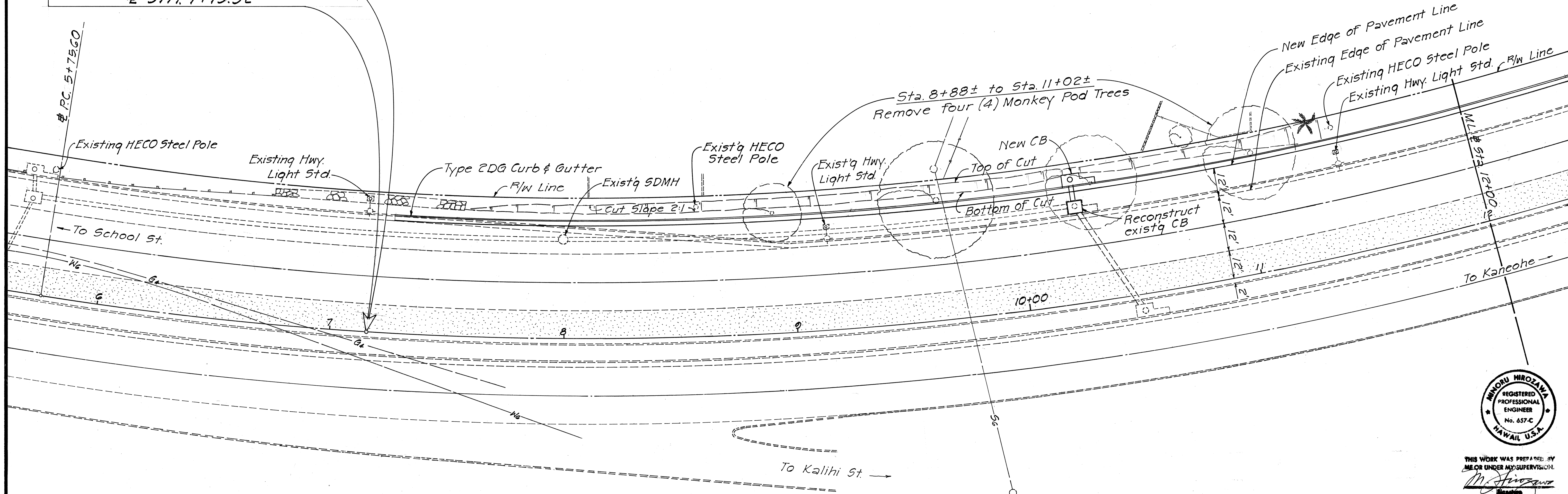


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-063-1(17)	1984	57	156

CURVE DATA
 $\Delta = 32^{\circ} 32' 00''$
 $R = 1500.00'$
 $T = 437.68'$
 $C = 840.32'$
 $L_c = 851.72'$

SCALE: 1" = 20'

BEGIN PROJECT NO. F-063-1(17)
 # STA. 7+15.32



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 ME OR UNDER MY SUPERVISION
M. Hirozawa
 Signature

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

DETAIL PLAN OF ROADWAY
 LIKELIKE HIGHWAY IMPROVEMENTS
 KAM IV ROAD TO VICINITY OF KALIHI STREET
 F.A. PROJ. NO. F-063-1(17)

SHEET No. 1 OF 6 SHEETS

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-063-1(17)	1984	58	156

SCALE: 1" = 20'

