± CURVE DATA
 $\Delta = 31^{\circ}12'05''$
 $D = 1^{\circ}30'$
 $R = 3810.72$
 $T = 1066.53$
 $L = 2080.09$
 $C = 2054.40$
 $S.E. = 0.02'/ft.$

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
 KAUNAKAKAI TO KEONELELE AVE.
 PROJ. NO. 460A-01-00M
 SCALE: AS SHOWN DATE: OCT. 1989
SHEET No. 4 OF 16 SHEETS

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

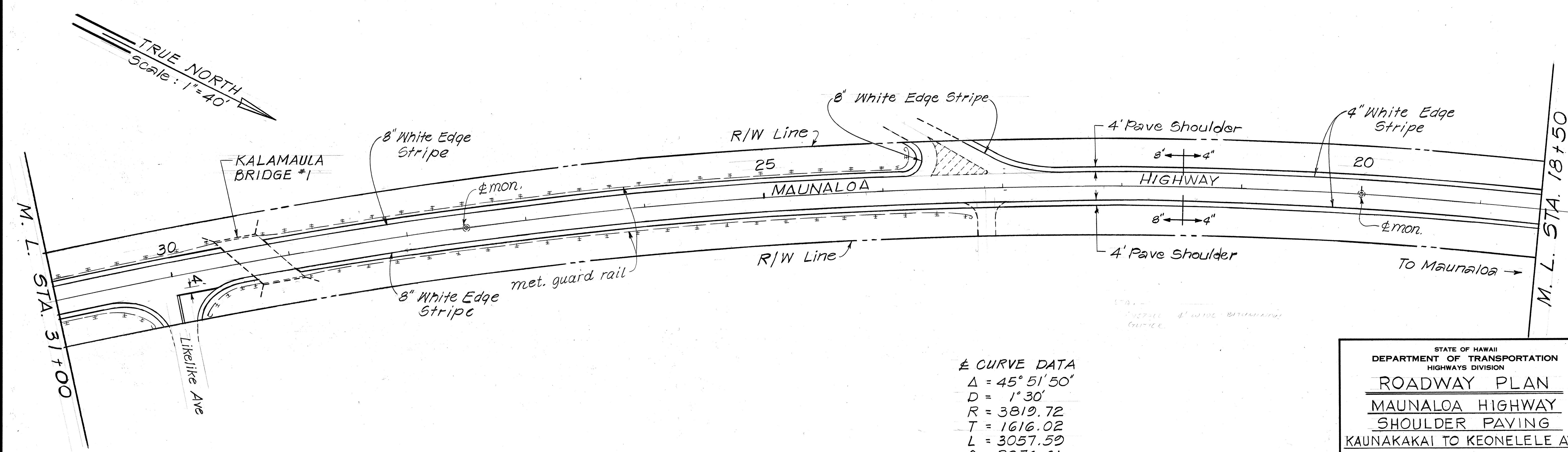
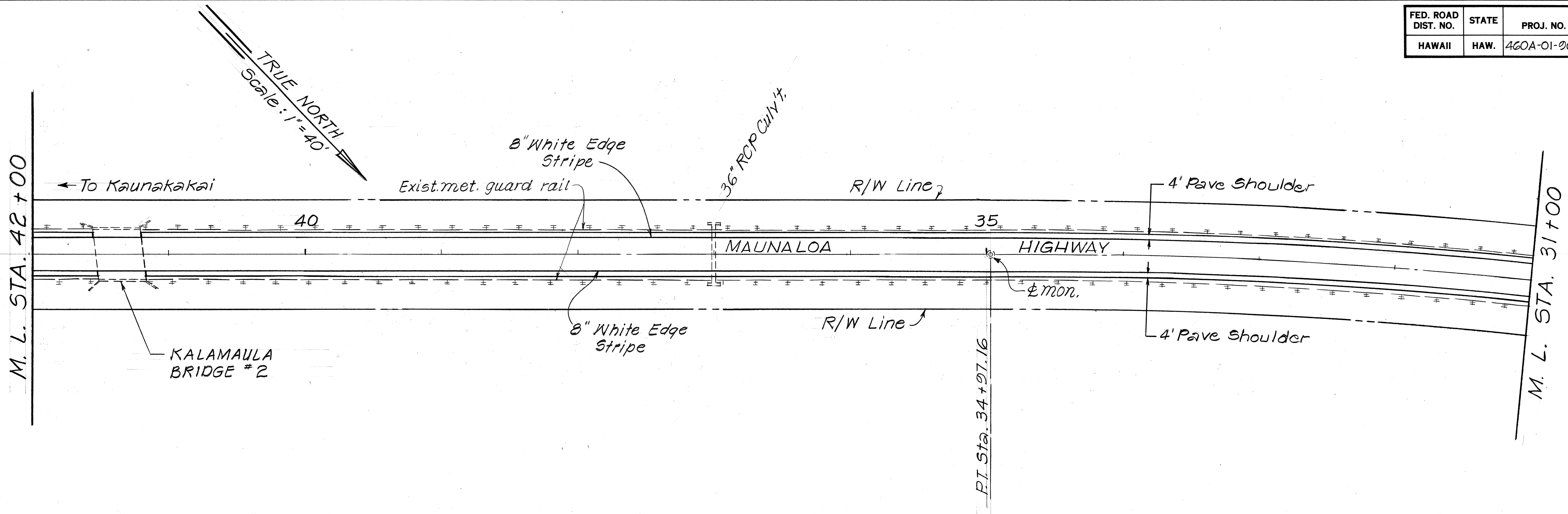
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-20M	1990	8	23



