FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	68	325

LEGEND

EXISTING / PROPOSED

- AC Traveled Way Pavement (letter designates pavement structure type)
- AC Shoulder Pavement (number designates pavement structure type)
- AC Overlay (Type X) — OL-X
- Plain Concrete Sidewalk or Reinforced Concrete Gutter
- Approximate Grading Limit
- Guardrail Type 3 W-Beam or Thrie Beam
- Underdrain
- Underdrain cleanout
- Contour — 50
- Drainline with Flow Direction and Culvert Size — D24
- Grouted Rubble Pavement
- Irrigation Sleeve and Main (to remain in service)
- Manhole
- Drop Intake or Catch Basin
- Facilities Abandoned or Removed
- Air Release Valve Box to be adjusted to finish grade. (Number indicates approximate amount of adjustment: (+)=higher, (-)=lower) (See General Roadway Construction Note No. 13) — ARV (+5")
- Sewer Line — S18
- Street Lighting — SL
- Pull Box
- Aviation Gas Line — AG
- Transpac Land Cable — HT-TP
- Non-Potable Water Line — NPW16
- Water Line — W4
- Electric Line — E
- Gas Line — G
- Jet Fuel Line — JF
- Petroleum Line — P
- Portable Concrete Barrier
- Street Light Pole
- Slope
- Joint Trunking Cable Line — JTS

GENERAL ROADWAY CONSTRUCTION NOTES:

1. Existing fences and metal beam guardrails that are to be removed shall become the property of the contractor and shall be disposed of in accordance with Specifications Section 201.04 – Removal and Disposal of Material.
2. Existing concrete structures, such as manholes, culverts, channels, etc., which are designated to be removed or are in conflict with proposed construction shall be removed to a depth of not less than 3 feet below finish grade in roadway and not less than 1.5 feet below finish grade in other areas. Payment for removal and backfilling to finish grade will be considered incidental to various contract items.
3. Limits of shown rehabilitation work for A.C. pavement and A.C. overlays are approximate. Actual limits will be established by the Engineer.
4. Where necessary, existing A.C. pavement shall be cold-planed to 1 1/2 inches below finish grade to permit installation of A.C. overlay of not less than 1 1/2 inches thickness. Such work is not limited to areas identified on plans, but shall be performed as required.
5. Existing pavement within 6 inches of the finish grade in areas to be grassed shall be removed. All other existing pavement which will not be overlayed with new A.C. pavement shall be rooted, plowed, pulverized or scarified to a minimum depth of 6 inches. Payment for removal of existing pavement will be made under "Roadway Excavation". Payment for scarifying, etc. of existing pavement shall be considered incidental to various constract items.
6. Existing facilities and/or pavement which has been damaged by the Contractor shall be restored to its original condition at the expense of the Contractor.
7. Covers of utility structures which are in service shall be adjusted to finish grade whether or not they are shown on Plans. Abandoned utility boxes within the area of work shall be demolished and ducts, pipes, etc. shall be plugged.
8. All regraded areas and all grassed areas damaged by construction activities shall be planted in accordance with Specifications Section 653-Temporary Ground Cover.
9. Saw cut pavement and gutter at limits of reconstruction before removal. Remove 1'-0" exist. pavement prior to paving. See Pavement Interface detail on Sht. C-40. Payment for saw cutting pavement shall be considered incidental to various contract items.
10. Provide longitudinal broom finish for Gutter Type 2.
11. Provide Expansion Joints in concrete gutters at a spacing not exceeding 100 feet.
12. For all W-Beam End Section (flared), payment shall be considered incidental to Guardrail Type 3.
13. Air Release Valve Box are to be adjusted to finish grade. Adjustment dimensions shown on Plans are for bidding purposes only and shall not be used for determining finish grade.
14. For gutter transitions at Bridge End Posts, see detail on Sht. C-41.

ABBREVIATIONS

A.C., AC	ASPHALT CONCRETE
ACB	ASPHALT CONCRETE BASE
AG	AVIATION GAS
AGGR., AGG	AGGREGATE
ARV	AIR RELEASE VALVE
BCT	BREAKAWAY CABLE TERMINAL
℄	BASELINE
CRM	CEMENT RUBBLE MASONRY
CT	CABLE TELEVISION
E	ELECTRIC
FIN. GR.	FINISH GRADE
G	GAS
GRP	GROUTED RUBBLE PAVEMENT
HH	HANDHOLE
HT-TP	TRANSPAC LAND CABLE
JF	JET FUEL
JTS	JOINT TRUNKING CABLE (ABN)
MH	MANHOLE
NPW	NON-POTABLE WATER
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
PAVT.	PAVEMENT
PB	PULL BOX
P.C.	POINT OF CURVATURE
P.C.C.	POINT OF COMPOUND CURVATURE
P.I.	POINT OF INTERSECTION
PIVC, P.I.V.C.	POINT OF INTERSECTION OF VERTICAL CURVE
P.O.T.	POINT ON TANGENT
P.T.	POINT OF TANGENCY
S	SEWER
SD	STORM DRAIN
SL	STREET LIGHT
T	TELEPHONE
W	WATER
WM	WATER METER
WV	WATER VALVE
TBC	THRIE BEAM CONNECTION TO BRIDGE END POST & TRANSITION TO W-BEAM GUARDRAIL (DETAIL ON SHT. C-38)

GENERAL DRAINAGE NOTES:

1. Payment for complete or partial removal of structures and culverts, and sealing of abandoned pipes will be considered incidental to various contract items. Drainage pipes to be abandoned shall be removed as necessary to facilitate construction.
2. Contractor shall sequence construction such that exist. facilities remain in service until new facilities are in service or shall provide and maintain, as is necessary, temporary water diversion facilities.
3. The Contractor shall verify locations and elevations of all existing utility lines and notify respective owners before commencing excavation work for drainlines.
4. Contractor shall submit shop drawings of pre-cast drainage structures to the engineer for approval. Contractor shall verify location of exist. utilities prior to manufacturing pre-cast box culverts to ensure conflicts with proposed drainage structure do not exist.
5. All drainage pipes shall be spiral rib aluminum pipe, sheet thickness, 0.105 inch or RCP, Class III unless otherwise specified on Plans.
6. The reference point for locating drainage structures by station and offsets is at the center of the main body, except that at catch basins the reference point is at the centerline of the main body at face of curb.
7. Existing drainage facilities to remain and located within project limits shall be cleaned of silt and debris. Payment shall be considered incidental to various contract items.
8. Except in areas where new pavement structure is being constructed, existing pavement damaged by trenching or other activities shall be restored in accordance with Trench Repavement Detail shown on Sht. SY-10.
9. Steel plates for covering trenches shall have skid resistant surface.

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

CAD by W.HIGASHIHARA, 55-52

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RANDALL M. URASAKI
LICENSED PROFESSIONAL ENGINEER
No. 7269-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION & DRAINAGE NOTES LEGENDS AND ABBREVIATIONS

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: NONE DATE: AUGUST 1994

SHEET NO. C-1 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	69	325

DRAINAGE SUMMARY

STRUCTURES			CULVERTS		ESTIMATED QUANTITIES																											
SHEET NUMBER	STRUCTURE NUMBER OR ROADWAY/RAMP	TYPE	ITEM NO.			206		503		603	603				604	604	604	604	604	604	604	604	604	604		605		609	609			640	640	640	640
						.2020		.1025		.9040	.9050				.5010	.5013	.5021	.5022	.5025	.5026	.5090	.9050	.9060	.9070		.0006		.8614	.8618			.2200	.6900	.8000	.9000
			FROM STRUCTURE/ ℄ STATION NO.	TO STRUCTURE/ ℄ STATION NO.		STRUCTURE EXCAVATION FOR DRAINAGE SYSTEM		4 FT. x 5.5 FT. BOX CULVERT		24-INCH SPIRAL RIB METAL PIPE SHT. THICK., 0.075 INCH OR 24-INCH RCP, CL. III	30-INCH SPIRAL RIB METAL PIPE SHT. THICK., 0.075 INCH OR 24-INCH RCP, CL. III				TYPE A3 CATCH BASIN, 3.00 FT TO 3.99 FT	TYPE A3 CATCH BASIN, 6.00 FT TO 6.99 FT	TYPE 61616 GRATED DROP INLET, 4.00 FT TO 4.99 FT	TYPE 61616 GRATED DROP INLET, 5.00 FT TO 5.99 FT	TYPE 61616 GRATED DROP INLET, 8.00 FT TO 8.99 FT	TYPE 61616 GRATED DROP INLET, 9.00 FT TO 9.99 FT	TYPE E STORM DRAIN MANHOLE, 12.00 FT TO 12.99 FT	DROP INLET MODIFICATION	ADJUST STORM DRAIN MANHOLE FRAME AND COVER	GRATED DROP INLET MODIFICATION FOR GUARDRAIL POST		6-INCH PERFORATED UNDERDRAIN PIPE		GUTTER TYPE 2 (61614)	GUTTER TYPE 2 (61618)			2.0 FT x 2.0 FT (SS 1/1) LINED TRAP. DRAINAGE DITCH	RECONSTRUCT 2 FT WIDE LINED RECTANGULAR DRAINAGE DITCH	4 FT. WIDE LINED RECTANGULAR DITCH	2.0 FT x 4.0 FT TRAPEZOIDAL DITCH TRANSITION
			UNIT			C.Y.		LIN. FT.		LIN. FT.	LIN. FT.				EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		LIN. FT.		LIN. FT.	LIN. FT.			LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.
C-6	H-3	TRAP DITCH	258+53 RT.																													360			
		DROP INTAKE MODIFICATION	256+40 LT.																			1													
		4' x 5.5' BOX CULVERT	255+96 LT.					40																											
		TRAP DITCH TRANSITION	255+54 LT.																																40
		UNDERDRAIN	252+33.06 LT.	259+25.04 LT.																						692									
		GUTTER TYPE 2 (61618)	252+33.06 LT.	258+50 LT.																									617						
▼	▼	GUTTER TYPE 2 (61614)	256+43 LT.	257+00 LT.																								55							
C-7	H-3	TRAP DITCH	262+00 RT.																													185			
		RECONSTRUCT DRAINAGE DITCH	265+00 LT.																														50		
		UNDERDRAIN	262+48 LT.	269+12 LT.																						664									
▼	▼	GUTTER TYPE 2 (61618)	262+48 LT.	269+12 LT.																									664						
C-8	MF	GDI MODIFICATION	190+77 LT.																					1											
C-9	D1	TYPE A3 CB													1																				
		24" PIPE	D1	D3		75				98																									
	D2	TYPE A3 CB														1																			
▼		24" PIPE	D2	D3		125				98																									
C-10	ES	GUTTER TYPE 2 (61614)	20+40 RT.	22+00 RT.																								160							
C-11	ES	GUTTER TYPE 2 (61614)	22+00 RT.	25+20 RT.																								320							
C-12	ES	GUTTER TYPE 2 (61614)	33+50 RT.	37+62 RT.																								412							
▼	▼	UNDERDRAIN	38+63.90 LT.	42+00 LT.																						336									
SUB-TOTAL THIS SHEET						200		40		196					1	1						1		1		1692		947	1281			545	50		40

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

CAD by J. MIMURA, 55-52

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	70	325

DRAINAGE SUMMARY

STRUCTURES			CULVERTS		ESTIMATED QUANTITIES																												
SHEET NUMBER	STRUCTURE NUMBER OR ROADWAY/RAMP	TYPE	ITEM NO.			206		503		603	603				604	604	604	604	604	604	604	604	604	604		605		609	609			640	640	640	640
						.2020		.1025		.9040	.9050				.5010	.5013	.5021	.5022	.5025	.5026	.5090	.9050	.9060	.9070		.0006		.8614	.8618			.2200	.6900	.8000	.9000
			FROM STRUCTURE/ ℄ STATION NO.	TO STRUCTURE/ ℄ STATION NO.		STRUCTURE EXCAVATION FOR DRAINAGE SYSTEM		4 FT. x 5.5 FT. BOX CULVERT		24-INCH SPIRAL RIB METAL PIPE SHT. THICK., 0.075 INCH OR 24-INCH RCP, CL. III	30-INCH SPIRAL RIB METAL PIPE SHT. THICK., 0.075 INCH OR 24-INCH RCP, CL. III				TYPE A3 CATCH BASIN, 3.00 FT TO 3.99 FT	TYPE A3 CATCH BASIN, 6.00 FT TO 6.99 FT	TYPE 61616 GRATED DROP INLET, 4.00 FT TO 4.99 FT	TYPE 61616 GRATED DROP INLET, 5.00 FT TO 5.99 FT	TYPE 61616 GRATED DROP INLET, 8.00 FT TO 8.99 FT	TYPE 61616 GRATED DROP INLET, 9.00 FT TO 9.99 FT	TYPE E STORM DRAIN MANHOLE, 12.00 FT TO 12.99 FT	DROP INLET MODIFICATION	ADJUST STORM DRAIN MANHOLE FRAME AND COVER	GRATED DROP INLET MODIFICATION FOR GUARDRAIL POST		6-INCH PERFORATED UNDERDRAIN PIPE		GUTTER TYPE 2 (61614)	GUTTER TYPE 2 (61618)			2.0 FT x 2.0 FT (SS 1/1) LINED TRAP. DRAINAGE DITCH	RECONSTRUCT 2 FT WIDE LINED RECTANGULAR DRAINAGE DITCH	4 FT. WIDE LINED RECTANGULAR DITCH	2.0 FT x 4.0 FT TRAPEZOIDAL DITCH TRANSITION
			UNIT			C.Y.		LIN. FT.		LIN. FT.	LIN. FT.				EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		LIN. FT.		LIN. FT.	LIN. FT.			LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.
C-13	ES	UNDERDRAIN	42+00 LT.	46+07.53 LT.																						408									
C-14	EW-1	TYPE A GDI																		1														
		30" PIPE	EW-1	EW-2		272					193																							
	EW-2	TYPE A GDI																1																
		24" PIPE	EW-2	EW-3		92				98																								
	EW-3	TYPE A GDI																1																
	EW	GUTTER TYPE 2 (61618)	124+00 LT.	129+00 LT.																									500					
		GUTTER TYPE 2 (61618)	124+00 RT.	127+10 RT.																									310					
		RECTANGULAR DITCH	127+70 RT.																														230	
		UNDERDRAIN	124+00 LT.	127+35 LT.																						335								
▼	▼	UNDERDRAIN	133+35 LT.	134+00 LT.																						65								
C-15	EW	GUTTER TYPE 2 (61614)	139+72 LT.	144+00 LT.																								428						
		UNDERDRAIN	134+00 LT.	136+80 LT.																						280								
▼	▼	UNDERDRAIN	139+85 LT.	144+00 LT.																						415								
C-16	EW	GUTTER TYPE 2 (61614)	144+00 LT.	147+40 LT.																								340						
		GUTTER TYPE 2 (61618)	148+30 LT.	152+33.06 LT.																									403					
▼	▼	UNDERDRAIN	144+00 LT.	152+33.06 LT.																						833								
C-17	F	GUTTER TYPE 2 (61618)	12+95 LT.	16+80 LT.																									385					
▼	▼	UNDERDRAIN	14+36.02 RT.	20+00 RT.																						564								
C-18	F1	TYPE A GDI																1																
	F2	TYPE A GDI																1																
▼		24" PIPE	F2	F3		25				14																								
SUB-TOTAL THIS SHEET						389				112	193							4		1						2900		768	1598				230	

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

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	71	325

DRAINAGE SUMMARY

STRUCTURES			CULVERTS		ESTIMATED QUANTITIES																											
SHEET NUMBER	STRUCTURE NUMBER OR ROADWAY/RAMP	TYPE	ITEM NO.			206		503		603	603				604	604	604	604	604	604	604	604	604	604		605		609	609			640	640	640	640
						.2020		.1025		.9040	.9050				.5010	.5013	.5021	.5022	.5025	.5026	.5090	.9050	.9060	.9070		.0006		.8614	.8618			.2200	.6900	.8000	.9000
			FROM STRUCTURE/ ℄ STATION NO.	TO STRUCTURE/ ℄ STATION NO.		STRUCTURE EXCAVATION FOR DRAINAGE SYSTEM		4 FT. x 5.5 FT. BOX CULVERT		24-INCH SPIRAL RIB METAL PIPE SHT. THICK., 0.075 INCH OR 24-INCH RCP, CL. III	30-INCH SPIRAL RIB METAL PIPE SHT. THICK., 0.075 INCH OR 24-INCH RCP, CL. III				TYPE A3 CATCH BASIN, 3.00 FT TO 3.99 FT	TYPE A3 CATCH BASIN, 6.00 FT TO 6.99 FT	TYPE 61616 GRATED DROP INLET, 4.00 FT TO 4.99 FT	TYPE 61616 GRATED DROP INLET, 5.00 FT TO 5.99 FT	TYPE 61616 GRATED DROP INLET, 8.00 FT TO 8.99 FT	TYPE 61616 GRATED DROP INLET, 9.00 FT TO 9.99 FT	TYPE E STORM DRAIN MANHOLE, 12.00 FT TO 12.99 FT	DROP INLET MODIFICATION	ADJUST STORM DRAIN MANHOLE FRAME AND COVER	GRATED DROP INLET MODIFICATION FOR GUARDRAIL POST		6-INCH PERFORATED UNDERDRAIN PIPE		GUTTER TYPE 2 (61614)	GUTTER TYPE 2 (61618)			2.0 FT x 2.0 FT (SS 1/1) LINED TRAP. DRAINAGE DITCH	RECONSTRUCT 2 FT WIDE LINED RECTANGULAR DRAINAGE DITCH	4 FT. WIDE LINED RECTANGULAR DITCH	2.0 FT x 4.0 FT TRAPEZOIDAL DITCH TRANSITION
			UNIT			C.Y.		LIN. FT.		LIN. FT.	LIN. FT.				EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		LIN. FT.		LIN. FT.	LIN. FT.			LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.
C-18	F3	ADJUST SDMH FRAME & COVER																					1												
	F	GUTTER TYPE 2 (61618)	20+00 RT.	23+50 RT.																									350					
		GUTTER TYPE 2 (61618)	25+95 RT.	27+94 RT.																									199					
		UNDERDRAIN	20+00 RT.	24+75 RT.																						475								
C-19	K1	TYPE A GDI															1																	
		24" PIPE	K1	K2		51				46																								
	K2	TYPE A GDI																1																
		30" PIPE	K2	K3		76					46																								
	K3	TYPE A GDI																	1															
	K	GUTTER TYPE 2 (61618)	10+00 RT.	19+20 RT.																									920					
		UNDERDRAIN	10+00 RT.	21+00 RT.																						1100								
C-20	K	UNDERDRAIN	21+00 RT.	22+39.05 RT.																						139								
	L	UNDERDRAIN	13+91.91 RT.	19+50 RT.																						558								
C-21	M	GUTTER TYPE 2 (61618)	23+12 RT.	24+75 RT.																									163					
		GUTTER TYPE 2 (61614)	22+07 RT.	23+12 RT.																								105						
		UNDERDRAIN	19+56 RT.	21+60 RT.																						204								
		UNDERDRAIN	22+25 RT.	25+76.13 RT.																						351								
		RECONSTRUCT DRAINAGE DITCH	24+10 RT.																														14	
C-22	O	GUTTER TYPE 2 (61614)	10+69 RT.	14+07 RT.																								338						
		GUTTER TYPE 2 (61614)	15+65 RT.	17+90 RT.																								225						
		GUTTER TYPE 2 (61614)	19+80 RT.	21+42.73 RT.																								163						
		UNDERDRAIN	10+75 RT.	14+10 RT.																						335								
		UNDERDRAIN	14+10	14+10																						23								
SUB-TOTAL THIS SHEET						127				46	46						1	1	1				1			3185		831	1632			14		

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

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	72	325

DRAINAGE SUMMARY

STRUCTURES			CULVERTS		ESTIMATED QUANTITIES																													
SHEET NUMBER	STRUCTURE NUMBER OR ROADWAY/RAMP	TYPE	ITEM NO.			206		503		603	603				604	604	604	604	604	604	604	604	604	604		605		609	609			640	640	640	640
						.2020		.1025		.9040	.9050				.5010	.5013	.5021	.5022	.5025	.5026	.5090	.9050	.9060	.9070		.0006		.8614	.8618			.2200	.6900	.8000	.9000
			FROM STRUCTURE/ ℄ STATION NO.	TO STRUCTURE/ ℄ STATION NO.		STRUCTURE EXCAVATION FOR DRAINAGE SYSTEM		4 FT. x 5.5 FT. BOX CULVERT		24-INCH SPIRAL RIB METAL PIPE SHT. THICK., 0.075 INCH OR 24-INCH RCP, CL. III	30-INCH SPIRAL RIB METAL PIPE SHT. THICK., 0.075 INCH OR 24-INCH RCP, CL. III				TYPE A3 CATCH BASIN, 3.00 FT TO 3.99 FT	TYPE A3 CATCH BASIN, 6.00 FT TO 6.99 FT	TYPE 61616 GRATED DROP INLET, 4.00 FT TO 4.99 FT	TYPE 61616 GRATED DROP INLET, 5.00 FT TO 5.99 FT	TYPE 61616 GRATED DROP INLET, 8.00 FT TO 8.99 FT	TYPE 61616 GRATED DROP INLET, 9.00 FT TO 9.99 FT	TYPE E STORM DRAIN MANHOLE, 12.00 FT TO 12.99 FT	DROP INLET MODIFICATION	ADJUST STORM DRAIN MANHOLE FRAME AND COVER	GRATED DROP INLET MODIFICATION FOR GUARDRAIL POST		6-INCH PERFORATED UNDERDRAIN PIPE		GUTTER TYPE 2 (61614)	GUTTER TYPE 2 (61618)			2.0 FT x 2.0 FT (SS 1/1) LINED TRAP. DRAINAGE DITCH	RECONSTRUCT 2 FT WIDE LINED RECTANGULAR DRAINAGE DITCH	4 FT. WIDE LINED RECTANGULAR DITCH	2.0 FT x 4.0 FT TRAPEZOIDAL DITCH TRANSITION
			UNIT			C.Y.		LIN. FT.		LIN. FT.	LIN. FT.				EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		LIN. FT.		LIN. FT.	LIN. FT.			LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.
C-22	0	UNDERDRAIN	15+60 RT.	21+50 RT.																						590									
↓	↓	GDI MODIFICATION	14+10 RT.																					1											
C-23	01	TYPE E MH																		1															
↓	0	24" PIPE	01	MF1		163				89																									
C-25	P	GUTTER TYPE 2 (61614)	22+52 LT.	22+97 LT.																								45							
SUB-TOTAL THIS SHEET						163				89										1				1		590		45							
TOTAL						879		40		443	239				1	1	1	5	1	1	1	1	1	2		8367		2591	4511			545	64	230	40
ROUNDED TOTAL						880		40		450	240				1	1	1	5	1	1	1	1	1	2		8370		2600	4520			550	70	230	40

SURVEY PLOTTED BY _____ DATE
DRAWN BY _____ " "
TRACED BY _____ " "
DESIGNED BY _____ " "
QUANTITIES BY _____ " "
CHECKED BY _____ " "

ORIGINAL PLAN
NOTE BOOK No. _____

CAD by J. MIMURA, 55-52

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	73	325

Drop Intake Modification
H-3 Sta. 256+40±, 71'± Lt.
Inv. Grate 49.0
Inv. Box Culv. 44.25
Inv. 41.0±
See detail on Sht. C-49.

Connect to exist 2'W x 4'D Trap Ditch, 2:1 s/s
Inv. 46.6±
Sawcut before removing exist. ditch

Gutter Type 2 (61614)
H-3 Sta. 256+96 ±, 64' Lt.±
Inv. 49.4

See Ramp K Roadway Construction Plan for continuation

See Ramp EW Roadway Construction Plan for continuation

Gutter Type 2 (61618)
Remove exist. AC Gutter

See Concrete Glare Screen at Sign Bridge detail on Sht. C-31.

H-3 Sta. 252+33.06

Remove exist. ditch

RAMP K ℄

40' Ditch Transition

H-3 Sta. 258+50

Ramp K Sta. 13+21.10

MATCH LINE INTERSTATE ROUTE H-3 STA. 262+00 SEE SHT. NO. C-7

RAMP EW ℄

RAMP ES ℄

RAMP WE ℄

MH (+5")

ARV (+5")

See Note 1

H-3 INBOUND

H-3 ℄

H-3 OUTBOUND

H-3 Sta. 259+25.04

H-3 Sta. 261+06.31

Guardrail Type 4E

Future Underdrain and Cleanout. By Others.

Connect 6" non-perforated Underdrain pipe to trap. ditch (pipe inv. 54.75±). Miter pipe to match slope of trap. ditch. Stub out 5' and cap end of pipe.

4'x5.5' Box Culvert
H-3 Sta. 255+96, 75' Lt.
Inv. 45.14
See detail on Sht. C-49.

Guardrail Type 3 By Others.

H-3 Sta. 252+33.06

RAMP P ℄

HALAWA STREAM ℄

See Ramp P Roadway Construction Plans

Exist. Chain Link Fence & Gate to remain

Begin 2'x2' Trap. Ditch
H-3 ℄ Sta. 258+53±, 78' Rt. ±
Connect to exist. 2'x2' trap. ditch
Inv. 54.0±

NOTES:

1. See Guardrail Type 4E, Concrete Glare Screen at Sign Bridge and Highway Light Standard detail on Sht. C-31.
2. The Outbound Roadway shall be completed by others.

RANDALL M. URASAKI
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Randall M. Urasaki

DATE	REVISION
2/27/95	Added existing chain link fence, gate & note and two MH adjustments.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING INTERSTATE ROUTE H-3

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-6 OF 55 SHEETS

ADD. 73

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

CAD by: J. Mimura, 55-52

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	74	325

Reconstruct 50± LF of 2' Wide Lined Rectangular Drainage Ditch to meet ditch outlet. See profile and detail on Sht. C-47.

See Ramp K Roadway Construction Plan for continuation

Gutter Type 2 (61618)
Remove exist. AC Gutter

H-3 Ditch Outlet. See detail on Sht. C-47.

Limit of Grading

12'

Sta. 266+30

W-Beam and End Section (flared)

Gutter Type 2 (61618)
Remove exist. GRP Gutter See detail on Sht. C-40.

Sta. 268+10±

Remove exist. guardrail

43.75'

Guardrail Type 4E

TBC. See Detail on Sht. C-38.

Connect to Exist. guardrail

Connect to Exist. guardrail

Exist. guardrail to remain

31.25'

Exist. guardrail to remain

Remove exist. guardrail. Install TBC. See detail on Sht. C-38.

Replace 25± LF of damaged guardrail Use exist. guardrail posts.

Pavement Transition to Exist. Structure. See detail on Sht. C-40.

10'

20'

Opening in median barrier to remain.

MATCH LINE H-3
STA. 262+00
SEE SHT. NO. C-6

10+00
RAMP K ℄

OL-X

See Note 1
H-3 ℄

3
H-3 INBOUND

1
See Note 1

265+00

H-3 OUTBOUND

22+50.64

RAMP O ℄

Ramp O Sta. 21+42.73

End 2'x2' Trap. Ditch
H-3 ℄ Sta. 263+80,
197' Rt.
Top Ditch 61.1

Top Ditch 61.0
Inv. 59.0

12'

Transition to 2'x2' trap. section See Detail on Sht. C-50.

See Ramp O Roadway Construction Plan

RAMP P ℄

See Ramp P Roadway Construction Plan

RAMP M ℄

RAMP F ℄

15+00

25+00

29+10.15

10+00

20+00

19+55.24

10+00

190+00

194+41.71

MOANALUA FREEWAY OUTBOUND

MOANALUA FREEWAY INBOUND

NORTH HALAWA STREAM ℄

5+00

14+03.13

15+00

25+00

5+00

20+00

NOTES:

1. See Concrete Glare Screen at Highway Light Standard detail on Sht. C-31.
2. Interstate Route H-3 Outbound Roadway, including Shoulders, Gutters, Underdrain and Guardrail Type 3 shall be omitted from this Contract. The Outbound Roadway shall be completed by others.

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

CAD by WHIGASHIHARA, 55-52

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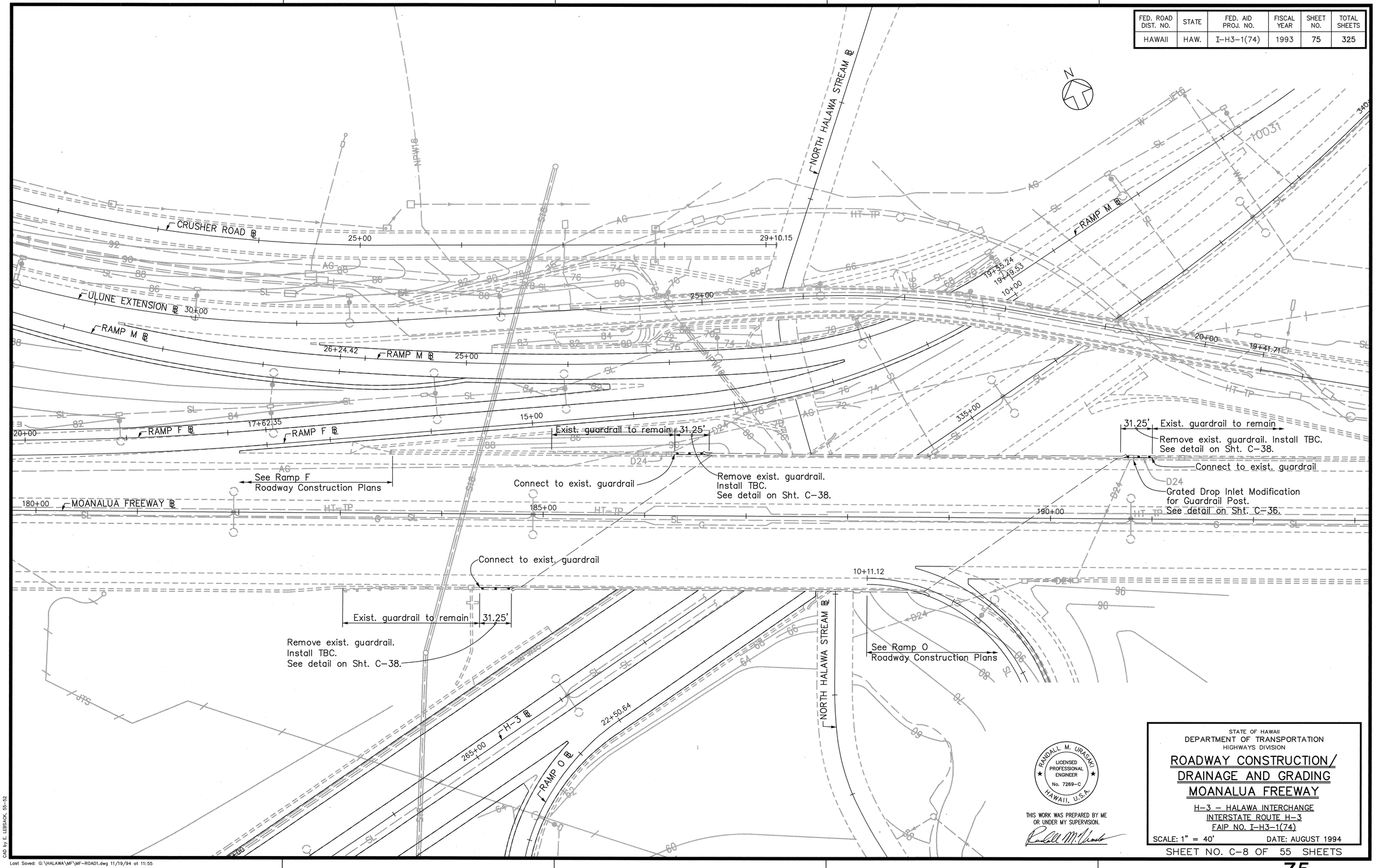
ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING INTERSTATE ROUTE H-3

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-7 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	75	325



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

CAD by E. LERSACK, 55-52

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HIGHWAYS DIVISION

ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING MOANALUA FREEWAY

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-8 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	76	325

Type A3 CB
Ramp D Sta. 17+97
Inv. 47.2
For detail see
Sht. C-52 &
Sht. C-53.

D1

D3 Exist. CB
Ramp D Sta. 16+92
D24 Inv. 46.3 (D1)
D24 Inv. 44.0 (D2)
D30 Inv. 43.0± (Exist.)

D2 Type A3 CB
Ramp D Sta. 15+87
Inv. 44.7
For detail see
Sht. C-52 &
Sht. C-53.

32.67'
Guardrail Type 4F
See Sht. C-32

32.67'
Guardrail Type 4F
See Sht. C-32

RAMP G
RAMP D
RAMP EW
RAMP J
RAMP H
RAMP I
MOANALUA FREEWAY

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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NOTE BOOK	DESIGNED BY	
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CAD by E. LESSACK, VFW

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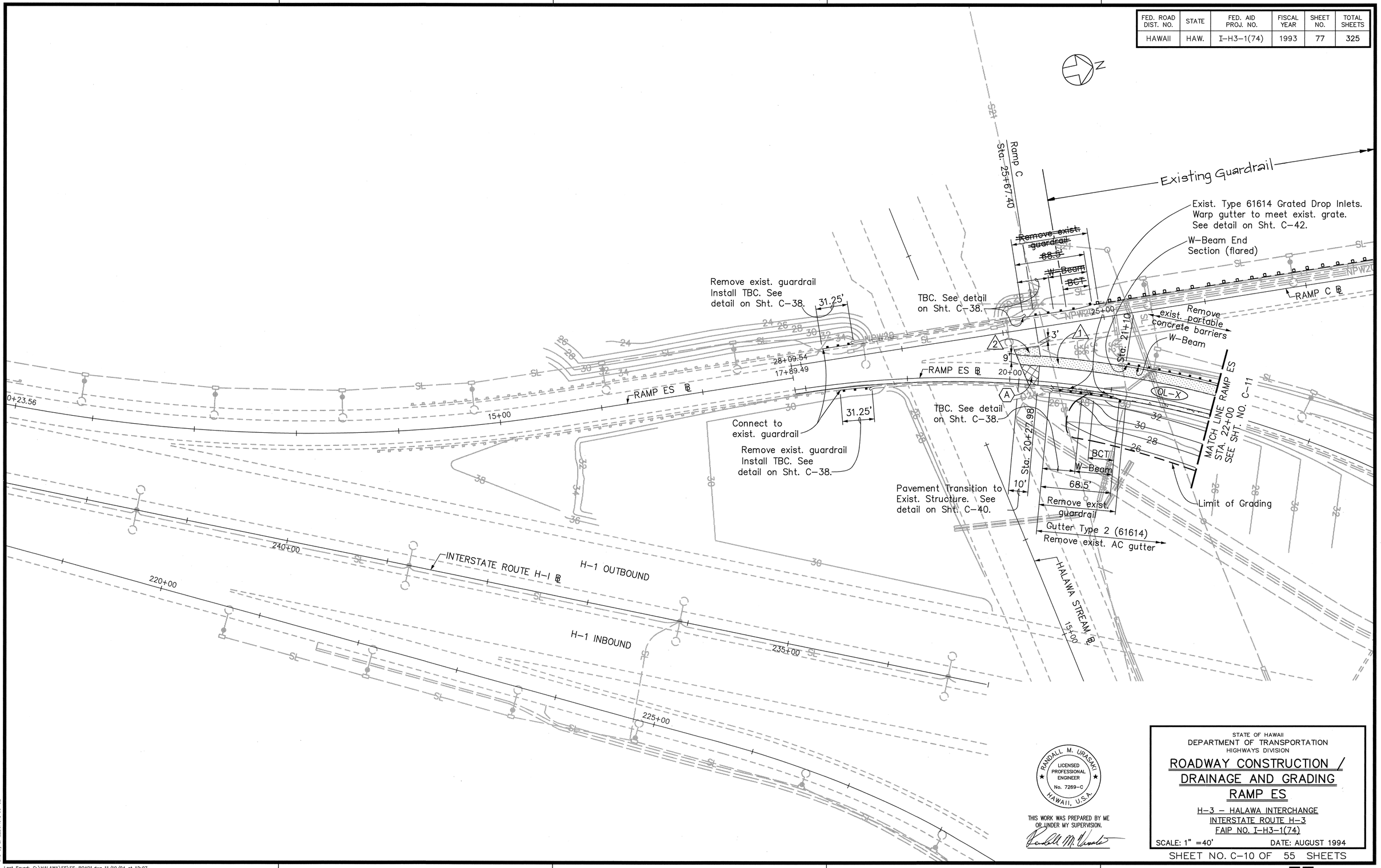
ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP D

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-9 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	77	325



ORIGINAL PLAN
NOTE BOOK
No. ____

SURVEY PLOTTED BY ____ DATE
DRAWN BY ____
TRACED BY ____
DESIGNED BY ____
QUANTITIES BY ____
CHECKED BY ____

CAD by E. LEBSACK, 45-52

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION / DRAINAGE AND GRADING RAMP ES

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" =40' DATE: AUGUST 1994

SHEET NO. C-10 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	78	325

All work in between deleted (ref. CCO#5) N.I.C.