NORTH LANE CURVE DATA

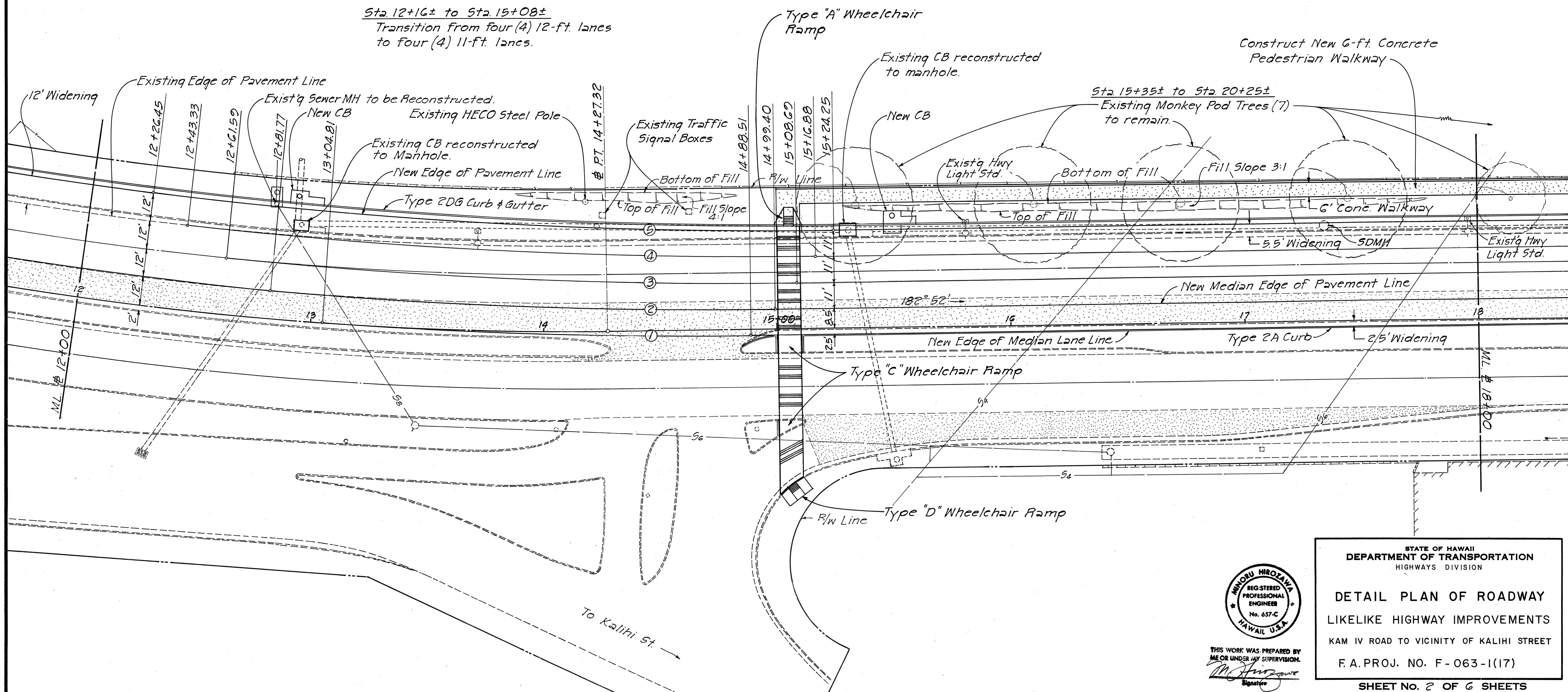
CURVE DATA

$\Delta = 32^{\circ}32'00''$
 $R = 1500.00'$
 $T = 437.68'$
 $C = 840.32'$
 $L_c = 851.72'$

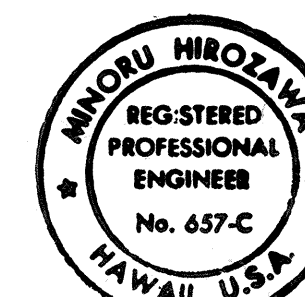
①	②	③	④	⑤
$\Delta = 4^{\circ}40'46''$	$\Delta = 5^{\circ}33'35''$	$\Delta = 6^{\circ}19'50''$	$\Delta = 7^{\circ}01'41''$	$\Delta = 7^{\circ}40'22''$
$R = 2250.00'$	$R = 2232.00'$	$R = 2214.00'$	$R = 2196.00'$	$R = 2178.00'$
$T = 91.93'$	$T = 108.38'$	$T = 122.44'$	$T = 134.85'$	$T = 146.05'$
$L_c = 183.76'$	$L_c = 216.58'$	$L_c = 244.62'$	$L_c = 269.37'$	$L_c = 291.67'$

See Sheet 80 for revised Traffic Signal System layout.

Sta 12+16± to Sta 15+08±
 Transition from four (4) 12-ft. lanes to four (4) 11-ft. lanes.



