

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-1(14)	1982	10	214

Adjust Valve Box Frame And Cover

Sta. -4+63 Rt. ~1 Ea.
Sta. -3+50 Rt. ~3 Ea.
Sta. -0+50 Rt. ~2 Ea.
Sta. -0+10 Rt. ~1 Ea.
Sta. 05+43 Lt. ~3 Ea.
Sta. 10+50 Lt. ~1 Ea.

Adjust Water Manhole Frame And Cover

Sta. -5+00 Rt. ~1 Ea.

S.R. "A" Sta. 0+00 Rt.

Relocate Water Meter, Box & Cover, 35 Lin. Ft.
2" Copper Pipe.

S.R. "A" Sta. 1+75 Lt.

Relocate 1 1/2" Water Meter, Box & Cover, 15 Lin. Ft.
2" Copper Pipe removed by D.W.S.

LANE-2 Rt. E.P.

CURVE - "C"
 $\Delta = 10^\circ 15' 56''$
 $R = 716.80'$
 $T = 64.39'$
 $C = 128.26'$
 $L = 128.43'$

LANE-1 Lt. E.P.

CURVE - "A"
 $\Delta = 10^\circ 15' 56''$
 $R = 716.80'$
 $T = 64.39'$
 $C = 128.26'$
 $L = 128.43'$

LANE-3 Lt. E.P.

CURVE - "B"
 $\Delta = 10^\circ 15' 56''$
 $R = 716.80'$
 $T = 64.39'$
 $C = 128.26'$
 $L = 128.43'$

Note:

Power Pole No. 1 and No. 385 to be Relocated by Others. Excavate Slope to Provide Space for New Power Pole No. 1 at Sta. -3+23 Rt.

Sta. -3+50 Rt.

Relocate PRV Unit For Details See Sheet No. 147

Sta. 1+90 Rt.

Relocate 1 1/2" Water Meter Box and cover. 25 Lin. Ft. copper pipe.

LANE-4

E.P. CURVE DATA
 $\Delta = 88^\circ 25' 00''$
 $R = 150.00'$
 $T = 145.91'$
 $C = 209.18'$
 $L = 231.47'$
 $Se = 0.05$

LANE-1 CURVE

$\Delta = 88^\circ 25' 00''$
 $R = 150.00'$
 $T = 145.91'$
 $C = 209.18'$
 $L = 231.47'$
 $Se = 0.05$

LANE-5

E.P. CURVE DATA
 $\Delta = 88^\circ 25' 00''$
 $R = 150.00'$
 $T = 145.91'$
 $C = 209.18'$
 $L = 231.47'$
 $Se = 0.05$

LANE-6

E.P. CURVE DATA
 $\Delta = 88^\circ 25' 00''$
 $R = 150.00'$
 $T = 145.91'$
 $C = 209.18'$
 $L = 231.47'$
 $Se = 0.05$

Sta. -4+63 Lt.

Relocate Fire Hydrant, Type "B" w/Concrete Block, 15 Lin. Ft. of 6-Inch D.I. Pipe, 1-6" Sleeve MJ 12" Long w/Ret. Gland.

NOTE:

Details for Intersection Islands See Sheet Nos. 63 & 110.

Details for Wheelchair Ramp See Misc. Detail Sheet No. 35 & 36.

LANE-7

E.P. CURVE DATA
 $\Delta = 88^\circ 25' 00''$
 $R = 150.00'$
 $T = 145.91'$
 $C = 209.18'$
 $L = 231.47'$
 $Se = 0.05$

17 Dec. 84	Sheet added to Contract plan to show details of Water Line and Service Lateral connections.
Date	Revision

APPROVED: *[Signature]*
Manager, Dept. of Water Supply

2/20/82
Date

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN

PALANI ROAD JUNCTION

HBR FAP ROUTE 11
PALANI RD. TO KILOHANA SUB'D.
PROJECT No. F-011-1(14)
NORTH KONA, HAWAII

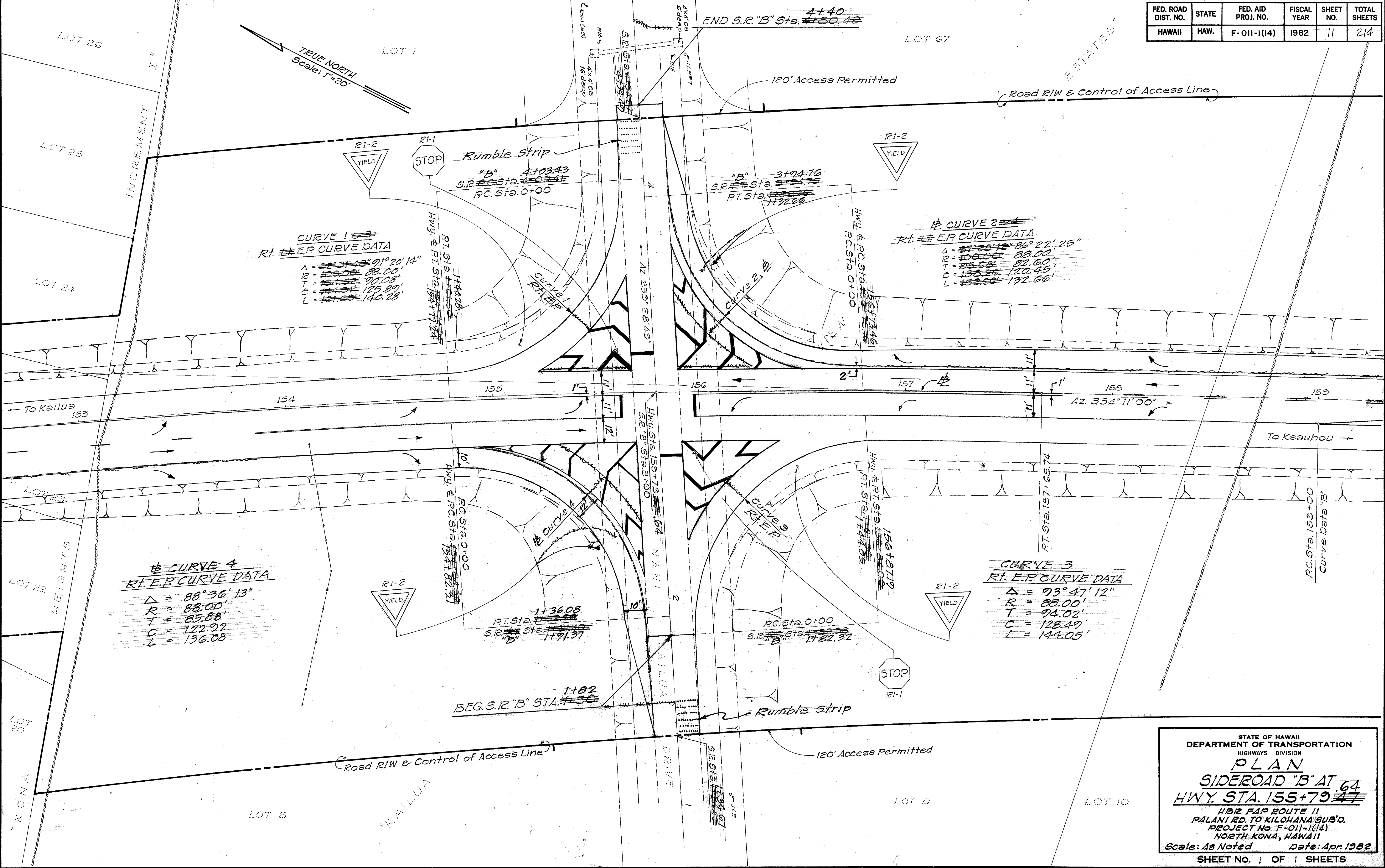
Scale: As Noted Date: Apr. 1982

SHEET NO. 1 OF 1 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	2/26/81
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NO.	