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
KAUNAKAKAI TO KEONELELE AVE
PROJ. NO. 460A-01-20M
SCALE: AS SHOWN DATE: OCT. 1989
SHEET No. 5 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-00M	1980	9	23



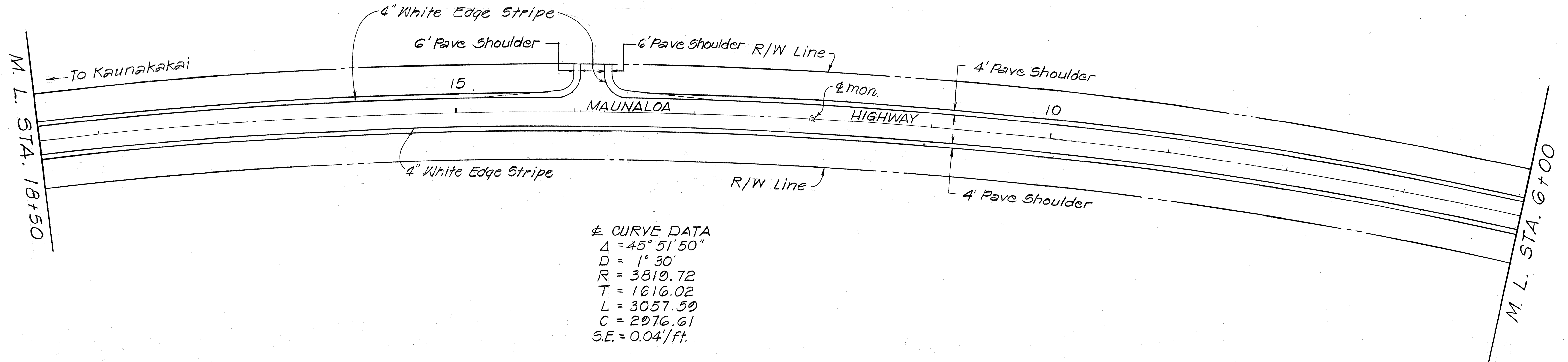
± CURVE DATA
 $\Delta = 45^\circ 51' 50''$
 $D = 1^\circ 30'$
 $R = 3819.72$
 $T = 1616.02$
 $L = 3057.59$
 $C = 2976.61$
 $S.E. = 0.04'/ft.$

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
 KAUNAKAKAI TO KEONELELE AVE.
 PROJ. NO. 460A-01-00M
 SCALE: AS SHOWN DATE: OCT. 1980
SHEET No. 6 OF 16 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

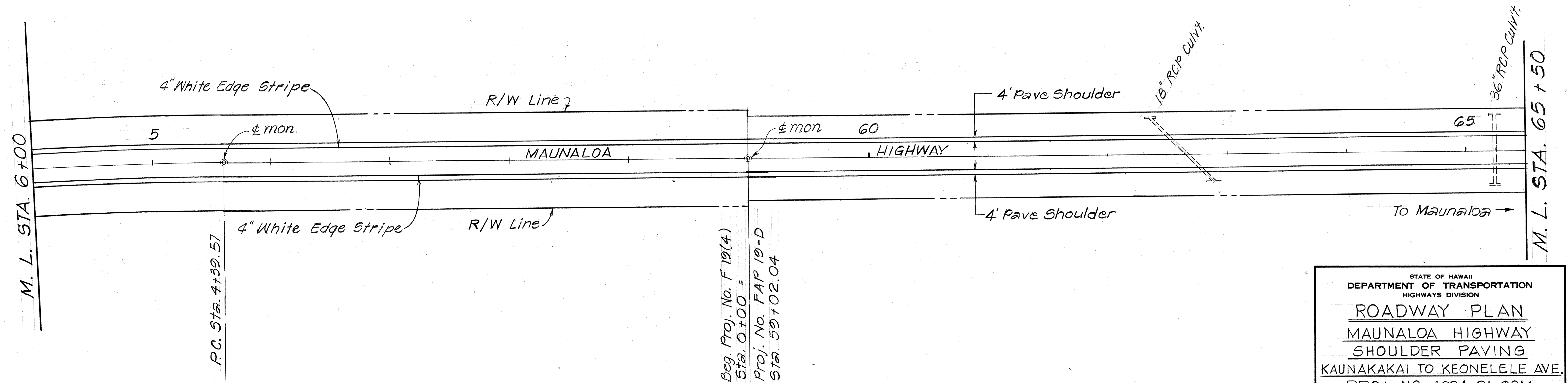
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-20M	1990	10	23

TRUE NORTH
Scale: 1" = 40'



± CURVE DATA
 $\Delta = 45^\circ 51' 50''$
 $D = 1^\circ 30'$
 $R = 3819.72$
 $T = 1616.02$
 $L = 3057.59$
 $C = 2976.61$
 $S.E. = 0.04'/ft.$

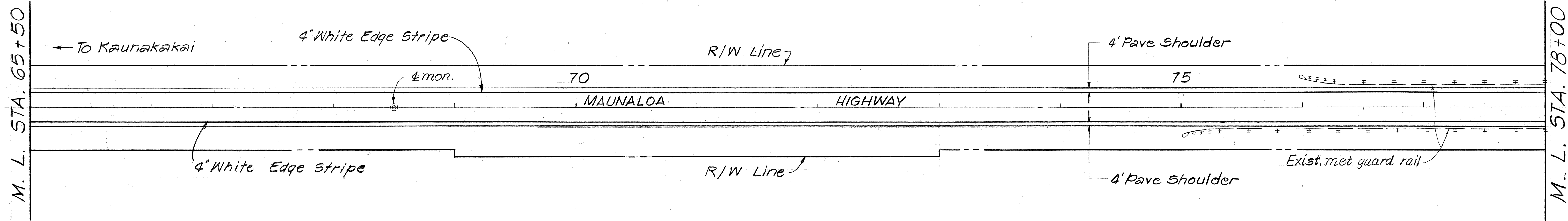
TRUE NORTH
Scale: 1" = 40'