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

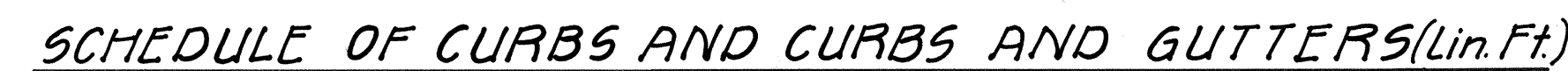


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 Signature: *[Signature]*

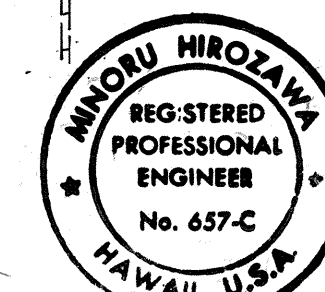
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

DETAIL PLAN OF ROADWAY
 LIKELIKE HIGHWAY IMPROVEMENTS
 KAM IV ROAD TO VICINITY OF KALIHU STREET
 F.A.PROJ. NO. F-063-1(17)

SHEET No. 2 OF 6 SHEETS



FROM STA.	TO STA.	CURBS		CURBS AND GUTTERS			
		2A	2D	2AG	2AGM	2DG	2DGM
7+25±L	22+40±L					1517	
14+85±R	20+00±R	521					
20+00±R	22+45±R				245		
Gulick Intersection			33				
22+20±R	22+45±R	27					
23+12±R	26+81±R				369		
23+75±L	25+07±L					132	
28+93±R	29+94±R				101		
28+59±L	29+94±L					119	
29+94±L	32+58±L						271
29+94±R	32+69±R			275			
Kono Intersection			34				
33+30±R	33+94±R	68					
33+33±R	37+63±R			431			
33+70±L	40+55±L						710
Kam IV Intersection			182				
40+78±R	41+51±R	145					
TOTALS		761	249	706	715	1768	981



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETAIL PLAN OF ROADWAY
LIKELIKE HIGHWAY IMPROVEMENTS

KAM IV ROAD TO VICINITY OF KALIHI STREET

F.A. PROJ. NO. F - 063-1(17)

SHEET No. 3 OF 6 SHEETS

ADD. 59

2-5-85	New Pavement Limit Line Added
DATE	REVISION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-063-1(17)	1984	60	156

SCALE: 1" = 20'

Sta. 25+00± to Sta. 26+50±
Remove existing Wood Guard
Rail with Concrete Posts.

Sta 25+07 to Sta. 25+25
Transition from Curb & Gutter
Type 2DG to Type 4F Guard Rail.
See Sheet 74 for details.

Sta. 25+25 to Sta. 26+48
Construct Type 4F Guard Rail,
partially on Concrete Retaining
Wall. See Sheet 102 for details.

Reconstruct Guard Rails with materials salvaged in the removal of the existing rails.

Sta. 26+18± to 26+80± - Median Outbound
Double Metal Guard Rail with Rub Rail. Install Buffer Type with Median End Section at Sta. 26+18±. Install Flared End Section at Sta. 26+80±. Tie in to existing guard rail at Sta. 26+80±.

