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S0.2	INDEX TO STRUCTURAL DRAWINGS	SA4.7	KALIHI STREAM / RICHARD LANE BRIDGE ABUTMENT #1 SECTION
S0.3	INDEX TO STRUCTURAL DRAWINGS	SA4.8	KALIHI STREAM / RICHARD LANE BRIDGE ABUTMENT #1 PLANS
S0.4	INDEX TO STRUCTURAL DRAWINGS	SA4.9	KALIHI STREAM / RICHARD LANE BRIDGE ABUTMENT #1 SECTION
S0.5	STRUCTURAL GENERAL NOTES	SA4.10	KALIHI STREAM / RICHARD LANE BRIDGE ABUTMENT #1 SECTION
S0.6	STRUCTURAL GENERAL NOTES	SA4.11	KALIHI STREAM / RICHARD LANE BRIDGE ABUTMENT #1 CREEP BLOCK DETAIL
S0.7	STRUCTURAL GENERAL NOTES	SA4.12	KALIHI STREAM / RICHARD LANE BRIDGE ABUTMENT #1 CREEP BLOCK SECTION
S0.8	STRUCTURAL GENERAL NOTES	SA4.13	KALIHI STREAM / RICHARD LANE BRIDGE ABUTMENT #2 SECTION
S0.9	STRUCTURAL GENERAL NOTES	SA4.14	KALIHI STREAM / RICHARD LANE BRIDGE ABUTMENT #2 SECTION
S0.10	STRUCTURAL GENERAL NOTES	SA4.15	KALIHI STREAM / RICHARD LANE BRIDGE ABUTMENT #2 SECTION
S0.11	SYMBOLS AND ABBREVIATIONS	SA4.16	KALIHI STREAM / RICHARD LANE BRIDGE ABUTMENT #2 PLANS
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	KALIHI STREAM / RICHARD LANE BRIDGE	SA4.18	KALIHI STREAM / RICHARD LANE BRIDGE ABUTMENT #2 HINGE BLOCK SECTION
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	227	466

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SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-24

STATE OF HAWAII
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INDEX TO STRUCTURAL DRAWINGS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: None — Date: December 2022

SHEET No. S0.1 OF 11 SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	228	466

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DEPARTMENT OF TRANSPORTATION
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INDEX TO STRUCTURAL DRAWINGS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: None Date: December 2022

SHEET No. S0.2 OF 11 SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
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HAWAII	HAW.	NH-HI-1(280)	2023	229	466

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SB7.2	GULICK AVENUE OVERPASS TRENCH DETAILS	SB12.2	GULICK AVENUE OVERPASS TYPICAL RAILING
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ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
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INDEX TO STRUCTURAL DRAWINGS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: None — Date: December 2022

SHEET No. S0.3 OF 11 SHEETS

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SC1.3	TYPICAL WALL REVEAL AND PULLBOX SECTIONS AND DETAILS
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SC3.6	TYPICAL WALL 3 SECTION CUT CONDITION

SHEET NO.	DESCRIPTION
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SC3.8	WALL 3 SECTION AT GDI
SC3.9	WALL 3 SECTION AT GDI
SC3.10	TYPICAL WALL 4 SECTION
SC3.11	TYPICAL WALL 4 SECTION
SC3.12	TYPICAL WALL 4 SECTIONS
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 230	466

DATE	REVISION
4/7/23	(2) Revised Index

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Project No. NH-HI-1(280)

Scale: None — Date: December 2022

SHEET No. S0.4 OF 11 SHEETS

ADD. 230

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

ORIGINAL PLAN
NOTE BOOK
No.

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-S0001 INDEX ADD2.DWG PLOT TIME: 04-10-23, 3:07 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	231	466

STRUCTURAL GENERAL NOTES:

1. General Specifications:

   A. Hawaii Department of Transportation (HDOT) 2005 "Standard Specifications for Road and Bridge Construction", together with Special Provisions prepared for this project.

2. Design Specifications:

   A. American Association of State Highway and Transportation Officials (AASHTO) 2020 "LRFD Bridge Design Specifications", 9th Edition as amended by HDOT document dated August 8, 2014 with subject title "Design Criteria for Bridges and Structures".

   B. HDOT Document dated August 8, 2014 with subject title "Design Criteria for Bridges and Structures" and HDOT memorandum dated January 8, 2018 with subject title "Changes to Design Criteria for Bridges and Structures".

   C. AASHTO 2015 "LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals", 1st Edition including all subsequent interim revisions and editions as amended by the HDOT document dated August 8, 2014 with subject title "Design Criteria for Bridge and Structures".

   D. AASHTO 2012 Guide Specifications for Design of Bonded FRP Systems for Repair and Strengthening of Concrete Bridge Elements, 1st Edition, including all subsequent interim revisions and editions.

   E. AASHTO 1995 Guide Design Specifications for Bridge Temporary Works, 1st Edition, including the 2008 interim revision edition.

   F. AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges, 2009, including all subsequent interim revisions.

3. Design Loads:

   A. Dead Load: A weight of 25 psf for future wearing surface from curb to curb has been provided for in the design.

   B. Utility Load: An allowance of 150 plf on each side of the bridge for utility loads has been provided for in the design.

   C. Railing Test Level: TL-2 (Gulick Avenue Overpass Railings)
      TL-3 (Barriers along H-1)
      TL-4 (Richard Lane Bridge/Kalihi Stream Bridge)

   D. Live Load: AASHTO HL-93 Vehicular Live Loading

   E. Seismic Loads:

PGA = 0.174 g	F_{PGA} = 1.20	As = 0.209 g
Ss = 0.398 g	Fa = 1.20	S_{DS} = 0.477 g
S_1 = 0.109 g	Fv = 1.69	S_{D1} = 0.184 g
Site Class = C	Seismic Zone = 2	

   F. Wind Loads:
      V = 115 mph
      K_Z = 0.71
      G = 0.85
      C_D = 1.2

4. Concrete:

   A. All concrete strengths shall be as noted below:

Gulick Avenue Overpass

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)	Drilled Shafts	4,500 psi	0.45	720	C
(2)	Drilled Shaft Cap Beam, Concrete Facing, Concrete Infill Wall, Wingwalls, End Beams, Corbels, Wall G1	6,000 psi*	0.40	670	C, D, E
(3)	Slab Extension, Overlay, Approach Slabs, Sleeper Slabs	(SBD, See Section 601)			
(4)	Railings, Thickened Railing at Light Standard, W12 Jacket	6,000 psi*	0.40	670	C, D, E
(5)	Sidewalks	5,000 psi	0.45	670	C, D, F
(6)	Trench Concrete	10,000 psi	(See Note 5.D)		
(7)	Curb Ramps	(VESLMC, See Section 540)			
(8)	Shotcrete	4,000 psi	0.45	752	C, D, F
(9)	Except as noted otherwise, all others	5,000 psi	0.45	670	C

Richard Lane Bridge / Kalihi Stream Bridge

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)	Drilled Shafts	4,500 psi	0.45	720	C
(2)	Drilled Shaft Cap, Conc. Seats, Wingwalls, Corbel, Creep Block, Hinge Block	6,000 psi*	0.40	670	C, D, E
(3)	Rigid Frame Abutment, Abut. No. 1, Abut. No. 2	6,000 psi*	0.40	670	C, D
(4)	Rigid Frame Abut. and Wingwall Spread Footing	6,000 psi*	0.45	670	C, D, E
(5)	Precast Prestressed Girders	7,500 psi	0.40	740	C
(6)	Precast Plank	9,000 psi	0.40	752	C
(7)	Bridge Deck, Topping, Beams "A" and "b" Between New Girders	(SBD, See Section 601)			
(8)	Bridge Deck Closure Pour, and Beams "A" and "B" Between Exist. and New Girders	(VESLMC, See Section 540)			
(9)	Railings, End Posts, Thickened Railing at Light Standard	6,000 psi*	0.40	670	C, D, E
(10)	Except as Noted Otherwise, All Others	4,000 psi	0.45	670	C

4. Concrete (Continued):

Walls and Barriers

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)	Concrete Barrier Wall and Footing	5,000 psi	0.45	670	C, D, E
(2)	Retaining Wall (Including Light Standard Pedestal) and Footing	5,000 psi	0.45	670	C, D, E
(3)	Except as noted otherwise, all others	4,000 psi	0.45	670	C

* 56 day compressive strengths shall be a minimum of 6,000 psi. No extra cylinders need to be tested if the 28 day compressive strengths are greater than 6,000 psi.

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

C. Amine carboxylate corrosion inhibiting water-based admixture such as Cortec MCI 2005 NS or approved equal shall be added at a dosage of 24 ounces per cubic yard of concrete.

D. Shrinkage reducing admixture such as Masterlife SRA 35 or approved equal shall be added at a dosage of 128 ounces per cubic yard of concrete or as recommended by the manufacturer.

E. Alkali resistant structural glass fiber such as CEMFIL, ANTI-CRAK HP67/36 or approved equal shall be added to the concrete mix. The dosage rate shall be 15 lbs. per cubic yard of concrete for CEMFIL or the equivalent amount of approved equal to achieve similar properties as the glass dosage. The fiber shall be added to the concrete as recommended by the manufacturer during the mixing process.

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SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: None — Date: December 2022

SHEET No. S0.5 OF 11 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-S0005 BRIDGE STRUCT NOTES.DWG PLOT TIME: 01-04-23, 9:09 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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STRUCTURAL GENERAL NOTES:

4. Concrete (Continued):

F. A 1 1/2" long macro synthetic fiber such as Forta Ferro, Strux 90/40, Masterfiber Mac Matrix or approved equal shall be added to the concrete mix. The dosage shall be 7.5 lbs. per cubic yard of concrete or the equivalent amount of approved equal to achieve similar properties.

G. Contractor is not limited to only adding admixtures listed on these notes. Other admixtures may be added upon approval of the Engineer.

H. If formwork is removed/stripped exposing concrete within 7-days of placement then concrete shall be cured. All exposed concrete shall be cured using Sinak Lithium Cure 1000 or approved equal at a coverage rate of no less than 400 sq. ft. per gallon.

I. Cure concrete as specified in the Contract documents. Remove curing that may affect areas requiring future bonding unless using a curing agent such as Sinak Lithium Cure or approved equal that does not affect bond.

J. The Contractor has the option to design the concrete for all items to be pumpable and flowable. All concrete shall be designed for minimum segregation and separation. Clearances between rebars, ducts, etc. shall be considered when designing the concrete mix.

K. All concrete shall include at least one of the three methods stated in Section 601 of the Special Provisions, or approved equal, to reduce the embodied carbon footprint in concrete.

5. Materials:

A. Non-shrink grout shall be a pre-mix product consisting of non-staining, non-metallic aggregate cement, water reducing and plasticizing agents capable of developing a minimum compressive strength of 4,000 psi in 3 days and 7,000 psi in 28 days. The non-shrink grout shall contain at least 10 grams of migrating amine carboxylate corrosion inhibiting admixture per 0.4 to 0.5 cubic feet of non-shrink grout.

B. Premolded joint filler shall comply with ASTM D1751 with a minimum compressive strength of 100 psi at 50% deformation, unless otherwise specified on the contract documents.

C. Bonding agent shall be a three-component, preproportioned, water based epoxy modified Portland cement bonding agent and anti-corrosion coating. 14-day bond strength shall exceed 2,400 psi in accordance with ASTM C882.

5. Materials (Continued):

D. Trench concrete shall consist of FasTrac 246 concrete, and an added amine carboxylate corrosion inhibiting admixture, or approved equal so that when combined it produces a rapid-setting material capable of achieving 3,000 psi of compressive strength in 3-hours.

E. The fiber reinforced polymer (FRP) composite system shall consist of a uni-directional, high-strength carbon fiber fabric bonded to the existing concrete substrate using a structural epoxy via the wet-layup method. The FRP composite gross laminate properties of one ply shall meet the following minimum test value material properties:

(1) Tensile strength - 143,000 psi - ASTM D3039

(2) Tensile modulus - 13.9 x 10^6 psi - ASTM D3039

(3) Elongation at break - 1% - ASTM D3039

(4) Nominal laminate thickness - 0.04 in. or 0.08 in. - ASTM D1777 as noted

Alternatively, FRP manufacturer may provide a system with an equivalent E x A as shown on the plans. Calculations stamped by a licensed engineer shall be submitted to Engineer for review and approval. See Special Provisions Section 577-FRP for painting requirements of FRP.

F. Adhesive material used for post-installed anchors and reinforcing dowels bars shall be an injectable, two component hybrid adhesive that has a current evaluation service report from ICC-ES. Adhesive shall achieve full cure in 90 minutes or less at 68° F.

G. Structural steel:

(1) All structural steel shapes and plates shall conform to ASTM A709/AASHTO M270, unless otherwise noted.

(2) All post-installed adhesive anchors which connect steel to concrete shall utilize threaded rods conforming to ASTM F1554, Grade 55 unless otherwise noted.

(3) All bolts which connect steel to steel shall be high-strength bolts conforming to ASTM -A325, Type 1, snug-tightened, unless otherwise noted.

(4) All nuts shall be ASTM A563 and all hardened washers shall be ASTM F436.

(5) All structural steel shapes and plates, including deck drain assemblies and utility brackets/hangers, shall be ASTM A123 Hot-Dip Galvanized after fabrication. All bolts, nuts, and washers shall be ASTM A153 Hot-Dip Galvanized.

5. Materials (Continued):

(6) Stainless steel anchor bolts/threaded rods used at light standard locations shall be fabricated from 2205 duplex grade alloy with a minimum yield strength of 65 ksi. Cut threads in accordance with UNC standards.

(7) Stainless steel nuts shall be heavy hex nuts fabricated from 2205 duplex grade alloy. Threads shall match anchor bolt. Stainless steel washers shall be fabricated from 2205 duplex grade alloy.

(8) All welds shall conform to the latest bridge welding code AWS D1.5 of the American Welding Society. Electrodes shall be E70XX.

H. Expanded Polystyrene (ESP): EPS15 per ASTM D6817 or Type I per ASTM C578.

I. Concrete sealer used shall be equal to or exceed the performance of a 28 day water cured quality concrete per ASTM C39, ASTM C1202. Concrete sealer shall not leave a film or coating on the concrete surface & shall not interfere with bonding of any future materials to the concrete surface.

J. Concrete sealer shall be applied to all concrete surfaces.

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STRUCTURAL GENERAL NOTES

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: None — Date: December 2022

SHEET No. S0.6 OF 11 SHEETS

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

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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STRUCTURAL GENERAL NOTES:

6. Reinforcement:

A. All reinforcing steel shall be ASTM A615, Grade 60 unless otherwise noted.

B. Reinforcing steel shall be ASTM A706, Type W, Grade 60 where welded connections are required.

C. Reinforcing steel shall be ASTM A1035 Type CS Grade 100 where noted on the plans.

D. Epoxy-coated reinforcing steel shall be ASTM A775 where noted on the plans

E. Reinforcing bars shall be placed and installed in accordance with the CRSI Manual of Standard Practice and CRSI Placing Reinforcing Bars, unless otherwise noted.

F. The covering measured from the surface of the concrete to the face of any reinforcing bars shall be as follows, except as otherwise shown:

(1) Top of bridge deck, top of approach slab, top of sleeper slab, overlay, overpass slab extension.

(a) Gulick Avenue Overpass = 2 1/2"
(b) Richard Lane Bridge/Kalihi Stream Bridge = 2 1/2"

(2) Railings, end posts, wingwalls, drill shaft cap beam = 2", unless otherwise noted.

(3) Concrete cast against and permanently exposed to earth = 3"

(4) Drilled shafts = 4"

(5) Prestressed girder = 1 1/2", unless otherwise noted.

(6) All others unless otherwise noted = 2"

G. Minimum lap splice length for steel reinforcing shall be 40 bar diameters or 2'-0", whichever is greater, for #8 bars or smaller. Minimum lap splice length for #9 bars or larger shall be 50 bar diameters. Increase lap length by multiplying the minimum lap splice length by 1.3 for bars having more than 12" of fresh concrete below bars. Increase lap length by 1.25 for ASTM A1035 reinforcing. Lap splices for bundled bars shall consist of individual bar splices within a bundle that do not overlap. Entire bundles shall not be lap spliced.

H. Unless otherwise noted, reinforcing splices shall be staggered. Minimum distance between staggered lap splice shall be equal to the length required for the lap splice. Number of bars spliced at sections normal to axis of member shall not exceed 50 percent of the total main reinforcing in the member.

6. Reinforcement (Continued):

I. Minimum clear spacing between parallel bars shall be 1 1/2 times the diameter of bars (for non bundled bars). In no case shall the clear distance between the bars be less than 1 1/2 times the maximum size of the coarse aggregate or 1 1/2".

J. All dimensions relating to reinforcing bars are to centers of bars unless otherwise noted.

K. Reinforcing bars shall be securely tied at all intersections and lap splices except where the spacing of intersections is less than 1 foot in each direction, in which case alternate intersections shall be tied.

L. Strands for prestressing shall be Grade 270, seven wire low relaxation type conforming to ASTM A416.

M. Dissimilar metals shall be separated at contact points using teflon tape.

N. Mechanical coupling sleeves for reinforcing steel bars shall meet the requirements of a Type 2 coupler and develop 160% of the reinforcing bar yield strength.

O. Form-saver couplers used to join reinforcing steel bars at construction joints shall meet the requirements of a Type 2 coupler and develop 100% of the reinforcing bar ultimate strength.

P. Headed rebars shall conform to ASTM A970 Class B. Head width, height, and thickness shall allow for minimum clear cover and clear spacing between bars.

Q. Welded Wire Fabric (WWF) shall be hot dipped galvanized and conform to ASTM A1064. WWF lap splice shall be a minimum of 12 inches.

7. Glass Fiber Reinforced Polymer Bar (ASTM D7957):

A. Glass Fiber Reinforced Polymer (GFRP) rebar shall conform to ASTM D7957.

B. Concrete cover for the GFRP bars shall be 1 1/2" unless otherwise noted.

C. Minimum lap splice lengths for the GFRP bars shall be 42 bar diameter or 2'-6", whichever is greater, unless otherwise noted.

D. All GFRP bars shall be securely tied in place. Tie wire shall be alloy 302 or 304 stainless steel or non-metallic.

E. The GFRP bars may be cut in the field with a masonry or diamond blade.

F. All work including materials and bends shall follow manufacturer's recommendations.

8. Concrete Masonry Units (CMU):

A. Concrete masonry units shall conform to TMS 402/602-16 Building Code requirements and specifications for masonry structures.

B. CMU block shall be hollow masonry units with F'M = 1,500 psi conforming to ASTM C-90 and built-in running bond unless otherwise shown.

C. CMU walls shall be doweled to slabs at bottom. Dowels shall match vertical wall reinforcing.

D. All cells shall be filled solidly with 3,000 psi grout. Grout shall be poured in lifts not to exceed 8 feet in height. Cleanouts shall be provided for all pours over 5'-4" in height. All grout shall be consolidated at the time of pouring by vibrating and then reconsolidated again by pudding later, before plasticity is lost.

E. When the grouting is stopped for one hour or longer, horizontal construction joints shall be formed by stopping the pour of grout 1 1/2" inches below the top of the uppermost unit.

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SIGNATURE

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STRUCTURAL GENERAL NOTES

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
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Project No. NH-H1-1(280)

Scale: None Date: December 2022

SHEET No. S0.7 OF 11 SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
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STRUCTURAL GENERAL NOTES:

9. Construction Notes:

A. All holes for post-installed adhesive anchors and reinforcing dowel bars shall be hammer drilled using a hollow bit connected to a vacuum system in accordance with current evaluation service report from ICC-ES.

B. All individuals performing anchor and dowel work shall hold a current ACI/CRSI installer certification.

C. Drilling procedures, equipment, material and certifications shall be submitted to the Engineer for approval.

D. Drilled holes in existing concrete for anchors and dowels shall not be left unfilled for more than 8 hours. Adhesive material in drilled holes shall fully cure prior to pouring concrete around reinforcing steel dowels.

E. Location of drilled holes shown in plans are approximate. Prior to placing holes in concrete, the contractor shall locate all reinforcing steel and adjust the location of the holes to clear all reinforcing bars. Final hole locations are subject to the approval of the Engineer.

F. Any drilled holes, inserts, or brackets needed for construction including, but not limited to, falsework for deck and beam overhang, and work platform scaffolding shall be approved by the Engineer. Expansion or wedge type anchors shall not be used. Location of drilled holes shall be coordinated with FRP work and shall not interfere with installation of FRP. Drilling of holes through FRP is prohibited.

G. All holes drilled into concrete that go unused shall be completely filled with an approved polymer-modified cementitious repair mortar containing a corrosion inhibitor.

H. There shall be no acute angles when pouring back VESLMC. All corners shall be a minimum 90 degrees.

I. All cracks wider than 0.010" shall be prepared and pressure injected with an approved epoxy and all defective concrete shall be repaired.

J. Finish overlay and shoulder slopes and grades shall provide smooth and even transitions at and near connections with existing elements. Finish cross slope of overlay shall follow finish elevations as shown on plans.

K. Finish grades shall match existing grades unless otherwise noted.

L. No construction work will be allowed to take place on the ground within the limits of the ordinary high water mark (OHWM) of the stream as shown on the foundation plans. All work conducted within these limits must occur above the elevation of the OHWM.

M. Where FRP work conflicts with locations of permanent anchor bolts or adhesive anchors, FRP manufacturer shall provide details to address the conflict in the shop drawings.

9. Construction Notes (Continued):

N. For the installation of anchor bolts for lighting standards, the Contractor shall provide rigid templates to maintain the proper locations and shall protect such anchor bolts at all times during the period constructions.

O. The Contractor shall verify all site conditions and not rely upon these plans for existing elevations and azimuths, stream channel location, roads, roadway gutters, curbs and sidewalks, etc. Conditions may differ from those shown.

P. The Contractor shall verify the location of all utility lines and notify the respective owners before commencing with excavation, and any temporary piling or sheeting.

Q. The Contractor shall be solely responsible for the protection of adjacent properties, utilities and existing and new structures from damage due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.

R. Except as otherwise noted, all vertical dimensions are measured plumb.

S. Construction joints may be relocated or additional ones added subject to the approval of the Engineer.

T. Unless otherwise noted, all exposed concrete edges shall be chamfered 3/4"x3/4"

U. All existing reinforcing shall remain in place and shall not be damage in any way unless otherwise noted. Any damaged reinforcing that is to remain in place shall be repaired to the satisfaction of the Engineer and shall be paid for by the Contractor.

V. The Contractor shall submit working drawings and calculations for the proposed bracing/shoring details needed to protect the existing structures when subjected to loading from equipment, drilled shaft rigs, cranes, vehicles and fresh concrete, etc. The Contractor shall also submit working drawings and calculations for the proposed launching system (if required). All drawings and calculations shall be stamped by a State of Hawaii licensed Structural Engineer and a licensed Civil Engineer specializing in geotechnical engineering. The above work, including working drawings and calculations, shall be incidental to any structure excavation. The drawings and calculations shall be found acceptable by the Engineer before any construction work is to proceed.

W. No construction work, including falsework, shall be performed in any portion of the existing channel unless otherwise permitted by the Engineer.

9. Construction Notes (Continued):

X. Construction joints between separate pours shall not be feather edged, unless otherwise noted. All joints shall be made square and vertical for the entire thickness of the new pour prior to pouring, except as directed by the Engineer.

Y. Construction joints shall be cleaned and roughened to 1/4" amplitude.

Z. Anchor bolts shall be installed using a template to ensure proper layout. Anchor bolts shall be installed with misalignments of less than 1:40 from vertical. After installation, firm contact shall exist between the anchor bolt nuts, washers, and base plate on any anchor bolt installed in a misaligned position.

AA. Girder concrete seats shall be poured monolithically with the drilled shaft cap beam. Top of concrete seats shall be finished with a steel trowel to a smooth level surface to the elevation shown on the plans. Grind down high spots as needed to provide an even bearing surface to 1/16"+ tolerance.

AB. The Contractor shall provide a template including details showing exact location of rebar so that no interference will occur between vertical drilled shaft reinforcement and horizontal reinforcement in the drilled shaft cap beam.

AC. No portion of the bridge temporary works for Gulick Avenue Overpass shall be located below the lowest elevation of the 6" downturn on the Pearl City and Diamond Head edges of the existing Gulick Avenue Overpass.

AD. Protective plates shall be placed on the soffit of Gulick Avenue Overpass below each trench for post-tensioning duct installation prior to trenching of the slab structure. The Contractor shall submit working drawings and calculations stamped by a State of Hawaii licensed Structural Engineer. The drawings and calculations shall be found acceptable by the Engineer before any construction work is to proceed. Coordinate placement of plates with the traffic control plan. Power actuated fasteners are not allowed. All fasteners must be removed and the concrete patched.

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STRUCTURAL GENERAL NOTES

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Scale: None Date: December 2022

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HAWAII	HAW.	NH-HI-1(280)	2023	235	466

STRUCTURAL GENERAL NOTES:

9. Construction Notes (Continued):

AE. The maximum weight of vehicles and equipment on Gulick Avenue Overpass, during the partial closure shall not exceed HS15 loading.

AF. The Contractor shall provide a work plan detailing traffic control, demolition, installation, construction methods, procedures, sequencing and any other details the Engineer deems important for all of the critical work for Gulick Avenue Overpass. Critical work shall include but is not limited to Drilled Shafts, Trench Concrete, and Tie Rods.

10. General:

A. Structural general notes apply to the structural plans unless otherwise noted.

B. The Contractor shall be responsible for obtaining As-Builts of the existing structures. As-built plans of the existing City and County structures are available for review from the City & County of Honolulu, Department of Design and Construction, Civil Division, Bridge & Structures Section, 650 S. King Street, Honolulu, HI 96813. As-Built plan of the existing HDOT structures are available for review from the Highways Design Branch located at the State Department of Transportation, Highway Division, Kakuhihewa Building, Room 809, 601 Kamokila Boulevard, Kapolei, HI 96707. The Contractor shall verify all dimensions and site conditions and shall report any discrepancies in writing to the Engineer before commencing work or ordering materials.

C. The contract documents are complementary. Any requirement occurring in one document is as binding as though occurring in all. A stricter requirement prevails over any less strict requirements. The stricter requirement will be the requirement that provides the greater product life, durability, strength, and function.

D. Contractor shall note that in 2019 there was an adjustment to the vertical datum that made elevations on benchmarks lower on Oahu.

11. Foundation Notes:

A. The Foundation Design is based upon recommendations contained in the Geotechnical Engineering Exploration report entitled "Geotechnical Engineering Exploration, Interstate Route H-1 (EB) Improvements, Ola Lane Overpass to Kalihi Street Interchange, Honolulu, Oahu, Hawaii" dated November 21, 2022. The report shall be considered as a part of the construction documents and its recommendations shall be implemented unless otherwise directed by the Engineer. The Contractor may obtain a copy of the report at the State of Hawaii, Department of Transportation, Highways Division, upon written request to the Engineer.

(1) 5'-0" Diameter Drilled Shaft Foundations - See SB6.1 and SA7.6 for estimated shaft tip elevations.

(a) The drilled shaft foundations will derive support principally from adhesion between the sides of the drilled shaft and the dense old alluvium, conglomerate and/or basalt formation encountered in the Geotechnical Engineering borings.

B. Design Soil Parameters

(1) Gulick Avenue Overpass

(a) Bearing capacity (Pier No. 1)

i. Extreme event limit state = 130.0 ksf
ii. Strength limit state = 58.5 ksf
iii. Service limit state = 43.3 ksf

(b) Passive resistance (Pier No. 1)

i. Extreme event limit state = 50 psi

ii. Strength limit state = 25 psi

(c) Coefficient of friction (Pier No. 1)

i. Extreme event limit state = 0.70
ii. Strength limit state = 0.60

(d) Static lateral earth pressure

i. Active condition, level backfill
   a. Soil condition = 38 pcf
   b. Rock condition = 5 pcf
ii. At-rest condition, level backfill
   a. Soil condition = 56 pcf
   b. Rock condition = 5 pcf

(e) Dynamic lateral earth pressure

i. Active condition, level backfill = $3.6H^2$ psf (rectangular distribution)
ii. At-rest condition, level backfill = $6.2H^2$ psf (rectangular distribution)

10. Foundation Notes (Continued):

(2) Kalihi Stream Bridge

(a) Bearing capacity

i. Extreme event limit state = 60 ksf
ii. Strength limit state = 27 ksf
iii. Service limit state = 20 ksf

(b) Passive resistance

i. Extreme event limit state = 290 pcf
ii. Strength limit state = 145 pcf

(c) Coefficient of friction

i. Extreme event limit state = 0.70
ii. Strength limit state = 0.60

(d) Static lateral earth pressure

i. Active condition, level backfill = 38 pcf
ii. Active condition, maximum 2H:1V sloping backfill = 63 pcf (Horizontal)
   = 15 pcf (Vertical)
iii. At-rest condition, level backfill = 56 pcf
iv. At-rest condition, maximum 2H:1V sloping backfill = 80 pcf (Horizontal)
   = 20 pcf (Vertical)

(e) Dynamic lateral earth pressure

i. Active condition, level backfill = $3.6H^2$ psf
ii. Active condition, maximum 2H:1V backfill = $17.52H^2$ psf (rectangular distribution)
iii. At-rest condition, level backfill = $6.2H^2$ psf
iv. At-rest condition, maximum 2H:1V backfill = $28H^2$ (rectangular distribution)

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK:RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-S0005 BRIDGE STRUCT NOTES.DWG PLOT TIME: 01-04-23, 9:10 AM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
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Eric Y Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: None Date: December 2022

SHEET No. S0.9 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	236	466

STRUCTURAL GENERAL NOTES:

10. Foundation Notes (Continued):

(3). Retaining Walls and End Posts

I. From Ola Lane to H-1 ℄ Sta. 34+50

(a) Bearing capacity

i. Extreme event limit state = 12 ksf
ii. Strength limit state = 5.4 ksf
iii. Service limit state = 4.0 ksf

(b) Passive resistance

i. Extreme event limit state = 330 pcf
ii. Strength limit state = 165 pcf

(c) Coefficient of friction

i. Extreme event limit state = 0.35
ii. Strength limit state = 0.28

(d) Static lateral earth pressure

i. Active condition, level backfill = 40 pcf
ii. Active condition, maximum 2H:1V sloping backfill = 60 pcf (Horizontal)
= 16 pcf (Vertical)
iii. At-rest condition, level backfill = 60 pcf
iv. At-rest condition, maximum 2H:1V sloping backfill = 80 pcf (Horizontal)
= 21 pcf (Vertical)

(e) Dynamic lateral earth pressure

i. Active condition, level backfill = $4H^2$ psf
ii. Active condition, maximum 2H:1V backfill = $13H^2$ psf (rectangular distribution)

II. From H-1 ℄ Sta. 34+50 to Kalihi Street Overpass

(a) Bearing capacity

i. Extreme event limit state = 60 ksf
ii. Strength limit state = 27.0 ksf
iii. Service limit state = 20.0 ksf

(b) Passive resistance

i. Extreme event limit state
a. Rock Condition = 50 psi
b. Soil Condition = 290 pcf
ii. Strength limit state
a. Rock Condition = 25 psi
b. Soil Condition = 145 pcf

10. Foundation Notes (Continued):

(c) Coefficient of friction

i. Extreme event limit state = 0.7
ii. Strength limit state = 0.6

(d) Static lateral earth pressure

i. Active condition, level backfill = 40 pcf
ii. Active condition, maximum 2H:1V sloping backfill = 60 pcf (Horizontal)
= 16 pcf (Vertical)
iii. Basalt rock formation = 5 pcf
iv. At-rest condition, level backfill = 56 pcf
v. At-rest condition, maximum 2H:1V sloping backfill = 80 pcf (Horizontal)
= 21 pcf (Vertical)

(e) Dynamic lateral earth pressure

i. Active condition, level backfill = $4.06H^2$ psf
ii. Active condition, maximum 2H:1V backfill = $13.5H^2$ psf (rectangular distribution)
iii. At-rest condition, level backfill = $6.2H^2$ psf
iv. At-rest condition, maximum 2H:1V backfill = $28H^2$ (rectangular distribution)

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Eric Y. Matsumoto 4-30-24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: None Date: December 2022

SHEET No. S0.10 OF 11 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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SYMBOLS AND ABBREVIATIONS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	237	466

∉	And
@	At
Ø	Diameter
≥	Greater Than or Equal to
≤	Less Than or Equal to
#	Number
AB	Anchor Bolt
Abut.	Abutment
Abbr.	Abbreviation
AC	Asphaltic Concrete
Add.	Additional
Alt.	Alternate
Approx.	Approximate
Az.	Azimuth
Bal.	Balance
℄	Baseline
Bet.	Between
BF	Both Faces
BFE	Bottom of Footing Elevation
Bk.	Back
Blt.	Bolt
Bm.	Beam
BOF	Bottom of Footing
Bot., Bott., B	Bottom
Br.	Bridge
Brg., Brgs.	Bearing, Bearings
BVC	Beginning of Vertical Curve
BW	Both Ways
Cant.	Cantilever
CBW	Concrete Barrier Wall
cc	Center to Center
CF	Cubic Feet
CFCW	Continuous Flashing Compound Waterproofing
CG	Center of Gravity
CIP	Cast Iron Pipe, Cast in Place
CJ	Construction Joint
℄	Center line
Cl.	Class
Clr.	Clearance
CLSM	Controlled Low Strength Material
CMU	Concrete Masonry Unit
Cntl. Jt.	Control Joint
CO	Clean Out
Col.	Column
Conc.	Concrete
Conn.	Connection
Const.	Construction
Cont.	Continuous
CSL	Crosshole Sonic Logging
CRM	Cement Rubble Masonry
CY, Cu. Yd.	Cubic Yard
Dbl.	Double
Demol.	Demolition
Det.	Detail
DI	Drain Inlet, Ductile Iron
Dia.	Diameter
Diaph.	Diaphragm
Dim.	Dimension
Dist.	Distance
Dn.	Down
DO	Ditto
DS	Drilled Shaft
Dwg., Dwgs.	Drawing, Drawings
Dwls.	Dowels
e	Existing
E	East
EA, Ea., ea.	Each
EF	Each Face
EFH	Each Face Horizontal
EFV	Each Face Vertical
EJ	Expansion Joint
El., Elev.	Elevation
Elec.	Electrical
Emb.	Embankment
EMH	Electrical Manhole
EPE	Existing Edge of Pavement
EPS	Expanded Polystyrene
Eq.	Equal
ES	Edge of Shoulder
Est.	Estimated
EVC	End of Vertical Curve
EW	Each Way
Exc.	Excavation
Excl.	Excluding
Exist., Ex.	Existing
Exp., (E)	Expansion
Ext.	Exterior
(F)	Fixed
FA	Force account
FB	Flat Bar
FC	Compression Stresses
f'c	Specified Compressive Strength of Concrete at 28 days
f'ci	Specified Compressive Strength of Concrete at Time of Initial Prestress
FF	Far Face, Front Face
Fig.	Figure
Fin. Gr.	Finish Grade
FRP	Fiberglass Reinforced Polymer
FT	Tensile Stresses
Ft.	Feet, Foot
Ftg.	Footing
G, Gir.	Girder
Ga.	Gage, Gauge
Galv.	Galvanized
GDI	Grated Drain Inlet
GFRP	Glass Fiber Reinforced Polymer Rebar
Gr.	Grade
Grd.	Ground
GRP	Grouted Rubble Pavement
(H)	Hinge
HDPE	High Density Polyethylene
HDOT	State of Hawaii Department of Transportation
HECO	Hawaiian Electric Company
Horiz., H	Horizontal
Ht.	Height
HS	High strength
IB	Inbound
ID	Inside Diameter
IF	Inside Face
In.	Inch
Int.	Interior
Inv.	Invert
Jt.	Joint
K	Kips
KF	Kip Foot
KLF	Kips Per Linear Foot
KSF	Kips Per Square Foot
KSI, ksi	Kips Per Square Inch
L	Length
lb., lbs., LBS.	Pound, Pounds
LF, Lin. Ft.	Linear Feet/Foot
Longit.	Longitudinal
LS	Lump Sum
Ltg. Std.	Lighting Standard
M	Modified
Max.	Maximum
Mech.	Mechanical
MH	Manhole
Min.	Minimum
Misc.	Miscellaneous
M.L.	Matchline
MPH	Miles Per Hour
MSL	Mean Sea Level
N	North
NF	Near Face
NIC	Not in Contract
No.	Number
NTS	Not to Scale
OB	Outbound
oc, o.c.	On Center
OD	Outside Diameter
OG	Outside Girder, Outbound Girder
Opn'g	Opening
O/S	Offset
OHWM	Ordinary High Water Mark
PB	Pull Box
PL	Plate
PCCP	Portland Cement Concrete Pavement
PC	Point of Curvature
PCF	Pounds per Cubic Foot
P(e)	Effective Prestress Force After All Losses
Perf.	Perforated
PI	Point of Intersection of Tangents
PIVC	Point of Intersection of Vertical Curve
PLF, plf	Pounds per Linear Foot
PPM	Parts Per Million
PRC	Point of Reverse Curvature
PVC	Polyvinyl Chloride
Prestr.	Prestressed
P/S	Prestressed Strands
PSF, psf	Pounds per Square Foot
PSI, psi	Pounds per Square Inch
PT	Point of Tangency
Pt., Pts.	Point, Points
R, Rad.	Radius
Rebar	Reinforcing Bar
Ref.	Reference
Reinf.	Reinforced, Reinforcing, Reinforcement
Req'd.	Required
Ret.	Retaining
RF	Rear Face
ROW	Right of Way
Rdwy.	Roadway
S	South
SBD	Special Bridge Deck Mix
SE	Super Elevation
Sect.	Section
SF, sq. ft.	Square Feet
Sht.	Sheet
Sim.	Similar
Sl.	Slope
Spcs., Spg.	Spaces, Spacing
Spec.	Specification
Sprd.	Spread
SRW	Segmental Retaining Wall
SS	Stainless Steel
Std.	Standard
Sta.	Station
Stiff.	Stiffener
Stirr.	Stirrup
Stl.	Steel
Str.	Straight, Stream
Struct.	Structure
SY	Square Yard
Symm.	Symmetrical
T	Top
T℄B	Top and Bottom
Tan.	Tangent
TCE	Top of Column (and Bent Cap Soffit) Elevation
Temp.	Temporary
Term.	Terminal
TFE	Top of Footing Elevation
Thk.	Thick
TOD	Top of Deck
TOP	Top of Pier
Tot.	Total
Transv.	Transverse
TS	Structural Tubing
TSS	Tendon For Girder in Simply Supported Condition
Typ.	Typical
Undergrd.	Underground
UNO	Unless Noted Otherwise
Var.	Varies
VC	Vertical Curve
VESLMC	Very Early Strength Latex Modified Concrete
Vert., V	Vertical
W	West
w/	With
W/C	Water/Cementitious
WP	Work Point, Working Point
WS	Water Surface
WW	Wingwall
WWF	Welded Wire Fabric
Yr.	Year

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SYMBOLS AND ABBREVIATIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: None Date: December 2022

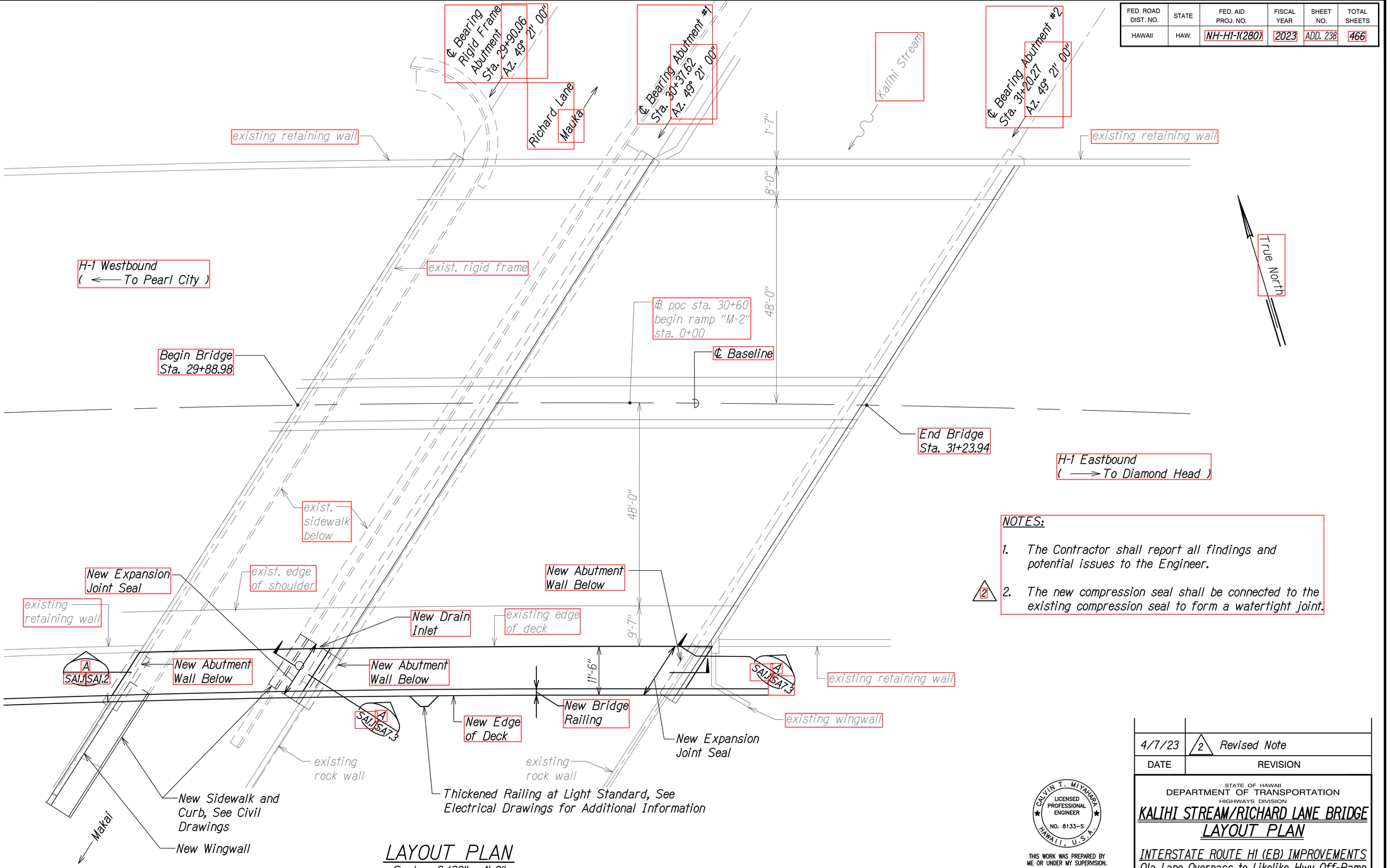
SHEET No. S0.11 OF 11 SHEETS

237

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 238	466



LAYOUT PLAN
Scale: 3/32" = 1'-0"

NOTES:

1. The Contractor shall report all findings and potential issues to the Engineer.
2. The new compression seal shall be connected to the existing compression seal to form a watertight joint.

DATE	REVISION
4/7/23	2 Revised Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
LAYOUT PLAN

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA1.1 OF 2 SHEETS

CALVIN T. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 8133-S HAWAII, U.S.A.

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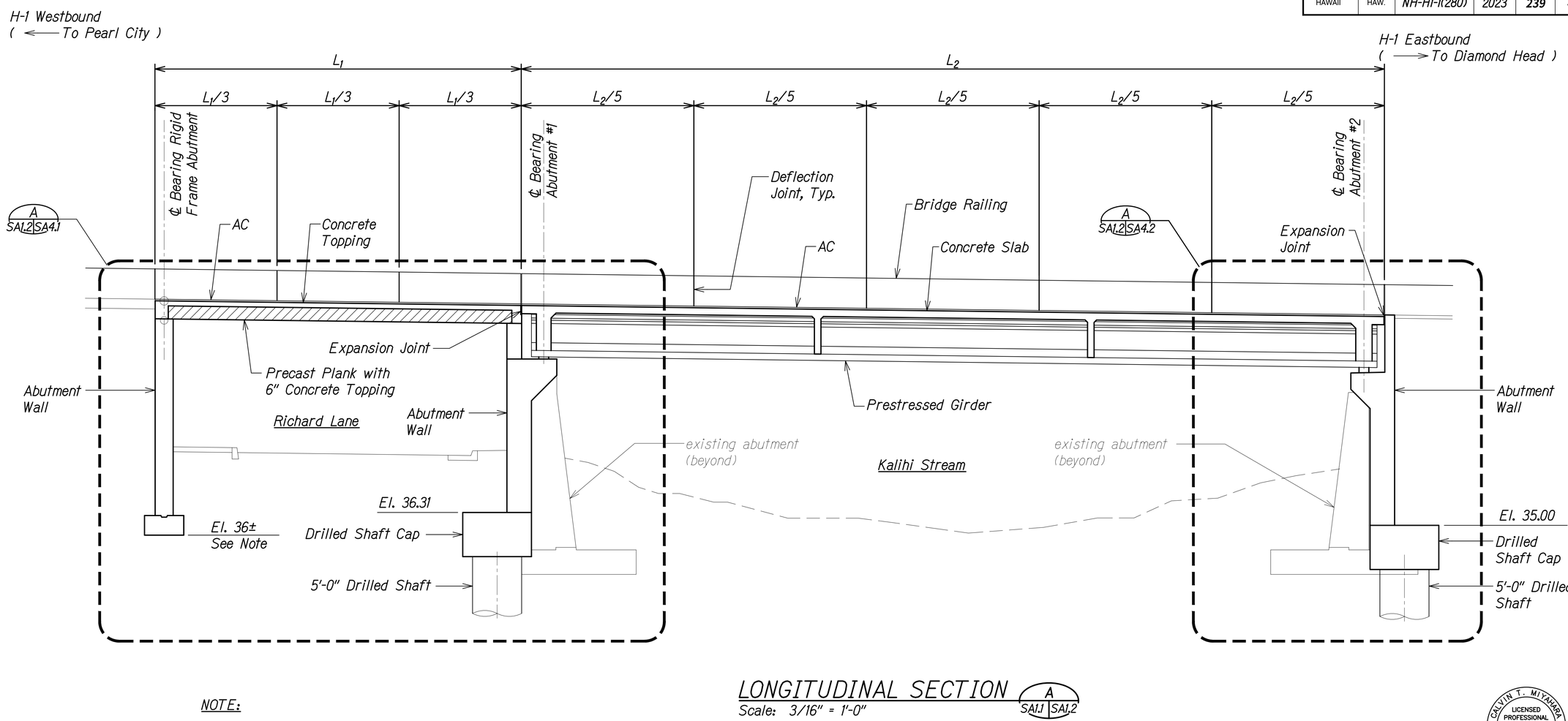
Calvin Miyahara
4-30-24
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NOTE BOOK | No.

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ADD. 238

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	239	466



LONGITUDINAL SECTION

A SA1.1 | SA1.2

Scale: 3/16" = 1'-0"

NOTE:

Rigid frame abutment foundation shall bear on rock. Adjust bottom of footing elevation as required.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
LONGITUDINAL SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

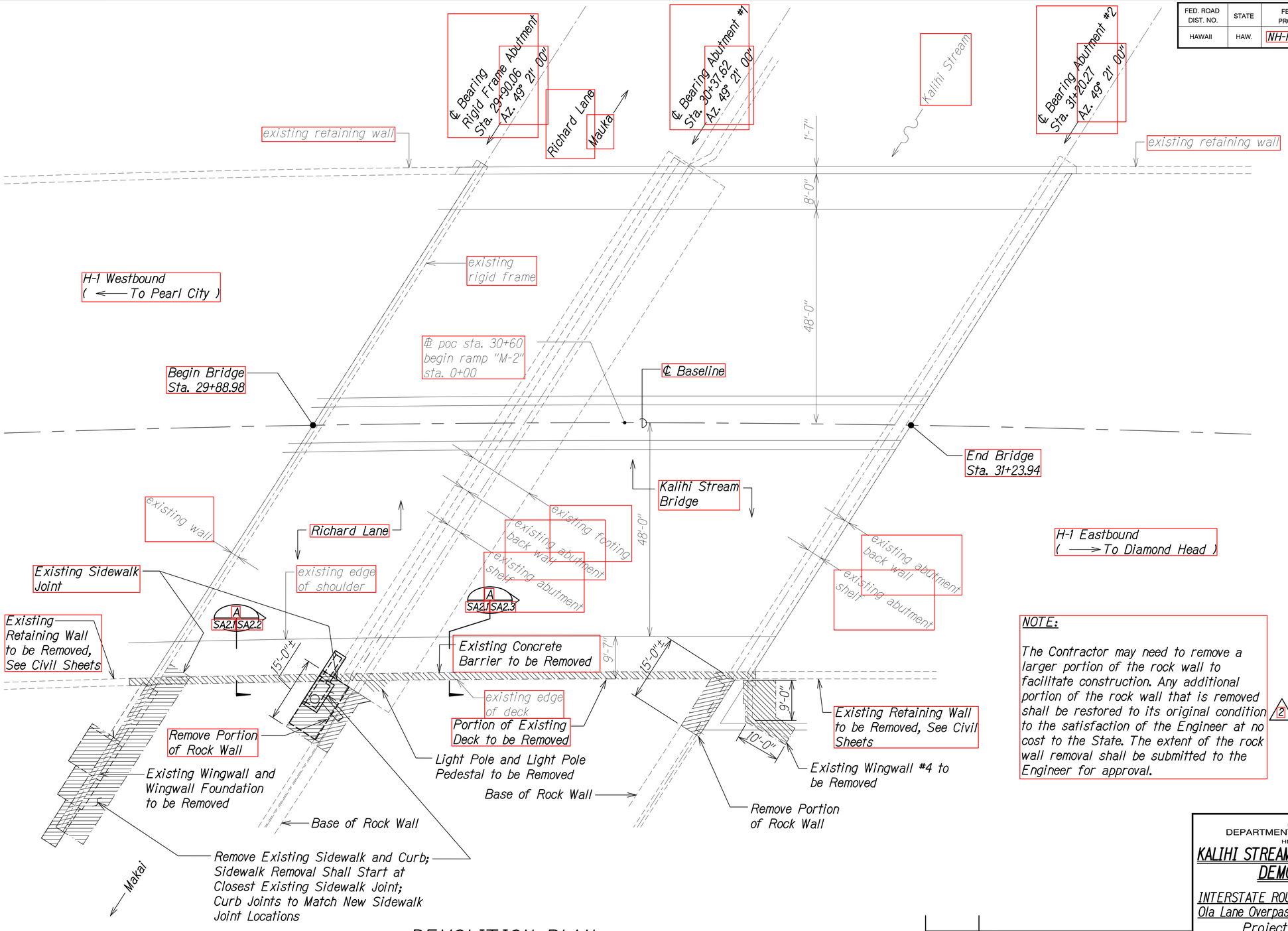
Scale: As Noted Date: December 2022

SHEET No. SA1.2 OF 2 SHEETS

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

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 240	466



DEMOLITION PLAN

Scale: 3/32" = 1'-0"

NOTE:

The Contractor may need to remove a larger portion of the rock wall to facilitate construction. Any additional portion of the rock wall that is removed shall be restored to its original condition to the satisfaction of the Engineer at no cost to the State. The extent of the rock wall removal shall be submitted to the Engineer for approval. 2

CALVIN T. MIYAHARA
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DATE	REVISION
4/7/23	2 Revised Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE DEMOLITION PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

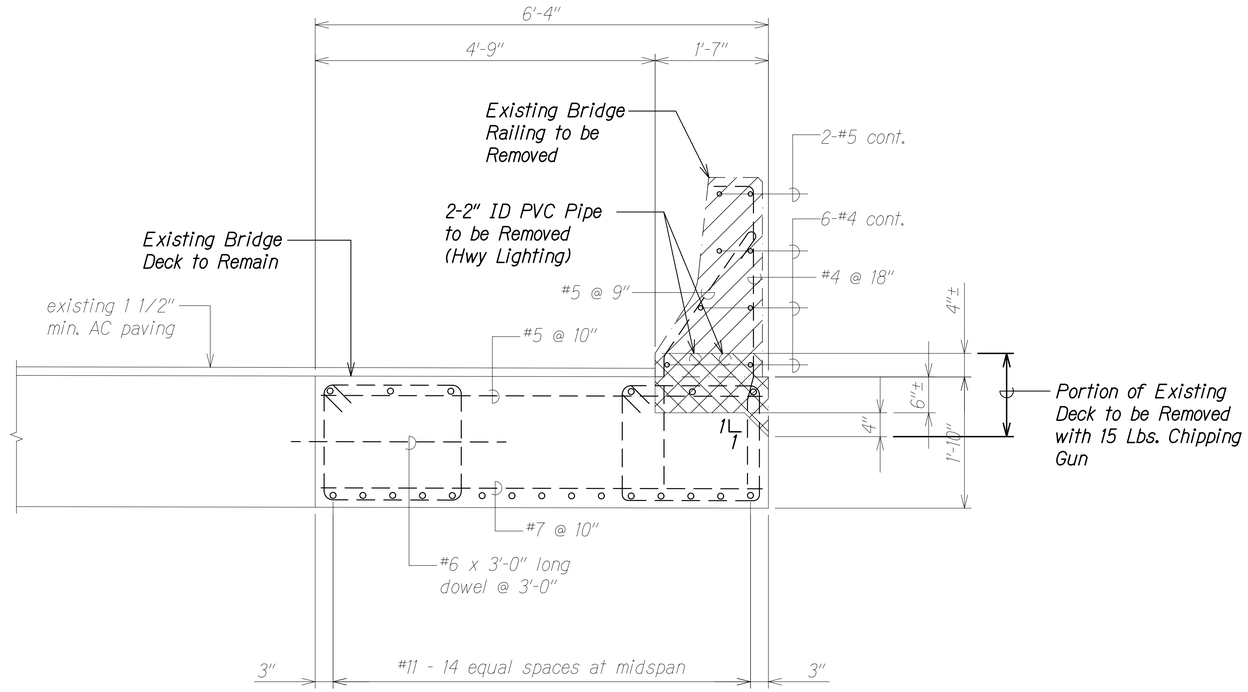
SHEET No. SA2.1 OF 10 SHEETS

ADD. 240

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	241	466



DEMOLITION SECTION A
Scale: 1" = 1'-0"
SA2.1 | SA2.2

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK/RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0202 RL DEMO DECK SECT.DWG PLOT TIME: 01-04-23, 9:12 AM)

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HIGHWAYS DIVISION

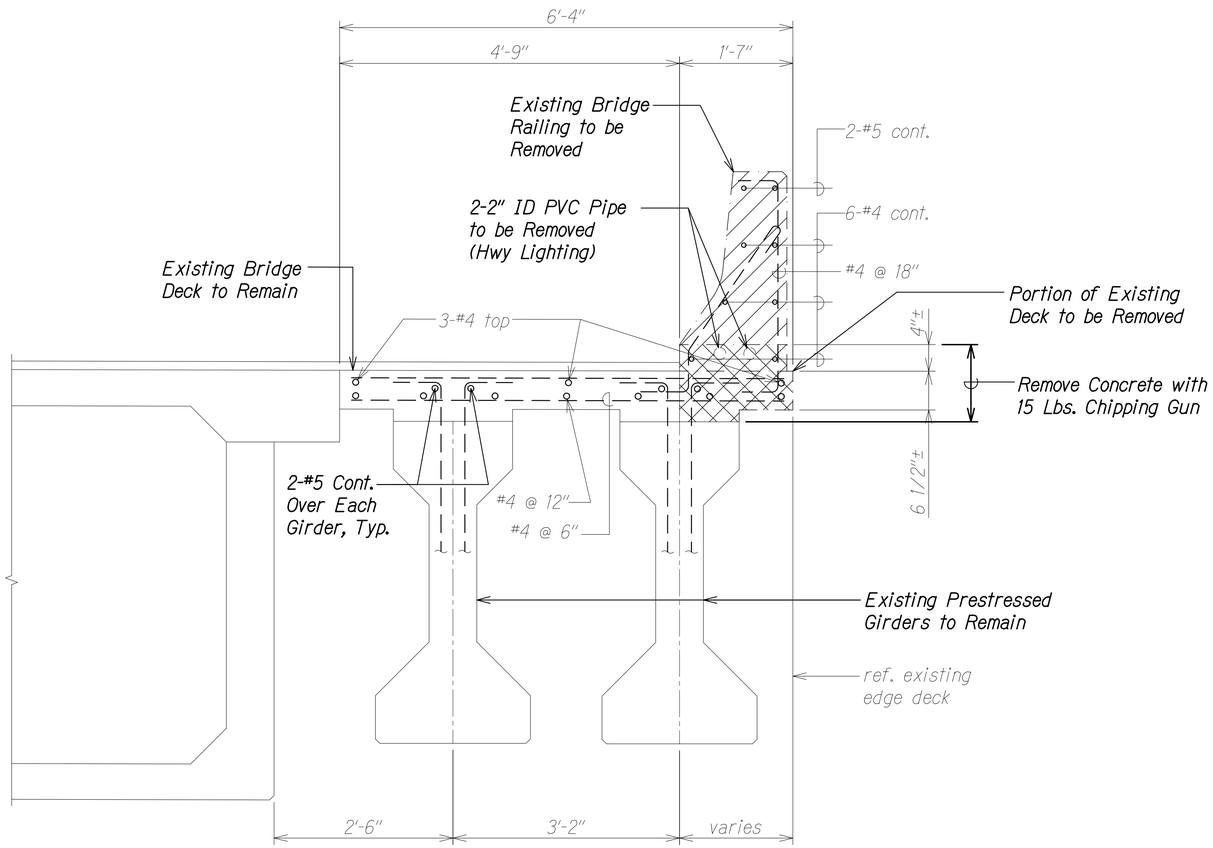
KALIHI STREAM/RICHARD LANE BRIDGE DEMOLITION SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA2.2 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	242	466



DEMOLITION SECTION (A) SA2.1 | SA2.3

Scale: 1" = 1'-0"

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KALIHI STREAM/RICHARD LANE BRIDGE DEMOLITION SECTION

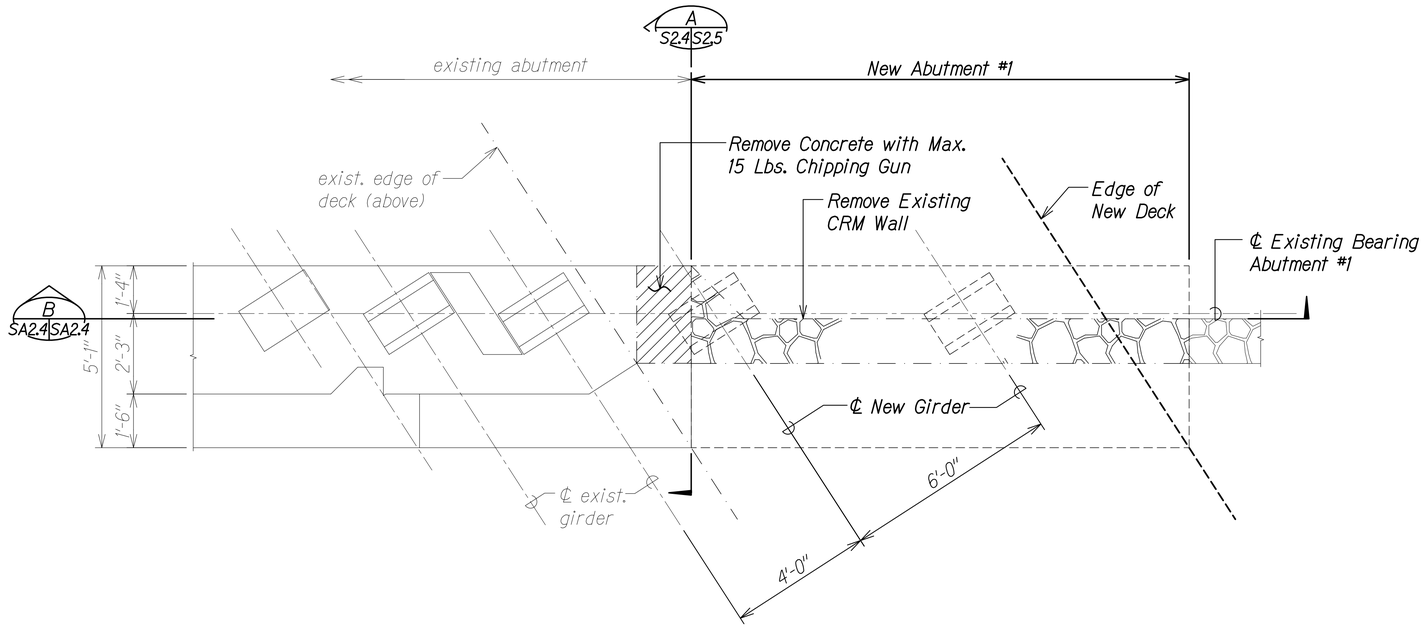
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SA2.3 OF 10 SHEETS

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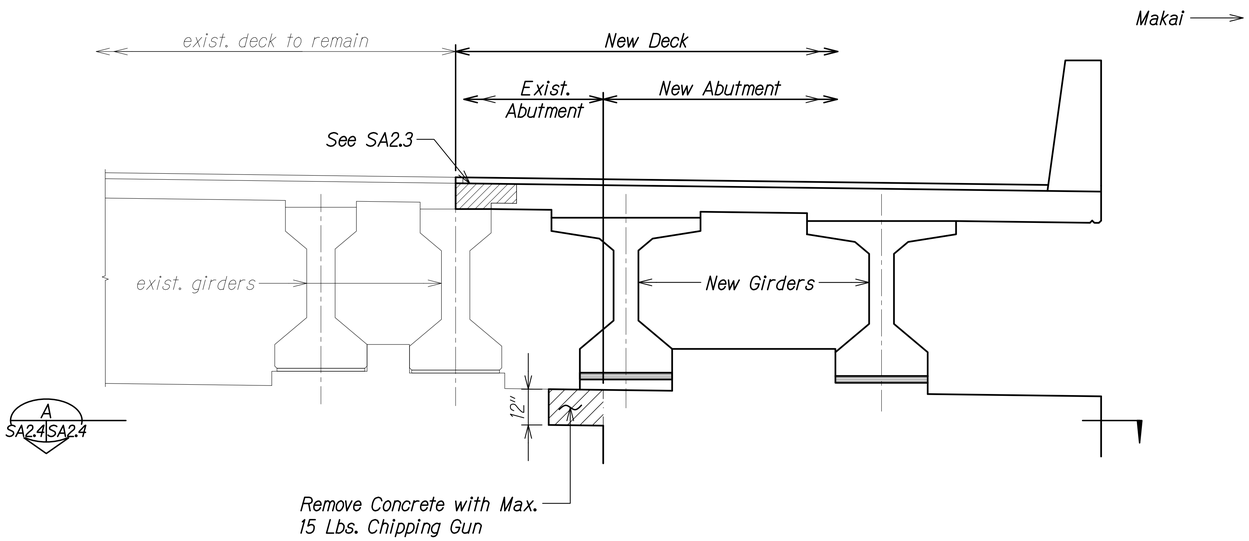
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	243	466



EXISTING ABUTMENT #1 - DEMOLITION PLAN

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

A SA2.4 SA2.4



EXISTING ABUTMENT #1 - DEMOLITION ELEVATION

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

B SA2.4 SA2.4

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

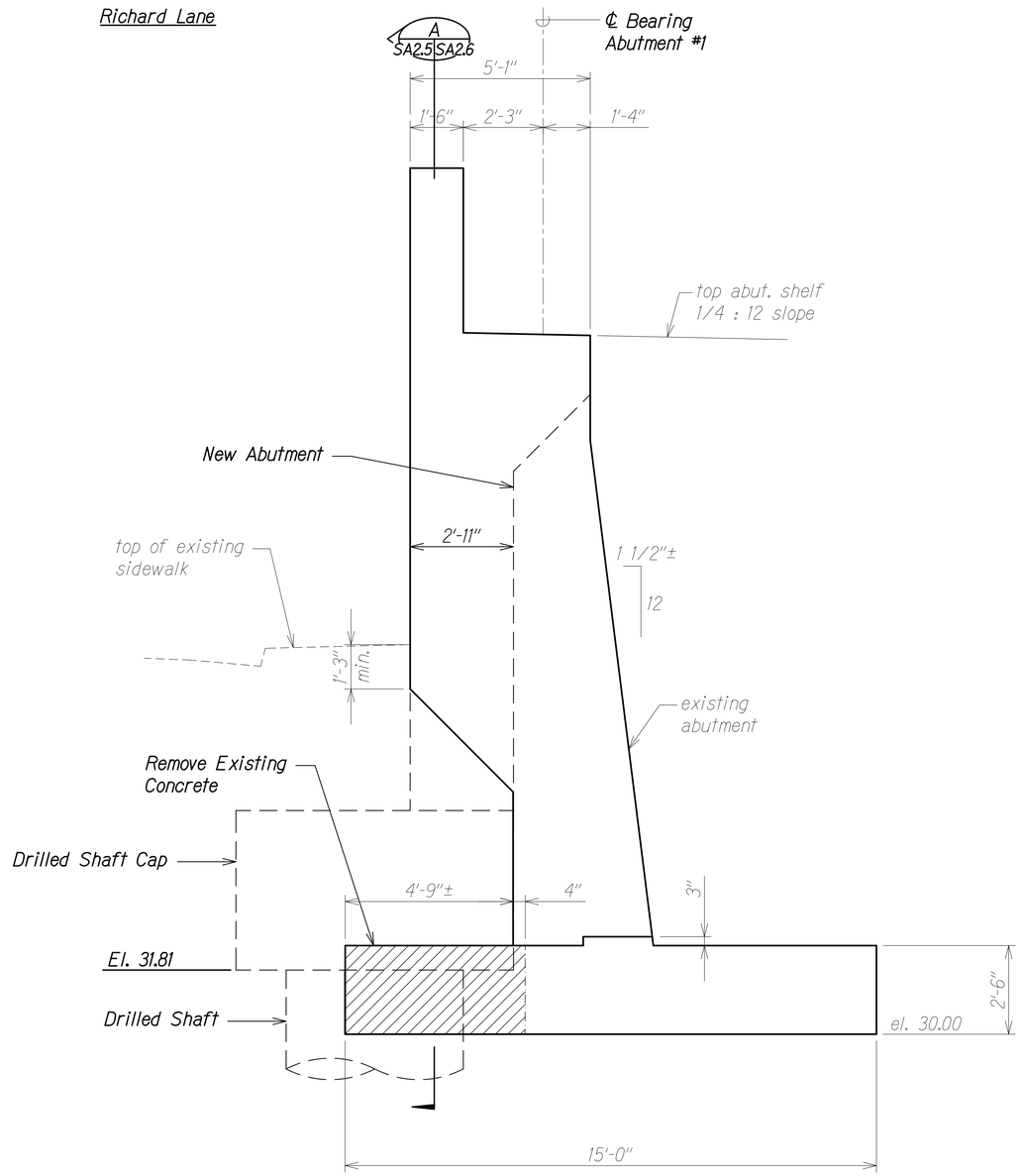
KALIHI STREAM/RICHARD LANE BRIDGE
ABUTMENT #1 - DEMOLITION PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA2.4 OF 10 SHEETS

Richard Lane



EXISTING ABUTMENT #1 - DEMOLITION ELEVATION

A
SA2.4|SA2.5

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	244	466

CALVIN T. MIYAHIRA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
ABUT. #1 - DEMOLITION SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

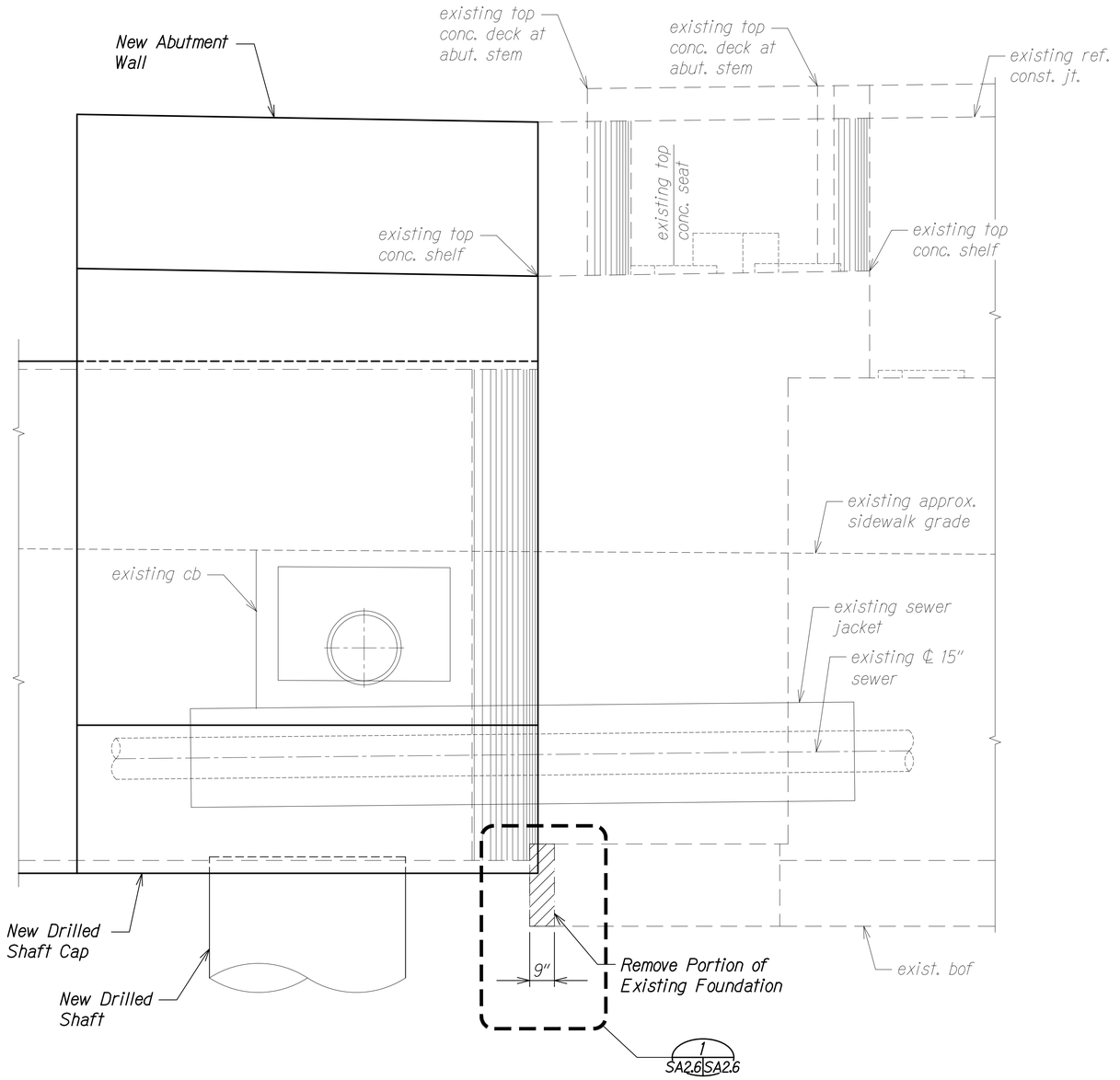
Scale: As Noted Date: December 2022

SHEET No. SA2.5 OF 10 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0204 ABUT1 DEMO.DWG PLOT TIME: 01-04-23, 9:13 AM)

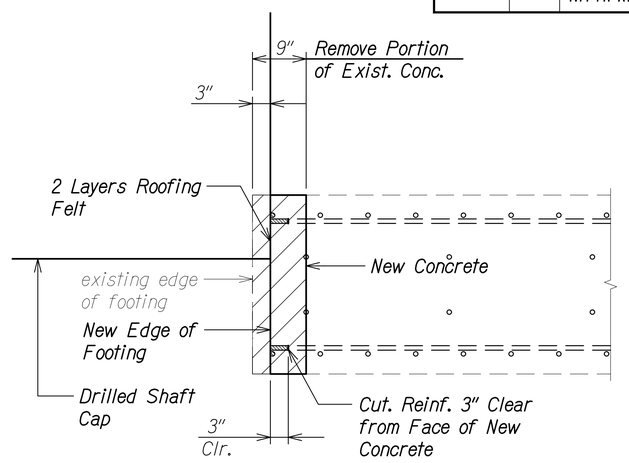
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	245	466



EXISTING ABUTMENT #1 - DEMOLITION ELEVATION

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

A
SA2.6 | SA2.6



NOTE:

Coat any exposed bar with epoxy.

DEMOLITION DETAIL

Scale: 1" = 1'-0"

1
SA2.6 | SA2.6

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
ABUT. #1 - DEMOLITION SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

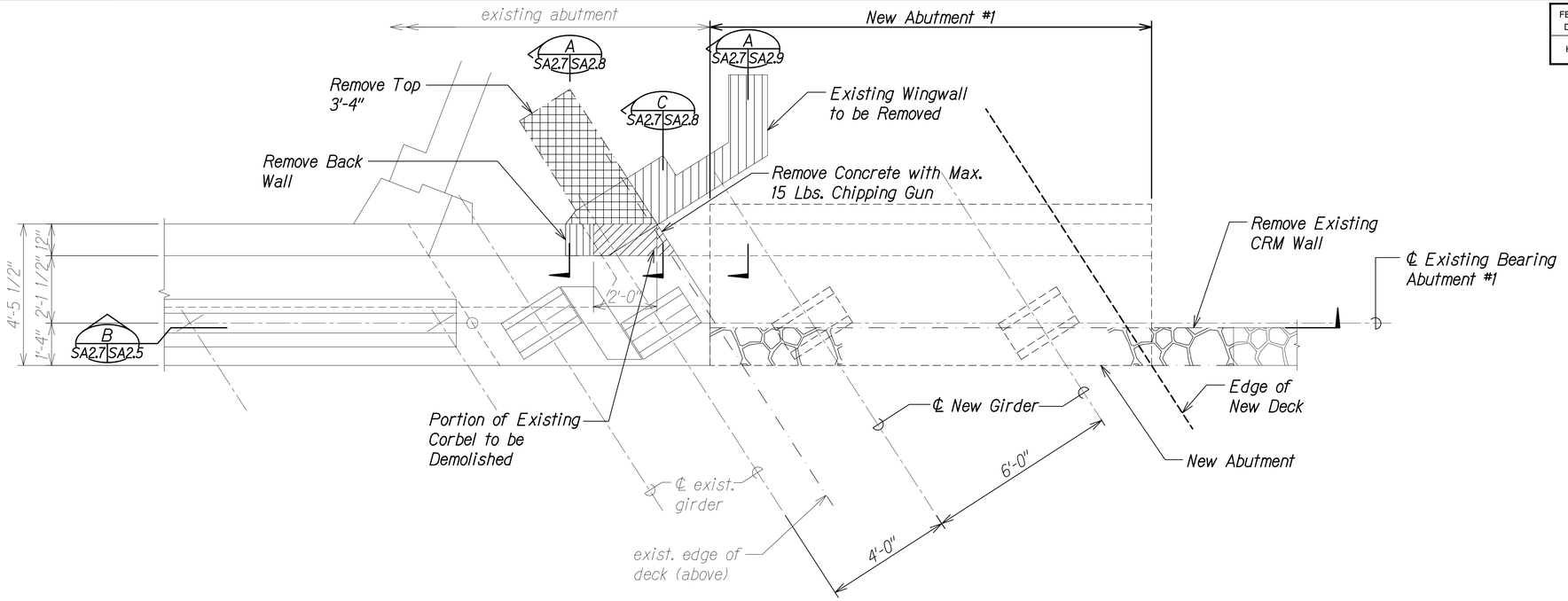
Scale: As Noted Date: December 2022

SHEET No. SA2.6 OF 10 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0204 ABUT1 DEMO.DWG PLOT TIME: 01-04-23, 9:13 AM)

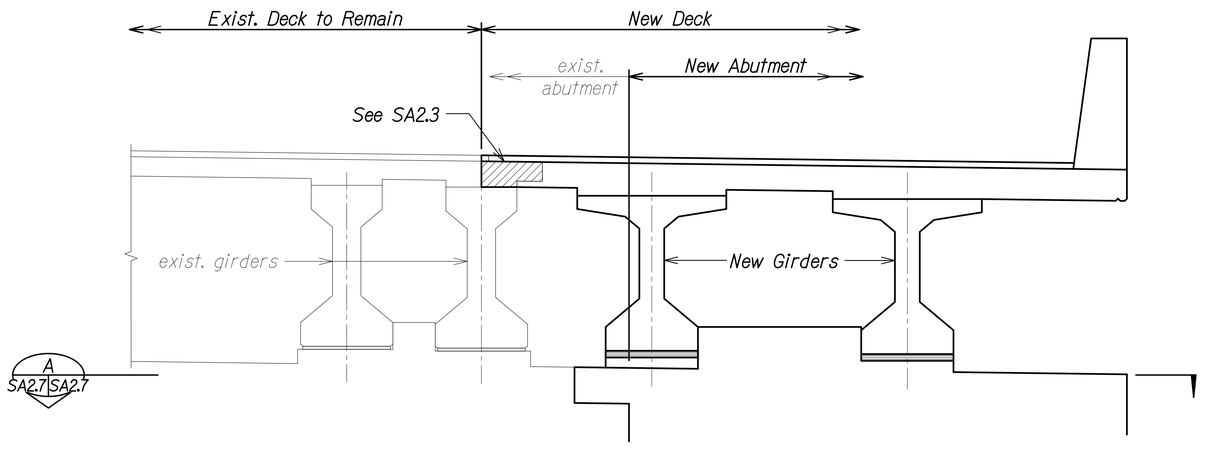
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	246	466



EXISTING ABUTMENT #2 - DEMOLITION PLAN

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

A SA2.7 SA2.7



EXISTING ABUTMENT #2 - DEMOLITION ELEVATION

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

B SA2.7 SA2.7

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

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24

SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
ABUTMENT #2 - DEMO. PLAN AND ELEVATION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

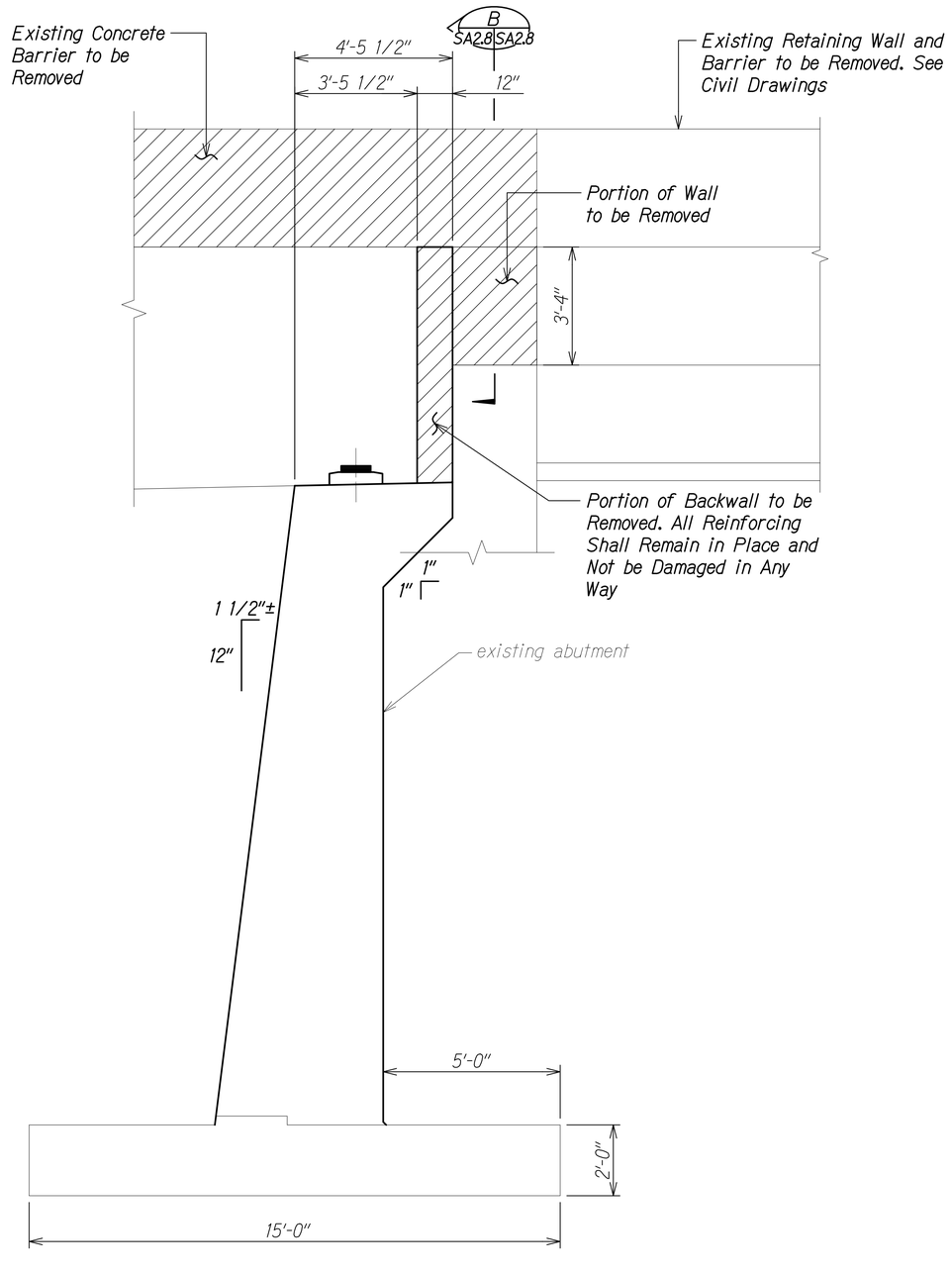
Scale: As Noted Date: December 2022

SHEET No. SA2.7 OF 10 SHEETS

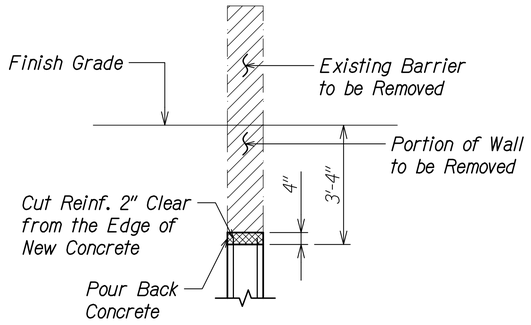
246

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0207 ABUT2 DEMO.DWG PLOT TIME: 01-04-23, 9:14 AM)

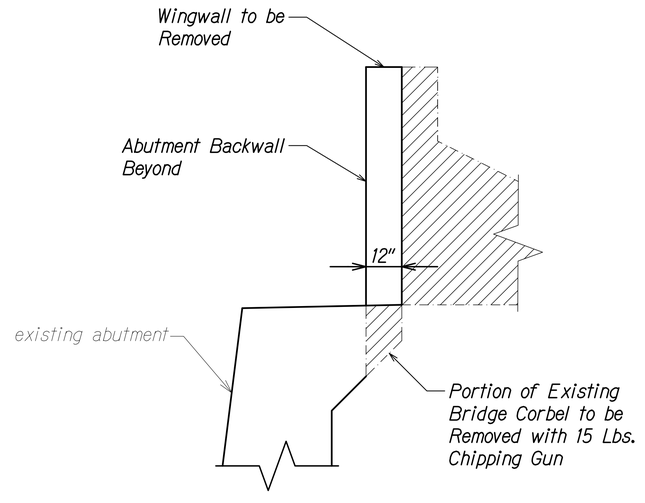
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	247	466



SECTION A
Scale: 1/2" = 1'-0" SA2.7 | SA2.8



SECTION B
Scale: 1/2" = 1'-0" SA2.8 | SA2.8



SECTION C
Scale: 1/2" = 1'-0" SA2.7 | SA2.8

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

ORIGINAL PLAN
NOTE BOOK
No. ____

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK:RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0208 WALL DEMO SECT.DWG PLOT TIME: 01-04-23, 9:15 AM)

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

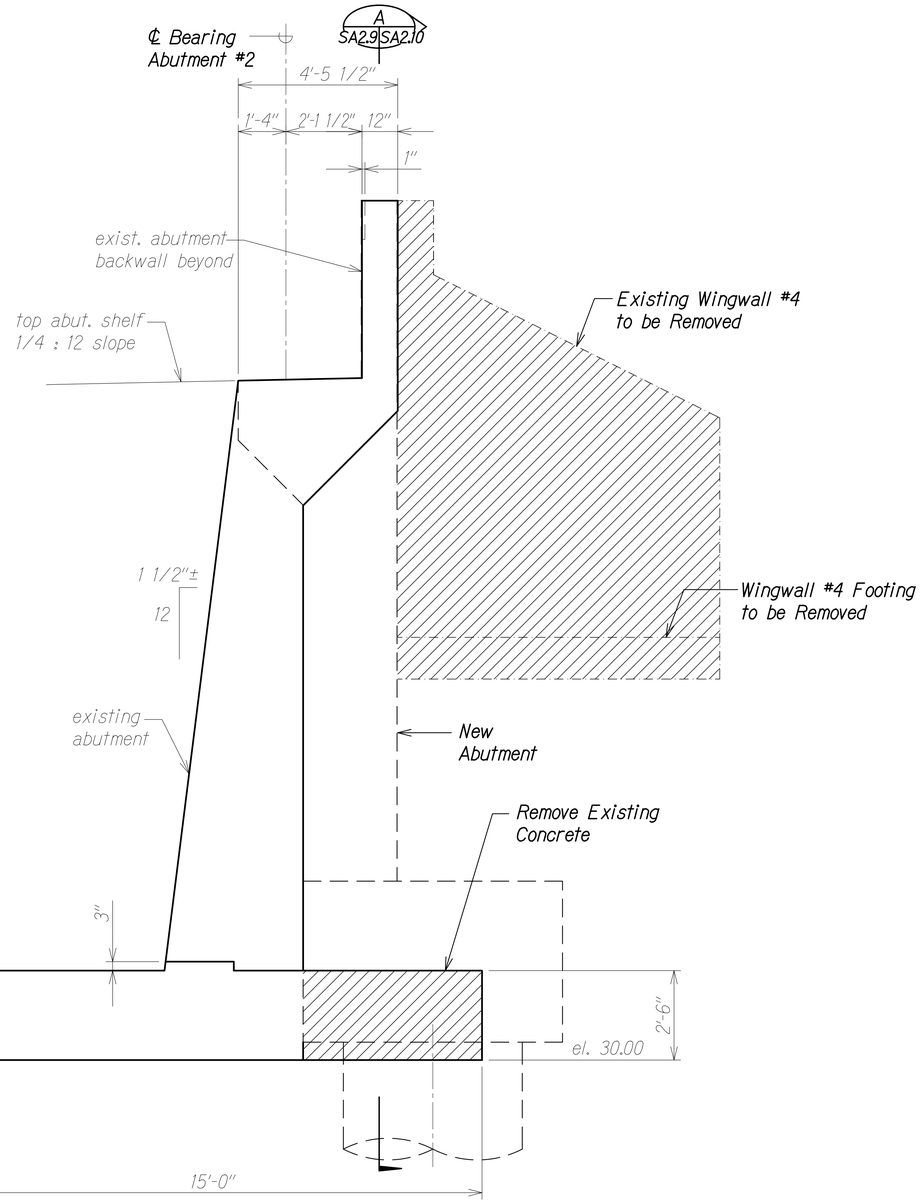
KALIHI STREAM/RICHARD LANE BRIDGE DEMO SECTION AT ABUT. #2

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA2.8 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	248	466



EXISTING ABUTMENT #2 - DEMOLITION SECTION

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

A
SA2.9 SA2.9

CALVIN T. MIYAMURA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
ABUTMENT #2 - DEMOLITION SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

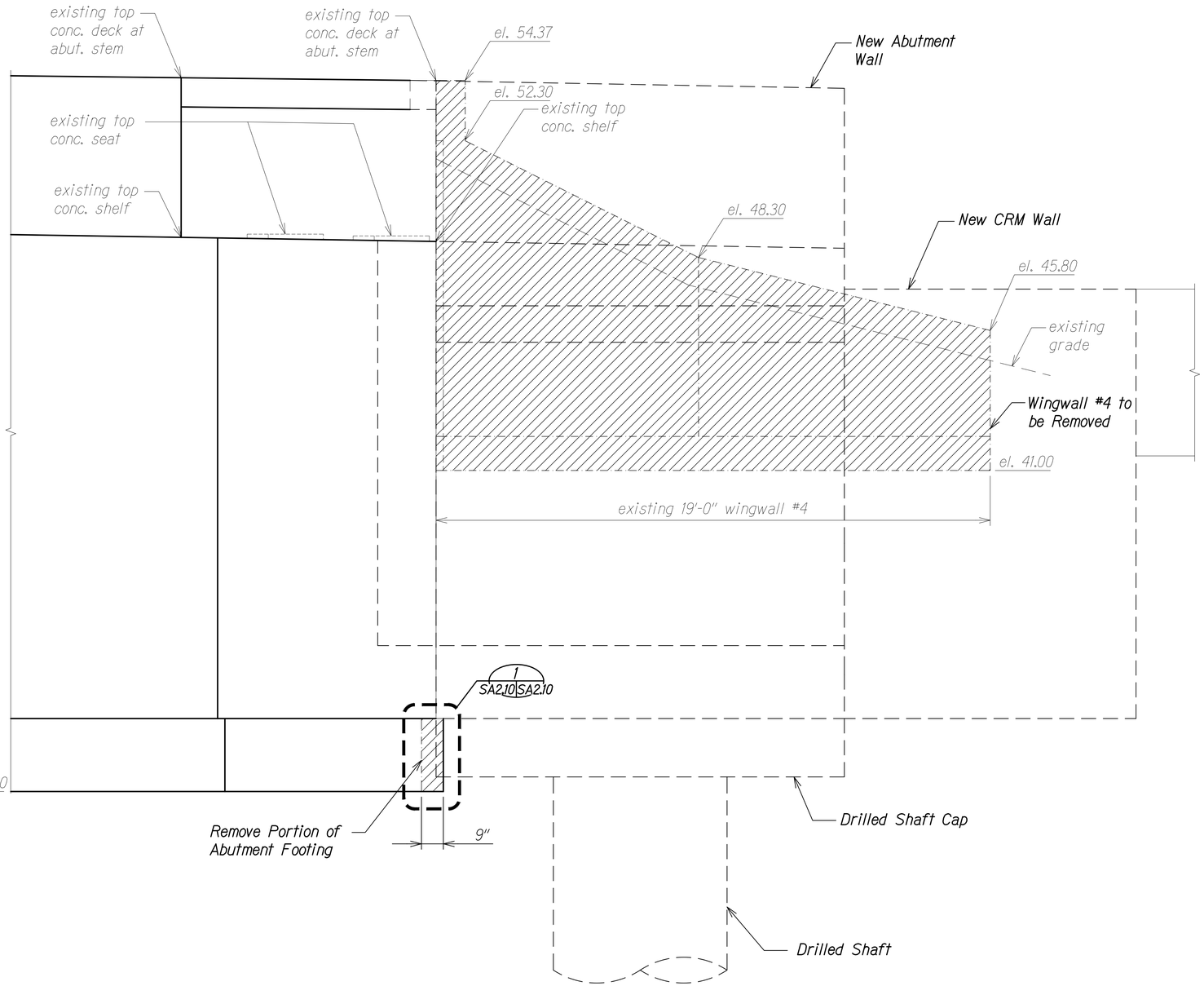
Scale: As Noted Date: December 2022

SHEET No. SA2.9 OF 10 SHEETS

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

DRAWING NAME: Z:\OD ONGOING\OD JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0207 ABUT2 DEMO.DWG PLOT TIME: 01-04-23, 9:14 AM)

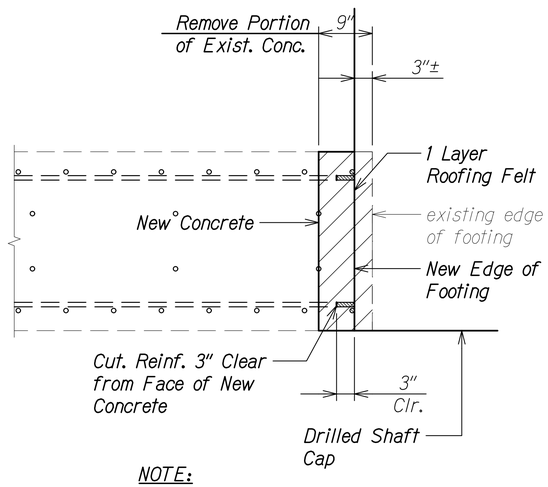
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	249	466



EXISTING ABUTMENT #2 - DEMOLITION ELEVATION

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

A
SA2.10 SA2.10



NOTE:

Coat any exposed bar with epoxy.

DEMOLITION DETAIL

Scale: 1" = 1'-0"

1
SA2.5 SA2.10

CALVIN T. MIYAMURA
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
ABUTMENT #2 - DEMOLITION ELEVATION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

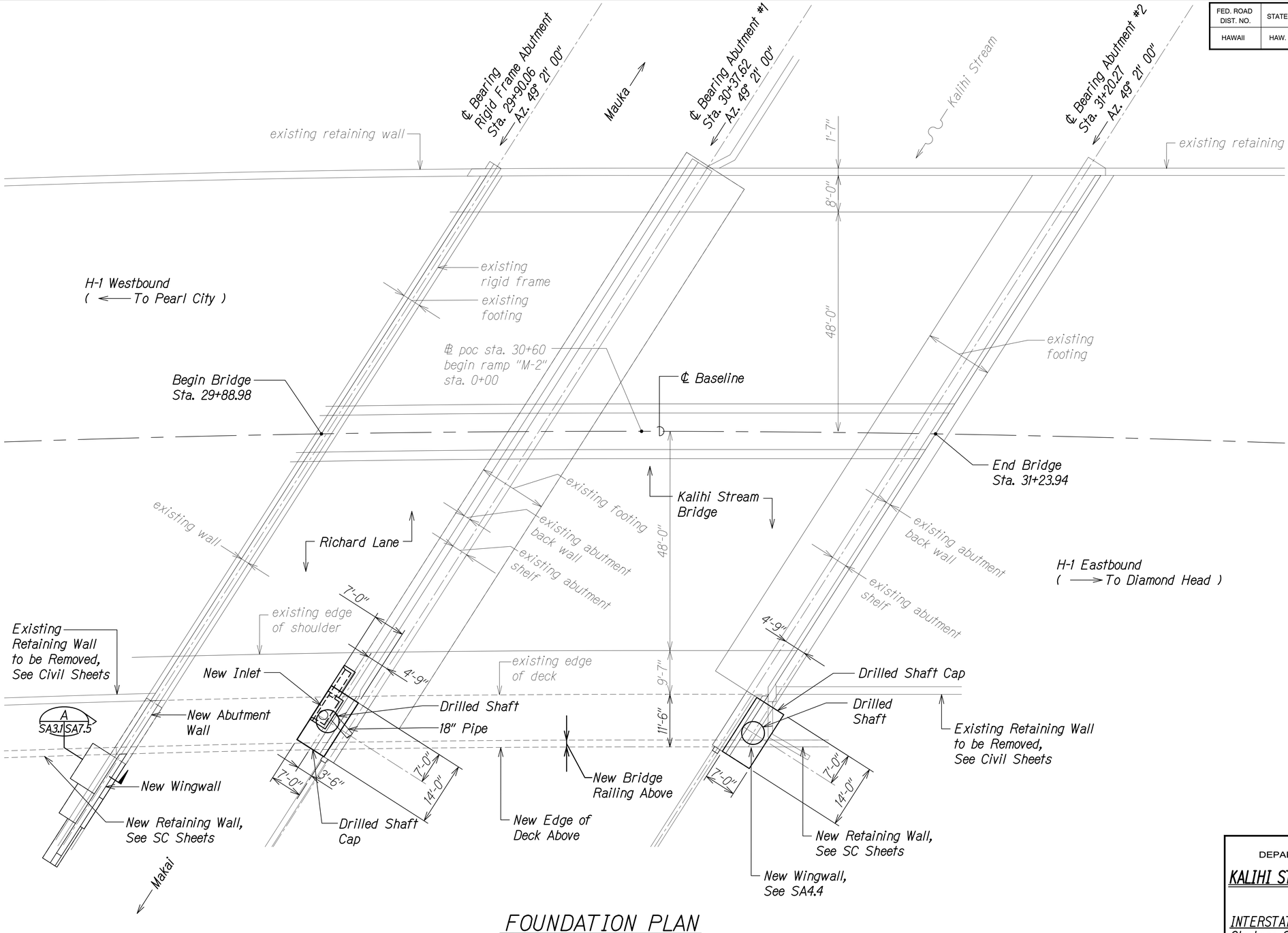
Scale: As Noted Date: December 2022

SHEET No. SA2.10 OF 10 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0207 ABUT2 DEMO.DWG PLOT TIME: 01-04-23, 9:14 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	250	466



FOUNDATION PLAN

Scale: 3/32" = 1'-0"

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

DRAWING NAME: Z:\DO ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0301 BRD FDN PLAN.DWG PLOT TIME: 01-04-23, 9:16 AM)

CALVIN T. MIYAHIRA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

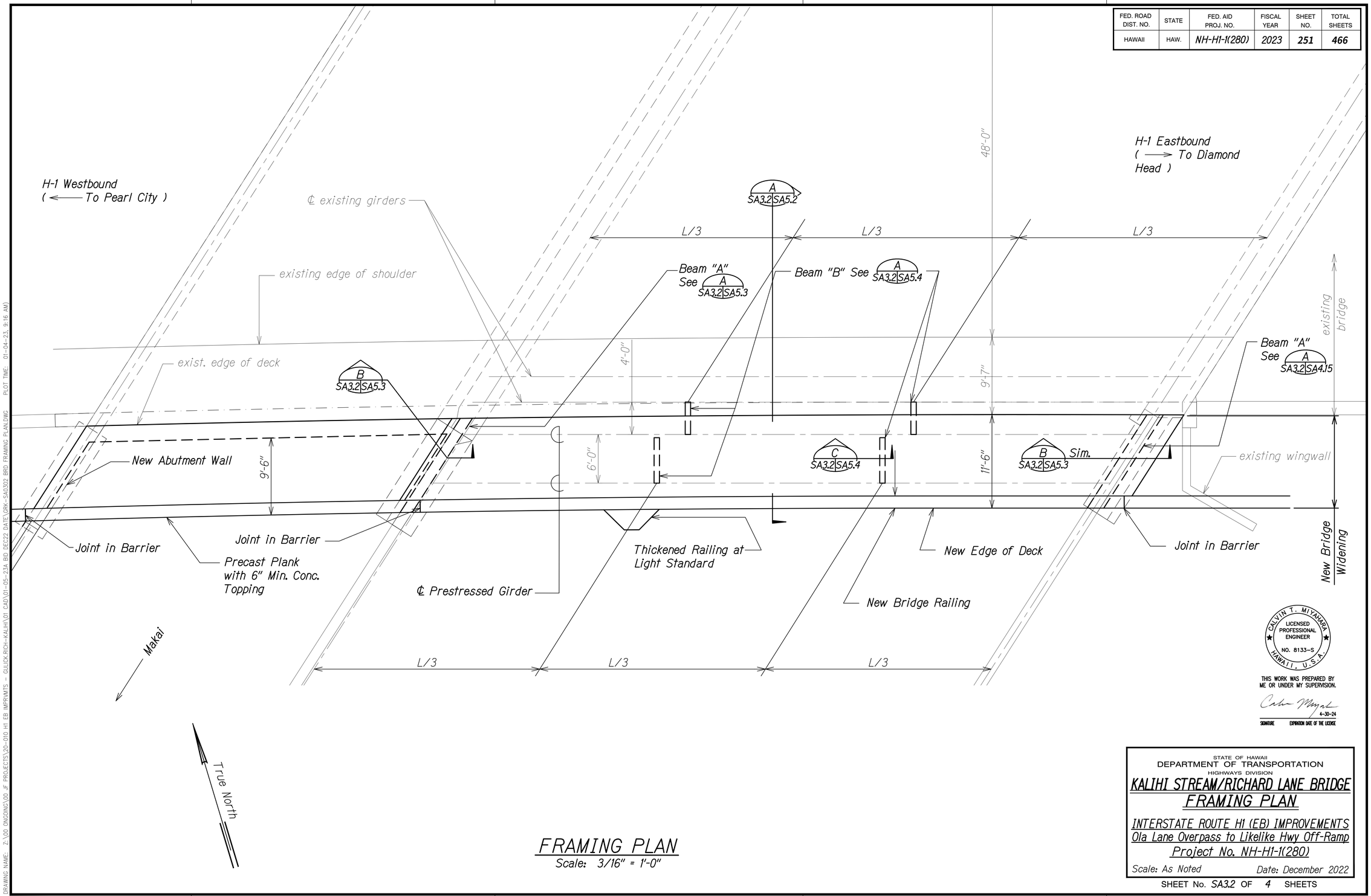
KALIHI STREAM/RICHARD LANE BRIDGE FOUNDATION PLAN

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA3.1 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	251	466



FRAMING PLAN
Scale: 3/16" = 1'-0"

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

DRAWING NAME: Z:\OD ONGOING\OD JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0302 BRD FRAMING PLAN.DWG PLOT TIME: 01-04-23, 9:16 AM)

CALVIN T. MIYAMURA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

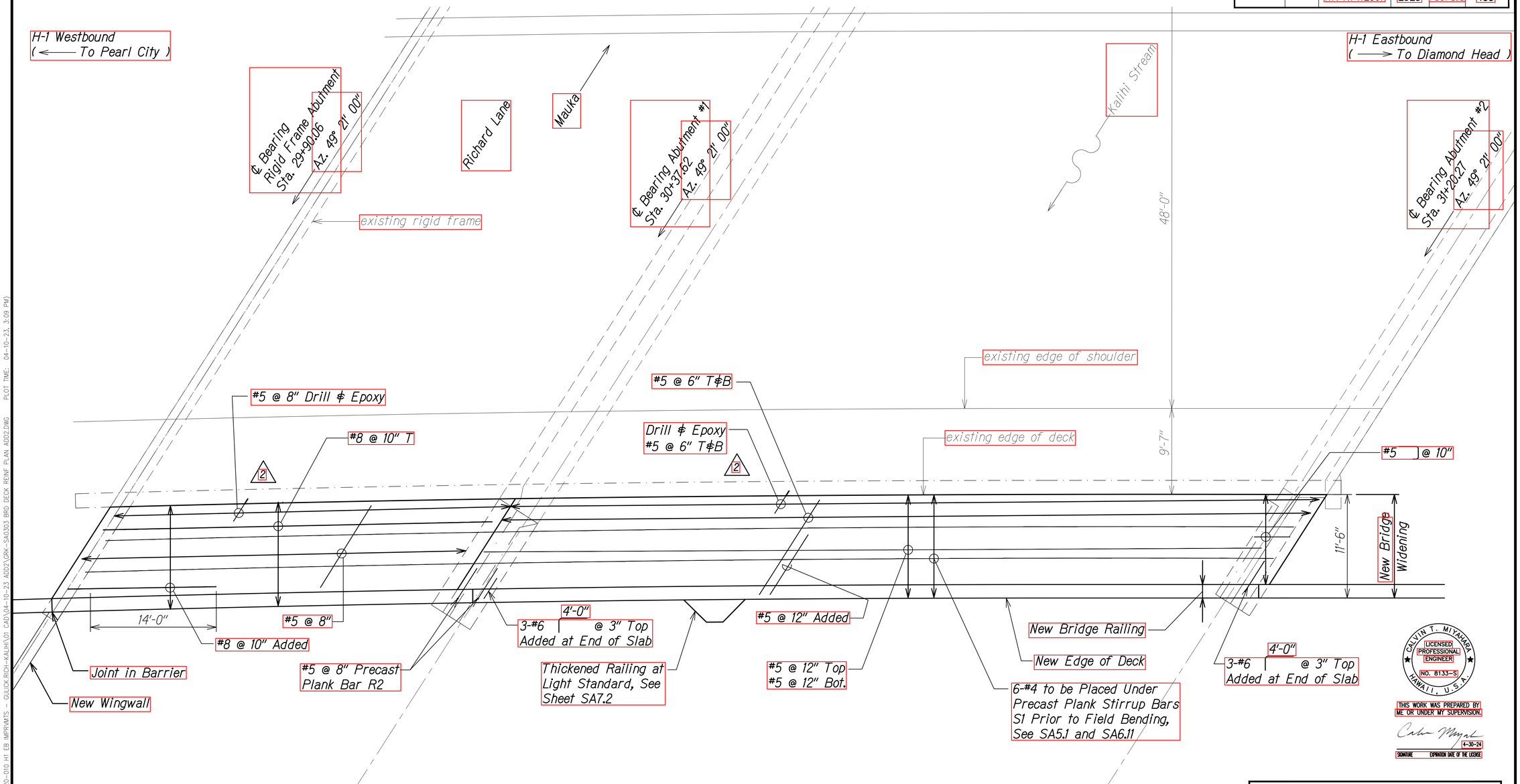
KALIHI STREAM/RICHARD LANE BRIDGE
FRAMING PLAN

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA3.2 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 252	466



DECK REINFORCING PLAN

Scale: 3/16" = 1'-0"

DATE	No.	REVISION
4/7/23	2	Revised Reinf.