F.B. 964:63, 70-80, 1210:2-3, 71

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-1(14)	1982	11	214



CURVE 1
RT. E.P. CURVE DATA
 $\Delta = 92^\circ 34' 43''$
 $R = 88.00'$
 $T = 101.52'$
 $C = 111.51'$
 $L = 140.28'$

CURVE 2
RT. E.P. CURVE DATA
 $\Delta = 87^\circ 28' 12''$
 $R = 88.00'$
 $T = 95.68'$
 $C = 138.26'$
 $L = 132.66'$

CURVE 4
RT. E.P. CURVE DATA
 $\Delta = 88^\circ 36' 13''$
 $R = 88.00'$
 $T = 85.88'$
 $C = 122.92'$
 $L = 136.08'$

CURVE 3
RT. E.P. CURVE DATA
 $\Delta = 93^\circ 47' 12''$
 $R = 88.00'$
 $T = 94.02'$
 $C = 128.49'$
 $L = 144.05'$

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN
SIDEROAD "B" AT 64
HWY. STA. 155+79.47

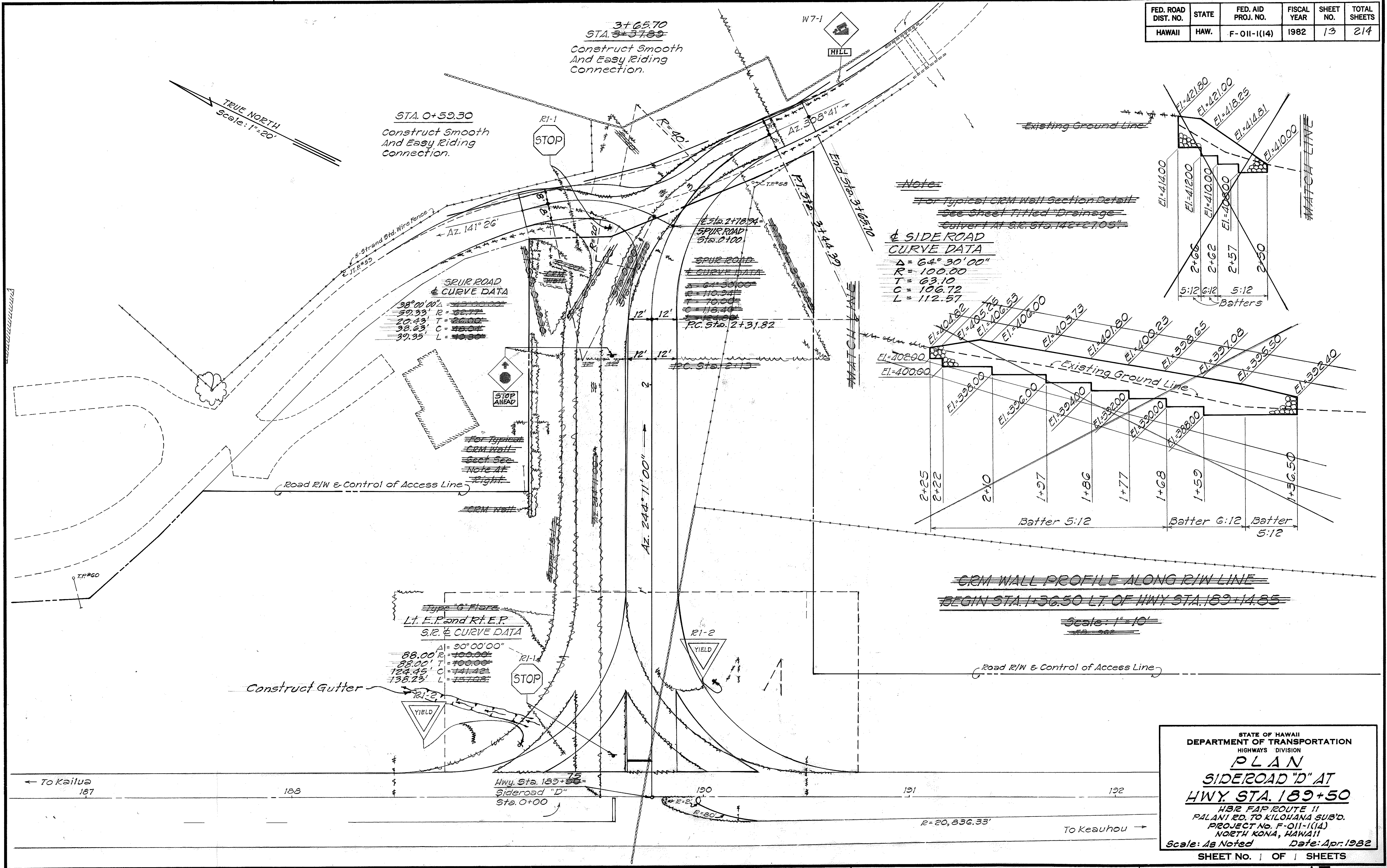
H&R F&P ROUTE 11
PALANI RD. TO KILOHANA SUB'D.
PROJECT No. F-011-1(14)
NORTH KONA, HAWAII

Scale: As Noted Date: Apr. 1982

SHEET No. 1 OF 1 SHEETS

ORIGINAL PLAN	DATE: Apr. 82
NOTED BY	DESIGNED BY
QUANTITIES BY	CHECKED BY
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-1(14)	1982	13	214



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLAN
SIDEROAD "D" AT
HWY. STA. 189+50
H32 FAP ROUTE 11
PALANI RD. TO KILOHANA SUB'D.
PROJECT NO. F-011-1(14)
NORTH KONA, HAWAII
Scale: As Noted Date: Apr. 1982
SHEET NO. | OF | SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-1(14)	1982	14	214

Hwy. Sta. 242+55
 123.15 Install ~~123.15~~ Lin. Ft., 2-Each
 108" ~~108"~~ Structural Plate
~~Pipe Arch~~ Culvert Gauge
 No. ~~7~~. See Sheet No. 20.
 8

Sideroad "E" Sta. 142+27.05
 102.2 Install ~~102.2~~ Lin. Ft., 2-Each
 108" ~~108"~~ Structural Plate
~~Pipe Arch~~ Culvert, Gauge
 No. ~~7~~. See Sheet No. 23 & 24.
 8

Lane-1 Lt. E.P. Sta. ~~144+48.60~~
 27.3 Install ~~27.3~~ Lin. Ft., 1-Each
 36" Culvert w/Concrete Drop Intake.
 Lane-2 Rt. E.P. Sta. ~~143+80~~
 49.0 Install 48.60 Lin. Ft., 1-Each
 24" Culvert w/Concrete Drop Intake and Headwall.
 Lane-2 Rt. E.P. Sta. 144+27.16
 60.7 Install 60.30 Lin. Ft., 1-Each
 36" Culvert w/Concrete Drop Intake and Headwall.
 Lane-3 Rt. E.P. Sta. 0+84.91
 56.0 Install 54.05 Lin. Ft., 1-Each
 24" Culvert w/Concrete Drop Intake and Headwall.
 Lane-5 Rt. E.P. Sta. 147+35.08
 89.0 Install 89.20 Lin. Ft., 1-Each
 36" Culvert w/Concrete Drop Intake.