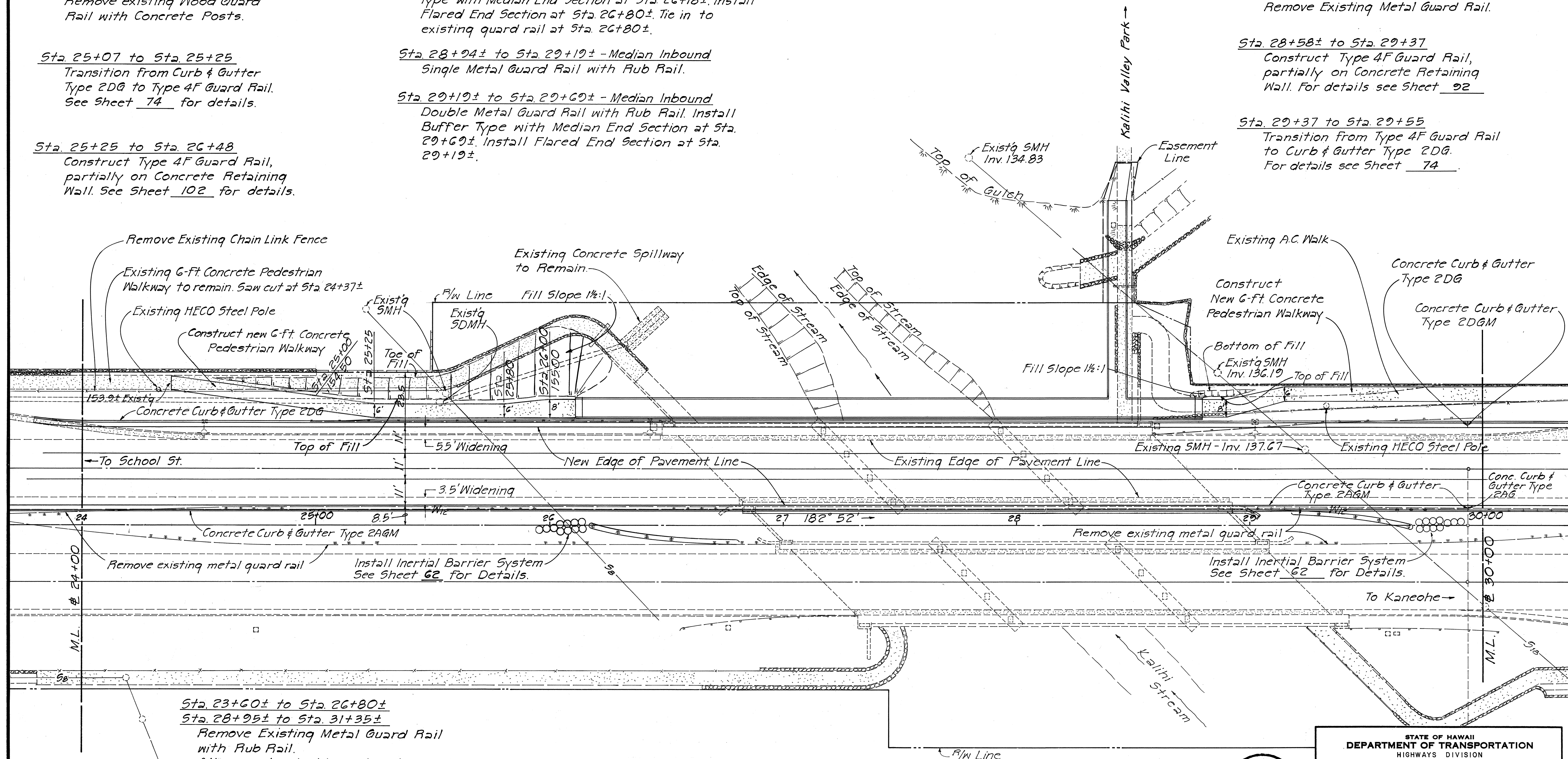
Sta. 28+94± to Sta. 29+19± - Median Inbound
Single Metal Guard Rail with Rub Rail.

Sta. 29+19± to Sta. 29+60± - Median Inbound
Double Metal Guard Rail with Rub Rail. Install
Buffer Type with Median End Section at Sta.
29+60±. Install Flared End Section at Sta.
29+19±.

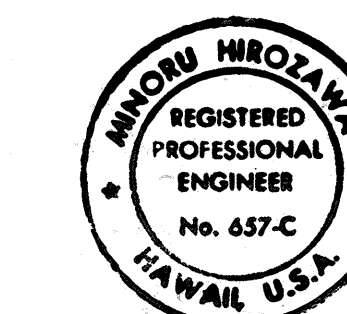
Sta. 28+60± to Sta. 30+00±
Remove Existing Metal Guard Rail.

Sta. 28+58± to Sta. 29+37
Construct Type 4F Guard Rail,
partially on Concrete Retaining
Wall. For details see Sheet 92

Sta. 29+37 to Sta. 29+55
Transition From Type 4F Guard Rail
to Curb & Gutter Type 2DG.
For details see Sheet 74



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



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**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION**

DETAIL PLAN OF ROADWAY LIKEHIGHWAY IMPROVEMENTS

KAM IV ROAD TO VICINITY OF KALIHU STREET

F.A. PROJ. NO. F-063-1(17)