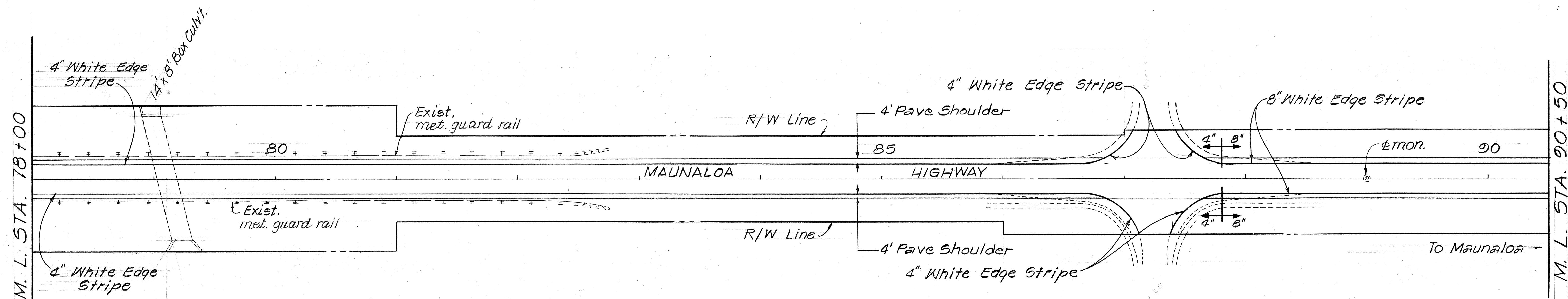
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
KAUNAKAKAI TO KEONELELE AVE.
PROJ. NO. 460A-01-20M
SCALE: AS SHOWN DATE: OCT. 1989
SHEET No. 7 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-00M	1990	11	23

TRUE NORTH
Scale: 1"=40'



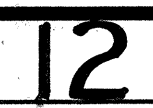
TRUE NORTH
Scale: 1"=40'



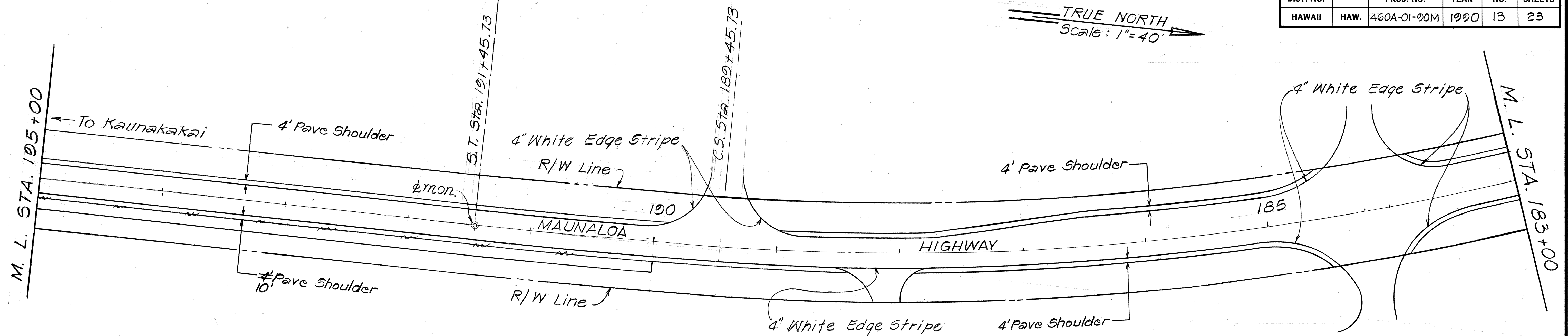
ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
KAUNAKAKAI TO KEONELELE AVE.
PROJ. NO. 460A-01-00M
SCALE: AS SHOWN DATE: OCT. 1989
SHEET No. 8 OF 16 SHEETS

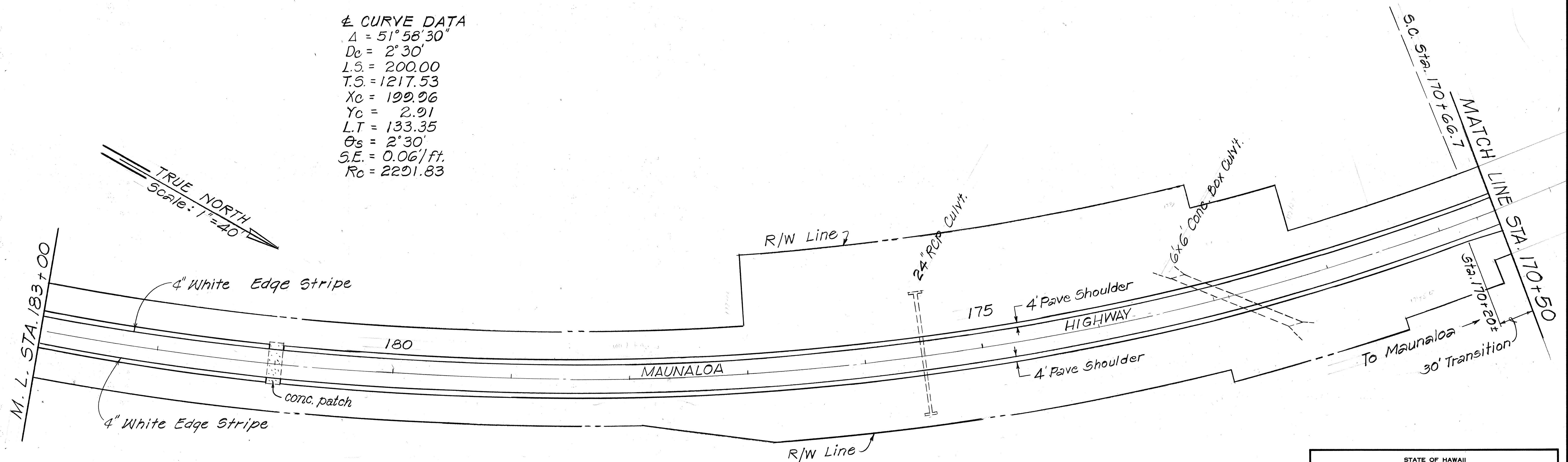
ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE _____
NOTE BOOK	DRAWN BY _____
	TRACED BY _____
	DESIGNED BY _____
	QUANTITIES BY _____
No. _____	CHECKED BY _____