Existing Guardrail

MELT 37.5'

RAMP C ℄

RAMP WE ℄

Sta. 24+88

45'

225+00

Sta. 25+33

~~TBC. See detail on Sht. C-38.~~ N.I.C.

Exist. Type 61614 Grated Drop Inlet. Warp gutter to meet exist. grate. See detail on Sht. C-42.

Remove exist. guardrail

W-Beam

Remove exist. Portable Concrete Barrier

1

A

~~Pavement Transition to Exist. Structure. See detail on Sht. C-40.~~ N.I.C.

10'

~~TBC. See detail on Sht. C-38.~~ N.I.C.

W-Beam

68.75'

Sta. 25+20

Remove exist. guardrail

OL-X

W-Beam End Section (Flared)

Limit of Grading

~~Gutter Type 2 (6181A)~~ N.I.C.

Remove exist. AC gutter

MATCH LINE RAMP ES STA. 22+00 SEE SHT. NO. C-10

RAMP ES ℄

RAMP B ℄

15+00

12+06.67

MOANALUA FREEWAY ℄

150+00

15+00

30+34.05

30+00

13+22.47

INTERSTATE ROUTE H-1 ℄

H-1 OUTBOUND

H-1 INBOUND

MATCH LINE RAMP ES STA. 32+00 SEE SHT. NO. C-12

HALAWA STREAM ℄

15+00

20+00

230+00

250+00

NPW16

S18

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

CAD by E. LEBSACK, 55-52

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HIGHWAYS DIVISION

ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP ES

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-11 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	79	325

MOANALUA FREEWAY ℄

RAMP EW ℄

HALAWA HEIGHTS STREAM

RAMP ES ℄

HALAWA STREAM ℄

Sta. 33+37

45'

All work in between deleted (ref. CCO#5) N.I.C.

75'±

Remove exist. guardrail and anchor block

~~TBC. See detail on Sht. C-38.~~ N.I.C.

Sta. 33+82

W-Beam

BCT

Sta. 35+25

MATCH LINE RAMP ES STA. 32+00 SEE SHT. NO. C-11

~~Pavement Transition to Exist. Structure. See detail on Sht. C-40.~~ N.I.C.

~~TBC. See detail on Sht. C-38.~~ N.I.C.

10'

75'±

Remove exist. guardrail and anchor block

W-Beam

Sta. 33+50.00

Exist. Type 61614 Grated Drop Inlet. Warp gutter to meet exist. grate. See detail on Sht. C-42.

N.I.C.

~~Gutter Type 2 (61614)~~

Remove exist. AC gutter

Exist. Type 61614 Grated Drop Inlet. Warp gutter to meet exist. grate. See detail on Sht. C-42.

Gutter Type 2 (61614)

Remove exist. AC gutter

Sta. 38+63.90

Underdrain pipe Inv. 33.71

Underdrain pipe Sta. 40+10 Inv. 34.80

Underdrain pipe Inv. 33.36

6" non-perforated Underdrain pipe

W-Beam

Guardrail Post spacing shall be 3'-1 1/2" over the Halawa Heights Stream Structure. Guardrail Post length shall be 5'-4" with an embedment length of 3'-0".

Connect 6" non-perforated Underdrain pipe to exist. Halawa Heights Stream Structure. Pipe Inv. 30.32

MATCH LINE RAMP ES STA. 42+00 SEE SHT. NO. C-13

OL-X

D(1'x1' Rect Ditch)

S18

30+34.05

28+12.08

155+00

10+00

110+00

35+00

40+00

25+00

30+00

20+00

235+00

240+00

242+35.80

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

CAD by E. LEBSACK

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RANDALL M. URASAKI ★ LICENSED PROFESSIONAL ENGINEER ★ No. 7269-C HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP ES

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-12 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	80	325

RAMP J ℄
15+00
15+79.97
RAMP I ℄
RAMP L ℄
20+00
RAMP K ℄
RAMP EW ℄
145+00
150+00
RAMP EW ℄
RAMP ES ℄
52+33.06
252+33.06
252+35.05
H-3 ℄
10+00
50+00
ARV (±5")
ARV (+5")
MATCH LINE RAMP ES STA. 42+00 SEE SHT. NO. C-12
OL-X
RAMP ES ℄
45+00
OL-X
Type 3 Guardrails*
250+00
RAMP WE ℄
50'
Flare Guardrail
Connect to exist. guardrail
W-Beam
Sta. 44+00
Exist. guardrail to remain
Sta. 46+07.53
See Ramp EW Roadway Construction Plan for continuation
Ramp ES Sta. 47+07.53
35+00
245+00
244+00
242+35.80
40+00
HALAWA STREAM ℄
41+34.82
KAHUAPAANI STREET ℄

* Remove existing Guardrail and install Type 3 Guardrails (ref. CCO#11)

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP ES

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-13 OF 55 SHEETS

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

CAD by W.HIGASHIHARA, 55-52

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	81	325

EW-2 Type A GDI
Ramp EW Sta. 126+02
Inv. 44.0
Remove exist. GDI
See detail on Sht. C-53.

EW-3 Type A GDI
Ramp EW Sta. 127+00
Inv. 44.6
See detail on Sht. C-53.

EW-1 Type A GDI
Ramp EW Sta. 124+09
D24 Inv. 47.0±
D30 Inv. 43.0
D36 Inv. 42.5±
Remove exist. GDI
See Detail on Sht. C-53.

To Elec. Substation

Gutter Type 2 (61618)

Sta. 129+10

Sta. 128+10

Limit of Grading

Sta. 127+35

Remove exist. AC Gutter

For Underdrain location see Ramp EW Typical Section

Remove 185 LF of exist. D30

D24

D30

D36

STA. 124+00 END OF PROJECT

Sta. 130+02

35+00

RAMP G ℄

25+00

RAMP D ℄

W-Beam

W-Beam End Section (flared)

Daylight 6" non-perforated underdrain pipe. Pipe Inv. 57.0
Miter pipe to match exist. slope

Sta. 133+35

R=50'(Typ.)

RAMP EW ℄

130+00

OL-X

30'

19'

W-Beam

MATCH LINE RAMP EW
STA. 134+00
SEE SHT. NO. C-15

Meet exist. 1' V-Ditch
Ramp EW Sta. 129+29±, 58'± Rt.

R=22'

4' Wide Lined Rectangular Drainage Ditch

Remove exist. V-Ditch and AC gutter

Sta. 130+25

CRM Wall
See Detail on this Sheet.

Sta. 133+00

Sta. 133+50

Ditch Transition
See Detail on Sht. C-51.

4' Wide Lined Rectangular Drainage Ditch
Ramp EW Sta. 129+06, 36' Rt.
Inv. 49.52

RAMP E ℄

20+00

25+00

RAMP E ℄

Gutter Type 2 (61618)
Remove exist. AC Gutter

60'

Sta. 127+10

Limit of Grading

Gutter Transition
See Detail on Sht. C-51.

215+00

INTERSTATE ROUTE H-1 - OUTBOUND

INTERSTATE ROUTE H-1 - INBOUND

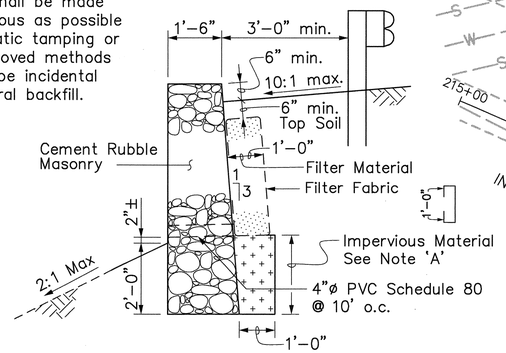
H-1 ℄

D36

17+00.09

NOTE:
For 4' Wide Lined Rectangular Drainage Ditch Detail see Sht. C-51.

NOTE 'A':
The impervious material as selected by the Engineer shall be made as impervious as possible by pneumatic tamping or other approved methods and shall be incidental to structural backfill.



CRM WALL
Scale: ½" = 1'-0"

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

CAD by W.HIGASHIHARA, 55-52

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP EW

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-14 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	82	325

RAMP G ℄
RAMP D ℄
RAMP H ℄
RAMP I ℄
RAMP J ℄
RAMP EW ℄
RAMP E ℄
RAMP ES ℄
RAMP WE ℄
MOANALUA FREEWAY ℄
HALAWA STREAM ℄

TBC. See detail on Sht. C-38.
Pavement Transition to Exist. Structure. See detail on Sht. C-40.
W-Beam
Remove exist. guardrail
10'
Gutter Type 2 (61614)
Remove exist. gutter and guardrail
Pavement Transition to Exist. Structure. See detail on Sht. C-40.
For underdrain loction, see Ramp EW Typical Section.
MATCH LINE RAMP EW STA. 134+00 SEE SHT. NO. C-14
MATCH LINE RAMP EW STA. 144+00 SEE SHT. NO. C-16
OL-X
Connect to exist. guardrail
31.25'
Exist. guardrail to remain
Remove exist. guardrail and conc. block.
Remove exist. guardrail Install TBC. See detail on Sht. C-38.
Type 3 Guardrail *
See Ramp ES Roadway Construction Plan

* Remove existing Guardrail and install Type 3 Guardrail (ref. CCO#11)

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

CAD by WHIGASHIHARA, 55-52

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

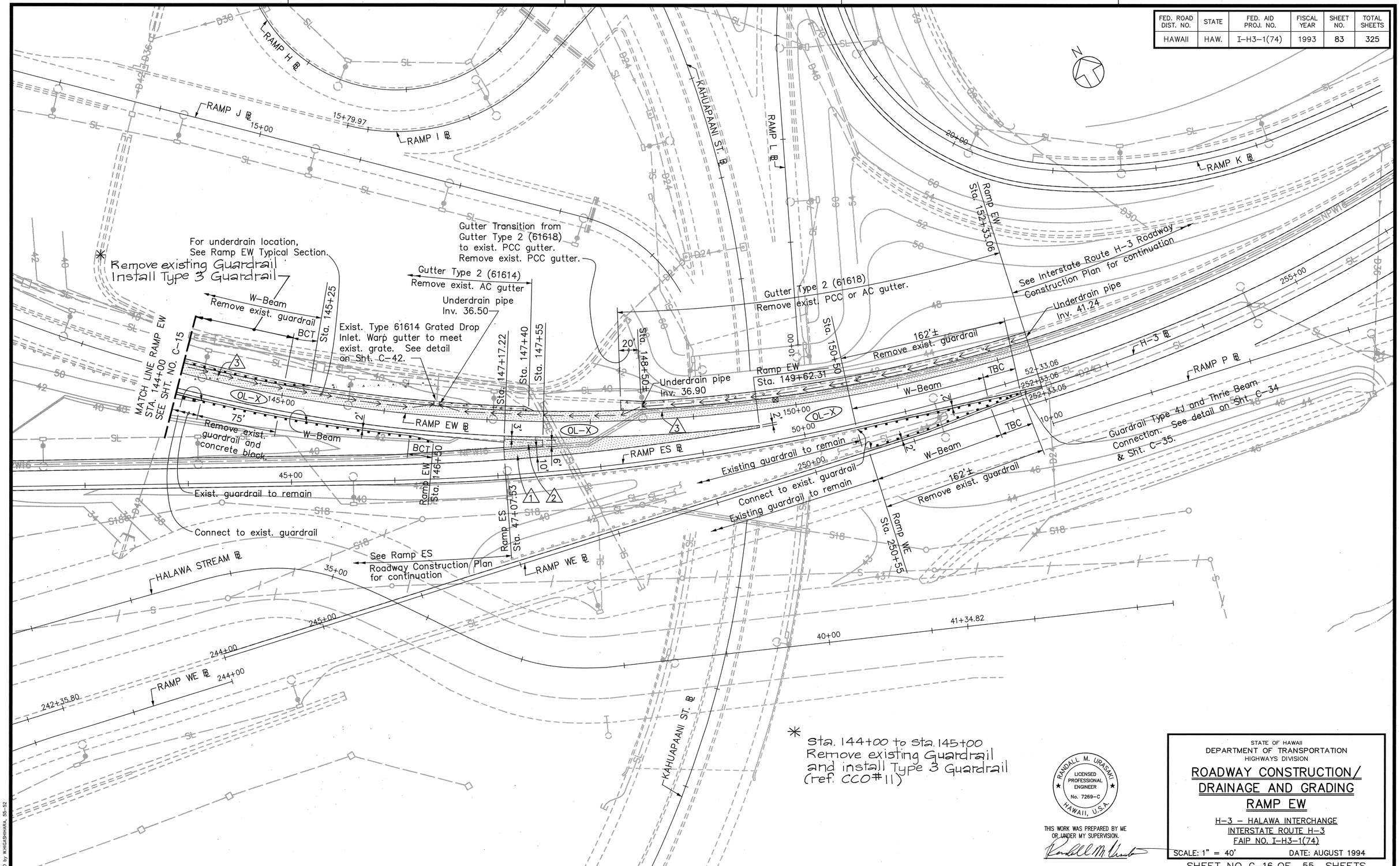
ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP EW

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-15 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	83	325



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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CAD by W.HIGASHIHARA, 55-52

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP EW

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-16 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	84	325

CRUSHER ROAD ℄

ULUNE EXTENSION ℄

RAMP M ℄

RAMP F ℄

NORTH HALAWA STREAM ℄

MOANALUA FREEWAY (MF) ℄

INBOUND – INTERSTATE ROUTE H-3

OUTBOUND – INTERSTATE ROUTE H-3

H-3 ℄

RAMP O ℄

Spillway Inlet
See detail on Sht. C-45.

ARV (+5")

Pavement Transition
to Exist. Structure.
See detail on Sht. C-40.

Gutter Type 2 (61618)
Remove exist. AC gutter

Gutter Transition.
See detail on Sht. C-43.

Limit of Grading

For Underdrain location,
see Ramp F Typical Section

MATCH LINE RAMP F
STA. 20+00
SEE SHT. NO. C-18

MELT

W-Beam

OL-X

See Ramp M
Roadway
Construction Plan

TBC. See detail
on Sht. C-38.

W-Beam & End
Section (flared)

Remove exist. guardrail

Exist. AC gutter
to remain

Gutter Transition
See detail on Sht. C-43.
Remove exist. AC gutter

See Ramp M Roadway Construction Plan

Survey Plotted By	Date
Drawn By	x x x
Traced By	x x x
Designed By	x x x
Quantities By	
Checked By	

ORIGINAL PLAN

NOTE BOOK No. ____

CAD by J. Mimura, 55-52

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Date	Revision
11/10/95	Revised Ramp F grading and extended W-beam guardrail.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP F

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" =40' DATE: AUGUST 1994

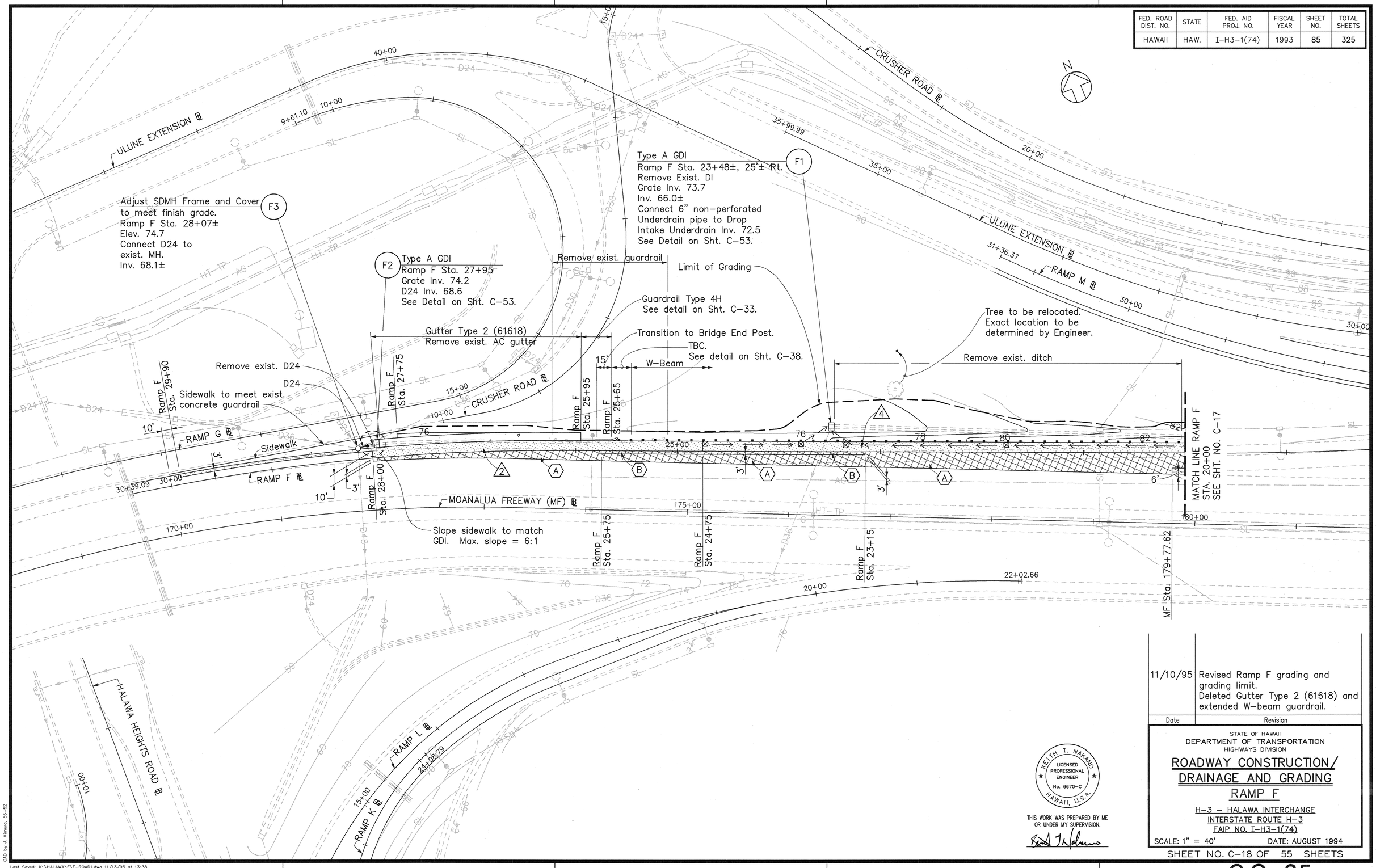
KEITH T. NAKANO
LICENSED PROFESSIONAL ENGINEER
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SHEET NO. C-17 OF 55 SHEETS

C.O. 84

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	85	325



Date	Revision
11/10/95	Revised Ramp F grading and grading limit. Deleted Gutter Type 2 (61618) and extended W-beam guardrail.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP F

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-18 OF 55 SHEETS

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CAD by J. Mimura, 55-52

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C.O. 85

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	86	325

Extend Roadway Pavement Reconstruction
Type A - Sta. 20+00 to Sta. 22+32.05

Exist. guardrail to remain

MATCH LINE RAMP K
STA. 21+00
SEE SHT. NO. C-20

Connect to exist. guardrail

Replace 75± LF Damaged Guardrail Use exist. guardrail posts.

Connect to exist. guardrail

Exist. guardrail to remain

Connect to exist. guardrail

Replace 50± LF Damaged Guardrail Use exist. guardrail posts.

Connect to exist. guardrail

Exist. guardrail to remain

Connect 6" non-perforated Underdrain pipe to Drop Intake. Inv. 56.5

Gutter Type 2 (61618) Remove exist. AC gutter

Sta. 19+20

Sta. 20+00

Sta. 18+50

Type A GDI
Ramp K Sta. 14+50
Inv. 45.0±
See detail on Sht. C-53.
Connect to exist. D36.
Underdrain connection to GDI, see detail on Sht. C-54.
Underdrain Inv. 52.10

K3

Remove exist. GDI

D30

K2 Type A GDI
Ramp K Sta. 14+00
Inv. 48.5
See detail on Sht. C-53.

D24

K1 Type A GDI
Ramp K Sta. 13+50
Inv. 49.5
See detail on Sht. C-53.
Underdrain connection to GDI, see detail on Sht. C-54.
Underdrain Inv. 52.07

Gutter Type 2 (61618) Remove exist. AC gutter

See Interstate Route H-3 Construction Plan for continuation

Exist. guardrail to remain

Replace 25± LF Damaged Guardrail Use exist. guardrail posts.

Remove exist. guardrail

60'±

RAMP K ℄

OL-X

15+00

10+00

Exist. guardrail to remain

Connect to exist. guardrail

W-Beam. Connect to exist. guardrail

Sta. 14+54 Ramp K BCT

Sta. 14+70

RAMP ES ℄

RAMP WE ℄

H-3 ℄

RAMP R ℄

NPW16

152+33.06
52+33.06
252+33.06
252+35.05

255+00

260+00

See Interstate Route H-3 Roadway Construction Plan

Remove existing Guardrail and install Type 3 Guardrail Sta. 14+70 to Sta. 21+50 Lt. (Ref. CCO #11)

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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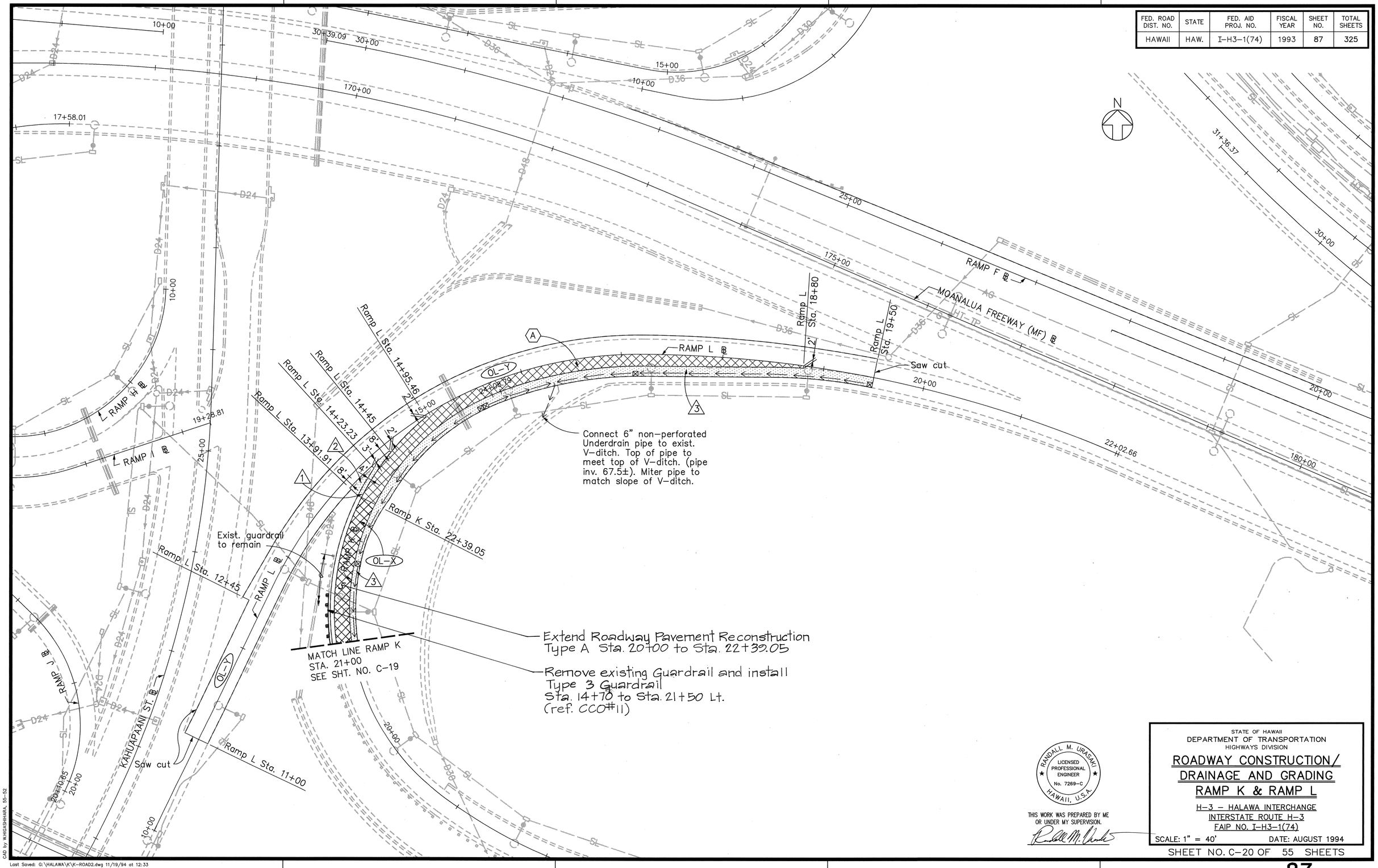
ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP K

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-19 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	87	325



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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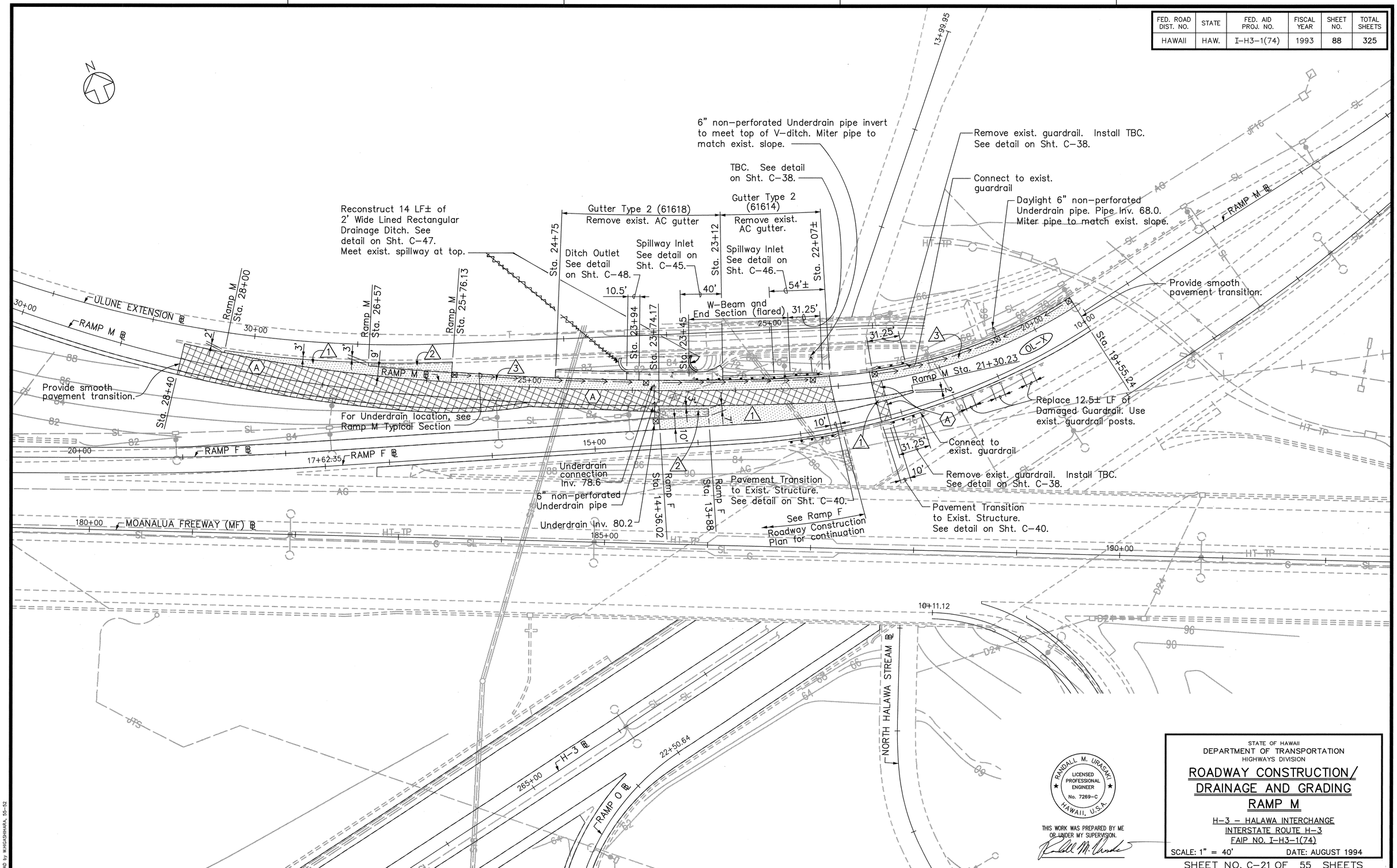
ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP K & RAMP L

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-20 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	88	325



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

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ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP M

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-21 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	89	325

MOANALUA FREEWAY (MF) ℄
185+00
RAMP M ℄
RAMP F ℄
10+00
20+00
19+55.24
19+49.53
10+00
N
RAMP K ℄
10+00
H-3 INBOUND
H-3 ℄
265+00
H-3 OUTBOUND
335+00
22+50.64
RAMP O ℄
Stub out and cap underdrain
Sta. 21+42.73
For actual Underdrain location, see Ramp O Typical Section
Sta. 20+15
35'
Gutter Type 2 (61614)
Remove exist. AC gutter
Gutter Transition from Gutter Type 2 (61614) to 2:1 V-ditch.
For actual Underdrain location see Ramp O Typical Section
Gutter Transition from Gutter Type 2 (61614) to 2:1 V-ditch.
6" non-perforated Underdrain pipe
TBC. See detail on Sht. C-38.
W-Beam End Section (flared)
Gutter Type 2 (61614)
Remove exist. AC gutter
87.5'
35'
Sta. 17+50
Inv. 52.0
5+00
TBC. See detail on Sht. C-38.
W-Beam and End Section (flared)
Remove exist. guardrail and concrete block.
Sta. 18+00
15+00
W-Beam
25+00
Remove exist. Guardrail
TBC. See detail on Sht. C-38.
10+11.12
GRP
NORTH HALAWA STREAM ℄
See Plan Detail Ramp O on Sht. C-23.
190+00
W-Beam
For actual Underdrain location, see Ramp O Typical Section
Limit of Grading
Gutter Type 2 (61614)
11+00
Sta. 14+03.13
15'
15'
Sta. 13+25
5+00
Transition to Bridge End post.
Guardrail Type 4G. See detail on Sht. C-33.
Transition to Bridge Parapet
Grated Drop Inlet Modification for Guardrail Post. See detail on Sht. C-36.
W-Beam
Limit of Grading
W-Beam End Section (flared)
MF Sta. 193+20
ULUNE EXTENSION ℄
20+00
19+41.71
10+00
Limit of Grading
TBC. See detail on Sht. C-38.
30+00
20+00
10+00

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ORIGINAL PLAN
NOTE BOOK ____ No. ____

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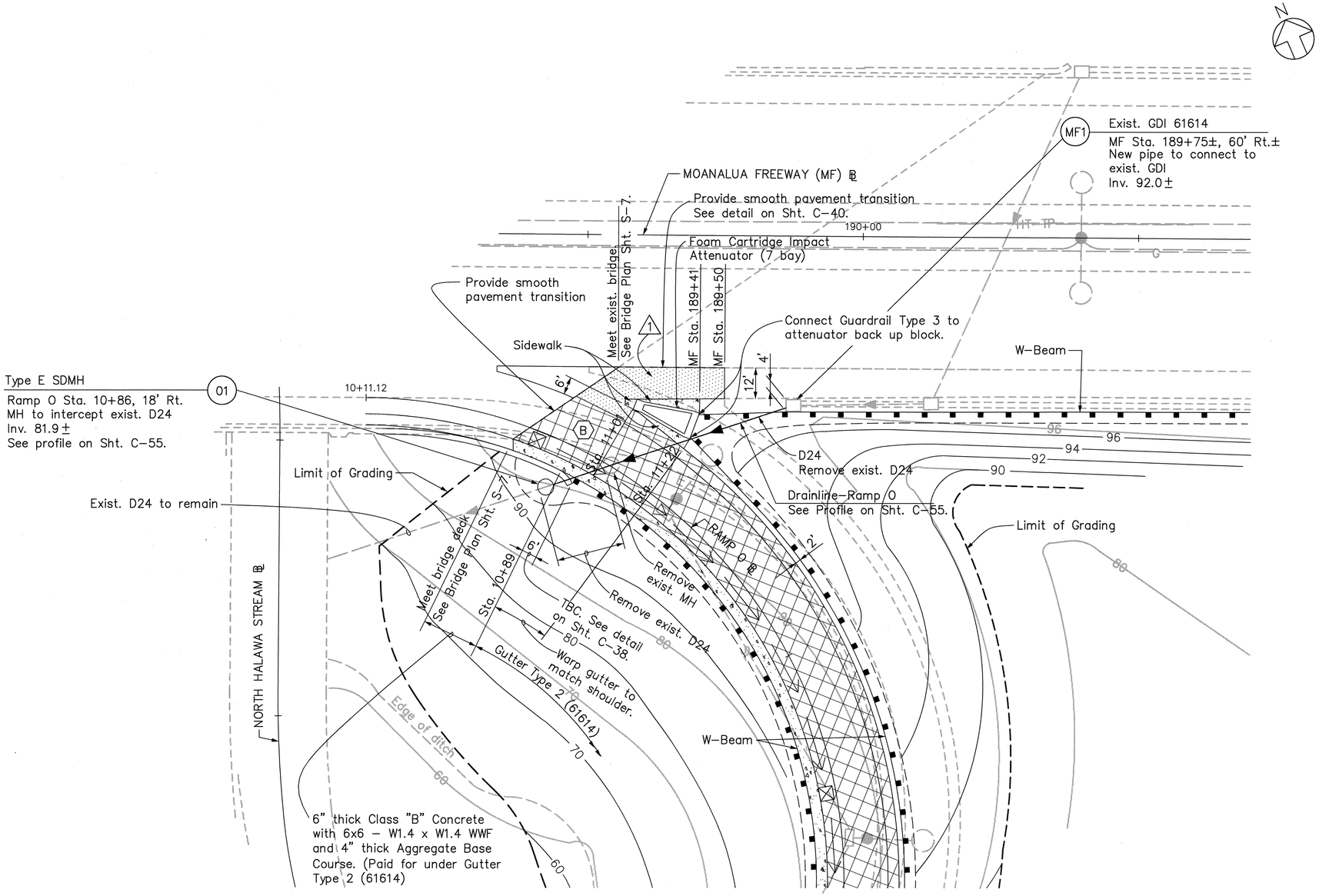
ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP O

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-22 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	90	325