SHEET No. 4 OF 6 SHEETS

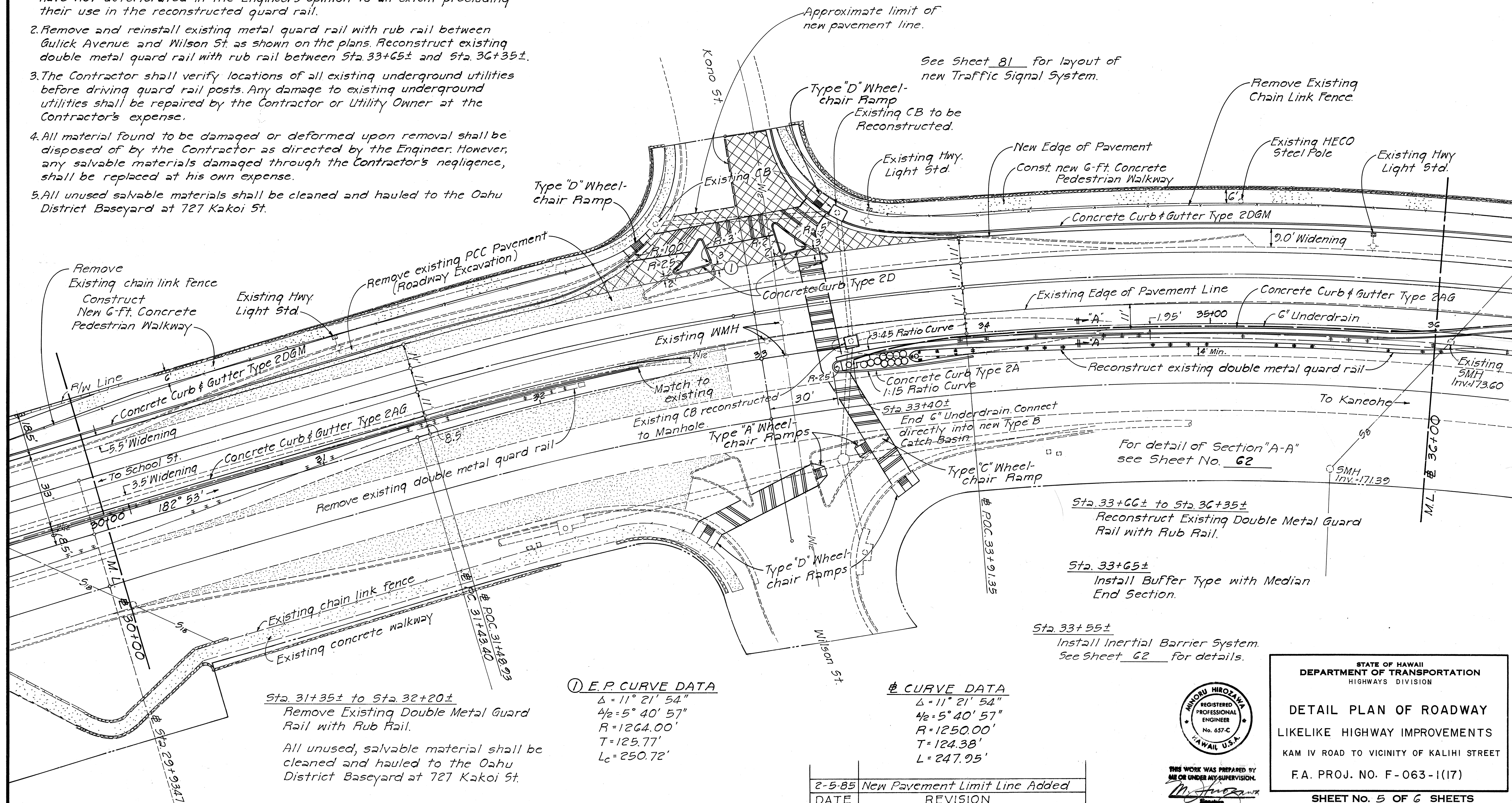
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-063-1(17)	1984	61	156

SCALE: 1"=20'

NOTES FOR RECONSTRUCTING GUARD RAILS

- It is intended that the Contractor shall make use of all posts, rails, spacer blocks, and fittings salvaged from the existing guard rail that have not deteriorated in the Engineer's opinion to an extent precluding their use in the reconstructed guard rail.
- Remove and reinstall existing metal guard rail with rub rail between Gulick Avenue and Wilson St. as shown on the plans. Reconstruct existing double metal guard rail with rub rail between Sta. 33+65± and Sta. 36+35±.
- The Contractor shall verify locations of all existing underground utilities before driving guard rail posts. Any damage to existing underground utilities shall be repaired by the Contractor or Utility Owner at the Contractor's expense.
- All material found to be damaged or deformed upon removal shall be disposed of by the Contractor as directed by the Engineer. However, any salvable materials damaged through the Contractor's negligence, shall be replaced at his own expense.
- All unused salvable materials shall be cleaned and hauled to the Oahu District Baseyard at 727 Kakoi St.

