INDEX TO STRUCTURAL DRAWINGS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 30	280

SHEET NO.	DESCRIPTION
S0.1	INDEX TO STRUCTURAL DRAWINGS
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S0.3	INDEX TO STRUCTURAL DRAWINGS
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S0.6	STRUCTURAL GENERAL NOTES
S0.7	STRUCTURAL GENERAL NOTES
S0.8	STRUCTURAL GENERAL NOTES
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SA1.2	FOUNDATION PLAN
SA2.1	DOWNSTREAM ELEVATION
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SHEET NO.	DESCRIPTION
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DATE	REVISION
12/6/24	/1 Revised Index

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

INDEX TO STRUCTURAL DRAWINGS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: None Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

SHEET No. S0.1 OF 9 SHEETS

ADD. 30

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

DRAWING NAME: Z:\OD ONDOING\23-022.9-NANUE STR BR PE2-3DTM.01 CADD\12-06-24 ADD\VSR-S0001 INDEX ADD2.DWG PLOT TIME: 12-03-24, 9:48 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 34	280

STRUCTURAL GENERAL NOTES

5. Structural Steel (Cont.)

B. All new steel structures shall be ASTM A123 hot-dip zinc galvanized after all fabrication is complete. Protect elements against hydrogen embrittlement in conformance with ASTM A143. Post-galvanizing quenching/passivation shall not be utilized for steel going to paint. Coordinate with coating Contractor.

C. The steel detailer of the trestle structures shall hold a current National Institute of Steel Detailing (NISD) Senior Detailer - Class I Bridge Certification and shall be submitted to the Engineer for review and approval.

1 D. The steel fabricator of the trestle structures shall hold a current AISC Intermediate (IBR) Bridge Fabricator Certification and shall be submitted to the Engineer for review and approval.

E. Prior to hot-dip galvanizing, all welding flux and slag shall be completely removed using mechanical methods to ensure proper zinc adhesion.

F. Vent holes may be provided in members for hot-dip zinc galvanized operation. Size and location of holes shall be determined by galvanizing contractor, unless otherwise shown on the drawings. Vent hole sizes and locations shall be included on the structural steel shop drawings. All holes, other than base plates, and where noted shall be filled with zinc plugs following galvanizing operation.

G. All damage done to galvanized steel surfaces shall be repaired in accordance with ASTM A780 using the zinc solder method. Zinc rich paint shall not be an acceptable repair procedure

H. Structural parts designated for CVN Testing shall meet the longitudinal Charpy V-Notch requirements for a non-fracture critical member in Zone 1.

I. Steel plates for columns shall be cut and fabricated so that the primary direction of rolling is parallel to the column length. For column splice plates, the direction shall be parallel to the direction of the splice. For base plates, the direction shall be parallel to the centerline of the bent.

J. All holes in steel members shall be be sub-punched and reamed or full size drilled.

K. All holes for bolted connections shall be standard size unless otherwise shown on the contract drawings.

L. Bolt assemblies which connect steel to steel shall utilize 7/8" dia. high-strength bolts conforming to ASTM F3125, Grade A325, Type 1, unless otherwise noted. Bolts shall be ordered such that threads are excluded from the shear plane. Bolts shall be snug tightened unless otherwise shown on plans. All pretensioned/ slip-critical bolts shall utilize Direct Tension Indicating (DTI) washers to ensure proper bolt tension. Bolts shall be inspected.

M. Steel-to-steel bolted joints designated as slip-critical shall be pretensioned bolt assemblies with additional paint masking requirements between the faying surfaces. Provide paint masking details as shown in the contract documents.

5. Structural Steel (Cont.)

N. All nuts shall be ASTM A563 DH heavy-hex and all hardened washers shall be ASTM F436. All hardened washers shall have a hardness of Rc 38-45. DTI Washer shall be ASTM F959 and shall be installed under the bolt head or nut as shown on the Contract drawings.

O. Matched Bolt Assemblies shall contain bolt, nut, and washer provided by the same supplier.

P. Installation of all bolted assemblies shall be in accordance with the latest Research Council of Structural Connections (RCSC) Specifications for Structural Joints Using High-Strength Bolts.

Q. Anchor bolts which connect steel to concrete shall be high-strength threaded rods conforming to ASTM F1554, Grade 105 and shall be straight rod with anchor plate details at the embedded end as shown in the contract drawings. Anchor bolts shall have CVN Testing performed. Anchor bolts shall be pretensioned by the turn of the nut method. See anchor bolt pretensioning schedule.

R. All hardware, including bolts, anchor bolts, nuts and hardened washers shall be ASTM F2329 hot-dip zinc galvanized. Hardware shall be centrifugally cleaned post galvanizing. Nut threads shall be tapped oversized prior to galvanizing in accordance with ASTM A563 and are prohibited from being chased following the galvanizing process. DTI washers shall be mechanically zinc galvanized in accordance with ASTM B695, Class 55.

S. All welding shall conform to the latest ANSI/AASHTO/AWS D1.5 Bridge Welding Code. Welding shall be performed in accordance with a Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) as required in AWS D1.5. The WPS variables shall be within the parameters established by the filler-metal manufacturer.

T. All welding, whether shop or field, shall be done by certified welders in conformance with the Bridge Welding Code AWS D1.5 of the American Welding Society.

U. All Welder Certifications, WPS's and supporting PQR's shall be submitted to the Engineer for review and approval prior to any welding being performed.

V. Welding shall be performed in such a manner so as to minimize warping and distortion of steel pieces being joined. Excessive concentrated heat being applied to steel pieces shall be avoided.

W. All welded connections shall receive full seal welding along all edges of faying surfaces to prevent moisture intrusion.

X. All weld sizes are shown in inches. No fillet weld (including seal welds) or PJP weld shall be less than 1/4" and 3/16", respectively.

6. Structural Steel (Cont.)

Y. All welds shall utilize E70XX Electrodes where Shielded Metal Arc Welding (SMAW) is utilized. Where other welding processes are used, filler metal shall have matching strength to base metal.

Z. Field welding shall not be permitted unless explicitly shown on the contract drawings.

AA. All welding arc strikes, whether shop or field performed, shall be ground flush to the base metal. Any arc strikes made to the bottom flange of the plate girder shall additionally have magnetic particle inspection and hardness testing performed in accordance with AWS D1.5.

AB. All existing deformed girder stiffeners shall be cold straightened to bring them back in original alignment over their full height. Cost for this work shall be incidental to the various pay items.

AC. See Standard Specifications and Special Provisions Section 501 - STEEL STRUCTURES for additional requirements.

6. Concrete:

A. All concrete strengths shall be as noted below:

Item No.	Structural Parts	Compressive Strength, f'c (28 Days)	Maximum Water/ Cementitious (W/C)	Maximum Cementitious Material Content (lbs./cy)	Included Admixtures (See Notes Below in This Section)
(1)	Foundation Pedestals, Grade Beams, and Cheek Walls	6,000 psi	0.40	720	C, D, E
(2)	Underwater Concrete	(See Special Provisions Section 615)			
(3)	VESLMC	(See Special Provisions Section 679)			

B. The use of calcium chloride in any concrete is prohibited.

C. A migrating amine carboxylate water-based corrosion inhibiting admixture such as Cortec MCI 2005 NS or approved equal shall be added to the concrete mix. The dosage requirements shall be 24 fluid ounces per cubic yard of concrete.

DATE	REVISION
12/6/24	1 Revised Note

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

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SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

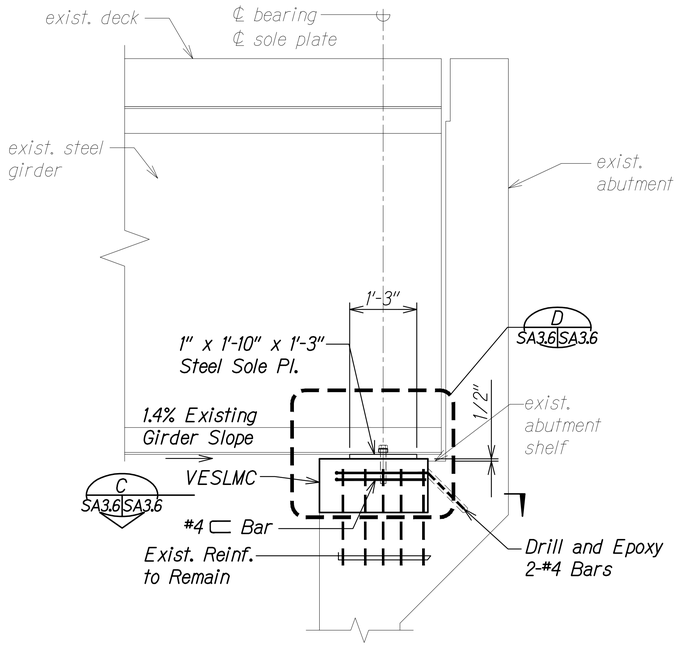
Scale: None Date: Oct. 2024

SHEET No. S0.5 OF 9 SHEETS

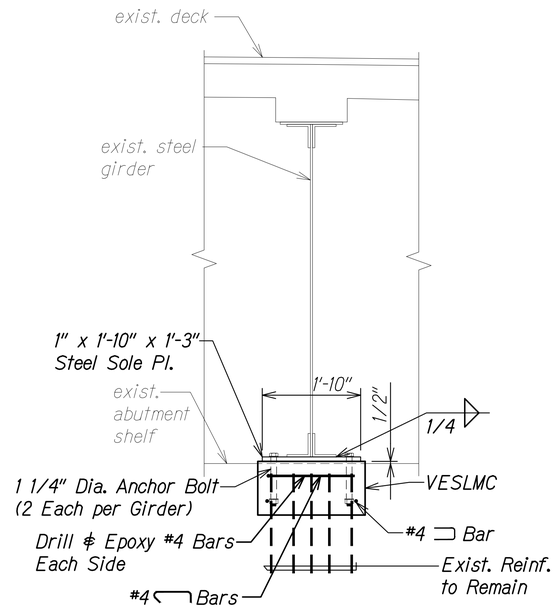
ADD. 34

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

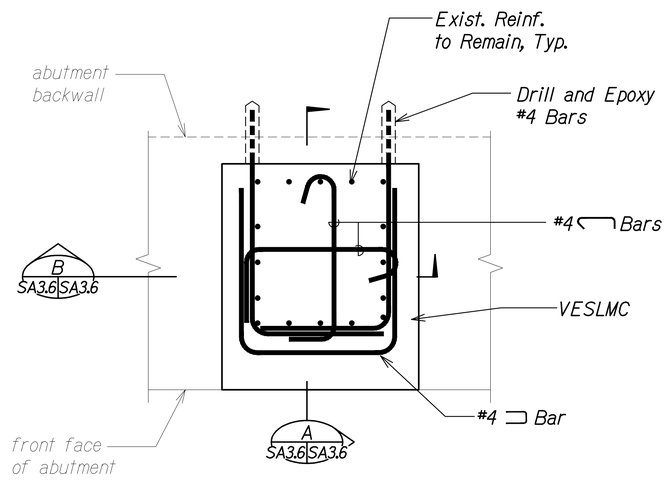
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 51	280



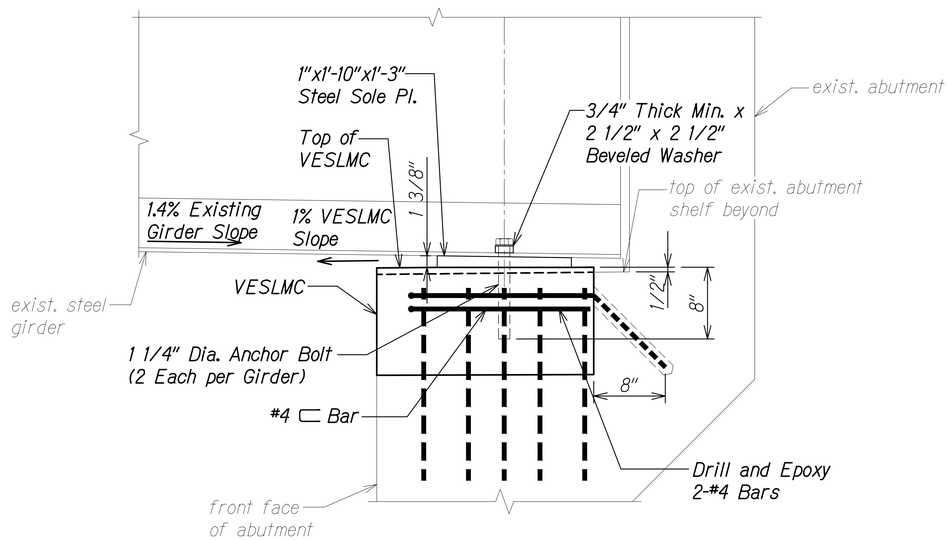
SECTION A
Scale: 3/4" = 1'-0" SA3.1 SA3.6



SECTION B
Scale: 3/4" = 1'-0" SA3.1 SA3.6



PLAN
Scale: 1 1/2" = 1'-0" C SA3.6 SA3.6 1



SECTION D
Scale: 1 1/2" = 1'-0" SA3.6 SA3.6

NOTES:

1. Verify all dimensions and slopes in field before fabricating any members.
2. 1 Repair all welds to bearing plates with zinc solder in accordance with ASTM A780, Painting of all bearings shall be incidental to Pay Item 666.1000.

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ABUTMENT NO. 2
ABUTMENT SECTIONS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET No. SA3.6 OF 7 SHEETS

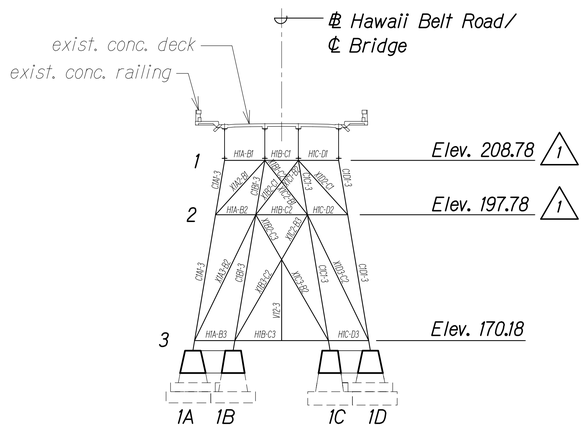
DATE	REVISION
12/6/24	1 Revised Scale and Added Note

ADD. 51

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

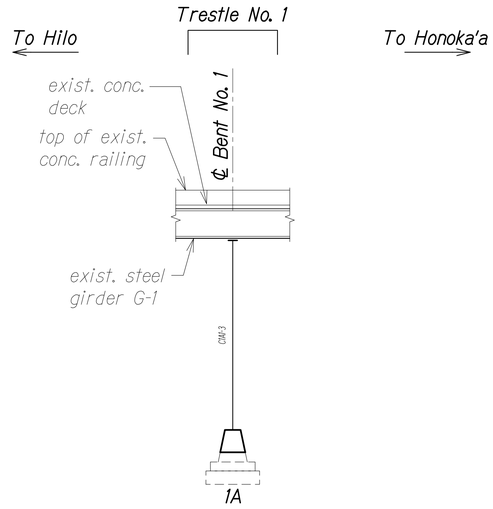
DRAWING NAME: A:\OD ONGOING\23-022\3-NANUE STR BR PE2-BOTH.DGN 12-06-24 ADD2\NSE-SA03\1-SA03\7 ABUT.DWG PLOT TIME: 12-05-24, 2:28 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 55	280



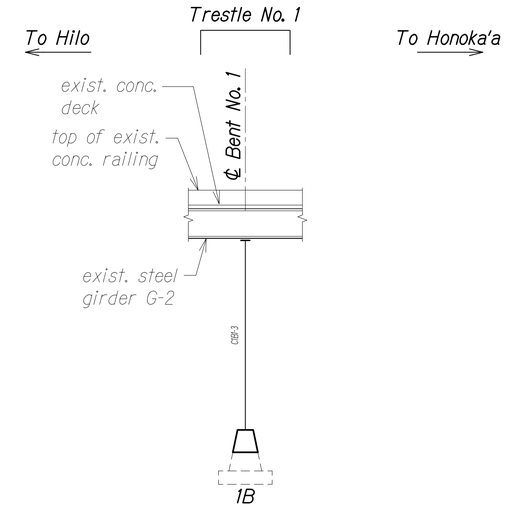
BENT NO. 1 ELEVATION — A

Scale: 1/16" = 1'-0"



TRESTLE NO. 1 ELEVATION - COLUMN LINE "A" — B

Scale: 1/16" = 1'-0"



TRESTLE NO. 1 ELEVATION - COLUMN LINE "B" — C

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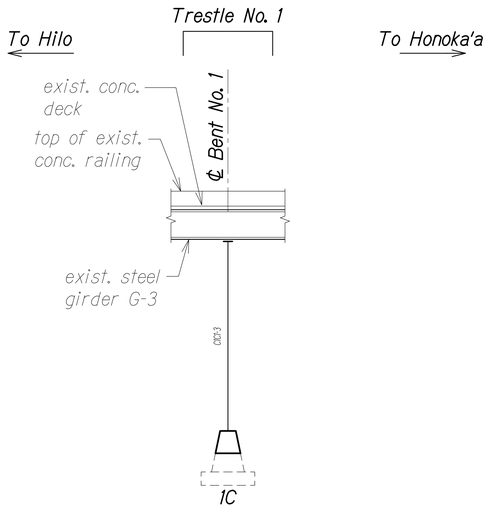

TRESTLE NO. 1 ELEVATION - COLUMN LINE "C" — D

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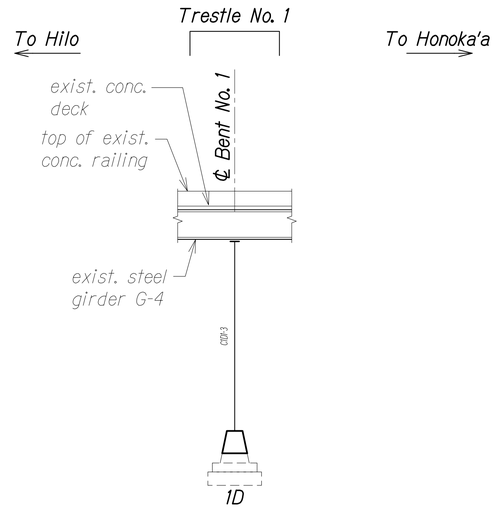

TRESTLE NO. 1 ELEVATION - COLUMN LINE "D" — E

Scale: 1/16" = 1'-0"

DATE	REVISION
12/6/24	1 Revised Elevations

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BENT NO. 1/TRESTLE NO. 1 MEMBER ELEVATIONS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET No. SA4.3 OF 20 SHEETS

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

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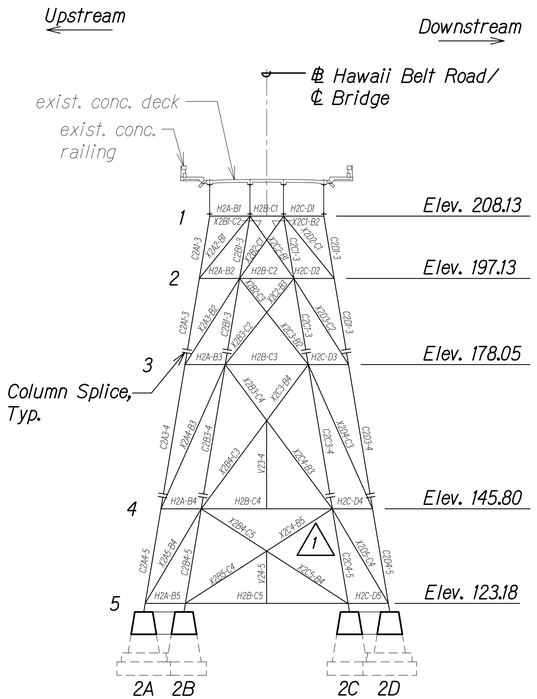
ORIGINAL PLAN | NOTE BOOK | No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

DRAWING NAME: ZA100 ENGINEERING\23-0229-NANUE STR BR PE2-20TH\01 CAD\12-06-24 ADD\NSR-SA0401-SA410 BENT-TRESTLES ADD2.DWG PLOT TIME: 12-05-24, 3:20 PM

ADD. 55

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 56	280



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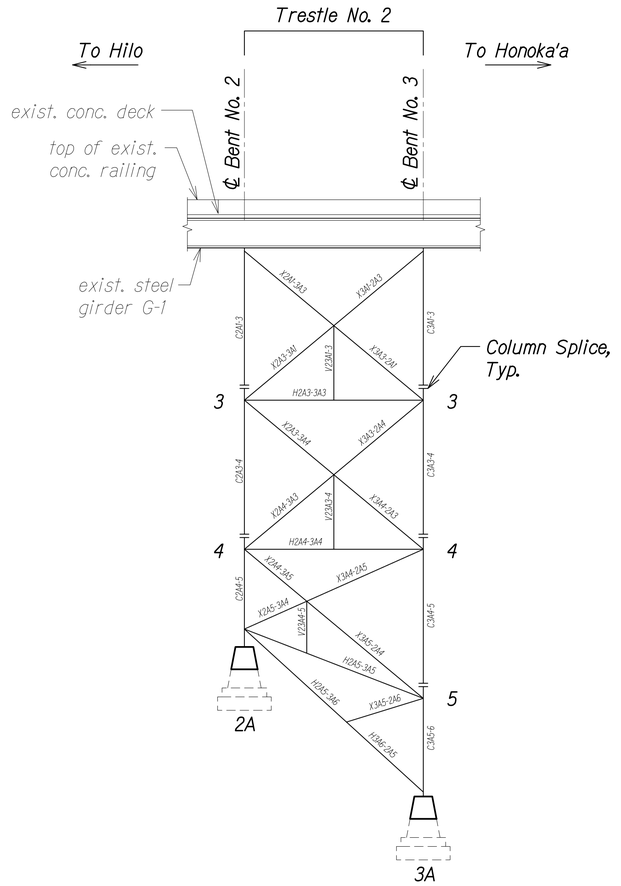

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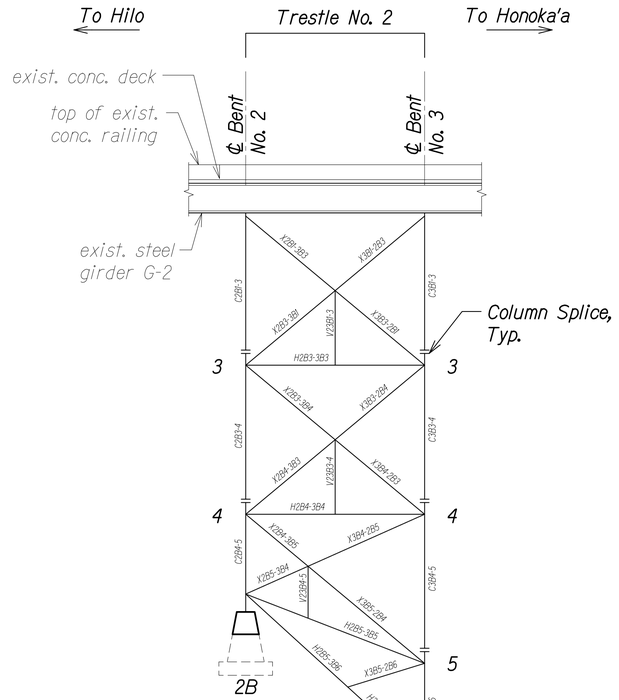

TRESTLE NO. 2 ELEVATION - COLUMN LINE "B" (C)
Scale: 1/16" = 1'-0"

12/6/24	1 Revised Label
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BENT NO. 2/TRESTLE NO. 2 MEMBER ELEVATIONS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

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4-30-26
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SURVEY PLOTTED BY
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QUANTITIES BY
CHECKED BY
DATE

ORIGINAL PLAN
NOTE BOOK
No.

SHEET No. SA4.4 OF 20 SHEETS

ADD. 56

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 85	280

BENT UPPER INTERIOR DIAGONAL BRACE SCHEDULE

	MEMBER ID	"A"	BATTEN PLATE SPACES
BENT NO. 1	X1B1-C2	1'-6"	1 Eq. Spaces 1
	X1C1-B2	1'-6"	1 Eq. Spaces 1
	X1B2-C1	1'-6"	2 Eq. Spaces 1
	X1C2-B1	1'-6"	2 Eq. Spaces 1
	X1B2-C3	1'-6"	4 Eq. Spaces
	X1C2-B3	1'-6"	4 Eq. Spaces
	X1B3-C2	1'-6"	9 Eq. Spaces
	X1C3-B2	1'-6"	9 Eq. Spaces
BENT NO. 2	X2B1-C2	1'-6"	1 Eq. Spaces 1
	X2C1-B2	1'-6"	1 Eq. Spaces 1
	X2B2-C1	1'-6"	2 Eq. Spaces 1
	X2C2-B1	1'-6"	2 Eq. Spaces 1
	X2B2-C3	1'-6"	3 Eq. Spaces
	X2C2-B3	1'-6"	3 Eq. Spaces
	X2B3-C2	1'-6"	6 Eq. Spaces
	X2C3-B2	1'-6"	6 Eq. Spaces
	X2B3-C4	1'-6"	6 Eq. Spaces
	X2C3-B4	1'-6"	6 Eq. Spaces
	X2B4-C3	1'-6"	11 Eq. Spaces
	X2C4-B3	1'-6"	11 Eq. Spaces
	X2B4-C5	1'-6"	7 Eq. Spaces
	X2C4-B5	1'-6"	7 Eq. Spaces 1
	X2B5-C4	1'-6"	10 Eq. Spaces
	X2C5-B4	1'-6"	10 Eq. Spaces
BENT NO. 3	X3B1-C2	1'-6"	1 Eq. Spaces 1
	X3C1-B2	1'-6"	1 Eq. Spaces 1
	X3B2-C1	1'-6"	2 Eq. Spaces 1
	X3C2-B1	1'-6"	2 Eq. Spaces 1
	X3B2-C3	1'-6"	3 Eq. Spaces
	X3C2-B3	1'-6"	3 Eq. Spaces
	X3B3-C2	1'-6"	6 Eq. Spaces
	X3C3-B2	1'-6"	6 Eq. Spaces
	X3B3-C4	1'-6"	6 Eq. Spaces
	X3C3-B4	1'-6"	6 Eq. Spaces
	X3B4-C3	1'-6"	11 Eq. Spaces
	X3C4-B3	1'-6"	11 Eq. Spaces
	X3B4-C5	1'-6"	9 Eq. Spaces
	X3C4-B5	1'-6"	9 Eq. Spaces
	X3B5-C4	1'-6"	12 Eq. Spaces
	X3C5-B4	1'-6"	12 Eq. Spaces
	X3B4-C6	1'-6"	10 Eq. Spaces
	X3C5-B6	1'-6"	10 Eq. Spaces
	X3B6-C5	1'-6"	12 Eq. Spaces
	X3C6-B5	1'-6"	12 Eq. Spaces

BENT UPPER INTERIOR DIAGONAL BRACE SCHEDULE

	MEMBER ID	"A"	BATTEN PLATE SPACES
BENT NO. 4	X4B1-C2	1'-6"	1 Eq. Spaces 1
	X4C1-B2	1'-6"	1 Eq. Spaces 1
	X4B2-C1	1'-6"	2 Eq. Spaces 1
	X4C2-B1	1'-6"	2 Eq. Spaces 1
	X4B2-C3	1'-6"	3 Eq. Spaces
	X4C2-B3	1'-6"	3 Eq. Spaces
	X4B3-C2	1'-6"	6 Eq. Spaces
	X4C3-B2	1'-6"	6 Eq. Spaces
	X4B3-C4	1'-6"	6 Eq. Spaces
	X4C3-B4	1'-6"	6 Eq. Spaces
	X4B4-C3	1'-6"	11 Eq. Spaces
	X4C4-B3	1'-6"	11 Eq. Spaces
	X4B4-C5	1'-6"	9 Eq. Spaces
	X4C4-B5	1'-6"	9 Eq. Spaces
	X4B5-C4	1'-6"	12 Eq. Spaces
	X4C5-B4	1'-6"	12 Eq. Spaces
	X4B5-C6	1'-6"	11 Eq. Spaces
	X4C5-B6	1'-6"	11 Eq. Spaces
	X4B6-C5	1'-6"	14 Eq. Spaces
	X4C6-B5	1'-6"	14 Eq. Spaces
BENT NO. 5	X5B1-C2	1'-6"	1 Eq. Spaces 1
	X5C1-B2	1'-6"	1 Eq. Spaces 1
	X5B2-C1	1'-6"	2 Eq. Spaces 1
	X5C2-B1	1'-6"	2 Eq. Spaces 1
	X5B2-C3	1'-6"	3 Eq. Spaces
	X5C2-B3	1'-6"	3 Eq. Spaces
	X5B3-C2	1'-6"	6 Eq. Spaces
	X5C3-B2	1'-6"	6 Eq. Spaces
	X5B3-C4	1'-6"	6 Eq. Spaces
	X5C3-B4	1'-6"	6 Eq. Spaces
	X5B4-C3	1'-6"	11 Eq. Spaces
	X4C4-B3	1'-6"	11 Eq. Spaces
	X5B4-C5	1'-6"	9 Eq. Spaces
	X5C4-B5	1'-6"	9 Eq. Spaces
	X5B5-C4	1'-6"	12 Eq. Spaces
	X5C5-B4	1'-6"	12 Eq. Spaces
	X5B5-C6	1'-6"	11 Eq. Spaces
	X5C5-B6	1'-6"	11 Eq. Spaces
	X5B6-C5	1'-6"	14 Eq. Spaces
	X5C6-B5	1'-6"	14 Eq. Spaces

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

DRAWING NAME: Z:\OD ONDONG\23-022.9-NANUE STR BR PE2-3DTM.01 CADD\12-06-24 ADD\VSR-540512 DAG BRACE DTLS ADD2.DWG PLOT TIME: 12-03-24, 10:03 PM

DATE	REVISION
12/6/24	1 Revised Table Value

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DIAGONAL BRACE SCHEDULE

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

SHEET NO. SA5.13 OF 34 SHEETS

ADD. 85

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 86	280

BENT UPPER INTERIOR DIAGONAL BRACE SCHEDULE

	MEMBER ID	"A"	BATTEN PLATE SPACES
BENT NO. 6	X6B1-C2	1'-6"	1 Eq. Spaces 1
	X6C1-B2	1'-6"	1 Eq. Spaces 1
	X6B2-C1	1'-6"	2 Eq. Spaces 1
	X6C2-B1	1'-6"	2 Eq. Spaces 1
	X6B2-C3	1'-6"	3 Eq. Spaces
	X6C2-B3	1'-6"	3 Eq. Spaces
	X6B3-C2	1'-6"	6 Eq. Spaces
	X6C3-B2	1'-6"	6 Eq. Spaces
	X6B3-C4	1'-6"	6 Eq. Spaces
	X6C3-B4	1'-6"	6 Eq. Spaces
	X6B4-C3	1'-6"	11 Eq. Spaces
	X6C4-B3	1'-6"	11 Eq. Spaces
	X6B4-C5	1'-6"	9 Eq. Spaces
	X6C4-B5	1'-6"	9 Eq. Spaces
	X6B5-C4	1'-6"	12 Eq. Spaces
	X6C5-B4	1'-6"	12 Eq. Spaces
	X6B5-C6	1'-6"	11 Eq. Spaces
	X6C5-B6	1'-6"	11 Eq. Spaces
	X6B6-C5	1'-6"	14 Eq. Spaces
	X6C6-B5	1'-6"	14 Eq. Spaces
BENT NO. 7	X7B1-C2	1'-6"	1 Eq. Spaces 1
	X7C1-B2	1'-6"	1 Eq. Spaces 1
	X7B2-C1	1'-6"	2 Eq. Spaces 1
	X7C2-B1	1'-6"	2 Eq. Spaces 1
	X7B2-C3	1'-6"	3 Eq. Spaces
	X7C2-B3	1'-6"	3 Eq. Spaces
	X7B3-C2	1'-6"	6 Eq. Spaces
	X7C3-B2	1'-6"	6 Eq. Spaces
	X7B3-C4	1'-6"	6 Eq. Spaces
	X7C3-B4	1'-6"	6 Eq. Spaces
	X7B4-C3	1'-6"	11 Eq. Spaces
	X7C4-B3	1'-6"	11 Eq. Spaces
	X7B4-C5	1'-6"	9 Eq. Spaces
	X7C4-B5	1'-6"	9 Eq. Spaces
	X7B5-C4	1'-6"	12 Eq. Spaces
	X7C5-B4	1'-6"	12 Eq. Spaces
	X7B5-C6	1'-6"	11 Eq. Spaces
	X7C5-B6	1'-6"	11 Eq. Spaces
	X7B6-C5	1'-6"	14 Eq. Spaces
	X7C6-B5	1'-6"	14 Eq. Spaces

BENT UPPER INTERIOR DIAGONAL BRACE SCHEDULE

	MEMBER ID	"A"	BATTEN PLATE SPACES
BENT NO. 8	X8B1-C2	1'-6"	1 Eq. Spaces 1
	X8C1-B2	1'-6"	1 Eq. Spaces 1
	X8B2-C1	1'-6"	2 Eq. Spaces 1
	X8C2-B1	1'-6"	2 Eq. Spaces 1
	X8B2-C3	1'-6"	3 Eq. Spaces
	X8C2-B3	1'-6"	3 Eq. Spaces
	X8B3-C2	1'-6"	6 Eq. Spaces
	X8C3-B2	1'-6"	6 Eq. Spaces
	X8B3-C4	1'-6"	6 Eq. Spaces
	X8C3-B4	1'-6"	6 Eq. Spaces
	X8B4-C3	1'-6"	11 Eq. Spaces
	C8C4-B3	1'-6"	11 Eq. Spaces
BENT NO. 9	X9B1-C2	1'-6"	1 Eq. Spaces 1
	X9C1-B2	1'-6"	1 Eq. Spaces 1
	X9B2-C1	1'-6"	2 Eq. Spaces 1
	X9C2-B1	1'-6"	2 Eq. Spaces 1
	X9B2-C3	1'-6"	4 Eq. Spaces
	X9C2-B3	1'-6"	4 Eq. Spaces
	X9B3-C2	1'-6"	7 Eq. Spaces
	X9C3-B2	1'-6"	7 Eq. Spaces

DATE	REVISION
12/6/24	1 Revised Table Value

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DIAGONAL BRACE SCHEDULE

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

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SHEET No. SA5.14 OF 34 SHEETS

ADD. 86

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

DRAWING NAME: ZA:\OD ONO\NO\23-022\3-NANUE STR BR PE2-OOTA\01 CAD\12-06-24 ADD\ANSR-SA0512 DIAG BRACE QTYS ADD2.DWG PLOT TIME: 12-03-24 12:03:24 (12-03-24 10:05 PM)

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 88	280

BENT LOWER INTERIOR DIAGONAL BRACE SCHEDULE

	MEMBER ID	"A"	BATTEN PLATE SPACES
BENT NO. 4	X4B6-C7	1'-6"	14 Eq. Spaces
	X4C6-B7	1'-6"	14 Eq. Spaces
	X4B7-C6	1'-6"	18 Eq. Spaces
	X4C7-B6	1'-6"	18 Eq. Spaces
BENT NO. 5	X5B6-C7	1'-6"	20 Eq. Spaces 1
	X5C6-B7	1'-6"	20 Eq. Spaces 1
	X5B8-C7	1'-6"	18 Eq. Spaces
	X5C8-B7	1'-6"	18 Eq. Spaces
BENT NO. 6	X6B6-C7	1'-6"	20 Eq. Spaces 1
	X6C6-B7	1'-6"	20 Eq. Spaces 1
	X6B8-C7	1'-6"	18 Eq. Spaces
	X6C8-B7	1'-6"	18 Eq. Spaces

DRAWING NAME: Z:\OD ENGINEERING\23-022\9-NANUE STR BR PE2-OOTHA\01 CAD\12-06-24 ADD\NSR-SA5512 DIAG BRACE DTLS ADD2.DWG PLOT TIME: 12-03-24 10:04 PM

ORIGINAL PLAN
NOTE BOOK
No.

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

DATE	REVISION
12/6/24	1 Revised Table Value

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STEPHEN T. PETERS
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SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-26

DIAGONAL BRACE SCHEDULE

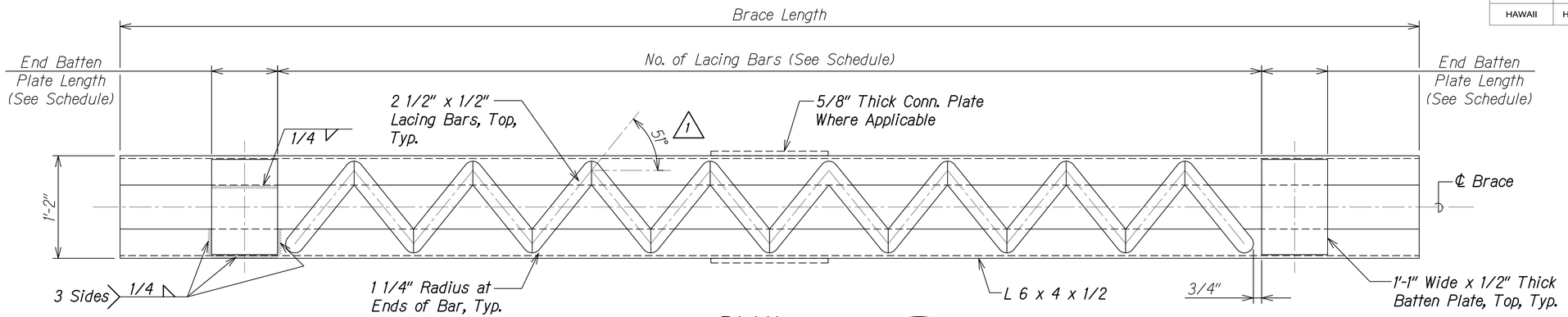
HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET No. SA5.16 OF 34 SHEETS

ADD. 88

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 91	280

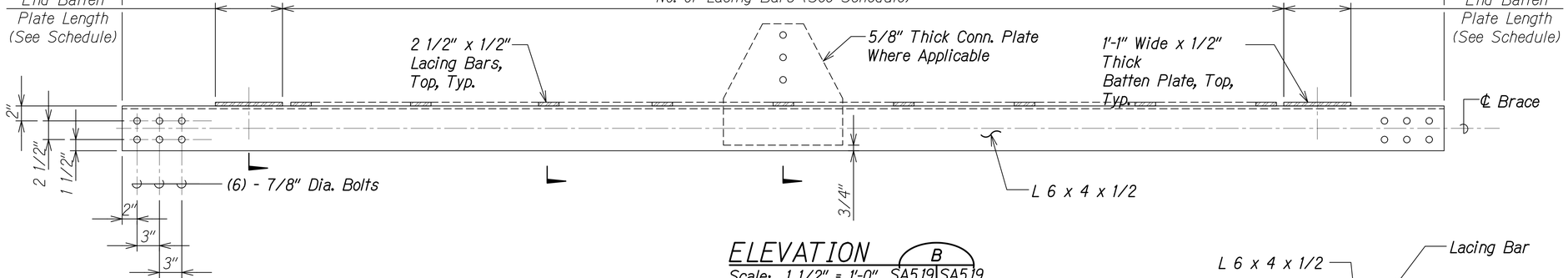


PLAN (A) SA5.19 | SA5.19
Scale: 1 1/2" = 1'-0"

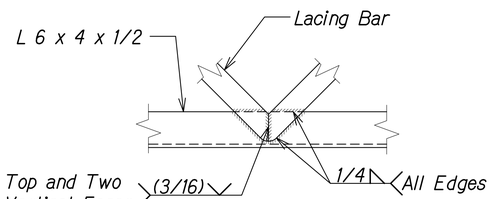
NOTE:

Steel detailer to determine all lengths not shown on brace plans and schedule.

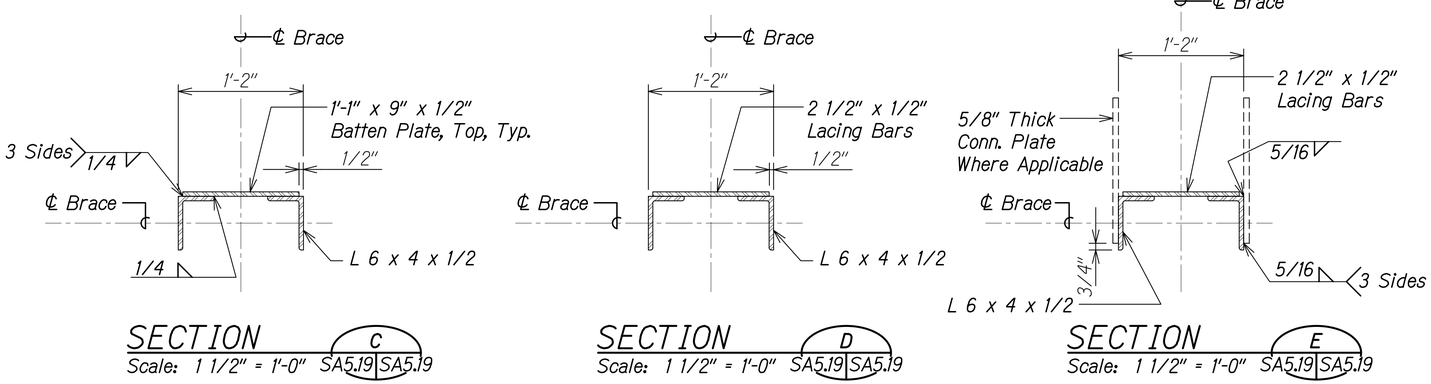
C SA5.19 | SA5.19 D SA5.19 | SA5.19 E SA5.19 | SA5.19



ELEVATION (B) SA5.19 | SA5.19
Scale: 1 1/2" = 1'-0"



DETAIL (1) SA5.19 | SA5.19
Scale: 1 1/2" = 1'-0"



SECTION (C) SA5.19 | SA5.19
Scale: 1 1/2" = 1'-0"

SECTION (D) SA5.19 | SA5.19
Scale: 1 1/2" = 1'-0"

SECTION (E) SA5.19 | SA5.19
Scale: 1 1/2" = 1'-0"

BENT UPPER HORIZONTAL BRACE

DATE	REVISION
12/6/24	1 Revised Dimension

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HORIZONTAL BRACE PLAN, ELEVATION AND SECTION

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-26
SIGNATURE EXPIRATION DATE OF THE LICENSE

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

BRAWING NAME: J:\00 ONGOING\23-02\23-NANUE STR BR PE2-BOTH\01 CAD\12-06-24 ADD2\NSB-240519 DWG BRACE DTLS ADD2.DWG PLOT TIME: 12-05-24, 12:33 PM

BENT UPPER HORIZONTAL BRACE SCHEDULE

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 92	280

BENT NO. 1	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H1A-B1	0'-10"	4
	H1B-C1	0'-9"	2 /1
	H1C-D1	0'-10"	4
	H1A-B2	0'-10"	4
	H1B-C2	1'-5" /1	4 /1
	H1C-D2	0'-10"	4

BENT NO. 2	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H2A-B1	0'-10"	4
	H2B-C1	0'-8" /1	2 /1
	H2C-D1	0'-10"	4
	H2A-B2	0'-9" /1	6 /1
	H2B-C2	0'-10"	8
	H2C-D2	0'-10"	4
	H2A-B3	0'-10"	4
	H2B-C3	0'-8" /1	14 /1
	H2C-D3	0'-10"	4
	H2A-B4	0'-10"	4
	H2B-C4	0'-9" /1	26 /1
	H2C-D4	0'-10"	4

BENT NO. 3	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H3A-B1	0'-10"	4
	H3B-C1	0'-9"	2 /1
	H3C-D1	0'-10"	4
	H3A-B2	0'-10"	4
	H3B-C2	1'-5" /1	4 /1
	H3C-D2	0'-10"	4
	H3A-B3	0'-10"	4
	H3B-C3	1'-3" /1	12 /1
	H3C-D3	0'-10"	4
	H3A-B4	0'-10"	4
	H3B-C4	0'-10" /1	26 /1
	H3C-D4	0'-10"	4
	H3A-B5	0'-10"	4
	H3B-C5	1'-2" /1	38 /1
	H3C-D5	0'-10"	4

BENT NO. 4	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H4A-B1	0'-10"	4
	H4B-C1	0'-8" /1	2 /1
	H4C-D1	0'-10"	4
	H4A-B2	0'-10"	4
	H4B-C2	0'-9" /1	6 /1
	H4C-D2	0'-10"	4
	H4A-B3	0'-10"	4
	H4B-C3	0'-8" /1	14 /1
	H4C-D3	0'-10"	4

BENT NO. 5	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H5A-B1	0'-10"	4
	H5B-C1	0'-9"	2 /1
	H5C-D1	0'-10"	4
	H5A-B2	0'-10"	4
	H5B-C2	1'-5" /1	4 /1
	H5C-D2	0'-10"	4
	H5A-B3 /1	0'-10"	4
	H5B-C3 /1	1'-3" /1	12 /1
	H5C-D3 /1	0'-10"	4
	H5A-B4 /1	0'-10"	4
	H5B-C4	0'-10" /1	26 /1
	H5C-D4	0'-10"	4
	H5A-B5	0'-10"	4
	H5B-C5	1'-5" /1	38 /1
	H5C-D5	0'-10"	4

BENT NO. 6	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H6A-B1	0'-10"	4
	H6B-C1	0'-8" /1	2 /1
	H6C-D1	0'-10"	4
	H6A-B2	0'-10"	4
	H6B-C2	0'-9" /1	6 /1
	H6C-D2	0'-10"	4
	H6A-B3	0'-10"	4
	H6B-C3	0'-8" /1	14 /1
	H6C-D3	0'-10"	4
	H6A-B4	0'-10"	4
	H6B-C4	0'-9" /1	26 /1
	H6C-D4	0'-10"	4
	H6A-B5	0'-10"	4
	H6B-C5	1'-3" /1	38 /1
	H6C-D5	0'-10"	4

BENT NO. 7	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H7A-B1	0'-10"	4
	H7B-C1	0'-9"	2 /1
	H7C-D1	0'-10"	4
	H7A-B2	0'-10"	4
	H7B-C2	1'-5" /1	4 /1
	H7C-D2	0'-10"	4
	H7A-B3	0'-10"	4

BENT NO. 7	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H7B-C3	1'-3" /1	12 /1
	H7C-D3	0'-10"	4
	H7A-B4	0'-10"	4
	H7B-C4	0'-10" /1	26 /1
	H7C-D4	0'-10"	4
	H7A-B5	0'-10"	4
	H7B-C5	0'-9"	40 /1
	H7C-D5	0'-10"	4

BENT NO. 8	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H8A-B1	0'-10"	4
	H8B-C1	0'-8" /1	2 /1
	H8C-D1	0'-10"	4
	H8A-B2	0'-10"	4
	H8B-C2	0'-9" /1	6 /1
	H8C-D2	0'-10"	4
	H8A-B3	0'-10"	4
	H8B-C3	1'-2"	12 /1
	H8C-D3	0'-10"	4

BENT NO. 9	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H9A-B1	0'-10"	4
	H9B-C1	0'-9"	2 /1
	H9C-D1	0'-10"	4
	H9A-B2	0'-10"	4
	H9B-C2	1'-5" /1	4 /1
	H9C-D2	0'-10"	4

DATE	REVISION
12/6/24	/1 Revised Table Value

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HORIZONTAL BRACE SCHEDULE

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

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SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

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

ORIGINAL PLAN
NOTE BOOK
No.