NOTE:

Culvert Details for Lanes 1 to 5. See "Sideroad 'E' Drainage Culvert" Sheet No. 05 and "Reinf. Conc. Drop Intake" Sheet No. 22

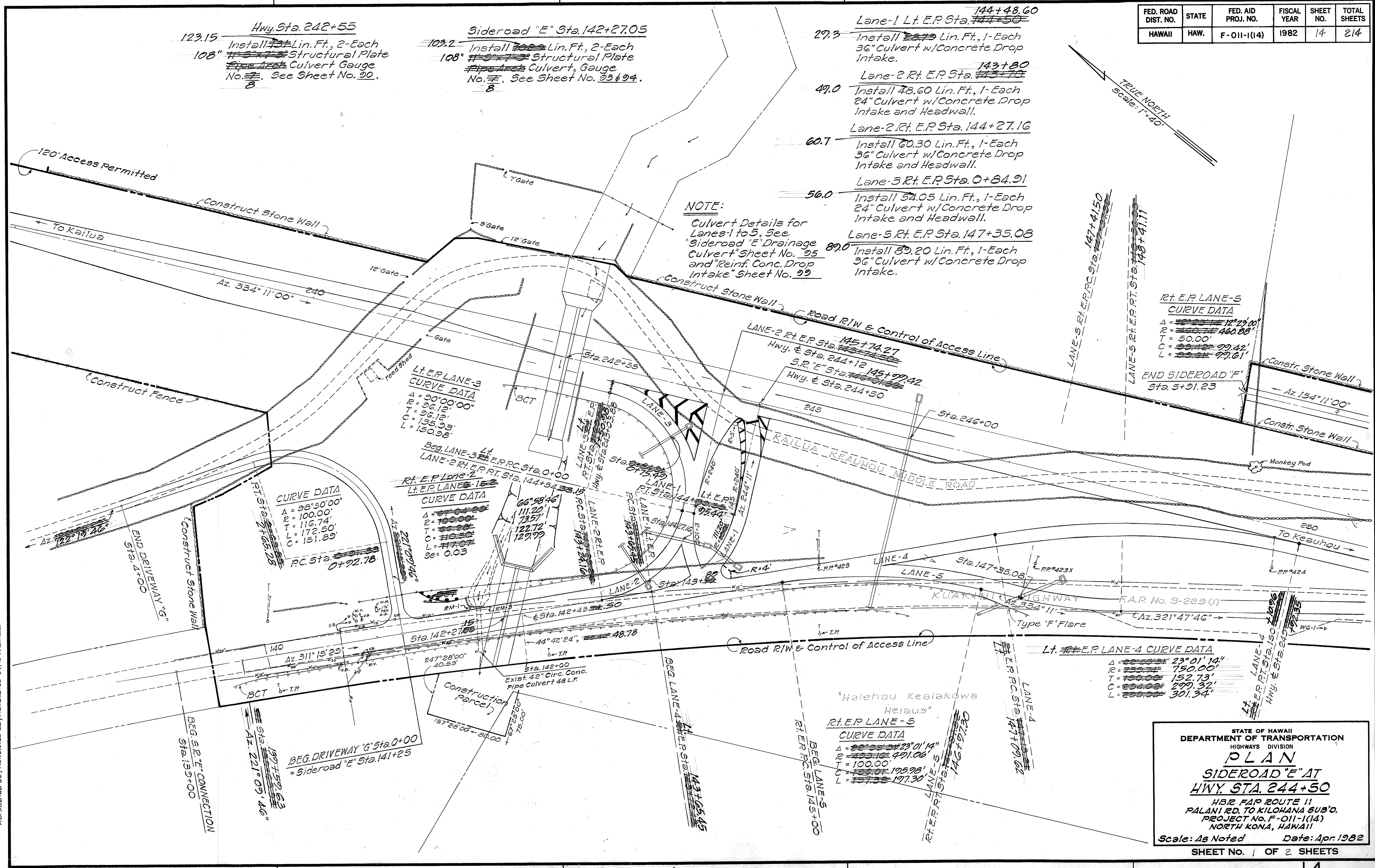
Rt. E.P. LANE-5
 CURVE DATA
~~A = 12°29'00"~~
~~R = 460.88'~~
~~T = 50.00'~~
~~C = 99.42'~~
~~L = 99.61'~~

END SIDEROAD "F"
 Sta. 5+91.23

Lt. E.P. LANE-4 CURVE DATA
~~A = 23°01'14"~~
~~R = 750.00'~~
~~T = 152.73'~~
~~C = 299.32'~~
~~L = 301.34'~~

Rt. E.P. LANE-5
 CURVE DATA
~~A = 23°01'14"~~
~~R = 750.00'~~
~~T = 152.73'~~
~~C = 299.32'~~
~~L = 301.34'~~

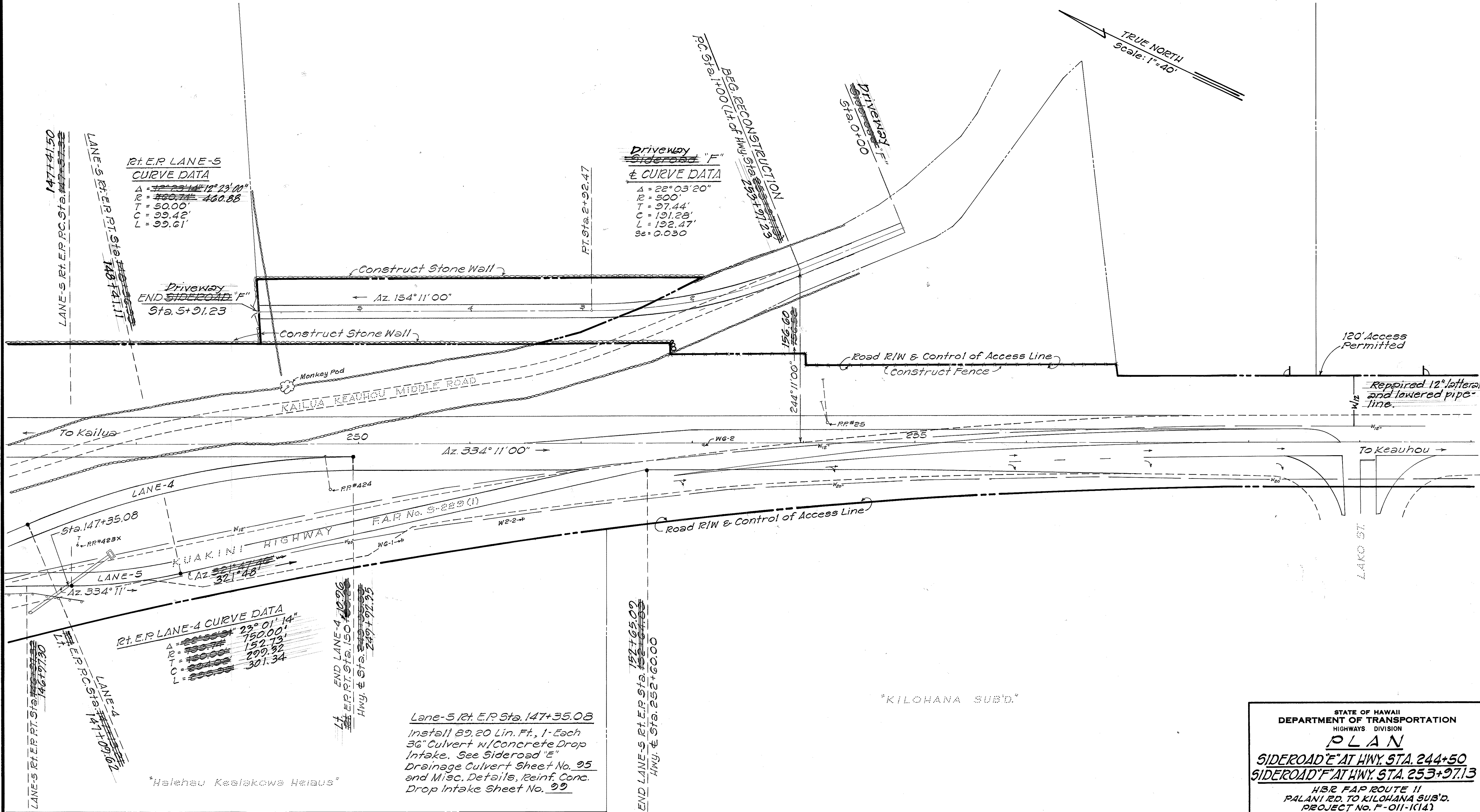
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PLAN
SIDEROAD "E" AT
HWY. STA. 244+50
 H&R F&R ROUTE 11
 PALANI RD. TO KILOHANA SUB'D.
 PROJECT No. F-011-1(14)
 NORTH KONA, HAWAII
 Scale: As Noted Date: Apr. 1982
 SHEET NO. 1 OF 2 SHEETS