CALVIN T. MIYAMURA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
DECK REINFORCING PLAN

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted
Date: December 2022

SHEET No. SA3.3 OF 4 SHEETS

ADD. 252

ORIGINAL PLANS | NOTE BOOK | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 AD22\GRK-SA0303 BRD DECK REINF PLAN AD22.DWG PLOT TIME: 04-10-23, 3:09 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 253	466

Begin Bridge
Sta. 29+88.98

℄ Baseline

H-1 Eastbound
(⟶ To Diamond Head)

30+00

31+00

℄ bearing
rigid frame abutment
sta. 29+90.06
Az. 49° 21' 00"

existing
rigid frame

Richard Lane (Below)

Mauka

℄ bearing abutment #1
sta. 30+37.62
Az. 49° 21' 00"

True North

℄ bearing abutment #2
sta. 31+20.27
Az. 49° 21' 00"

existing edge
of shoulder

existing edge
of deck

56.33
Sta. 29+50.93
o/s 56.61' Rt.

56.03
Sta. 29+75.00
o/s 58.00' Rt.

55.75
Sta. 30+00.00
o/s 58.00' Rt.

55.47
Sta. 30+25.00
o/s 58.00' Rt.

55.16
Sta. 30+50.00
o/s 58.00' Rt.

54.89
Sta. 30+75.00
o/s 58.00' Rt.

54.78
Sta. 30+84.22
o/s 58.03' Rt.

56.21
Sta. 29+43.26
o/s 68.00' Rt.

56.12
Sta. 29+50.00
o/s 68.00' Rt.

55.83
Sta. 29+75.00
o/s 68.00' Rt.

55.54
Sta. 30+00
o/s 68.00' Rt.

55.26
Sta. 30+25
o/s 68.00' Rt.

54.96
Sta. 30+50
o/s 68.00' Rt.

54.69
Sta. 30+75.00
o/s 68.00' Rt.

54.65
Sta. 30+77.91
o/s 68.00' Rt.

existing bridge

New Bridge Widening

New Bridge Railing

New Wingwall

New Edge of Deck

Kalihi Stream

Makai

1

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-07-23 ADD1\GRK-SA0304 FIN GRADE ADD1.DWG PLOT TIME: 04-06-23, 6:12 PM)

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

FINISH GRADE PLAN

Scale: 3/16" = 1'-0"

DATE	REVISION
4/7/23	1 Add. 1 - Remove Joint Line

CALVIN T. MIYAMASA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
FINISH GRADE PLAN

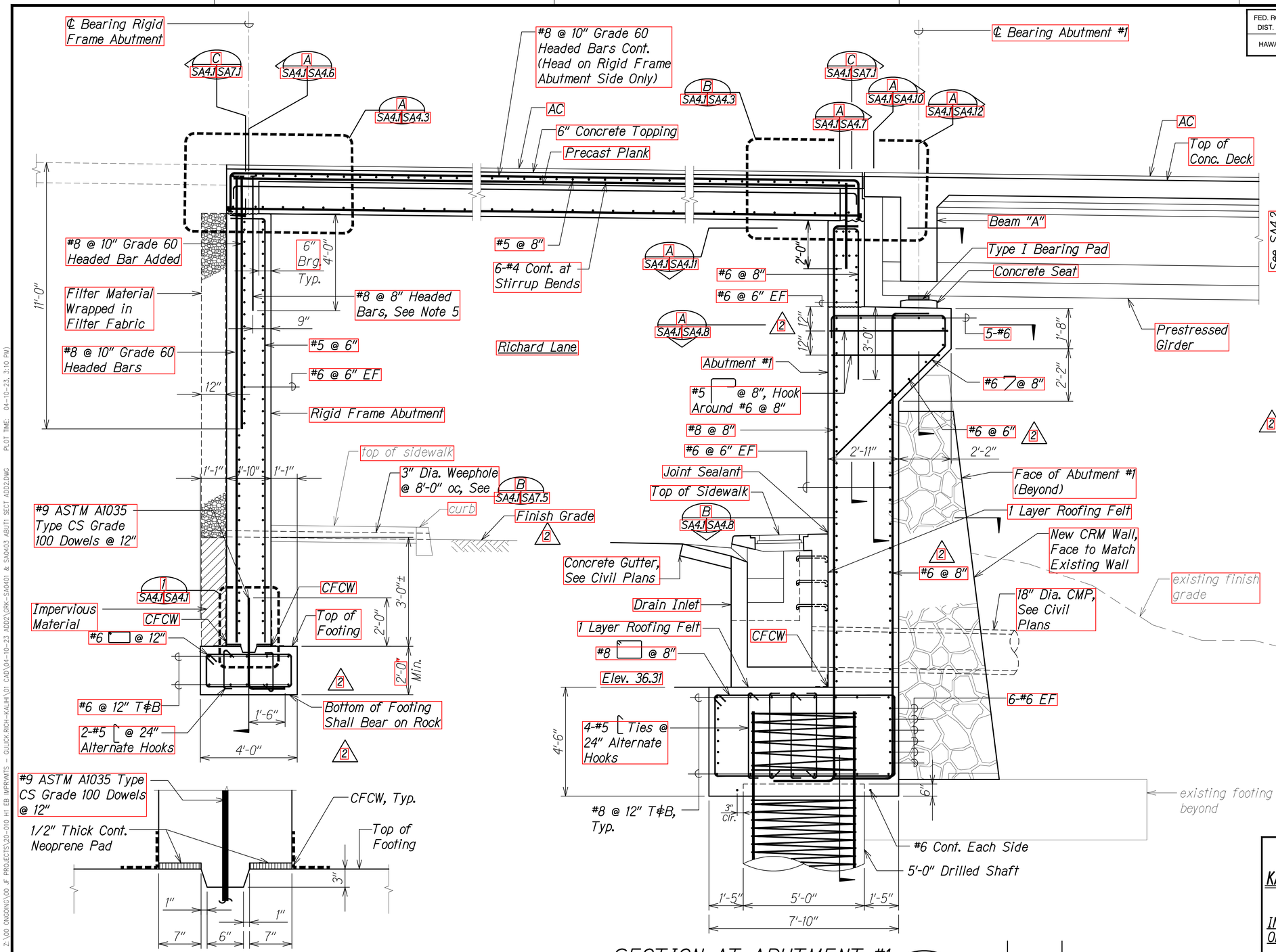
INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA3.4 OF 4 SHEETS

ADD. 253

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 254	466



KEY DETAIL 1 SA4.1 SA4.1
Scale: 1 1/2" = 1'-0"

SECTION AT ABUTMENT #1 A SA1.2 SA4.1
Scale: 1/2" = 1'-0"

NOTES:

1. Verify location of existing rigid frame footing. Submit layout of #6 dowels prior to drilling holes.
2. Expansion Joint gap at Abutment #1 shall match gap in existing bridge.
3. Strands not shown for clarity.
4. All horizontal dimensions are measured perpendicular to face of abutment walls.
5. #8 @ 8" vertical headed bars shall be offset and adjusted as required to miss bottom of Precast Plank #8 when plank is set.

CALVIN T. MIYAHIRA LICENSED PROFESSIONAL ENGINEER NO. 8133-S HAWAII, U.S.A.

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

DATE	REVISION
4/7/23	2 Revised Callouts and Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
SECTION AT ABUTMENT #1

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

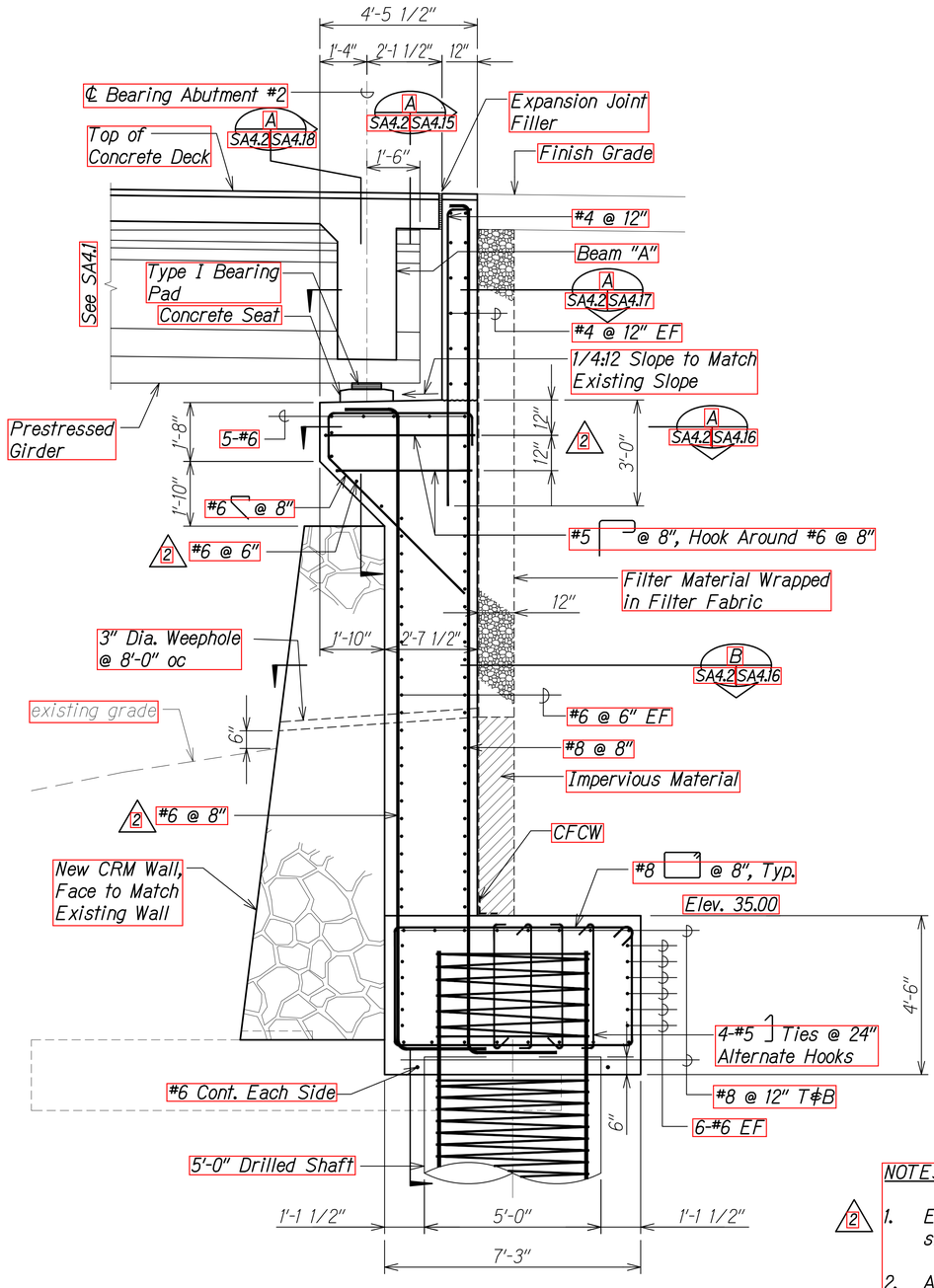
SHEET No. SA4.1 OF 22 SHEETS

ADD. 254

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK:RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0401 & SA0403 ABUT1 SECT ADD2.DWG PLOT TIME: 04-10-23, 3:10 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 225	466



SECTION AT ABUTMENT #2

A
SA1.2 SA4.2

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

NOTES:

2

1. Expansion joint gap at Abutment #2 shall match gap in existing bridge.
2. All horizontal dimensions are measured perpendicular to face of abutment wall.

DATE		REVISION
4/7/23	2	Revised Callouts and Note

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
SECTION AT ABUTMENT #2

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SA4.2 OF 22 SHEETS

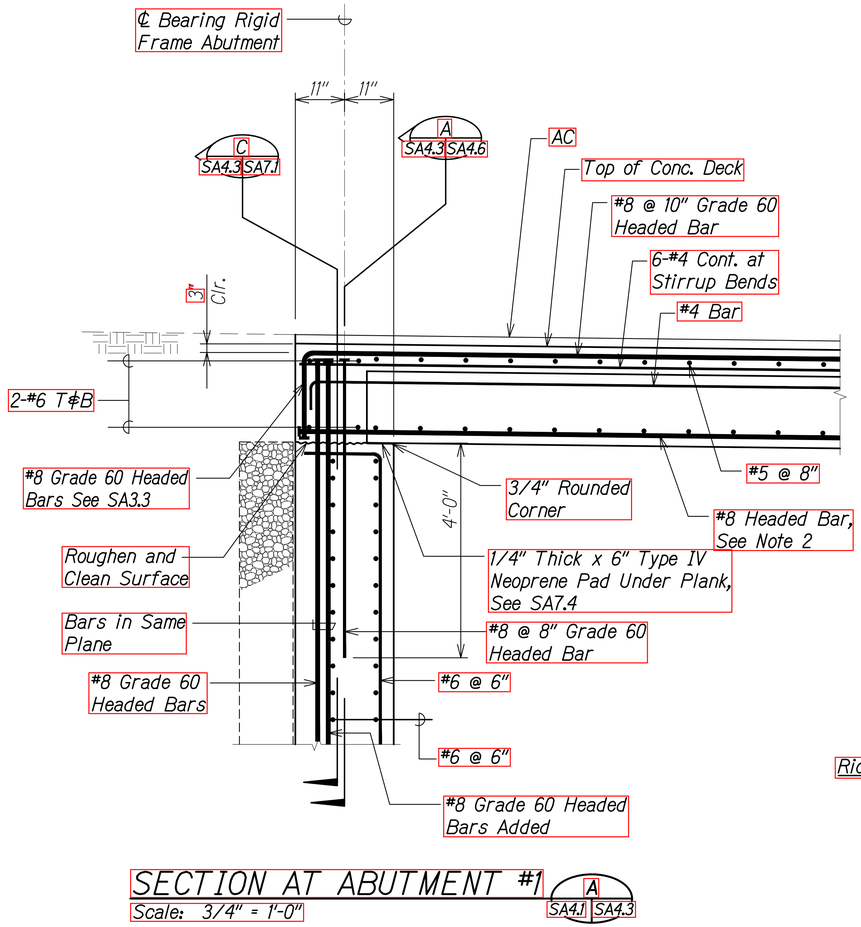
ADD. 255

ORIGINAL PLAN	NOTE BOOK	No.	DATE

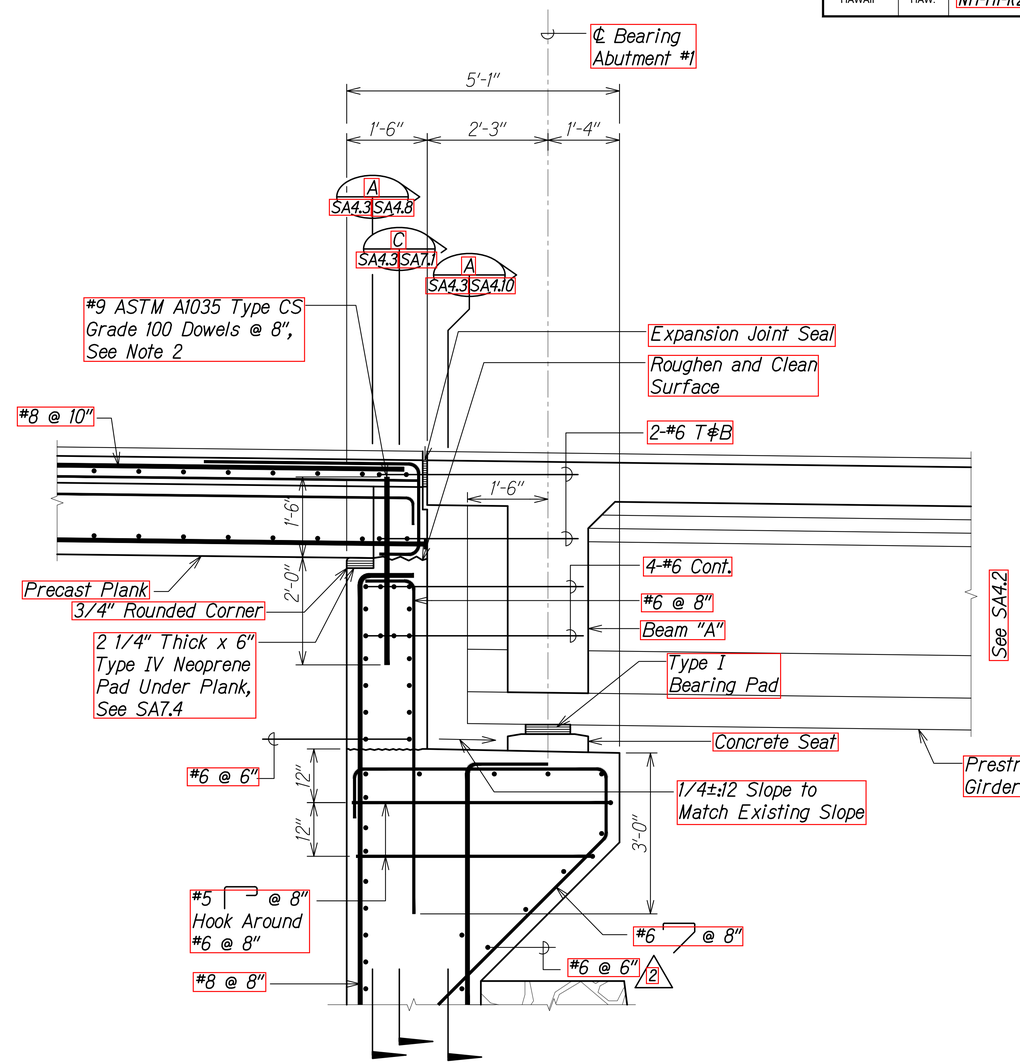
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK:RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0402 ABUT2 SECT ADD2.DWG PLOT TIME: 04-10-23, 3:13 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 256	466



SECTION AT ABUTMENT #1 (A SA4.1 SA4.3)
Scale: 3/4" = 1'-0"



SECTION AT ABUTMENT #1 (B SA4.1 SA4.3)
Scale: 3/4" = 1'-0"

Richard Lane

NOTES:

1. Strands not shown for clarity.
2. Bars shall be coordinated and adjusted as required when setting the precast plank.
3. All horizontal dimensions are measured perpendicular to face of abutment walls.

CALVIN T. MIYAHARA — LICENSED PROFESSIONAL ENGINEER — NO. 8133-S — HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

DATE		REVISION
4/7/23	2	Revised Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
ENLARGED SECTIONS AT ABUTMENT #1

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

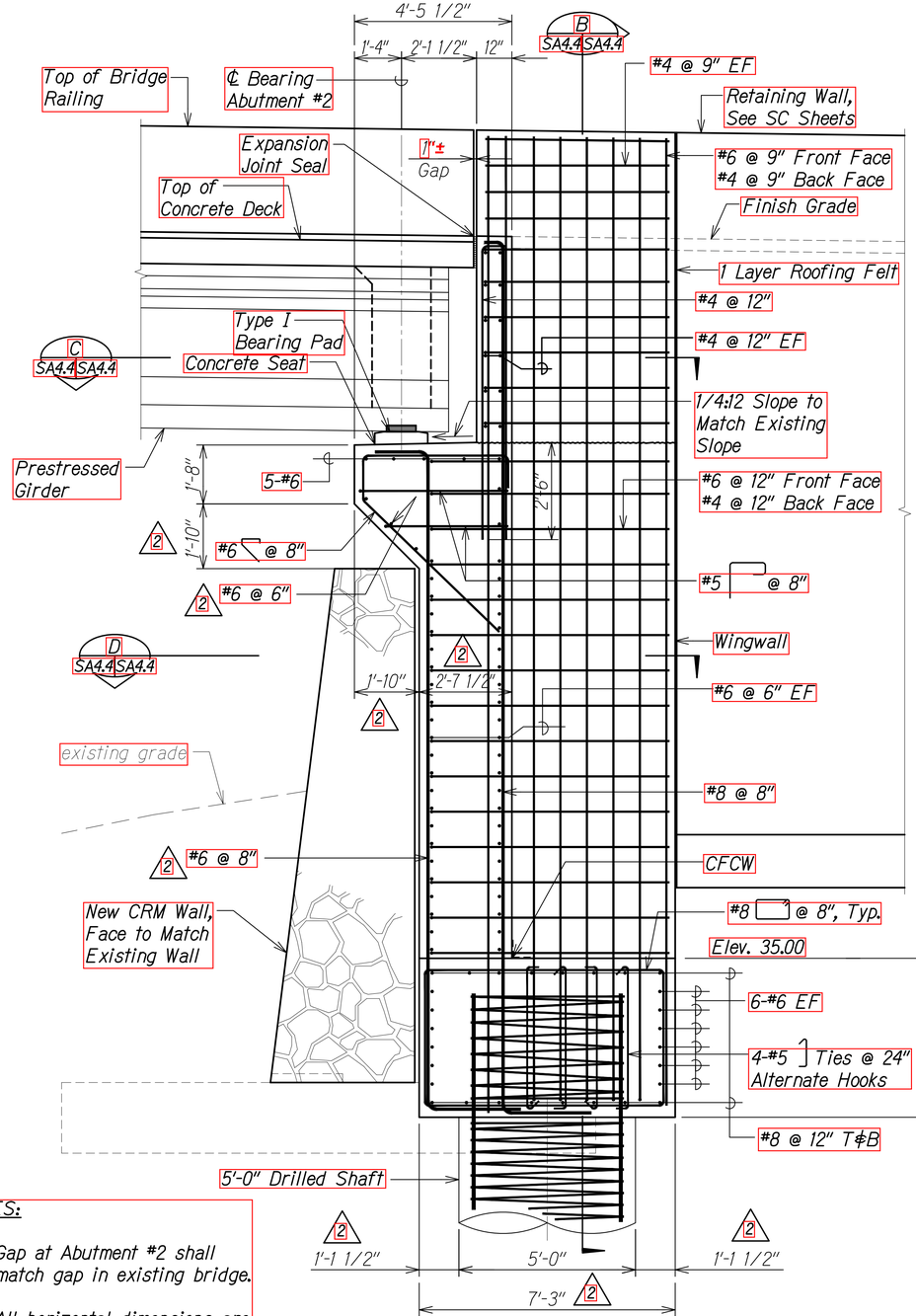
SHEET No. SA4.3 OF 22 SHEETS

ADD. 256

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK/RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0401 & SA0403 ABUT1 SECT ADD2.DWG PLOT TIME: 04-10-23, 3:10 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 257	466



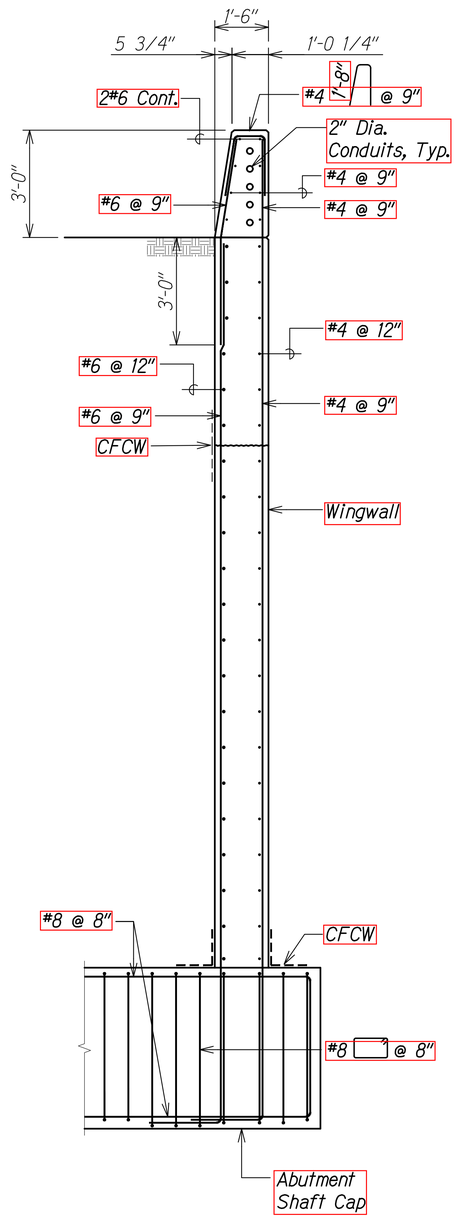
NOTES:

1. Gap at Abutment #2 shall match gap in existing bridge.
2. All horizontal dimensions are measured perpendicular to face of abutment wall.

SECTION AT ABUTMENT #2

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

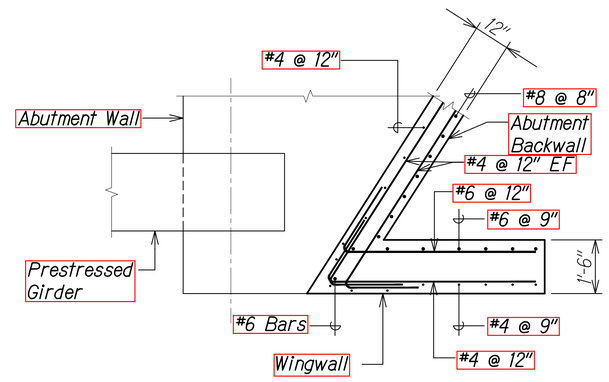
A SA1.2 SA4.4



SECTION

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

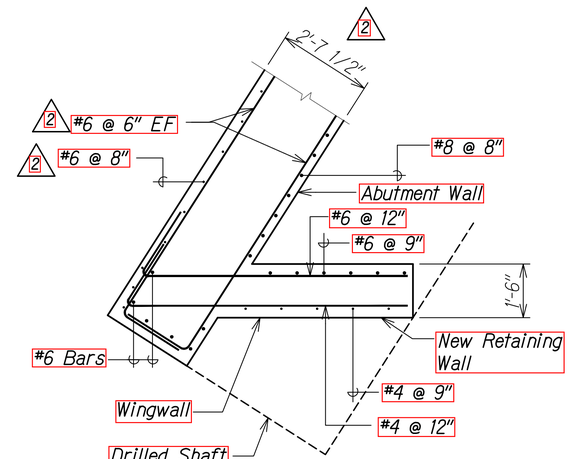
B SA4.4 SA4.4



SECTION

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

C SA4.4 SA4.4



SECTION

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

D SA4.4 SA4.4

DATE		REVISION
4/7/23	2	Revised Callouts

CALVIN T. MIYAHARA — LICENSED PROFESSIONAL ENGINEER — NO. 8133-S — HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Calvin Miyahara — 4-30-24

SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
SECTIONS AT ABUTMENT #2

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

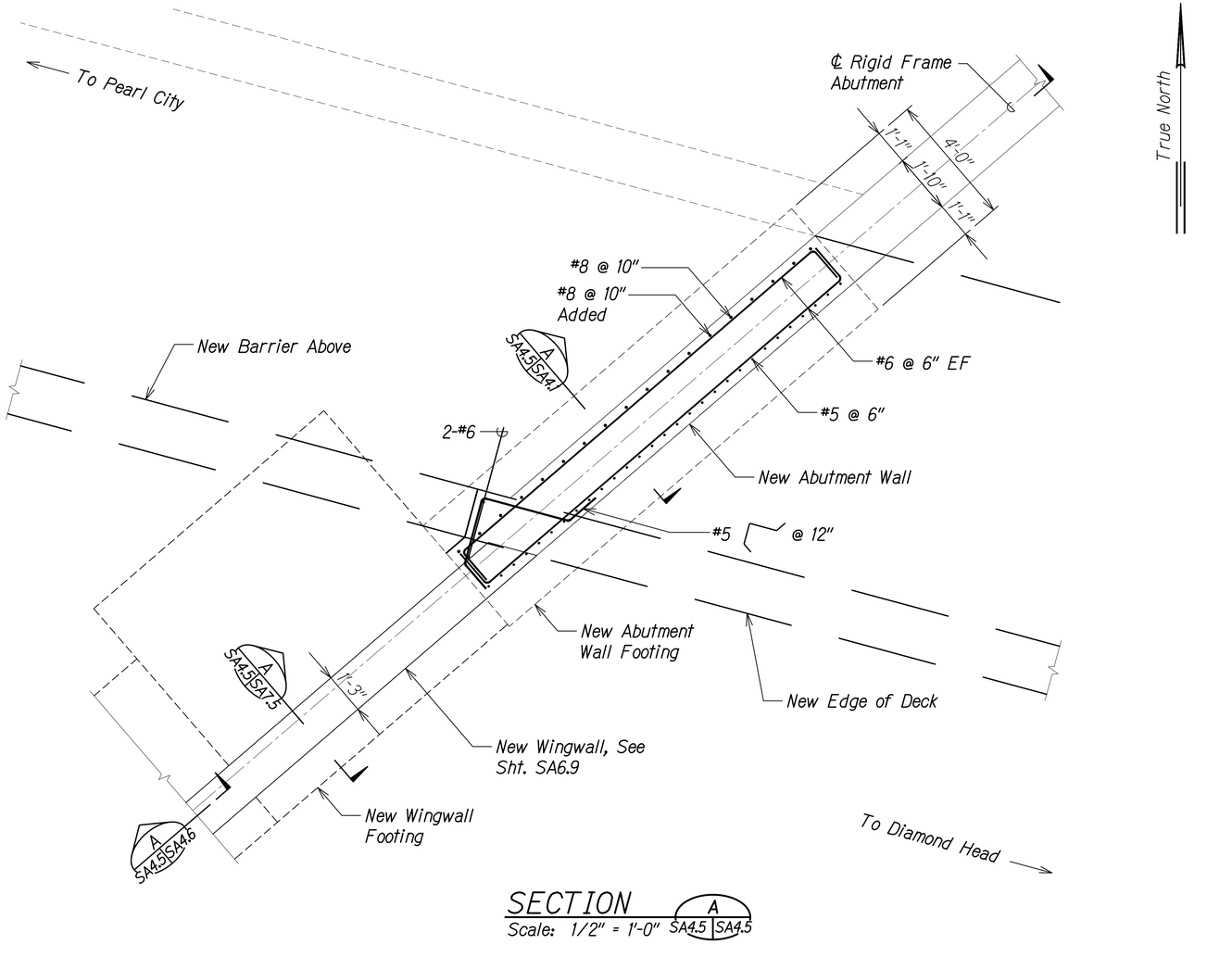
SHEET No. SA4.4 OF 22 SHEETS

ADD. 257

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0404-SA0405 ABUT2 SECT ADD2.DWG PLOT TIME: 04-10-23, 3:11 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	258	466



SECTION A
Scale: 1/2" = 1'-0" SA4.5 | SA4.5

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0404-SA0405 ABUT2 SECT.DWG PLOT TIME: 01-04-23, 9:19 AM)

CALVIN T. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 8133-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Calvin Miyahara 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

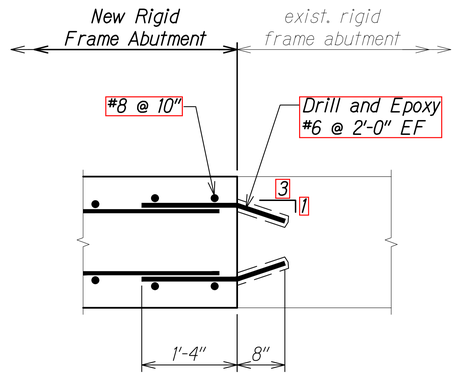
KALIHI STREAM/RICHARD LANE BRIDGE SECTION AT WINGWALL

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

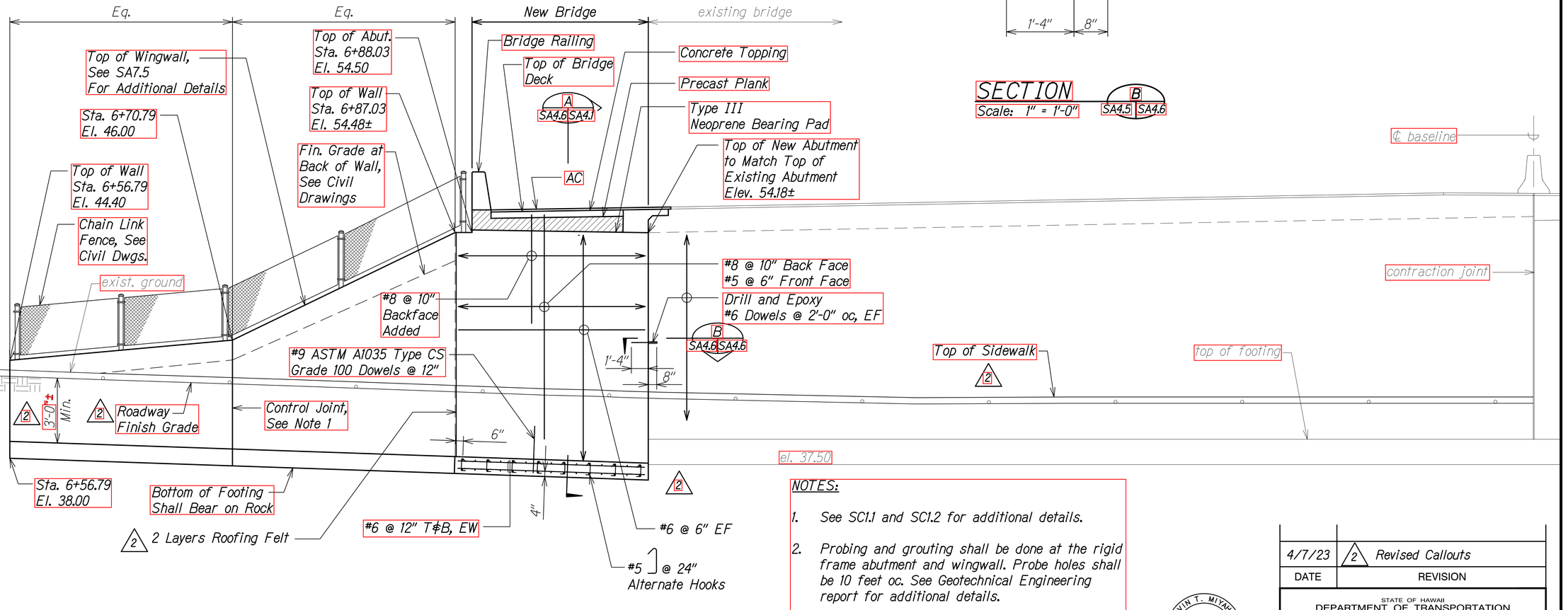
Scale: As Noted Date: December 2022

SHEET No. SA4.5 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 259	466



SECTION B
Scale: 1" = 1'-0"
SA4.5 SA4.6



RIGID FRAME SECTION
Scale: 1/4" = 1'-0"
A
SA4.1 SA4.6

NOTES:

1. See SC1.1 and SC1.2 for additional details.
2. Probing and grouting shall be done at the rigid frame abutment and wingwall. Probe holes shall be 10 feet oc. See Geotechnical Engineering report for additional details.
3. The top of abutment wall elevations shall be checked to verify the correct finish grade elevation will be attained. The elevations shown assumes 2" of AC. Verify the AC thickness and adjust elevations as required. Plank camber shall be accounted for. Submit elevation calculations to the Engineer prior to pourng wall.

CALVIN T. MIYAMARA LICENSED PROFESSIONAL ENGINEER NO. 8133-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Calvin Miyamara
SIGNATURE
4-30-24
EXPIRATION DATE OF THE LICENSE

DATE	REVISION
4/7/23	2 Revised Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
RIGID FRAME SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

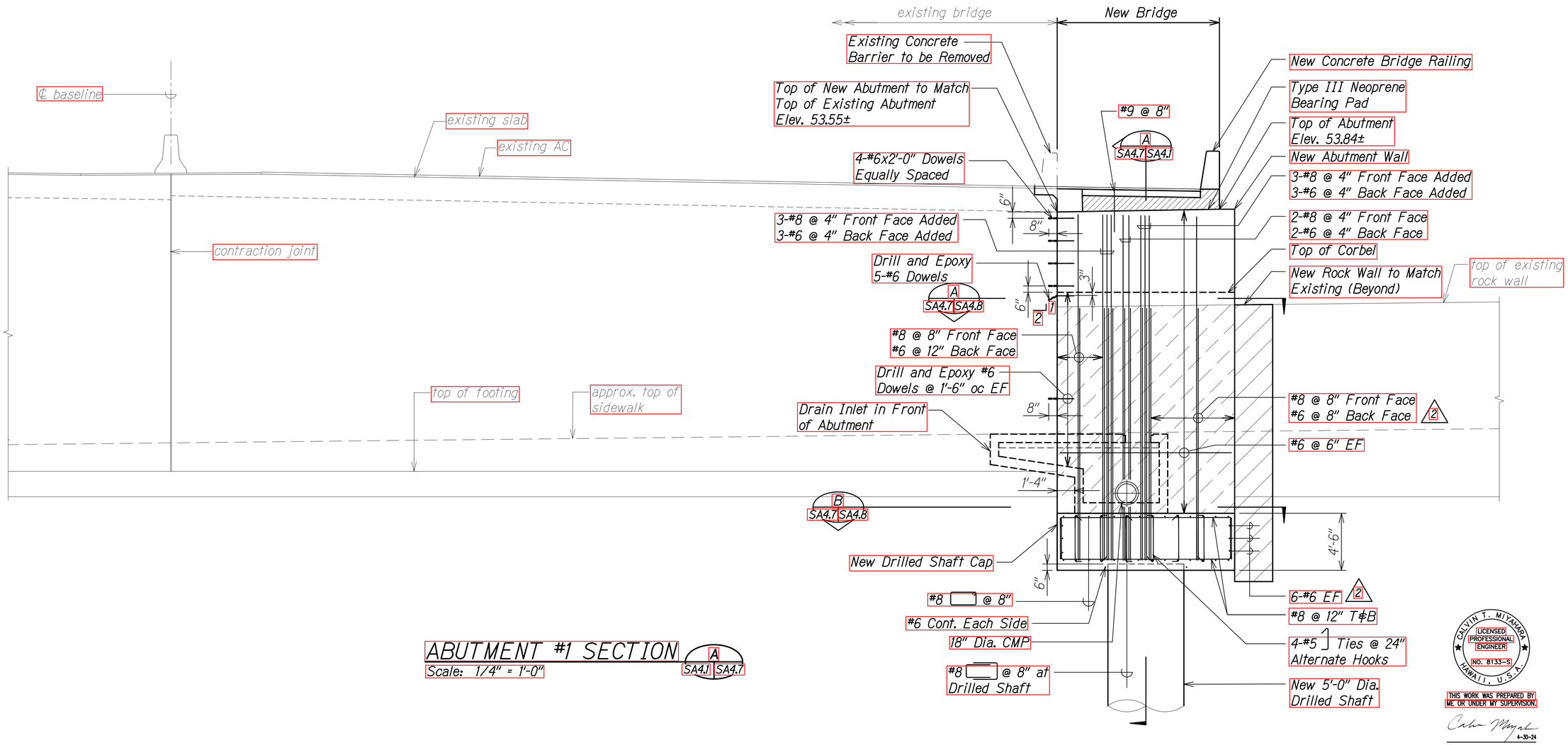
SHEET No. SA4.6 OF 22 SHEETS

ADD. 259

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0406 RF ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:11 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 260	466



ABUTMENT #1 SECTION

A
SA4.1 SA4.7

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

NOTE:

The top of abutment wall elevations shall be checked to verify the correct finish grade elevation will be attained. The elevations shown assume 2" of AC. Verify the AC thickness and adjust elevations as required. Plank camber shall be accounted for. Submit elevation calculations to the Engineer prior to pourng wall.

CALVIN T. MIYAHIRA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

DATE	REVISION
4/7/23	2 Revised Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
ABUTMENT #1 SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

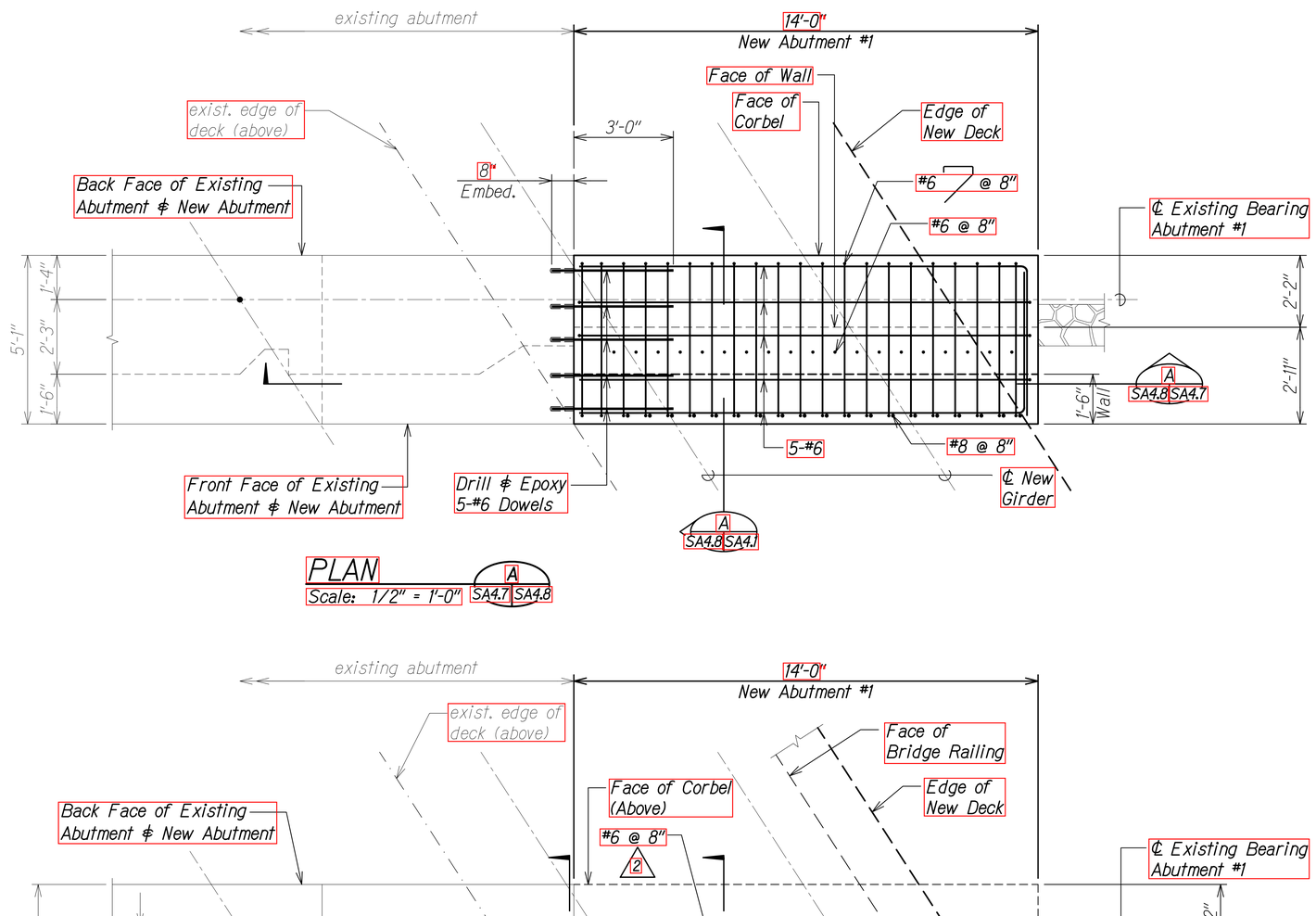
SHEET No. SA4.7 OF 22 SHEETS

ADD. 260

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 AD02\GRK-SA0407 ABUT1 ELEV AD02.DWG PLOT TIME: 04-10-23, 3:12 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 261	466



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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0408 ABUT1 SECT ADD2.DWG PLOT TIME: 04-10-23, 3:12 PM)

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE ABUTMENT #1 PLANS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

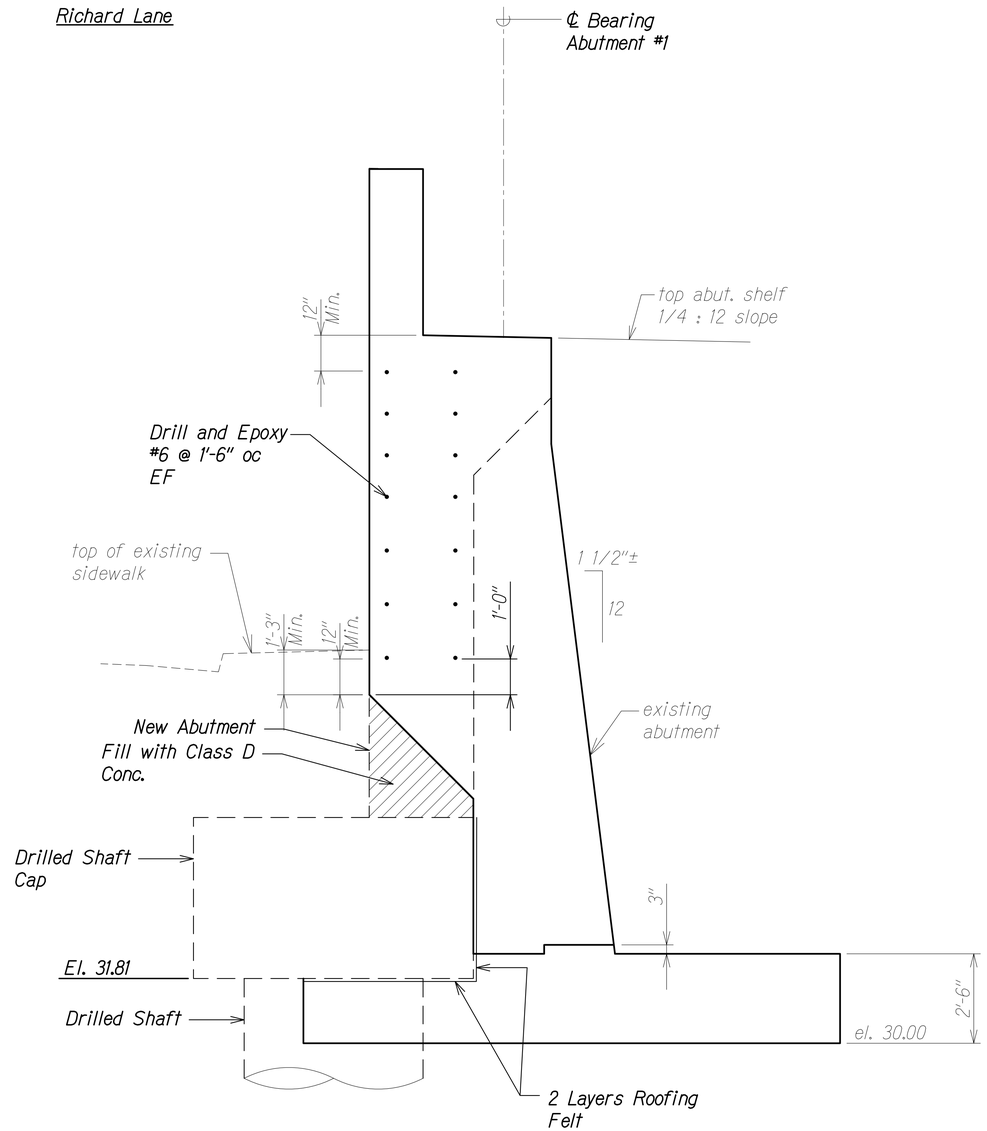
SHEET No. SA4.8 OF 22 SHEETS

DATE	REVISION
4/7/23	2 Revised Callouts

ADD. 261

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	262	466

Richard Lane



TYP. SECTION - ABUTMENT #1

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

A
SA4.9 | SA4.9

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

ORIGINAL PLAN
NOTE BOOK
No. _____

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB MPRVMTS - GULICK,RICH-KALIHA\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0409 ABUT1.DWG PLOT TIME: 01-04-23, 9:20 AM)

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

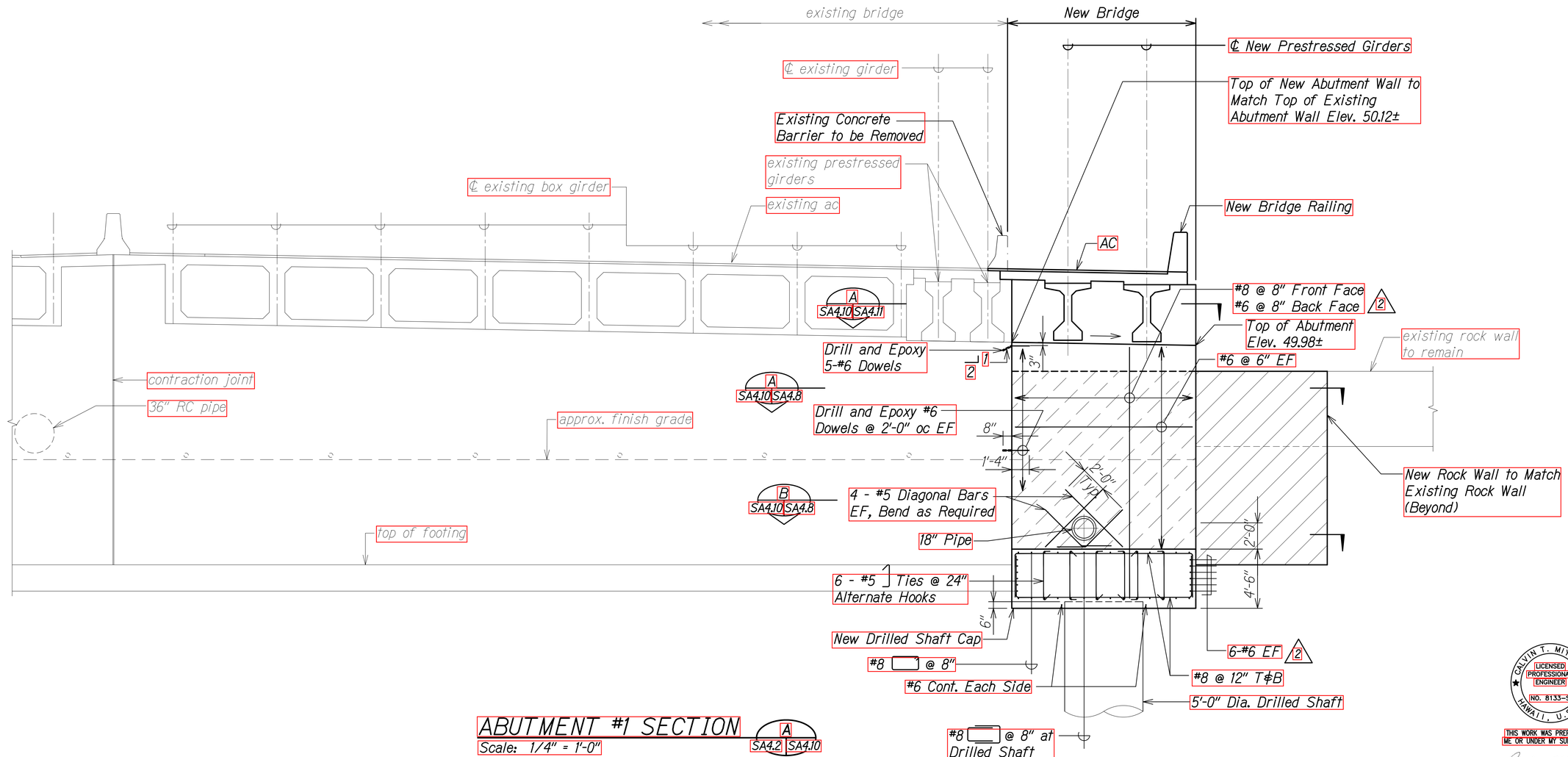
KALIHI STREAM/RICHARD LANE BRIDGE
ABUTMENT #1 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA4.9 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 263	466



ABUTMENT #1 SECTION

A SA4.2 SA4.10

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

NOTE:

The top of abutment wall elevations shall be checked to verify the correct finish grade elevation will be attained. The elevations shown assume 2" of AC. Verify AC thickness and adjust elevations as required. Girder camber shall be accounted for. Submit elevation calculations to the Engineer prior to pouring wall.

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

DATE	REVISION
4/7/23	2 Revised Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
ABUTMENT #1 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

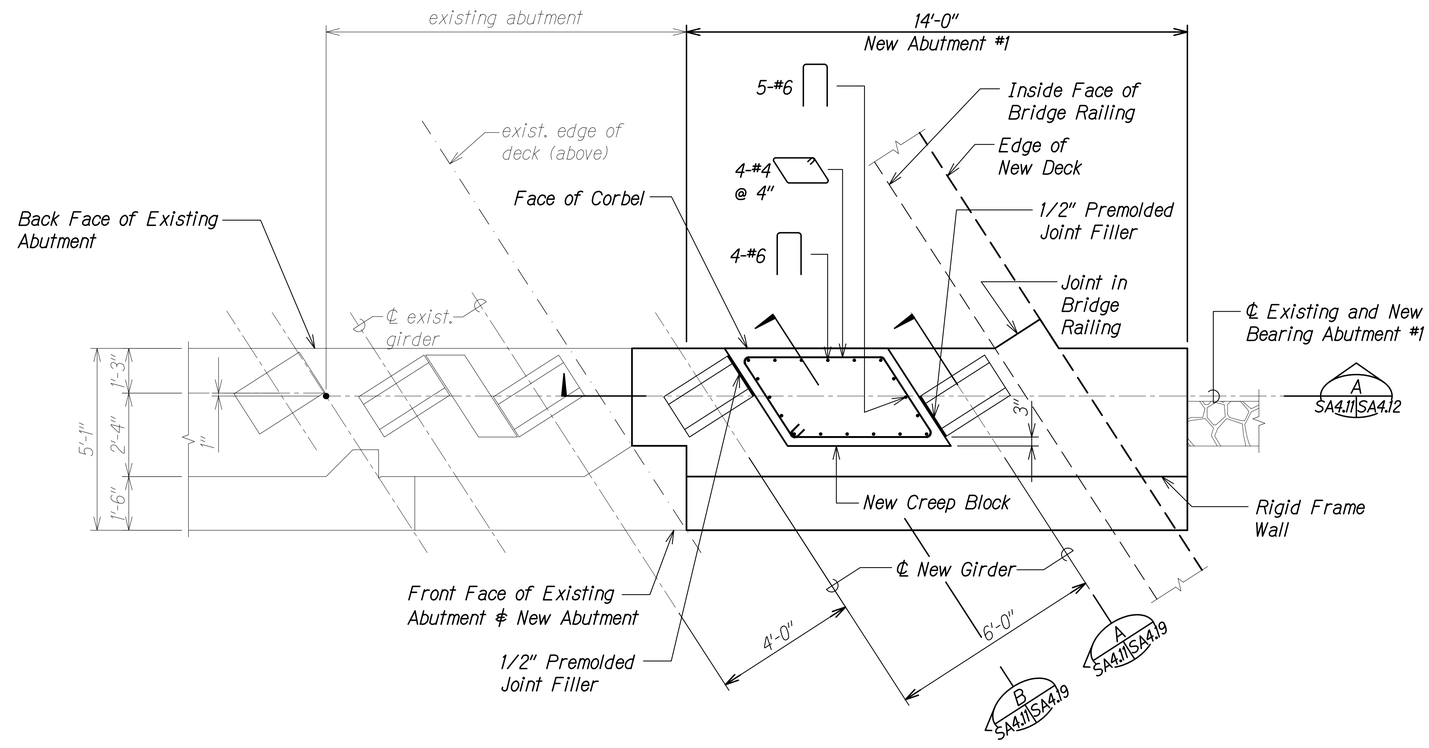
SHEET No. SA4.10 OF 22 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0410 ABUT1 ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:13 PM)

ADD. 263

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	264	466



CREEP BLOCK PLAN

A SA4.10 SA4.11

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

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

DRAWING NAME: Z:\OO ONGOING\OO_JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0411 ABUT1 CREEP BLK.DWG PLOT TIME= 01-04-23, 9:21 AM)

CALVIN T. MIYAMURA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24

SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

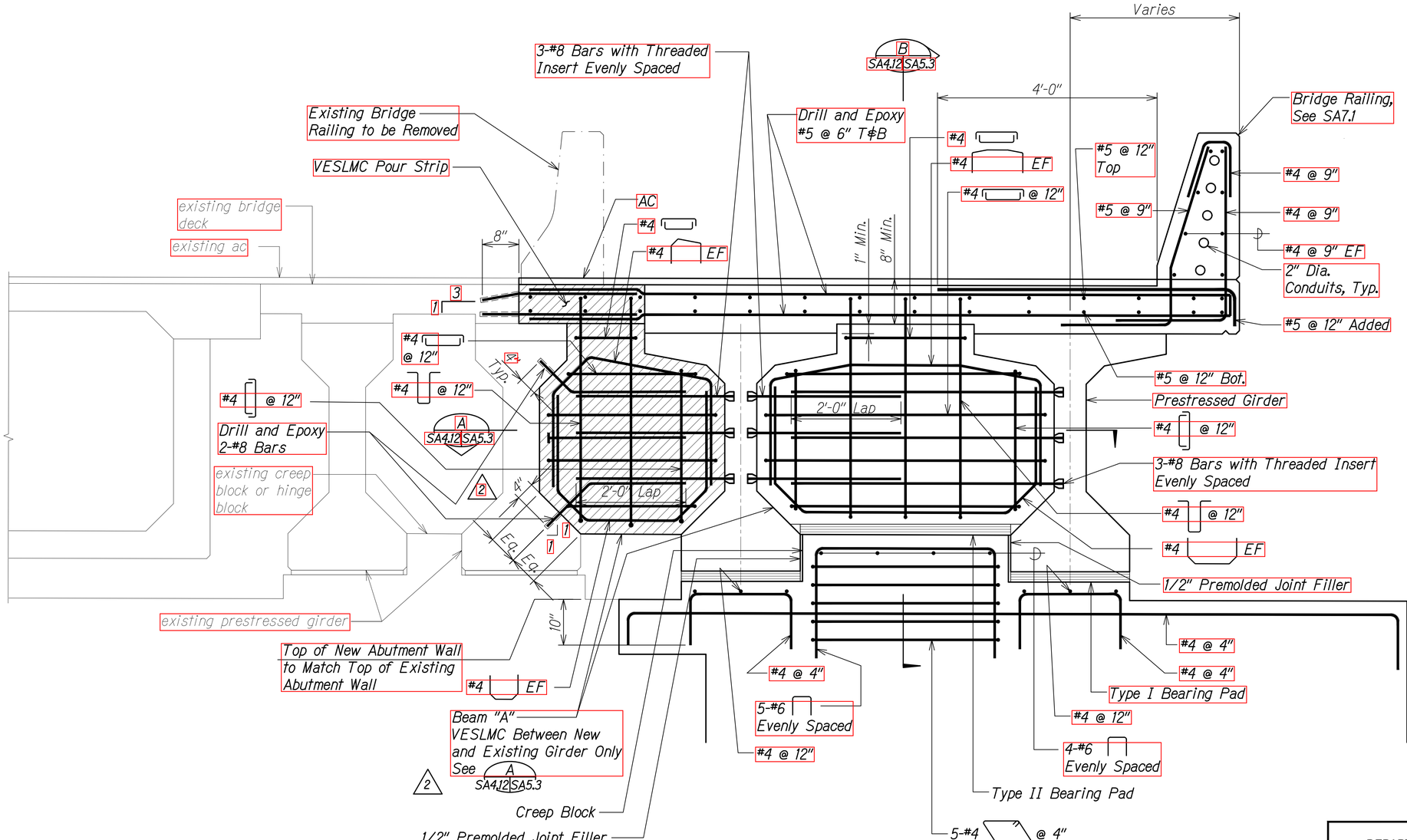
KALIHI STREAM/RICHARD LANE BRIDGE ABUTMENT #1 CREEP BLOCK DETAIL

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA4.11 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 265	466



CREEP BLOCK SECTION A SA3.2 SA4.12
Scale: 1" = 1'-0"

CALVIN T. MIYAMURA LICENSED PROFESSIONAL ENGINEER NO. 8133-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE ABUTMENT #1 CREEP BLOCK SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA4.12 OF 22 SHEETS

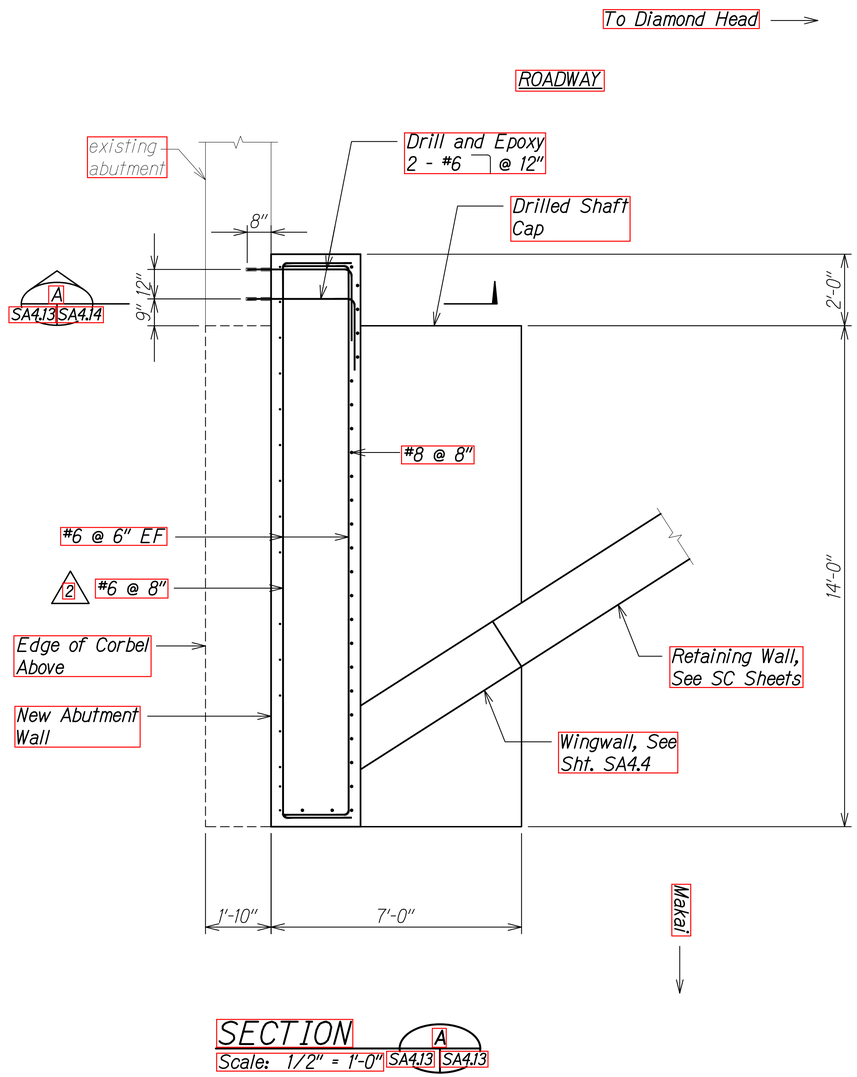
DATE	REVISION
4/7/23	2 Revised Callouts

ADD. 265

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-17-23 ADD2\GRK-SA0412 ABUT1 CREEP BLK ADD2.DWG PLOT TIME: 04-17-23, 11:14 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 266	466



SECTION A

Scale: 1/2" = 1'-0" SA4.13 SA4.13

DRAWING NAME: Z:\OD ONCONG\OD JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 AD02\GRK-SA0413-SA414 ABU12 AD02.DWG PLOT TIME: 04-10-23, 3:15 PM)

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

CALVIN T. MIYAMURA LICENSED PROFESSIONAL ENGINEER NO. 8133-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24

SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE ABUTMENT #2 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

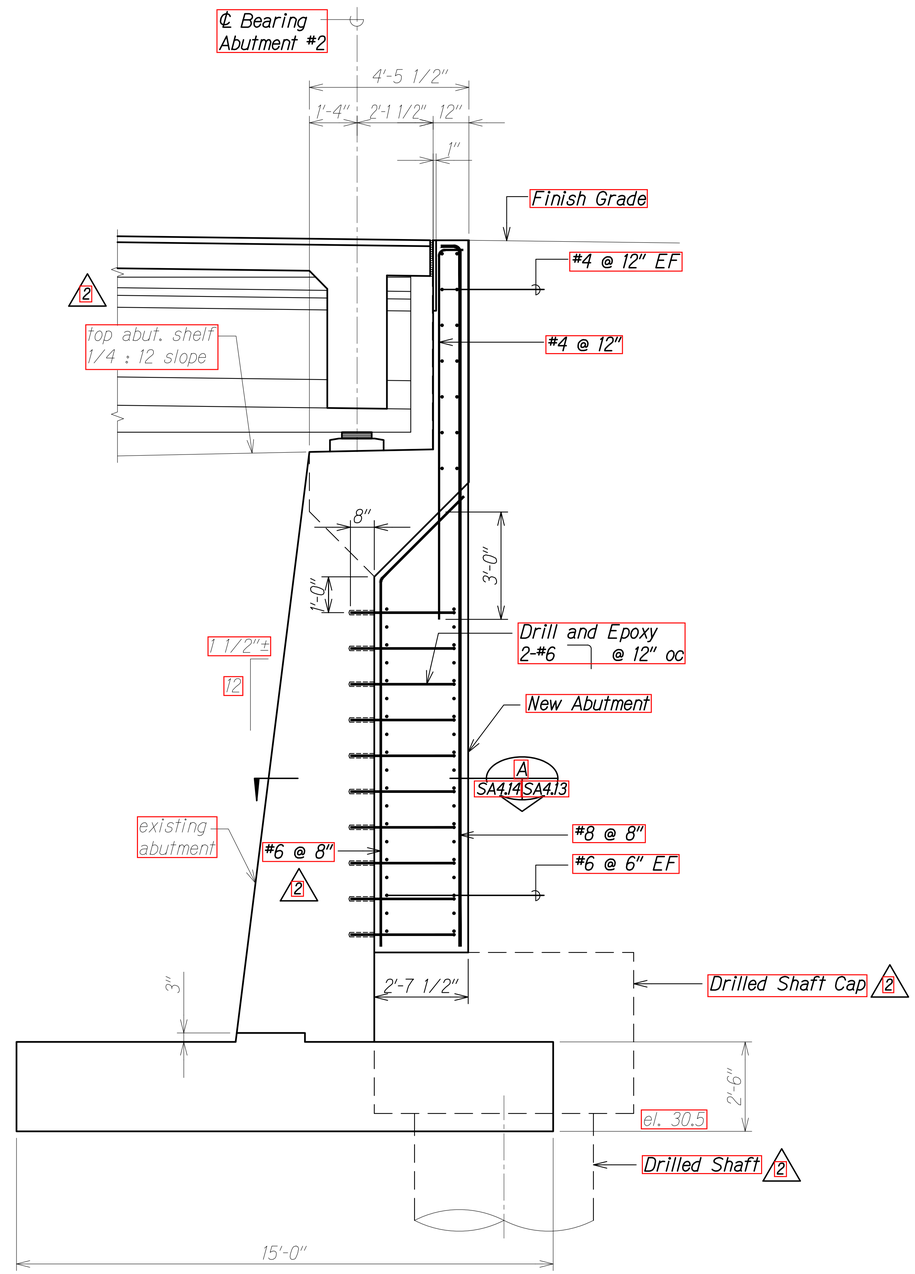
Scale: As Noted Date: December 2022

DATE	REVISION
4/5/23	2 Revised Section

SHEET No. SA4.13 OF 22 SHEETS

ADD. 266

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 267	466



TYP. SECTION - ABUTMENT #2

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

A
SA4J3 SA4J4

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0413-SA414 ABUT2 ADD2.DWG PLOT TIME: 04-10-23, 3:15 PM)

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
ABUTMENT #2 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

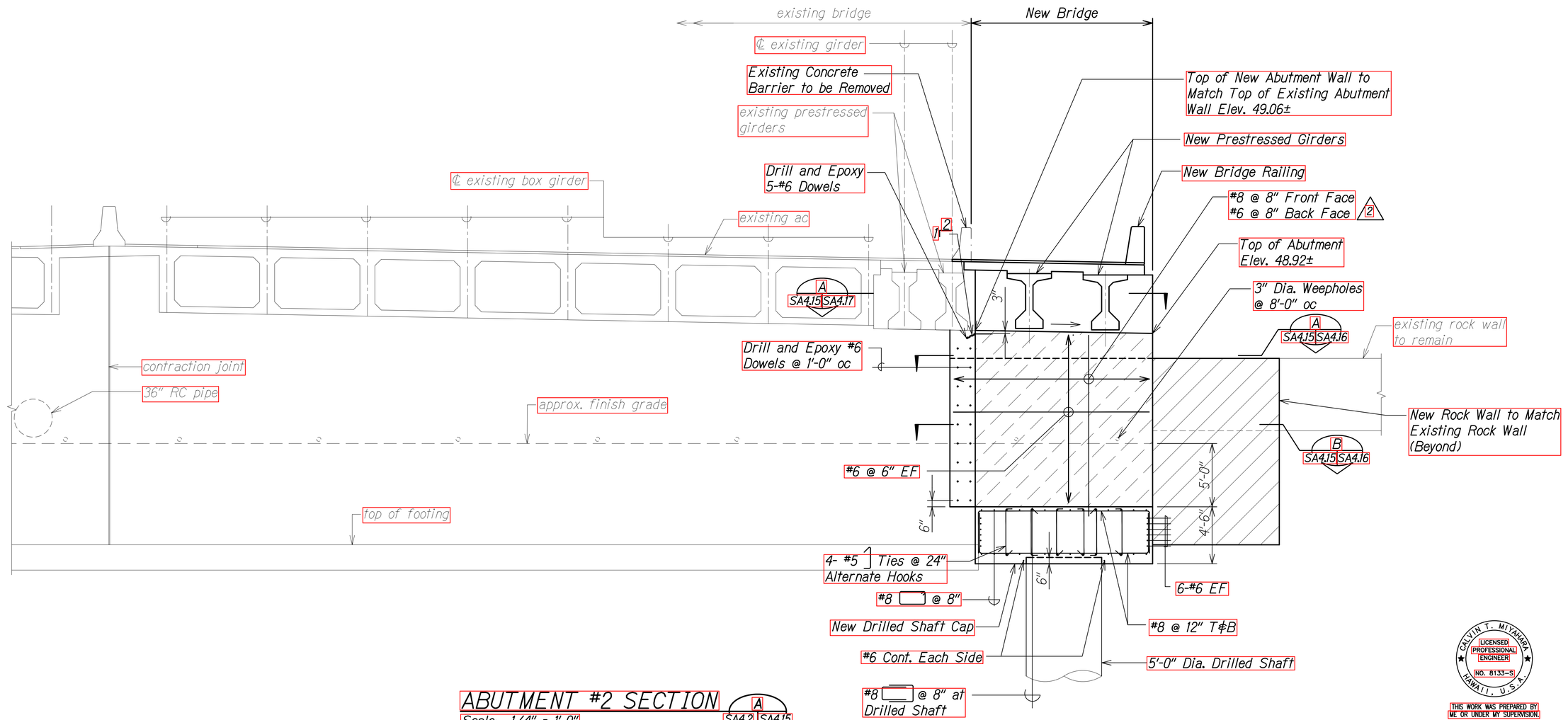
Scale: As Noted Date: December 2022

DATE	REVISION
4/5/23	2 Revised Section

SHEET No. SA4.14 OF 22 SHEETS

ADD. 267

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 268	466



ABUTMENT #2 SECTION

A
SA4.2 SA4.15

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

NOTE:

The top of abutment wall elevations shall be checked to verify the correct finish grade elevation will be attained. The elevations shown assume 2" of AC. Verify AC thickness and adjust elevations as required. Girder camber shall be accounted for. Submit elevation calculations to the Engineer prior to pouring wall.

CALVIN T. MIYAHARA
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HAWAII, U.S.A.

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4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

DATE	No.	REVISION
4/7/23	2	Revised Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
ABUTMENT #2 SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA4.15 OF 22 SHEETS

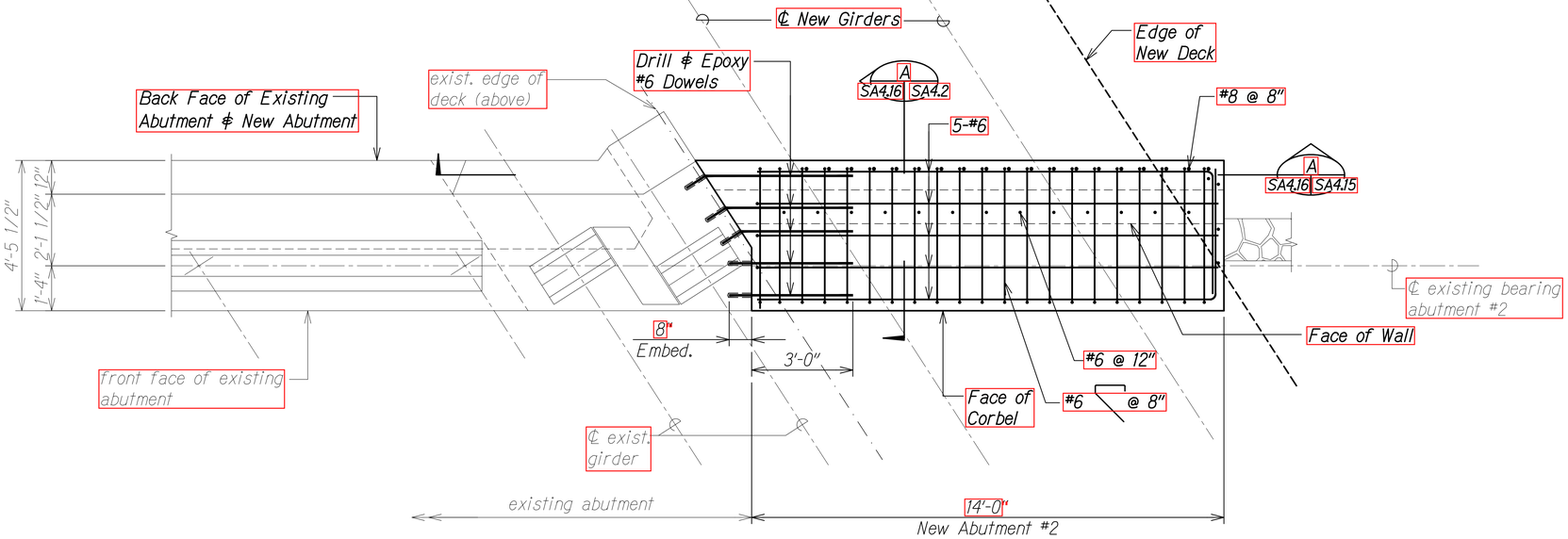
ADD. 268

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

ORIGINAL PLAN
NOTE BOOK

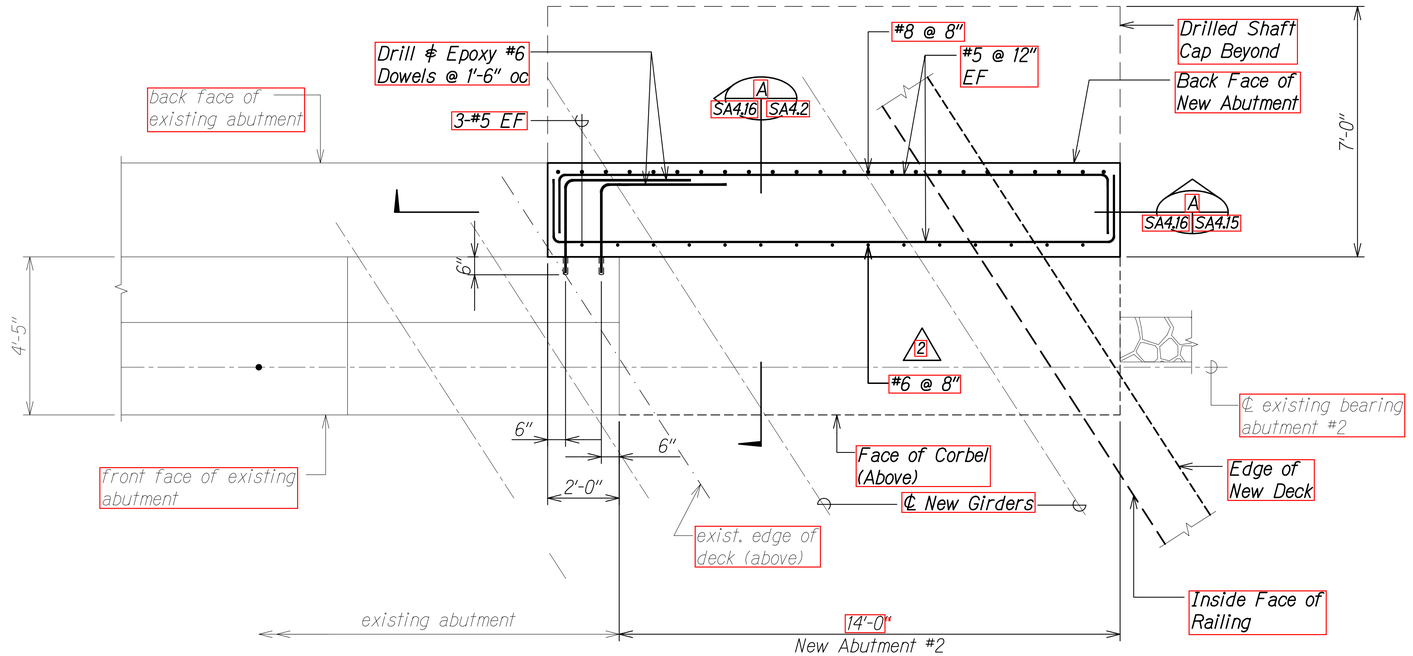
DRAWING NAME: Z:\OAHU ONGOING\00 JF PROJECTS\20-010 H1 EB IMPROVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0415 ABUT2 ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:16 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 269	466



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

A
SA4.2 SA4.J6



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

B
SA4.15 SA4.16

DATE	REVISION
4/5/23	2 Revised Callout

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
ABUTMENT #2 PLANS

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted | Date: December 2022

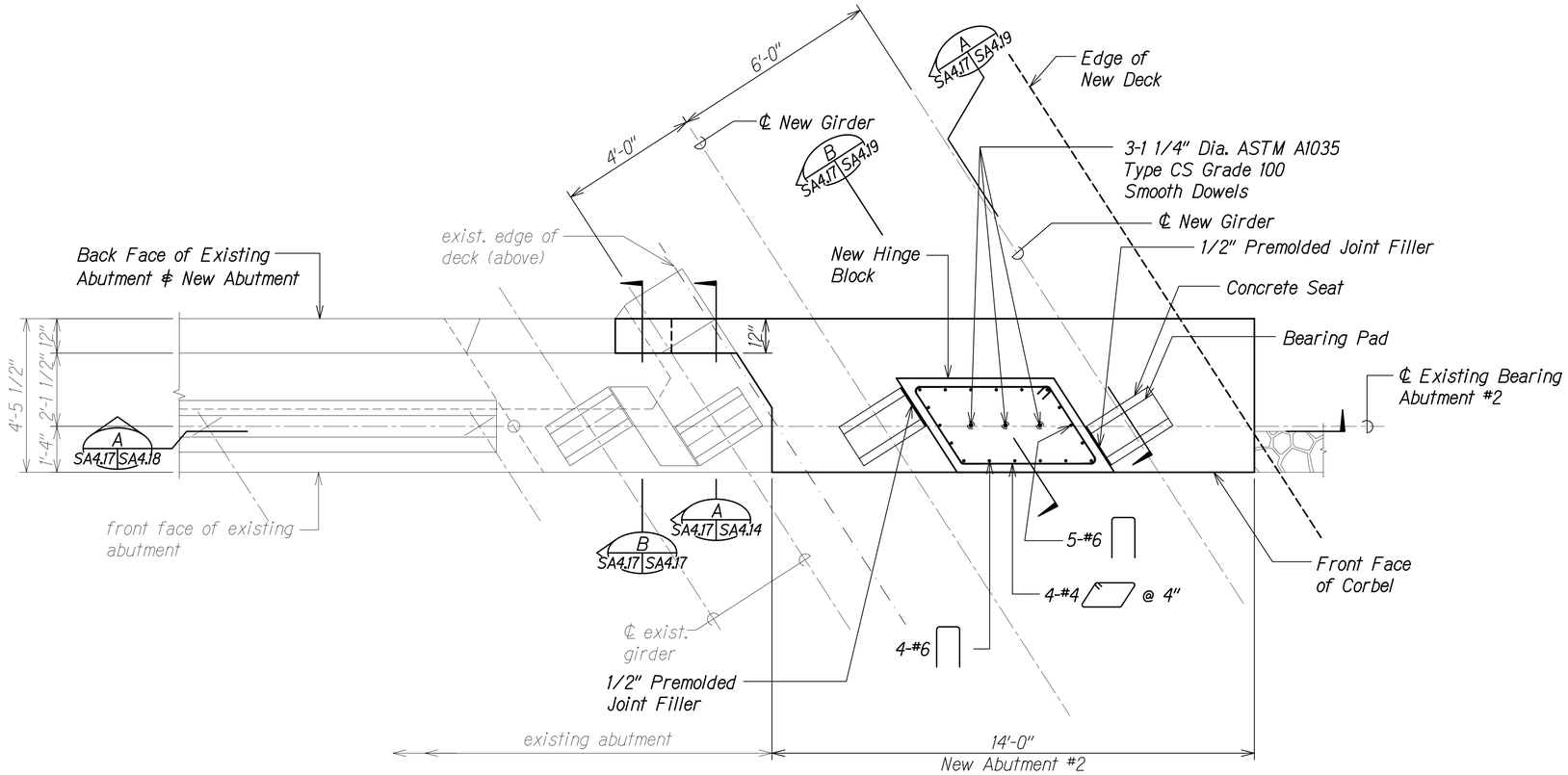
SHEET No. SA4.16 OF 22 SHEETS

ADD. 269

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0416 ABUT2 SECT ADD2.DWG PLOT TIME: 04-10-23, 3:16 PM)

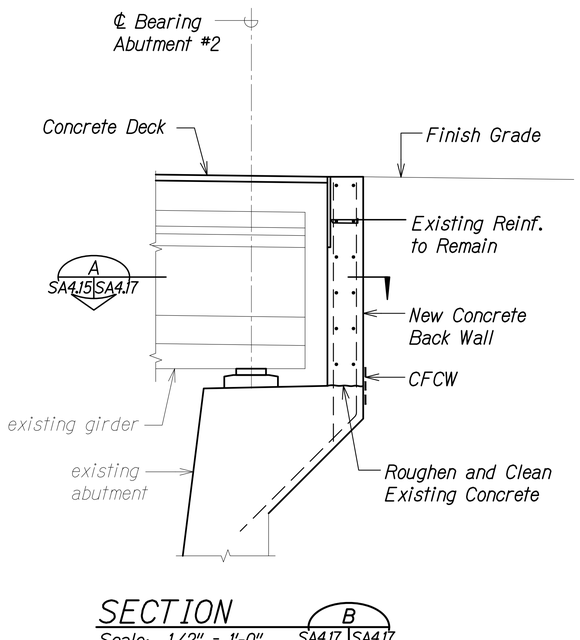
ORIGINAL PLAN	SURVEY PLOTTED BY
NOTE BOOK	DRAWN BY
No.	TRACED BY
	DESIGNED BY
	QUANTITIES BY
	CHECKED BY
	DATE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	270	466



HINGE BLOCK PLAN A SA4.15 SA4.17

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



SECTION B SA4.17 SA4.17

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

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

DRAWING NAME: Z:\OD ONGOING\OD JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0416 ABUT2 SECT.DWG PLOT TIME: 01-04-23, 9:22 AM)

CALVIN T. MIYAMARA LICENSED PROFESSIONAL ENGINEER NO. 8133-S HAWAII, U.S.A.

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4-30-24

SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

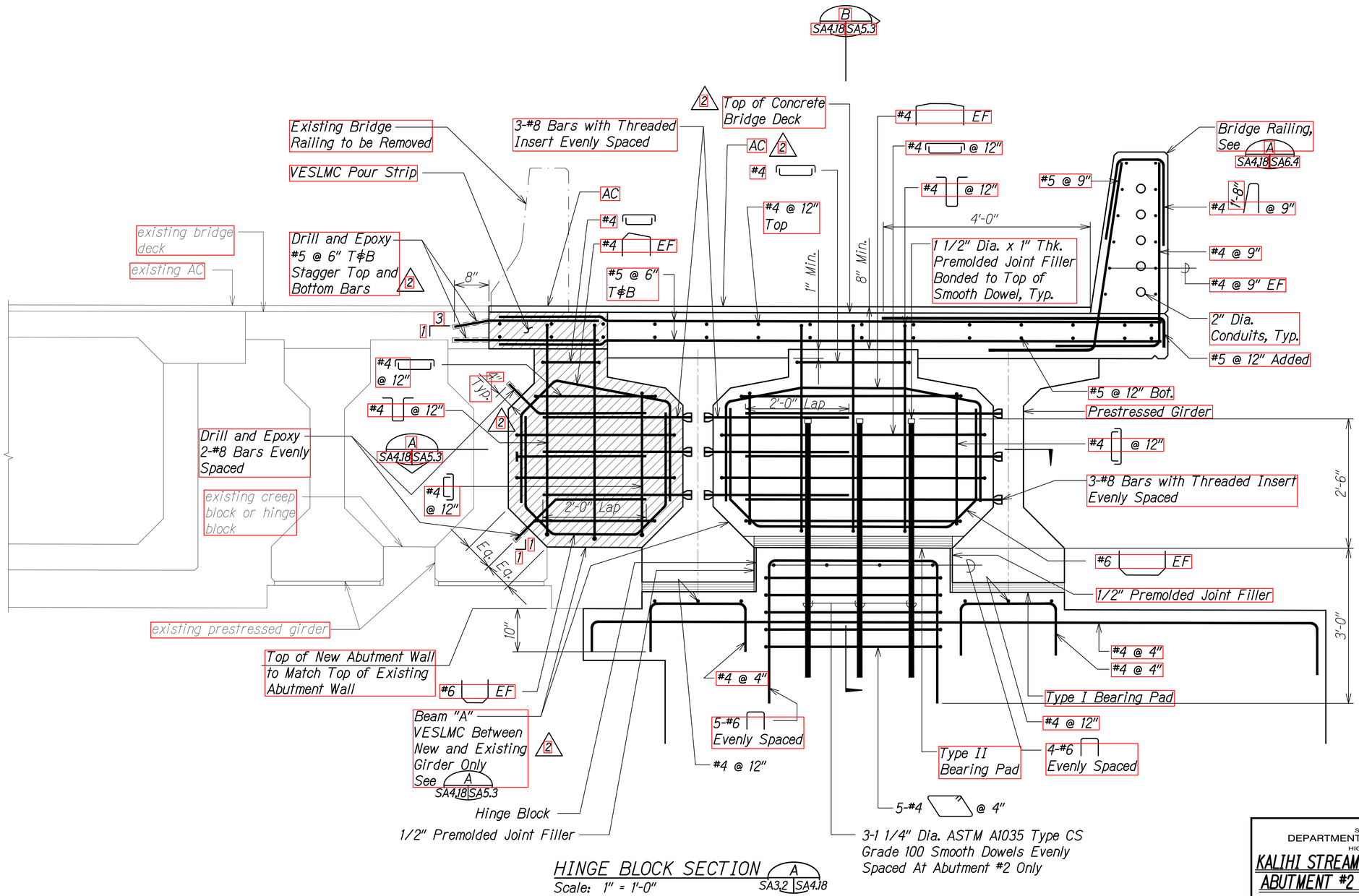
KALIHI STREAM/RICHARD LANE BRIDGE ABUTMENT #2 HINGE BLOCK DETAIL

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA4.17 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 271	466



HINGE BLOCK SECTION (A SA3.2 SA4.18)

Scale: 1" = 1'-0"

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-17-23 AD22\GRK-SA0418 HINGE BLK AD22.DWG PLOT TIME: 04-17-23, 11:30 AM)

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

DATE	REVISION
4/7/23	2 Revised Callouts

CALVIN T. MIYAMURA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE ABUTMENT #2 HINGE BLOCK SECTION

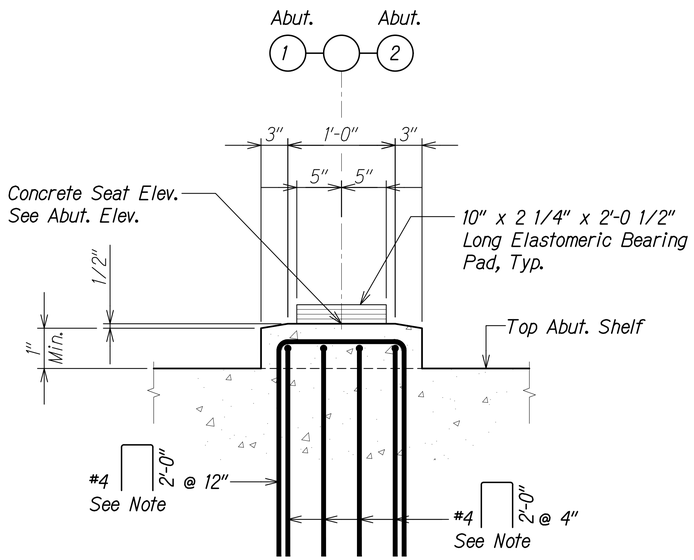
INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

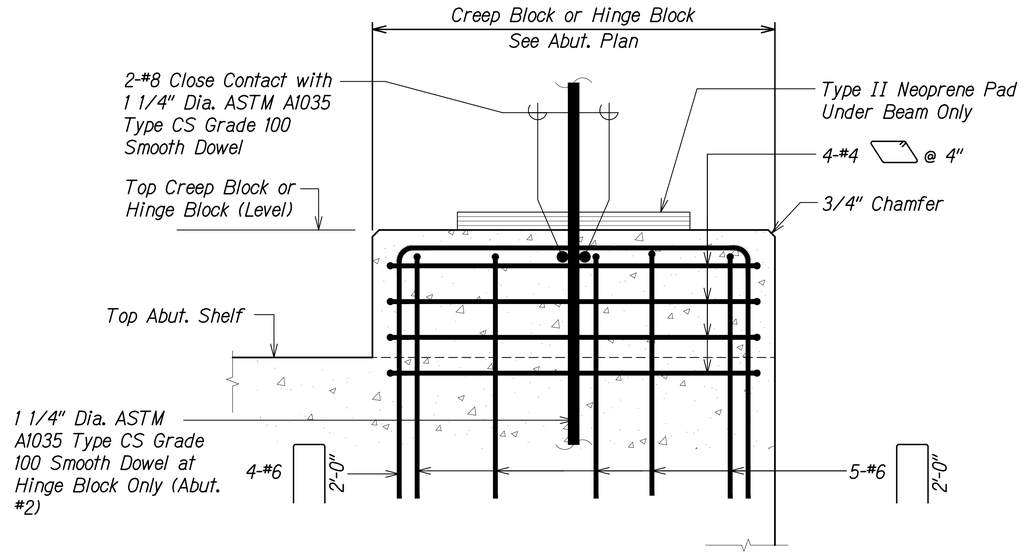
SHEET No. SA4.18 OF 22 SHEETS

ADD. 271

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	272	466



GIRDER SEAT SECTION (A) SA4.19 | SA4.19
Scale: 1 1/2" = 1'-0"



SECTION (B) SA4.19 | SA4.19
Scale: 1 1/2" = 1'-0"

NOTE:

Trim bars to fit above existing abutment.

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
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HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

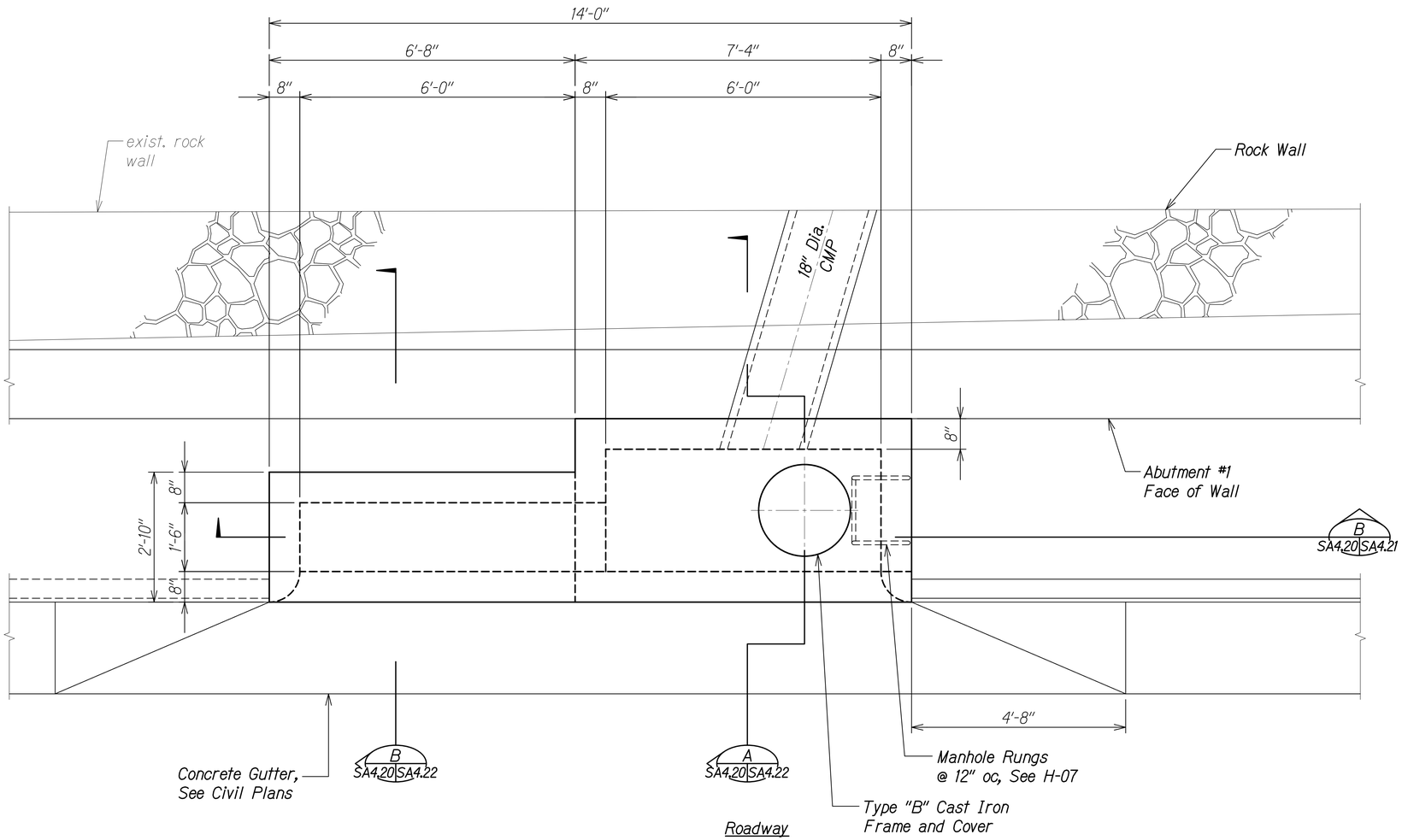
Scale: As Noted Date: December 2022

SHEET No. SA4.19 OF 22 SHEETS

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

DRAWING NAME: Z:\OD ONCONG\OD JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0419 HINGE DET.DWG PLOT TIME: 01-04-23, 9:23 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	273	466



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

A
SA4.20 SA4.20

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0420-SA0422 CBASN.DWG PLOT TIME: 01-04-23, 9:24 AM)

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

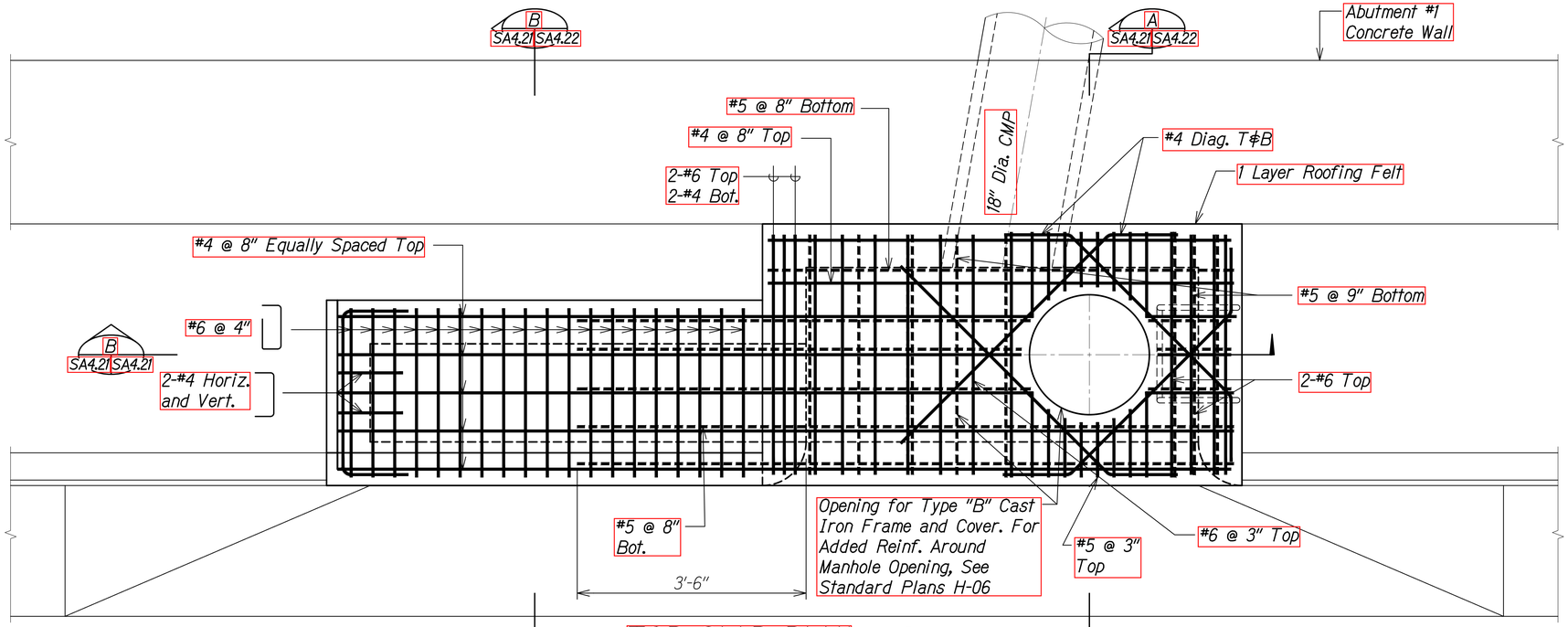
KALIHI STREAM/RICHARD LANE BRIDGE CULVERT BOX PLAN AND SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA4.20 OF 22 SHEETS

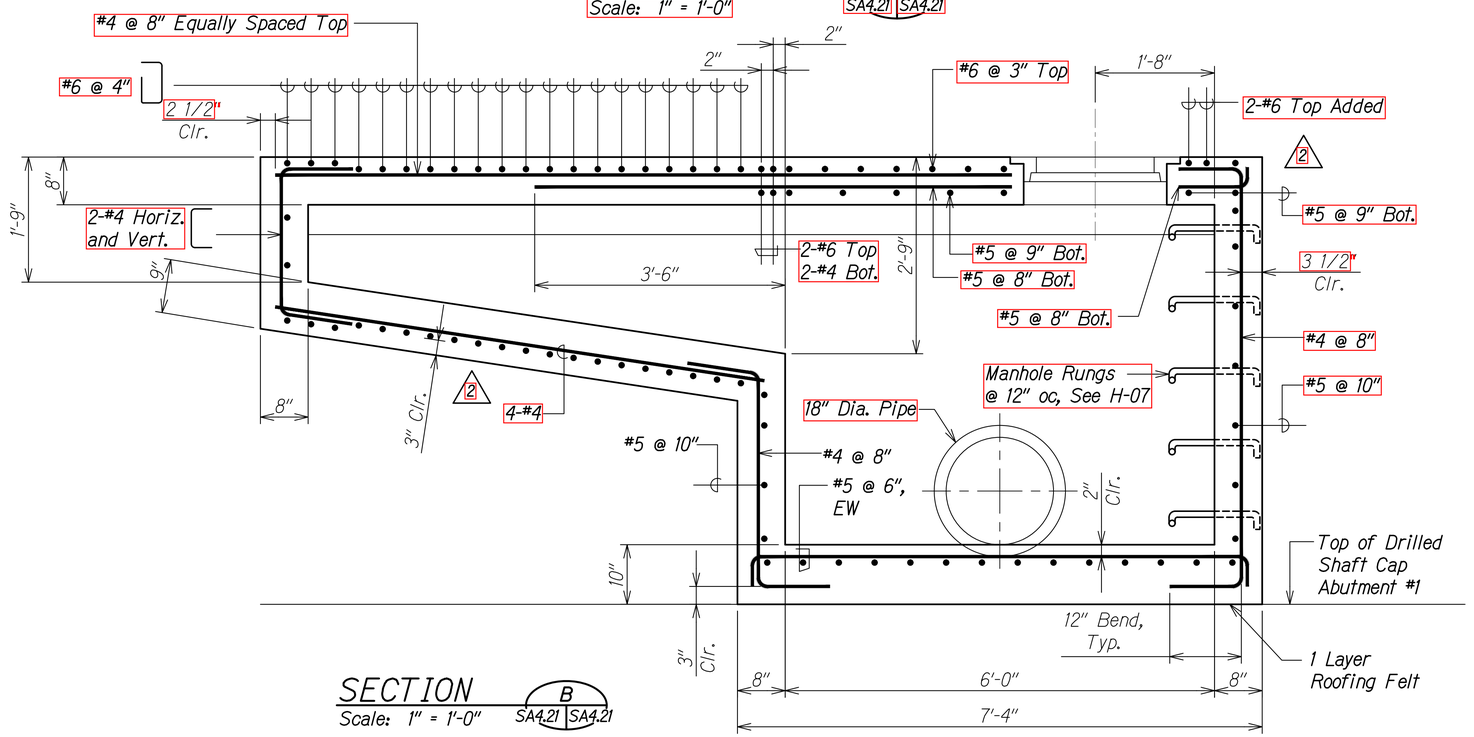
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 274	466



TOP SLAB PLAN

Scale: 1" = 1'-0"

A SA4.21 SA4.21



SECTION

Scale: 1" = 1'-0"

B SA4.21 SA4.21

DATE	REVISION
4/7/23	2 Revised Callouts and Reinforcing

NOTE:

See SB18.4 for additional details.

CALVIN T. MIYAHARA
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HAWAII, U.S.A.

