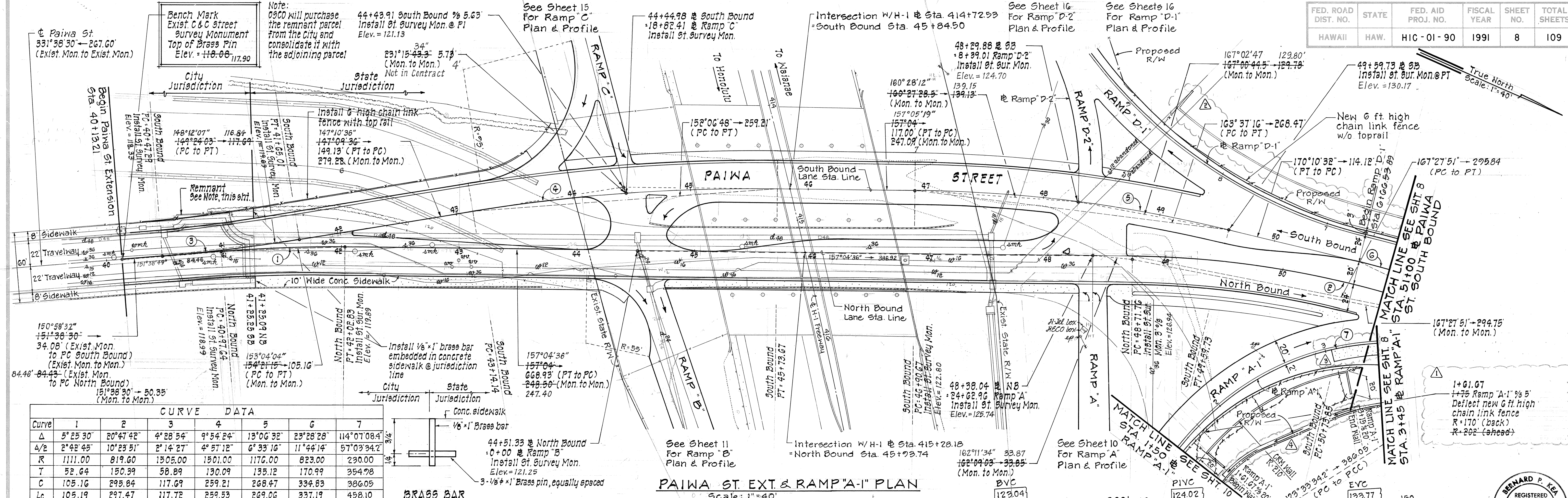
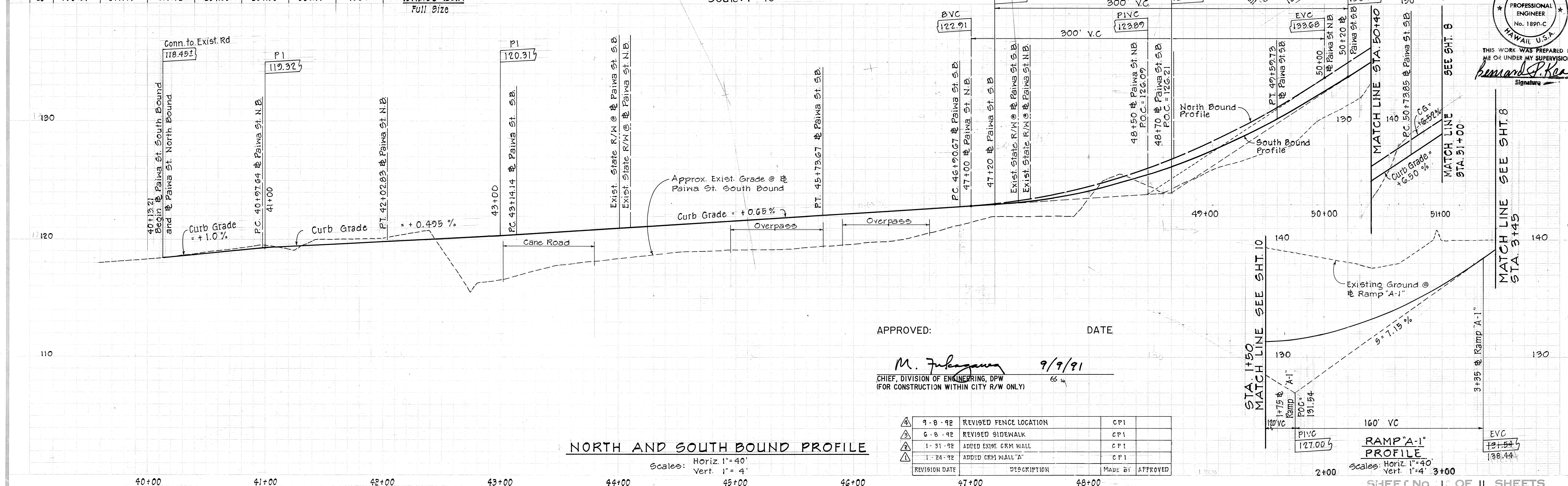
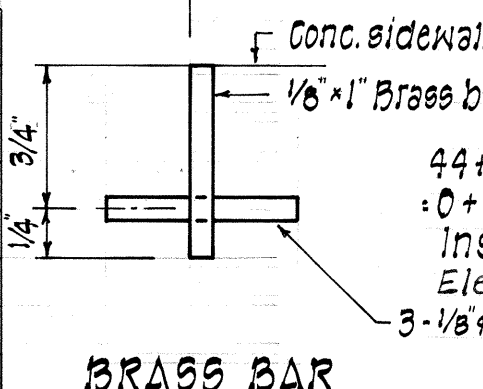


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIC - 01 - 90	1991	8	109



Curve	1	2	3	4	5	6	7
Δ	5° 25' 30"	20° 47' 42"	4° 28' 54"	9° 54' 24"	13° 06' 32"	23° 28' 28"	114° 07' 08.4"
L	248.45	101.23	214.27	4° 57' 12"	6° 33' 16"	11° 44' 14"	57° 03' 34.2"
R	1111.00	819.60	1305.00	1501.00	1176.00	823.00	230.00
T	52.64	150.39	58.89	130.09	135.12	170.99	354.98
C	105.16	295.84	117.69	259.21	268.47	334.83	386.05
Lc	105.19	297.47	117.72	259.53	269.06	337.19	458.10



APPROVED: *M. Fujisawa* 9/9/91
 CHIEF, DIVISION OF ENGINEERING, DPW
 (FOR CONSTRUCTION WITHIN CITY R/W ONLY)

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
9-8-92	REVISED FENCE LOCATION	CP1	
9-8-92	REVISED SIDEWALK	CP1	
1-31-92	ADDED EXIST. GRM WALL	CP1	
1-24-92	ADDED CRM WALL 'A'	CP1	