SURVEY PLOTTED BY	DATE
DRAWN BY	1982.02
CHECKED BY	
NOTED BY	
QUANTITIES BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-1(14)	1982	15	214

ORIGINAL PLAN	DATE: 10/2/81
DESIGNED BY	DATE: 10/2/81
NOTED BY	DATE: 10/2/81
CHECKED BY	DATE: 10/2/81
DATE: 10/2/81	DATE: 10/2/81



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN

SIDEROAD "E" AT HWY. STA. 244+50

SIDEROAD "F" AT HWY. STA. 253+97.13

HBR FAP ROUTE 11
PALANI RD. TO KILOHANA SUB'D.
PROJECT NO. F-011-1(14)
NORTH KONA, HAWAII

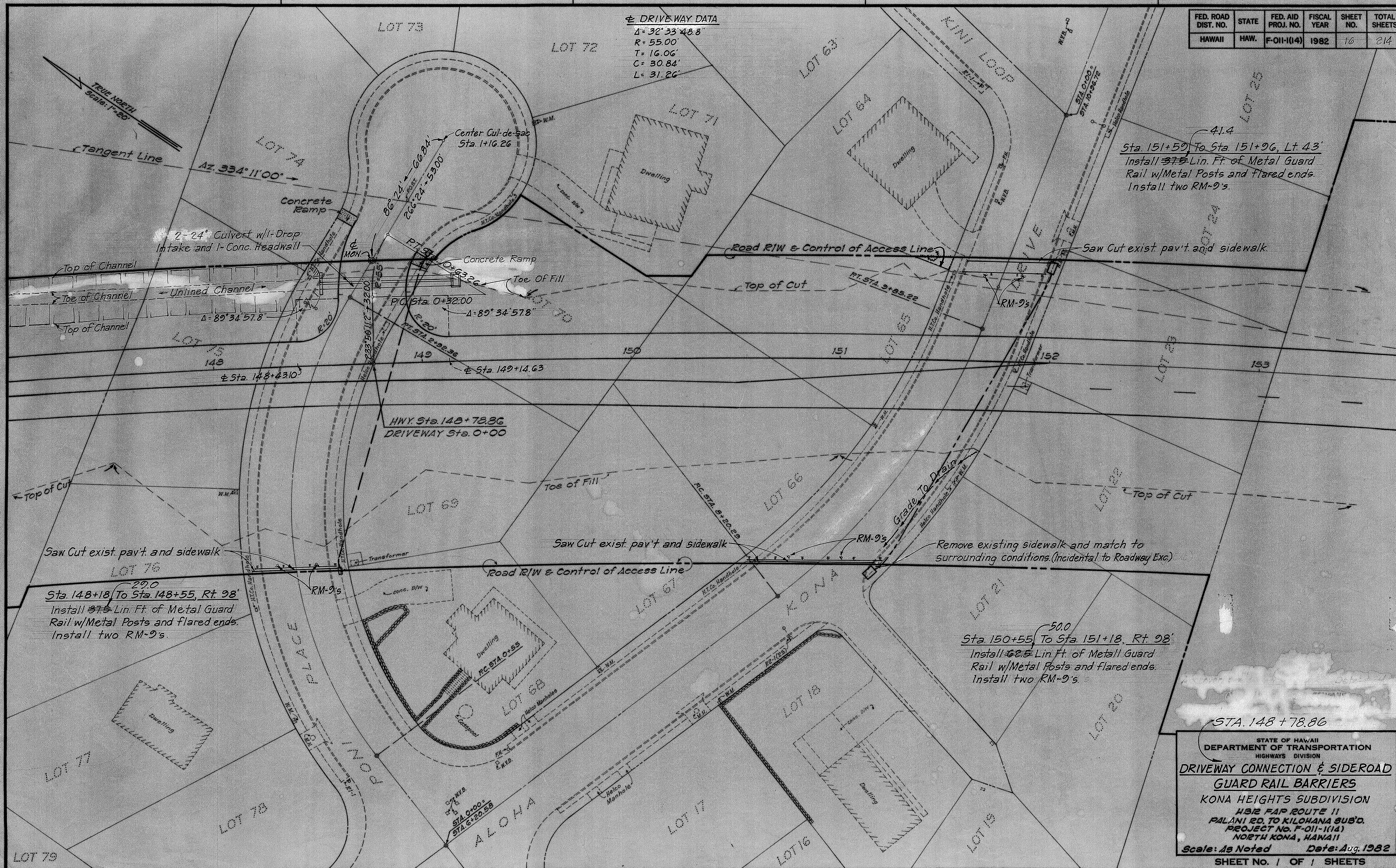
Scale: As Noted Date: Apr. 1982

SHEET NO. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-1(14)	1982	16	214

DRIVEWAY DATA

$\Delta = 32^{\circ}33'48.8''$
 $R = 55.00'$
 $T = 16.06'$
 $C = 30.84'$
 $L = 31.26'$



ORIGINAL	SURVEY PLOTTED BY	J.C.	DATE	May 21
PLAN	DRAWN BY	J.C.		May 21
	NOTE BOOK			
	DESIGNED BY			
	QUANTITIES BY			
	CHECKED BY			

STA. 148+78.86
 STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
DRIVEWAY CONNECTION & SIDEROAD
GUARD RAIL BARRIERS
 KONA HEIGHTS SUBDIVISION
 HB12 F&P ROUTE 11
 PALANI RD. TO KILOHANA SUB'D.
 PROJECT NO. F-011-1(14)
 NORTH KONA, HAWAII
 Scale: As Noted Date: Aug. 1982
 SHEET NO. 1 OF 1 SHEETS