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-00M	1990	13	23



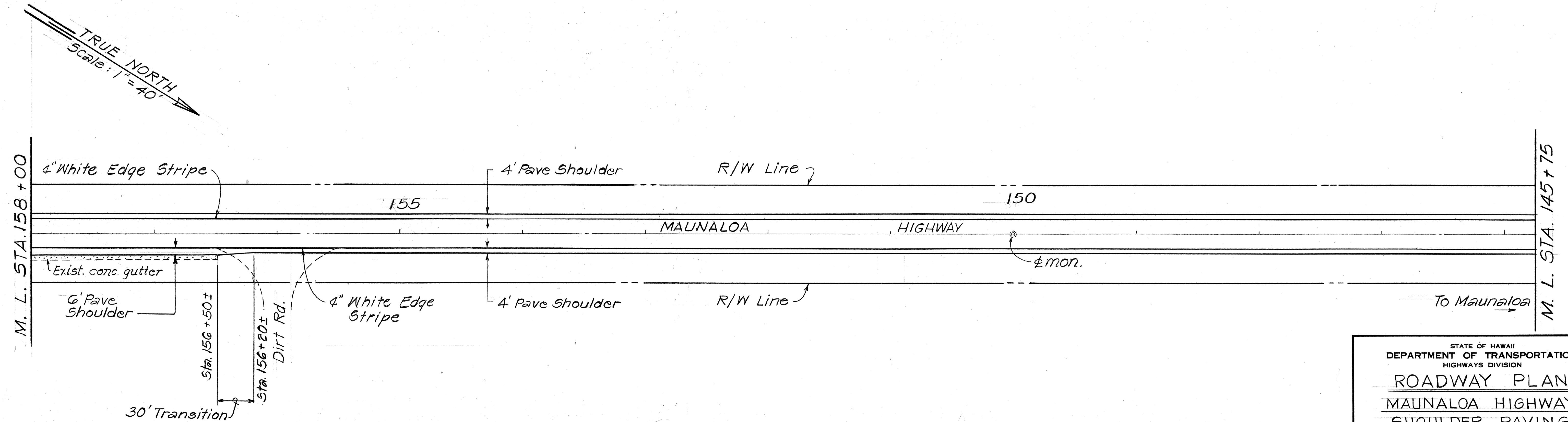
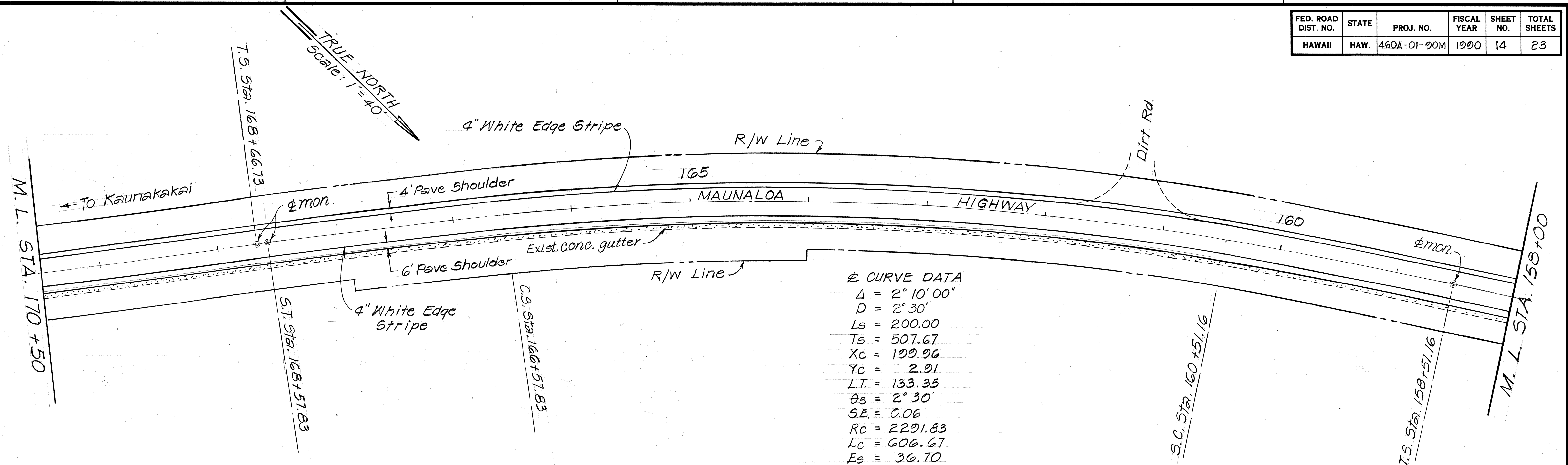
& CURVE DATA
 $\Delta = 51^\circ 58' 30''$
 $D_c = 2^\circ 30'$
 $L.S. = 200.00$
 $T.S. = 1217.53$
 $X_c = 199.96$
 $Y_c = 2.91$
 $L.T. = 133.35$
 $\theta_s = 2^\circ 30'$
 $S.E. = 0.06'/ft.$
 $R_c = 2201.83$