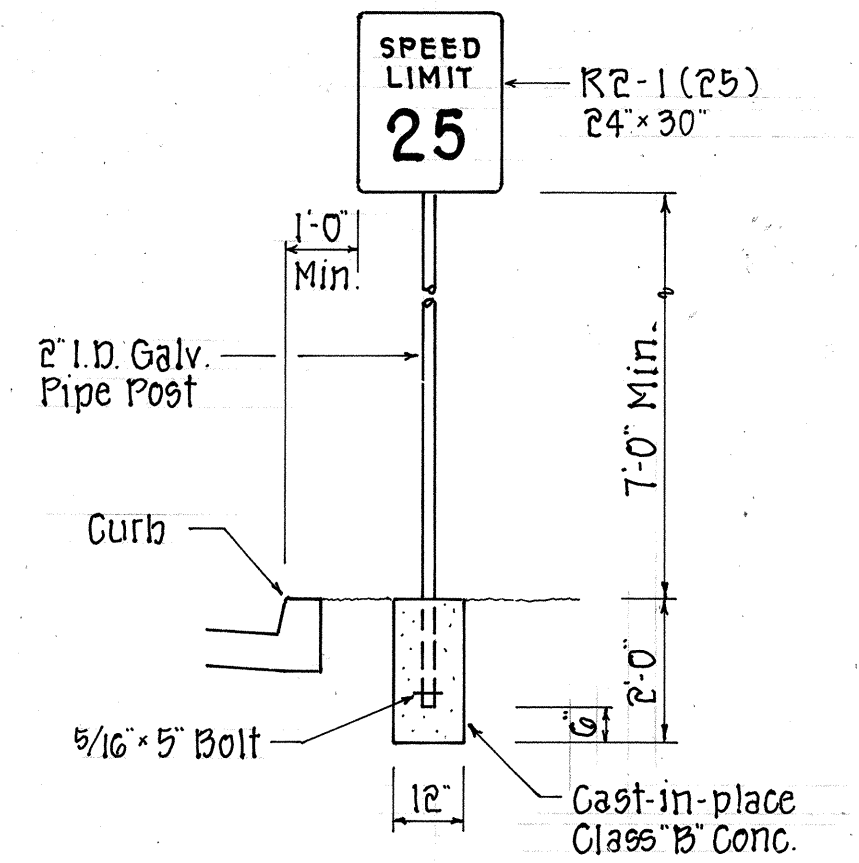
BERNARD P. KEE
 REGISTERED PROFESSIONAL ENGINEER
 No. 1899-C
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Bernard P. Kee
 Signature

ORIGINAL PLAN
 SURVEY PLOTTED BY
 DATE
 DRAWN BY
 TRACED BY
 DESIGNED BY
 CHECKED BY
 NO.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIC - 01 - 90	1991	9	109

**Within the City Right-of-Way, maintenance of the 3'-0" grassed area, median, 12'-0" & 3'-0" planting strips, conc. sidewalk and bikeway will be the responsibility of the Waikale Community Association.*

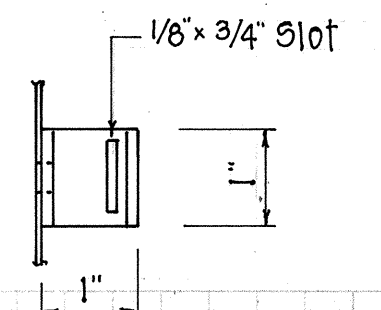
True North
Scale: 1" = 40'



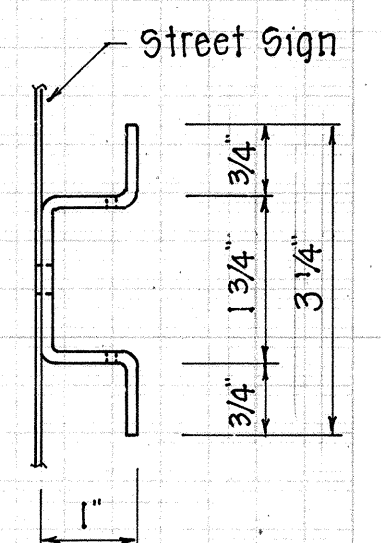
TYPICAL SIGN POST
WITHIN CITY R/W
Not to Scale

NOTES: Not to

1. Signs shall be attached to posts with 5/16" zinc plated steel bolts, nuts & washers.
2. Signs 48" wide or larger than 10 sq. ft. in area shall be mounted on 2'-2" galv. posts. The sign shall be installed with at least 1 ft. clearance from the sign edge to the curb face.



SIDE VIEW



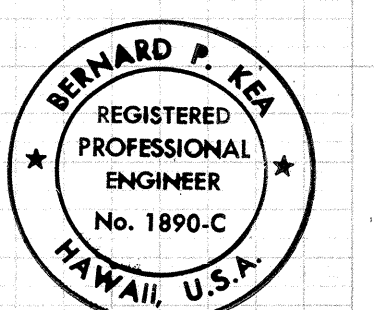
PLAN

STRAP DETAIL
Not to Scale

BRACKET DETAIL
Scale: 1/2" = 1"

APPROVED: M. J. Ferguson 9/9/91
 Chief, Div. of Engineering, DPW
 (For Grading & Construction
 within City R/W only)

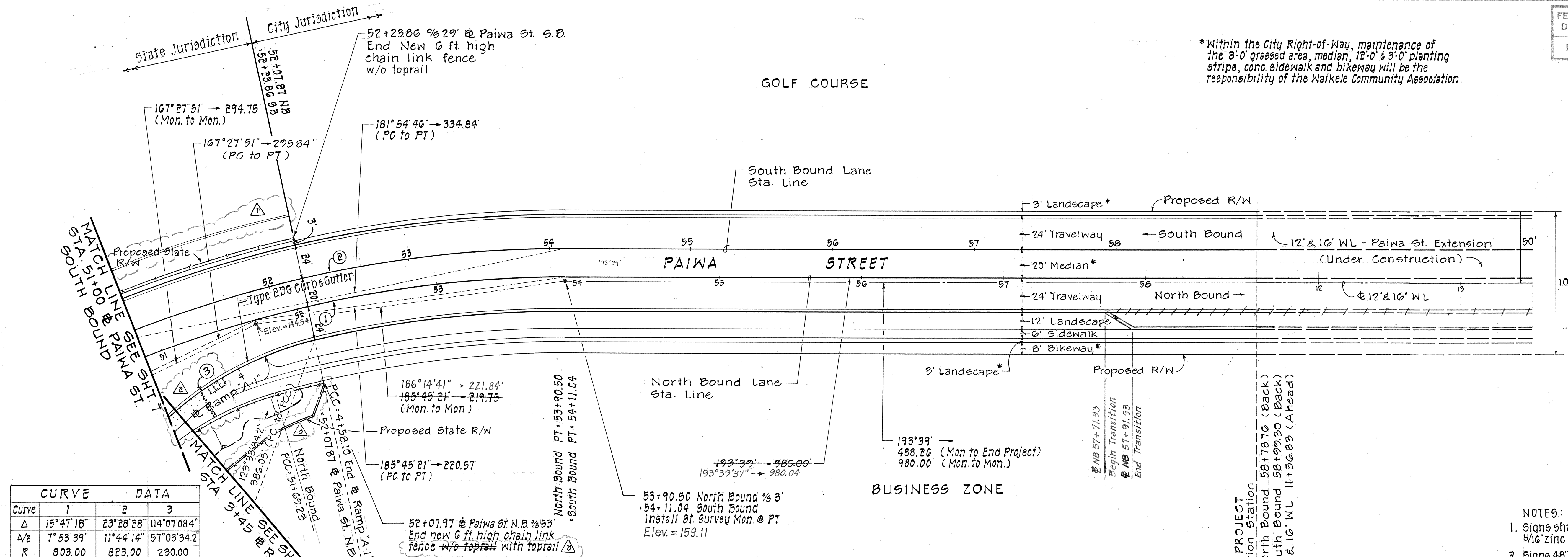
Peter A. P. Ho 6/4/91
 Chief, Traffic Engineering, DTS
 (For Construction within City R/W only)