ORIGINAL PLAN
NOTE BOOK No. ____
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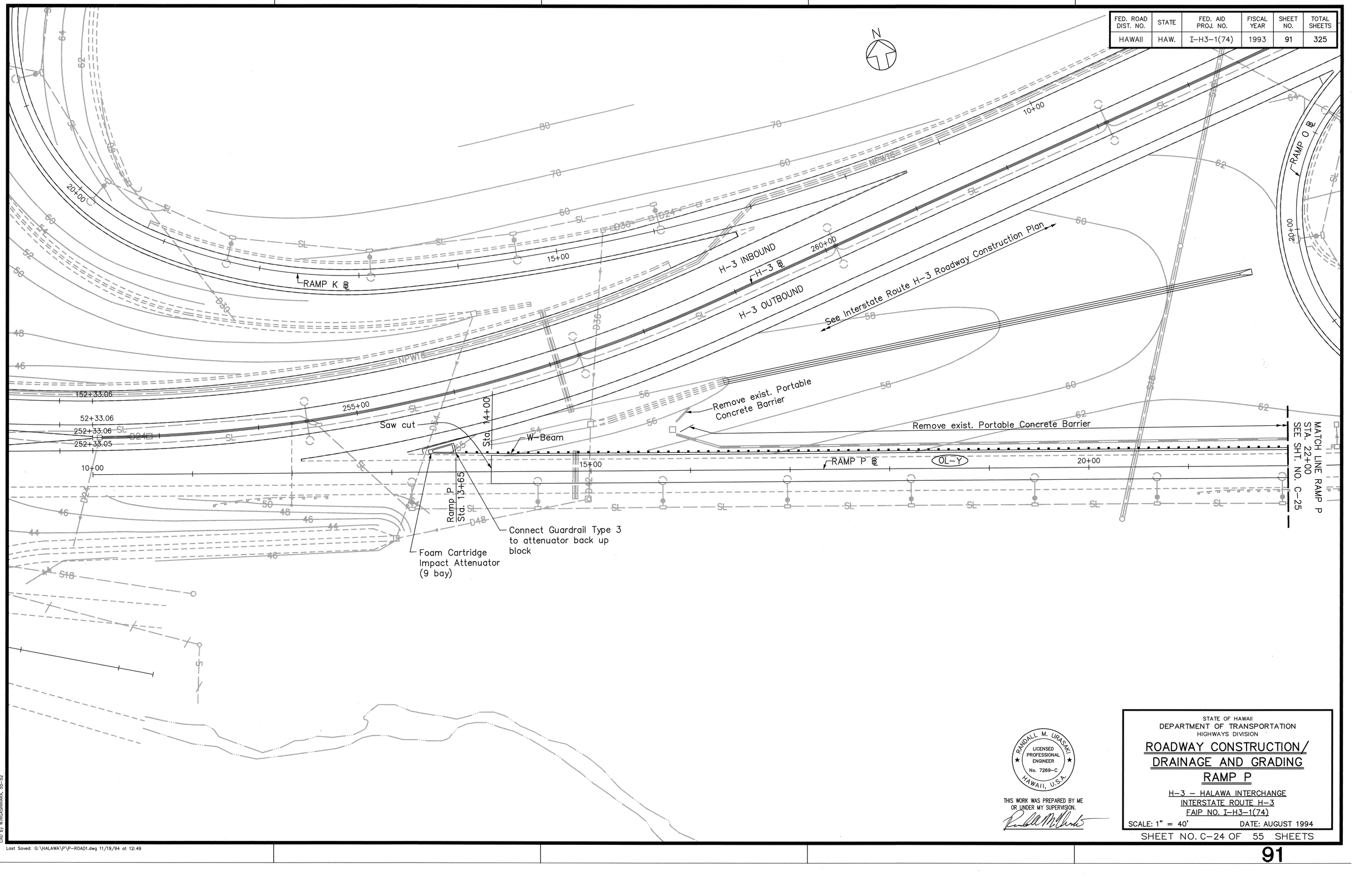
PLAN DETAIL
RAMP O

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 20' DATE: AUGUST 1994

SHEET NO. C-23 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	91	325



ORIGINAL PLAN
NOTE BOOK
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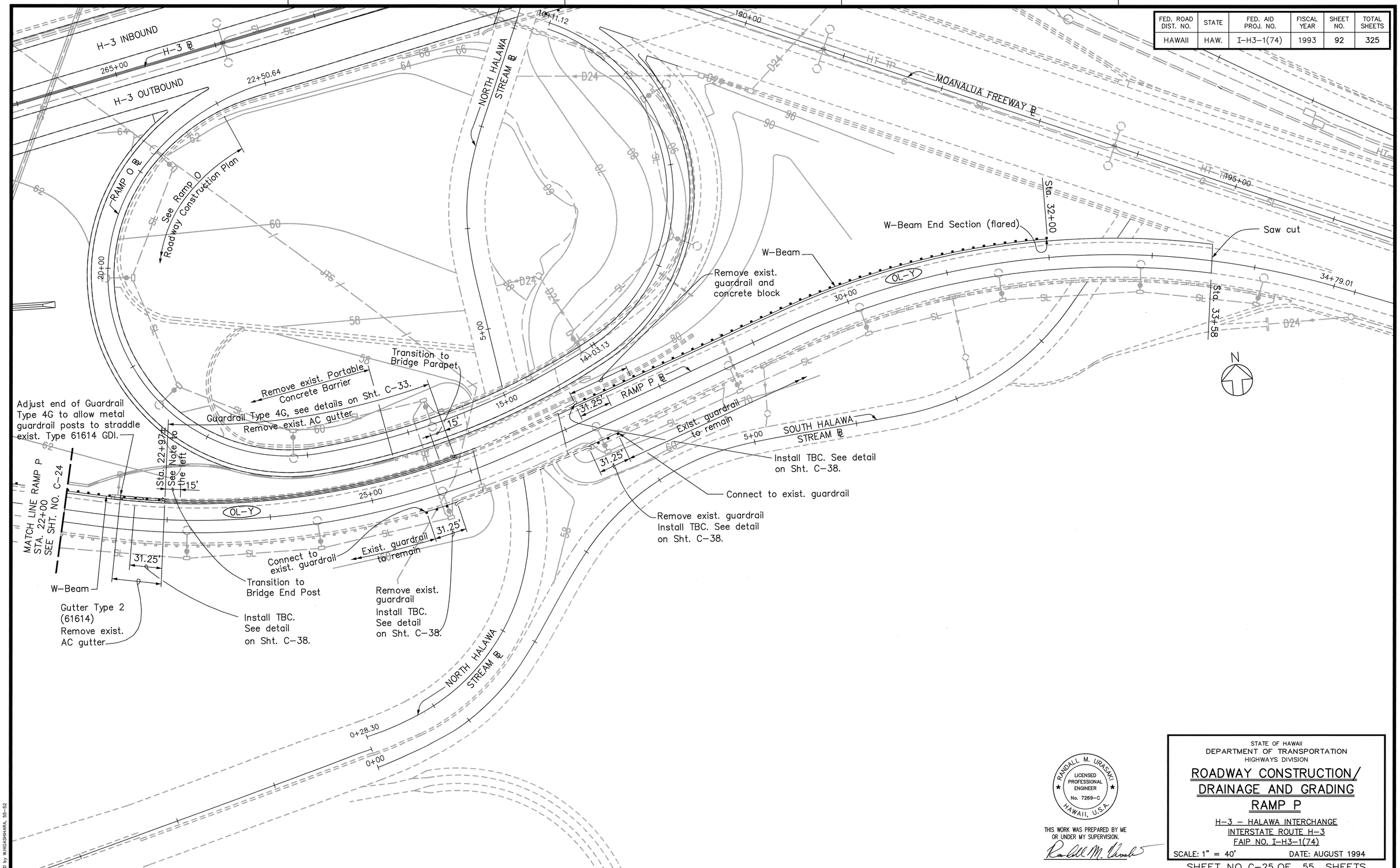
ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP P

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-24 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	92	325



ORIGINAL PLAN

SURVEY PLOTTED BY _____ DATE
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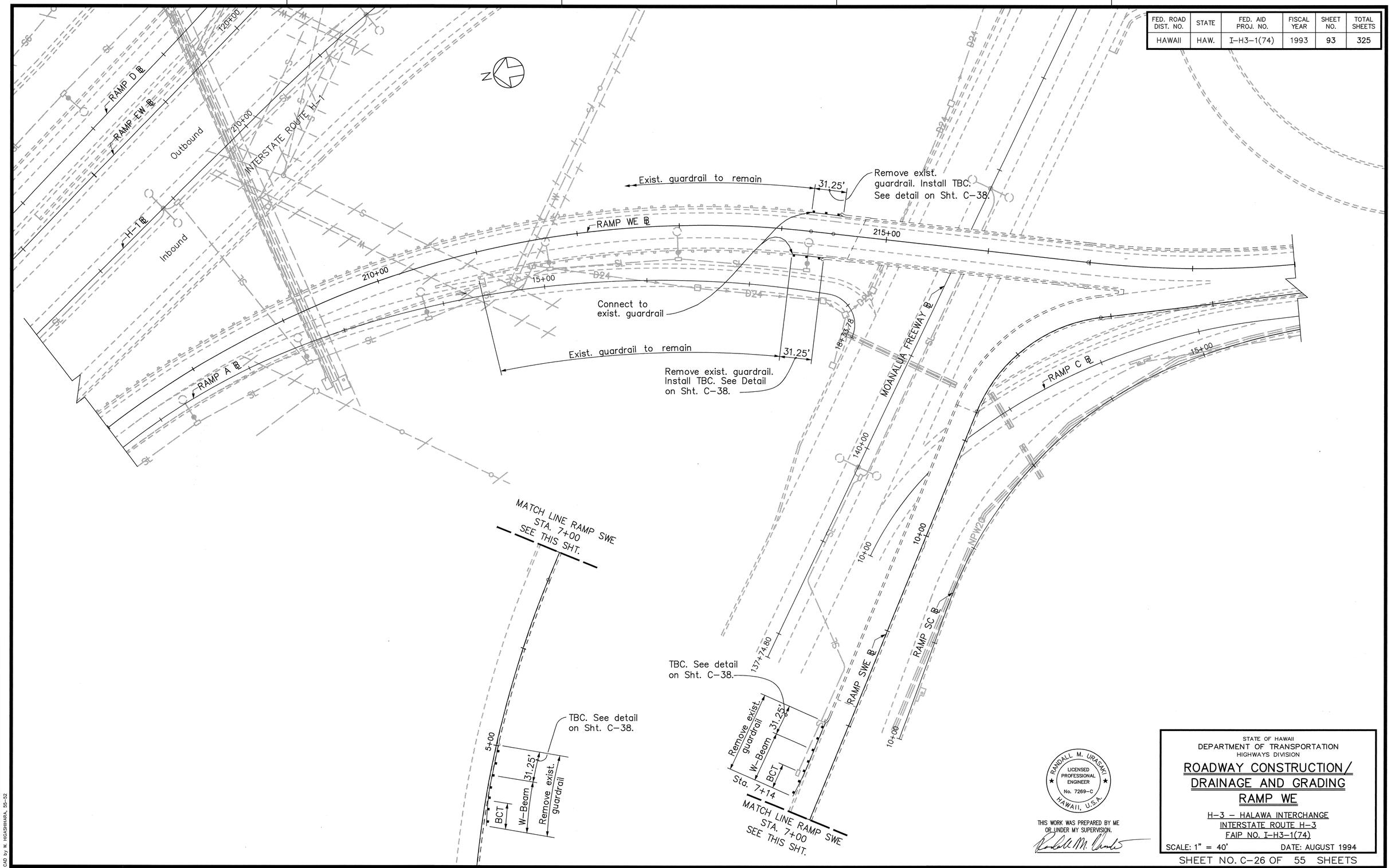
ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP P

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-25 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	93	325



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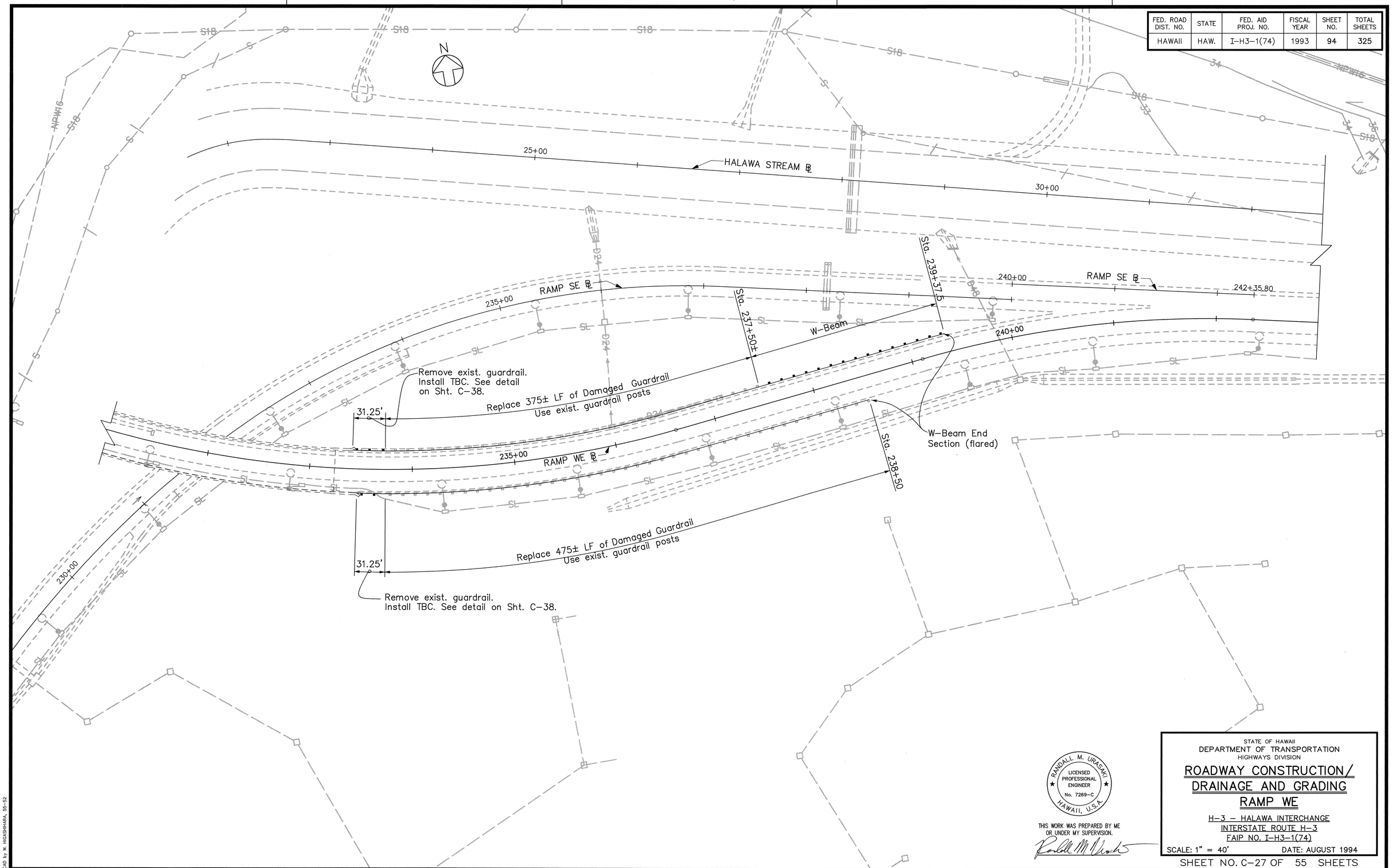
ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP WE

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-26 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	94	325



ORIGINAL PLAN
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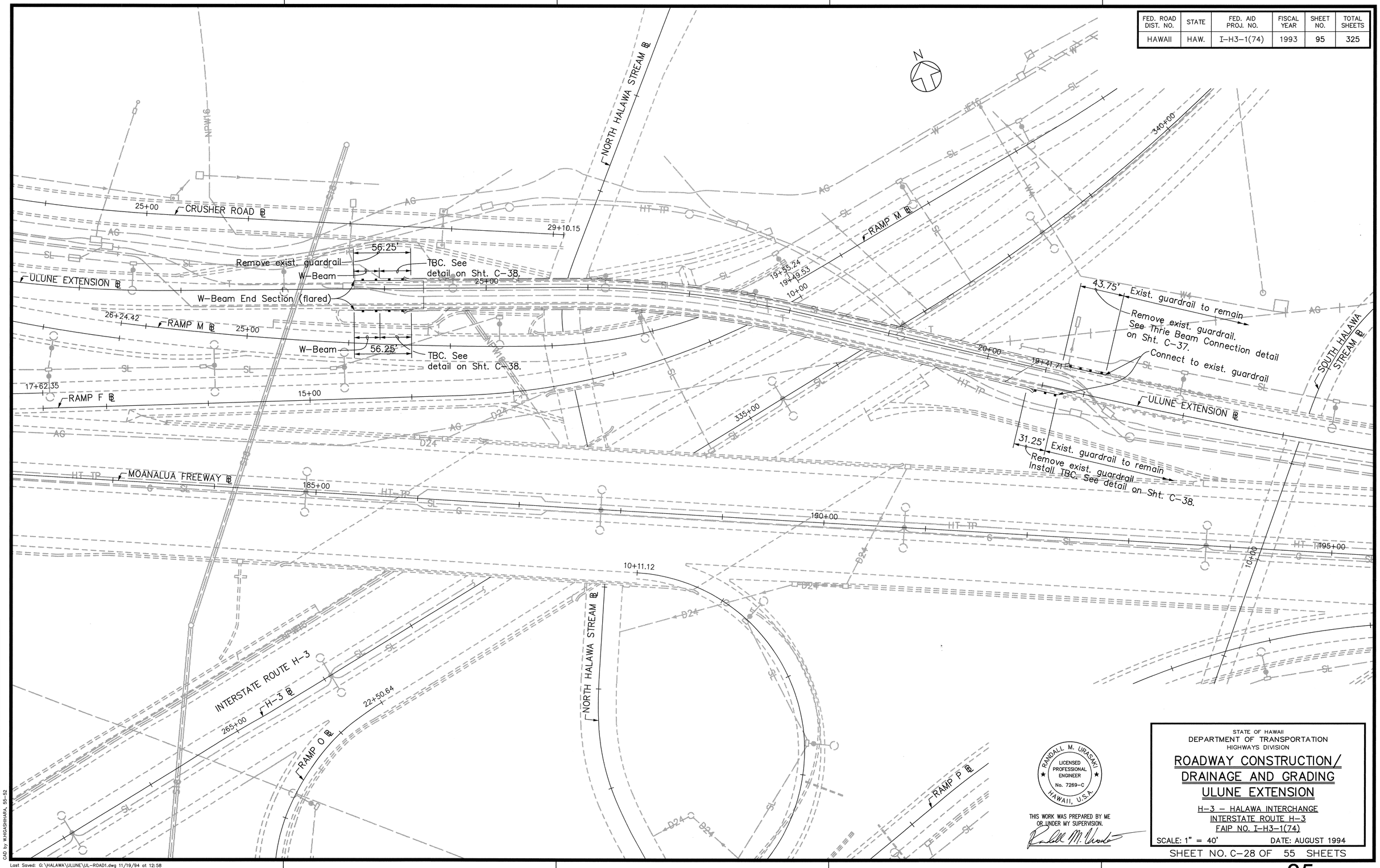
ROADWAY CONSTRUCTION/ DRAINAGE AND GRADING RAMP WE

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-27 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	95	325



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NOTE BOOK _____ No. _____

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HIGHWAYS DIVISION

ROADWAY CONSTRUCTION / DRAINAGE AND GRADING
ULUNE EXTENSION

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

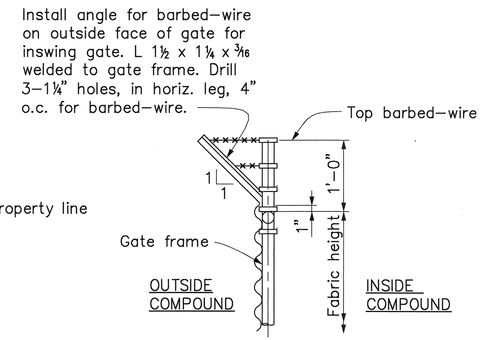
SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-28 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	96	325

TYPICAL BARBED WIRE ON FENCE DETAIL

Scale: 1" = 1'–0"

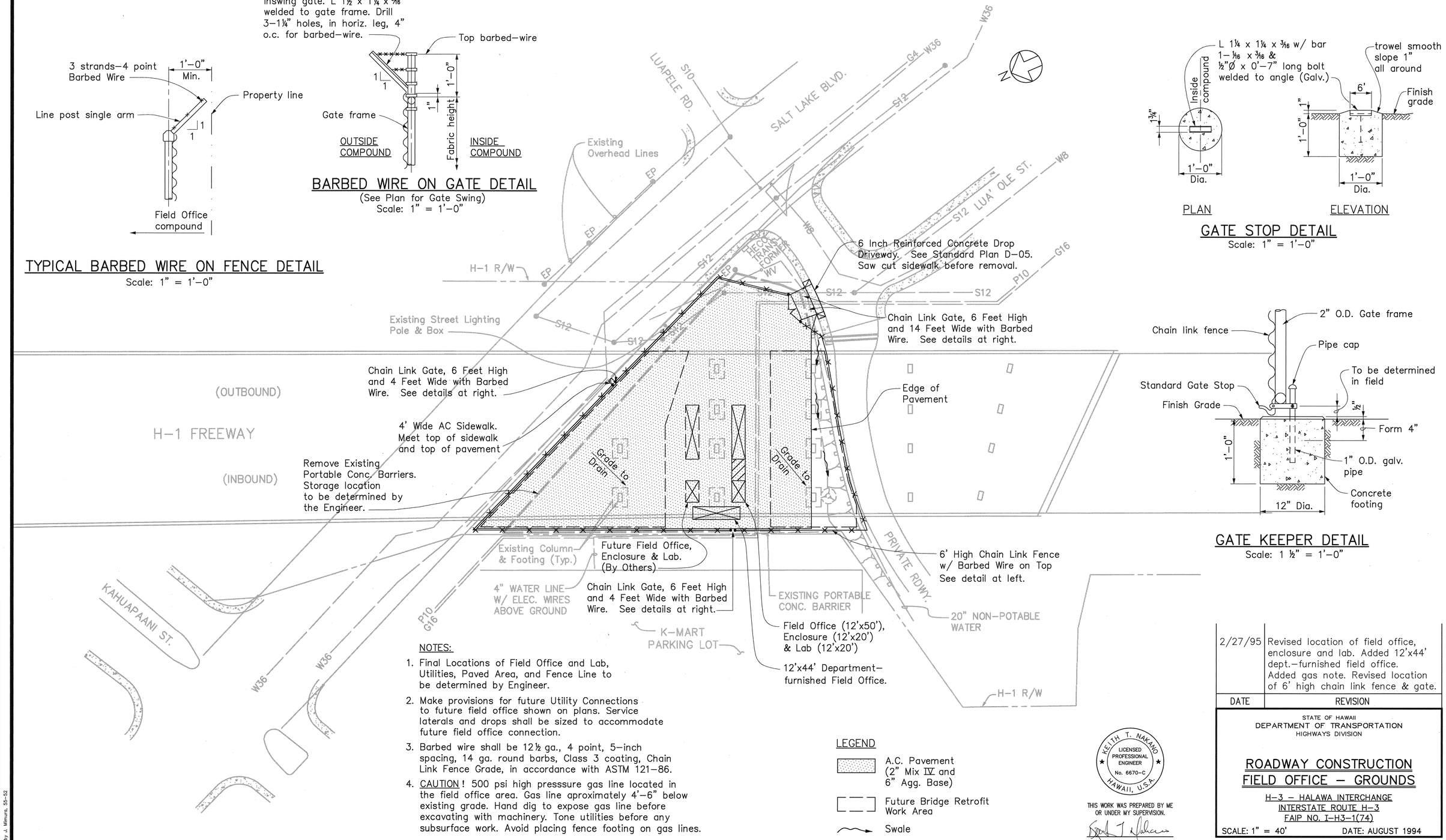


BARBED WIRE ON GATE DETAIL

(See Plan for Gate Swing)
Scale: 1" = 1'–0"

GATE STOP DETAIL

Scale: 1" = 1'–0"



GATE KEEPER DETAIL

Scale: 1 ½" = 1'–0"

NOTES:

1. Final Locations of Field Office and Lab, Utilities, Paved Area, and Fence Line to be determined by Engineer.
2. Make provisions for future Utility Connections to future field office shown on plans. Service laterals and drops shall be sized to accommodate future field office connection.
3. Barbed wire shall be 12½ ga., 4 point, 5–inch spacing, 14 ga. round barbs, Class 3 coating, Chain Link Fence Grade, in accordance with ASTM 121–86.
4. CAUTION ! 500 psi high presssure gas line located in the field office area. Gas line aproximately 4'–6" below existing grade. Hand dig to expose gas line before excavating with machinery. Tone utilities before any subsurface work. Avoid placing fence footing on gas lines.

LEGEND

- A.C. Pavement (2" Mix IV and 6" Agg. Base)
- Future Bridge Retrofit Work Area
- Swale

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DATE	REVISION
2/27/95	Revised location of field office, enclosure and lab. Added 12'x44' dept.–furnished field office. Added gas note. Revised location of 6' high chain link fence & gate.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION
FIELD OFFICE – GROUNDS

H–3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H–3
FAIP NO. I–H3–1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C–29 OF 55 SHEETS

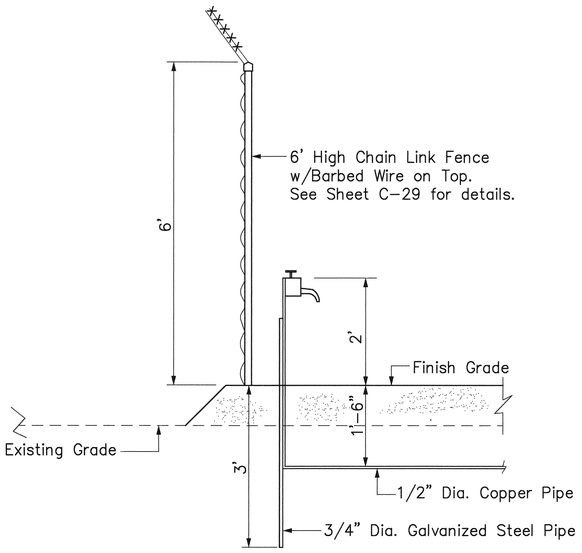
ADD. 96

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

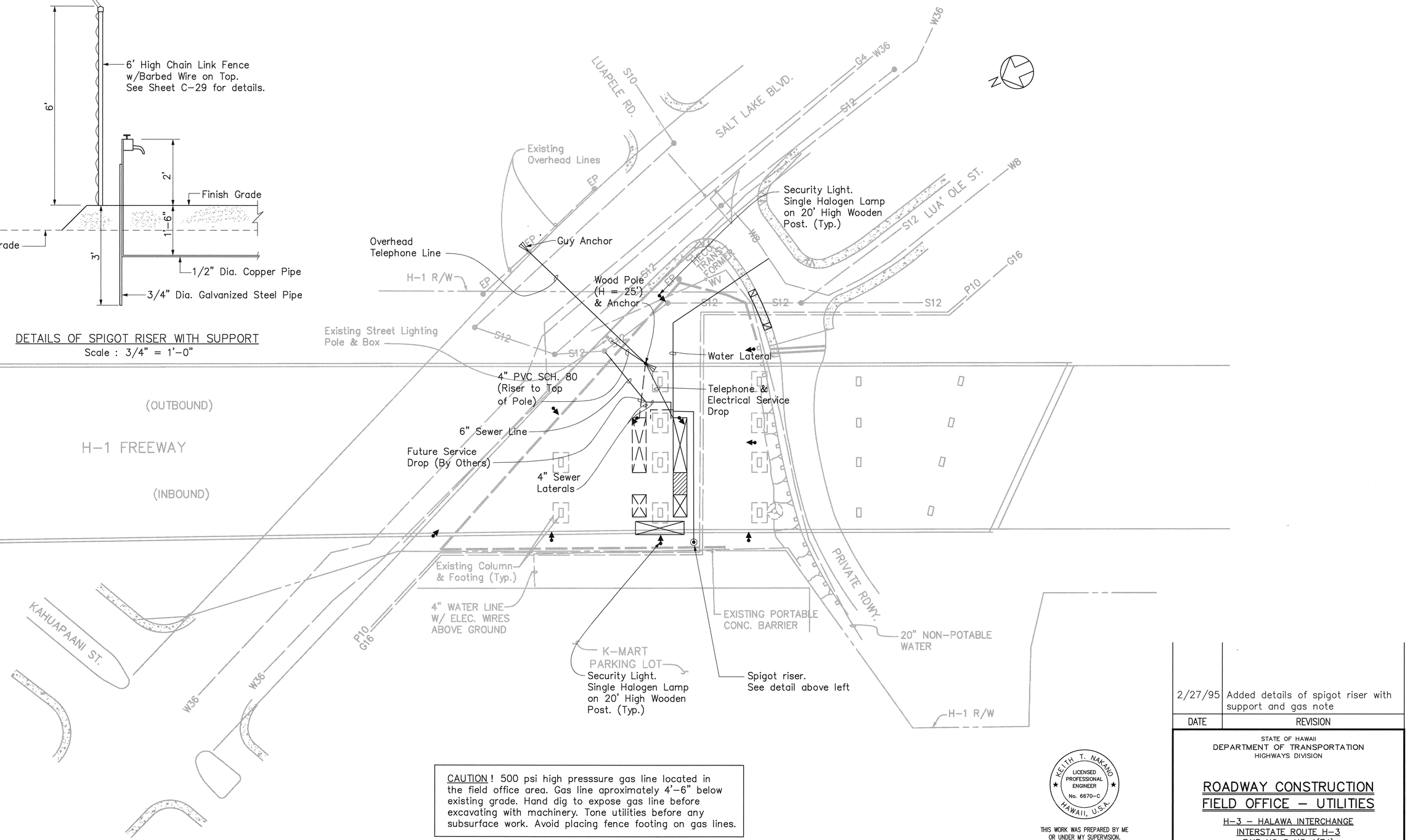
CAD by J. Mimura, 55–52

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	97	325



DETAILS OF SPIGOT RISER WITH SUPPORT
Scale : 3/4" = 1'-0"



CAUTION ! 500 psi high presssure gas line located in the field office area. Gas line aproximately 4'-6" below existing grade. Hand dig to expose gas line before excavating with machinery. Tone utilities before any subsurface work. Avoid placing fence footing on gas lines.

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

CAD by J. Mineta, 55-52

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DATE	REVISION
2/27/95	Added details of spigot riser with support and gas note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION
FIELD OFFICE - UTILITIES

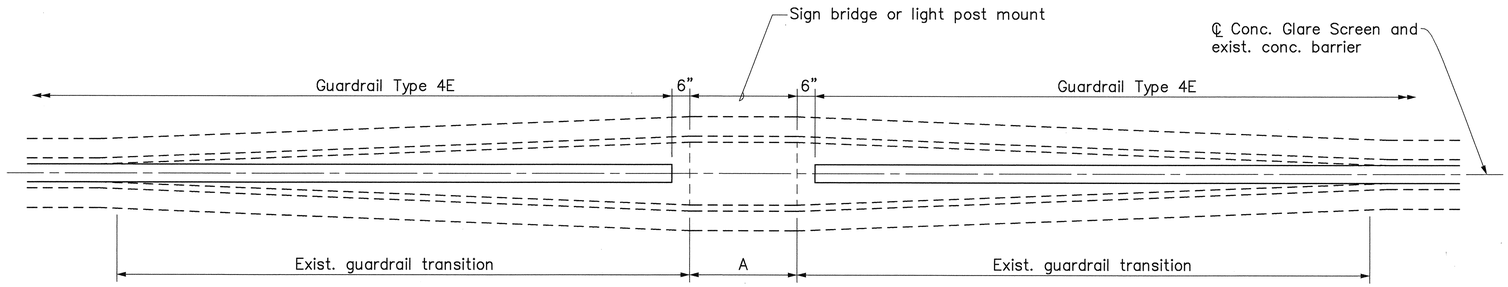
H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 1" = 40' DATE: AUGUST 1994

SHEET NO. C-30 OF 55 SHEETS

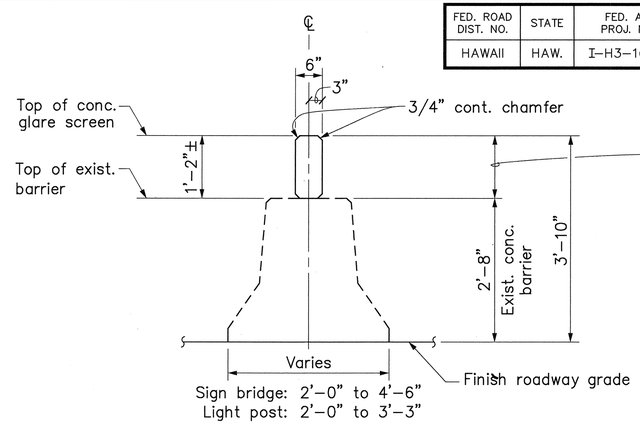
ADD. 97

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	98	325



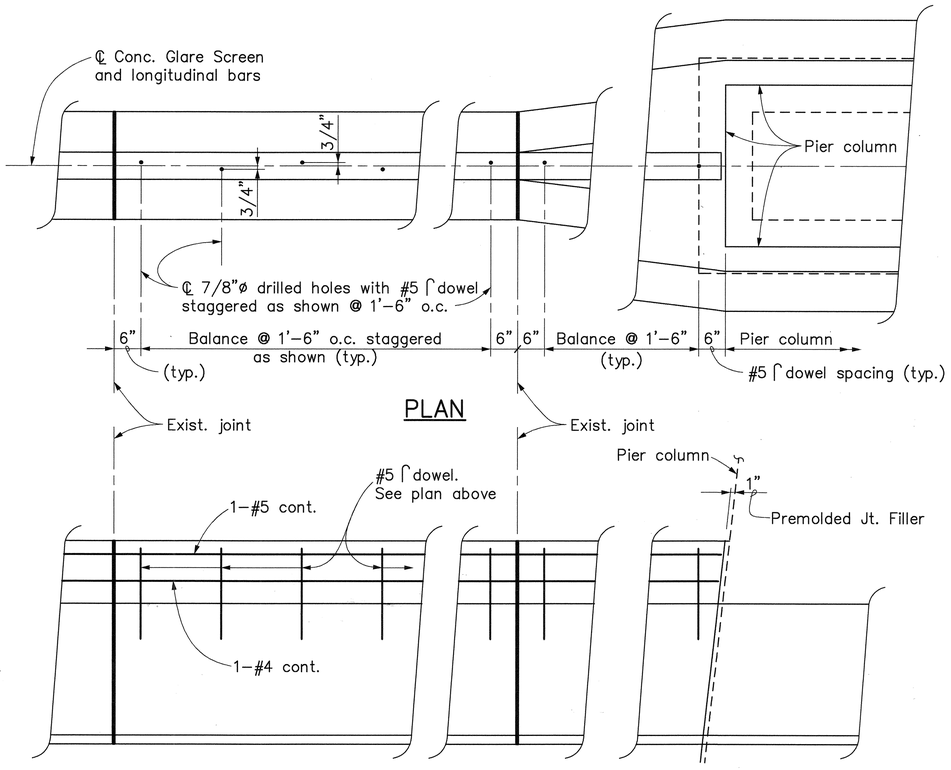
PLAN
Scale: 1/2" = 1'-0"

	A
Sign bridge	13'-0"
Light post	3'-0"



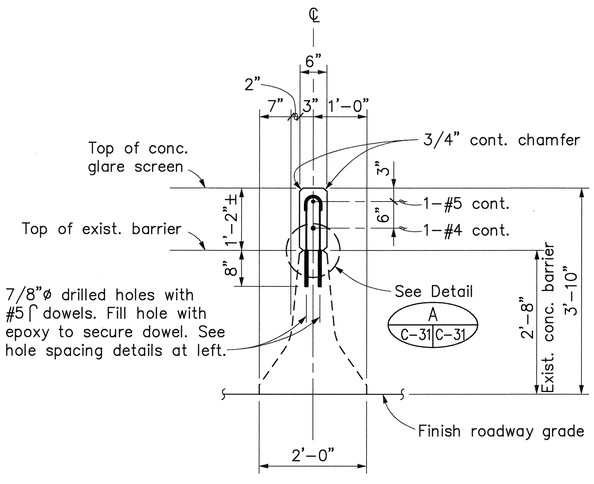
TYPICAL GUARDRAIL TRANSITION SECTION
Scale: 3/4" = 1'-0"