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4-30-24

SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE CULVERT BOX PLAN AND SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

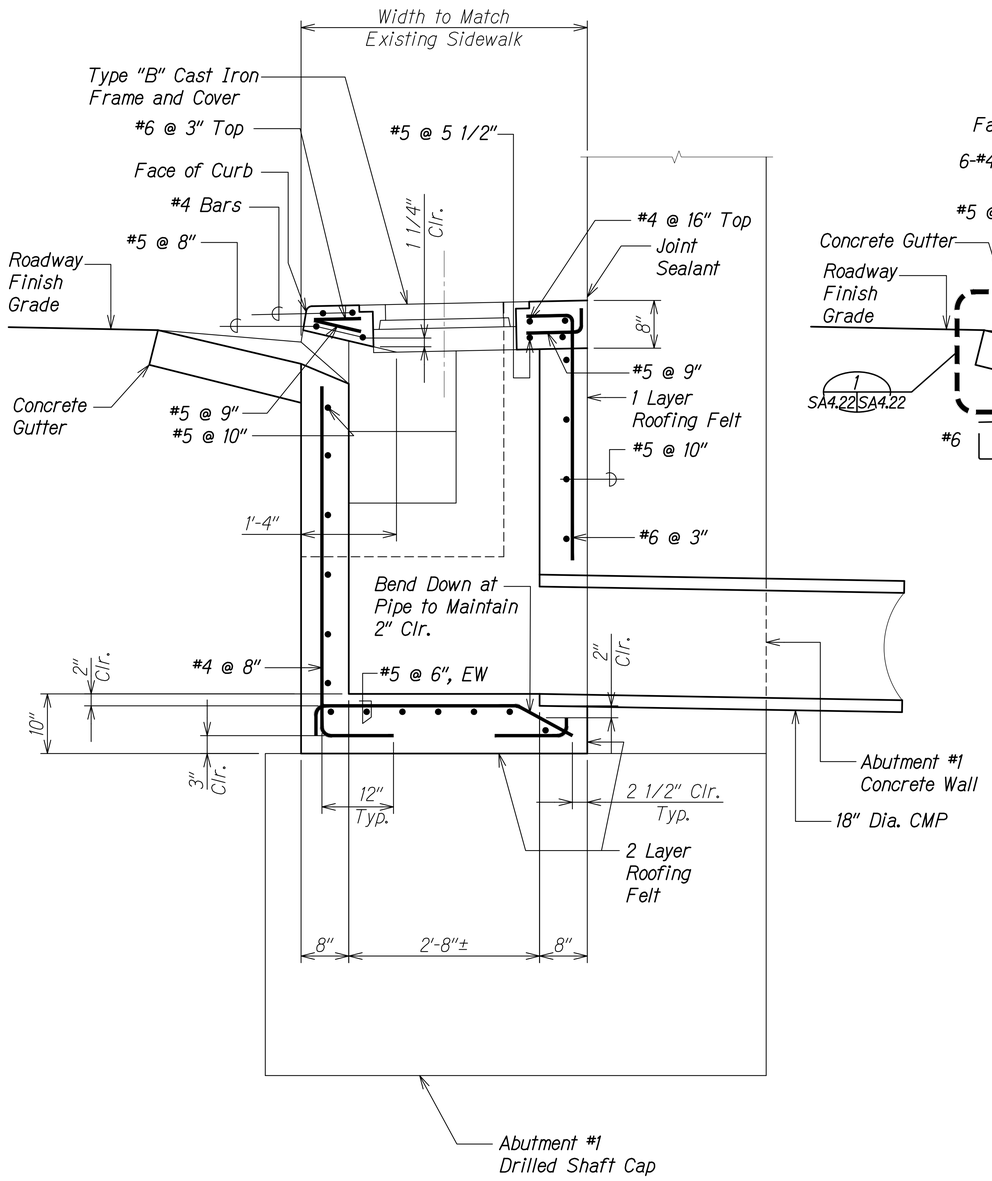
SHEET No. SA4.21 OF 22 SHEETS

ADD. 274

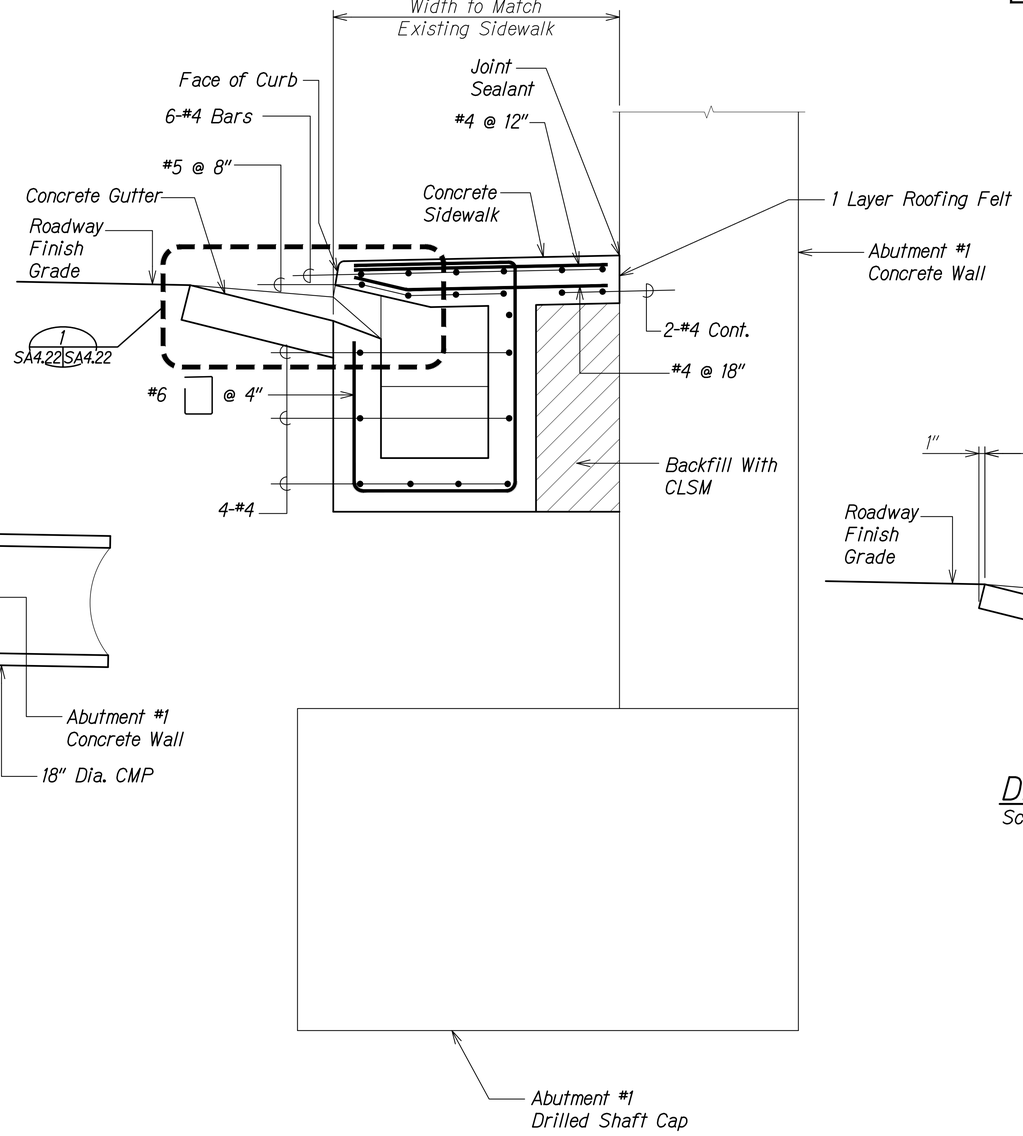
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
No.	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0420-SA0422 CBASIN ADD2.DWG PLOT TIME: 04-10-23, 3:17 PM)

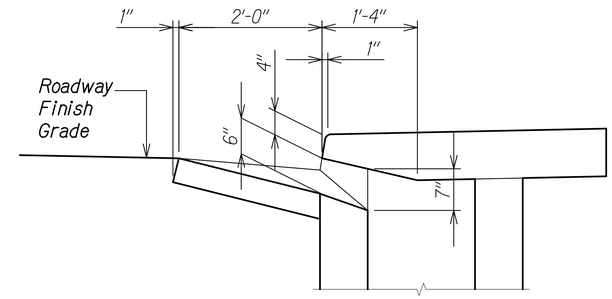
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	275	466



SECTION A
Scale: 1" = 1'-0"
SA4.21 | SA4.22



SECTION B
Scale: 1" = 1'-0"
SA4.21 | SA4.22



DETAIL 1
Scale: 1" = 1'-0"
SA4.22 | SA4.22

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE INLET SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

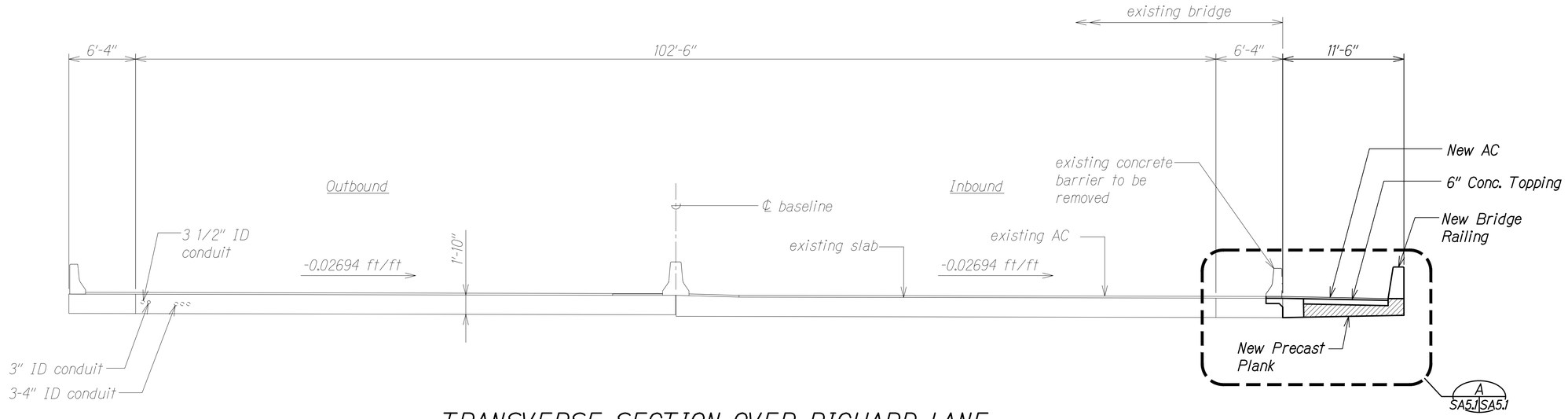
Scale: As Noted — Date: December 2022

SHEET No. SA4.22 OF 22 SHEETS

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

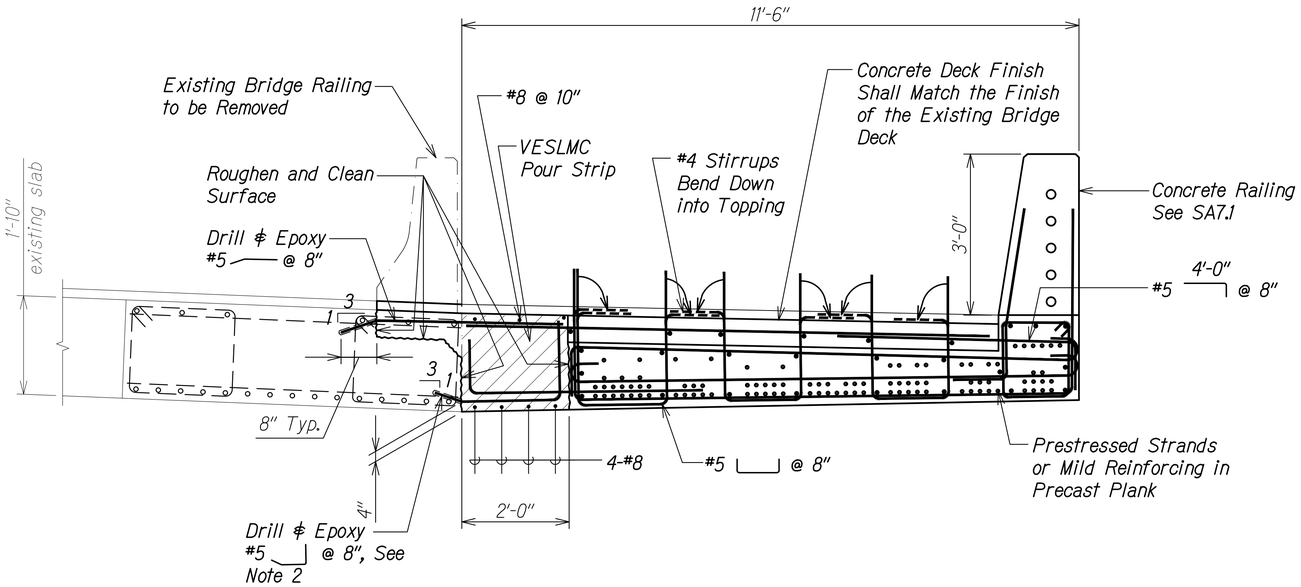
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	276	466



TRANSVERSE SECTION OVER RICHARD LANE

Scale: 3/16" = 1'-0"



SECTION

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

A SA5.1 | SA5.1

NOTES:

1. See SA6.4 to SA6.12 for additional prestressed plank details.
2. All dimensions are measured perpendicular to precast plank centerline.
3. Drill and Epoxy dowels shall be installed prior to setting the precast plank. These bars shall be placed in plan parallel with ℄ Bearing Rigid Frame Abutment and ℄ Bearing Abutment #1. The Location of these bars shall be coordinated with H4 in the precast plank to avoid conflict during the setting of the precast plank.

CALVIN T. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 8133-S HAWAII, U.S.A.

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
TYP. TRANSV. SECTS. OVER RICHARD LN.

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

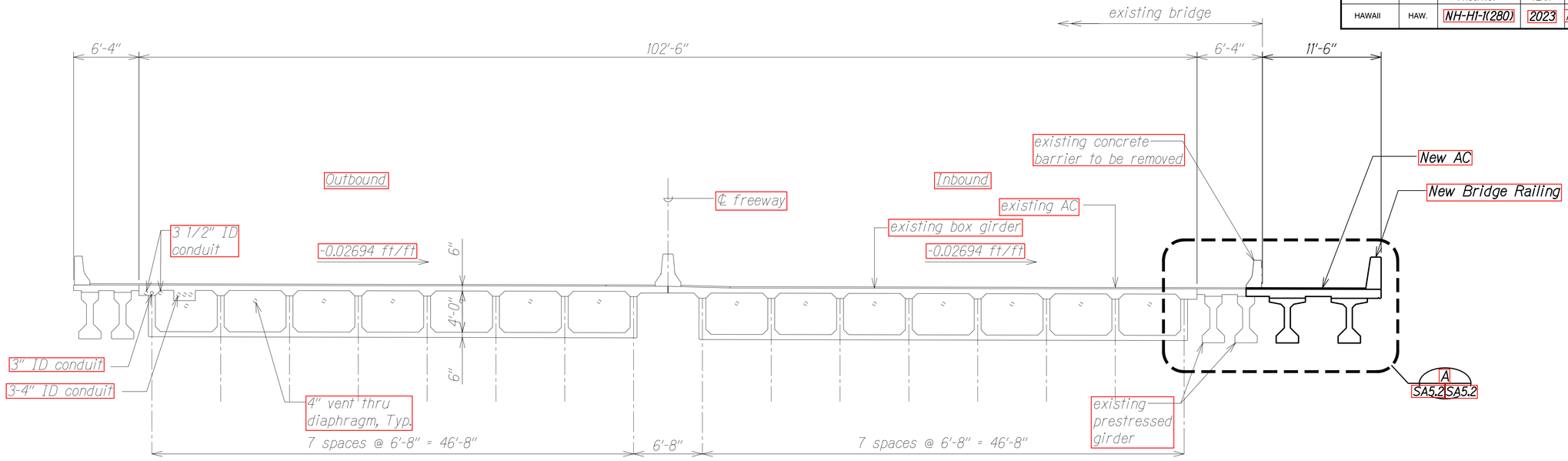
Scale: As Noted Date: December 2022

SHEET No. SA5.1 OF 4 SHEETS

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

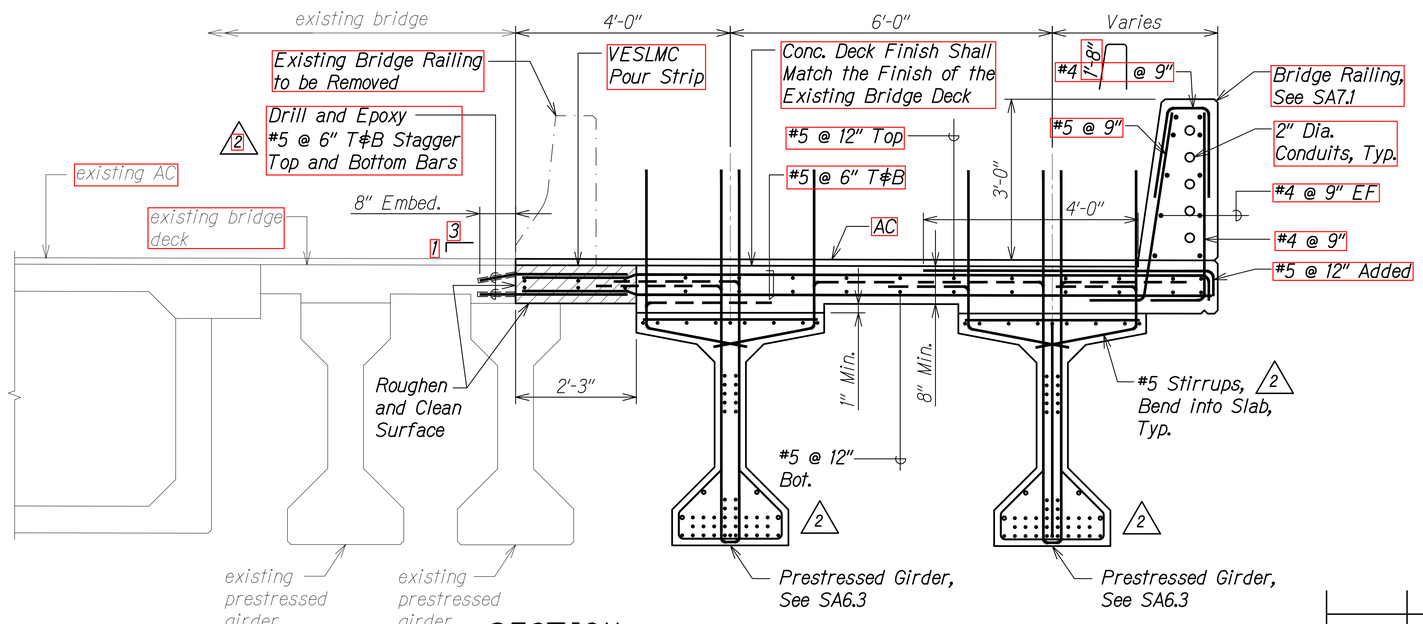
DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GUJCK.RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0501 RL BRD CROSS SECT.DWG PLOT TIME: 01-04-23, 9:24 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 277	466



TRANSVERSE SECTION OVER KALIHI STREAM

Scale: 3/16" = 1'-0"



SECTION

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

A SA3.2 SA5.2

NOTE:

All dimensions are measured perpendicular to prestressed girder centerline.

CALVIN T. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 8133-S HAWAII, U.S.A.

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4-30-24

SIGNATURE EXPIRATION DATE OF THE LICENSE

DATE	REVISIONS

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

DATE		REVISION
4/7/23	2	Revised Reinf. and Callout

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
TYP. TRANSV. SECTS. OVER KALIHI STR.

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

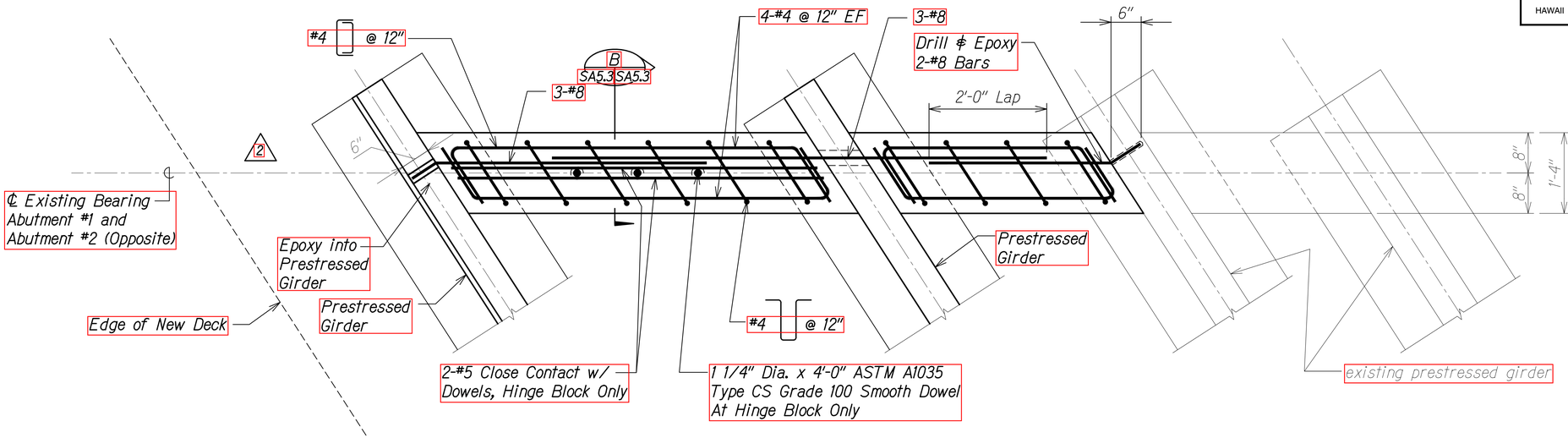
Scale: As Noted Date: December 2022

SHEET No. SA5.2 OF 4 SHEETS

ADD. 277

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GUICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0502 KS BRD CROSS SECT ADD2.DWG PLOT TIME: 04-10-23, 3:18 PM)

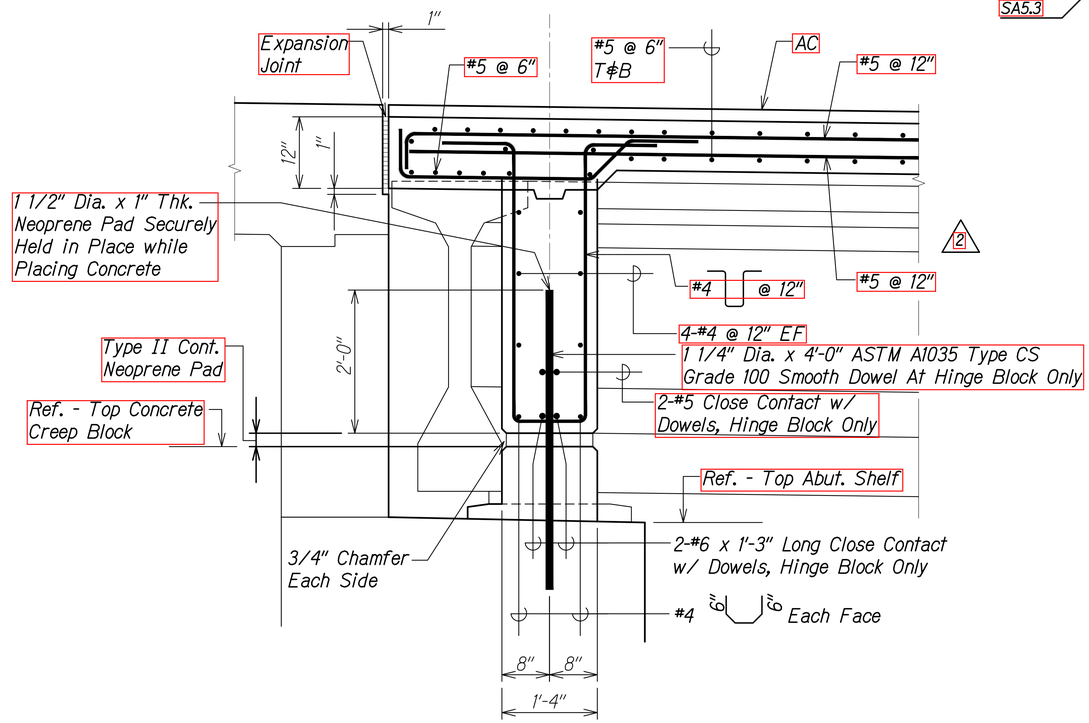
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 278	466



BEAM "A" SECTION

Scale: 1" = 1'-0"

A
SA3.2 SA5.3
SA5.3



BEAM "A" SECTION

Scale: 1" = 1'-0"

B
SA3.2 SA5.3

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0503 BEAM A-B SECT ADD2.DWG PLOT TIME: 04-10-23, 3:18 PM)

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
BEAM "A" SECTIONS

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

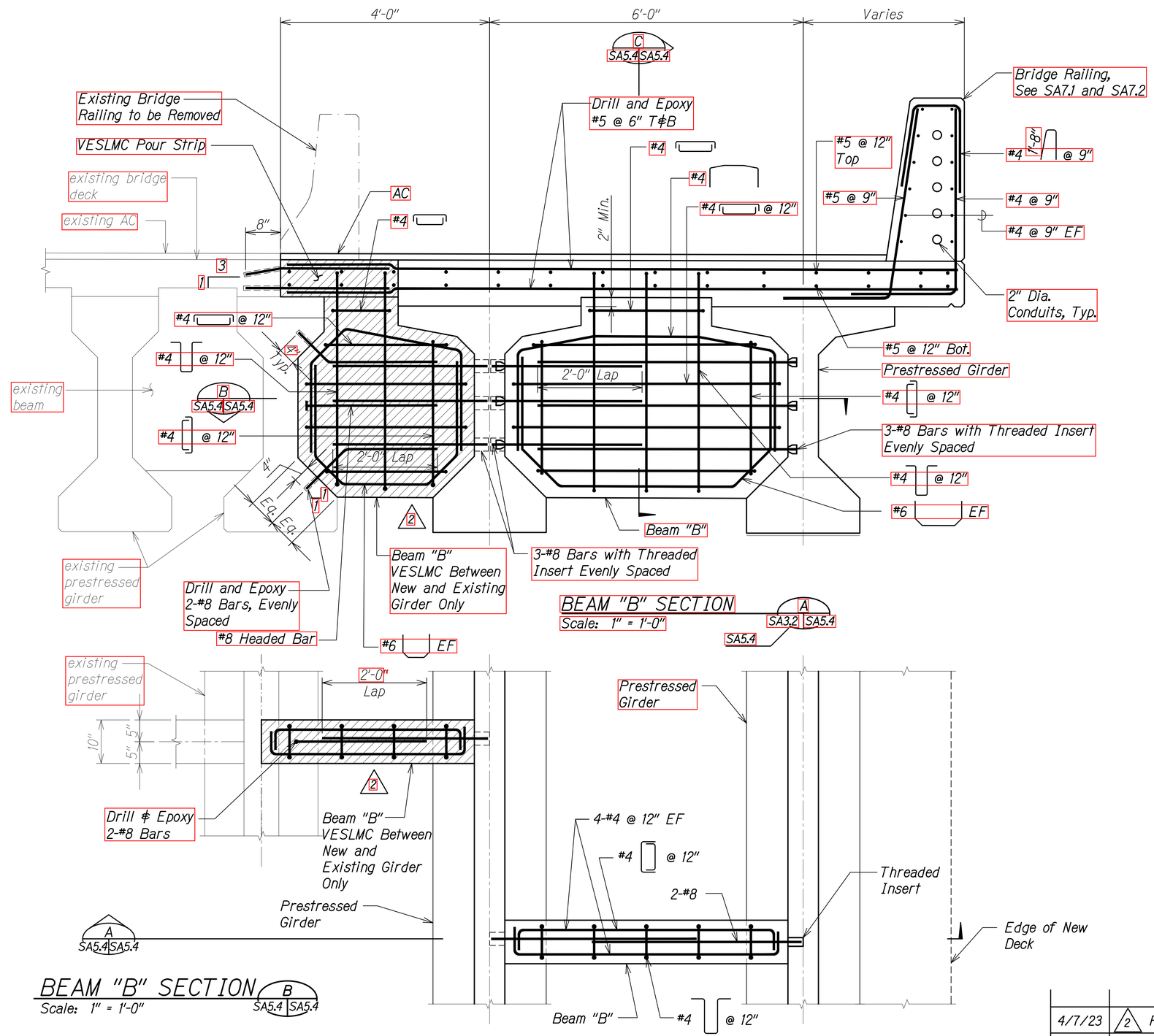
Scale: As Noted Date: December 2022

SHEET No. SA5.3 OF 4 SHEETS

DATE	REVISION
4/7/23	2 Revised Sections

ADD. 278

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 279	466



CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
BEAM "B" SECTIONS

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA5.4 OF 4 SHEETS

DATE	REVISION
4/7/23	2 Revised Callouts

ADD. 279

DATE

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

ORIGINAL PLAN
NOTE BOOK
No.

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-17-23 ADD2\GRK-SA0504 BEAM A.DWG PLOT TIME: 04-17-23, 11:15 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	280	466

PRESTRESSED GIRDER NOTES:

1. Prestressed steel shall be 7-wire 0.6-inch diameter ASTM A416 Grade 270 low-relaxation strand.
2. See framing plans for location of diaphragms, ℄ bearing to ℄ bearing, and girder spacing.
3. Strand pattern shall be symmetrical about the longitudinal ℄ of the girder.
4. Strand release sequence shall not induce any lateral deflection of the girder.
5. Contractor shall submit shop drawings indicating proposed strand pattern, holes, inserts, releasing sequence, reinforcing details and hold down device details to the Engineer prior to fabrication.
6. The Contractor shall incorporate all holes, inserts, and other embedded items required in girders during fabrication of the girders.
7. Lifting devices shall be placed as close as possible to the center line bearing of the girder. Details and locations of lifting devices shall be submitted to the Engineer for approval. Such approval does not relieve the Contractor of his responsibilities if the girder is damaged due to failure of lifting device.
8. Prior to casting girder Contractor shall field verify span lengths.
9. Contractor shall inspect all lifting devices for damage prior to delivery and immediately before installation.
10. Contractor shall submit alternative method to lift girder if lifting devices are damaged for review and acceptance.
11. Roughen top surface of girder to 1/4" min. amplitude.
12. The compressive strength of the girder at strand release shall be at least 5,000 psi.
13. The compressive strength of the girder at 28 days shall be at least 7,500 psi.
14. Contractor may adjust locations of holes & inserts with the approval of the Engineer.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0601 GIRDER DETAILS.DWG PLOT TIME: 01-04-23, 9:26 AM)

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE PRESTRESSED GIRDER DETAILS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: None Date: December 2022

SHEET No. SA6.1 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	281	466

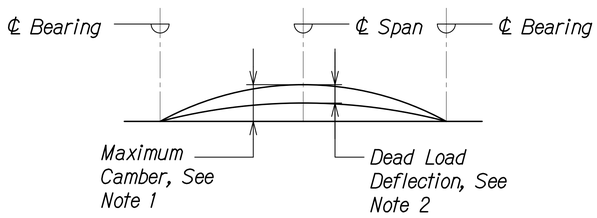
GIRDER CAMBER AND DEAD LOAD DEFLECTION SCHEDULE

Note: Girder Length Given is the Horizontal Distances Between ℄ Bearing in Feet.

Girder Length ℄ Brg to ℄ Brg	Initial Camber	Dead Load Deflection	Working Force (kips)	Location of CG Strands	
				"A" (in)	"B" (in)
82.65'	1.22	(-) 0.50	1020	14.11	4.25

GIRDER CAMBER NOTES:

1. The initial camber includes the effect of the initial prestress force and the weight of the girder after removal from the bed. Positive values shown for initial camber indicate a net upward deflection. The maximum camber immediately prior to erection of girders shall not exceed the initial camber multiplied by a factor of 2 plus a one-inch tolerance.
2. The dead load deflection includes the combined effects of the weight of slab, drop panels and diaphragms.
3. Contractor shall camber the deck form work as required to account for the calculated dead load deflection in order to provide the specified finish deck elevations.
4. All cambers and deflections are in inches.
5. Check camber at job site upon arrival at jobsite and at least one (1) week prior to installation. Submit measurements to Engineer.



GIRDER CAMBER DIAGRAM
NO SCALE

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PRESTRESSED GIRDER CAMBER AND DEAD LOAD DEFLECTION SCHEDULE

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

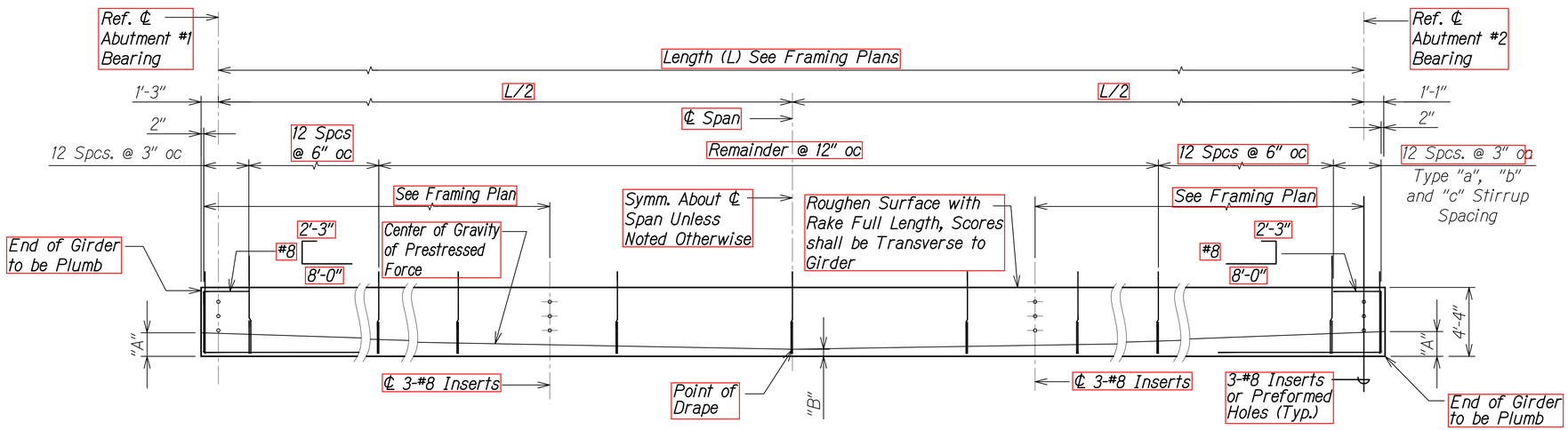
Scale: As Noted Date: December 2022

SHEET No. SA6.2 OF 12 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0602 GIRDER SCHED.DWG PLOT TIME: 01-04-23, 9:26 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 282	466

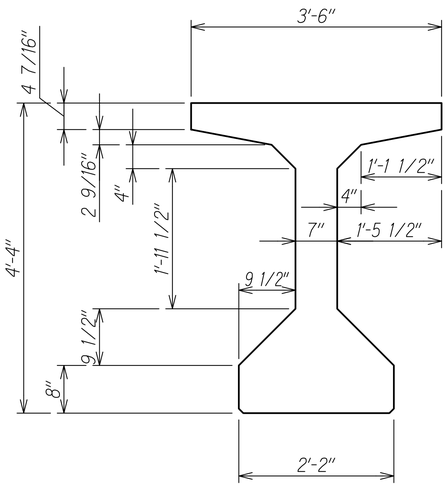


TYPICAL PRESTRESSED GIRDER ELEVATION

Not to Scale

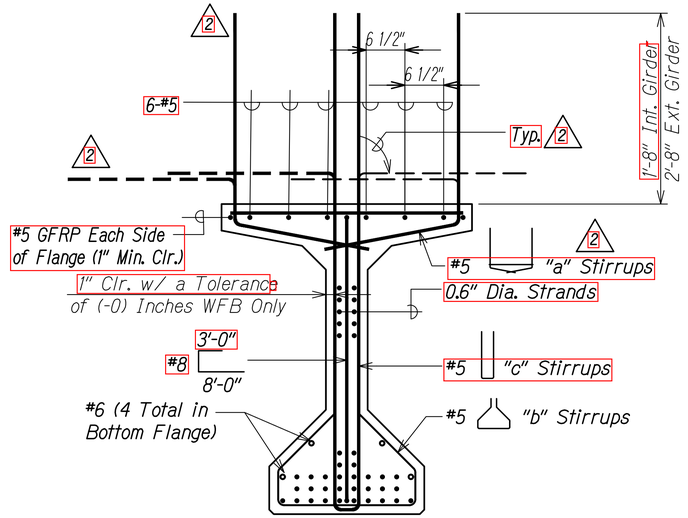
A

SA6.3 | SA6.3



PRESTRESSED GIRDER SECTION

Scale: 1" = 1'-0"



PRESTRESSED GIRDER END SECTION

Scale: 1" = 1'-0"

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

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE PRESTRESSED GIRDER DETAILS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA6.3 OF 12 SHEETS

DATE	REVISION
4/7/23	2 Revised Reinf.

ADD. 282

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0603 GIRDER DTLS ADD2.DWG PLOT TIME: 04-10-23, 3:18 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 283	466

PRECAST PLANK NOTES:

1. Prestressed steel shall be 7-wire 0.6-inch diameter ASTM A416 Grade 270 low-relaxation strand.
2. See framing plan for location of precast plank.
3. Strand and strand masking pattern shall be as shown on sheets SA6.6 to SA6.10. Any changes to strands and/or strand masking pattern shall be submitted to Engineer for approval.
4. Strand release sequence shall minimize any lateral deflection of the plank.
5. Contractor shall submit shop drawings indicating any alternative strand pattern, holes, inserts, releasing sequence, reinforcing details and hold down device details to the Engineer prior to fabrication.
6. The Contractor shall incorporate all holes, inserts, and other embedded items required in plank during fabrication of the plank.
7. Lifting devices shall be placed as close as possible to the center line bearing of the plank. Details and locations of lifting devices shall be submitted to the Engineer for approval. Such approval does not relieve the Contractor of his responsibilities if the plank is damaged due to failure of lifting device.
8. Prior to casting plank Contractor shall field verify span length.
9. Contractor shall inspect all lifting devices for damage prior to delivery and immediately before installation.
10. Contractor shall submit alternative method to lift plank if lifting devices are damaged for review and acceptance.
11. Clean and roughen surfaces of plank indicated on sheet SA6.6. Surfaces shall be free of laitance and intentionally roughened to 1/4" amplitude.
12. The compressive strength of the plank at strand release shall be at least 6,000 psi.
13. The compressive strength of the plank at 28 days shall be at least 9,000 psi.
14. Contractor may adjust locations of holes & inserts with the approval of the Engineer.
15. During curing, care shall be taken to avoid any lateral deflection of the plank due to improper orientation.

DATE	REVISION
4/7/23	2 Revised Note

ORIGINAL PLAN
NOTE BOOK No.
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QUANTITIES BY
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DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0604 PRECAST NOTES ADD2.DWG PLOT TIME: 04-10-23, 3:19 PM)

CALVIN T. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE PRECAST PLANK NOTES

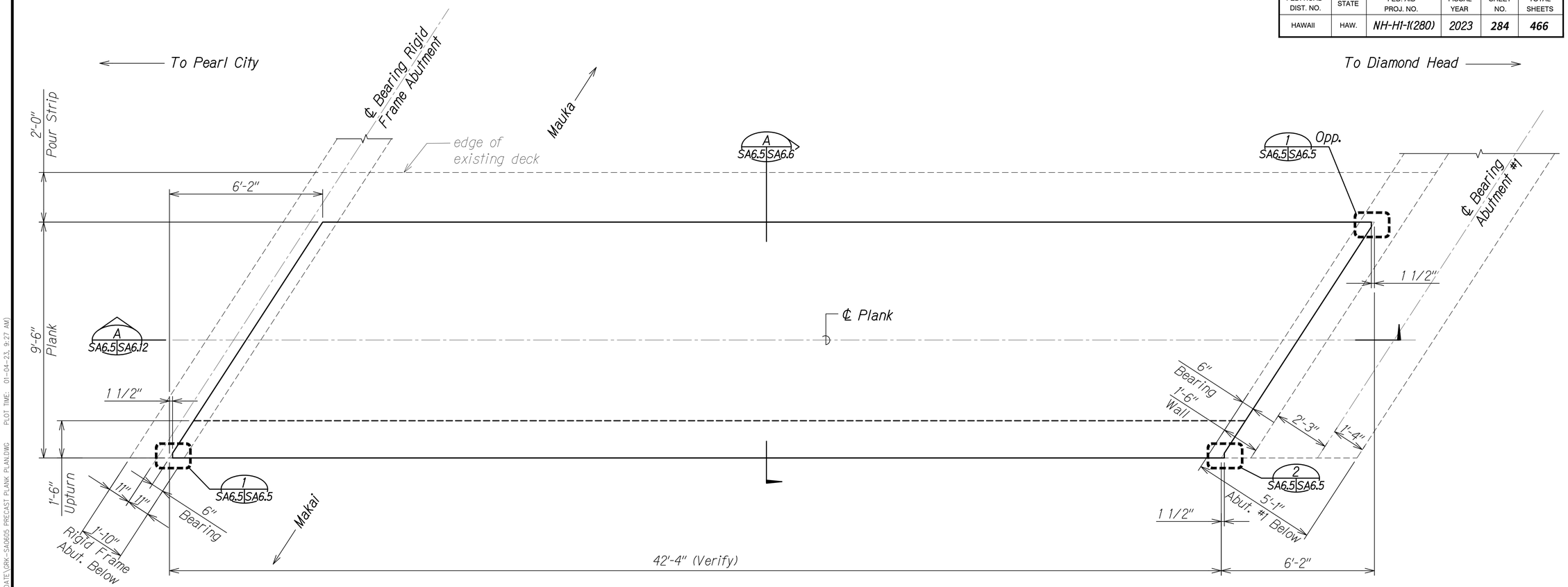
INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: None Date: December 2022

SHEET No. SA6.4 OF 12 SHEETS

ADD. 283

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	284	466

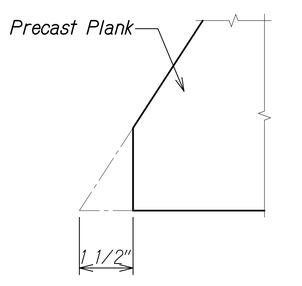


PRECAST PLANK PLAN (A SA6.5 | SA6.5)

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

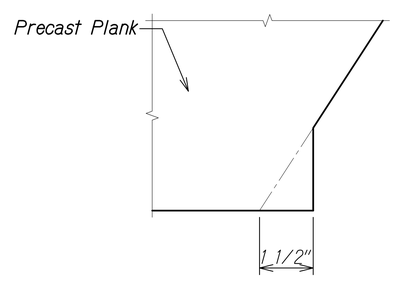
NOTE:

For rigid frame abutment and Abutment #1, see SA4.1.



DETAIL (1 SA6.5 | SA6.5)

Scale: 6" = 1'-0"



DETAIL (2 SA6.5 | SA6.5)

Scale: 6" = 1'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE PRECAST PLANK PLAN

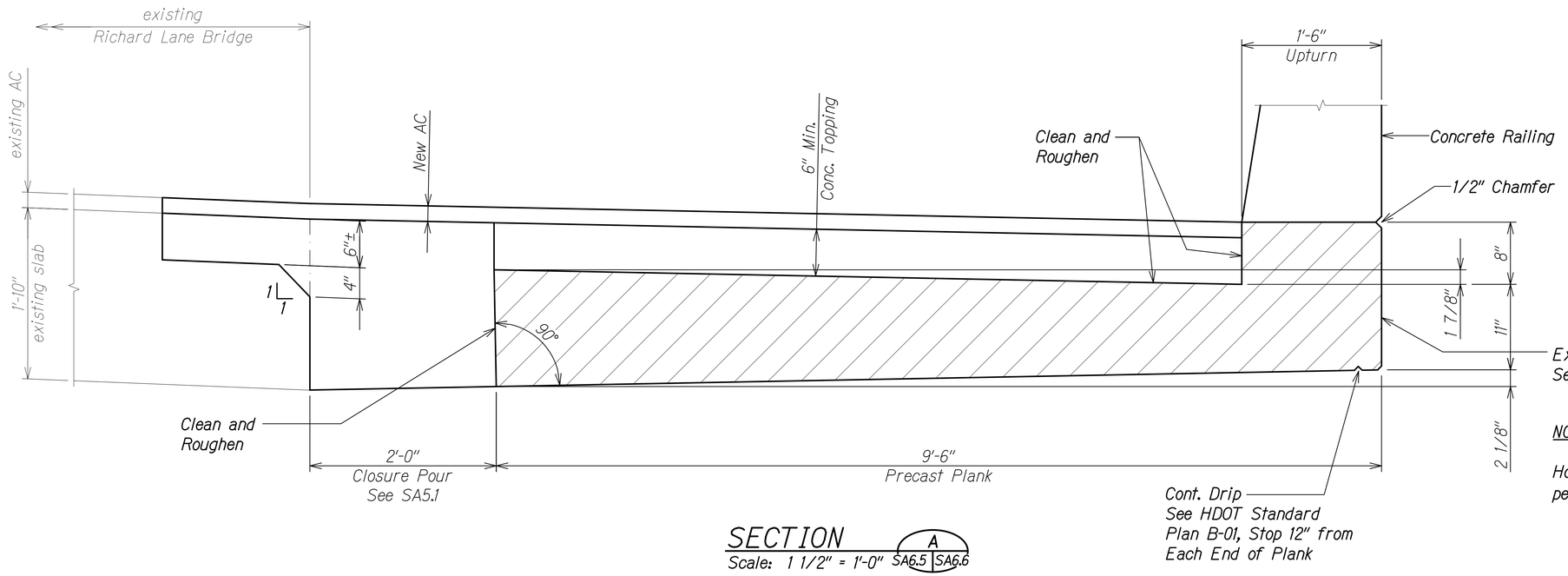
INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

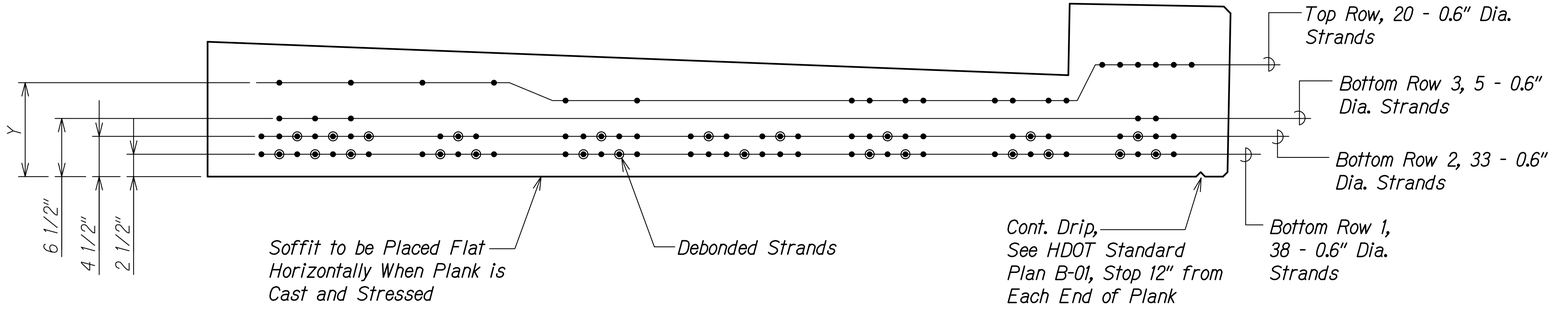
SHEET No. SA6.5 OF 12 SHEETS

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0605 PRECAST PLANK PLAN.DWG PLOT TIME: 01-04-23, 9:27 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	285	466



SECTION A
Scale: 1 1/2" = 1'-0" SA6.5 | SA6.6



NOTE:

For location of pretensioning strands, strand spacing, length of debonding, and dimension Y, see SA6.7 to SA6.10.

STRAND LAYOUT SECTION B
Scale: 1 1/2" = 1'-0" SA6.6 | SA6.6

NOTE:

Horizontal dimensions measured perpendicular to ℄ Plank.

CALVIN T. MIYAHIRA
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HAWAII, U.S.A.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE PRECAST PLANK SECTIONS

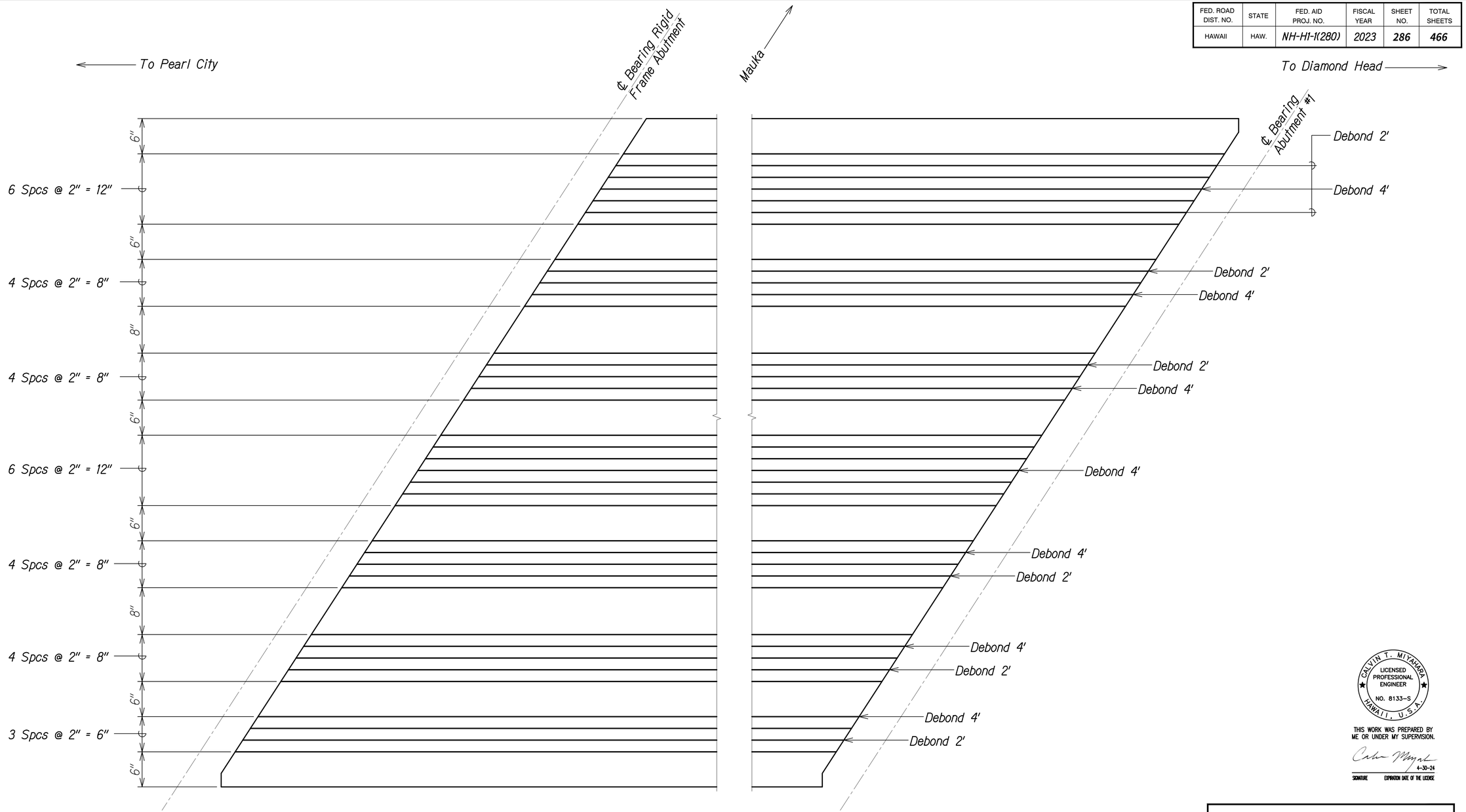
INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA6.6 OF 12 SHEETS

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0606 PRECAST PLANK.DWG PLOT TIME: 01-04-23, 9:27 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	286	466



PRECAST PLANK STRAND LAYOUT BOTTOM ROW 1

A | SA6.7 | SA6.7

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

NOTES:

1. All debonded strands indicated shall be debonded for the length specified at both ends.
2. For location of bottom row 1, see SA6.6.

CALVIN T. MIYAHARA
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HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
STRAND LAYOUT PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

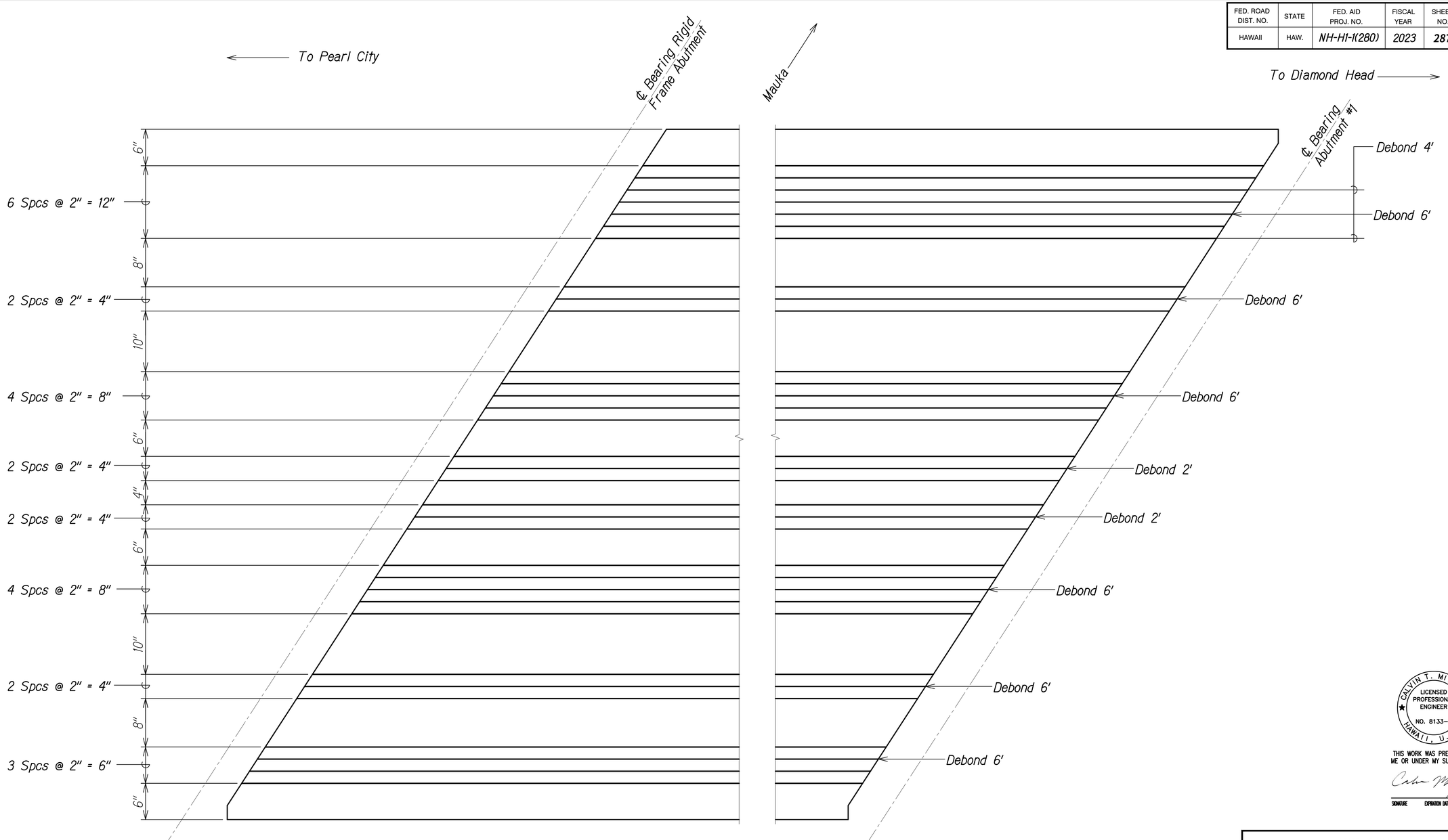
SHEET No. SA6.7 OF 12 SHEETS

286

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0607 STRAND LAYOUT PLANS.DWG PLOT TIME: 01-04-23, 9:27 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	287	466



PRECAST PLANK STRAND LAYOUT BOTTOM ROW 2

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

A
SA6.8 | SA6.8

NOTES:

1. All debonded strands indicated shall be debonded for the length specified at both ends.
2. For location of bottom row 2, see SA6.6.

CALVIN T. MIYAMARA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.

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4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE STRAND LAYOUT PLAN

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

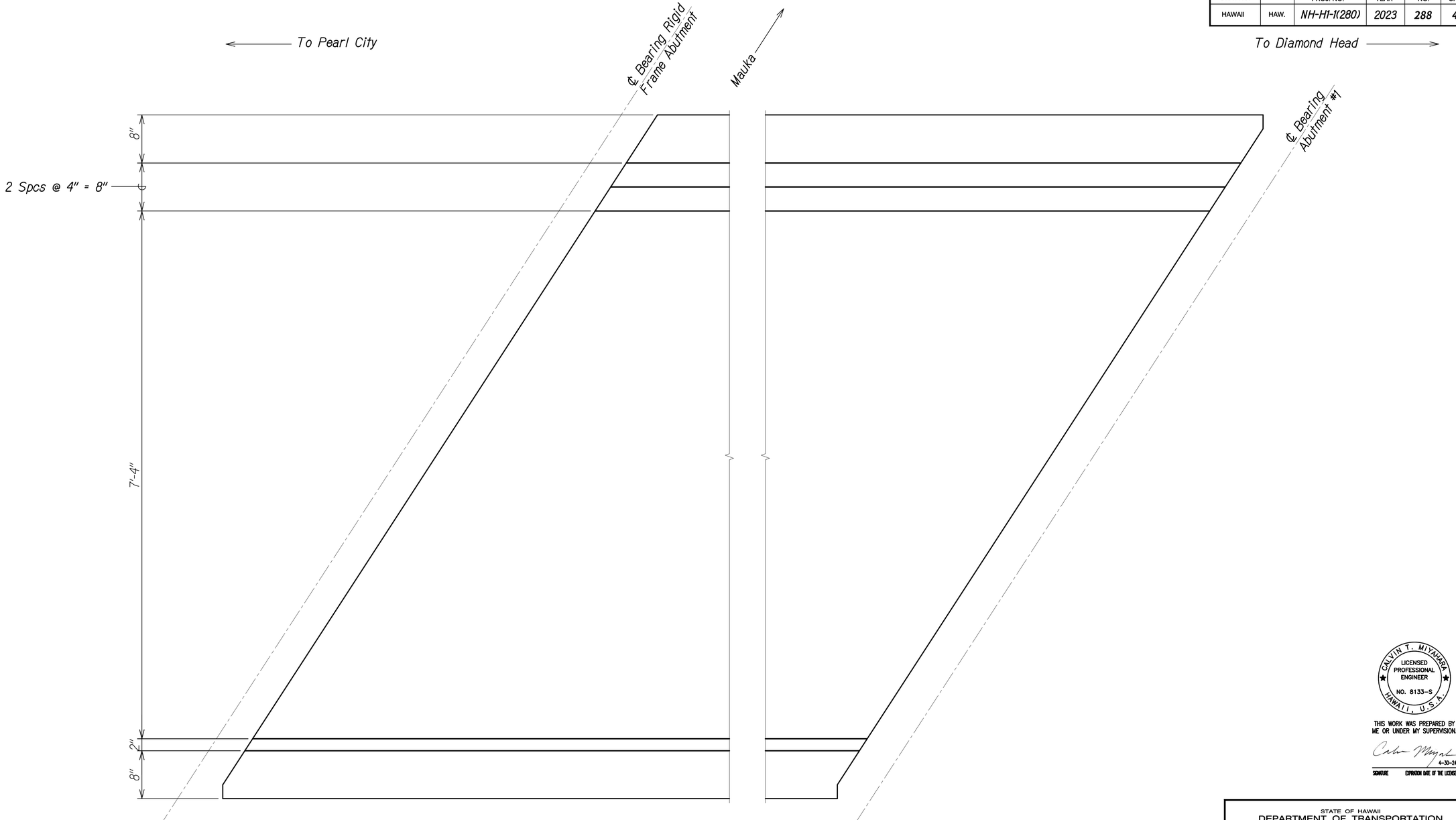
Scale: As Noted Date: December 2022

SHEET No. SA6.8 OF 12 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
No.	DESIGNED BY	
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DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0607 STRAND LAYOUT PLANS.DWG PLOT TIME: 01-04-23, 9:28 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	288	466



PRECAST PLANK STRAND LAYOUT BOTTOM ROW 3

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

A
SA6.9 | SA6.9

NOTE:

For location of bottom row 3, see SA6.6.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
STRAND LAYOUT PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

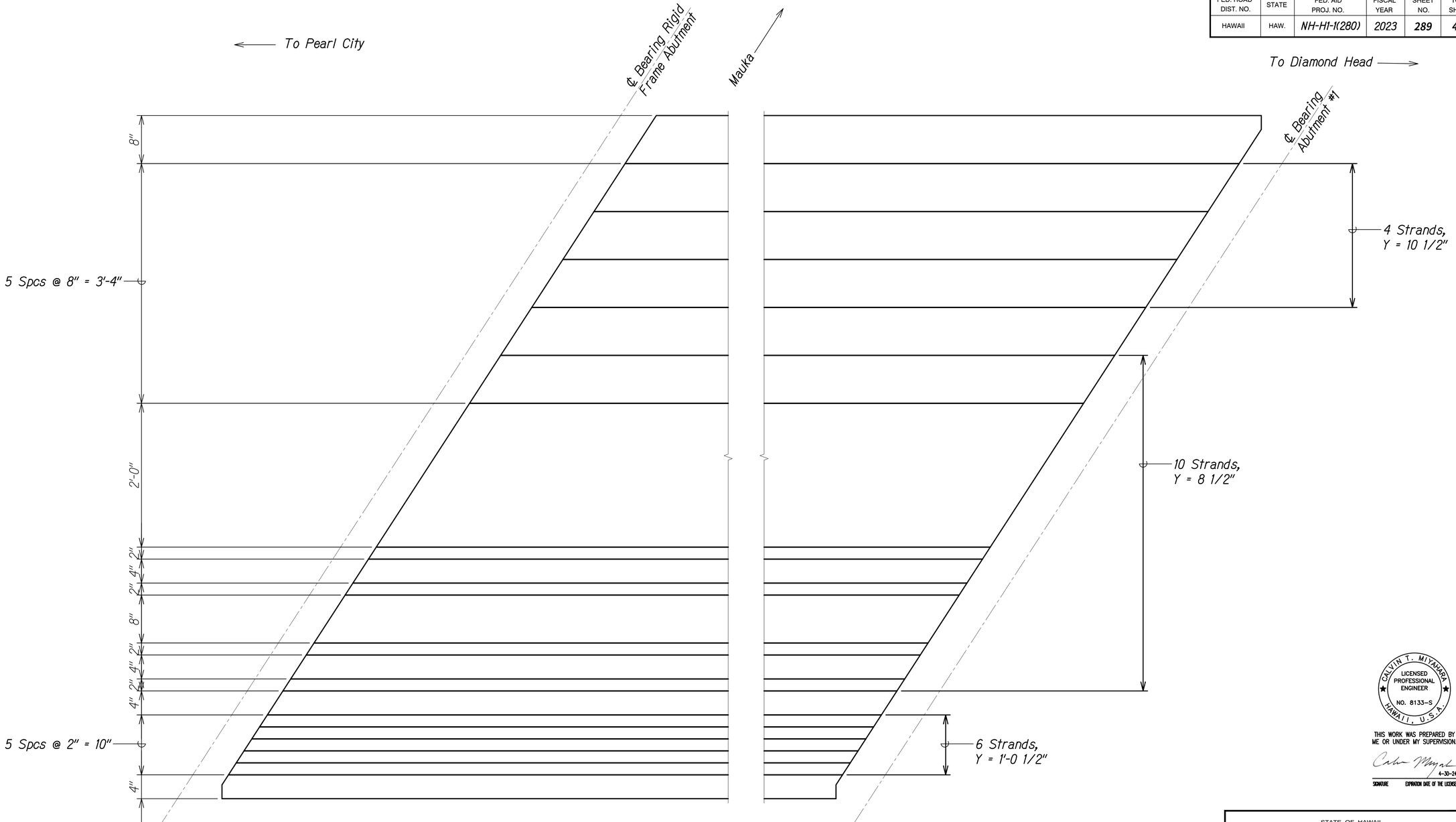
Scale: As Noted Date: December 2022

SHEET No. SA6.9 OF 12 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0607 STRAND LAYOUT PLANS.DWG PLOT TIME: 01-04-23, 9:28 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	289	466



PRECAST PLANK STRAND LAYOUT TOP ROW

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

A SA6.10 | SA6.10

NOTE:

For location of top row and dimension Y, see SA6.6.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0607 STRAND LAYOUT PLANS.DWG PLOT TIME: 01-04-23, 9:28 AM)

CALVIN T. MIYAHARA
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

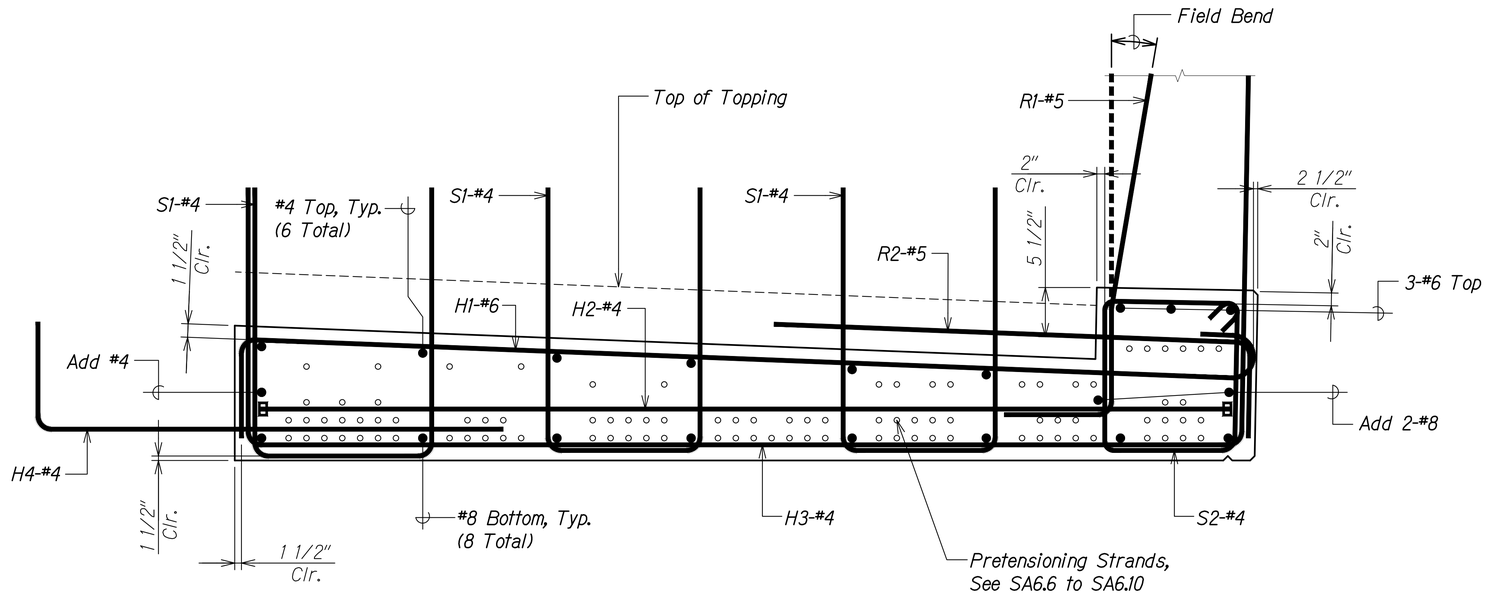
KALIHI STREAM/RICHARD LANE BRIDGE STRAND LAYOUT PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA6.10 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	290	466

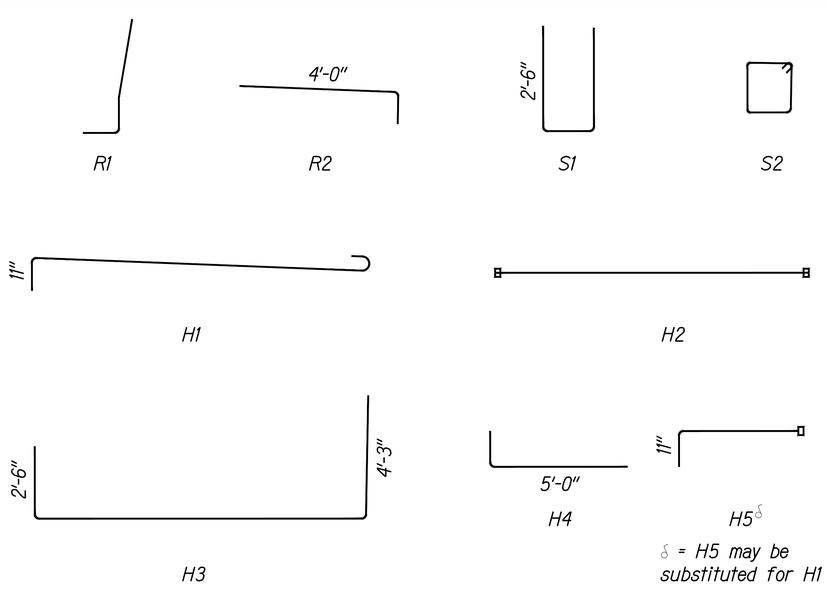


REINFORCING STEEL SECTION

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

A SA6.11 | SA6.11

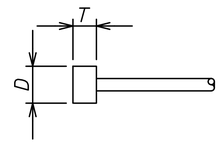
BENDING DIAGRAM (ALL DIMENSIONS ARE OUT TO OUT)



NOTES:

1. For spacing of R-bars, S-bars, and H-bars, see SA6.12.
2. R-bars, S-bars, and H-bars shall be placed in plan parallel with ℄ Bearing Rigid Frame Abutment and ℄ Bearing Abutment #1.
3. Vertical legs of bars S1 and H3 shall be field bent around added #4 longitudinal bar in topping. See SA5.1.
4. Headed ends of bars H2 and H5 shall be as close to exterior vertical face of precast plank as possible but shall not be in the same plane with vertical reinforcing.

HEADED REBAR ANCHOR HEAD DIMENSIONS		
Bar No.	D (Dia.)	T (Thk.)
#4	1.38	0.88
#6	1.88	1.31
#8	2.75	1.75



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HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE PRECAST PLANK SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

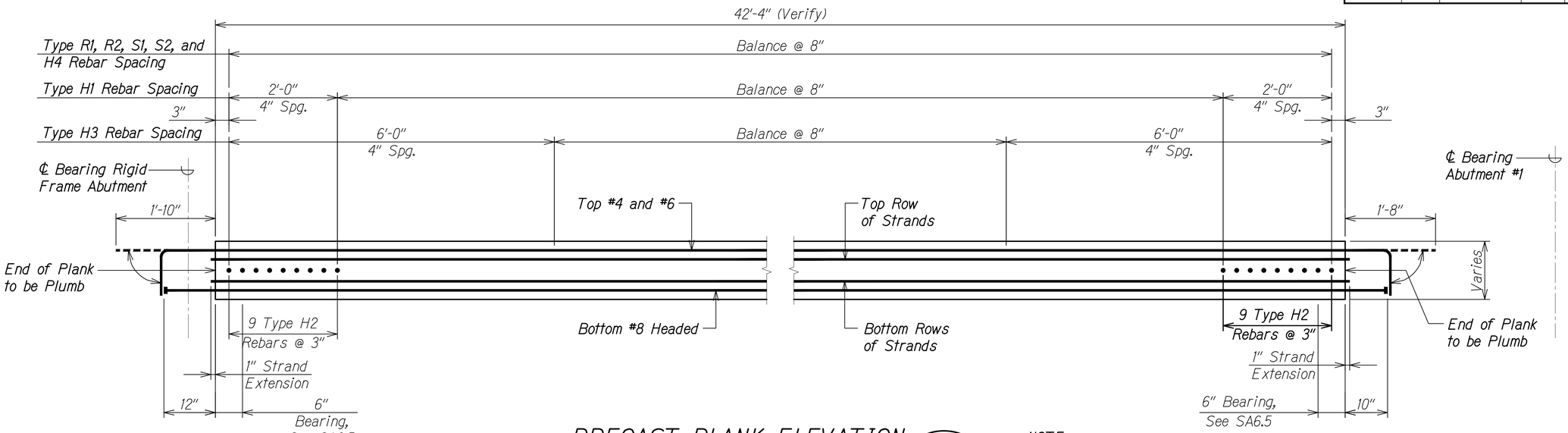
SHEET No. SA6.11 OF 12 SHEETS

290

ORIGINAL PLAN | SURVEY PLOTTED BY | DATE
NOTE BOOK | DRAWN BY
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DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0611 PRECAST SECT.DWG PLOT TIME: 01-04-23, 9:29 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	291	466



PRECAST PLANK ELEVATION

Scale: 1" = 1'-0"

A SA6.12 | SA6.12

NOTE:

Horizontal dimensions and spacings measured parallel with ℄ Plank unless noted otherwise.

PLANK CAMBER NOTES:

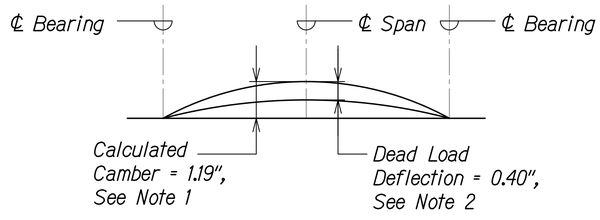
1. The initial camber (0.70") includes the effect of the initial prestress force and the weight of the plank after removal from the bed. The calculated camber value at 60 days is the initial camber multiplied by creep factor to approximate the effect of camber growth and concrete creep. Positive values shown for calculated camber indicate a net upward deflection. Maximum camber immediately prior to erection of plank shall not exceed the calculated camber by more than 0.25 inch. Plank with cambers exceeding the maximum camber will not be accepted.

2. The dead load deflection includes the combined effects of the weight of topping, closure pour, railing, and AC.

3. Contractor shall camber the deck form work as required to account for the calculated dead load deflection in order to provide the specified finish deck elevations.

4. All cambers and deflections are in inches.

5. Check camber at job site upon arrival at jobsite and at least one (1) week prior to installation. Submit measurements to Engineer.



PLANK CAMBER DIAGRAM

NO SCALE

CALVIN T. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 8133-S HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
PRECAST PLANK ELEVATION AND CAMBER DIAGRAM

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

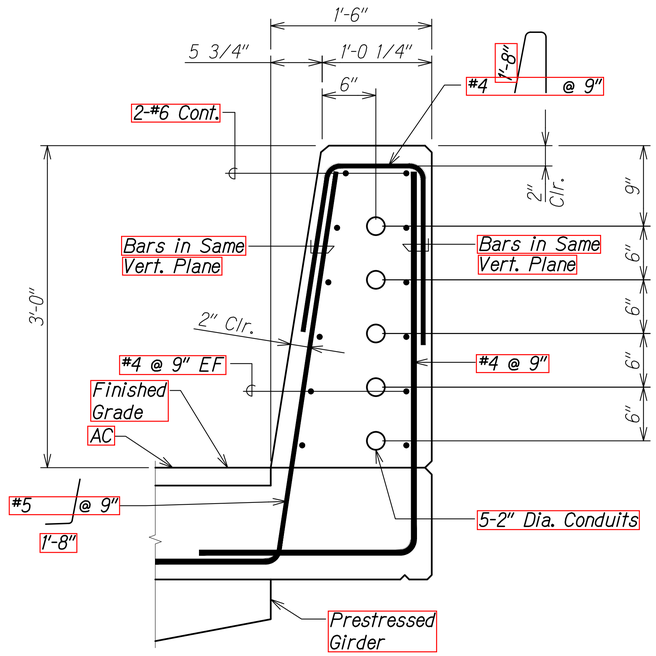
Scale: As Noted Date: December 2022

SHEET No. SA6.12 OF 12 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK:RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0612 PRECAST PLAN ELEV.DWG PLOT TIME: 01-04-23, 9:29 AM)

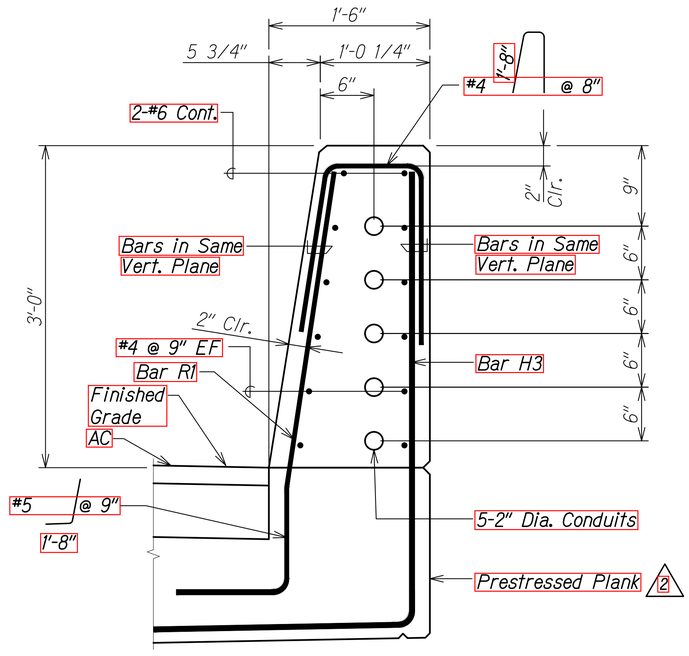
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 292	466



SECTION AT KALIHI STREAM

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

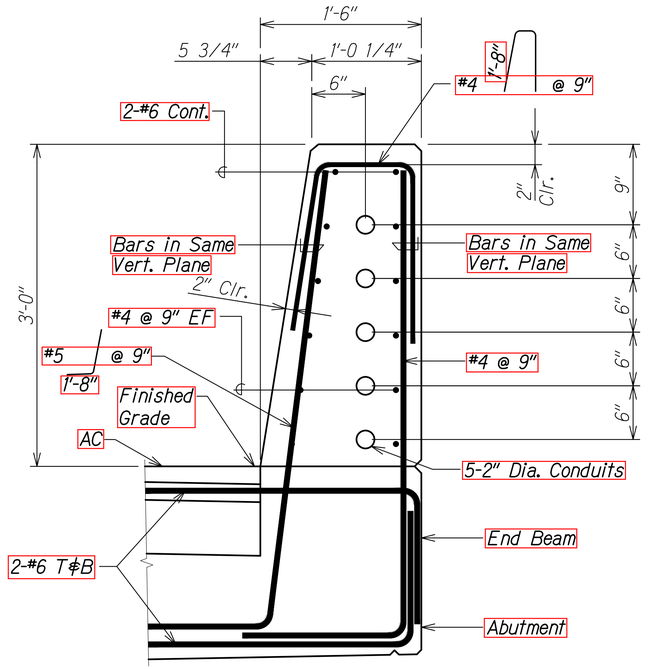
A SA7.1 SA7.1



SECTION AT RICHARD LANE

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

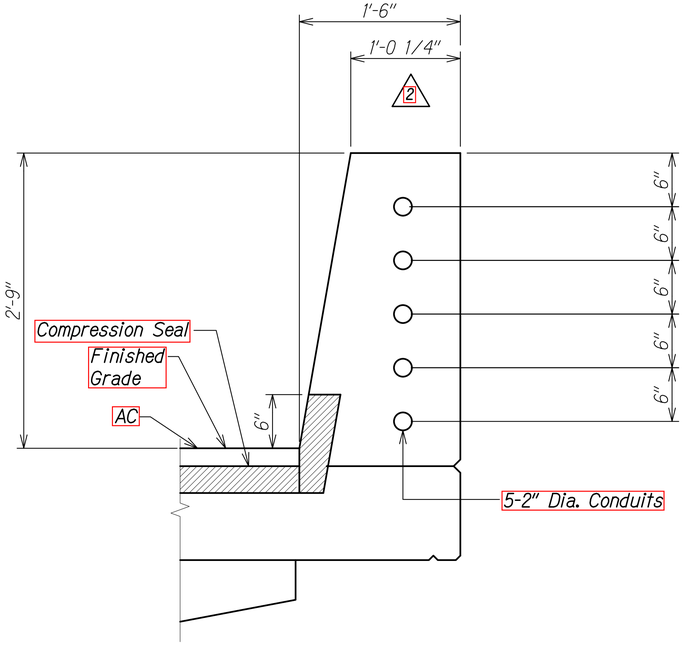
B SA7.1 SA7.1



SECTION AT RIGID FRAME ABUTMENT AND ABUTMENT #1

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

C SA7.1 SA7.1



SECTION AT EXPANSION JOINTS

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

D SA7.1 SA7.1

NOTES:

1. Follow Joint Seal Manufacturer's recommendations for size of compression seal, installation procedures, and all other requirements related to the compression seal.
2. Joint seal shall be continuous with no joints.
3. At new barriers, the angle of the joint changes.
4. All dimensions are perpendicular to the precast plank and prestressed girder centerlines.

CALVIN T. MIYAHARA
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NO. 8133-S
HAWAII, U.S.A.

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DATE	REVISIONS

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ORIGINAL PLANS
NOTE BOOK
No.

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK:RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0701 RAILING DET ADD2.DWG PLOT TIME: 04-10-23, 3:19 PM)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
CONCRETE RAILING SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

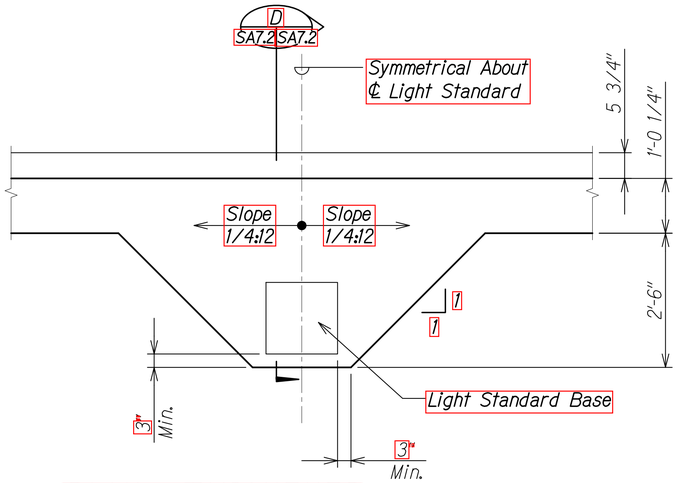
Scale: As Noted Date: December 2022

SHEET No. SA7.1 OF 7 SHEETS

DATE	REVISION
4/7/23	2 Revised Callouts

ADD. 292

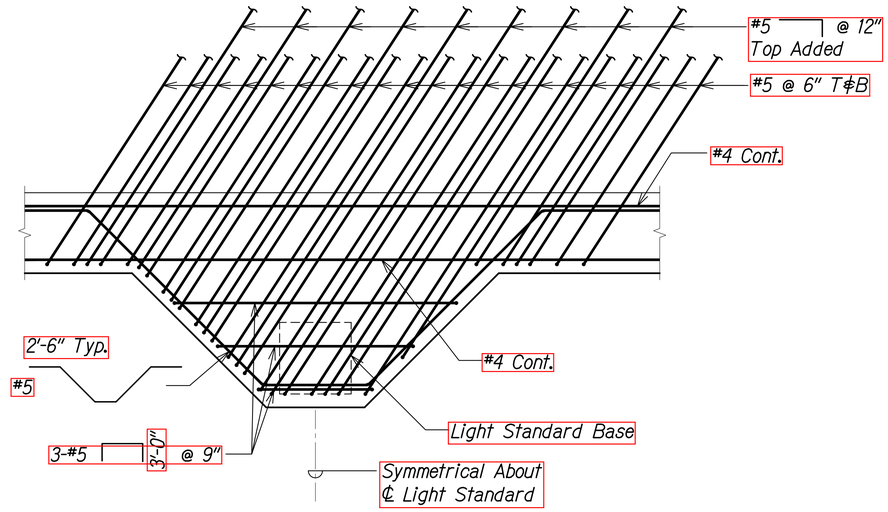
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 293	466



PLAN - THICKENED RAILING AT LIGHT STANDARD

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

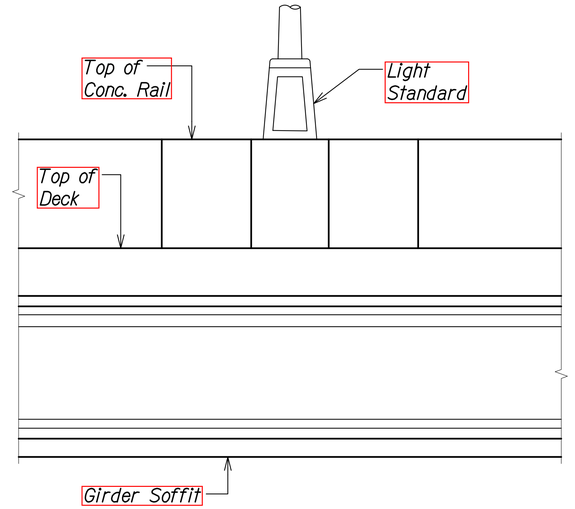
A SA7.2 SA7.2



DECK REINFORCING AT LIGHT STANDARD

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

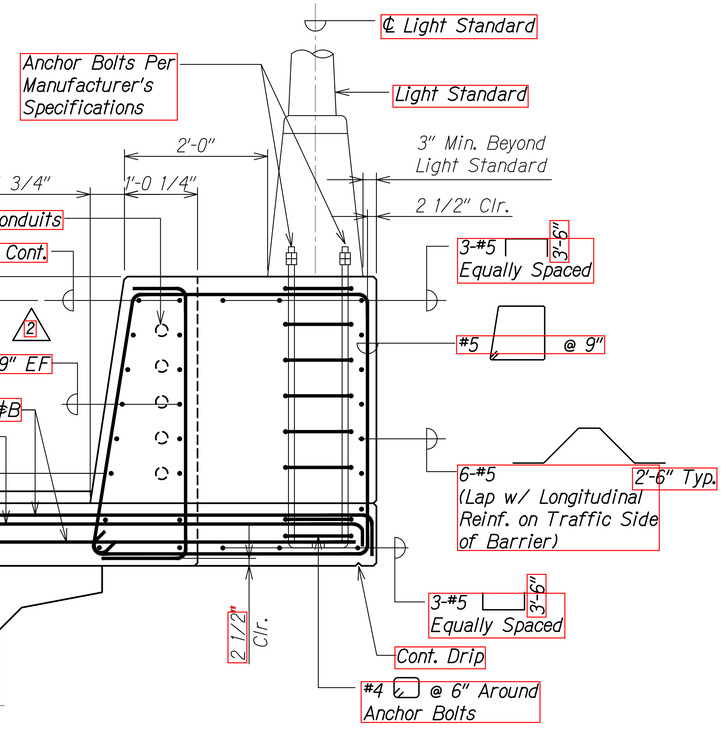
B SA7.2 SA7.2



ELEVATION - THICKENED RAILING AT LIGHT STANDARD

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

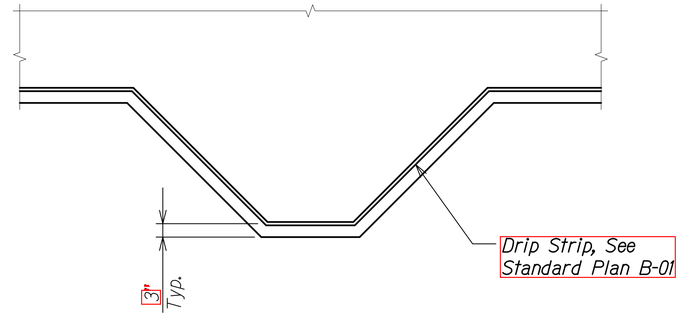
C SA7.2 SA7.2



TYP. THICKENED RAILING AT LIGHT STANDARD

Scale: 1" = 1'-0"

D SA7.2 SA7.2



DRIP STRIP DETAIL AT LIGHT STANDARD (LOOKING AT SOFFIT)

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

E SA7.2 SA7.2

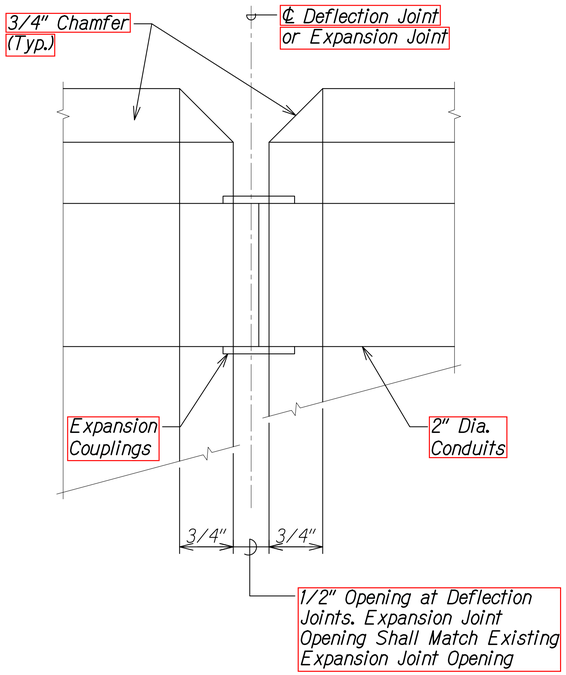
CALVIN T. MIYAHARA
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NO. 8133-S
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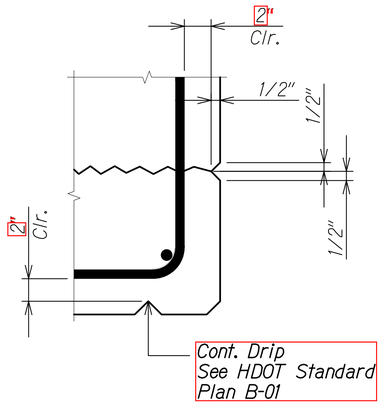
4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

DATE		REVISIONS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 294	466



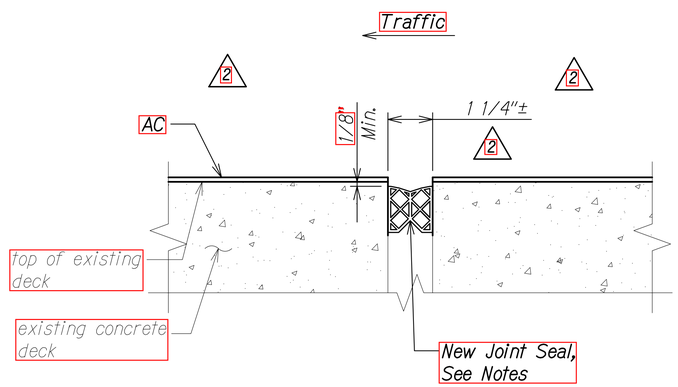
JOINT DETAIL 1 (SA7.3 | SA7.3)
Scale: 1" = 1"



DETAIL 2 (SA7.3 | SA7.3)
Scale: 3" = 1'-0"

NOTE:

Detail 2 shown for condition at Kalihi Stream. Condition at Richard Lane Similar.



TYPICAL EXPANSION JOINT A (SA1.1 | SA7.3)
Scale: 6" = 1'-0"

NOTES:

1. New Joint seal shall conform to Section 515 DECK EXPANSION JOINT of the Special Provisions.
2. New Joint seal shall be bonded to existing joint seal to form a watertight connection. Width of new joint seal shall match width of existing joint seal.

DATE		REVISION
4/7/23	2	Revised Note and Dimensions

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE CONCRETE RAILING DETAILS

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

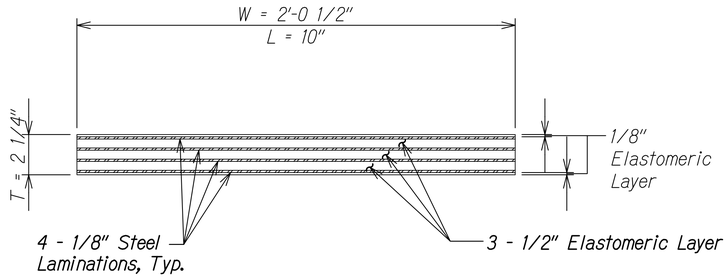
SHEET No. SA7.3 OF 7 SHEETS

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 AD22\GRK-SA0701 RAILING DET AD22.DWG PLOT TIME: 04-10-23, 3:20 PM)

ADD. 294

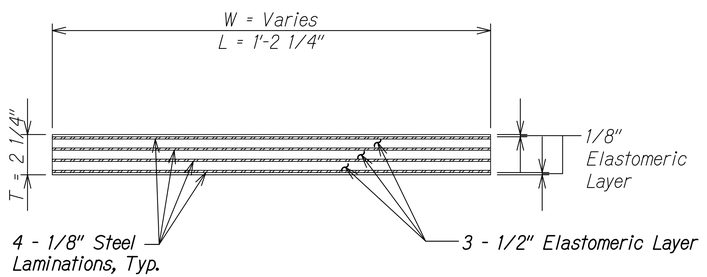
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	295	466



ELASTOMERIC BEARING PAD, TYPE I

Scale: 3" = 1'-0"

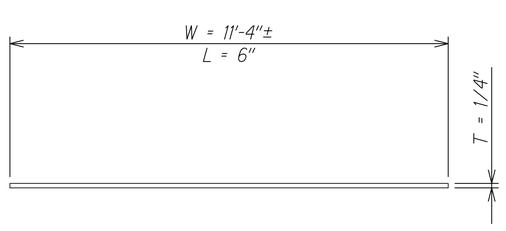
1 SA7.4 | SA7.4



ELASTOMERIC BEARING PAD, TYPE II

Scale: 3" = 1'-0"

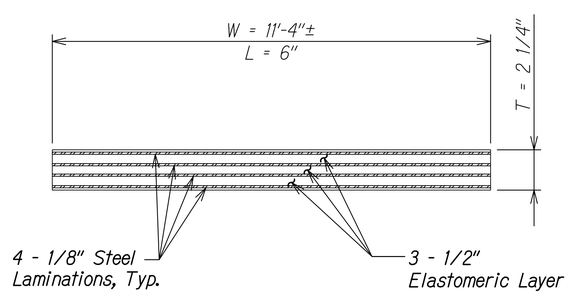
2 SA7.4 | SA7.4



ELASTOMERIC BEARING PAD, TYPE III

Scale: 3" = 1'-0"

3 SA7.4 | SA7.4



ELASTOMERIC BEARING PAD, TYPE IV

Scale: 3" = 1'-0"

3 SA7.4 | SA7.4

NOTES:

1. Type I bearing pad dimensions are parallel and perpendicular to the girder centerline.
2. Type II, III and IV bearing pads are measured parallel and perpendicular to the abutment centerline.
3. The ends of the Type III and Type IV pads shall be beveled to match the skewed edges of the plank. The W=11'-4"± is the dimension of the pad with the ends skewed.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE ELASTOMERIC BEARING PADS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

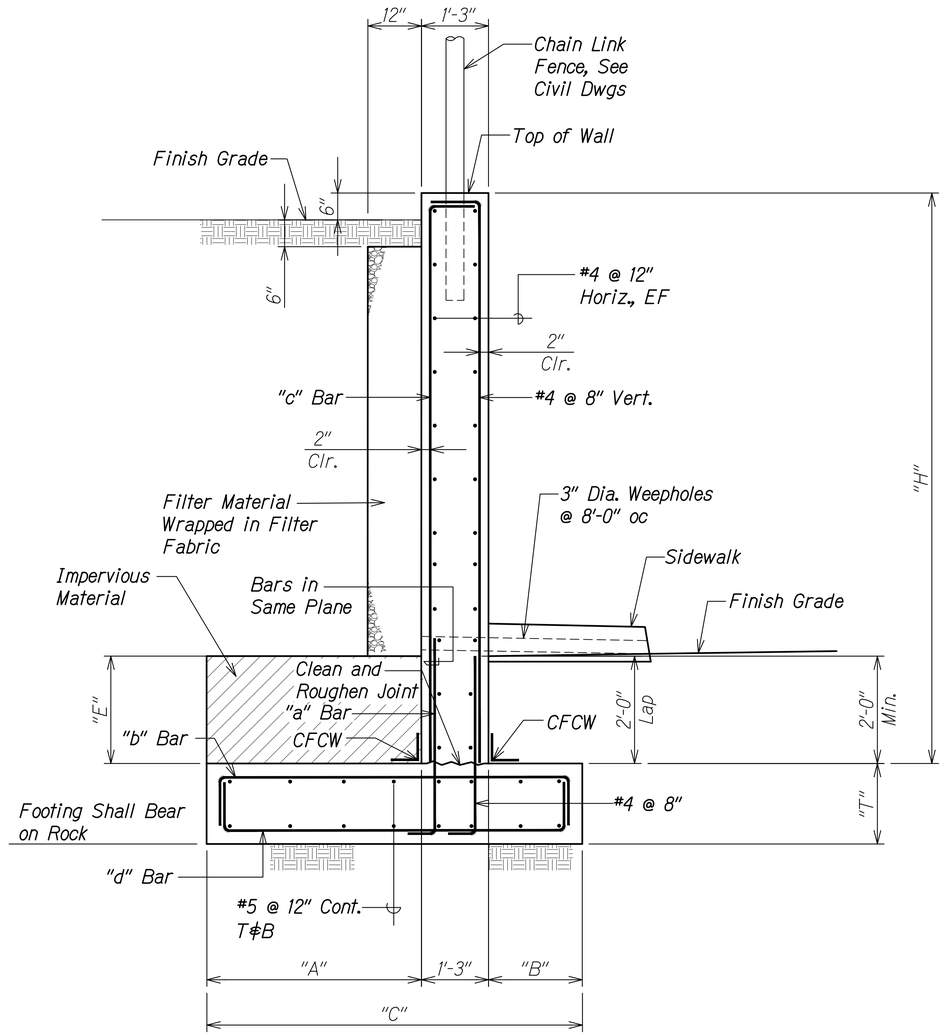
Scale: As Noted Date: December 2022

SHEET No. SA7.4 OF 7 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GUICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0704 ELAS BRG PAD.DWG PLOT TIME: 01-04-23, 9:31 AM)

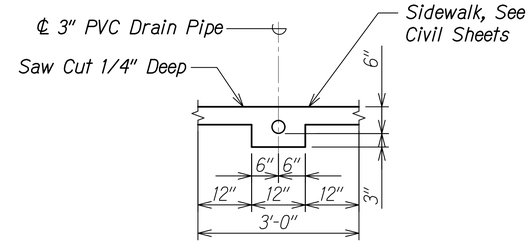
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	296	466



A SA4.5 SA7.5 WINGWALL SECTION
Scale: 3/4" = 1'-0"

DIMENSIONS AND REINFORCING STEEL

Design Height - "H"	6'-0"	10'-0"	14'-0"	17'-0"
Heel - "A"	2'-0"	4'-3"	5'-9"	7'-0"
Toe - "B"	0'-6"	1'-0"	1'-0"	1'-0"
Footing Length - "C"	3'-9"	6'-6"	8'-0"	9'-3"
Footing Thickness - "T"	1'-4"	1'-4"	1'-4"	1'-4"
Bars Extension "E"	2'-6"	2'-6"	6'-6"	6'-6"
"a" bars	#4 @ 8"	#5 @ 12"	#7 @ 8"	#8 @ 6"
"b" bars	#4 @ 8"	#5 @ 12"	#7 @ 8"	#8 @ 6"
"c" bars	#4 @ 8"	#5 @ 12"	#5 @ 8"	#6 @ 6"
"d" bars	#4 @ 8"	#4 @ 8"	#4 @ 8"	#4 @ 8"



B SA7.5 SA7.5 SECTION
Scale: 3/4" = 1'-0"

CALVIN T. MIYAHARA
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NO. 8133-S
HAWAII, U.S.A.

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STATE OF HAWAII
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HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE WINGWALL SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA7.5 OF 7 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GUICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0705 WINGWALL SECT.DWG PLOT TIME: 01-04-23, 9:31 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	297	466

DRILLED SHAFT SCHEDULE		
Drilled Shaft	Abutment #1	Abutment #2
Drilled Shaft Tip Elevation	12.31	11.00
Drilled Shaft Pay Length	20'-0"	20'-0"
Strength Limit State Compression Demand (Kips)	850 kips	850 kips
Strength Limit State Compression Capacity (Kips)	850 kips	850 kips
Extreme Event Limit State Compression Demand (Kips)	640 kips	560 kips
Extreme Event Limit State Compression Capacity (Kips)	2,040 kips	1,960 kips

NOTES:

1. See SA7.7 for drilled shaft details.
2. See SA3.1 for foundation plan.
3. All excavation and drilling operations for foundations shall be monitored by the Engineer.
4. Drilled shaft tip elevations are estimated. The actual length of the shaft and drilled shaft tip elevations will be determined by the Engineer.
5. Drilled shaft tip elevations shall be verified by the Engineer prior to placing reinforcement and concrete. Concrete shall be placed within 24 hours after drilling but shall not be placed without prior approval of the Engineer.

ORIGINAL PLAN
NOTE BOOK
No.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SA0706 DSHAFT SCHED.DWG PLOT TIME: 01-04-23, 9:32 AM)

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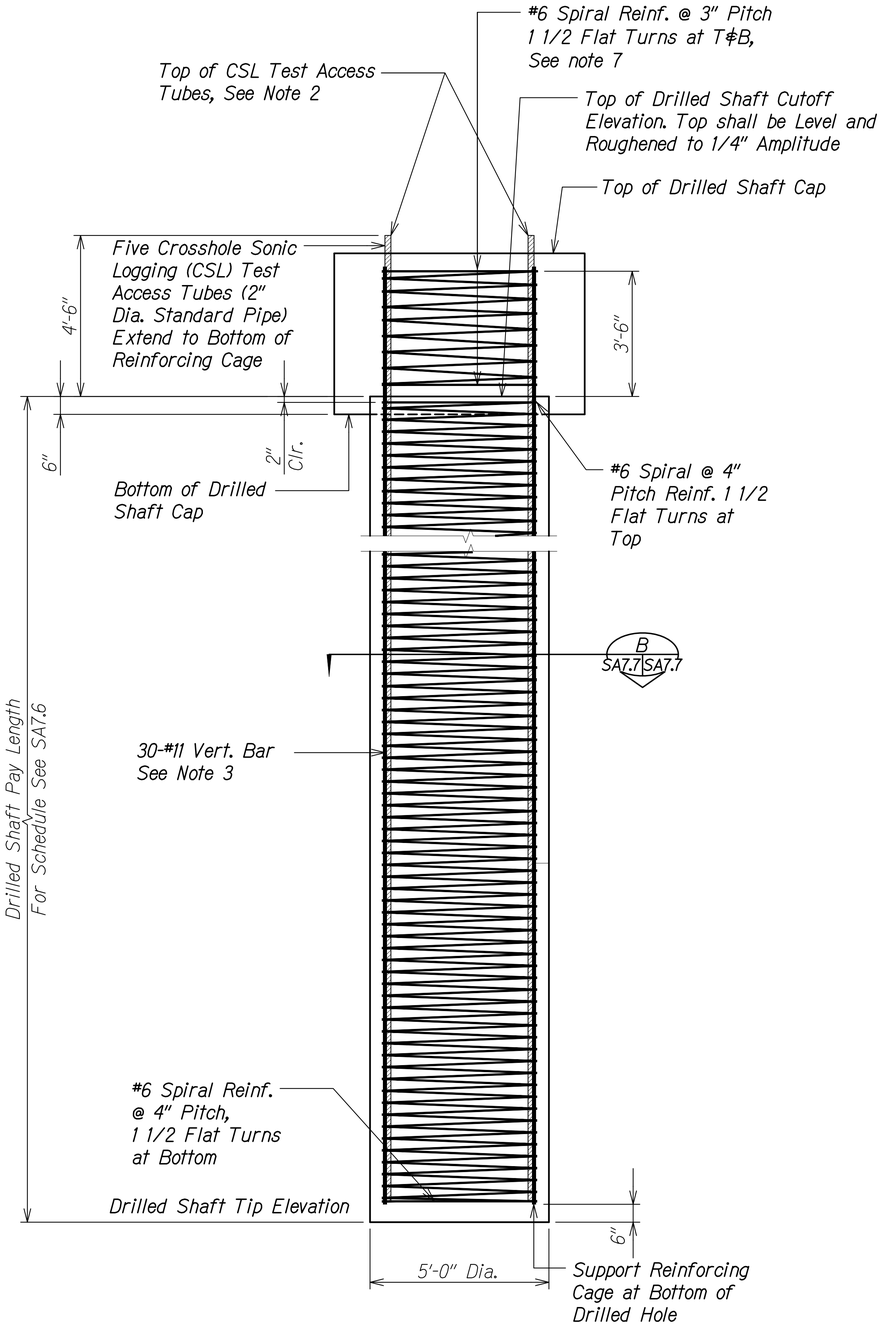
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
DRILLED SHAFT SCHEDULE

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

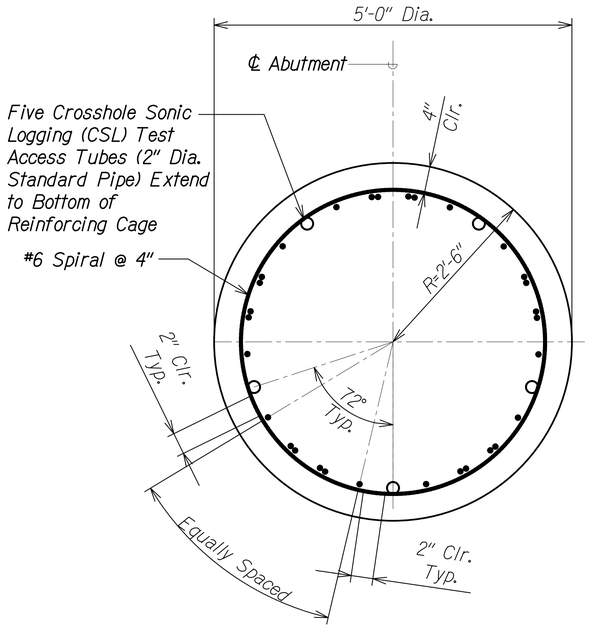
SHEET No. SA7.6 OF 7 SHEETS



PRODUCTION DRILLED SHAFT ELEVATION

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

A SA7.7 SA7.7



30 - #11 Vert. Bars
(2 x 10 Bundles 10
Single Bars)

SECTION

Scale: 1" = 1'-0"

B SA7.7 SA7.7

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	298	466

NOTES:

1. Crosshole Sonic Logging (CSL) testing shall be performed on every drilled shaft. Shafts indicating irregular CSL readings may be subjected to additional testing.
2. After CSL testing, a portion of the CSL test access tubes shall be removed in the drilled shaft cap to one inch above top of the drilled shaft cutoff elevation. Tubes shall be completely filled with non-shrink, non-metallic, cementitious grout of at least equal strength as drilled shaft concrete prior to pouring the drilled shaft cap. See Structural General Notes for material requirement.
3. Lap splice for vertical reinforcing are not permitted.
4. Lap splice length for #6 spirals shall be 3'-6" min. with a 135° hook bend at each end.
5. Each end of the spiral shall have 1 1/2 extra turns with a 135° hook around a vertical reinforcing bar.
6. Concrete or other non-corrosive spacing devices shall be used to maintain the reinforcement cage in position within the shaft.
7. #6 Spiral reinforcing in drilled shaft cap may be installed after demolition of overpour section.
8. Vertical shaft reinforcing shall be arranged with a template to avoid interference with horizontal reinforcing in the drilled shaft cap.

