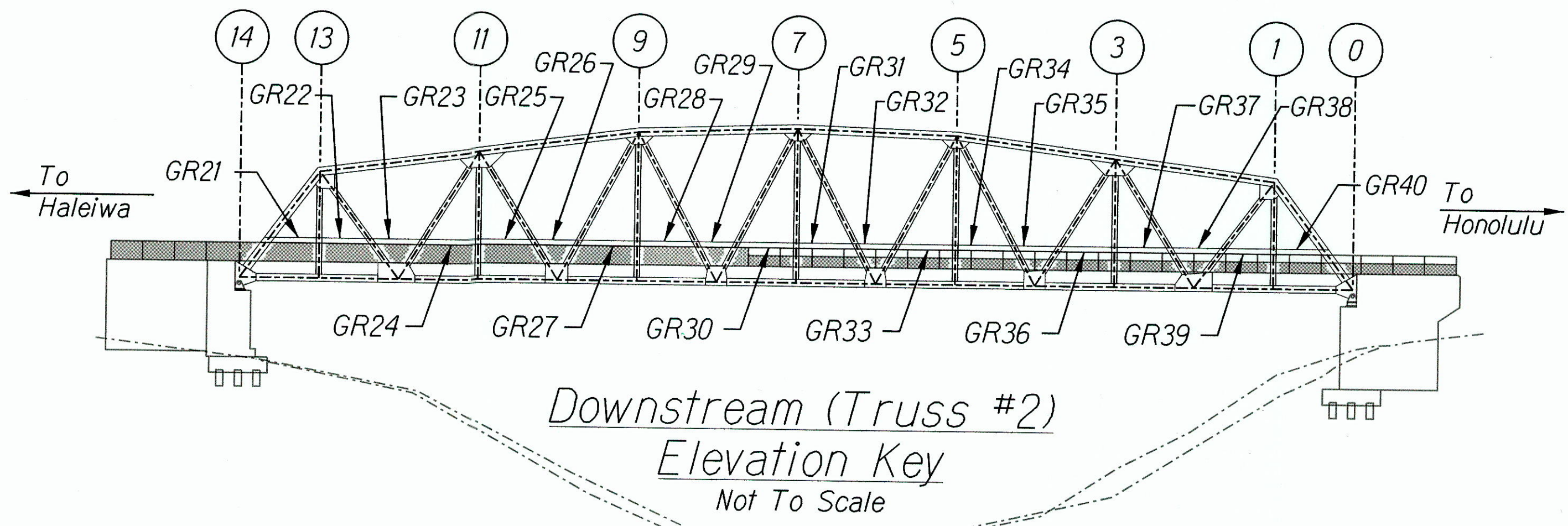
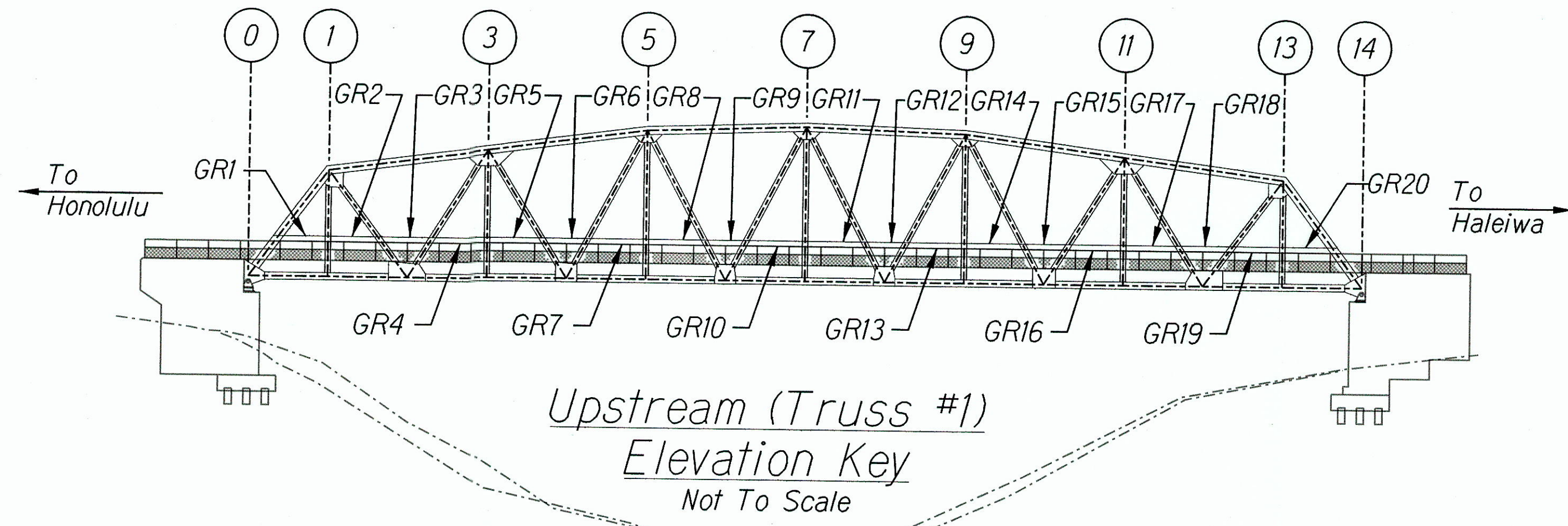