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
Bernard P. Kea
Signature

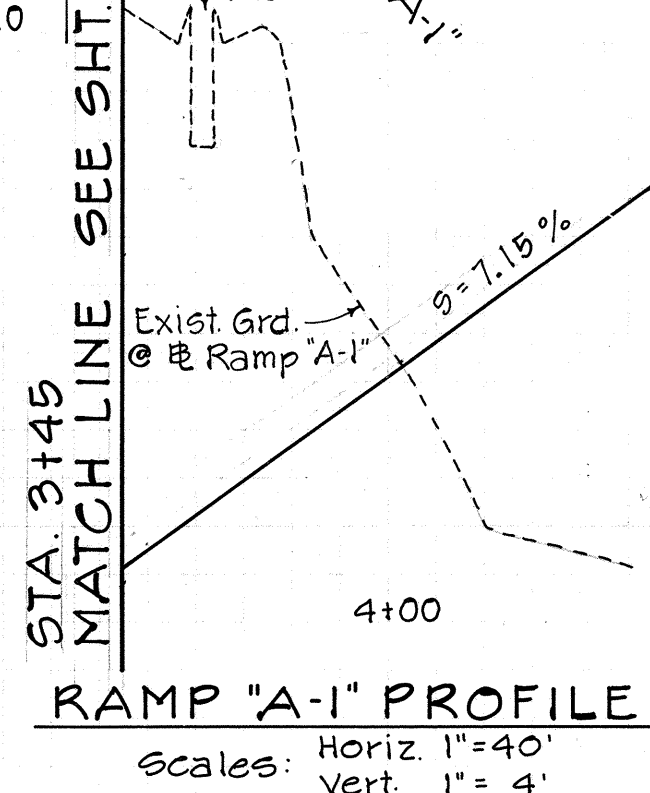
3	9 - 8 - 92	REVISED FENCE & FENCE LOCATION	CP1	
2	9 - 8 - 92	REVISED SIDEWALK	CP1	
1	1 - 31 - 92	ADDED EXIST. CRM WALL	CP1	
	REVISION DATE	DESCRIPTION	MADE BY	APPROVED

SHEET No. 2 OF 11 SHEETS



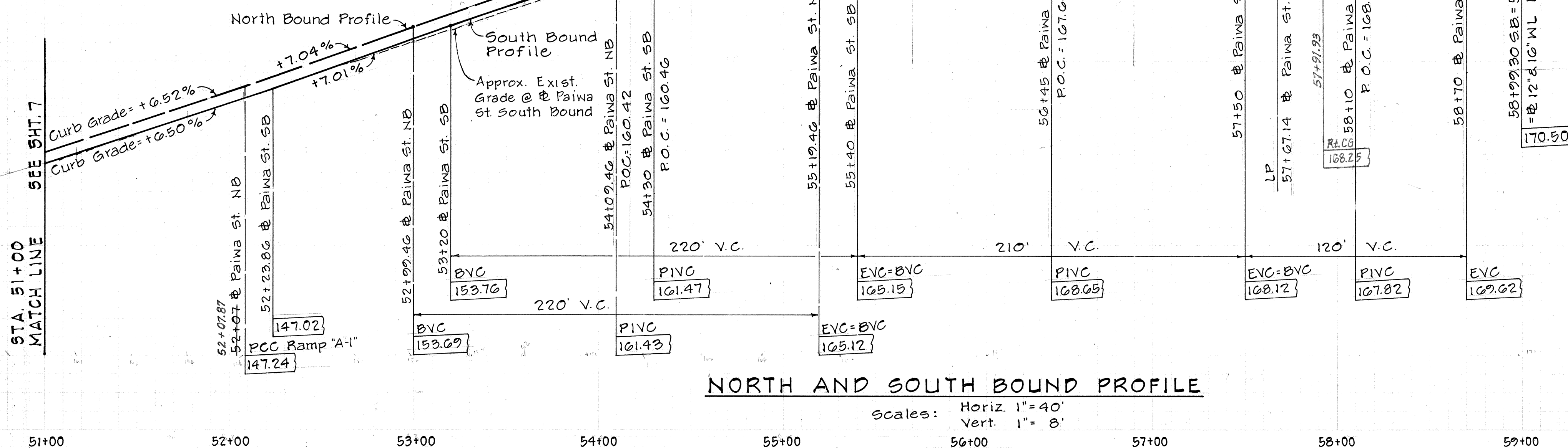
PAIWA ST. EXT. & RAMP "A-1" PLAN

Scale: 1" = 40'



RAMP "A-1" PROFILE

Scales: Horiz. 1" = 40'
Vert. 1" = 4'