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HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE
PRODUCTION DRILLED SHAFT

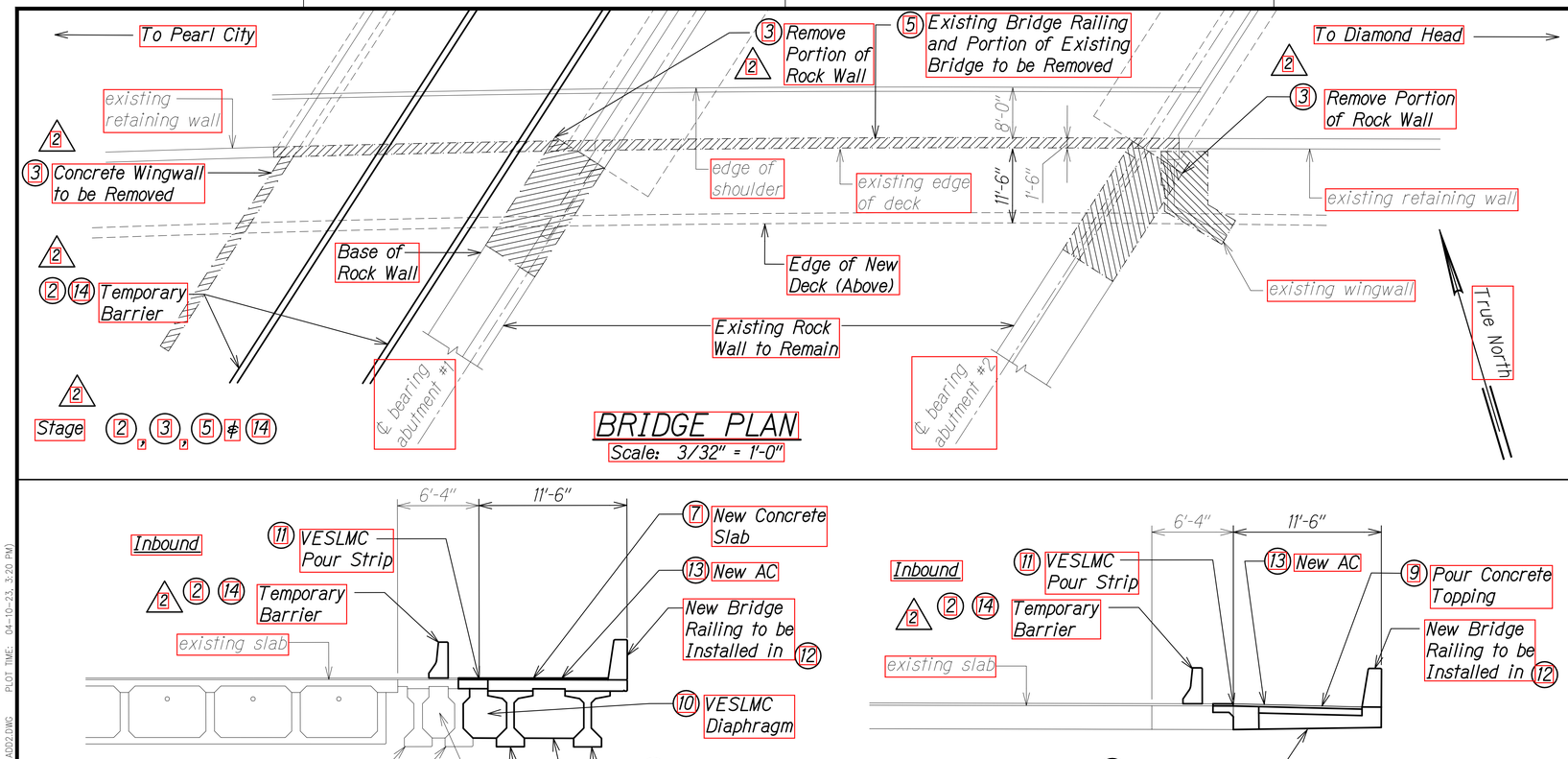
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

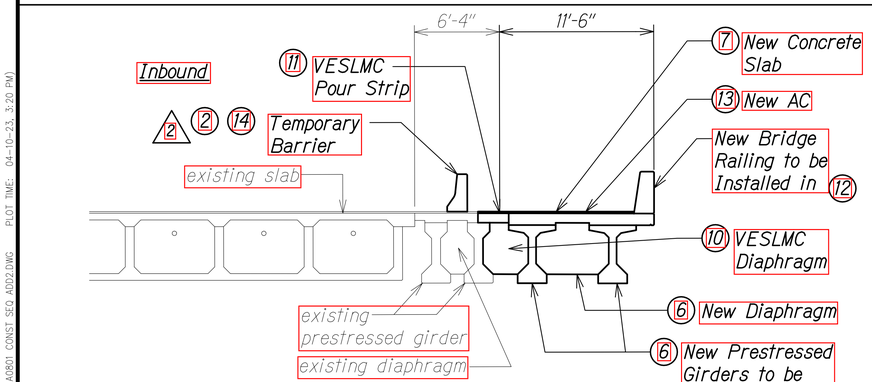
SHEET No. SA7.7 OF 7 SHEETS

ORIGINAL PLANS	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
No.	QUANTITIES BY	
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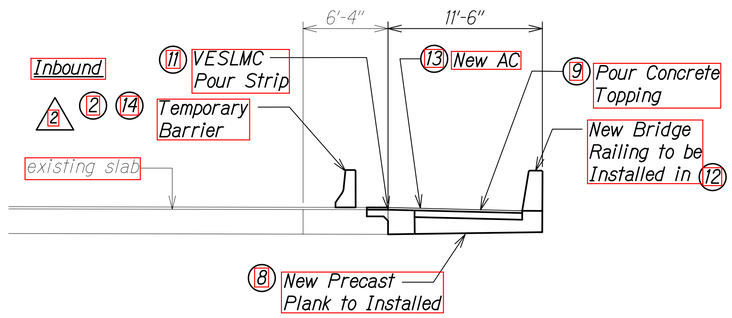
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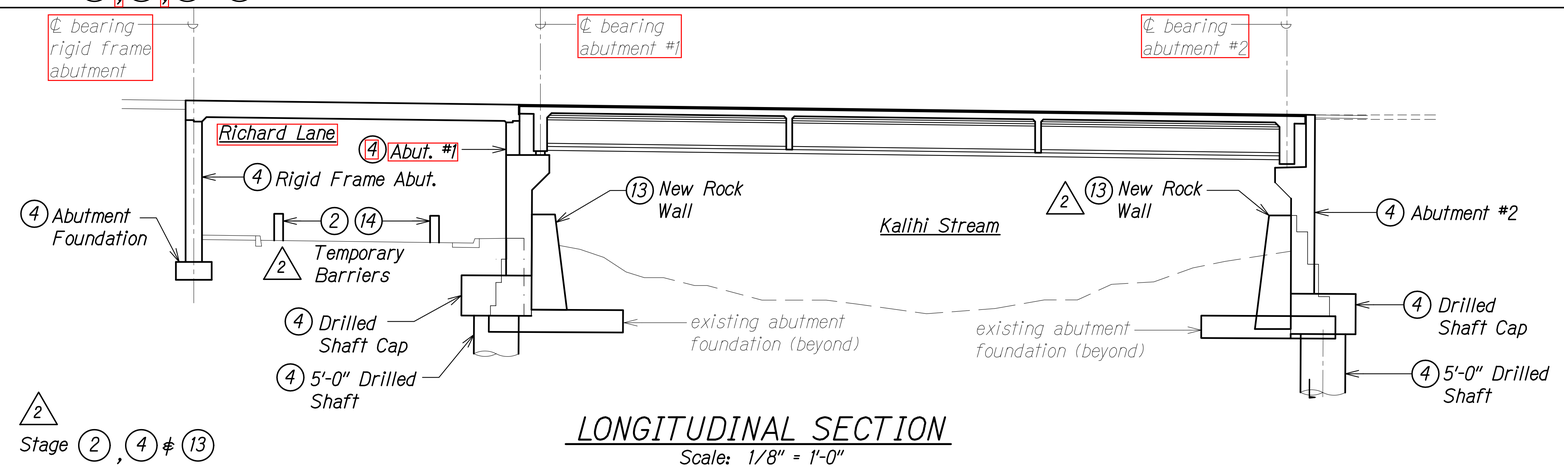
BRIDGE PLAN
Scale: 3/32" = 1'-0"



TRANSVERSE SECTION OVER KALIHI STREAM
Scale: 3/16" = 1'-0"



TRANSVERSE SECTION OVER RICHARD LANE
Scale: 3/16" = 1'-0"



LONGITUDINAL SECTION
Scale: 1/8" = 1'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 299	466

CONSTRUCTION SEQUENCE

1. Install BMPs.
2. Install temporary barriers.
3. Remove portion of existing rock walls and wingwalls. Contractor shall be responsible for shoring and stabilizing excavated area. Coordinate with demolition of existing retaining walls on H-1.
4. Construct drilled shafts, drilled shaft cap, abutment foundation, and abutments. Note this includes partial demolition of existing abutments.
5. Remove existing bridge railing and portion of existing bridge deck.
6. Install prestress girders and pour diaphragm over Kalihi Stream. Precast plank and prestressed girders may be cast concurrent with Stages 1 to 5.
7. Pour deck slab over Kalihi Stream.
8. Install precast plank over Richard Lane.
9. Pour concrete topping and end beams.
10. Pour diaphragm for bridge over Kalihi Stream using VESLMC. Vehicular traffic shall be restricted so that a minimum of 20 feet is maintained between any vehicle and the closest edge of the pour strip for at least 3 hours after completion of pour.
11. Connect widened portion of bridge to existing bridge with VESLMC pour strip over both Kalihi Stream and Richard Lane. Vehicular traffic shall be restricted so that a minimum of 20 feet is maintained between any vehicle and the closest edge of the pour strip for at least 3 hours after completion of pour.
12. Construct bridge railings. 2
13. Construct wingwall, rock wall, and place AC. Note that these task need to be coordinated with other tasks.
14. Remove temporary barriers.

DATE		REVISION
4/7/23	2	Revised Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM/RICHARD LANE BRIDGE CONSTRUCTION SEQUENCE

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SA8.1 OF 1 SHEETS

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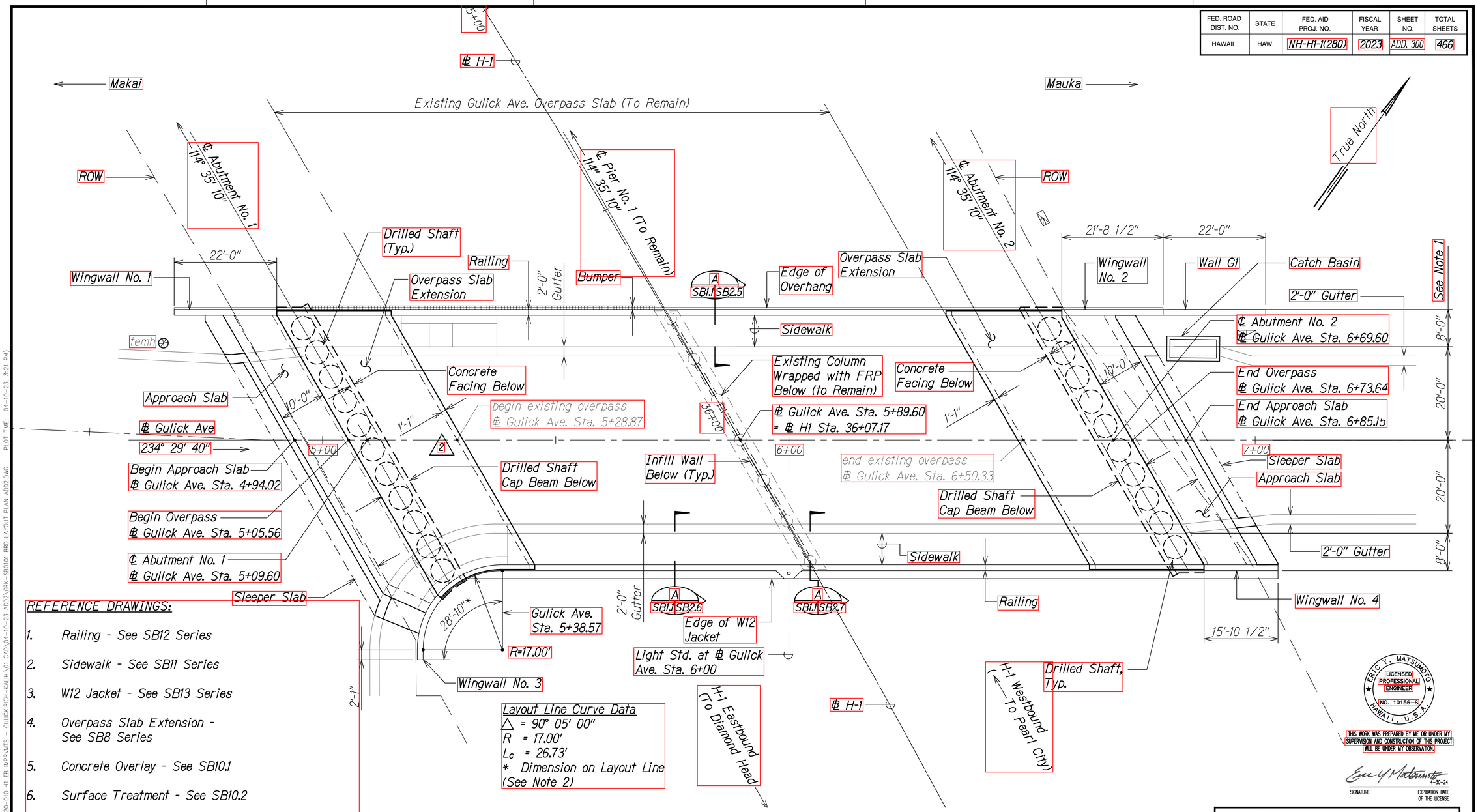
4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB MPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SA0801 CONST SEQ ADD2.DWG PLOT TIME: 04-10-23, 3:20 PM)

ADD. 299

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 300	466



REFERENCE DRAWINGS:

1. Railing - See SB12 Series
2. Sidewalk - See SB11 Series
3. W12 Jacket - See SB13 Series
4. Overpass Slab Extension - See SB8 Series
5. Concrete Overlay - See SB10.1
6. Surface Treatment - See SB10.2
7. Abutments - See SB4 Series
8. Wingwalls and Wall G1 - See SB5 Series
9. Sleeper Slab and Approach Slab - See SB14 Series
10. Bumper - See SB16 Series
11. Catch Basin - See SB18 Series

Layout Line Curve Data
△ = 90° 05' 00"
R = 17.00'
L_c = 26.73'
* Dimension on Layout Line (See Note 2)

NOTES:

1. See Civil plans for sidewalk and gutter geometry.
2. Layout line = Diamond Head face of railing.

LAYOUT PLAN
Scale: 1" = 10'

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) — DATE

DATE		REVISION
4/7/23	2	Revised Dimension

ERIC Y. MATSUMOTO
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS LAYOUT PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

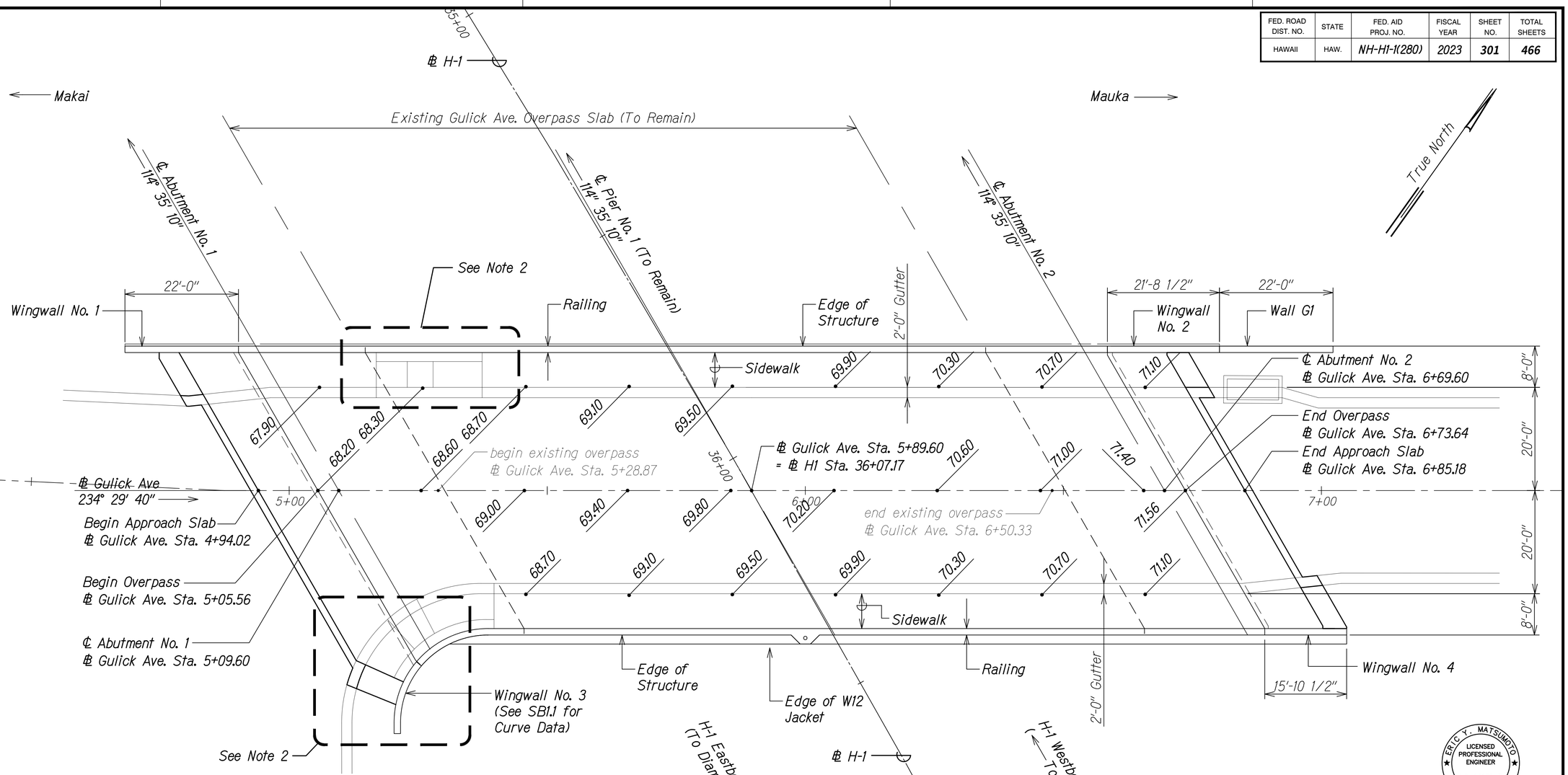
SHEET No. SB1.1 OF 3 SHEETS

ADD. 300

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0101 BRD LAYOUT PLAN ADD2.DWG PLOT TIME: 04-10-23, 3:21 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	301	466



NOTES:

1. Unless otherwise noted, finishing grade elevations at ℄ Gulick Avenue and at bottom of sidewalk are shown at 20'-0" intervals starting at Begin Overpass ℄ Gulick Avenue Sta. 5+05.56.

2. See Civil sheets for grades at curb ramps and at bottom of sidewalks on approach slabs and sleeper slabs.

FINISH GRADE PLAN

Scale: 1" = 10'

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NO. 10156-S
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS FINISH GRADE PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

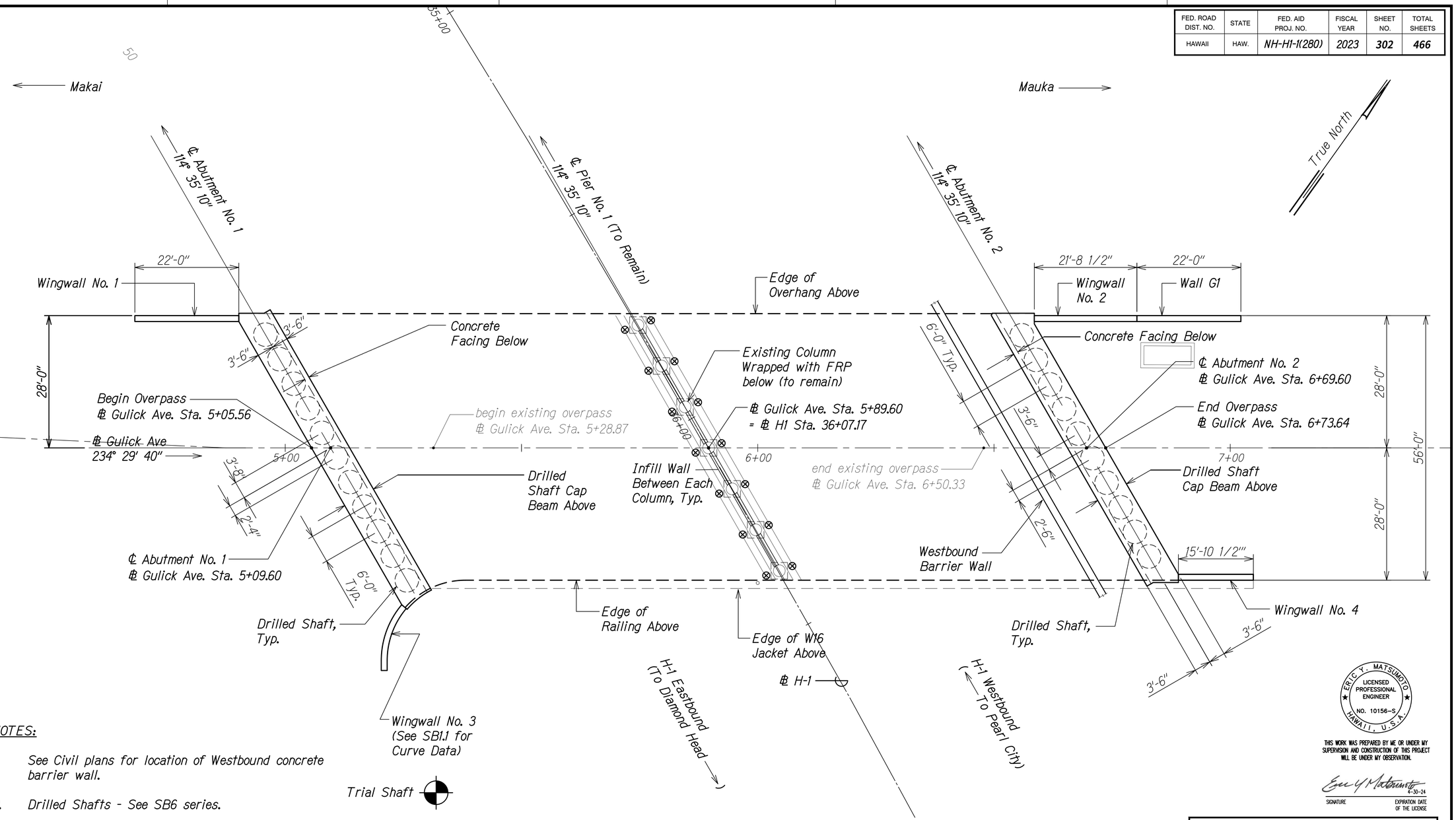
Scale: As Noted — Date: December 2022

SHEET No. SB1.2 OF 3 SHEETS

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0102 BRD FIN GRADE PLAN.DWG PLOT TIME: 01-04-23, 9:33 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	302	466



NOTES:

1. See Civil plans for location of Westbound concrete barrier wall.
2. Drilled Shafts - See SB6 series.
3. ⊗ Indicates probe hole locations. See Special Provisions Section 660.
4. Abutments - see SB4 series.
5. For trial shaft, see Geotechnical Engineering Exporation report and Special Provisions Section 511.

FOUNDATION PLAN

Scale: 1" = 10'

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0103 BRD FDN PLAN.DWG PLOT TIME: 01-04-23, 9:34 AM)

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

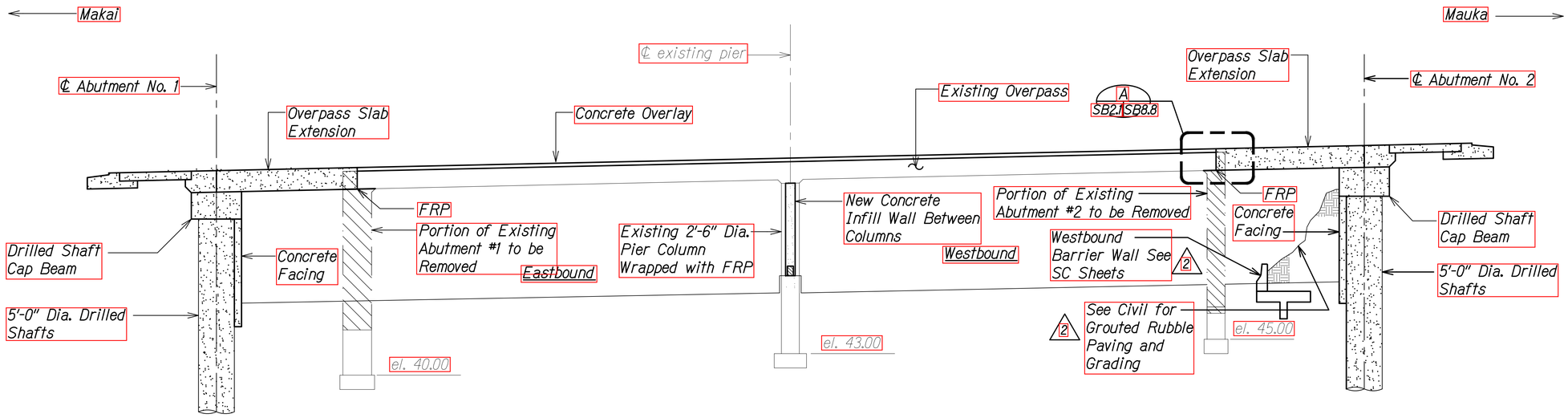
GULICK AVENUE OVERPASS
FOUNDATION PLAN

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SBI.3 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 303	466



LEGEND:

Existing Concrete to be Removed

New Concrete

NOTE:

For FRP on soffit of slab, see SB16.3

LONGITUDINAL SECTION

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

ERIC Y. MATSUMOTO
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NO. 10156-S
HAWAII, U.S.A.

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS LONGITUDINAL SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB2.1 OF 10 SHEETS

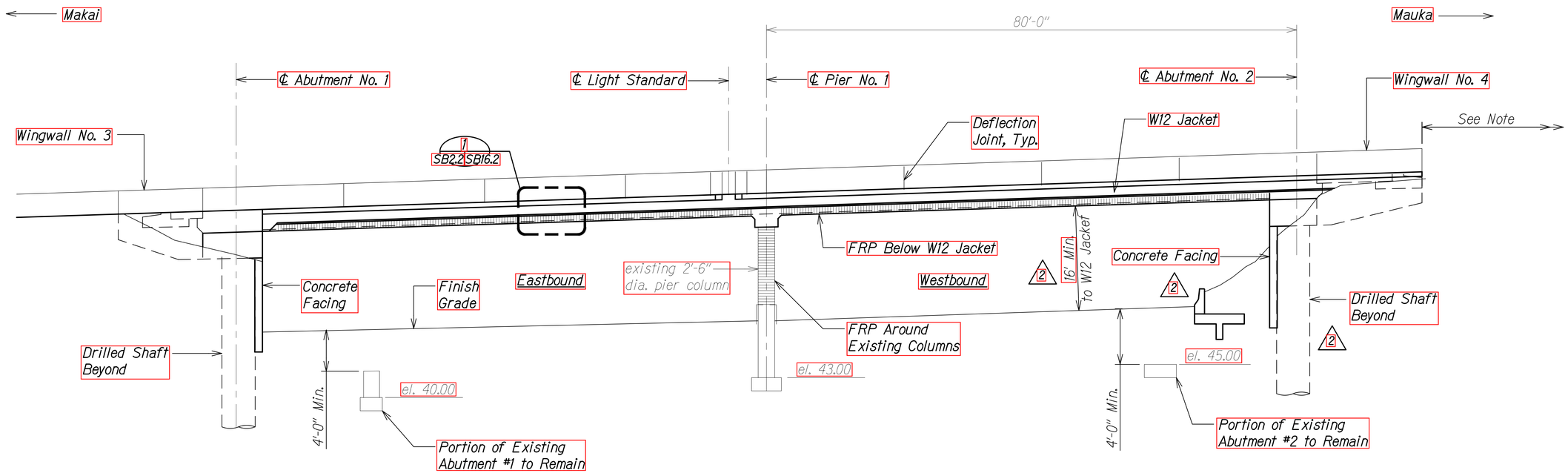
DATE	REVISION
4/7/23	2 Revised Note and Barrier Wall

ADD. 303

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0201 BRD LONG SECT ADD2.DWG PLOT TIME: 04-10-23, 3:22 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 304	466



NOTE:

See Civil sheets for W12 information beyond Abutment No. 1 and beyond Wingwall No. 4.

OVERPASS DIAMOND HEAD ELEVATION

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

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

ORIGINAL PLAN
NOTE BOOK
No.

DRAWING NAME: Z:\OD ONCONG\OD JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\04-10-23 AD02\GRK-SB0202 BRD DH ELEV AD02.DWG PLOT TIME: 04-10-23, 3:23 PM)

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) — DATE

DATE	REVISION
4/7/23	2 Revised Dimension and Barrier Wall Location

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LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS DIAMOND HEAD ELEVATION

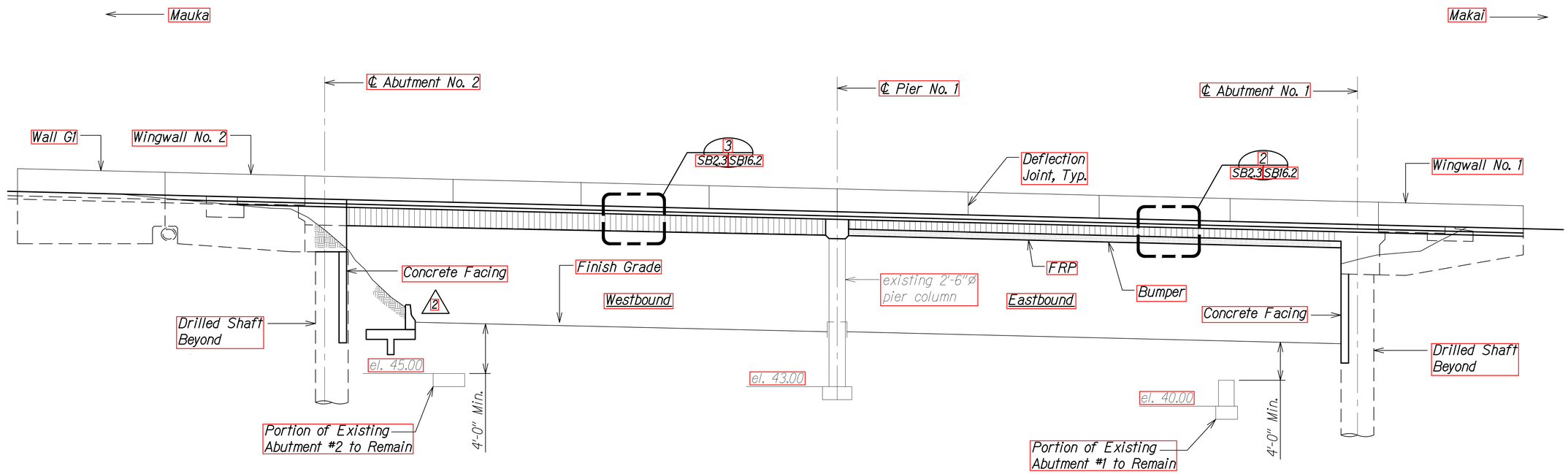
INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB2.2 OF 10 SHEETS

ADD. 304

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 305	466



OVERPASS PEARL CITY ELEVATION

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

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Eric Y. Matsumoto — 4-30-24

SIGNATURE — EXPIRATION DATE OF THE LICENSE

DATE	REVISION
4/7/23	2 Revised Barrier Wall Location

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS PEARL CITY ELEVATION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

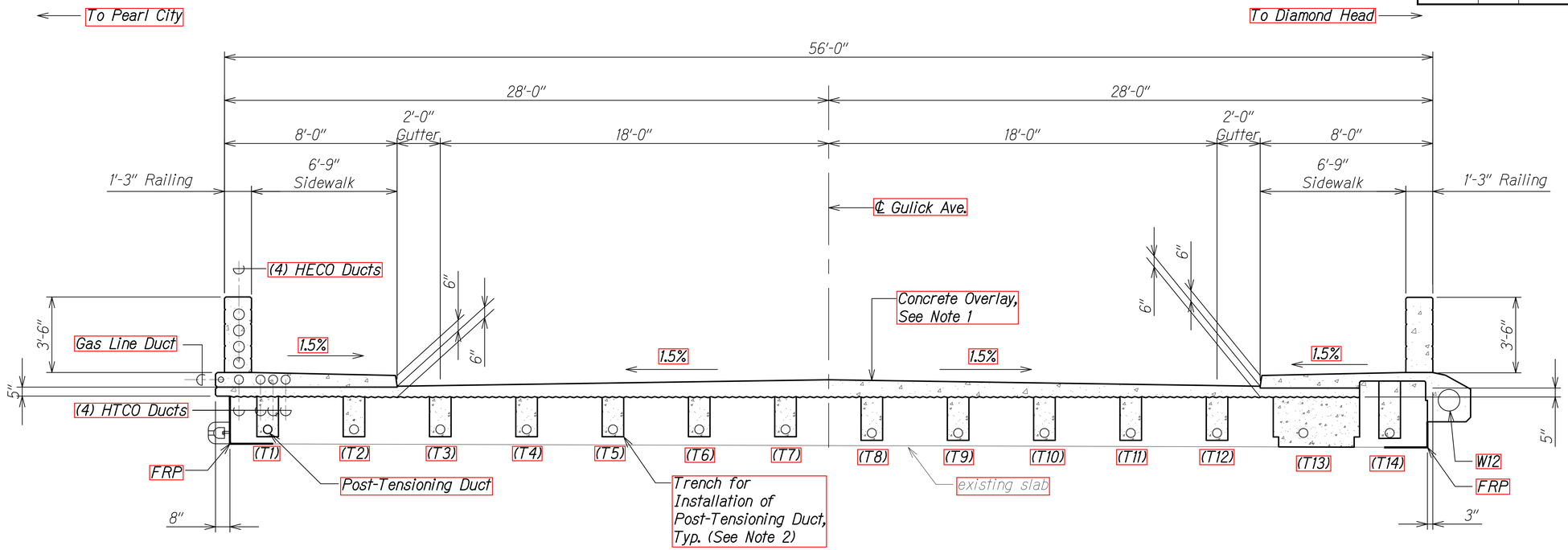
SHEET No. SB2.3 OF 10 SHEETS

ADD. 305

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK\RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0203 BRD PC ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:23 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 306	466



NOTES:

2

1. Concrete Overlay thickness is 5" below sidewalks. Concrete Overlay thickness is 6" minimum between sidewalks.
2. Refer to Structural General Notes 9.AD regarding protective plates.
3. See SB7 series for trench details
4. (T_) = Post-tensioning Tendons and Trench Number. Trench and install post-tensioning ducts starting at T1 and continue sequentially to T14. Order of work shall not be changed unless approved by the Engineer.
5. Fill trenches (T1), (T2) and (T14) to top of existing sidewalk. Portions of trench in existing sidewalk will be removed with the sidewalks during the full closure of Gulick Avenue Overpass.

NORMAL SECTION AT MIDSPAN

A
SB2.4 | SB2.4

Scale: 3/8" = 1'-0"

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS NORMAL SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB2.4 OF 10 SHEETS

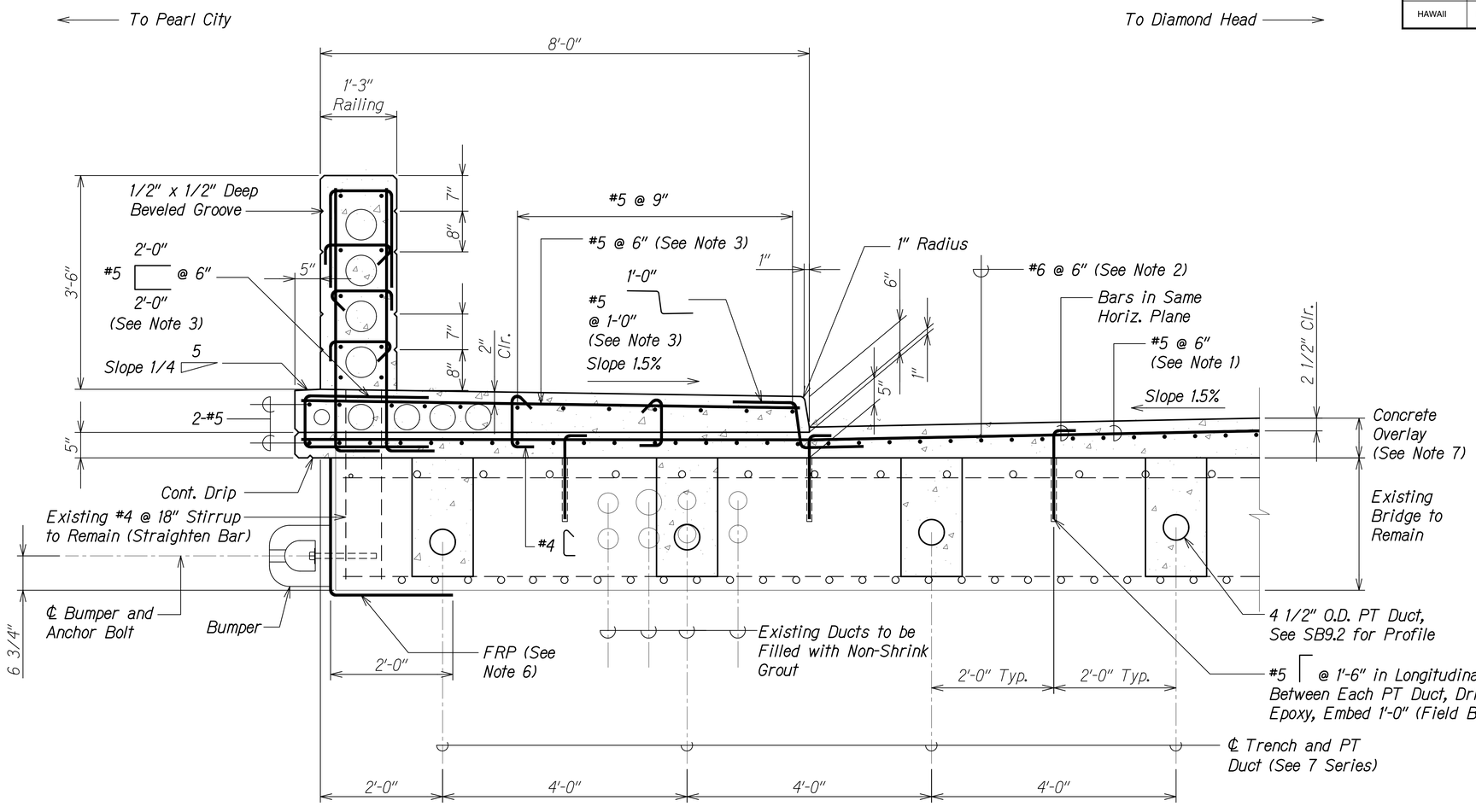
DATE	REVISION
4/7/23	2 Revised Note

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\04-10-23 ADD2\GRK-SB0204 BRD CROSS SECT ADD2.DWG PLOT TIME: 04-10-23, 3:23 PM)

ADD. 306

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	307	466



SECTION A
Scale: 1" = 1'-0"
SB1.1 | SB2.5

NOTES:

1. Place transverse reinforcing bars in concrete overlay along Az. 114° 35' 10".
2. Place longitudinal reinforcing bars in concrete overlay and sidewalk along Az. 234° 29' 40".
3. Place transverse reinforcing bars in sidewalk perpendicular to railing, unless noted otherwise.
4. See SB7.2 for reinforcing in trenches (not shown on this sheet for clarity).
5. See SB12 series for railing details.
6. See SB16.2 for FRP details.
7. Pour deck between sidewalks 1/8" higher than shown in this section. Upper 1/8" of concrete will be removed during blanket grinding.

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

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS SECTION

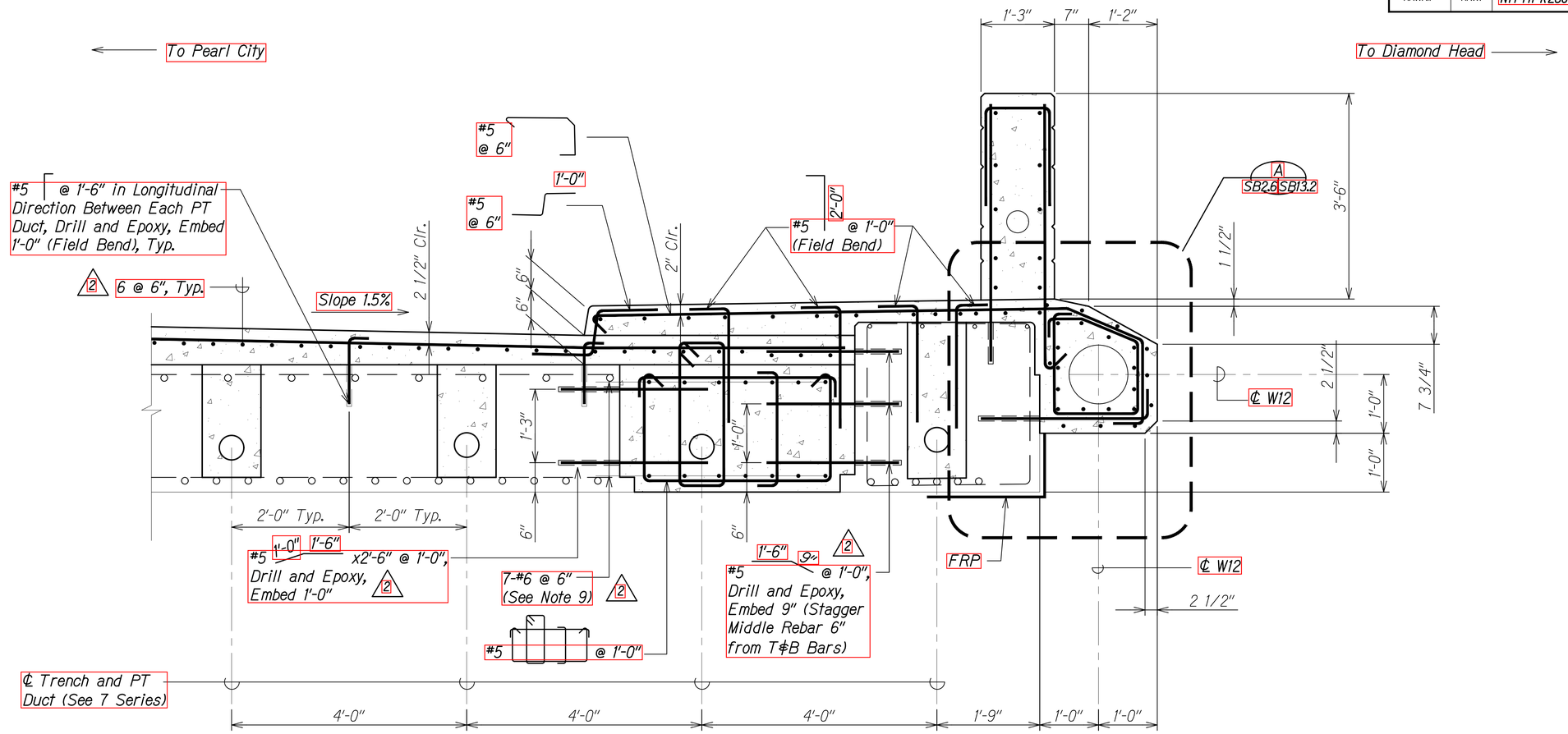
INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB2.5 OF 10 SHEETS

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK:RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0205 DECK SECT.DWG PLOT TIME: 01-04-23, 9:36 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 308	466



SECTION NEAR MIDSPAN

A SB1.1 SB2.6 2

Scale: 1" = 1'-0"

NOTES:

1. Place transverse reinforcing bars in concrete overlay along Az. 114° 35' 10".
2. Place longitudinal reinforcing bars in concrete overlay and sidewalk along Az. 234° 29' 40".
3. Place transverse reinforcing bars in sidewalk perpendicular to railing.
4. See SB7.2 for reinforcing in trenches (not shown on this sheet for clarity).
5. See SB12 series for railing detail.
6. See SB13 series for W12 jacket details.
7. See SB16.2 for FRP details.
8. Pour deck between sidewalks 1/8" higher than shown in this section. Upper 1/8" of concrete will be removed during blanket grinding.
9. Drill and epoxy 7-#6 (bottom row) into pier 9" minimum.

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) DATE

DATE		REVISION
4/7/23	2	Revised Callout

ERIC Y. MATSUMOTO LICENSED PROFESSIONAL ENGINEER NO. 10156-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Eric Y. Matsumoto 4-30-24

SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
SECTION NEAR MIDSPAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

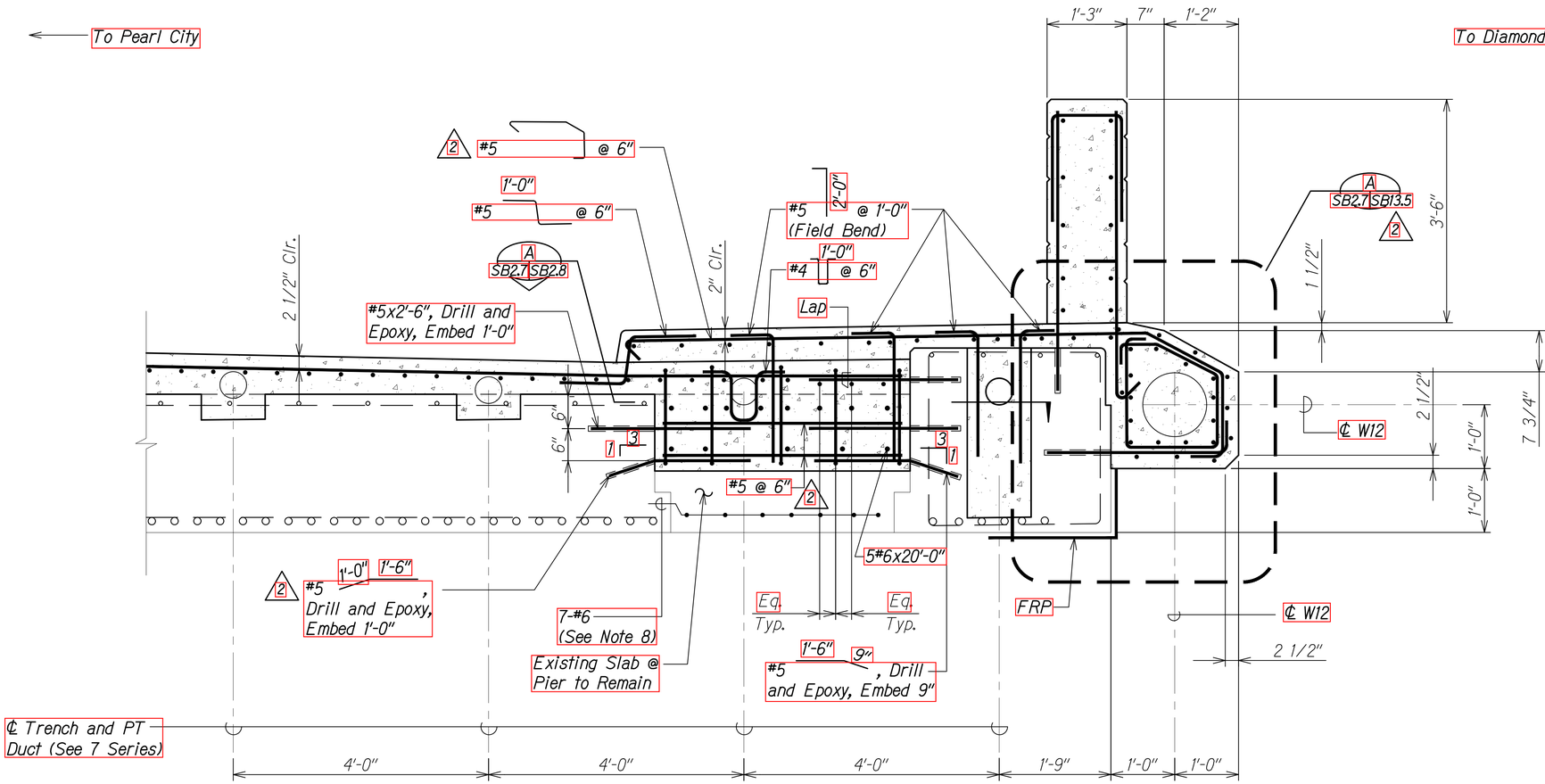
SHEET No. SB2.6 OF 10 SHEETS

ADD. 308

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0206 DECK SECT ADD2.DWG PLOT TIME: 04-10-23, 3:24 PM)

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 309	466



SECTION AT PIER

Scale: 1" = 1'-0"

A SB1.1 SB2.7 2

NOTES:

1. Place transverse reinforcing bars in concrete overlay along Az. 114° 35' 10".
2. Place longitudinal reinforcing bars in concrete overlay and sidewalk along Az. 234° 29' 40".
3. Place transverse reinforcing bars in sidewalk perpendicular to railing.
4. See SB7.2 for reinforcing in trenches (not shown on this sheet for clarity).
5. See SB12 series for railing details.
6. See SB16 for FRP details.
7. Pour deck between sidewalks 1/8" higher than shown in this section. Upper 1/8" of concrete will be removed during blanket grinding.
8. Drill and epoxy 7-#6 into slab at pier 9" minimum.

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) DATE

DATE	REVISION
4/7/23	2 Revised Callout

ERIC Y. MATSUMOTO LICENSED PROFESSIONAL ENGINEER NO. 10156-S HAWAII, U.S.A.

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Eric Y Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
SECTION AT PIER

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

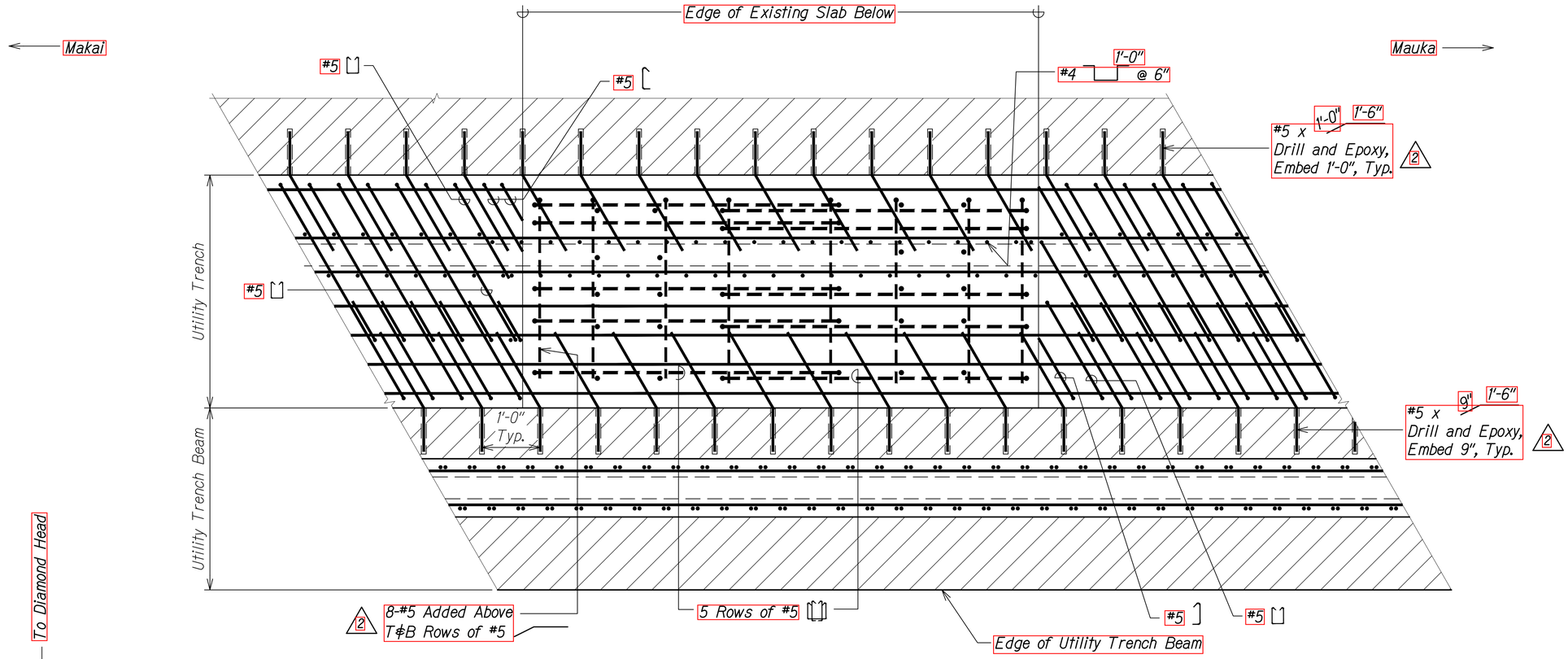
SHEET No. SB2.7 OF 10 SHEETS

ADD. 309

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0206 DECK SECT ADD2.DWG PLOT TIME: 04-10-23, 3:24 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 310	466



UTILITY TRENCH AT PIER

Scale: 1" = 1'-0"

A

SB2.7 SB2.8

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto

SIGNATURE

6-30-24

EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS UTILITY TRENCH AT PIER

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB2.8 OF 10 SHEETS

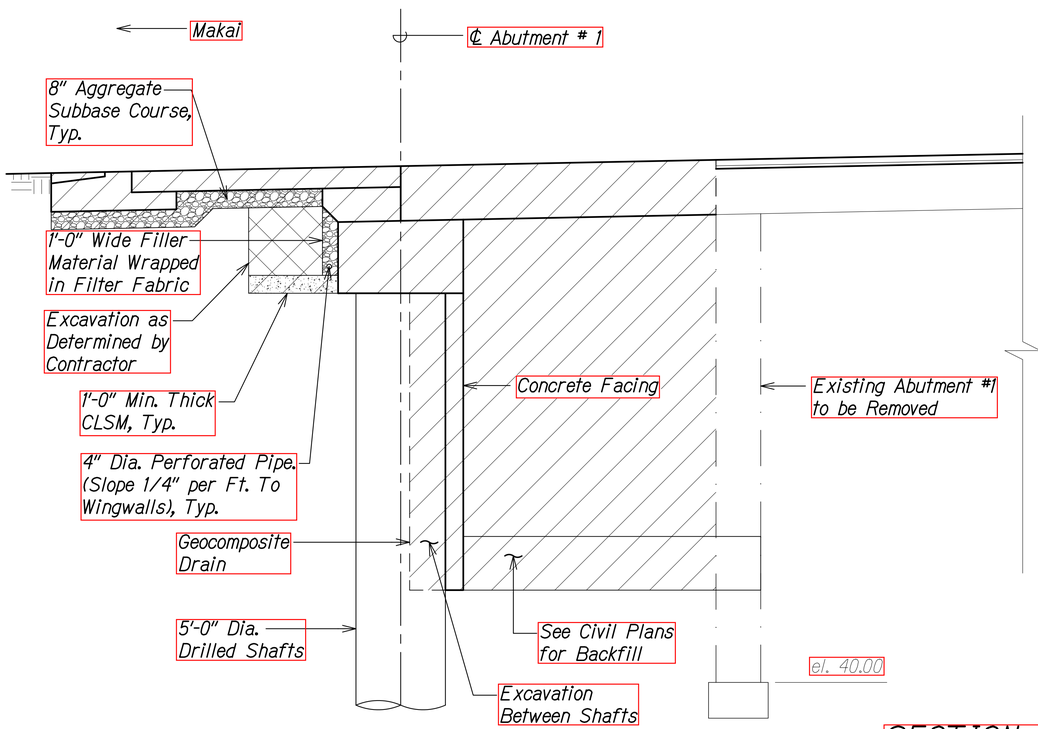
DATE	REVISION
4/7/23	2 Added Rebars and Callouts

ADD. 310

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB2D8 BACK FILL ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:25 PM)

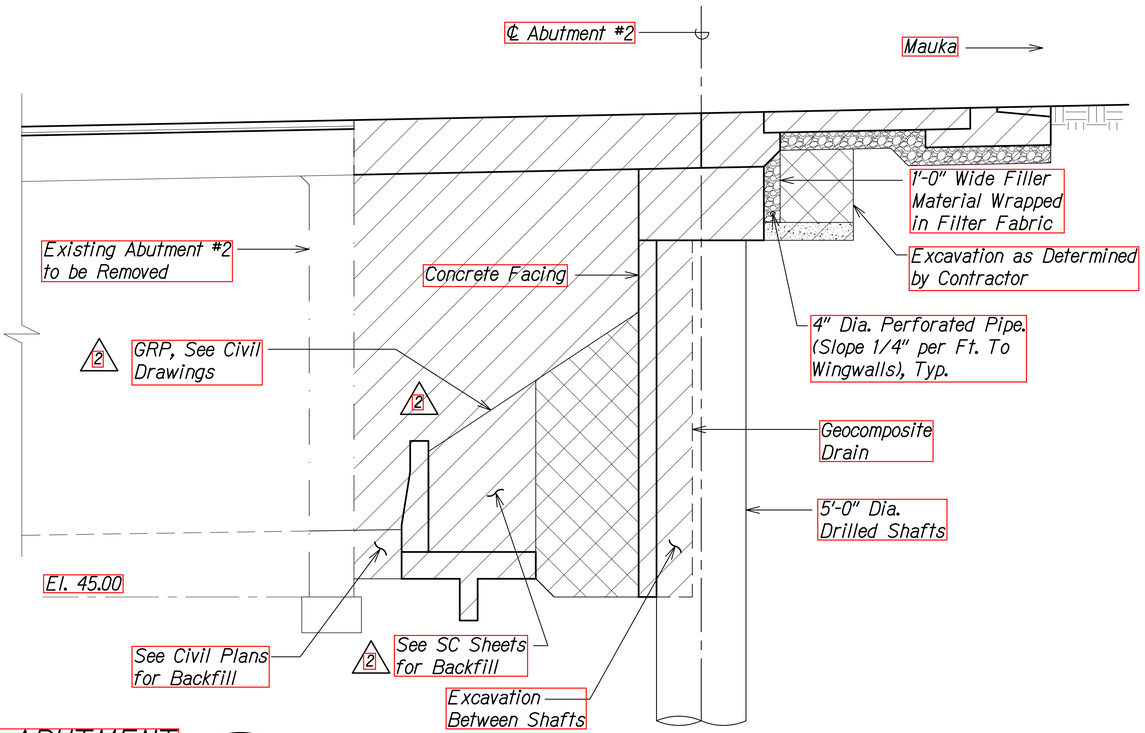
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 311	466

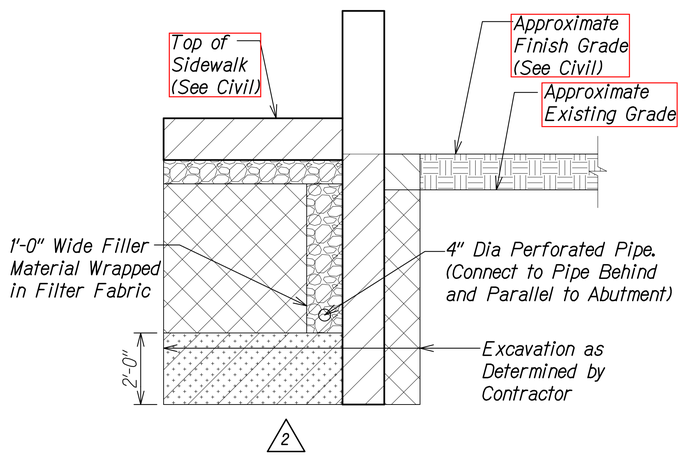


SECTION AT ABUTMENT

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

A SB2.9 | SB2.9

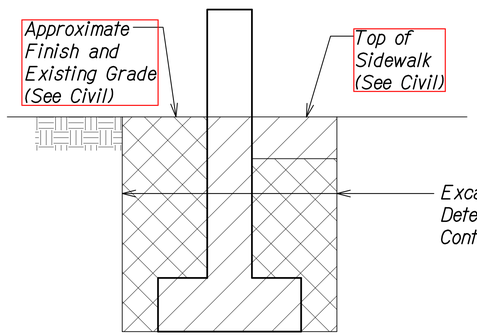




SECTION AT WINGWALLS

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

B SB2.10 | SB2.9



SECTION AT WALL G1

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

C SB2.9 | SB2.9

LEGEND

- Structure Excavation
- Structure Backfill
- Aggregate Basecourse
- CLSM
- Impervious Material

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS EXCAVATION AND BACKFILL

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB2.9 OF 10 SHEETS

DATE	REVISION
4/7/23	2 Revised Barrier Wall

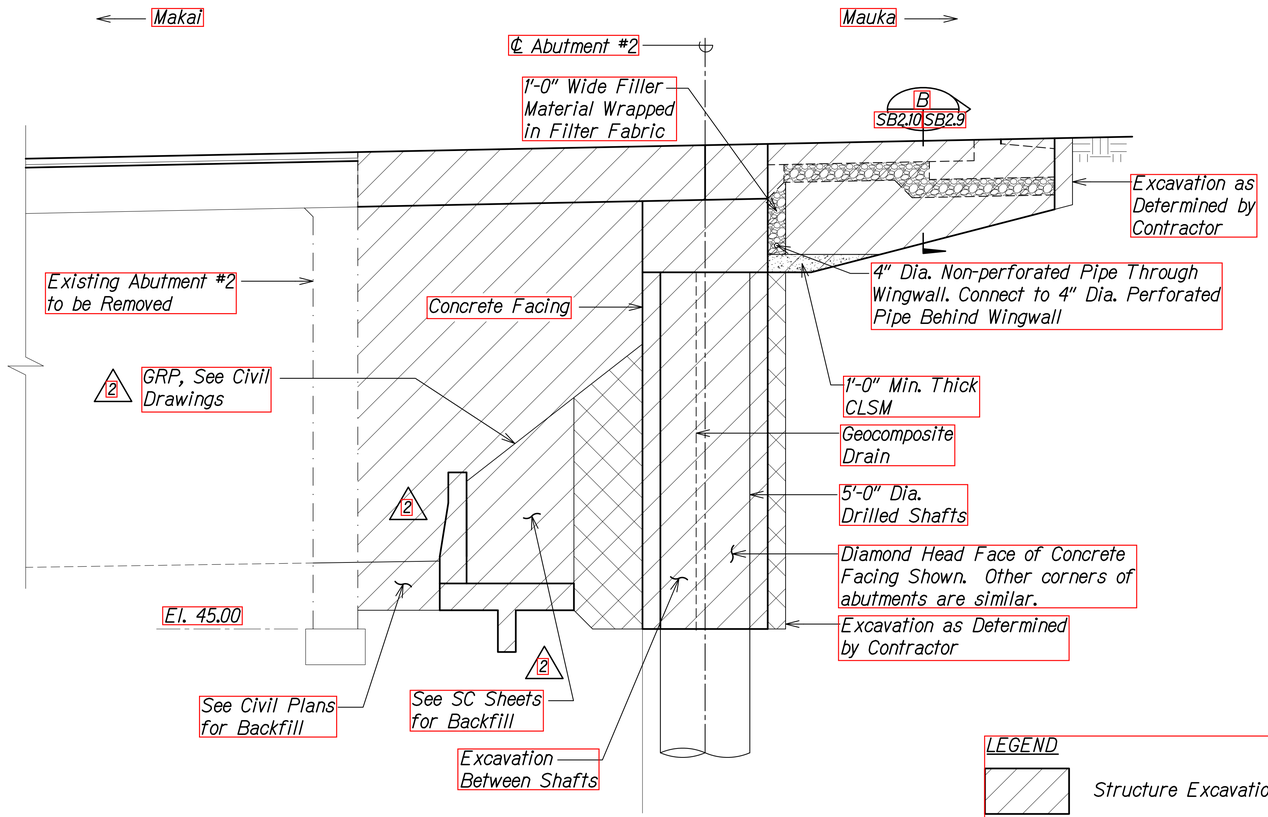
ADD. 311

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

DATE

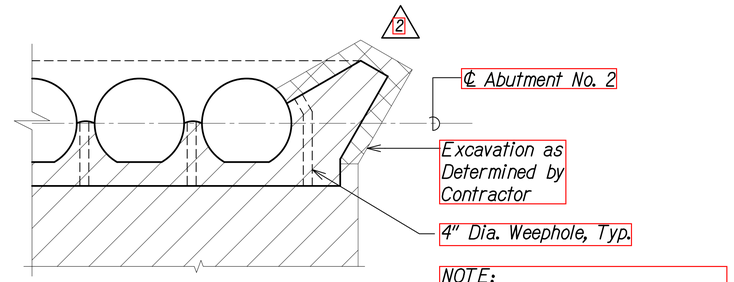
DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0208 BACK FILL ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:25 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 312	466



ELEVATION AT WINGWALL

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



NOTE:

Diamond Head side of Abutment No. 2 is shown. Other corners are similar.

SECTION AT END OF ABUTMENT

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

A
SB2.10 SB2.10

LEGEND

- Structure Excavation
- Structure Backfill
- Aggregate Basecourse
- CLSM

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS EXCAVATION AND BACKFILL

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted | Date: December 2022

SHEET No. SB2.10 OF 10 SHEETS

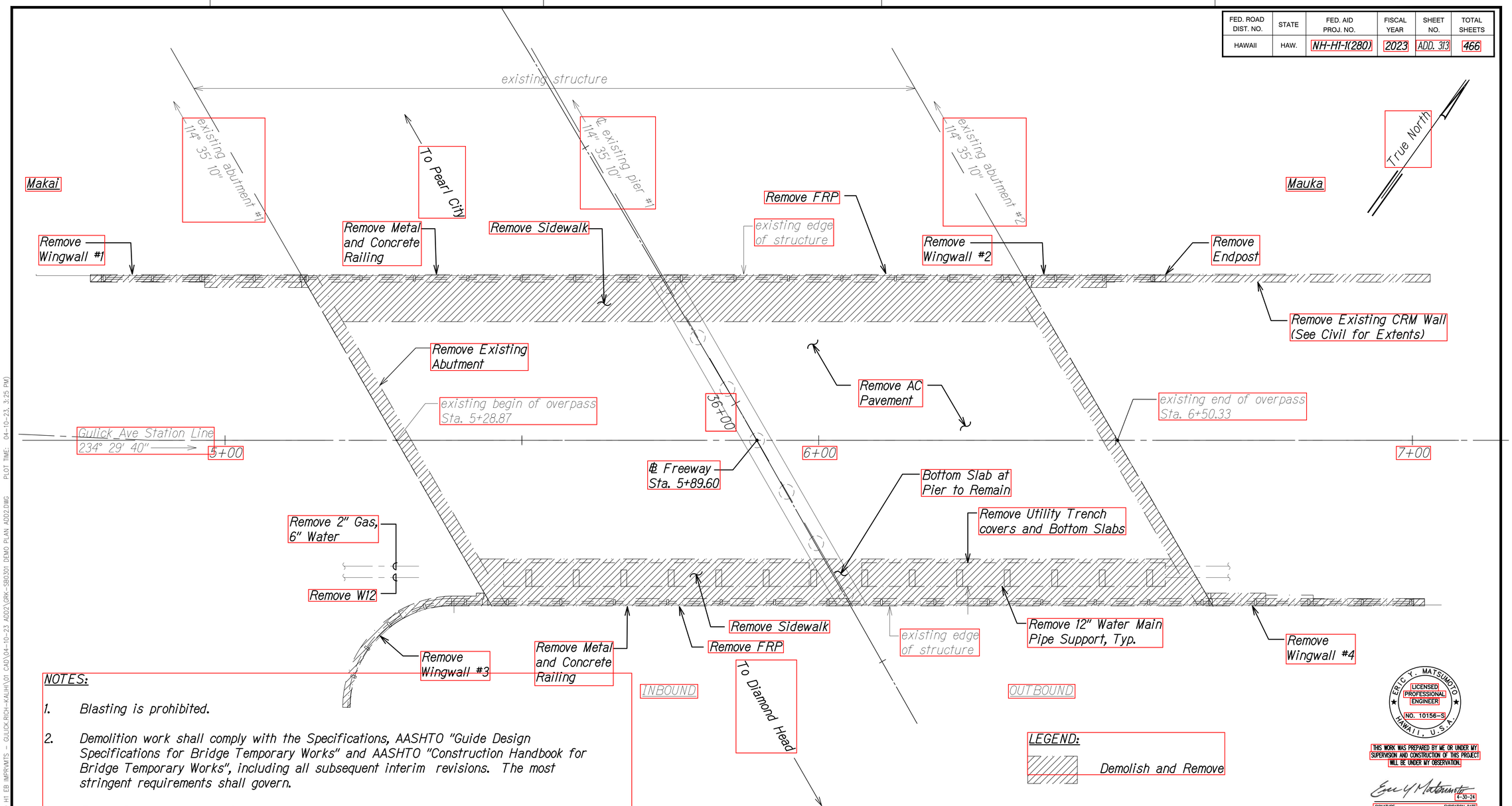
DATE	REVISION
4/7/23	2 Revised Barrier Wall

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS — GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0210 BACK FILL ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:25 PM)

ADD. 312

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 313	466



NOTES:

1. Blasting is prohibited.
2. Demolition work shall comply with the Specifications, AASHTO "Guide Design Specifications for Bridge Temporary Works" and AASHTO "Construction Handbook for Bridge Temporary Works", including all subsequent interim revisions. The most stringent requirements shall govern.
3. Follow Best Management Practices required when performing demolition. At no point shall construction material or debris be allowed to fall onto existing freeway below.
4. For as-built plans of the existing Gulick Avenue Overpass, see Structural General Notes 10.B.
5. For trenching of existing bridge to install post-tensioning ducts, see SB7 series.
6. For sequence of demolition, see SB19 series.
7. For demolishing, trenching and drilling of existing concrete, Contractor shall anticipate concrete compressive strength > 10 ksi.

LEGEND:

Demolish and Remove

DEMOLITION PLAN

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

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) — DATE

DATE	No.	REVISION
4/7/23	2	Revised Note

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto — 4-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS DEMOLITION PLAN

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

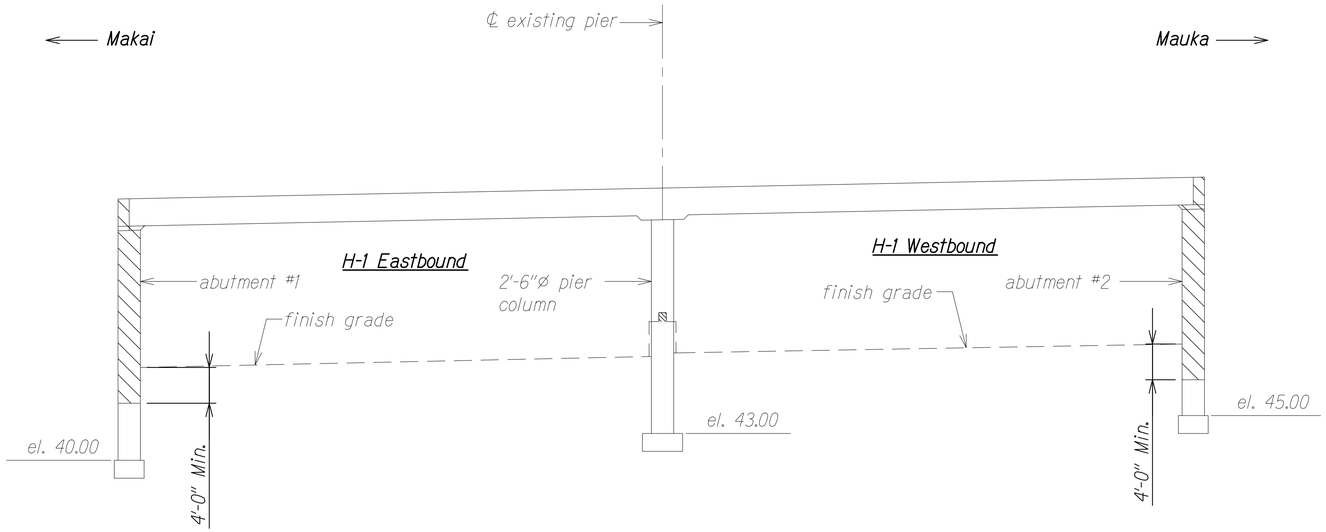
SHEET No. SB3.1 OF 8 SHEETS

ADD. 313

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0301 DEMO PLAN ADD2.DWG PLOT TIME: 04-10-23, 3:25 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	314	466



OVERPASS DEMOLITION SECTION
ALONG ℄ GULICK AVENUE
Scale: 1/8" = 1'-0"

LEGEND:

Demolish and Remove

NOTES:

1. See Sht. SB19 Series for Construction Sequence.
2. See Civil plans for Traffic Control.

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS BRIDGE DEMOLITION SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

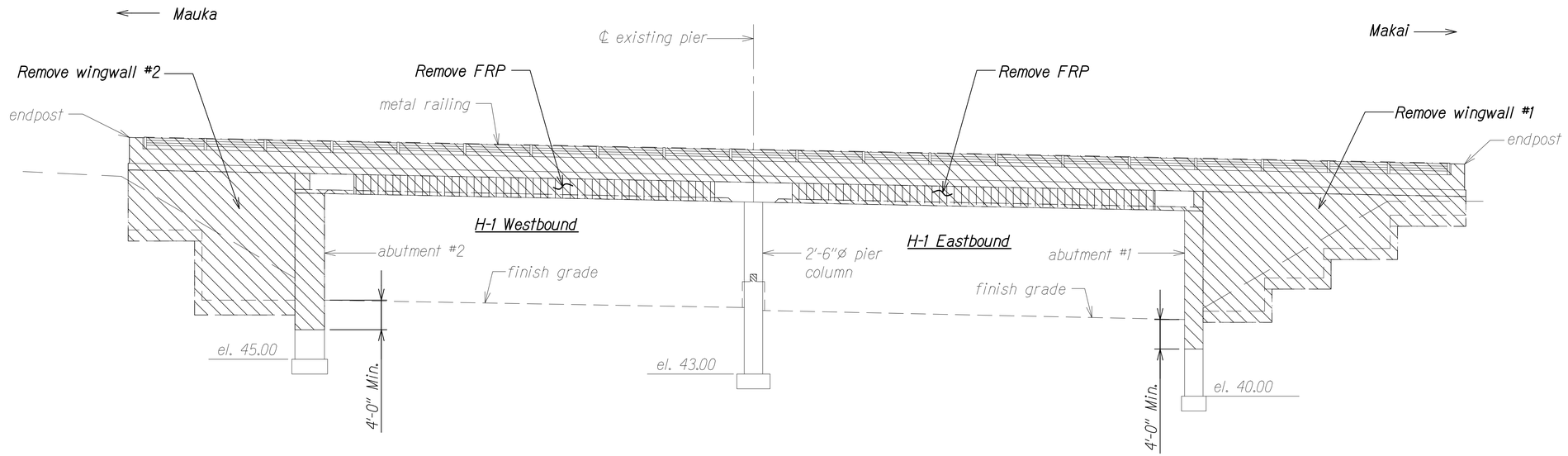
Scale: As Noted — Date: December 2022

SHEET No. SB3.2 OF 8 SHEETS

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0302 BRD DEMO SECT.DWG PLOT TIME: 01-04-23, 9:38 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	315	466



OVERPASS DEMOLITION PEARL CITY ELEVATION

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

LEGEND:

Demolish and Remove

FRP to be Removed

NOTES:

1. See SB19 Series for Construction Sequence.
2. See Civil plans for Traffic Control.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK:RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0303 BRD DEMO EWA ELEV.DWG PLOT TIME: 01-04-23, 9:38 AM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Eric Y. Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

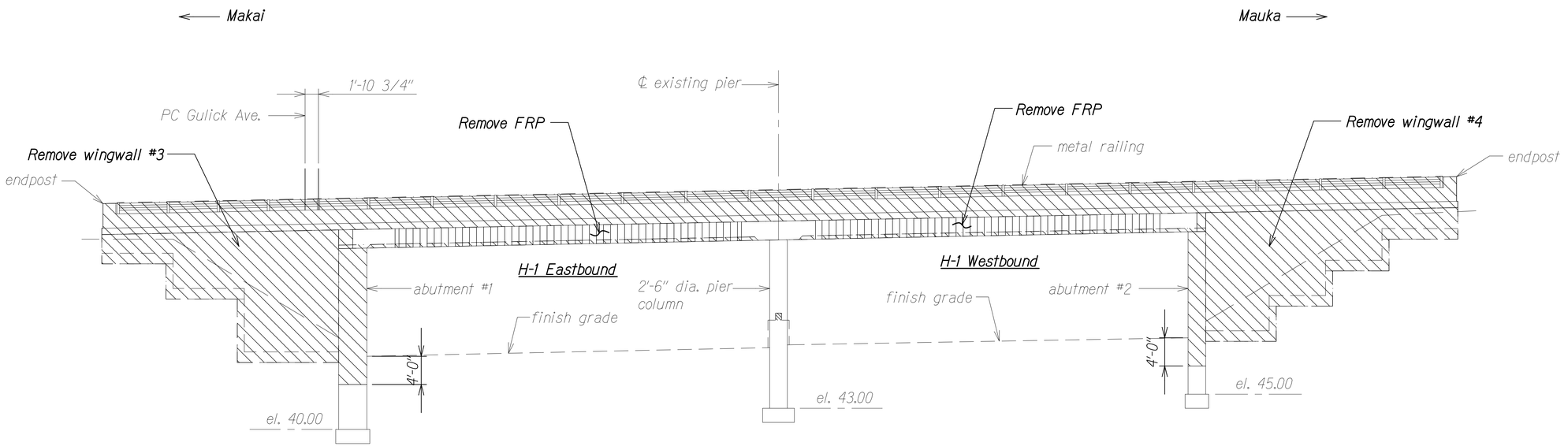
GULICK AVENUE OVERPASS
DEMOLITION PEARL CITY ELEVATION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB3.3 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	316	466



OVERPASS DEMOLITION DIAMOND HEAD ELEVATION

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

LEGEND:

Demolish and Remove

FRP to be Removed

NOTES:

1. See SB19 Series for Construction Sequence.
2. See Civil plans for Traffic Control.

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

DRAWING NAME: Z:\OD ONGOING\OD JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0304 BRD DEMO DH ELEV.DWG PLOT TIME: 01-04-23, 9:38 AM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

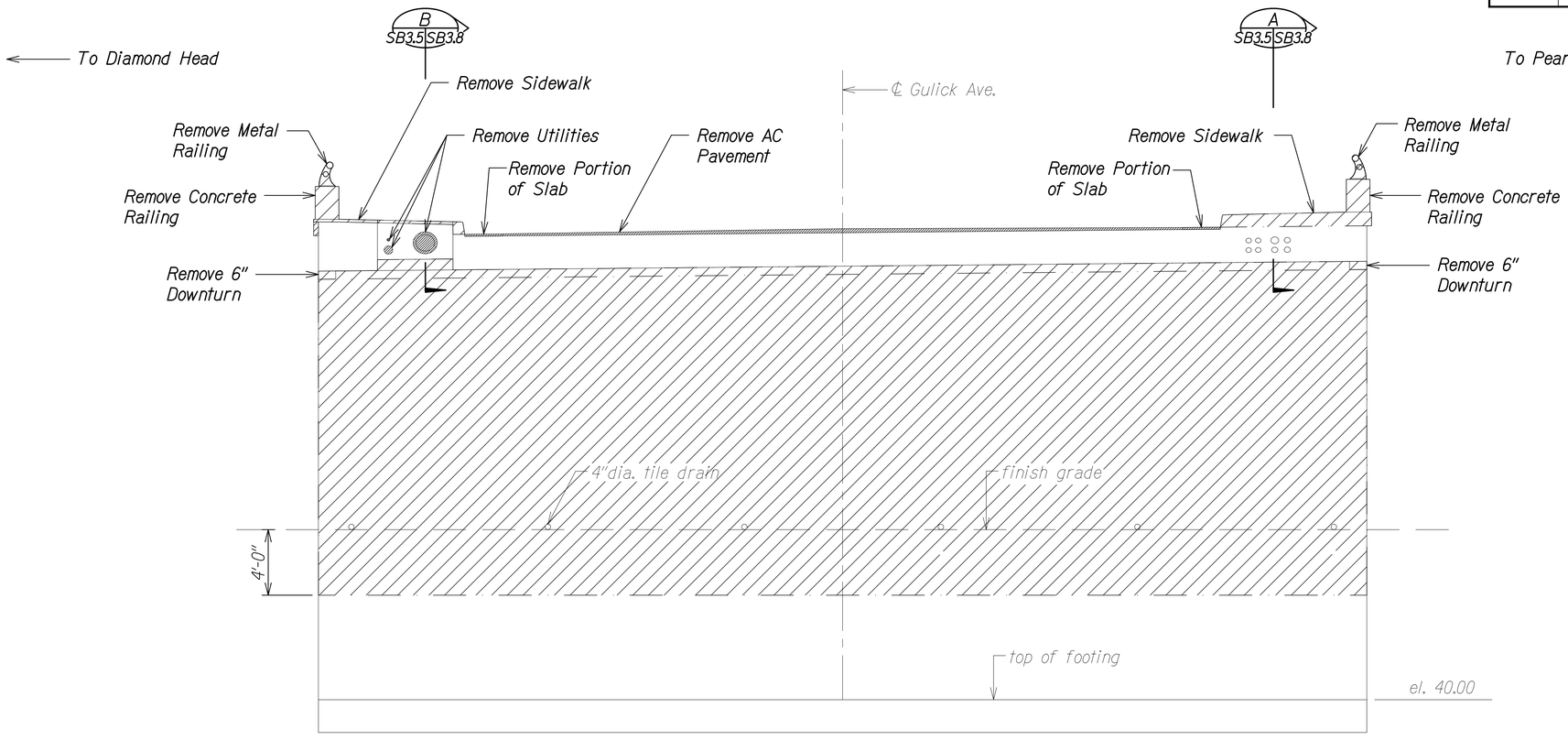
GULICK AVENUE OVERPASS
DEMOLITION DIAMOND HEAD ELEVATION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB3.4 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	317	466



ABUTMENT #1 DEMOLITION ELEVATION

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

LEGEND:

Demolish and Remove

NOTES:

1. See SB19 Series for Construction Sequence.
2. See Civil plans for Traffic Control.

ORIGINAL PLAN
NOTE BOOK No.

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

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
ABUT. #1 DEMOLITION ELEV.

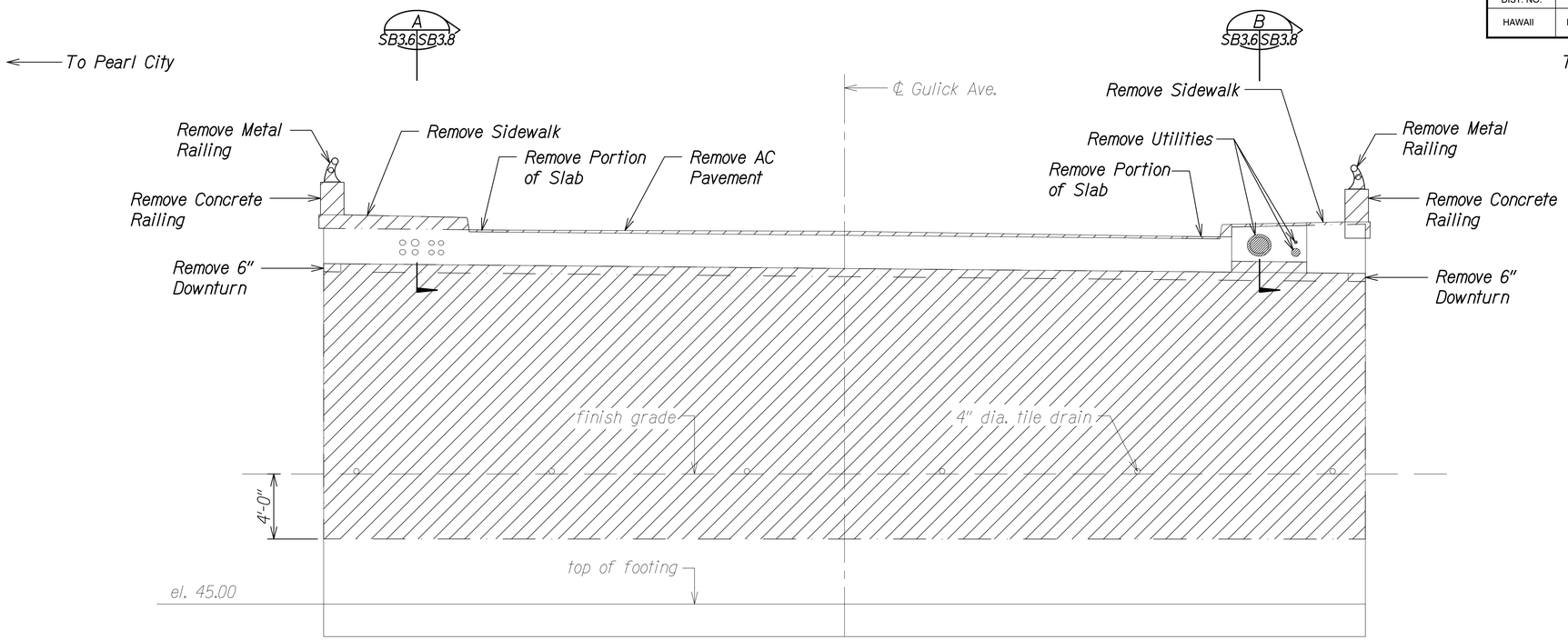
INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB3.5 OF 8 SHEETS

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0305 ABUT 1 ELEV.DWG PLOT TIME: 01-04-23, 9:39 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	318	466



ABUTMENT #2 DEMOLITION ELEVATION

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

LEGEND:

Demolish and Remove

NOTES:

1. See SB19 Series for Construction Sequence.
2. See Civil plans for Traffic Control.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB036 ABUT 2 ELEV.DWG PLOT TIME: 01-04-23, 9:39 AM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

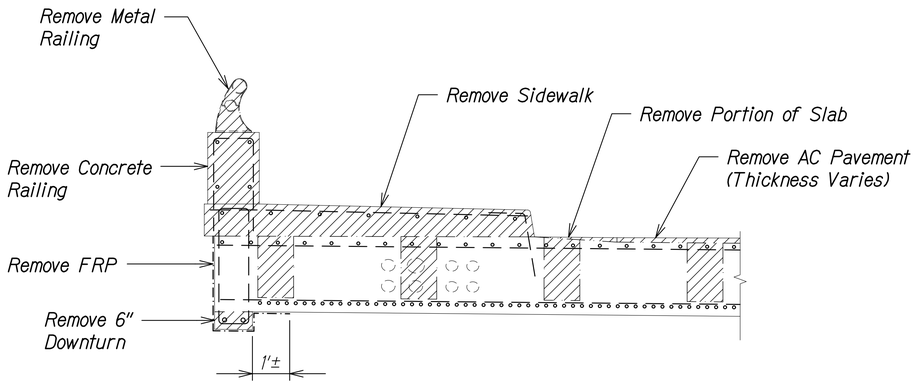
GULICK AVENUE OVERPASS
ABUT. #2 DEMOLITION ELEV.

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB3.6 OF 8 SHEETS

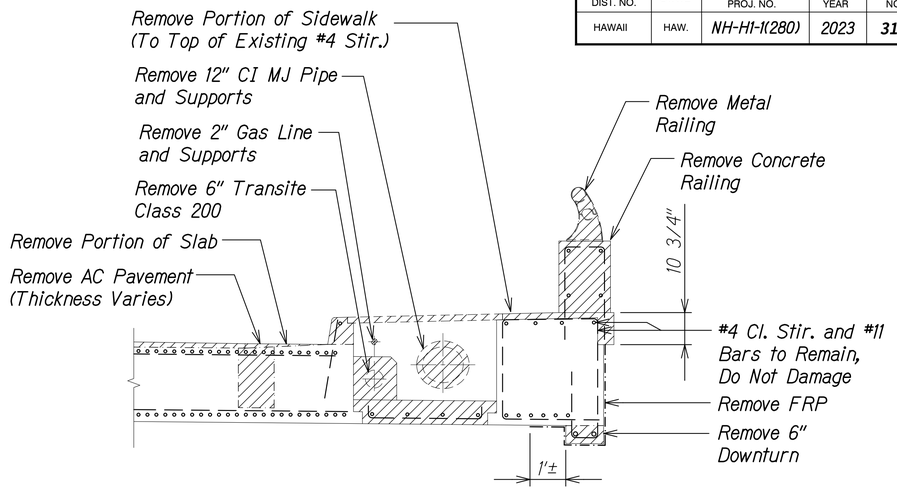
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	319	466



DEMOLITION AT TYPICAL TRANSVERSE SECTION

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

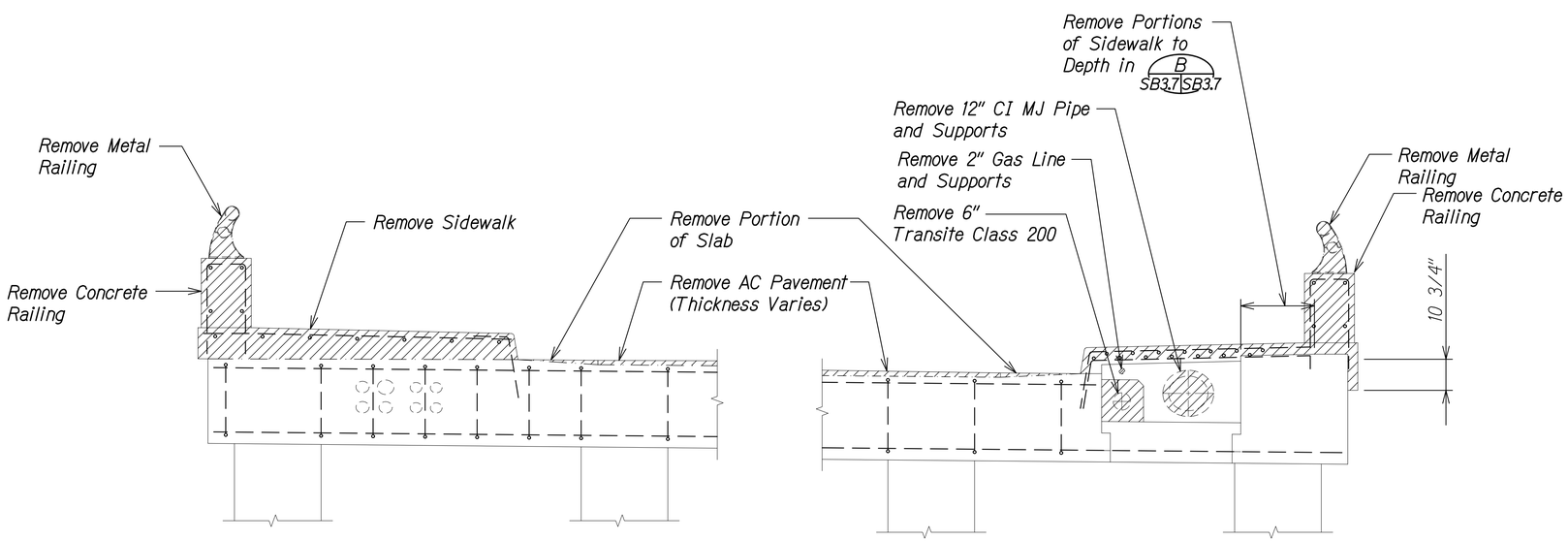
A SB3.7 | SB3.7



DEMOLITION AT TYPICAL TRANSVERSE SECTION

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

B SB3.7 | SB3.7



DEMOLITION AT SECTION THRU BENT BEAM

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

C SB3.7 | SB3.7

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) — DATE

ERIC Y. MATSUMOTO LICENSED PROFESSIONAL ENGINEER NO. 10156-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS DEMOLITION SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

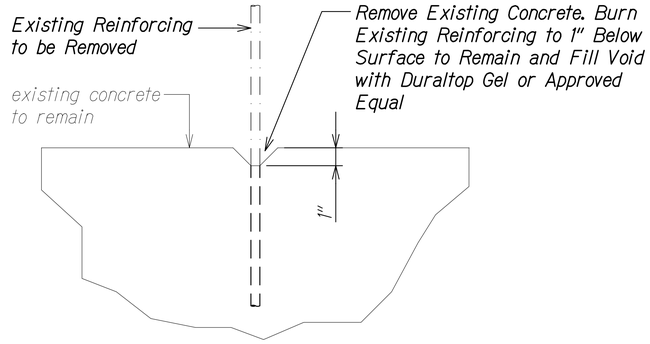
Scale: As Noted — Date: December 2022

SHEET No. SB3.7 OF 8 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0307 DEMOL SECT.DWG PLOT TIME: 01-04-23, 9:39 AM)

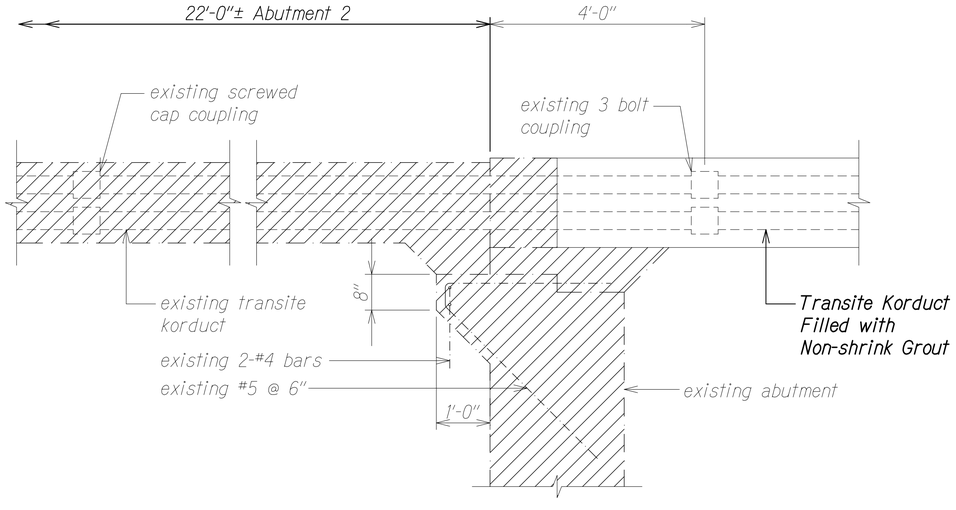
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	320	466



REINFORCING REMOVAL DETAIL

Scale: 3" = 1'-0"

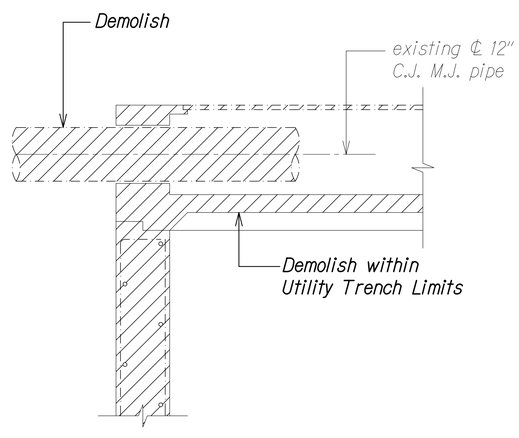
1 SB3.8 | SB3.8



SECTION ALONG KORDUCT LINE

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

A SB3.6 | SB3.8 — SB3.5



SECTION

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

B SB3.6 | SB3.8 — SB3.5

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0308 DEMOL DTLS.DWG PLOT TIME: 01-04-23, 9:39 AM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Eric Y. Matsumoto 4-30-24

SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

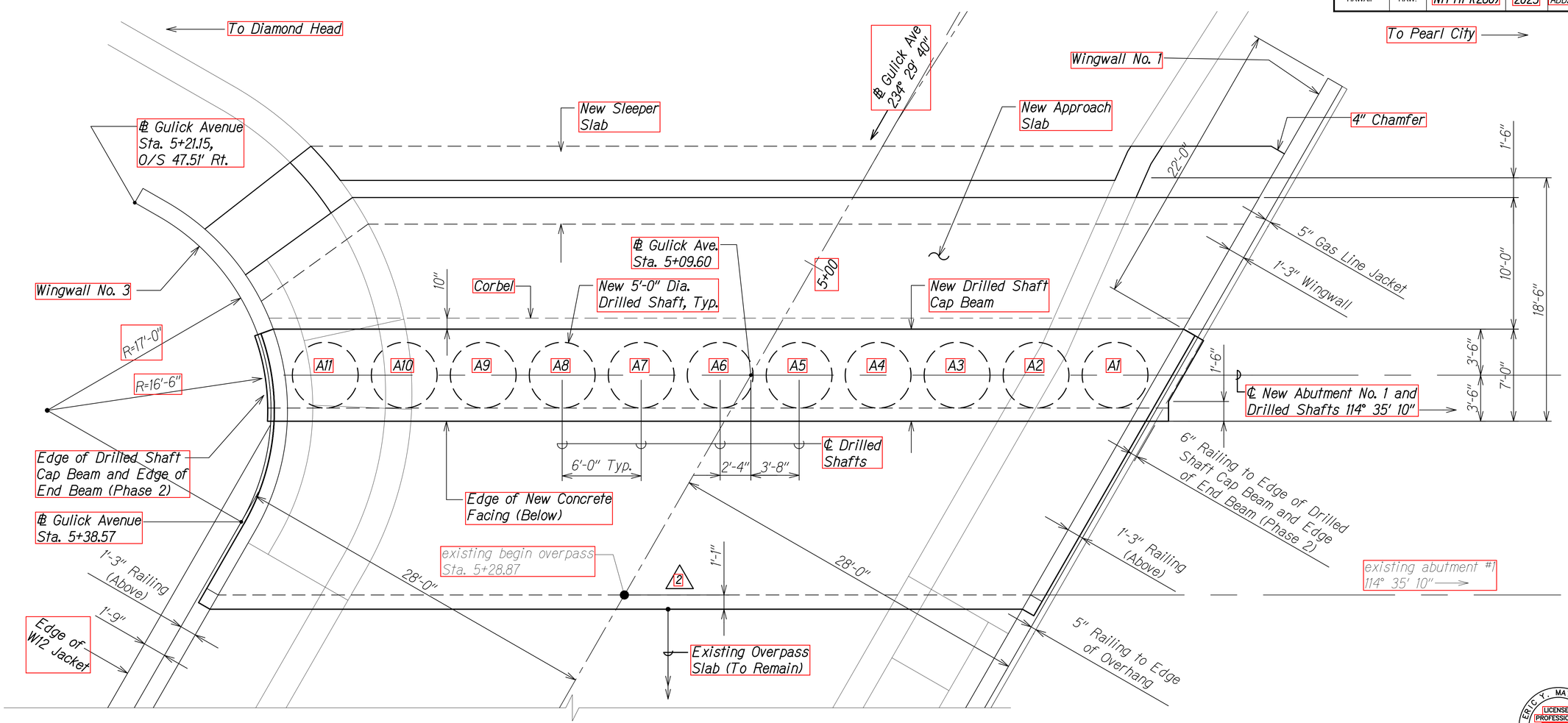
GULICK AVENUE OVERPASS DEMOLITION DETAIL AND SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB3.8 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 321	466



NOTES:

1. See SB1.1 for Wingwall No. 3 curve data.
2. See SB5 series for Wingwalls.
3. See SB6 series for Drilled Shafts.

ABUTMENT NO. 1 PLAN

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

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0401 ABUT 1 PLAN ADD2.DWG PLOT TIME: 04-10-23, 3:26 PM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Eric Y. Matsumoto — 4-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
ABUTMENT NO. 1 PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

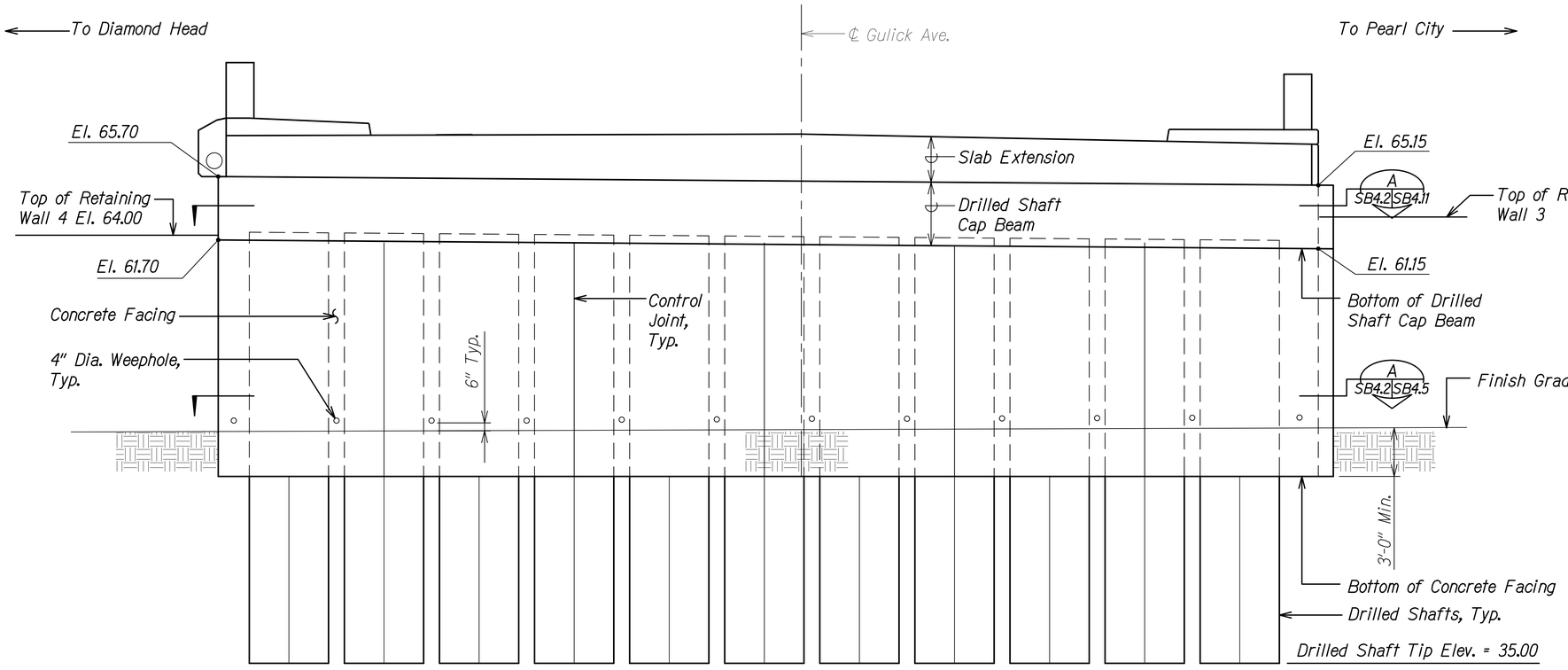
Scale: As Noted — Date: December 2022

SHEET No. SB4.1 OF 13 SHEETS

DATE	REVISION
4/7/23	2 Revised Dimension

ADD. 321

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	322	466



NOTES:

1. See Civil sheets for finish grades.
2. See SB6 series for drilled shafts.

ABUTMENT NO. 1 ELEVATION (ALONG ℄ ABUTMENT)

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

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto — 6-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
ABUTMENT NO. 1 ELEVATION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

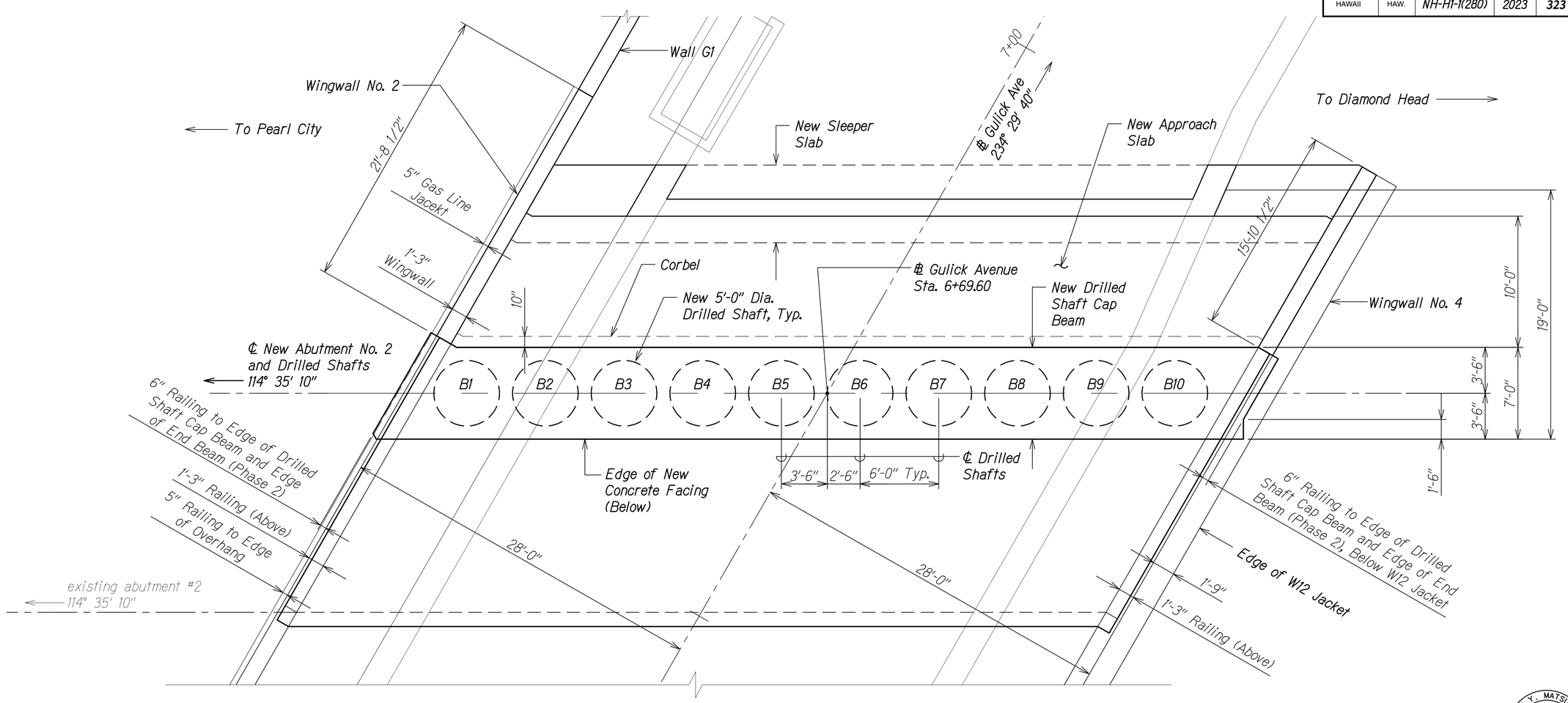
Scale: As Noted — Date: December 2022

SHEET No. SB4.2 OF 13 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0401 ABUT 1 PLAN.DWG PLOT TIME: 01-04-23, 9:40 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	323	466



ABUTMENT NO. 2 PLAN

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

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0403 ABUT 2 PLAN.DWG PLOT TIME: 01-04-23, 9:40 AM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

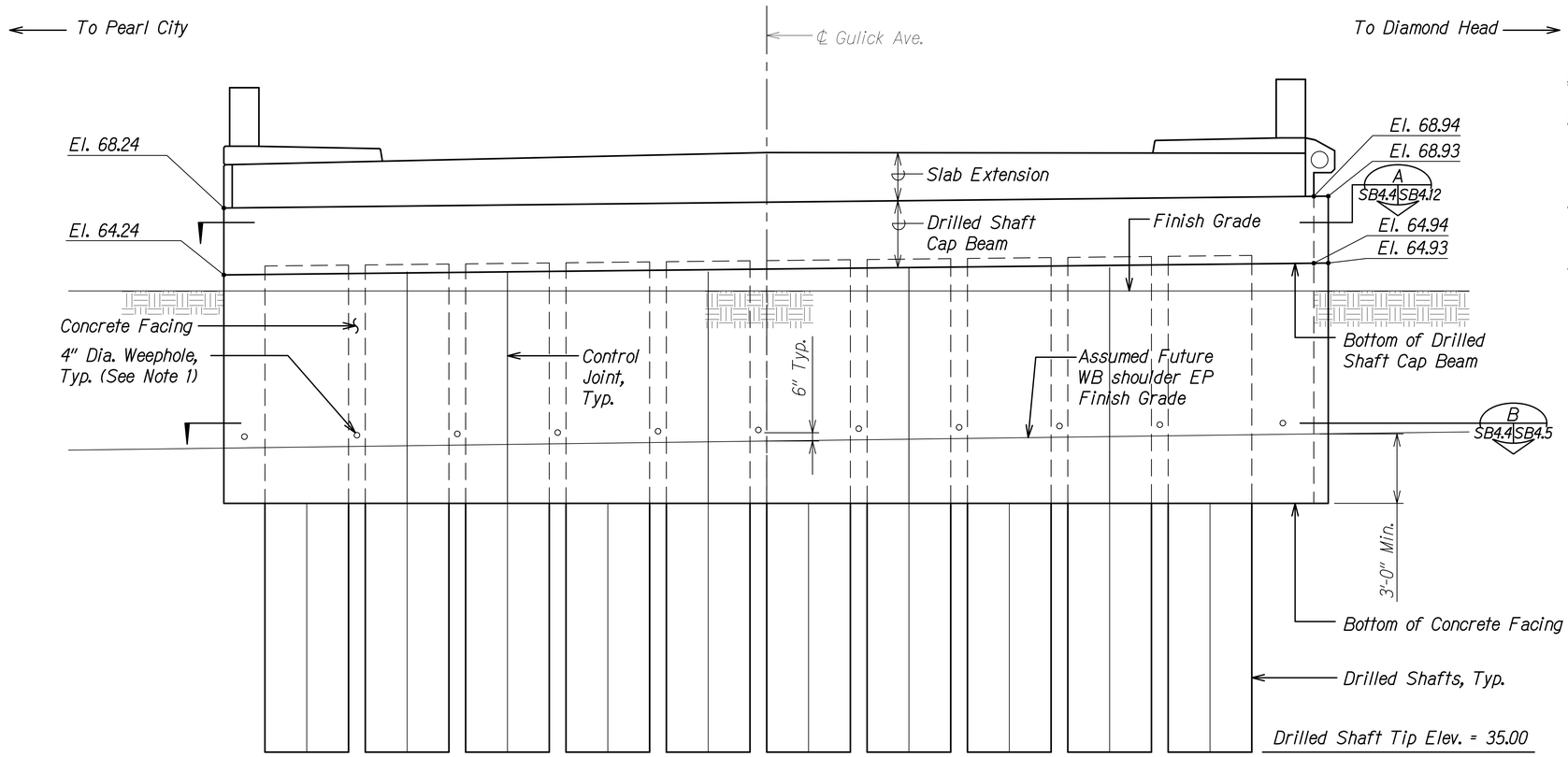
GULICK AVENUE OVERPASS
ABUTMENT NO. 2 PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB4.3 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	324	466



ABUTMENT NO. 2 ELEVATION (ALONG ℄ ABUTMENT)

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

NOTES:

1. Connect weepholes in abutment to weepholes in new concrete barrier along H-1.
2. See Civil for assumed future WB shoulder EP finish grade.
3. See SB6 series for drilled shaft.