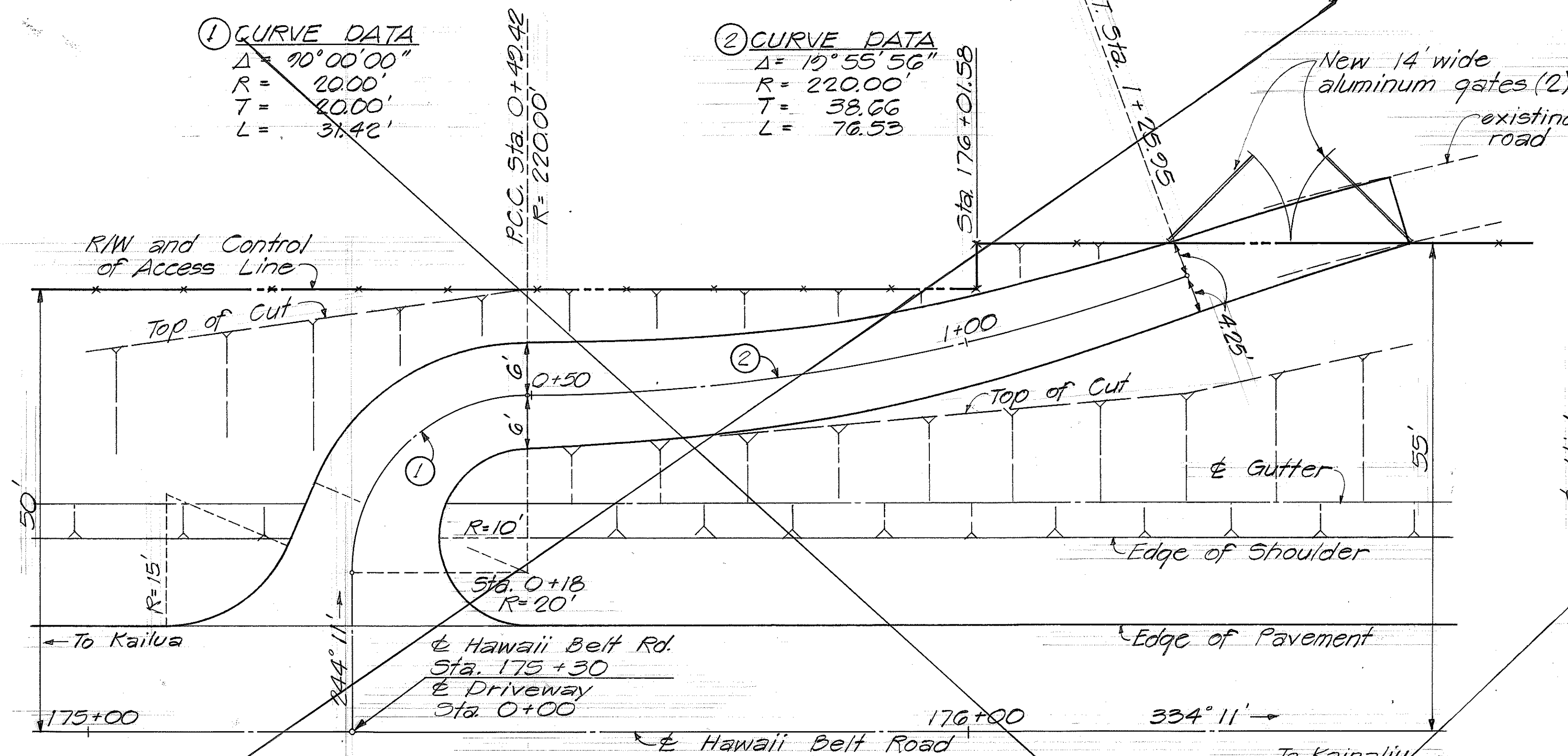
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-1(14)	1982	17	214

ESTIMATED QUANTITIES

A.C. Pavement, Mix V	10.96 Tons
Aggregate Base	33.70 C.Y.
Aggregate Subbase	37.70 C.Y.
12'-wide Aluminum Gate	2 Ea.
Roadway Excavation (included with highway cross sections)	

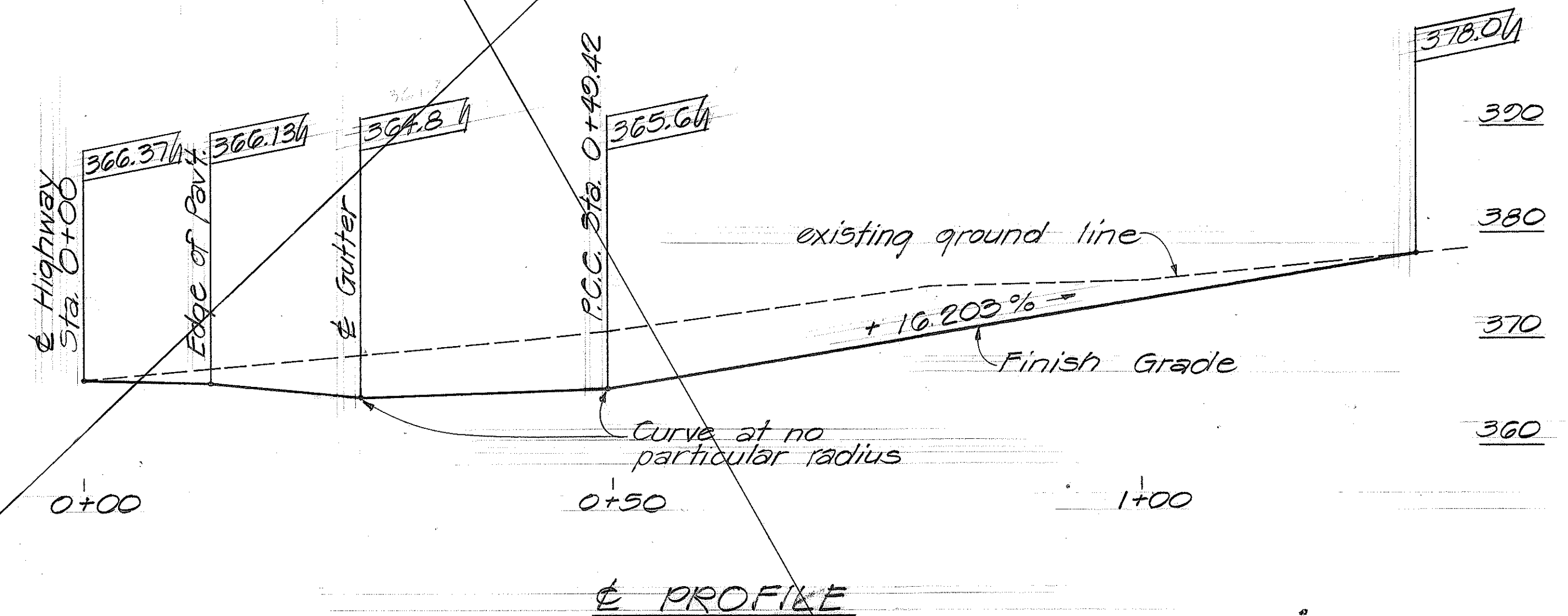
① CURVE DATA
 $\Delta = 10^{\circ}00'00''$
 $R = 2000'$
 $T = 20.00'$
 $L = 31.42'$

② CURVE DATA
 $\Delta = 10^{\circ}55'56''$
 $R = 220.00'$
 $T = 38.66'$
 $L = 76.53'$



PLAN

DRIVEWAY DETAIL AT HWY. STA. 175+30 LT. Scale: 1"=10'