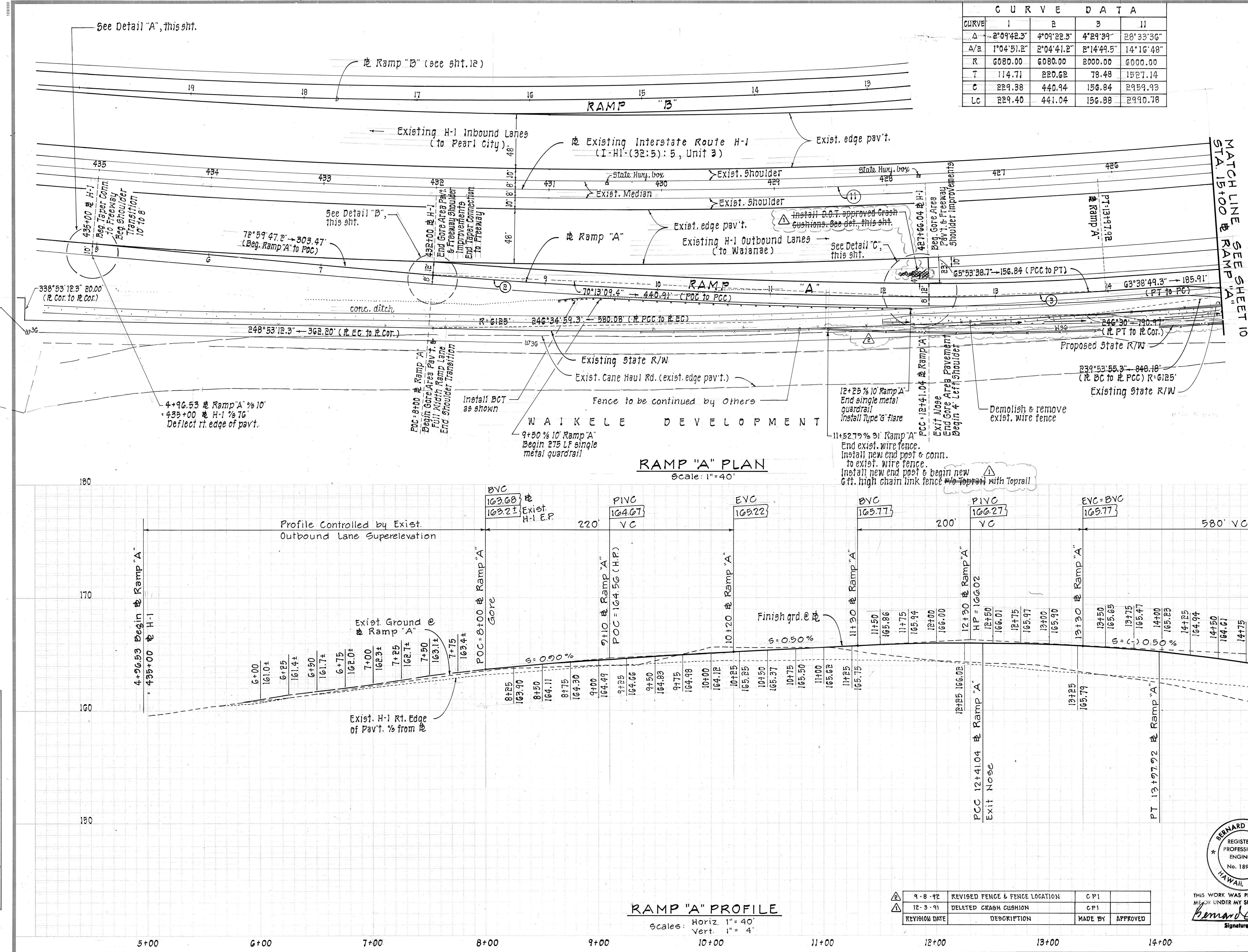


NORTH AND SOUTH BOUND PROFILE

Scales: Horiz. $1" = 40$
Vert. $1" = 8$

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

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



CURVE DATA				
CURVE	1	2	3	11
Δ	2°09'42.3"	4°09'22.3"	4°29'39"	28°33'36"
A/B	1°04'51.2"	2°04'41.2"	2°14'49.5"	14°16'48"
K	6080.00	6080.00	2000.00	6000.00
T	114.71	220.62	78.48	1527.14
C	229.38	440.94	156.84	2959.93
Lc	229.40	441.04	156.88	2990.78

FED. ROAD DIST. NO. HAWAII

STATE HAW.

FED. AID PROJ. NO. HIC-01-90

FISCAL YEAR 1991

SHEET NO. 10

TOTAL SHEETS 109

Notes:

- Design Data
Impact Speed: 70 mph
Max. "G" Force: 6.0
- Contractor shall provide shop drawings & calculations.

True North
Scale: 1" = 40'

Edge Pav't. H-1

Edge Shoulder H-1

New "Exit" sign.
See Signing & Striping Plan, Sht. 53

Install Fitch (or D.O.T. approved equal) Interstitial Barriers as shown.
(Numbers indicate weight of sand in 100 lb. units)

Edge Pav't. Ramp "A"

Edge Shoulder Ramp "A"

PCC-12+41.04
Ramp "A"

DETAIL - CRASH CUSHIONS
Not to Scale

335°09'12" 66.00' (EP to H-1 R)

335°09'12" 23.00' (EP Ramp "A" to EP H-1)

338°08'28.2" 12.00'

PCC-12+41.04
Ramp "A"

Shoulder

Edge Pav't. Ramp "A"

Ramp "A"

DETAIL 'C'
Scale: 1" = 20'

339°17'50.5" 66.00' (EP to H-1 R)

342°17'50.5" 12.00'

PCC-8+00
Ramp "A"

432+00 R H-1

Exist. H-1 EP

Ramp "A"

DETAIL 'B'
Scale: 1" = 20'

341°27'53.7" 66.00' (EP to H-1 R)

Edge Travelway

Shoulder

Exist. H-1 EP

Ramp "A"

BC 4+96.53 Begin
Ramp "A"

DETAIL 'A'
Scale: 1" = 20'

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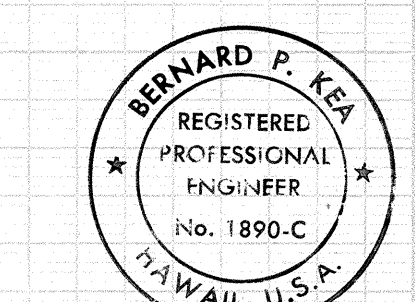
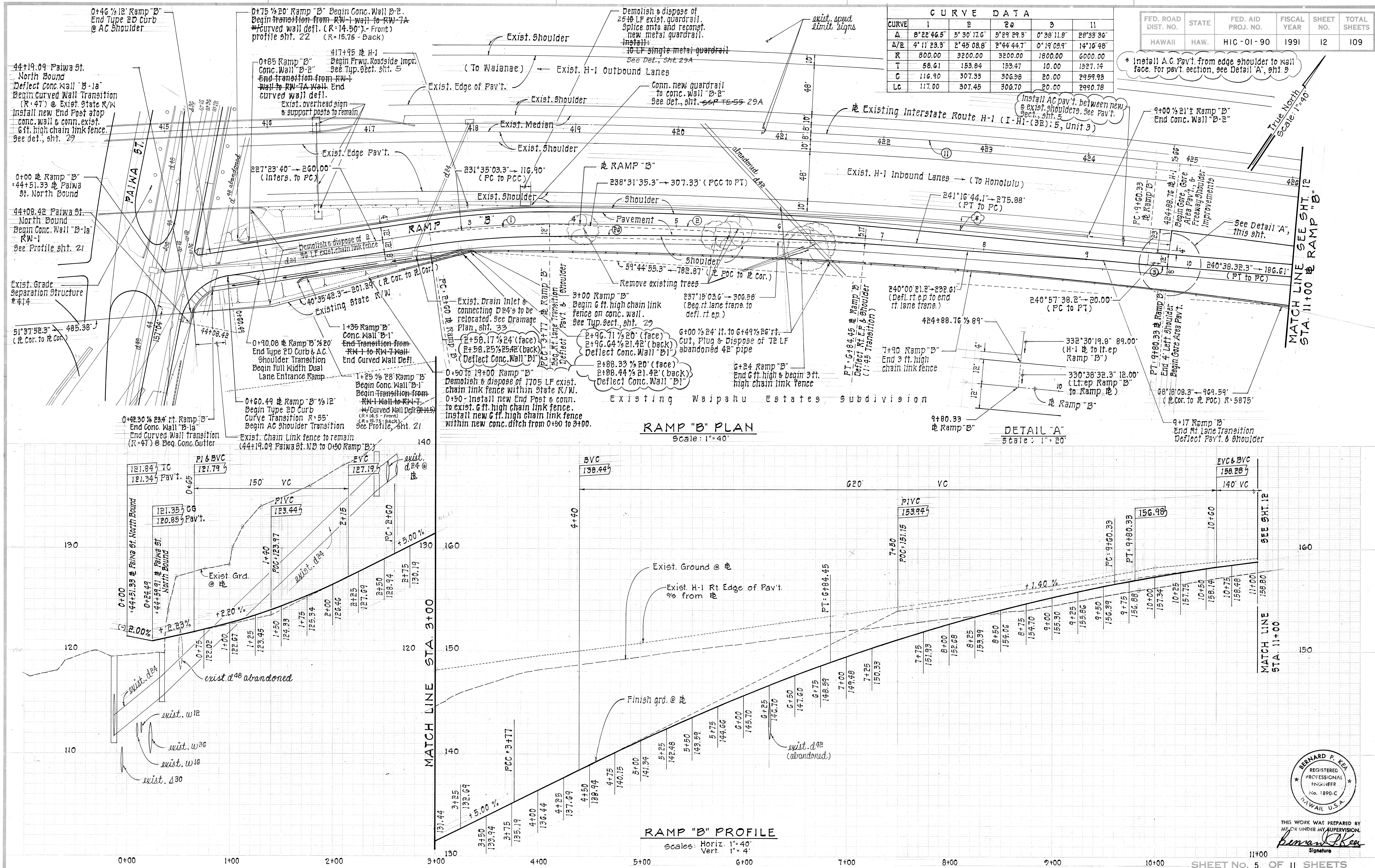
Bernard P. Kea
REGISTERED PROFESSIONAL ENGINEER
No. 1890-C
HAWAII, U.S.A.