CONCRETE GLARE SCREEN AT SIGN BRIDGE AND HIGHWAY LIGHT STANDARD

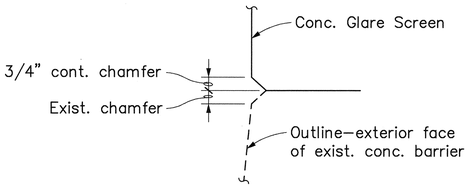


PLAN

ELEVATION
HOLE SPACING DETAILS
Not To Scale



TYPICAL SECTION
Scale: 3/4" = 1'-0"



DETAIL A C-31|C-31
Scale: 3" = 1'-0"

CONCRETE GLARE SCREEN ON EXISTING CONCRETE MEDIAN BARRIER
GUARDRAIL TYPE 4E

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

CAD by: M.HIGASHIHARA, 55-52

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

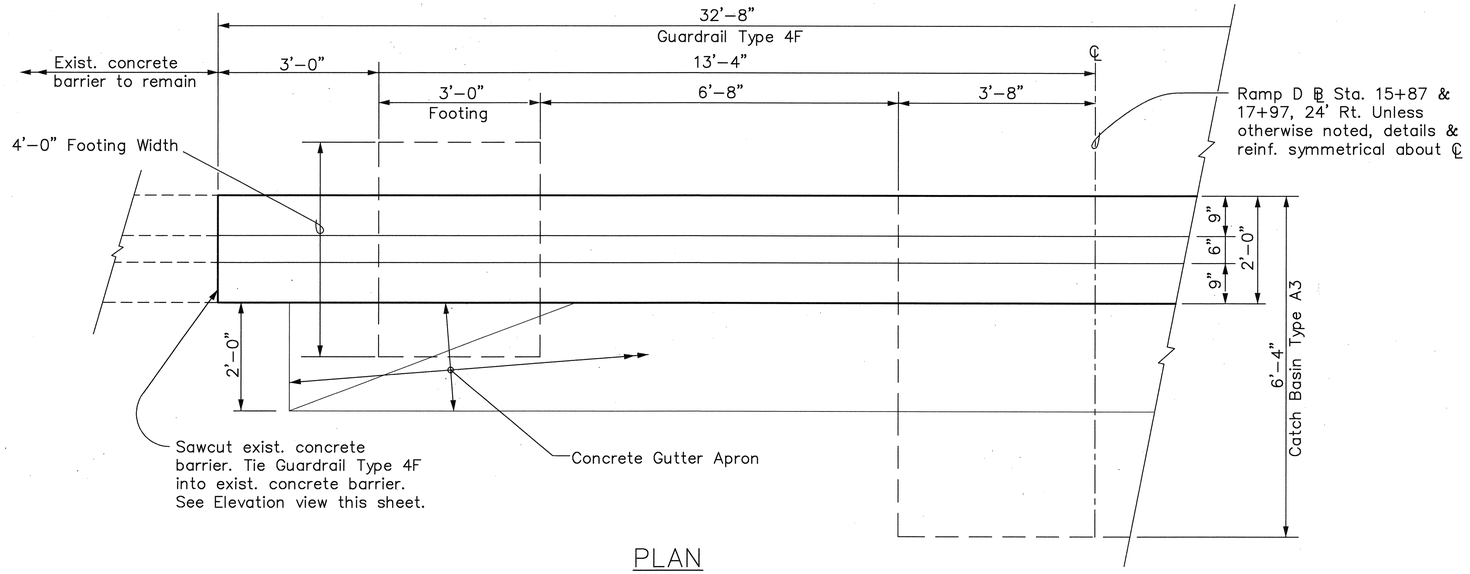
ROADWAY CONSTRUCTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

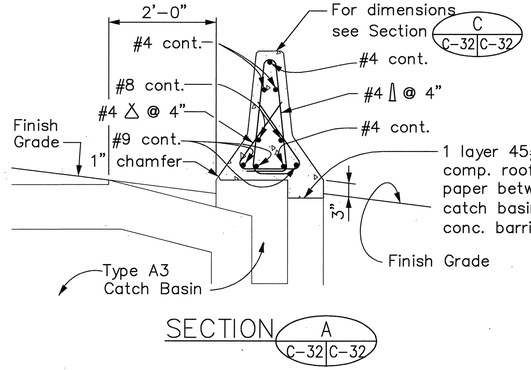
SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-31 OF 55 SHEETS

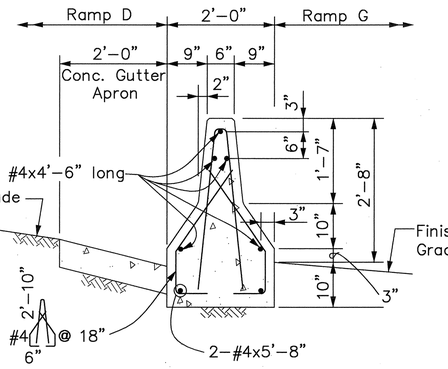
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	99	325



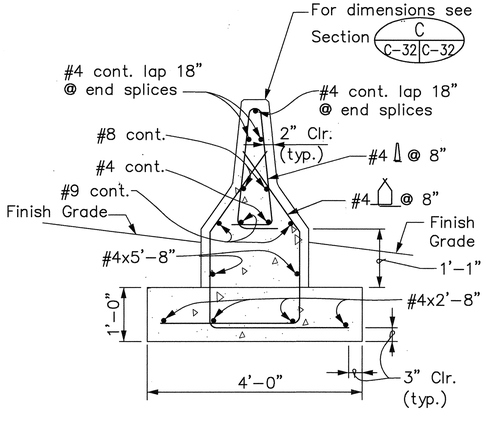
PLAN



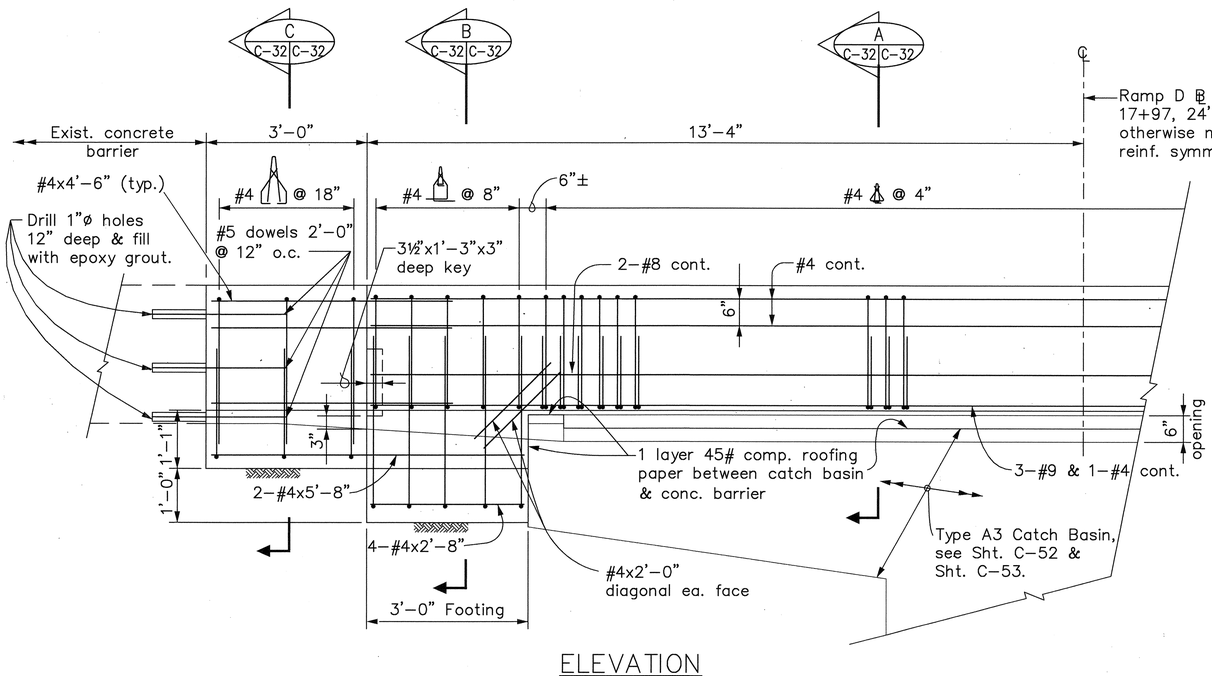
SECTION A C-32 C-32



SECTION C C-32 C-32



SECTION B C-32 C-32



ELEVATION

GUARDRAIL TYPE 4F CONCRETE BARRIER
RAMP D ℄ STA. 15+87 & 17+97, 24' RT.

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

CAD by W.HIGASHIHARA, 55-52

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

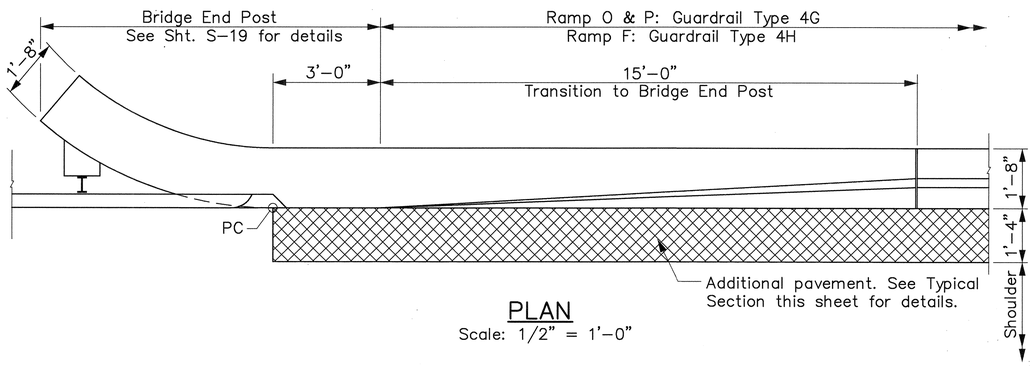
ROADWAY CONSTRUCTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

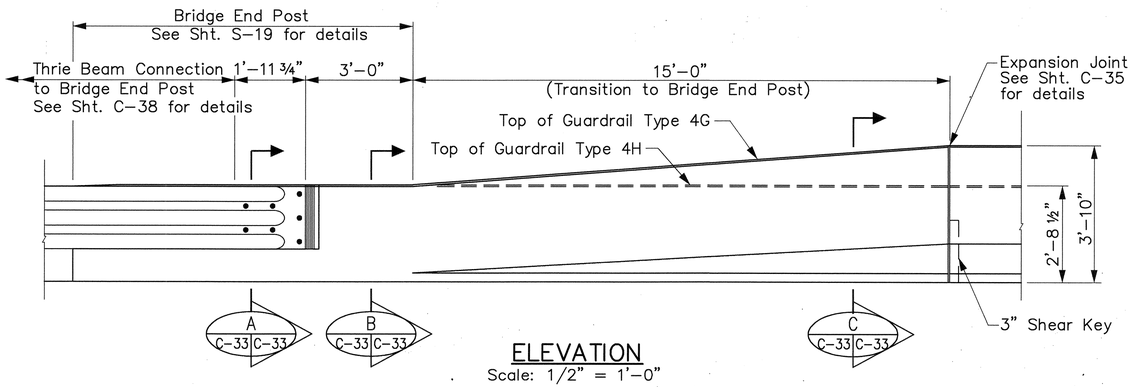
SCALE: 3/4' = 1'-0" DATE: AUGUST 1994

SHEET NO. C-32 OF 55 SHEETS

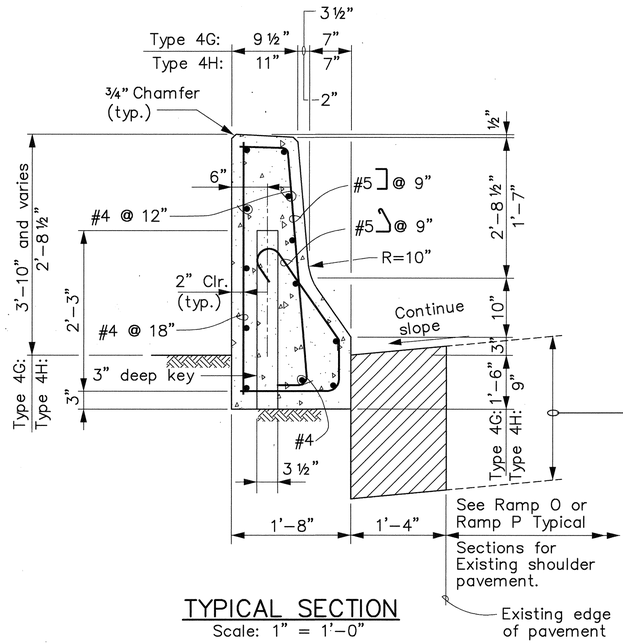
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	100	325



PLAN
Scale: 1/2" = 1'-0"

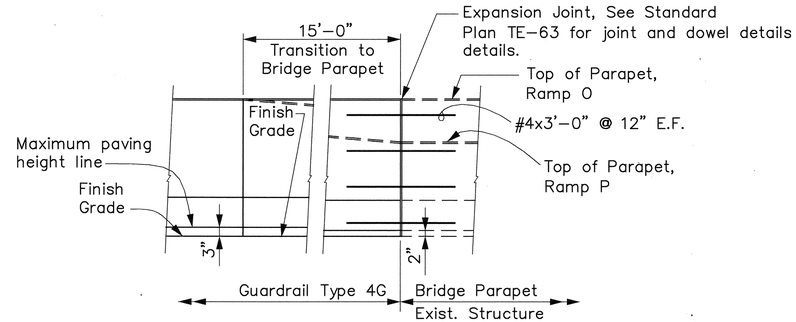


ELEVATION
Scale: 1/2" = 1'-0"



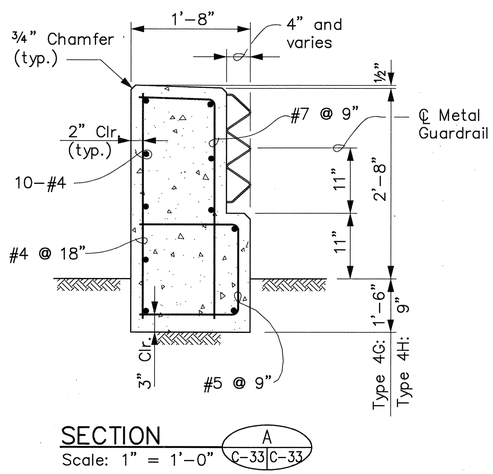
TYPICAL SECTION
Scale: 1" = 1'-0"

Ramp O	Ramp P
3 1/2" AC Mix IV	2 1/2" AC Mix IV
6" AC Base Course	7 3/4" Aggregate Base Course
4" Untreated Permeable Base Course	13 1/2" Aggregate Subbase
4 1/2" Aggregate Subbase	

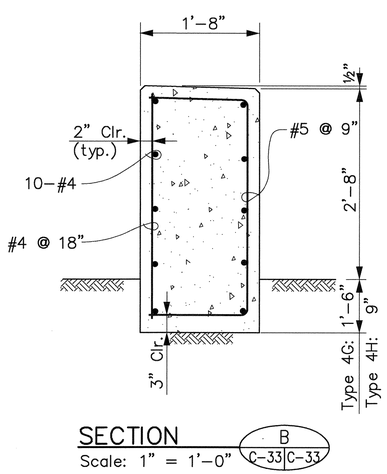


ELEVATION
Scale: 1/2" = 1'-0"

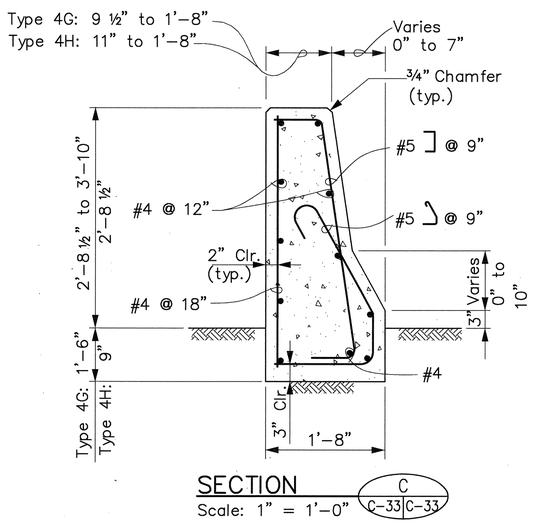
GUARDRAIL TYPE 4G
TRANSITION TO BRIDGE PARAPET



SECTION A
Scale: 1" = 1'-0"



SECTION B
Scale: 1" = 1'-0"



SECTION C
Scale: 1" = 1'-0"

GUARDRAIL TYPE 4G & 4H

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

CAD by W.HIGASHIHARA, 55-52

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

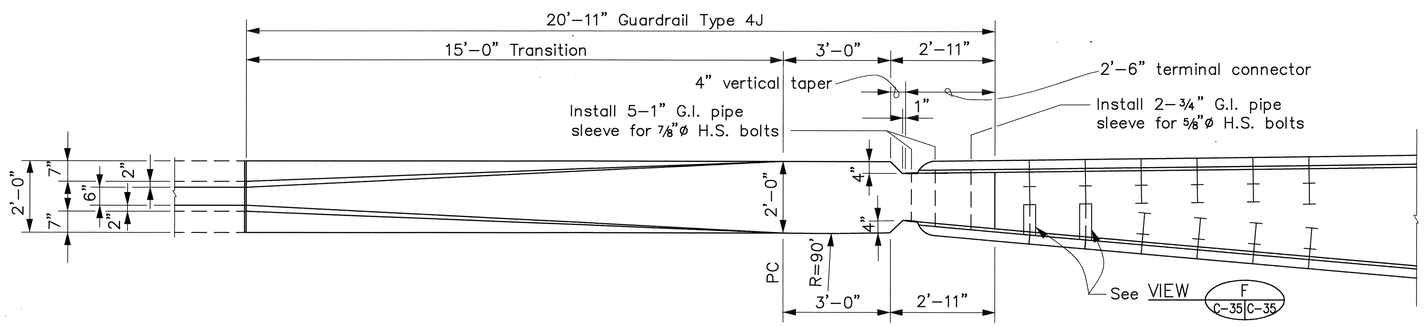
ROADWAY CONSTRUCTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

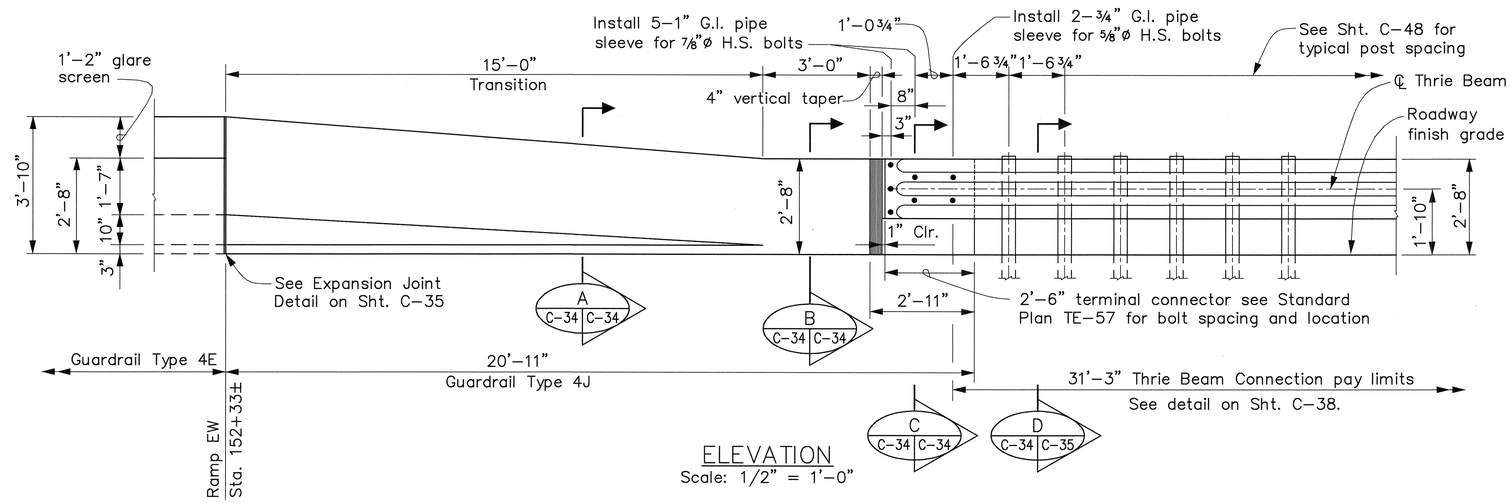
SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-33 OF 55 SHEETS

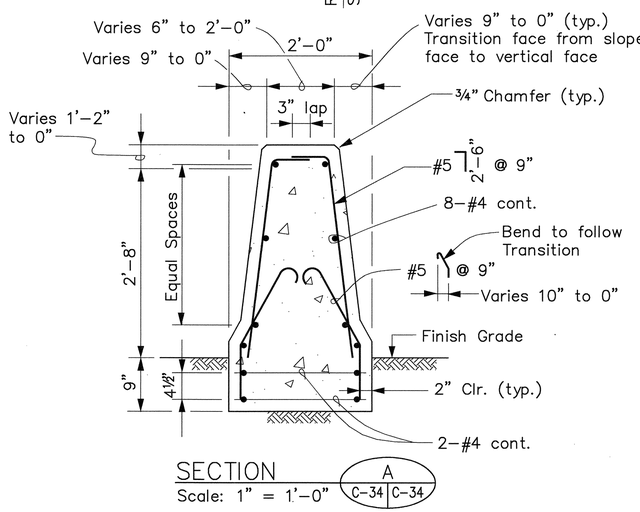
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	101	325



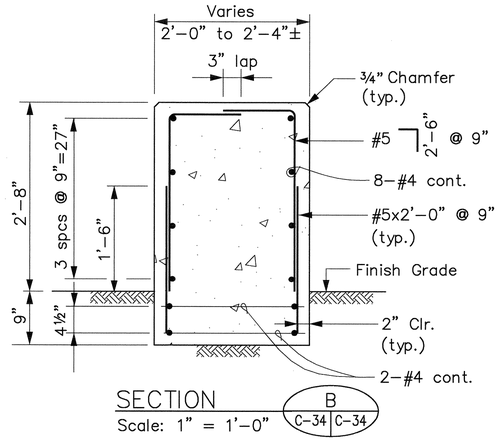
PLAN
Scale: 1/2" = 1'-0"



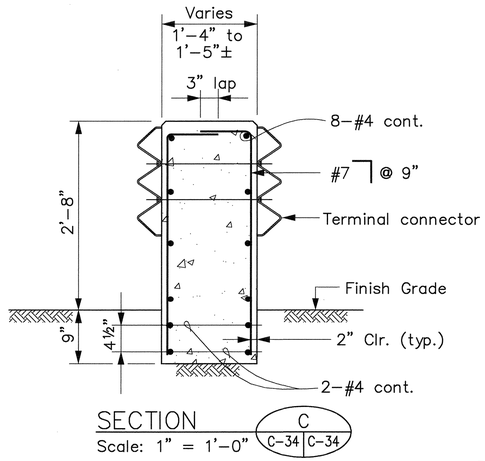
ELEVATION
Scale: 1/2" = 1'-0"



SECTION A
Scale: 1" = 1'-0"



SECTION B
Scale: 1" = 1'-0"



SECTION C
Scale: 1" = 1'-0"

GUARDRAIL TYPE 4J AND THRIE BEAM CONNECTION
RAMP EW STA. 152+33

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

CAD by W.HIGASHIHARA, 55-52

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION DETAILS

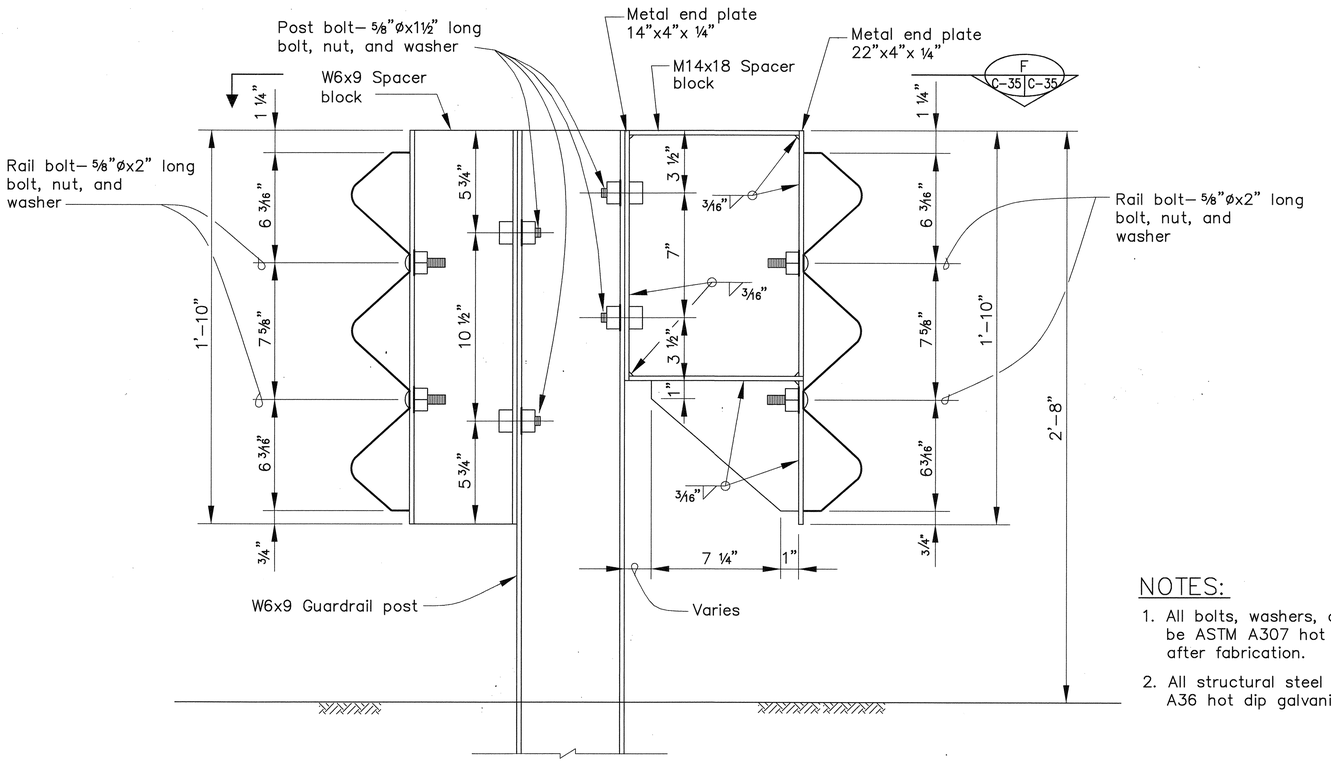
H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-34 OF 55 SHEETS

101

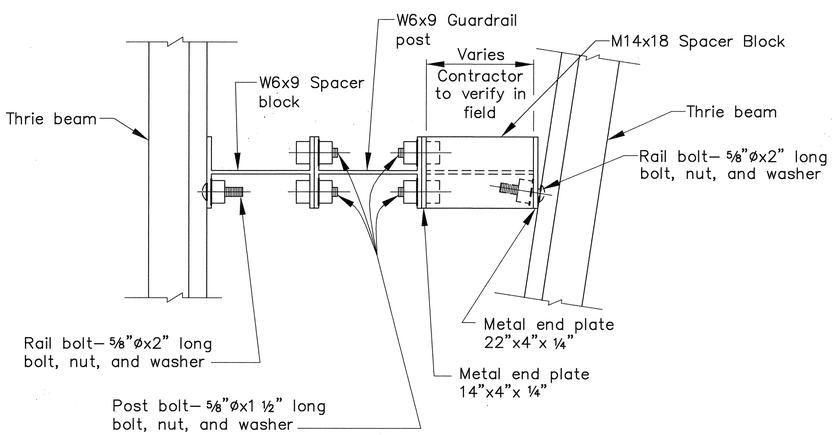
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	102	325



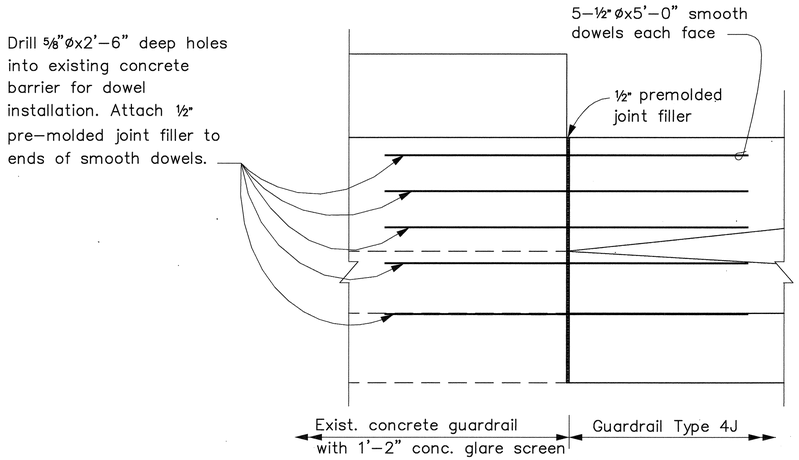
NOTES:

1. All bolts, washers, and nuts shall be ASTM A307 hot dip galvanized after fabrication.
2. All structural steel shall be ASTM A36 hot dip galvanized.

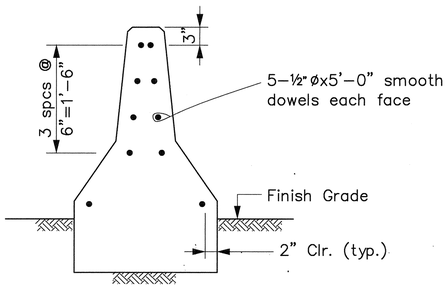
SECTION D (C-34 | C-35)
Scale: 3"=1'–0"



VIEW F (C-35 | C-35)
Scale: 3"=1'–0"



ELEVATION



TYPICAL SECTION

EXPANSION JOINT DETAIL

Scale: 1" = 1'–0"

GUARDRAIL TYPE 4J AND THRIE BEAM CONNECTION RAMP EW STA. 152+33

KEITH T. NAKANO
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION DETAILS

H–3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H–3
FAIP NO. I–H3–1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C–35 OF 55 SHEETS

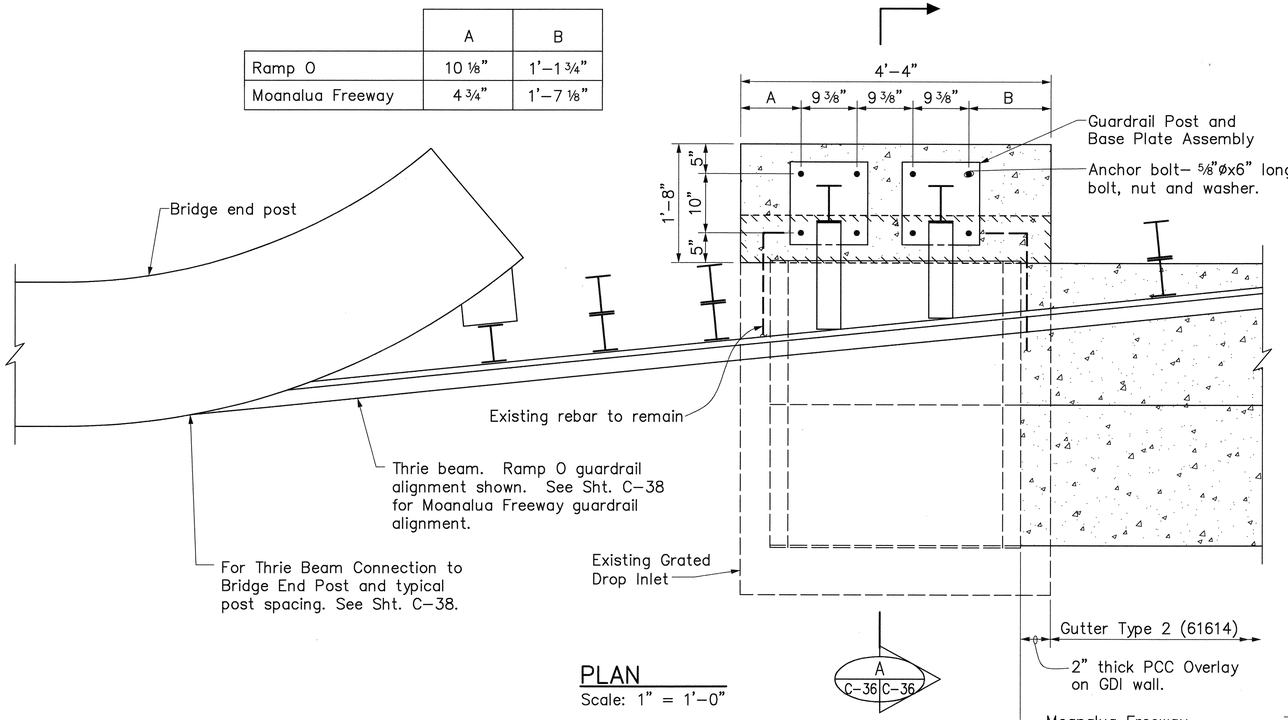
ORIGINAL PLAN
NOTE BOOK
No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

CAD by W.HIGASHIHARA, 55-52

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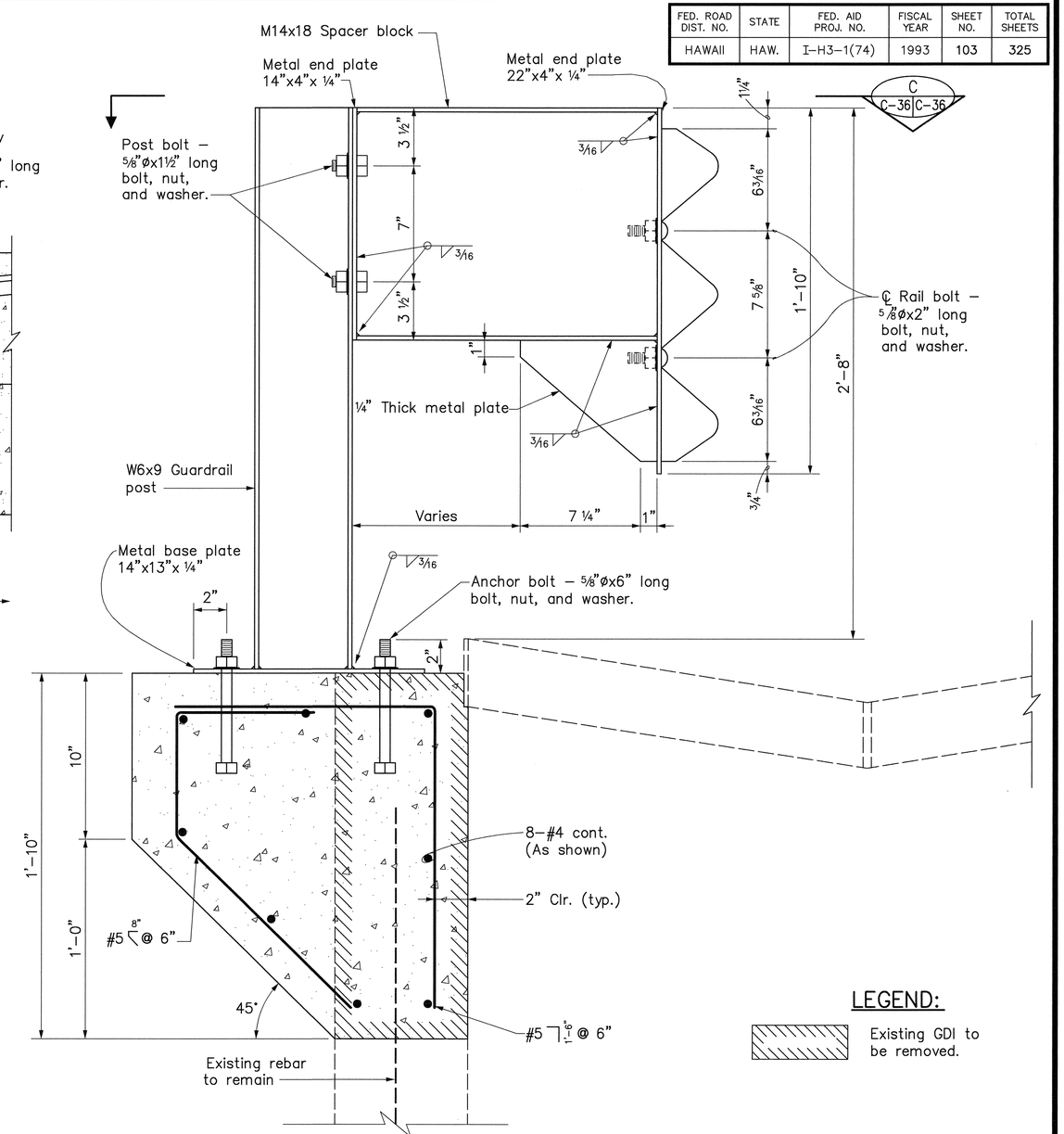
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	103	325

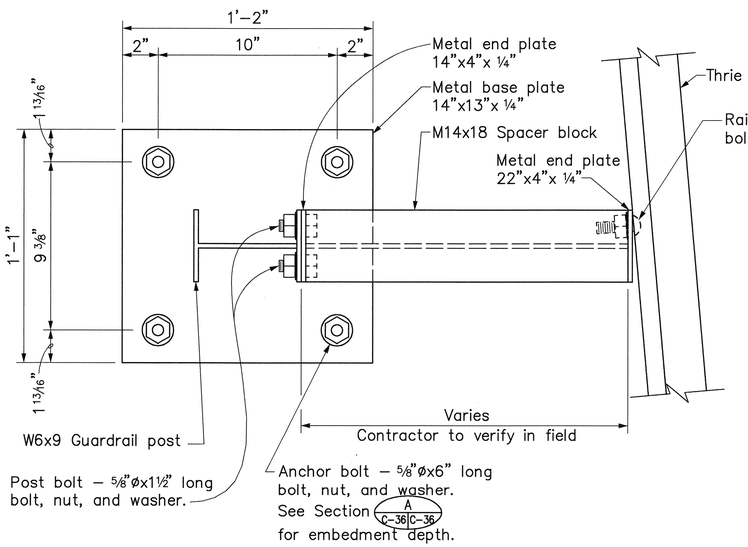
	A	B
Ramp O	10 1/8"	1'-1 3/4"
Moanalua Freeway	4 3/4"	1'-7 1/8"



PLAN
Scale: 1" = 1'-0"

A C-36 C-36





VIEW
Scale: 3" = 1'-0"

C C-36 C-36

NOTES:

1. All bolts, washers, and nuts shall be ASTM A307, hot dip galvanized after fabrication.
2. All structural steel shall be ASTM A36, hot dip galvanized.
3. All anchor bolts shall be high strength bolts conforming to the requirements of ASTM 325 and Special Provisions, Section 713.04.
4. Payment for all bolts, nuts, washers, metal end plates, and metal spacer blocks shall be considered incidental to Type 3 Guardrail and will not be paid for separately.