FED. ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-080-1(012)	2014	54	82

TRUSS GUARDRAIL REPAIR SCHEDULE

Label	Repair Length (Ft)	Repair Detail	Comment
GR1	<del>12'-0"</del> 11'-0"	2/S5.22	Collision Damage
GR2	<del>12'-0"</del> 11'-0"	2/S5.22	Collision Damage
GR3	0	-	
GR4	0	-	
GR5	0	-	
GR6	0	-	
GR7	12'-0"	2/S5.22	Collision Damage
GR8	<del>12'-0"</del> 0	-	
GR9	0	-	
GR10	<del>0 12'-0"</del>	2/S5.22	Corroded
GR11	0	-	
GR12	0	-	
GR13	<del>0 12'-0"</del>	2/S5.22	Collision Damage
GR14	<del>0 12'-0"</del>	2/S5.22	Collision Damage
GR15	0	-	
GR16	<del>0 12'-0"</del>	-	Corroded
GR17	0	-	
GR18	0	-	
GR19	<del>0 11'-0"</del>	2/S5.22	Collision Damage
GR20	<del>0 11'-0"</del>	2/S5.22	Collision Damage
GR21	0	-	
GR22	<del>0 11'-0"</del>	-	
GR23	0	-	
GR24	0	-	
GR25	0	-	
GR26	<del>0 6'-0"</del>	2/S5.22	Collision Damage
GR27	<del>0 12'-0"</del>	2/S5.22	Collision Damage
GR28	0	-	
GR29	0	-	
GR30	0	-	
GR31	0	-	
GR32	0	-	
GR33	12'-0"	2/S5.22	Collision Damage
GR34	0	-	
GR35	0	-	
GR36	0	-	
GR37	0	-	
GR38	0	-	
GR39	<del>12'-0"</del> 11'-0"	2/S5.22	Collision Damage
GR40	<del>12'-0"</del> 11'-0"	2/S5.22	Corroded

Note:  
The exact amount and location of rivet replacement and new bolt installation shall be confirmed based on actual field conditions and subject to Engineer's approval.



SURVEY PLOTTED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN BY \_\_\_\_\_  
 DESIGNED BY \_\_\_\_\_  
 QUANTITIES BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 ORIGINAL PLAN \_\_\_\_\_  
 NOTEBOOK \_\_\_\_\_  
 No. \_\_\_\_\_

GEORGE O. GUTIERREZ, JR.  
LICENSED PROFESSIONAL ENGINEER  
NO. 12107-S  
HAWAII, U.S.A.

