DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MAUI	HAW.	BR-030-1(37)	2024	28	42

MINIMUM SPLICE & EMBEDMENT LENGTHS

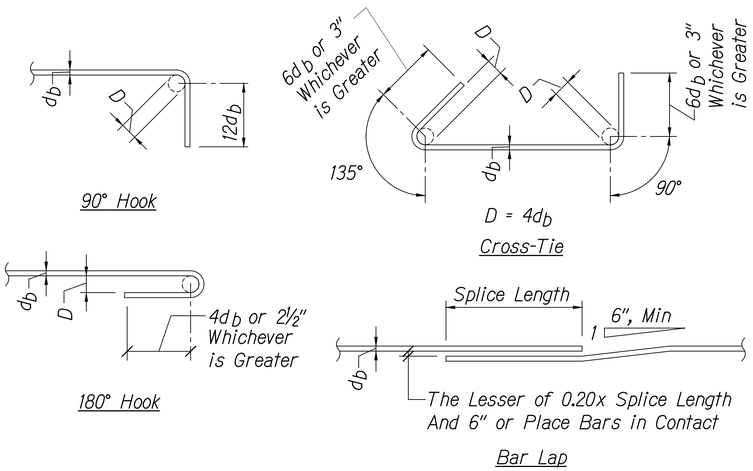
BAR SIZE	CONCRETE STRENGTH = 4,000 PSI				
	LAP SPLICE		EMBEDMENT		
			STRAIGHT		WITH STANDARD 90° HOOK
	OTHER BARS	TOP BAR	OTHER BARS	TOP BAR	
#4	19"	25"	15"	19"	8"
#5	24"	31"	18"	24"	10"
#6	28"	37"	22"	28"	12"
#7	36"	47"	28"	36"	14"
#8	47"	61"	36"	47"	16"
#9	60"	78"	46"	60"	18"
#10	76"	98"	58"	76"	20"
#11	93"	121"	72"	93"	22"

Notes:
1. "Top Bars" are horizontal bars with 12" or more of concrete cast below.
2. Embedment lengths for bars with 90° hook are bars with side cover, normal to plane of hook, of not less than 2½" and cover on bar extension beyond hook not less than 2". Increase embedment length by 25% for bars not meeting these requirements.

TYPICAL REBAR SPLICE AND EMBEDMENT LENGTH SCHEDULE

1 | S0.2 | S0.2

Not to Scale



D = 6d_b for #8 and Smaller
D = 8d_b for #9 to #11

STANDARD HOOKS AND CROSS-TIE DETAIL

2 | S0.2 | S0.2

Not to Scale

ABBREVIATIONS

℄	Baseline	Galv	Galvanized
Bot	Bottom	Horiz	Horizontal
Btwn	Between	HSB	High Strength Bolt
℄	Centerline	I.D.	Inside Diameter
CJ	Construction Joint	Max	Maximum
Clr	Clear	Mech	Mechanical
Conc	Concrete	Min	Minimum
Cont	Continuous	Misc	Miscellaneous
Dbl	Double	No. or #	Number
Dia	Diameter	N.T.S.	Not to Scale
Dwg	Drawing	O.C.	On center
Ea	Each	O.D.	Outside Diameter
E.F.	Each Face	Opng	Opening
Elev	Elevation	Opp	Opposite
Eq	Equal	PL or ℙ	Plate
E.W.	Each Way	Prefab	Prefabricated
Exist or (E)	Existing	Ref	Reference
Ext	Exterior	Reinf	Reinforced or Reinforcing
Fin	Finish	Sim	Similar
Ft	Foot or Feet	Sp	Spaces or Spacing
Ftg	Footing	ss	Stainless Steel

PAINT SCHEDULE

SPECIAL COATING SCHEDULE FOR ZINC COATED METAL BRIDGE RAILING

	OPTION 1	OPTION 2	OPTION 3	OPTION 4
PREPARATION:	Carboline thinner #2 or surface cleaner #3, per SSPC-SP1, ApplyRustbond Penetrating Sealer.	Solvent clean per SSPC-1, and as recommended by the manufacturer	Solvent clean per SSPC-SP1, and as recommended by the manufacturer	Solvent clean per SSPC- SP1. Apply Galvanized Zinc Treatment (Acid Etching)
1ST COAT:	Carboline Carboguard 890 epoxy DFT 5 mil (min) WFT 7 mil (min)	Tnemec High-Build Epoxoline II Series N69 DFT 5 mil (min) WFT 7 mil (min)	Sherwin Williams Tile Clad High Solids B62 Series DFT 4 mil (min) WFT 7 mil (min)	Ameron Amercoat 385 epoxy DFT 5 mil (min) WFT 8 mil (min)
RECOATING TIME:	8 HRS (min) 2 Days (max)	10 HRS (min) 2 Days (max)	8 HRS (min) 14 Days (max)	8 HRS (min) 2 Days (max)
TOP COAT:	Carboline Carbothane 133HB Alyphatic polyurethane DFT 5 mil (min) WFT 7 mil (max)	Tnemec Endura-Shield Series 75 DFT 4 mil (min) WFT 7 mil (min)	Sherwin Williams Corothane II B65 W200 Series/B60V2 DFT 4 mil (min) WFT 7 mil (min)	Ameron Amercoat 450 SA Polyurethane DFT 4 mil WFT 7 mil
TOP COAT COLOR:	Medium Shade Green, submit color chips for approval.			

BRIDGE LOAD CAPACITY RATING SUMMARY

Design Load	Rating Factor	Controlling Member	Controlling Load Effect	Live Load Distribution Factor
HL-93 Inventory	1.12	Exterior Tee Beam	Tension Stress	0.751
HL-93 Operating	1.45	Exterior Tee Beam	Tension Stress	0.751

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

KEN KAZUO HAYASHIDA
LICENSED PROFESSIONAL ENGINEER
No. 6818-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

APRIL 30, 2026
LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

Typical Details, Schedules and Abbreviations

Honoapi'ilani Highway
Rehabilitation of Honolua Bridge
F.A.P No. BR-030-1(37)

Scale: As Shown Date: August 2024

SHEET No. S0.2 OF 42 SHEETS