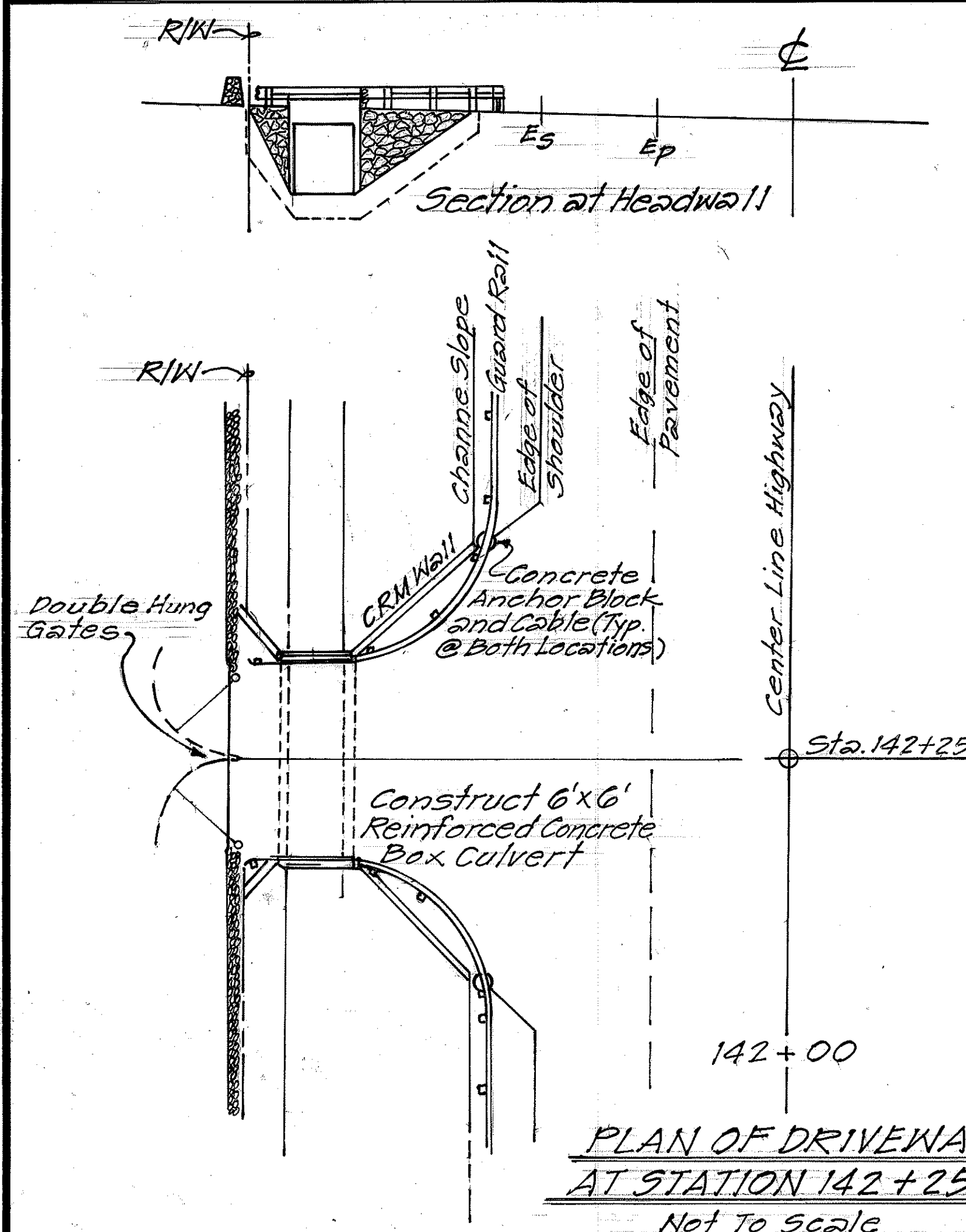
PROFILE

BOX CULVERT & REINFORCING STEEL

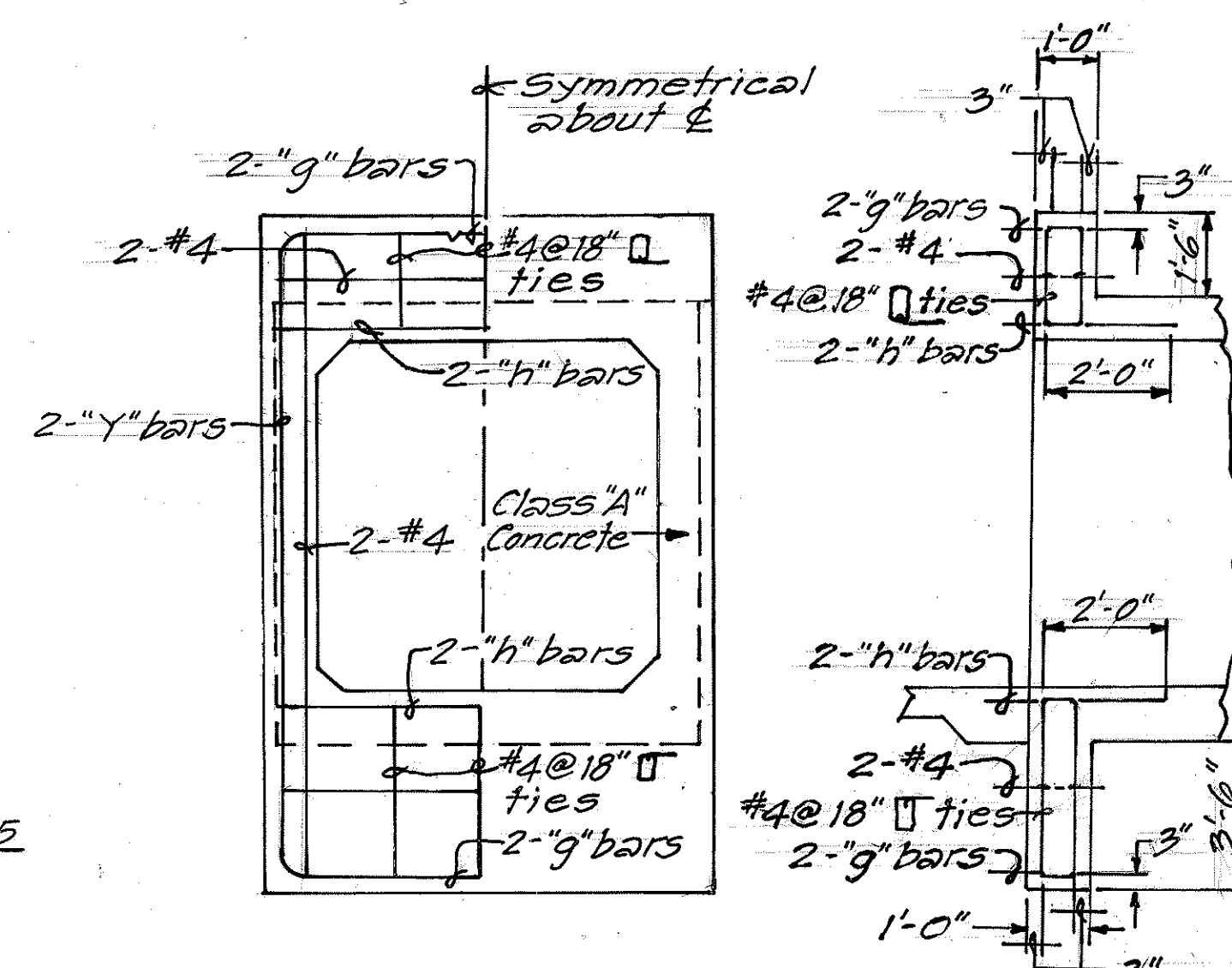
	SPAN X HEIGHT	
	4'x4'	6'x6'
MAX. FILL OVER TOP SLAB	25'	17.5'
Concrete Top Slab = T ₁	8"	8"
Concrete Bottom Slab = T ₂	9 1/2"	11"
Concrete Walls = T ₃	8"	10"
Reinforcing Steel Dimension = D ₁	3'-2"	4'-5"
" = D ₂	1'-6"	2'-1"
" = D ₃	1'-2"	1'-6"
Bar size & spacing "a" bar	#4@10"	#4@12"
"b" bar	#4@10"	#5@12"
"c" bar	#4@10"	#5@12"
Cont. long "d" bar	#4@18"	#4@18"
Vertical "e" bar	#4@15"	#4@18"