DRAWING NAME: Z:\OD ONGOING\23-0229-NANUE STR BR PEP-EOR\01 CAD\12-06-24 ADD\NSR-SA0512 DWG BRACE BTES ADD2.DWG PLOT TIME: 12-03-24, 10:07 PM

SHEET NO. SA5.20 OF 34 SHEETS

ADD. 92

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 94	280

BENT LOWER HORIZONTAL BRACE SCHEDULE

BENT NO. 1	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H1A-B3	0'-8"	4
	H1B-C3	1'-4" /1	16
	H1C-D3	0'-8"	4

BENT NO. 2	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H2A-B5	0'-8"	4
	H2B-C5	1'-6" /1	34
	H2C-D5	0'-8"	4

BENT NO. 3	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H3A-B6	0'-8"	4
	H3B-C6	0'-9" /1	22 /1
	H3C-B6	0'-9" /1	22 /1
	H3C-D6	0'-8"	4

BENT NO. 4	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H4A-B6	0'-8"	4
	H4B-C6	1'-3" /1	22
	H4C-B6	1'-3" /1	22
	H4C-D6	0'-8"	4
	H4A-B7	0'-8"	4
	H4B-C7	1'-5" /1	30
	H4C-B7	1'-5" /1	30
	H4C-D7	0'-8"	4

BENT NO. 5	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H5A-B6	0'-8"	4
	H5B-C6	1'-2" /1	22
	H5C-B6	1'-2" /1	22
	H5C-D6	0'-8"	4
	H5A-B7	0'-8"	4
	H5B-C7	1'-3" /1	28
	H5C-B7	1'-3" /1	28
	H5C-D7	0'-8"	4
	H5A-B8	0'-8"	4
	H5B-C8	1'-5" /1	32
	H5C-B8	1'-5" /1	32
	H5C-D8	0'-8"	4

BENT NO. 6	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H6A-B6	0'-8"	4
	H6B-C6	1'-1" /1	22
	H6C-B6	1'-1" /1	22
	H6C-D6	0'-8"	4
	H6A-B7	0'-8"	4
	H6B-C7	1'-5" /1	28
	H6C-B7	1'-5" /1	28
	H6C-D7	0'-8"	4
	H6A-B8	0'-8"	4
	H6B-C8	0'-11"	34 /1
	H6C-B8	0'-11"	34 /1
	H6C-D8	0'-8"	4

BENT NO. 7	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H7A-B6	0'-8"	4
	H7B-C6	1'-2" /1	22
	H7C-B6	1'-2" /1	22
	H7C-D6	0'-8"	4

BENT NO. 8	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H8A-B4	0'-8"	4
	H8B-C4	1'-2" /1	26
	H8C-D4	0'-8"	4

BENT NO. 9	MEMBER ID	End Batten Plate Length	No. of Lacing Bars
	H9A-B3	0'-8"	4
	H9B-C3	1'-4" /1	14
	H9C-D3	0'-8"	4

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

DRAWING NAME: ZA\00 ONGOING\23-0229-NANUE STR BR PE2-EOTA\01 CAD\12-06-24 ADD2\NSR-SA0512 BWD BRACE DTLS ADD2.DWG PLOT TIME: 12-03-24 10:08 PW

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

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4-30-26
SIGNATURE EXPIRATION DATE OF THE LICENSE

DATE	REVISION
12/6/24	/1 Revised Table Value

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HORIZONTAL BRACE SCHEDULE

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET NO SA5.22 OF 34 SHEETS

ADD. 94

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 99	280

TRESTLE NO. 5 DIAGONAL BRACE SCHEDULE

TRESTLE NO. 5

MEMBER ID	"A"	BATTEN PLATE SPACES	
X8A1-9A3	1'-6"	12 Eq. Spaces	1
X8B1-9B3	1'-6"	12 Eq. Spaces	1
X8C1-9C3	1'-6"	12 Eq. Spaces	1
X8D1-9D3	1'-6"	12 Eq. Spaces	1
X9A1-8A3	1'-6"	12 Eq. Spaces	
X9B1-8B3	1'-6"	12 Eq. Spaces	
X9C1-8C3	1'-6"	12 Eq. Spaces	
X9D1-8D3	1'-6"	12 Eq. Spaces	
X8A3-9A1	1'-6"	10 Eq. Spaces	
X8B3-9B1	1'-6"	10 Eq. Spaces	
X8C3-9C1	1'-6"	10 Eq. Spaces	
X8D3-9D1	1'-6"	10 Eq. Spaces	
X9A3-8A1	1'-6"	12 Eq. Spaces	
X9B3-8B1	1'-6"	12 Eq. Spaces	
X9C3-8C1	1'-6"	12 Eq. Spaces	
X9D3-8D1	1'-6"	12 Eq. Spaces	
X8A4-9A3	1'-6"	12 Eq. Spaces	1
X8B4-9B3	1'-6"	12 Eq. Spaces	1
X8C4-9C3	1'-6"	12 Eq. Spaces	1
X8D4-9D3	1'-6"	12 Eq. Spaces	1
X9A3-8A4	1'-6"	12 Eq. Spaces	
X9B3-8B4	1'-6"	12 Eq. Spaces	
X9C3-8C4	1'-6"	12 Eq. Spaces	
X9D3-8D4	1'-6"	12 Eq. Spaces	

DRAWING NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR PE2-DOTH\01 CAD\12-06-24 ADD2\NSB-SAD512 DIAG BRACE DTLS ADD2.DWG PLOT TIME: 12-03-24 10:09 PM

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

DATE	REVISION
12/6/24	1 Revised Table Value

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

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DIAGONAL BRACE SCHEDULE

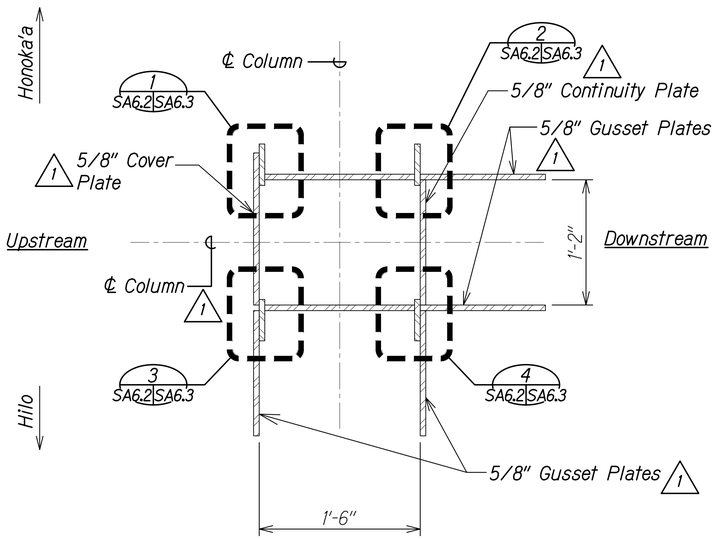
HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

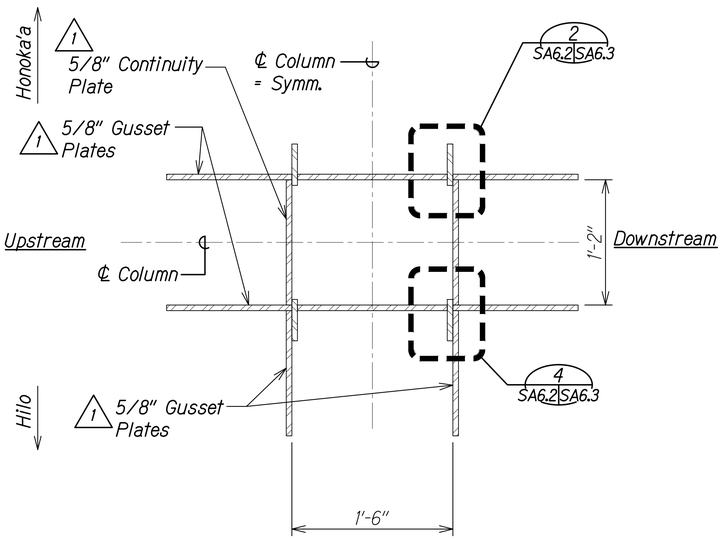
SHEET NO SA5.27 OF 34 SHEETS

ADD. 99

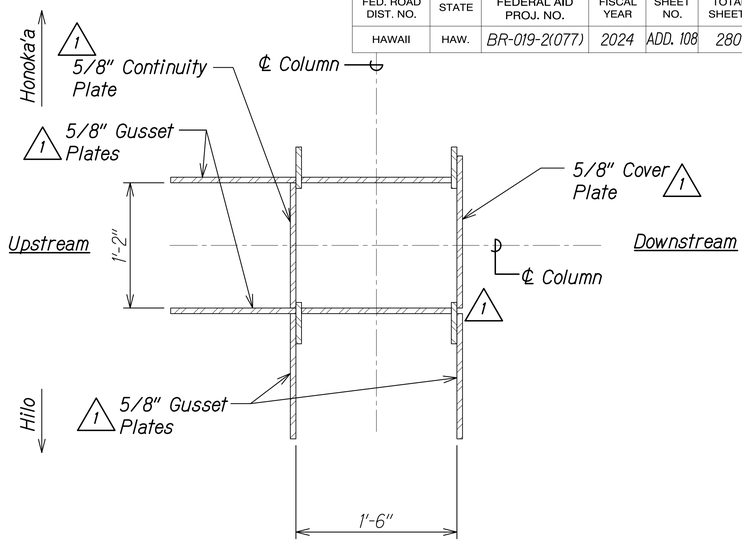
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 108	280



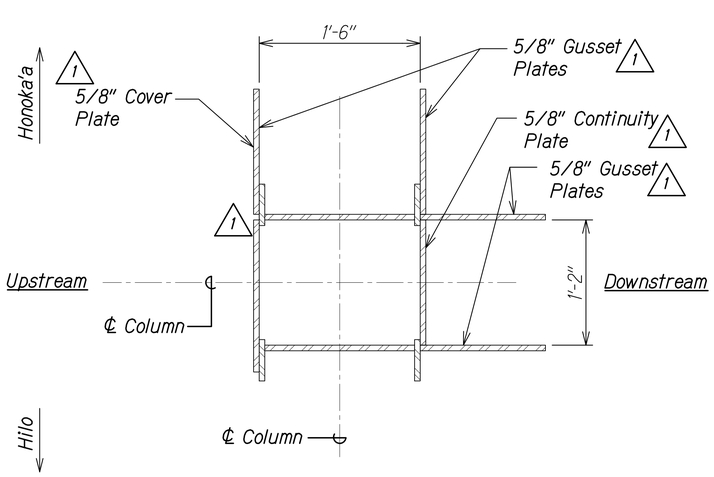
PLAN DETAIL A
Scale: 1 1/2" = 1'-0" SA6.2|SA6.2



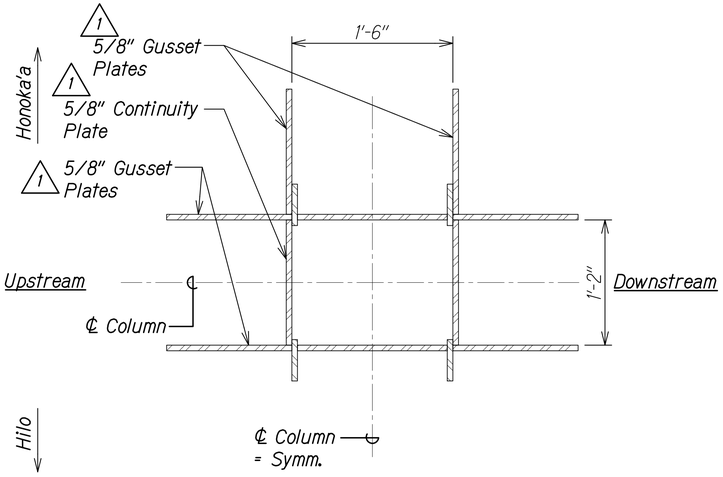
PLAN DETAIL B
Scale: 1 1/2" = 1'-0" SA6.2|SA6.2



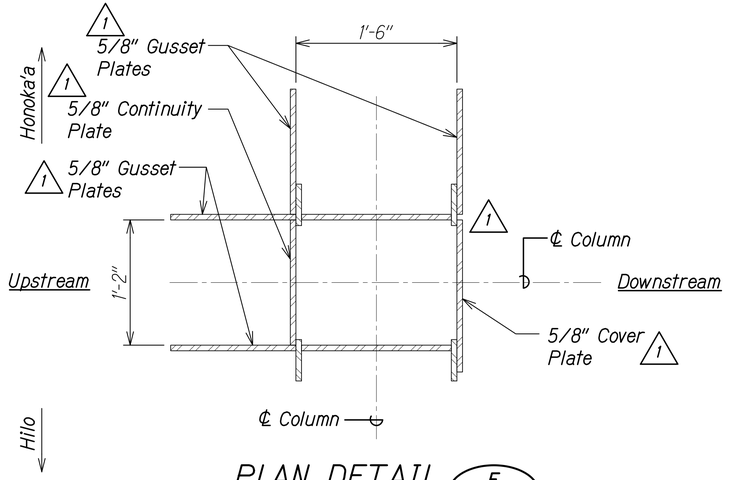
PLAN DETAIL C
Scale: 1 1/2" = 1'-0" SA6.2|SA6.2



PLAN DETAIL D
Scale: 1 1/2" = 1'-0" SA6.2|SA6.2



PLAN DETAIL E
Scale: 1 1/2" = 1'-0" SA6.2|SA6.2



PLAN DETAIL F
Scale: 1 1/2" = 1'-0" SA6.2|SA6.2

NOTE:

Brace not shown for clarity.

DATE		REVISION
12/6/24	1	Revised Callouts

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

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SIGNATURE — EXPIRATION DATE OF THE LICENSE 4-30-26

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

COLUMN TO BRACE CONNECTION DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

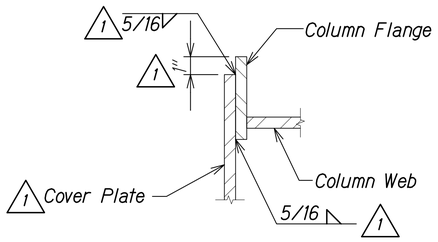
SHEET No. SA6.2 OF 22 SHEETS

ADD. 108

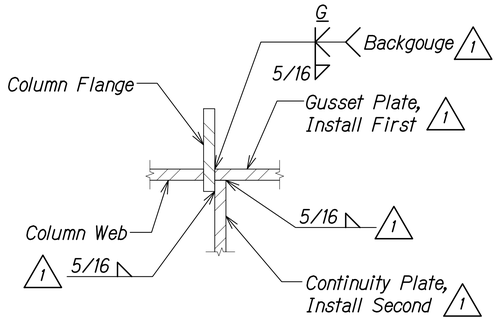
ORIGINAL PLAN | NOTE BOOK | No.
SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

DRAWING NAME: Z:\OD ONGOING\23-022.9-NANUE STR BR PE2-3DTHA\01 CAD\12-06-24 ADD\VSR-S0602-SA6&7 CONN DTLS ADD2.DWG PLOT TIME: 12-03-24, 10:12 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 109	280



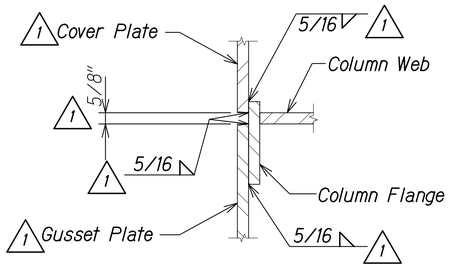
DETAIL 1
Scale: 3" = 1'-0" SA6.2 | SA6.3



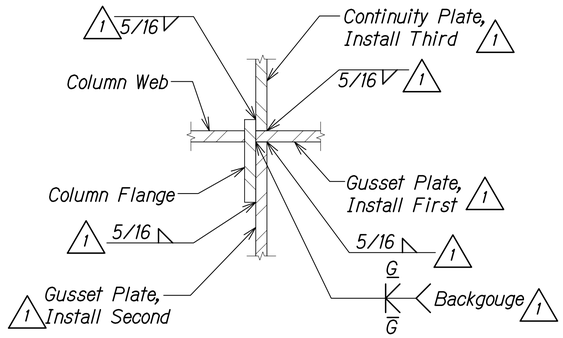
DETAIL 2
Scale: 3" = 1'-0" SA6.2 | SA6.3

1 NOTE:

All gusset/cover/continuity/stiffener plates shall receive return fillet welds across the top and bottom connection at faying edge with column flange and column seat to provide a full seal weld to prevent moisture intrusion.



DETAIL 3
Scale: 3" = 1'-0" SA6.2 | SA6.3



DETAIL 4
Scale: 3" = 1'-0" SA6.2 | SA6.3

12/6/24	1 Revised Callouts and Added Note
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

COLUMN TO BRACE CONNECTION DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
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SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

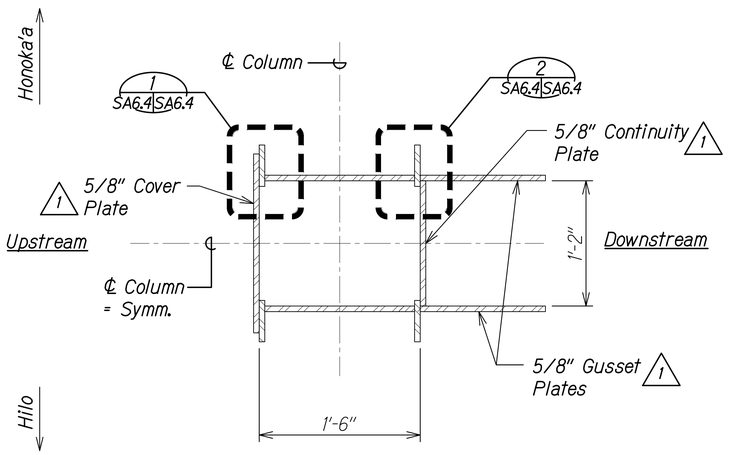
ORIGINAL PLAN
NOTE BOOK
No.

DRAWING NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR PE2-BOTH\01 CAD\12-06-24 ADD2\NSR-SA6802-SA6813 CONN DTLS ADD2.DWG PLOT TIME: 12-05-24, 1:11 PM)

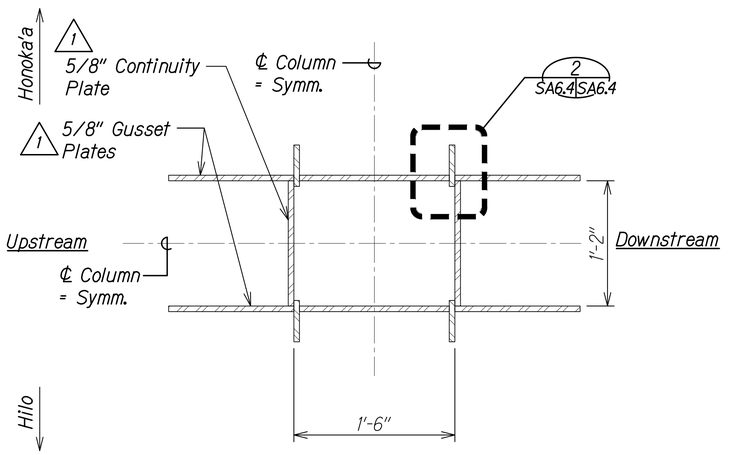
SHEET No. SA6.3 OF 22 SHEETS

ADD. 109

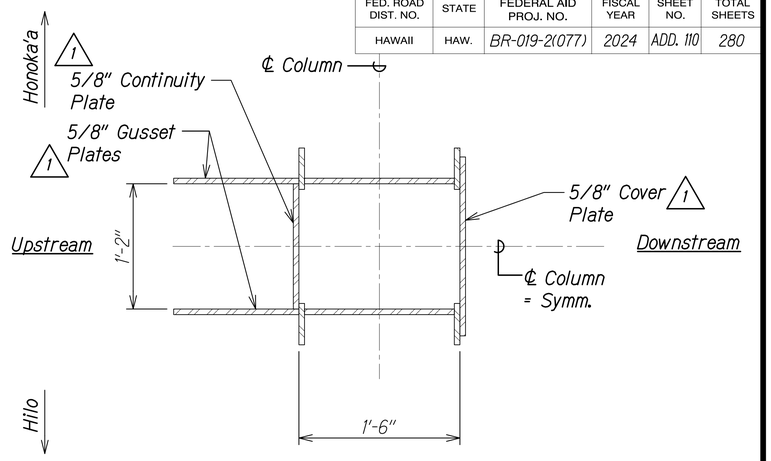
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 110	280



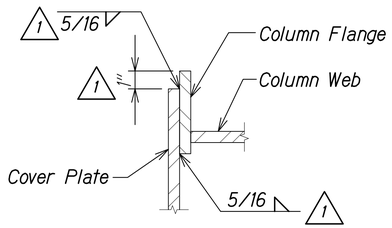
PLAN DETAIL A
Scale: 1 1/2" = 1'-0" SA6.4 SA6.4



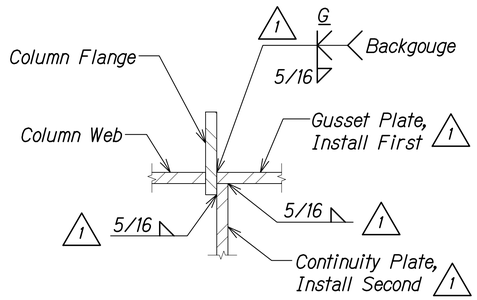
PLAN DETAIL B
Scale: 1 1/2" = 1'-0" SA6.4 SA6.4



PLAN DETAIL C
Scale: 1 1/2" = 1'-0" SA6.4 SA6.4



DETAIL 1
Scale: 3" = 1'-0" SA6.4 SA6.4



DETAIL 2
Scale: 3" = 1'-0" SA6.4 SA6.4

1 NOTE:

All gusset/cover/continuity/stiffener plates shall receive return fillet welds across the top and bottom connection at faying edge with column flange and column seat to provide a full seal weld to prevent moisture intrusion.

12/6/24	1 Revised Callouts and Added Dimensions & Notes
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

COLUMN TO BRACE CONNECTION DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
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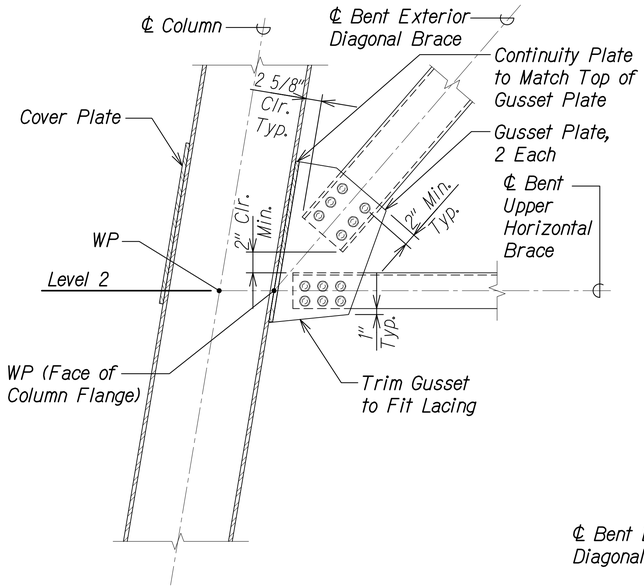
SHEET No. SA6.4 OF 22 SHEETS

ADD. 110

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

DRAWING NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR REP-DOTH\01 CAD\12-06-24 ADD2\NSB-S40602-S40617 CONN DTLS ADD2.DWG PLOT TIME: 12-05-24, 1:11 PM

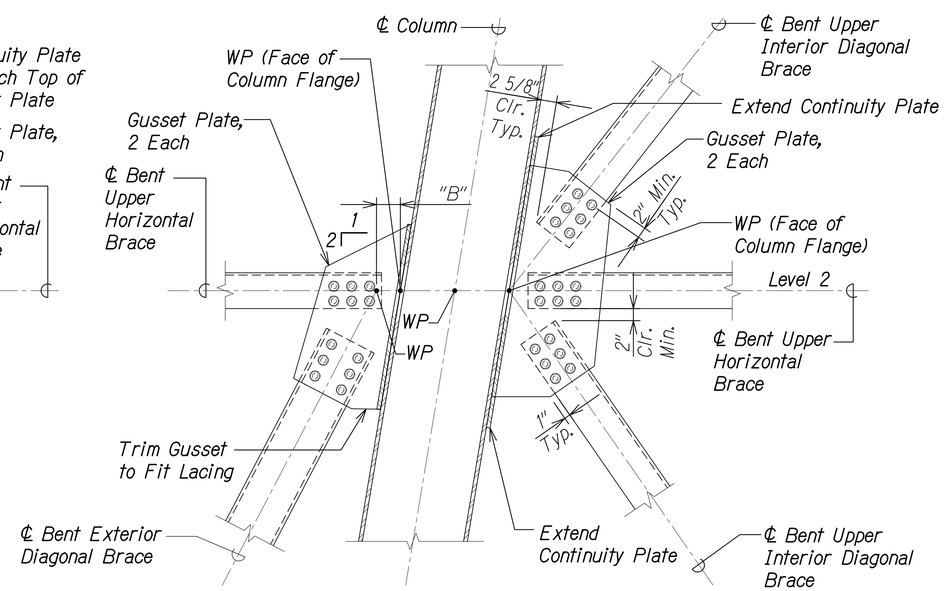
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 111	280



EXTERIOR COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

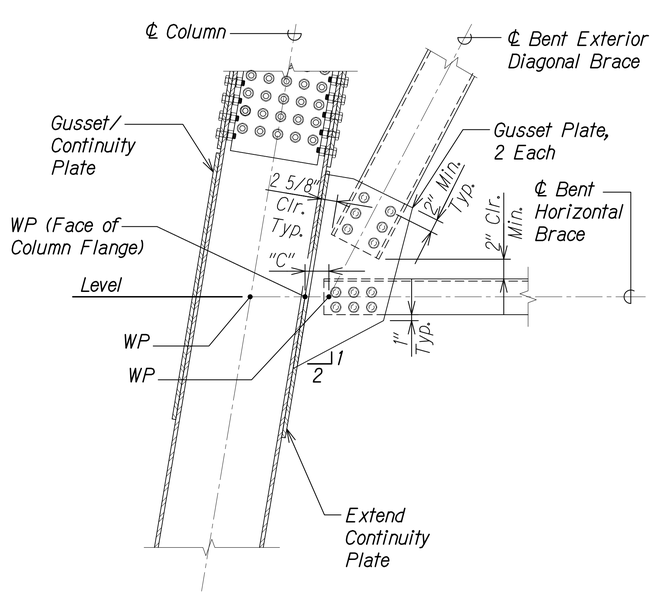
1 SA6.5 | SA6.5 ⚠1



INTERIOR COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

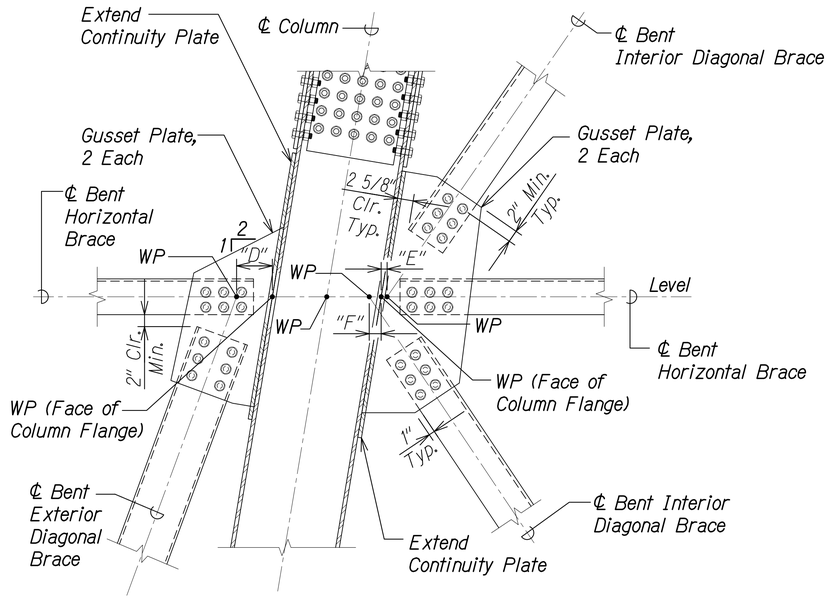
2 SA6.5 | SA6.5 ⚠1



EXTERIOR COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

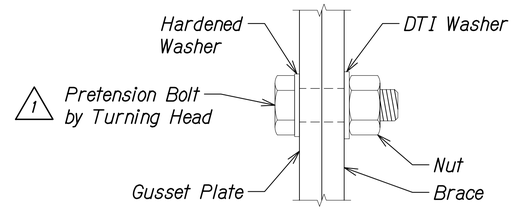
3 SA6.5 | SA6.5 ⚠1



INTERIOR COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

4 SA6.5 | SA6.5 ⚠1



TYPICAL BRACE BOLT CONNECTION DETAIL

Scale: 6" = 1'-0"

5 SA6.5 | SA6.5

NOTES:

1. The Contractor's Steel Detailer is responsible for determining the actual size of each gusset/continuity/cover plate based on the information provided in the Contract Drawings.
2. ⚠1 All bolted connections for horizontal and diagonal braces, as detailed on this sheet, shall be pretensioned.
3. ⚠1 After erection, touch-up paint the ends of all bolts/nuts/washers.
4. ⚠1 Batten plates and lacing not shown for clarity.
5. ⚠1 See Schedule on sheet SA6.6 for WP offsets.

DATE	REVISION
12/6/24	⚠1 Revised Details & Added Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

COLUMN TO BRACE CONNECTION DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

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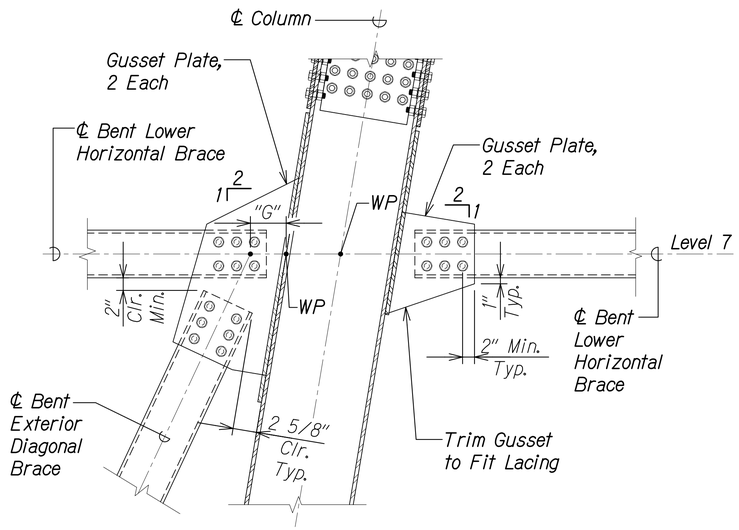
SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

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

ORIGINAL PLAN
NOTE BOOK
No.

DRAWING NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR PEP-BOTA\01 CAD\12-06-24 ADD\NSR-SA0602-SA0617 CONN DTLS ADD2.DWG PLOT TIME: 12-03-24, 10:14 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 112	280



INTERIOR COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

1 SA6.6 | SA6.6 1

1

WP OFFSET SCHEDULE							
LOCATION		"B"	"C"	"D"	"E"	"F"	"G"
Level 2	Bent Nos. 1 ₰ 9	6"	-	-	-	-	-
	Bent Nos. 2, 3, 4, 5, 6, 7, ₰ 8	4"	-	-	-	-	-
Level 3	Bent Nos. 2, 3, 4, 5, 6, 7, ₰ 8	-	4"	6"	1"	0"	-
Level 4	Bent Nos. 2, 3, 4, 5, 6, ₰ 7	-	6"	6"	3"	0"	-
Level 5	Bent Nos. 3, 4, 5, 6, ₰ 7	-	6"	6"	0"	8"	-
Level 6	Bent No. 4	-	6"	6"	-5"	8"	-
	Bent Nos. 5 ₰ 6	-	6"	6"	-5"	2"	-
Level 7	Bent Nos. 5, ₰ 6	-	6"	-	-	-	6"

1 NOTES:

1. The Contractor's Steel Detailer is responsible for determining the actual size of each gusset/continuity/cover plate based on the information provided in the Contract Drawings.
2. All bolted connections for horizontal and diagonal braces, as detailed on this sheet, shall be pretensioned.
3. After erection, touch-up paint the ends of all bolts/nuts/washers.
4. Batten plates and lacing not shown for clarity.

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

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

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SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

DATE	REVISION
12/6/24	1 Revised Detail ₰ Schedule, and Added Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

COLUMN TO BRACE CONNECTION DETAILS

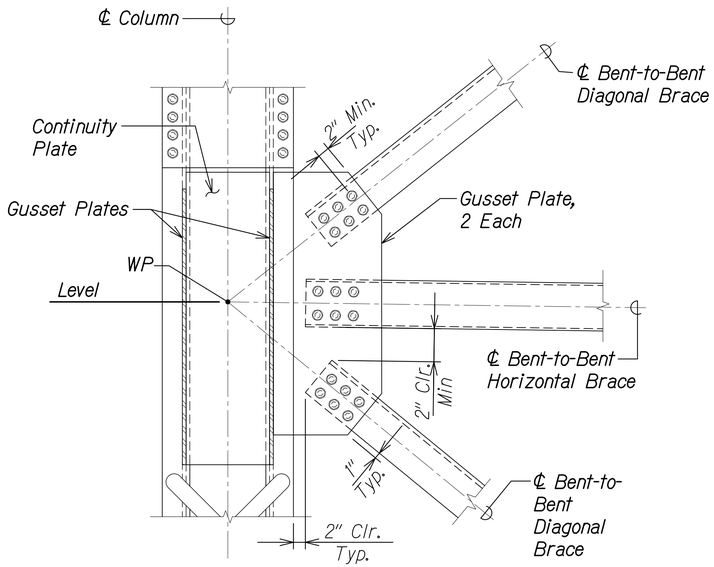
HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET No. SA6.6 OF 22 SHEETS

ADD. 112

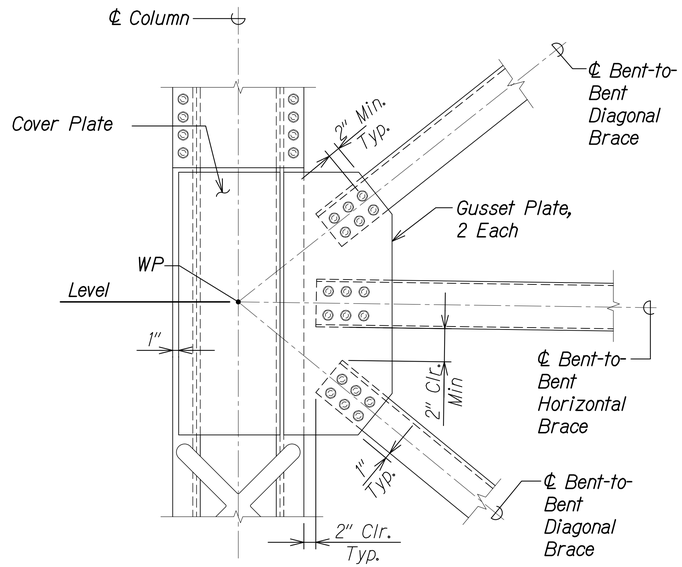
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 113	280



COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

1 SA6.7 | SA6.7 △1



COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

2 SA6.7 | SA6.7 △1

△1 NOTES:

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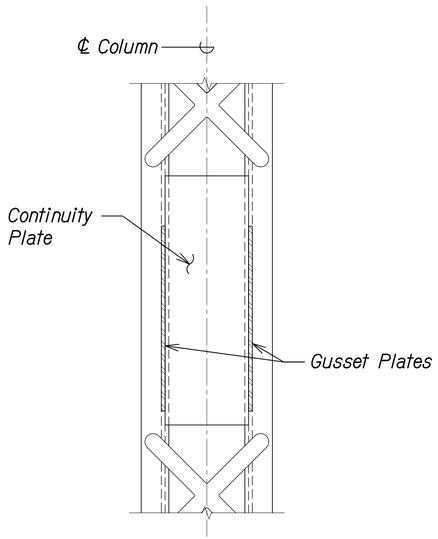
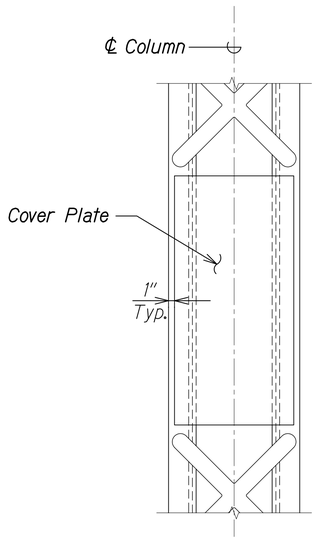
4. Batten plates and lacing on braces not shown for clarity.



COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

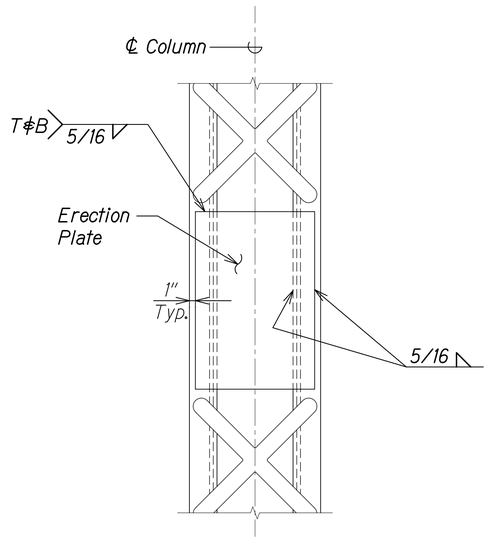
3 SA6.7 | SA6.7 △1



COVER PLATE CONNECTION DETAIL

Scale: 1" = 1'-0"

4 SA6.7 | SA6.7 △1



ERECTION PLATE CONNECTION DETAIL

Scale: 1" = 1'-0"

5 SA6.7 | SA6.7 △1

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-26

DATE		REVISION
12/6/24	△1	Revised Details ℄ Added Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

COLUMN TO BRACE CONNECTION DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted — Date: Oct. 2024

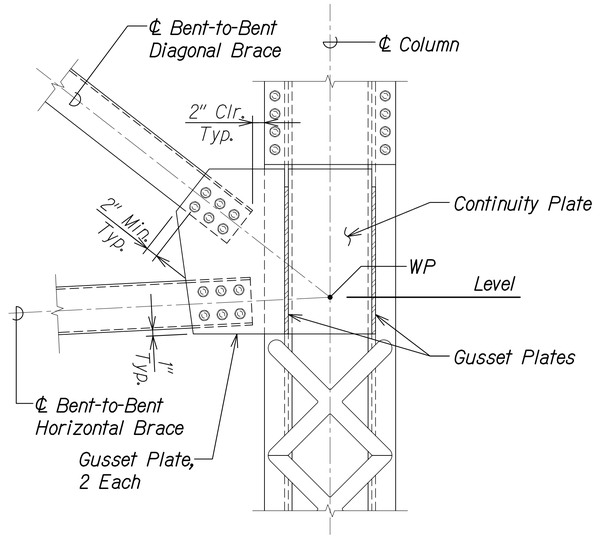
SHEET No. SA6.7 OF 22 SHEETS

ADD. 113

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

DRAWING NAME: Z:\OD ONGOING\23-072\3-NANUE STR BR RP2-DOTH\01 CAD\12-06-24 ADD2\NSB-SA0602-SA0617 CONN DTLS ADD2.DWG PLOT TIME: 12-05-24, 3:33 PM

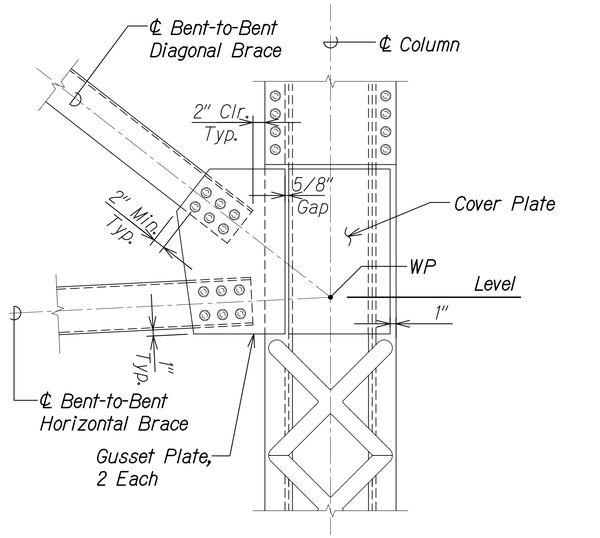
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 114	280



COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

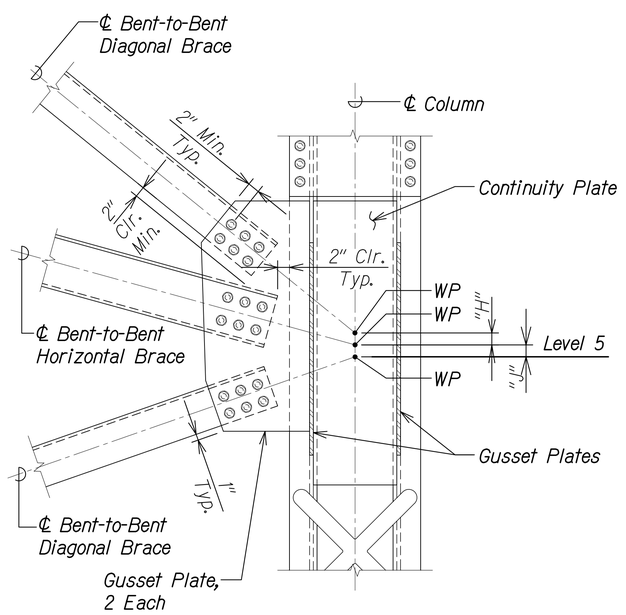
1 SA6.8 | SA6.8 △1



COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

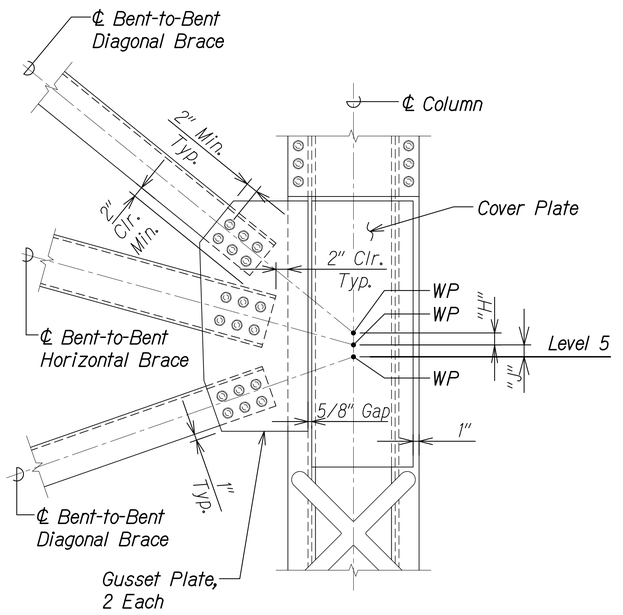
2 SA6.8 | SA6.8 △1



COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

3 SA6.8 | SA6.8 △1



COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

4 SA6.8 | SA6.8 △1

△1 NOTES:

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△1

WP OFFSET SCHEDULE			
LOCATION		"H"	"J"
Level 5	Bent No. 3	4"	2"

ORIGINAL PLAN | NOTE BOOK | No.

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

DRAWING NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR PEZ-ROTA\01 CAD\12-06-24 ADD\NSR-S06902-S06917 CONN DTLS ADD2.DWG PLOT TIME: 12-05-24, 3:35 PM)

DATE	REVISION
12/6/24	△1 Revised Details & Added Notes & Schedule

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

COLUMN TO BRACE CONNECTION DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

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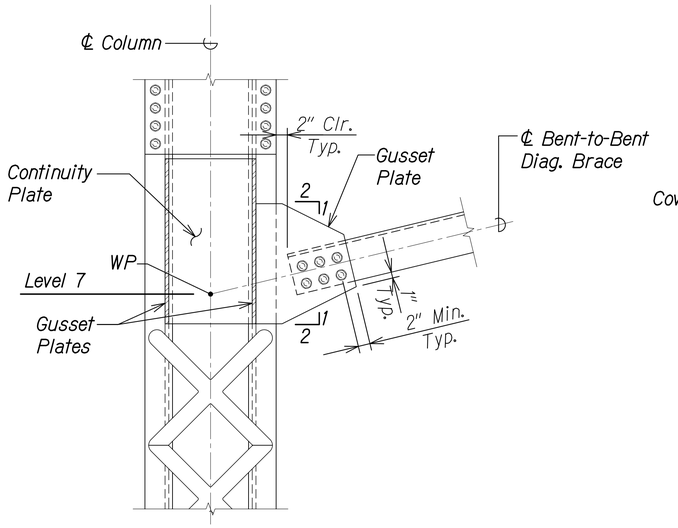
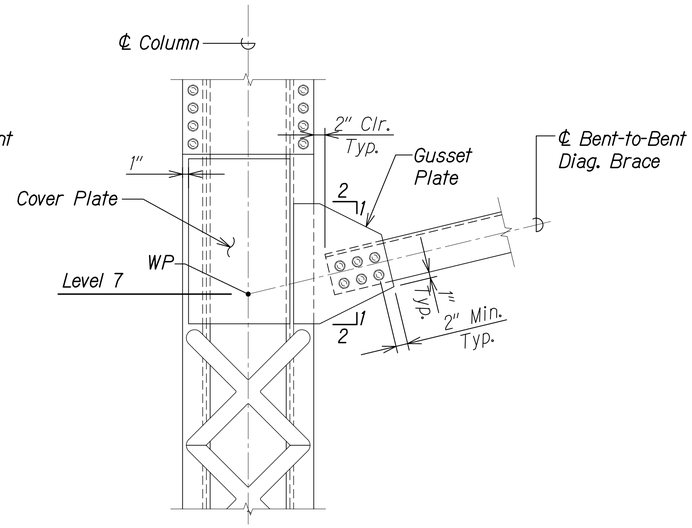
SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 115	280



COLUMN TO BRACE CONNECTION DETAIL (1 / SA6.9 | SA6.9) △1

Scale: 1" = 1'-0"



COLUMN TO BRACE CONNECTION DETAIL (2 / SA6.9 | SA6.9) △1

Scale: 1" = 1'-0"

△1 NOTES:

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

DRAWING NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR PE2-DOT\A01 CAD\12-06-24 ADD2\NSR-SA0602-SA0617 CONN DTLS ADD2.DWG PLOT TIME: 12-03-24, 10:16 PM)

12/6/24	△1 Revised Details and Added Notes
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

COLUMN TO BRACE CONNECTION DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

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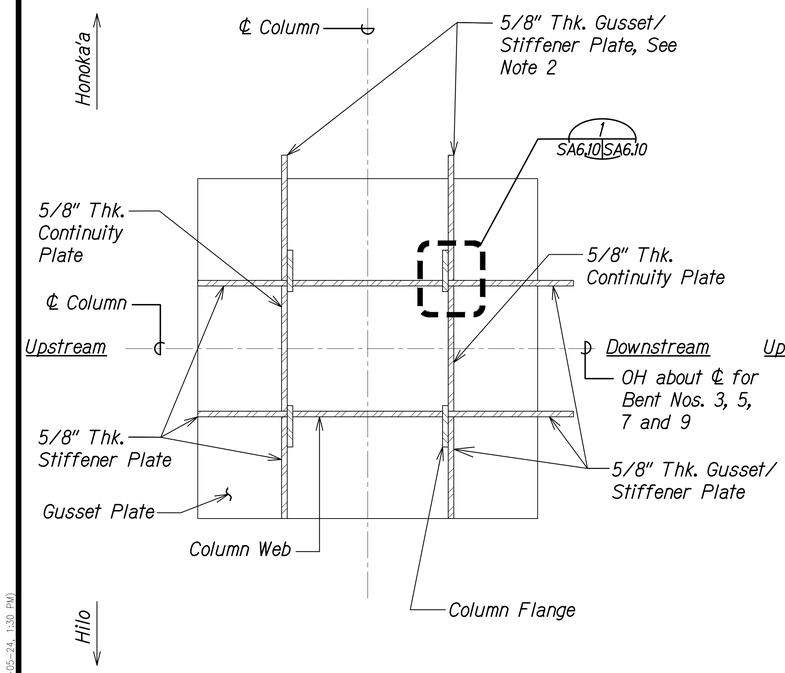
SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

SHEET No. SA6.9 OF 22 SHEETS

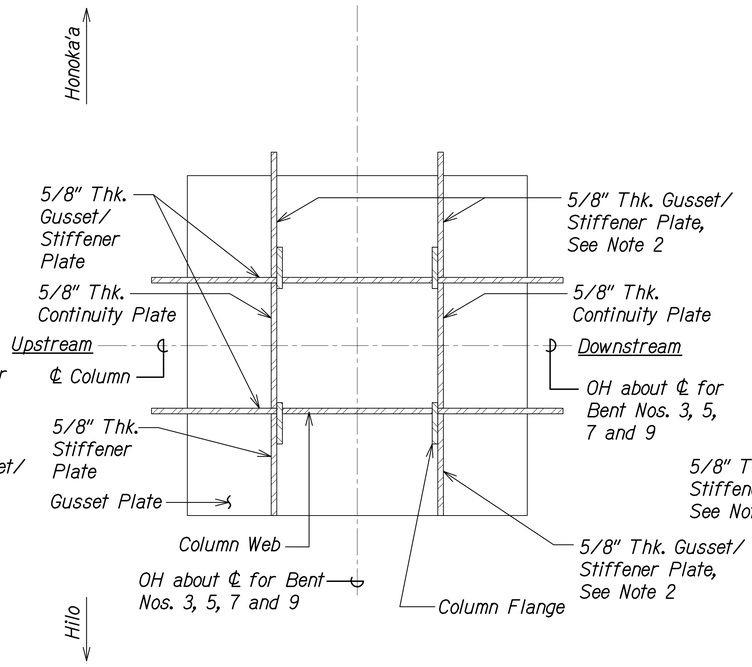
ADD. 115

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 116	280



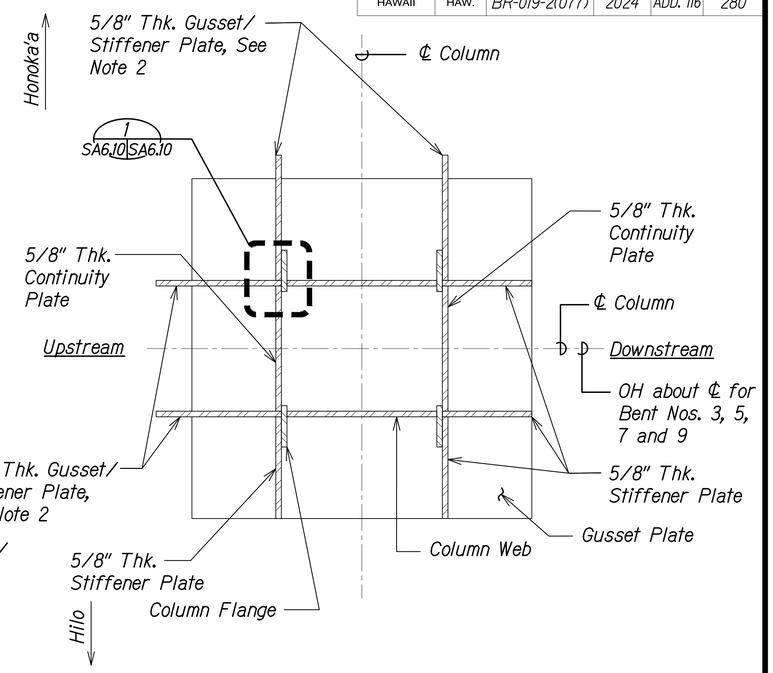
BASE COLUMN TO BRACE PLAN AT BENT EXTERIOR

Scale: 1 1/2" = 1'-0" — A SA6.10 SA6.10 — 1



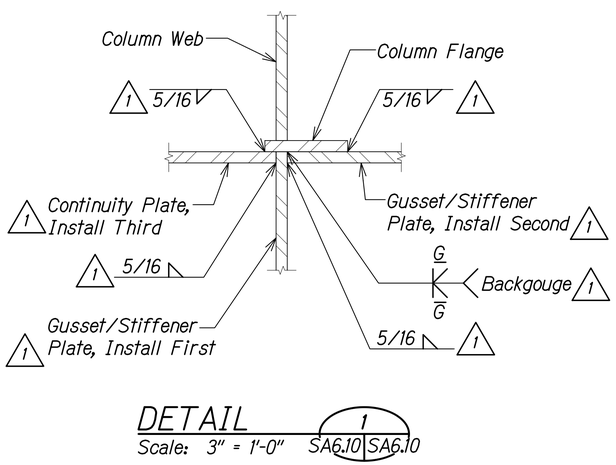
BASE COLUMN TO BRACE PLAN AT BENT INTERIOR

Scale: 1 1/2" = 1'-0" — B SA6.10 SA6.10 — 1



BASE COLUMN TO BRACE PLAN AT BENT EXTERIOR

Scale: 1 1/2" = 1'-0" — C SA6.10 SA6.10 — 1



DETAIL

Scale: 3" = 1'-0" — 1 SA6.10 SA6.10

1 NOTES:

1. All gusset/cover/continuity/stiffener plates shall receive return fillet welds across the top and bottom connection at faying edge with column flange and base plate to provide a full seal weld to prevent moisture intrusion.
2. 5/8" thick stiffener Plate at Bent No. 1.

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

STEPHEN T. PETERS — LICENSED PROFESSIONAL ENGINEER — NO. 17097-S — HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — 4-30-26 EXPIRATION DATE OF THE LICENSE

DATE	REVISION
12/6/24	1 Revised Details & Added Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BASE COLUMN TO BRACE CONNECTION DETAILS

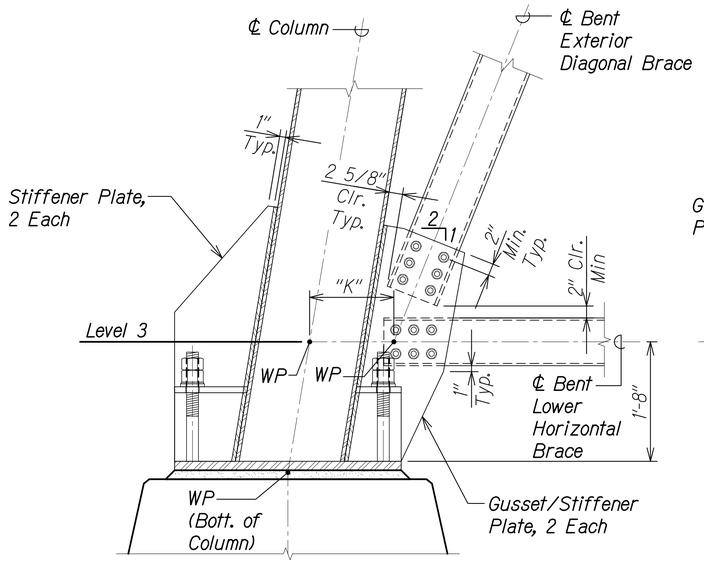
HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted — Date: Oct. 2024

SHEET No. SA6.10 OF 22 SHEETS

ADD. 116

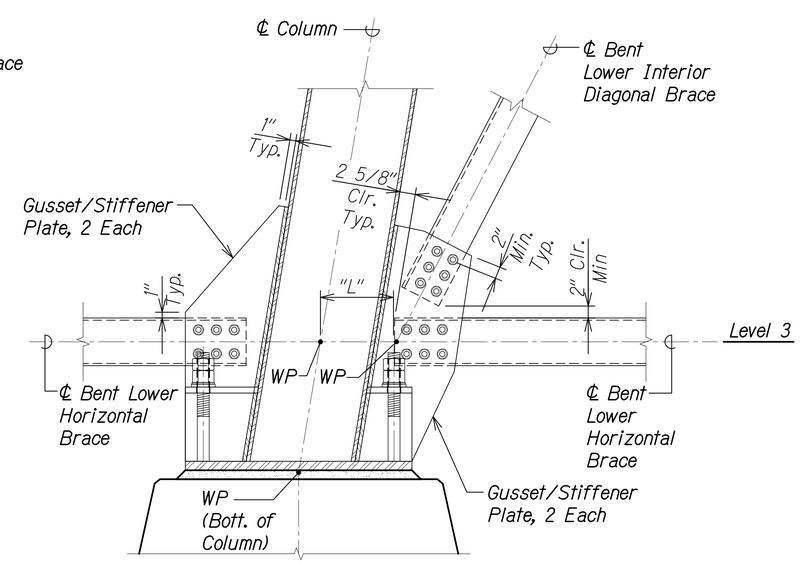
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 117	280



EXT. BASE COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

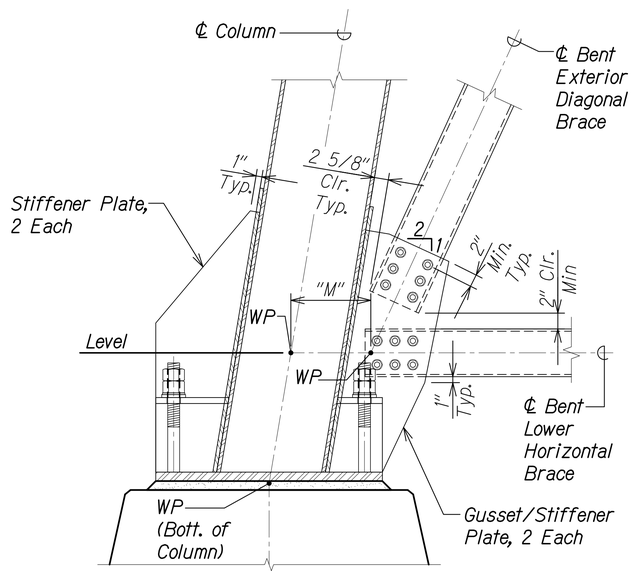
1 SA6.11 | SA6.11 ⚠1



INT. BASE COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

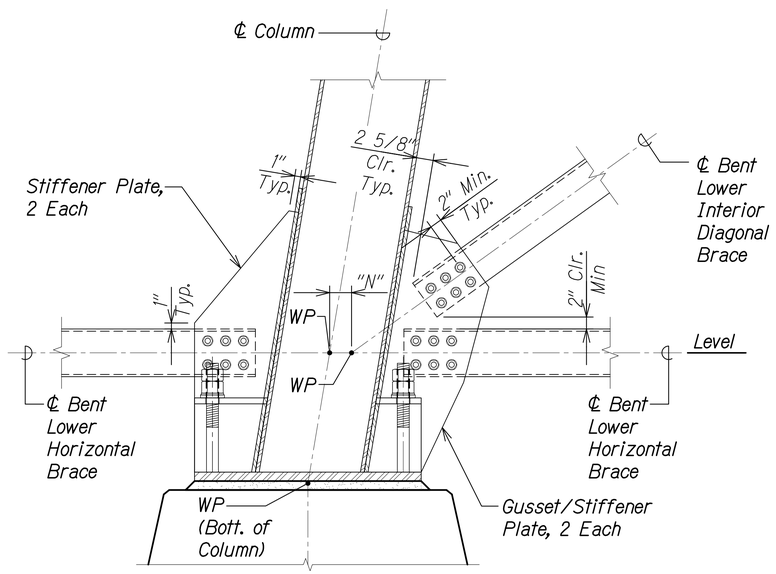
2 SA6.11 | SA6.11 ⚠1



EXT. BASE COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

3 SA6.11 | SA6.11 ⚠1



INT. BASE COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

4 SA6.11 | SA6.11 ⚠1

⚠1 NOTES:

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3. After erection, touch-up paint the ends of all bolts/nuts/washers.
4. Batten plates and lacing not shown for clarity.
5. See Schedule on sheet SA6.12 for WP offsets.

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

DRAWING NAME: Z:\OD ONGOING\23-072\3-NANUE STR BR PEP-DOTH\01 CAD\12-06-24 ADD\NSB_SA0602_SA0617 CONN DTLS ADD2.DWG PLOT TIME: 12-05-24, 1:27 PM)

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

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DATE		REVISION
12/6/24	⚠1	Revised Details & Added Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BASE COLUMN TO BRACE CONNECTION DETAILS

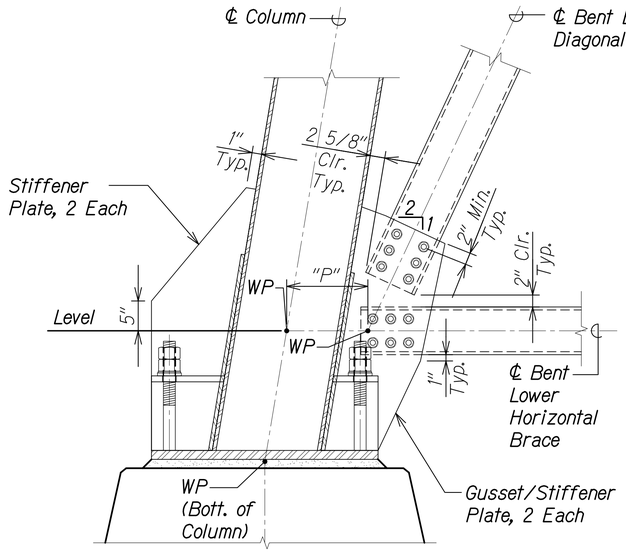
HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET No. SA6.11 OF 22 SHEETS

ADD. 117

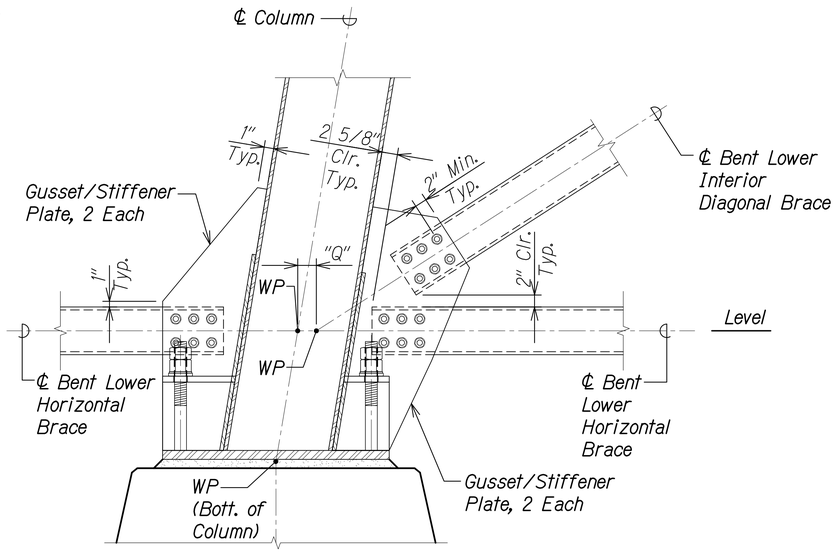
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 118	280



EXT. BASE COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

1 SA6.12 | SA6.12 △1



INT. BASE COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

2 SA6.12 | SA6.12 △1

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△1

WP OFFSET SCHEDULE

LOCATION	"K"	"L"	"M"	"N"	"P"	"Q"
Bent No. 1	14 1/4"	12 3/4"	-	-	-	-
Bent No. 2	-	-	13 1/2"	3 3/4"	-	-
Bent No. 3	-	-	-	-	14"	0"
Bent No. 4	-	-	15 1/2"	2 1/2"	-	-
Bent No. 5	-	-	-	-	13 1/2"	3"
Bent No. 6	-	-	-	-	13 1/2"	3"
Bent No. 7	-	-	15"	4"	-	-
Bent No. 8	-	-	-	-	15 1/4"	12 1/2"
Bent No. 9	-	-	13 1/2"	11 3/4"	-	-

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

DATE	REVISION
12/6/24	△1 Revised Details and Added Notes & Schedule

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BASE COLUMN TO BRACE CONNECTION DETAILS

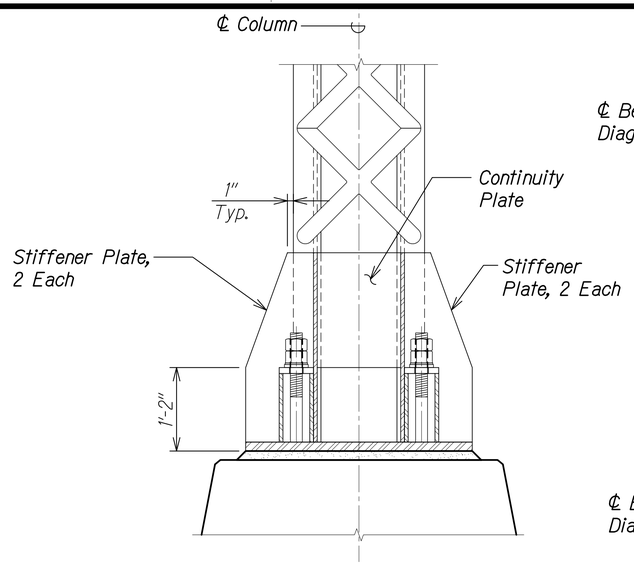
HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET No. SA6.12 OF 22 SHEETS

ADD. 118

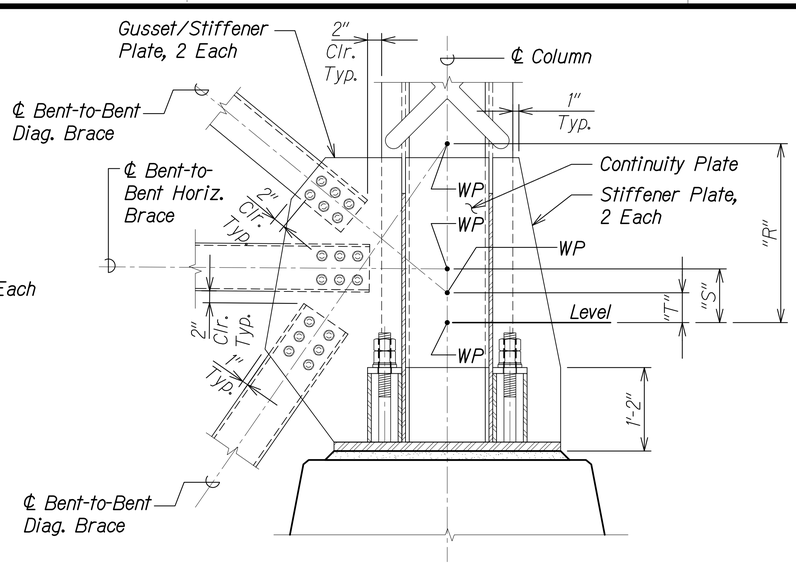
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 119	280



BASE COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

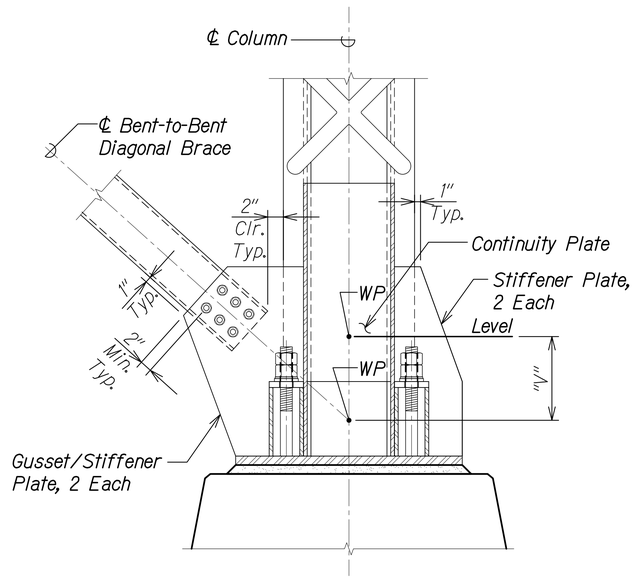
1 SA6.13 | SA6.13 /1



BASE COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

2 SA6.13 | SA6.13 /1



BASE COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

3 SA6.13 | SA6.13 /1

/1

WP OFFSET SCHEDULE				
LOCATION	"R"	"S"	"T"	"V"
Bent No. 2	10"	12"	10"	-
Bent No. 3	-	-	-	14"
Bent No. 4	0"	2"	2"	-
Bent No. 5	-	-	-	5"
Bent No. 6	-	-	-	20"
Bent No. 7	30"	9"	5"	-
Bent No. 8	-	-	-	15"
Bent No. 9	7"	3"	0"	-

/1 NOTES:

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

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — 4-30-26 EXPIRATION DATE OF THE LICENSE

DATE	REVISION
12/6/24	/1 Revised Details and Added Notes & Schedule

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BASE COLUMN TO BRACE CONNECTION DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

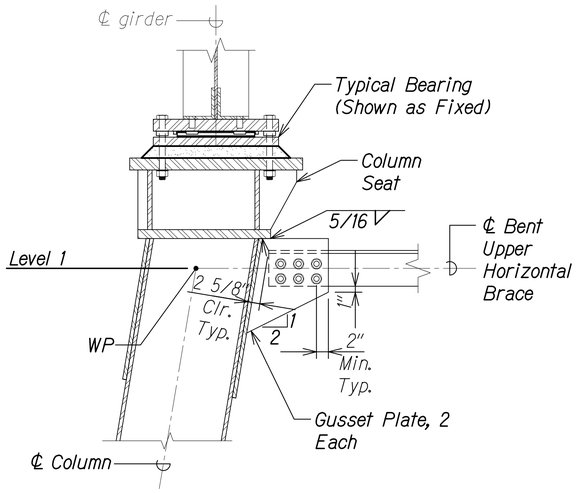
Scale: As Noted Date: Oct. 2024

SHEET No. SA6.13 OF 22 SHEETS

ADD. 119

DRAWING NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR REP-DOTH\01 CAD\12-06-24 ADD2\NSB-SA0602-SA0617 CONN DTLS ADD2.DWG PLOT TIME: 12-03-24, 10:18 PM

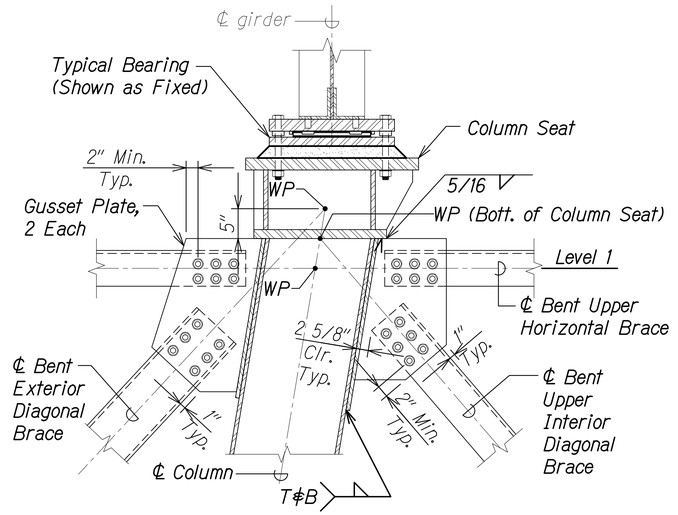
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 120	280



EXT. TOP COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

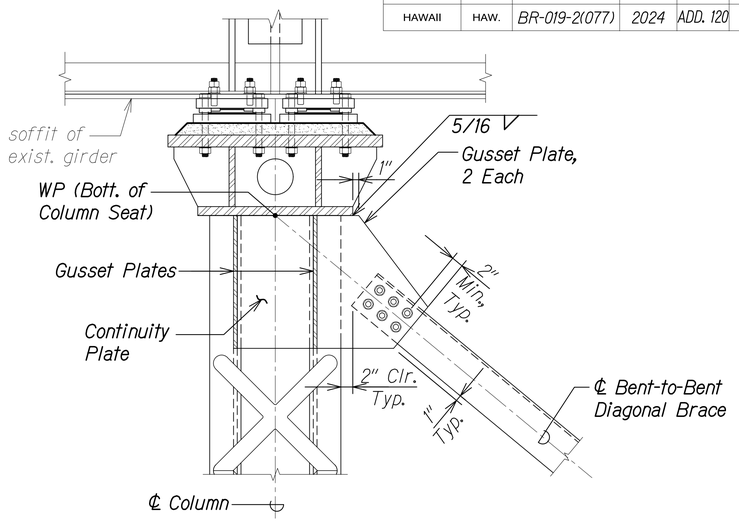
1 SA6.14 | SA6.14 /1



INT. TOP COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

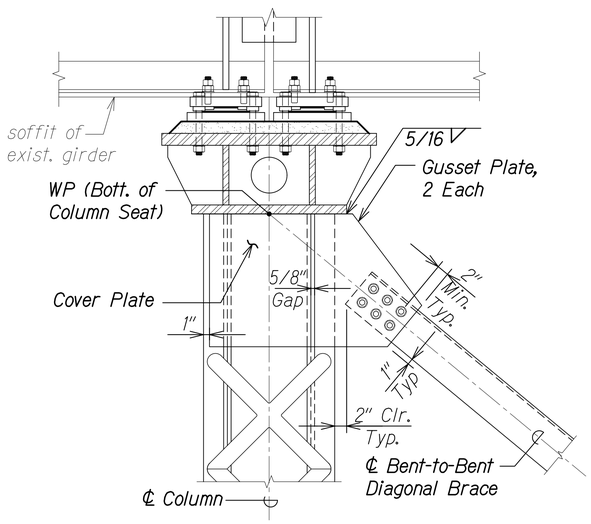
2 SA6.14 | SA6.14 /1



TOP COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

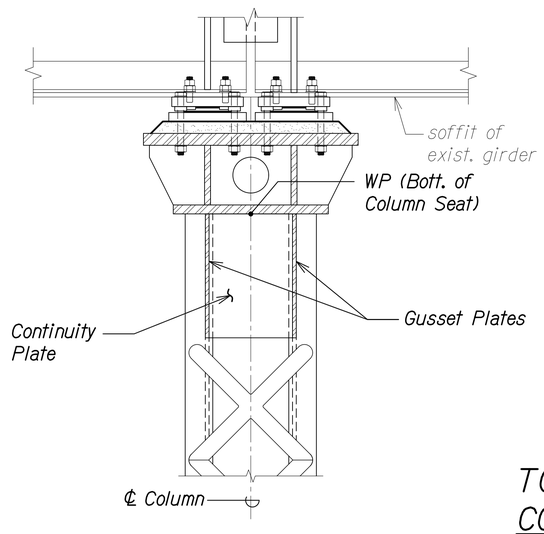
3 SA6.14 | SA6.14 /1



TOP COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

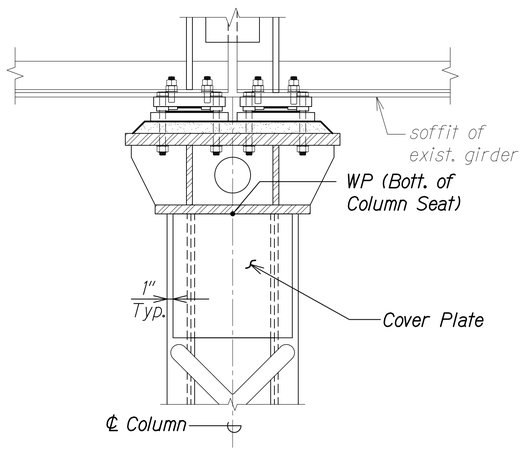
4 SA6.14 | SA6.14 /1



TOP COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

5 SA6.14 | SA6.14 /1



TOP COLUMN TO BRACE CONNECTION DETAIL

Scale: 1" = 1'-0"

6 SA6.14 | SA6.14 /1

/1 NOTES:

1. The Contractor's Steel Detailer is responsible for determining the actual size of each gusset/continuity/cover plate based on the information provided in the Contract Drawings.
2. All bolted connections for horizontal and diagonal braces, as detailed on this sheet, shall be pretensioned.
3. After erection, touch-up paint the ends of all bolts/nuts/washers.
4. Batten plates and lacing on braces not shown for clarity.

DATE	REVISION
12/6/24	/1 Revised Details & Added Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TOP COLUMN TO BRACE CONNECTION DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS ★ LICENSED PROFESSIONAL ENGINEER ★ NO. 17097-S ★ HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

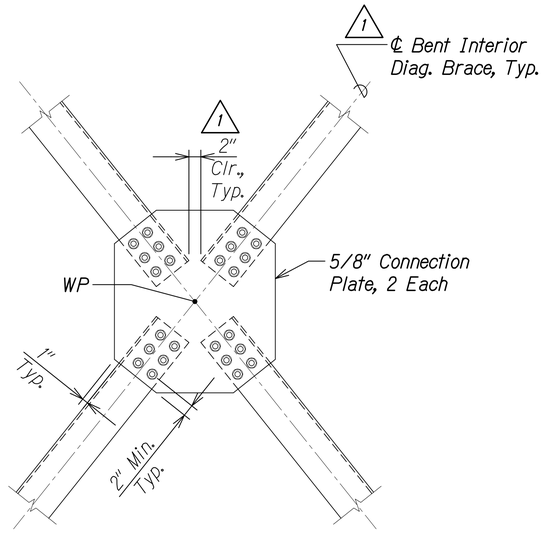
SIGNATURE 6-30-26 EXPIRATION DATE OF THE LICENSE

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

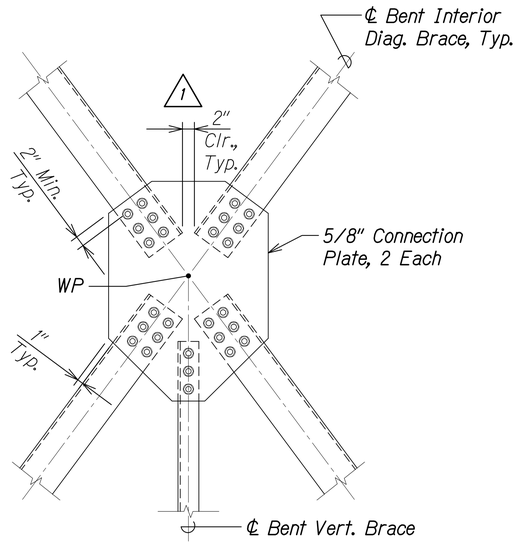
SHEET No. SA6.14 OF 22 SHEETS

ADD. 120

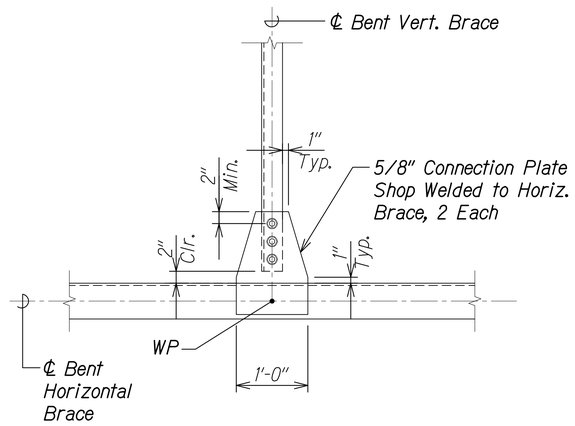
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 121	280



BRACE TO BRACE CONNECTION DETAIL 1 (SA6.15 | SA6.15)
Scale: 1" = 1'-0"



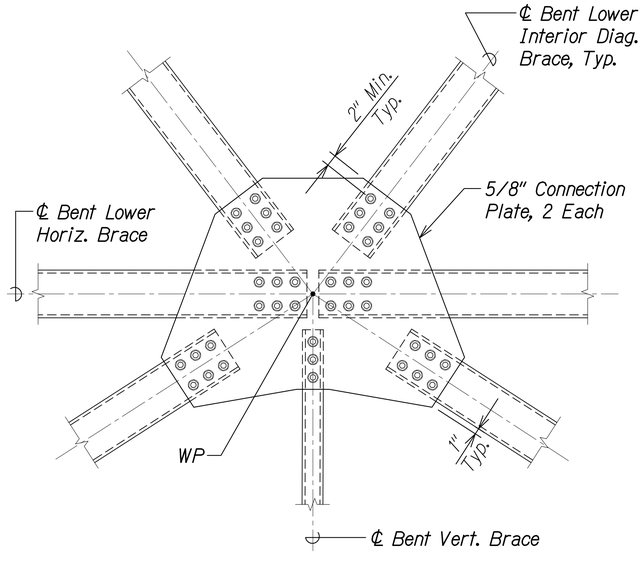
BRACE TO BRACE CONNECTION DETAIL 2 (SA6.15 | SA6.15)
Scale: 1" = 1'-0"



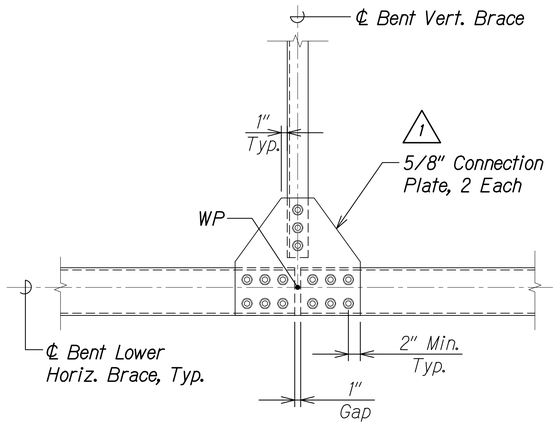
BRACE TO BRACE CONNECTION DETAIL 3 (SA6.15 | SA6.15) 1
Scale: 1" = 1'-0"

1 NOTES:

1. The Contractor's Steel Detailer is responsible for determining the actual size of each connection plate based on the information provided in the Contract Drawings.
2. All bolted connections for horizontal and diagonal braces, as detailed on this sheet, shall be pretensioned.
3. After erection, touch-up paint the ends of all bolts/nuts/washers.
4. Batten plates and lacing on braces not shown for clarity.