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
 KAUNAKAKAI TO KEONELELE AVE.
 PROJ. NO. 460A-01-00M
 SCALE: AS SHOWN DATE: OCT. 1989
 SHEET NO. 10 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-00M	1980	14	23



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

MAUNALOA HIGHWAY

SHOULDER PAVING

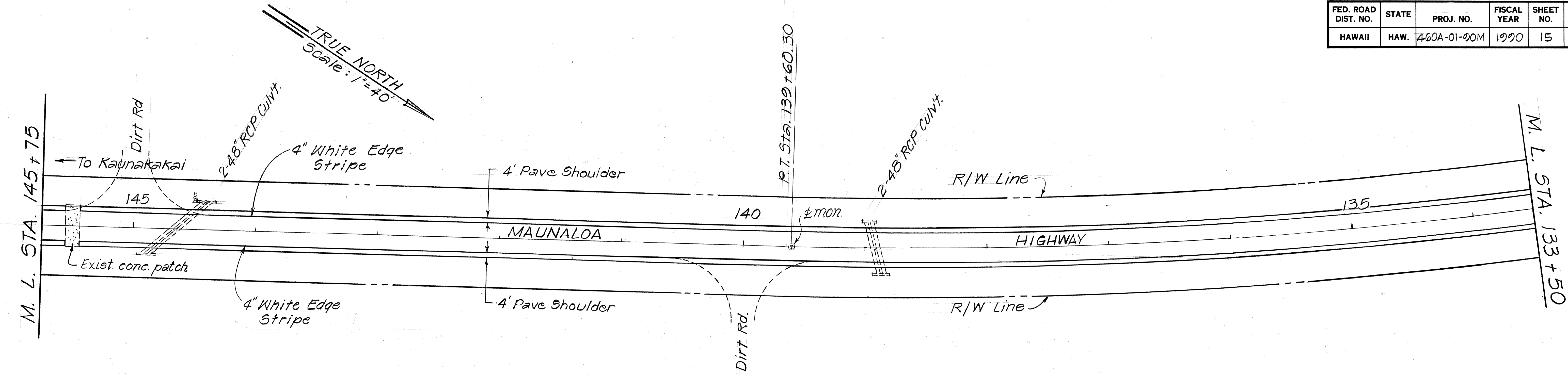
KAUNAKAKAI TO KEONELELE AVE.

PROJ. NO. 460A-01-00M

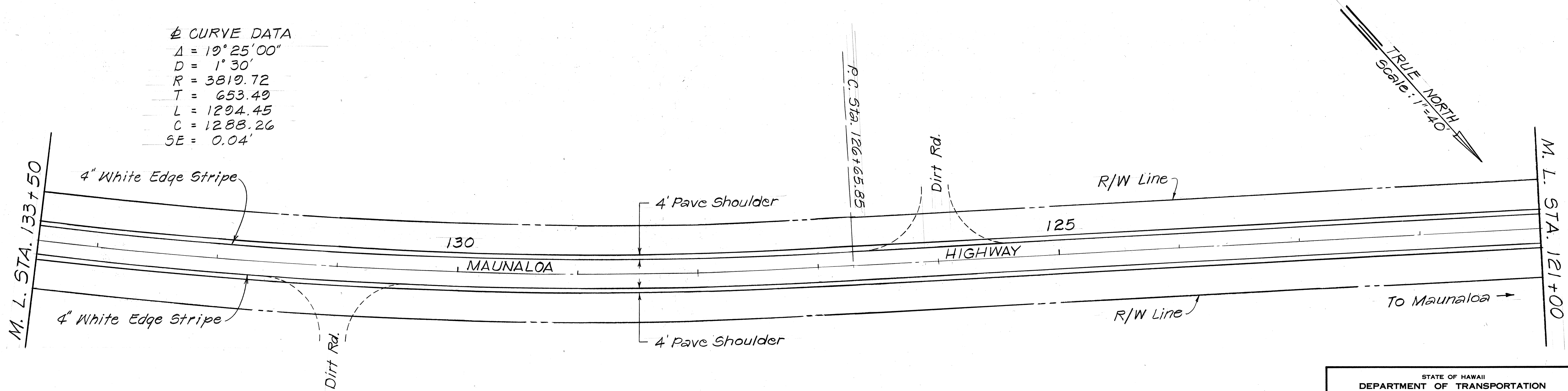
SCALE: AS SHOWN DATE: OCT. 1980

SHEET NO. 11 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-00M	1990	15	23



CURVE DATA
 $\Delta = 19^\circ 25' 00''$
 $D = 1' 30''$
 $R = 3819.72$
 $T = 653.49$
 $L = 1294.45$
 $C = 1288.26$
 $SE = 0.04'$