LEGEND:

Existing GDI to be removed.

SECTION
Scale: 3" = 1'-0"

A C-36 C-36

KEITH T. NAKANO
LICENSED PROFESSIONAL ENGINEER
No. 6670-C
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-36 OF 55 SHEETS

GRATED DROP INLET MODIFICATION FOR GUARDRAIL POST RAMP O STA. 14+10 AND MOANALUA FREEWAY STA. 190+79

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

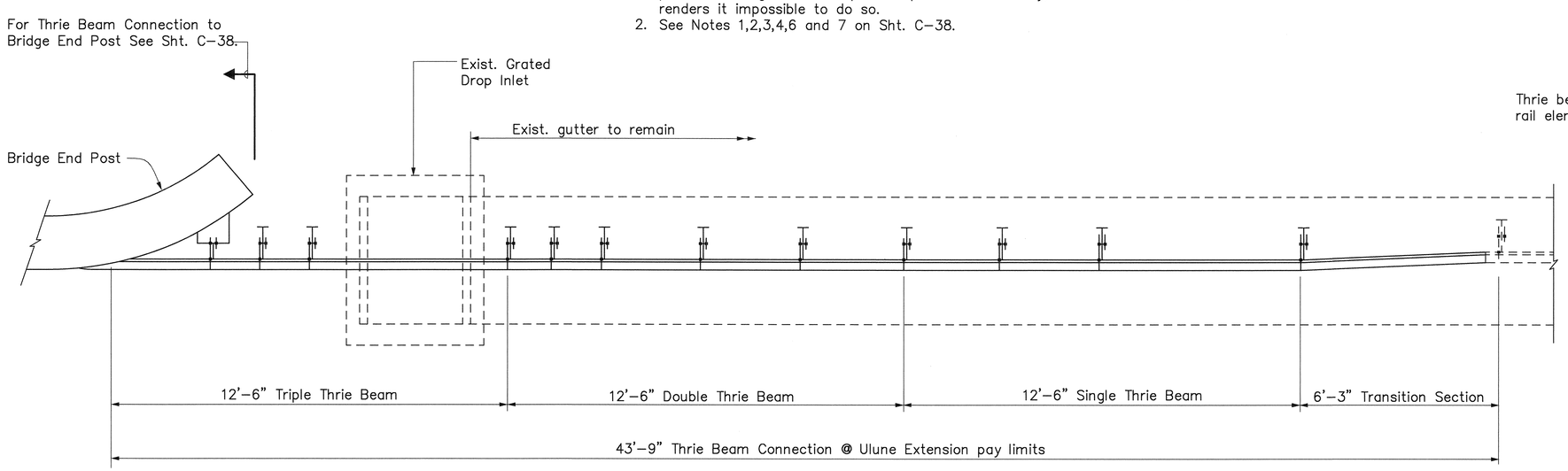
CAD by W.HIGASHIHARA, 55-52

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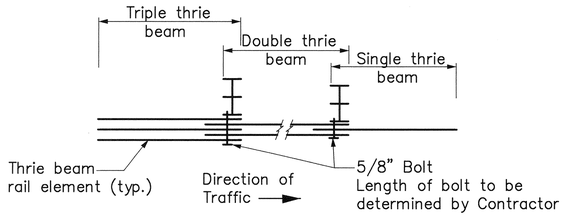
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	104	325

Notes:

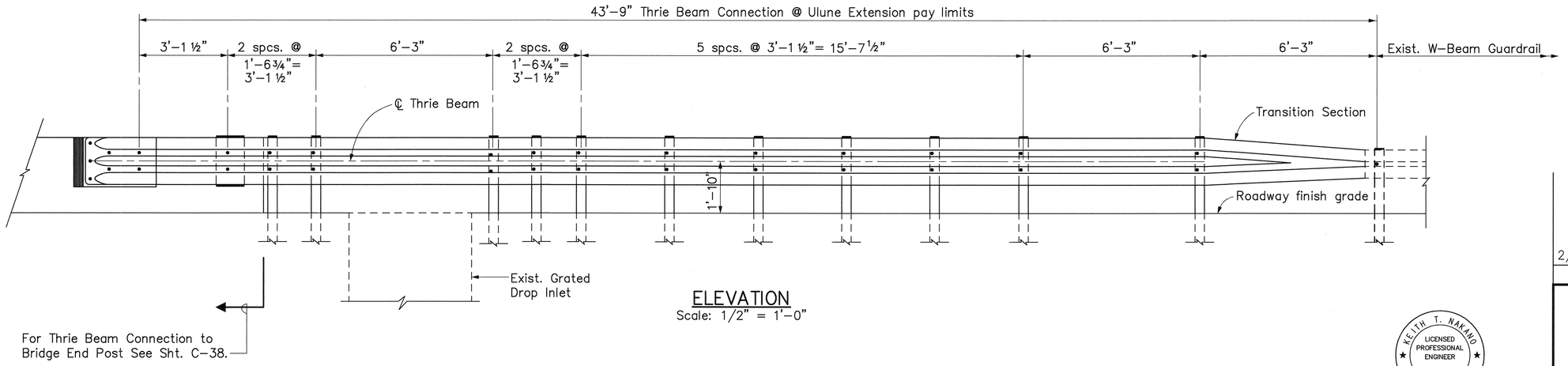
1. First 37'-6" of guardrail adjoining 'Terminal Connector' shall be of galvanized steel and supports spaced as shown on the detail drawings. This section of rail shall be placed on tangent to end post or parallel to roadway, unless conditions at site renders it impossible to do so.
2. See Notes 1,2,3,4,6 and 7 on Sht. C-38.



PLAN
Scale: 1/2" = 1'-0"



PLAN - THRIE BEAM LAP JOINT
N.T.S.



ELEVATION
Scale: 1/2" = 1'-0"

THRIE BEAM CONNECTION @ ULUNE EXTENSION STA. 19+18

DATE	REVISION
2/27/95	Added thrie beam lap joint detail

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-37 OF 55 SHEETS

KEITH T. NAKANO
LICENSED PROFESSIONAL ENGINEER
No. 6670-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

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

CAD by W.HIGASHIHARA, 55-52

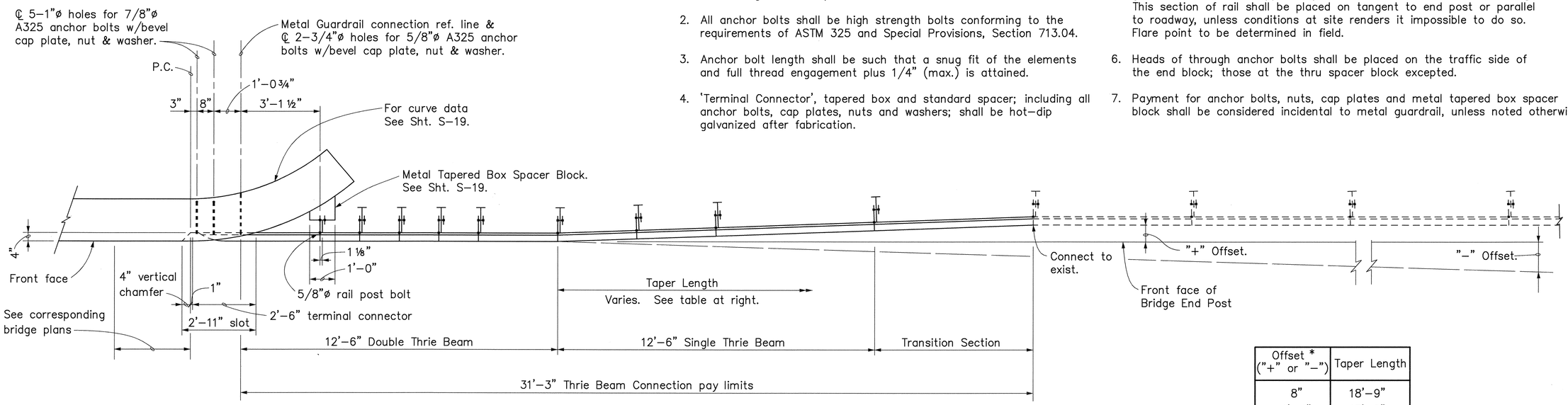
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ADD. 104

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	105	325

Notes:

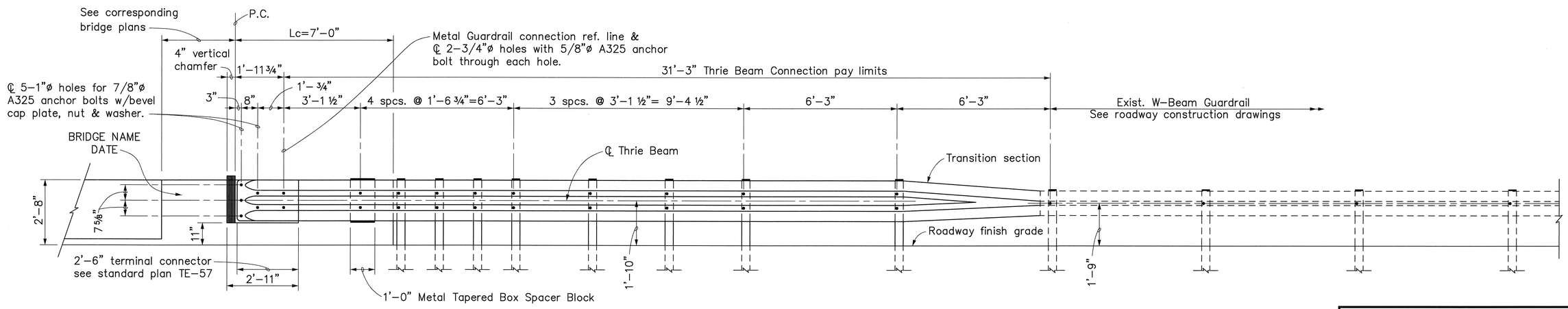
1. 'Terminal Connector' shall be fabricated from 10 gauge steel conforming to the requirements of AASHTO M180.
2. All anchor bolts shall be high strength bolts conforming to the requirements of ASTM 325 and Special Provisions, Section 713.04.
3. Anchor bolt length shall be such that a snug fit of the elements and full thread engagement plus 1/4" (max.) is attained.
4. 'Terminal Connector', tapered box and standard spacer; including all anchor bolts, cap plates, nuts and washers; shall be hot-dip galvanized after fabrication.
5. First 25'-0" of guardrail adjoining 'Terminal Connector' shall be of galvanized steel and supports spaced as shown on the detail drawings. This section of rail shall be placed on tangent to end post or parallel to roadway, unless conditions at site renders it impossible to do so. Flare point to be determined in field.
6. Heads of through anchor bolts shall be placed on the traffic side of the end block; those at the thru spacer block excepted.
7. Payment for anchor bolts, nuts, cap plates and metal tapered box spacer block shall be considered incidental to metal guardrail, unless noted otherwise.



PLAN
Scale: 1/2" = 1'-0"

Offset * ("+" or "-")	Taper Length
8"	18'-9"
1'-4"	43'-9"

* Thrie Beam Bridge End Post connection and transition shall not be offset when immediately preceeded by a BCT.



ELEVATION
Scale: 1/2" = 1'-0"

THRIE BEAM CONNECTION TO BRIDGE END POST AND TRANSITION TO W-BEAM GUARDRAIL

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

CAD by W.HIGASHIHARA, 55-52

Last Saved: G:\HALAWA\DET\THRIE.dwg 11/21/94 at 07:49

KEITH T. NAKANO
LICENSED PROFESSIONAL ENGINEER
No. 6670-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION DETAILS

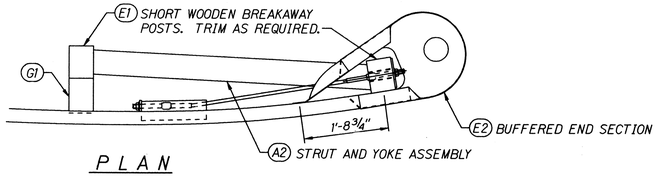
H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

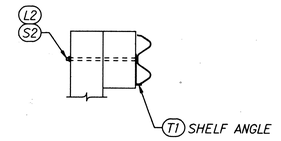
SHEET NO. C-38 OF 55 SHEETS

105

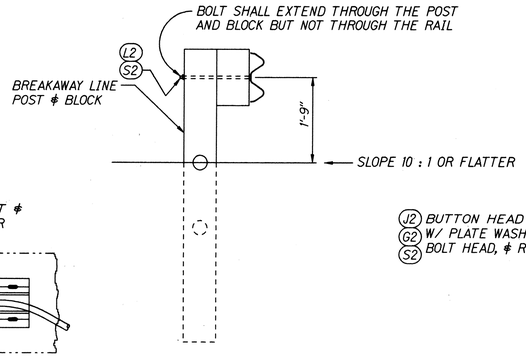
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	105S-1	325



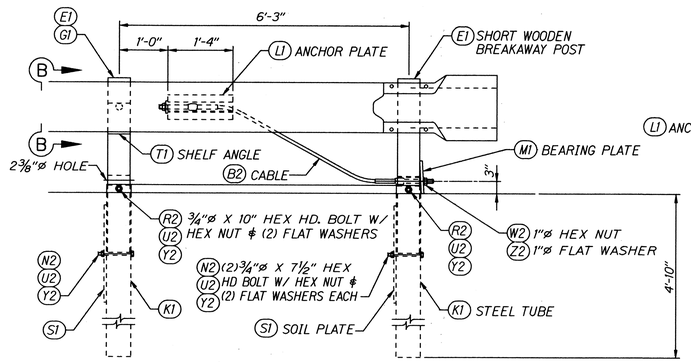
PLAN



SECTION B - B

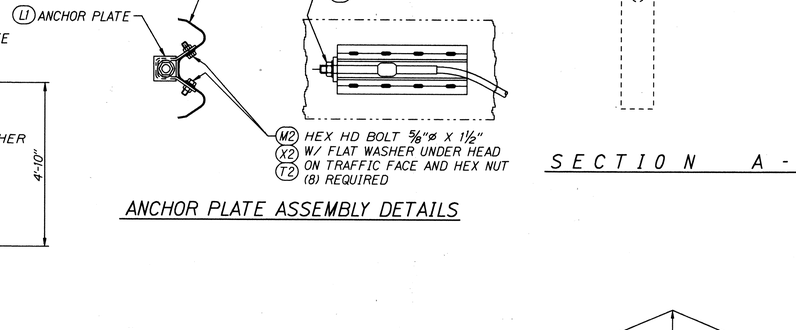


SECTION A - A

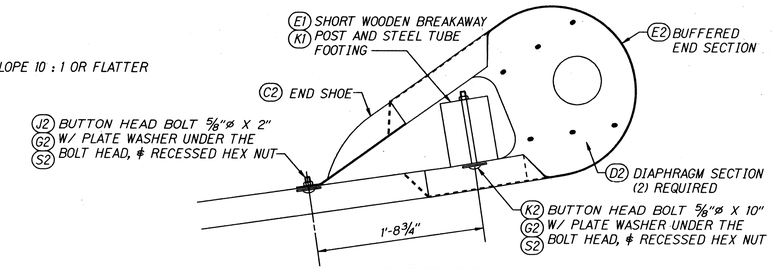


ELEVATION

BUFFERED END & ANCHORAGE ASSEMBLY



ANCHOR PLATE ASSEMBLY DETAILS



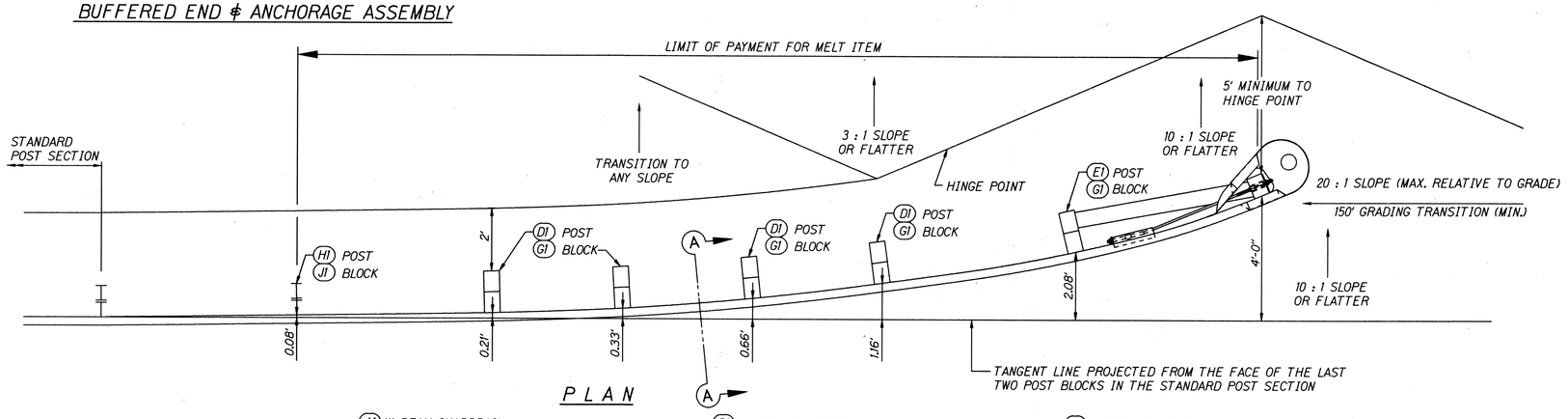
BUFFERED END ASSEMBLY

NOTES

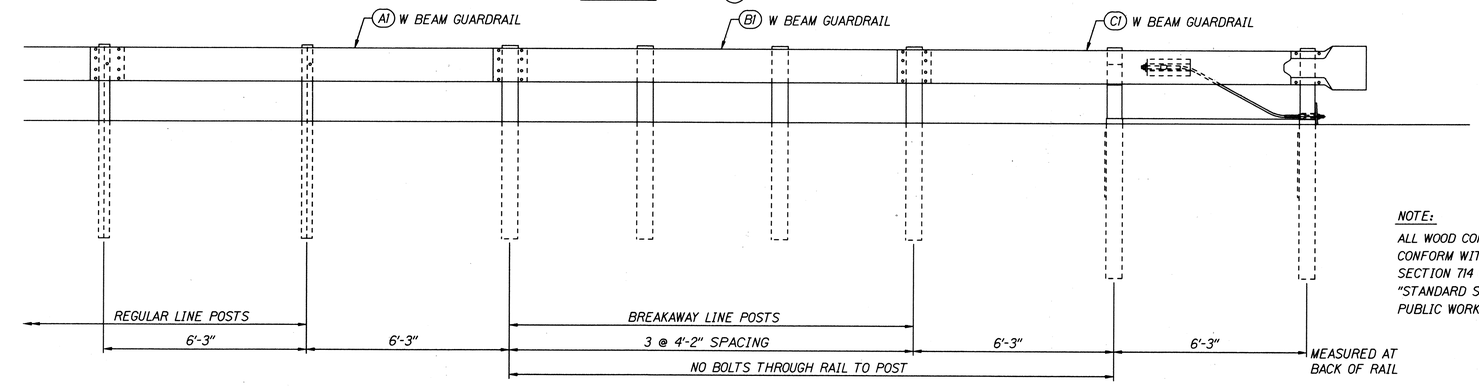
1. THE POST OFFSET DIMENSIONS ARE GIVEN TO THE CENTER OF THE TRAFFIC FACE OF THE BLOCKOUTS, EXCEPT AT THE FIRST POST, WHERE THE DIMENSION IS TO THE CENTER OF THE TRAFFIC FACE OF THE POST. OFFSET POINTS ARE TO BE LOCATED BY CHORD MEASUREMENTS AT THE BACK OF THE RAIL EQUAL TO THE NOMINAL POST SPACINGS SHOWN. POSTS ARE TO BE SET APPROXIMATELY RADIAL TO THE RAILING AT EACH POST LOCATION.

SUMMARY OF COMPONENTS

FIND NO.	DESCRIPTION
A1	GUARDRAIL, 12GA X 12'-6"
B1	GUARDRAIL, 12GA X 12'-6"
C1	GUARDRAIL, 12GA X 12'-6"
D1	BREAKAWAY LINE POST, TIMBER - 6" X 8" X 6'-0"
E1	BREAKAWAY POST, TIMBER - 5½" X 7½" X 3'-6½"
G1	BLOCK, TIMBER - 5½" X 7½" X 1'-2"
H1	POST - W6 X 8.5 X 6'-0"
J1	BLOCK - W6 X 8.5 X 1'-2"
K1	SOIL TUBE - TS 8 X 6 X .188 X 5'-0"
L1	CABLE ANCHOR BRACKET
M1	BEARING PLATE
R1	PIPE SPACER
S1	SOIL PLATE
T1	SHELF ANGLE
A2	STRUT & YOKE ASSEMBLY
B2	CABLE ASSEMBLY
C2	END SHOE
D2	DIAPHRAGM PLATE
E2	BUFFERED END SECTION
G2	WASHER, PLATE
H2	BOLT, SPLICE ⅝"ø X 1¼"
J2	BOLT, POST ⅝"ø X 2"
K2	BOLT, POST ⅝"ø X 10"
L2	BOLT, POST ⅝"ø X 18"
M2	BOLT, HEX ⅝"ø X 1½"
N2	BOLT, HEX ¾"ø X 7½"
R2	BOLT, HEX ¾"ø X 10"
S2	NUT, HEX, RECESSED ⅝"ø
T2	NUT, HEX ⅝"ø
U2	NUT, HEX ¾"ø
W2	NUT, HEX 1"ø
X2	WASHER, FLAT ⅝"ø
Y2	WASHER, FLAT ¾"ø
Z2	WASHER, FLAT 1"ø



PLAN



ELEVATION

NOTE:

ALL WOOD COMPONENTS SHALL BE TREATED TO CONFORM WITH ANY OF THE ACCEPTED METHODS IN SECTION 714 OF THE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND PUBLIC WORKS CONSTRUCTION", 1994.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MODIFIED ECCENTRIC LOADER TERMINAL (MELT)

POST LAYOUT & ERECTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I H3-1(74)

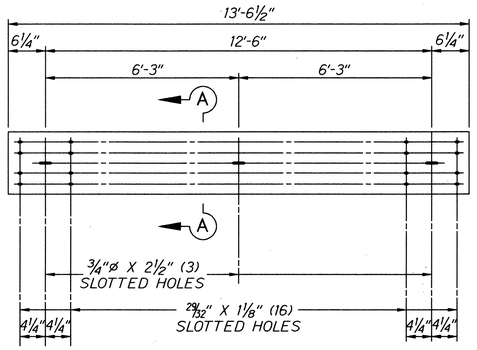
Not to Scale Date: Feb., 1995

SHEET No. C-38 OF 55 SHEETS

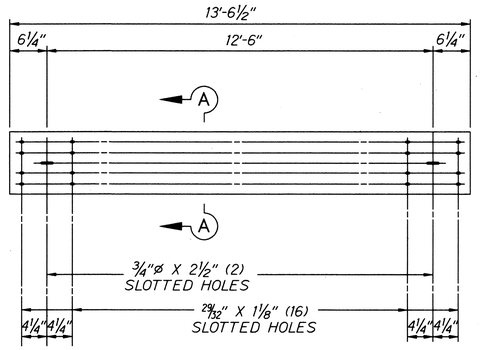
137218

ADD. 105 S-1

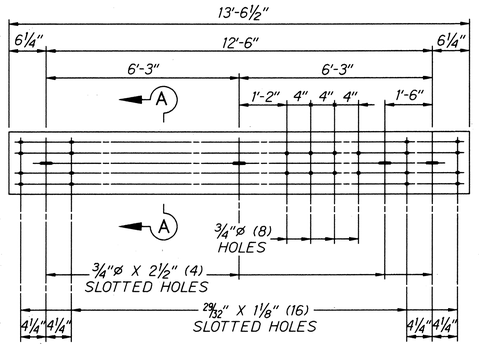
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	105S-2	325



ONE - GUARDRAIL - A1



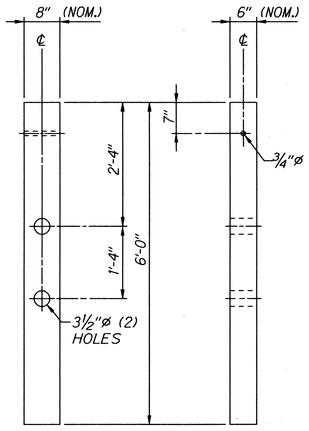
ONE - GUARDRAIL - B1



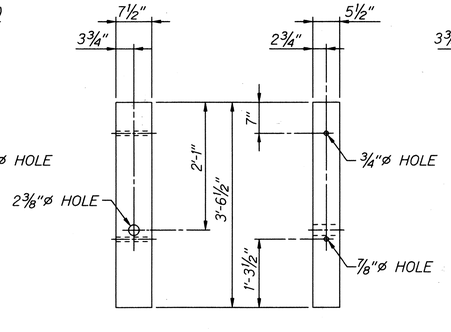
ONE - GUARDRAIL - C1



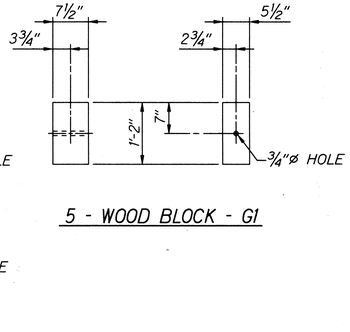
FIND No.	PIECE MARK	MATERIAL	LENGTH FEET	LENGTH INCHES	WEIGHT	UNIT WEIGHT	REMARKS
A1		GUARDRAIL, W-BEAM				95.0	A123
		12 GA. W-BEAM GUARDRAIL	12	6	89.0		M180
B1		GUARDRAIL, W-BEAM				95.0	A123
		12 GA. W-BEAM GUARDRAIL	12	6	89.0		M180
C1		GUARDRAIL, W-BEAM				95.0	A123
		12 GA. W-BEAM GUARDRAIL	12	6	89.0		M180
D1		BREAKAWAY LINE POST				88.0	
		TIMBER POST 6 X 8	6	0	352.0		M168
E1		BREAKAWAY POST, SHORT				44.6	
		TIMBER POST 5½X 7½	3	6½	89.2		M168
G1		BLOCK				16.8	
		TIMBER BLOCK 5½X 7½	1	2	84.0		M168
H1		POST				54.9	A123
		W6 X 8.5	6	0	52.0		A36
J1		BLOCK				11.0	A123
		W6 X 8.5	1	2	10.1		A36
K1		SOIL TUBE				88.9	A123
		TS 8 X 6 X .1875	5	0	170.8		A500B
L1		CABLE ANCHOR BRACKET				19.3	A123
	a	PL¼X 12⅜	1	4	17.6		A36
	b	PL½X 2¾	0	3	1.17		A36
M1		BEARING PLATE				11.9	A123
	c	PL⅝X 8	0	8	11.3		A36
	d	PL3/16X 1	0	8	0.4		A36
R1		POST SLEEVE				1.76	A123
		PIPE 2ø STD	0	5½	1.67		A53
S1		SOIL PLATE				84.8	A123
		PL¼X 24	2	0	40.8		A36
T1		SHELF ANGLE				3.7	A123
		PL¼X 6	0	8½	3.61		A36



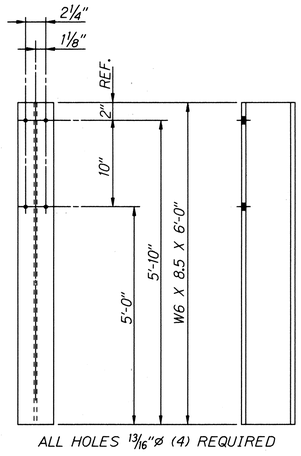
4 - WOOD POST - D1



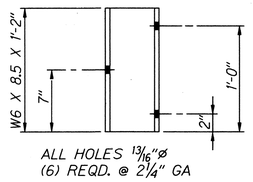
2 - WOOD POST - E1



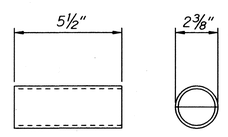
5 - WOOD BLOCK - G1



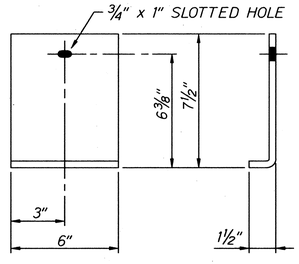
ONE - POST - H1



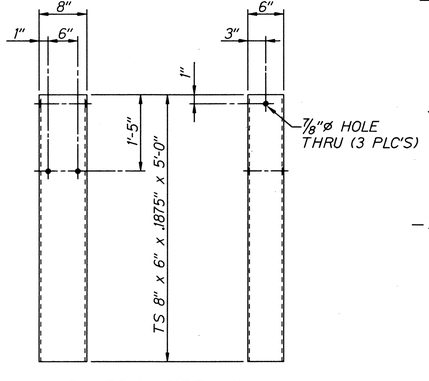
ONE - BLOCK - J1



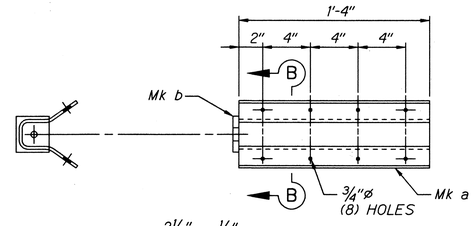
ONE - PIPE SPACER - R1

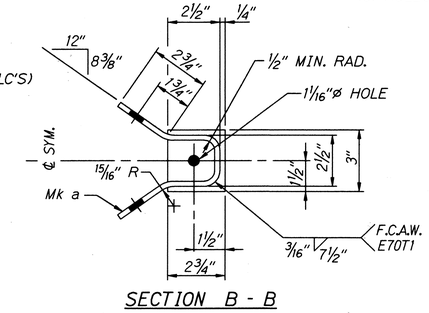


ONE - SHELF ANGLE - T1



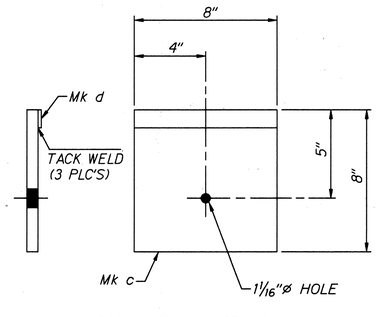
2 - SOIL TUBE - K1



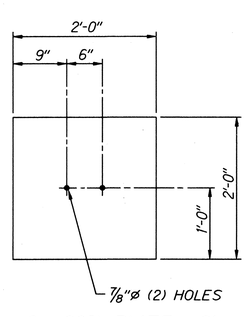


SECTION B - B

ONE - CABLE ANCHOR BRACKET - L1



ONE - BEARING PLATE - M1



2 - SOIL PLATE - S1

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

ORIGINAL PLAN — NOTE BOOK — No.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MODIFIED ECCENTRIC LOADER TERMINAL (MELT)

COMPONENT DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

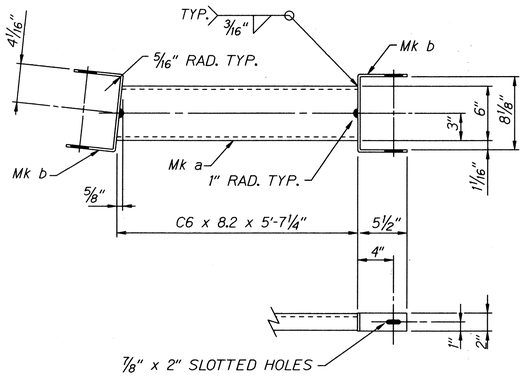
Not to Scale — Date: Feb., 1995

SHEET No. C-38 OF 55 SHEETS

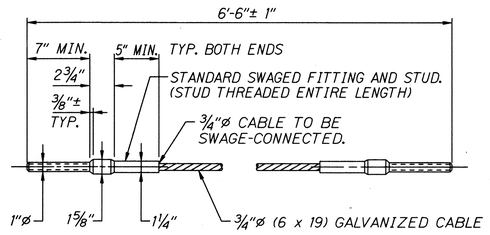
137218

ADD. 105 S-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	105S-3	325



ONE - STRUT AND YOKE ASSEMBLY - A2



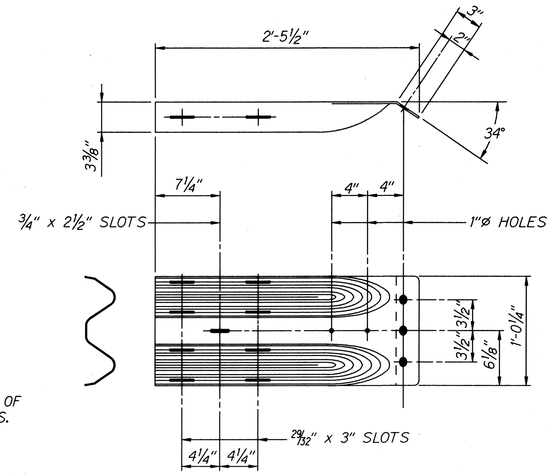
NOTES:

THE STUD SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A449 AND SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A153. THE THREADS SHALL HAVE A CLASS 2A FIT BEFORE GALVANIZING.