HEADWALL REINFORCING STEEL

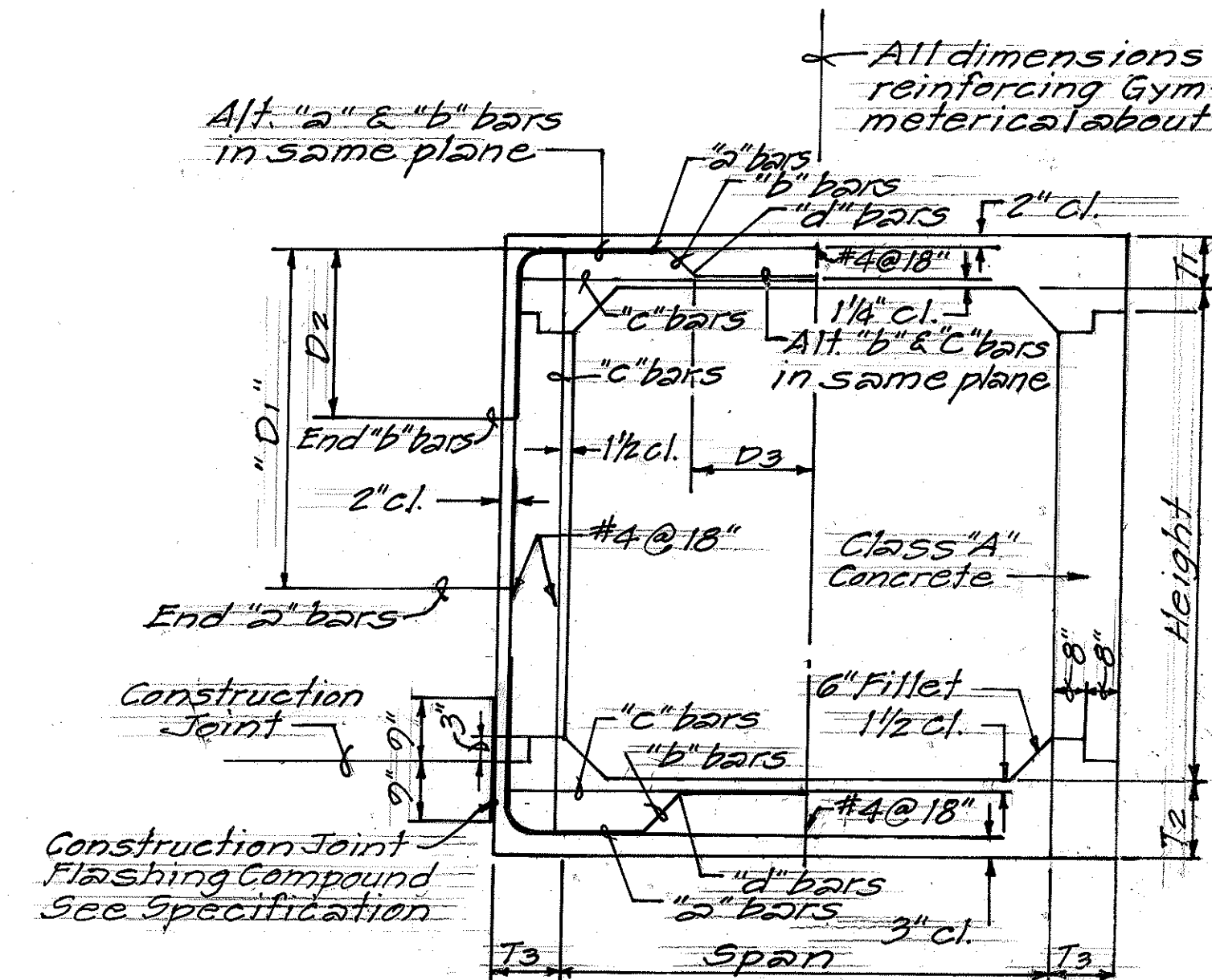
DESCRIPTION	4'x4'	6'x6'
CULVERT SIZE	5'-0"	6'-0"
Vertical Bent "Y" bar	4-#4	4-#5
Horizontal "g" bar	4-#4	4-#4
Horizontal "h" bar	4-#4	4-#5