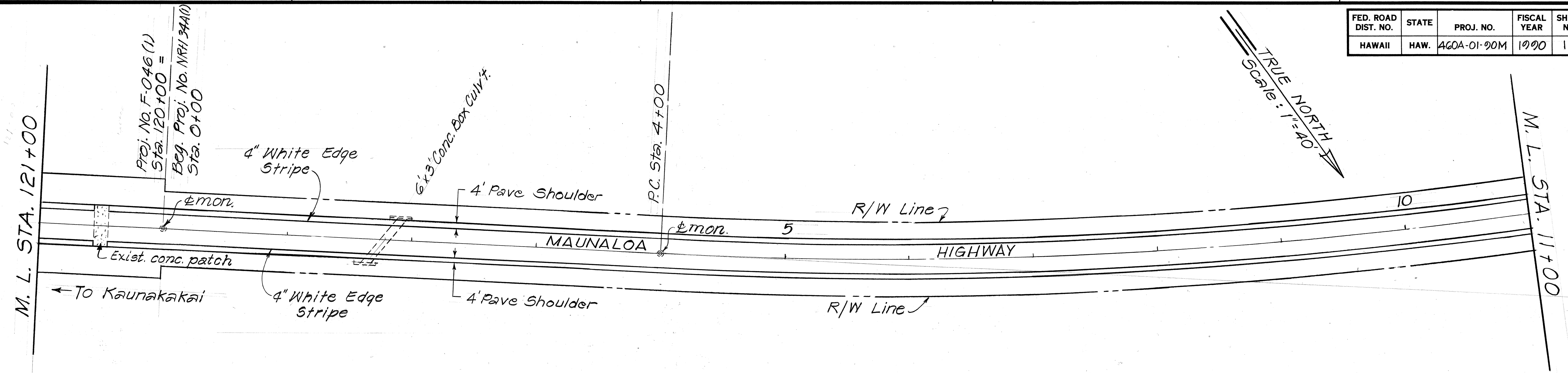


ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

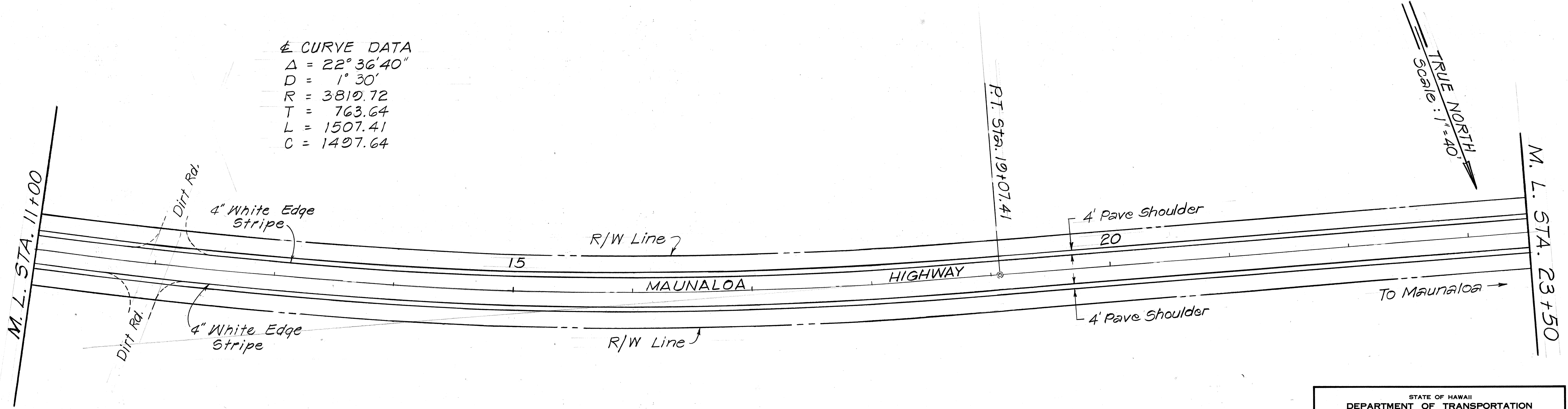
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
 KAUNAKAKAI TO KEONELELE AVE.
 PROJ. NO. 460A-01-00M
 SCALE: AS SHOWN DATE: OCT. 1989
 SHEET No. 12 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-00M	1990	16	23

TRUE NORTH
Scale: 1"=40'