WIRE ROPE SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. M-30 AND SHALL BE 3/4-INCH PREFORMED, 6 x 19, WIRE STRAND CORE OR INDEPENDENT WIRE ROPE CORE (IWRC), GALVANIZED, RIGHT REGULAR LAY, MANUFACTURED OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 46,000 POUNDS.

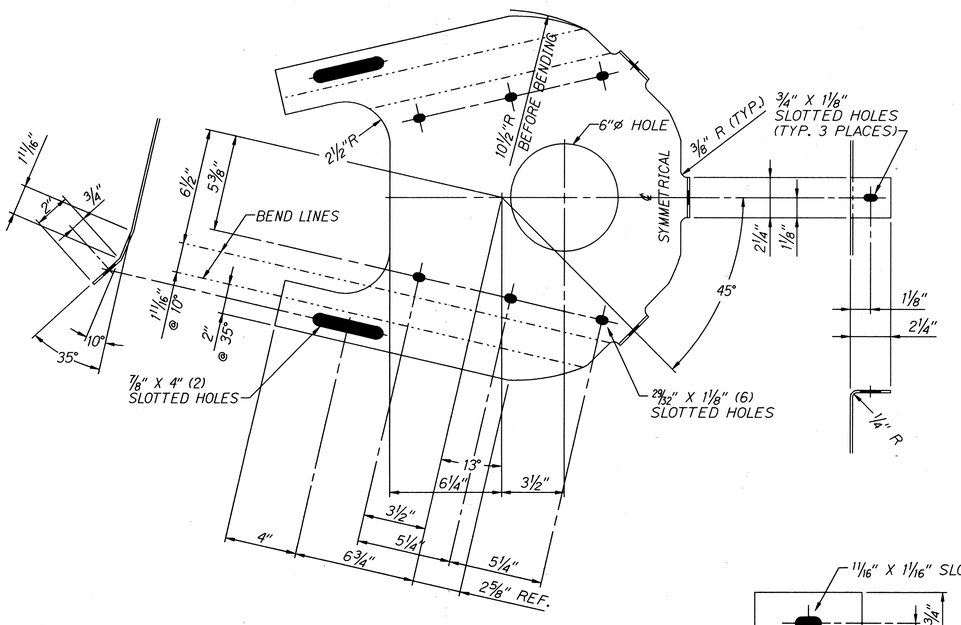
THE SWAGED FITTING, STUD, AND NUT SHALL DEVELOP THE BREAKING STRENGTH OF THE WIRE ROPE.

ONE - CABLE ASSEMBLY - B2

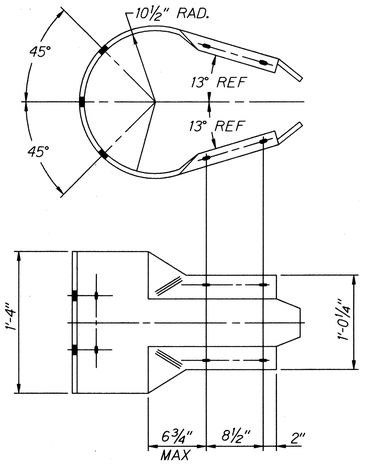


ONE - END SHOE - C2

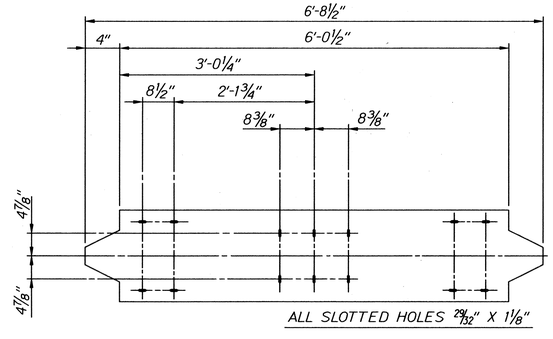
MATERIAL SCHEDULE							
FIND No.	PIECE MARK	MATERIAL	LENGTH FEET	LENGTH INCHES	WEIGHT	UNIT WEIGHT	REMARKS
A2		STRUT AND YOKE ASSEMBLY				52.0	A123
	a	C6 X 8.2	5	7 1/4	46.0		A36
	b	BAR 2 X 3/16	1	6 3/4	4.0		A36
B2		CABLE ASSEMBLY				9.6	SEE NOTES
		3/4"ø CABLE ASSEMBLY	6	6			SEE DETAIL
C2		END SHOE				23.1	A123
		PL 10 GA. X 19 1/8	2	6	21.9		M180
D2		DIAPHRAGM PLATE				9.7	A123
		PL 12 GA. X 21	2	1 5/8	32.6		M180
E2		BUFFERED END SECTION				37.5	A123
		PL 12 GA. X 16	6	8 1/2	39.0		M180
G2		WASHER, PLATE				.22	A123
		PL 3/16 X 1 3/4	0	3	.56		A36
		HARDWARE					
H2		BOLT, SPLICE 5/8ø x 1 1/4				6.3	A307 A153
J2		BOLT, POST 5/8ø X 2				.44	A307 A153
K2		BOLT, POST 5/8ø X 10				.88	A307 A153
L2		BOLT, POST 5/8ø X 18				7.75	A307 A153
M2		BOLT, HEX 5/8ø X 1 1/2				2.04	A307 A153
N2		BOLT, HEX 3/4ø X 7 1/2				4.2	A307 A153
R2		BOLT, HEX 3/4ø X 10				2.66	A307 A153
S2		NUT, HEX, RECESSED 5/8ø				7.31	A563 A153
T2		NUT, HEX 5/8ø				1.3	A563 A153
U2		NUT, HEX 3/4ø				.72	A563 A153
W2		NUT, HEX 1ø				.57	A563 A153
X2		WASHER, FLAT 5/8ø				.75	F844 A123
Y2		WASHER, FLAT 3/4ø				.95	F844 A123
Z2		WASHER, FLAT 1ø				.29	F844 A123



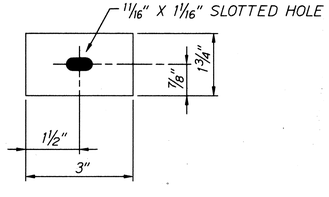
2 - DIAPHRAGM PLATE - D2



ONE - BUFFERED END SECTION - E2



BUFFERED END SECTION, FLAT PLATE LAYOUT



2 - WASHERS, PLATE - G2

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MODIFIED ECCENTRIC LOADER TERMINAL (MELT)

COMPONENT DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

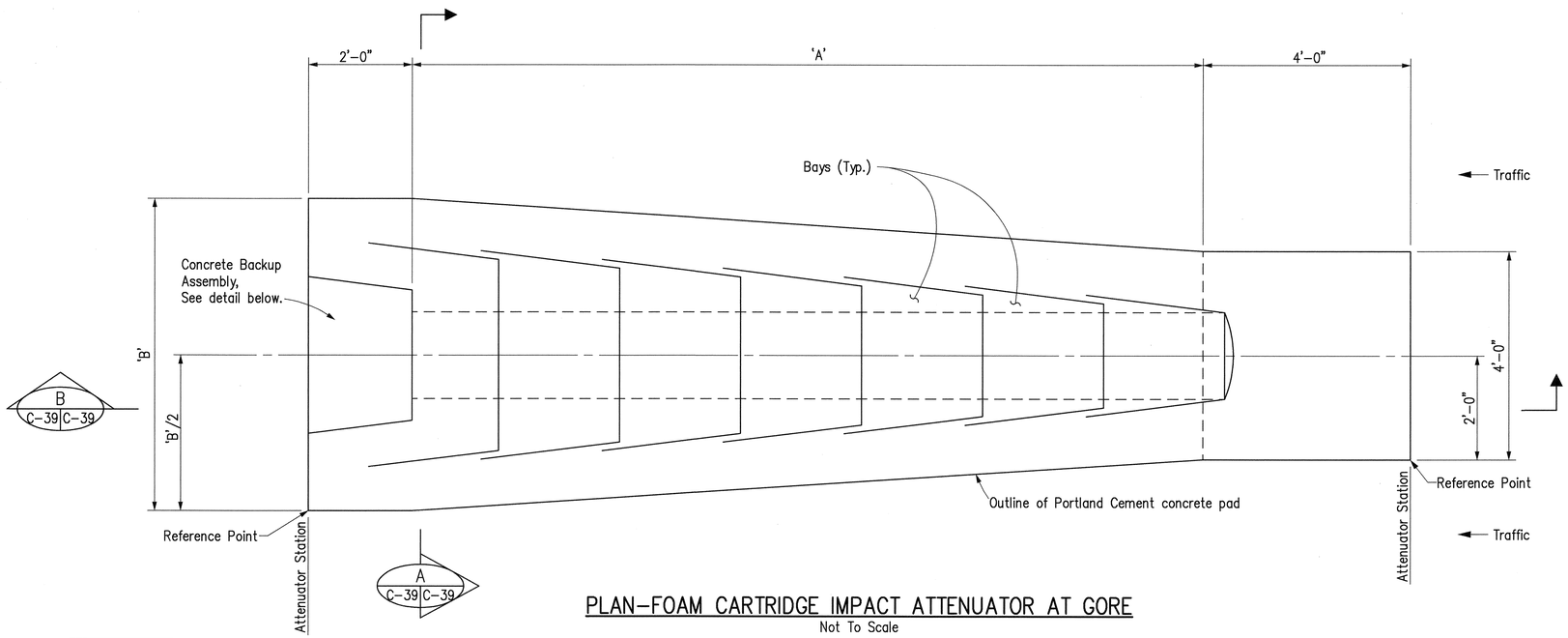
Not to Scale — Date: Feb., 1995

SHEET No. C-38 OF 55 SHEETS

137218

ADD. 105S-3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	106	325

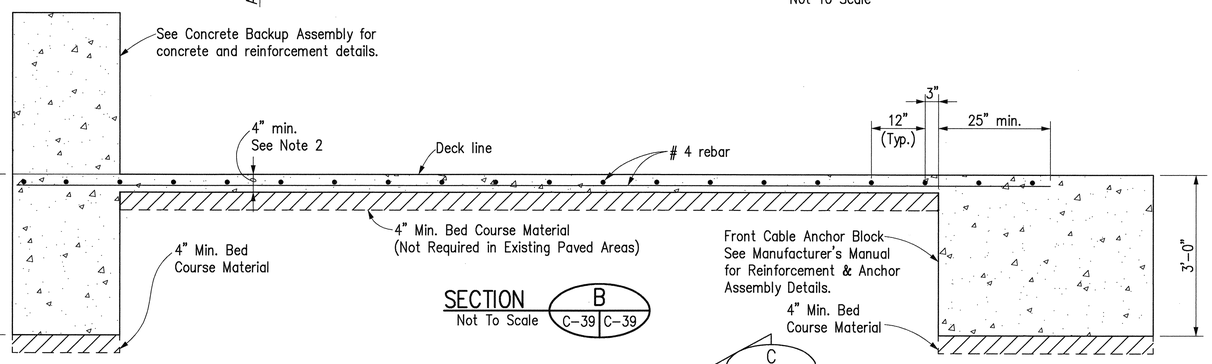


PLAN-FOAM CARTRIDGE IMPACT ATTENUATOR AT GORE
Not To Scale

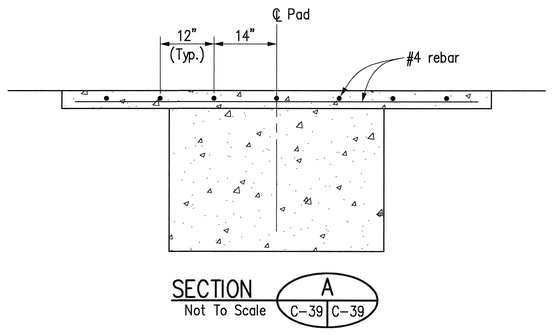
Unit Location	Unit Size	'A'	'B'	'C'	'D'	'E'
Ramp O, Sta. 11+22	7 bays	16'-5"	10'-0"	7'-6"	2'-6"	3'-9"
Ramp P, Sta. 13+65	9 bays	20'-11"	10'-0"	7'-6"	2'-8¾"	3'-9"

Notes:

1. Cross slope of pad shall not exceed 5% and not vary more than 2% from front to back.
2. 4" min. reinforced 4000 PSI concrete pad or 8" min. non-reinforced 4000 PSI concrete roadway.
3. Vertical reinforcement in front face shall be 7-#6 rebars. All other reinforcement shall be #5 rebars at 12" centers.
4. Maximum overturning moment at deckline will be approximately 2000 KIP in. for durations of 4± milliseconds.
5. Use items ⑥ ⑦ & ⑧ to attach vinyl tubes to both sides of backup.
6. Mechanical type anchors may be substituted in horizontal applications. The substituted anchors shall be the same diameter and shall have the following minimum pullout strength: 3/8"ø-2760 LBS.

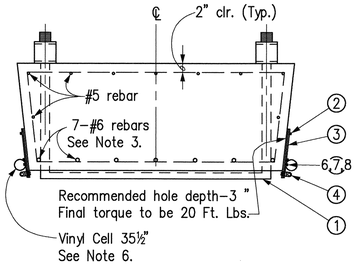


SECTION B C-39 C-39
Not To Scale

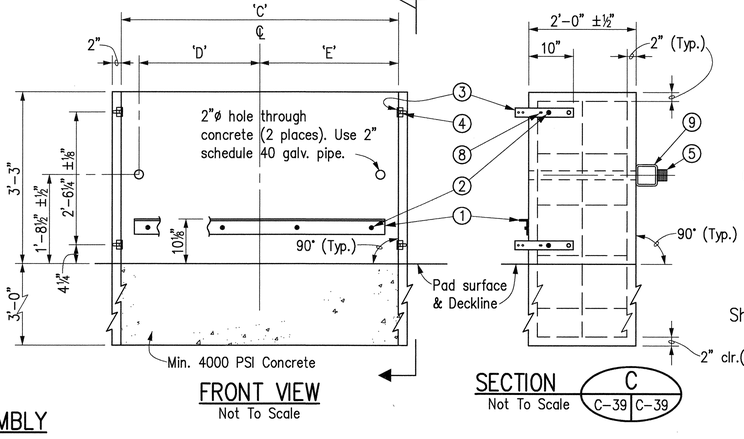


SECTION A C-39 C-39
Not To Scale

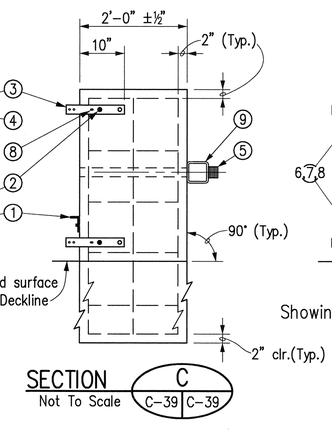
C C-39 C-39



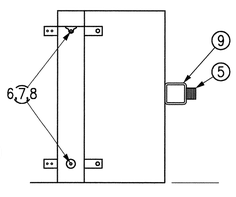
TOP VIEW
Not To Scale



FRONT VIEW
Not To Scale



SECTION C C-39 C-39
Not To Scale



SIDE VIEW
Showing Side Cell Attachment
Not To Scale

Item	Description
①	Bracket, Cartridge, Support
②	Anchor, 3/8x4
③	Strap, Mounting, 12 3/4
④	Clamp, Wire Rope, 3/8, Galv.
⑤	Washer, Bar, 3x3x1/4, Galv.
⑥	Bolt, Cr, 5/16x3/4, Galv.
⑦	Washer, Flat, 5/16x7/8, Galv.
⑧	Nut, Hx, 5/16, Galv.
⑨	Shim, Restraining Cable, Conc. B/U

NOTE: The above is a partial hardware list. Refer to manufacturer's manual for full hardware listing and installation requirements.

CONCRETE BACKUP ASSEMBLY

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

CAD by W.HIGASHIHARA, 55-52

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KEITH T. NAKANO
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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION DETAILS

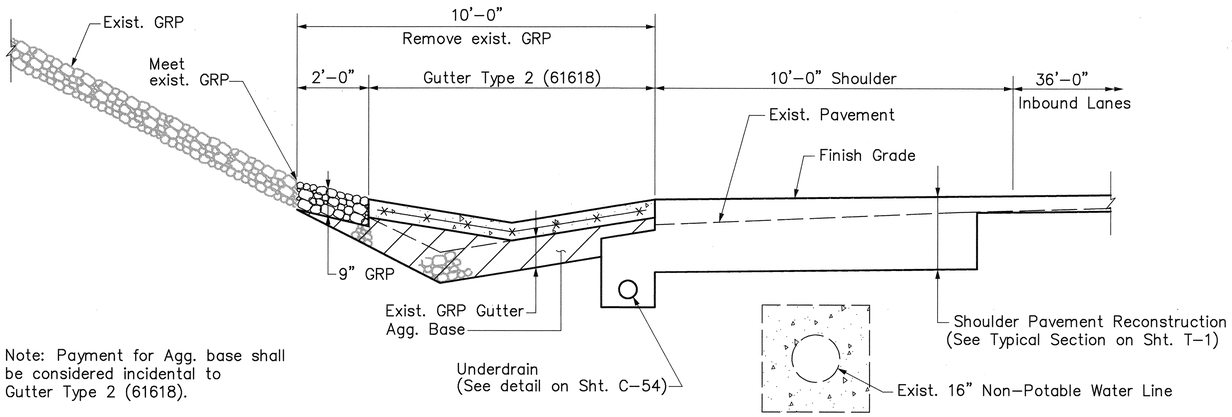
H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-39 OF 55 SHEETS

106

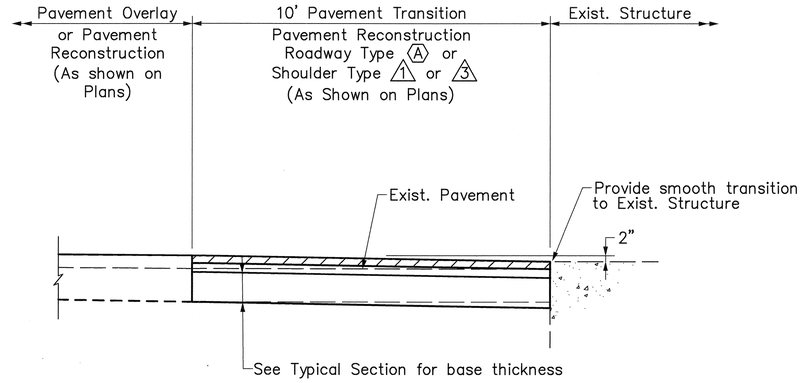
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	107	325



Note: Payment for Agg. base shall be considered incidental to Gutter Type 2 (61618).

GRP GUTTER RECONSTRUCTION

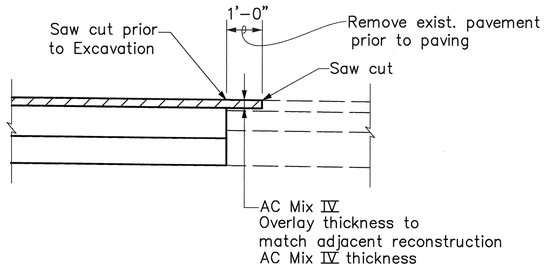
Scale: ½" = 1'-0"



PAVEMENT TRANSITION TO EXIST. STRUCTURES

Scale: ½" = 1'-0"

'B', BASE THICKNESS				
MATERIALS	H-3	Ramp M	Ramp ES	Ramp EW
ROADWAY PAVEMENT (A)				
AC Base	6 ½"	3 ½"	4"	5"
SHOULDER PAVEMENT				
Aggregate Base (Type 1)	6 ½"	3 ½"	4"	5"
Untreated Permeable Base (Type 3)	18"	12"	18"	12"



PAVEMENT INTERFACE DETAIL

(Longitudinal or Transverse Interface)

Scale: ½" = 1'-0"

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

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HIGHWAYS DIVISION

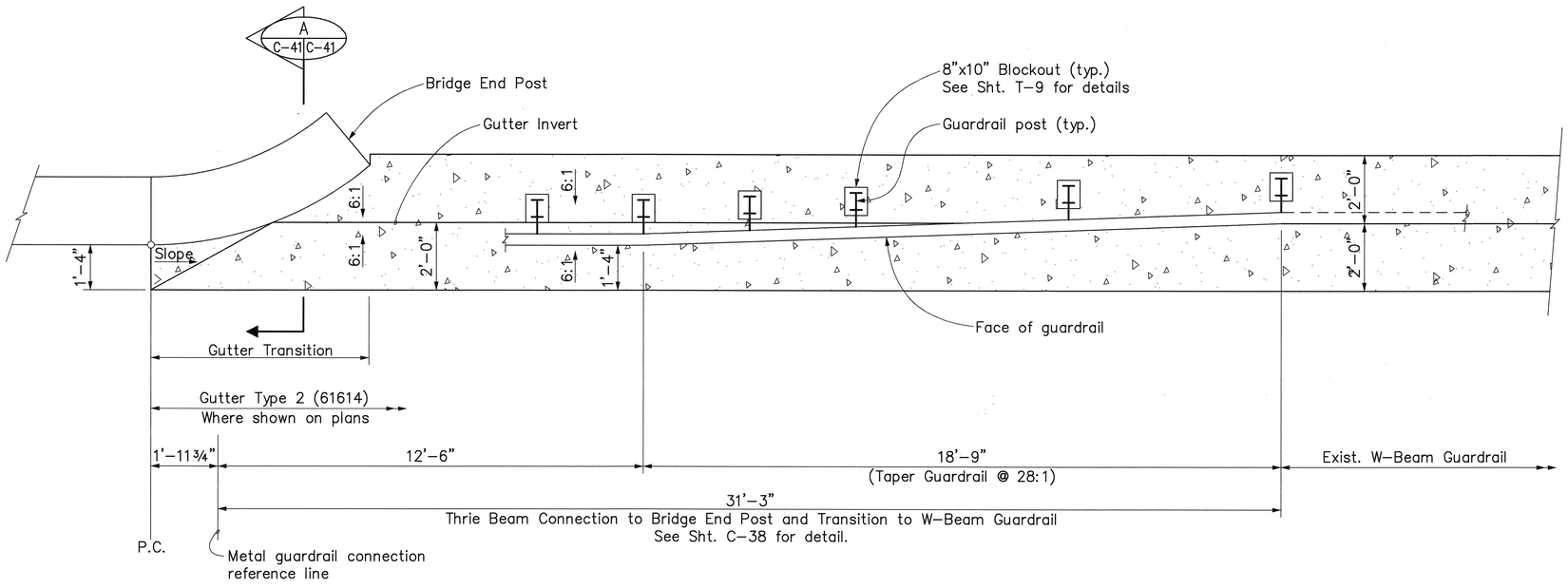
ROADWAY CONSTRUCTION DETAILS

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

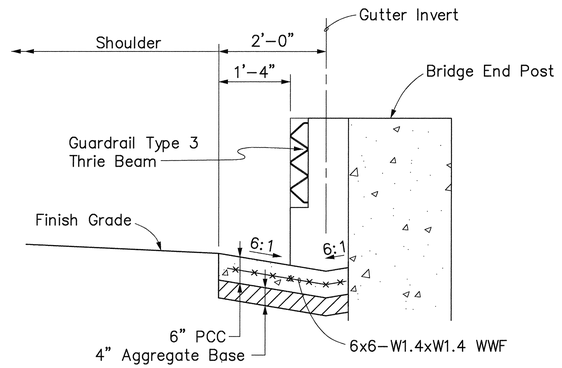
SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-40 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	108	325



PLAN
Scale: 1/2" = 1'-0"



SECTION A
Scale: 3/4" = 1'-0"

GUTTER TYPE 2 (61614) AT BRIDGE END POST

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

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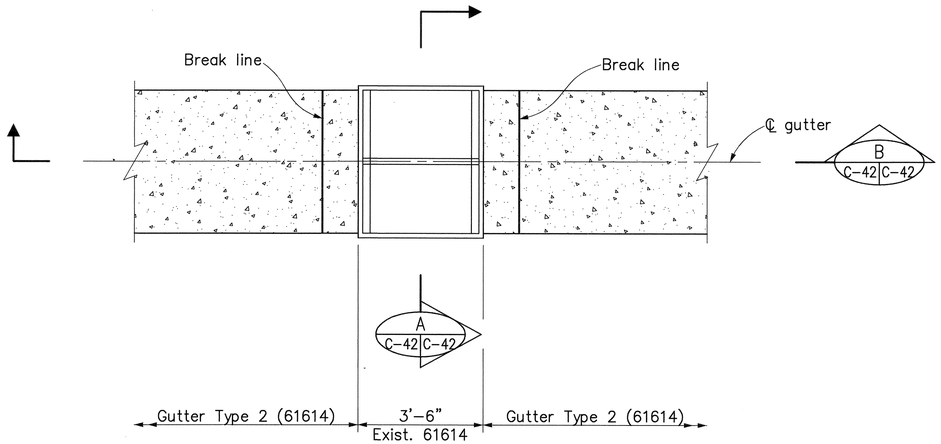
ROADWAY CONSTRUCTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

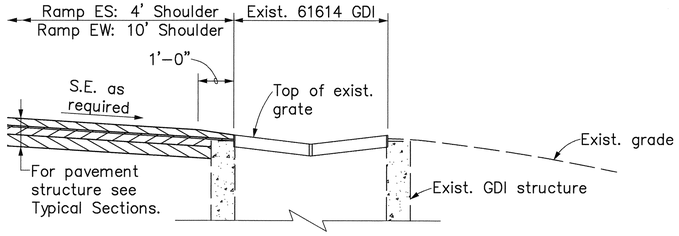
SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-41 OF 55 SHEETS

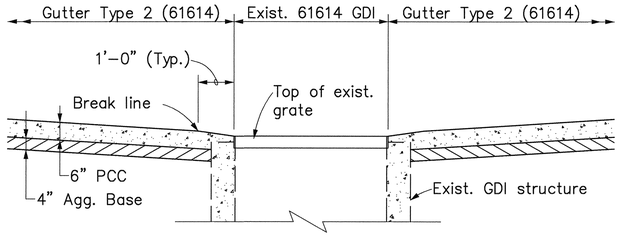
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	109	325



PLAN
Scale: 1/2"=1'-0"



SECTION A
Scale: 1/2"=1'-0"
C-42 C-42



SECTION B
Scale: 1/2"=1'-0"
C-42 C-42

GUTTER AT EXISTING TYPE 61614 GRATED DROP INLET

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

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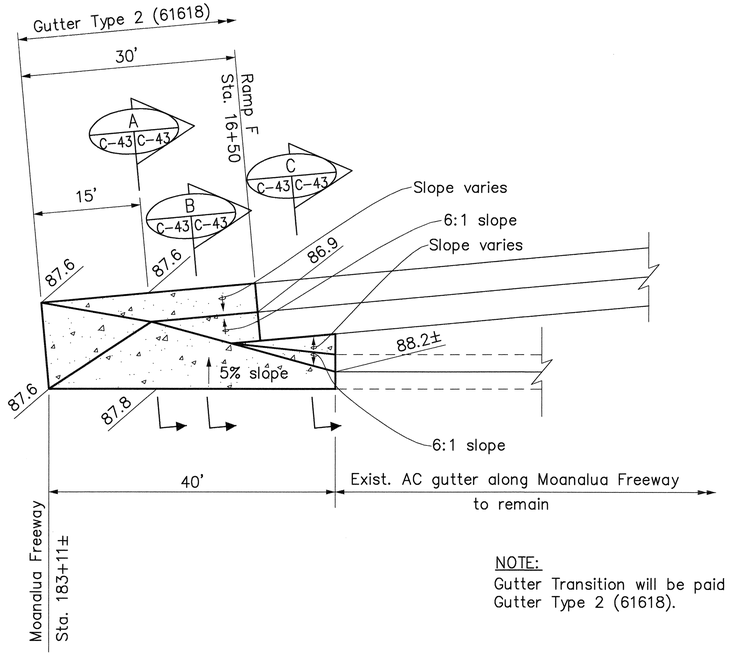
ROADWAY CONSTRUCTION DETAILS

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

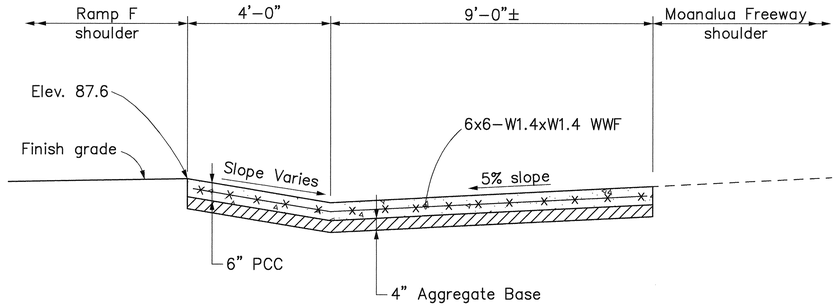
SHEET NO. C-42 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	110	325

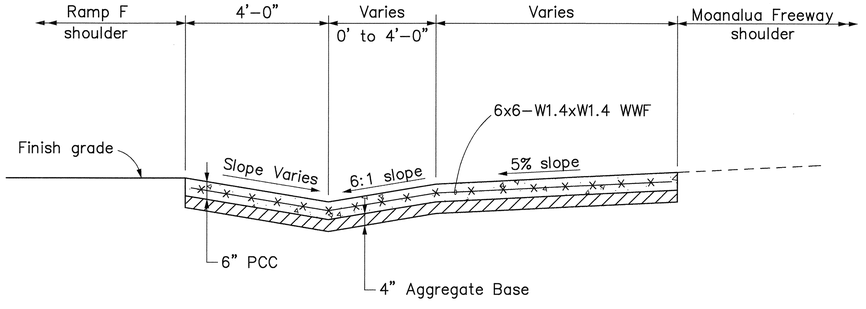


NOTE:
Gutter Transition will be paid for under Gutter Type 2 (61618).

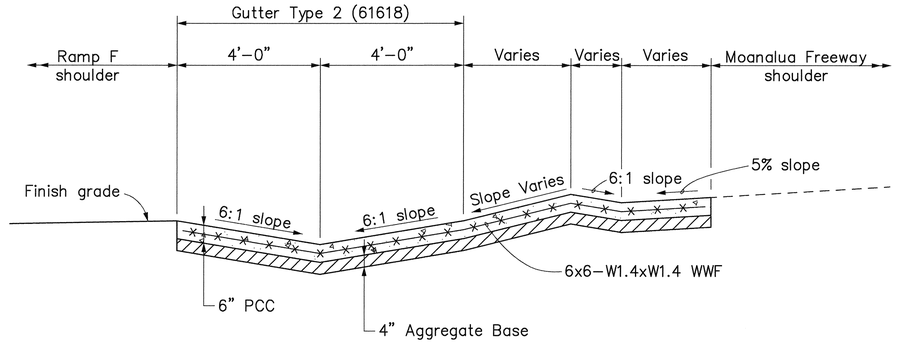
PLAN
Scale: 1" = 10'-0"



SECTION A (C-43 | C-43)
Scale: 1/2" = 1'-0"



SECTION B (C-43 | C-43)
Scale: 1/2" = 1'-0"



SECTION C (C-43 | C-43)
Scale: 1/2" = 1'-0"

GUTTER TRANSITION BETWEEN RAMP F & MOANALUA FREEWAY

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

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HIGHWAYS DIVISION

ROADWAY CONSTRUCTION DETAILS
RAMP F

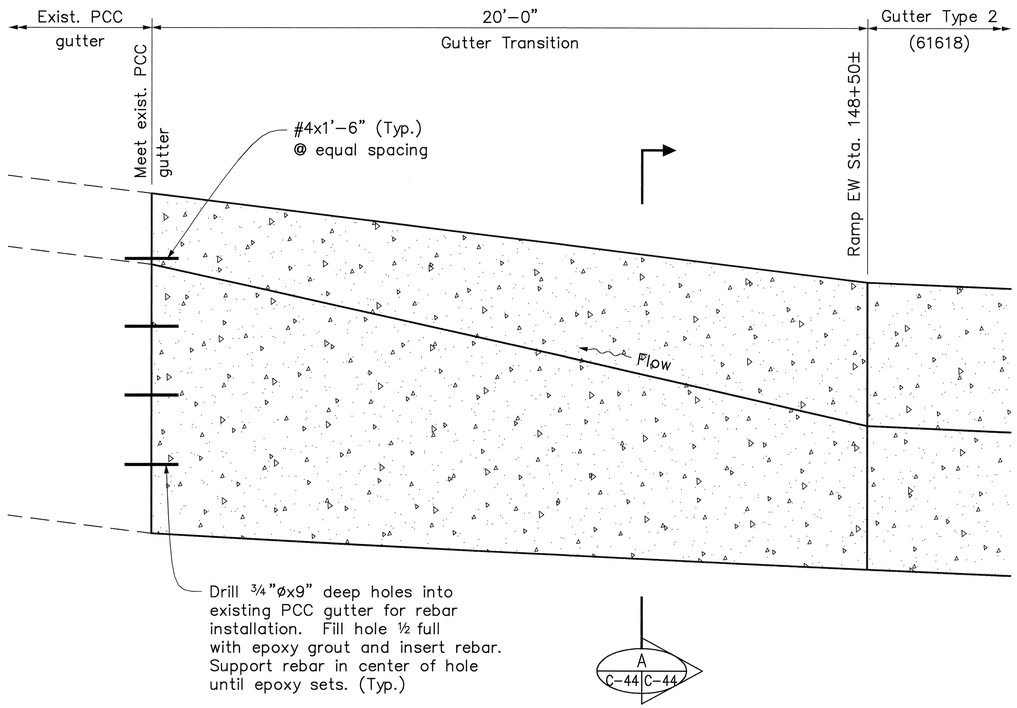
H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

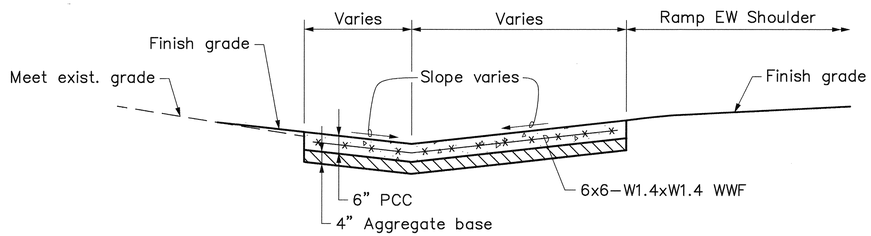
SHEET NO. C-43 OF 55 SHEETS

110

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	111	325



PLAN
Scale: ½" = 1'-0"



SECTION
Scale: ½" = 1'-0"
A
C-44 C-44

NOTE:

Gutter Transition will be paid for under Gutter Type 2 (61618).