LICENSE EXPIRES: 4/30/16  
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**REPAIR TABLES -  
TRUSS GUARDRAIL**

KAMEHAMEHA HIGHWAY  
Repair and Repaint Karsten Thot Bridge  
Federal Aid Project No. BR-080-1(012)

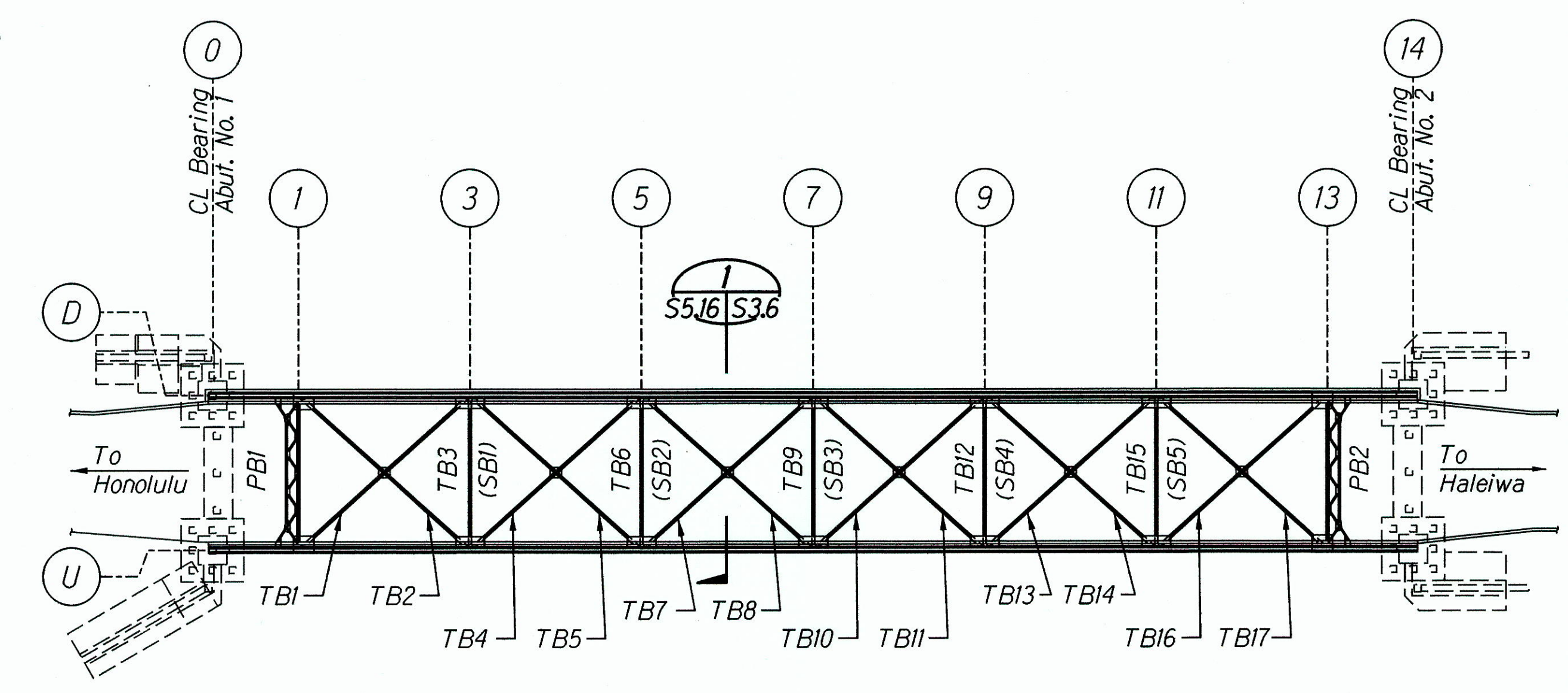
Scale: No Scale      Date: Sept 2014

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-080-1(012)	2014	55	82

~~TRUSS TOP CHORD HORIZONTAL BRACING REPAIR SCHEDULE~~

Label	Repair Length (Ft)	Repair Detail
TB1	0'-0"	-
TB2	0'-0"	-
TB3	3'-0"	1/S5.22
TB4	3'-0"	1/S5.22
TB5	0'-0"	-
TB6	0'-0"	-
TB7	5'-0"	1/S5.22
TB8	6'-0"	1/S5.22
TB9	5'-0"	1/S5.22
TB10	5'-0"	1/S5.22
TB11	5'-0"	1/S5.22
TB12	0'-0"	-
TB13	7'-0"	1/S5.22
TB14	1'-0"	1/S5.22
TB15	2'-0"	1/S5.22
TB16	0'-0"	-
TB17	0'-0"	-



Keyplan  
Not To Scale

PORTAL BRACING REPAIR SCHEDULE

Label	Repair
PB1	Complete Replacement*
PB2	Complete Replacement*

\* Refer to 1931 Original Construction Plans of Kaukonahua Bridge for existing portal bracing members.

Notes:

- Contractor to provide temporary lateral bracing of truss top chords prior to removal of existing portal bracing.
- The Contractor shall provide all measures necessary to protect the structure during construction. Such measures shall include, but not be limited to falsework such as bracing, shoring for loads due to construction equipment, winds, seismic, etc. Falsework shall be designed, constructed and maintained to support required loads. Contractor shall submit plans and calculations stamped and signed by Contractor's Structural Engineer for review.
- The exact amount and location of rivet replacement and new bolt installation shall be confirmed based on actual field conditions and subject to Engineer's approval.
- Drill 1/4" dia. weep holes to prevent water ponding in portal bracing at low points where necessary. Contractor to perform tests on portal bracing to determine low points.

SURVEY PLOTTED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN BY \_\_\_\_\_  