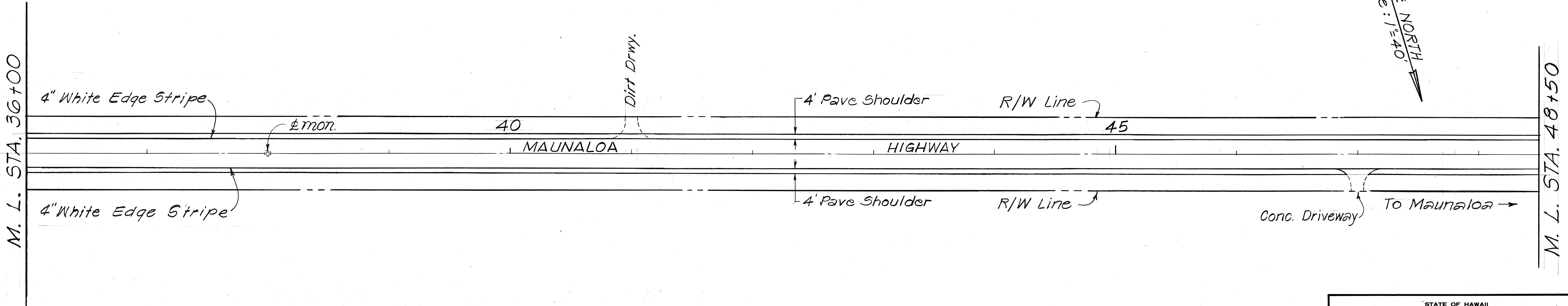
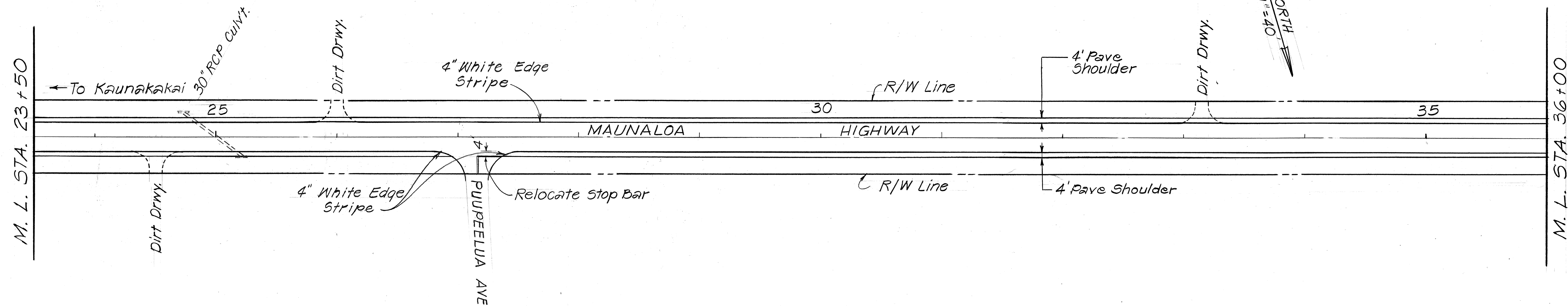
Δ CURVE DATA
 Δ = 22° 36' 40"
 D = 1° 30'
 R = 3819.72
 T = 763.64
 L = 1507.41
 C = 1497.64



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
 KAUNAKAKAI TO KEONELELE AVE
 PROJ. NO. 460A-01-00M
 SCALE: AS SHOWN DATE: OCT. 1989
 SHEET No. 13 OF 16 SHEETS

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-20M	1990	17	23

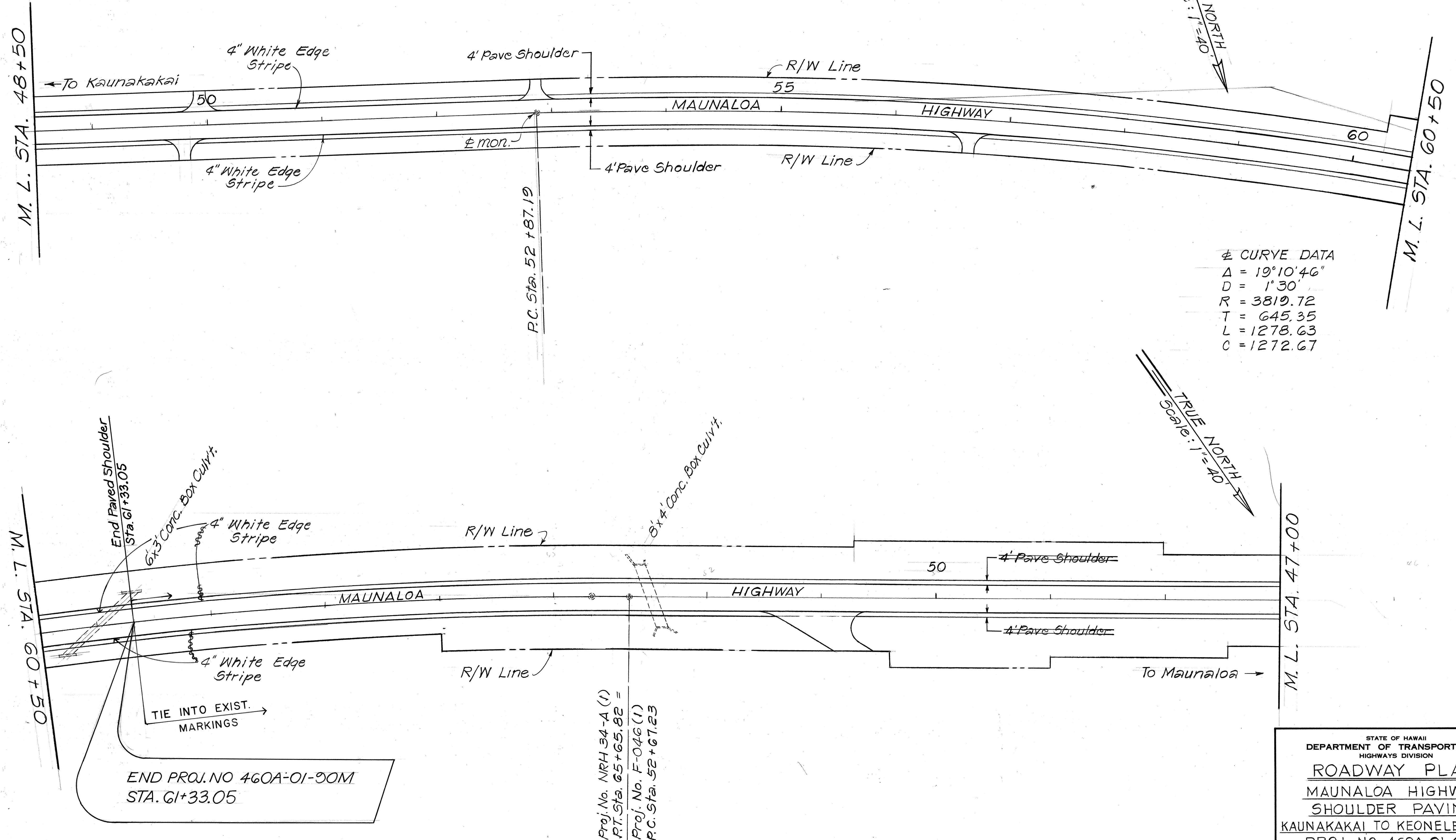


ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
KAUNAKAKAI TO KEONELELE AVE.
PROJ. NO. 460A-01-20M
SCALE: AS SHOWN DATE: OCT. 1989
SHEET No. 14 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-20M	1980	18	23