GUTTER TRANSITION @ RAMP EW STA. 148+50±

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

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

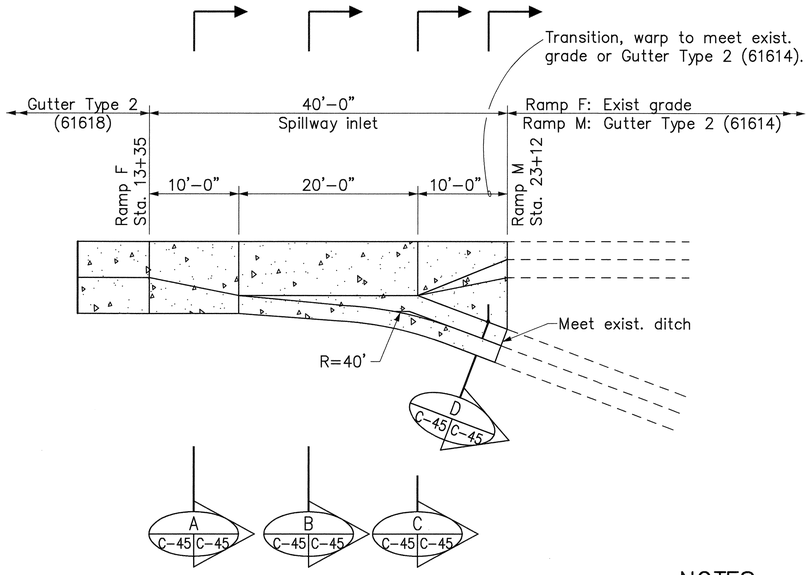
ROADWAY CONSTRUCTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-44 OF 55 SHEETS

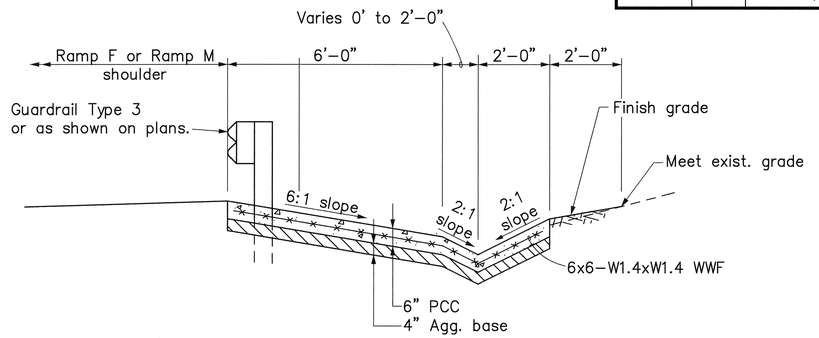
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	112	325



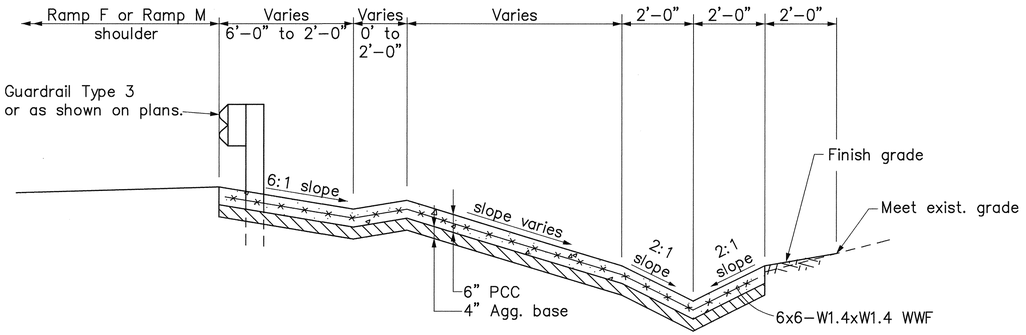
PLAN
Scale: 1/8"=1'-0"

NOTES:

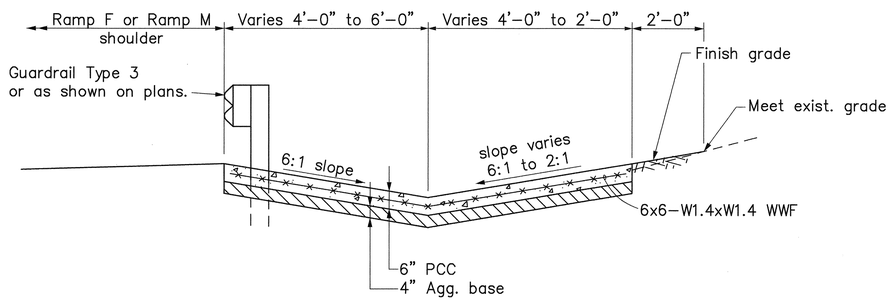
1. Spillway inlet shall be paid for under Gutter Type 2 (61618).



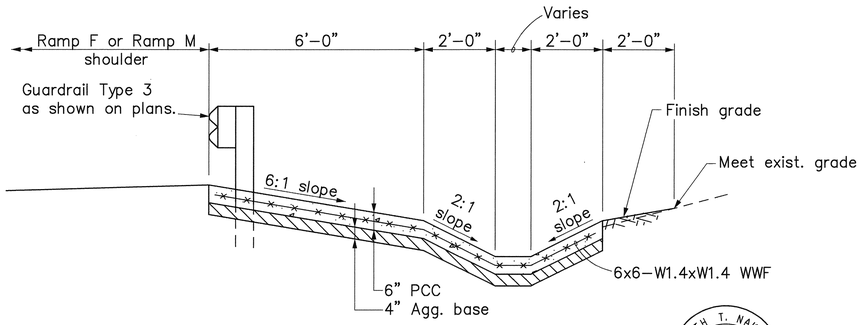
SECTION B
Scale: 1/2"=1'-0" C-45 C-45



SECTION D
Scale: 1/2"=1'-0" C-45 C-45



SECTION A
Scale: 1/2"=1'-0" C-45 C-45



SECTION C
Scale: 1/2"=1'-0" C-45 C-45

KEITH T. NAKANO
LICENSED PROFESSIONAL ENGINEER
No. 6670-C
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-45 OF 55 SHEETS

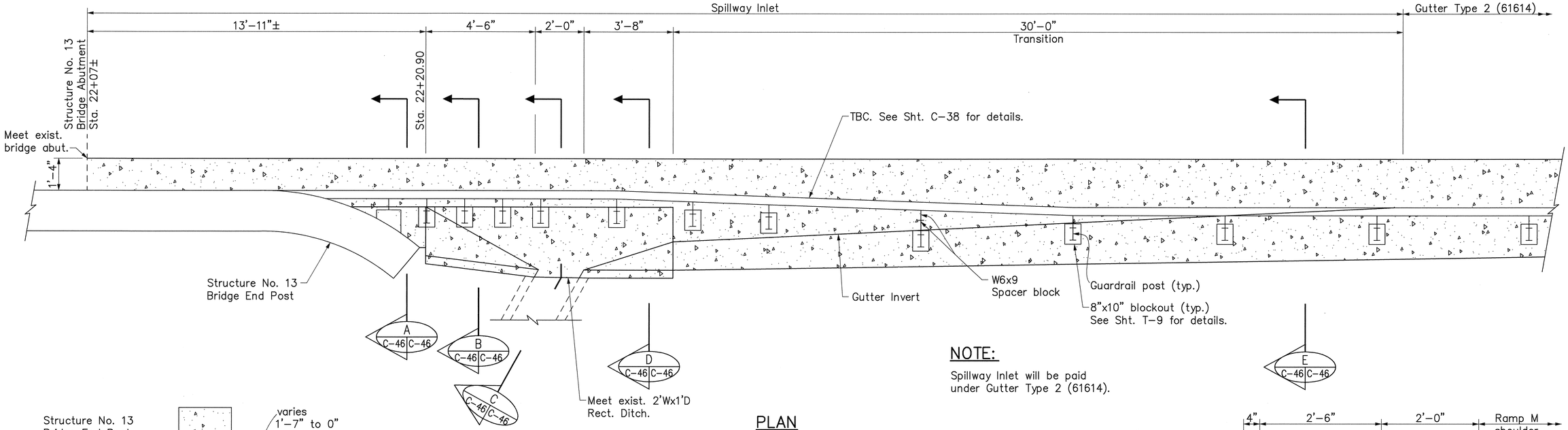
SPILLWAY INLET-RAMP F STA. 13+35 & RAMP M STA. 23+12

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

CAD by W.HIGASHIHARA, 55-52

Last Saved: G:\HALAWA\DET\F-INLET.dwg 11/21/94 at 08:05

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	113	325

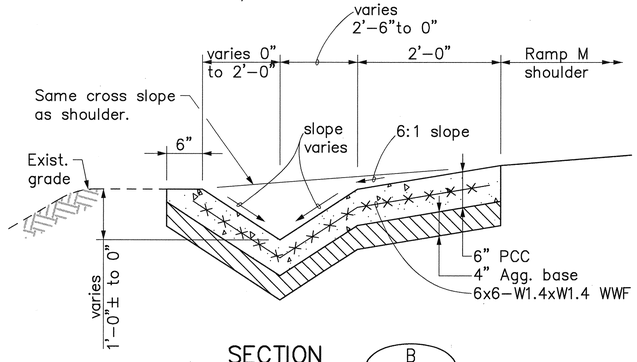


NOTE:

Spillway Inlet will be paid under Gutter Type 2 (61614).

SECTION A (C-46 C-46)
Scale: 1"=1'-0"

PLAN
Scale: 1/2"=1'-0"



SECTION B (C-46 C-46)
Scale: 1"=1'-0"

SECTION C (C-46 C-46)
Scale: 1"=1'-0"

SECTION D (C-46 C-46)
Scale: 1"=1'-0"

SECTION E (C-46 C-46)
Scale: 1"=1'-0"

SPILLWAY INLET-RAMP M STA. 22+07±

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

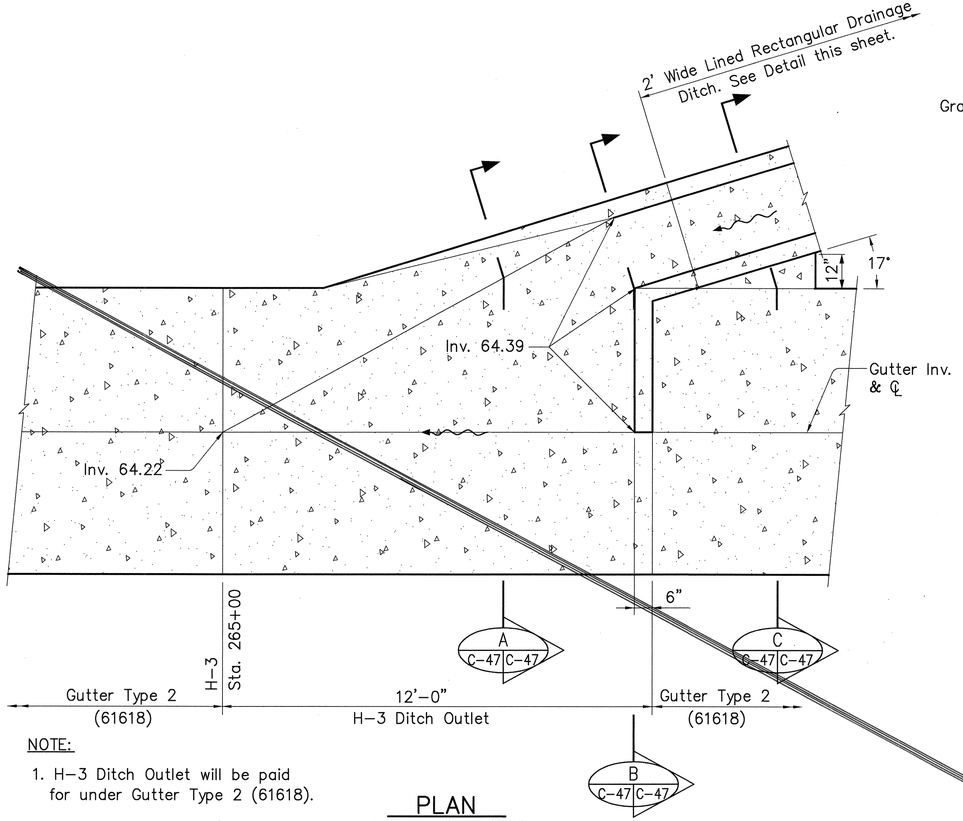
ROADWAY CONSTRUCTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-46 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	114	325

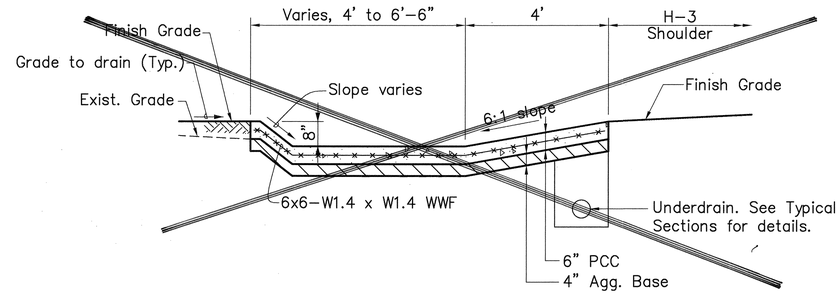


NOTE:

1. H-3 Ditch Outlet will be paid for under Gutter Type 2 (61618).

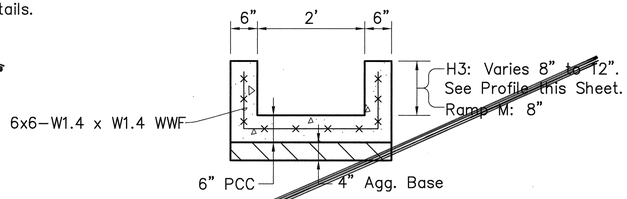
PLAN

Scale: ½" = 1'-0"



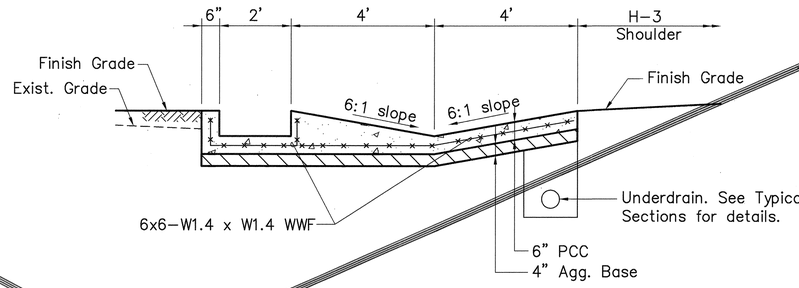
SECTION A

Scale: ½" = 1'-0"



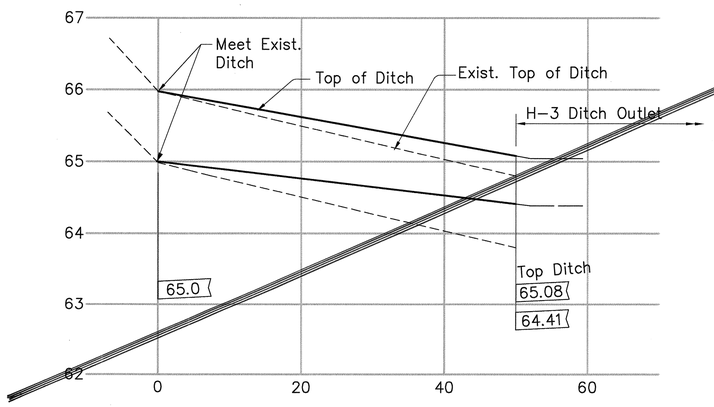
2' WIDE LINED RECTANGULAR DRAINAGE DITCH

Scale: ¾" = 1'-0"



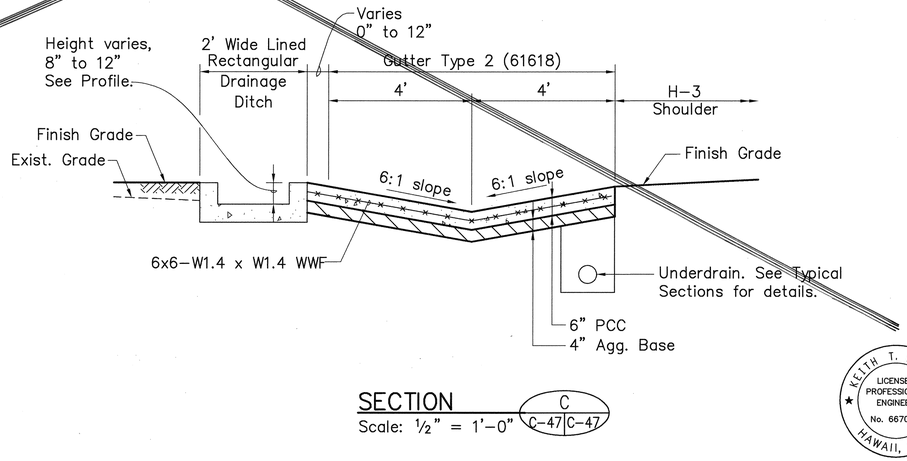
SECTION B

Scale: ½" = 1'-0"



PROFILE

Scale: Horiz. 1" = 10'
Vert. 1" = 1'



SECTION C

Scale: ½" = 1'-0"

H-3 DITCH OUTLET

KEITH T. NAKANO
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No. 6670-C
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THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Note:
See Sheet 114S-1.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

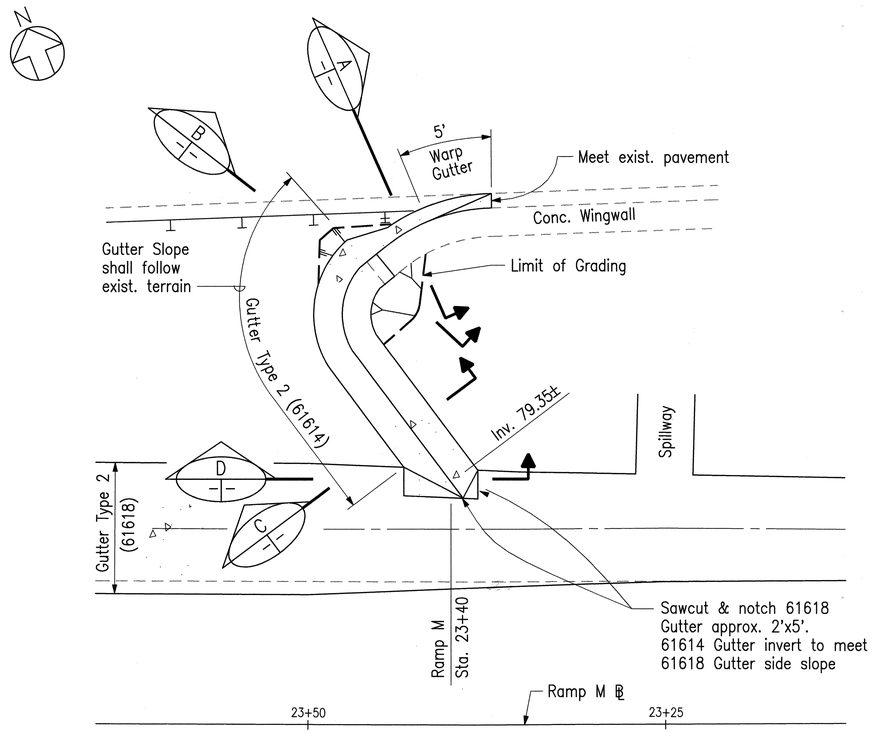
SHEET NO. C-47 OF 55 SHEETS

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

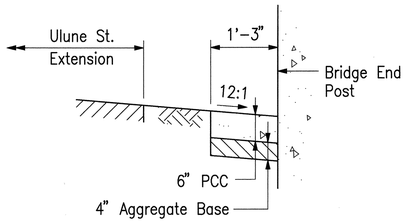
CAD by W.HIGASHIHARA, 55-52

Last Saved: G:\HALAWA\H3\H3-SECA.dwg 11/21/94 at 08:10

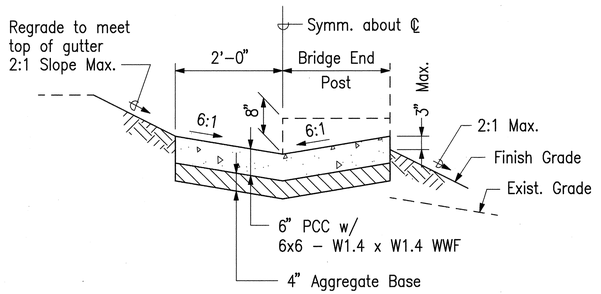
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	114S-1	325



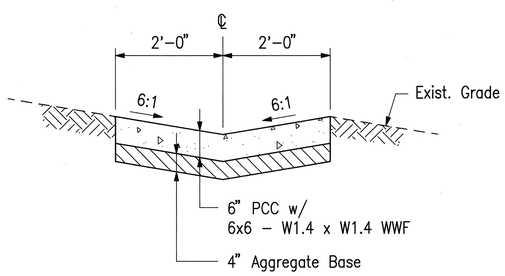
PLAN
Scale: 1" = 5'



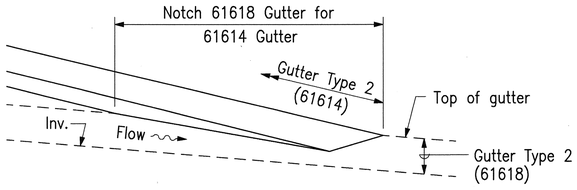
SECTION A
Scale: ¾" = 1'-0"



SECTION B
Scale: ¾" = 1'-0"



SECTION C
Scale: ¾" = 1'-0"



SECTION D
Scale: ¾" = 1'-0"

NOTE: THIS TRACING PREPARED DURING "AS-BUILT" POSTING.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY CONSTRUCTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-47A OF 55 SHEETS

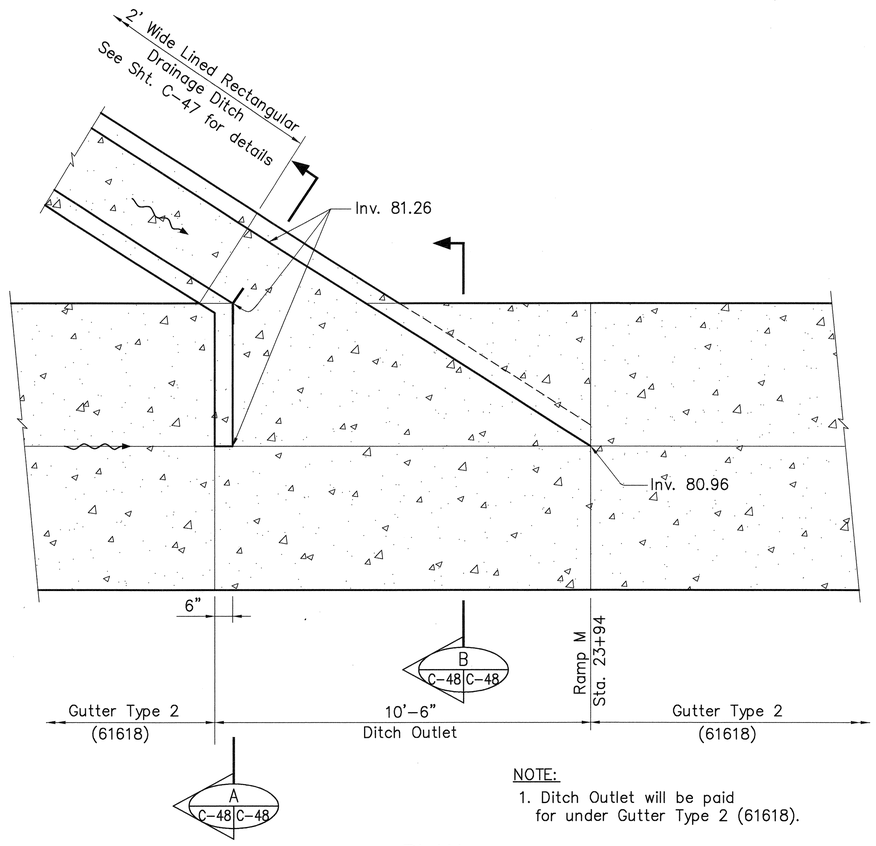
114S-1

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

CAD by J. Minami, 55-52

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	115	325

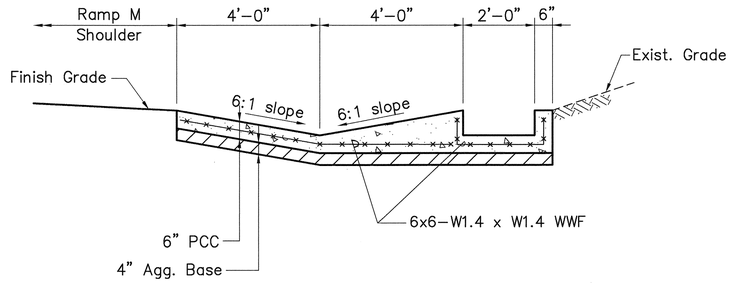


NOTE:

1. Ditch Outlet will be paid for under Gutter Type 2 (61618).

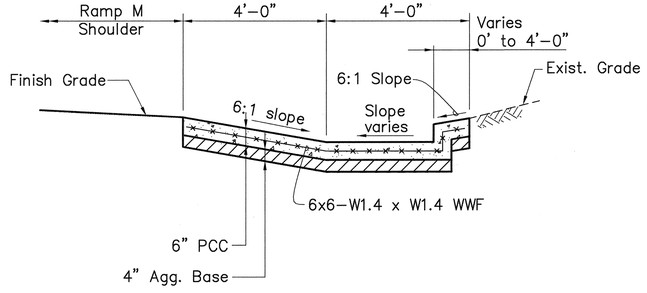
PLAN

Scale: ½" = 1'-0"



SECTION A (C-48 C-48)

Scale: ½" = 1'-0"



SECTION B (C-48 C-48)

Scale: ½" = 1'-0"

DITCH OUTLET
RAMP M @ STA. 23+94

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

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KEITH T. NAKANO
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

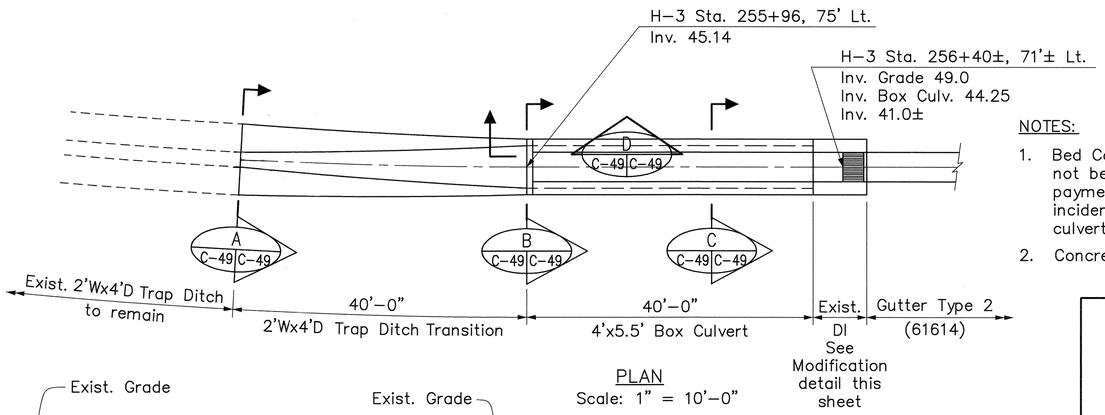
ROADWAY CONSTRUCTION DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-48 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	116	325



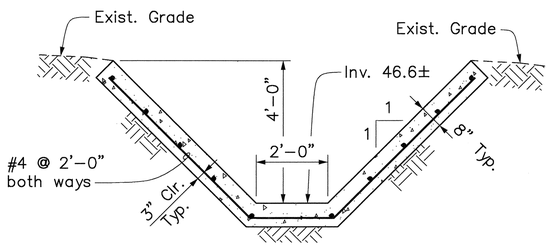
PLAN
Scale: 1" = 10'-0"

NOTES:

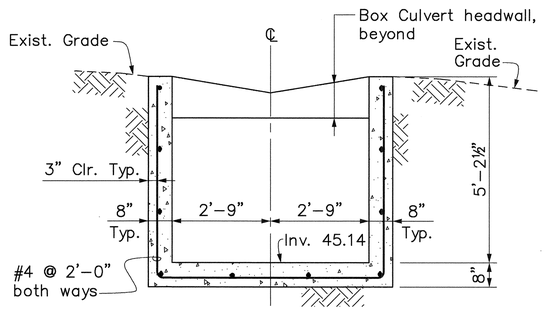
1. Bed Course Material will not be measured for payment. Consider it incidental to the box culvert.
2. Concrete shall be Class A.

LEGEND:

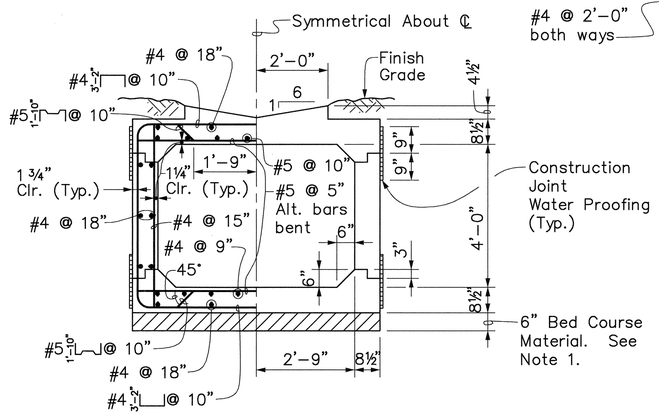
Concrete to be removed. The Interface between new and old concrete shall be clean, free of laitance and roughened to a full amplitude of approximately ¼". Epoxy bonding material shall be coated on the roughened surface immediately prior to pouring new concrete.



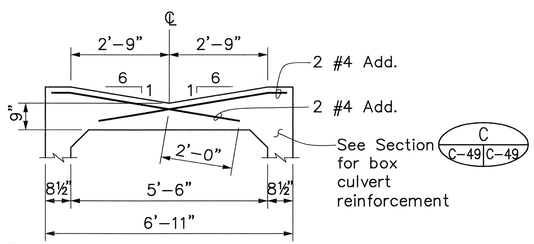
SECTION A
Scale: ½" = 1'-0"



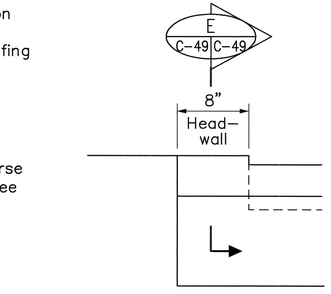
SECTION B
Scale: ½" = 1'-0"



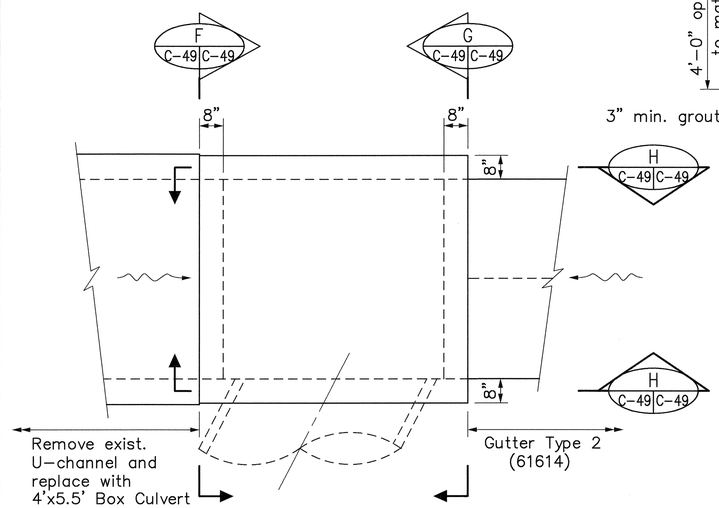
SECTION C
Scale: ½" = 1'-0"



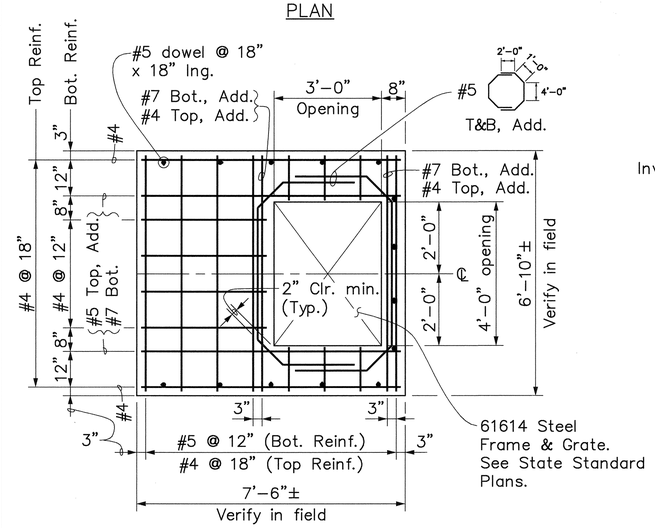
SECTION E
Scale: ½" = 1'-0"



SECTION D
Scale: 1½" = 1'-0"



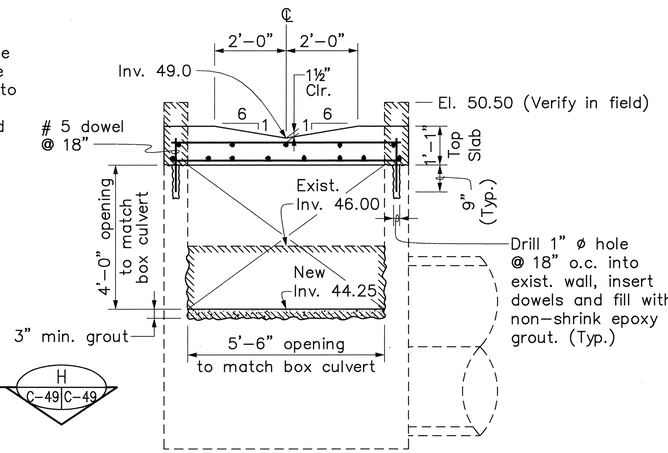
PLAN



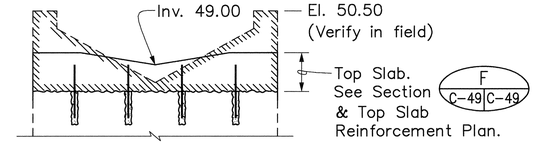
TOP SLAB REINFORCEMENT

DROP INLET MODIFICATION

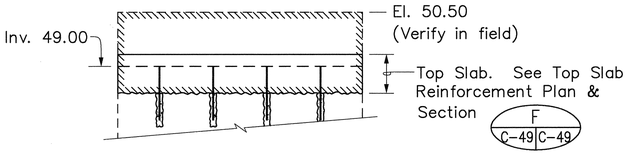
Scale: ½" = 1'-0"



SECTION F C-49 C-49



SECTION G C-49 C-49



SECTION H C-49 C-49

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-49 OF 55 SHEETS

KEITH T. NAKANO
LICENSED PROFESSIONAL ENGINEER
No. 6670-C
HAWAII, U.S.A.

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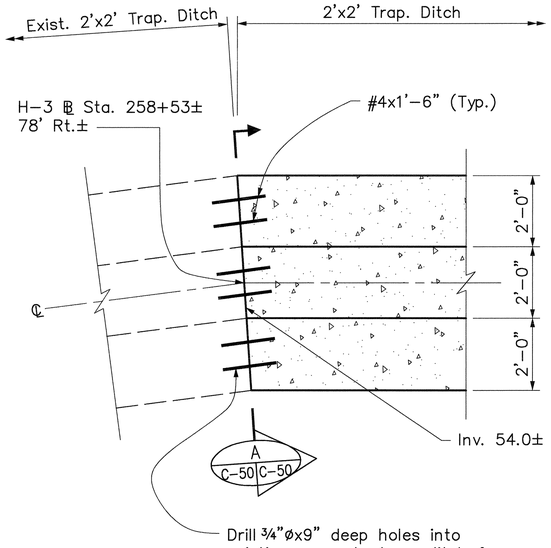
ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
NOTE BOOK
No.