Signature

9-8-92	REVISED FENCE & FENCE LOCATION	CP1	
12-3-91	DELETED CRASH CUSHION	CP1	
REVISION DATE	DESCRIPTION	MADE BY	APPROVED

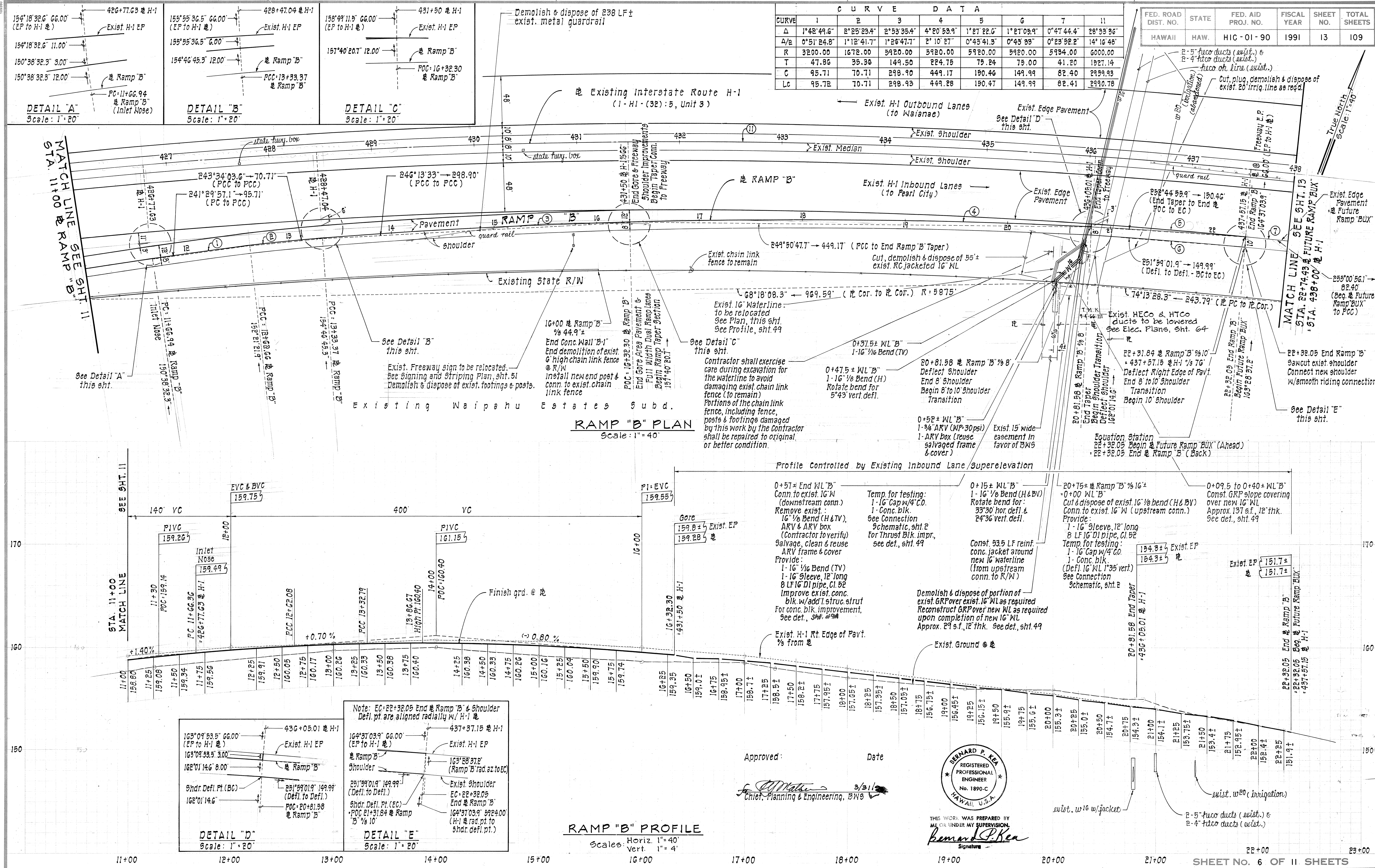
SHEET NO. 3 OF 11 SHEETS

DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
CHECKED BY: _____
NOTE BOOK: _____
NO. _____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Bernard P. Kea
Signature

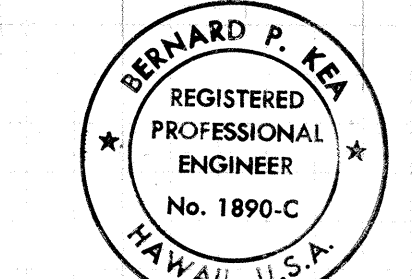
ORIGINAL PLAN
DATE: _____
DRAWN BY: _____
DESIGNED BY: _____
CHECKED BY: _____
NO. _____