BRACE TO BRACE CONNECTION DETAIL 4 (SA6.15 | SA6.15) 1
Scale: 1" = 1'-0"



BRACE TO BRACE CONNECTION DETAIL 5 (SA6.15 | SA6.15)
Scale: 1" = 1'-0"

DATE	REVISION
12/6/24	1 Revised Details & Added Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BRACE TO BRACE CONNECTION DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

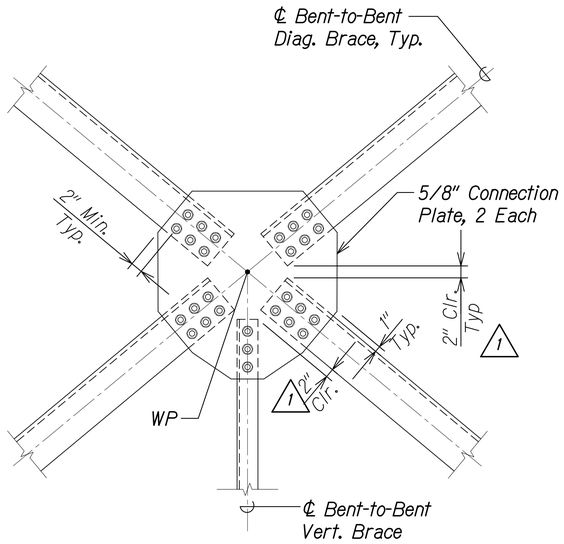
SHEET No. SA6.15 OF 22 SHEETS

ADD. 121

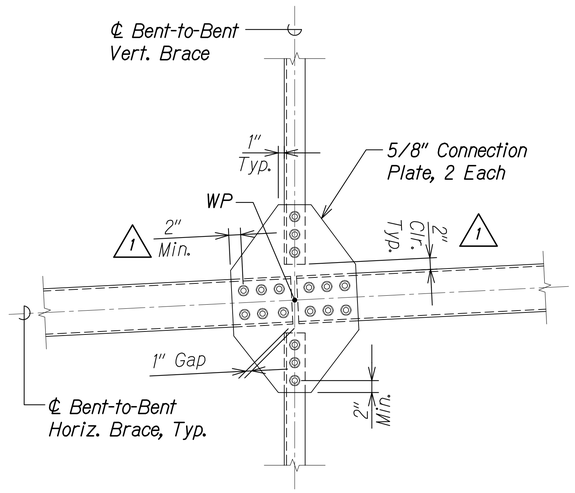
ORIGINAL PLAN | NOTE BOOK | No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

DRAWING NAME: ZA100 ONONEA 23-0229-NANUE STR BR PE2-SOTHA01 CADD\12-06-24 ADD\NSR-SA6602-SA6617 CONN DTLS ADD.DWG PLOT TIME: 12-05-24, 1:31 PM)

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 122	280



BRACE TO BRACE CONNECTION DETAIL 1
Scale: 1" = 1'-0"
SA6.16 | SA6.16



BRACE TO BRACE CONNECTION DETAIL 2
Scale: 1" = 1'-0"
SA6.16 | SA6.16

1 NOTES:

1. The Contractor's Steel Detailer is responsible for determining the actual size of each connection plate based on the information provided in the Contract Drawings.
2. All bolted connections for horizontal and diagonal braces, as detailed on this sheet, shall be pretensioned.
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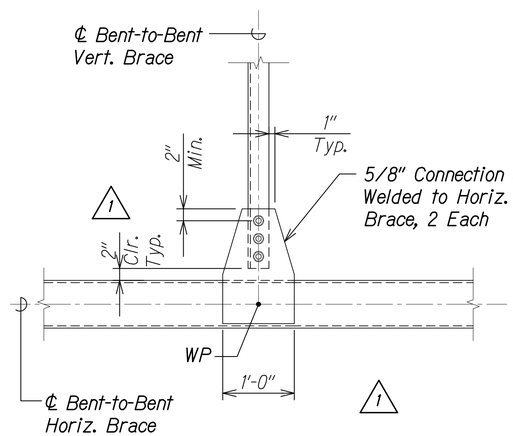
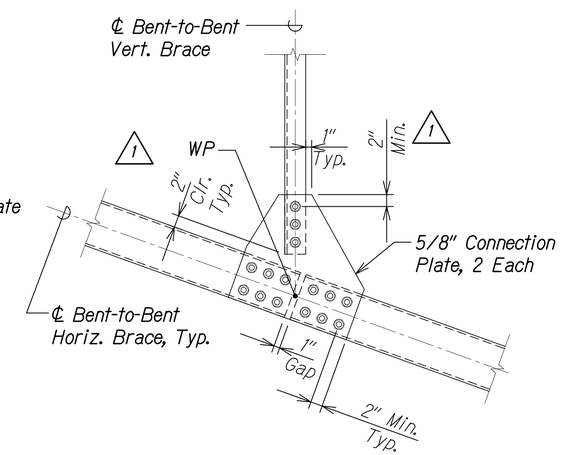
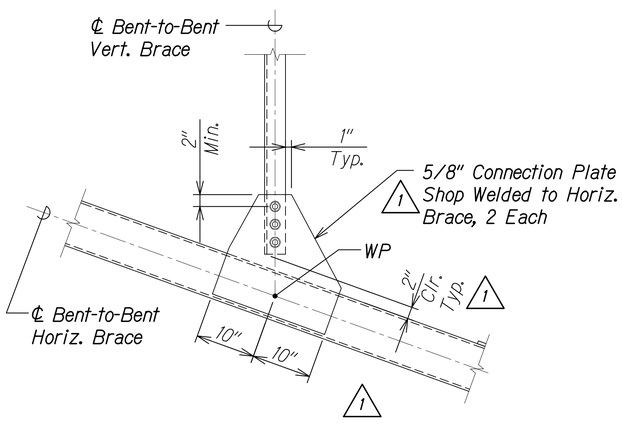
4. Batten plates and lacing on braces not shown for clarity.



BRACE TO BRACE CONNECTION DETAIL 3
Scale: 1" = 1'-0"
SA6.16 | SA6.16



BRACE TO BRACE CONNECTION DETAIL 4
Scale: 1" = 1'-0"
SA6.16 | SA6.16



BRACE TO BRACE CONNECTION DETAIL 5
Scale: 1" = 1'-0"
SA6.16 | SA6.16

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — 6-30-26 EXPIRATION DATE OF THE LICENSE

DATE		REVISION
12/6/24	1	Revised Details & Added Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BRACE TO BRACE CONNECTION DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted — Date: Oct. 2024

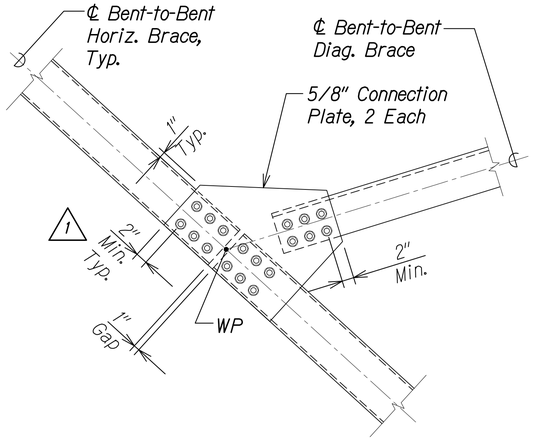
SHEET No. SA6.16 OF 22 SHEETS

ADD. 122

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

DRAWING NAME: Z:\OD ONGOING\23-072\3-NANUE STR BR PEP-DOTH\01 CAD\12-06-24 ADD\NSB-SA6B2-SA6B17 CONN DTLS ADD2.DWG PLOT TIME: 12-05-24, 2:41 PM

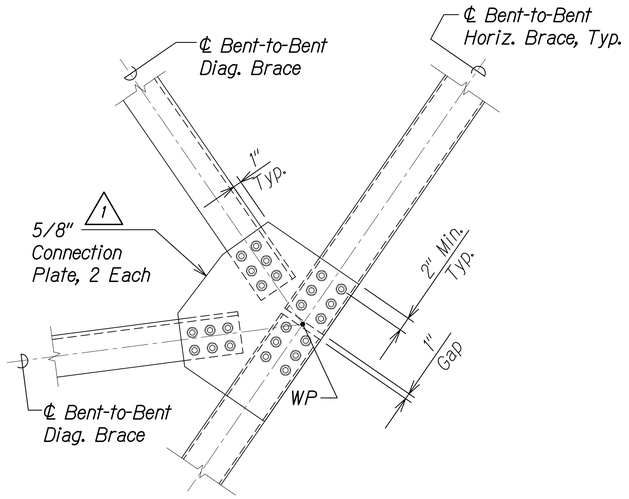
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 123	280



BRACE TO BRACE CONNECTION DETAIL 1

Scale: 1" = 1'-0"

SA6.17 | SA6.17



BRACE TO BRACE CONNECTION DETAIL 2

Scale: 1" = 1'-0"

SA6.17 | SA6.17

1 NOTES:

1. The Contractor's Steel Detailer is responsible for determining the actual size of each connection plate based on the information provided in the Contract Drawings.
2. All bolted connections for horizontal and diagonal braces, as detailed on this sheet, shall be pretensioned.
3. After erection, touch-up paint the ends of all bolts/nuts/washers.
4. Batten plates and lacing on braces not shown for clarity.

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

DRAWING NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR PE2-DOTH\01 CAD\12-06-24 ADD2\NSE-SA0602-SA0617 CONN DTLS ADD2.DWG PLOT TIME: 12-05-24, 1:33 PM

DATE	REVISION
12/6/24	1 Revised Details & Added Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BRACE TO BRACE CONNECTION DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

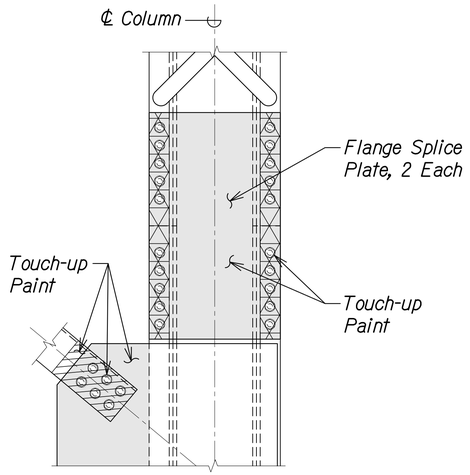
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

SHEET No. SA6.17 OF 22 SHEETS

ADD. 123

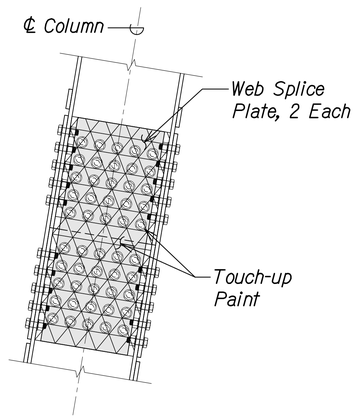
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 123S-1	280



COLUMN FLANGE SPLICE PAINT BLOCKING DETAIL (1)

Scale: 1" = 1'-0"

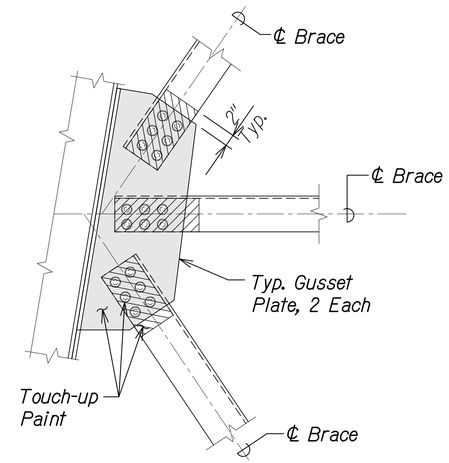
SA6.17A | SA6.7A



COLUMN WEB SPLICE PAINT BLOCKING DETAIL (2)

Scale: 1" = 1'-0"

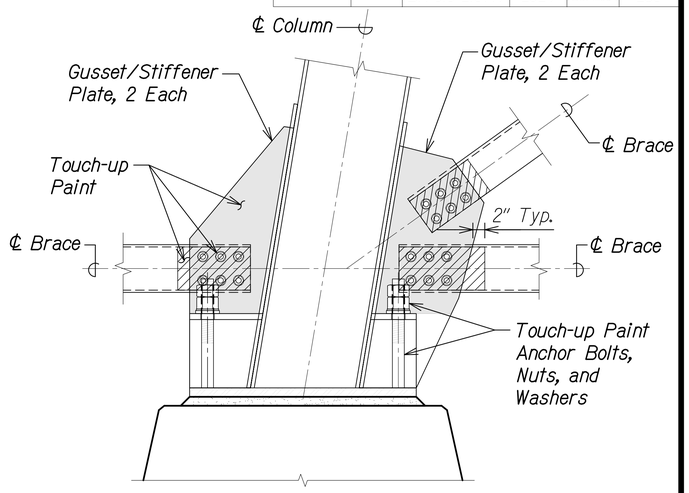
SA6.17A | SA6.7A



TYP. GUSSET PLATE PAINT BLOCKING DETAIL (3)

Scale: 1" = 1'-0"

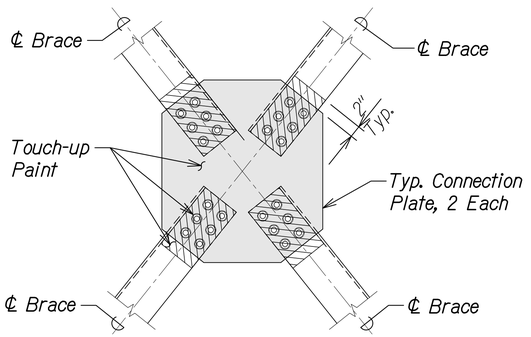
SA6.17A | SA6.7A



BASE COLUMN GUSSET PLATE PAINT BLOCKING DETAIL (4)

Scale: 1" = 1'-0"

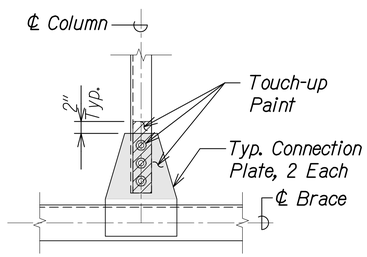
SA6.17A | SA6.17A



TYP. CONNECTION PLATE PAINT BLOCKING DETAIL (5)

Scale: 1" = 1'-0"

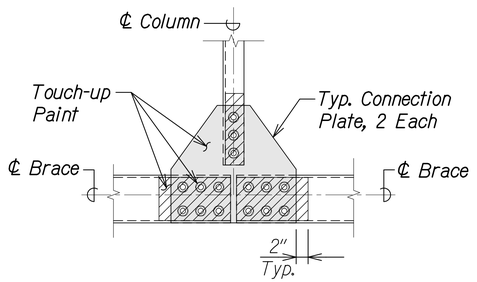
SA6.17A | SA6.17A



CONNECTION PLATE PAINT BLOCKING DETAIL (6)

Scale: 1" = 1'-0"

SA6.17A | SA6.17A



CONNECTION PLATE PAINT BLOCKING DETAIL (7)

Scale: 1" = 1'-0"

SA6.17A | SA6.17A

PAINT BLOCKING LEGEND

- Mask Outside Face of Splice/Gusset/Connection Plate Only. No Shop Application of Topcoat. Field Touch-up Paint Intermediate and Topcoat After Bolt Installation
- Mask Inside Face of Brace Only. No Shop Application of Topcoat. Field Touch-up Paint Intermediate and Topcoat After Bolt Installation
- Mask Inside Face of Column Flange and Column Web Only. No Shop Application of Topcoat. Field Touch-up Paint Intermediate and Topcoat After Bolt Installation

NOTES:

1. Paint blocking details are typical for all bolted connections at bridge trestle.
2. See Special Provisions Section 667 - PREPARATION AND COATING OF GALVANIZED BRIDGE STEEL for requirements pertaining to touch-up painting of field bolted connections at trestles.
3. Work for touch-up painting of field bolted connections at trestles shall be covered under Pay Item 667.3000.

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

DATE	REVISION
12/6/24	1 New Sheet

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE 4-30-26

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAINT BLOCKING DETAILS AT BOLTED CONNECTIONS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET No. SA6.17A OF 22 SHEETS

ADD. 123S-1 (1)

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 124	280

CONNECTION REFERENCE SCHEDULE

BENT NO. 1

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP1A1-C	A/SA6.4	1/SA6.14
TP1B1-C	B/SA6.4	2/SA6.14
TP1C1-C	B/SA6.4	2/SA6.14 (OH)
TP1D1-C	C/SA6.4	1/SA6.14 (OH)
SP1B1-C2	-	1/SA6.15
GP1A2-C	A/SA6.4	1/SA6.5
GP1B2-C	B/SA6.4	2/SA6.5
GP1C2-C	B/SA6.4	2/SA6.5 (OH)
GP1D2-C	C/SA6.4	1/SA6.5 (OH)
SP1B2-C3	-	2/SA6.15
BP1A3-C	1 A/SA6.10	1/SA6.11
BP1B3-C	1 B/SA6.10	2/SA6.11
SP13	-	3/SA6.15
BP1C3-C	1 B/SA6.10	2/SA6.11 (OH)
BP1D3-C	1 C/SA6.10	1/SA6.11 (OH)

BENT NO. 2

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP2A1-C	D/SA6.2	1/SA6.14
TP2B1-C	E/SA6.2	2/SA6.14
TP2C1-C	E/SA6.2	2/SA6.14 (OH)
TP2D1-C	F/SA6.2	1/SA6.14 (OH)
SP2B1-C2	-	1/SA6.15
GP2A2-C	A/SA6.4	1/SA6.5
GP2B2-C	B/SA6.4	2/SA6.5
GP2C2-C	B/SA6.4	2/SA6.5 (OH)
GP2D2-C	C/SA6.4	1/SA6.5 (OH)
SP2B2-C3	-	1/SA6.15
GP2A3-C	D/SA6.2	1 3/SA6.5
GP2B3-C	E/SA6.2	1 4/SA6.5
GP2C3-C	E/SA6.2	1 4/SA6.5 (OH)
GP2D3-C	F/SA6.2	1 3/SA6.5 (OH)
SP2B3-C4	-	1 2/SA6.15
GP2A4-C	D/SA6.2	1 3/SA6.5
GP2B4-C	E/SA6.2	1 4/SA6.5
SP24	-	3/SA6.15
GP2C4-C	E/SA6.2	1 4/SA6.5 (OH)
GP2D4-C	F/SA6.2	1 3/SA6.5 (OH)
SP2B4-C5	-	2/SA6.15

BENT NO. 2

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
BP2A5-C	A/SA6.10	3/SA6.11
BP2B5-C	B/SA6.10	4/SA6.11
SP25	-	3/SA6.15
BP2C5-C	B/SA6.10	4/SA6.11 (OH)
BP2D5-C	1 C/SA6.10	3/SA6.11 (OH)

BENT NO. 3

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP3A1-C	A/SA6.2	1/SA6.14
TP3B1-C	B/SA6.2	2/SA6.14
TP3C1-C	B/SA6.2	2/SA6.14 (OH)
TP3D1-C	C/SA6.2	1/SA6.14 (OH)
SP3B1-C2	-	1/SA6.15
GP3A2-C	A/SA6.4	1/SA6.5
GP3B2-C	B/SA6.4	2/SA6.5
GP3C2-C	B/SA6.4	2/SA6.5 (OH)
GP3D2-C	C/SA6.4	1/SA6.5 (OH)
SP3B2-C3	-	1/SA6.15
GP3A3-C	A/SA6.4	1 3/SA6.5
GP3B3-C	B/SA6.4	1 4/SA6.5
GP3C3-C	B/SA6.4	1 4/SA6.5 (OH)
GP3D3-C	C/SA6.4	1 3/SA6.5 (OH)
SP3B3-C4	-	1 2/SA6.15
GP3A4-C	A/SA6.2	1 3/SA6.5
GP3B4-C	B/SA6.2	1 4/SA6.5
SP34	-	3/SA6.15
GP3C4-C	B/SA6.2	1 4/SA6.5 (OH)
GP3D4-C	C/SA6.2	1 3/SA6.5 (OH)
SP3B4-C5	-	2/SA6.15
GP3A5-C	A/SA6.2	1 3/SA6.5
GP3B5-C	B/SA6.2	1 4/SA6.5
SP35	-	3/SA6.15
GP3C5-C	B/SA6.2	1 4/SA6.5 (OH)
GP3D5-C	C/SA6.2	1 3/SA6.5 (OH)
SP3B5-C6	-	2/SA6.15
BP3A6-C	A/SA6.10 (OH)	1/SA6.12
BP3B6-C	B/SA6.10 (OH)	2/SA6.12
SP36	-	5/SA6.15
BP3C6-C	B/SA6.10 (OH)	2/SA6.12 (OH)
BP3D6-C	1 C/SA6.10 (OH)	1/SA6.12 (OH)

BENT NO. 4

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP4A1-C	D/SA6.2	1/SA6.14
TP4B1-C	E/SA6.2	2/SA6.14
TP4C1-C	E/SA6.2	2/SA6.14 (OH)
TP4D1-C	F/SA6.2	1/SA6.14 (OH)
SP4B1-C2	-	1/SA6.15
GP4A2-C	A/SA6.4	1/SA6.5
GP4B2-C	B/SA6.4	2/SA6.5
GP4C2-C	B/SA6.4	2/SA6.5 (OH)
GP4D2-C	C/SA6.4	1/SA6.5 (OH)
SP4B2-C3	-	1/SA6.15
GP4A3-C	D/SA6.2	1 3/SA6.5
GP4B3-C	E/SA6.2	1 4/SA6.5
GP4C3-C	E/SA6.2	1 4/SA6.5 (OH)
GP4D3-C	F/SA6.2	1 3/SA6.5 (OH)
SP4B3-C4	-	2/SA6.15
GP4A4-C	D/SA6.2	1 3/SA6.5
GP4B4-C	E/SA6.2	1 4/SA6.5
SP44	-	3/SA6.15
GP4C4-C	E/SA6.2	1 4/SA6.5 (OH)
GP4D4-C	F/SA6.2	1 3/SA6.5 (OH)
SP4B4-C5	-	2/SA6.15
GP4A5-C	D/SA6.2	1 3/SA6.5
GP4B5-C	E/SA6.2	1 4/SA6.5
SP45	-	3/SA6.15
GP4C5-C	E/SA6.2	1 4/SA6.5 (OH)
GP4D5-C	F/SA6.2	1 3/SA6.5 (OH)
SP4B5-C6	-	2/SA6.15
GP4A6-C	D/SA6.2	3/SA6.5
GP4B6-C	E/SA6.2	4/SA6.5
SP46	-	5/SA6.15
GP4C6-C	E/SA6.2	4/SA6.5 (OH)
GP4D6-C	F/SA6.2	3/SA6.5 (OH)
SP4B6-C7	-	2/SA6.15
BP4A7-C	A/SA6.10	3/SA6.11
BP4B7-C	B/SA6.10	4/SA6.11
SP47	-	5/SA6.15
BP4C7-C	B/SA6.10	4/SA6.11 (OH)
BP4D7-C	1 C/SA6.10	3/SA6.11 (OH)

BENT NO. 5

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP5A1-C	A/SA6.2	1/SA6.14
TP5B1-C	B/SA6.2	2/SA6.14
TP5C1-C	B/SA6.2	2/SA6.14 (OH)
TP5D1-C	C/SA6.2	1/SA6.14 (OH)
SP5B1-C2	-	1/SA6.15
GP5A2-C	A/SA6.4	1/SA6.5
GP5B2-C	B/SA6.4	2/SA6.5
GP5C2-C	B/SA6.4	2/SA6.5 (OH)
GP5D2-C	C/SA6.4	1/SA6.5 (OH)
SP5B2-C3	-	1/SA6.15
GP5A3-C	A/SA6.2	1 3/SA6.5
GP5B3-C	B/SA6.2	1 4/SA6.5
GP5C3-C	B/SA6.2	1 4/SA6.5 (OH)
GP5D3-C	C/SA6.2	1 3/SA6.5 (OH)
SP5B3-C4	-	2/SA6.15
GP5A4-C	A/SA6.2	1 3/SA6.5
GP5B4-C	B/SA6.2	1 4/SA6.5
SP54	-	3/SA6.15
GP5C4-C	B/SA6.2	1 4/SA6.5 (OH)
GP5D4-C	C/SA6.2	1 3/SA6.5 (OH)
SP5B4-C5	-	2/SA6.15
GP5A5-C	A/SA6.2	1 3/SA6.5
GP5B5-C	B/SA6.2	1 4/SA6.5
SP55	-	3/SA6.15
GP5C5-C	B/SA6.2	1 4/SA6.5 (OH)
GP5D5-C	C/SA6.2	1 3/SA6.5 (OH)
SP5B5-C6	-	2/SA6.15

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

DRAWING NAME: Z:\OD ENGINEERING\03-0229-HANUE STR BR PEP-DOTH\01 CAD\12-06-24 ADD\NSR-SA0618-SA0622 CON DTLS SCHD ADD2.DWG PLOT TIME: 12-03-24, 10:26 PM

DATE	REVISION
12/6/24	1 Revised Table Values

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONNECTION REFERENCE SCHEDULE

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-26

SHEET No. SA6.18 OF 22 SHEETS

ADD. 124

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 125	280

CONNECTION REFERENCE SCHEDULE

BENT NO. 5

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
GP5A6-C	A/SA6.2	3/SA6.5
GP5B6-C	B/SA6.2	4/SA6.5
SP56	-	5/SA6.15
GP5C6-C	B/SA6.2	4/SA6.5 (OH)
GP5D6-C	C/SA6.2	3/SA6.5 (OH)
GP5A7-C	A/SA6.2	3/SA6.5
GP5B7-C	B/SA6.2	1/SA6.6
SP5B7-C8	-	4/SA6.15
GP5C7-C	B/SA6.2	1/SA6.6 (OH)
GP5D7-C	C/SA6.2	3/SA6.5 (OH)
BP5A8-C	A/SA6.10 (OH)	1/SA6.12
BP5B8-C	B/SA6.10 (OH)	2/SA6.12
SP58	-	5/SA6.15
BP5C8-C	B/SA6.10 (OH)	2/SA6.12 (OH)
BP5D8-C	1 C/SA6.10 (OH)	1/SA6.12 (OH)

BENT NO. 6

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP6A1-C	D/SA6.2	1/SA6.14
TP6B1-C	E/SA6.2	2/SA6.14
TP6C1-C	E/SA6.2	2/SA6.14 (OH)
TP6D1-C	F/SA6.2	1/SA6.14 (OH)
SP6B1-C2	-	1/SA6.15
GP6A2-C	A/SA6.4	1/SA6.5
GP6B2-C	B/SA6.4	2/SA6.5
GP6C2-C	B/SA6.4	2/SA6.5 (OH)
GP6D2-C	C/SA6.4	1/SA6.5 (OH)
SP6B2-C3	-	1/SA6.15
GP6A3-C	D/SA6.2	1 3/SA6.5
GP6B3-C	E/SA6.2	1 4/SA6.5
GP6C3-C	E/SA6.2	1 4/SA6.5 (OH)
GP6D3-C	F/SA6.2	1 3/SA6.5 (OH)
SP6B3-C4	-	2/SA6.15
GP6A4-C	D/SA6.2	1 3/SA6.5
GP6B4-C	E/SA6.2	1 4/SA6.5
SP64	-	3/SA6.15
GP6C4-C	E/SA6.2	1 4/SA6.5 (OH)
GP6D4-C	F/SA6.2	1 3/SA6.5 (OH)
SP6B4-C5	-	2/SA6.15

BENT NO. 6

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
GP6A5-C	D/SA6.2	1 3/SA6.5
GP6B5-C	E/SA6.2	1 4/SA6.5
SP65	-	3/SA6.15
GP6C5-C	E/SA6.2	1 4/SA6.5 (OH)
GP6D5-C	F/SA6.2	1 3/SA6.5 (OH)
SP6B5-C6	-	2/SA6.15
GP6A6-C	D/SA6.2	3/SA6.5
GP6B6-C	E/SA6.2	4/SA6.5
SP66	-	5/SA6.15
GP6C6-C	E/SA6.2	4/SA6.5 (OH)
GP6D6-C	F/SA6.2	3/SA6.5 (OH)
GP6A7-C	D/SA6.2	3/SA6.5
GP6B7-C	E/SA6.2	1/SA6.6
SP6B7-C8	-	4/SA6.15
GP6C7-C	E/SA6.2	1/SA6.6 (OH)
GP6D7-C	F/SA6.2	3/SA6.5 (OH)
BP6A8-C	A/SA6.10	1/SA6.12
BP6B8-C	B/SA6.10	2/SA6.12
SP68	-	5/SA6.15
BP6C8-C	B/SA6.10	2/SA6.12 (OH)
BP6D8-C	1 C/SA6.10	1/SA6.12 (OH)

BENT NO. 7

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP7A1-C	A/SA6.2	1/SA6.14
TP7B1-C	B/SA6.2	2/SA6.14
TP7C1-C	B/SA6.2	2/SA6.14 (OH)
TP7D1-C	C/SA6.2	1/SA6.14 (OH)
SP7B1-C2	-	1/SA6.15
GP7A2-C	A/SA6.4	1/SA6.5
GP7B2-C	B/SA6.4	2/SA6.5
GP7C2-C	B/SA6.4	2/SA6.5 (OH)
GP7D2-C	C/SA6.4	1/SA6.5 (OH)
SP7B2-C3	-	1/SA6.15
GP7A3-C	A/SA6.2	1 3/SA6.5
GP7B3-C	B/SA6.2	1 4/SA6.5
GP7C3-C	B/SA6.2	1 4/SA6.5 (OH)
GP7D3-C	C/SA6.2	1 3/SA6.5 (OH)
SP7B3-C4	-	2/SA6.15

BENT NO. 7

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
GP7A4-C	A/SA6.2	1 3/SA6.5
GP7B4-C	B/SA6.2	1 4/SA6.5
SP74	-	3/SA6.15
GP7C4-C	B/SA6.2	1 4/SA6.5 (OH)
GP7D4-C	C/SA6.2	1 3/SA6.5 (OH)
SP7B4-C5	-	2/SA6.15
GP7A5-C	A/SA6.2	1 3/SA6.5
GP7B5-C	B/SA6.2	1 4/SA6.5
SP75	-	3/SA6.15
GP7C5-C	B/SA6.2	1 4/SA6.5 (OH)
GP7D5-C	C/SA6.2	1 3/SA6.5 (OH)
SP7B5-C6	-	2/SA6.15
BP7A6-C	A/SA6.10 (OH)	3/SA6.11
BP7B6-C	B/SA6.10 (OH)	4/SA6.11
SP76	-	5/SA6.15
BP7C6-C	B/SA6.10 (OH)	4/SA6.11 (OH)
BP7D6-C	1 C/SA6.10 (OH)	3/SA6.11 (OH)

BENT NO. 8

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP8A1-C	D/SA6.2	1/SA6.14
TP8B1-C	E/SA6.2	2/SA6.14
TP8C1-C	E/SA6.2	2/SA6.14 (OH)
TP8D1-C	F/SA6.2	1/SA6.14 (OH)
SP8B1-C2	-	1/SA6.15
GP8A2-C	A/SA6.4	1/SA6.5
GP8B2-C	B/SA6.4	2/SA6.5
GP8C2-C	B/SA6.4	2/SA6.5 (OH)
GP8D2-C	C/SA6.4	1/SA6.5 (OH)
SP8B2-C3	-	1/SA6.15
GP8A3-C	D/SA6.2	1 3/SA6.5
GP8B3-C	E/SA6.2	1 4/SA6.5
GP8C3-C	E/SA6.2	1 4/SA6.5 (OH)
GP8D3-C	F/SA6.2	1 3/SA6.5 (OH)
SP8B3-C4	-	2/SA6.15
BP8A4-C	A/SA6.10	1/SA6.12
BP8B4-C	B/SA6.10	2/SA6.12
SP84	-	3/SA6.15
BP8C4-C	B/SA6.10	2/SA6.12 (OH)
BP8D4-C	1 C/SA6.10	1/SA6.12 (OH)

BENT NO. 9

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP9A1-C	A/SA6.2	1/SA6.14
TP9B1-C	B/SA6.2	2/SA6.14
TP9C1-C	B/SA6.2	2/SA6.14 (OH)
TP9D1-C	C/SA6.2	1/SA6.14 (OH)
SP9B1-C2	-	1/SA6.15
GP9A2-C	A/SA6.4	1/SA6.5
GP9B2-C	B/SA6.4	2/SA6.5
GP9C2-C	B/SA6.4	2/SA6.5 (OH)
GP9D2-C	C/SA6.4	1/SA6.5 (OH)
SP9B2-C3	-	1/SA6.15
BP9A3-C	A/SA6.10 (OH)	3/SA6.11
BP9B3-C	B/SA6.10 (OH)	4/SA6.11
BP9C3-C	B/SA6.10 (OH)	4/SA6.11 (OH)
BP9D3-C	1 C/SA6.10 (OH)	3/SA6.11 (OH)

DATE		REVISION
12/6/24	1	Revised Table Values

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONNECTION REFERENCE SCHEDULE

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

SHEET No. SA6.19 OF 22 SHEETS

ADD. 125

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

DRAWING NAME: Z:\OD ONGOING\23-072\3-NANUE STR BR PE2-DOTH\01 CAD\12-06-24 ADD2\NSB-S40618-S40622 CON DTLS SCHD ADD2.DWG PLOT TIME: 12-03-24, 10:27 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 126	280

CONNECTION REFERENCE SCHEDULE

TRESTLE NO. 1 - COL. LINE "A", "B", "C" AND "D"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS UPSTREAM	ELEV. DETAILS DOWNSTREAM
TP1A1-B	A/SA6.4	6/SA6.14	5/SA6.14
BP1A3-B	1 A/SA6.10	1/SA6.13	1/SA6.13
TP1B1-B	B/SA6.4	5/SA6.14	5/SA6.14
BP1B3-B	1 B/SA6.10	1/SA6.13	1/SA6.13
TP1C1-B	B/SA6.4	5/SA6.14	5/SA6.14
BP1C3-B	1 B/SA6.10	1/SA6.13	1/SA6.13
TP1D1-B	C/SA6.4	5/SA6.14	6/SA6.14
BP1D3-B	1 C/SA6.10	1/SA6.13	1/SA6.13

TRESTLE NO. 2 - COLUMN LINE "A"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS UPSTREAM	ELEV. DETAILS DOWNSTREAM
TP2A1-B	D/SA6.2	4/SA6.14	3/SA6.14
TP3A1-B	A/SA6.2	4/SA6.14 (OH)	3/SA6.14 (OH)
SP23A1-3	-	1/SA6.16	1/SA6.16
GP2A3-B	D/SA6.2	2/SA6.7	1/SA6.7
SP23A3	-	3/SA6.16	3/SA6.16
GP3A3-B	A/SA6.2	2/SA6.7 (OH)	1/SA6.7 (OH)
SP23A3-4	-	1/SA6.16	1/SA6.16
GP2A4-B	D/SA6.2	2/SA6.7	1/SA6.7
SP23A4	-	3/SA6.16	3/SA6.16
GP3A4-B	A/SA6.2	2/SA6.7 (OH)	1/SA6.7 (OH)
SP23A4-5	-	1/SA6.16	1/SA6.16
BP2A5-B	A/SA6.10	2/SA6.13 (OH)	2/SA6.13 (OH)
SP23A5	-	5/SA6.16	5/SA6.16
GP3A5-B	A/SA6.2	4/SA6.8	3/SA6.8
SP23A5-6	-	1/SA6.17	1/SA6.17
BP3A6-B	A/SA6.10 (OH)	3/SA6.13	3/SA6.13

TRESTLE NO. 2 - COL LINE "B"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP2B1-B	E/SA6.2	3/SA6.14
TP3B1-B	B/SA6.2	3/SA6.14 (OH)
SP23B1-3	-	1/SA6.16
GP2B3-B	E/SA6.2	1/SA6.7
SP23B3	-	3/SA6.16
GP3B3-B	B/SA6.2	1/SA6.7 (OH)
SP23B3-4	-	1/SA6.16

TRESTLE NO. 2 - COLUMN LINE "B"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
GP2B4-B	E/SA6.2	1/SA6.7
SP23B4	-	3/SA6.16
GP3B4-B	B/SA6.2	1/SA6.7 (OH)
SP23B4-5	-	1/SA6.16
BP2B5-B	B/SA6.10	2/SA6.13 (OH)
SP23B5	-	5/SA6.16
GP3B5-B	B/SA6.2	3/SA6.8
SP23B5-6	-	1/SA6.17
BP3B6-B	B/SA6.10 (OH)	3/SA6.13

TRESTLE NO. 2 - COLUMN LINE "C"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP2C1-B	E/SA6.2	3/SA6.14
TP3C1-B	B/SA6.2	3/SA6.14 (OH)
SP23C1-3	-	1/SA6.16
GP2C3-B	E/SA6.2	1/SA6.7
SP23C3	-	3/SA6.16
GP3C3-B	B/SA6.2	1/SA6.7 (OH)
SP23C3-4	-	1/SA6.16
GP2C4-B	E/SA6.2	1/SA6.7
SP23C4	-	3/SA6.16
GP3C4-B	B/SA6.2	1/SA6.7 (OH)
SP23C4-5	-	1/SA6.16
BP2C5-B	B/SA6.10	2/SA6.13 (OH)
SP23C5	-	5/SA6.16
GP3C5-B	B/SA6.2	3/SA6.8
SP23C5-6	-	1/SA6.17
BP3C6-B	B/SA6.10 (OH)	3/SA6.13

TRESTLE NO. 2 - COL LINE "D"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS UPSTREAM	ELEV. DETAILS DOWNSTREAM
TP2D1-B	F/SA6.2	3/SA6.14	4/SA6.14
TP3D1-B	C/SA6.2	3/SA6.14 (OH)	4/SA6.14 (OH)
SP23D1-3	-	1/SA6.16	1/SA6.16
GP2D3-B	F/SA6.2	1/SA6.7	2/SA6.7
SP23D3	-	3/SA6.16	3/SA6.16
GP3D3-B	C/SA6.2	1/SA6.7 (OH)	2/SA6.7 (OH)
SP23D3-4	-	1/SA6.16	1/SA6.16

TRESTLE NO. 2 - COLUMN LINE "D"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS UPSTREAM	ELEV. DETAILS DOWNSTREAM
GP2D4-B	F/SA6.2	1/SA6.7	2/SA6.7
SP23D4	-	3/SA6.16	3/SA6.16
GP3D4-B	C/SA6.2	1/SA6.7 (OH)	2/SA6.7 (OH)
SP23D4-5	-	1/SA6.16	1/SA6.16
BP2D5-B	1 C/SA6.10	2/SA6.13 (OH)	2/SA6.13 (OH)
SP23D5	-	5/SA6.16	5/SA6.16
GP3D5-B	C/SA6.2	3/SA6.8	4/SA6.8
SP23D5-6	-	1/SA6.17	1/SA6.17
BP3D6-B	1 C/SA6.10 (OH)	3/SA6.13	3/SA6.13

TRESTLE NO. 3 - COLUMN LINE "A"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS UPSTREAM	ELEV. DETAILS DOWNSTREAM
TP4A1-B	D/SA6.2	4/SA6.14	3/SA6.14
TP5A1-B	A/SA6.2	4/SA6.14 (OH)	3/SA6.14 (OH)
SP45A1-3	-	1/SA6.16	1/SA6.16
GP4A3-B	D/SA6.2	2/SA6.7	1/SA6.7
SP45A3	-	3/SA6.16	3/SA6.16
GP5A3-B	A/SA6.2	2/SA6.7 (OH)	1/SA6.7 (OH)
SP45A3-4	-	1/SA6.16	1/SA6.16
GP4A4-B	D/SA6.2	2/SA6.7	1/SA6.7
SP45A4	-	3/SA6.16	3/SA6.16
GP5A4-B	A/SA6.2	2/SA6.7 (OH)	1/SA6.7 (OH)
SP45A4-5	-	1/SA6.16	1/SA6.16
GP4A5-B	D/SA6.2	2/SA6.7	1/SA6.7
SP45A5	-	3/SA6.16	3/SA6.16
GP5A5-B	A/SA6.2	2/SA6.7 (OH)	1/SA6.7 (OH)
SP45A5-6	-	1/SA6.16	1/SA6.16
GP4A6-B	D/SA6.2	2/SA6.7	1/SA6.7
SP45A6	-	3/SA6.16	3/SA6.16
GP5A6-B	A/SA6.2	2/SA6.7 (OH)	1/SA6.7 (OH)
SP45A6-7	-	1/SA6.16	1/SA6.16
BP4A7-B	A/SA6.10	2/SA6.13 (OH)	2/SA6.13 (OH)
SP45A7	-	2/SA6.16	2/SA6.16
GP5A7-B	A/SA6.2	2/SA6.8	1/SA6.8
SP45A7-8	-	4/SA6.16	4/SA6.16
BP5A8-B	A/SA6.10 (OH)	3/SA6.13	3/SA6.13

TRESTLE NO. 3 - COLUMN LINE "B"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP4B1-B	E/SA6.2	3/SA6.14
TP5B1-B	B/SA6.2	3/SA6.14 (OH)
SP45B1-3	-	1/SA6.16
GP4B3-B	E/SA6.2	1/SA6.7
SP45B3	-	3/SA6.16
GP5B3-B	B/SA6.2	1/SA6.7 (OH)
SP45B3-4	-	1/SA6.16
GP4B4-B	E/SA6.2	1/SA6.7
SP45B4	-	3/SA6.16
GP5B4-B	B/SA6.2	1/SA6.7 (OH)
SP45B4-5	-	1/SA6.16
GP4B5-B	E/SA6.2	1/SA6.7
SP45B5	-	3/SA6.16
GP5B5-B	B/SA6.2	1/SA6.7 (OH)
SP45B5-6	-	1/SA6.16
GP4B6-B	E/SA6.2	1/SA6.7
SP45B6	-	3/SA6.16
GP5B6-B	B/SA6.2	1/SA6.7 (OH)
SP45B6-7	-	1/SA6.16
BP4B7-B	B/SA6.10	2/SA6.13 (OH)
SP45B7	-	1 2/SA6.16
GP5B7-B	B/SA6.2	1/SA6.8
SP45B7-8	-	4/SA6.16
BP5B8-B	B/SA6.10 (OH)	3/SA6.13

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

DRAWING NAME: Z:\OD ENGINEERING\23-022\9-NANUE STR BR PEZ-ADD\TA01 CAD\12-06-24 ADD\NSR-SA0618-SA0622 CON DTLS SCHD ADD2.DWG PLOT TIME: 12-03-24, 10:28 PM

DATE	REVISION
12/6/24	1 Revised Table Values

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONNECTION REFERENCE SCHEDULE

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE EXPIRATION DATE OF THE LICENSE 4-30-26

SHEET NO SA6.20 OF 22 SHEETS

ADD. 126

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 127	280

CONNECTION REFERENCE SCHEDULE

TRESTLE NO. 3 - COLUMN LINE "C"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP4C1-B	E/SA6.2	3/SA6.14
TP5C1-B	B/SA6.2	3/SA6.14 (OH)
SP45C1-3	-	1/SA6.16
GP4C3-B	E/SA6.2	1/SA6.7
SP45C3	-	3/SA6.16
GP5C3-B	B/SA6.2	1/SA6.7 (OH)
SP45C3-4	-	1/SA6.16
GP4C4-B	E/SA6.2	1/SA6.7
SP45C4	-	3/SA6.16
GP5C4-B	B/SA6.2	1/SA6.7 (OH)
SP45C4-5	-	1/SA6.16
GP4C5-B	E/SA6.2	1/SA6.7
SP45C5	-	3/SA6.16
GP5C5-B	B/SA6.2	1/SA6.7 (OH)
SP45C5-6	-	1/SA6.16
GP4C6-B	E/SA6.2	1/SA6.7
SP45C6	-	3/SA6.16
GP5C6-B	B/SA6.2	1/SA6.7 (OH)
SP45C6-7	-	1/SA6.16
BP4C7-B	B/SA6.10	2/SA6.13 (OH)
SP45C7	-	2/SA6.16
GP5C7-B	B/SA6.2	1/SA6.8
SP45C7-8	-	4/SA6.16
BP5C8-B	B/SA6.10 (OH)	3/SA6.13

TRESTLE NO. 3 - COLUMN LINE "D"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS	
		UPSTREAM	DOWNSTREAM
TP4D1-B	F/SA6.2	3/SA6.14	4/SA6.14
TP5D1-B	C/SA6.2	3/SA6.14 (OH)	4/SA6.14 (OH)
SP45D1-3	-	1/SA6.16	1/SA6.16
GP4D3-B	F/SA6.2	1/SA6.7	2/SA6.7
SP45D3	-	3/SA6.16	3/SA6.16
GP5D3-B	C/SA6.2	1/SA6.7 (OH)	2/SA6.7 (OH)
SP45D3-4	-	1/SA6.16	1/SA6.16
GP4D4-B	F/SA6.2	1/SA6.7	2/SA6.7
SP45D4	-	3/SA6.16	3/SA6.16
GP5D4-B	C/SA6.2	1/SA6.7 (OH)	2/SA6.7 (OH)
SP45D4-5	-	1/SA6.16	1/SA6.16
GP4D5-B	F/SA6.2	1/SA6.7	2/SA6.7
SP45D5	-	3/SA6.16	3/SA6.16
GP5D5-B	C/SA6.2	1/SA6.7 (OH)	2/SA6.7 (OH)
SP45D5-6	-	1/SA6.16	1/SA6.16
GP4D6-B	F/SA6.2	1/SA6.7	2/SA6.7
SP45D6	-	3/SA6.16	3/SA6.16
GP5D6-B	C/SA6.2	1/SA6.7 (OH)	2/SA6.7 (OH)
SP45D6-7	-	1/SA6.16	1/SA6.16
BP4D7-B	1 C/SA6.10	2/SA6.13 (OH)	2/SA6.13 (OH)
SP45D7	-	2/SA6.16	2/SA6.16
GP5D7-B	C/SA6.2	1/SA6.8	2/SA6.8
SP45D7-8	-	4/SA6.16	4/SA6.16
BP5D8-B	1 C/SA6.10 (OH)	3/SA6.13	3/SA6.13

TRESTLE NO. 4 - COLUMN LINE "A"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS	
		UPSTREAM	DOWNSTREAM
TP6A1-B	D/SA6.2	4/SA6.14	3/SA6.14
TP7A1-B	A/SA6.2	4/SA6.14 (OH)	3/SA6.14 (OH)
SP67A1-3	-	1/SA6.16	1/SA6.16
GP6A3-B	D/SA6.2	2/SA6.7	1/SA6.7
SP67A3	-	3/SA6.16	3/SA6.16
GP7A3-B	A/SA6.2	2/SA6.7 (OH)	1/SA6.7 (OH)
SP67A3-4	-	1/SA6.16	1/SA6.16
GP6A4-B	D/SA6.2	2/SA6.7	1/SA6.7
SP67A4	-	3/SA6.16	3/SA6.16
GP7A4-B	A/SA6.2	2/SA6.7 (OH)	1/SA6.7 (OH)
SP67A4-5	-	1/SA6.16	1/SA6.16
GP6A5-B	D/SA6.2	2/SA6.7	1/SA6.7
SP67A5	-	3/SA6.16	3/SA6.16
GP7A5-B	A/SA6.2	2/SA6.7 (OH)	1/SA6.7 (OH)
SP67A5-6	-	1/SA6.16	1/SA6.16
GP6A6-B	D/SA6.2	2/SA6.7	1/SA6.7
SP67A6	-	3/SA6.16	3/SA6.16
BP7A6-B	A/SA6.10 (OH)	2/SA6.13	2/SA6.13
GP6A7-B	D/SA6.2	2/SA6.9	1/SA6.9
SP67A6-7	-	2/SA6.17	2/SA6.17
BP6A8-B	A/SA6.10	3/SA6.13 (OH)	3/SA6.13 (OH)

TRESTLE NO. 4 - COLUMN LINE "B"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP6B1-B	E/SA6.2	3/SA6.14
TP7B1-B	B/SA6.2	3/SA6.14 (OH)
SP67B1-3	-	1/SA6.16
GP6B3-B	E/SA6.2	1/SA6.7
SP67B3	-	3/SA6.16
GP7B3-B	B/SA6.2	1/SA6.7 (OH)
SP67B3-4	-	1/SA6.16
GP6B4-B	E/SA6.2	1/SA6.7
SP67B4	-	3/SA6.16
GP7B4-B	B/SA6.2	1/SA6.7 (OH)
SP67B4-5	-	1/SA6.16
GP6B5-B	E/SA6.2	1/SA6.7
SP67B5	-	3/SA6.16
GP7B5-B	B/SA6.2	1/SA6.7 (OH)
SP67B5-6	-	1/SA6.16
GP6B6-B	E/SA6.2	1/SA6.7
SP67B6	-	3/SA6.16
BP7B6-B	B/SA6.10 (OH)	2/SA6.13
GP6B7-B	E/SA6.2	1/SA6.9
SP67B6-7	-	2/SA6.17
BP6B8-B	B/SA6.10	3/SA6.13 (OH)

DATE		REVISION
12/6/24	1	Revised Table Values

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONNECTION REFERENCE SCHEDULE

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

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

ORIGINAL PLAN
NOTE BOOK
No.