 DESIGNED BY \_\_\_\_\_  
 QUANTITIES BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 ORIGINAL PLAN \_\_\_\_\_  
 NOTEBOOK \_\_\_\_\_  
 No. \_\_\_\_\_

LICENSE EXPIRES: 4/30/16  
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

*George O. Gutierrez Jr.*

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**REPAIR TABLES -  
TOP CHORD BRACING**

KAMEHAMEHA HIGHWAY  
Repair and Repaint Karsten Thot Bridge  
Federal Aid Project No. BR-080-1(012)

Scale: No Scale      Date: Sept 2014

SHEET No. S5.16 OF 22 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-080-1(012)	2014	56	82

TRUSS TOP CHORD BRACING REPAIR SCHEDULE

Sway Brace	Label	Repair Length	Repair Detail	Comment
SB 1	P1	0	-	
	P2	0	-	
	P3	0	-	
	P4	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P5	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P6	<del>Plate Size 0</del>	<del>Type 2/S6.9</del>	Plate & Connection Angles
	P7	0	-	
	P8	0	-	
	P9	0	-	
	P10	0	-	
	L1	0 3'-0"	<del>Type 3/S6.9</del>	
L2	0 1'-0"	<del>Type 3/S6.9</del>		
L3	0	-		
L4	0 1'-0"	<del>Type 3/S6.9</del>		
L5	0	-		
L6	3'-0" 2'-0"	Type 3/S6.9		
L7	1'-0" 2'-0"	Type 3/S6.9		
L8	1'-0" 2'-0"	Type 3/S6.9		
L9	0	-		
L10	0	-		
L11	25'-6" 10'-0"	Type 3/S6.9		

TRUSS TOP CHORD BRACING REPAIR SCHEDULE

Sway Brace	Label	Repair Length	Repair Detail	Comment
SB 3	P1	0	-	
	P2	0	-	
	P3	0	-	
	P4	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P5	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P6	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P7	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P8	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P9	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P10	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	L1	0 6'-0"	<del>Type 3/S6.9</del>	
L2	0 1'-0"	<del>Type 3/S6.9</del>		
L3	0	-		
L4	0	-		
L5	0	-		
L6	0	-		
L7	0	-		
L8	0	-		
L9	0	-		
L10	0 1'-0"	<del>Type 3/S6.9</del>		
L11	25'-6" 25'-0"	Type 3/S6.9	Replace Angles*	