CAD by WHIGASHIHARA, 55-52

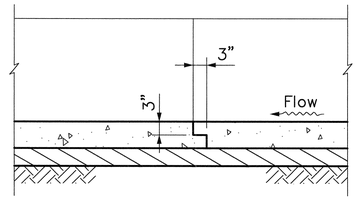
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116

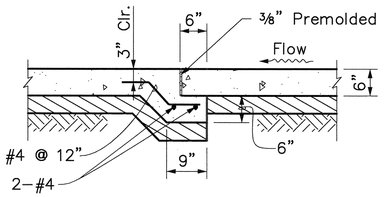
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	117	325



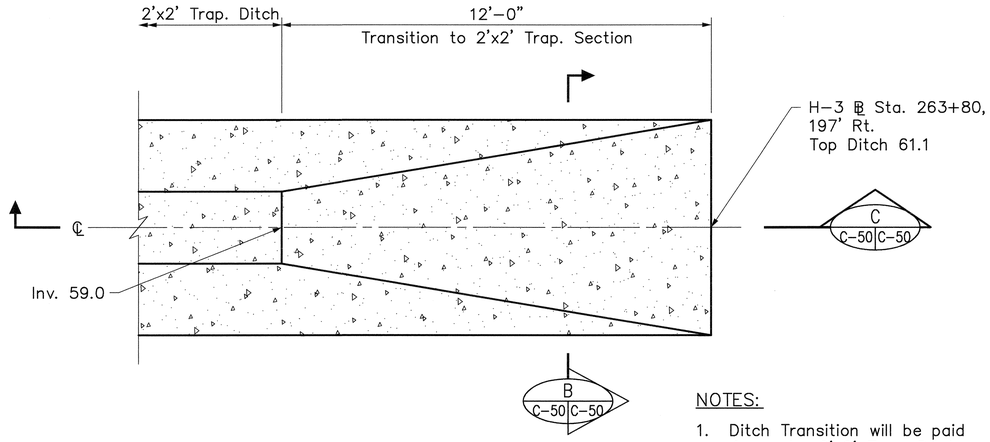
PLAN
Scale: ½" = 1'-0"



TYPICAL CONSTRUCTION JOINT @ 30' O.C.
Scale: ¾" = 1'-0"



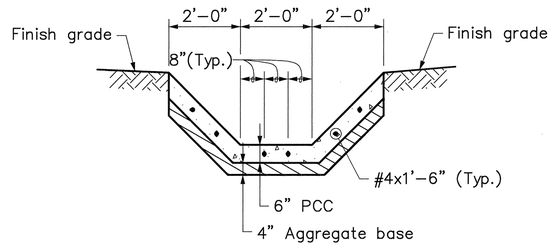
TYPICAL EXPANSION JOINT @ 90' O.C.
Scale: ¾" = 1'-0"



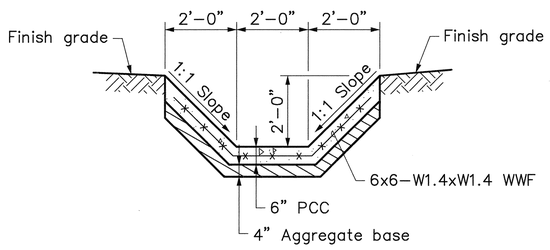
PLAN
Scale: ½" = 1'-0"

NOTES:

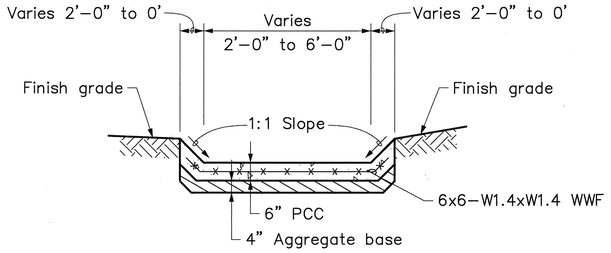
1. Ditch Transition will be paid for under 2'x2' Trap. Ditch.
2. Payment for Aggregate Base shall be considered incidental to 2'x2' Trap. Ditch.



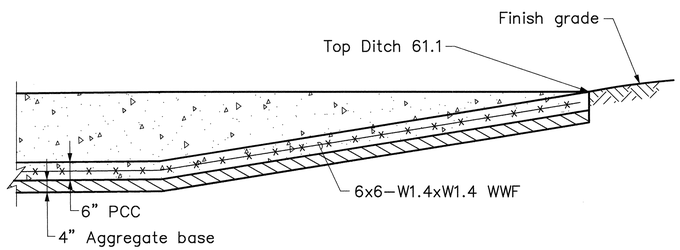
SECTION A
Scale: ½" = 1'-0"



TYPICAL SECTION
Scale: ½" = 1'-0"



SECTION B
Scale: ½" = 1'-0"



SECTION C
Scale: ½" = 1'-0"

2'x2' TRAPEZOIDAL DITCH

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

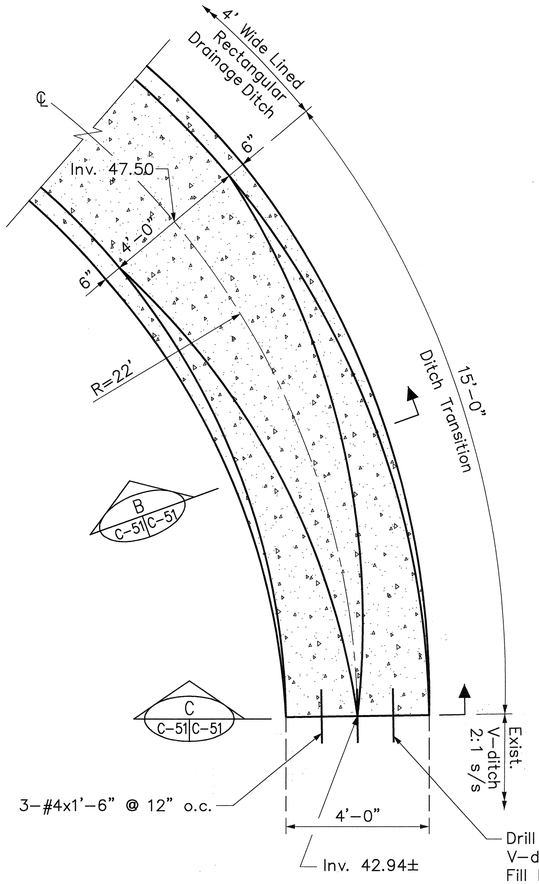
SHEET NO. C-50 OF 55 SHEETS

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

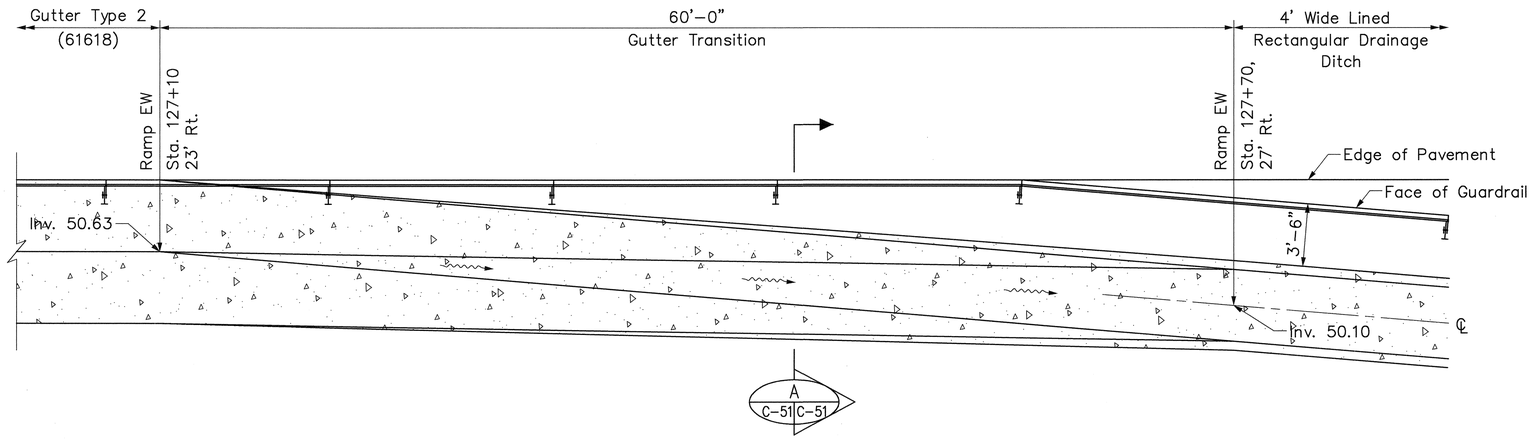
CAD by W.HIGASHIHARA, 55-52

Last Saved: G:\HALAWA\DET\TRAP-DIT.dwg 11/21/94 at 08:23

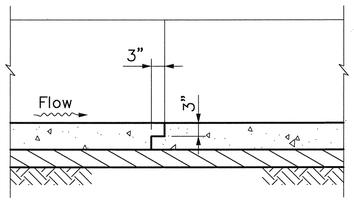
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	118	325



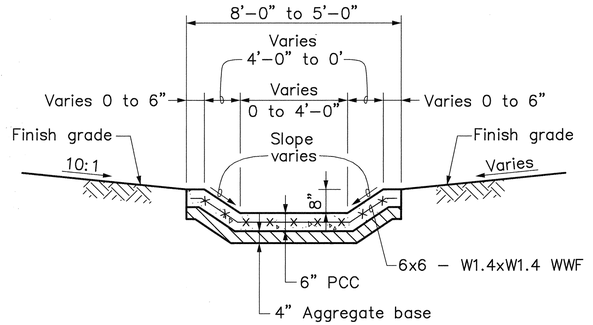
PLAN
Scale: ½" = 1'-0"



PLAN
Scale: ¼" = 1'-0"

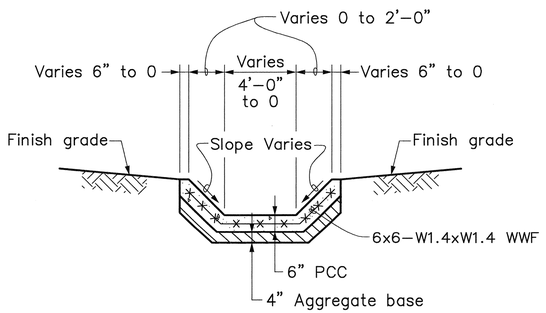


TYPICAL CONSTRUCTION JOINT @ 30' O.C.
Scale: ¾" = 1'-0"



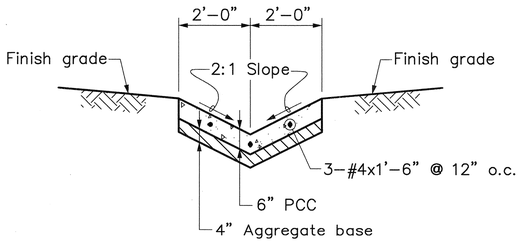
SECTION A
Scale: ½" = 1'-0"

TRANSITION @ RAMP EW STA. 127+10

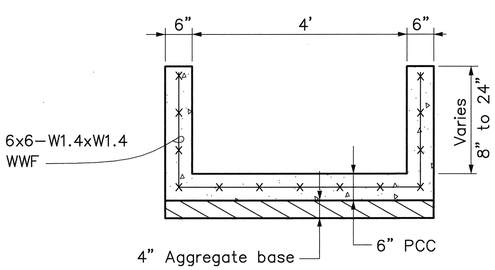


SECTION B
Scale: ½" = 1'-0"

DITCH TRANSITION



SECTION C
Scale: ½" = 1'-0"



4' WIDE LINED RECTANGULAR DRAINAGE DITCH
Scale: ¾" = 1'-0"

NOTE:
Transitions will be paid for under 4' Wide Lined Rectangular Drainage Ditch.

4' WIDE LINED RECTANGULAR DRAINAGE DITCH TRANSITION

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

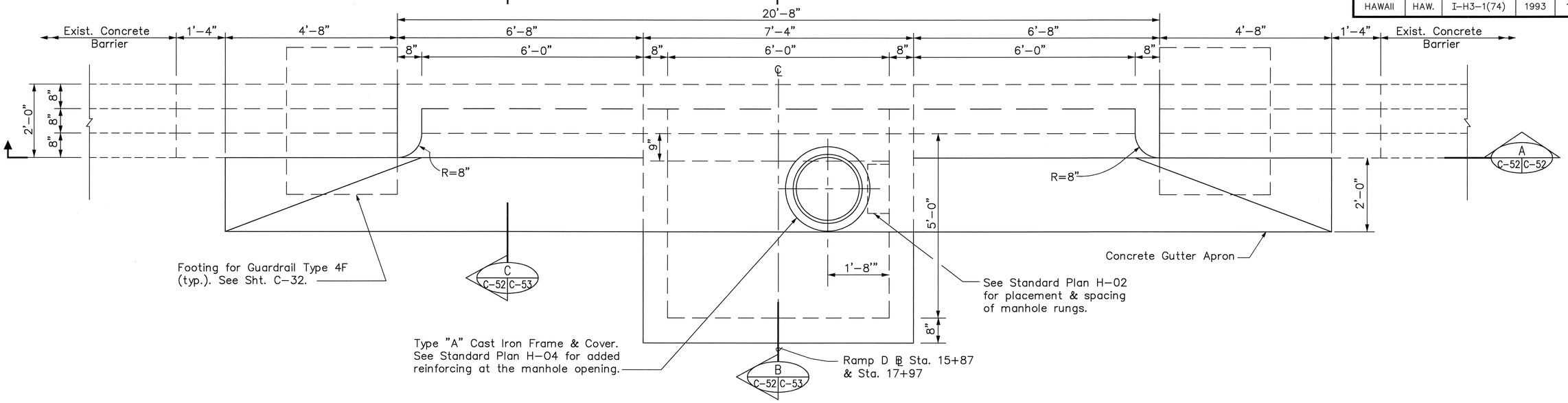
SHEET NO. C-51 OF 55 SHEETS

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

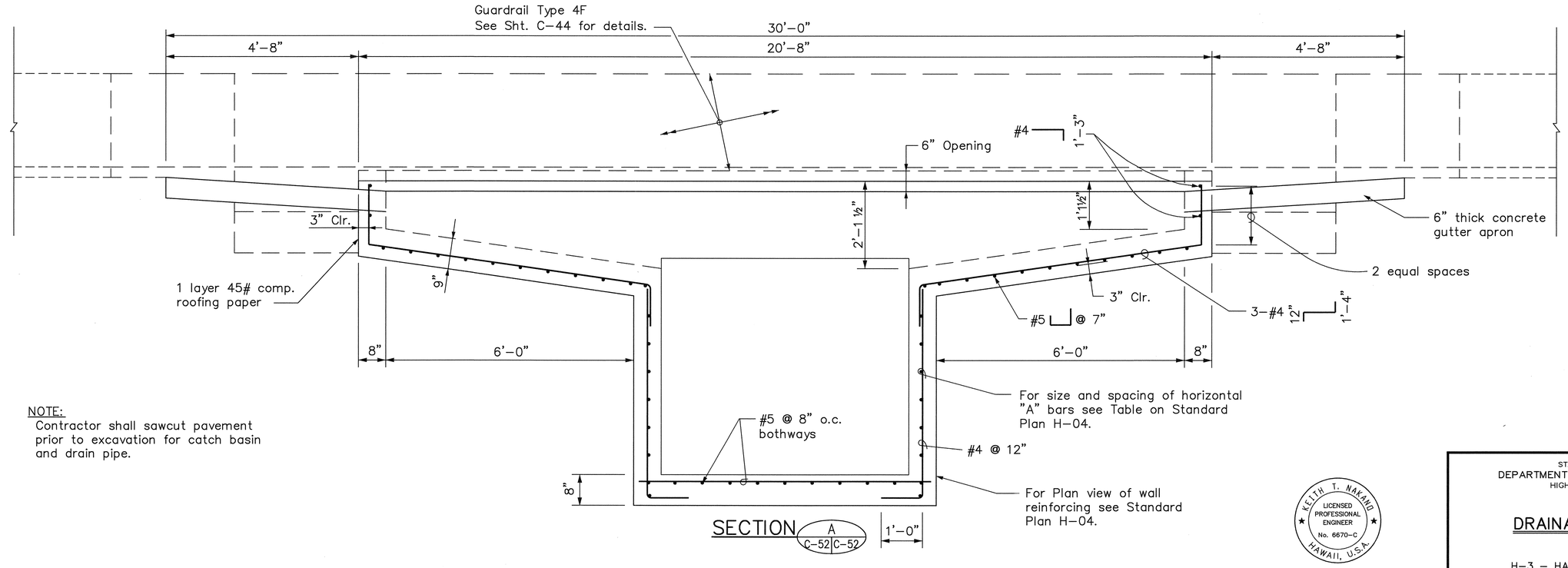
CAD by W:\HIGASHIHARA, 55-52

Last Saved: G:\HALAWA\DET\EW-GUTT.dwg 11/21/94 at 08:25

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	119	325



PLAN



NOTE:
Contractor shall sawcut pavement prior to excavation for catch basin and drain pipe.

TYPE A3 CATCH BASIN

CB (D1) RAMP D ℄ STA. 17+97, 24' RT.; CB (D2) RAMP D ℄ STA. 15+87, 24' RT.

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HIGHWAYS DIVISION

DRAINAGE DETAILS

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: 3/4" = 1'-0" DATE: AUGUST 1994

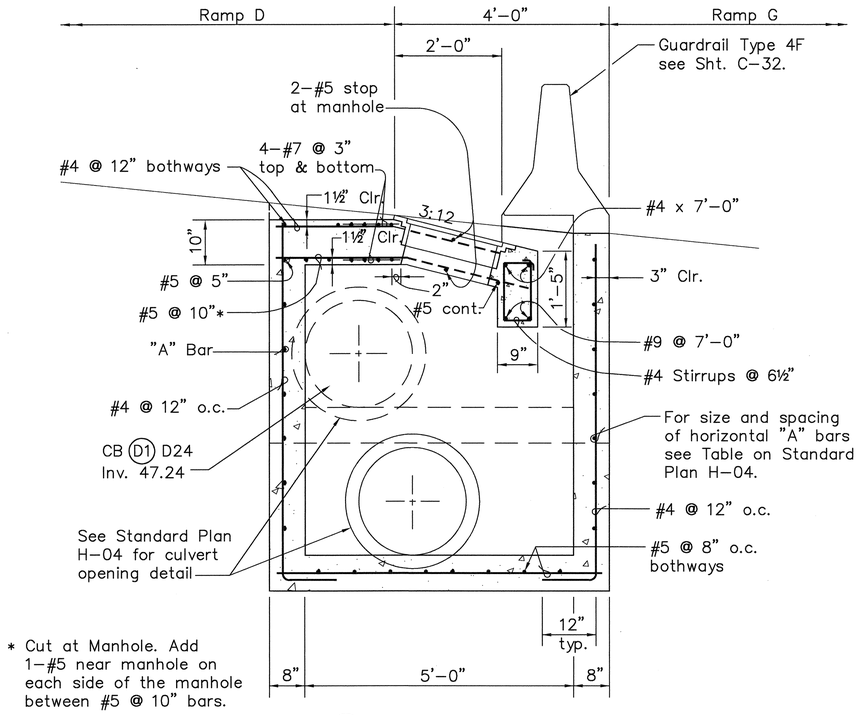
SHEET NO. C-52 OF 55 SHEETS

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

CAD by W.HIGASHIHARA, 55-52

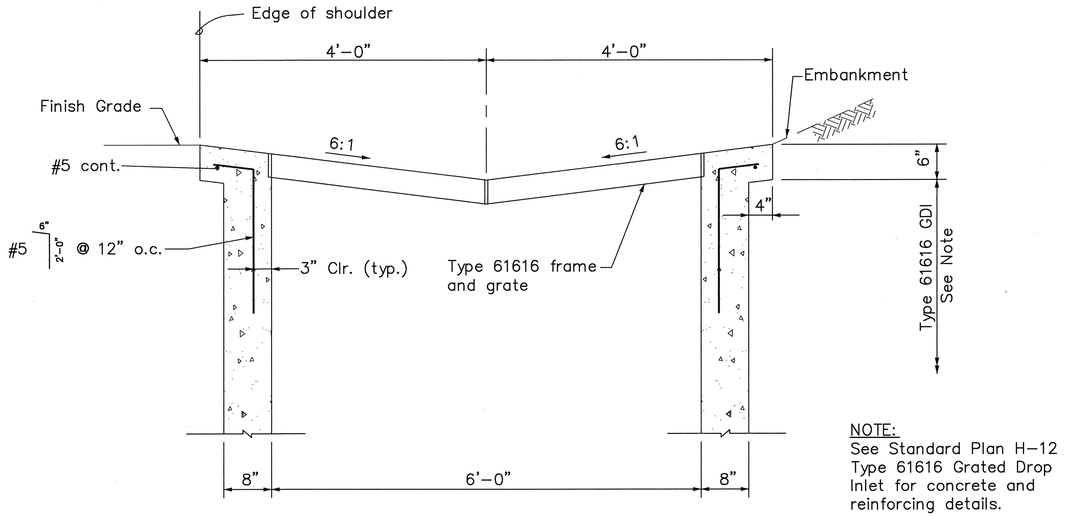
Last Saved: G:\HALAWA\DET\DRAIN1.dwg 11/21/94 at 08:27

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	120	325



* Cut at Manhole. Add 1-#5 near manhole on each side of the manhole between #5 @ 10" bars.

NOTE: CB (D1), Ramp D Sta. 17+97, Bottom Slab and D24 shown above dashed.



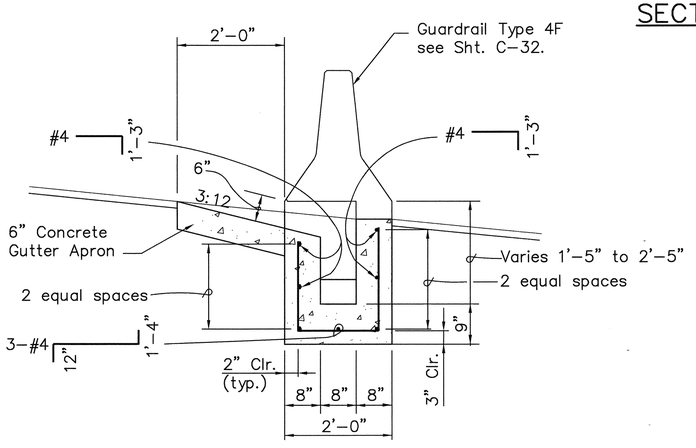
NOTE:
See Standard Plan H-12 Type 61616 Grated Drop Inlet for concrete and reinforcing details.

TYPE A GDI DRAINAGE STRUCTURES:

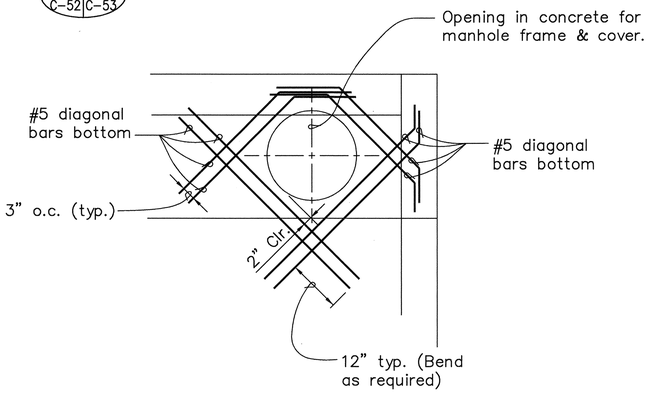
EW1 EW2 EW3 F1 F2 K1 K2 K3

Scale: 1"= 1'-0"

SECTION B C-52 C-53



SECTION C C-52 C-53



ADDED REINFORCING FOR MANHOLE OPENING

TYPE A3 CATCH BASIN

CB (D1) RAMP D ℄ STA 17+97, 24' RT.

CB (D2) RAMP D ℄ STA.15+87, 24' RT.

Scale: 3/4" = 1'-0"

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

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HIGHWAYS DIVISION

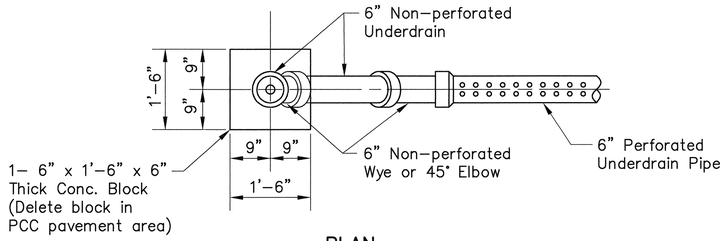
DRAINAGE DETAILS

H-3 - HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

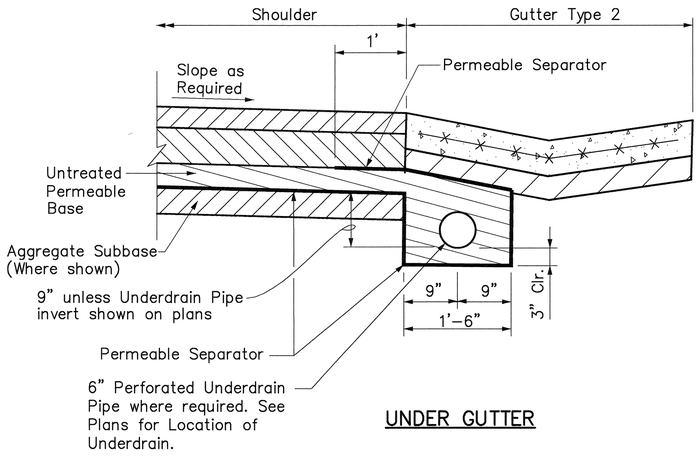
SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-53 OF 55 SHEETS

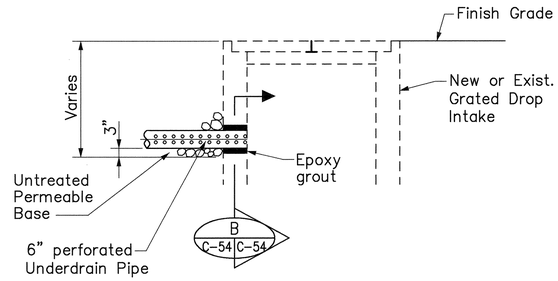
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	121	325



PLAN

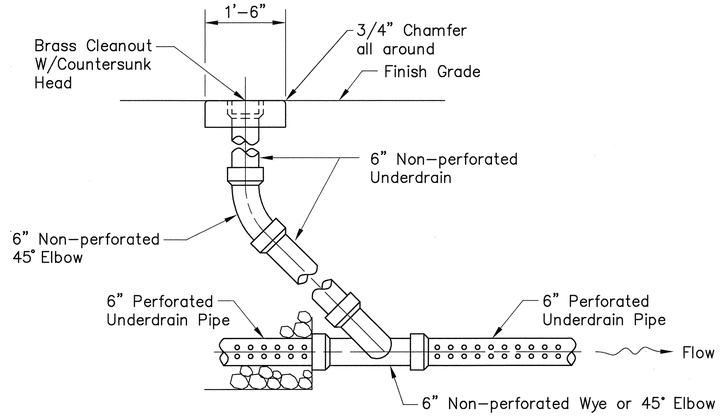


UNDER GUTTER



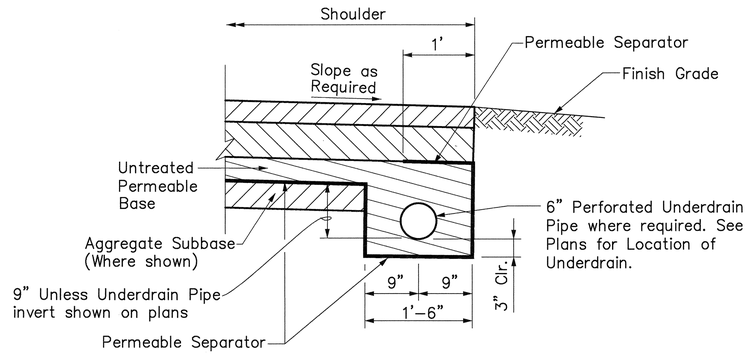
CONNECTION OF UNDERDRAIN TO GRATED DROP INTAKE

Scale: 1" = 2'

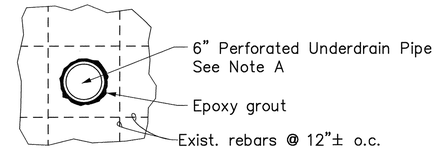


TYPICAL CLEANOUT DETAIL

Scale: 3/4" = 1'-0"



UNDER SHOULDER



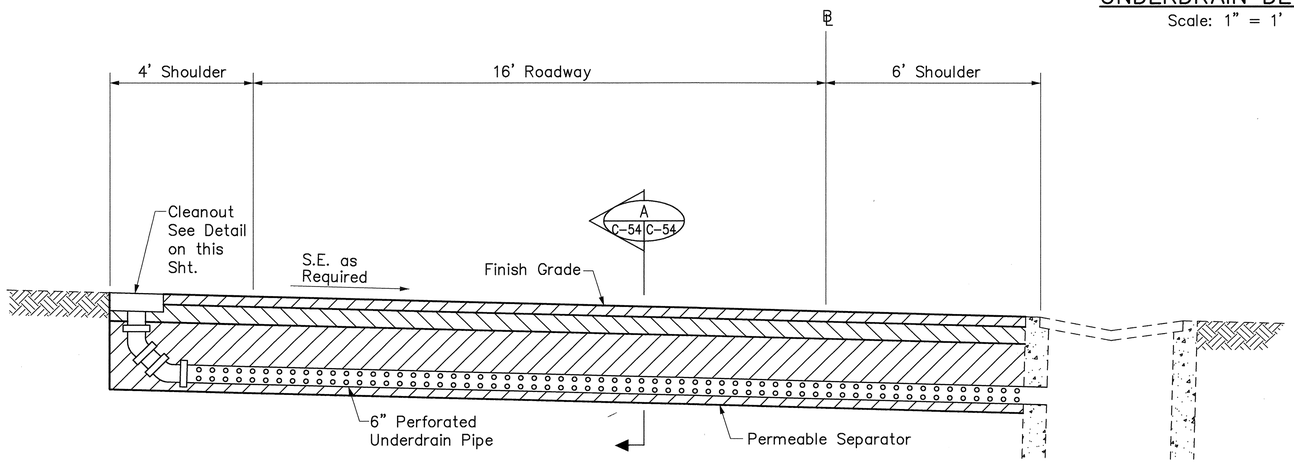
Note A:
The Contractor shall avoid cutting the existing rebars. In case the pipe opening interferes with the existing rebars, the opening shall be enlarged and the location of the pipe shall be adjusted to pass between the existing rebars as shown. The enlarged hole shall be patched with epoxy grout.

SECTION B C-54 C-54

Scale: 1" = 1'

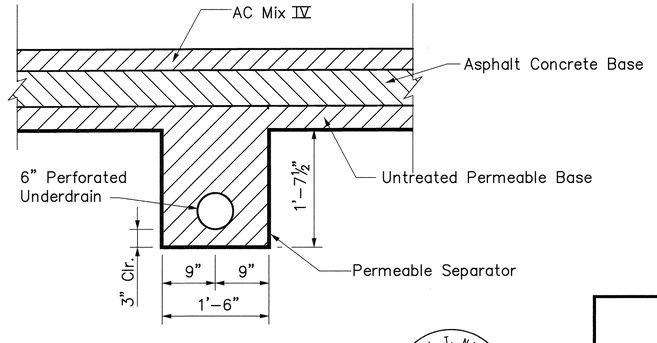
UNDERDRAIN DETAIL

Scale: 1" = 1'



TYPICAL SECTION – CROSS DRAIN INTERCEPTOR @ RAMP O STA. 14+09.4

Scale: 1" = 2'



SECTION A C-54 C-54

Scale: 1" = 1'

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HIGHWAYS DIVISION

ROADWAY CONSTRUCTION DETAILS

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

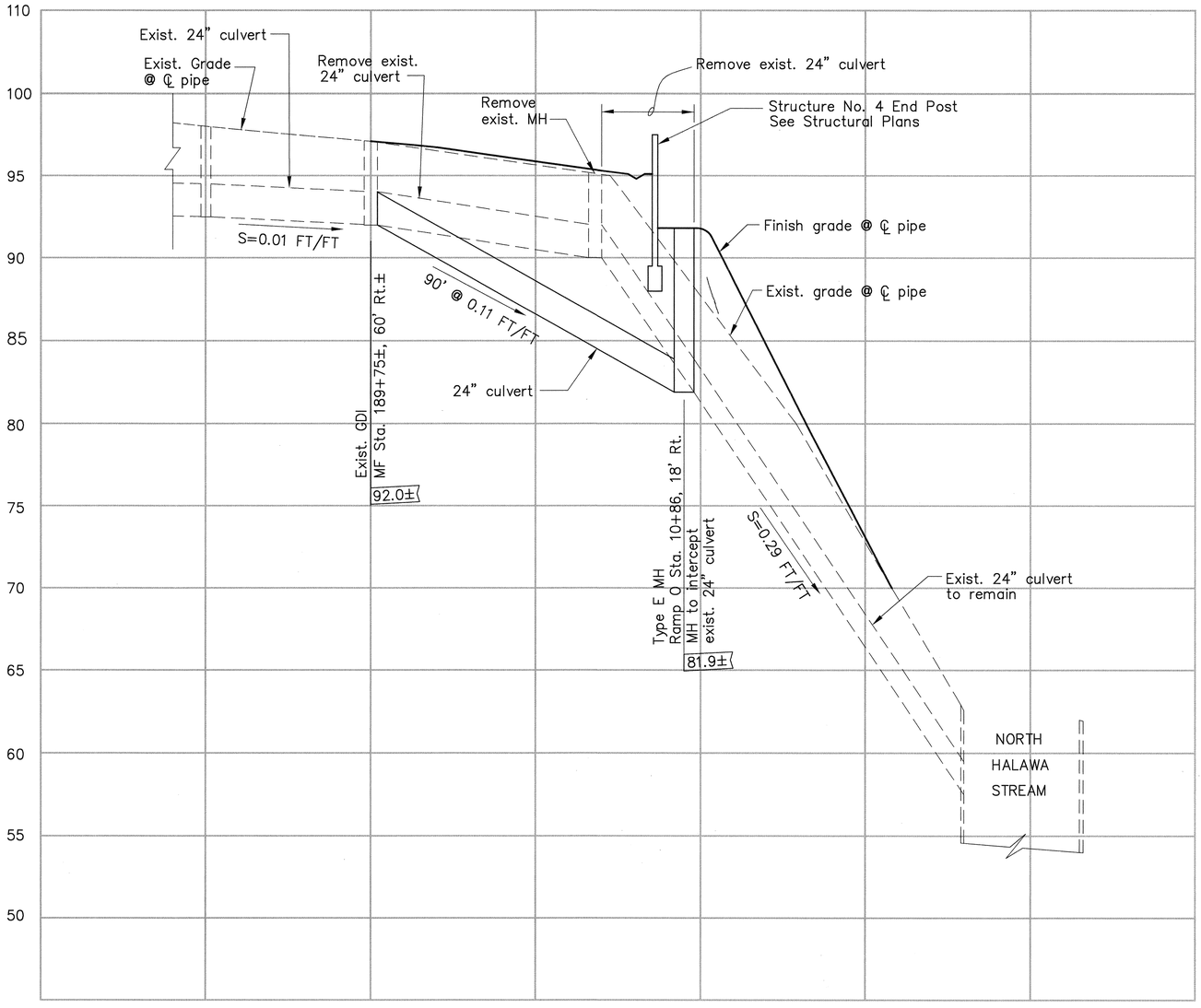
SHEET NO. C-54 OF 55 SHEETS

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

CAD by W.HIGASHIHARA, 55-52

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1(74)	1993	122	325



DRAINLINE PROFILE – RAMP O

Scale: Horiz. 1" = 20'
Vert. 1" = 4'

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

CAD by M.HIGASHIHARA, 55-52

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINLINE PROFILE
RAMP O

H-3 – HALAWA INTERCHANGE
INTERSTATE ROUTE H-3
FAIP NO. I-H3-1(74)

SCALE: AS SHOWN DATE: AUGUST 1994

SHEET NO. C-55 OF 55 SHEETS