6. Special terminal sections and other hardware not available in the salvable materials but required to complete the reconstructed guard rails as shown on the plans, shall be furnished and installed by the Contractor. All costs shall be considered incidental to Reconstructed Guard Rail.



① E.P. CURVE DATA

Δ = 11° 21' 54"
4½ = 5° 40' 57"
R = 1264.00'
T = 125.77'
Lc = 250.72'

② CURVE DATA

Δ = 11° 21' 54"
4½ = 5° 40' 57"
R = 1250.00'
T = 124.38'
L = 247.95'

2-5-85	New Pavement Limit Line Added
DATE	REVISION



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Signature: Minor Hirozawa

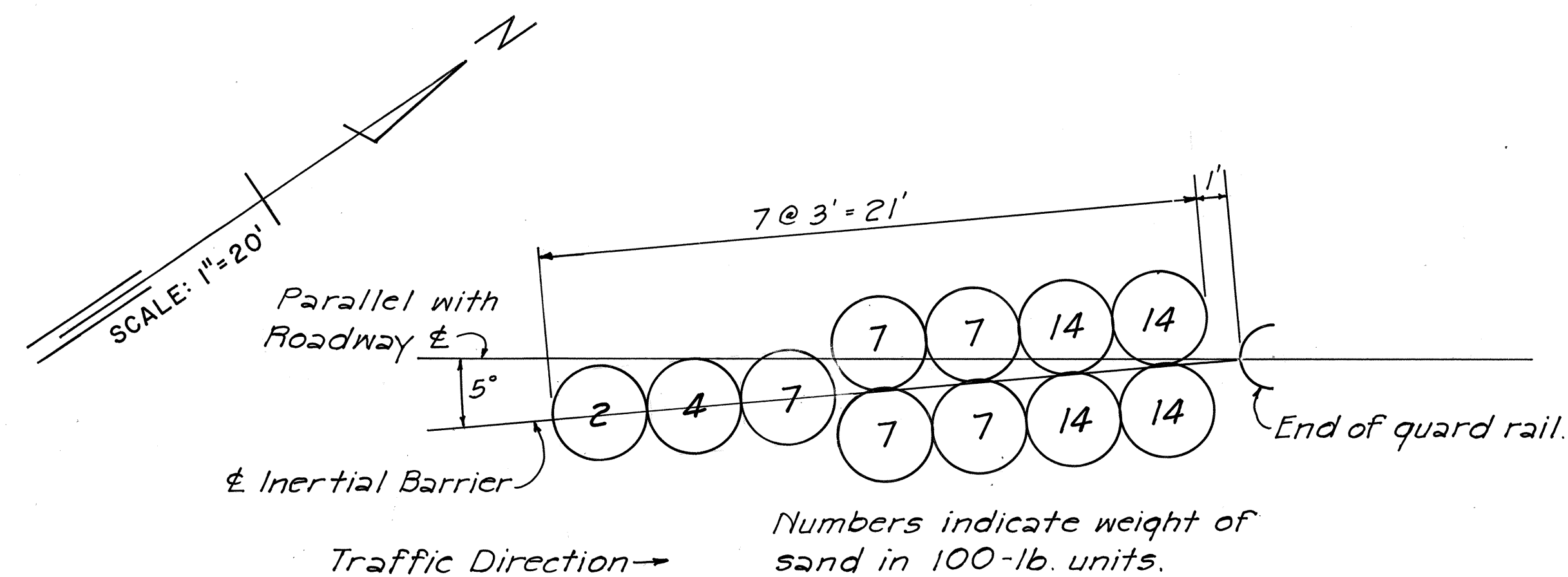
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETAIL PLAN OF ROADWAY
LIKELIKE HIGHWAY IMPROVEMENTS
KAM IV ROAD TO VICINITY OF KALIHI STREET
F.A. PROJ. NO. F-063-1(17)