CURVE DATA										
CURVE	1	2	3	4	5	6	7	8	9	10
Δ	1°42'49.6"	2°25'23.4"	2°53'35.4"	4°20'53.9"	1°27'22.6"	1°27'05.9"	0°47'44.4"	2°23'33.6"	2°23'33.6"	2°23'33.6"
A/E	0°51'24.8"	1°12'41.7"	1°26'47.7"	2°10'27"	0°43'41.3"	0°43'33"	0°23'52.2"	1°14'16.48"	1°14'16.48"	1°14'16.48"
R	3200.00	1678.00	5920.00	5920.00	5920.00	5920.00	5920.00	6000.00	6000.00	6000.00
T	47.86	35.36	149.50	224.75	75.24	75.00	41.20	182.14	182.14	182.14
C	95.71	70.71	298.90	449.17	190.46	149.99	82.40	299.93	299.93	299.93
Lc	95.72	70.71	298.93	449.28	190.47	149.99	82.41	299.93	299.93	299.93

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIC-01-90	1991	13	109

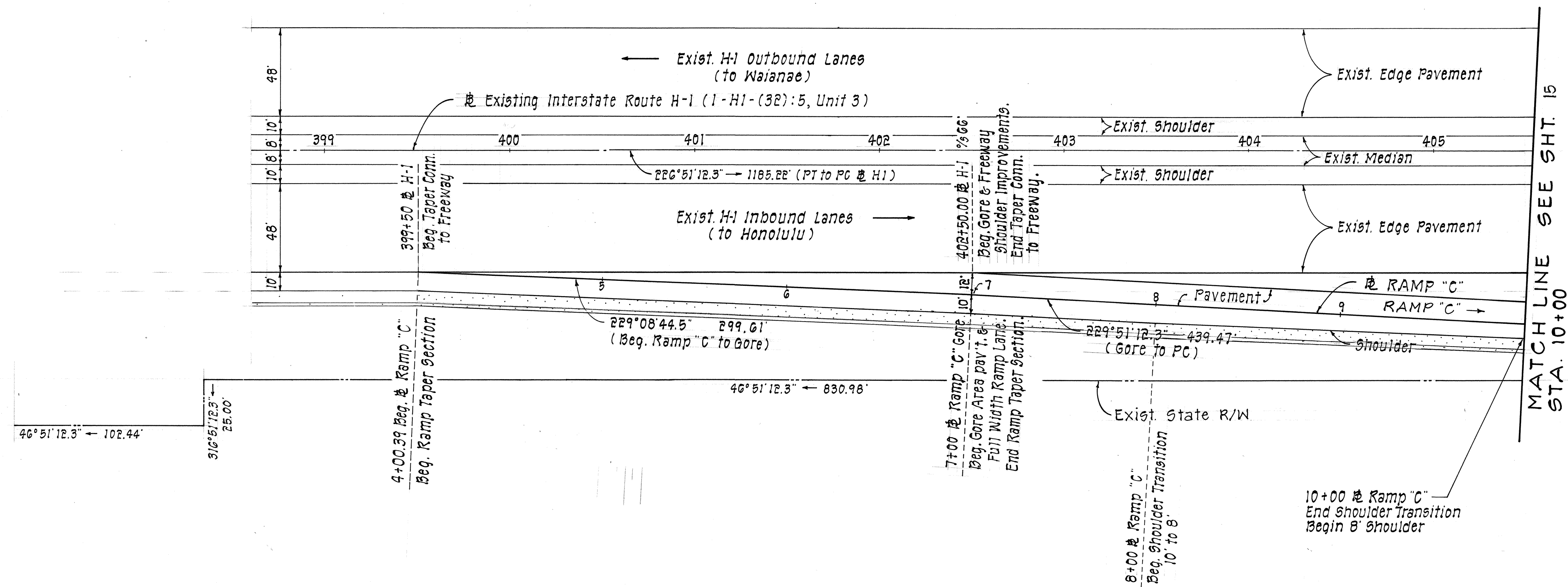
Approved: _____ Date: 3/31/_____
Chief, Planning & Engineering, BWS



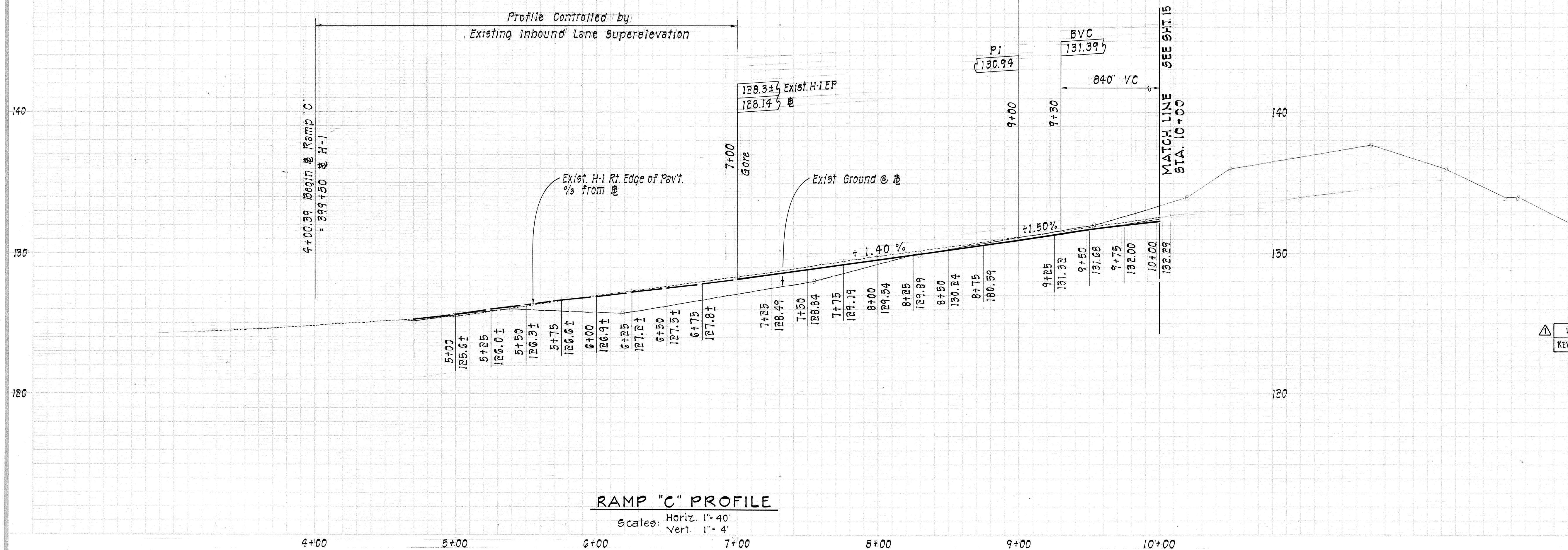
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Bernard P. Kien
Signature

RAMP "B" PROFILE
Scale: Horiz. 1" = 40'
Vert. 1" = 4'

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIC - 01 - 90	1991	15	109



RAMP "C" PLAN
Scale: 1" = 40'