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 128	280

CONNECTION REFERENCE SCHEDULE

TRESTLE NO. 4 - COLUMN LINE "C"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP6C1-B	E/SA6.2	3/SA6.14
TP7C1-B	B/SA6.2	3/SA6.14 (OH)
SP67C1-3	-	1/SA6.16
GP6C3-B	E/SA6.2	1/SA6.7
SP67C3	-	3/SA6.16
GP7C3-B	B/SA6.2	1/SA6.7 (OH)
SP67C3-4	-	1/SA6.16
GP6C4-B	E/SA6.2	1/SA6.7
SP67C4	-	3/SA6.16
GP7C4-B	B/SA6.2	1/SA6.7 (OH)
SP67C4-5	-	1/SA6.16
GP6C5-B	E/SA6.2	1/SA6.7
SP67C5	-	3/SA6.16
GP7C5-B	B/SA6.2	1/SA6.7 (OH)
SP67C5-6	-	1/SA6.16
GP6C6-B	E/SA6.2	1/SA6.7
SP67C6	-	3/SA6.16
BP7C6-B	B/SA6.10 (OH)	2/SA6.13
GP6C7-B	E/SA6.2	1/SA6.9
SP67C6-7	-	2/SA6.17
BP6C8-B	B/SA6.10	3/SA6.13 (OH)

TRESTLE NO. 4 - COLUMN LINE "D"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS	
		UPSTREAM	DOWNSTREAM
TP6D1-B	F/SA6.2	3/SA6.14	4/SA6.14
TP7D1-B	C/SA6.2	3/SA6.14 (OH)	4/SA6.14 (OH)
SP67D1-3	-	1/SA6.16	1/SA6.16
GP6D3-B	F/SA6.2	1/SA6.7	2/SA6.7
SP67D3	-	3/SA6.16	3/SA6.16
GP7D3-B	C/SA6.2	1/SA6.7 (OH)	2/SA6.7 (OH)
SP67D3-4	-	1/SA6.16	1/SA6.16
GP6D4-B	F/SA6.2	1/SA6.7	2/SA6.7
SP67D4	-	3/SA6.16	3/SA6.16
GP7D4-B	C/SA6.2	1/SA6.7 (OH)	2/SA6.7 (OH)
SP67D4-5	-	1/SA6.16	1/SA6.16
GP6D5-B	F/SA6.2	1/SA6.7	2/SA6.7
SP67D5	-	3/SA6.16	3/SA6.16
GP7D5-B	C/SA6.2	1/SA6.7 (OH)	2/SA6.7 (OH)
SP67D5-6	-	1/SA6.16	1/SA6.16
GP6D6-B	F/SA6.2	1/SA6.7	2/SA6.7
SP67D6	-	3/SA6.16	3/SA6.16
BP7D6-B	1 C/SA6.10 (OH)	2/SA6.13	2/SA6.13
GP6D7-B	F/SA6.2	1/SA6.9	2/SA6.9
SP67D6-7	-	2/SA6.17	2/SA6.17
BP6D8-B	1 C/SA6.10	3/SA6.13 (OH)	3/SA6.13 (OH)

TRESTLE NO. 5 - COLUMN LINE "A"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS	
		UPSTREAM	DOWNSTREAM
TP8A1-B	D/SA6.2	4/SA6.14	3/SA6.14
TP9A1-B	A/SA6.2	4/SA6.14 (OH)	3/SA6.14 (OH)
SP89A1-3	-	1/SA6.16	1/SA6.16
GP8A3-B	D/SA6.2	2/SA6.8 (OH)	1/SA6.8 (OH)
SP89A3	-	1 2/SA6.16 (OH)	1 2/SA6.16 (OH)
BP9A3-B	A/SA6.10 (OH)	2/SA6.13	2/SA6.13
SP89A3-4	-	4/SA6.16 (OH)	4/SA6.16 (OH)
BP8A4-B	A/SA6.10	3/SA6.13 (OH)	3/SA6.13 (OH)

TRESTLE NO. 5 - COLUMN LINE "B"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP8B1-B	E/SA6.2	3/SA6.14
TP9B1-B	B/SA6.2	3/SA6.14 (OH)
SP89B1-3	-	1/SA6.16
GP8B3-B	E/SA6.2	1/SA6.8 (OH)
SP89B3	-	1 2/SA6.16 (OH)
BP9B3-B	B/SA6.10 (OH)	2/SA6.13
SP89B3-4	-	4/SA6.16 (OH)
BP8B4-B	B/SA6.10	3/SA6.13 (OH)

TRESTLE NO. 5 - COLUMN LINE "C"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS
TP8C1-B	E/SA6.2	3/SA6.14
TP9C1-B	B/SA6.2	3/SA6.14 (OH)
SP89C1-3	-	1/SA6.16
GP8C3-B	E/SA6.2	1/SA6.8 (OH)
SP89C3	-	1 2/SA6.16 (OH)
BP9C3-B	B/SA6.10 (OH)	2/SA6.13
SP89C3-4	-	4/SA6.16 (OH)
BP8C4-B	B/SA6.10	3/SA6.13 (OH)

TRESTLE NO. 5 - COLUMN LINE "D"

CONNECTION ID	PLAN DETAILS	ELEV. DETAILS	
		UPSTREAM	DOWNSTREAM
TP8D1-B	F/SA6.2	3/SA6.14	4/SA6.14
TP9D1-B	C/SA6.2	3/SA6.14 (OH)	4/SA6.14 (OH)
SP89D1-3	-	1/SA6.16	1/SA6.16
GP8D3-B	F/SA6.2	1/SA6.8 (OH)	2/SA6.8 (OH)
SP89D3	-	1 2/SA6.16 (OH)	1 2/SA6.16 (OH)
BP9D3-B	1 C/SA6.10 (OH)	2/SA6.13	2/SA6.13
SP89D3-4	-	4/SA6.16 (OH)	4/SA6.16 (OH)
BP8D4-B	1 C/SA6.10	3/SA6.13 (OH)	3/SA6.13 (OH)

DATE	REVISION
12/6/24	1 Revised Table Values

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONNECTION REFERENCE SCHEDULE

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

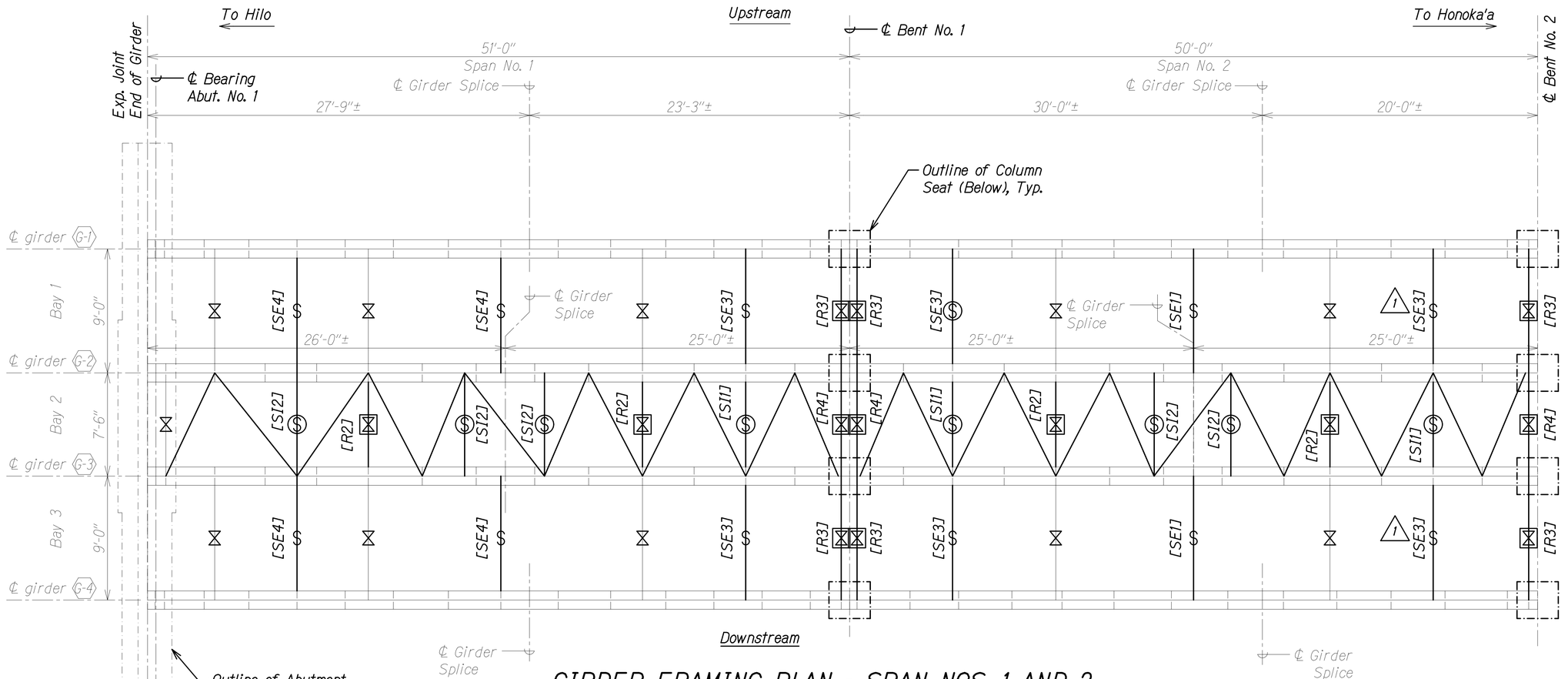
SHEET NO SA6.22 OF 22 SHEETS

ADD. 128

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

DRAWING NAME: Z:\OD ONGOING\23-022.9-NANUE STR BR PE2-3DTM.01 CADV 12-06-24 ADD\VSR-S40618-S40622 CON BTLS SCHD A092.DWG PLOT TIME: 12-03-24, 10:29 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 165	280



GIRDER FRAMING PLAN - SPAN NOS. 1 AND 2

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

LEGEND:

- Exist. Cross Frame to Remain
- Exist. Cross Frame to be Removed and Replaced
- Exist. Strut to be Removed and Replaced
- New Strut
- New Lateral Diagonal Bracing at Bottom Flange, See Sheet SA10.21 through SA10.24
- [ ] Cross Frame or Strut Mark, See Table

NOTES:

1. Cross Frames, Struts, Stiffeners and Lateral Bracing locations to be verified by Contractor.
2. Provided dimensions are based on As-Built plans.

INSTALLATION OF MEMBERS AND CONNECTIONS

MARK	REFERENCE	MARK	REFERENCE
SE1	Section A / SA10.12	R3	Section C / SA10.14
SE3	Section C / SA10.12	R4	Section D / SA10.14
SE4	Section D / SA10.12	-	-
SI1	Section A / SA10.13	-	-
SI2	Section B / SA10.13	-	-
R2	Section B / SA10.14	-	-

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

BRANWG NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR PE2-BOTH.01 DGN 12-06-24 ADD2\NSF-SA09B6 GIRDER SPAN 1 & 2 PLN ADD2.DWG PLOT TIME: 12-04-24, 3:30 PM

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

DATE	REVISION
12/6/24	1 Revised Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER FRAMING PLAN - SPAN NOS. 1 AND 2

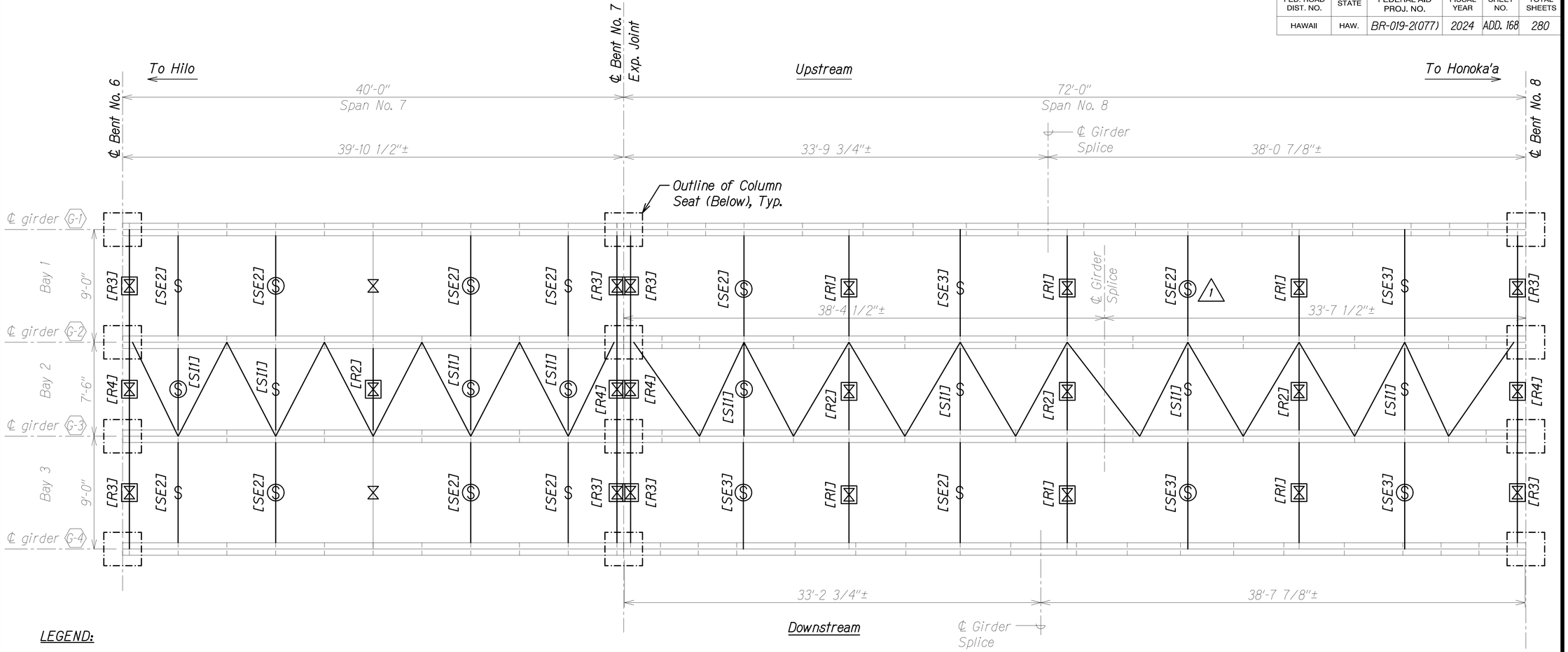
HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET No. SA9.6 OF 23 SHEETS

ADD. 165

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 168	280



LEGEND:

- Exist. Cross Frame to Remain
- Exist. Cross Frame to be Removed and Replaced
- Exist. Strut to be Removed and Replaced
- New Strut
- New Lateral Diagonal Bracing at Bottom Flange, See Sheet SA10.21 through SA10.24
- [ ] Cross Frame or Strut Mark, See Table

NOTES:

1. Cross Frames, Struts, Stiffeners and Lateral Bracing locations to be verified by Contractor.
2. Provided dimensions are based on As-Built plans.

GIRDER FRAMING PLAN - SPAN NOS. 7 AND 8

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

INSTALLATION OF MEMBERS AND CONNECTIONS

MARK	REFERENCE	MARK	REFERENCE
SE2	Section B / SA10.12	R1	Section A / SA10.14
SE3	Section C / SA10.12	R2	Section B / SA10.14
SI1	Section A / SA10.13	R3	Section C / SA10.14
-	-	R4	Section D / SA10.14

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

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

DATE	REVISION
12/6/24	1 Revised Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER FRAMING PLAN - SPAN NOS. 7 AND 8

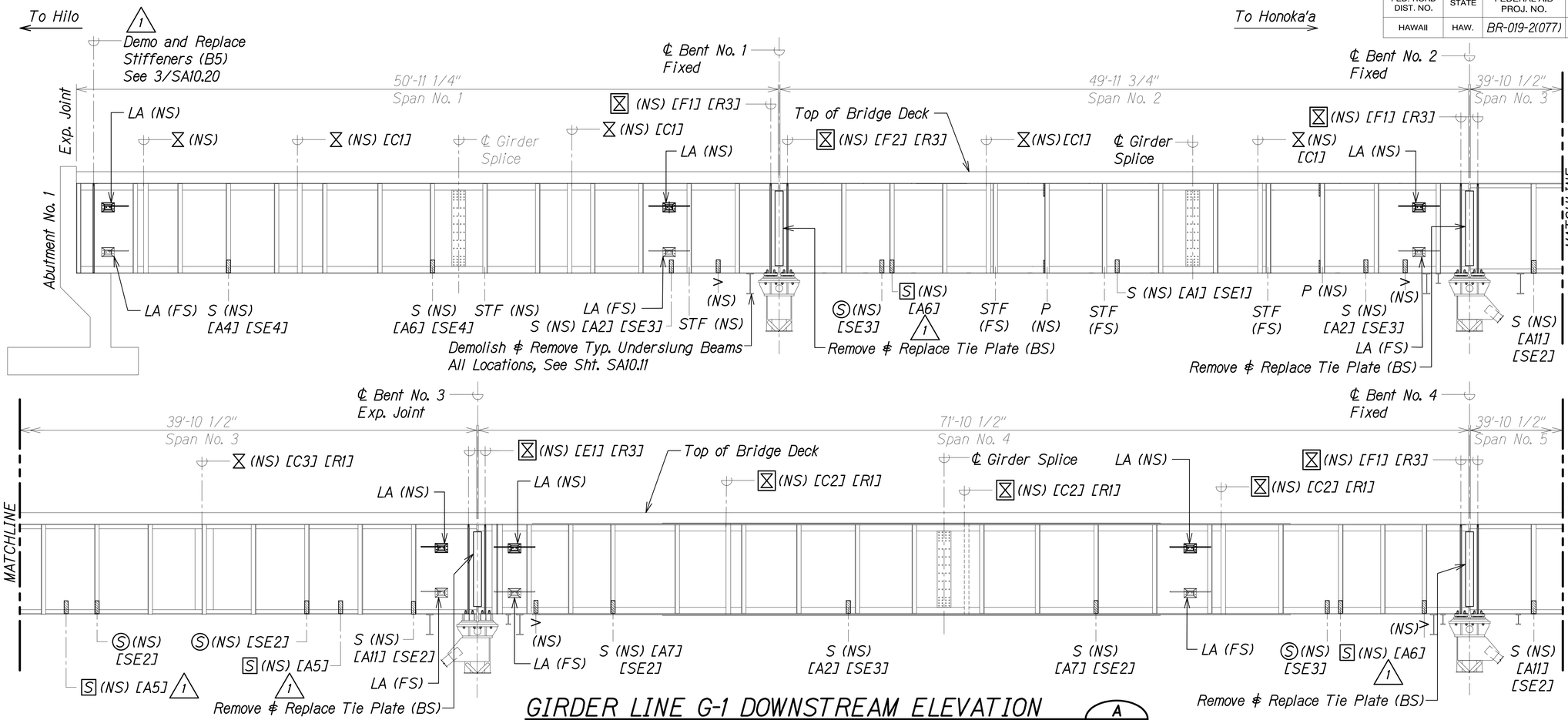
HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET No. SA9.9 OF 23 SHEETS

ADD. 168

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 170	280



GIRDER LINE G-1 DOWNSTREAM ELEVATION

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

A SA9.11 | SA9.11

LEGEND:

LA	Lifeline Anchor, See Sheet SA10.27
⧖	Cross Frame
BS	Both Sides
FS	Far Side
NS	Near Side
Ⓢ	New Strut
S	Exist. Strut to be Removed and Replaced
[S]	Exist. Strut to be Removed
[⧖]	Cross Frame to be Removed and Replaced
STF	Deformed Stiffener to be Repaired, See Structural General Note 5.AB.
P	Plates to be Removed from Stiffener Location. Plug Weld Resulting Holes
⊦	Exist. Angle Iron to be Removed, See Detail 1/SA10.11
△	Exist. Ancillary Flange Tab to be Removed, See Detail 3/SA10.11

DEMOLITION OF MEMBERS & CONNECTIONS

MARK	REFERENCE
A1	Section A / SA10.1
A2	Section B / SA10.1
A4	Section D / SA10.1
A5	Section A / SA10.2
A6	Section B / SA10.2
A7	Section C / SA10.2
A11	Section C / SA10.3
C1	Section A / SA10.6
C2	Section B / SA10.6
C3	Section C / SA10.6
E1	Section A / SA10.8
F1	Section A / SA10.9
F2	Section B / SA10.9

INSTALLATION OF MEMBERS & CONN.

MARK	REFERENCE
SE1	Section A / SA10.12
SE2	Section B / SA10.12
SE3	Section C / SA10.12
SE4	Section D / SA10.12
R1	Section A / SA10.14
R3	Section C / SA10.14

NOTES:

1. The gap between the ends of the girders at the bents is 1 1/2" according to As-Built drawings. See Sheets SA10.10 and SA10.25 for tie plate details.
2. Struts are shown hatched for clarity.
3. Replace bearing stiffeners at all locations EF of girder. See Sheet SA10.20.

DATE		REVISION
12/6/24	1	Revised Callouts

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER LINE G-1 DOWNSTREAM ELEVATION

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET No. SA9.11 OF 23 SHEETS

ADD. 170

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

NOTE BOOK | No.

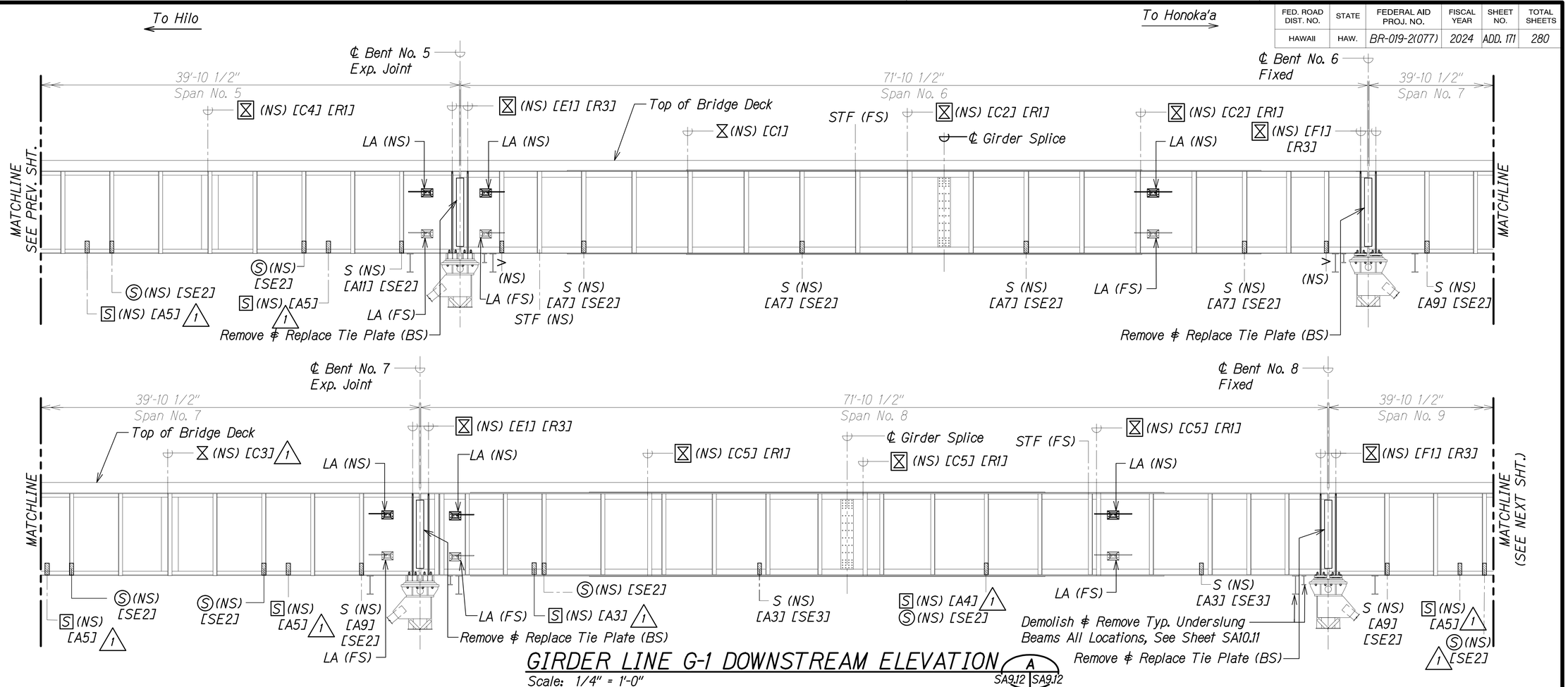
BRIDGE NO. 3-02-2-19 NANUE STR BR REP--BOTH DIR

DGN 12-06-24 ADD2 NSB-24091-S40922 GIRDER ELEV ADD2.DGN

PLOT TIME: 12-05-24, 2:45 PM

DRAWING NAME: Z:\OD ONGOING\3-02-2-19 NANUE STR BR REP--BOTH DIR\

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 171	280



GIRDER LINE G-1 DOWNSTREAM ELEVATION

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

A SA9.12 | SA9.12

LEGEND:

LA	Lifeline Anchor, See Sheet SA10.27
⧖	Cross Frame
BS	Both Sides
FS	Far Side
NS	Near Side
Ⓢ	New Strut
S	Exist. Strut to be Removed and Replaced
[S]	Exist. Strut to be Removed
[⧖]	Cross Frame to be Removed and Replaced
STF	Deformed Stiffener to be Repaired, See Structural General Note 5.AB.
P	Plates to be Removed from Stiffener Location. Plug Weld Resulting Holes
⊬	Exist. Angle Iron to be Removed, See Detail 1/SA10.11
△	Exist. Ancillary Flange Tab to be Removed, See Detail 3/SA10.11

DEMOLITION OF MEMBERS & CONNECTIONS	
MARK	REFERENCE
A3	Section C / SA10.1
A4	Section D / SA10.1
A5	Section A / SA10.2
A7	Section C / SA10.2
A9	Section A / SA10.3
A11	Section C / SA10.3
C1	Section A / SA10.6
C2	Section B / SA10.6
C3	Section C / SA10.6
C4	Section D / SA10.6
C5	Section E / SA10.6
E1	Section A / SA10.8
F1	Section A / SA10.9

INSTALLATION OF MEMBERS & CONN.	
MARK	REFERENCE
SE1	Section A / SA10.12
SE2	Section B / SA10.12
SE3	Section C / SA10.12
SE4	Section D / SA10.12
R1	Section A / SA10.14
R2	Section B / SA10.14
R3	Section C / SA10.14

NOTES:

1. The gap between the ends of the girders at the bents is 1 1/2" according to As-Built drawings. See Sheets SA10.10 and SA10.25 for tie plate details.
2. Struts are shown hatched for clarity.
3. Replace bearing stiffeners at all locations EF of girder. See Sheet SA10.20.

DATE		REVISION
12/6/24	1	Revised Callouts

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

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SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER LINE G-1 DOWNSTREAM ELEVATION

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

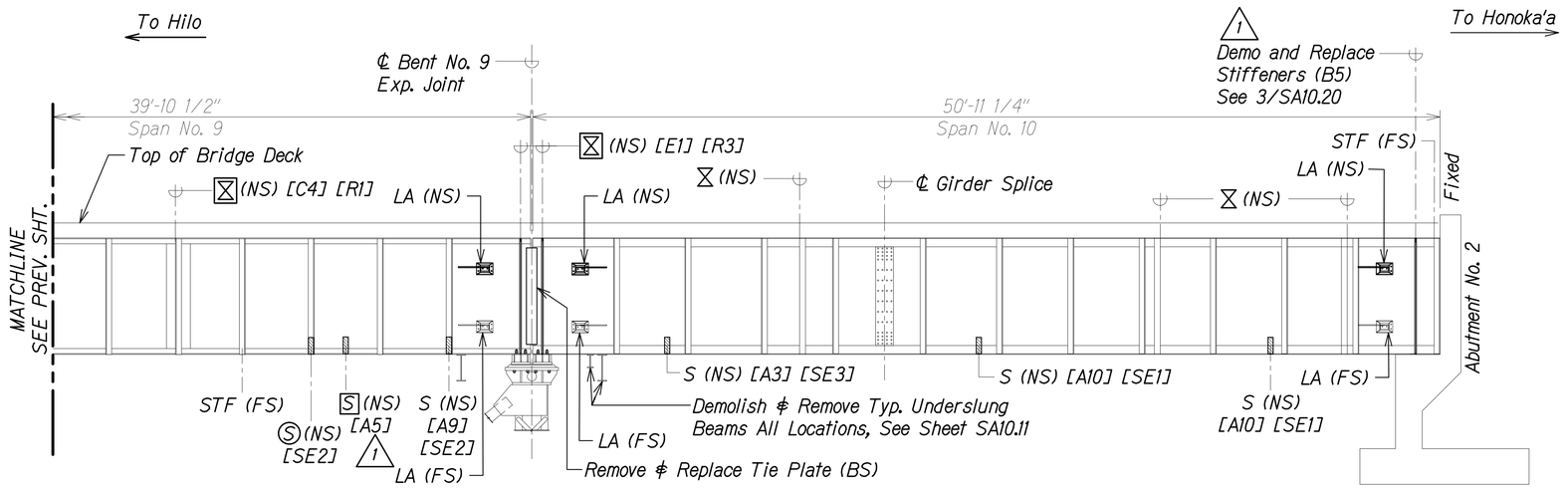
SHEET No. SA9.12 OF 23 SHEETS

ADD. 171

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

DRAWING NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR PE2-BOTH\01 CAD\12-06-24 ADD\NSR-540911-540922 GIRDER ELEV ADD2.DWG PLOT TIME: 12-04-24, 3:25 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 172	280



GIRDER LINE G-1
DOWNSTREAM ELEVATION

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

A — SA9.13 | SA9.13

LEGEND:

LA	Lifeline Anchor, See Sheet SA10.27
⧖	Cross Frame
BS	Both Sides
FS	Far Side
NS	Near Side
Ⓢ	New Strut
S	Exist. Strut to be Removed and Replaced
S in box	Exist. Strut to be Removed
⧖ in box	Cross Frame to be Removed and Replaced
STF	Deformed Stiffener to be Repaired, See Structural General Note 5.AB.
P	Plates to be Removed from Stiffener Location. Plug Weld Resulting Holes
⊦	Exist. Angle Iron to be Removed, See Detail 1/SA10.11
△	Exist. Ancillary Flange Tab to be Removed, See Detail 3/SA10.11

DEMOLITION OF MEMBERS & CONNECTIONS	
MARK	REFERENCE
A3	Section C / SA10.1
A5	Section A / SA10.2
A9	Section A / SA10.3
A10	Section B / SA10.3
C4	Section D / SA10.6
E1	Section A / SA10.8

INSTALLATION OF MEMBERS & CONN.	
MARK	REFERENCE
SE1	Section A / SA10.12
SE2	Section B / SA10.12
SE3	Section C / SA10.12
R1	Section A / SA10.14
R3	Section C / SA10.14
R4	Section D / SA10.14

NOTES:

1. The gap between the ends of the girders at the bents is 1 1/2" according to As-Built drawings. See Sheets SA10.10 and SA10.25 for tie plate details.
2. Struts are shown hatched for clarity.
3. Replace bearing stiffeners at all locations EF of girder. See Sheet SA10.20.

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

DATE	REVISION
12/6/24	1 Revised Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER LINE G-1
DOWNSTREAM ELEVATION

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

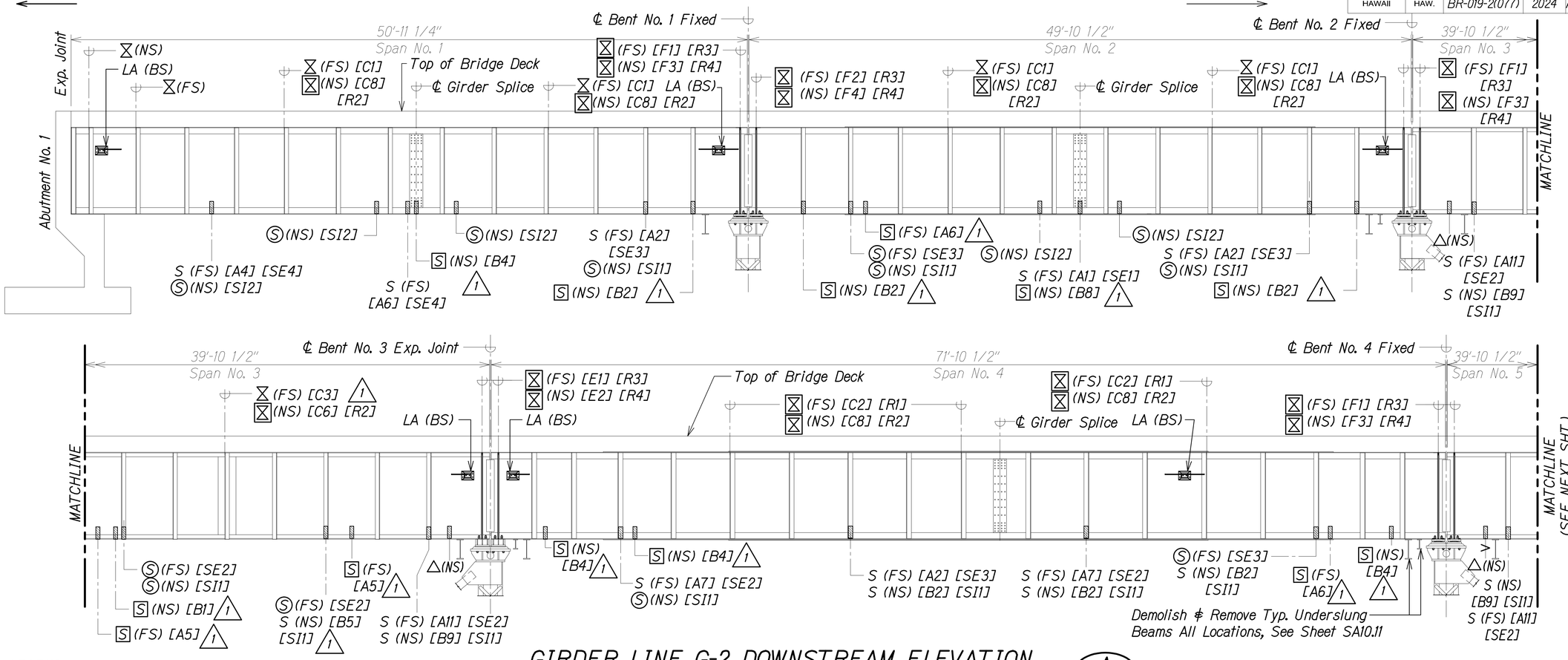
Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS — LICENSED PROFESSIONAL ENGINEER — NO. 17097-S — HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-26

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 173	280



GIRDER LINE G-2 DOWNSTREAM ELEVATION

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

A SA9.14 | SA9.14

LEGEND:

LA	Lifeline Anchor, See Sheet SA10.27	FS	Far Side
⧖	Cross Frame	NS	Near Side
BS	Both Sides	Ⓢ	New Strut
S	Exist. Strut to be Removed and Replaced		
[S]	Exist. Strut to be Removed		
[⧖]	Cross Frame to be Removed and Replaced		
STF	Deformed Stiffener to be Repaired, See Structural General Note 5.AB.		
P	Plates to be Removed from Stiffener Location. Plug Weld Resulting Holes		
⏚	Exist. Angle Iron to be Removed, See Detail 1/SA10.11		
△	Exist. Ancillary Flange Tab to be Removed, See Detail 3/SA10.11		

DEMOLITION OF MEMBERS & CONNECTIONS

MARK	REFERENCE	MARK	REFERENCE
A1	Section A / SA10.1	B9	Section E / SA10.5
A2	Section B / SA10.1	C1	Section A / SA10.6
A4	Section D / SA10.1	C2	Section B / SA10.6
A5	Section A / SA10.2	C3	Section C / SA10.6
A6	Section B / SA10.2	C6	Section A / SA10.7
A7	Section C / SA10.2	C8	Section C / SA10.7
A11	Section C / SA10.3	E1	Section A / SA10.8
B1	Section A / SA10.4	E2	Section B / SA10.8
B2	Section B / SA10.4	F1	Section A / SA10.9
B4	Section D / SA10.4	F2	Section B / SA10.9
B5	Section A / SA10.5	F3	Section C / SA10.9
B8	Section D / SA10.5	F4	Section D / SA10.9

INSTALLATION OF MEMBERS & CONN.

MARK	REFERENCE
SE1	Section A / SA10.12
SE2	Section B / SA10.12
SE3	Section C / SA10.12
SE4	Section D / SA10.12
SI1	Section A / SA10.13
SI2	Section B / SA10.13
R1	Section A / SA10.14
R2	Section B / SA10.14
R3	Section C / SA10.14
R4	Section D / SA10.14

NOTES:

1. The gap between the ends of the girders at the bents is 1 1/2" according to As-Built drawings.
2. Struts are shown hatched for clarity.
3. Replace bearing stiffeners at all locations EF of girder. See Sheet SA10.20.

DATE		REVISION
12/6/24	1	Revised Callouts

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER LINE G-2 DOWNSTREAM ELEVATION

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

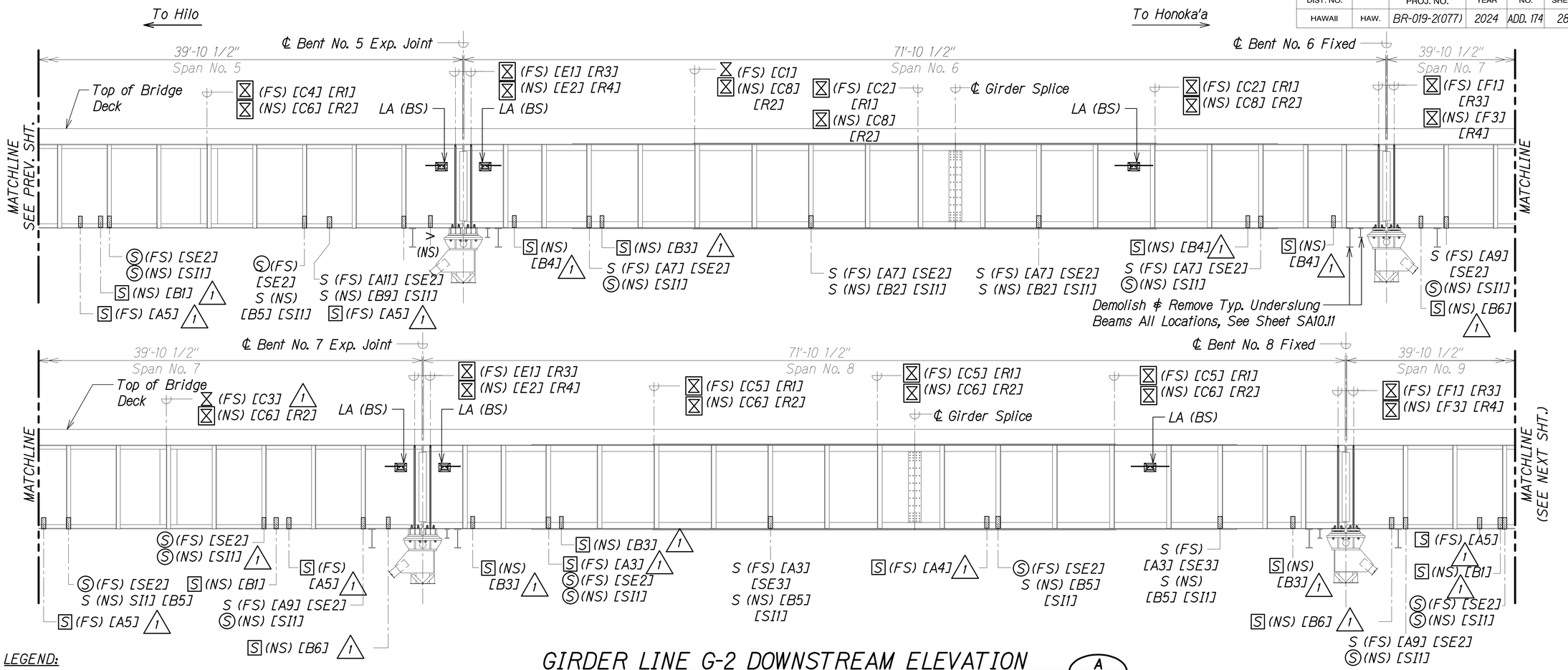
SHEET No. SA9.14 OF 23 SHEETS

ADD. 173

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

DRAWING NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR PE2-BOTH.VOL I\DGN\12-06-24 ADD\NSR-SA0911-SA0922 GIRDER ELEV ADD.DWG PLOT TIME: 12-04-24, 3:26 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 174	280



GIRDER LINE G-2 DOWNSTREAM ELEVATION

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

A SA9.15 | SA9.15

LEGEND:

LA	Lifeline Anchor, See Sheet SA10.27	FS	Far Side
⧖	Cross Frame	NS	Near Side
BS	Both Sides	Ⓢ	New Strut
S	Exist. Strut to be Removed and Replaced		
[S]	Exist. Strut to be Removed		
[⧖]	Cross Frame to be Removed and Replaced		
STF	Deformed Stiffener to be Repaired, See Structural General Note 5.AB.		
P	Plates to be Removed from Stiffener Location. Plug Weld Resulting Holes		
⊥	Exist. Angle Iron to be Removed, See Detail 1/SA10.11		
△	Exist. Ancillary Flange Tab to be Removed, See Detail 3/SA10.11		

DEMOLITION OF MEMBERS & CONNECTIONS

MARK	REFERENCE	MARK	REFERENCE
A3	Section C / SA10.1	B9	Section E / SA10.5
A4	Section D / SA10.1	C1	Section A / SA10.6
A5	Section A / SA10.2	C2	Section B / SA10.6
A7	Section C / SA10.2	C3	Section C / SA10.6
A9	Section A / SA10.3	C4	Section D / SA10.6
A11	Section C / SA10.3	C5	Section E / SA10.6
B1	Section A / SA10.4	C6	Section A / SA10.7
B2	Section B / SA10.4	C8	Section C / SA10.7
B3	Section C / SA10.4	E1	Section A / SA10.8
B4	Section D / SA10.4	E2	Section B / SA10.8
B5	Section A / SA10.5	F1	Section A / SA10.9
B6	Section B / SA10.5	F3	Section C / SA10.9

INSTALLATION OF MEMBERS & CONN.