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto — 4-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
ABUTMENT NO. 2 ELEVATION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

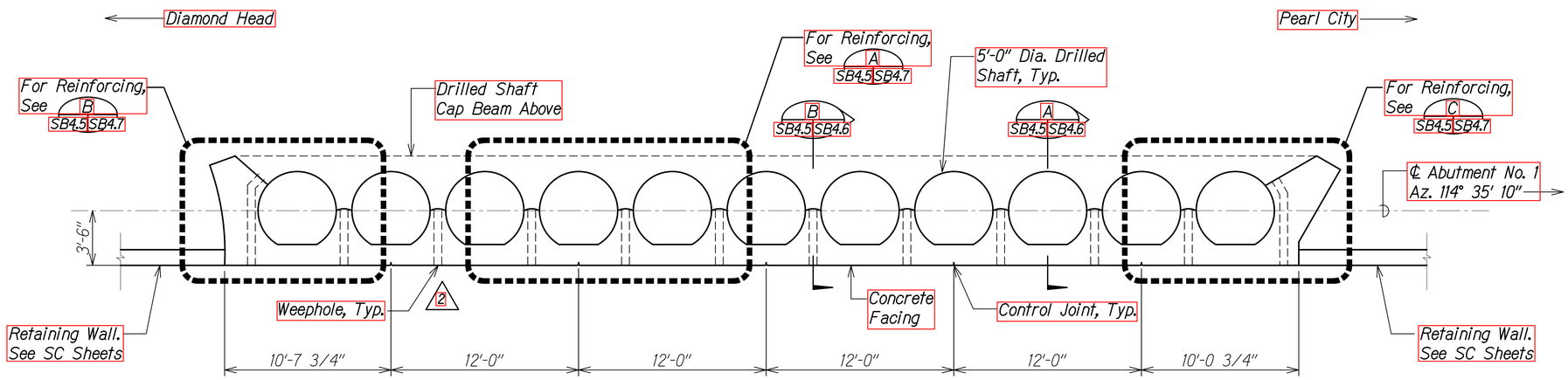
Scale: As Noted — Date: December 2022

SHEET No. SB4.4 OF 13 SHEETS

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0403 ABUT 2 PLAN.DWG PLOT TIME: 01-04-23, 9:41 AM)

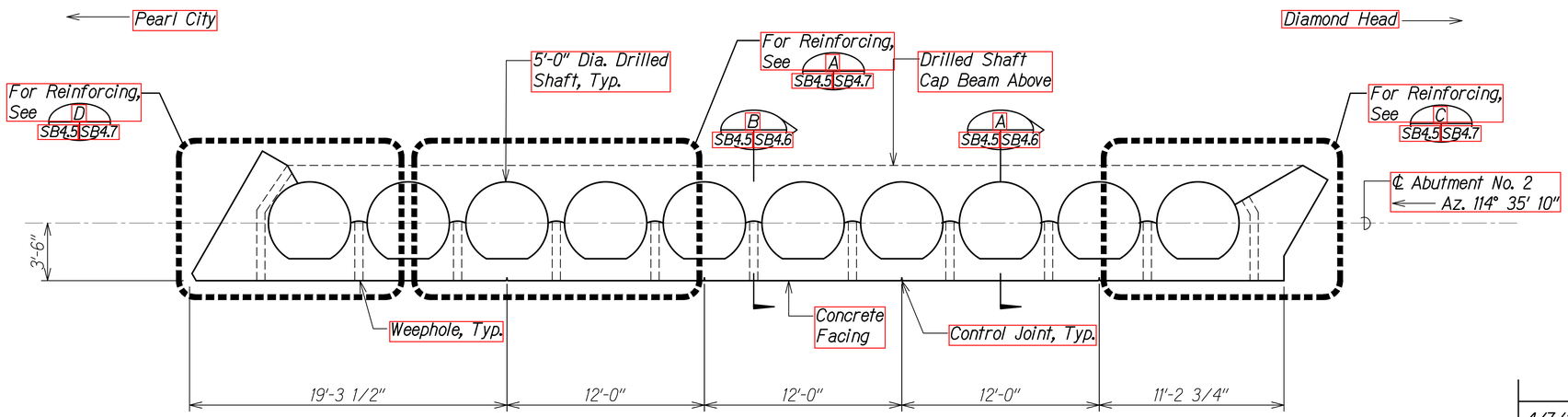
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 325	466



ABUTMENT NO. 1 SECTION

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

A SB4.2 SB4.5



ABUTMENT NO. 2 SECTION

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

B SB4.2 SB4.5

NOTE:

Reinforcing and drain details not shown.
See sheets SB4.6 and SB4.7.

DATE	REVISION
4/7/23	2 Revised Note Leader

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS CONCRETE FACING SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB4.5 OF 13 SHEETS

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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SIGNATURE

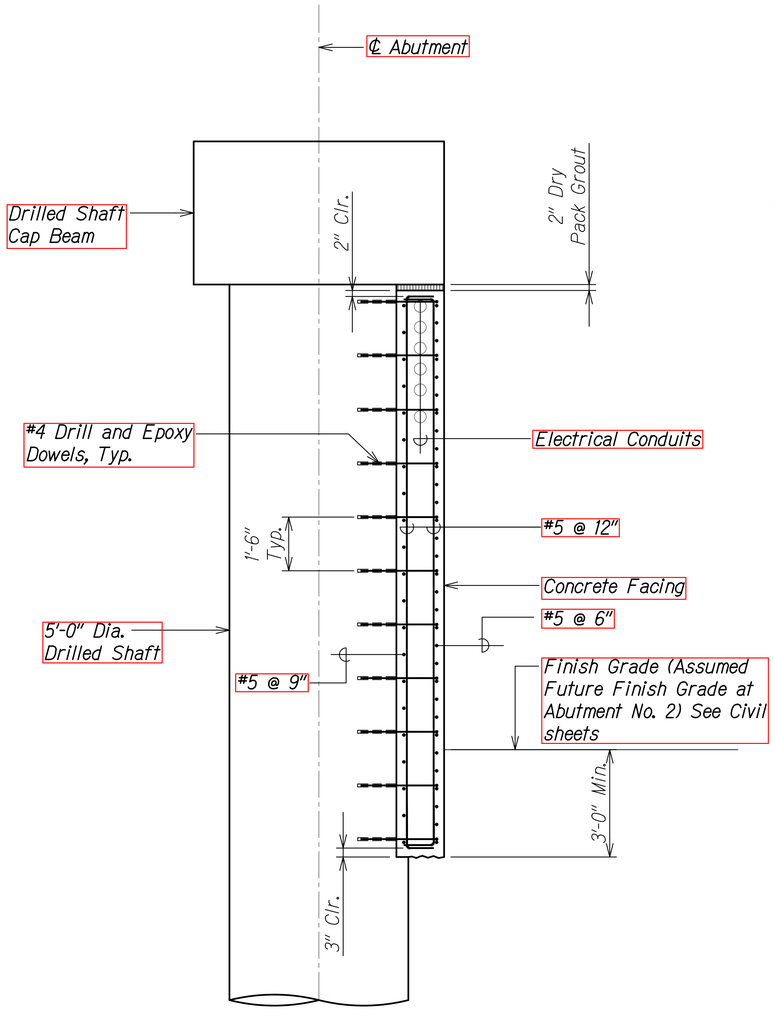
4-30-24
EXPIRATION DATE OF THE LICENSE

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

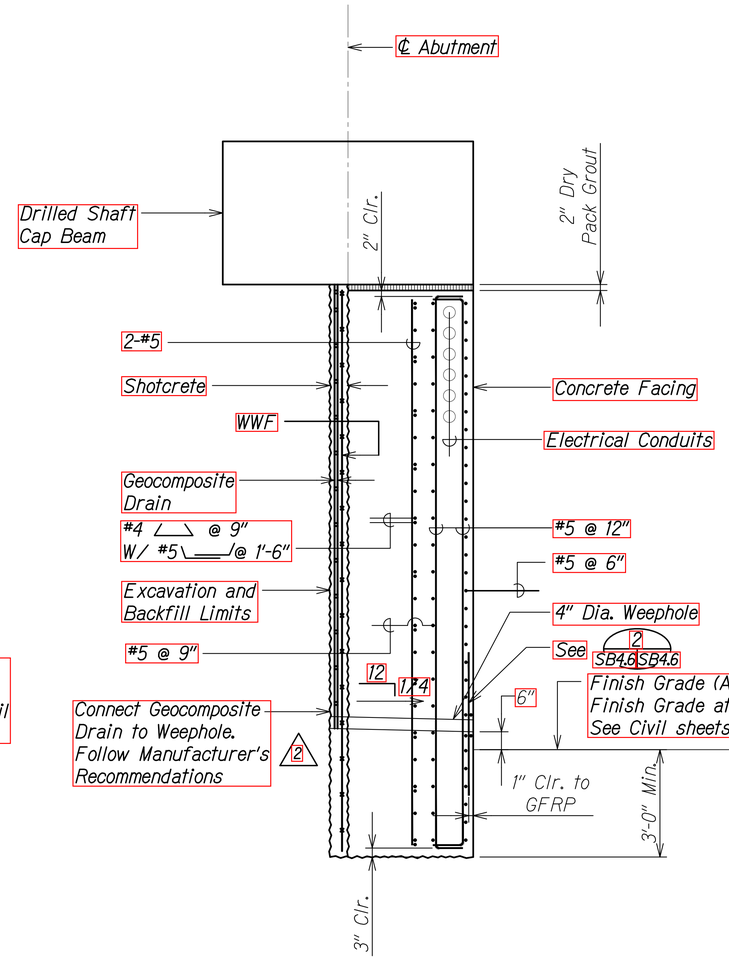
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ADD. 325

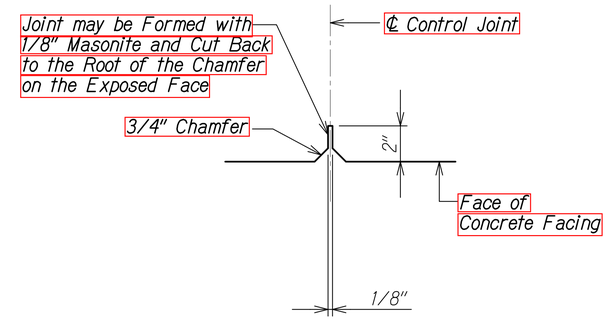
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 326	466



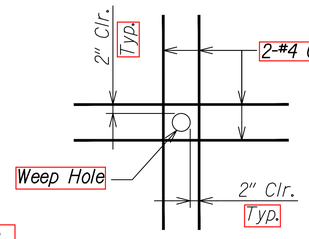
SECTION A
Scale: 1/2" = 1'-0"
SB4.5 | SB4.6



SECTION B
Scale: 1/2" = 1'-0"
SB4.5 | SB4.6



CONTROL JOINT DETAIL
Scale: 3" = 1'-0"
1
SB4.7 | SB4.6



ADDED REINF. AT WEEP
HOLES IN CONCRETE WALL
Scale: 3/4" = 1'-0"
2
SB4.6 | SB4.6

DATE	REVISION
4/7/23	2 Revised Note Leader

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS CONCRETE FACING SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB4.6 OF 13 SHEETS

ADD. 326

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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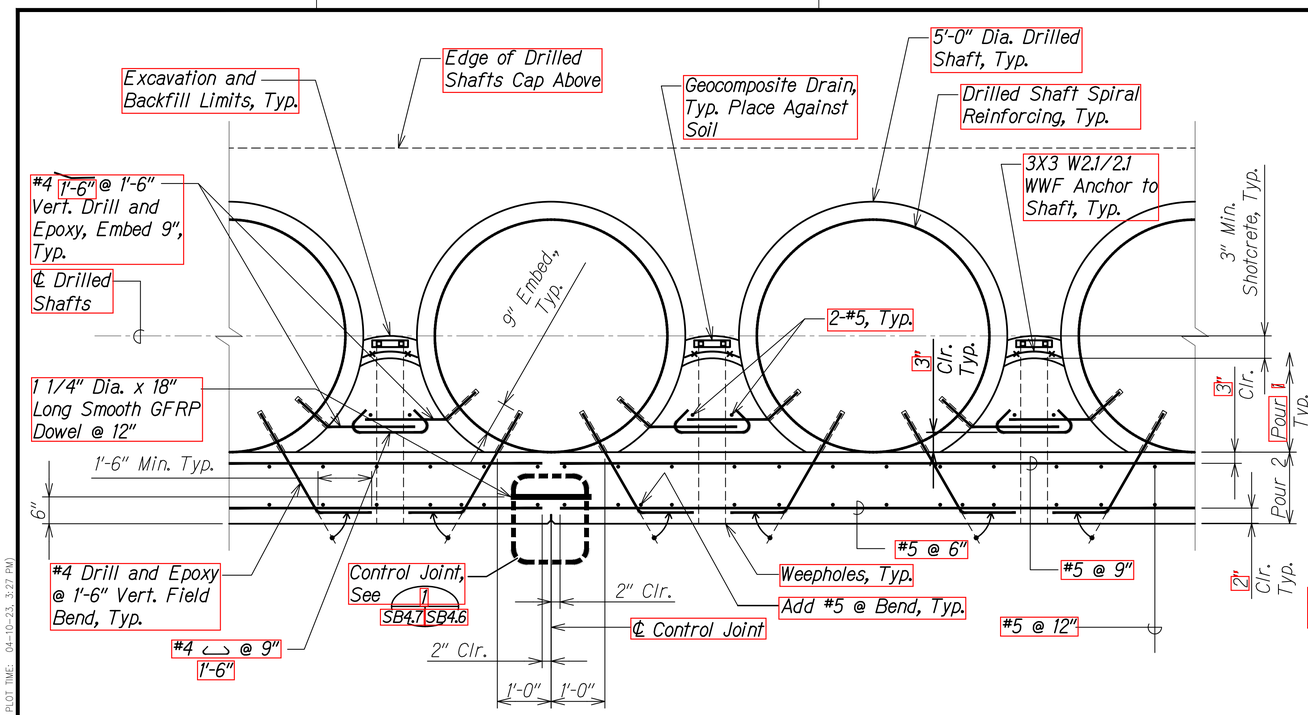
Eric Y. Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

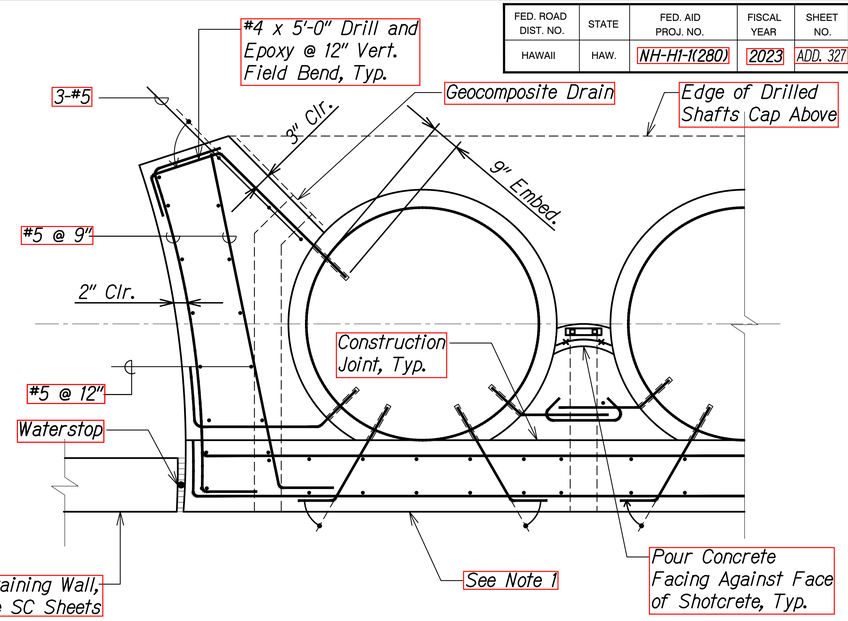
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	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS — GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0405 CONC FACING ADD2.DWG PLOT TIME: 04-10-23, 3:27 PM)

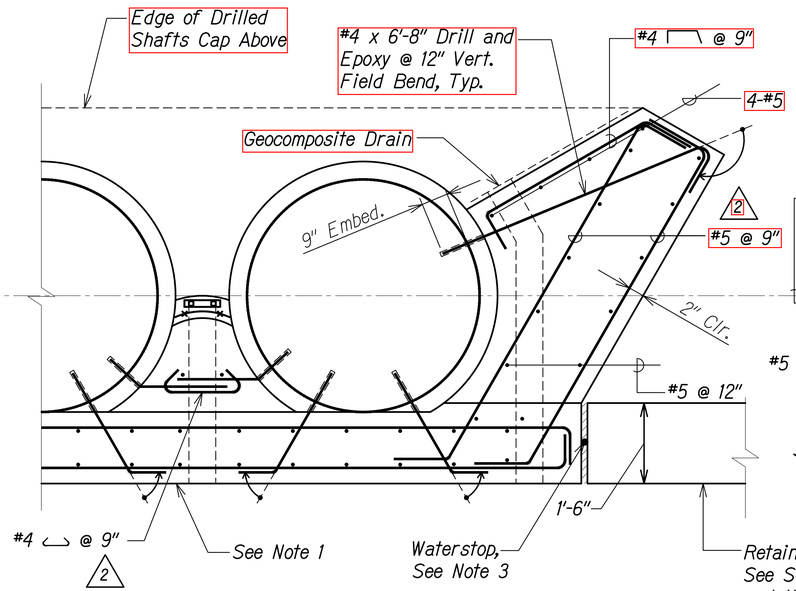
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 327	466



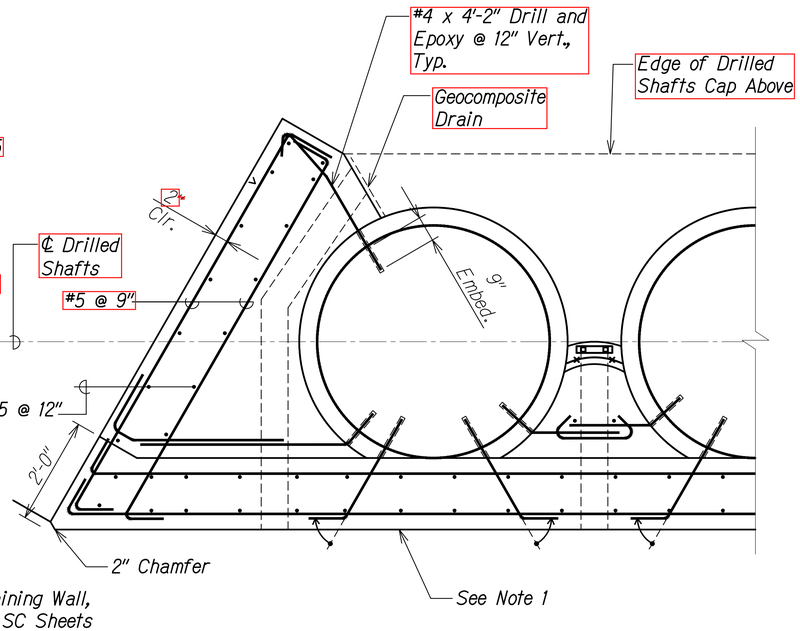
SECTION
Scale: 3/4" = 1'-0"
B SB4.5 SB4.7



SECTION
Scale: 3/4" = 1'-0"
A SB4.5 SB4.7



SECTION
Scale: 3/4" = 1'-0"
C SB4.5 SB4.7



SECTION
Scale: 3/4" = 1'-0"
D SB4.5 SB4.7

NOTES:

1. Reinforcing shown in section A shall be applicable to sections B, C, and D.
2. For locations of control joints, see SB4.5.
3. Section shown with waterstop and retaining wall is for the condition at Abutment No. 1 only. Section for the condition at Abutment No. 2 is similar.
4. Geocomposite drain and shotcrete shall be placed within 24 hours of excavation in front of abutment drilled shafts.
5. Backfill any voids below drilled shaft cap beam with CLSM (incidental to Gulick Abutment Concrete Facing).

DATE		REVISION
4/7/23	2	Revised Rebar

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS CONCRETE FACING SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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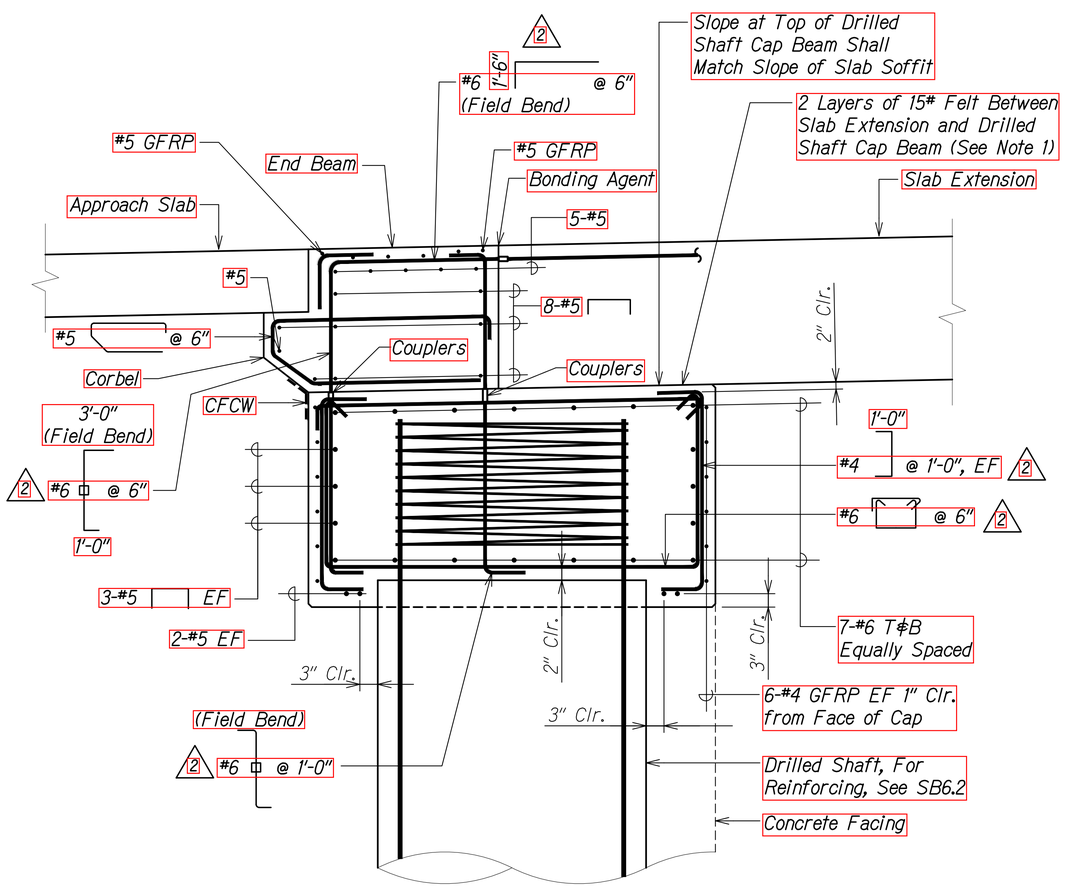
SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

SHEET No. SB4.7 OF 13 SHEETS

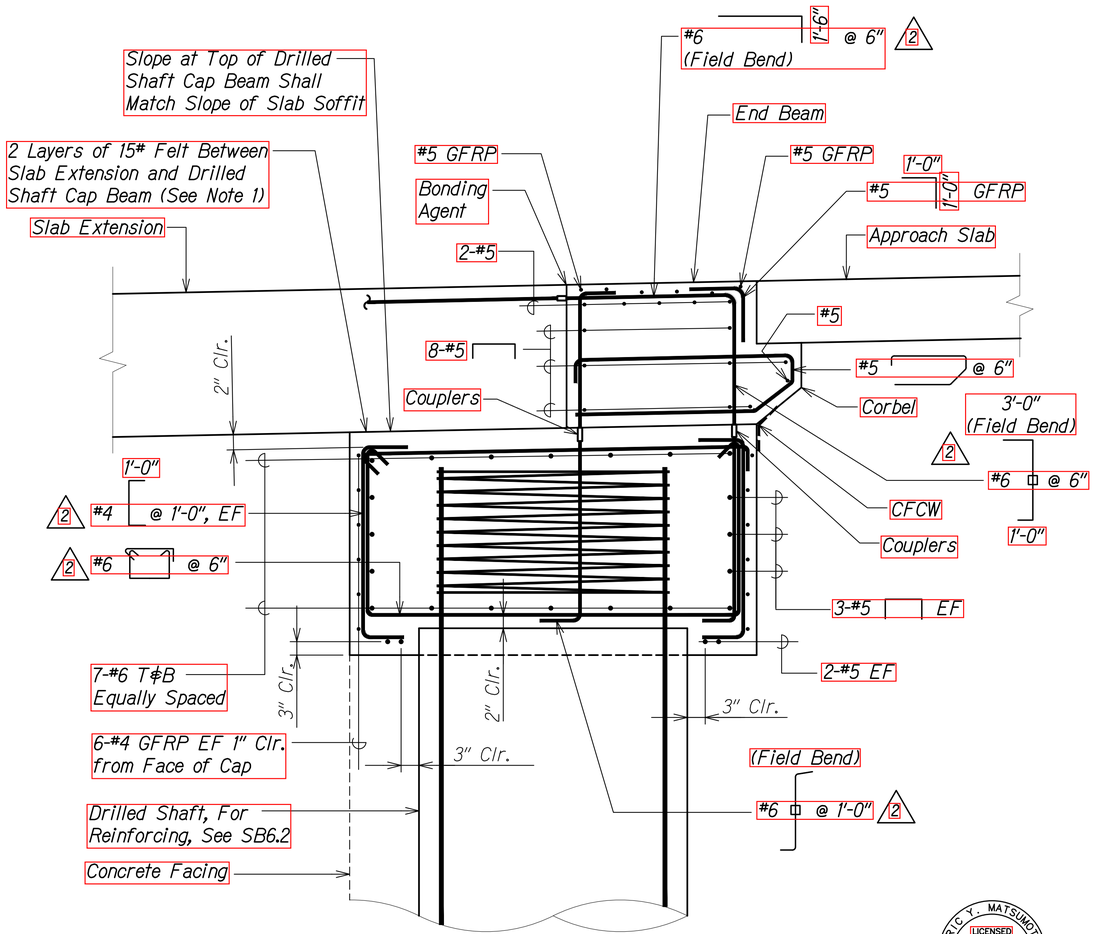
ADD. 327

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIH\01 CAD\04-10-23 ADD2\GRK-SB0405 CONC FACING ADD2.DWG PLOT TIME: 04-10-23, 3:27 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 328	466



SECTION
Scale: 3/4" = 1'-0"
A
SB4.11 SB4.8
SB4.9



SECTION
Scale: 3/4" = 1'-0"
B
SB4.12 SB4.8 2
SB4.10

NOTES:

1. Inject epoxy into gaps below slab extension with Sikador 55 SLV or approved equal after pouring end beam.
2. See SB14 series for approach slab, additional corbel details, and added reinforcement at W12.
3. See SB8 series for slab extension reinforcing.
2 4. Apply bonding agent (6" wide) on perimeter (top, bottom and sides) of slab extension.

DATE	REVISION
4/7/23	2 Added Note and Revised Callout

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS ABUTMENT SECTONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

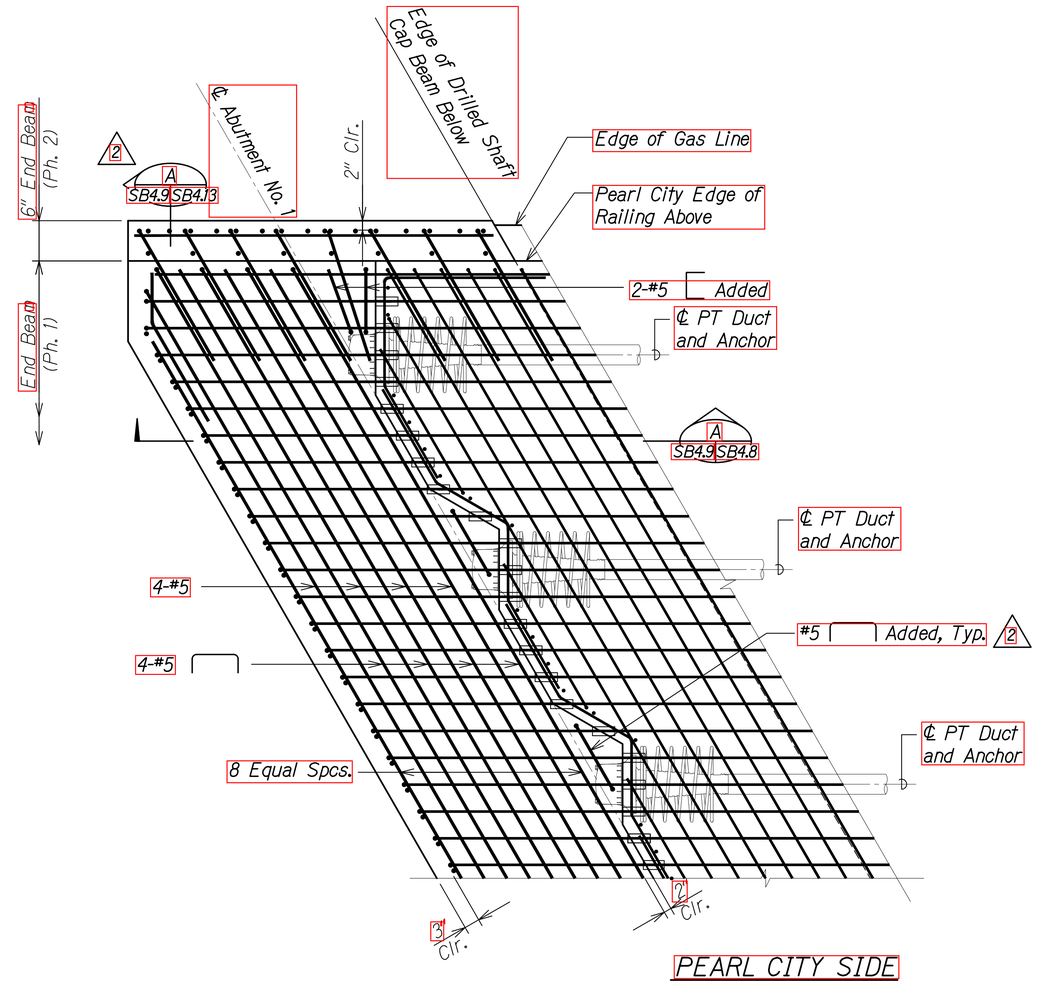
SHEET No. SB4.8 OF 13 SHEETS

ADD. 328

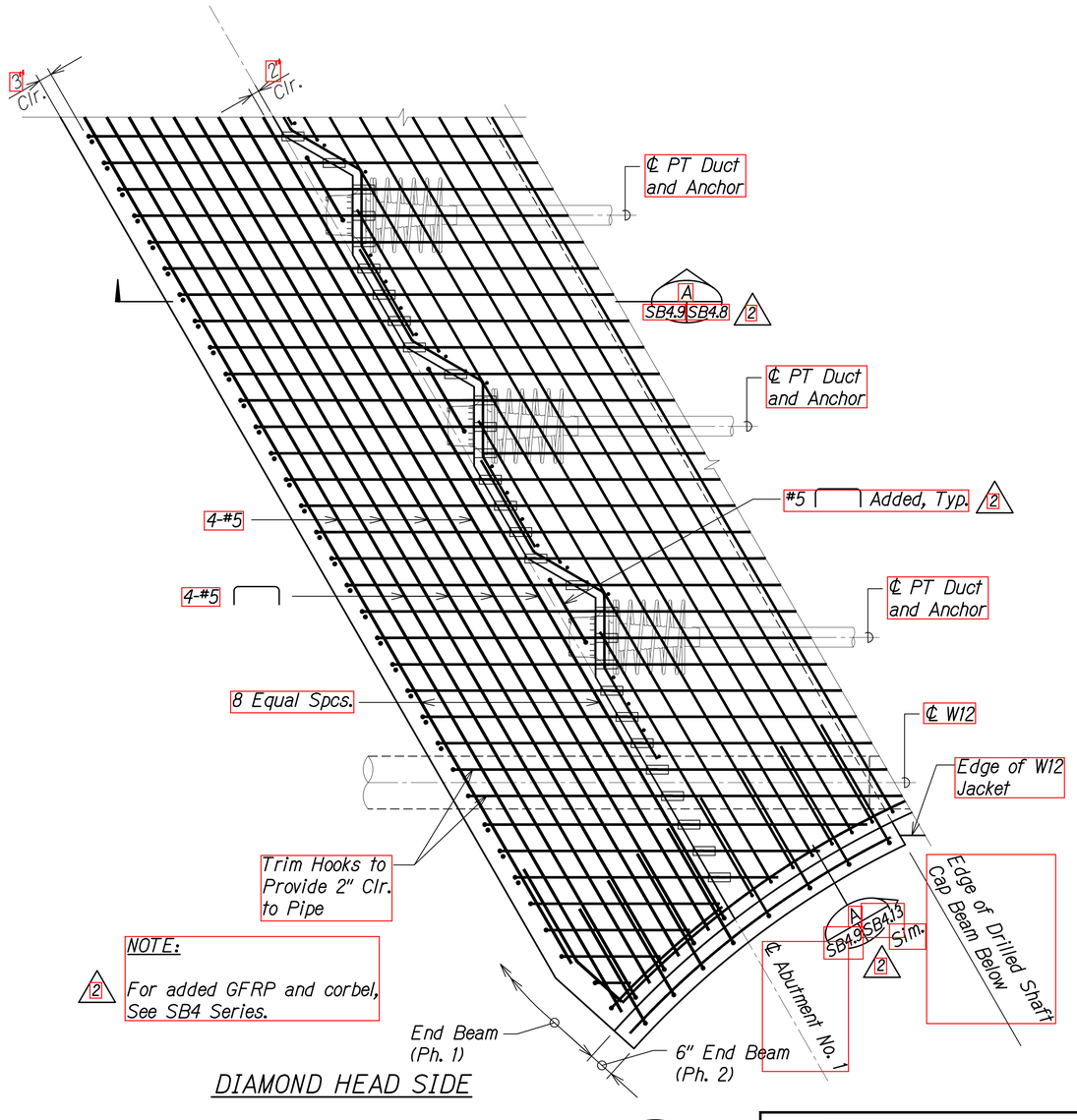
DATE
ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
NOTE BOOK
No.

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\04-10-23 ADD2\GRK-SB0408 ABUT SECT ADD2.DWG PLOT TIME: 04-10-23, 3:28 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 329	466



PEARL CITY SIDE



DIAMOND HEAD SIDE

NOTES:

1. See SB8 series for slab extension reinforcing.
2. Wingwalls not shown for clarity.

NOTE:

2 For added GFRP and corbel, See SB4 Series.

MAKAI SIDE OVERPASS END BEAM REINFORCEMENT

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

DATE	REVISION
4/7/23	2 Revised Notes and Ref. Sections

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

NOTE BOOK | No.

ERIC Y. MATSUMOTO LICENSED PROFESSIONAL ENGINEER NO. 10156-S HAWAII, U.S.A.

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SIGNATURE | EXPIRATION DATE OF THE LICENSE: 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS ABUTMENT NO. 1 END BEAM REINF.

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

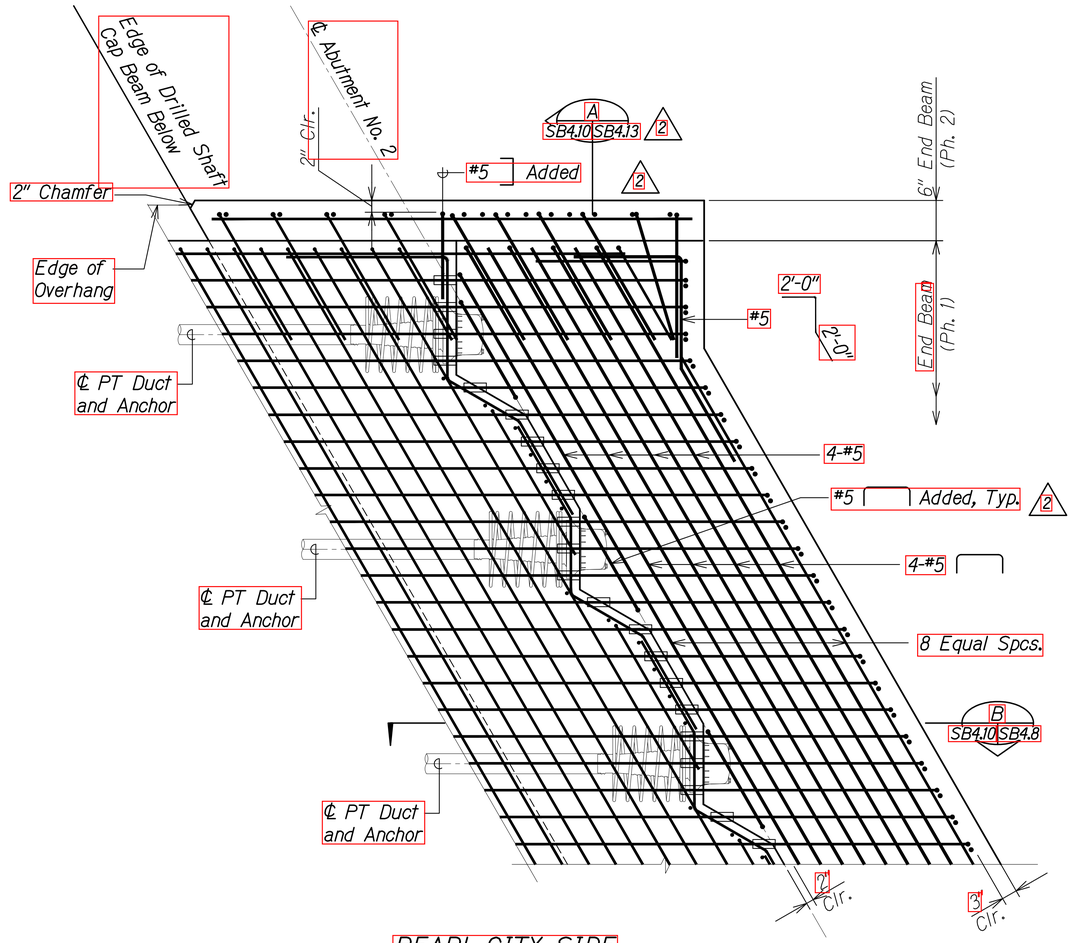
Scale: As Noted Date: December 2022

SHEET No. SB4.9 OF 13 SHEETS

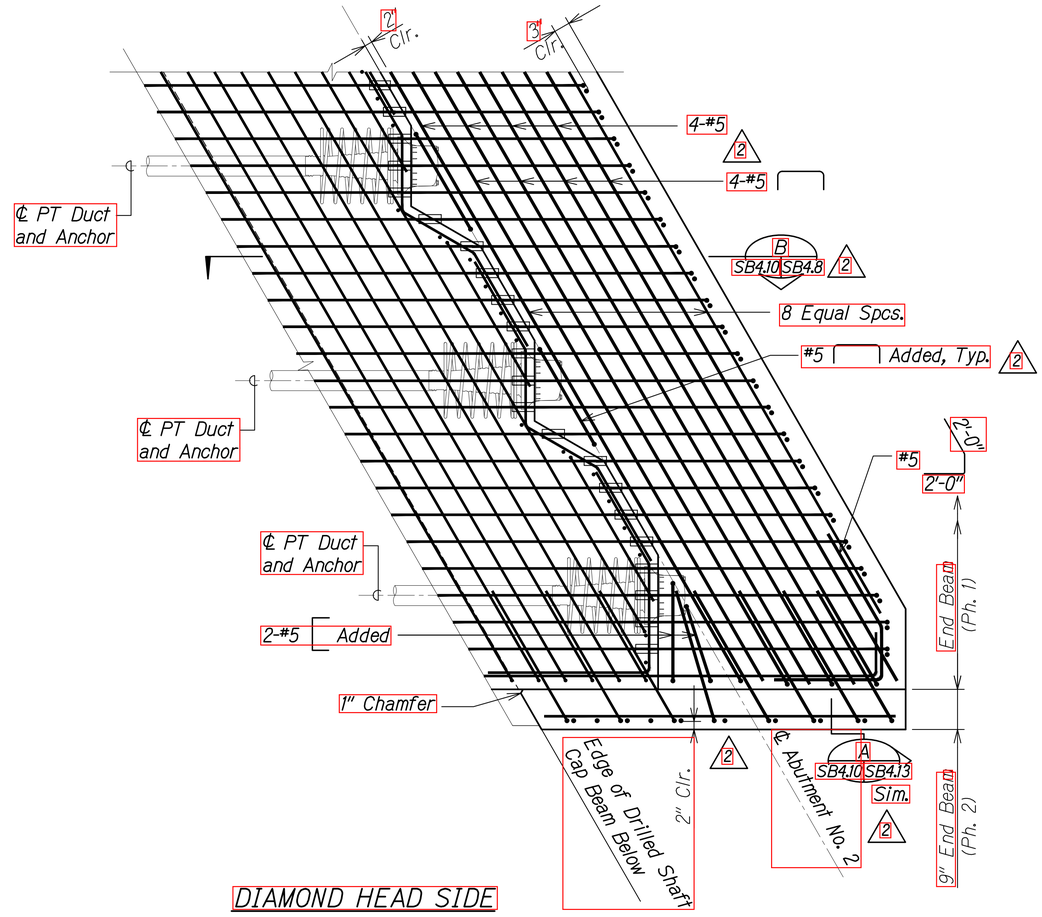
ADD. 329

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 330	466



PEARL CITY SIDE



DIAMOND HEAD SIDE

NOTES:

1. See SB8 series for slab extension reinforcing.
2. W12 jacket not shown for clarity.
3. For added GFRP and corbel, See SB14 Series.
4. Wingwalls not shown for clarity.

2

MAUKA SIDE OVERPASS END BEAM REINFORCEMENT

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

DATE	REVISION
4/7/23	1 Revised Note, Callouts and Ref. Sections

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ERIC Y. MATSUMOTO LICENSED PROFESSIONAL ENGINEER NO. 10156-S HAWAII, U.S.A.

Eric Y. Matsumoto 4-30-24

SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
ABUTMENT NO. 2 END BEAM REINF.

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

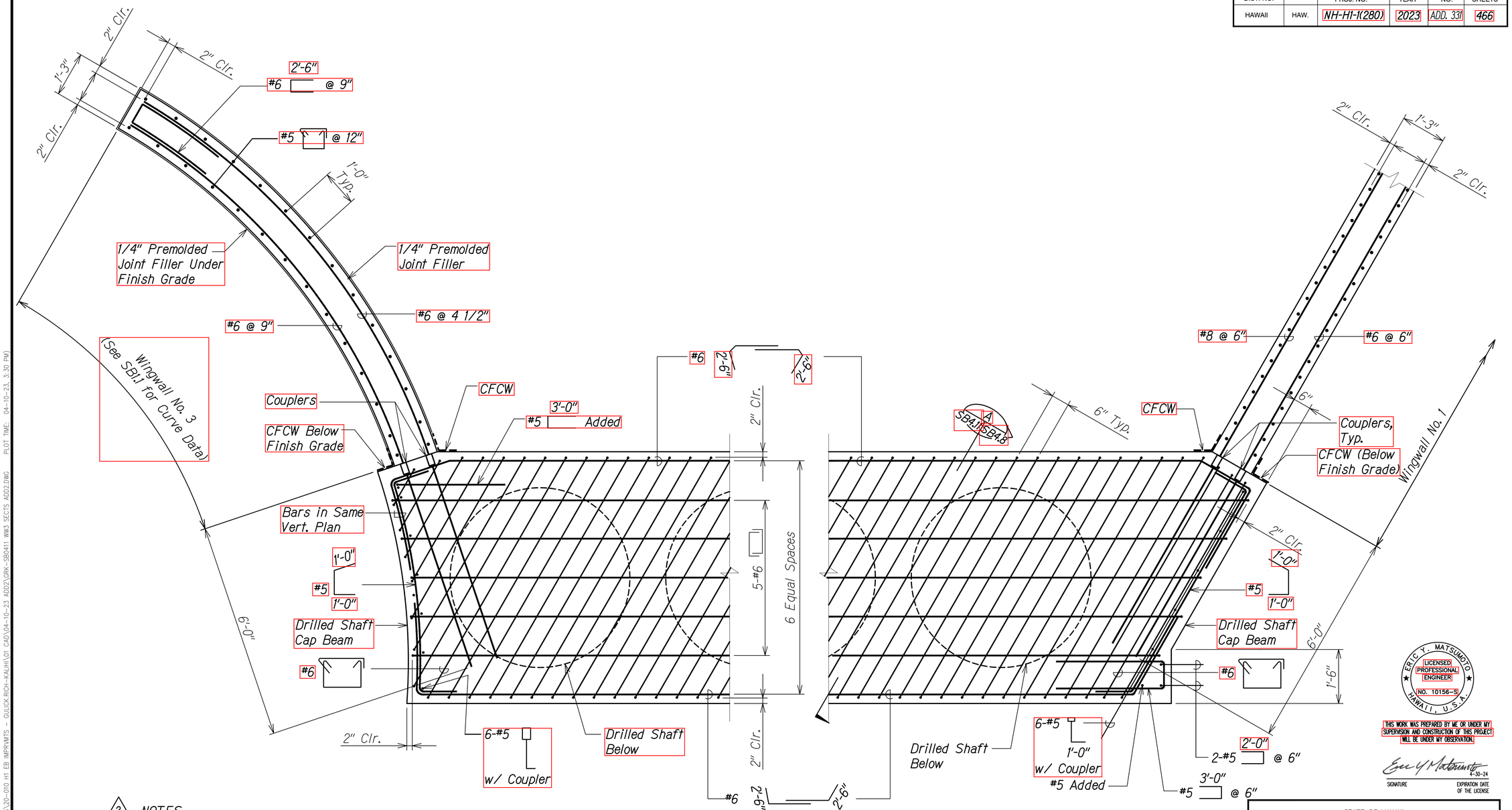
SHEET No. SB4.10 OF 13 SHEETS

ADD. 330

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK\RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0409 END BM ADD2.DWG PLOT TIME: 04-10-23, 5:23 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 331	466



2 NOTES:

1. Drill shafts reinforcing not shown for clarity.
2. See sheet SB4.8 for additional reinforcing.

SECTION A
Scale: 3/4" = 1'-0"
SB4.2 | SB4.11

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 6-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS ABUTMENT NO. 1 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB4.11 OF 13 SHEETS

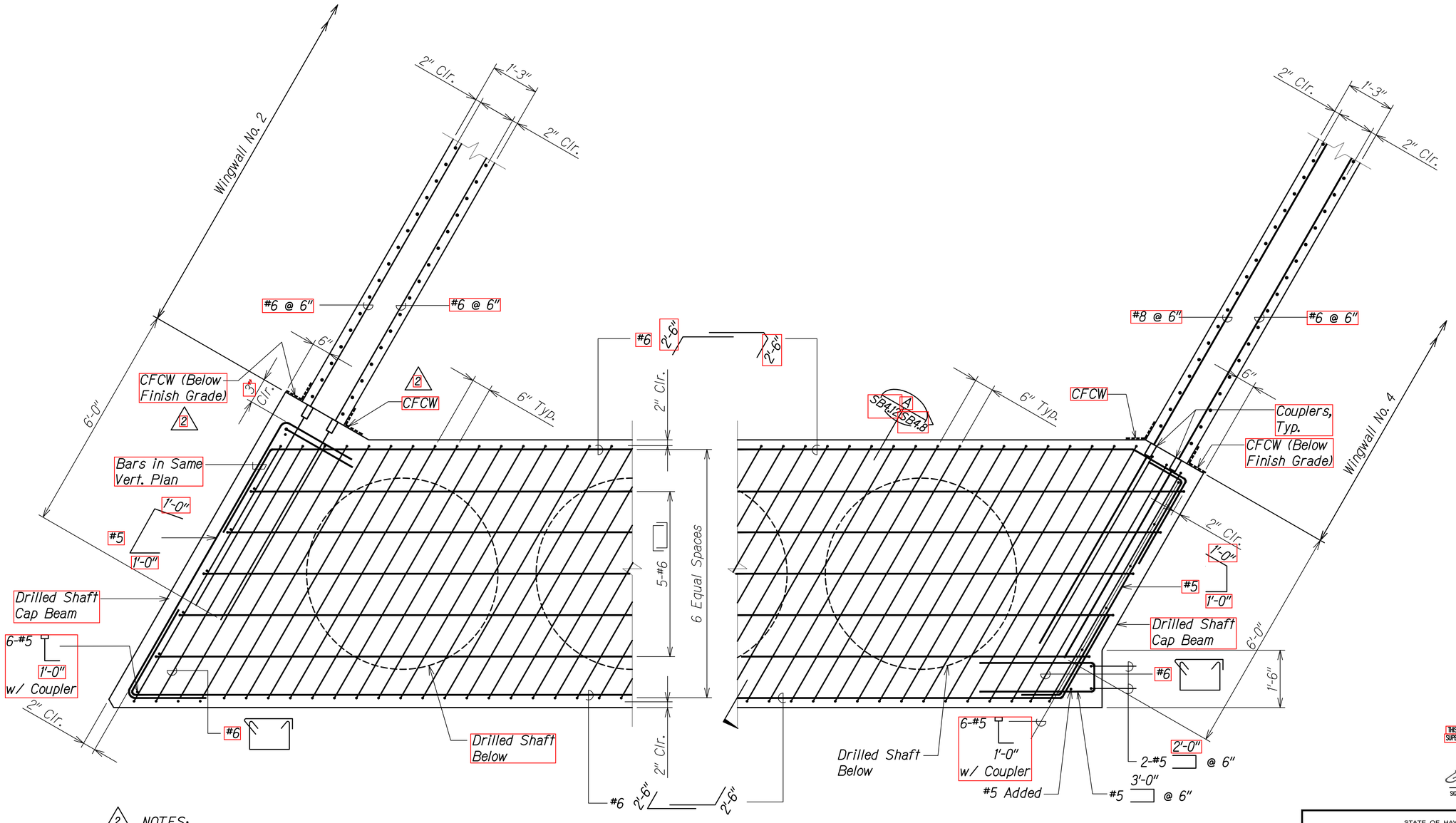
DATE	REVISION
4/7/23	2 Added Notes

ADD. 331

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH+KALIHI\01 CAD\04-10-23 ADD2\ORK-SB0411 WW3 SECTS ADD2.DWG PLOT TIME: 04-10-23, 3:30 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 332	466



2 NOTES:

1. Drill shafts reinforcing not shown for clarity.
2. See sheet SB4.8 for additional reinforcing.

SECTION A
Scale: 3/4" = 1'-0"
SB4.4 | SB4.12

DATE	REVISION
4/7/23	2 Added Notes and Callouts

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS ABUTMENT NO. 2 SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

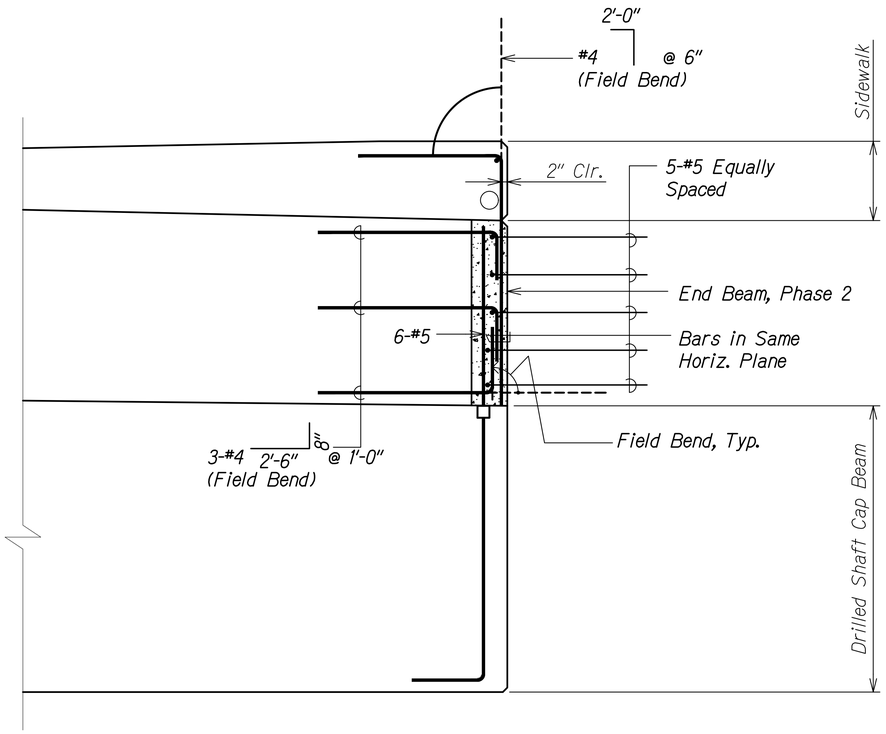
SHEET No. SB4.12 OF 13 SHEETS

ADD. 332

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0411 WW3 SECTS ADD2.DWG PLOT TIME: 04-10-23, 3:30 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	333	466



END BEAM PHASE 2 SECTION

Scale: 1" = 1'-0"

A
SB4.9 | SB4.13

ORIGINAL PLAN
NOTE BOOK
No.

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

DRAWING NAME: Z:\OD ONGOING\OD JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0411 WW3 SECTS.DWG PLOT TIME: 01-04-23, 11:36 AM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

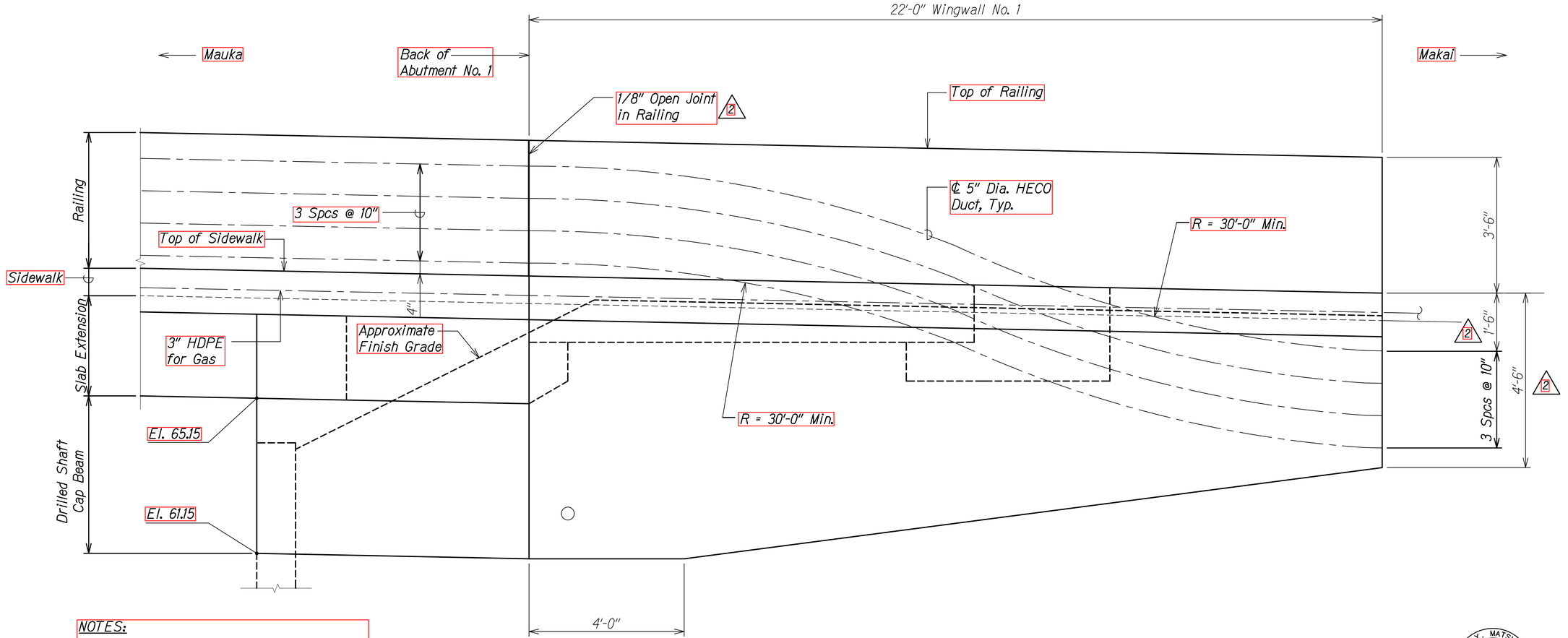
GULICK AVENUE OVERPASS
END BEAM PHASE 2 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB4.13 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 334	466



NOTES:

1. Elevation shows 5" Dia. HECO duct location without reinforcing. For reinforcing, see SB5.2.
2. See Civil drawings for approximate finish grade.
3. See Civil drawings for gas line beyond Wingwall No. 1.

WINGWALL NO. 1
UTILITIES ELEVATION

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

A SB5.1 | SB5.1

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 16156-S
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
WINGWALL NO. 1 ELEVATION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB5.1 OF 20 SHEETS

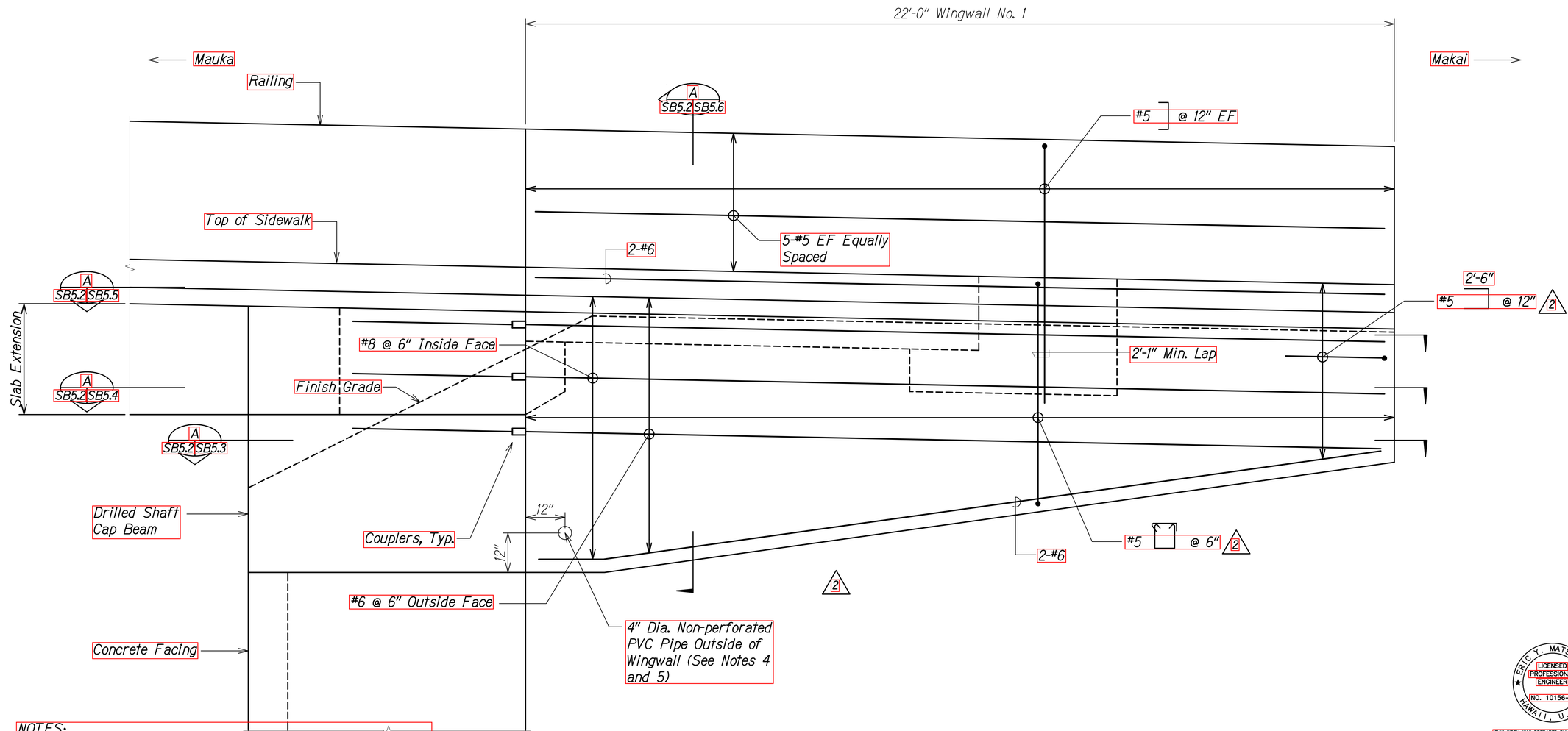
DATE	REVISION
4/7/23	2 Added Dimensions and Revised Callout

ADD. 334

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK\RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0501 WW PC ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:30 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 335	466



NOTES:

1. See SB5.1 for wingwall dimensions.
2. See Civil drawings for approximate finish grade.
3. Gas line jacket reinforcing is not shown for clarity. See SB5.6.
4. Connect 4" Dia. non-perforated pipe to 4" Dia. perforated pipe between wingwalls and Retaining Wall 3 drainage system.
5. See Detail 4/SB12.6 for added reinforcing at weephole.

WINGWALL NO. 1 REINFORCING ELEVATION

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

A SB5.2 SB5.2

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS WINGWALL NO. 1 ELEVATION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB5.2 OF 20 SHEETS

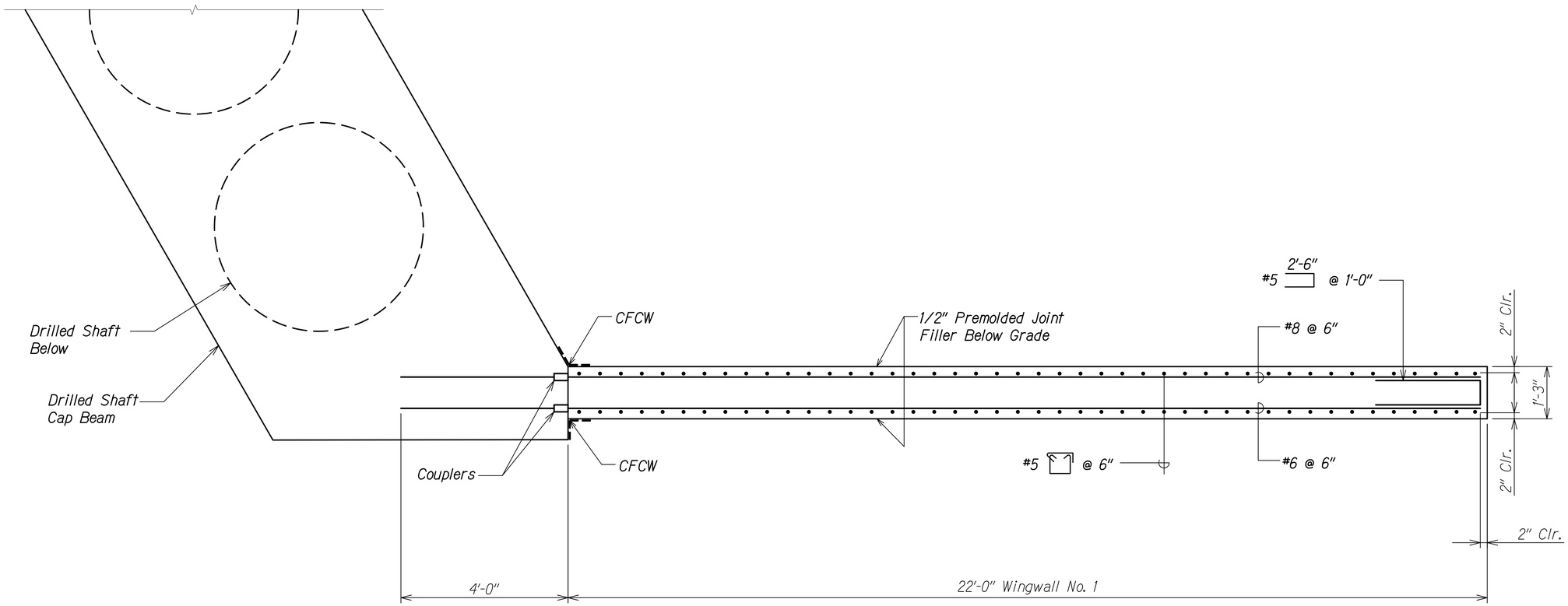
DATE	REVISION
4/7/23	2 Revised Rebar

ADD. 335

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0501 WW PC ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:31 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	336	466



SECTION A
Scale: 3/4" = 1'-0"
SB5.2 | SB5.3

ORIGINAL PLAN
NOTE BOOK
No.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0503 WW PC SECTS.DWG PLOT TIME: 01-04-23, 9:44 AM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y Matsumoto 6-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

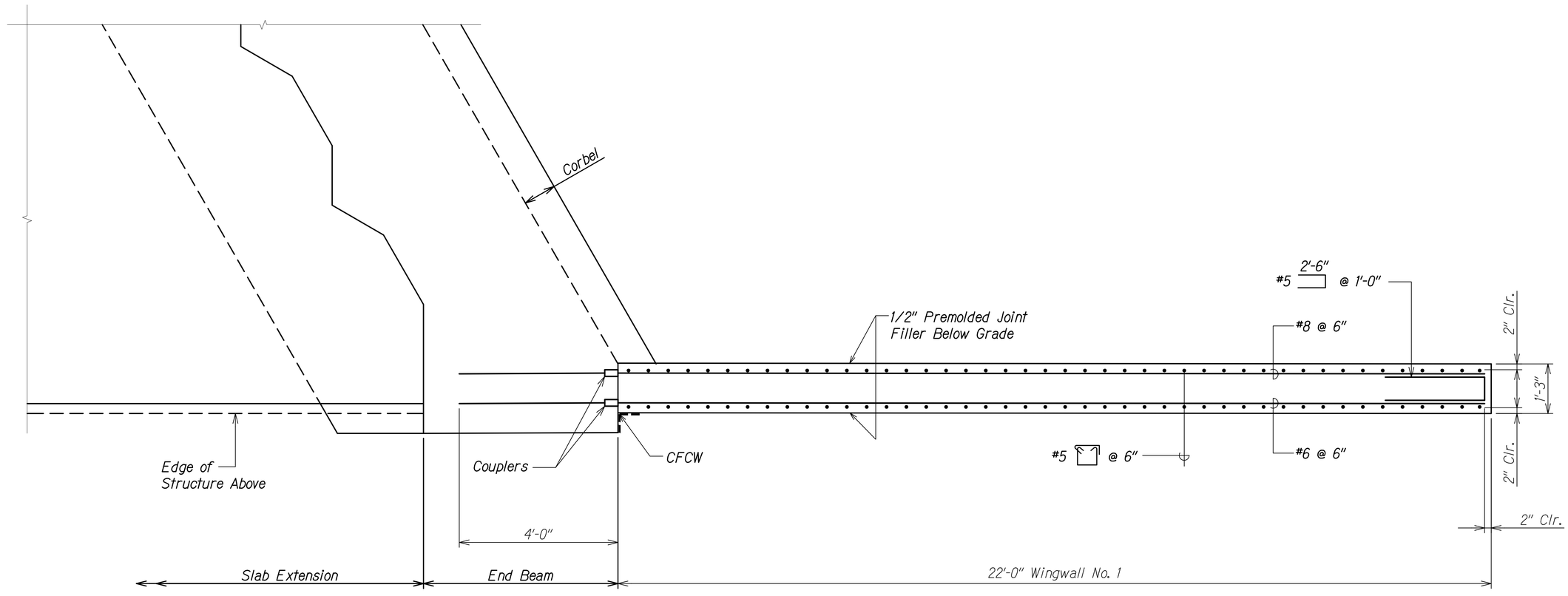
GULICK AVENUE OVERPASS WINGWALL NO. 1 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB5.3 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	337	466



SECTION A
Scale: 3/4" = 1'-0"
SB5.2 | SB5.4

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0503 WW PC SECTS.DWG PLOT TIME: 01-04-23, 9:45 AM)

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HAWAII, U.S.A.

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

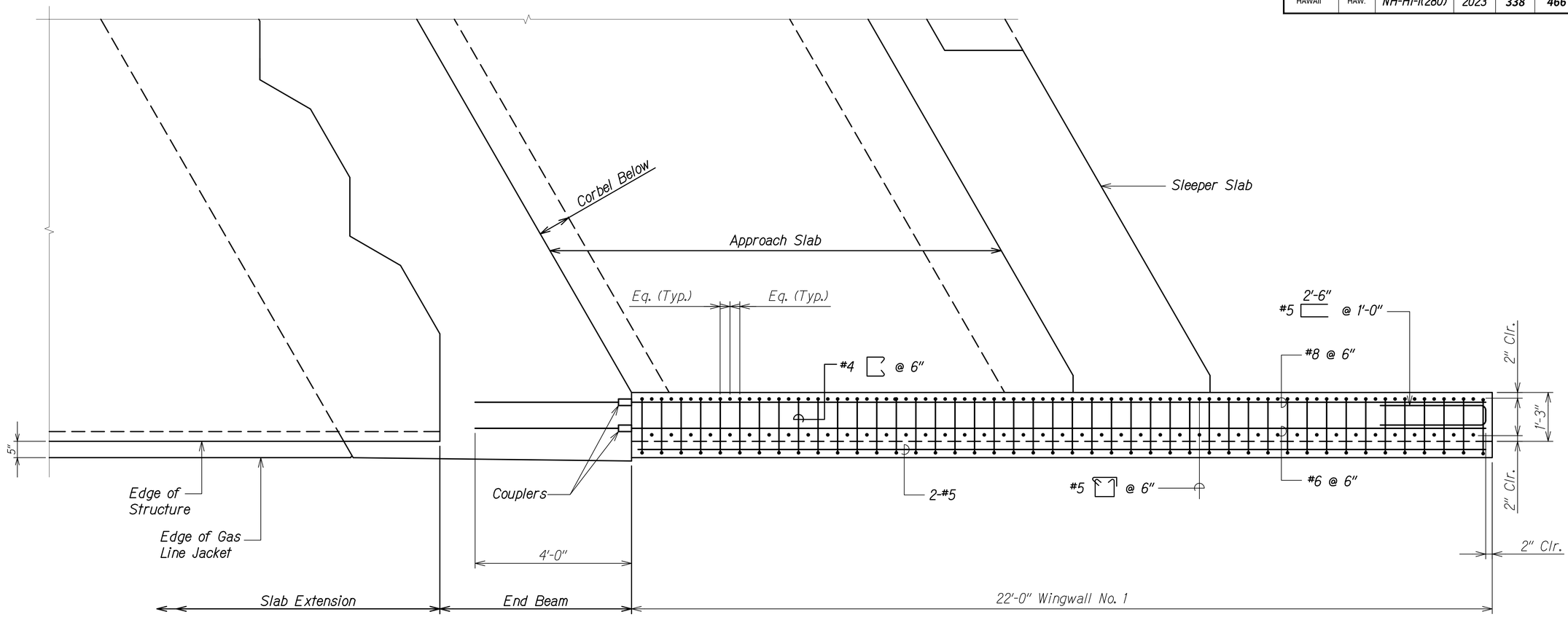
GULICK AVENUE OVERPASS WINGWALL NO. 1 SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB5.4 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	338	466



SECTION A
Scale: 3/4" = 1'-0"
SB5.2 | SB5.5

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HAWAII, U.S.A.

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SIGNATURE

6-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS WINGWALL NO. 1 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

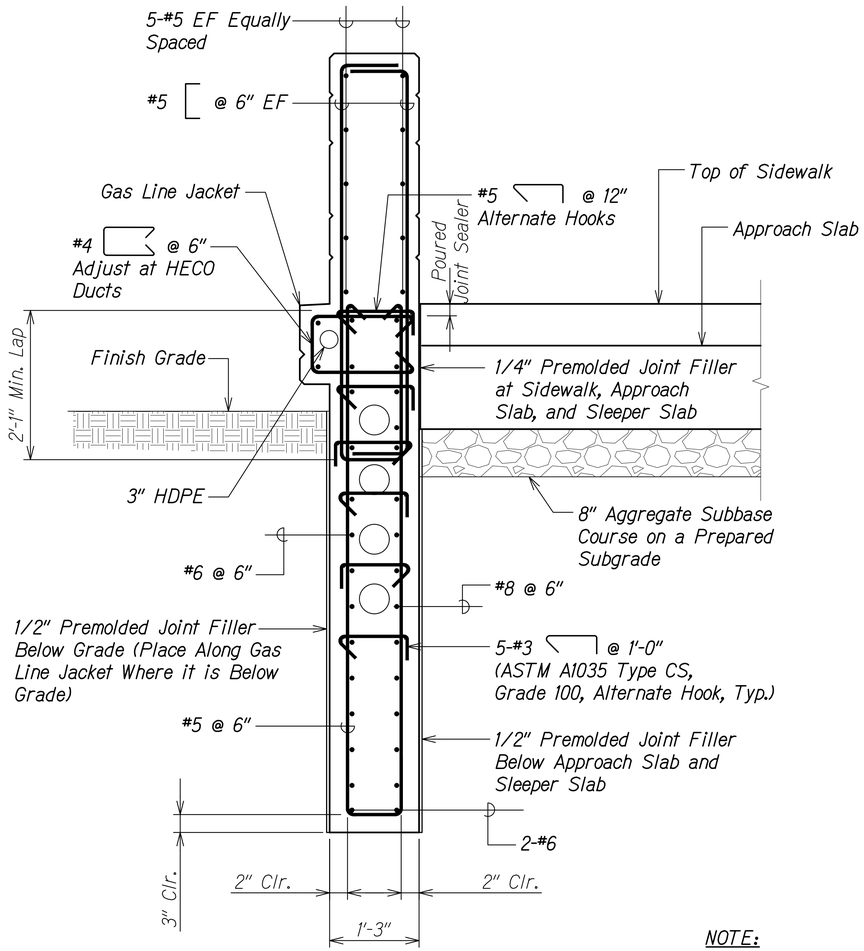
SHEET No. SB5.5 OF 20 SHEETS

338

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0503 WW PC SECTS.DWG PLOT TIME: 01-04-23, 9:45 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	339	466



SECTION A
Scale: 1" = 1'-0"
SB5.2 SB5.6

NOTE:

See SB2.9 for backfill at wingwalls.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0503 WW PC SECTS.DWG PLOT TIME: 01-04-23, 9:45 AM)

ERIC Y. MATSUMOTO
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HAWAII, U.S.A.

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Eric Y Matsumoto
SIGNATURE

6-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

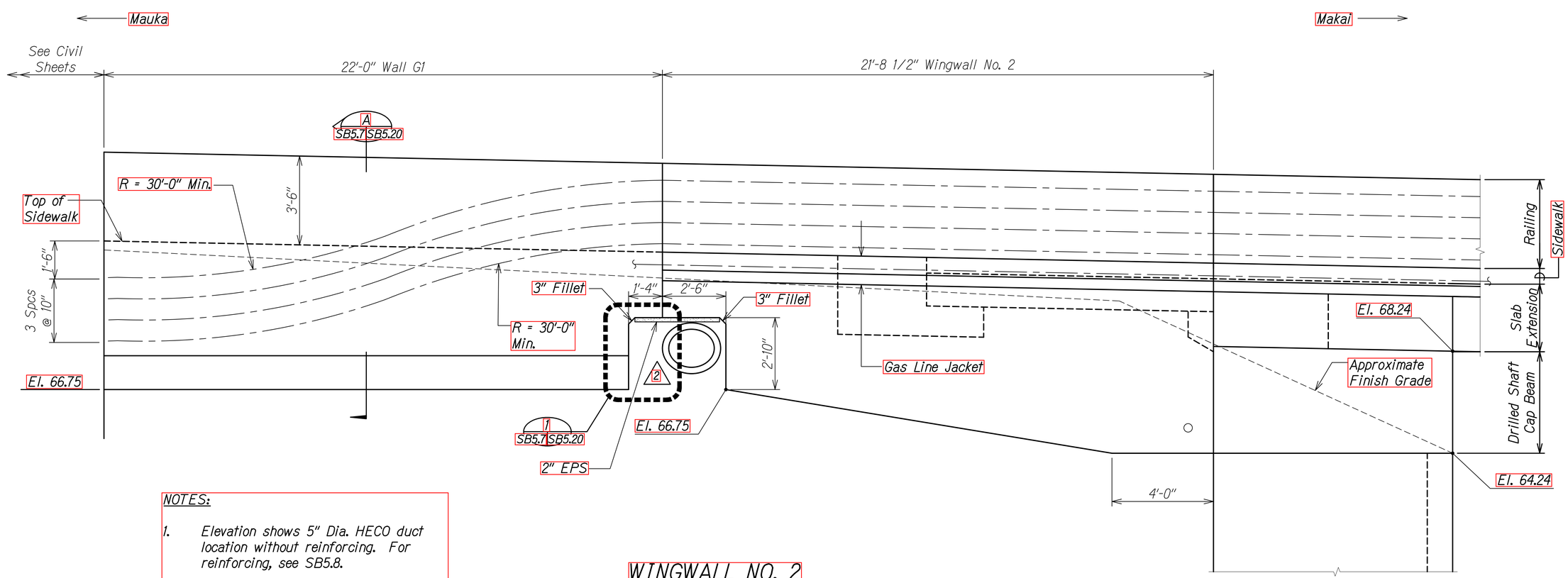
GULICK AVENUE OVERPASS WINGWALL NO. 1 SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB5.6 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 340	466



NOTES:

1. Elevation shows 5" Dia. HECO duct location without reinforcing. For reinforcing, see SB5.8.
2. See Civil drawings for approximate finish grade.
3. See Civil drawings for gas line beyond Wingwall No. 2.

WINGWALL NO. 2
UTILITIES ELEVATION

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

A SB5.7 SB5.7

DATE	
4/7/23	2 Revised Joint Line

ORIGINAL PLAN
NOTE BOOK
No.

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

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
WINGWALL NO. 2 ELEVATION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

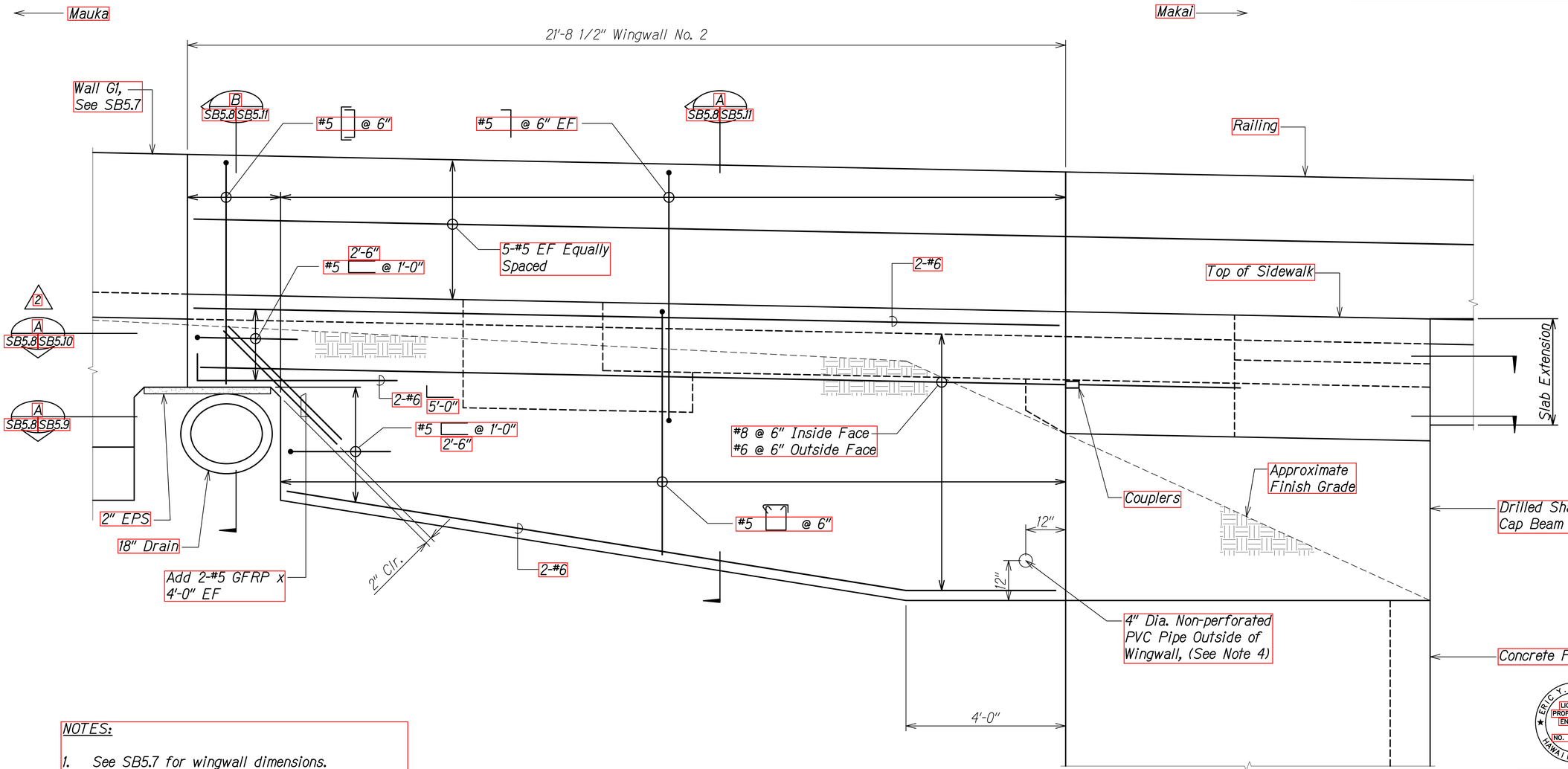
Scale: As Noted Date: December 2022

SHEET No. SB5.7 OF 20 SHEETS

ADD. 340

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0507 WW2 PC ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:31 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 341	466



NOTES:

1. See SB5.7 for wingwall dimensions.
2. See Civil drawings for approximate finish grade.
3. Gas line jacket reinforcing is not shown for clarity. See SB5.11.
4. Connect 4" Dia. non-perforated pipe to 4" Dia. perforated pipe between wingwalls and daylight through slope.
5. See detail 4/SB12.6 for added reinforcing at weephole.

WINGWALL NO. 2 REINFORCING ELEVATION

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

A SB5.8 | SB5.8

DATE	REVISION
4/7/23	2 Revised Ref. Section

ERIC Y. MATSUMOTO
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SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS WINGWALL NO. 2 ELEVATION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

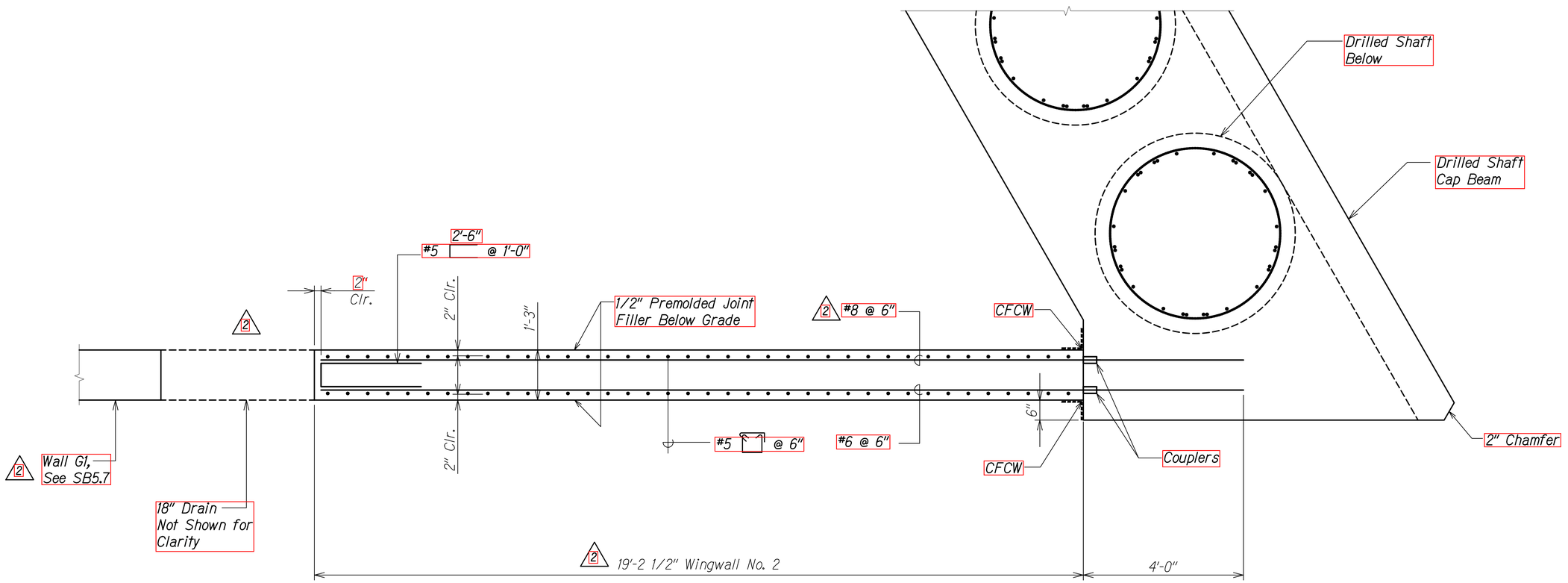
SHEET No. SB5.8 OF 20 SHEETS

ADD. 341

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0507 WW2 PC ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:33 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 342	466



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

A
SB5.8 | SB5.9

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0509 WW2 PC SECTS ADD2.DWG PLOT TIME: 04-10-23, 3:33 PM)

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

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NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto
SIGNATURE

6-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS WINGWALL NO. 2 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

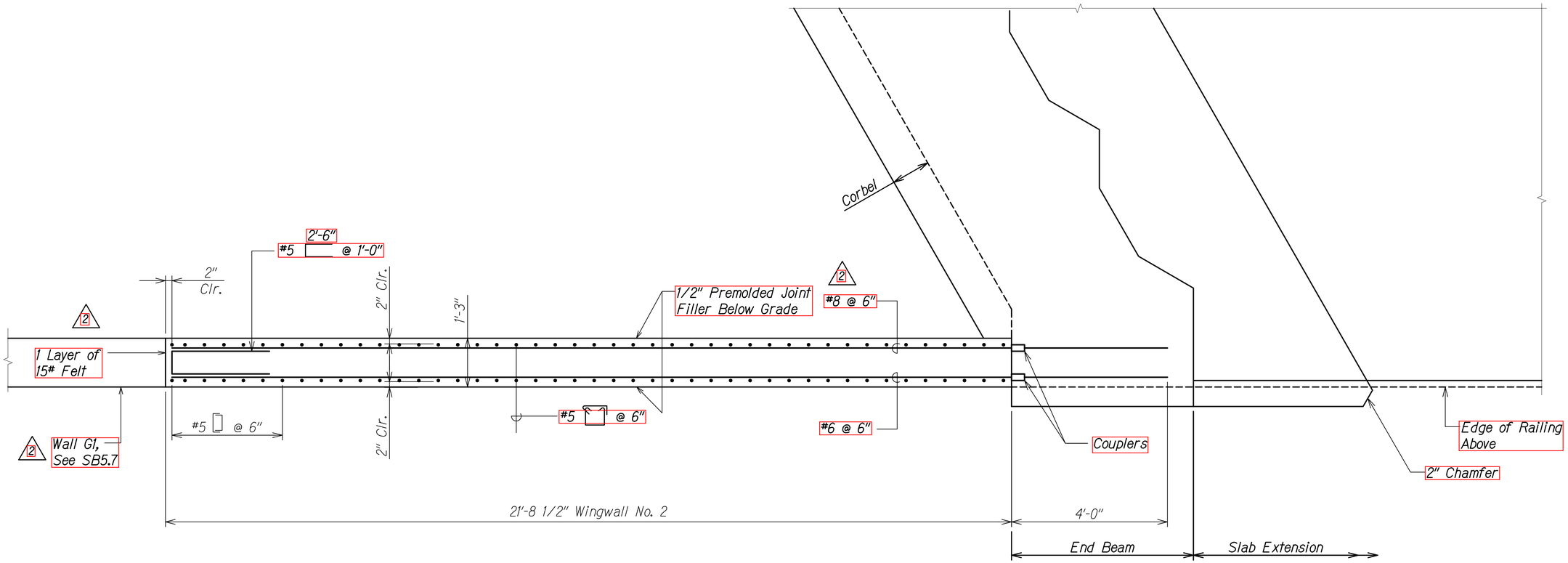
Scale: As Noted Date: December 2022

DATE	REVISION
4/7/23	2 Revised Section

SHEET No. SB5.9 OF 20 SHEETS

ADD. 342

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 343	466



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

A SB5.8 SB5.10

ERIC Y. MATSUMOTO
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NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto
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4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS WINGWALL NO. 2 SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB5.10 OF 20 SHEETS

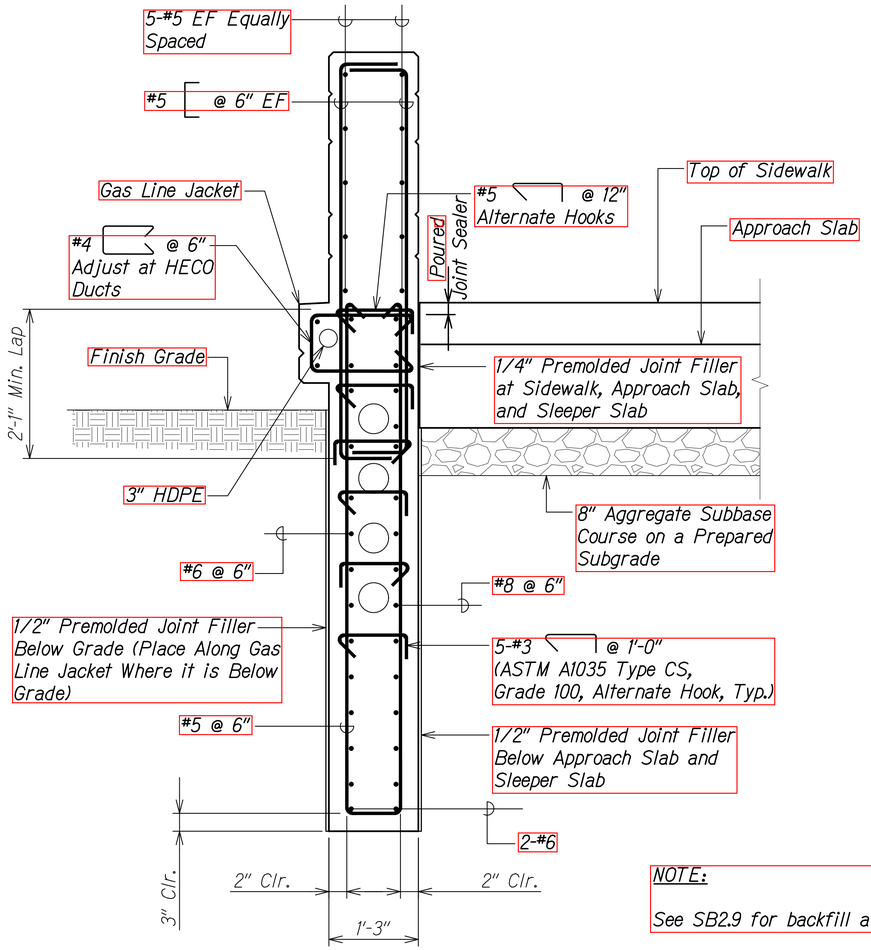
DATE	REVISION
4/7/23	2 Revised Section

ADD. 343

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\04-10-23 ADD2\GRK-SB0509 WW2 PC SECTS ADD2.DWG PLOT TIME: 04-10-23, 3:33 PM)

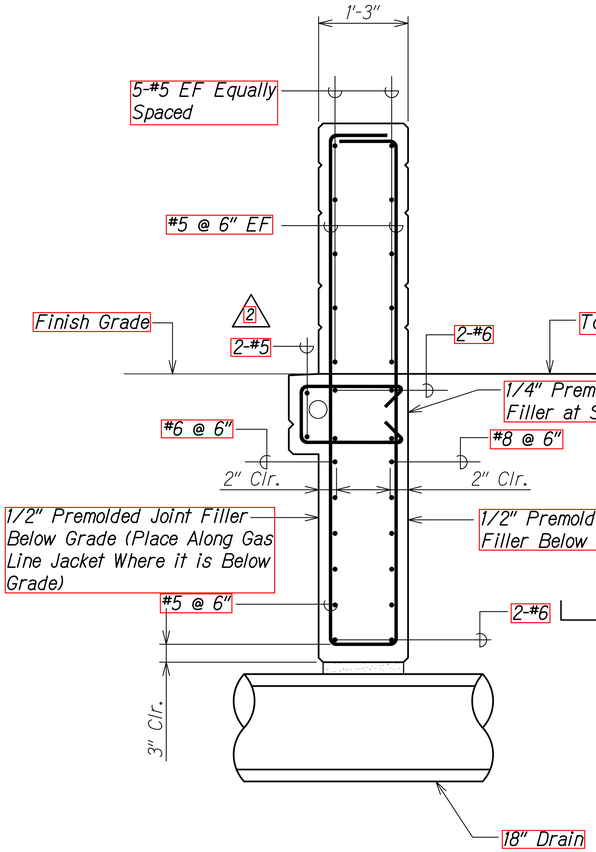
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 344	466



NOTE:

See SB2.9 for backfill at wingwalls.

SECTION A
Scale: 1" = 1'-0"
SB5.8 | SB5.11



SECTION B
Scale: 1" = 1'-0"
SB5.8 | SB5.11

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS WINGWALL NO. 2 SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB5.11 OF 20 SHEETS

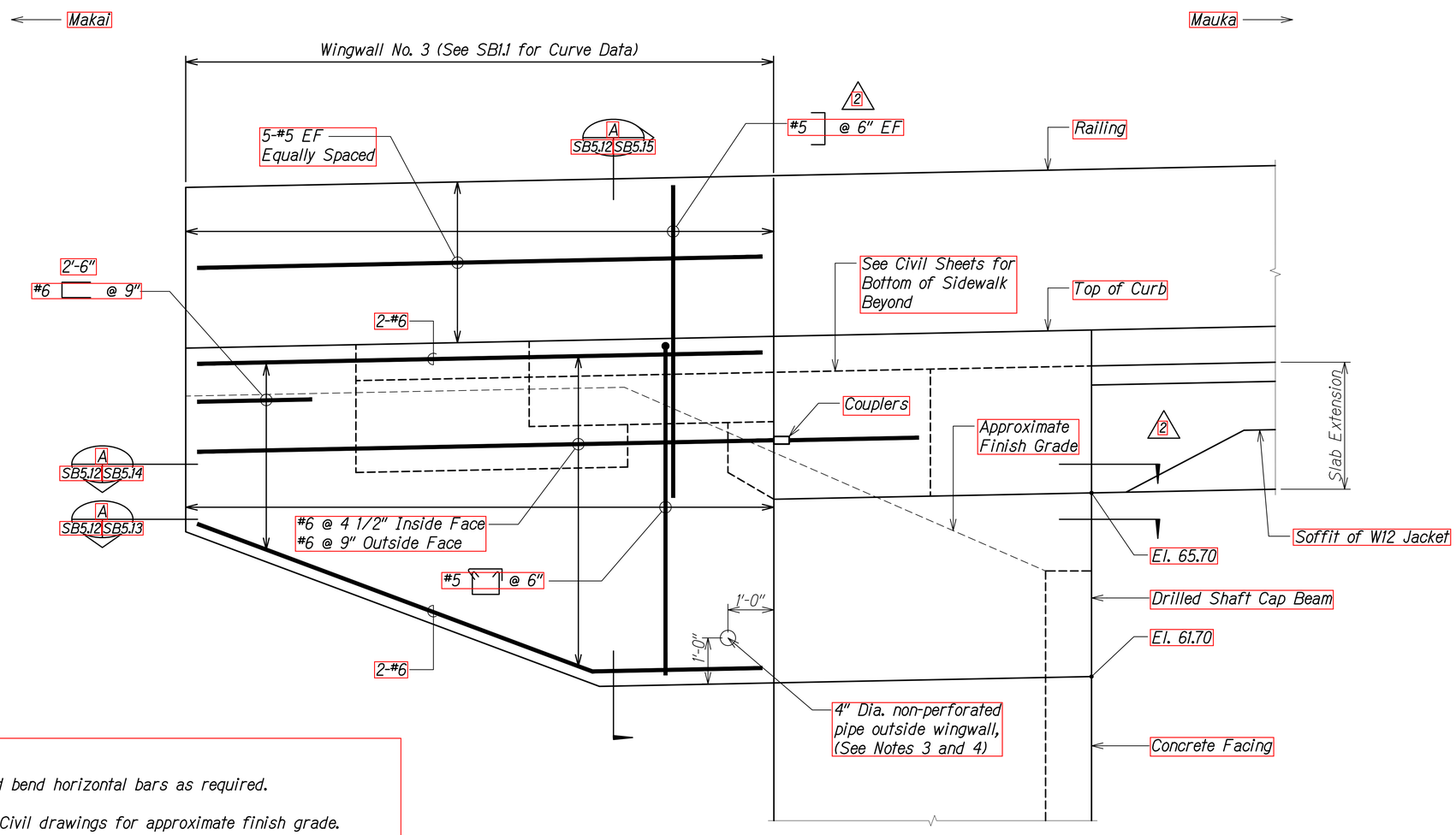
DATE	REVISION
4/7/23	2 Added Note

ADD. 344

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0509 WW2 PC SECTS ADD2.DWG PLOT TIME: 04-10-23, 3:34 PM)

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 345	466



NOTES:

1. Field bend horizontal bars as required.
2. See Civil drawings for approximate finish grade.
3. Connect 4" Dia. non-perforated pipe to 4" Dia. perforated pipe between wingwalls and Retaining Wall 4 drainage system.
4. See detail 4/SB12.6 for added reinforcing at weephole.

WINGWALL NO. 3 REINFORCING ELEVATION

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

A SB5.12 SB5.12

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

NOTE BOOK | No.

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH+KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0512 WW3 DH ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:34 PM)

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DATE	REVISION
4/7/23	2 Revised Elevation

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS WINGWALL NO. 3 ELEVATION

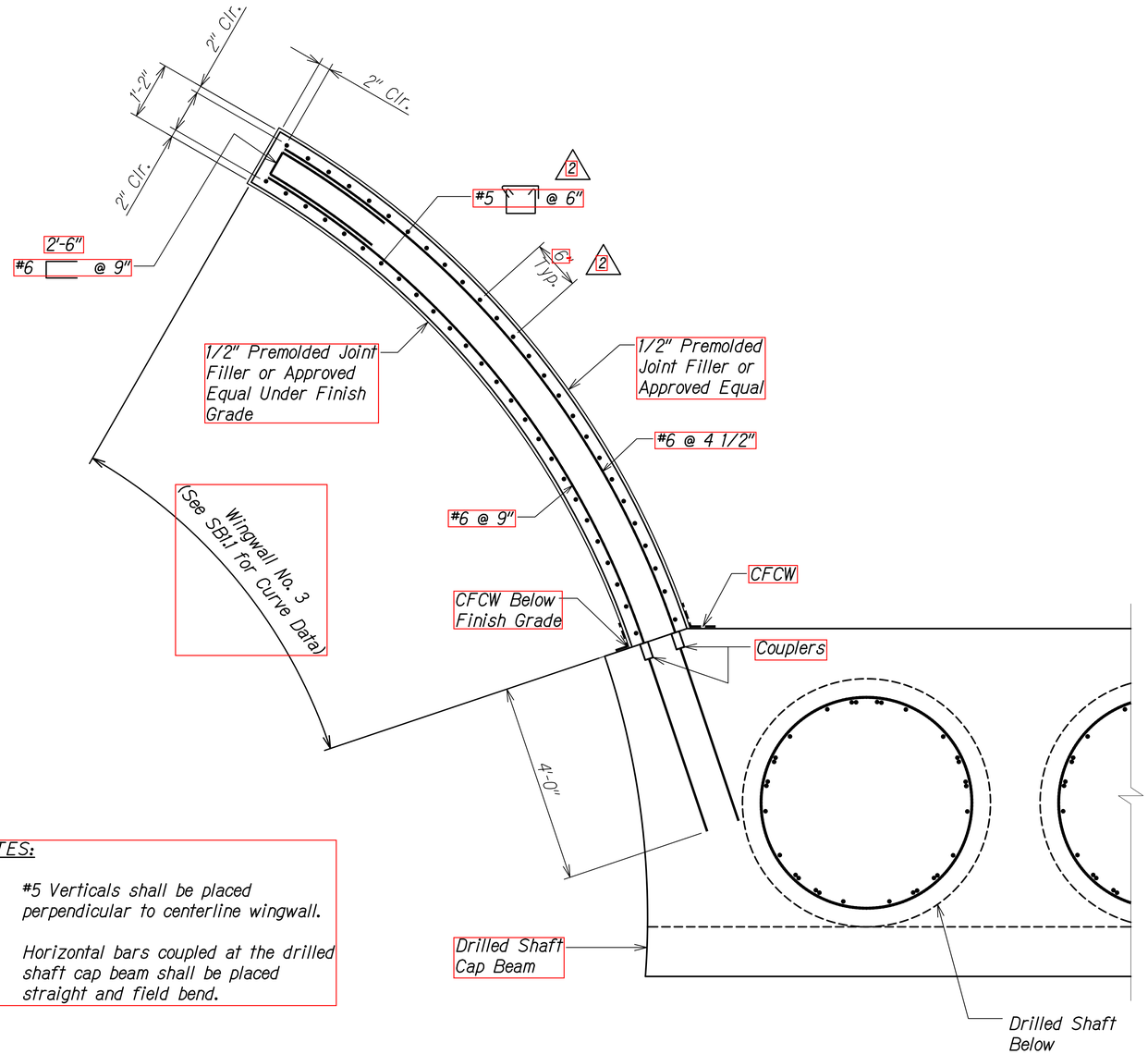
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB5.12 OF 20 SHEETS

ADD 345

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 346	466



NOTES:

1. #5 Verticals shall be placed perpendicular to centerline wingwall.
2. Horizontal bars coupled at the drilled shaft cap beam shall be placed straight and field bend.

SECTION A
Scale: 3/4" = 1'-0"
SB5.12 | SB5.13

ERIC Y. MATSUMOTO
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HAWAII, U.S.A.

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SIGNATURE
4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS WINGWALL NO. 3 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted
Date: December 2022

SHEET No. SB5.13 OF 20 SHEETS

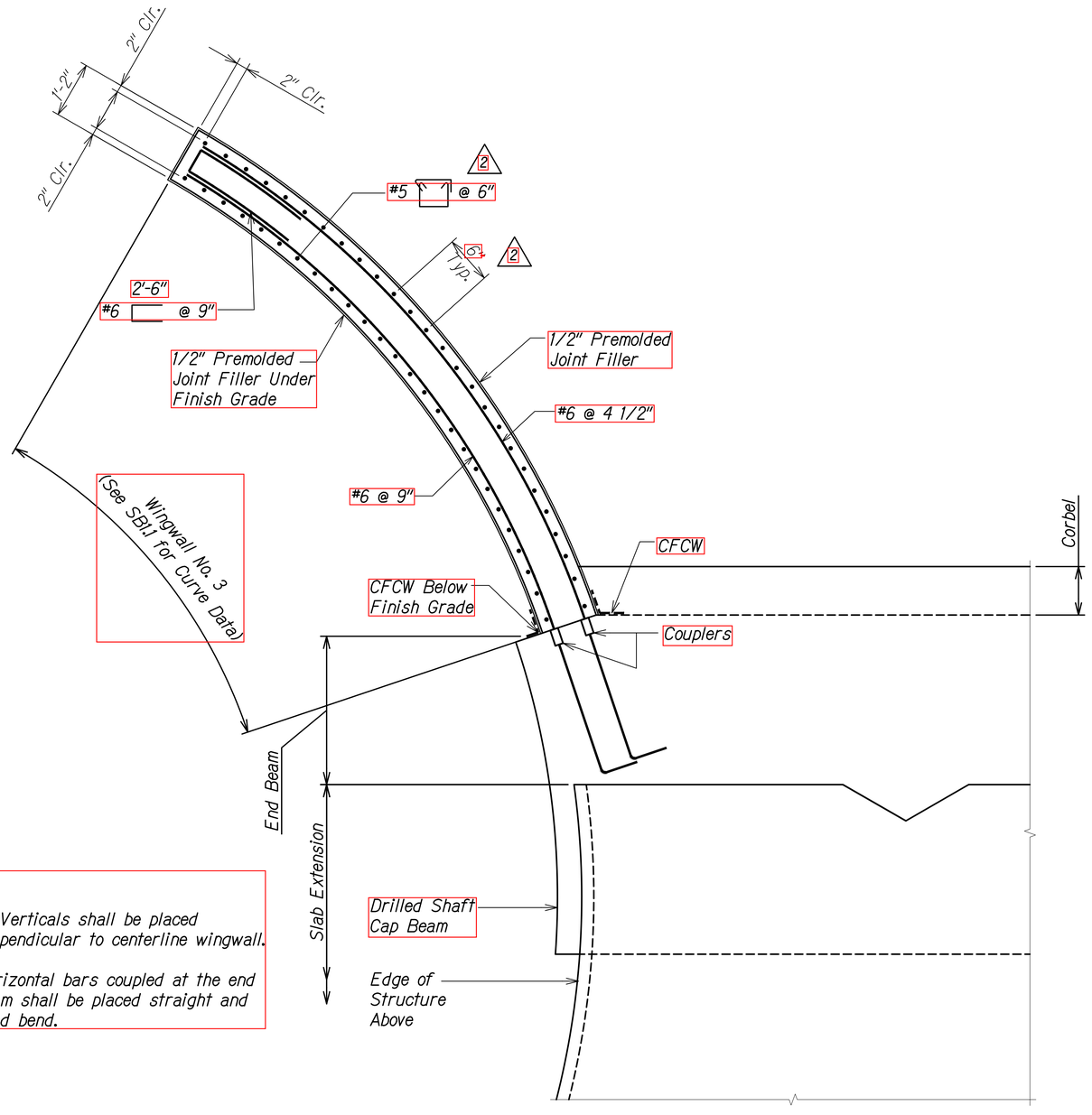
DATE	REVISION
4/7/23	2 Revised Rebar

ADD. 346

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0513 WW3 DH SECTS ADD2.DWG PLOT TIME: (04-10-23, 3:35 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 347	466



NOTES:

1. #5 Verticals shall be placed perpendicular to centerline wingwall.
2. Horizontal bars coupled at the end beam shall be placed straight and field bend.