RAMP "C" PROFILE

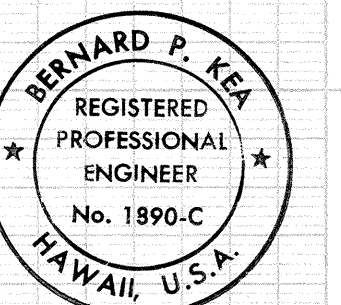
Notes:

1. Design Data:
Impact Speed: 70 mph
Max. "G" Force: 6.0
2. Contractor shall provide shop drawings & calculations

Install Fitch (or D.O.T. approved
equal) Inertial Barrier as shown.
(Numbers indicate weight of sand
in 100 lb. units)

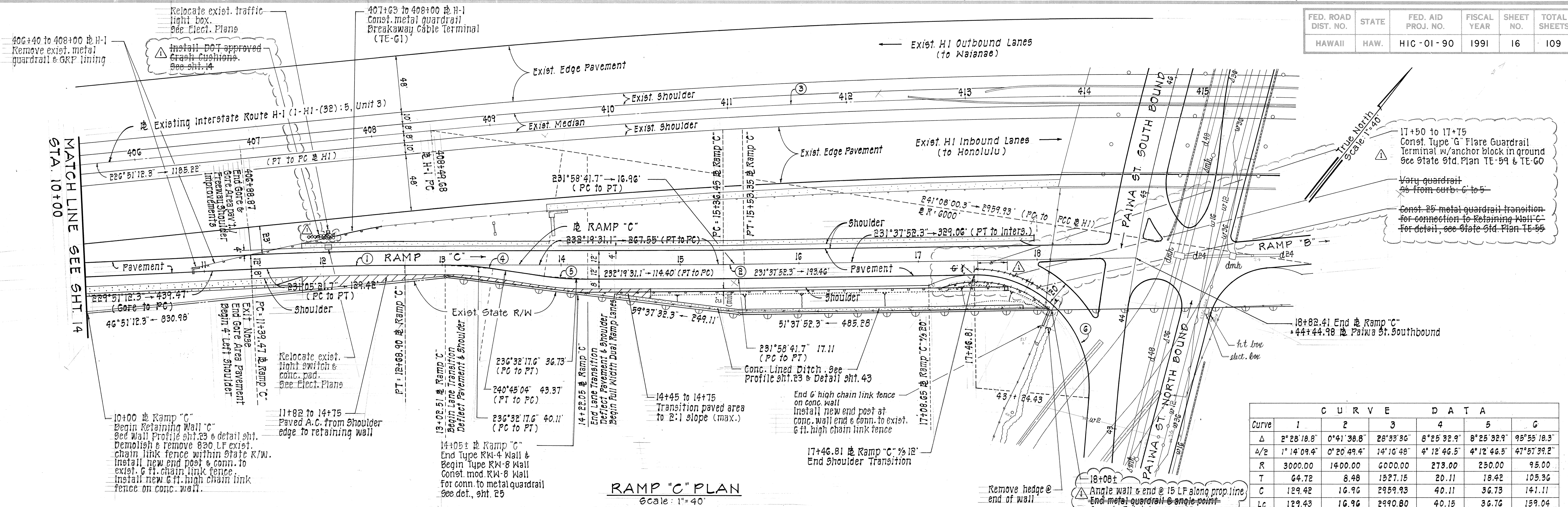
 ~~DETAIL - CRASH CUSHIONS~~
~~Not to Scale~~

①	12-3-91	DELETED CRASH CUSHIONS DETAIL	CPI	
	REVISION DATE	DESCRIPTION	MADE BY	APPROVED

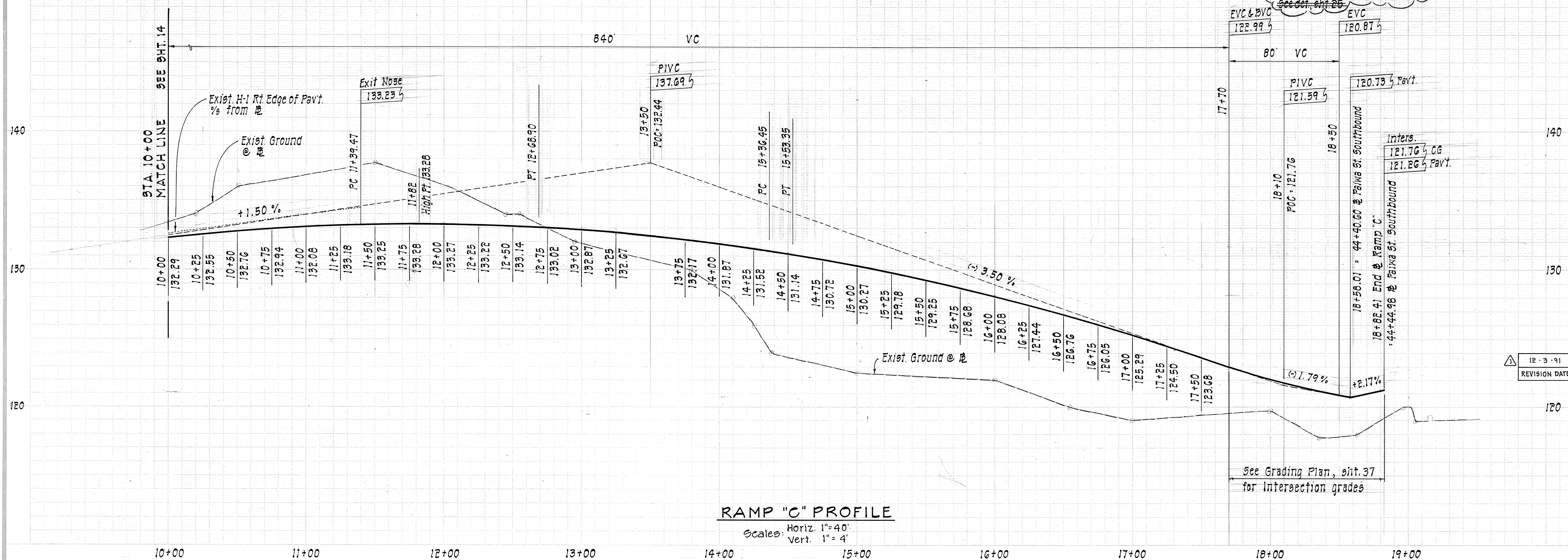


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ME OR UNDER MY SUPERVISION.
Bernard P. Kea
Signature

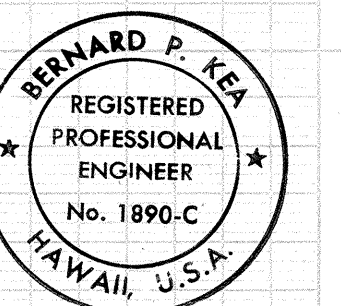
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIC - 01 - 90	1991	16	109