MARK	REFERENCE
SE1	Section A / SA10.12
SE2	Section B / SA10.12
SE3	Section C / SA10.12
SE4	Section D / SA10.12
SI1	Section A / SA10.13
SI2	Section B / SA10.13
R1	Section A / SA10.14
R2	Section B / SA10.14
R3	Section C / SA10.14
R4	Section D / SA10.14

NOTES:

1. The gap between the ends of the girders at the bents is 1 1/2" according to As-Built drawings.
2. Struts are shown hatched for clarity.
3. Replace bearing stiffeners at all locations EF of girder. See Sheet SA10.20.

DATE		REVISION
12/6/24	1	Revised Callouts

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER LINE G-2 DOWNSTREAM ELEVATION

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

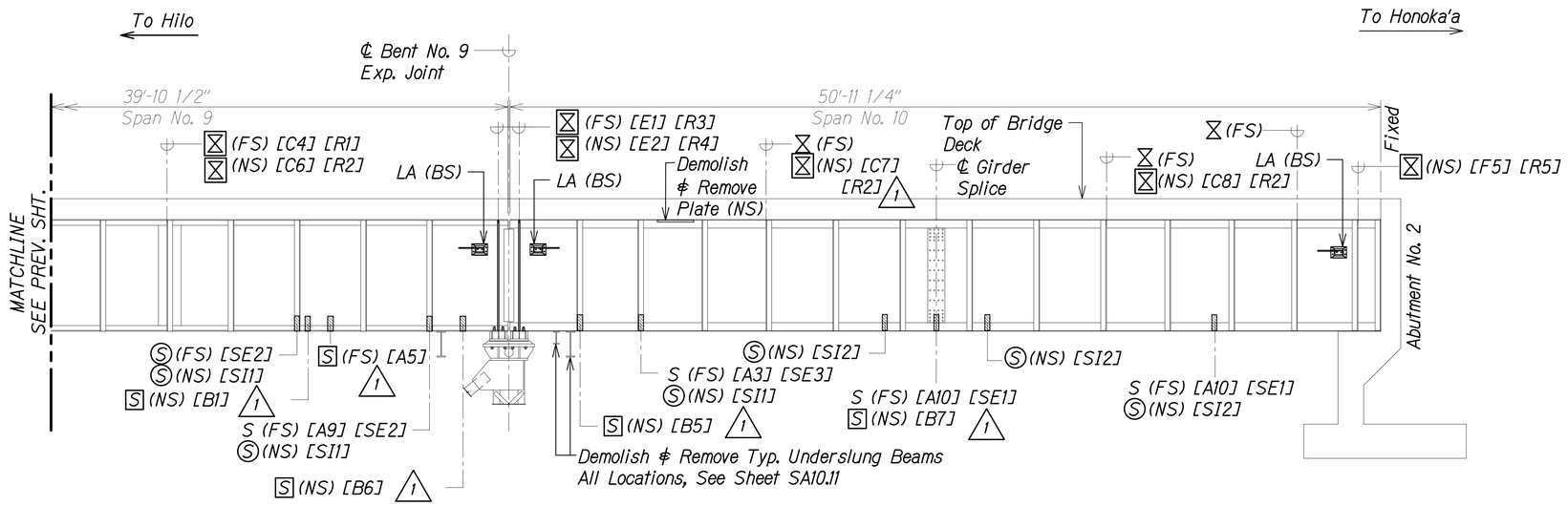
SHEET No. SA9.15 OF 23 SHEETS

ADD. 174

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

DRAWING NAME: Z:\OD\ONONCA\23-0229-NANUE STR BR PEP_EOTH.01 CAD\12-06-24 ADD\NSR-SA09.11-SA09.20 GIRDER ELEV ADD2.DWG PLOT TIME: 12-04-24, 3:27 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 175	280



GIRDER LINE G-2
DOWNSTREAM ELEVATION (A)

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

SA9.16 | SA9.16

LEGEND:

LA	Lifeline Anchor, See Sheet SA10.27	FS	Far Side
⧖	Cross Frame	NS	Near Side
BS	Both Sides	(S)	New Strut
S	Exist. Strut to be Removed and Replaced		
[S]	Exist. Strut to be Removed		
⧖	Cross Frame to be Removed and Replaced		
STF	Deformed Stiffener to be Repaired, See Structural General Note 5.AB.		
P	Plates to be Removed from Stiffener Location. Plug Weld Resulting Holes		
⊦	Exist. Angle Iron to be Removed, See Detail 1/SA10.11		
△	Exist. Ancillary Flange Tab to be Removed, See Detail 3/SA10.11		

DEMOLITION OF MEMBERS & CONNECTIONS	
MARK	REFERENCE
A3	Section C / SA10.1
A5	Section A / SA10.2
A9	Section A / SA10.3
A10	Section B / SA10.3
B1	Section A / SA10.4
B5	Section A / SA10.5
B6	Section B / SA10.5
B7	Section C / SA10.5
C4	Section D / SA10.6
C6	Section A / SA10.7

INSTALLATION OF MEMBERS & CONN.	
MARK	REFERENCE
SE1	Section A / SA10.12
SE2	Section B / SA10.12
SE3	Section C / SA10.12
SI1	Section A / SA10.13
SI2	Section B / SA10.13
R1	Section A / SA10.14
R2	Section B / SA10.14
R3	Section C / SA10.14
R4	Section D / SA10.14
R5	Section A / SA10.15

NOTES:

1. The gap between the ends of the girders at the bents is 1 1/2" according to As-Built drawings.
2. Struts are shown hatched for clarity.
3. Replace bearing stiffeners at all locations EF of girder. See Sheet SA10.20.

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

DRAWING NAME: Z:\OD ONGOING\23-072-3-HNUE_STR_BR_FED-BOTH.OT CAD\12-06-24 ADD\NSF_SA0911_SA0922 GIRDER ELEV ADD.DWG PLOT TIME: 12-04-24, 12:22 PM

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

DATE	REVISION
12/6/24	1 Revised Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER LINE G-2
DOWNSTREAM ELEVATION

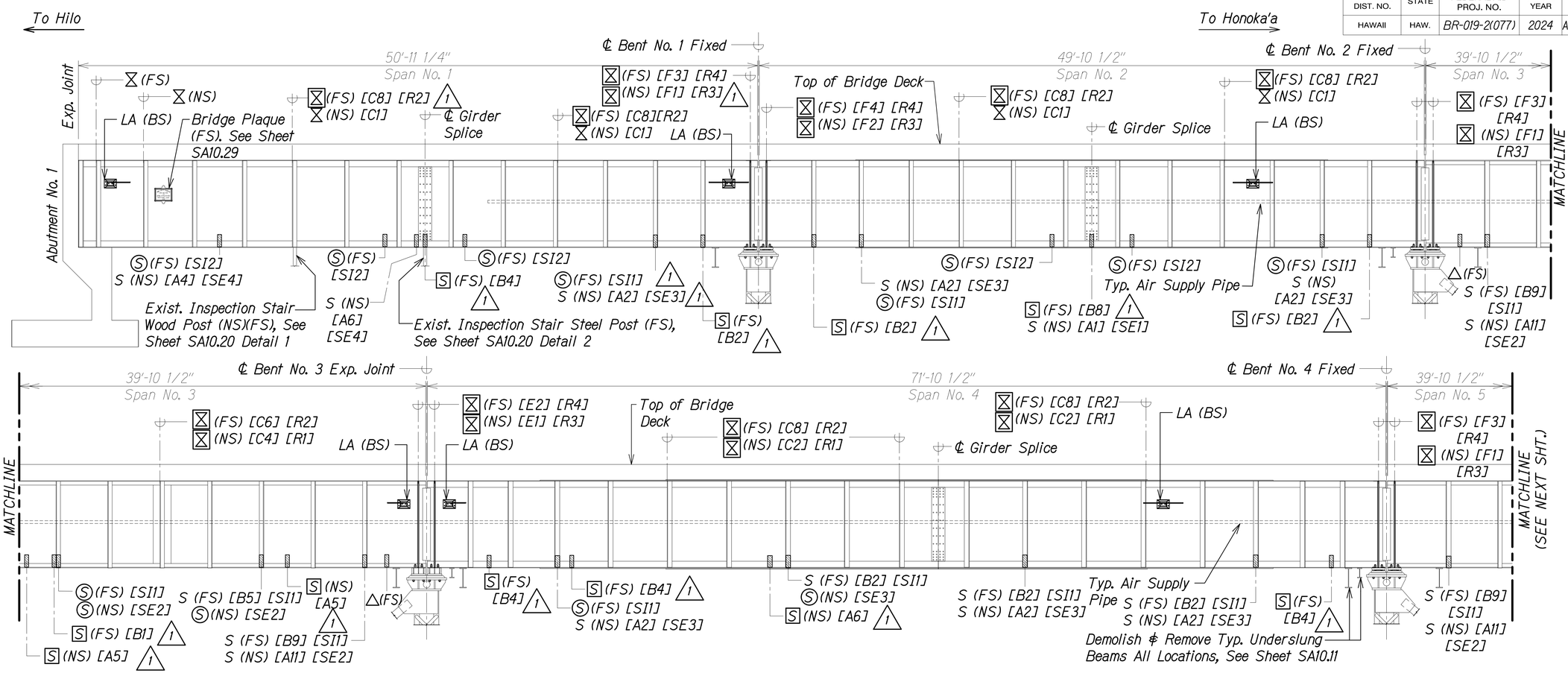
HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET No. SA9.16 OF 23 SHEETS

ADD. 175

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 176	280



GIRDER LINE G-3 DOWNSTREAM ELEVATION

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

A SA9.17 | SA9.17

LEGEND:

LA	Lifeline Anchor, See Sheet SA10.27	FS	Far Side
⧖	Cross Frame	NS	Near Side
BS	Both Sides	Ⓢ	New Strut
S	Exist. Strut to be Removed and Replaced		
[S]	Exist. Strut to be Removed		
[⧖]	Cross Frame to be Removed and Replaced		
STF	Deformed Stiffener to be Repaired, See Structural General Note 5.AB.		
P	Plates to be Removed from Stiffener Location. Plug Weld Resulting Holes		
⊥	Exist. Angle Iron to be Removed, See Detail 1/SA10.11		
△	Exist. Ancillary Flange Tab to be Removed, See Detail 3/SA10.11		

DEMOLITION OF MEMBERS & CONNECTIONS

MARK	REFERENCE	MARK	REFERENCE
A1	Section A / SA10.1	C1	Section A / SA10.6
A2	Section B / SA10.1	C2	Section B / SA10.6
A4	Section D / SA10.1	C4	Section D / SA10.6
A5	Section A / SA10.2	C6	Section A / SA10.7
A6	Section B / SA10.2	C8	Section C / SA10.7
A11	Section C / SA10.3	E1	Section A / SA10.8
B1	Section A / SA10.4	E2	Section B / SA10.8
B2	Section B / SA10.4	F1	Section A / SA10.9
B4	Section D / SA10.4	F2	Section B / SA10.9
B5	Section A / SA10.5	F3	Section C / SA10.9
B8	Section D / SA10.5	F4	Section D / SA10.9
B9	Section E / SA10.5	-	-

INSTALLATION OF MEMBERS & CONN.

MARK	REFERENCE
SE1	Section A / SA10.12
SE2	Section B / SA10.12
SE3	Section C / SA10.12
SE4	Section D / SA10.12
SI1	Section A / SA10.13
SI2	Section B / SA10.13
R1	Section A / SA10.14
R2	Section B / SA10.14
R3	Section C / SA10.14
R4	Section D / SA10.14

NOTES:

1. The gap between the ends of the girders at the bents is 1 1/2" according to As-Built drawings.
2. Struts are shown hatched for clarity.
3. Replace bearing stiffeners at all locations EF of girder. See Sheet SA10.20.

DATE		REVISION
12/6/24	1	Revised Callouts

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE 4-30-26

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER LINE G-3 DOWNSTREAM ELEVATION

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

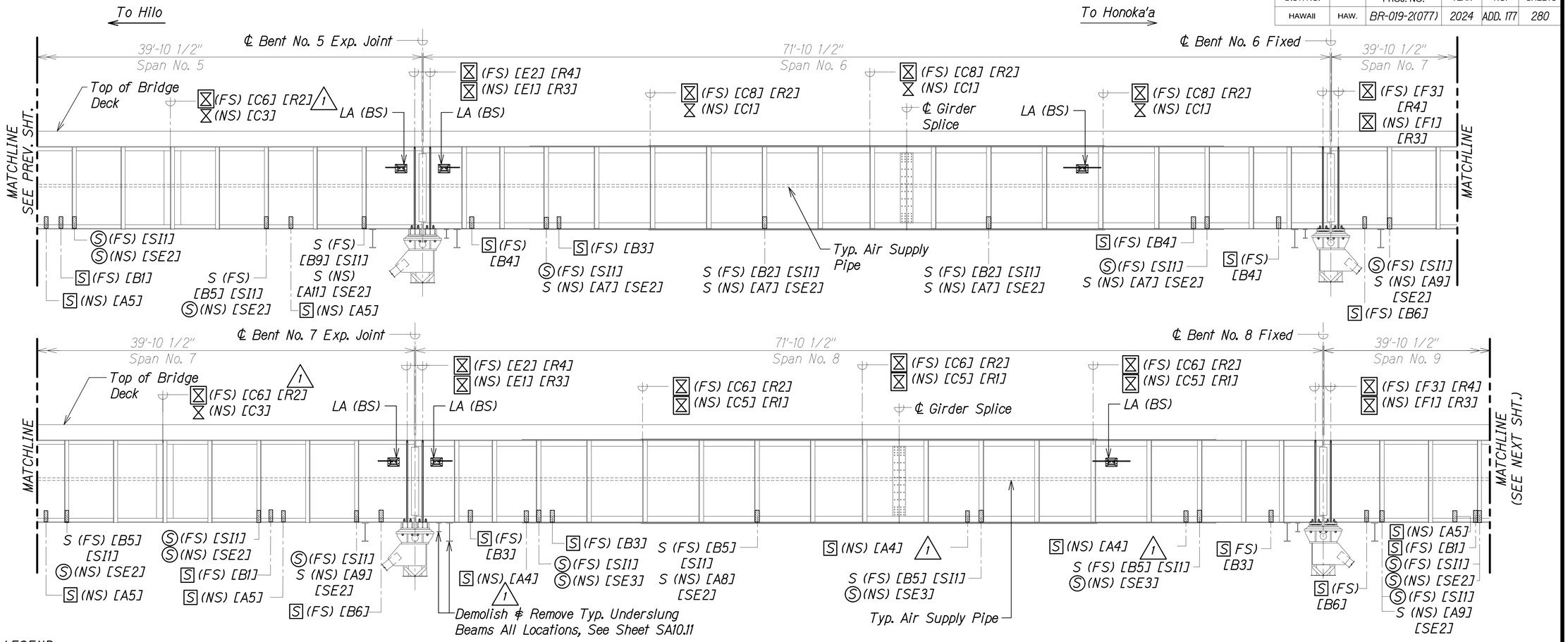
SHEET No. SA9.17 OF 23 SHEETS

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

DRAWING NAME: Z:\OD ENGINEERING\23-022\9-HANUE STR BR PEP-SOTH\01 CAD\12-06-24 ADD\NSR-SA9911-SA0922 GIRDER ELEV ADD2.DWG PLOT TIME: 12-04-24, 12:22 PM

ADD. 176

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 177	280



GIRDER LINE G-3 DOWNSTREAM ELEVATION

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

A SA9.18 | SA9.18

LEGEND:

LA	Lifeline Anchor, See Sheet SA10.27	FS	Far Side
⧖	Cross Frame	NS	Near Side
BS	Both Sides	Ⓢ	New Strut
S	Exist. Strut to be Removed and Replaced		
[S]	Exist. Strut to be Removed		
[⧖]	Cross Frame to be Removed and Replaced		
STF	Deformed Stiffener to be Repaired, See Structural General Note 5.AB.		
P	Plates to be Removed from Stiffener Location. Plug Weld Resulting Holes		
⟊	Exist. Angle Iron to be Removed, See Detail 1/SA10.11		
△	Exist. Ancillary Flange Tab to be Removed, See Detail 3/SA10.11		

DEMOLITION OF MEMBERS & CONNECTIONS

MARK	REFERENCE	MARK	REFERENCE
A4	Section D / SA10.1	B9	Section E / SA10.5
A5	Section A / SA10.2	C1	Section A / SA10.6
A7	Section C / SA10.2	C3	Section C / SA10.6
A8	Section D / SA10.2	C5	Section E / SA10.6
A9	Section A / SA10.3	C6	Section A / SA10.7
AI1	Section C / SA10.3	C8	Section C / SA10.7
B1	Section A / SA10.4	E1	Section A / SA10.8
B2	Section B / SA10.4	E2	Section B / SA10.8
B3	Section C / SA10.4	F1	Section A / SA10.9
B4	Section D / SA10.4	F3	Section C / SA10.9
B5	Section A / SA10.5	-	-
B6	Section B / SA10.5	-	-

INSTALLATION OF MEMBERS & CONN.

MARK	REFERENCE
SE2	Section B / SA10.12
SE3	Section C / SA10.12
SE4	Section D / SA10.12
SI1	Section A / SA10.13
SI2	Section B / SA10.13
R1	Section A / SA10.14
R2	Section B / SA10.14
R3	Section C / SA10.14
R4	Section D / SA10.14

NOTES:

1. The gap between the ends of the girders at the bents is 1 1/2" according to As-Built drawings.
2. Struts are shown hatched for clarity.
3. Replace bearing stiffeners at all locations EF of girder. See Sheet SA10.20.

DATE	REVISION
12/6/24	1 Revised Callouts

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER LINE G-3 DOWNSTREAM ELEVATION

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

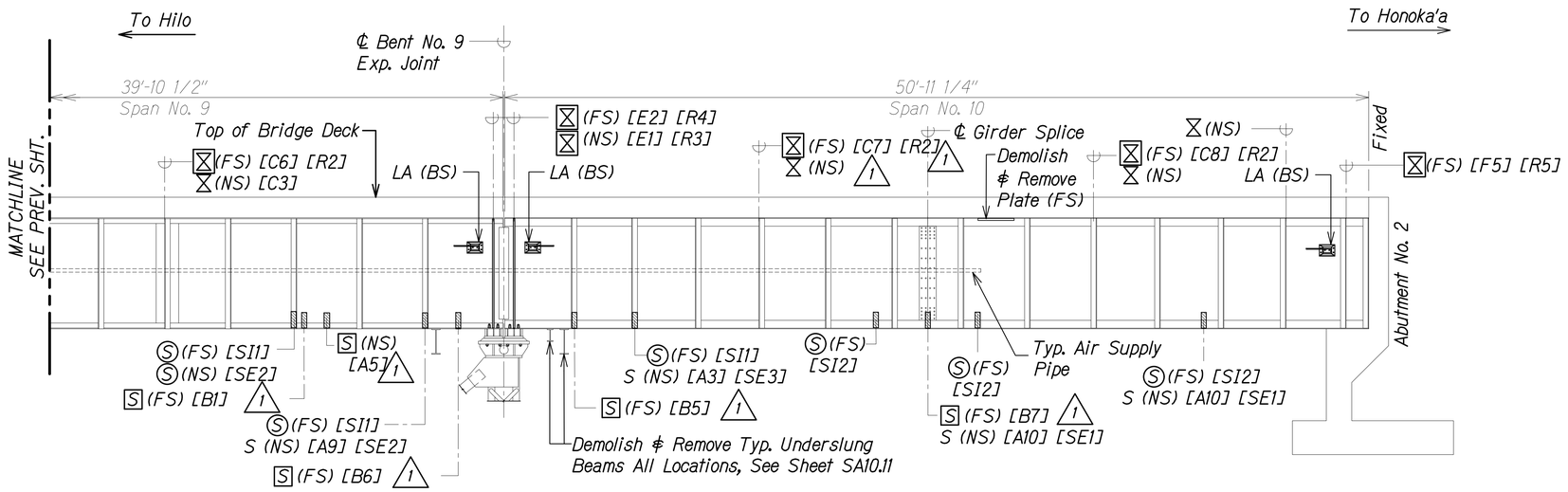
SHEET No. SA9.18 OF 23 SHEETS

ADD. 177

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

PLOT TIME: 12-04-24, 12:23 PM
DRAWING NAME: Z:\OD ONGINO\23-022\3-NANUE STR BR PE2-DOT\H01 CAD\12-06-24 ADD\NSB-SA0911-SA0920 GIRDER ELEV ADD2.DWG

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 178	280



GIRDER LINE G-3
DOWNSTREAM ELEVATION

A
SA9.19 | SA9.19

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

LEGEND:

LA	Lifeline Anchor, See Sheet SA10.27	FS	Far Side
⧖	Cross Frame	NS	Near Side
BS	Both Sides	(S)	New Strut
S	Exist. Strut to be Removed and Replaced		
[S]	Exist. Strut to be Removed		
⧖	Cross Frame to be Removed and Replaced		
STF	Deformed Stiffener to be Repaired, See Structural General Note 5.AB.		
P	Plates to be Removed from Stiffener Location. Plug Weld Resulting Holes		
⊦	Exist. Angle Iron to be Removed, See Detail 1/SA10.11		
△	Exist. Ancillary Flange Tab to be Removed, See Detail 3/SA10.11		

DEMOLITION OF MEMBERS & CONNECTIONS			
MARK	REFERENCE	MARK	REFERENCE
A3	Section C / SA10.1	C7	Section C / SA10.7
A5	Section A / SA10.2	C8	Section C / SA10.7
A9	Section A / SA10.3	E1	Section A / SA10.8
A10	Section B / SA10.3	E2	Section B / SA10.8
B1	Section A / SA10.4	F5	Section E / SA10.9
B5	Section A / SA10.5	-	-
B6	Section B / SA10.5	-	-
B7	Section C / SA10.5	-	-
C3	Section C / SA10.6	-	-
C6	Section A / SA10.7	-	-

INSTALLATION OF MEMBERS & CONN.	
MARK	REFERENCE
SE1	Section A / SA10.12
SE2	Section B / SA10.12
SE3	Section C / SA10.12
SI1	Section A / SA10.13
SI2	Section B / SA10.13
R1	Section A / SA10.14
R2	Section B / SA10.14
R3	Section C / SA10.14
R4	Section D / SA10.14
R5	Section A / SA10.15

NOTES:

1. The gap between the ends of the girders at the bents is 1 1/2" according to As-Built drawings.
2. Struts are shown hatched for clarity.
3. Replace bearing stiffeners at all locations EF of girder. See Sheet SA10.20.

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-26
SIGNATURE EXPIRATION DATE OF THE LICENSE

DATE	REVISION
12/6/24	1 Revised Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER LINE G-3
DOWNSTREAM ELEVATION

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

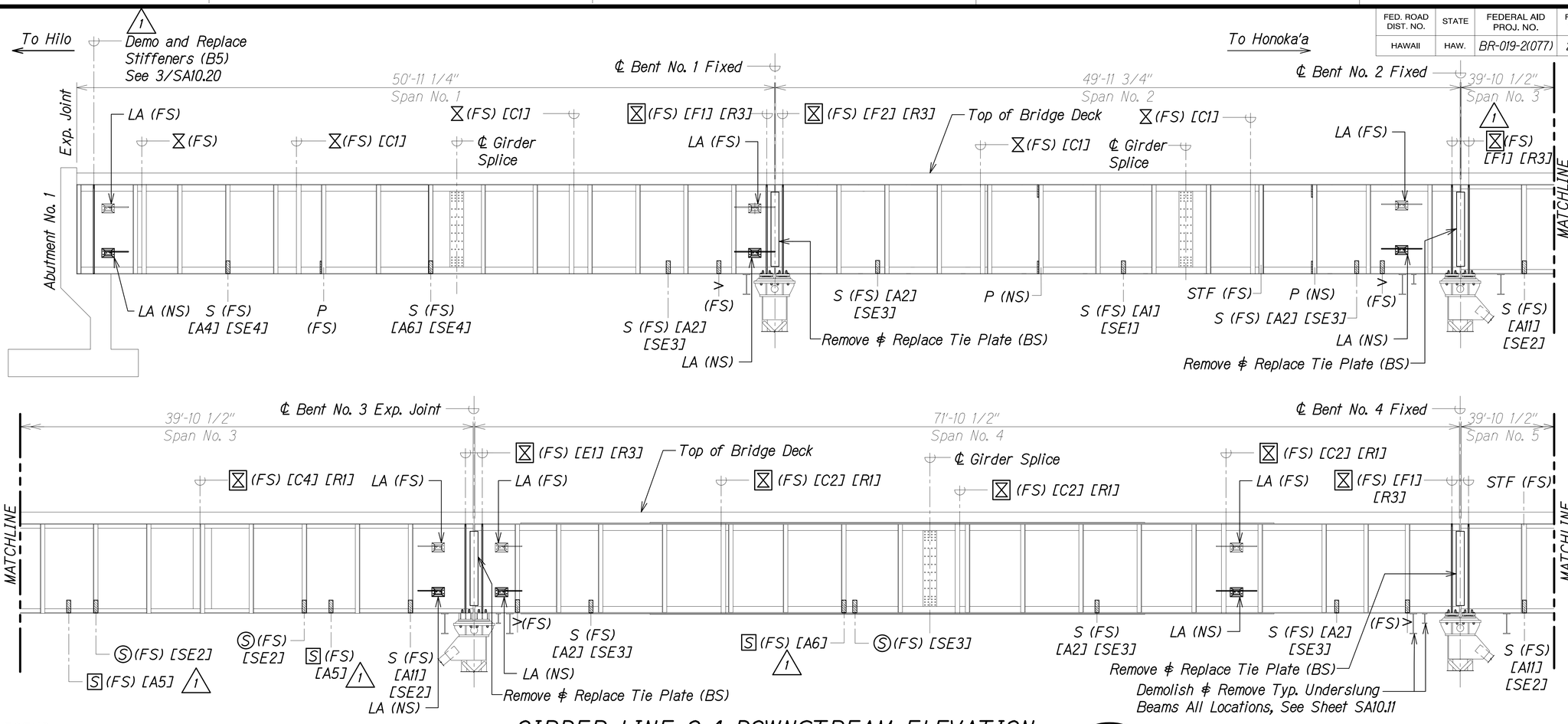
SHEET No. SA9.19 OF 23 SHEETS

ADD. 178

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

DRAWING NAME: Z:\OD ONGOING\23-072-3-NANUE STR BR REP-BOTH.OT CAD\12-06-24 ADD\NSB-SA0911-SA0922 GIRDER ELEV ADD.DWG PLOT TIME: 12-04-24, 3:28 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 179	280



GIRDER LINE G-4 DOWNSTREAM ELEVATION

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

A SA9.20 | SA9.20

LEGEND:

LA	Lifeline Anchor, See Sheet SA10.27	FS	Far Side
⧖	Cross Frame	NS	Near Side
BS	Both Sides	Ⓢ	New Strut
S	Exist. Strut to be Removed and Replaced		
[S]	Exist. Strut to be Removed		
⧖	Cross Frame to be Removed and Replaced		
STF	Deformed Stiffener to be Repaired, See Structural General Note 5.AB.		
P	Plates to be Removed from Stiffener Location. Plug Weld Resulting Holes		
⟊	Exist. Angle Iron to be Removed, See Detail 1/SA10.11		
△	Exist. Ancillary Flange Tab to be Removed, See Detail 3/SA10.11		

DEMOLITION OF MEMBERS & CONNECTIONS	
MARK	REFERENCE
A1	Section A / SA10.1
A2	Section B / SA10.1
A4	Section D / SA10.1
A5	Section A / SA10.2
A6	Section B / SA10.2
A11	Section C / SA10.3
C1	Section A / SA10.6
C2	Section B / SA10.6
C4	Section D / SA10.6
E1	Section A / SA10.8
F1	Section A / SA10.9
F2	Section B / SA10.9

INSTALLATION OF MEMBERS & CONN.	
MARK	REFERENCE
SE1	Section A / SA10.12
SE2	Section B / SA10.12
SE3	Section C / SA10.12
SE4	Section D / SA10.12
R1	Section A / SA10.14
R3	Section C / SA10.14

NOTES:

1. The gap between the ends of the girders at the bents is 1 1/2" according to As-Built drawings. See Sheets SA10.10 and SA10.25 for tie plate details.
2. Struts are shown hatched for clarity.
3. Replace bearing stiffeners at all locations EF of girder. See Sheet SA10.20.

DATE	REVISION
12/6/24	1 Revised Callouts

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

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SIGNATURE — EXPIRATION DATE OF THE LICENSE 4-30-26

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER LINE G-4 DOWNSTREAM ELEVATION

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted — Date: Oct. 2024

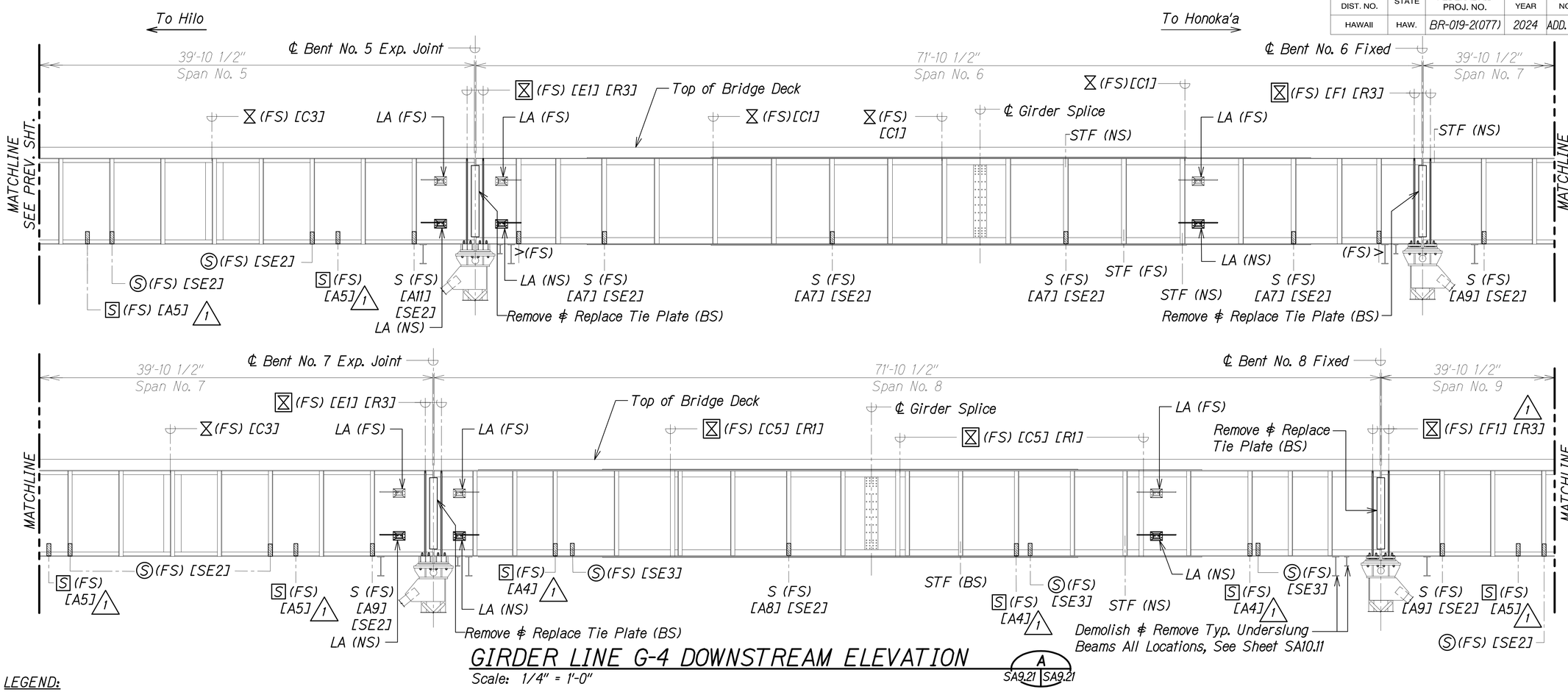
SHEET No. SA9.20 OF 23 SHEETS

ADD. 179

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

DRAWING NAME: ZA:\00 ONGOING\23-0229-NANUE STR BR PE2-DOTA\01 CAD\12-06-24 ADD\NSR-SA0911-SA0920 GIRDER ELEV ADD2.DWG PLOT TIME: 12-05-24, 2:47 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 180	280



GIRDER LINE G-4 DOWNSTREAM ELEVATION

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

A SA9.21 | SA9.21

LEGEND:

LA	Lifeline Anchor, See Sheet SA10.27	FS	Far Side
⧖	Cross Frame	NS	Near Side
BS	Both Sides	Ⓢ	New Strut
S	Exist. Strut to be Removed and Replaced		
[S]	Exist. Strut to be Removed		
[⧖]	Cross Frame to be Removed and Replaced		
STF	Deformed Stiffener to be Repaired, See Structural General Note 5.AB.		
P	Plates to be Removed from Stiffener Location. Plug Weld Resulting Holes		
⊥	Exist. Angle Iron to be Removed, See Detail 1/SA10.11		
△	Exist. Ancillary Flange Tab to be Removed, See Detail 3/SA10.11		

DEMOLITION OF MEMBERS & CONNECTIONS	
MARK	REFERENCE
A4	Section D / SA10.1
A5	Section A / SA10.2
A7	Section C / SA10.2
A8	Section D / SA10.2
A9	Section A / SA10.3
A11	Section C / SA10.3
C1	Section A / SA10.6
C3	Section C / SA10.6
C5	Section E / SA10.6
E1	Section A / SA10.8
F1	Section A / SA10.9

INSTALLATION OF MEMBERS & CONN.	
MARK	REFERENCE
SE1	Section A / SA10.12
SE2	Section B / SA10.12
SE3	Section C / SA10.12
SE4	Section D / SA10.12
R1	Section A / SA10.14
R3	Section C / SA10.14

NOTES:

1. The gap between the ends of the girders at the bents is 1 1/2" according to As-Built drawings. See Sheets SA10.10 and SA10.25 for tie plate details.
2. Struts are shown hatched for clarity.
3. Replace bearing stiffeners at all locations EF of girder. See Sheet SA10.20.

DATE	REVISION
12/6/24	1 Revised Callouts

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER LINE G-4 DOWNSTREAM ELEVATION

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

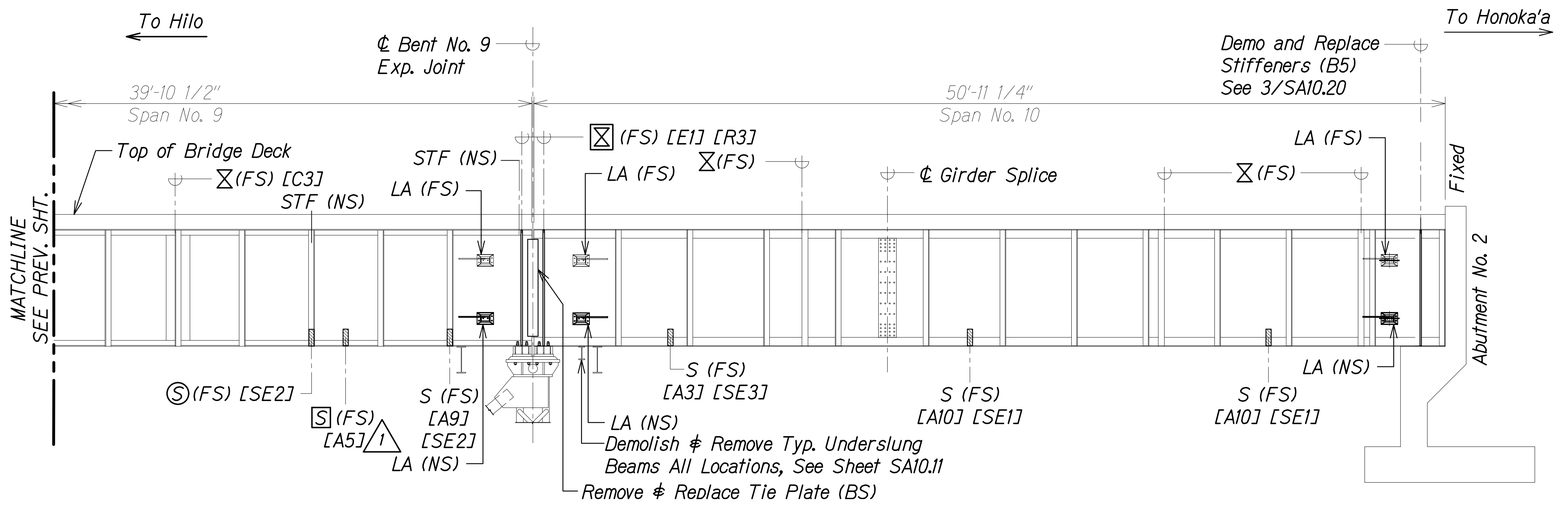
SHEET No. SA9.21 OF 23 SHEETS

ADD. 180

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

DRAWING NAME: Z:\OD\ONONOA\23-0229-NANUE STR BR PEP_EOTH.01 CADD\12-06-24 ADD2\NSR-SA0911-SA0929 GIRDER ELEV ADD2.DWG PLOT TIME: 12-04-24, 12:24 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 181	280



GIRDER LINE G-4
DOWNSTREAM ELEVATION (A)

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

SA9.22 | SA9.22

LEGEND:

LA	Lifeline Anchor, See Sheet SA10.27	FS	Far Side
⧖	Cross Frame	NS	Near Side
BS	Both Sides	Ⓢ	New Strut
S	Exist. Strut to be Removed and Replaced		
[S]	Exist. Strut to be Removed		
⧖	Cross Frame to be Removed and Replaced		
STF	Deformed Stiffener to be Repaired, See Structural General Note 5.AB.		
P	Plates to be Removed from Stiffener Location. Plug Weld Resulting Holes		
⊦	Exist. Angle Iron to be Removed, See Detail 1/SA10.11		
△	Exist. Ancillary Flange Tab to be Removed, See Detail 3/SA10.11		

DEMOLITION OF MEMBERS & CONNECTIONS	
MARK	REFERENCE
A3	Section C / SA10.1
A5	Section A / SA10.2
A9	Section A / SA10.3
A10	Section B / SA10.3
C3	Section C / SA10.6
E1	Section A / SA10.8

INSTALLATION OF MEMBERS & CONN.	
MARK	REFERENCE
SE1	Section A / SA10.12
SE2	Section B / SA10.12
SE3	Section C / SA10.12
R3	Section C / SA10.14

NOTES:

1. The gap between the ends of the girders at the bents is 1 1/2" according to As-Built drawings. See Sheets SA10.10 and SA10.25 for tie plate details.
2. Struts are shown hatched for clarity.
3. Replace bearing stiffeners at all locations EF of girder. See Sheet SA10.20.