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

A
SB5.12 | SB5.14

DATE	REVISION
4/7/23	2 Revised Rebar

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HIGHWAYS DIVISION

GULICK AVENUE OVERPASS WINGWALL NO. 3 SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

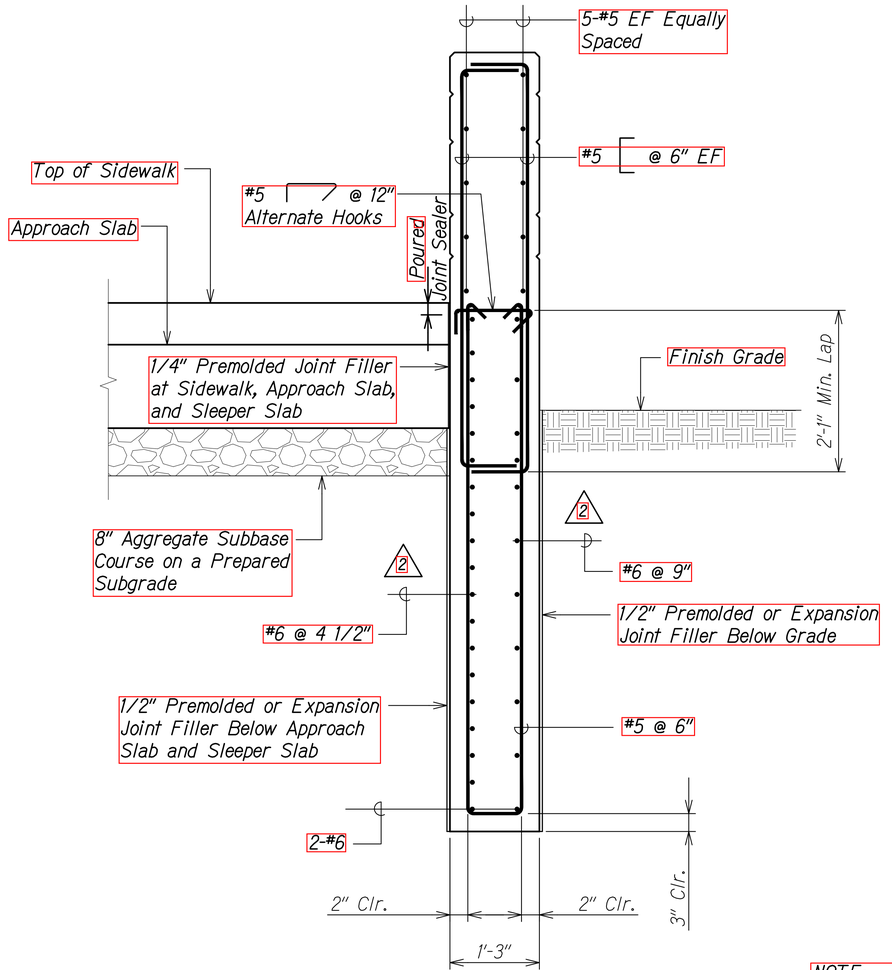
SHEET No. SB5.14 OF 20 SHEETS

ADD. 347

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK\RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0513 WW3 DH SECTS ADD2.DWG PLOT TIME: 04-10-23, 3:35 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 348	466



SECTION
Scale: 1" = 1'-0"

A SB5.12 | SB5.15

NOTE:

See SB2.9 for backfill at wingwalls.

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS WINGWALL NO. 3 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB5.15 OF 20 SHEETS

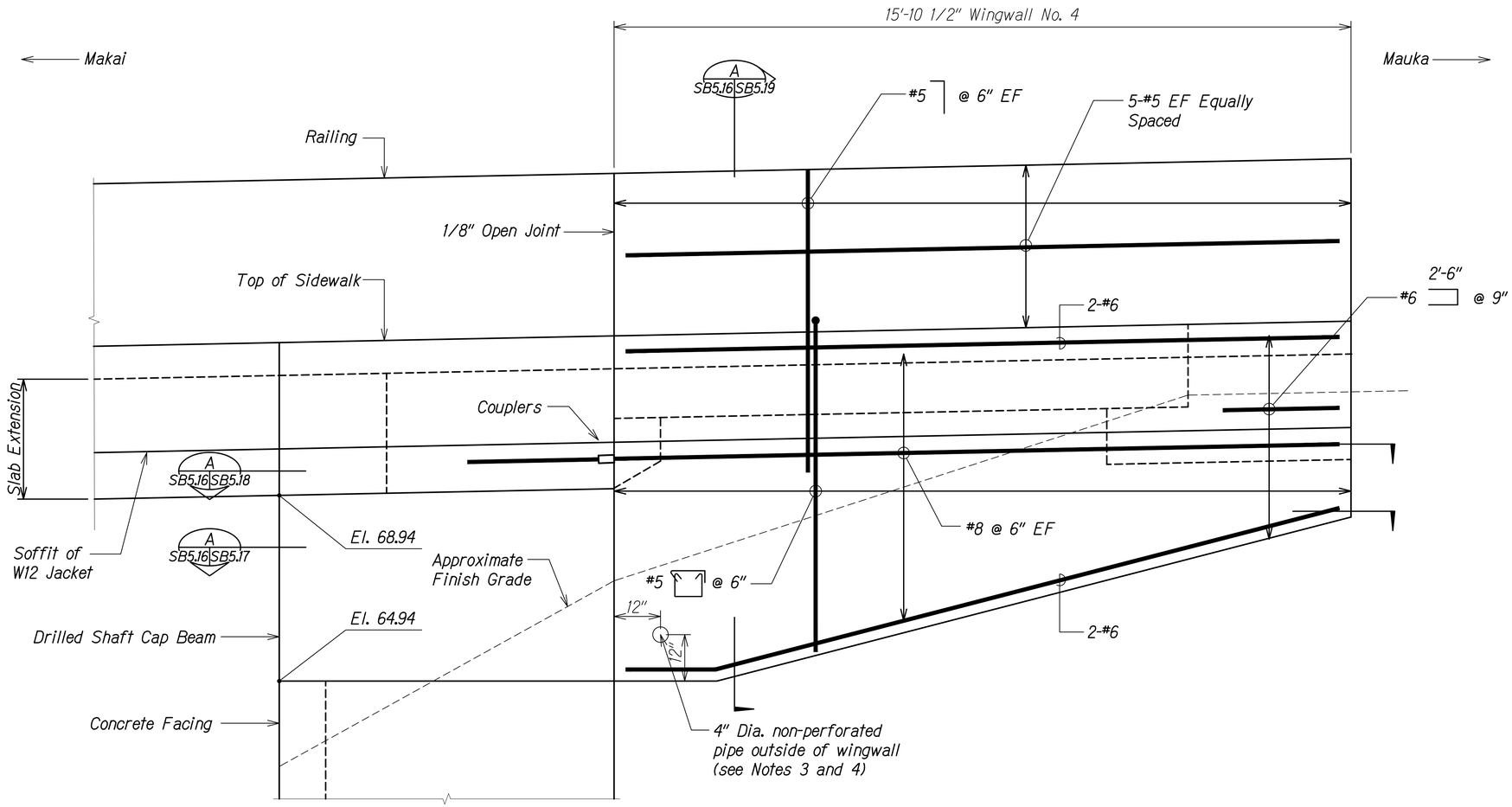
DATE	REVISION
4/7/23	2 Revised Note Leader

ADD. 348

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

DRAWING NAME: Z:\OD ONGOING\OD JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0513 WW3 DH SECTS ADD2.DWG PLOT TIME: 04-10-23, 3:35 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	349	466



NOTES:

1. W12 jacket reinforcing not shown. See SB5.19.
2. See Civil drawings for approximate finish grade.
3. Connect 4" Dia. non-perforated pipe to 4" Dia. perforated pipe between wingwalls and daylight through slope.
4. See Detail 4/SB12.6 for added reinforcing at weephole.

WINGWALL NO. 4 REINFORCING ELEVATION

A
SB5.16 SB5.16

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

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
WINGWALL NO. 4 ELEVATION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

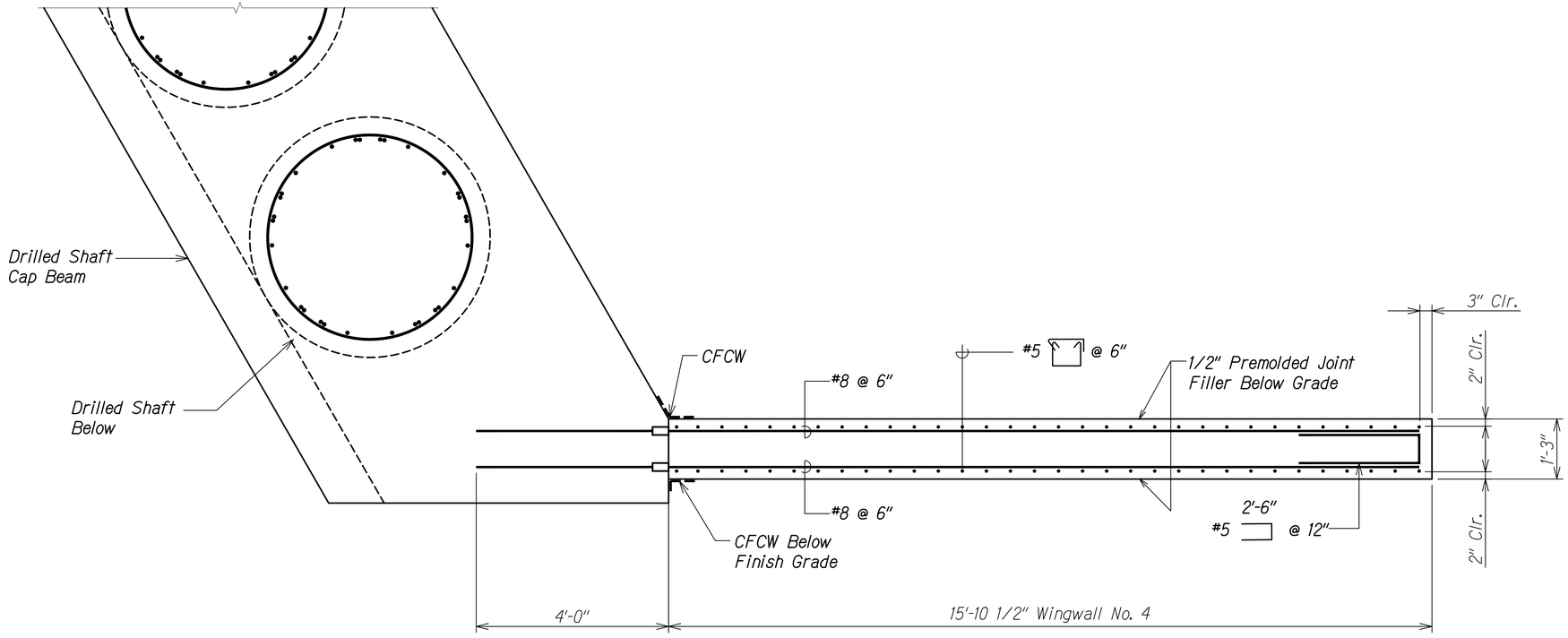
Scale: As Noted Date: December 2022

SHEET No. SB5.16 OF 20 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0516 WW4 DH ELEV.DWG PLOT TIME: 01-04-23, 9:48 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	350	466



SECTION A
Scale: 3/4" = 1'-0"
SB5.16 | SB5.17

ORIGINAL PLAN
NOTE BOOK
No.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0517 WW4 DH SECTS.DWG PLOT TIME: 01-04-23, 9:49 AM)

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NO. 10156-S
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Eric Y Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

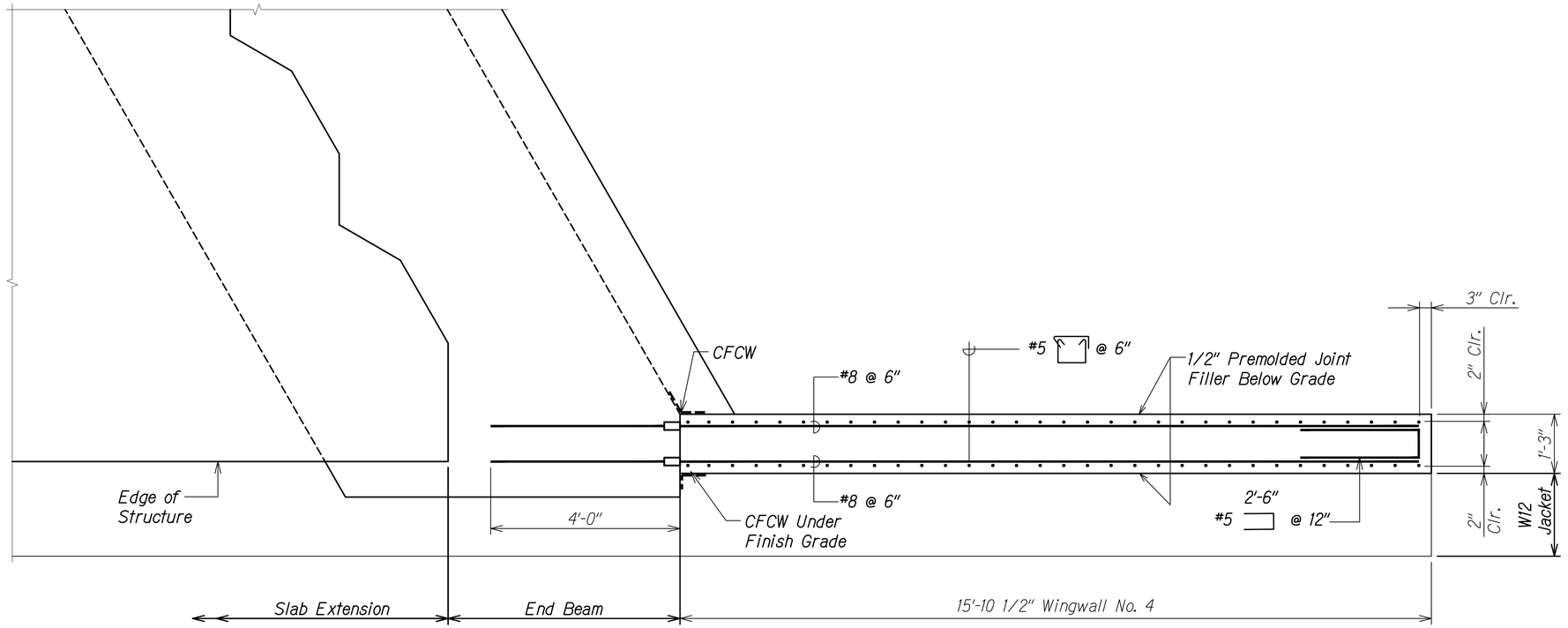
GULICK AVENUE OVERPASS WINGWALL NO. 4 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB5.17 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	351	466



NOTE:

W12 jacket reinforcing not shown. See SB5.19.

SECTION A
Scale: 3/4" = 1'-0"
SB5.16 SB5.18

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

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4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
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HIGHWAYS DIVISION

GULICK AVENUE OVERPASS WINGWALL NO. 4 SECTION

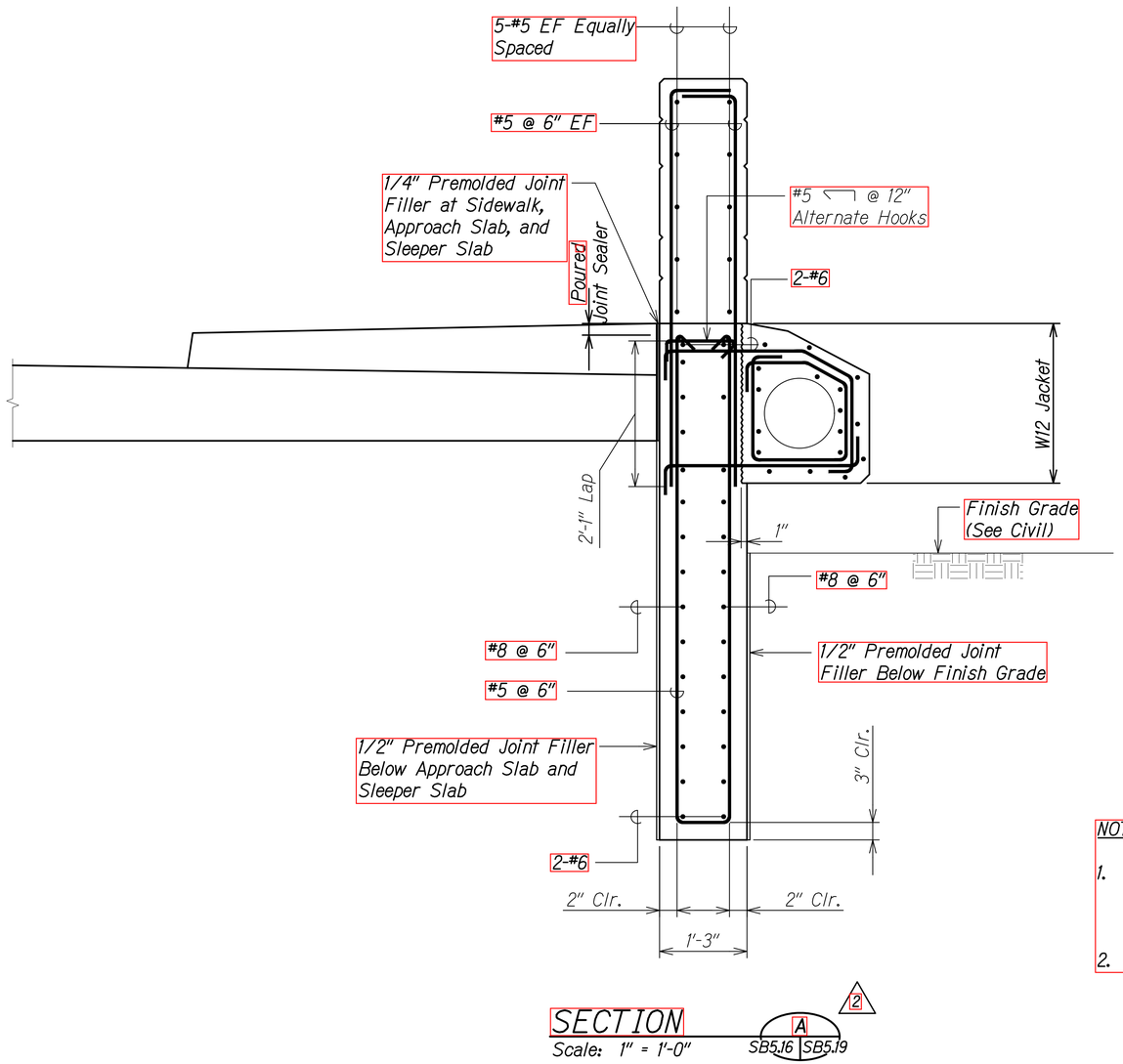
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB5.18 OF 20 SHEETS

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0517 WW4 DH SECTS.DWG PLOT TIME: 01-04-23, 9:49 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 352	466



SECTION
Scale: 1" = 1'-0"

2 A SB5.16 | SB5.19

NOTES:

1. Continue W12 jacket on bridge on Wingwall No. 4. For W12 jacket dimensions and reinforcing, see SB13.5. (2)
2. See SB2.9 for backfill at wingwalls.

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GULICK AVENUE OVERPASS WINGWALL NO. 4 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted
Date: December 2022

SHEET No. SB5.19 OF 20 SHEETS

DATE	REVISION
4/7/23	(2) Revised Note and Ref. Text

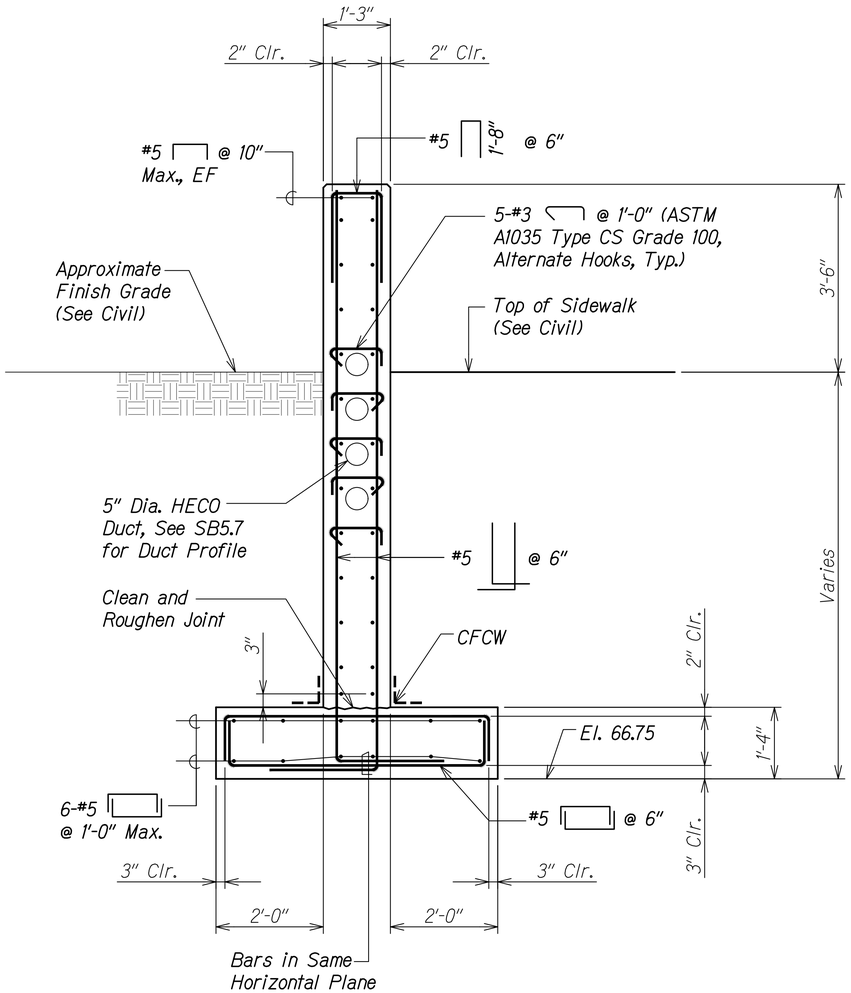
ADD. 352

ORIGINAL PLAN
NOTE BOOK
No.

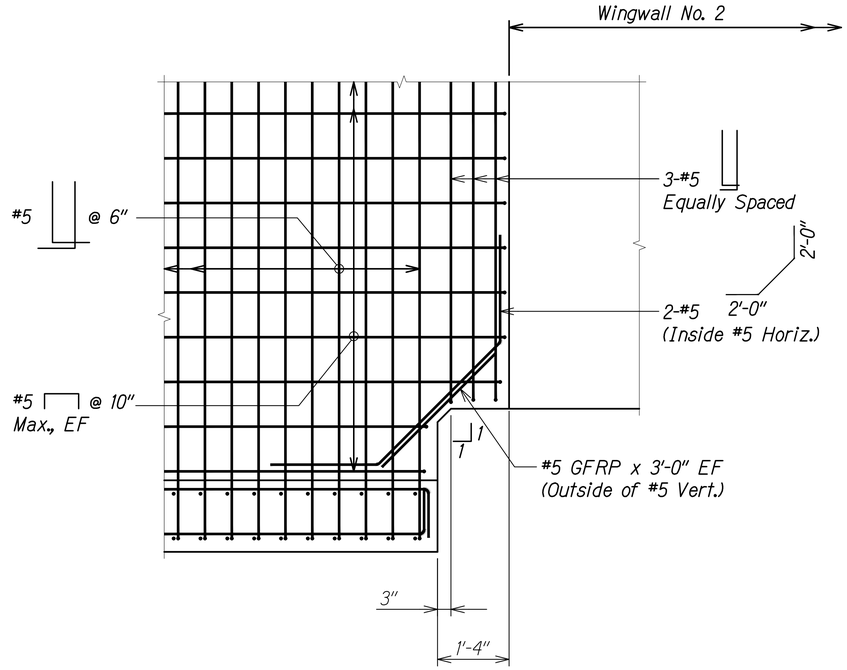
SURVEY PLOTTED BY
DRAWN BY
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QUANTITIES BY
CHECKED BY
DATE

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH+KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0517 WW4 DH SECTS ADD2.DWG PLOT TIME: 04-10-23, 3:36 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	353	466



SECTION A
Scale: 3/4" = 1'-0"
SB5.7 | SB5.20



DETAIL 1
Scale: 3/4" = 1'-0"
SB5.7 | SB5.20

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HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
WALL G1 SECTION AND DETAIL

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB5.20 OF 20 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0520 WW2 PC SECT.DWG PLOT TIME: 01-04-23, 9:50 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	354	466

DRILLED SHAFT SCHEDULE		
Drilled Shaft	Abutment No. 1	Abutment No. 2
Drilled Shaft Tip Elevation	See Note 4 and 6	
Drilled Shaft Pay Length	See Note 6	
Strength Limit State Compression Demand (Kips)	260 kips	260 kips
Strength Limit State Compression Capacity (Kips)	300 kips	300 kips
Extreme Event Limit State Compression Demand (Kips)	400 kips	400 kips
Extreme Event Limit State Compression Capacity (Kips)	600 kips	600 kips

NOTES:

1. See SB6.2 for drilled shaft details.
2. See SB1.3 for foundation plan.
3. All excavation and drilling operations for foundations shall be monitored by the Engineer.
4. Drilled shaft tip elevations are estimated. The actual length of the shaft and drilled shaft tip elevations will be determined by the Engineer.
5. Drilled shaft tip elevations shall be verified by the Engineer prior to placing reinforcement and concrete. Concrete shall be placed within 24 hours after drilling but shall not be placed without prior approval of the Engineer.
6. Top of drilled shaft cutoff elevation varies. For elevations at the bottom of the drilled shaft cap beam, see SB4.2 and SB4.4.

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK\RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0601 DRILLED SHAFT SCHED.DWG PLOT TIME: 01-04-23, 9:51 AM)

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NO. 10156-S
HAWAII, U.S.A.

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4-30-24
EXPIRATION DATE OF THE LICENSE

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

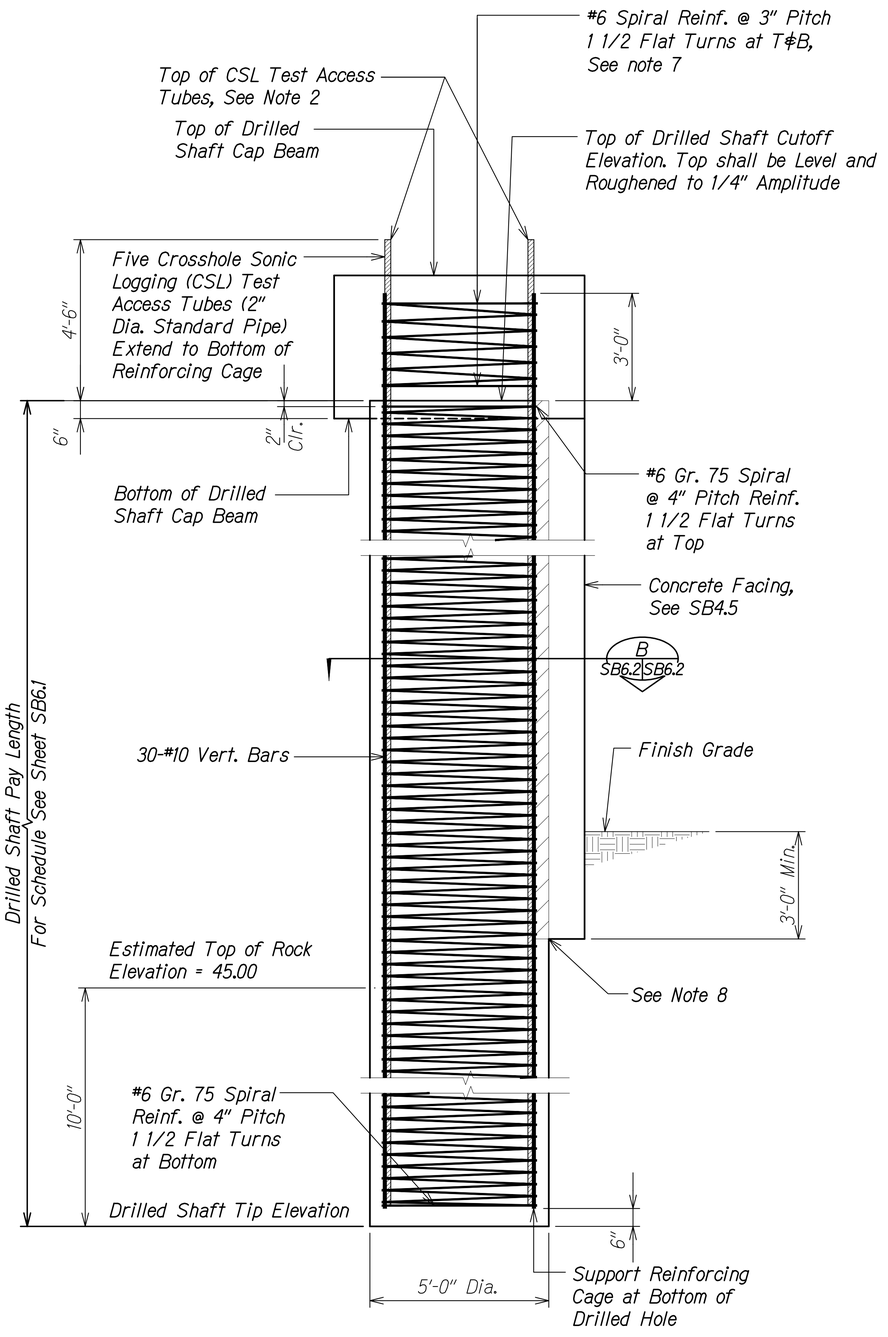
GULICK AVENUE OVERPASS
DRILLED SHAFT SCHEDULE

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB6.1 OF 2 SHEETS

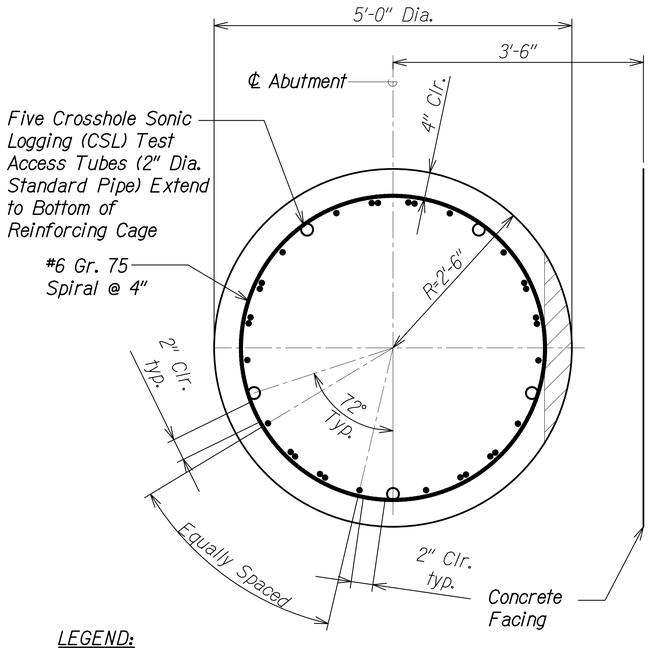
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	355	466



PRODUCTION AND TRIAL DRILLED SHAFT ELEVATION

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

A SB6.2 SB6.2



LEGEND:

EPS Blockout

30 - #10 Vert. Bars (2 x 10 Bundles 10 Single Bars)

SECTION

Scale: 1" = 1'-0"

B SB6.2 SB6.2

NOTES:

1. Crosshole Sonic Logging (CSL) testing shall be performed on every drilled shaft. Shafts indicating irregular CSL readings may be subjected to additional testing.
2. After CSL testing, a portion of the CSL test access tubes shall be removed in the drilled shaft cap beam to one inch above top of the drilled shaft cutoff elevation. Tubes shall be completely filled with non-shrink, non-metallic, cementitious grout of at least equal strength as drilled shaft concrete prior to pouring the drilled shaft cap beam. See Structural General Notes for material requirement.
3. Lap splice for vertical reinforcing are not permitted.
4. Lap splice length for #6 spirals shall be 3'-6" min. with a 135° hook bend at each end.
5. Each end of the spiral shall have 1 1/2 extra turns with a 135° hook around a vertical reinforcing bar.
6. Concrete or other non-corrosive spacing devices shall be used to maintain the reinforcement cage in position within the shaft.
7. #6 Spiral reinforcing in drilled shaft cap beam may be installed after demolition of overpour section. See SB4.8 for details.
8. EPS blockouts shall be installed during rebar cage placement and drilled shaft concrete placement. EPS blockouts shall be removed prior to constructing concrete facing. Portion of EPS blockouts may be removed as required for drilled shaft cap beam pour. For limits of EPS blockouts, see SB4.6.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0602 DRILLED SHAFT DET.DWG PLOT TIME: 01-04-23, 9:52 AM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
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HIGHWAYS DIVISION

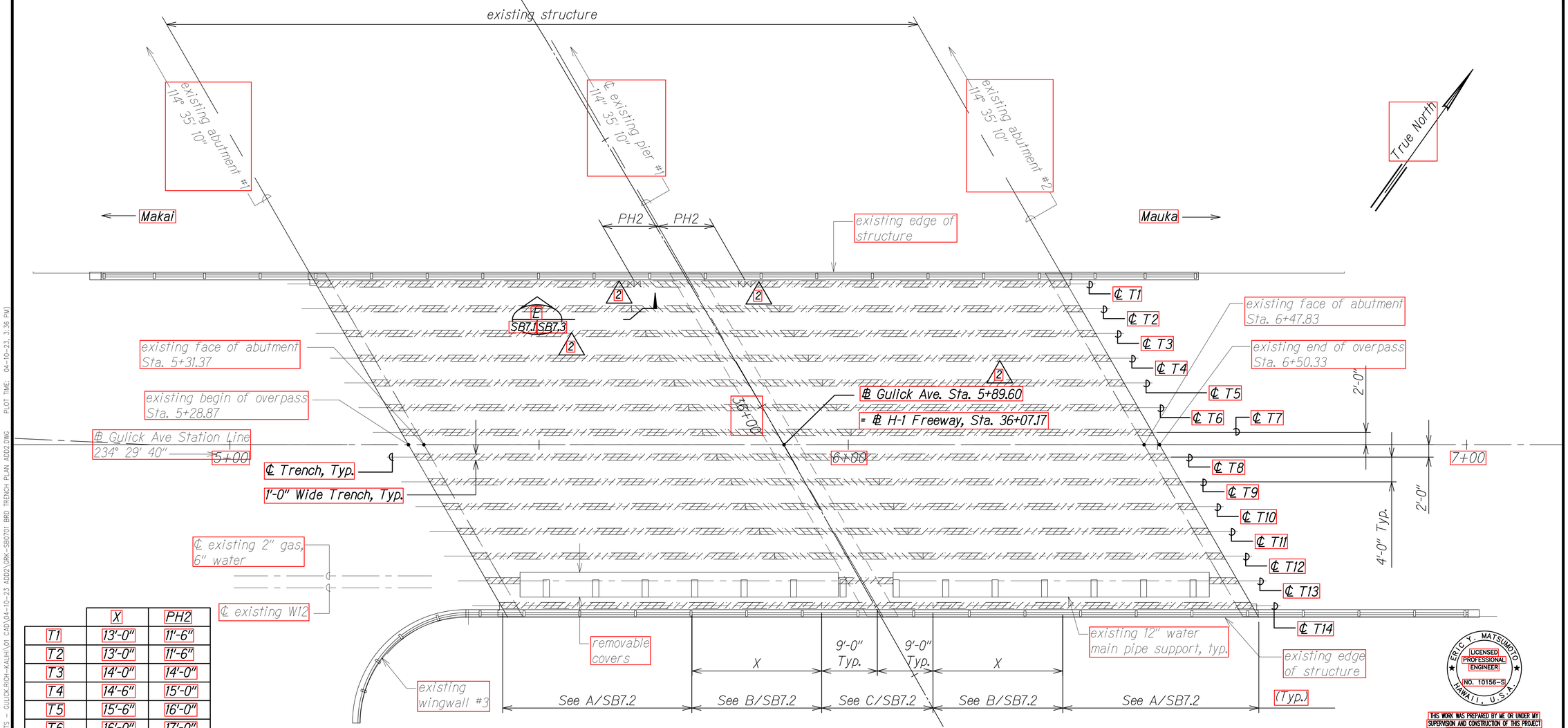
GULICK AVENUE BRIDGE
PRODUCTION AND TRIAL DRILLED SHAFT

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB6.2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 356	466



	X	PH2
T1	13'-0"	11'-6"
T2	13'-0"	11'-6"
T3	14'-0"	14'-0"
T4	14'-6"	15'-0"
T5	15'-6"	16'-0"
T6	16'-0"	17'-0"
T7	17'-0"	18'-0"
T8	17'-0"	18'-0"
T9	16'-0"	17'-0"
T10	15'-6"	16'-0"
T11	14'-6"	15'-0"
T12	14'-0"	14'-0"
T13	13'-0"	11'-6"
T14	13'-0"	11'-6"

PH2 is minimum length of trenching during full closure of Gulick Avenue measured from ℄ Pier #1

Legend:

Trenching during Partial Closure of Gulick Avenue

Trenching during Full Closure of Gulick Avenue

TRENCHING PLAN

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

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HIGHWAYS DIVISION

GULICK AVENUE OVERPASS TRENCHING PLAN

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB7.1 OF 3 SHEETS

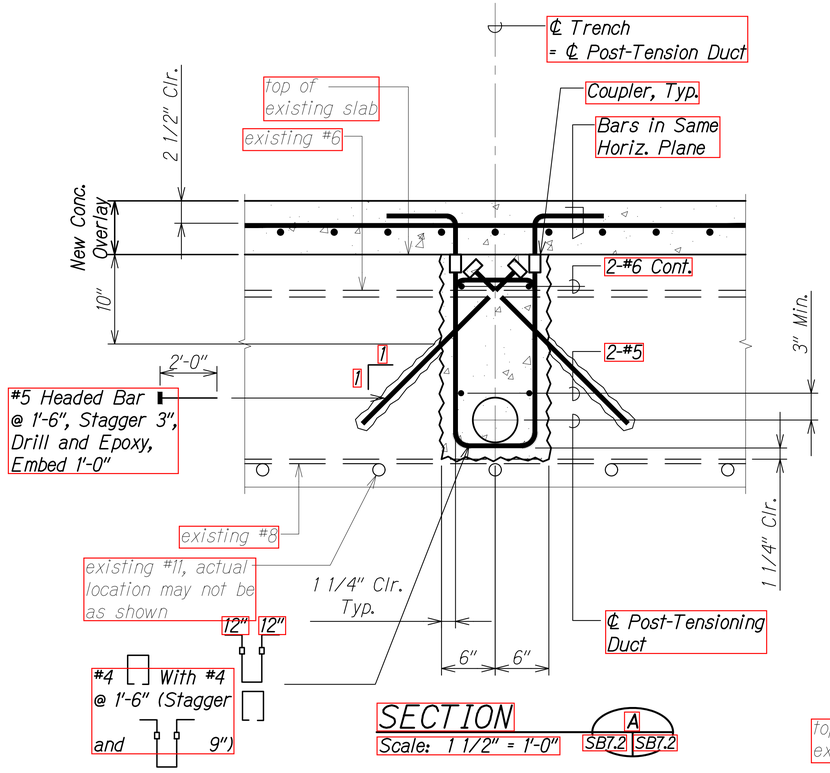
DATE	REVISION
4/7/23	2 Revised Note and Ref. Text

ADD. 356

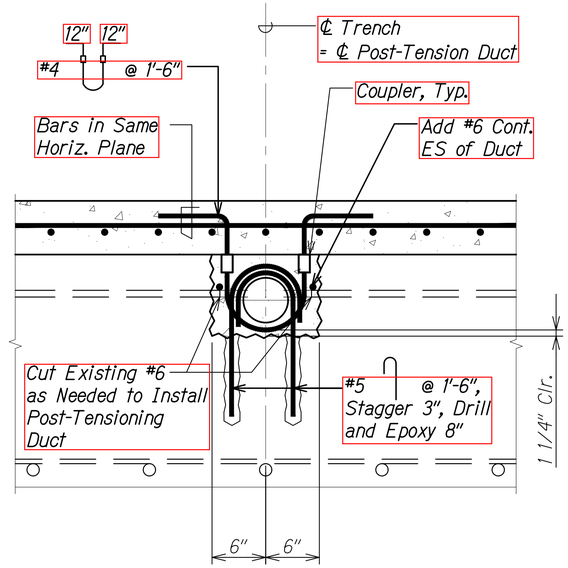
ORIGINAL PLAN — NOTE BOOK — No.
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0701 BRD TRENCH PLAN ADD2.DWG PLOT TIME: 04-10-23, 3:36 PM)

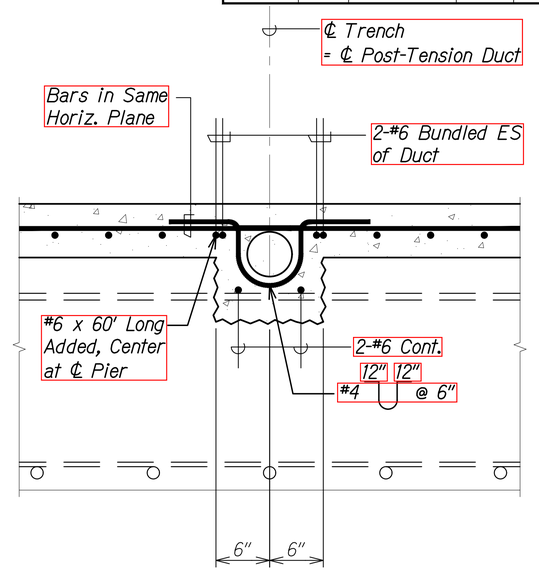
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 357	466



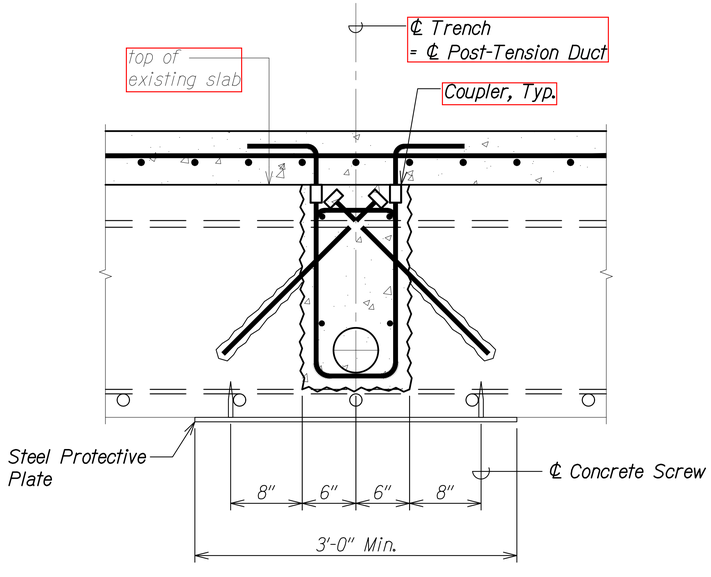
SECTION A
Scale: 1 1/2" = 1'-0"



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



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



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

NOTES:

1. Existing reinforcing steel shall remain, unless otherwise noted. Do not damage existing reinforcing steel.
2. Do not trench below top of existing #8.
3. Place steel protective plates under trenches before trenching. Place over a distance of 35'-0" minimum measured from the traffic face of each existing abutment.
4. Steel protective plates shall be 15 gauge thick minimum.
5. Concrete screws shall be 3/8" x 3" minimum @ 2'-0" minimum (minimum of 8 per plate). After removal, patch with Duraltop Gel or approved equal.
6. Steel protective plates shall be water tight with existing slab.
7. Contractor must protect coupler throughout all phases of construction.
8. Place transverse reinforcement, stirrups and epoxied bars parallel to abutments. △2

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS TRENCH DETAILS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB7.2 OF 3 SHEETS

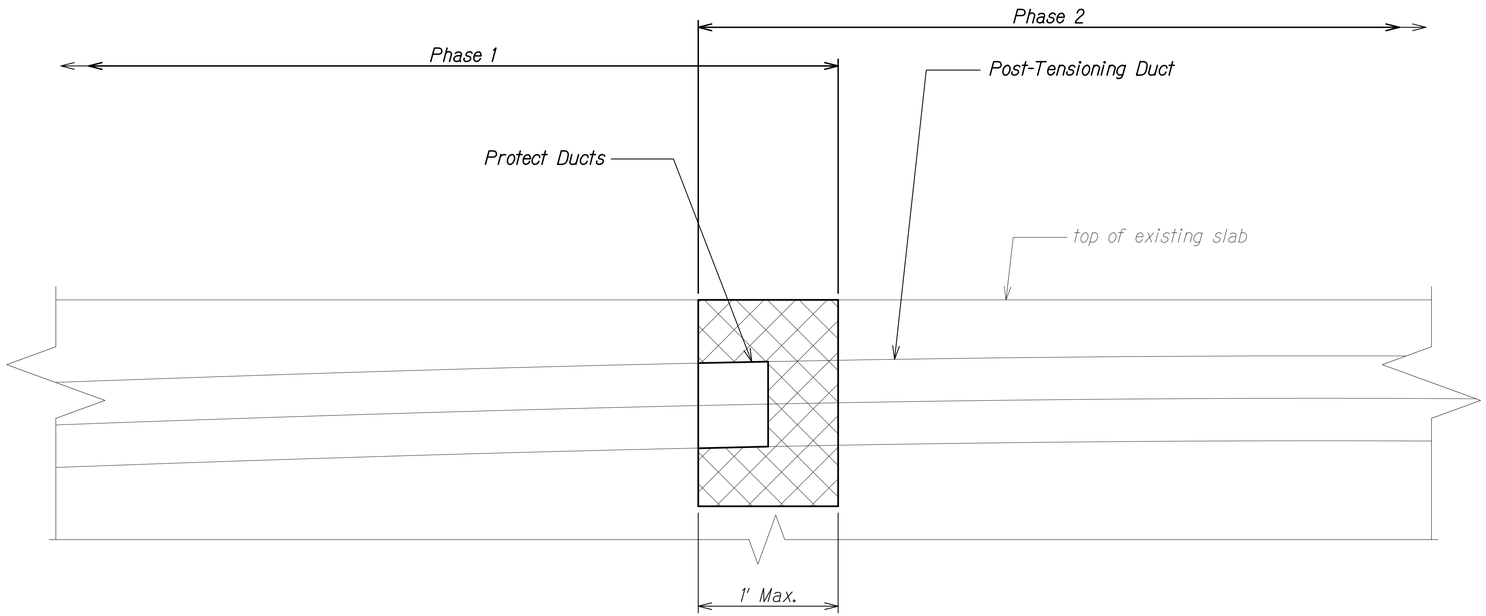
DATE	REVISION
4/7/23	△2 Revised Note

ADD. 357

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0702 TRENCH DET ADD2.DWG PLOT TIME: 04-10-23, 3:37 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	358	466



TRENCHING AT PHASE 1&2

Scale: NTS

E
SB7.1 | SB7.3

LEGEND:

Portion of Phase 1 Concrete that is Removed and Filled in Phase 2

NOTES:

1. Do not damage ducts during Phase 2 trenching.
2. Reinforcing is not shown for clarity.

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
TRENCH DETAILS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

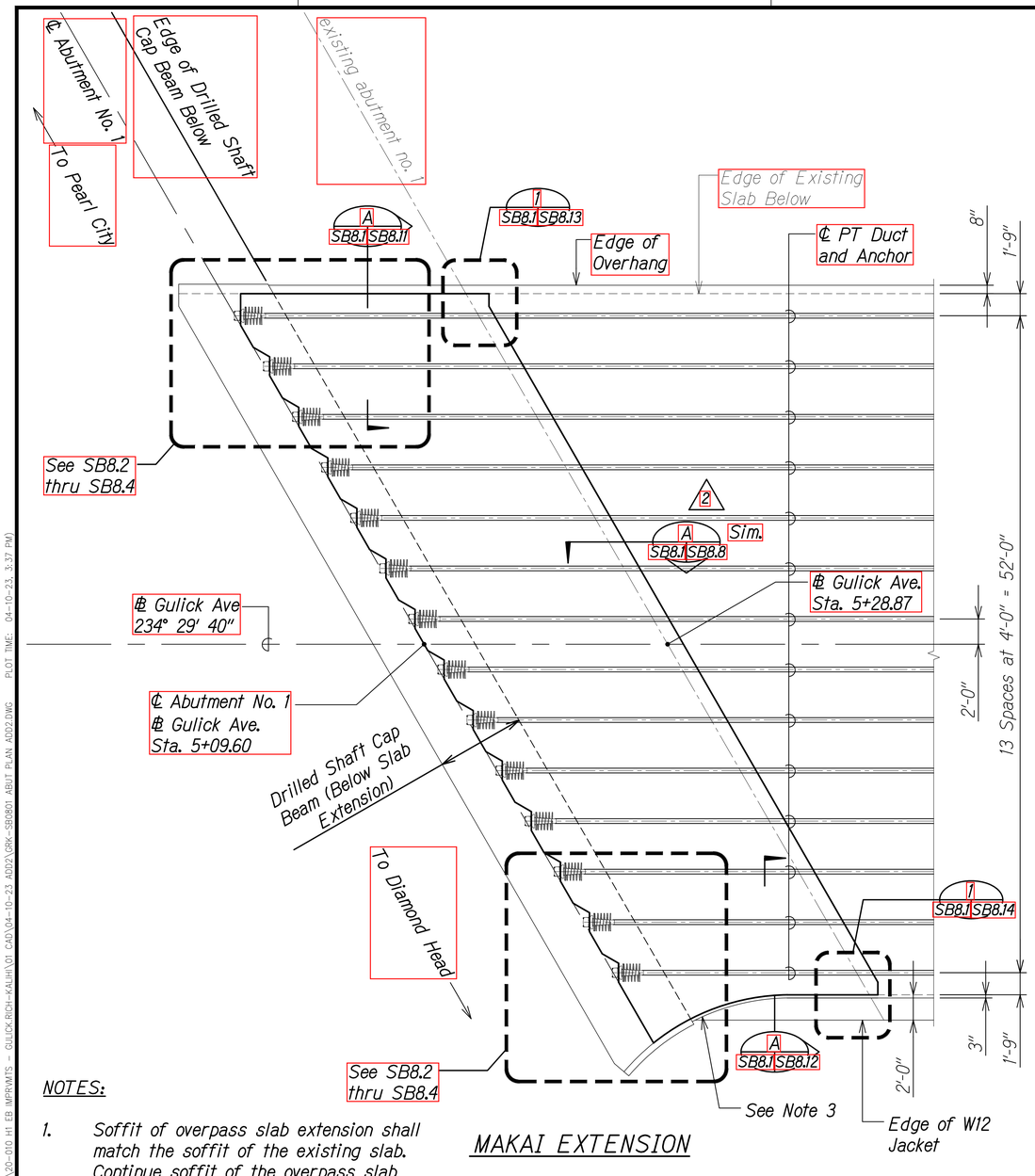
Scale: As Noted Date: December 2022

SHEET No. SB7.3 OF 3 SHEETS

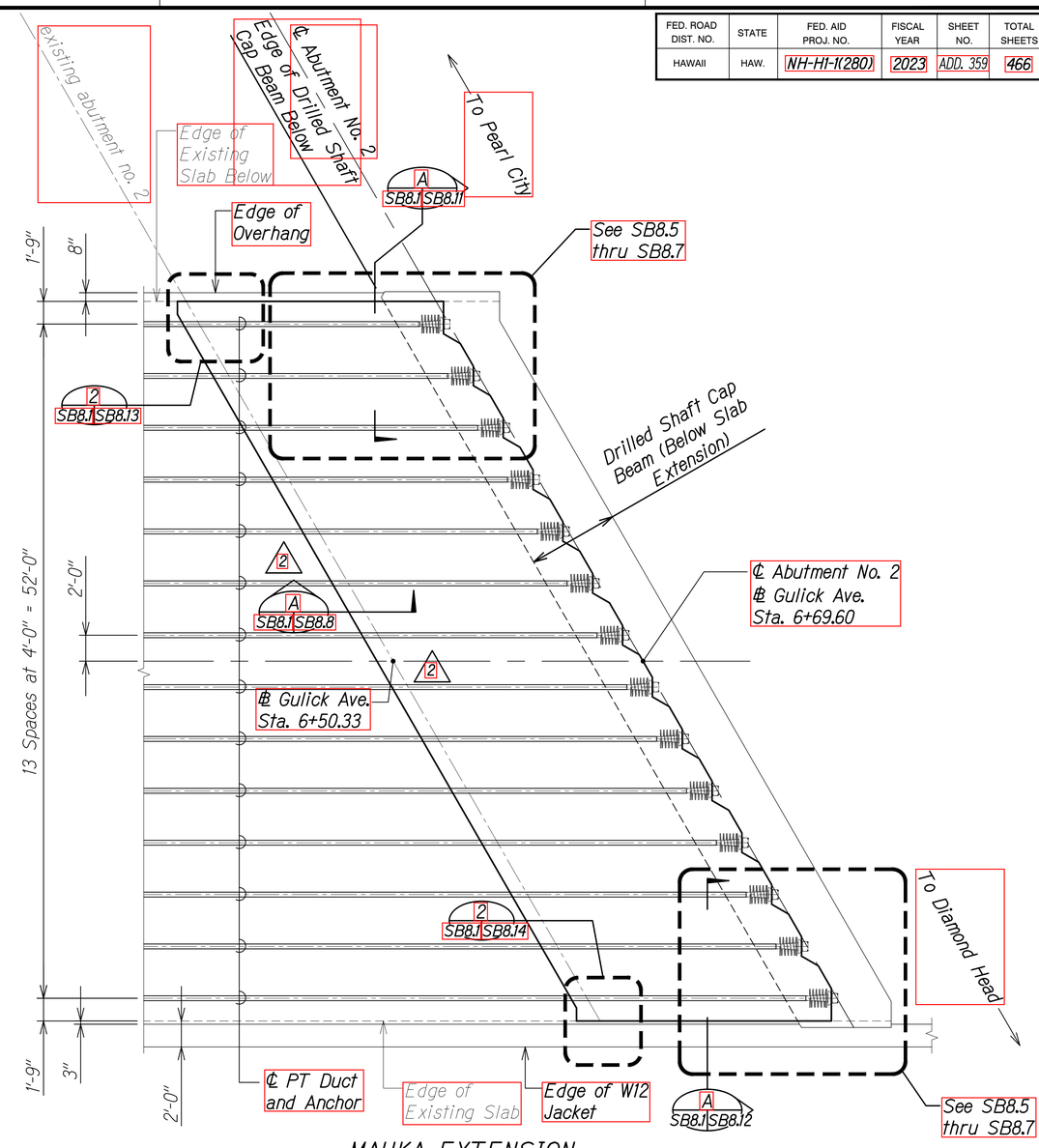
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0703 TRENCH PH1&2.DWG PLOT TIME: 01-04-23, 9:53 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 359	466



MAKAI EXTENSION



MAUKA EXTENSION

NOTES:

1. Soffit of overpass slab extension shall match the soffit of the existing slab. Continue soffit of the overpass slab extension along the same slope as the existing slab soffit.
2. Edge of slab on overpass shall match the edge of existing slab. Continue edge of new slab along the same azimuth as the edge of existing slab.
3. See SB1.1 for curve data.

OVERPASS SLAB EXTENSION PLANS

Scale: 3/16" = 1'-0"

DATE		REVISION
4/7/23	2	Revised Note Leader

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS — GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0801 ABUT PLAN ADD2.DWG PLOT TIME: 04-10-23, 3:37 PM)

ERIC Y. MATSUMOTO LICENSED PROFESSIONAL ENGINEER NO. 10156-S HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS SLAB EXTENSION PLANS

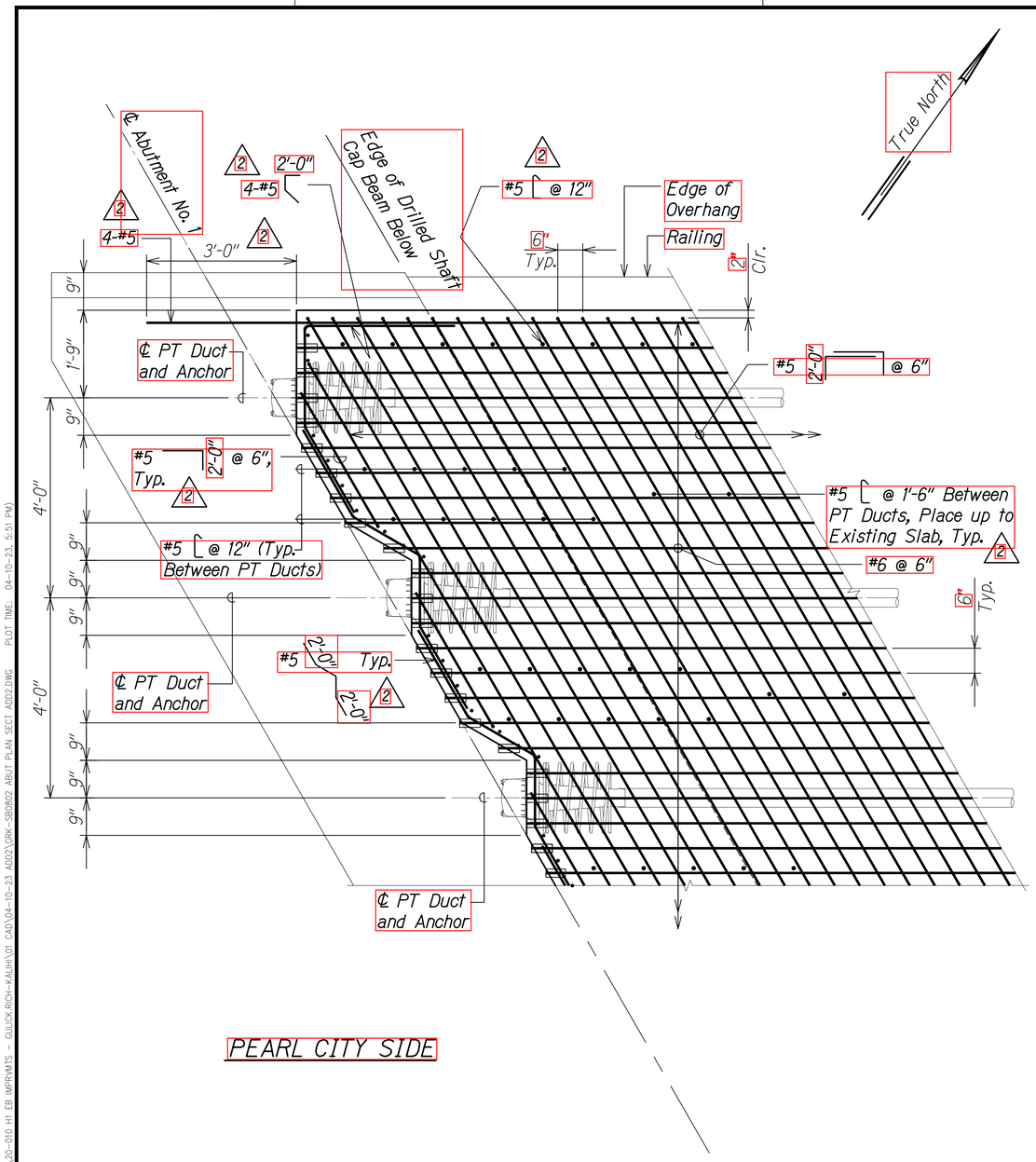
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

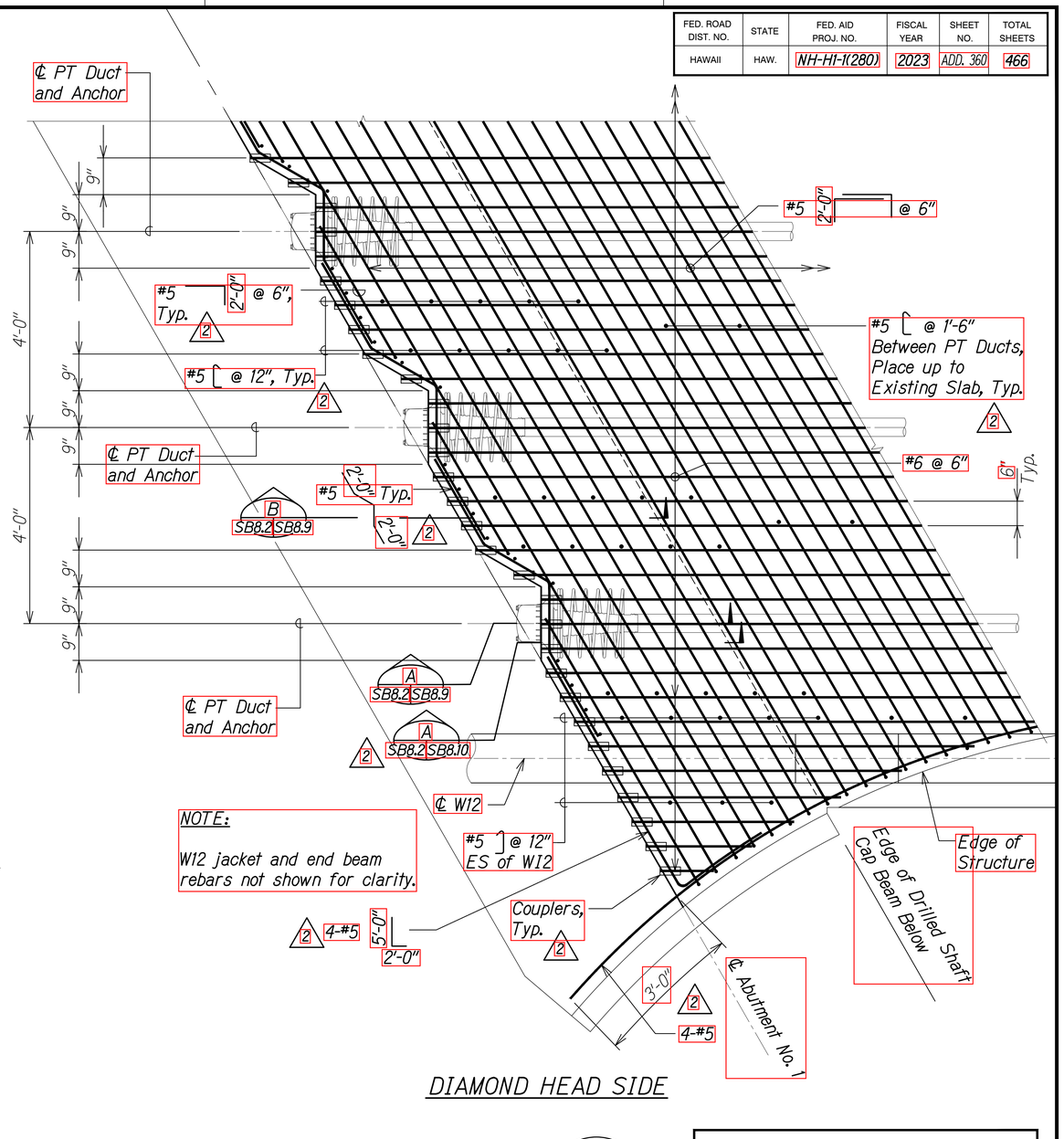
SHEET No. SB8.1 OF 14 SHEETS

ADD. 359

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 360	466



PEARL CITY SIDE



DIAMOND HEAD SIDE

MAKAI SIDE OVERPASS SLAB EXTENSION TOP MAT REINFORCEMENT

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

DATE	REVISION
4/7/23	2 Added Note and Rer. Text

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ERIC Y. MATSUMOTO — LICENSED PROFESSIONAL ENGINEER — NO. 10156-S — HAWAII, U.S.A.

Eric Y. Matsumoto 4-30-24

SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
OVERPASS SLAB EXTENSION PLAN/SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

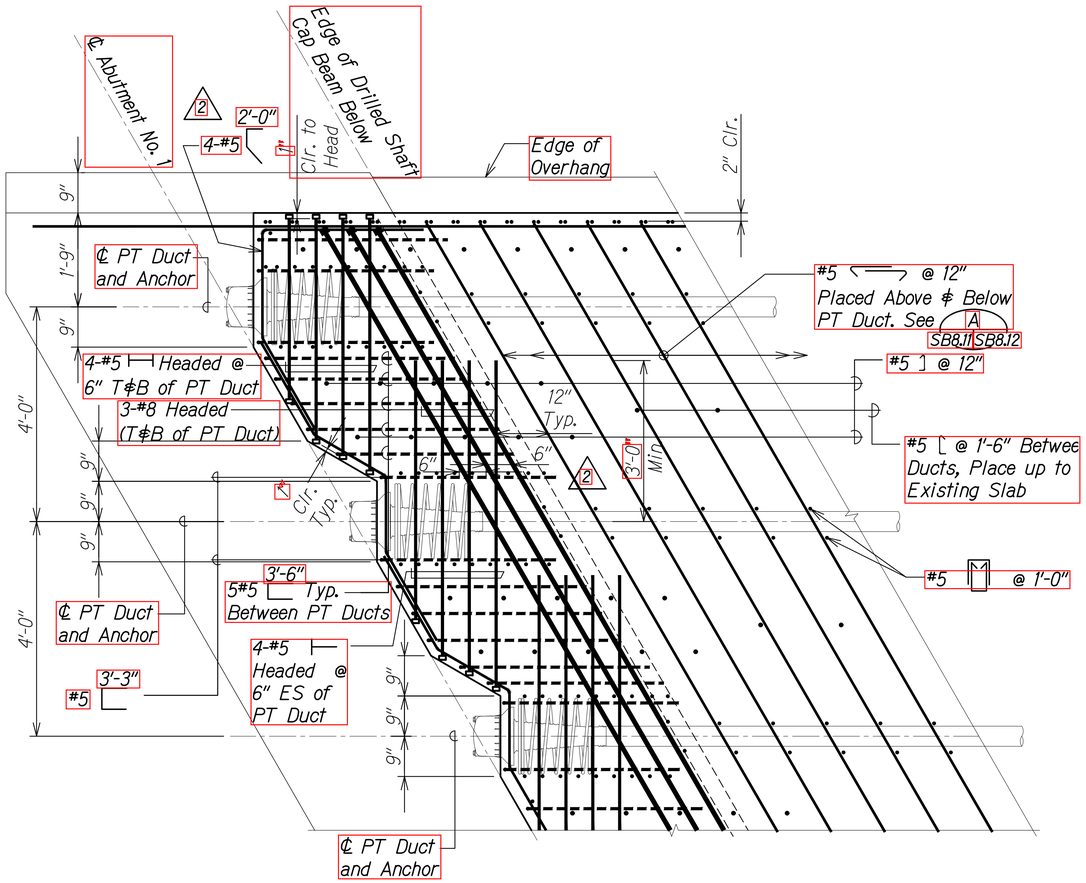
SHEET No. SB8.2 OF 14 SHEETS

ADD. 360

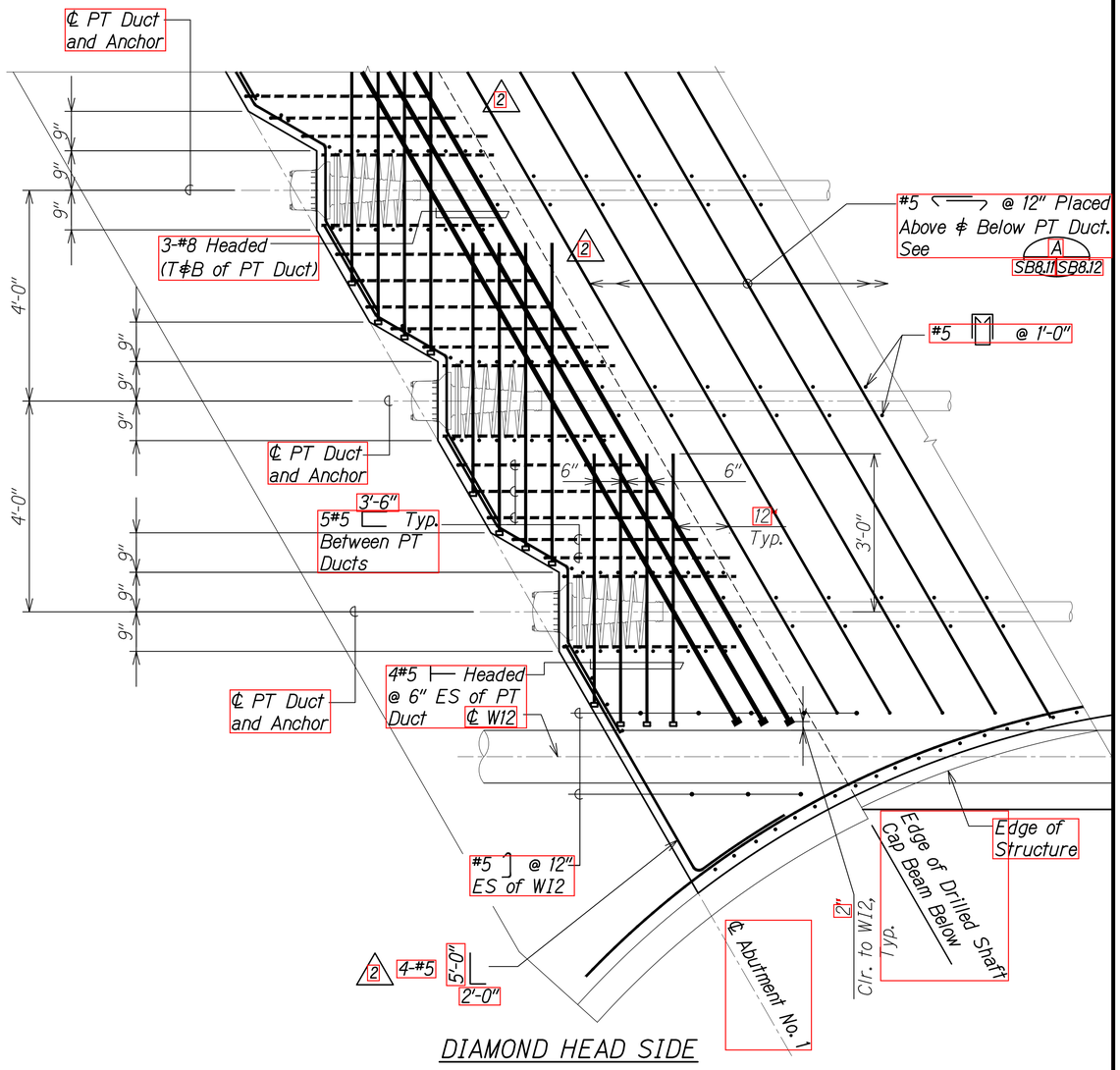
ORIGINAL PLAN	SURVEY PLOTTED BY
	DRAWN BY
NOTE BOOK	TRACED BY
	DESIGNED BY
No.	QUANTITIES BY
	CHECKED BY
	DATE

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0802 ABUT PLAN SECT ADD2.DWG PLOT TIME: 04-10-23, 5:51 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 361	466



PEARL CITY SIDE



DIAMOND HEAD SIDE

MAKAI SIDE OVERPASS SLAB EXTENSION MID-DEPTH MAT REINFORCEMENT

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

DATE	REVISION
4/7/23	2 Revised Rebar

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0803 ABUT PLAN SECT ADD2.DWG PLOT TIME: 04-10-23, 5:52 PM)

ERIC Y. MATSUMOTO LICENSED PROFESSIONAL ENGINEER NO. 10156-S HAWAII, U.S.A.

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SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
OVERPASS SLAB EXTENSION PLAN/SECTION

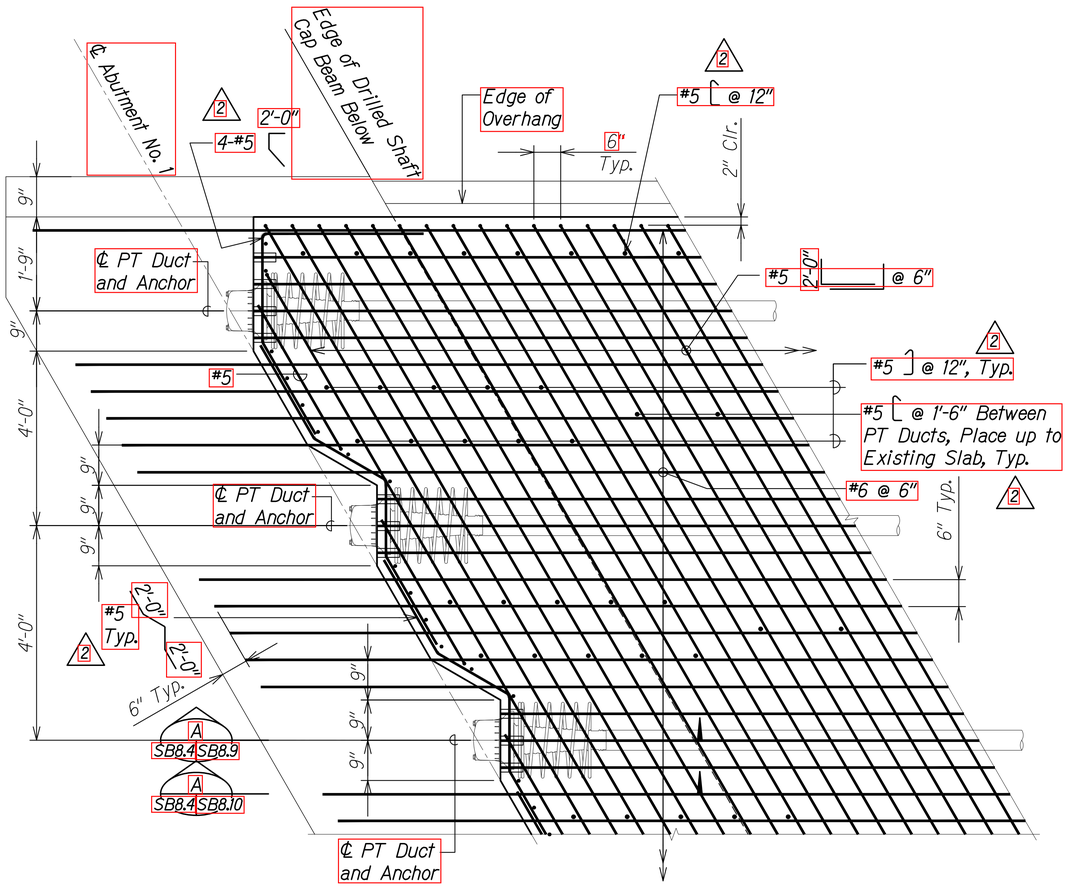
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

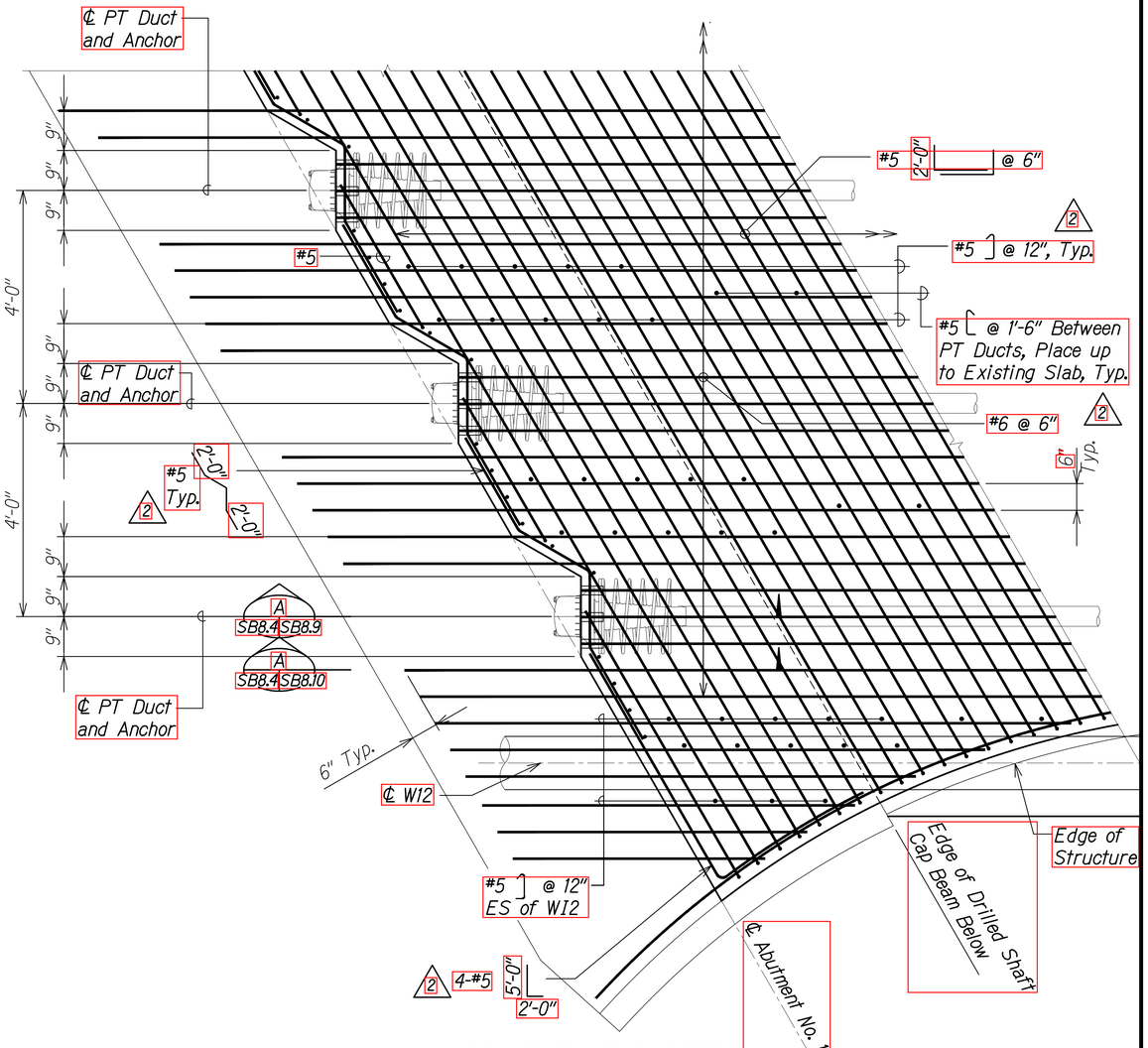
SHEET No. SB8.3 OF 14 SHEETS

ADD. 361

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 362	466



PEARL CITY SIDE



DIAMOND HEAD SIDE

MAKAI SIDE OVERPASS SLAB EXTENSION BOTTOM MAT REINFORCEMENT

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

DATE		REVISION
4/7/23	2	Added Text

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ERIC Y. MATSUMOTO LICENSED PROFESSIONAL ENGINEER NO. 10156-S HAWAII, U.S.A.

Eric Y. Matsumoto 4-30-24

SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
OVERPASS SLAB EXTENSION PLAN/SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

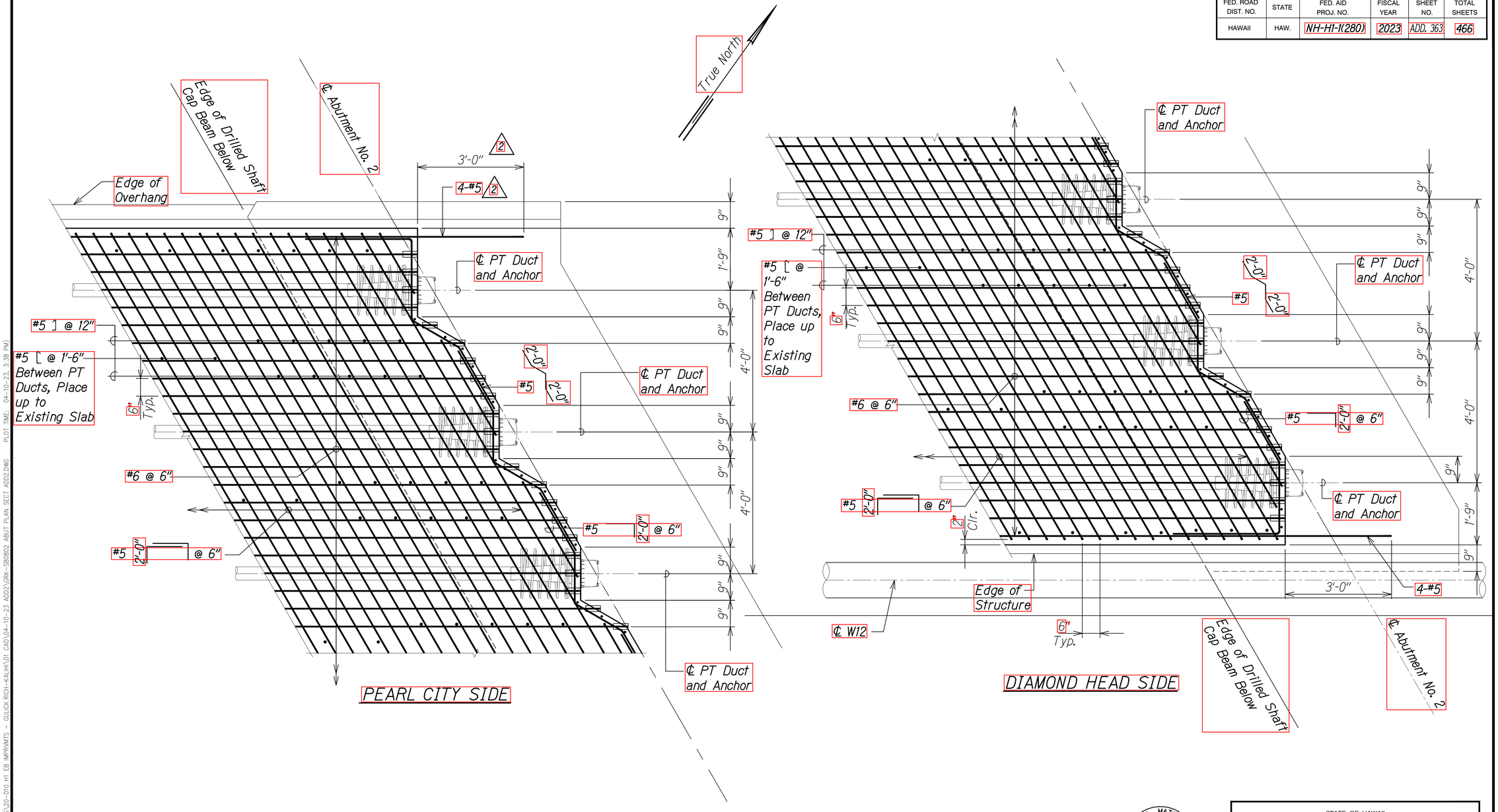
SHEET No. SB8.4 OF 14 SHEETS

ADD. 362

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0804 ABUT PLAN SECT ADD2.DWG PLOT TIME: 04-10-23, 5:52 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 363	466



MAUKA SIDE OVERPASS SLAB EXTENSION TOP MAT REINFORCEMENT

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

DATE	REVISION
4/7/23	2 Added Callout and Dimension

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

NOTE BOOK | No.

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0802 ABUT PLAN SECT ADD2.DWG PLOT TIME: 04-10-23, 3:38 PM)

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Eric Y. Matsumoto — SIGNATURE

4-30-24 — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS

OVERPASS SLAB EXTENSION PLAN/SECTION

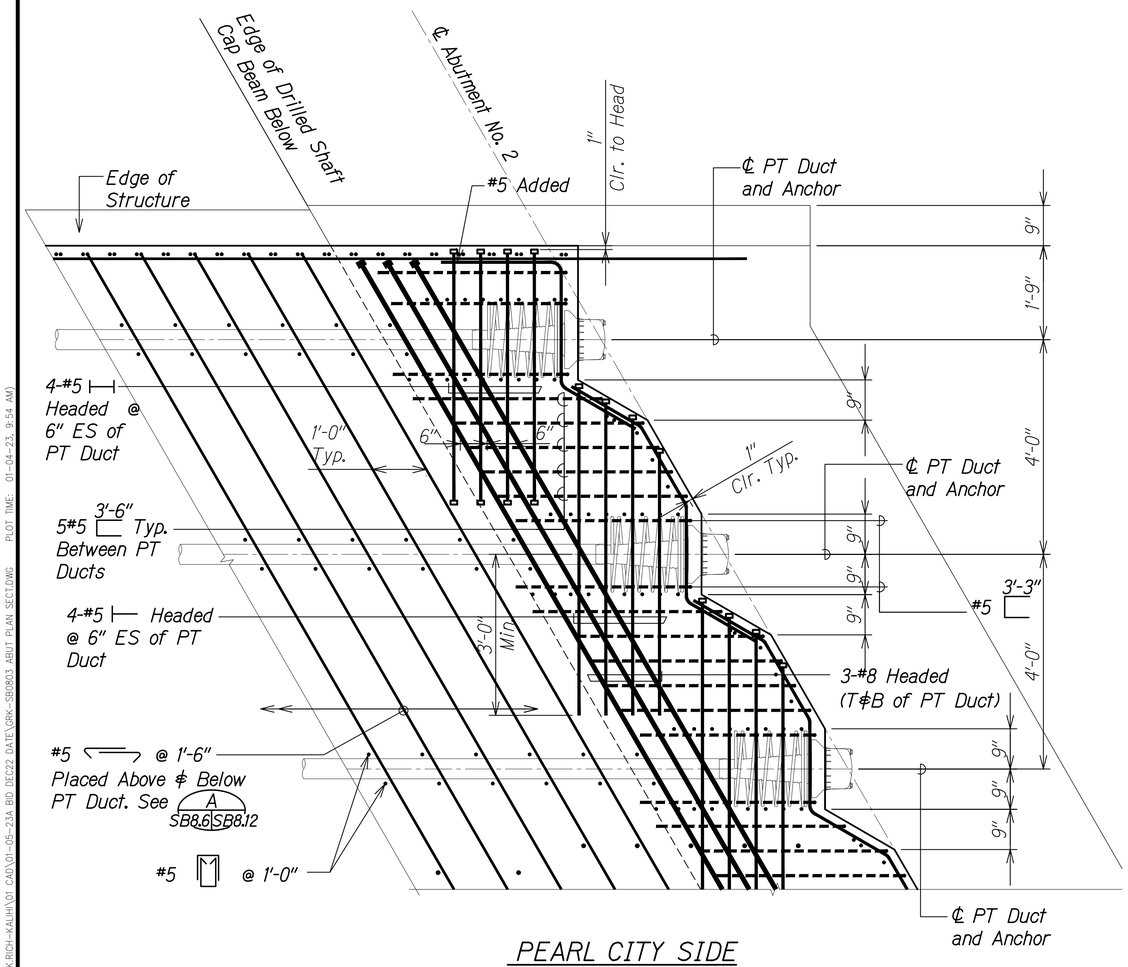
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

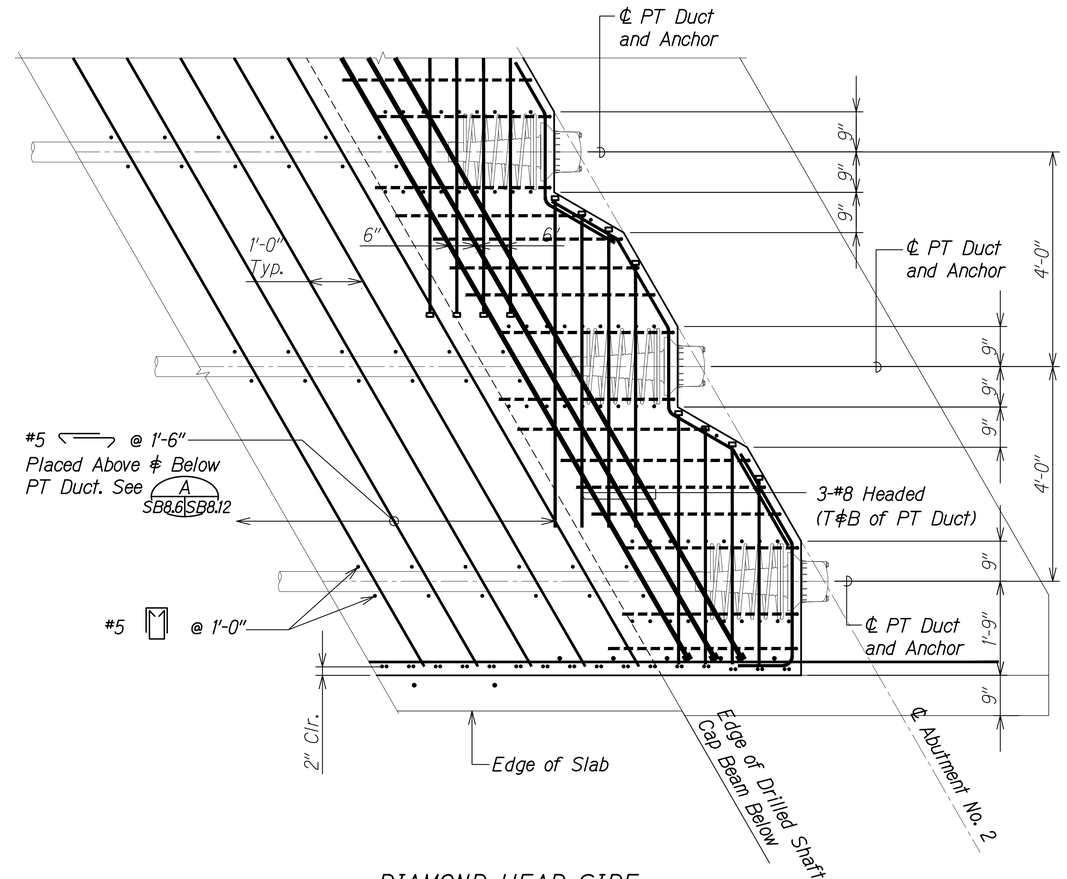
SHEET No. SB8.5 OF 14 SHEETS

ADD. 363

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	364	466



PEARL CITY SIDE



DIAMOND HEAD SIDE

NOTE:

WI2 jacket not shown for clarity.

MAUKA SIDE OVERPASS SLAB EXTENSION MID-DEPTH MAT REINFORCEMENT

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

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

ERIC Y. MATSUMOTO LICENSED PROFESSIONAL ENGINEER NO. 10156-S HAWAII, U.S.A.

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Eric Y Matsumoto 4-30-24

SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS

OVERPASS SLAB EXTENSION PLAN/SECTION

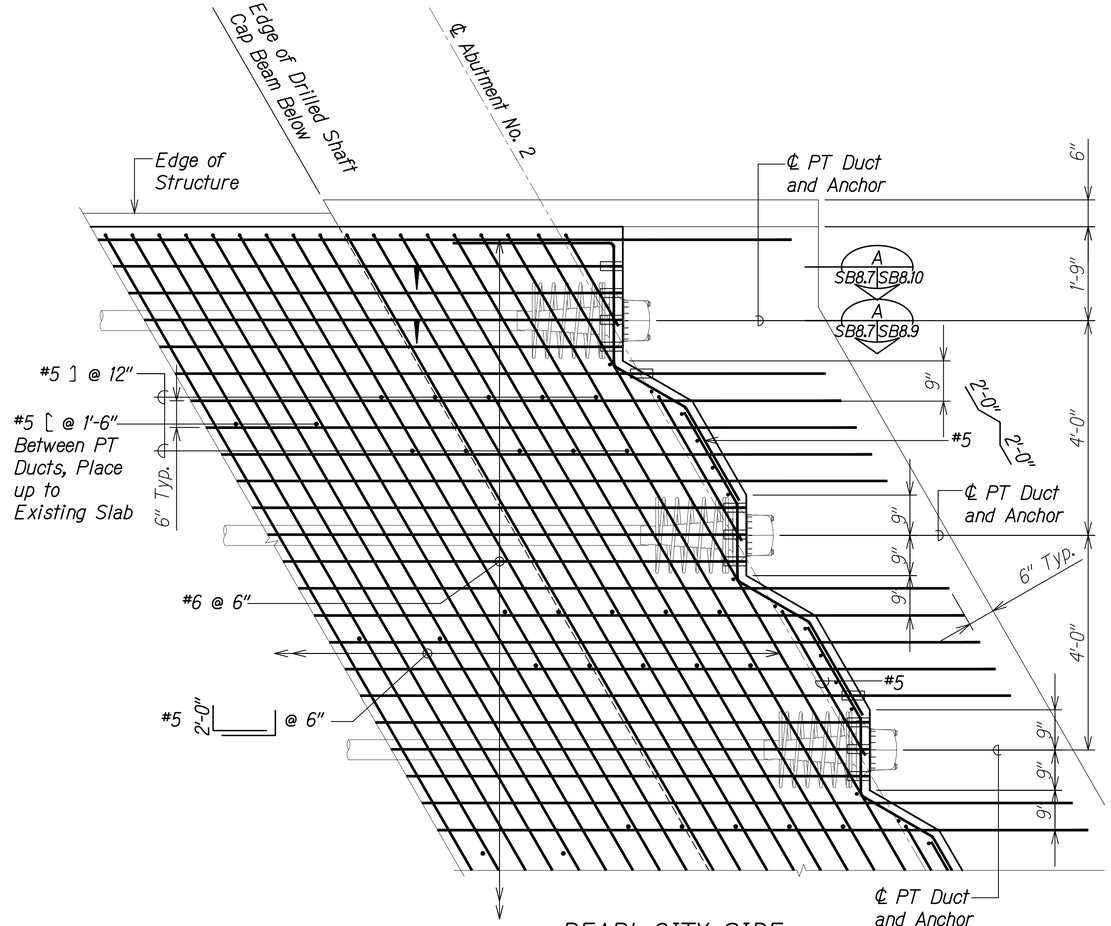
INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

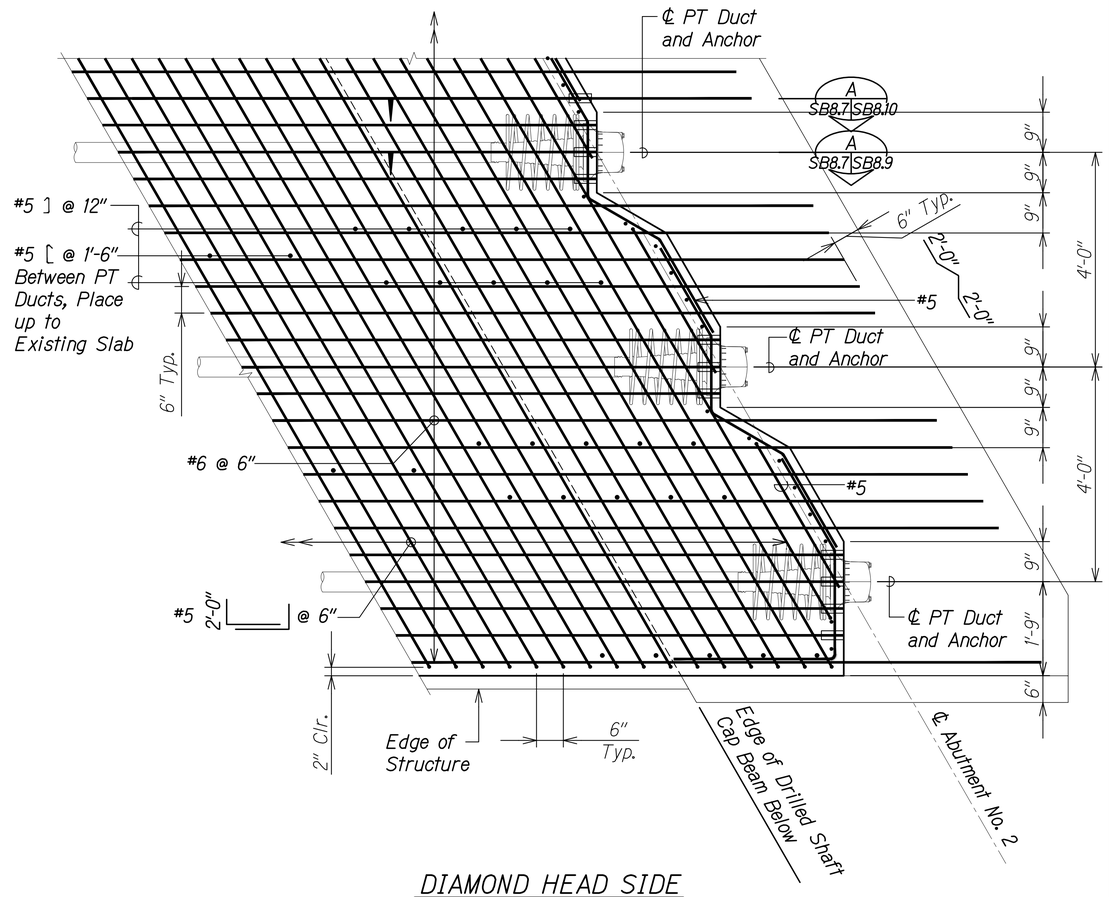
SHEET No. SB8.6 OF 14 SHEETS

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	365	466



PEARL CITY SIDE



DIAMOND HEAD SIDE

MAUKA SIDE OVERPASS SLAB EXTENSION BOTTOM MAT REINFORCEMENT

Scale: 3/4″ = 1′-0″

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
OVERPASS SLAB EXTENSION PLAN/SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

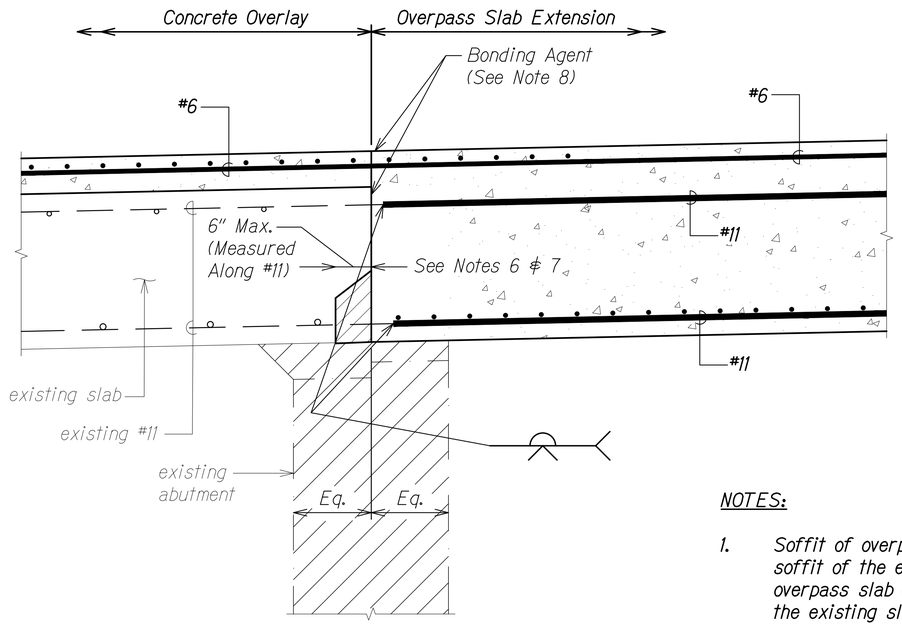
Scale: As Noted Date: December 2022

SHEET No. SB8.7 OF 14 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0804 ABUT PLAN SECT.DWG PLOT TIME: 01-04-23, 9:55 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	366	466



SECTION
Scale: 1" = 1'-0"

A SB8.1 | SB8.8

NOTES:

1. Soffit of overpass slab extension shall match the soffit of the existing slab. Continue soffit of the overpass slab extension along the same slope as the existing slab soffit.
2. Post-tensioning is not shown.
3. For additional reinforcing details in Overpass Slab Extension, refer to the other sheets in the SB8 series.
4. Contractor must sample existing reinforcement and determine chemical composition and carbon equivalent.
5. All welding shall conform to the requirements of AWSD1.4 and the contract documents.
6. Contractor may remove existing concrete as needed to weld new #11 to existing #11.
7. Contractor must submit procedures to remove concrete and weld #11 rebars. See contract documents for additional requirements.
8. At existing slab, apply bonding agent (6" wide) on perimeter (top, bottom and sides) of existing slab in contact with slab extension..

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS SLAB EXTENSION AT EXIST. ABUT.

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

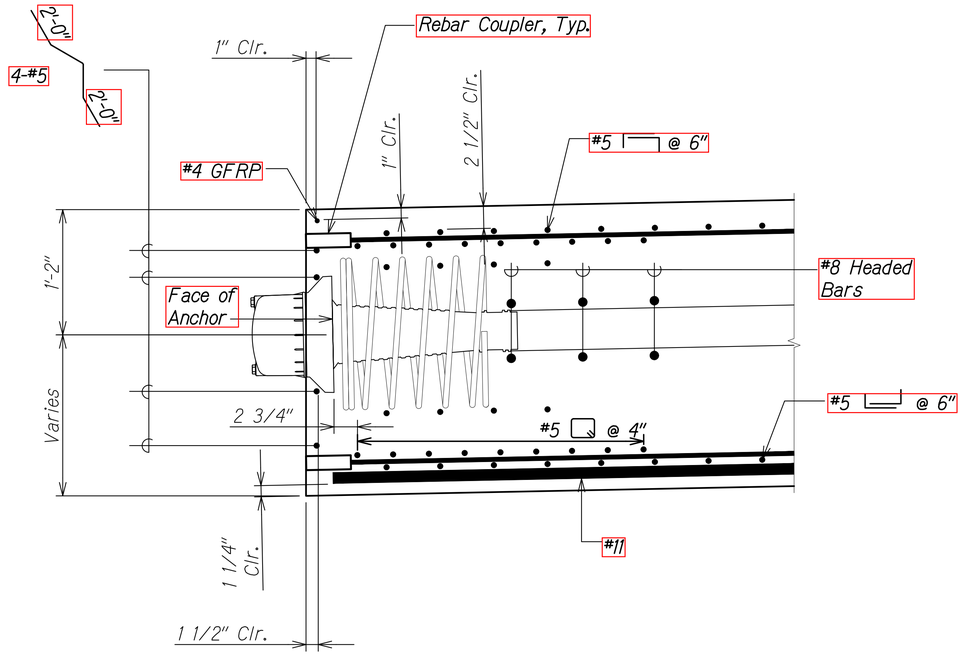
Scale: As Noted Date: December 2022

SHEET No. SB8.8 OF 14 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0808 ABUT SECT.DWG PLOT TIME: 01-04-23, 9:55 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 367	466



SECTION THROUGH POST-TENSIONING

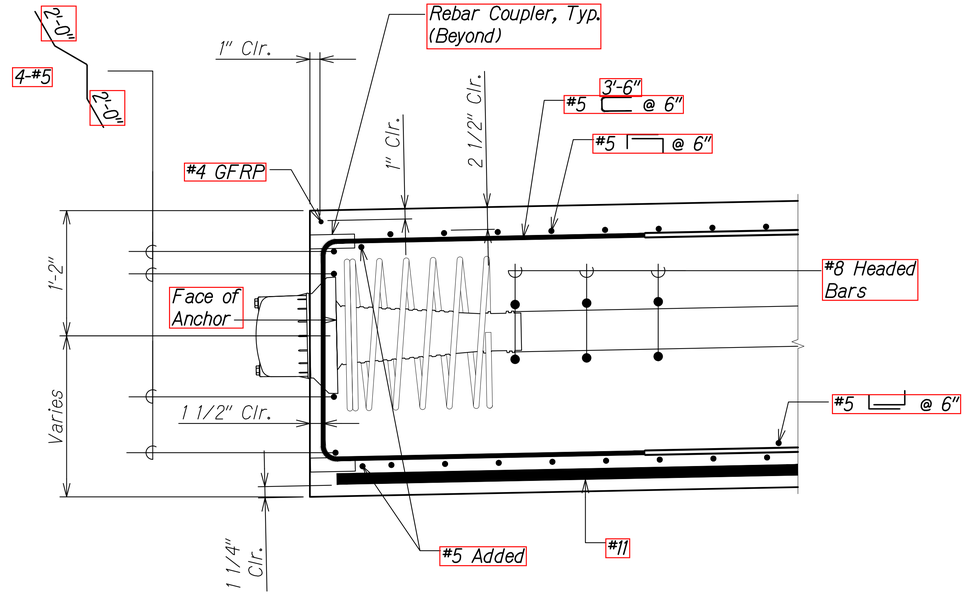
Scale: 1 1/2" = 1'-0"

A

SB8.2 SB8.9

SB8.3, SB8.4, SB8.7

2



SECTION BETWEEN POST-TENSIONING

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

B

SB8.2 SB8.9

SB8.3, SB8.4

ORIGINAL PLAN

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

NOTE BOOK
No.