C U R V E D A T A						
Curve	1	2	3	4	5	6
Δ	2° 28' 18.8"	0° 41' 38.8"	28° 33' 36"	6° 25' 32.9"	8° 25' 39.9"	95° 55' 18.3"
$\Delta/2$	1° 14' 09.4"	0° 20' 49.4"	14° 16' 48"	3° 12' 46.5"	4° 12' 46.5"	47° 57' 39.2"
R	3000.00	1400.00	6000.00	273.00	250.00	95.00
T	64.72	8.48	1527.15	20.11	18.42	105.36
C	129.42	16.96	2559.93	40.11	36.73	141.11
Lc	129.43	16.96	2990.80	40.15	36.76	139.04

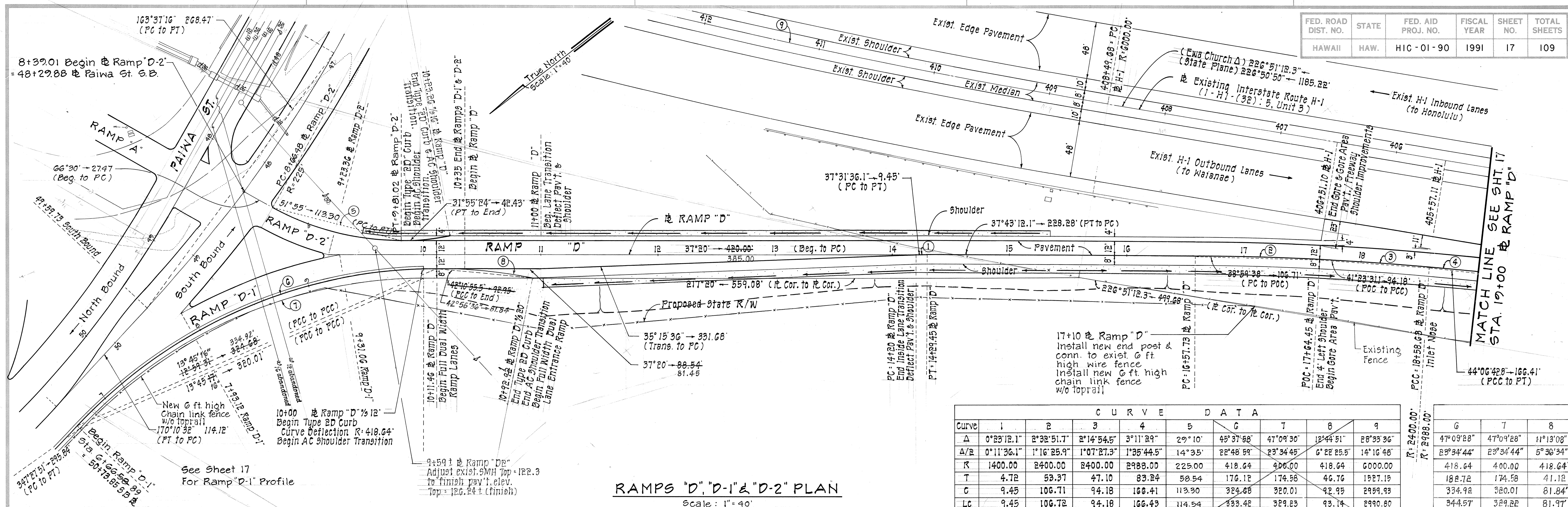


1	12-3-91	RAMP "C" - DELETED CRASH CUSHION & REVISED GUARD RAIL TERMINAL	CPI	
	REVISION DATE	DESCRIPTION	MADE BY	APPROVED



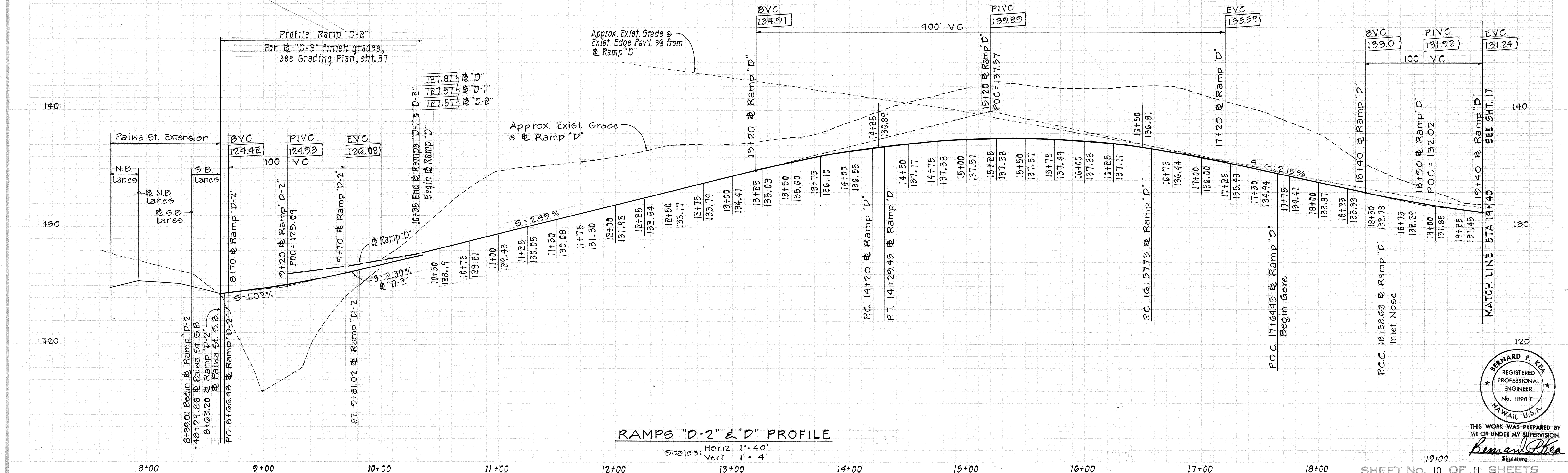
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
Bernard J. Kea
Signature

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIC-01-90	1991	17	109



CURVE DATA									
CURVE	1	2	3	4	5	6	7	8	9
Δ	0°23'12.1"	2°32'51.7"	2°14'54.5"	3°11'29"	2°9'10"	45°37'58"	47°09'30"	12°44'51"	28°33'36"
Δ/B	0°11'36.1"	1°16'25.9"	1°07'27.3"	1°35'44.5"	14°35'	22°48'59"	23°34'45"	6°28'25.5"	14°16'46"
R	1400.00	2400.00	2400.00	2988.00	225.00	418.64	406.00	418.64	6000.00
T	4.78	53.37	47.10	83.24	58.54	176.12	174.58	46.76	1527.15
C	9.45	106.71	94.18	166.41	113.30	324.66	320.01	42.95	2999.93
LC	9.45	106.72	94.18	166.43	114.54	333.42	329.83	93.14	2990.80

CURVE DATA		
CURVE	6	7
Δ	47°09'28"	47°09'28"
Δ/B	23°34'44"	23°34'44"
R	418.64	400.00
T	182.72	174.58
C	334.92	320.01
LC	344.57	329.82



120
 BERNARD P. KEA
 REGISTERED PROFESSIONAL ENGINEER
 No. 1850-C
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Signature
 SHEET No. 10 OF 11 SHEETS