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

DRAWING NAME: Z:\OD ONGOING\23-072-3-NANUE STR BR REP-BOTH.OT CAD\12-06-24 ADD\NSB-SA0911-SA0922 GIRDER ELEV ADD.DWG PLOT TIME: 12-05-24, 2:47 PM

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE 4-30-26

DATE	REVISION
12/6/24	1 Revised Callout

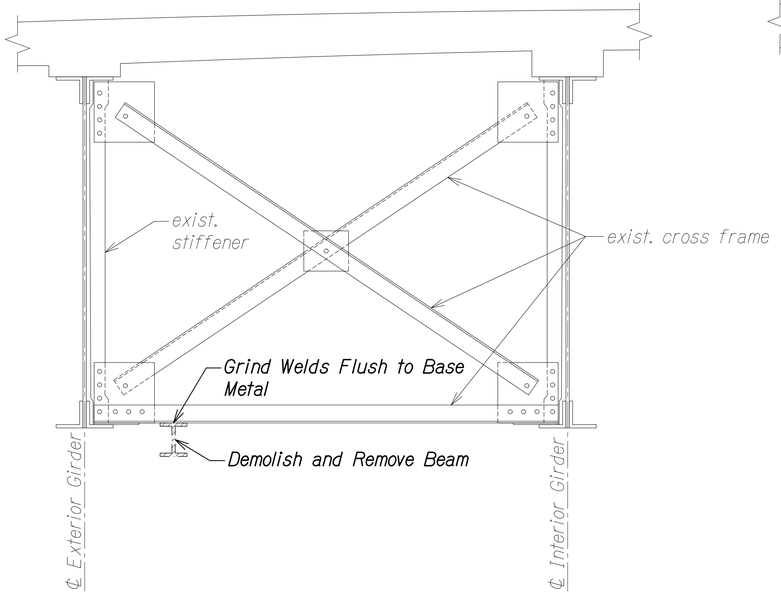
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GIRDER LINE G-4
DOWNSTREAM ELEVATION

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

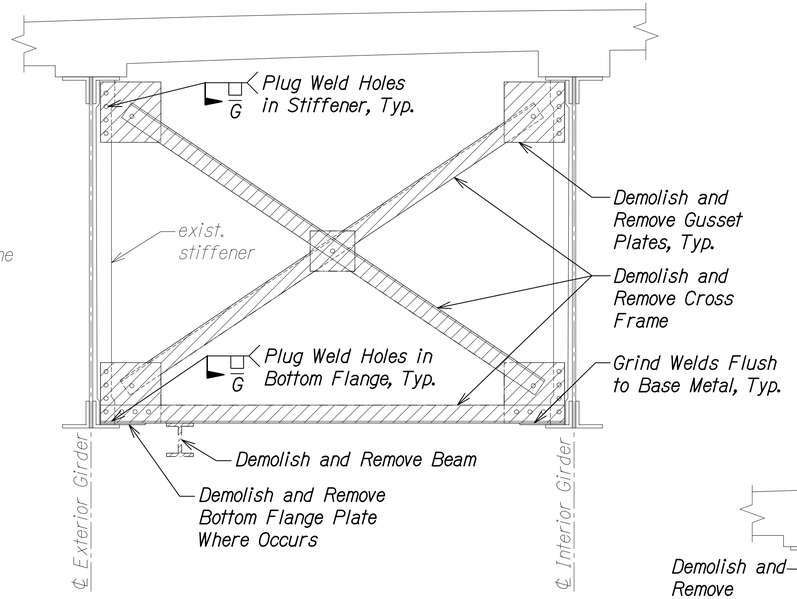
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 188	280



[C1] EXTERIOR BAY DEMO SECTION AT IN-SPAN CROSS FRAME (A)

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

SA10.6 | SA10.6



[C2] EXTERIOR BAY DEMO SECTION AT IN-SPAN CROSS FRAME (B)

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

SA10.6 | SA10.6

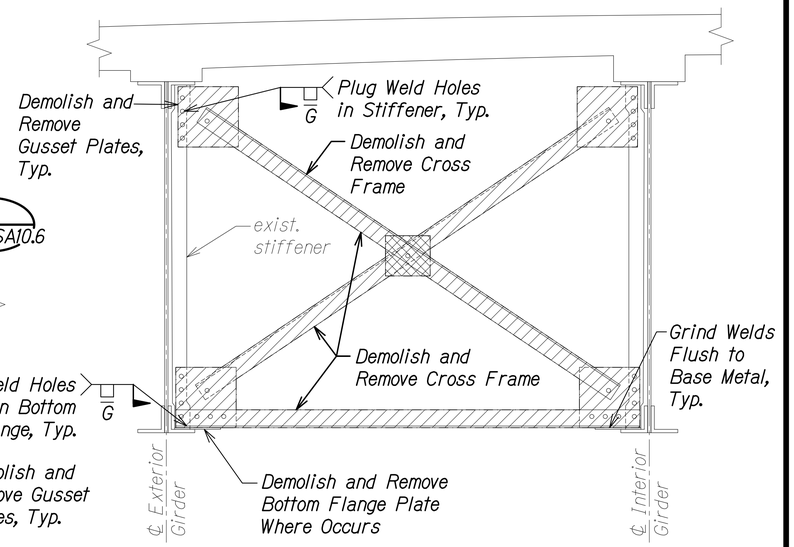
LEGEND:

Demolish and Remove

1 [XX] Cross Frame Mark, See SA9.1 through SA9.5 for locations

NOTES:

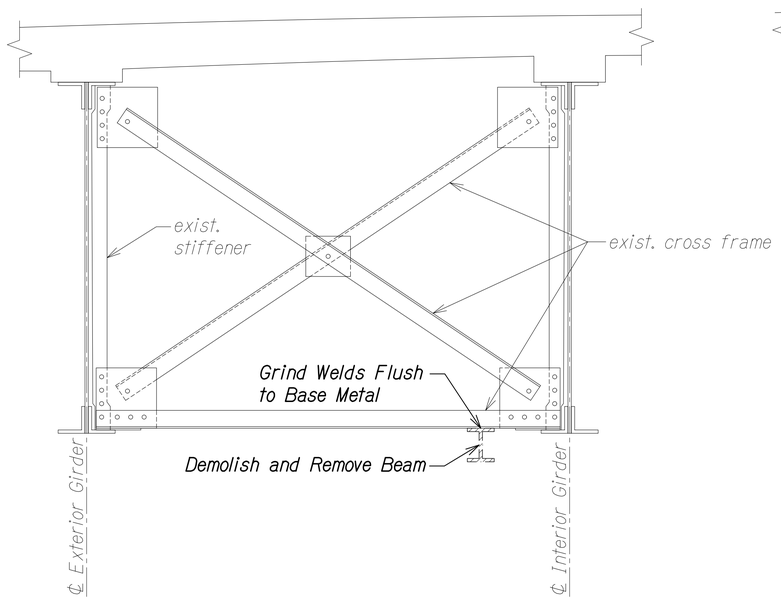
1. The Contractor shall take care when removing existing steel members so as not to damage the existing steel members to remain.
2. Remove all exist. wood board inspection planks (not shown) and deliver to HDOT maintenance yard.
3. Details beyond shown bay are not provided.
4. See Sheet SA10.11 for miscellaneous demolition details



[C5] EXTERIOR BAY DEMO SECTION AT IN-SPAN CROSS FRAME (E)

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

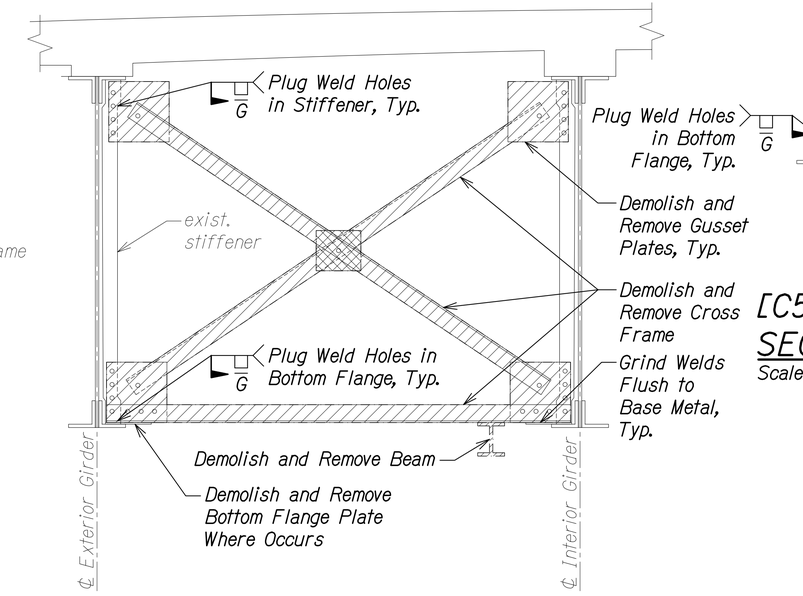
SA10.6 | SA10.6



[C3] EXTERIOR BAY DEMO SECTION AT IN-SPAN CROSS FRAME (C)

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

SA10.6 | SA10.6



[C4] EXTERIOR BAY DEMO SECTION AT IN-SPAN CROSS FRAME (D)

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

SA10.6 | SA10.6

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

DATE	REVISION
12/6/24	1 Revised Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-26

IN-SPAN CROSS FRAME DEMOLITION SECTIONS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

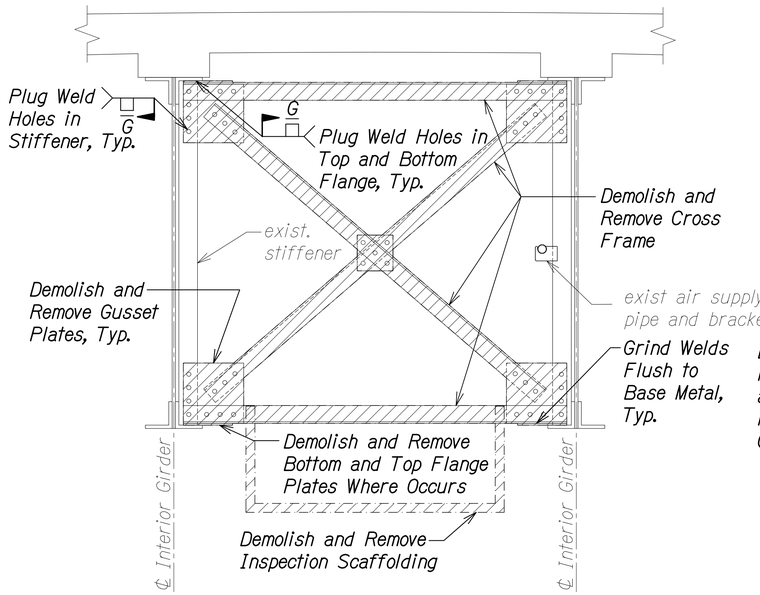
Scale: As Noted — Date: Oct. 2024

SHEET No SA10.6 OF 30 SHEETS

ADD. 188

DRAWING NAME: Z:\OD ONO\NOV\23-022-9-NANUE STR BR PEZ-DOTH\01 CAD\12-06-24 ADD\NSR-SA1001-SA1009 STRUT DEMO SECT ADD2.DWG PLOT TIME: 12-03-24, 10:32 PW

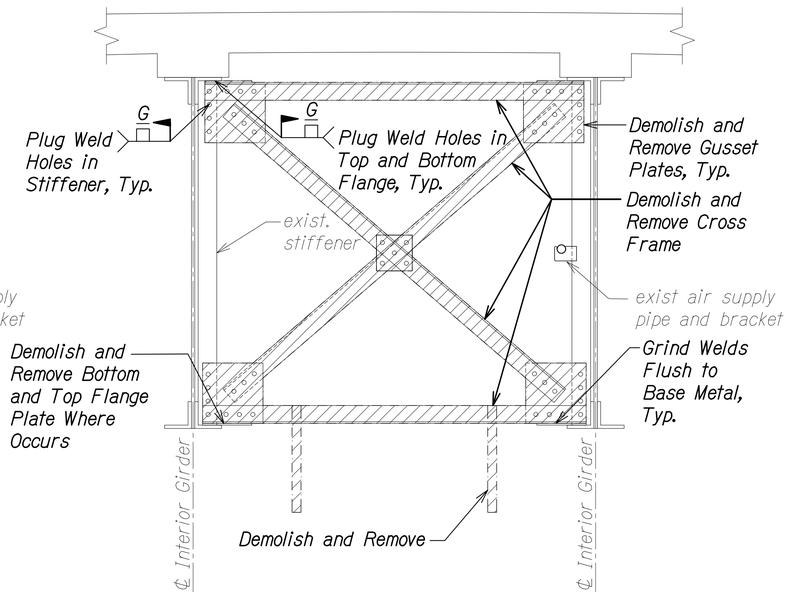
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 189	280



[C6] INTERIOR BAY DEMO
SECTION AT IN-SPAN CROSS FRAME (A)

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

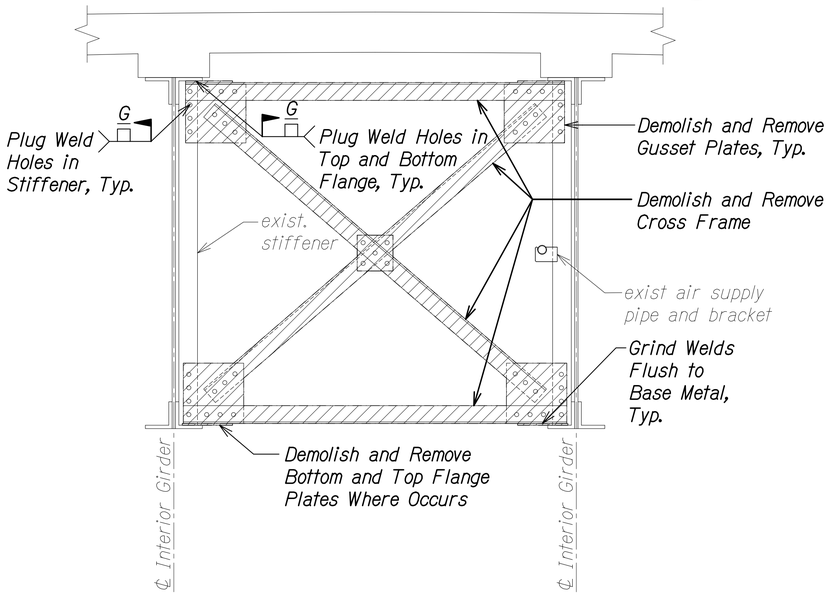
SA10.7 | SA10.7



[C7] INTERIOR BAY DEMO
SECTION AT IN-SPAN CROSS FRAME (B)

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

SA10.7 | SA10.7



[C8] INTERIOR BAY DEMO
SECTION AT IN-SPAN CROSS FRAME (C)

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

SA10.7 | SA10.7

LEGEND:

- Demolish and Remove
- 1 [XX] Cross Frame Mark, See SA9.1 through SA9.5 for locations

NOTES:

1. The Contractor shall take care when removing existing steel members so as not to damage the existing steel members to remain.
2. Remove all exist. wood board inspection planks (not shown) and deliver to HDOT maintenance yard.
3. Details beyond shown bay are not provided.
4. See Sheet SA10.11 for miscellaneous demolition details

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

DATE	REVISION
12/6/24	1 Revised Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IN-SPAN CROSS FRAME DEMOLITION SECTIONS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 190	280

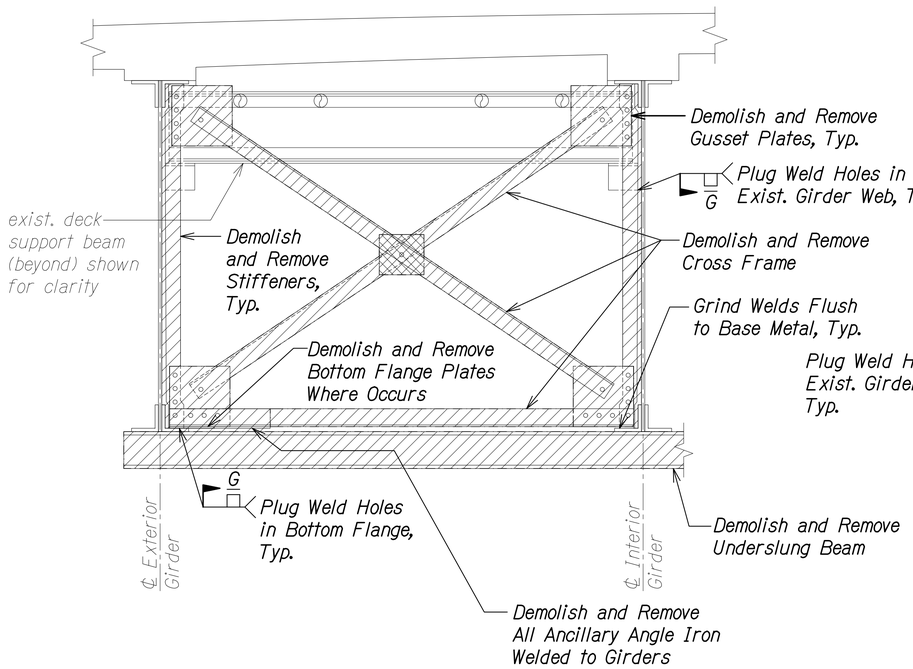
LEGEND:

Demolish and Remove

/1/ [XX] Cross Frame Mark, See SA9.1 through SA9.5 for locations

NOTES:

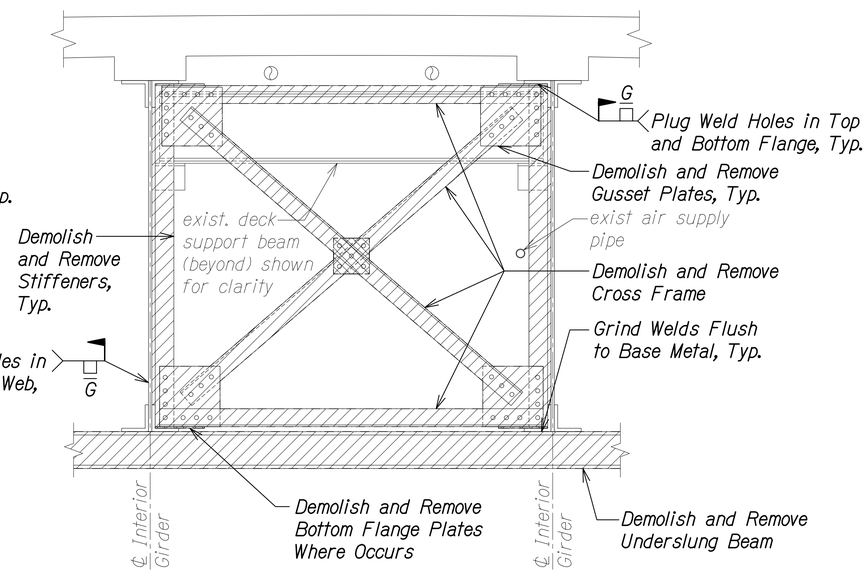
1. The Contractor shall take care when removing existing steel members so as not to damage the existing steel members to remain.
2. Remove all exist. wood board inspection planks (not shown) and deliver to HDOT maintenance yard.
3. Details beyond shown bay are not provided.
4. See Sheet SA10.11 for miscellaneous demolition details



[E1] EXTERIOR BAY DEMO SECTION AT EXPANSION BEARING

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

A SA10.8 | SA10.8



[E2] TYPICAL INTERIOR BAY DEMO SECTION AT EXPANSION BEARING

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

B SA10.8 | SA10.8

DATE	REVISION
12/6/24	/1/ Revised Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXPANSION BEARING CROSS FRAME DEMOLITION SECTIONS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

SHEET No SA10.8 OF 30 SHEETS

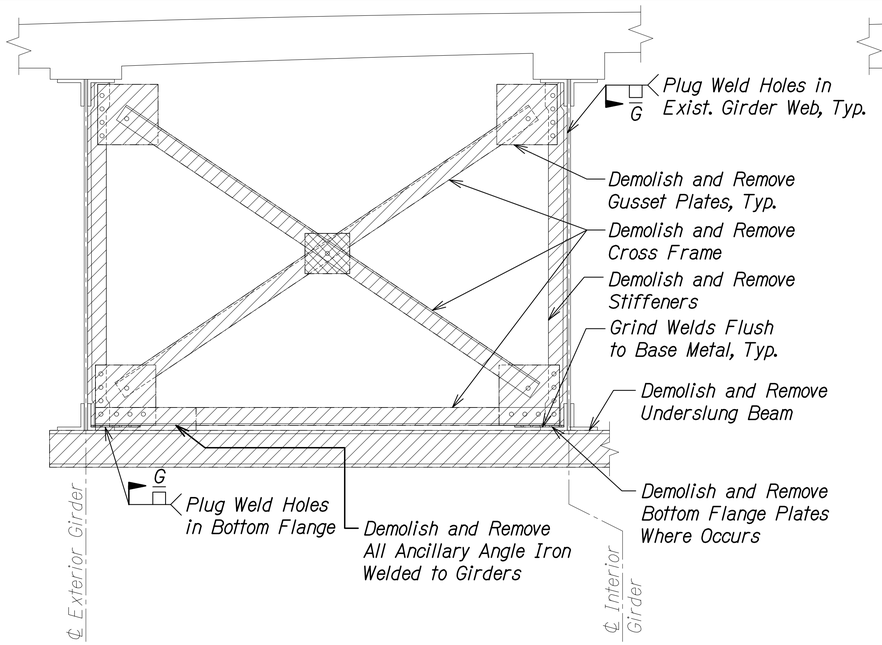
ADD. 190

ORIGINAL PLAN | NOTE BOOK | No.

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

DRAWING NAME: Z:\OD ONGONGA\23-022\3-NANUE STR BR PEZ-ROTA\01 CAD\12-06-24 ADD\NSBR-SA1001-SA1009 STRUT DEMO SECT ADD2.DWG PLOT TIME: 12-03-24, 10:33 PM

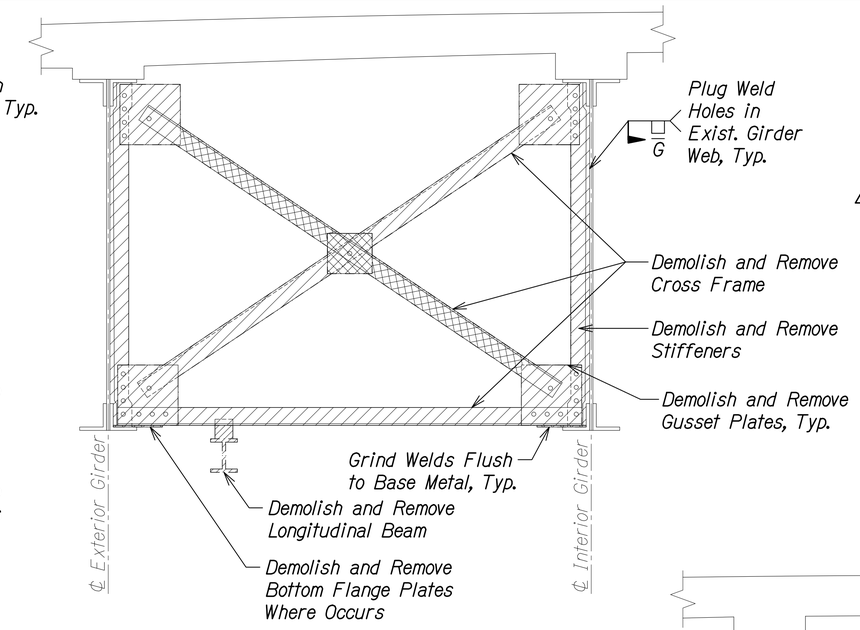
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 191	280



[F1] EXTERIOR BAY DEMO SECTION AT FIXED BEARING

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

A SA10.9 | SA10.9



[F2] EXTERIOR BAY DEMO SECTION AT FIXED BEARING

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

B SA10.9 | SA10.9

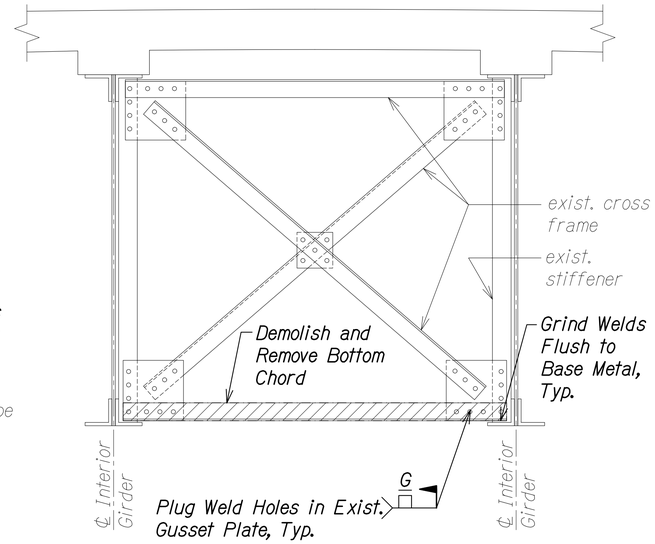
LEGEND:

Demolish and Remove

[XX] Cross Frame Mark, See SA9.1 through SA9.5 for locations

NOTES:

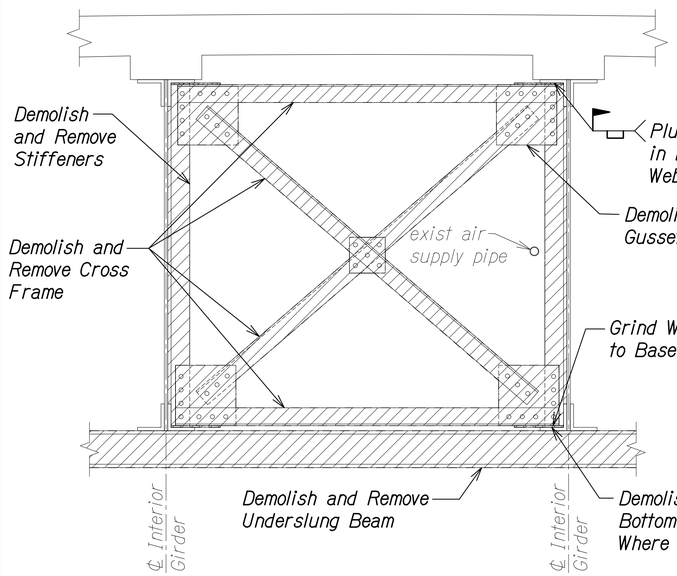
1. The Contractor shall take care when removing existing steel members so as not to damage the existing steel members to remain.
2. Remove all exist. wood board inspection planks (not shown) and deliver to HDOT maintenance yard.
3. Details beyond shown bay are not provided.
4. See Sheet SA10.11 for miscellaneous demolition details.



[F5] INTERIOR BAY DEMO SECTION AT FIXED ABUTMENT

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

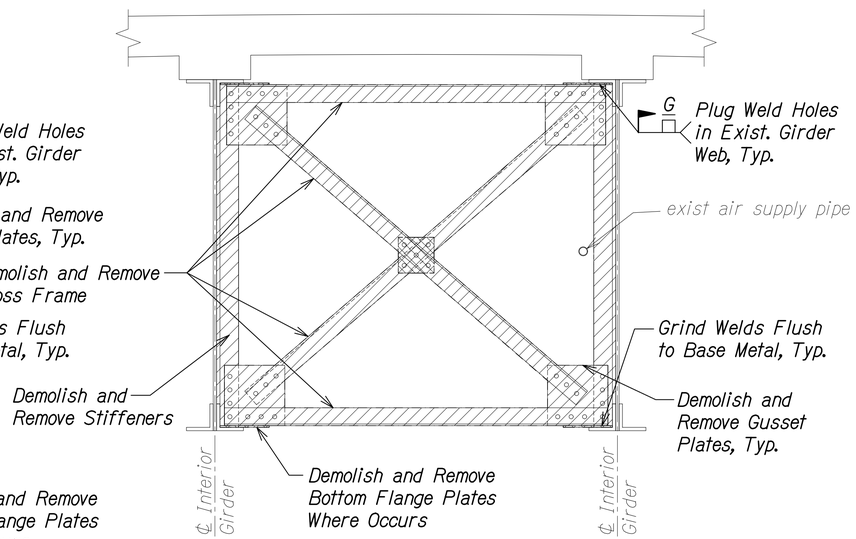
E SA10.9 | SA10.9



[F3] INTERIOR BAY DEMO SECTION AT FIXED BEARING

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

C SA10.9 | SA10.9



[F4] INTERIOR BAY DEMO SECTION AT FIXED BEARING

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

D SA10.9 | SA10.9

DATE	REVISION
12/6/24	1 Revised Note

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-26

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FIXED BEARING CROSS FRAME DEMOLITION SECTIONS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

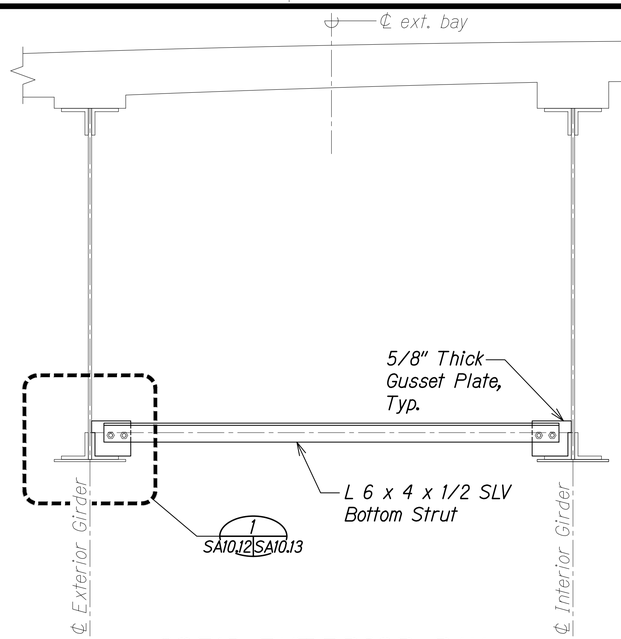
SHEET No SA10.9 OF 30 SHEETS

ADD. 191

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

DRAWING NAME: Z:\OD ONGINCA\23-0229-NANUE STR BR PE2-20TNA01 CAD\12-06-24 ADD\NSR-SA1001-SA1009 STRUT DEMO SECT ADD2.DWG PLOT TIME: 12-03-24, 10:34 PM

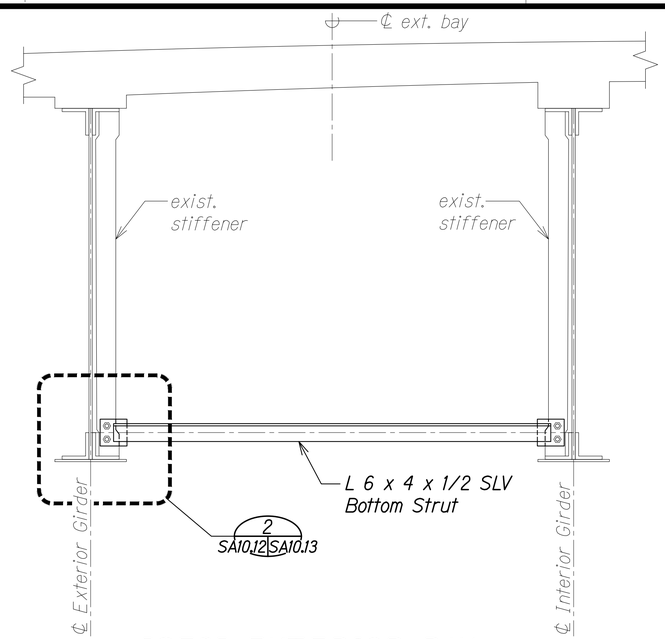
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 194	280



[SE1] EXTERIOR BAY STRUT SECTION

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

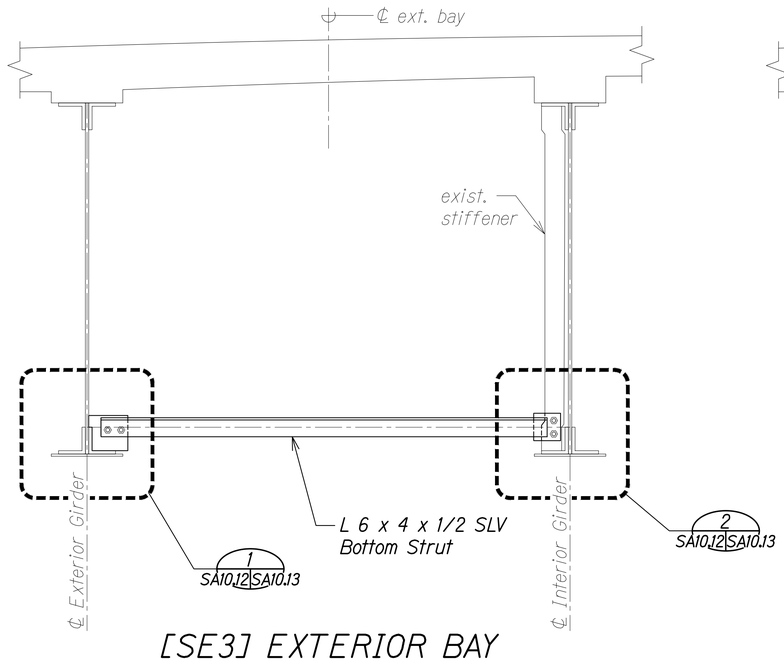
A
SA10.12 SA10.12



[SE2] EXTERIOR BAY STRUT SECTION

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

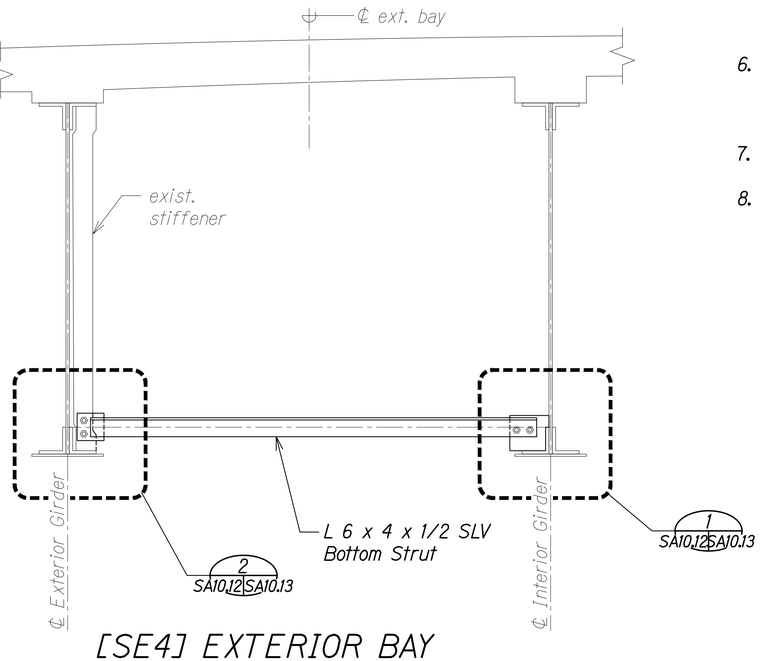
B
SA10.12 SA10.12



[SE3] EXTERIOR BAY STRUT SECTION

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

C
SA10.12 SA10.12



[SE4] EXTERIOR BAY STRUT SECTION

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

D
SA10.12 SA10.12

LEGEND:

[XXX] Strut Mark, See SA9.6 through SA9.10 for locations

NOTES:

1. The Contractor shall field fit strut members and gussets prior to welding and galvanizing assemblies.
2. New gussets welded directly to exist. plate girders shall be provided ungalvanized. Field drill standard size holes in exist. girder stiffeners and new welded gusset plates to match bolt pattern in new strut assembly.
3. Strut assemblies shall be delivered to the site fully assembled, hot-dip zinc galvanized per ASTM A123 and shop painted with primer, seal, stripe coat, and intermediate in accordance with Section 667 - PREPARATION AND COATING OF GALVANIZED BRIDGE STEEL of the Special Provisions. 1
4. Just prior to installation of strut assemblies, the immediate surrounding faying surfaces of existing girder web, flange, and stiffeners as well as new welded gusset plates shall be cleaned in accordance with SSPC-SP 10 or SSPC-SP 11 and painted, by brush, with two coats of the specified primer.
5. Perform final abrasive blast cleaning to all girders, stiffeners, etc. Strut assemblies shall be sufficiently shielded from damage during blasting operation and masked from overspray during primer application. 1
6. Strut assemblies shall receive field applied top coat in accordance with Section 666 - BLAST, CLEAN, AND PAINT EXISTING BRIDGE STEEL of the Special Provisions.
7. Details from adjacent bays not shown for clarity.
8. See Sheet SA9.23 for required sequence regarding strut replacement and corresponding traffic control requirements.

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

DRAWING NAME: ZA100 ONGOING\23-0229-NANUE STR BR PE2-DOTA\01 CAD\12-06-24 ADD\NSR-SA1012-SA1024 STRUT X-RNG ADD2.DWG PLOT TIME: 12-03-24, 10:39

DATE	REVISION
12/6/24	1 Revised Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXTERIOR BAY STRUT SECTIONS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

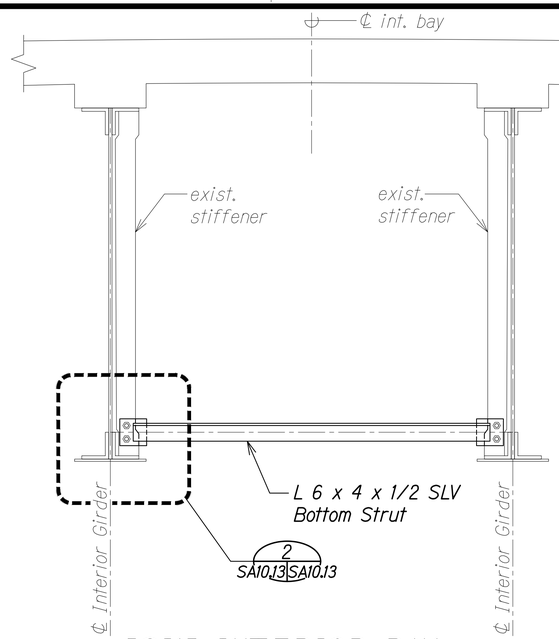
Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE EXPIRATION DATE OF THE LICENSE 4-30-26

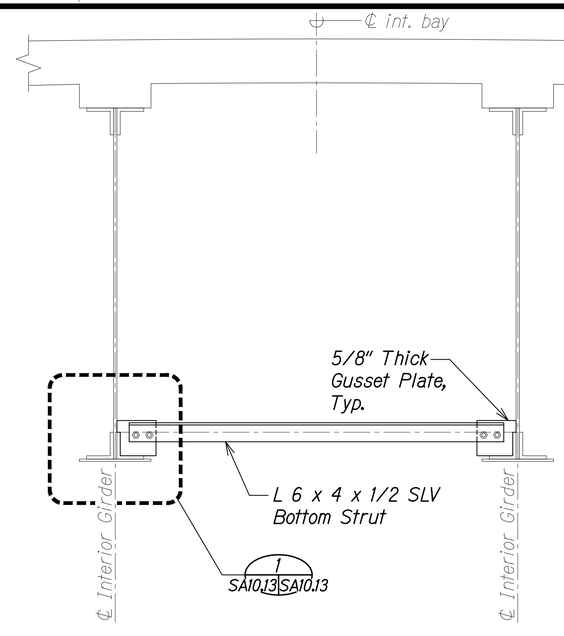
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 195	280



[SI1] INTERIOR BAY STRUT SECTION

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

A SA10.13 | SA10.13



[SI2] INTERIOR BAY STRUT SECTION

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

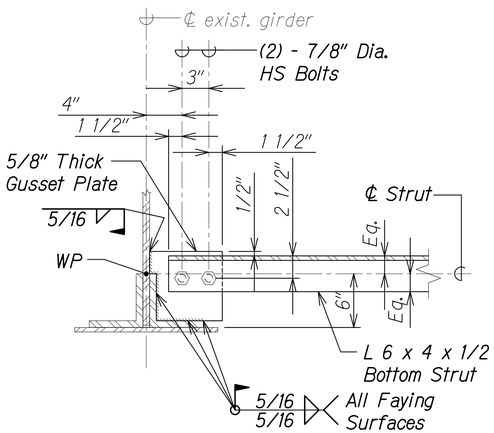
B SA10.13 | SA10.13

LEGEND:

[XXX] Strut Mark, See SA9.6 through SA9.10 for locations

NOTES:

1. The Contractor shall field fit strut members and gussets prior to welding and galvanizing assemblies.
2. New gussets welded directly to exist. plate girders shall be provided ungalvanized. Field drill standard size holes in exist. girder stiffeners and new welded gusset plates to match bolt pattern in new strut assembly.
3. Strut assemblies shall be delivered to the site fully assembled, hot-dip zinc galvanized per ASTM A123 and shop painted with primer, seal coat, stripe coat, and intermediate in accordance with Section 667 - PREPARATION AND COATING OF GALVANIZED BRIDGE STEEL of the Special Provisions. △1
4. Just prior to installation of strut assemblies, the immediate surrounding faying surfaces of existing girder web, flange, and stiffeners as well as new welded gusset plates shall be cleaned in accordance with SSPC-SP 10 or SSPC-SP 11 and painted, by brush, with two coats of the specified primer.
5. Perform final abrasive blast cleaning to all girders, stiffeners, etc. Strut assemblies shall be sufficiently shielded from damage during blasting operation and masked from overspray during primer application. △1
6. Strut assemblies shall receive field applied top coat in accordance with Section 666 - BLAST, CLEAN, AND PAINT EXISTING BRIDGE STEEL of the Special Provisions.
7. Details from adjacent bays not shown for clarity.
8. See Sheet SA9.23 for required sequence regarding strut replacement and corresponding traffic control requirements.