SHEET No. 5 OF 6 SHEETS

ADD. 61

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-063-1(17)	1984	62	156

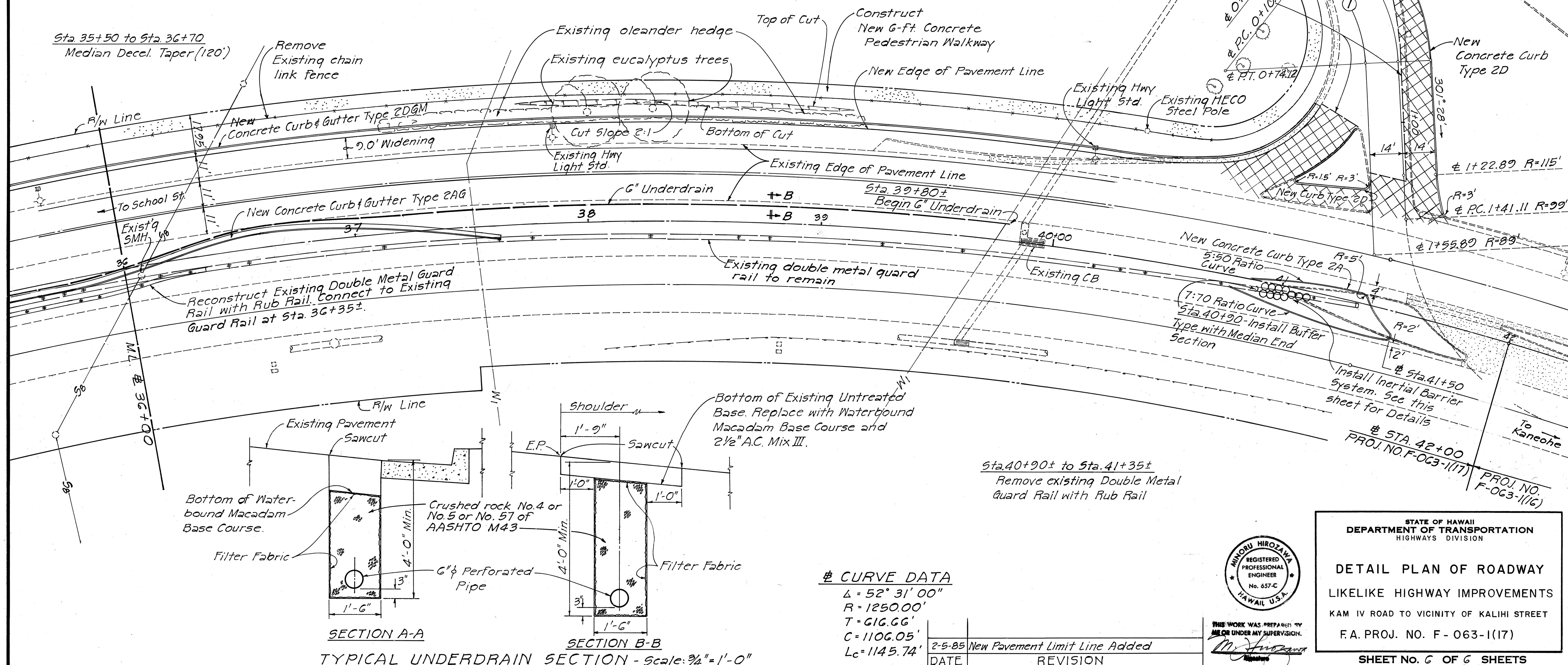


TYPICAL INERTIAL BARRIER SYSTEM
Scale: $\frac{1}{4}" = 1' - 0"$

Sta. 37+15± to Sta. 39+15±
Remove oleander hedge

Sta. 38+00± to Sta. 38+30±
Remove two eucalyptus trees

<u>CURVE DATA</u>		
①	②	③
$\Delta = 48^\circ 54'$	$\Delta = 48^\circ 54'$	$\Delta = 48^\circ 54'$
$\frac{1}{2}\Delta = 24^\circ 27'$	$\frac{1}{2}\Delta = 24^\circ 27'$	$\frac{1}{2}\Delta = 24^\circ 27'$
$R = 60.00'$	$R = 74.00'$	$R = 88.00'$
$T = 27.28'$	$T = 33.65'$	$T = 40.01'$
$L = 51.21'$	$L = 63.16'$	$L = 75.01'$



2-5-85	New Pavement Limit Line Added
DATE	REVISION



MINORU HIROZAWA
REGISTERED
PROFESSIONAL
ENGINEER
No. 657-C
HAWAII, U.S.A.

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FOR OR UNDER MY SUPERVIS**

Minoru Hirozawa
Signature

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETAIL PLAN OF ROADWAY
LIKELIKE HIGHWAY IMPROVEMENTS
KAM IV ROAD TO VICINITY OF KALIHI STREET
F.A. PROJ. NO. F - 063-1(17)

SHEET No. 6 OF 6 SHEETS