DATE

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0809 ABUT SECT ADD2.DWG PLOT TIME: 04-10-23, 3:39 PM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS SLAB EXTENSION SECTIONS

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

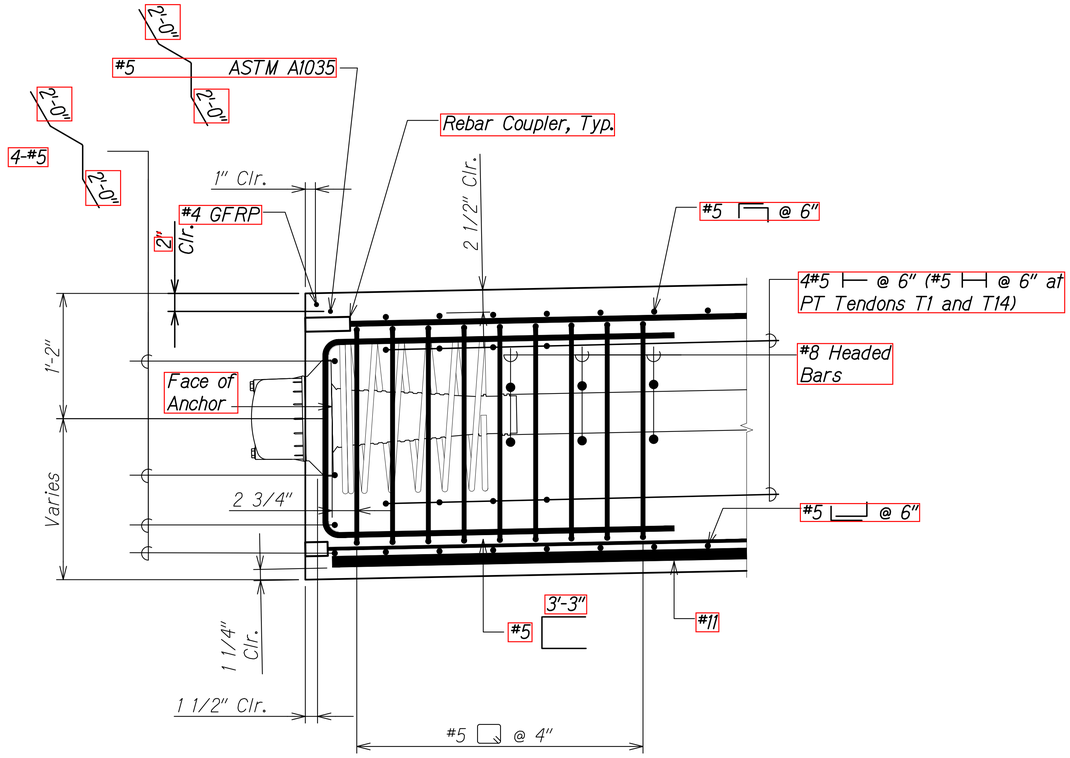
Scale: As Noted Date: December 2022

SHEET No. SB8.9 OF 14 SHEETS

DATE	REVISION
4/7/23	2 Added Ref. Text

ADD. 367

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 368	466



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

A
SB8.2 SB8.10
SB8.3, SB8.4, SB8.7
2

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0809 ABUT SECT ADD2.DWG PLOT TIME: 04-10-23, 3:40 PM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Eric Y Matsumoto
SIGNATURE
4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS SLAB EXTENSION SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

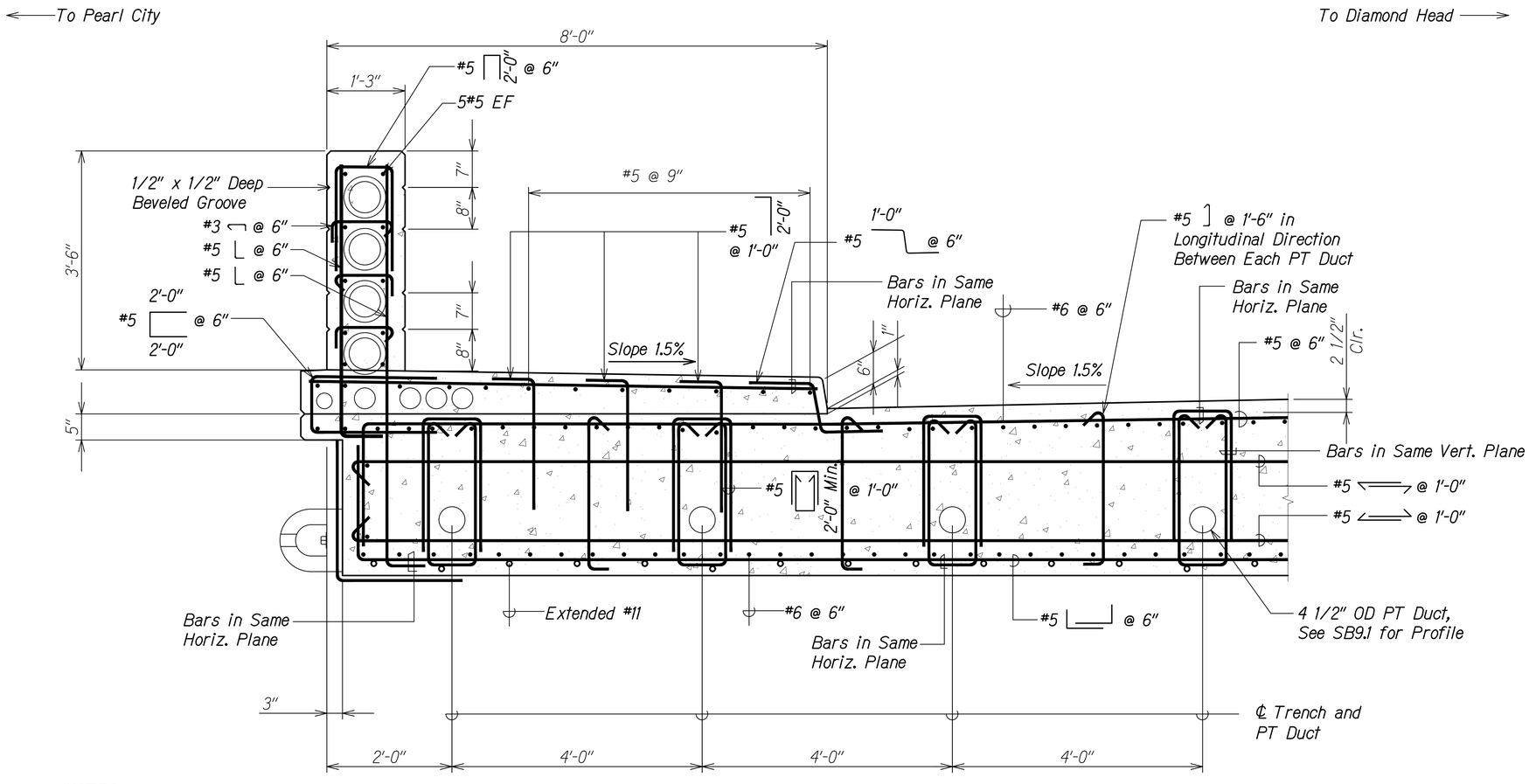
Scale: As Noted Date: December 2022

SHEET No. SB8.10 OF 14 SHEETS

DATE	REVISION
4/7/23	2 Added Ref. Text

ADD. 368

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	369	466



NOTES:

1. Place transverse reinforcing bars in concrete overlay along Az. 114° 35' 10".
2. Place longitudinal reinforcing bars in concrete overlay and sidewalk along Az. 234° 29' 40".
3. Place transverse reinforcing bars in sidewalk perpendicular to railing.
4. Maximum diameter of expansion/deflection coupler shall be 7 3/4" for 5" diameter duct and 5 1/8" for 3" diameter duct.
5. All reinforcing steel in railing (Pearl City side of existing overpass) shall be ASTM A1035 Type CS, Grade 100.

SECTION A
Scale: 1" = 1'-0"
SB8.1 | SB8.11

ORIGINAL PLAN
NOTE BOOK No.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0811 DECK EXTEND.DWG PLOT TIME: 01-04-23, 9:56 AM)

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HAWAII, U.S.A.

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Eric Y Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

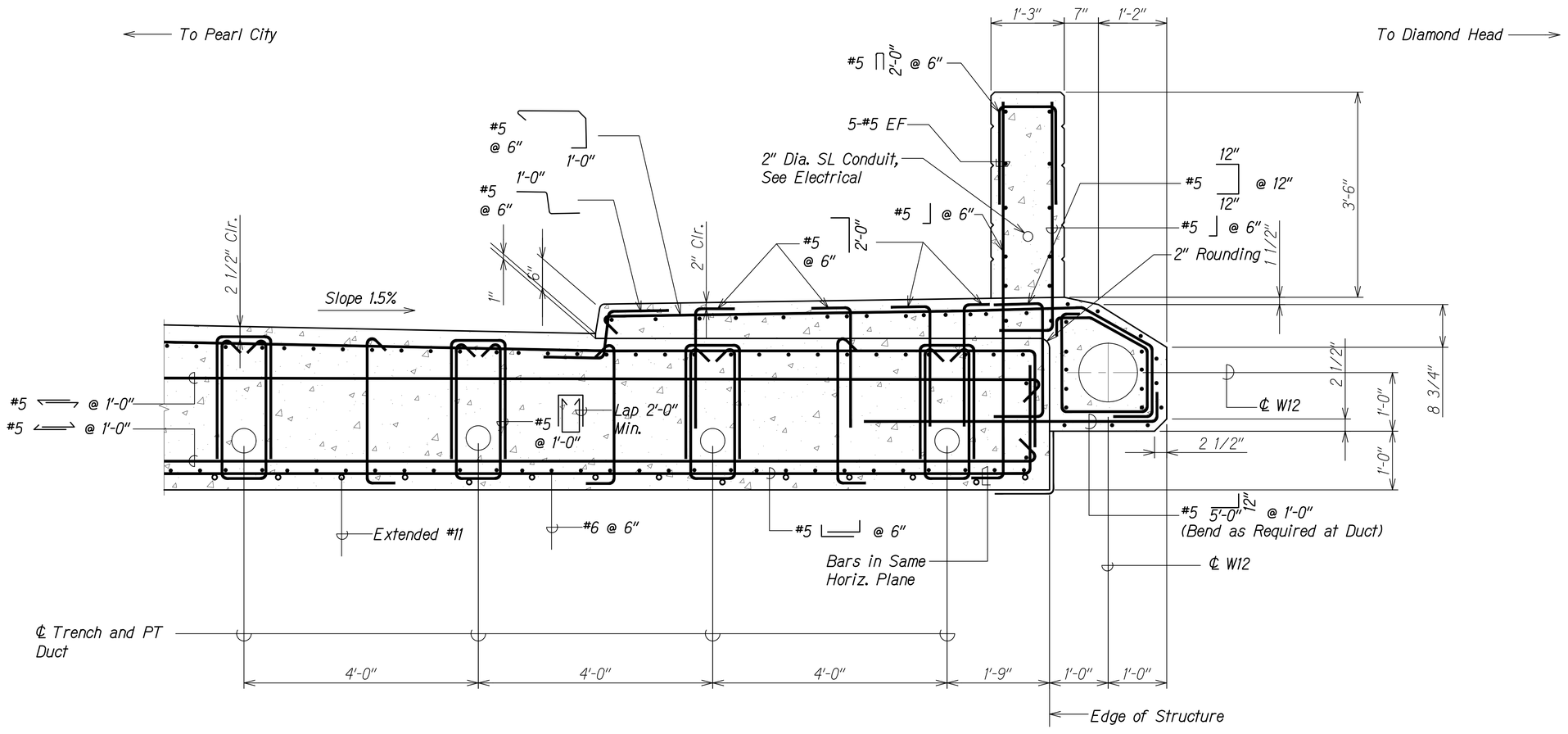
GULICK AVENUE OVERPASS SLAB EXTENSION SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB8.11 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	370	466



SECTION A
Scale: 1" = 1'-0"
SB8.1 | SB8.12

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK:RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0812 SLAB EXTEN.DWG PLOT TIME: 01-04-23, 9:57 AM)

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Eric Y Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

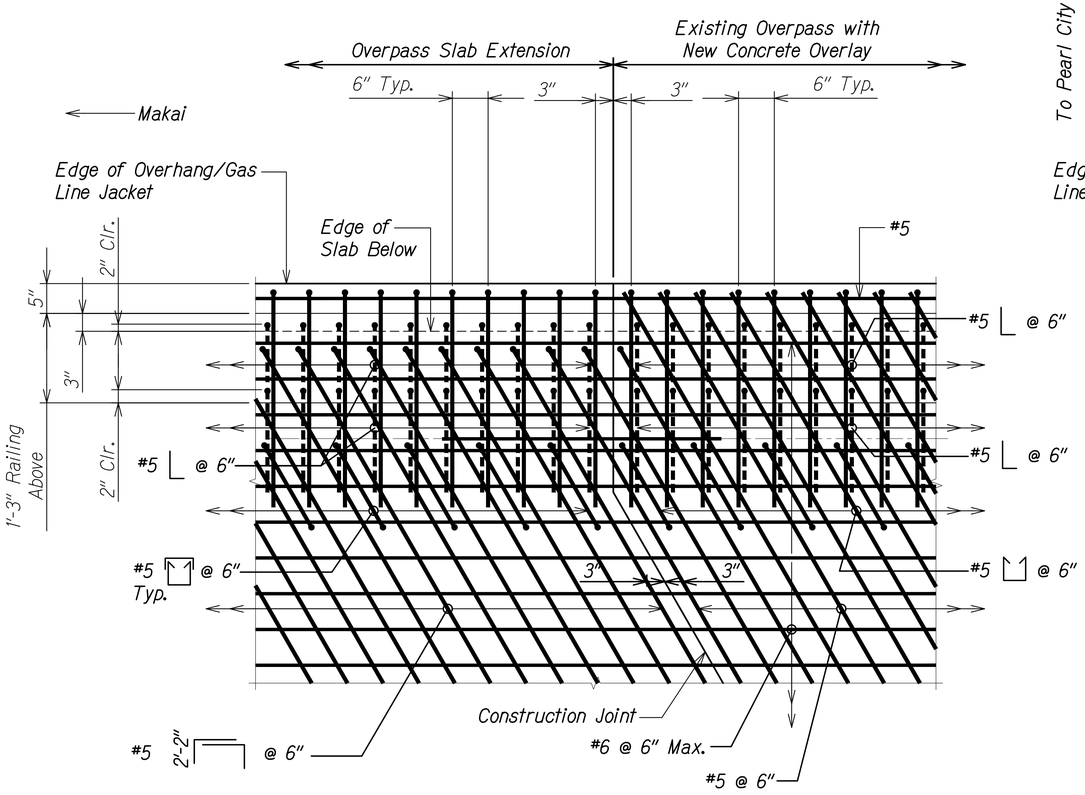
GULICK AVENUE OVERPASS SLAB EXTENSION SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB8.12 OF 14 SHEETS

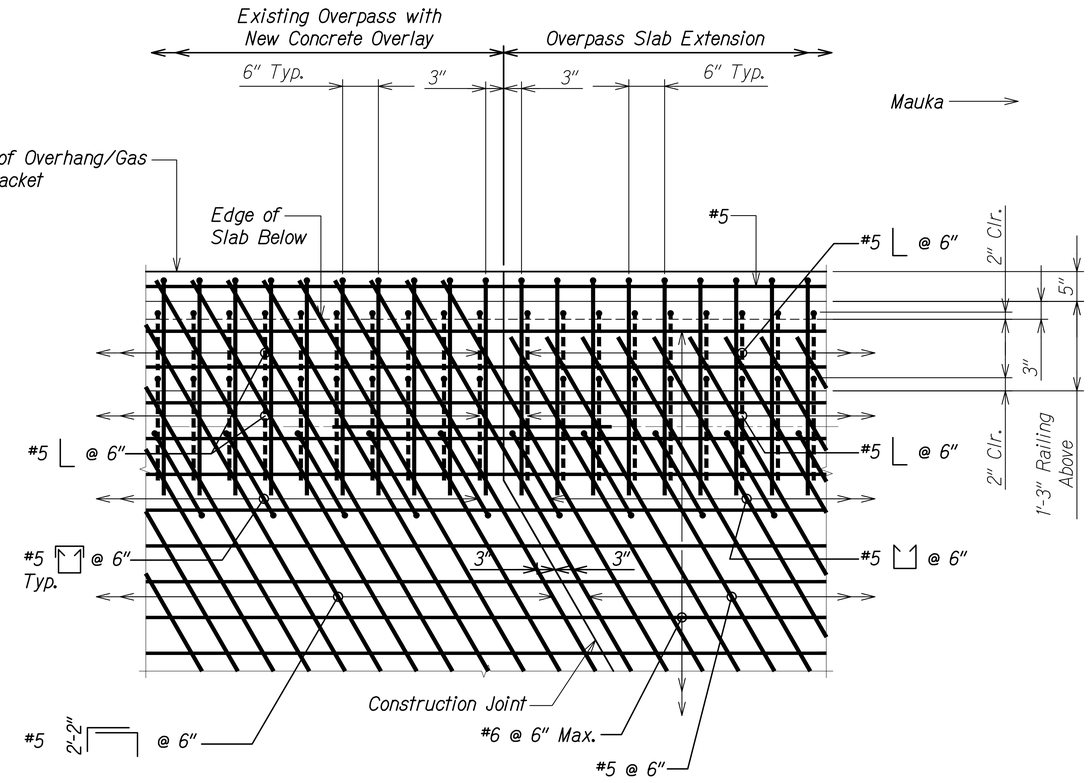
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	371	466



CONC. OVERLAY / SLAB EXTENSION INTERFACE (SHOWN AT TOP OF OVERLAY)

Scale: 1" = 1'-0"

1 SB8.1 | SB8.13 — SB10.1



CONC. OVERLAY / SLAB EXTENSION INTERFACE (SHOWN AT TOP OF OVERLAY)

Scale: 1" = 1'-0"

2 SB8.1 | SB8.13 — SB10.1

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0813 OVERLAY SECT.DWG PLOT TIME: 01-04-23, 11:40 AM)

ERIC Y. MATSUMOTO — LICENSED PROFESSIONAL ENGINEER — NO. 10156-S — HAWAII, U.S.A.

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Eric Y. Matsumoto — 4-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

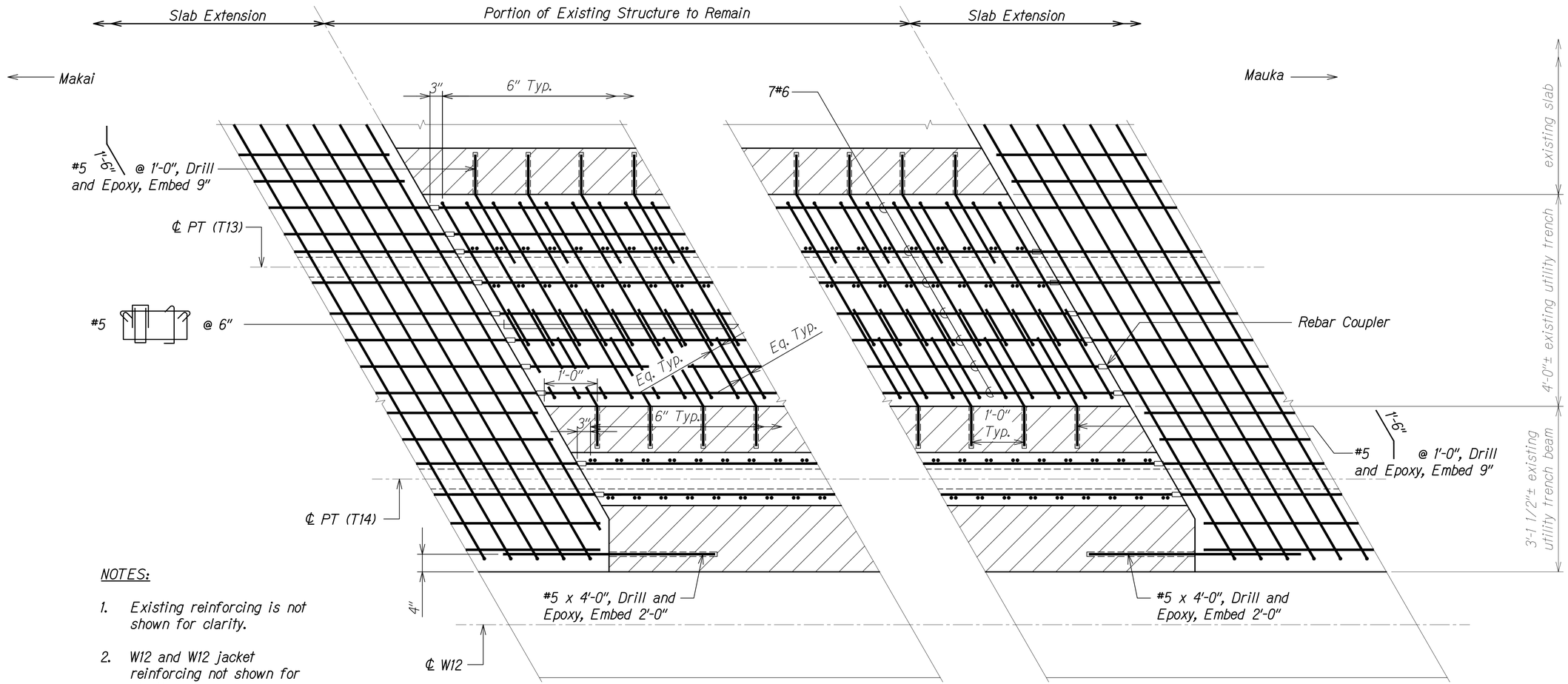
GULICK AVENUE OVERPASS SECTION THROUGH OVERLAY

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB8.13 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	372	466



NOTES:

1. Existing reinforcing is not shown for clarity.
2. W12 and W12 jacket reinforcing not shown for clarity.

UTILITY BEAM AND TRENCH / SLAB EXTENSION INTERFACE

Scale: 1" = 1'-0"

1 SB8.1 | SB8.14

UTILITY BEAM AND TRENCH / SLAB EXTENSION INTERFACE

Scale: 1" = 1'-0"

2 SB8.1 | SB8.14

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

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
SECTION THROUGH OVERLAY

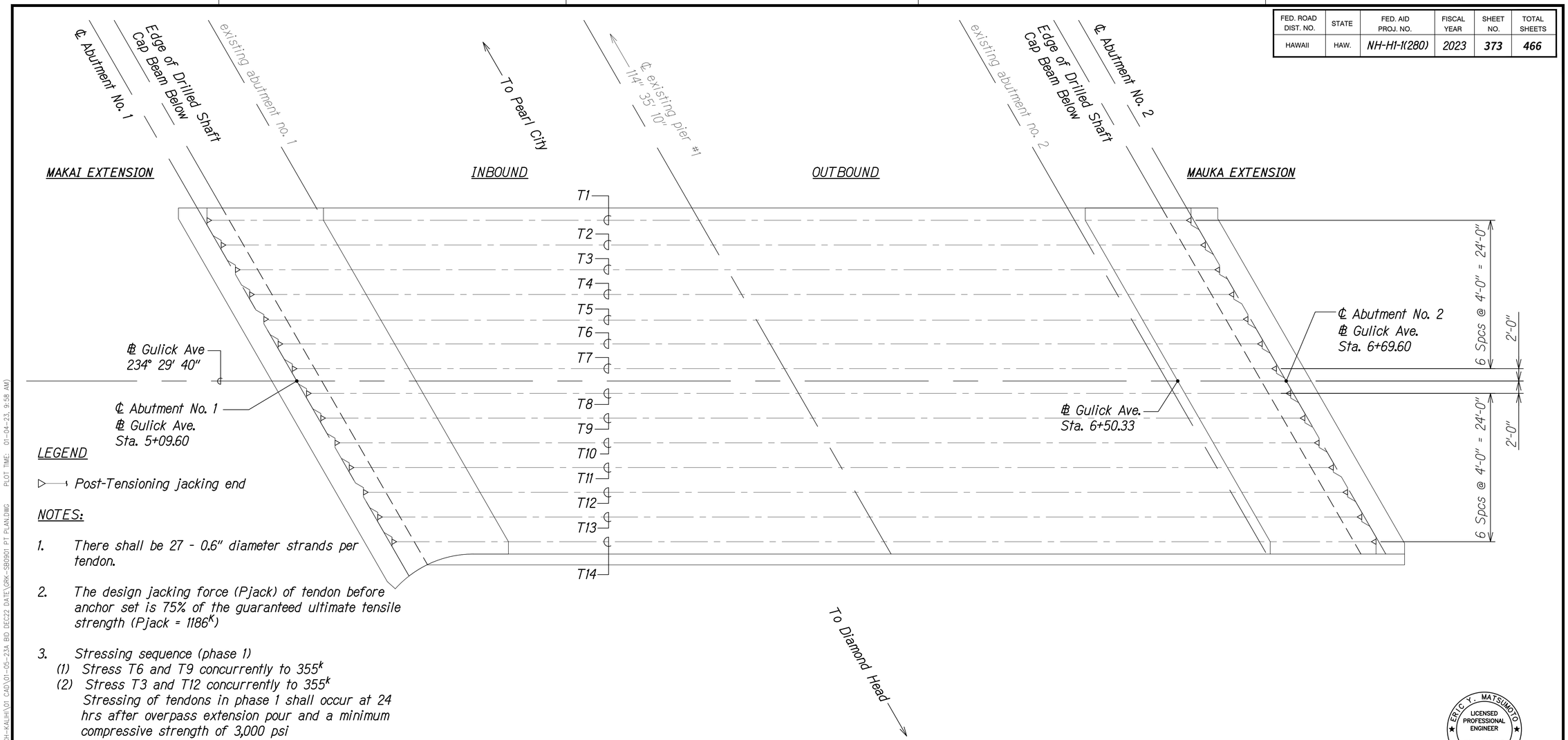
INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB8.14 OF 14 SHEETS

DRAWING NAME: Z:\OD ONGOING\OD JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0814 CONC OVERLAY PLAN.DWG PLOT TIME: 01-04-23, 9:57 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	373	466



LEGEND

▷—| Post-Tensioning jacking end

NOTES:

1. There shall be 27 - 0.6" diameter strands per tendon.

2. The design jacking force (Pjack) of tendon before anchor set is 75% of the guaranteed ultimate tensile strength (Pjack = 1186^{K})

3. Stressing sequence (phase 1)
   (1) Stress T6 and T9 concurrently to 355^{k}
   (2) Stress T3 and T12 concurrently to 355^{k}
   Stressing of tendons in phase 1 shall occur at 24 hrs after overpass extension pour and a minimum compressive strength of 3,000 psi

4. Stressing sequence (phase 2)

   (1) Stress T7 and T8 concurrently to 1186^{k}
   (2) Stress T6 and T9 concurrently to 1186^{k}
   (3) Stress T5 and T10 concurrently to 1186^{k}
   (4) Stress T4 and T11 concurrently to 1186^{k}
   (5) Stress T3 and T12 concurrently to 1186^{k}
   (6) Stress T2 and T13 concurrently to 1186^{k}
   (7) Stress T1 and T14 concurrently to 1186^{k}

   Stressing of tendons in phase 2 shall proceed after concrete overlay has aged at least 10 days and has attained a compressive strength of 6,000 psi.

5. See SB9.2 for additional post-tensioning notes.

TENDON LAYOUT PLAN

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

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB0901 PT PLAN.DWG PLOT TIME: 01-04-23, 9:58 AM)

ERIC Y. MATSUMOTO
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NO. 10156-S
HAWAII, U.S.A.

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SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

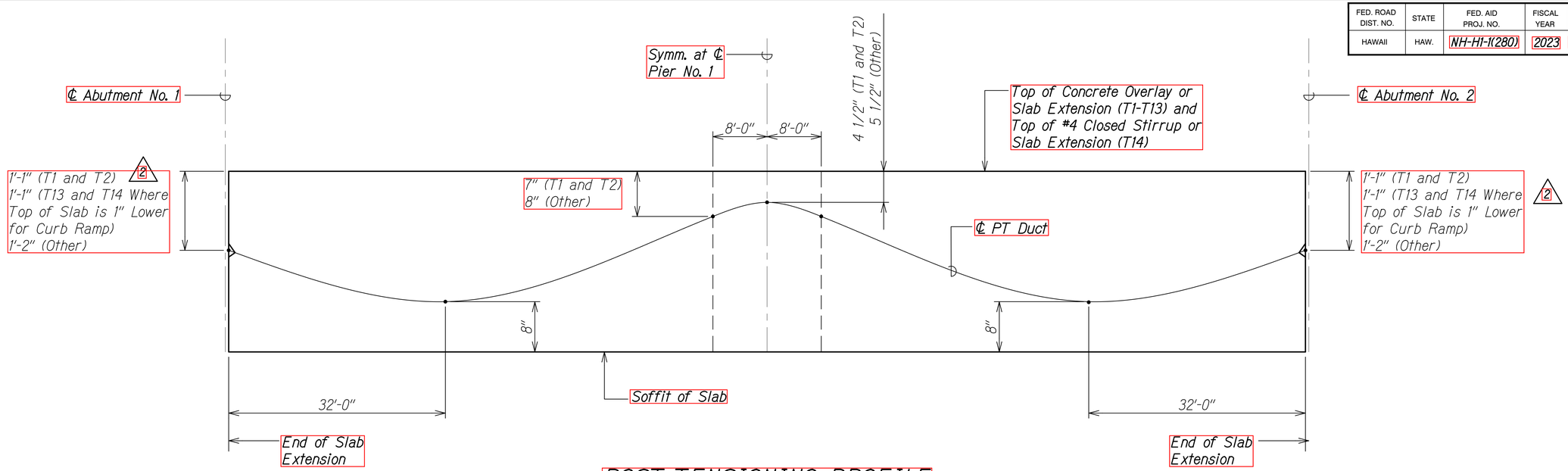
GULICK AVENUE OVERPASS
TENDON LAYOUT PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB9.1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 374	466



POST-TENSIONING PROFILE

NTS

POST-TENSIONING NOTES:

1. Duct path is parabolic between points shown, unless otherwise noted.
2. Jacking force in each tendon is 1186 kips. See SB9.1 for sequence of jacking. Jack from both ends.
3. Post-tensioning strands shall be ASTM A416 Grade 270, 0.6" diameter uncoated 7 wire low relaxation steel strands. Post-tensioning ducts shall be Spiro-Type semi-rigid galvanized.
4. After final post-tensioning, tendons shall be pressure grouted within 72 hours, unless otherwise noted. Ducts shall have grouting vents at anchorage and at each high point along the tendon profile.
5. Ducts shall be secured to prevent misalignment or leakage.
6. The post-tensioning design assumptions are as follows:

Curve friction coefficient	0.18
Wobble friction coefficient	0.0002/ft.
Anchor set	3/8"

7. Corrosion inhibiting powder for ferrous metals with a PH between 0.5 to 8.0 shall be applied in the ducts with the dosage recommended by the manufacturer and shall provide up to 24 months protection.

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Eric Y. Matsumoto — 4-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
POST-TENSIONING PROFILE AND NOTES

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB9.2 OF 2 SHEETS

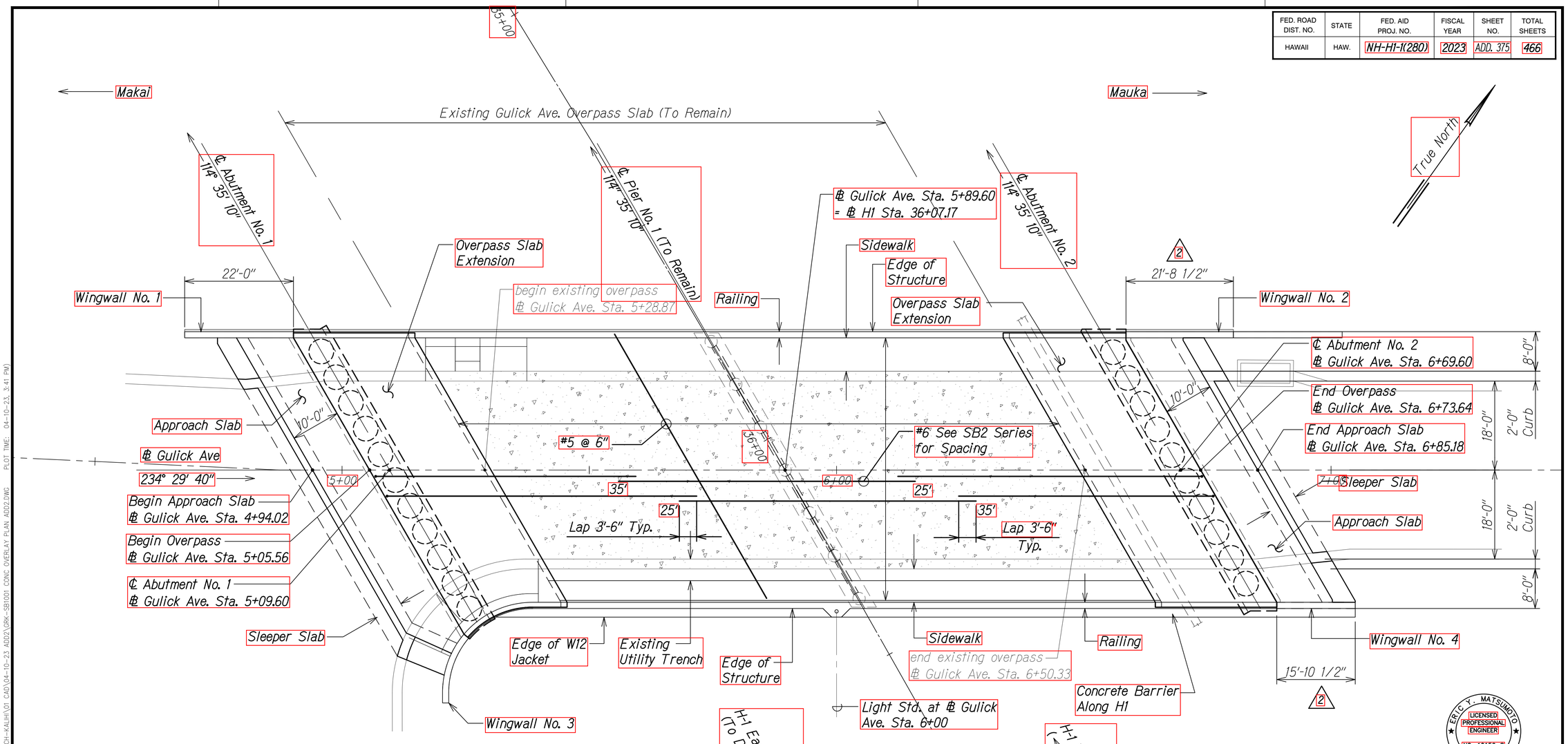
DATE	REVISION
4/7/23	2 Revised Callout

ADD. 374

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB0902 PT ELEV ADD2.DWG PLOT TIME: 04-10-23, 3:40 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 375	466



Legend:

Concrete Overlay

CONCRETE OVERLAY PLAN

Scale: 1" = 10'

ERIC Y. MATSUMOTO
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NO. 10156-S
HAWAII, U.S.A.

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Eric Y Matsumoto
4-30-24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS CONCRETE OVERLAY PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB10.1 OF 2 SHEETS

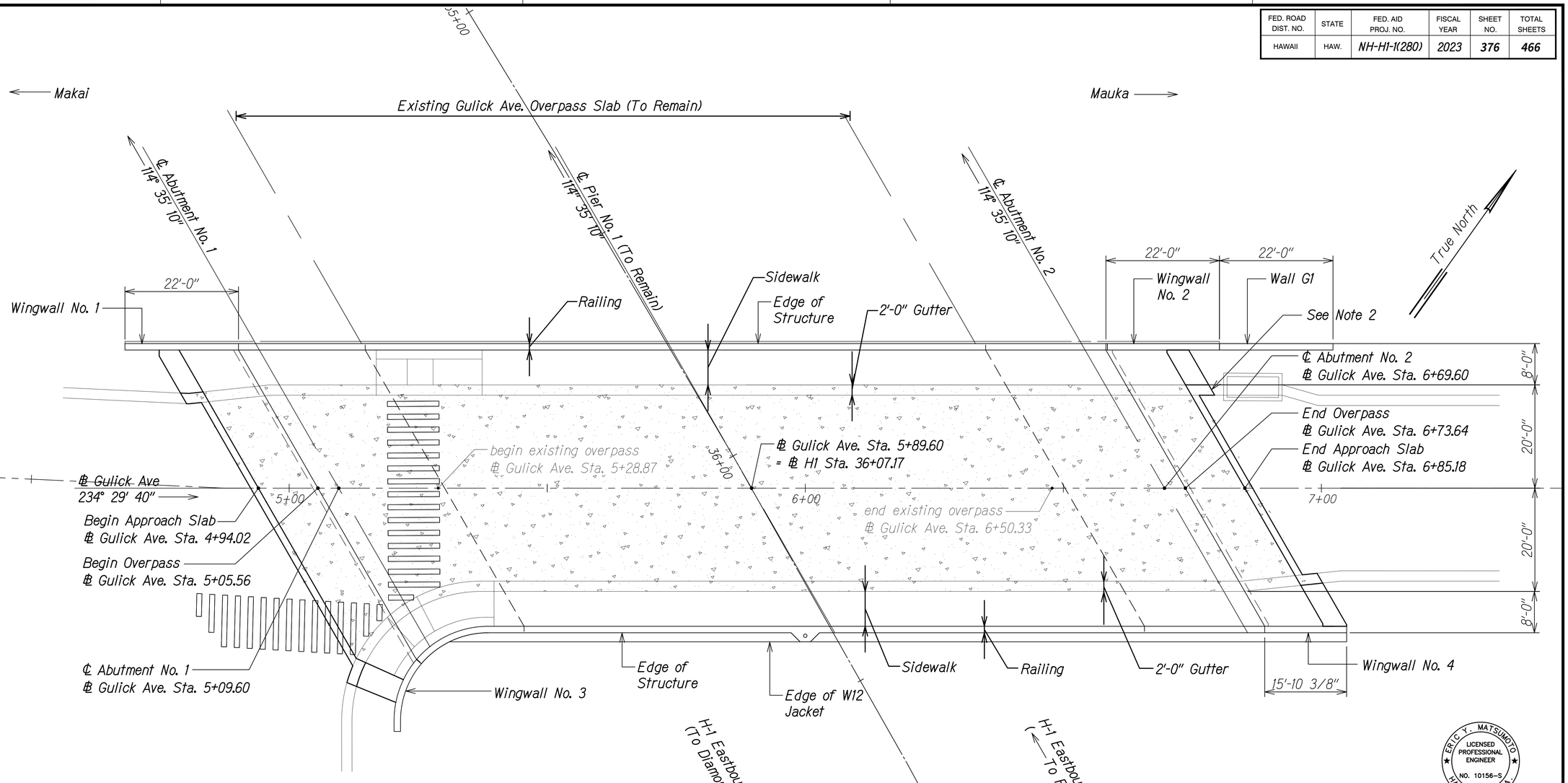
DATE	REVISION
4/7/23	2 Revised Text and Dimensions

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB1001 CONC OVERLAY PLAN ADD2.DWG PLOT TIME: 04-10-23, 3:41 PM)

ADD. 375

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	376	466



LEGEND:

Surface Treatment

NOTES:

1. See Special Provisions Section 681 for surface treatment.
2. Finish for portion of sleeper slab without surface treatment shall match finish of new gutter (see Civil).

SURFACE TREATMENT PLAN

Scale: 1" = 10'

ERIC Y. MATSUMOTO
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SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS SURFACE TREATMENT PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

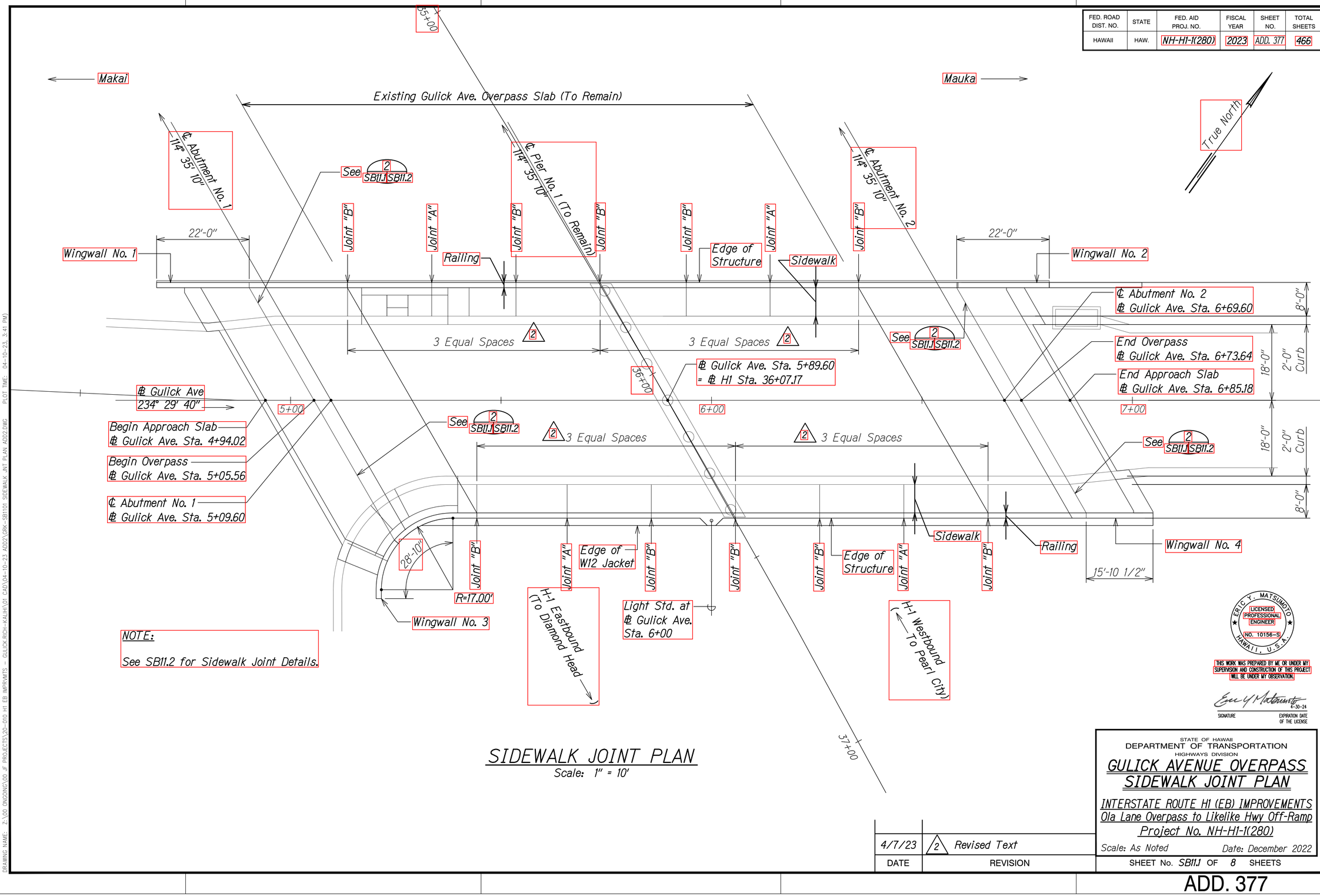
Scale: As Noted Date: December 2022

SHEET No. SB10.2 OF 2 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1002 BRD SUR TREAT PLAN.DWG PLOT TIME: 01-04-23, 9:59 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 377	466



NOTE:

See SB11.2 for Sidewalk Joint Details.

SIDEWALK JOINT PLAN

Scale: 1" = 10'

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NO. 10156-S
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS SIDEWALK JOINT PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB11.1 OF 8 SHEETS

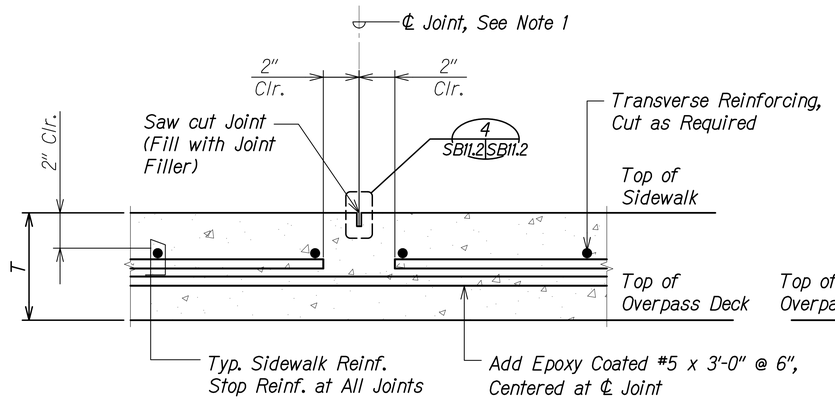
DATE	REVISION
4/7/23	2 Revised Text

ADD. 377

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB1101 SIDEWALK JNT PLAN ADD2.DWG PLOT TIME: 04-10-23, 3:41 PM)

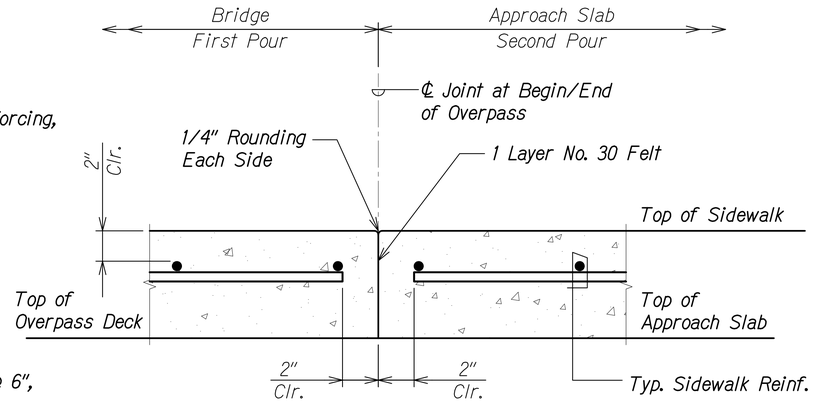
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	378	466



SIDEWALK JOINT "A" DETAIL

Scale: 3" = 1'-0"

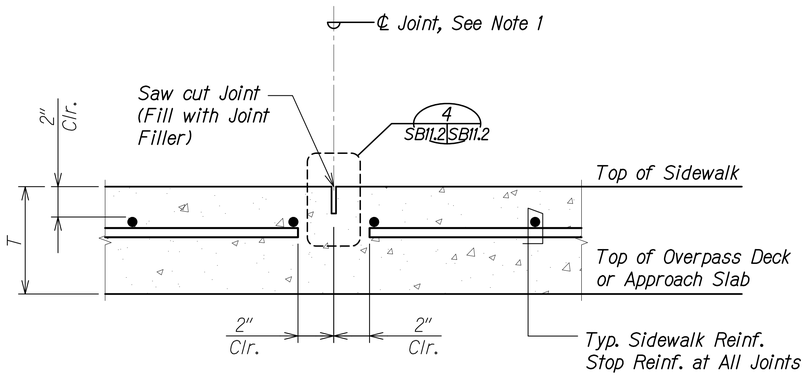
1 SB11.2 SB11.2



JOINT DETAIL AT BEGIN/END OF OVERPASS

Scale: 3" = 1'-0"

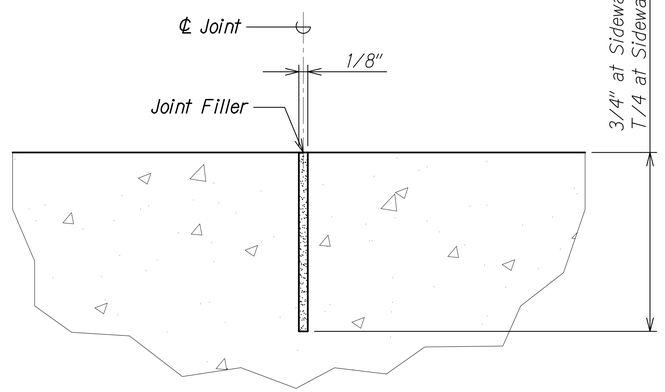
2 SB12.1 SB11.2



SIDEWALK JOINT "B" DETAIL

Scale: 3" = 1'-0"

3 SB11.2 SB11.2



JOINT DETAIL

Full Scale

4 SB11.2 SB11.2

LEGEND:

T = Thickness of Sidewalk or Raised Median

NOTES:

1. Sidewalk joints shall be located as shown on SB11.1. Typical sidewalk joints shall be placed perpendicular to ℄ Overpass. Sidewalk joints at begin/end of Overpass shall follow the skew of the abutment. Sidewalk joints shall match locations of deflection joints in railing.
2. For sidewalk above approach slab and sleeper slab, see SB14.1.
3. Joint filler shall be a semi-rigid epoxy or polyurea material. Filler shall not become brittle in service. Joint filler shall be 100% solids with a minimum shore hardness of A-80 as measured in accordance with ASTM D2240. The material shall be installed full depth in joint without a backer rod and flush with the finish surface.
4. Saw cut sidewalk joints as soon as possible without damaging concrete but no later than 6 hours after pouring concrete.

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Eric Y Matsumoto 4-30-24

SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS SIDEWALK JOINT DETAILS

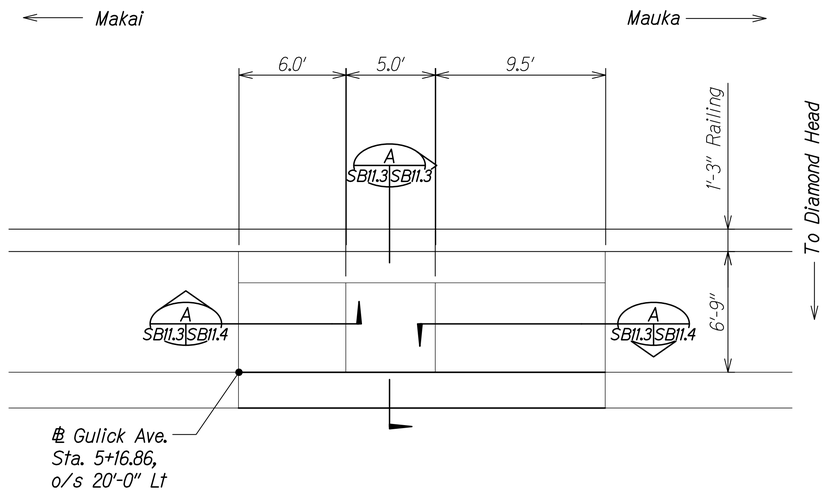
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

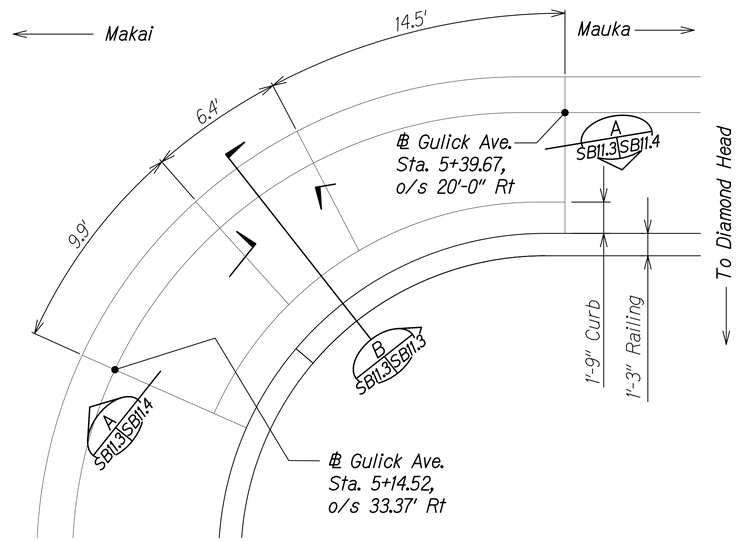
SHEET No. SB11.2 OF 8 SHEETS

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

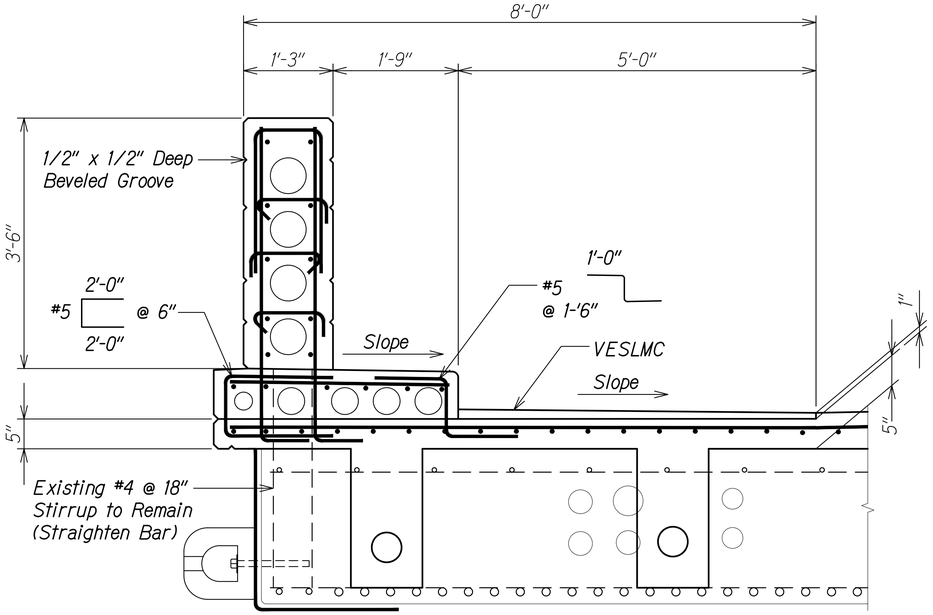
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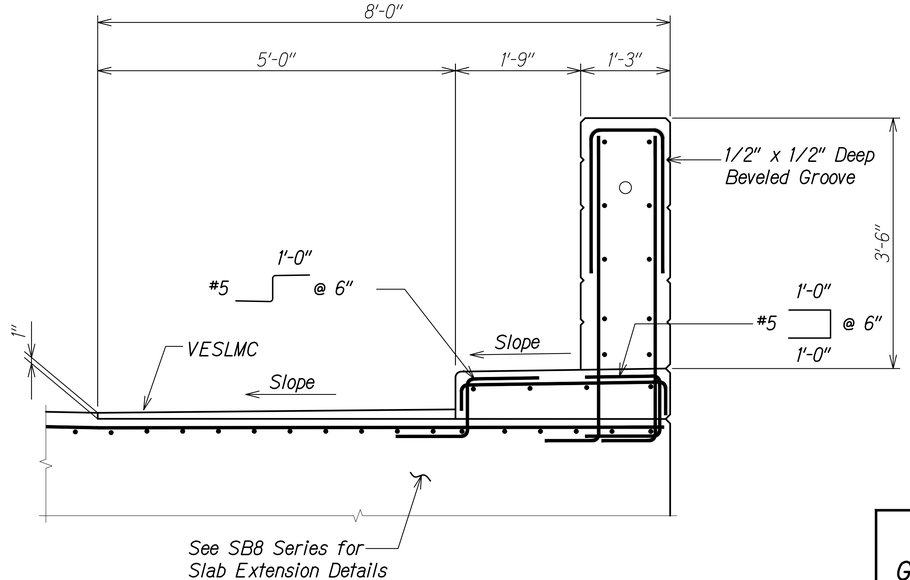
DETAIL 1
Scale: 1/4″ = 1′-0″



DETAIL 2
Scale: 1/4″ = 1′-0″



SECTION A
Scale: 1″ = 1′-0″ SB12.1 SB11.3



SECTION B
Scale: 1″ = 1′-0″ SB11.3 SB11.3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	379	466

NOTES:

1. For slopes and elevations, see Civil drawings.
2. For typical railing reinforcement, see sheets SB8.11, SB8.12, and SB12.2 as applicable.

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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SIGNATURE — EXPIRATION DATE OF THE LICENSE 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS CURB RAMPS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

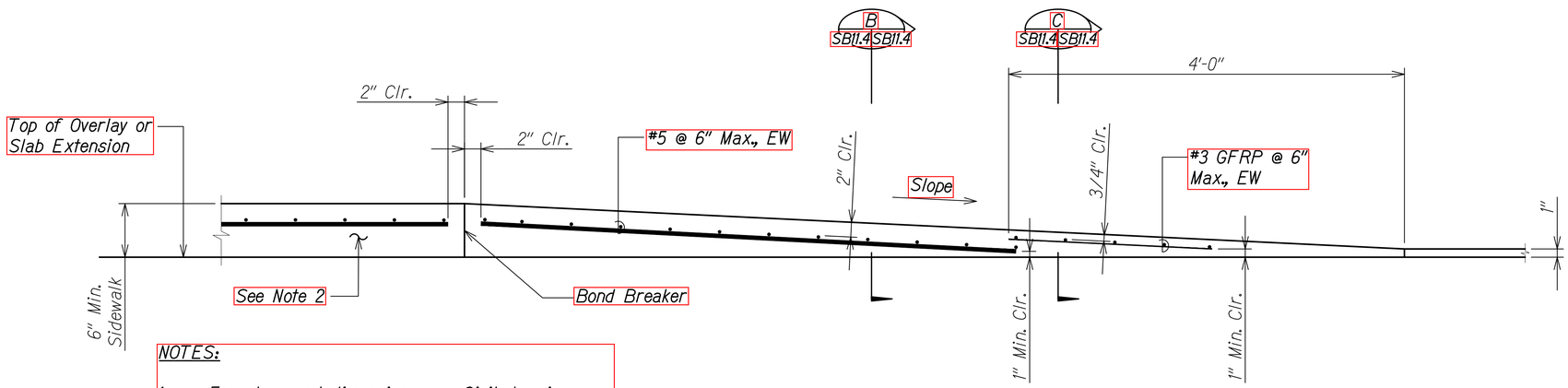
Scale: As Noted — Date: December 2022

SHEET No. SB11.3 OF 8 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1103 CURB RAMP PLAN.DWG PLOT TIME: 01-04-23, 10:00 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 380	466



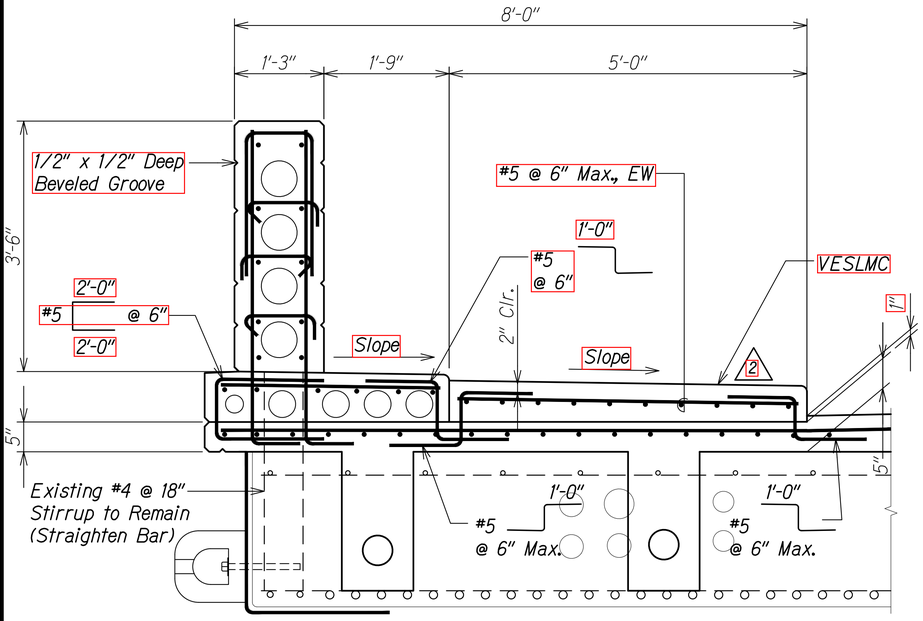
NOTES:

1. For slope and dimensions, see Civil drawings.
2. See sheets SB2.5, SB8.11 and SB8.12 for sidewalk reinforcing as applicable.

TYPICAL CURB RAMP SECTION

Not to Scale

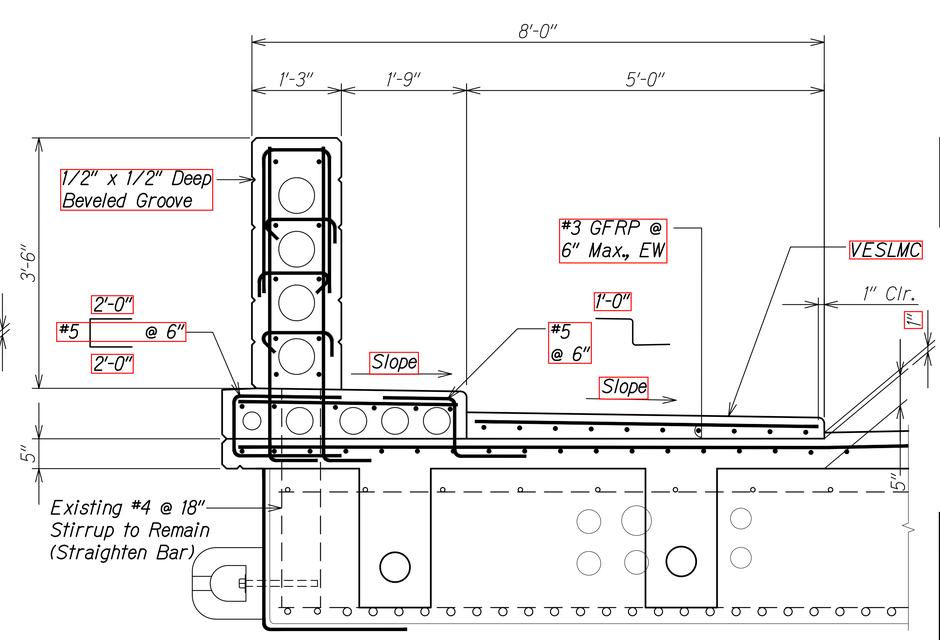
A
SB11.3 SB11.4



SECTION

Scale: 1" = 1'-0"

B
SB11.4 SB11.4



SECTION

Scale: 1" = 1'-0"

C
SB11.4 SB11.4

DATE	REVISION
4/7/23	2 Revised Section

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

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS CURB RAMPS

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

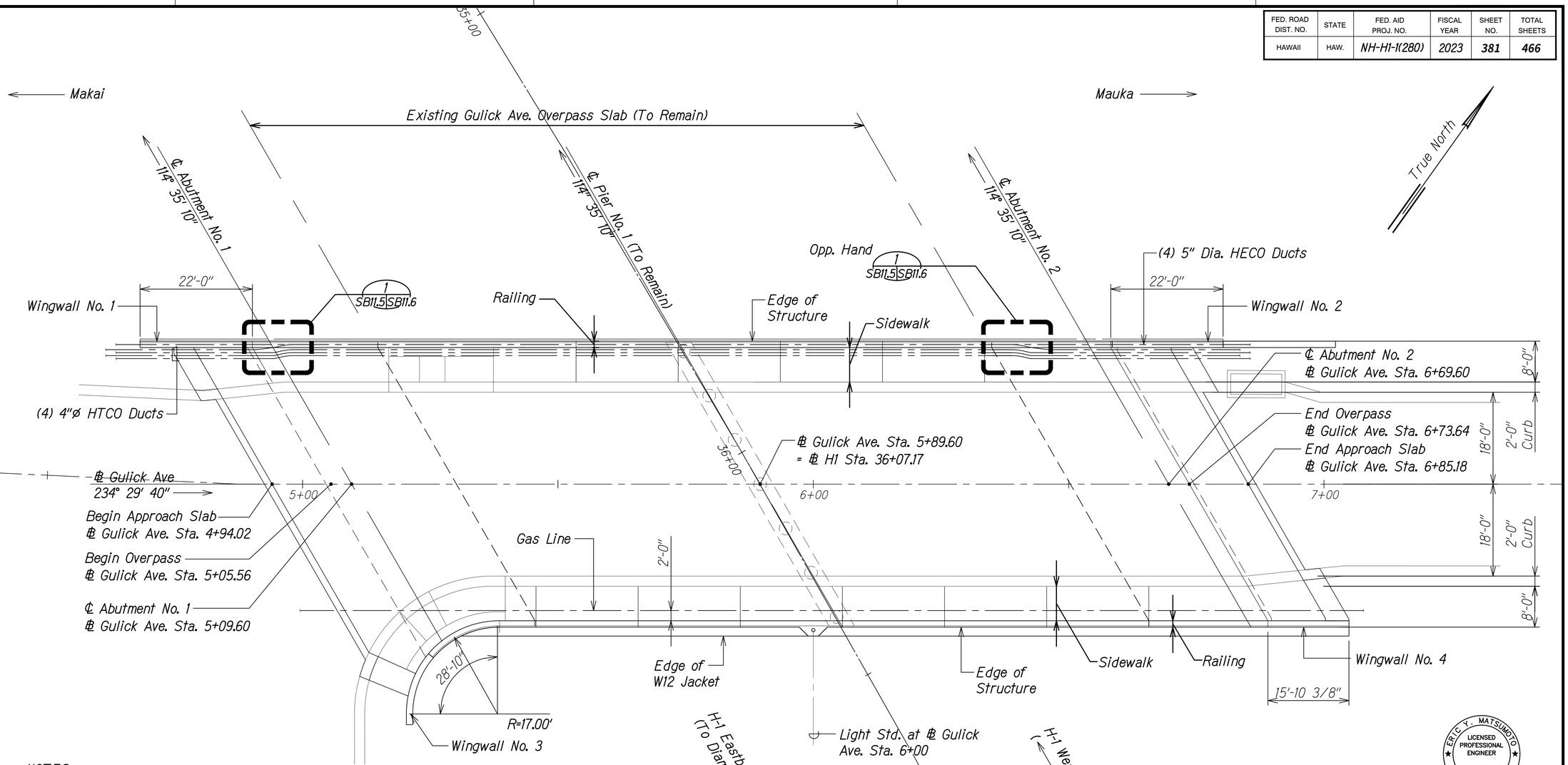
Scale: As Noted Date: December 2022

SHEET No. SB11.4 OF 8 SHEETS

ADD. 380

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB1104 CURB RAMP PLAN ADD2.DWG PLOT TIME: 04-10-23, 3:41 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	381	466



NOTES:

1. See Civil sheets for gas line.
2. See Electrical sheets for HECO line.
3. See SB11.1 for sidewalk joint plan.
4. For 5" Dia. HECO ducts, see SB5.1 and SB12.4 for additional information.

UTILITIES IN SIDEWALK

Scale: 1" = 10'

ERIC Y. MATSUMOTO
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SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
UTILITIES IN SIDEWALK

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

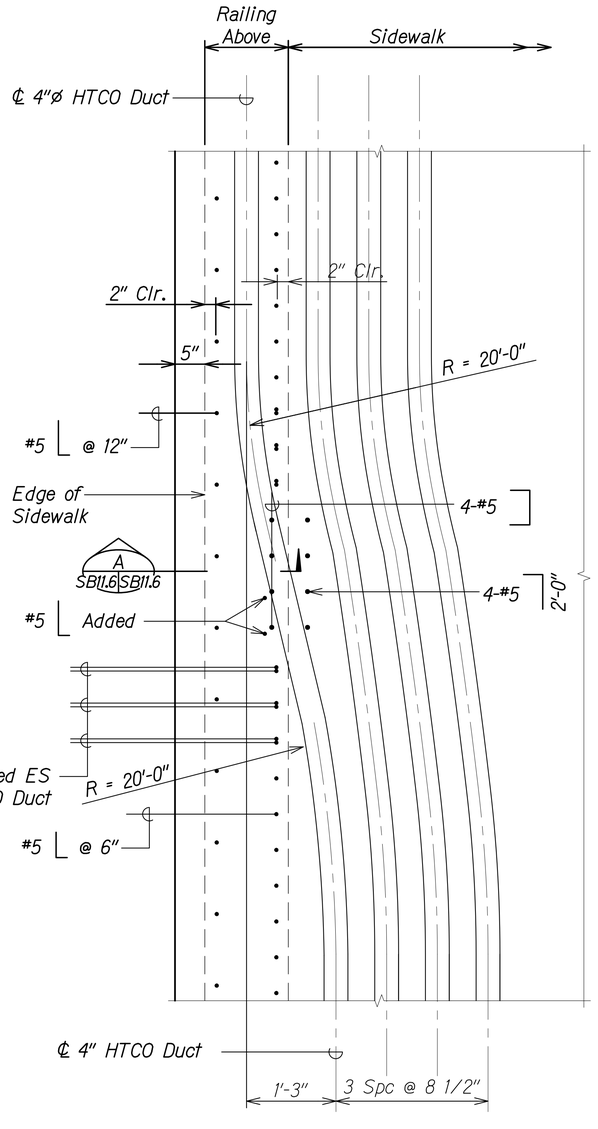
Scale: As Noted Date: December 2022

SHEET No. SB11.5 OF 8 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1105 UTILITY PLAN.DWG PLOT TIME: 01-04-23, 10:01 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	382	466



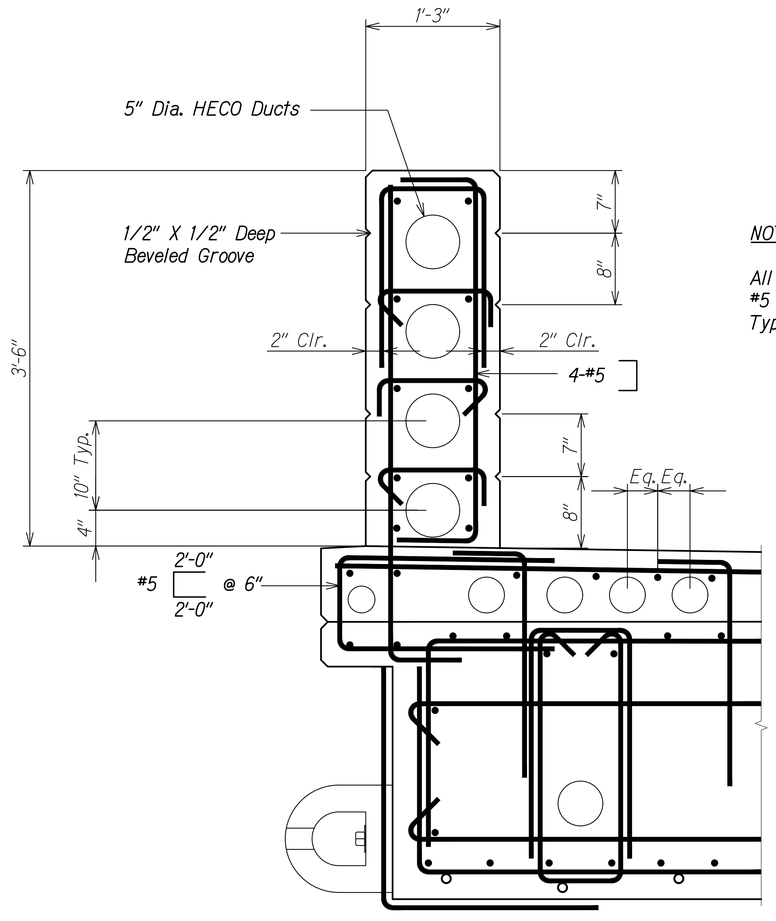
HTCO DUCT TRANSITION IN SIDEWALK

Scale: 1" = 1'-0"

1 SB11.6 SB11.6

NOTE:

Sidewalk reinforcement is not shown for clarity.



SECTION

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

A SB11.6 SB11.6

NOTE:

All reinforcing steel in railing and #5 ☐ @ 6" shall be ASTM A1035 Type CS, Grade 100.

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HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
HTCO DUCT TRANSITION IN SIDEWALK

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

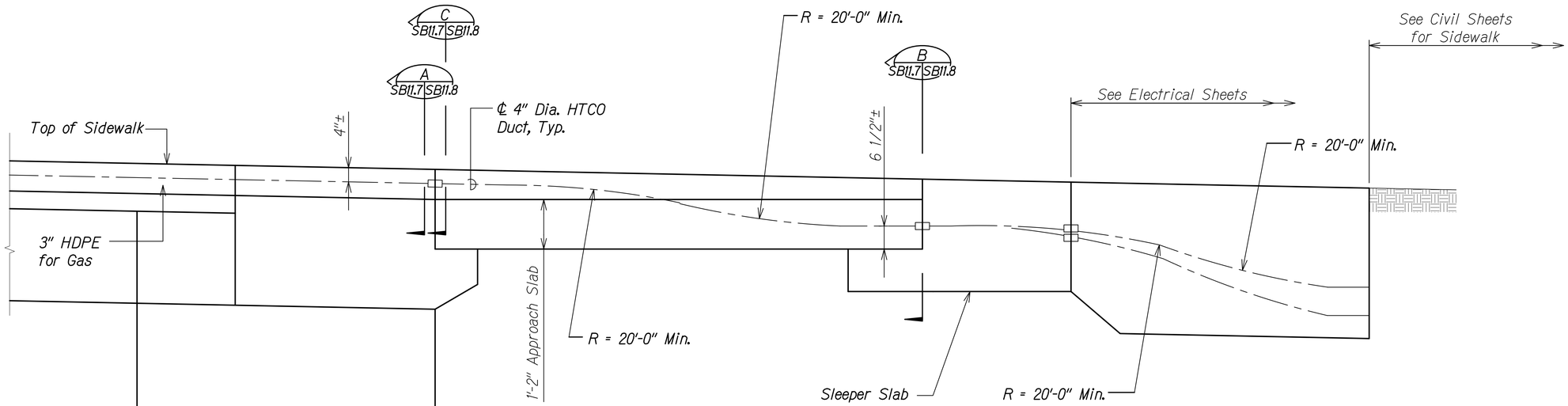
SHEET No. SB11.6 OF 8 SHEETS

382

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1106 HTCO DUCT TRANS.DWG PLOT TIME: 01-04-23, 10:01 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	383	466



NOTES:

1. Elevation shows 4" Dia. HTCO duct location without reinforcing. For reinforcing, see SB5.2.
2. See Civil drawings for approximate finish grade.
3. Makai side (at Wingwall No. 1) is shown. Mauka side (at Wingwall No. 2) is similar.

HTCO DUCT ELEVATION
Scale: 3/4" = 1'-0"

A
SB11.7 | SB11.7

ERIC Y. MATSUMOTO
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HAWAII, U.S.A.

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
HTCO DUCT ELEVATION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

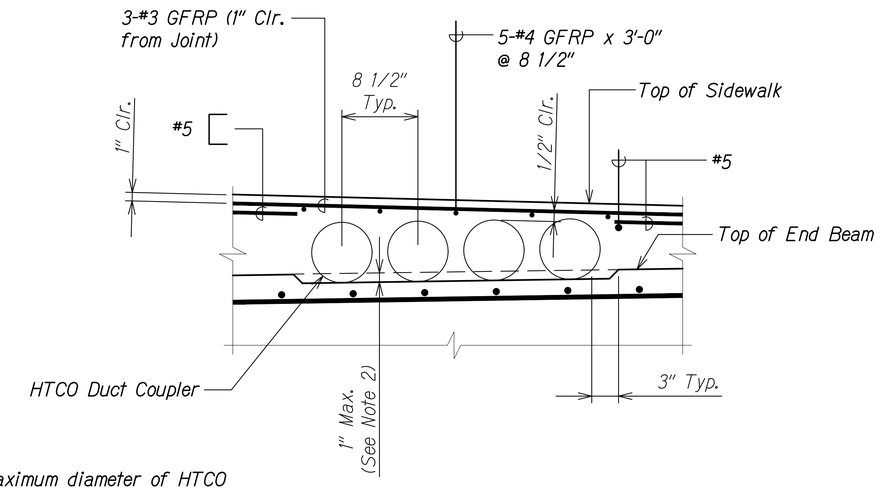
Scale: As Noted Date: December 2022

SHEET No. SB11.7 OF 8 SHEETS

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1107 HTCO DUCT.DWG PLOT TIME: 01-04-23, 10:01 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	384	466

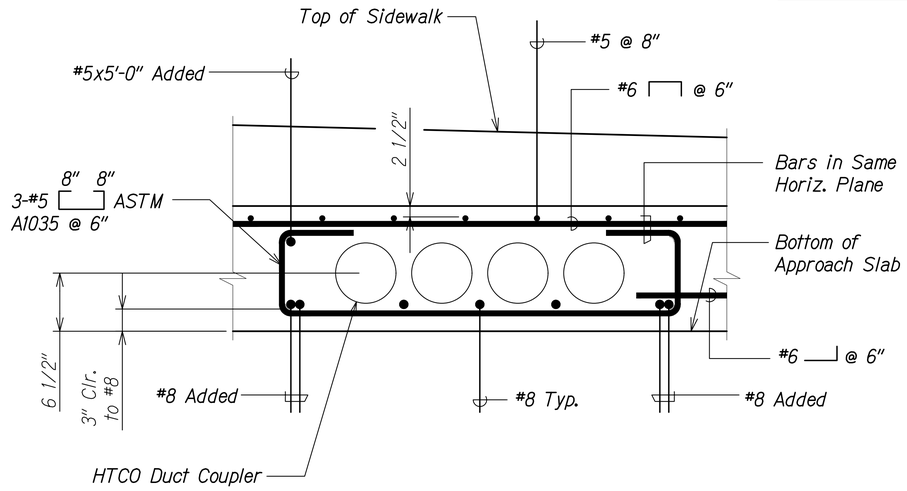


NOTES:

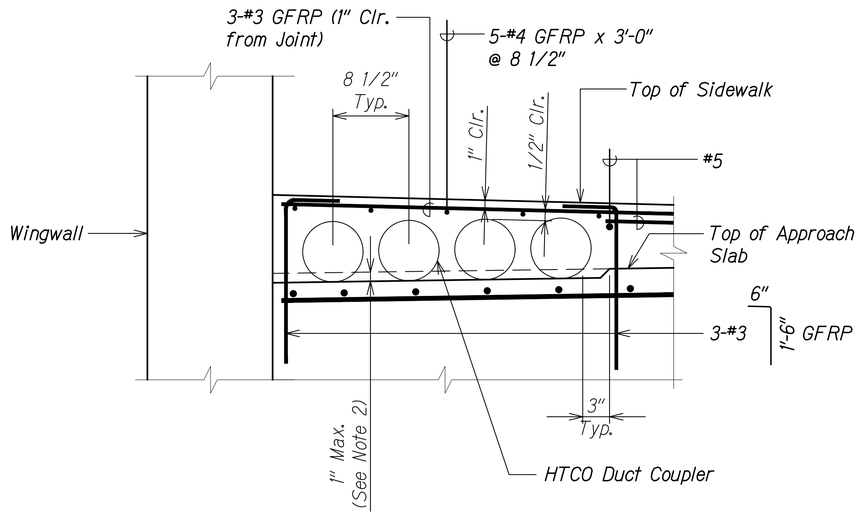
1. Maximum diameter of HTCO duct coupler = 6.75".

2. Top of End Beam or Approach Slab may be lowered by 1" under the duct coupler.

SECTION A
Scale: 1 1/2" = 1'-0"
SB11.7 | SB11.8



SECTION B
Scale: 1 1/2" = 1'-0"
SB11.7 | SB11.8



SECTION C
Scale: 1 1/2" = 1'-0"
SB11.7 | SB11.8

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHA\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1108 HTCO DUCT TRANS.DWG PLOT TIME: 01-04-23, 10:01 AM

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NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

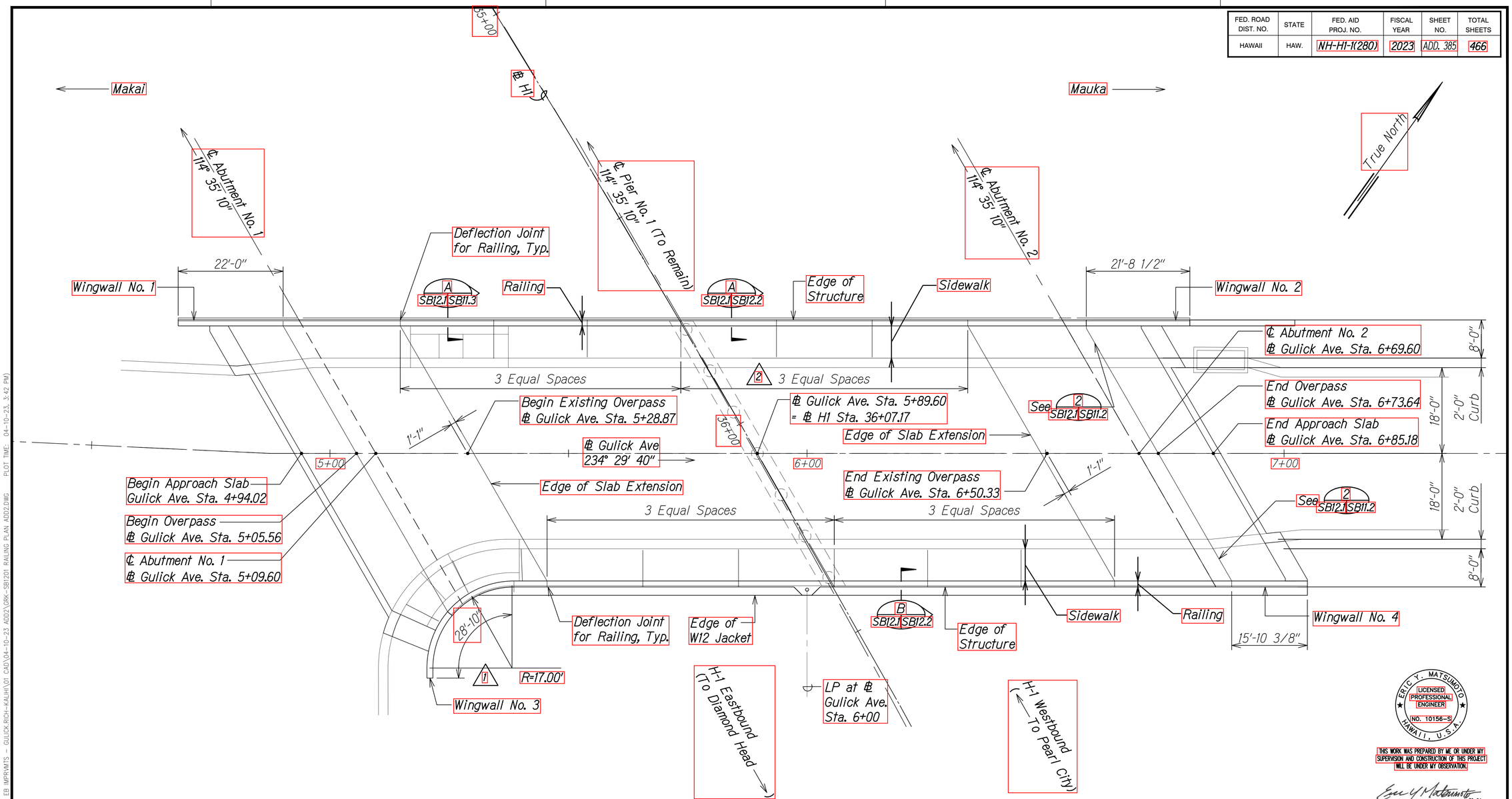
GULICK AVENUE OVERPASS HTCO DUCT SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB11.8 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 385	466



RAILING PLAN

Scale: 1" = 10'

DATE	REVISION
4/7/23	2 Revised Text

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LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS RAILING PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

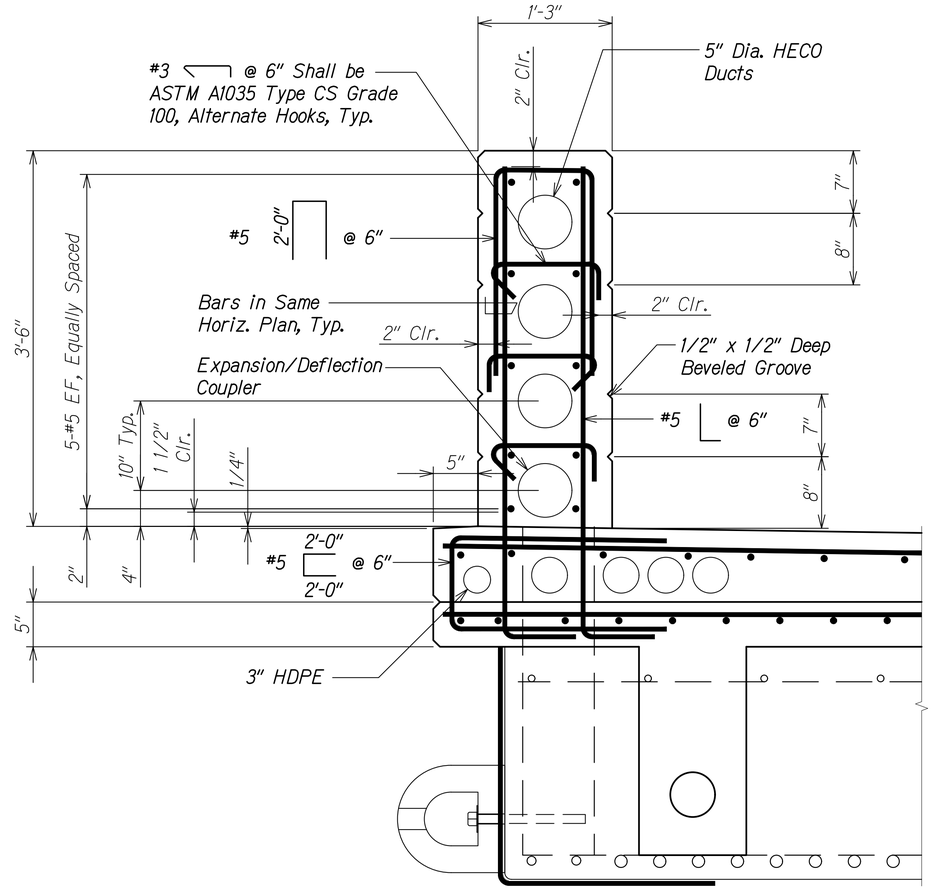
SHEET No. SBI2.1 OF 6 SHEETS

ADD. 385

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

PLOT TIME: 04-10-23, 3:42 PM)
DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SBI201 RAILING PLAN ADD2.DWG

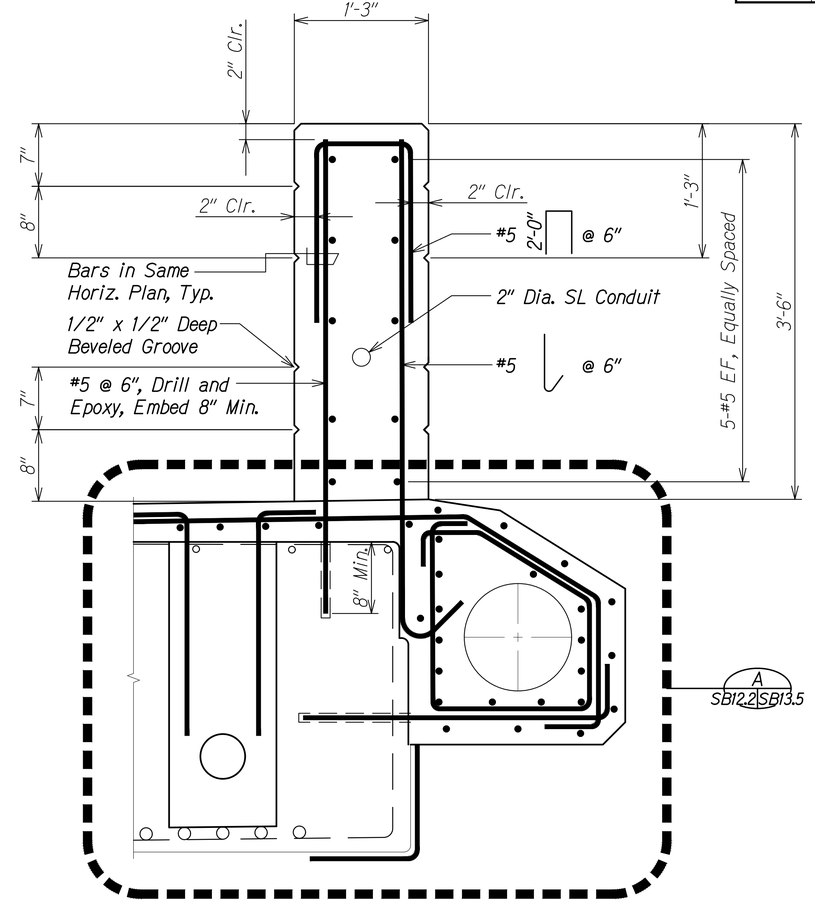
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	386	466



TYPICAL RAILING (PEARL CITY SIDE OF EXISTING OVERPASS)

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

A SB12.1 | SB12.2



TYPICAL RAILING (DIAMOND HEAD SIDE OF EXISTING OVERPASS)

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

B SB12.1 | SB12.2

NOTES:

1. Maximum diameter of expansion/deflection coupler shall be 7 3/4" for 5" diameter duct and 5 1/8" for 3" diameter duct.
2. All reinforcing steel in railing (Pearl City side of existing overpass) shall be ASTM A1035 Type CS, Grade 100.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1202 RAILING DET.DWG PLOT TIME: 01-04-23, 10:02 AM)

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SIGNATURE | EXPIRATION DATE OF THE LICENSE 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

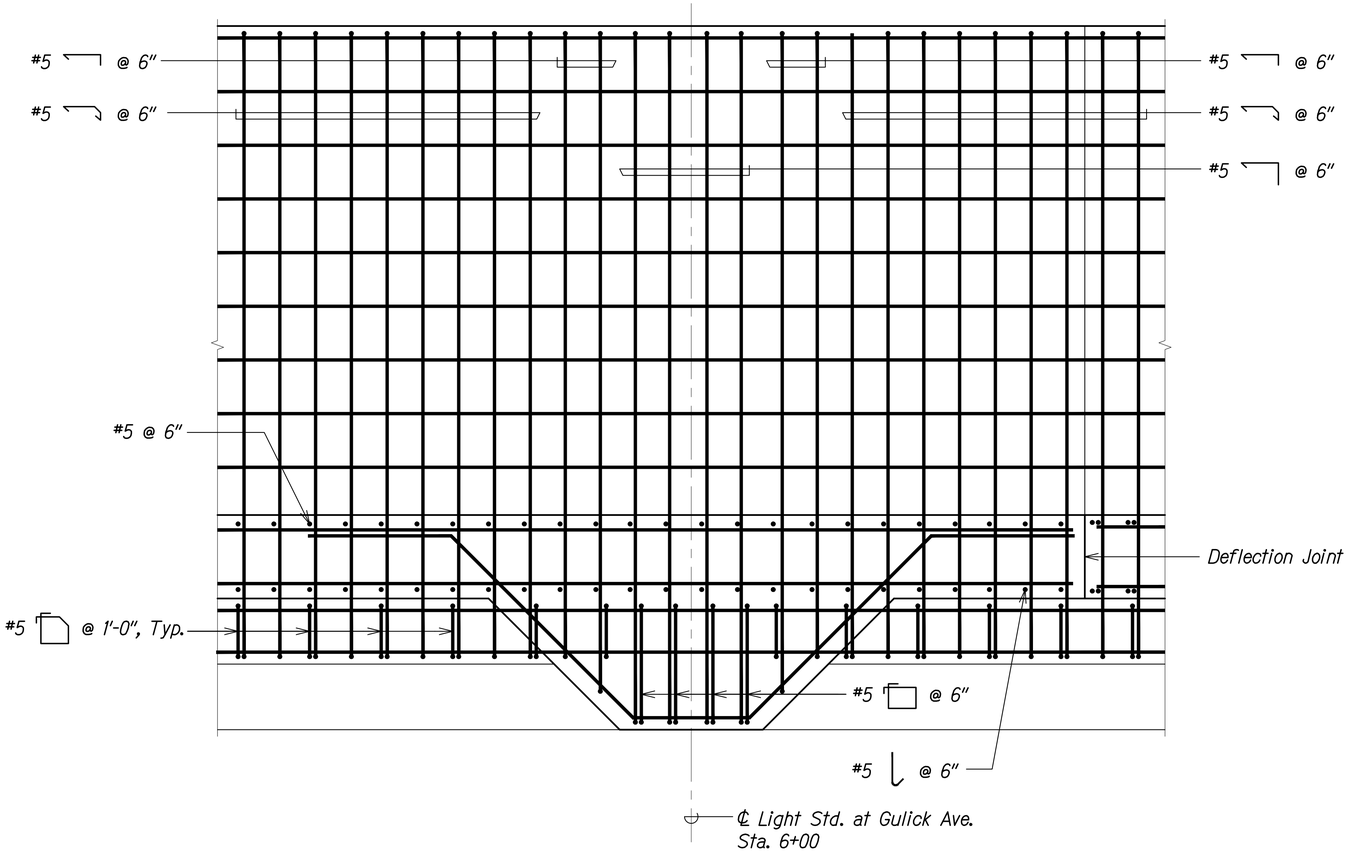
GULICK AVENUE OVERPASS TYPICAL RAILING

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB12.2 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	387	466



THICKENED RAILING AT LIGHT STANDARD
SECTION THRU SIDEWALK

Scale: 1" = 1'-0"

A
SBI2.3 | SBI2.3

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SBI203 SIDEWALK.DWG PLOT TIME: 01-04-23, 10:02 AM)

ERIC Y. MATSUMOTO
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NO. 10156-S
HAWAII, U.S.A.

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Eric Y Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

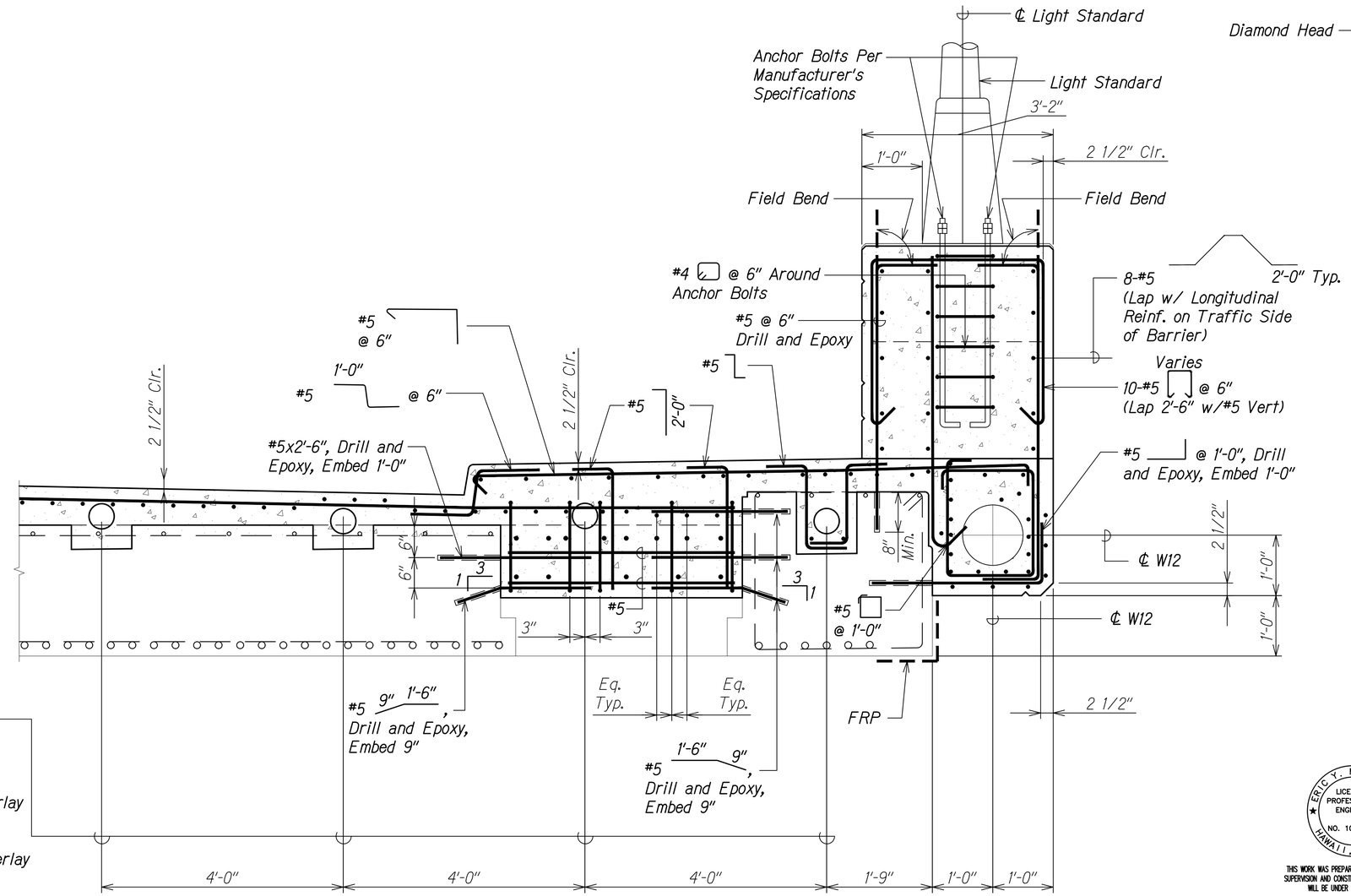
GULICK AVENUE OVERPASS
THICKENED RAILING AT LIGHT STANDARD

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SBI2.3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	388	466



NOTES:

1. Place transverse reinforcing bars in concrete overlay along Az. 114° 35' 10".
2. Place longitudinal reinforcing bars in concrete overlay and sidewalk along Az. 234° 29' 40".
3. Place transverse reinforcing bars in sidewalk perpendicular to railing.
4. See SB7.2 for reinforcing in trenches (not shown on this sheet for clarity).
5. See SB12 series for railing details.
6. See SB16 for FRP details.
7. Pour deck between sidewalks 1/8" higher than shown in this section. Upper 1/8" of concrete will be removed during blanket grinding.

SECTION AT LIGHT STANDARD

Scale: 1" = 1'-0"

A SB13.1 SB12.4

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
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HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
SECTION AT LIGHT STANDARD

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

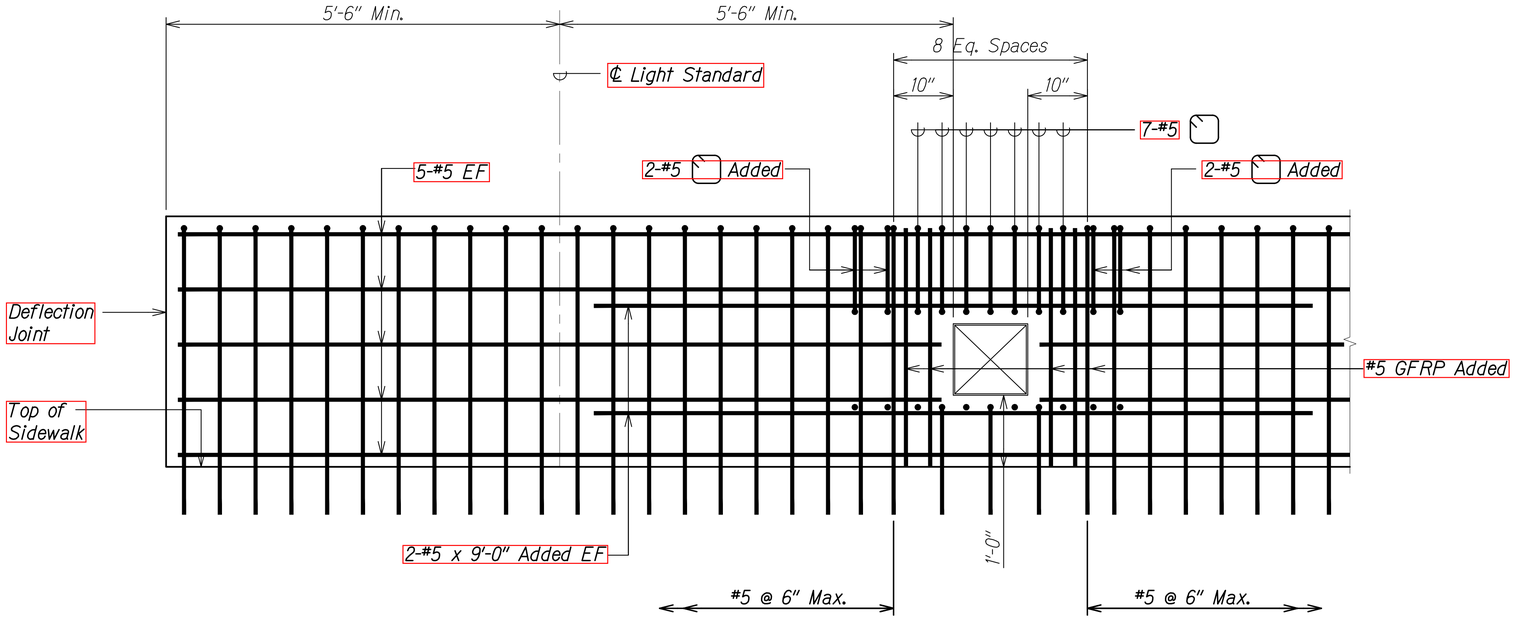
Scale: As Noted — Date: December 2022

SHEET No. SB12.4 OF 6 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1204 LP W12 JACKET.DWG PLOT TIME: 01-04-23, 11:22 AM)

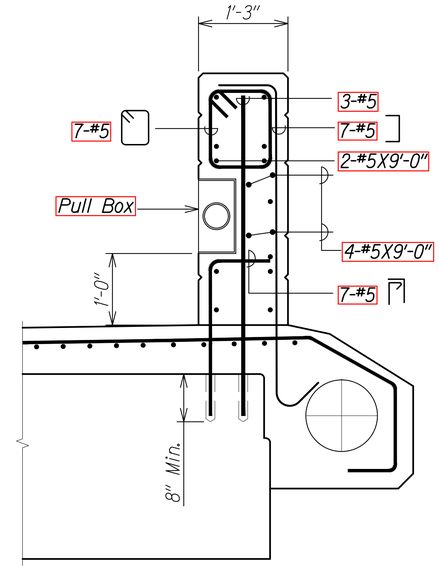
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 389	466



RAILING REINFORCEMENT - TRAFFIC FACE

Scale: 1" = 1'-0"

A SB12.5 SB12.5



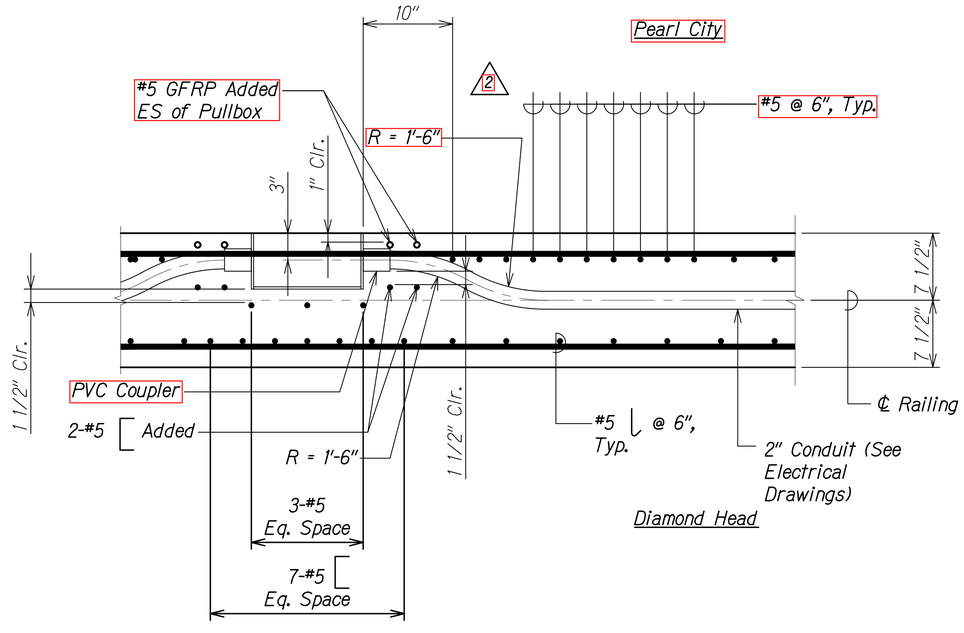
2 NOTE:

See SB13.5 for W12 jacket reinforcing.

SECTION

Scale: 1" = 1'-0"

C SB12.5 SB12.5



RAILING REINFORCEMENT AT PULLBOX

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

B SB12.5 SB12.5

DATE	REVISION
4/7/23	2 Added Note and Callout

ERIC Y. MATSUMOTO LICENSED PROFESSIONAL ENGINEER NO. 10156-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS PULLBOX DETAILS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

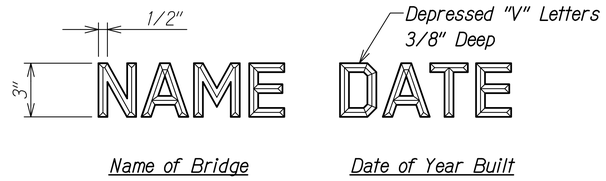
SHEET No. SB12.5 OF 6 SHEETS

ADD. 389

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB1205 DUCT AT RAILG ADD2.DWG PLOT TIME: 04-10-23, 3:43 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	390	466

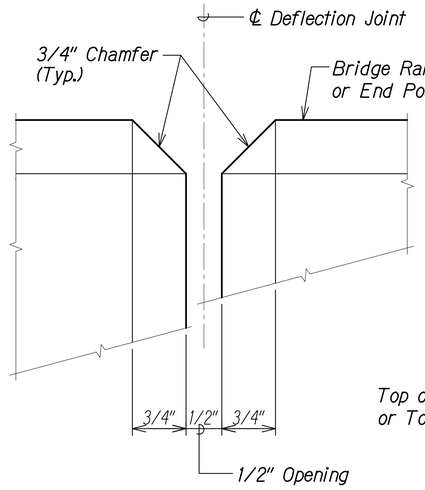


NOTES:

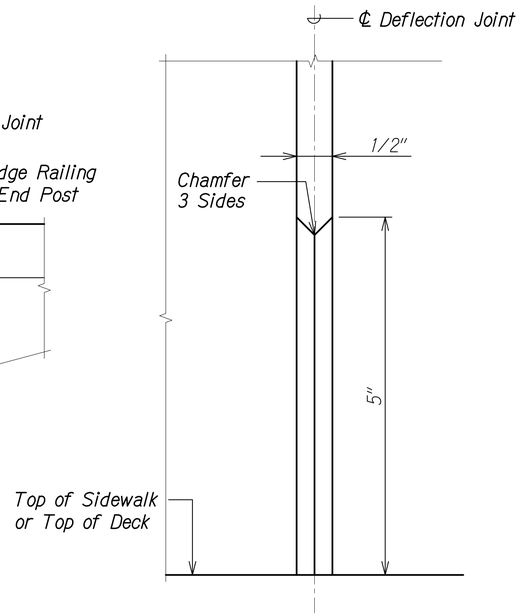
1. Exact details and spacing of letter and figures and location shall be as directed by the Engineer. Gothic letters and figures approximating the dimensions shown will be acceptable if approved by the Engineer.
2. Name & date shall be place on the trailing (exit) end post on each side of bridge.
3. Unless otherwise directed by the Engineer, The name of the bridge shall be "GULICK AVENUE OVERPASS". The year shall be the year at completion.