TRUSS TOP CHORD BRACING REPAIR SCHEDULE

Sway Brace	Label	Repair Length	Repair Detail	Comment
SB 5	P1	0	-	
	P2	<del>Plate Size 0</del>	<del>Type 2/S6.9</del>	
	P3	<del>Plate Size 0</del>	<del>Type 2/S6.9</del>	
	P4	<del>Plate Size 0</del>	<del>Type 2/S6.9</del>	
	P5	Plate Size	Type 2/S6.9	
	P6	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P7	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P8	Plate Size	Type 2/S6.9	
	P9	Plate Size	Type 2/S6.9	
	P10	<del>Plate Size 0</del>	<del>Type 2/S6.9</del>	
	L1	7'-6" 0	<del>Type 3/S6.9</del>	
L2	7'-6" 0	<del>Type 3/S6.9</del>		
L3	7'-6" 0	<del>Type 3/S6.9</del>		
L4	7'-6" 0	<del>Type 3/S6.9</del>		
L5	7'-6" 0	<del>Type 3/S6.9</del>		
L6	7'-6" 0	<del>Type 3/S6.9</del>		
L7	3'-6" 0	<del>Type 3/S6.9</del>	Replace Plate*	
L8	3'-6" 0	<del>Type 3/S6.9</del>	Replace Plate*	
L9	3'-6" 3'-0"	Type 3/S6.9	Replace Angles*	
L10	3'-6" 3'-0"	Type 3/S6.9	Replace Angles*	
L11	25'-6"	Type 3/S6.9	Replace Angles*	