PLAN OF DRIVEWAY
AT STATION 142+25
Not To Scale



SECTION A-A SECTION B-B
TYPICAL HEADWALL DETAILS
Not To Scale



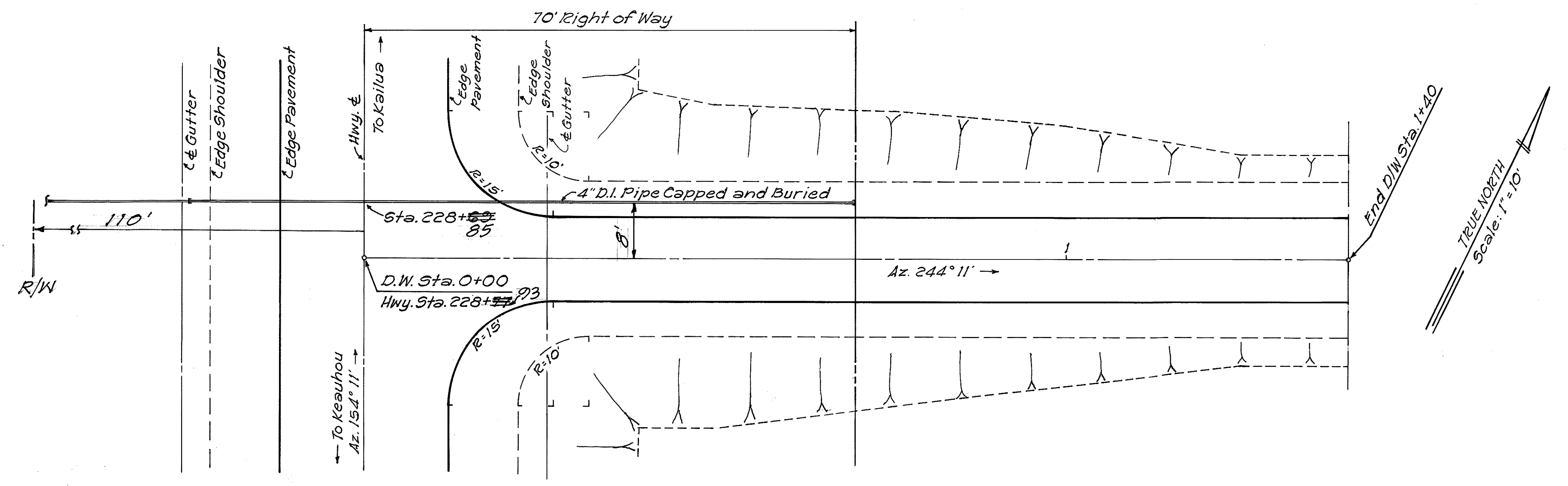
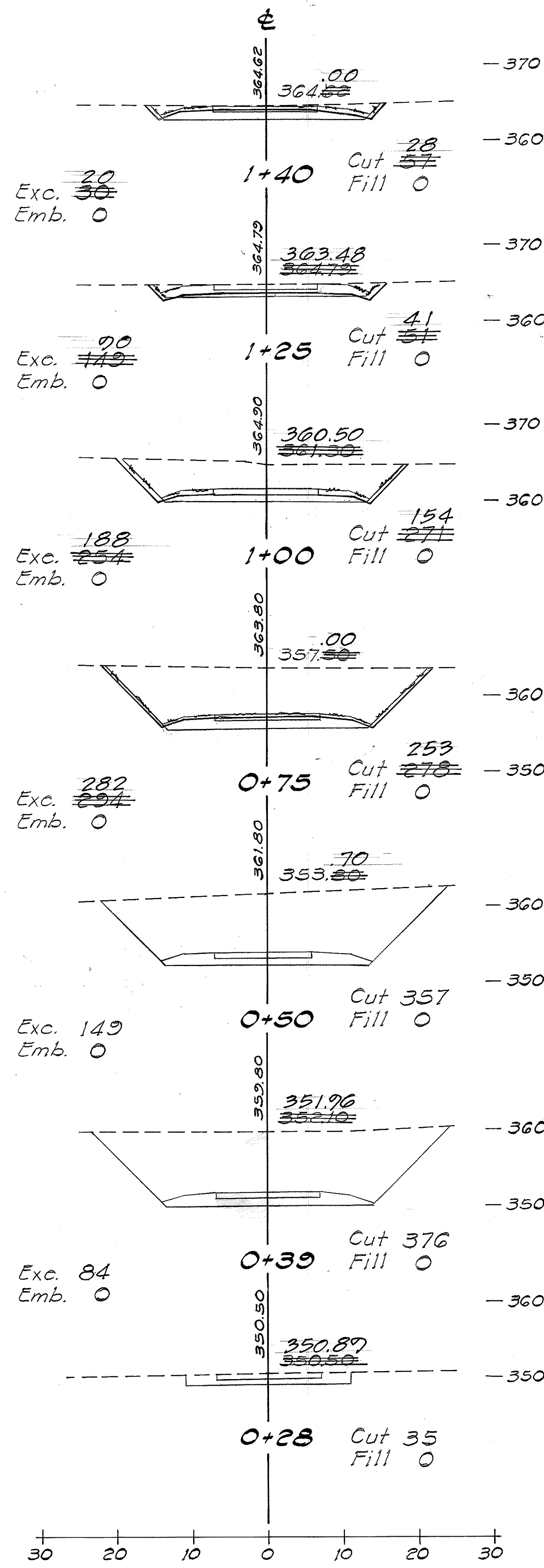
TYPICAL NORMAL CULVERT SECTION
Not To Scale

NOTE: This Tracings/Detail
Prepared During "As-Built"
Posting

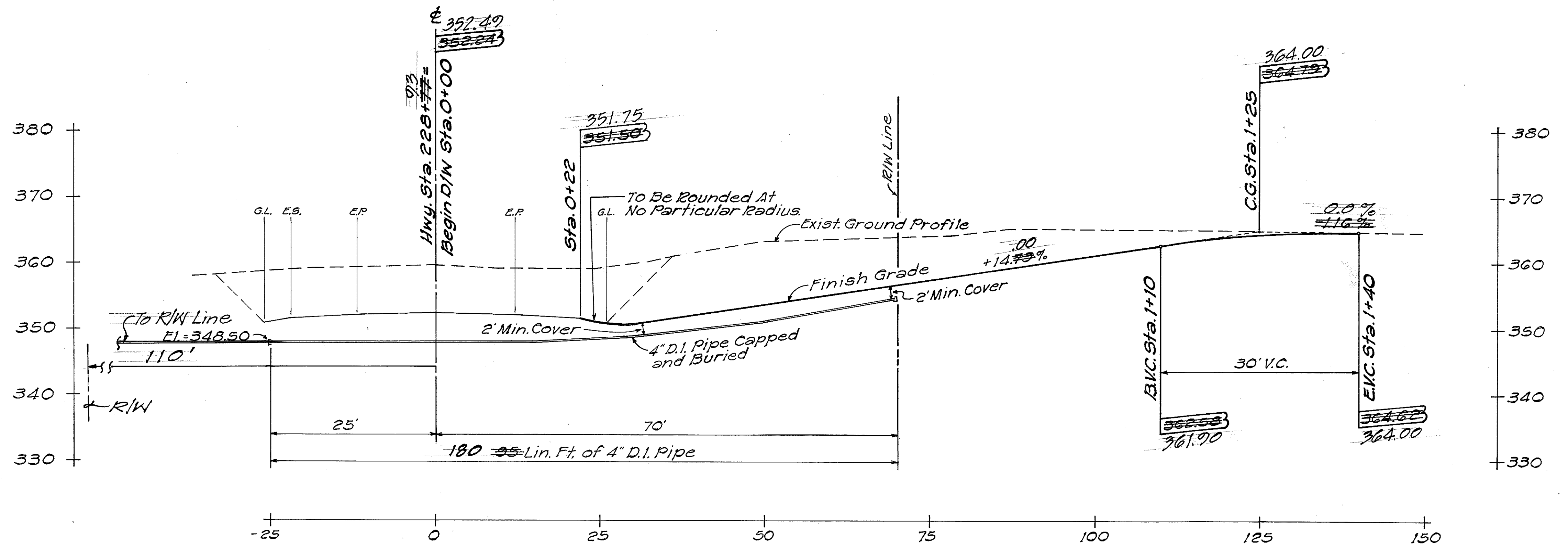
C.C.O. NO. 12

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
6'x6' Reinforced Concrete Box
DRIVEWAY DETAIL
@ HWY. STA. 175+30 LT.
HBR FAP ROUTE 11
PALANI RD. TO KILOHANA SUBD.
PROJECT No. F-011-1(14)
NORTH KONA, HAWAII
Scale: As Noted Date: June 1982
SHEET NO. OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-011-1(14)	1982	18	214



PLAN
Scale: 1" = 10'



PROFILE
Scale: Hor. = 1" = 10'
Vert. = 1" = 10'

ESTIMATED QUANTITIES

A.C. Mix V	7 Tons
Aggregate Base Course	46 Cu. Yds.
Aggregate Subbase Course	141 Cu. Yds.
4" Ductile Iron Pipe	95 Lin. Ft.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FRANK GOMES DRIVEWAY
LEFT OF HWY. STA. 228+77

H/2 FAR ROUTE 11
PALANI RD. TO KILOHANA SUB'D.
PROJECT No. F-011-1(14)
NORTH KONA, HAWAII

Scale: As Shown Date: July 1982

SHEET NO. OF SHEETS

ORIGINAL PLAN	DATE	BY
TRACED BY	DATE	BY
DESIGNED BY	DATE	BY
QUANTITIES BY	DATE	BY
CHECKED BY	DATE	BY