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

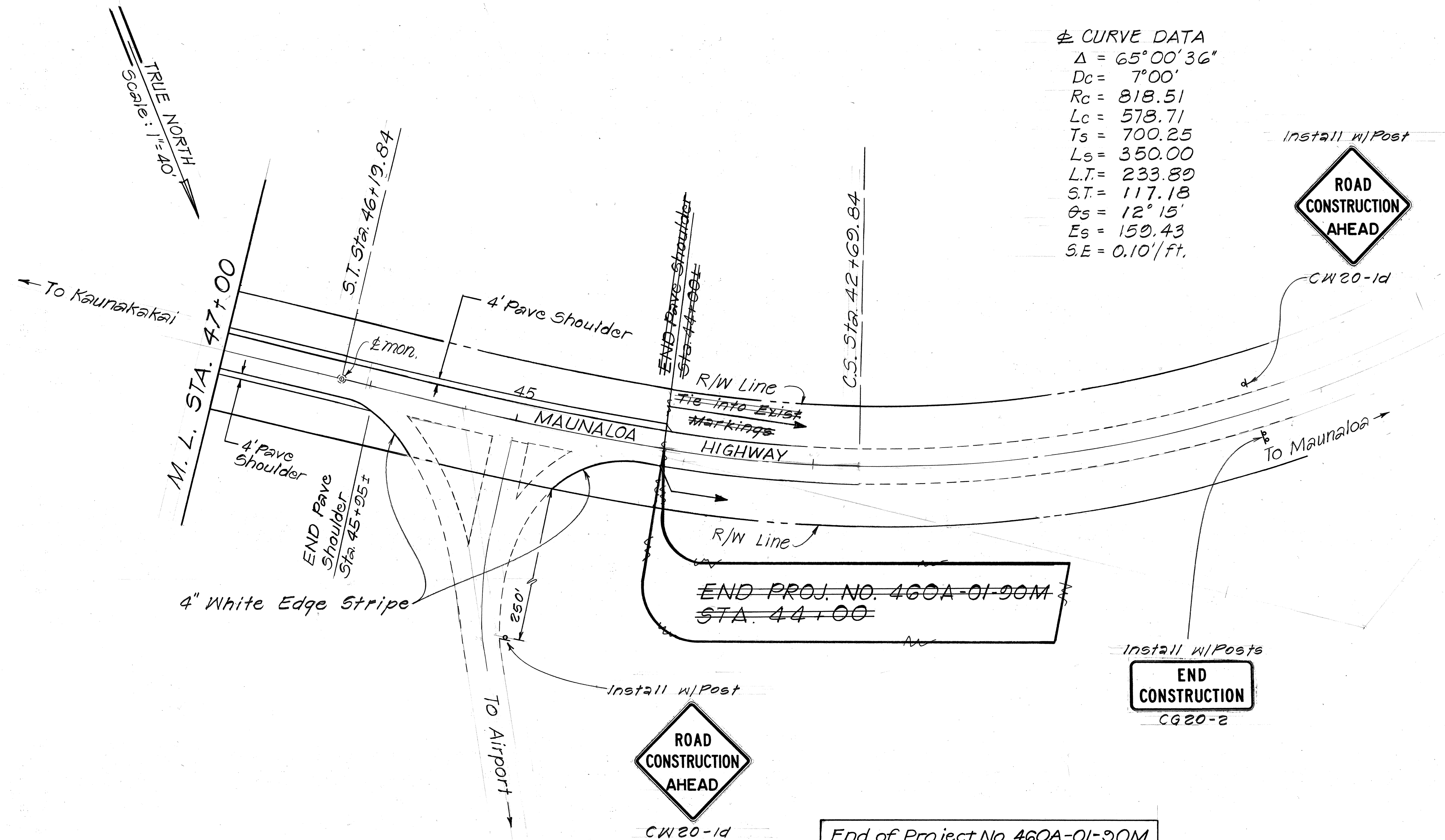
ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
KAUNAKAKAI TO KEONELELE AVE.
PROJ. NO. 460A-01-20M

SCALE: AS SHOWN DATE: OCT. 1980

SHEET No. 15 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	460A-01-90M	1990	19	23

± CURVE DATA
 $\Delta = 65^{\circ}00'36''$
 $D_c = 7^{\circ}00'$
 $R_c = 818.51$
 $L_c = 578.71$
 $T_s = 700.25$
 $L_s = 350.00$
 $L.T. = 233.89$
 $S.T. = 117.18$
 $\theta_s = 12^{\circ}15'$
 $E_s = 159.43$
 $S.E. = 0.10'/ft.$



End of Project No. 460A-01-90M
Change to Sta. 61+33.05
No Work Done on this Sheet.

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ROADWAY PLAN
MAUNALOA HIGHWAY
SHOULDER PAVING
KAUNAKAKAI TO KEONELELE AVE.
PROJ. NO. 460A-01-90M
SCALE: AS SHOWN DATE: NOV. 1989
SHEET No. 16 OF 16 SHEETS