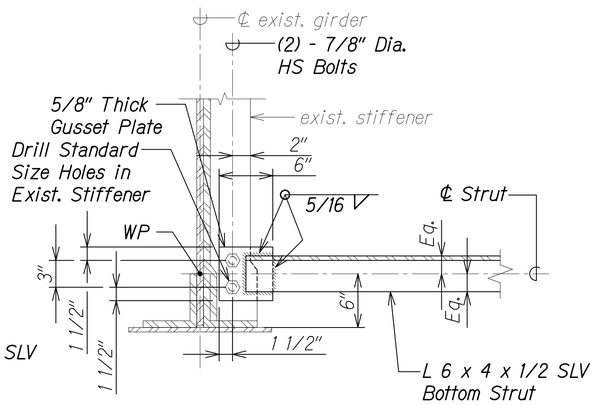


DETAIL

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

1 SA10.12 | SA10.13

SA10.13

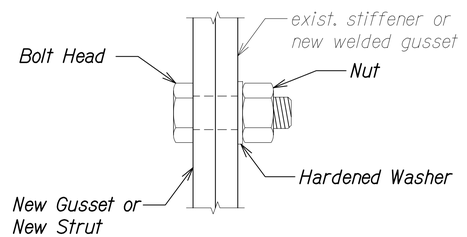


DETAIL

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

2 SA10.12 | SA10.13

SA10.13



BOLT CONNECTION DETAIL

Scale: 6" = 1'-0"

3 SA10.13 | SA10.13

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

DATE	REVISION
12/6/24	△1 Revised Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

INTERIOR BAY STRUT SECTIONS AND DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

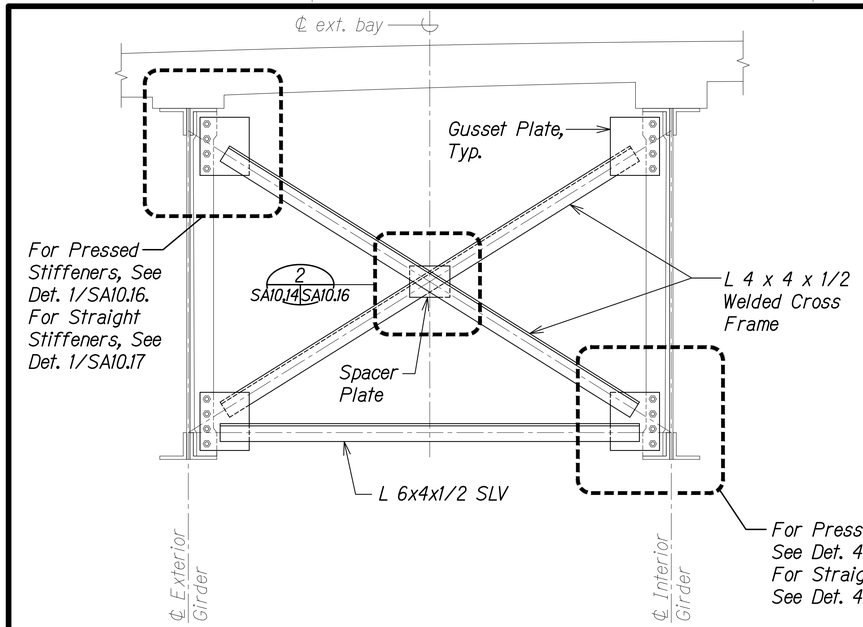
SHEET NO SA10.13 OF 30 SHEETS

ADD. 195

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

DRAWING NAME: Z:\OD\ONGINO\23-0229-NANUE STR BR PEP_EOTH\01 CAD\12-06-24 ADD\NSR-SA1012-SA1024 STRUT X-FING ADD2.DWG PLOT TIME: 12-03-24 8:57 PM)

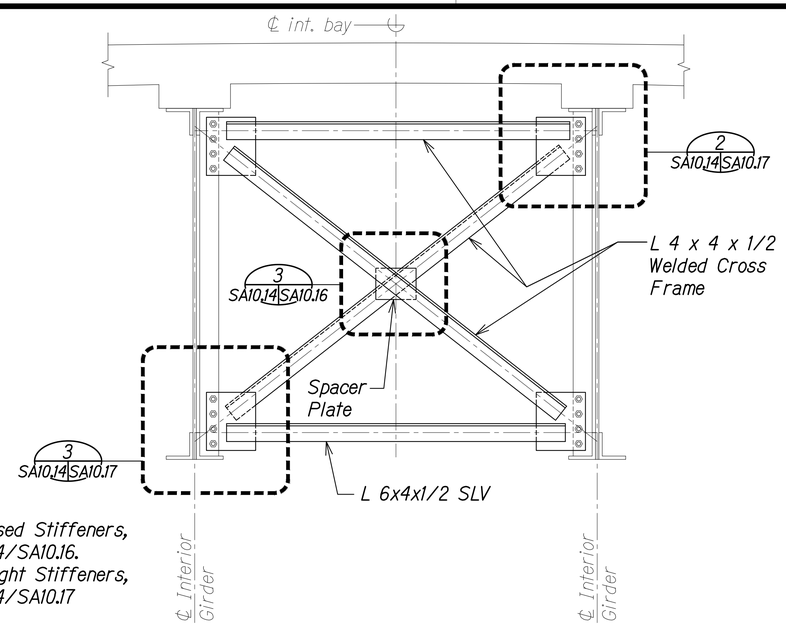
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 196	280



[R1] EXTERIOR BAY SECTION AT IN-SPAN CROSS FRAME

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

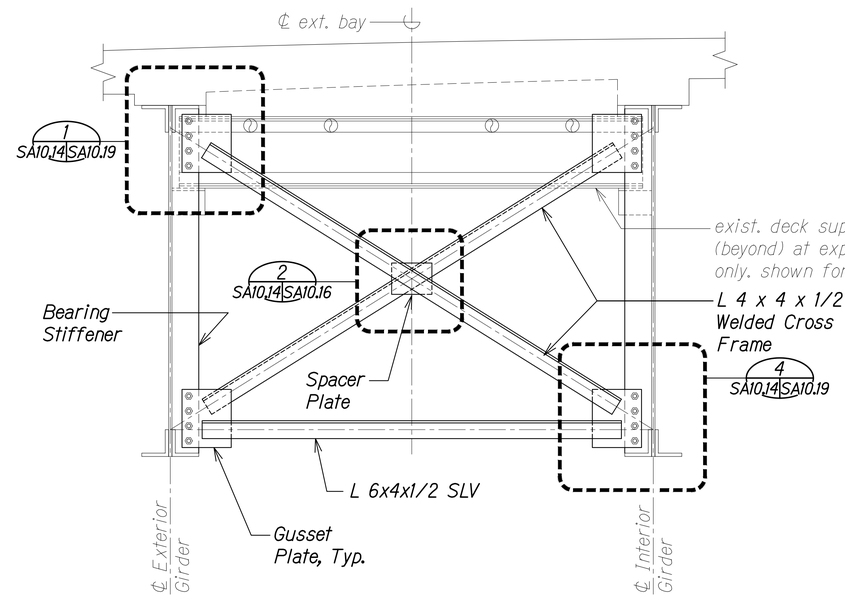
A SA10.14 SA10.14



[R2] INTERIOR BAY SECTION AT IN-SPAN CROSS FRAME

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

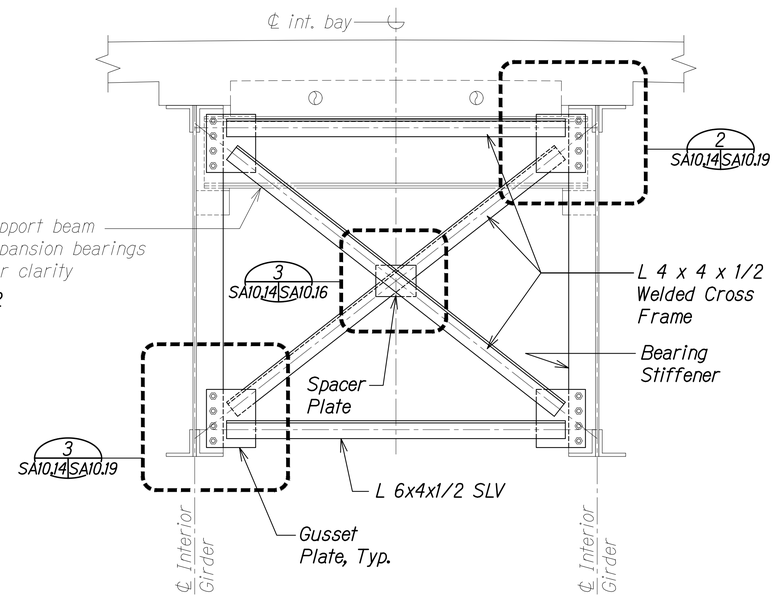
B SA10.14 SA10.14



[R3] EXTERIOR BAY SECTION AT FIXED & EXPANSION BEARING CROSS FRAMES

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

C SA10.14 SA10.14



[R4] INTERIOR BAY SECTION AT FIXED & EXPANSION BEARING CROSS FRAMES

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

D SA10.14 SA10.14

LEGEND:

[XXX] 1 *Cross Frame Mark, See SA9.6 through SA9.10 for locations*

NOTES:

1. *The Contractor shall field fit frame members and gussets prior to welding and galvanizing assemblies.*
2. *New girder stiffeners shall be provided ungalvanized and field welded to existing plate girders. Field drill standard size holes in existing/new girder stiffeners to match bolt pattern in new cross frame assembly.*
3. *Existing stiffeners at in-span cross frames shall remain. Existing bearing stiffeners at fixed and expansion bearing cross frames shall be replaced. See Sheet SA10.20 for stiffener replacement details.*
4. *Cross frame assemblies shall be delivered to the site fully assembled, hot-dip zinc galvanized per ASTM A123, and shop painted with primer, seal coat, stripe coat, and intermediate in accordance with Section 667 - PREPARATION AND COATING OF GALVANIZED BRIDGE STEEL of the Special Provisions.* 1
5. *Just prior to installation of cross frame assemblies, the immediate surrounding faying surfaces of existing/new girder stiffeners shall be cleaned in accordance with SSPC-SP 10 or SSPC-SP 11 and painted, by brush, with two coats of the specified primer.*
6. *Perform final abrasive blast cleaning to all girders, stiffeners, etc. Cross frame assemblies shall be sufficiently shielded from damage during blasting operation and masked from overspray during primer application.* 1
7. *Cross frame assemblies shall receive field applied top coat in accordance with Section 666 - BLAST, CLEAN, AND PAINT EXISTING BRIDGE STEEL of the Special Provisions.*
8. *Details from adjacent bays not shown for clarity.*
9. *See Sheet SA9.23 for required sequence regarding cross frame replacement and corresponding traffic control requirements.*

DATE	REVISION
12/6/24	1 Revised Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

IN-SPAN, ELEVATION, AND FIXED BEARING CROSS FRAME SECTIONS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE EXPIRATION DATE OF THE LICENSE 4-30-26

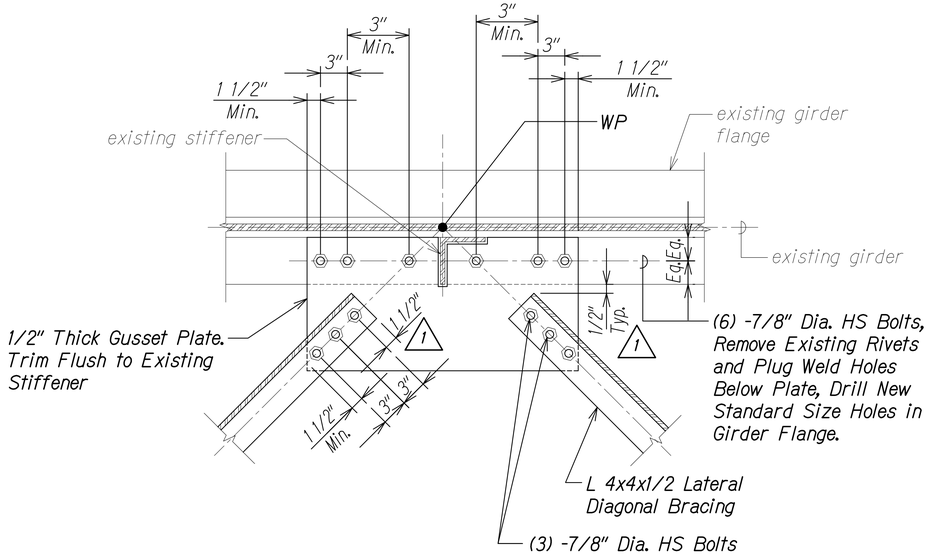
SHEET NO SA10.14 OF 30 SHEETS

ADD. 196

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

DRAWING NAME: Z:\OD ENGINO\23-022\3-NANUE STR BR PE\2-00\TH\01 CAD\12-06-24 ADD\NSR-SA1012-SA1024 STRUT X-FRMG ADD2.DWG PLOT TIME: 12-03-24 8:58 PM

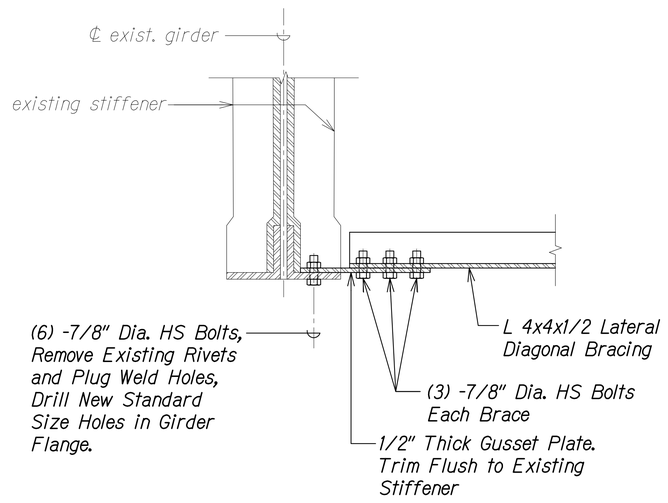
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 203	280



PLAN AT EXISTING WEB STIFFENER (A)

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

SA10.21 | SA10.21



SECTION AT EXISTING WEB STIFFENER (B)

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

SA10.21 | SA10.21

NOTES:

1. The Contractor shall field fit lateral diagonal bracing and gussets prior to galvanizing. Predrill holes in the field, including those through the bottom flange of the girder.
2. Lateral diagonal bracing and gussets shall be delivered to the site hot-dip zinc galvanized per ASTM A123, and shop painted with the complete coating system in accordance with Special Provisions Section 667-PREPARATION AND COATING OF GALVANIZED BRIDGE STEEL.
3. Install lateral diagonal bracing and gussets following completion of painting in Bay 2. Touch up paint ends of bolts, nuts and washers. Payment for work under Pay Item 667.3000 does not apply.

△1

INTERIOR BAY LATERAL DIAGONAL BRACING DETAILS

△1 △1

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

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE 4-30-26

DATE	REVISION
12/6/24	△1 Removed Details "C" & "D" Revised Notes and Added/ Revised Dimensions

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LATERAL DIAGONAL BRACING DETAILS

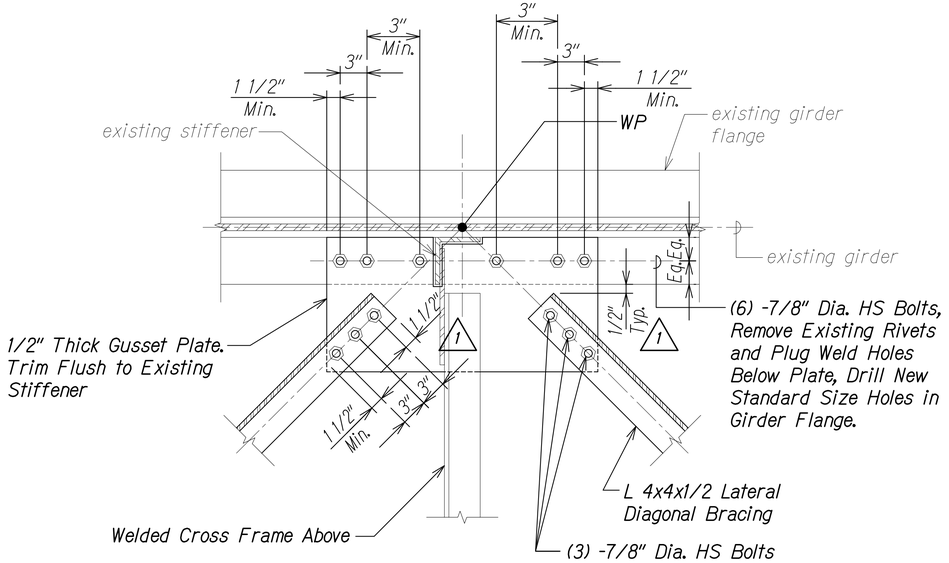
HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET NO SA10.21 OF 30 SHEETS

ADD. 203

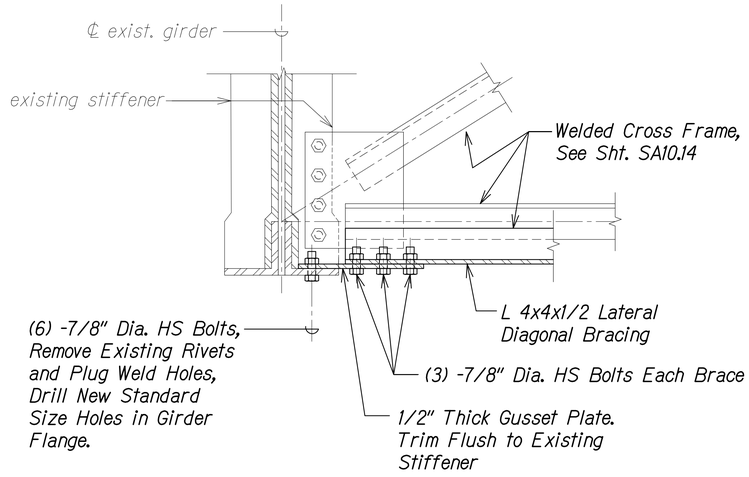
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 204	280



PLAN AT CROSS FRAME (A)

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

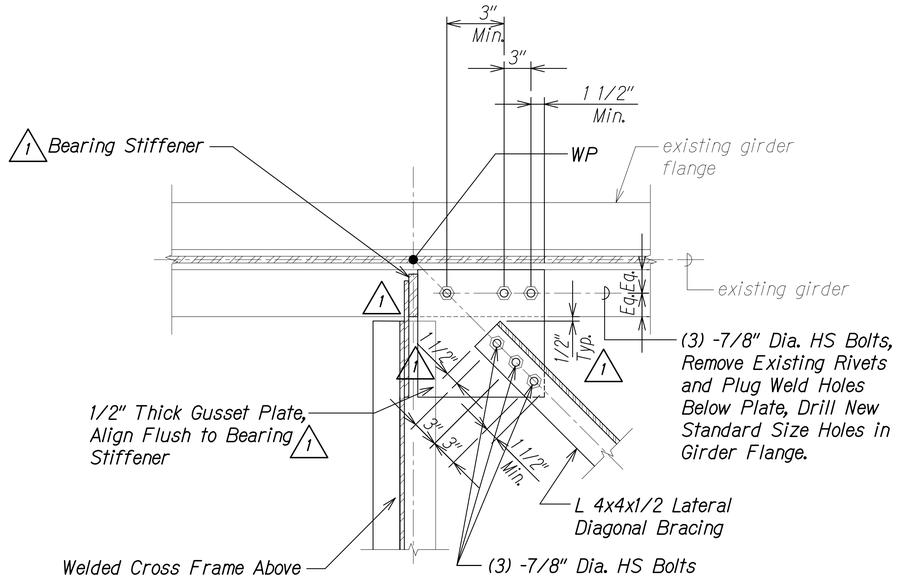
SA10.22 | SA10.22



SECTION AT CROSS FRAME (B)

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

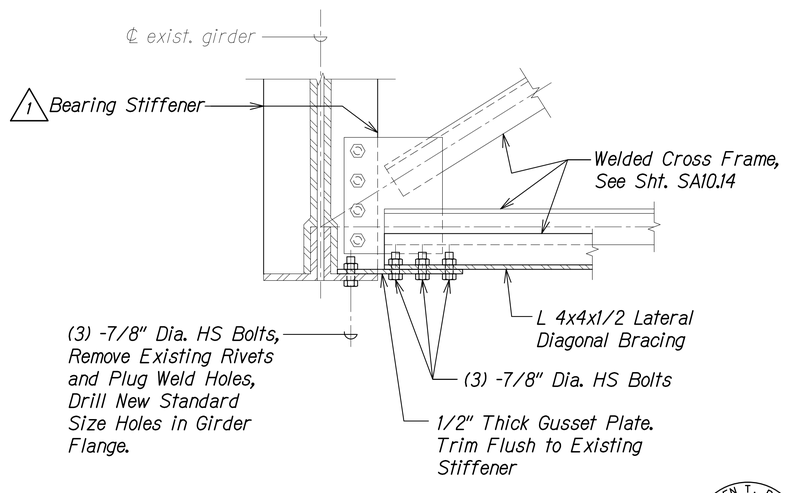
SA10.22 | SA10.22



PLAN AT BEARING CROSS FRAME (C)

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

SA10.22 | SA10.22



SECTION AT BEARING CROSS FRAME (D)

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

SA10.22 | SA10.22

NOTES:

1. The Contractor shall field fit lateral diagonal bracing and gussets prior to galvanizing. Predrill holes in the field, including those through the bottom flange of the girder.
2. Lateral diagonal bracing and gussets shall be delivered to the site hot-dip zinc galvanized per ASTM A123, and shop painted with the complete coating system in accordance with Special Provisions Section 667-PREPARATION AND COATING OF GALVANIZED BRIDGE STEEL.
3. Install lateral diagonal bracing and gussets following completion of painting in Bay 2. Touch up paint ends of bolts, nuts and washers. Payment for work under Pay Item 667.3000 does not apply.

1 Payment for work under Pay Item 667.3000 does not apply.

INTERIOR BAY LATERAL DIAGONAL BRACING DETAILS

DATE	REVISION
12/6/24	1 Revised Details Revised Notes and Added/ Revised Dimensions

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LATERAL DIAGONAL BRACING DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-26 EXPIRATION DATE OF THE LICENSE

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

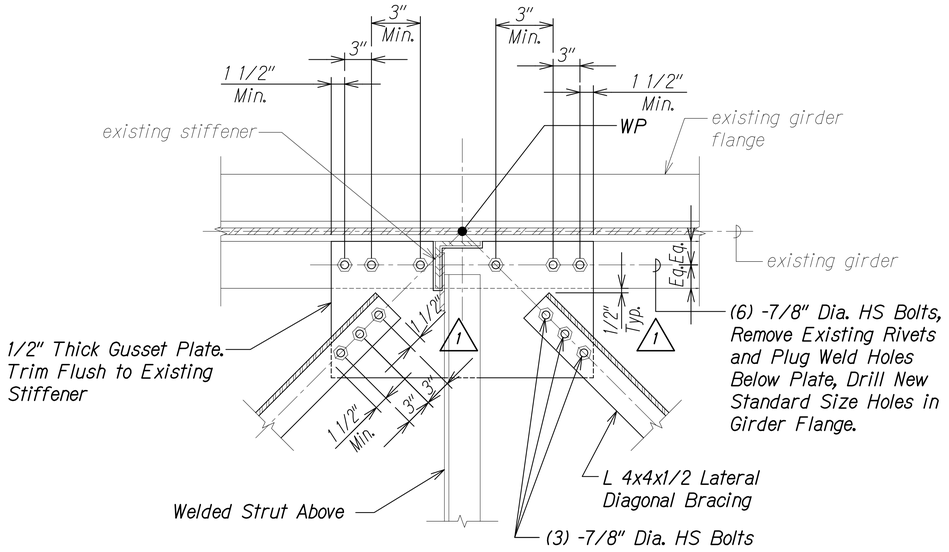
ORIGINAL PLAN
NOTE BOOK
No.

DRAWING NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR PE2-BOTH\01 CAD\12-06-24 ADD2\NSB-SA1012-SA1024 STRUT X-FRMS ADD2.DWG PLOT TIME: 12-04-24, 3:29 PM

SHEET NO. SA10.22 OF 30 SHEETS

ADD. 204

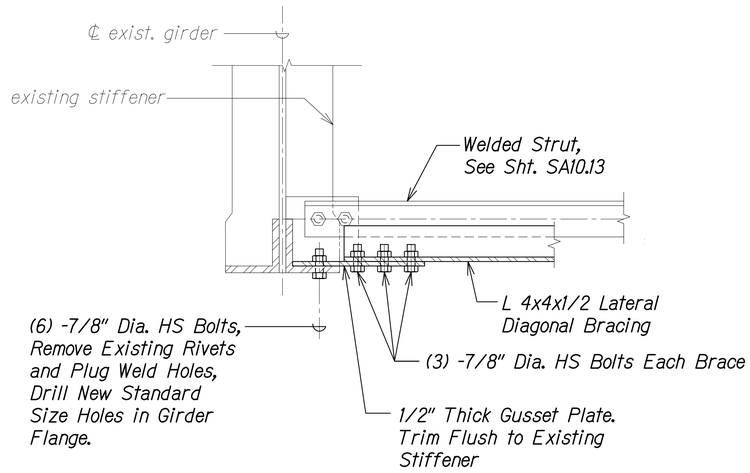
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 205	280



PLAN AT STRUT (A)

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

SA10.23 | SA10.23



SECTION AT STRUT (B)

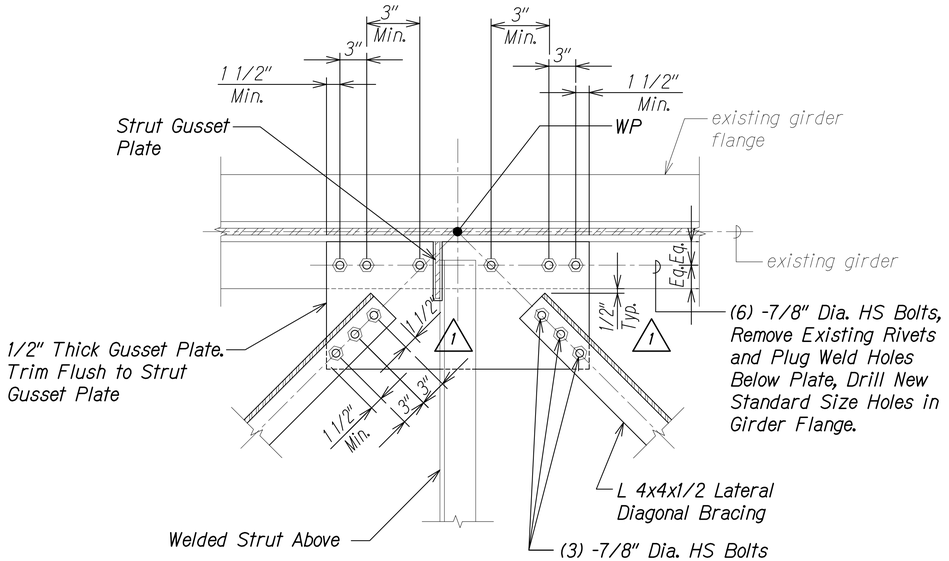
Scale: 1 1/2" = 1'-0"

SA10.23 | SA10.23

NOTES:

1. The Contractor shall field fit lateral diagonal bracing and gussets prior to galvanizing. Predrill holes in the field, including those through the bottom flange of the girder.
2. Lateral diagonal bracing and gussets shall be delivered to the site hot-dip zinc galvanized per ASTM A123, and shop painted with the complete coating system in accordance with Special Provisions Section 667-PREPARATION AND COATING OF GALVANIZED BRIDGE STEEL.
3. Install lateral diagonal bracing and gussets following completion of painting in Bay 2. Touch up paint ends of bolts, nuts and washers. Payment for work under Pay Item 667.3000 does not apply.

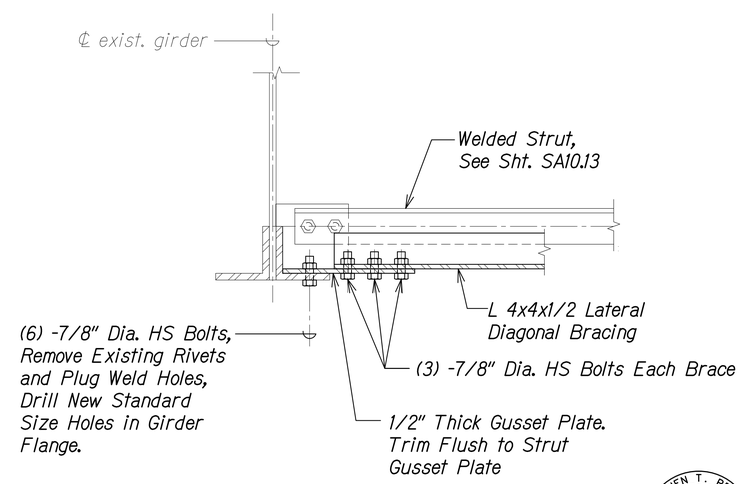
△1



PLAN AT STRUT (C)

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

SA10.23 | SA10.23



SECTION AT STRUT (D)

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

SA10.23 | SA10.23

INTERIOR BAY LATERAL DIAGONAL BRACING DETAILS

STEPHEN T. PETERS
LICENSED PROFESSIONAL ENGINEER
NO. 17097-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-26
SIGNATURE EXPIRATION DATE OF THE LICENSE

DATE	REVISION
12/6/24	△1 Revised Notes and Added/ Revised Dimensions

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LATERAL DIAGONAL BRACING DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

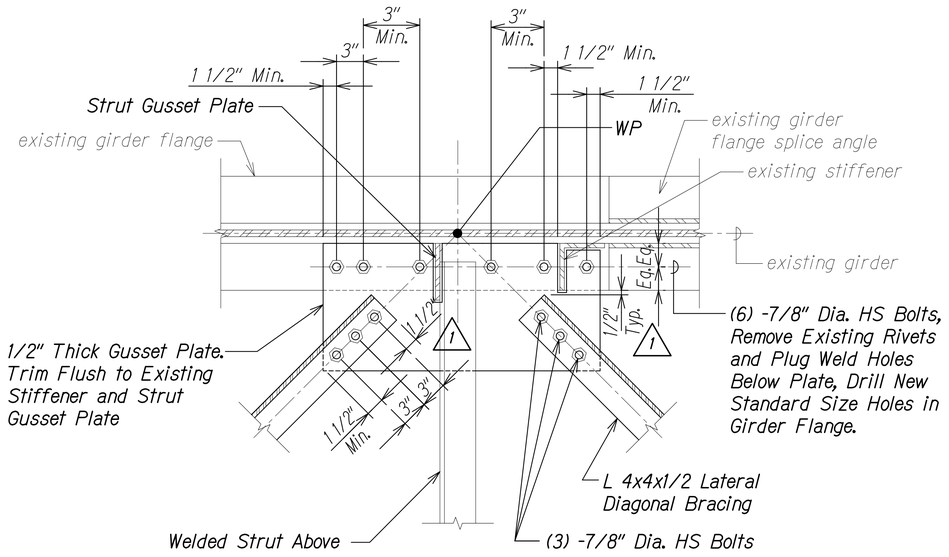
SHEET NO SA10.23 OF 30 SHEETS

ADD. 205

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

DRAWING NAME: Z:\OD\ONGINO\23-022\3-NANUE STR BR PE2-BOTH\D1 CAD\12-06-24 ADD\NSR-SA1012-SA1024 STRUT K-FING ADD.DWG PLOT TIME: 12-05-24 12:34 PM

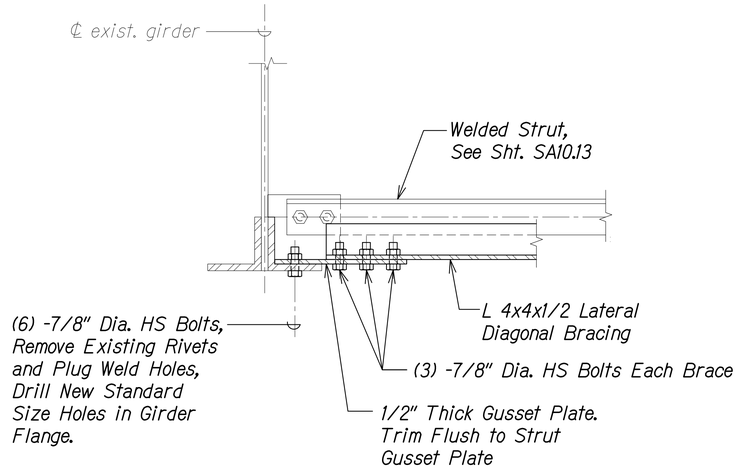
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 206	280



PLAN NEAR GIRDER SPLICE (A)

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

SAI0.24|SAI0.24



SECTION NEAR GIRDER SPLICE (B)

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

SAI0.24|SAI0.24

INTERIOR BAY LATERAL DIAGONAL BRACING DETAILS

NOTES:

1. The Contractor shall field fit lateral diagonal bracing and gussets prior to galvanizing. Predrill holes in the field, including those through the bottom flange of the girder.

2. Lateral diagonal bracing and gussets shall be delivered to the site hot-dip zinc galvanized per ASTM A123, and shop painted with the complete coating system in accordance with Special Provisions Section 667-PREPARATION AND COATING OF GALVANIZED BRIDGE STEEL.

3. Install lateral diagonal bracing and gussets following completion of painting in Bay 2. Touch up paint ends of bolts, nuts and washers. Payment for work under Pay Item 667.3000 does not apply. /1

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

DRAWING NAME: Z:\OD ONGOING\23-022.9-NANUE STR BR PE2-20THA\01 CAD\12-06-24 ADD\VSR-SA1012-SA1024 STRUT X-FRMG ADD2.DWG PLOT TIME: 12-03-24 9:01 PM)

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

SIGNATURE

4-30-26
EXPIRATION DATE OF THE LICENSE

DATE	REVISION
12/6/24	/1 Revised Notes and Added/ Revised Dimensions

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

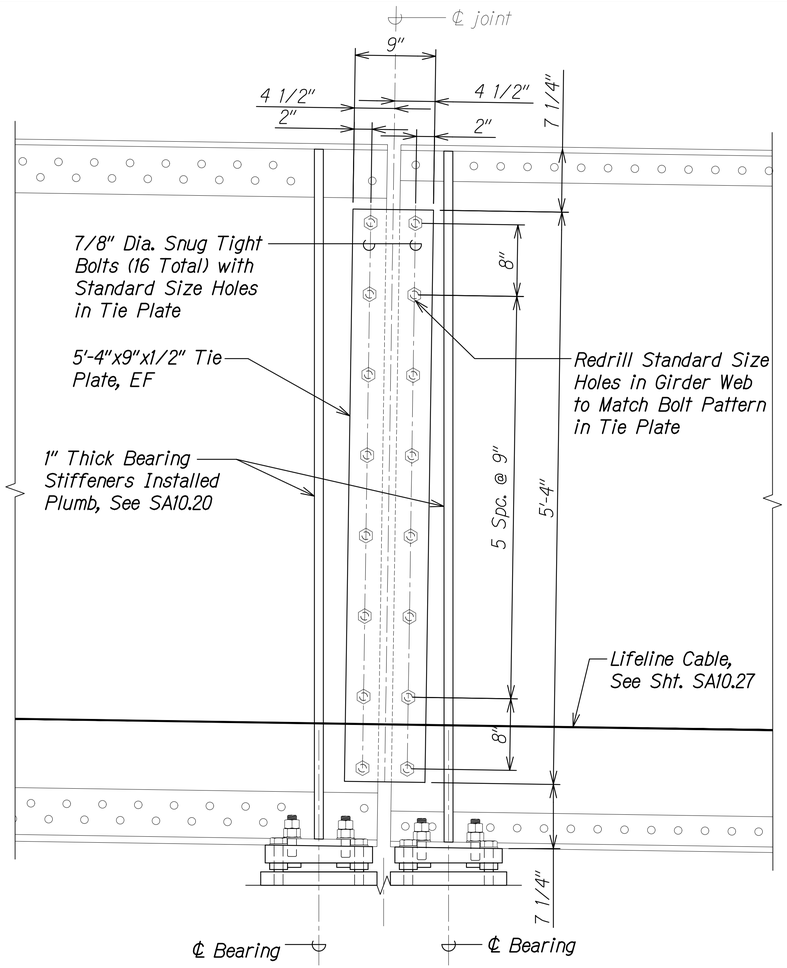
LATERAL DIAGONAL BRACING DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted Date: Oct. 2024

SHEET NO SA10.24 OF 30 SHEETS

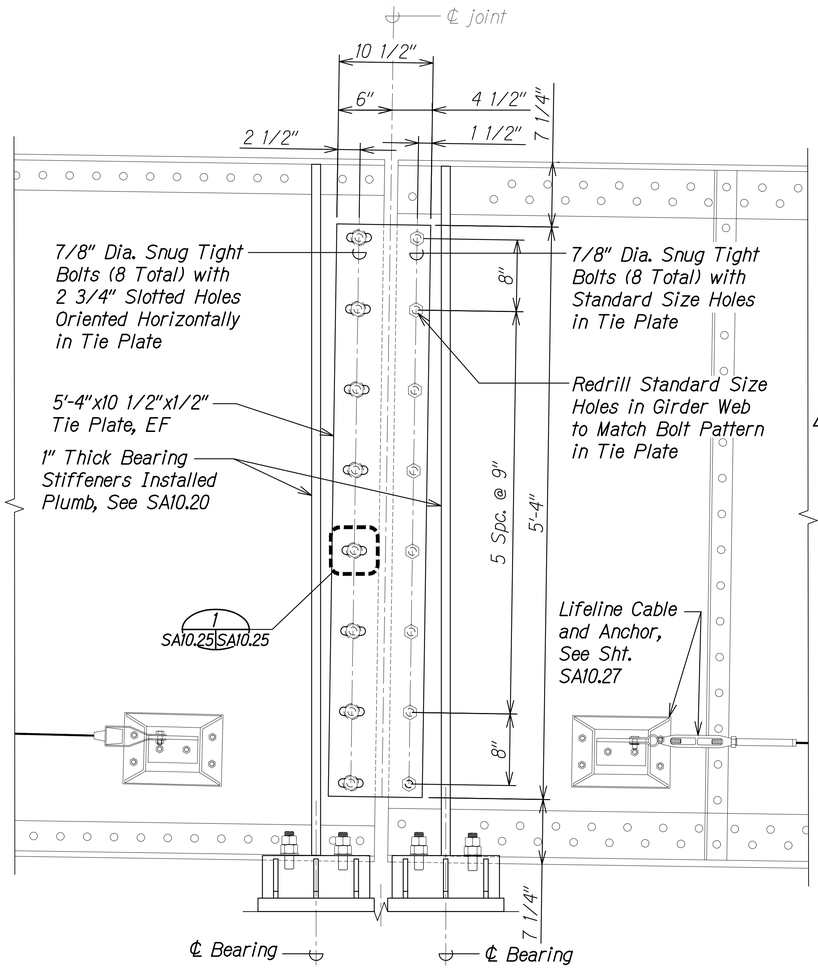
ADD. 206



TIE PLATE ELEVATION - FIXED BEARING (A)

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

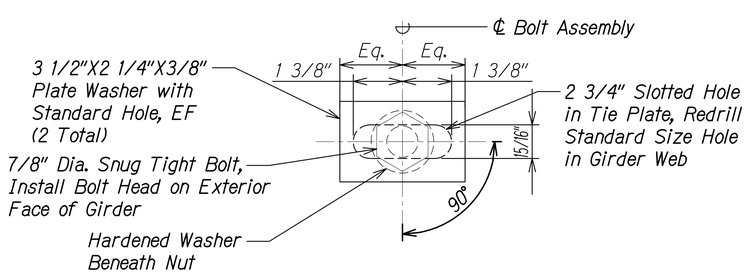
SA10.25 | SA10.25



TIE PLATE ELEVATION - EXPANSION BEARING (B)

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

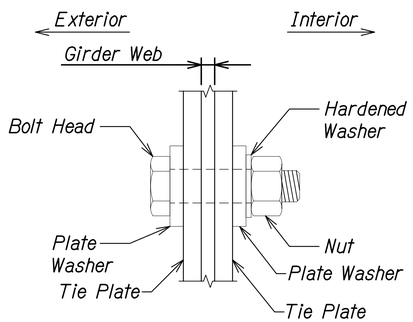
SA10.25 | SA10.25



BOLT CONNECTION DETAIL AT SLOTTED HOLE (1)

Scale: 6" = 1'-0"

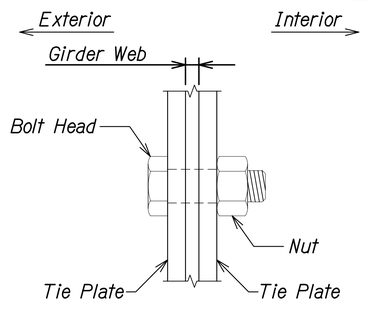
SA10.25 | SA10.25



BOLT CONNECTION DETAIL AT SLOTTED HOLE (2)

Scale: 6" = 1'-0"

SA10.25 | SA10.25



TYP. BOLT CONNECTION DETAIL (3)

Scale: 6" = 1'-0"

SA10.25 | SA10.25

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 207	280

NOTES:

1. Bolt assembly at tie plate connection must not be pretensioned.
2. See girder line elevations for location of tie plate replacement.
3. Redrill standard size holes at the ends of girder web to match bolt pattern in tie plate prior to painting.
4. Clean and paint girders prior to installation of tie plates.
5. (1) Tie plates shall be delivered to the site hot-dip zinc galvanized per ASTM A123 and shop painted with the complete coating system in accordance with Special Provisions Section 667 - PREPARATION AND COATING OF GALVANIZED BRIDGE STEEL.
6. Touch-up paint ends of all hardware (bolt, nut, washers) after installation. (1) Payment for work under Pay Item 667.3000 does not apply.

DATE		REVISION
12/6/24	1	Revised Notes

STEPHEN T. PETERS LICENSED PROFESSIONAL ENGINEER NO. 17097-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE 4-30-26

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TIE PLATE ELEVATIONS AND DETAILS AT BEARINGS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted — Date: Oct. 2024

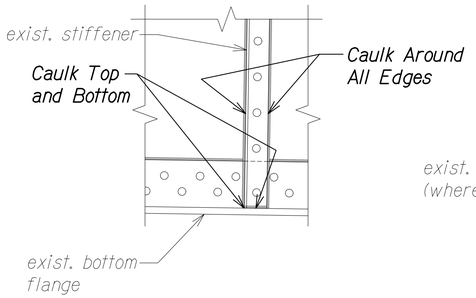
SHEET NO SA10.25 OF 30 SHEETS

ADD. 207

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

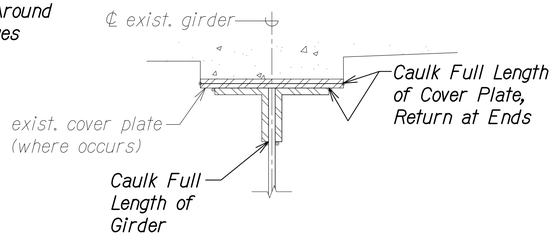
BRAWING NAME: Z:\OD ONGOING\23-022\3-NANUE STR BR PEP-BOTH\01 CAD\12-06-24 ADD\NSBR-SA1025 TIE PLATE ADD2.DWG PLOT TIME: 12-03-24, 11:04 PM)

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(077)	2024	ADD. 212	280



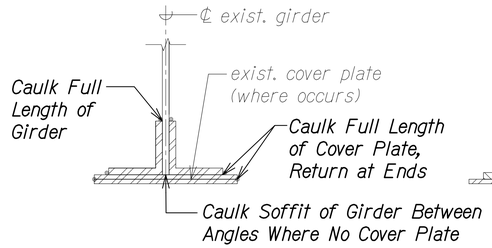
STIFFENER CONNECTION

Scale: 1 1/2" = 1'-0" — SA10.30 | SA10.30 — 1 — 1



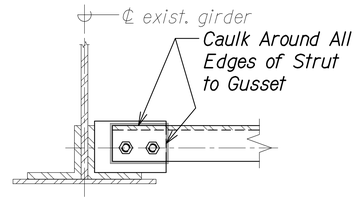
TOP FLANGE CONNECTION

Scale: 1 1/2" = 1'-0" — SA10.30 | SA10.30 — 2 — 1



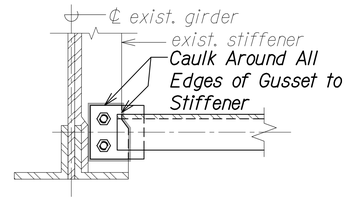
BOTTOM FLANGE CONNECTION

Scale: 1 1/2" = 1'-0" — SA10.30 | SA10.30 — 3 — 1



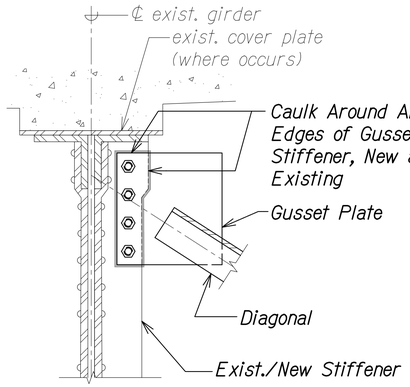
STRUT CONNECTION

Scale: 1 1/2" = 1'-0" — SA10.30 | SA10.30 — 4 — 1



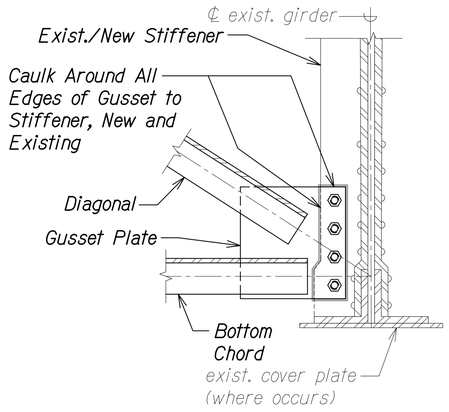
STRUT CONNECTION

Scale: 1 1/2" = 1'-0" — SA10.30 | SA10.30 — 5 — 1



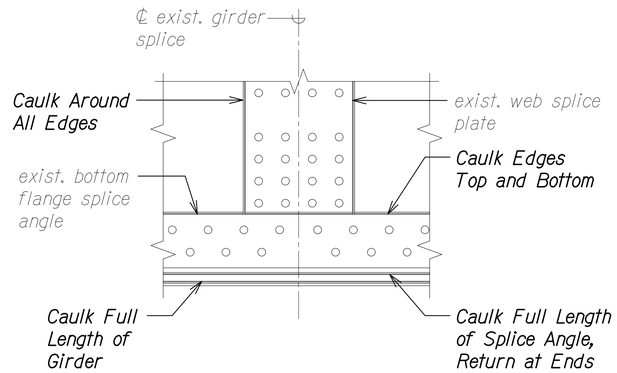
CROSS-FRAME CONNECTION

Scale: 1 1/2" = 1'-0" — SA10.30 | SA10.30 — 6 — 1



CROSS-FRAME CONNECTION

Scale: 1 1/2" = 1'-0" — SA10.30 | SA10.30 — 7 — 1



GIRDER SPLICE CONNECTION

Scale: 1 1/2" = 1'-0" — SA10.30 | SA10.30 — 8 — 1

NOTES:

1. All details are shown as typical and shall be applied at all locations throughout the bridge.
2. (1) Caulk shall be applied after applicable dry-to recoat time of the epoxy mist coat, as described in its product data sheet.
3. The cost for caulking shall be covered under Pay Item 666.3000.

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

DRAWING NAME: Z:\OD ONO\ONO\23-022\9-NANUE STR BR PE2-DOT\A01 CAD\12-06-24 ADD\VSR-SA1030 PAINT ADD2.DWG PLOT TIME: 12-05-24, 3:37 PM

STEPHEN T. PETERS — LICENSED PROFESSIONAL ENGINEER — NO. 17097-S — HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — 4-30-26 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAINT/CAULKING DETAILS

HAWAII BELT ROAD
Nanue Stream Bridge Rehabilitation
Federal Aid Project No. BR-019-2(077)

Scale: As Noted — Date: Oct. 2024

DATE	REVISION
12/6/24	1 Added Detail and Revised Details & Notes

SHEET NO SA10.30 OF 30 SHEETS

ADD. 212