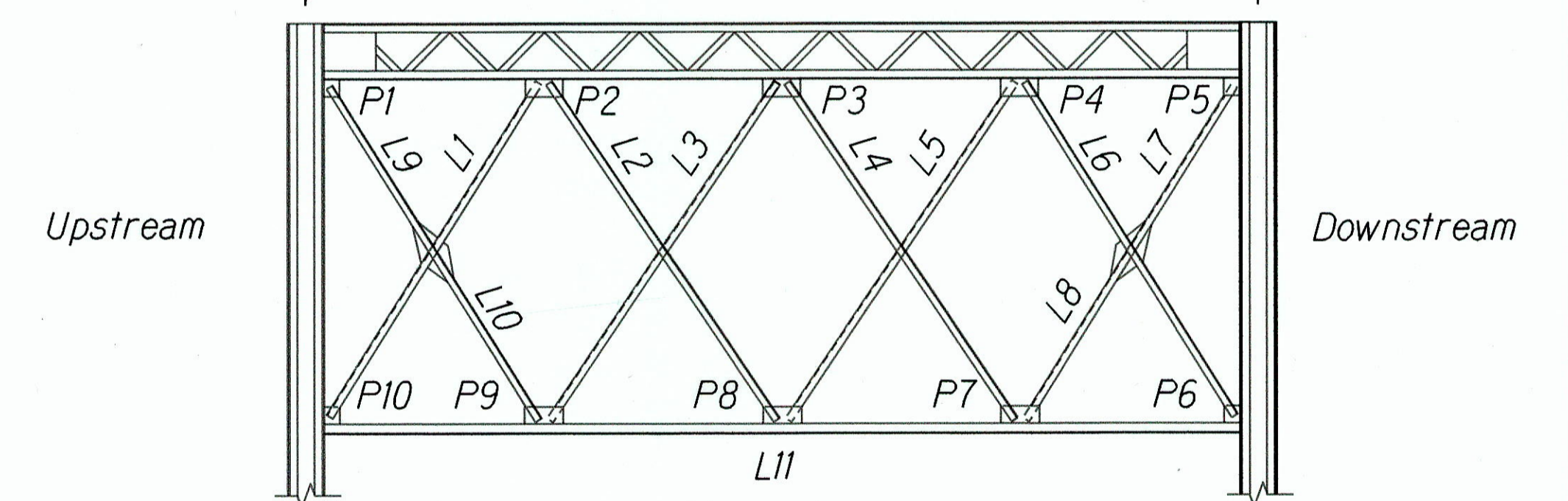
TRUSS TOP CHORD BRACING REPAIR SCHEDULE

Sway Brace	Label	Repair Length	Repair Detail	Comment
SB 2	P1	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P2	0	-	
	P3	0	-	
	P4	0	-	
	P5	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P6	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P7	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P8	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P9	Plate Size	Type 2/S6.9	
	P10	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	L1	11'-0"	Type 3/S6.9	
L2	1'-0"	Type 3/S6.9		
L3	2'-0"	Type 3/S6.9		
L4	0	-		
L5	0	-		
L6	1'-0"	Type 3/S6.9		
L7	0	-		
L8	1'-0"	Type 3/S6.9		
L9	5'-0" 3'-0"	Type 3/S6.9	Replace Angles*	
L10	5'-0" 3'-0"	Type 3/S6.9	Replace Angles*	
L11	25'-6"	Type 3/S6.9	Replace Angles*	

TRUSS TOP CHORD BRACING REPAIR SCHEDULE

Sway Brace	Label	Repair Length	Repair Detail	Comment
SB 4	P1	0	-	
	P2	0	-	
	P3	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P4	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P5	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P6	<del>Plate Size</del>	<del>Type 2/S6.9</del>	Type 2/S6.9
	P7	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P8	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P9	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	P10	<del>0 Plate Size</del>	<del>Type 2/S6.9</del>	
	L1	0 6'-0"	<del>Type 3/S6.9</del>	
L2	0 1'-0"	<del>Type 3/S6.9</del>		
L3	0 1'-0"	<del>Type 3/S6.9</del>		
L4	0 1'-0"	<del>Type 3/S6.9</del>		
L5	0 1'-0"	<del>Type 3/S6.9</del>		
L6	0 2'-0"	<del>Type 3/S6.9</del>		
L7	0 1'-0"	<del>Type 3/S6.9</del>		
L8	0 1'-0"	<del>Type 3/S6.9</del>		
L9	1'-0" 3'-0"	Type 3/S6.9	Replace Angle* & Plate*	
L10	5'-0" 3'-0"	Type 3/S6.9	Replace Angle* & Plate*	
L11	25'-6" 25'-0"	Type 3/S6.9	Replace Angle*	

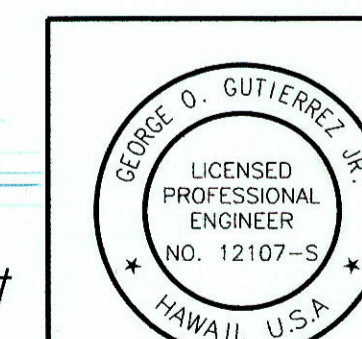
CL Truss #1 CL Truss #2



Keyplan  
Not To Scale

Note:

\* Refer to 1931 Original Construction Plans of Kaukonahua Bridge for existing portal bracing members. Attach new sway bracing members with bolts and match layout to existing conditions. The exact amount and location of rivet replacement and new bolt installation shall be confirmed based on actual field conditions and subject to Engineer's approval.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**REPAIR TABLES -  
TOP CHORD BRACING**

KAMEHAMEHA HIGHWAY  
Repair and Repaint Karsten Thot Bridge  
Federal Aid Project No. BR-080-1(012)

Scale: No Scale Date: Sept 2014

DATE \_\_\_\_\_  
SURVEY PLOTTED BY \_\_\_\_\_  
ORIGINAL PLAN \_\_\_\_\_  
DESIGNED BY \_\_\_\_\_  
NOTED BY \_\_\_\_\_  
QUANTITIES BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
No. \_\_\_\_\_