TYPICAL DETAIL OF LETTERS AND FIGURES

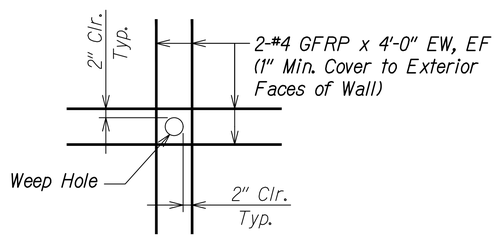
BRIDGE IDENTIFICATION DETAIL (1) SBI2.6 | SBI2.6
Scale: 3" = 1'-0"



DEFLECTION JOINT DETAIL (2) SBI2.6 | SBI2.6
Scale: 1" = 1"



DEFLECTION JOINT DETAIL (3) SBI2.6 | SBI2.6
Scale: 1" = 1"



ADDED REINF. AT WEEP HOLES (4) SBI2.6 | SBI2.6
Scale: 3/4" = 1'-0"

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
TYPICAL DETAILS

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

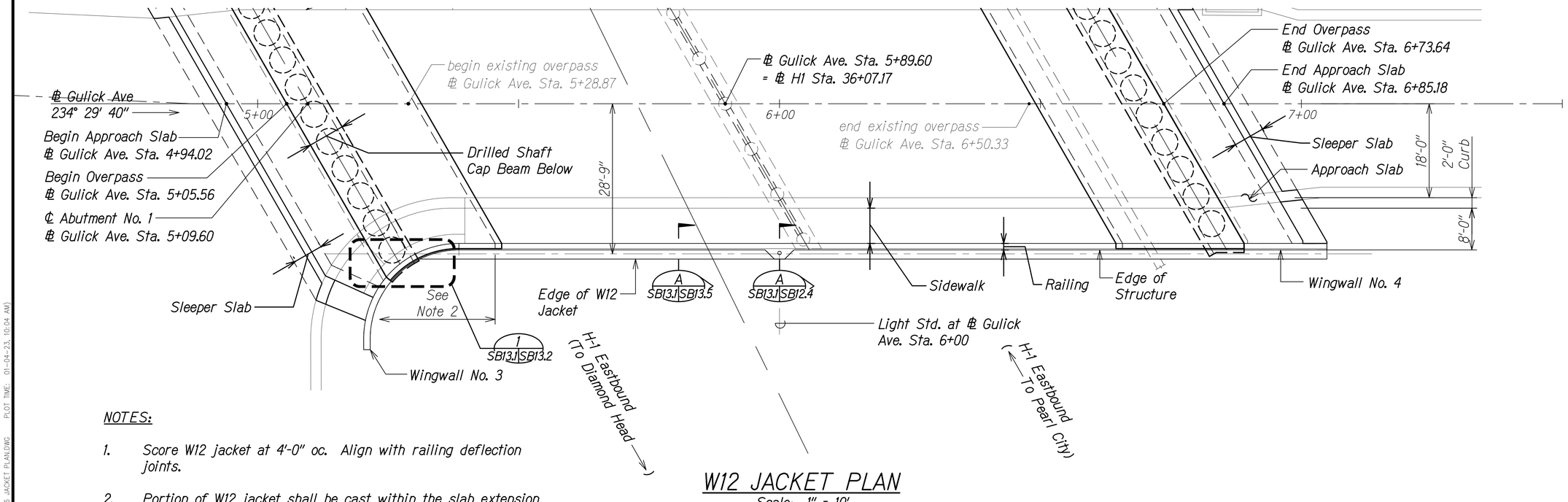
Scale: As Noted Date: December 2022

SHEET No. SBI2.6 OF 6 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1206 TYP DTLS.DWG PLOT TIME: 01-04-23, 10:03 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	391	466

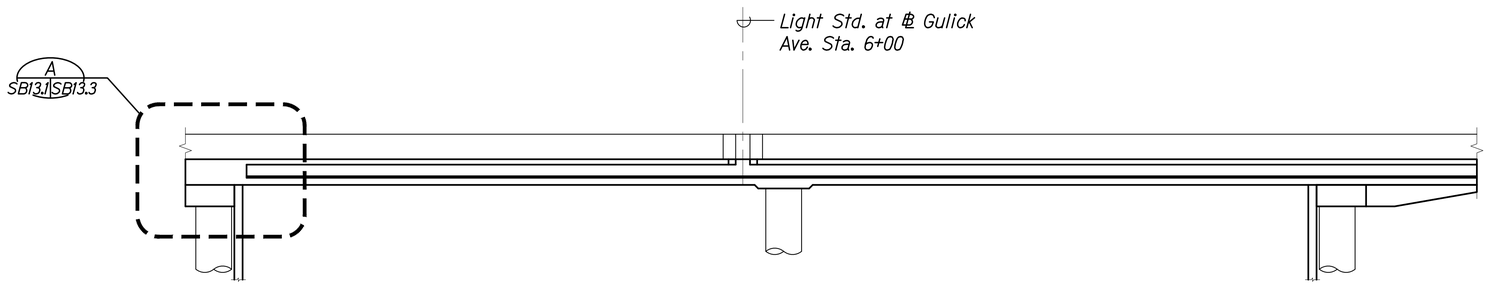


W12 JACKET PLAN

Scale: 1" = 10'

NOTES:

1. Score W12 jacket at 4'-0" oc. Align with railing deflection joints.
2. Portion of W12 jacket shall be cast within the slab extension side. Concrete for this portion of W12 jacket shall be SBD (See Spec Section 601).



W12 JACKET ELEVATION

Scale: 1" = 10'

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SBI301 W16 JACKET PLAN.DWG PLOT TIME: 01-04-23, 10:04 AM)

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) — DATE

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto — 4-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

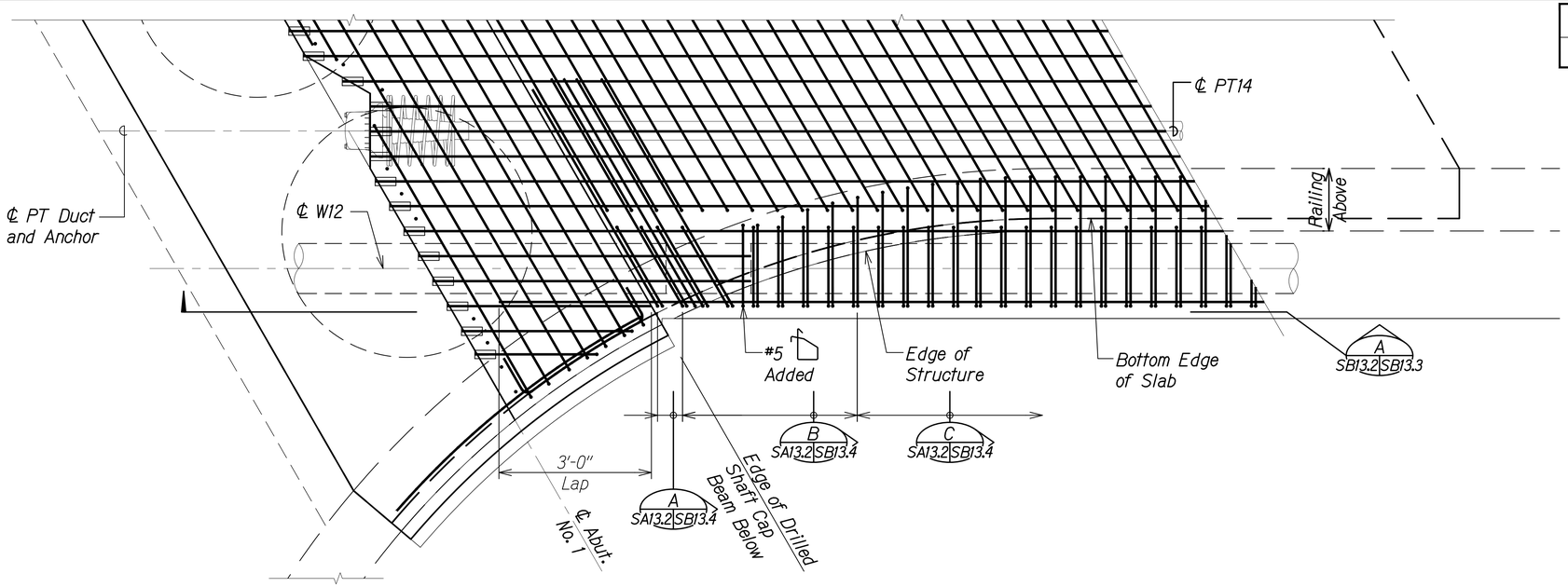
GULICK AVENUE OVERPASS
W12 JACKET

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SBI3.1 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	392	466



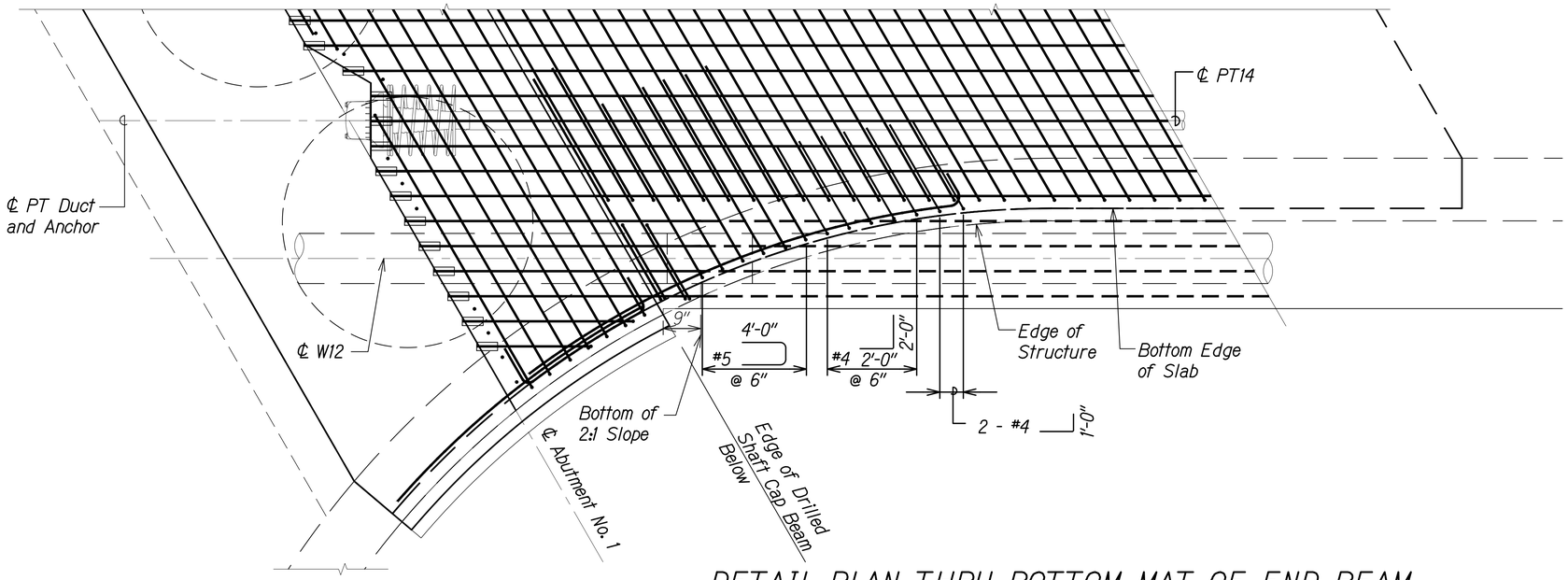
DETAIL PLAN THRU TOP MAT OF END BEAM DIAMOND HEAD SIDE

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

1 SI3.1 SI3.2

NOTE:

Sidewalk, railing, and balance of slab extension reinforcement not show for clarity.



DETAIL PLAN THRU BOTTOM MAT OF END BEAM DIAMOND HEAD SIDE

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

2 SI3.1 SI3.2

ERIC Y. MATSUMOTO
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Eric Y. Matsumoto — 6-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
W12 JACKET END BEAM TOP & BOTT. MAT SECTIONS

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

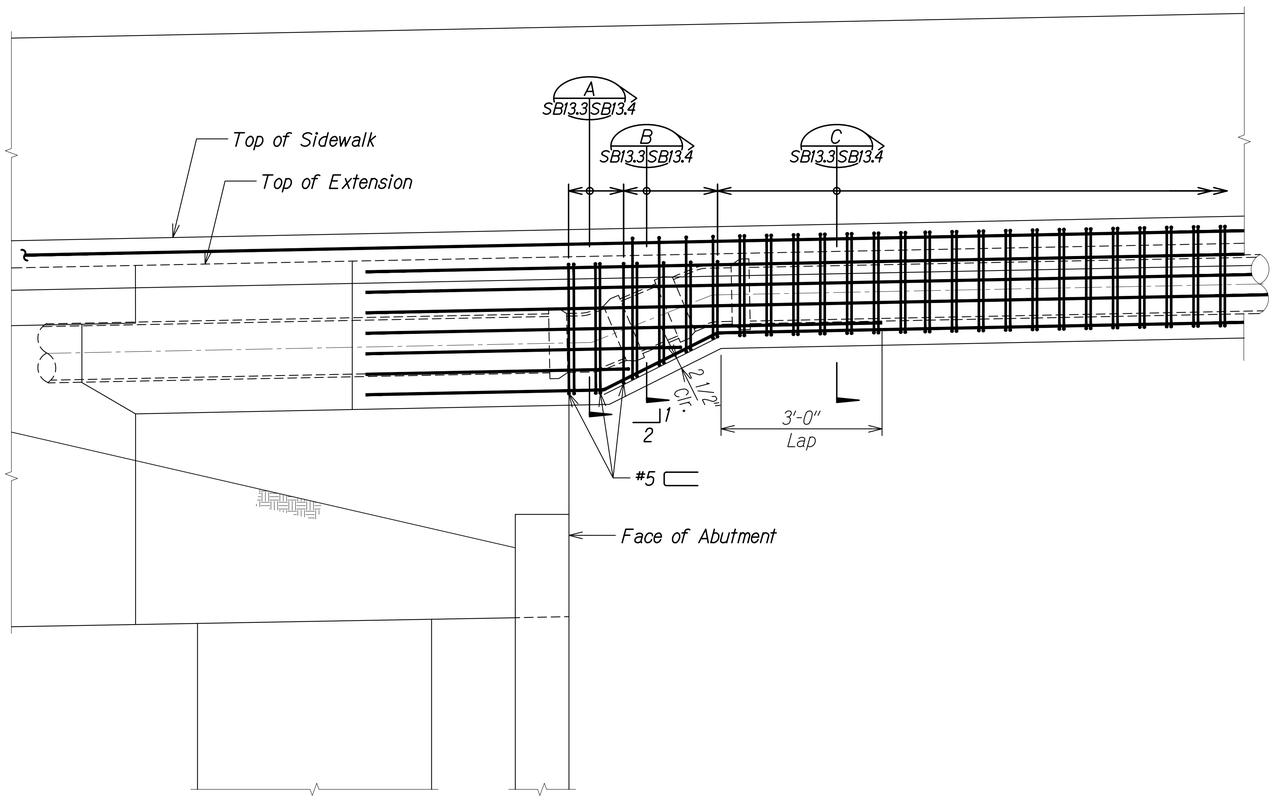
Scale: As Noted — Date: December 2022

SHEET No. SBI3.2 OF 5 SHEETS

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1302 ABUT1 PLAN SECT.DWG PLOT TIME: 01-04-23, 10:04 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	393	466



SECTION THRU TOP MAT OF END BEAM DIAMOND HEAD SIDE

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

A
S13.2 | S13.3

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
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HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
W12 JACKET ELEV. AT ABUT. NO. 1

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

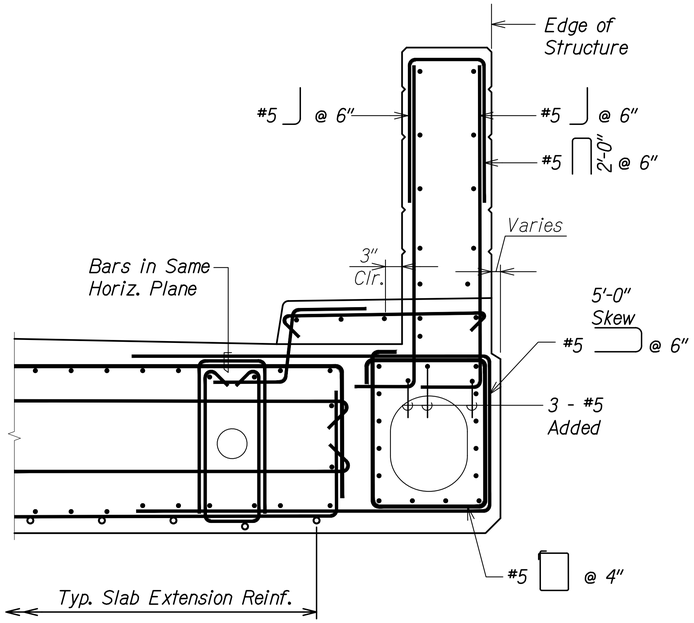
Scale: As Noted Date: December 2022

SHEET No. SBI3.3 OF 5 SHEETS

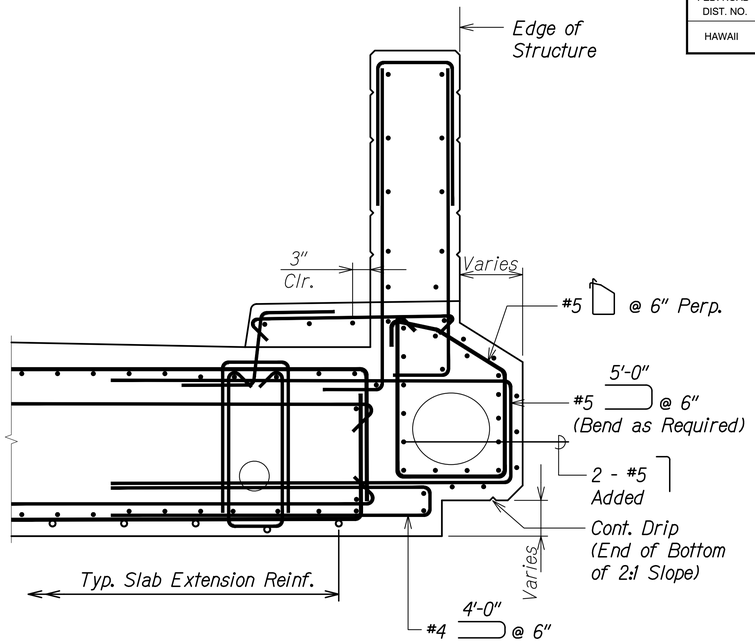
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

DRAWING NAME: Z:\OD ONGOING\OD JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SBI303 WW3 DH ELEV.DWG PLOT TIME: 01-04-23, 10:04 AM)

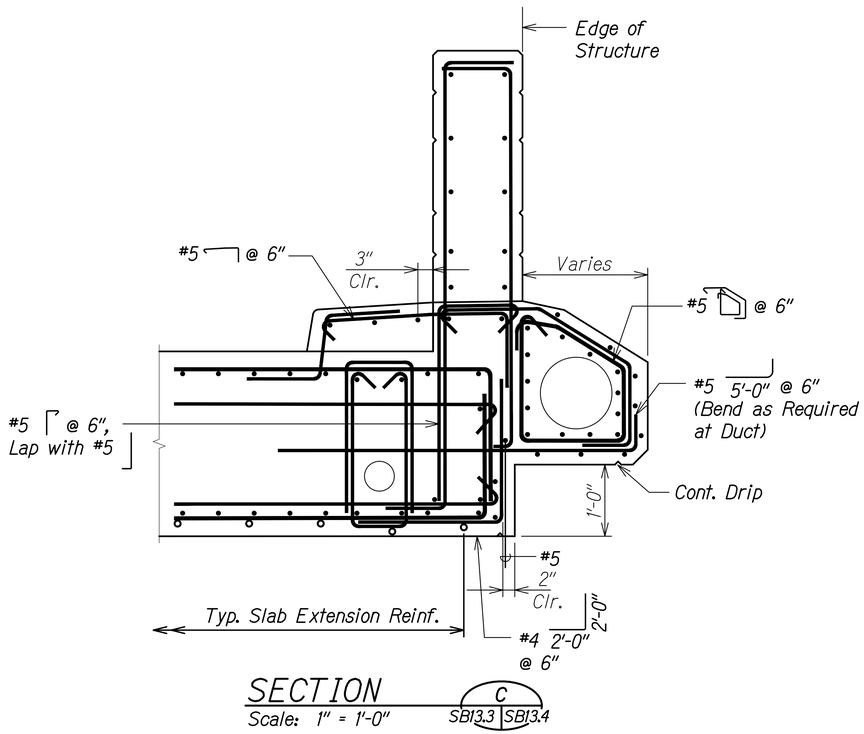
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	394	466



SECTION A
Scale: 1" = 1'-0"
SBI3.3 | SBI3.4



SECTION B
Scale: 1" = 1'-0"
SBI3.3 | SBI3.4



SECTION C
Scale: 1" = 1'-0"
SBI3.3 | SBI3.4

ERIC Y. MATSUMOTO
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NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 6-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
W12 JACKET SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

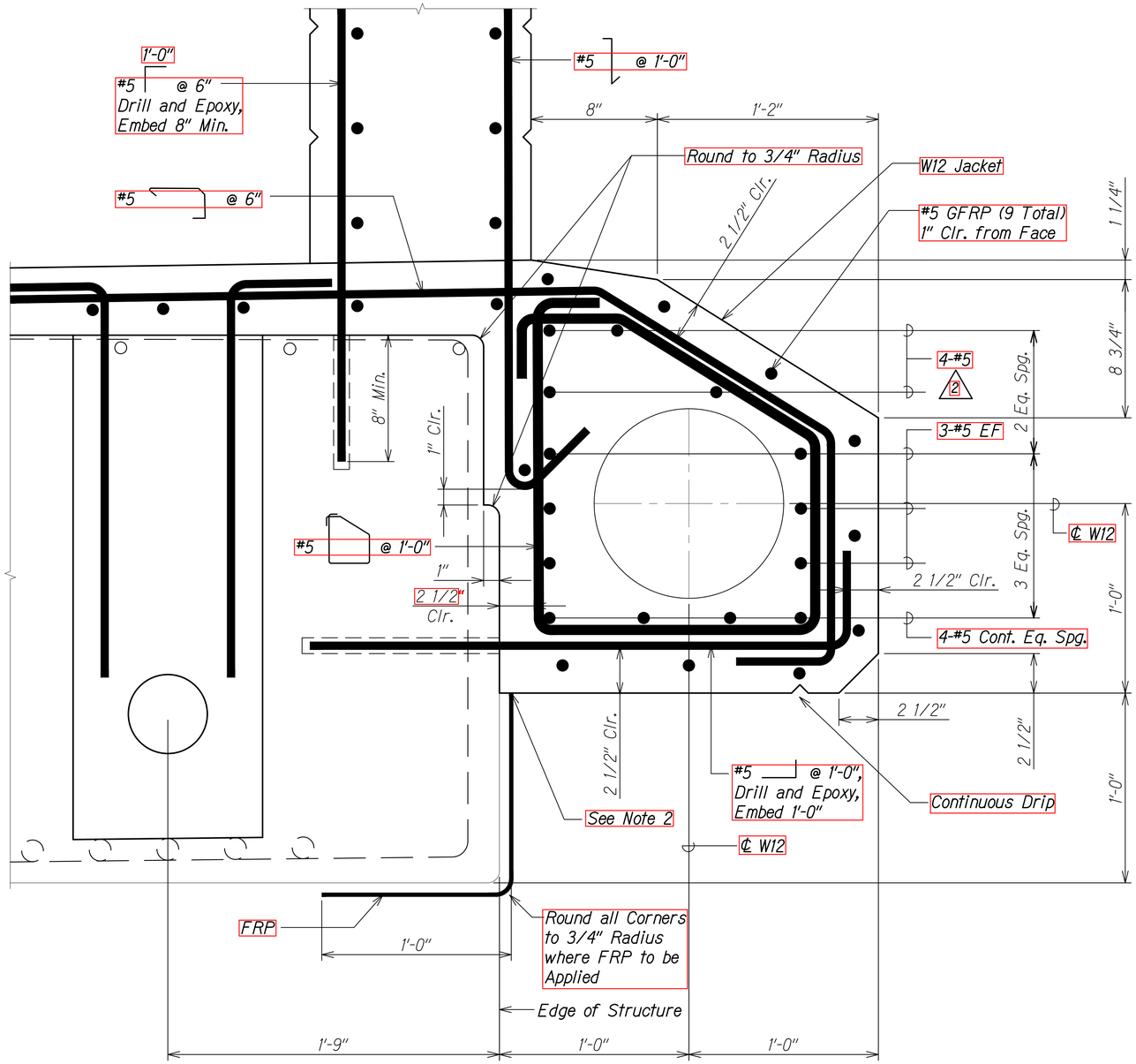
Scale: As Noted Date: December 2022

SHEET No. SBI3.4 OF 5 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH+KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SBI304 W12 JACKT SECTS.DWG PLOT TIME: 01-04-23, 10:05 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 395	466



SECTION
Scale: 3" = 1'-0"

A
SB2.6 | SB13.5
SB12.2, SB13.1

NOTES:

1. FRP shall be 1 ply of L-wrap, 0.08" thick. There shall be no gaps between strips.
2. Place L-wrapped FRP to bottom of W12 jacket.

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
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HAWAII, U.S.A.

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Eric Y. Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) — DATE

DATE	REVISION
4/7/23	2 Revised Callout

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS W12 JACKET SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

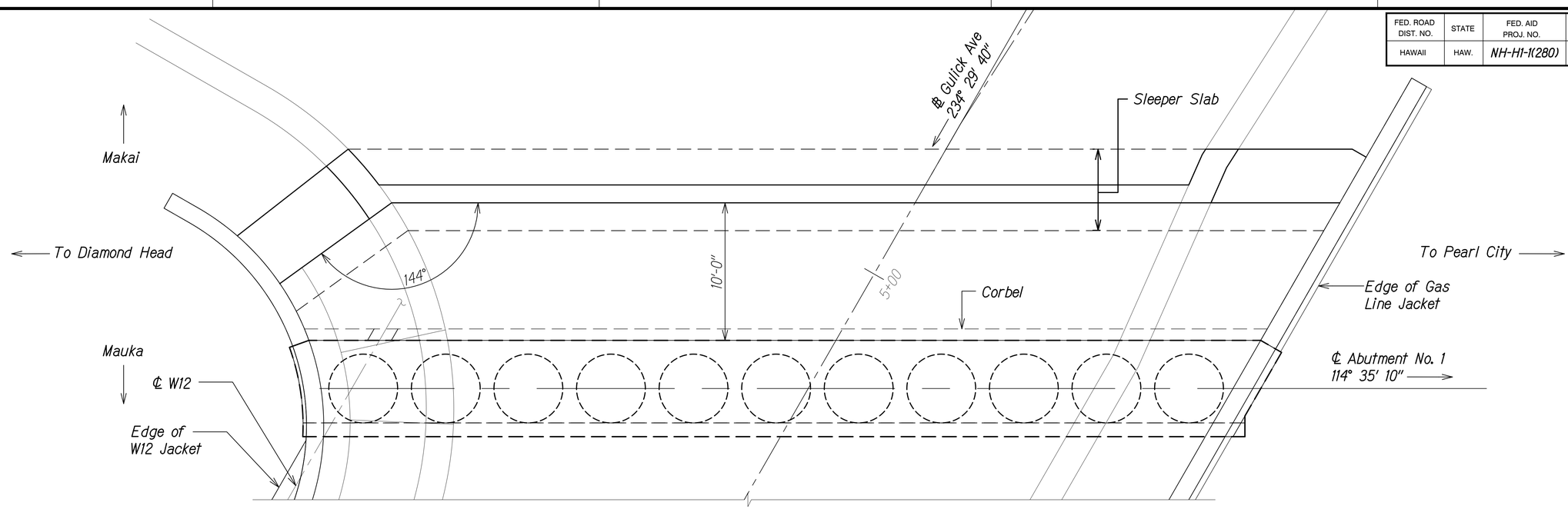
SHEET No. SB13.5 OF 5 SHEETS

ADD. 395

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

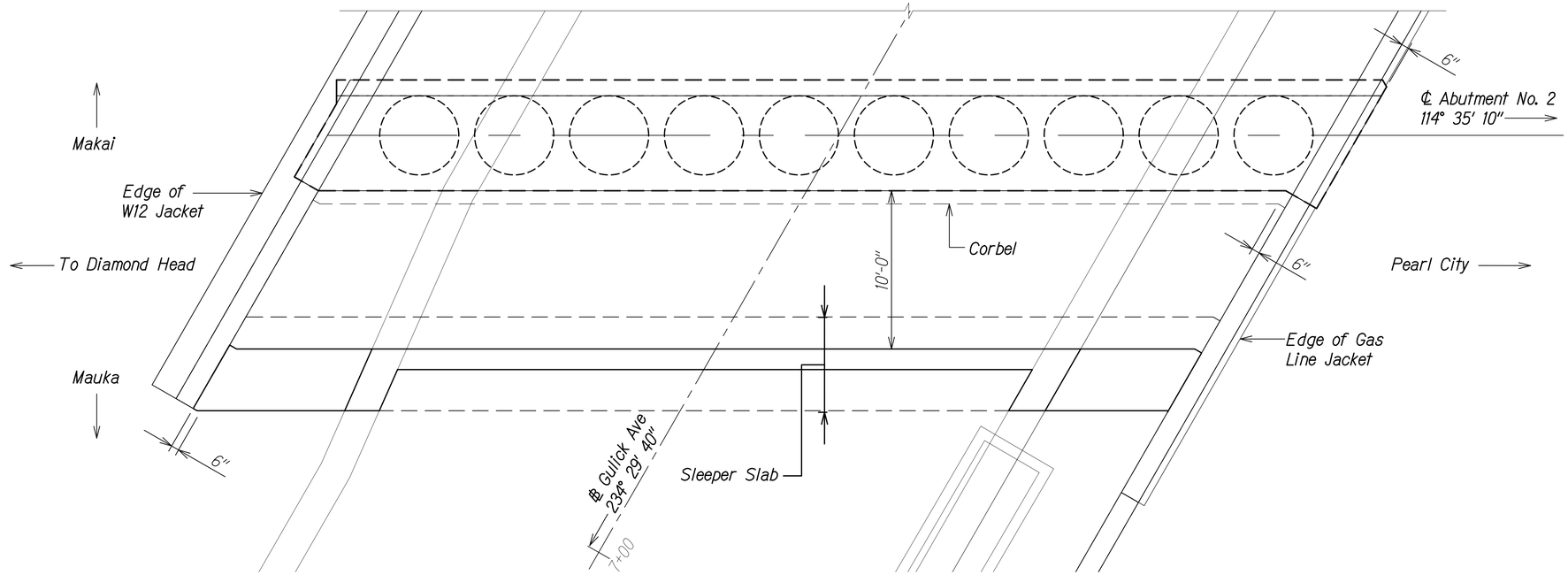
DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SB1305 WATER JKT ADD2.DWG PLOT TIME: 04-10-23, 3:43 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	396	466



APPROACH SLAB AND SLEEPER SLAB (ABUTMENT NO. 1) PLAN

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



APPROACH SLAB AND SLEEPER SLAB (ABUTMENT NO. 2) PLAN

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

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1401 SLEEPER SLAB.DWG PLOT TIME: 01-04-23, 10:05 AM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto — 4-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

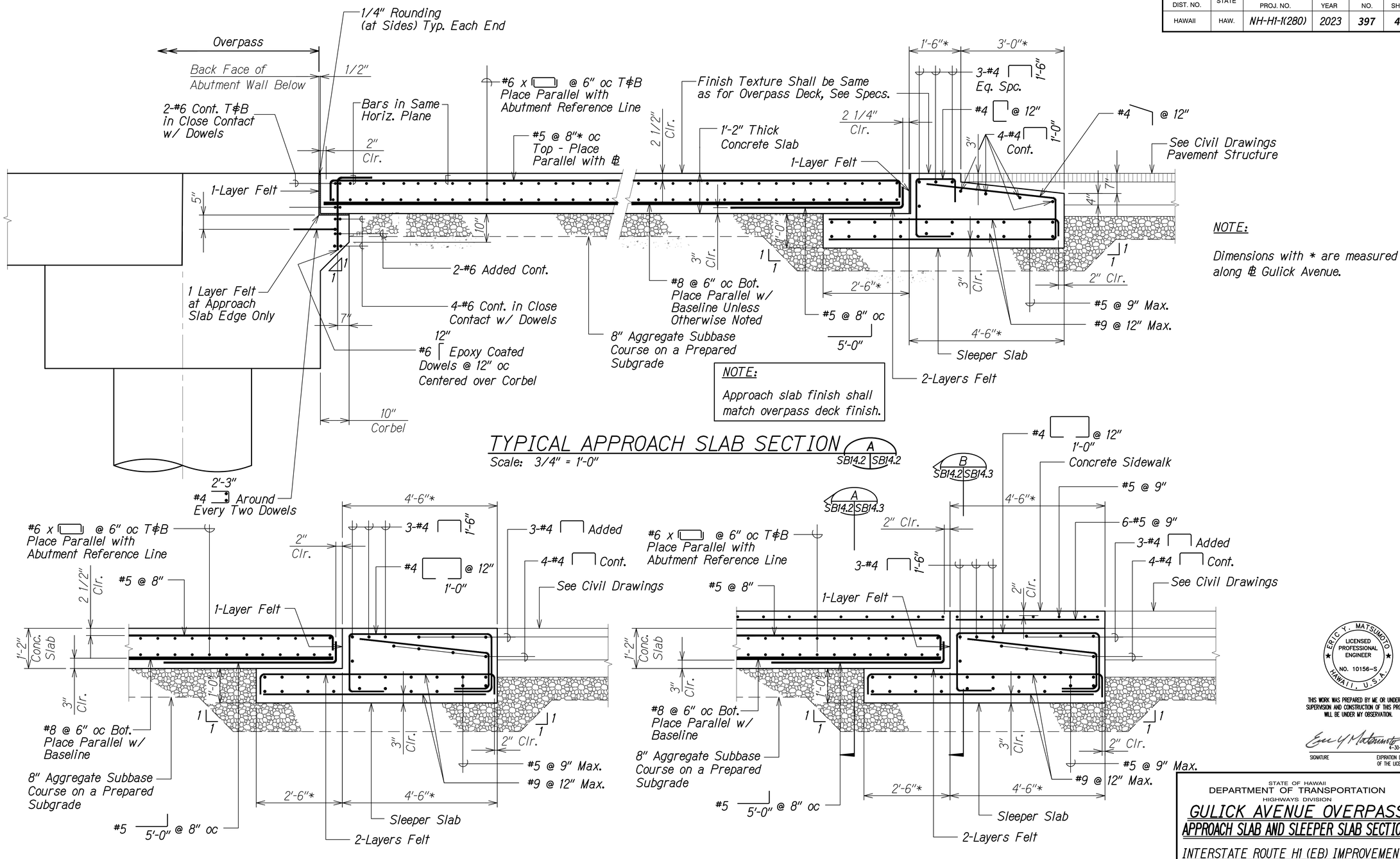
GULICK AVENUE OVERPASS
APPROACH SLAB AND SLEEPER SLAB PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB14.1 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	397	466



NOTE:

Approach slab finish shall match overpass deck finish.

NOTE:

Dimensions with * are measured along ℄ Gulick Avenue.

TYPICAL APPROACH SLAB SECTION

A SB14.2 | SB14.2

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

SECTION AT GUTTER

B SB14.2 | SB14.2

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

SECTION AT SIDEWALK

C SB14.2 | SB14.2

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

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1402 SLEEPER SLAB.DWG PLOT TIME: 01-04-23, 10:05 AM)

ERIC Y. MATSUMOTO
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NO. 10156-S
HAWAII, U.S.A.

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SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

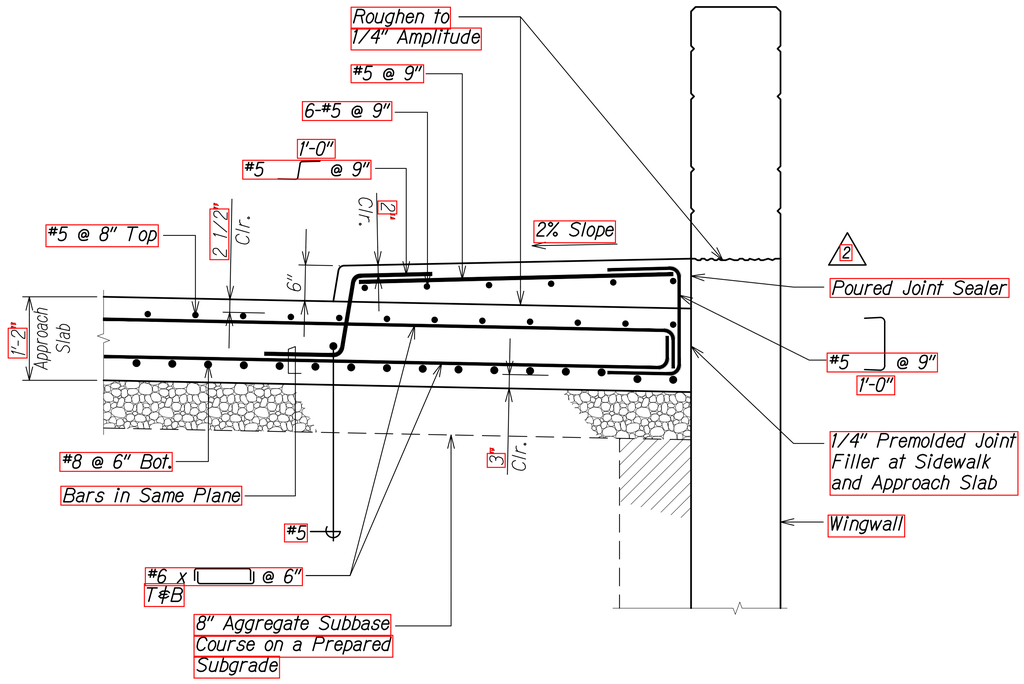
GULICK AVENUE OVERPASS
APPROACH SLAB AND SLEEPER SLAB SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB14.2 OF 4 SHEETS

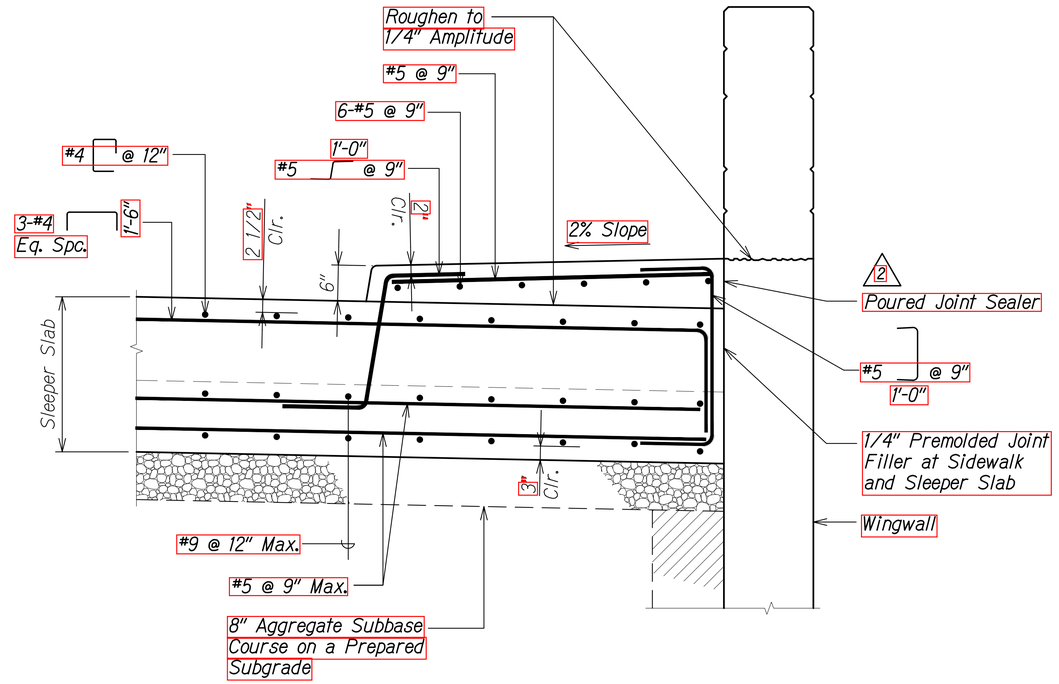
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 398	466



SECTION AT TYPICAL APPROACH SLAB

Scale: 1" = 1'-0"

A SBI4.2 SBI4.3



SECTION AT SLEEPER SLAB

Scale: 1" = 1'-0"

B SBI4.2 SBI4.3

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 6-30-24

SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
APPROACH SLAB AND SLEEPER SLAB SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SBI4.3 OF 4 SHEETS

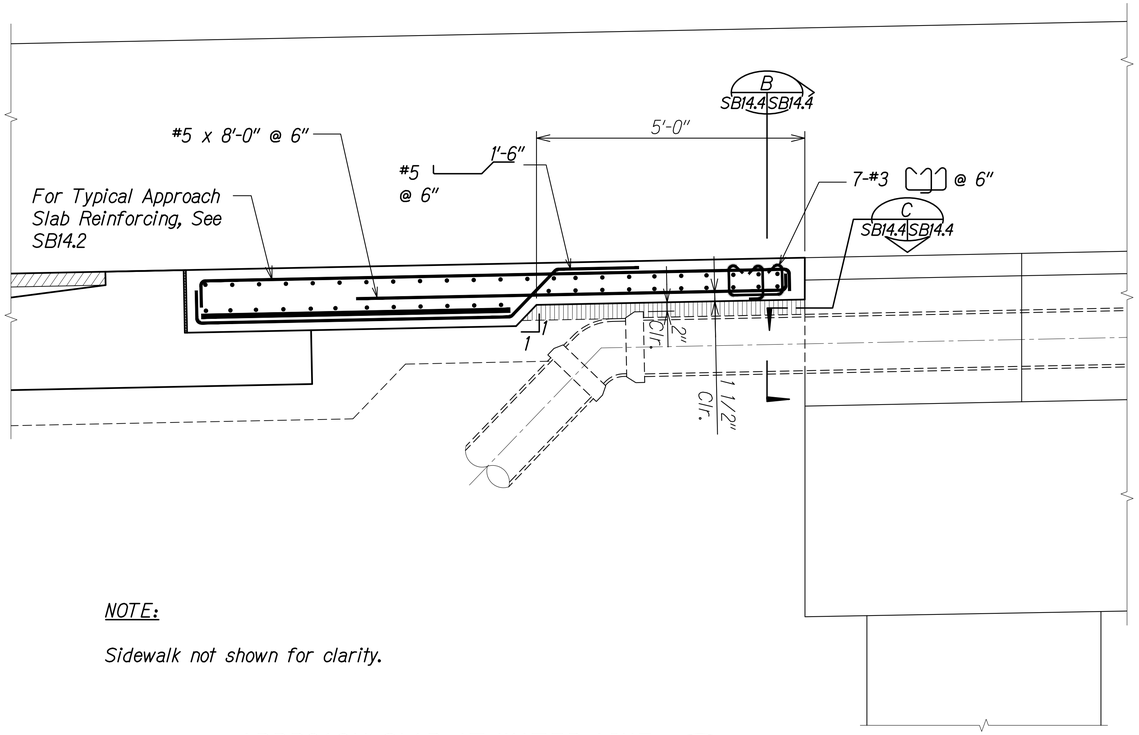
DATE	REVISION
4/7/23	2 Revised Text Leader

ADD. 398

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH+KALIHI\01 CAD\04-10-23 ADD2\GRK-SBI402 SLEEPER SLAB ADD2.DWG PLOT TIME: 04-10-23, 3:44 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	399	466



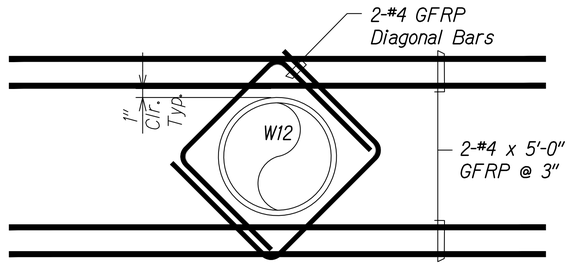
NOTE:

Sidewalk not shown for clarity.

APPROACH SLAB AT WATER LINE (A)

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

SB14.4 | SB14.4



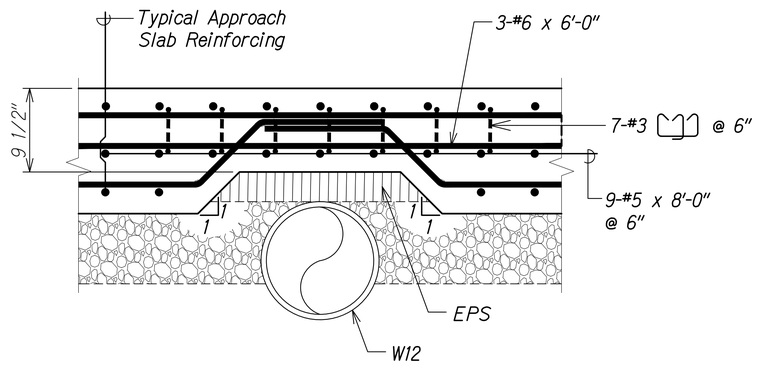
NOTE:

Clearance from GFRP to exterior face of end beam shall be 1"

ADDED REINFORCING AROUND WATERLINE OPENING (1)

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

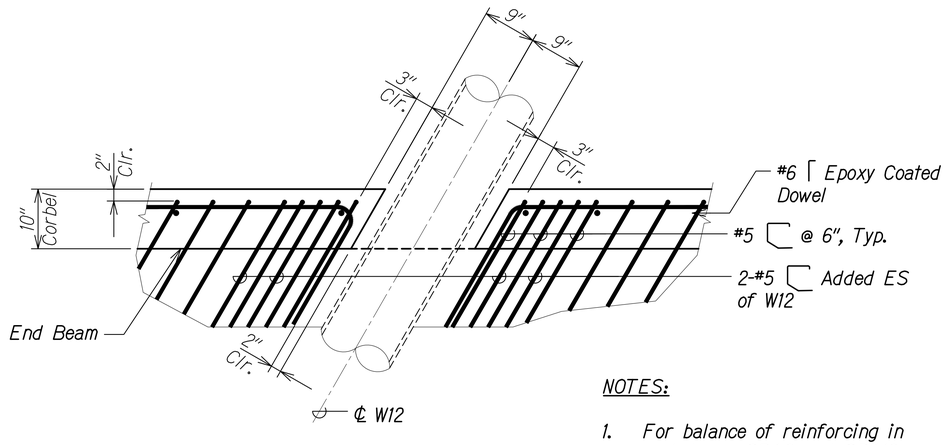
SB14.4 | SB14.4



SECTION (B)

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

SB14.4 | SB14.4



NOTES:

1. For balance of reinforcing in corbel, see SB4.8 and SB4.12.
2. End beam reinforcing not shown for clarity.

SECTION THROUGH CORBEL (C)

Scale: 1" = 1'-0"

SB14.4 | SB14.4

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS APPROACH SLAB AT WATERLINE

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

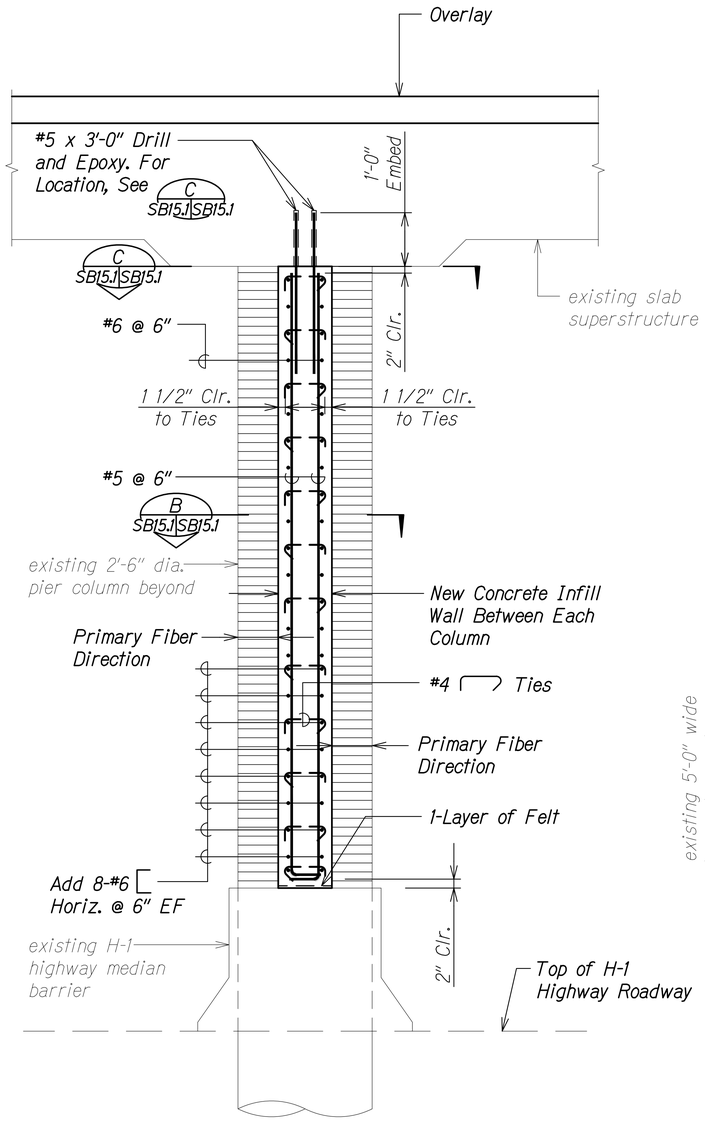
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SHEET No. SB14.4 OF 4 SHEETS

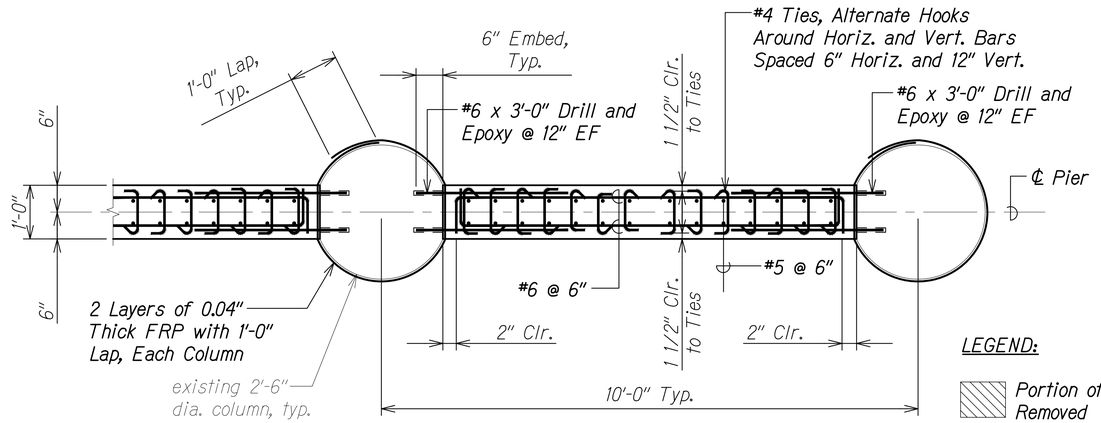
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	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

DRAWING NAME: Z:\OD ONGOING\OD JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1404 SLEEPR SLAB WTR JKT.DWG PLOT TIME: 01-04-23, 10:06 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	400	466



SECTION
Scale: 3/4 = 1'-0"
A SB15.1 SB15.1

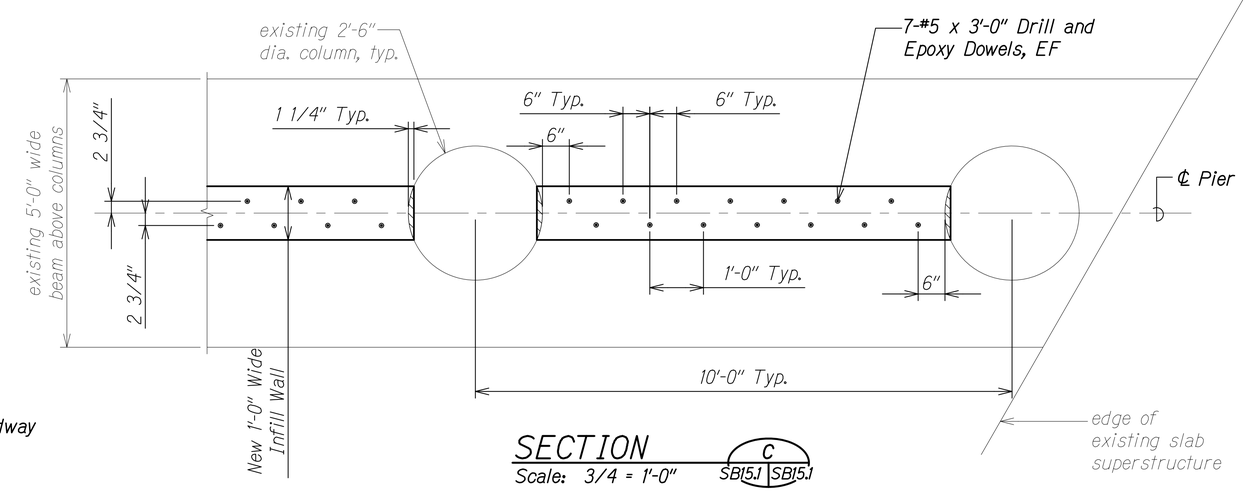


SECTION
Scale: 3/4 = 1'-0"
B SB15.1 SB15.1

LEGEND:

Portion of Column Cover to be Removed

Carbon FRP Composite Fabric around existing 2'-6" Dia. Column



SECTION
Scale: 3/4 = 1'-0"
C SB15.1 SB15.1

NOTES:

1. All column surfaces to which FRP will be bonded shall be considered "Contact Critical".
2. Each layer of FRP shall have an equivalent ExA = 6672 kips/12" width based on material test values.
3. Broadcast 10-16 mesh sand on all interior surfaces of FRP in contact with new infill wall.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS CONCRETE INFILL WALL

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

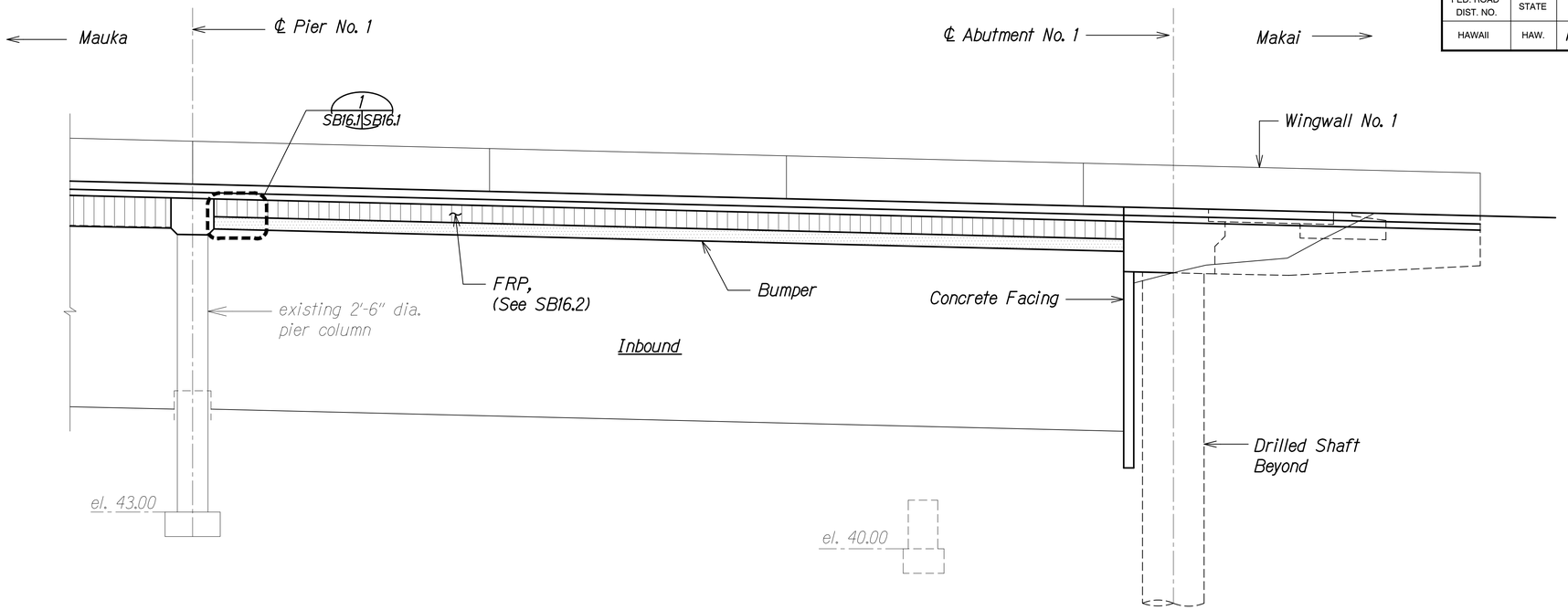
Scale: As Noted — Date: December 2022

SHEET No. SB15.1 OF 1 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
No.	DESIGNED BY	
	QUANTITIES BY	
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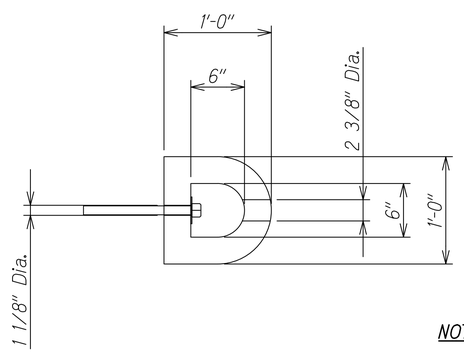
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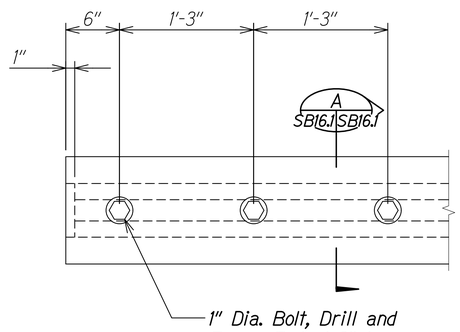
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	401	466



OVERPASS BUMPER ELEVATION

Scale: 3/16" = 1'-0"





NOTE:

See Special Provisions Section 697.

OVERPASS BUMPER SECTION

A SB16.1 SB16.1

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

OVERPASS BUMPER DETAIL

1 SB16.1 SB16.1

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

ERIC Y. MATSUMOTO
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HAWAII, U.S.A.

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Eric Y. Matsumoto 6-30-24

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
OVERPASS BUMPER

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

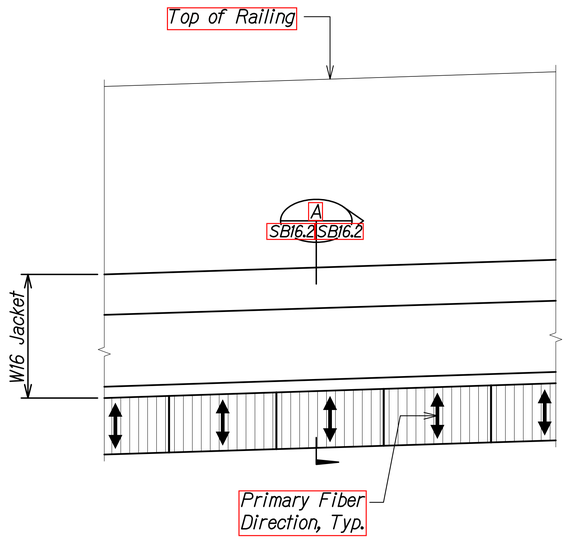
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SHEET No. SB16.1 OF 3 SHEETS

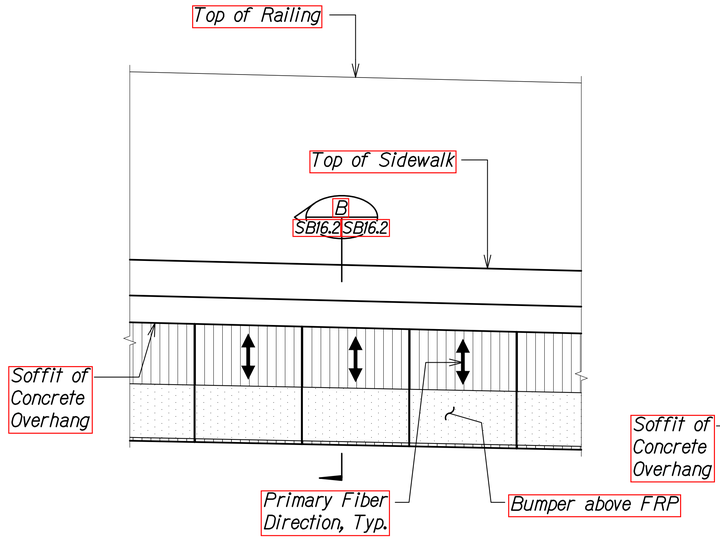
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	DRAWN BY	
NOTE BOOK	TRACED BY	
No.	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH+KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1601 BUMPER.DWG PLOT TIME: 01-04-23, 10:07 AM)

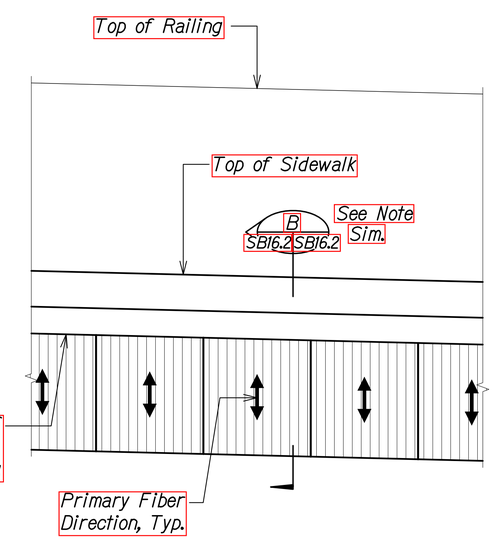
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 402	466



DETAIL 1
Scale: 3/4" = 1'-0"
SB2.2 SBI6.2



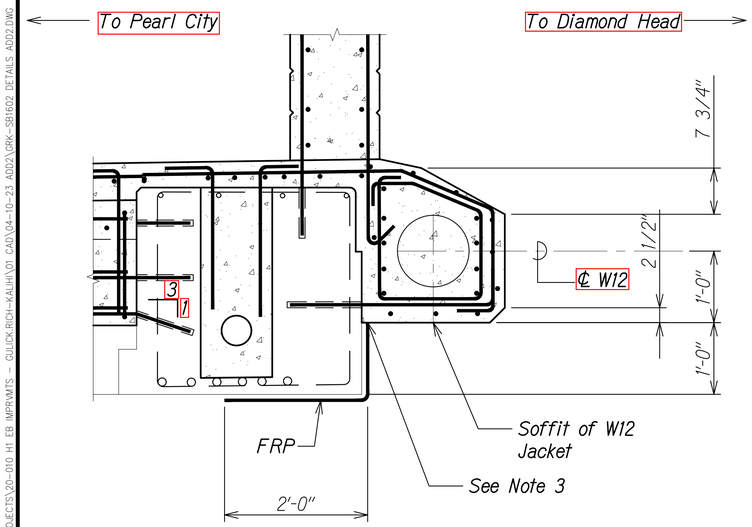
DETAIL 2
Scale: 3/4" = 1'-0"
SB2.3 SBI6.2



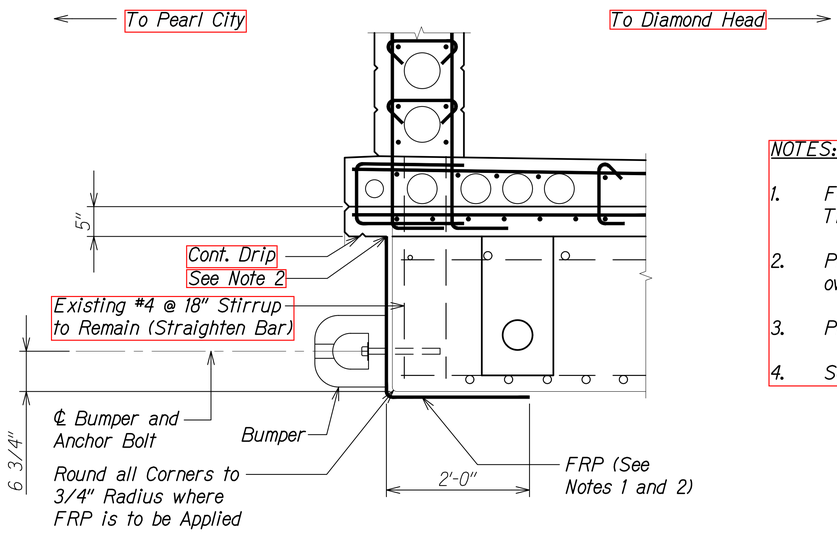
DETAIL 3
Scale: 3/4" = 1'-0"
SB2.3 SBI6.2

NOTE:

△2 No bumper is installed above westbound lanes.



SECTION A
Scale: 1" = 1'-0"
SBI6.2 SBI6.2



SECTION B
Scale: 1" = 1'-0"
SBI6.2 SBI6.2

NOTES:

1. FRP shall be 1 ply of L-wrap, 0.08" thick. There shall be no gaps between strips.
2. Place L-wrapped FRP to soffit of concrete overhang. △2
3. Place L-wrapped FRP to soffit of W12 jacket.
4. See Special Provisions Section 577.

ERIC Y. MATSUMOTO
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NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

DATE	REVISION
4/7/23	△2 Revised Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS FRP ON SLAB

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

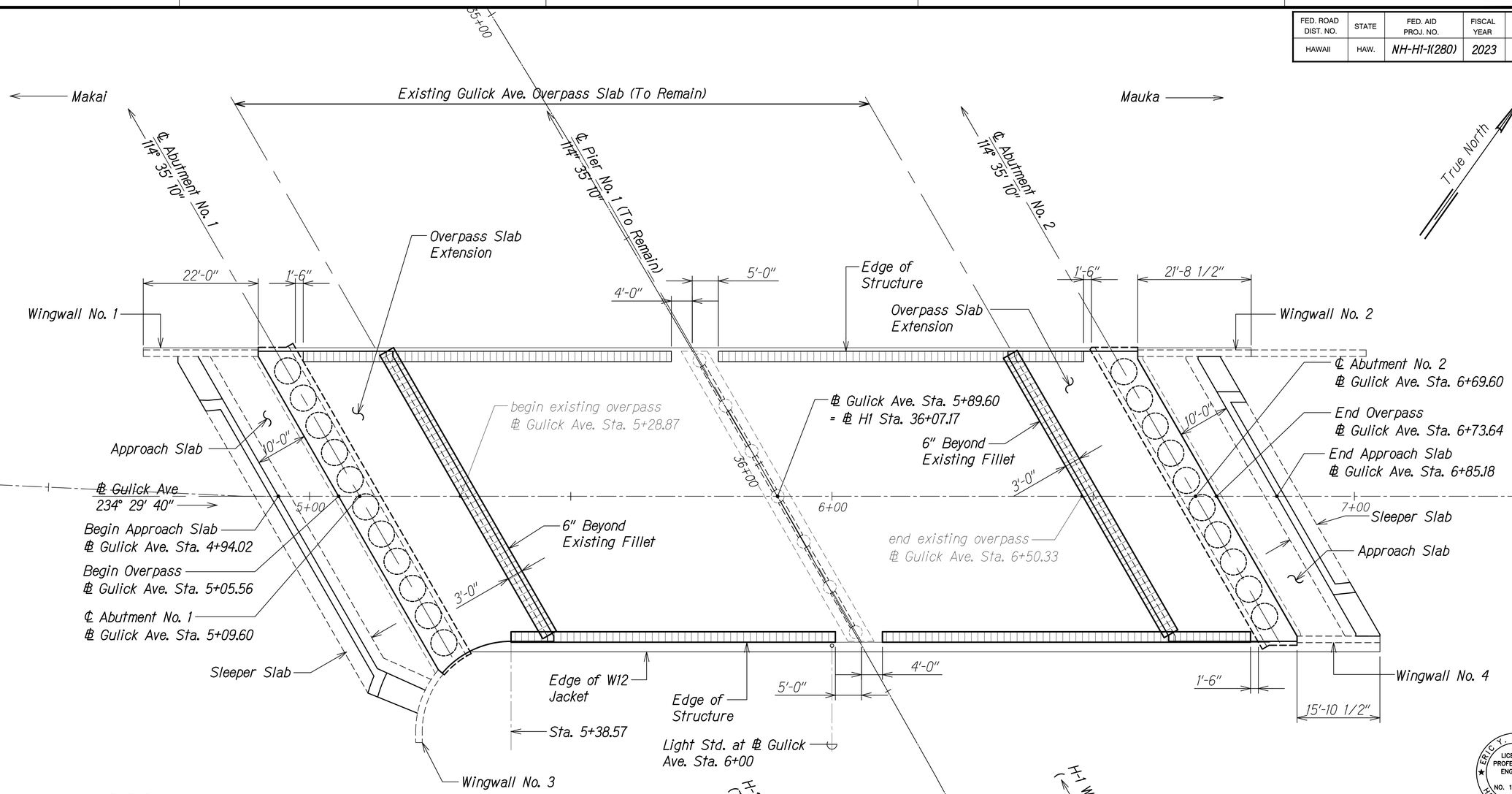
SHEET No. SBI6.2 OF 3 SHEETS

ADD. 402

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\04-10-23 ADD2\GRK-SBI602 DETAILS ADD2.DWG PLOT TIME: 04-10-23, 3:45 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	403	466



LEGEND:

FRP

NOTES:

1. Place 1 ply of 0.08 thick on soffit of bridge at each construction joint between existing slab and new slab extension.
2. See Special Provisions Section 577.

FRP - REFLECTED SOFFIT PLAN

Scale: 1" = 10'

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HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS
FRP - REFLECTED SOFFIT PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB16.3 OF 3 SHEETS

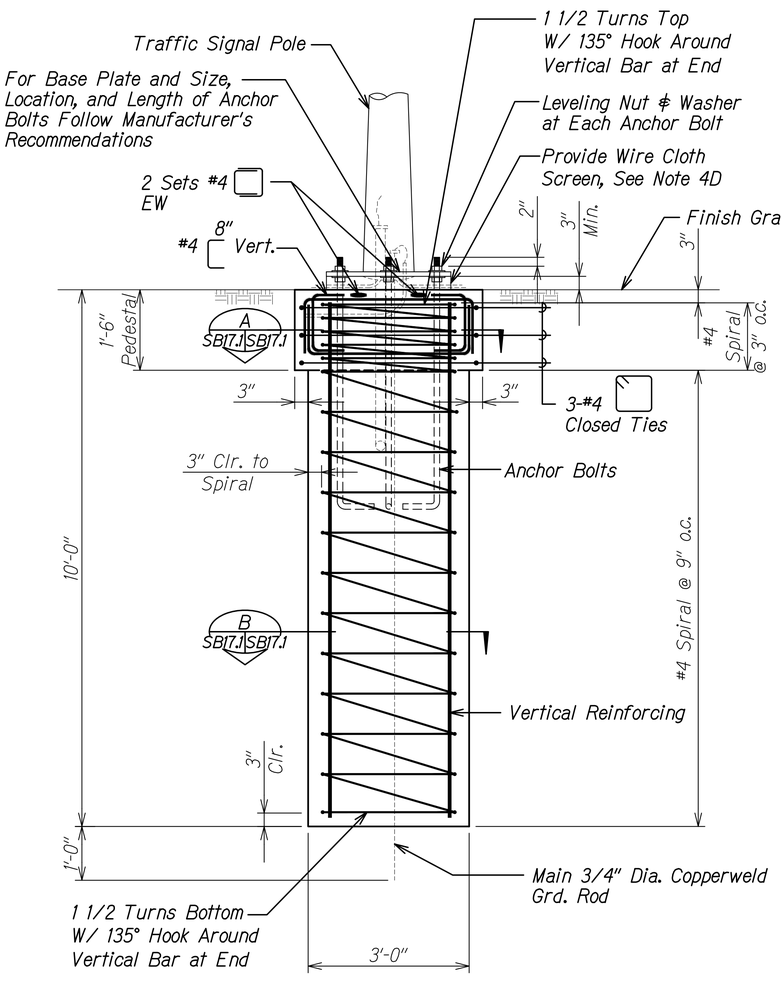
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	DRAWN BY	
NOTE BOOK	TRACED BY	
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No.	QUANTITIES BY	
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DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1603 SOFFIT OVERLAY PLAN.DWG PLOT TIME: 01-04-23, 10:07 AM)

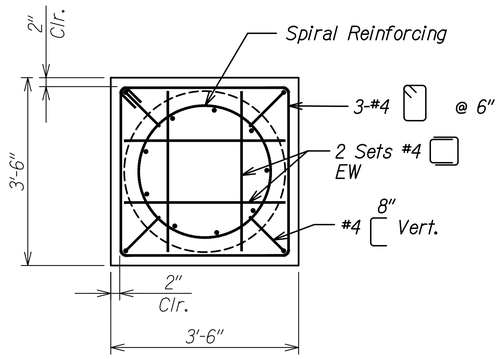
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	404	466

TRAFFIC SIGNAL FOUNDATION GENERAL NOTES:

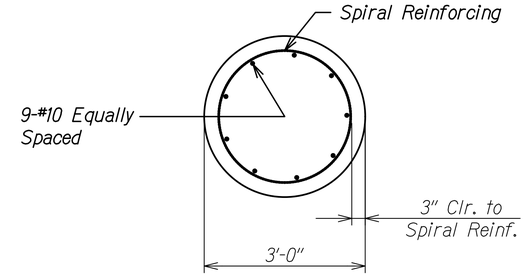
1. Design Specifications:
   - A. American Association of State Highway and Transportation Officials (AASHTO) 2020 LRFD Bridge Design Specifications, 9th Edition, as amended by Hawaii Department of Transportation (HDOT) document dated August 8, 2014 with subject title "Design Criteria for Bridges and Structures" and HDOT memorandum dated January 8, 2018 with subject title "Changes to Design Criteria for Bridges and Structures".
   - B. Design shall conform with the AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, First Edition 2015 with 2020 Interim Revisions.
   - C. See Structural General Notes on S0.4 to S0.7 for additional information.
2. Loads:
   - A. Basic Wind Speed: 145 mph.
   - B. Recurrence Interval of 1700 years.
   - C. Fatigue importance factor, I_f, shall be based on Fatigue Category I for cantilevered traffic signal structures.
   - D. Vortex shedding induced loads shall be considered for cantilevered mast arms and pole shafts that do not have tapers or have tapers of less than 0.14 in/ft.
   - E. Traffic signal structures shall be designed for a truck induced gust based on a truck speed of 20 mph over the posted speed.
   - F. Galloping and natural wind gusts shall be considered for cantilevered traffic signal structures.
   - G. Natural Wind Gusts shall be considered for all traffic signal structures.
3. Materials:
   - A. Concrete for traffic signal foundation shall develop a minimum 28-day compressive strength of 4,500 psi with a maximum w/c ratio of 0.45.
   - B. All concrete shall contain a water-based amine carboxylate migrating corrosion inhibitor or approved equal. Dosage shall be 24 ounces per cubic yard of concrete or recommended by the manufacturer.
   - C. All reinforcing steel shall be ASTM A615 Grade 60 deformed bars unless otherwise noted.
   - D. All connection bolts shall be AASHTO M164 bolts and anchor bolts shall be AASHTO M314-105 bolt.
   - E. Aluminum members and surfaces in contact with structural steel shall be isolated with neoprene material as approved by the Engineer.
4. General:
   - A. The recommendations of the traffic pole manufacturer shall be followed. Manufacturer shall select pole, anchor bolts, etc. based on criteria given in the contract documents. The Contractor shall submit catalog cuts and calculations to the Engineer for approval.
   - B. The Contractor shall use templates while installing the anchor bolts. Anchor bolts shall be vertical.
   - C. The Contractor shall adjust the spiral vertical spacing to allow installation of anchor bolts and plates.
   - D. Wire cloth shall be galvanized steel standard grade plain weave 2x2 mesh 0.063 inch diameter wires. Wrap around base plate perimeter with 3" minimum lap. Fasten with ¼" diameter capscrew ASTM F593 with SS washer spaced at approximately 9" o.c., drilled and tapped into perimeter of base plate.



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



SECTION A
Scale: 3/4" = 1'-0" SBI7.1 SBI7.1



SECTION B
Scale: 3/4" = 1'-0" SBI7.1 SBI7.1

NOTE:

Detail of conduits, anchor bolts, etc, are approximate only. Manufacturer's recommendatons shall be followed. Contractor shall submit catalog cuts to the Engineer for approval.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SBI701 TRAF SIGN.DWG PLOT TIME: 01-04-23, 10:08 AM)

ERIC Y. MATSUMOTO — LICENSED PROFESSIONAL ENGINEER — NO. 10156-S — HAWAII, U.S.A.

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Eric Y. Matsumoto — 4-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

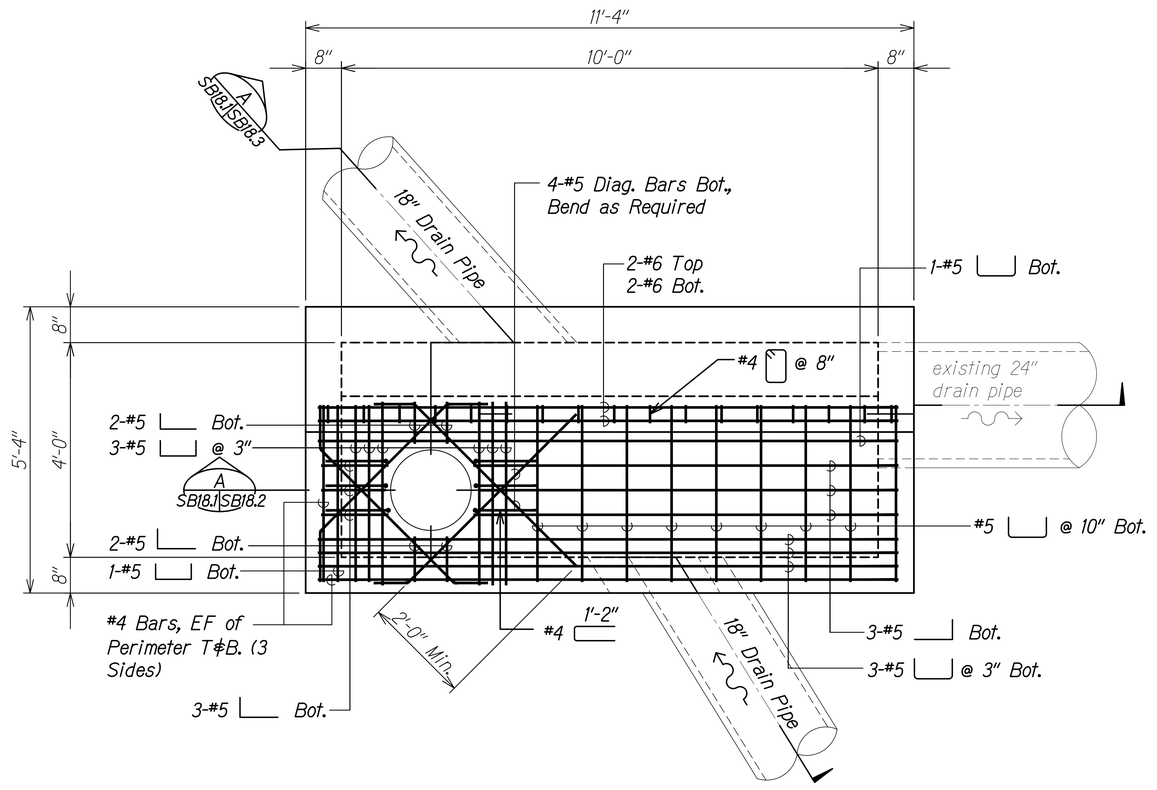
GULICK AVENUE BRIDGE
TRAFFIC SIGNAL FDN. NOTES AND SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SBI7.1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	405	466



PLAN (A SB18.1 SB18.1)

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

NOTES:

1. Top bars not shown for clarity. For reinforcing, see A SB18.1 SB18.2 and A SB18.1 SB18.3
2. For added reinforcing at pipe openings, see 4 SB18.1 SB18.4
3. See Civil drawings for pipe locations, size, material type, invert, and angle pipe enters or exits catch basin.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE BRIDGE
NEW MODIFIED TYPE D1 CB NO. 10

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

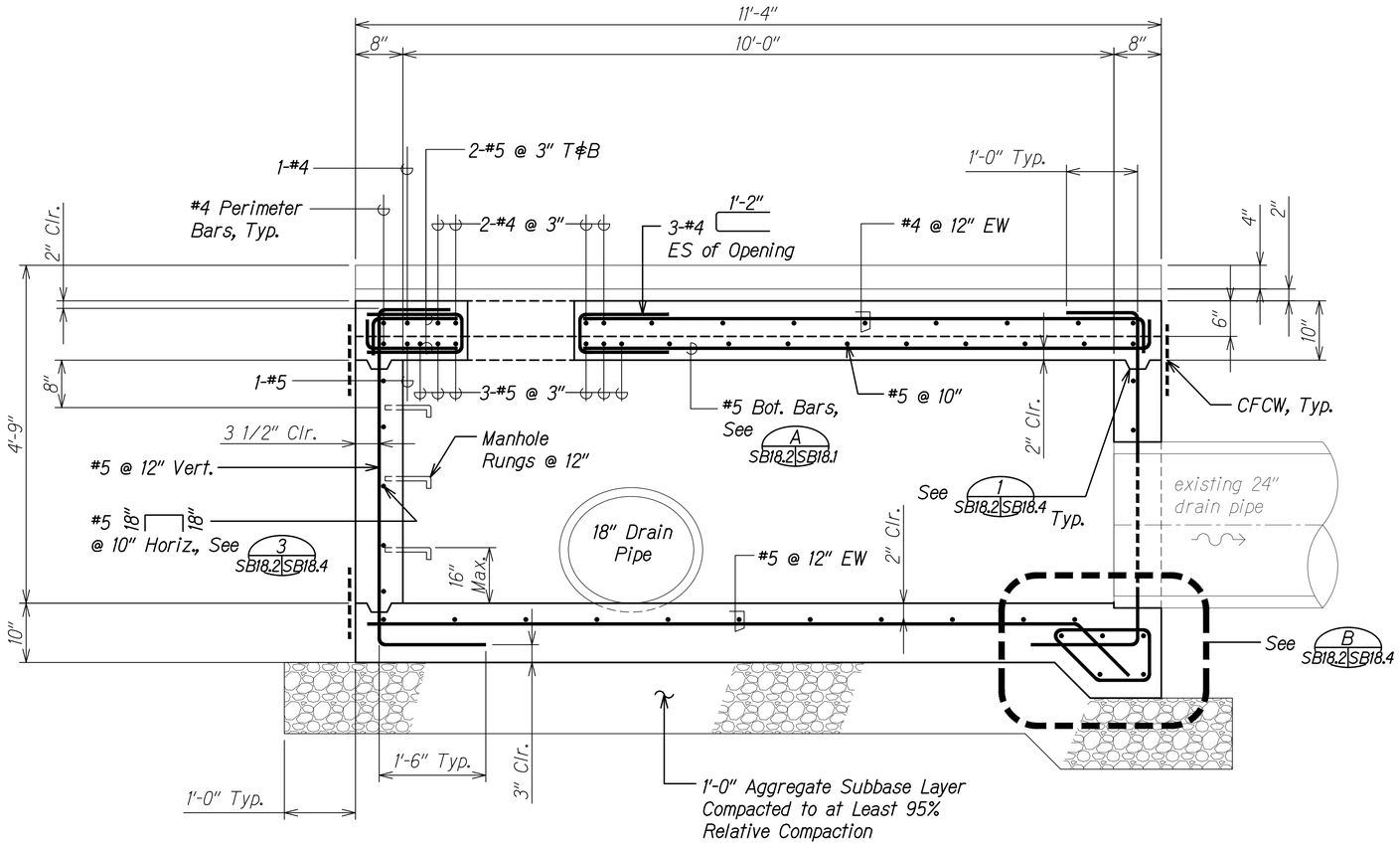
Scale: As Noted Date: December 2022

SHEET No. SB18.1 OF 4 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1801 CATCH BASIN.DWG PLOT TIME: 01-04-23, 10:08 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	406	466



SECTION A SB18.1 SB18.2
Scale: 1" = 1'-0"

NOTES:

1. For added reinforcing at pipe openings, see A SB18.2 SB18.4
2. See Civil drawings for pipe locations, size, material type, invert, and angle pipe enters or exits catch basin.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SB1801 CATCH BASIN.DWG PLOT TIME: 01-04-23, 10:08 AM)

ERIC Y. MATSUMOTO LICENSED PROFESSIONAL ENGINEER NO. 10156-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Eric Y Matsumoto 6-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

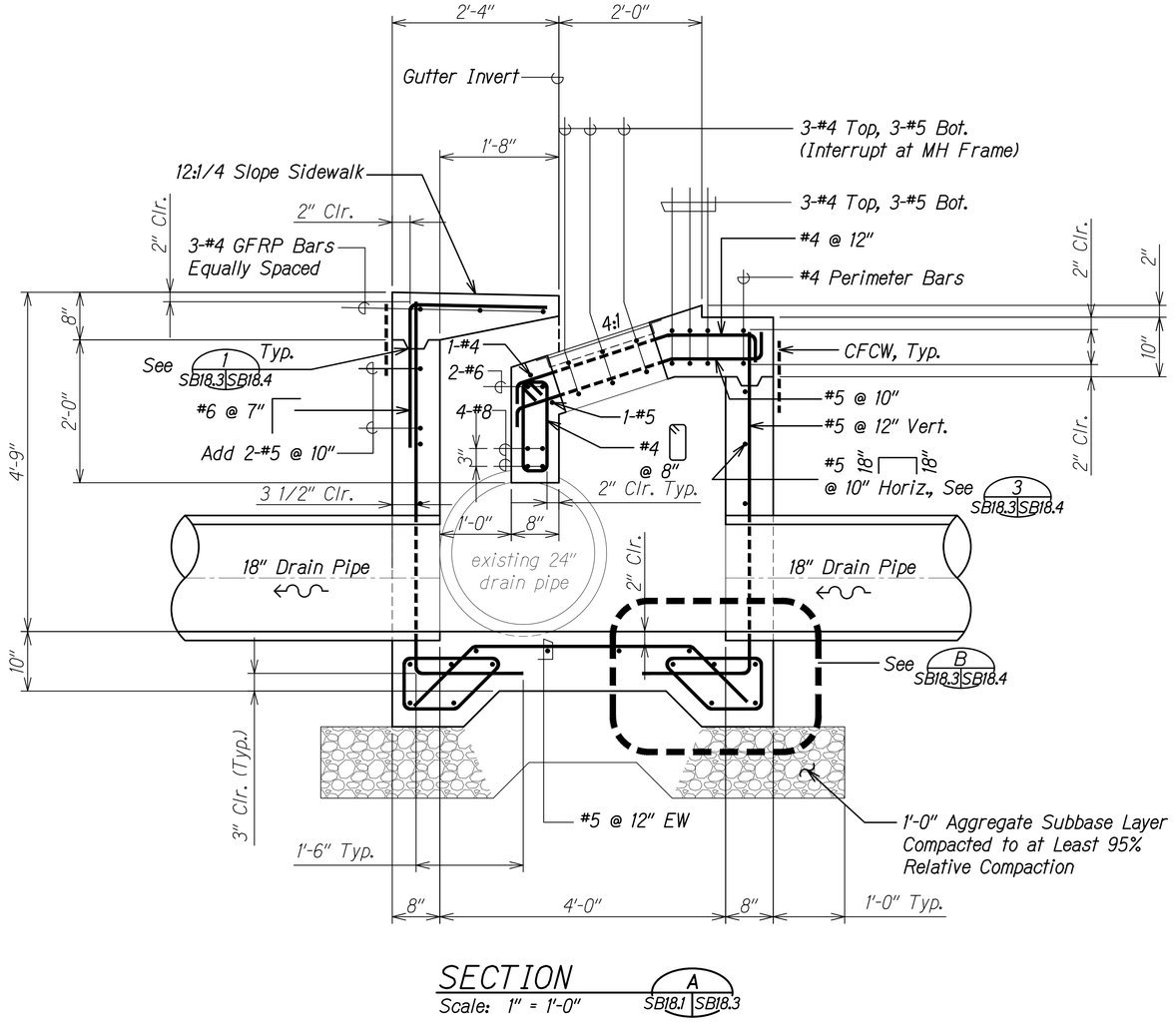
GULICK AVENUE BRIDGE
NEW MODIFIED TYPE D1 CB NO. 10

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SB18.2 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	407	466



SECTION A
Scale: 1" = 1'-0" SBI8.1|SBI8.3

NOTES:

1. For added reinforcing at pipe openings, see A SBI8.4|SBI8.4
2. See Civil drawings for pipe locations, size, material type, invert, and angle pipe enters or exits catch basin.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
No.	QUANTITIES BY	
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DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SBI801 CATCH BASIN.DWG PLOT TIME: 01-04-23, 10:08 AM)

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto 4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

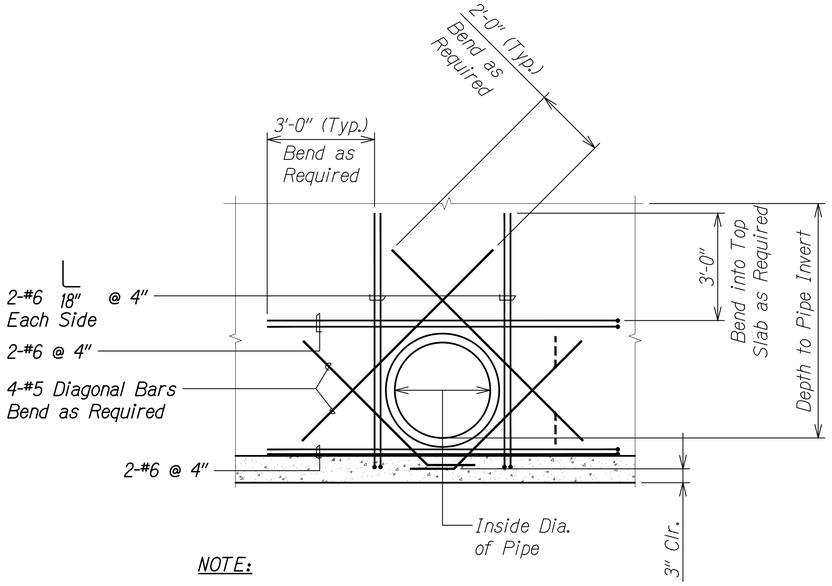
GULICK AVENUE BRIDGE
NEW MODIFIED TYPE D1 CB NO. 10

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SBI8.3 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	408	466



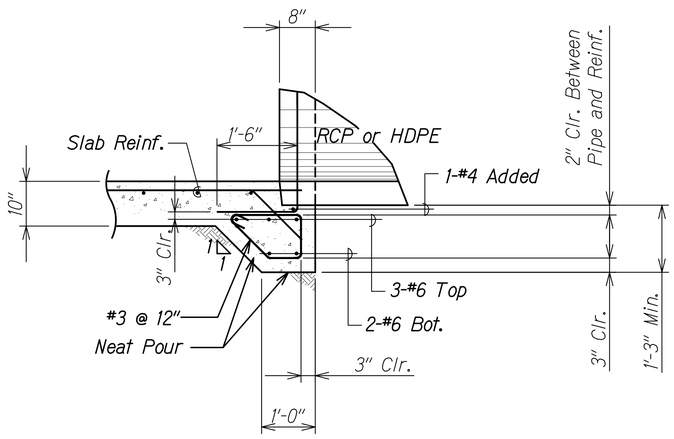
NOTE:

2" Clearance between pipe and reinforcing.

TYPICAL SECTION - ADDED REINFORCING FOR PIPE OPENINGS IN CATCH BASIN

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

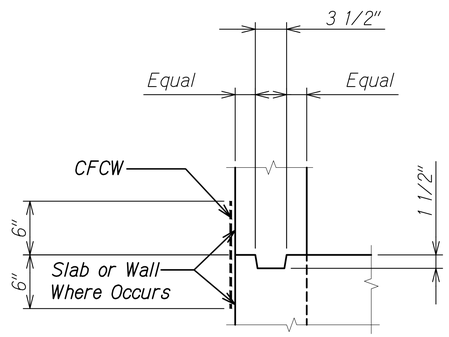
A — SBI8.4 | SBI8.4



TYPICAL SECTION - THICKENED EDGE FOR CATCH BASIN

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

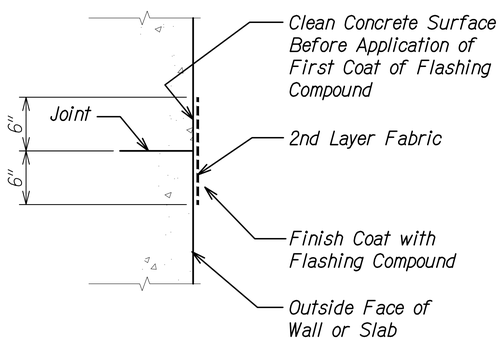
B — SBI8.2 | SBI8.4 — SBI8.3



TYPICAL KEY DETAIL

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

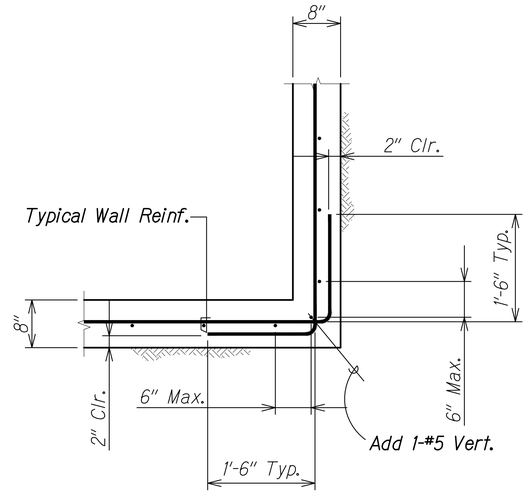
1 — SBI8.2 | SBI8.4 — SBI8.3



TYPICAL FLASHING COMPOUND WATERPROOFING DETAIL (CFCW, TYP.)

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

2 — SBI8.4 | SBI8.4



TYPICAL CORNER REINFORCING LAPPING (SINGLE CURTAIN)

Scale: 1" = 1'-0"

3 — SBI8.2 | SBI8.4 — SBI8.3

ERIC Y. MATSUMOTO LICENSED PROFESSIONAL ENGINEER NO. 10156-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE BRIDGE CATCH BASIN TYPICAL DETAILS

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

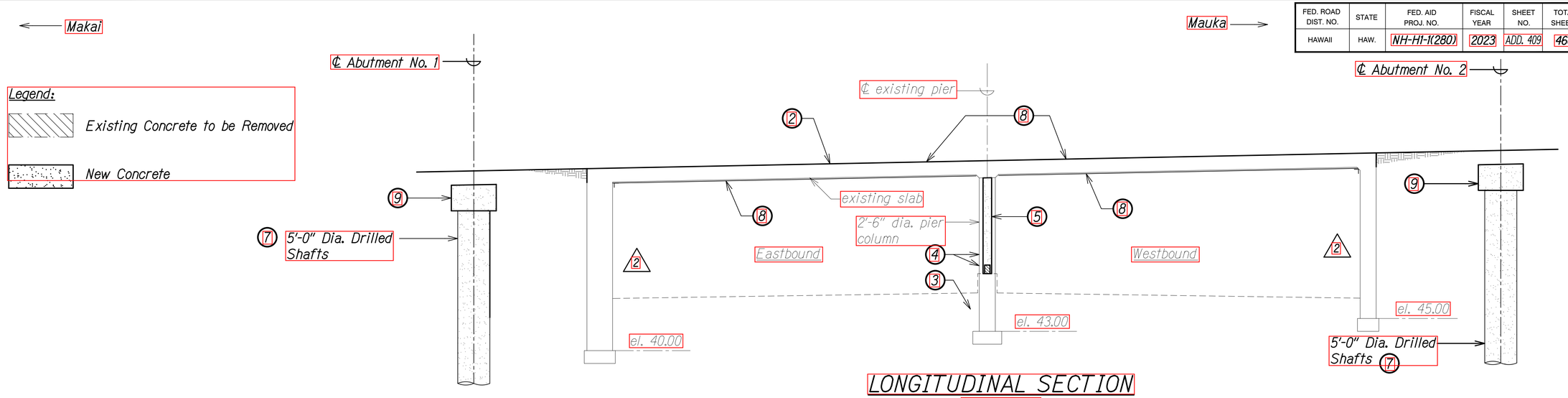
Scale: As Noted — Date: December 2022

SHEET No. SBI8.4 OF 4 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH+KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SBI801 CATCH BASIN.DWG PLOT TIME: 01-04-23, 10:09 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 409	466



LONGITUDINAL SECTION

Not to Scale

PARTIAL CLOSURE OF GULICK AVENUE OVERPASS

1. Install BMPs.
2. Remove AC pavement on overpass. Contractor must provide a smooth transition to the existing approaches and gutters.
3. Probe and grout at pier foundations.
4. Remove existing concrete screen above median, prepare columns and place FRP on existing columns. If portions of concrete screen to remain are damaged or removed during column work, replace in kind at no additional cost to the State.
5. Construct infill walls between existing columns.
6. Remove existing Korduct encasements on the fill side of the overpass abutments and existing cables within existing HECO and Hawaiian Telephone Co. Korducts on Pearl City side of overpass. Fill ducts with non-shrink grout.
7. Construct drilled shafts. (Remove portions of existing wingwalls as necessary)
8. Place protective plates on soffit of overpass under trench locations (see SB7.2), trench existing slab (Ph. 1), install post-tensioning ducts (except at pier), drill and epoxy dowels, roughen sides to 1/4" amplitude and pour concrete within trenches. Remove concrete screws and protective plates and patch holes.

NOTES FOR STAGE 8:

a. (2) Only one trench may be open at any time. When the trench is open, vehicular traffic is limited to HS15 loading with a maximum speed to 10 MPH. There shall be no vehicles within 3 ft of the open trench. During the placement of concrete within the trench and for a period of 3 hours after completing entire placement of trench concrete, traffic is limited to HS15 loading, maximum speed is 5 MPH, and no vehicles are permitted within 10 ft of the trench unless approved by the Engineer.

b. (2) For post-tensioning tendon (T13), remove existing utilities, utility encasement and utility supports in the existing utility trench on the Diamond Head side of the overpass. Remove bottom slab and covers of existing utility trench, install post-tensioning ducts (except at pier), drill and epoxy dowels, roughen sides to 1/4" amplitude and pour concrete within utility trench. Remove concrete screws and protective plates and patch holes.

(2)(9) Construct drilled shaft cap beams a minimum of 7 days after the final drilled shaft has been poured and after the drilled shaft concrete has attained a minimum compressive strength of 4,000 psi. Remove portions of existing wingwalls as necessary.

CONSTRUCTION SEQUENCE NOTES:

(2) 1. Various steps may occur simultaneously with the approval of the Engineer. However, order of construction sequence shall not be changed unless otherwise approved by the Engineer.

2. Each stage shall be completely finished before proceeding to the next stage unless otherwise noted. The Engineer shall be the sole judge of whether the stage is complete and may direct the Contractor to stop work on a stage to complete work on the preceeding stage.

3. Contractor shall submit overweight vehicular and machinery details for approval prior to their use. Entire existing structure, including foundation, must be verified and stamped by a Structural Engineer and Geotechnical Engineer licensed in the State of Hawaii.

4. For construction phasing, see PH Series.

(2) 5. For all stages, Contractor shall maintain traffic as shown in the Civil Sheets. Contractor shall submit a work plan for the maintenance of traffic. The work plan shall be found acceptable by the Engineer before any construction work is to proceed. The work plan shall be incidental to the various contract items.

(2) 6. The Contractor must ensure the stability of the structures throughout all steps of the construction process. Submit a work plan with calculations. The work plan and calculations must be stamped by a Structural Engineer licensed in the State of Hawaii. The work plan and calculations shall be found acceptable by the Engineer before any construction work is to proceed. The work plan and calculations shall be incidental to Removal of Portions of Existing Gulick Avenue Overpass.

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto
SIGNATURE

4-30-24
EXPIRATION DATE OF THE LICENSE

DATE	REVISION
4/7/23	(2) Revised Notes and Section

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS CONSTRUCTION SEQUENCE

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

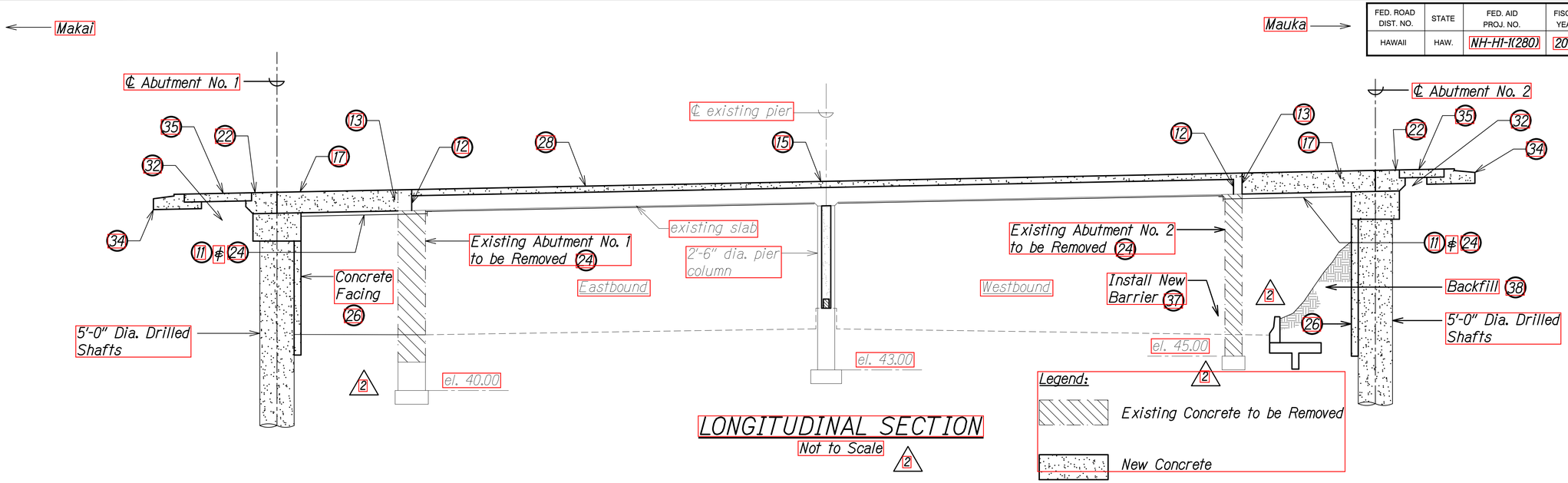
SHEET No. SB19.1 OF 2 SHEETS

ADD. 409

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-17-23 AD22\GRK-SB19D1 BRD CONST SEQ AD22.DWG PLOT TIME: 04-17-23, 11:51 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 410	466



LONGITUDINAL SECTION

Not to Scale (2)

FULL CLOSURE OF GULICK AVENUE OVERPASS

(10) Install BMPs.

(11) Install temporary tie rods, steel angles, struts, etc. to stabilize existing abutment walls at least 15 days after concrete in drilled shaft cap beam has been poured and has attained a minimum compressive strength of 5,000 psi.

(12) Detach existing slab from existing abutment wall. (Existing abutment walls must provide only vertical support of existing slab. i.e. Contractor may incrementally install Teflon pads between bottom of slab to remain and the existing abutment walls to be removed.)

(13) Remove portion of existing slab to expose existing rebar. Weld all existing horizontal (longitudinal) reinforcement in slab to reinforcement in bridge slab extension and extend post-tensioning ducts to ends of bridge slab extensions.

(14) Remove existing sidewalks and railings.

(15) Trench existing slab (Ph. 2) and install remainder of post-tensioning ducts at pier. (2)

(16) Construct concrete overlay on existing slab.

(17) Construct bridge slab extensions, including portion of W12 indicated on sheet SB13.1, 24 hours after concrete overlay pour. Do not place any load on the concrete overlay.

(18) Install post-tensioning tendons and stress tendons. See SB9 series for phasing and sequencing.

(19) Stress the remainder of the tendons and grout ducts. See SB9 series for phasing and sequencing.

(20) Remove 6" concrete downturns and existing FRP.

(21) Install new FRP at the Pearl City and Diamond Head edges of the overpass.

(22) Construct end beams and corbels a minimum of 30 days after the bridge slab extension pour. End beam concrete placement shall occur between 2:00 am and 5:00 am.

(23) Construct portions of Retaining Walls 3 and 4 adjacent to Abutment No. 1.

(24) Remove temporary restraints for existing abutment, existing abutments and (remainder) portion of existing wingwall and excavate behind existing abutments. Patch drilled shaft cap beam where temporary restraints were located and soffit of overpass. (2)

(25) Install geocomposite drains and shotcrete.

(26) Construct facings at abutment #1 and abutment #2.

(27) Construct sidewalks and curb ramps (except at approach slabs and sleeper slabs) and W12 jacket.

(28) Construct railings a minimum of 7 days after sidewalk pour.

(29) Install FRP on soffit of overpass.

(30) Install Bumper.

(31) Construct wingwalls and Wall G1 a minimum of 14 days after end beam pour and after the end beam has attained a minimum compressive strength of 5,000 psi.

(32) Backfill behind abutments equally. The difference in height of backfill at the abutments shall not exceed 2 ft at any time.

(33) Pour end beam phase 2.

(34) Construct sleeper slabs.

(35) Construct approach slabs a minimum of 7 days after casting sleeper slab and after the sleeper slab concrete has attained a minimum compressive strength of 4,000 psi.

(36) Construct remainder of sidewalks and curb ramps a minimum of 7 days after casting approach slab sand after the approach slab concrete has attained a minimum compressive strength of 4,000 psi.

(37) Construct Westbound Barrier Wall at Abutment No. 2.

(38) Backfill behind Westbound Barrier Wall.

(39) Grind sleeper slabs, approach slabs, slab extensions and overlay a minimum of 14 days after casting the approach slabs.

(40) Apply surface treatment.

(41) Installing lighting

(42) Remove BMPs.

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

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Eric Y. Matsumoto — SIGNATURE
4-30-24 — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GULICK AVENUE OVERPASS CONSTRUCTION SEQUENCE

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SB19.2 OF 2 SHEETS

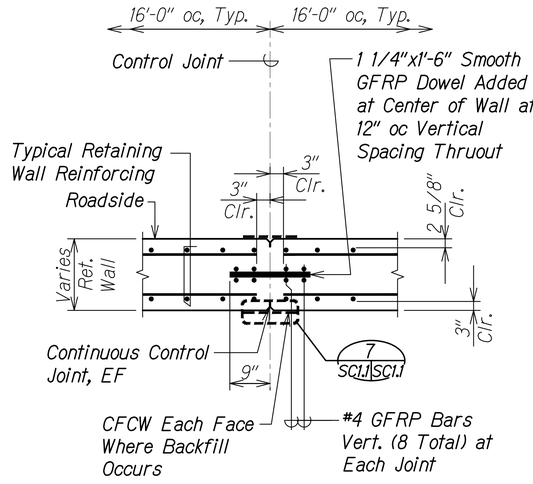
DATE	REVISION
4/7/23	(2) Revised Notes and Section

ADD. 410

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

PLOT TIME: 04-10-23, 3:46 PM)
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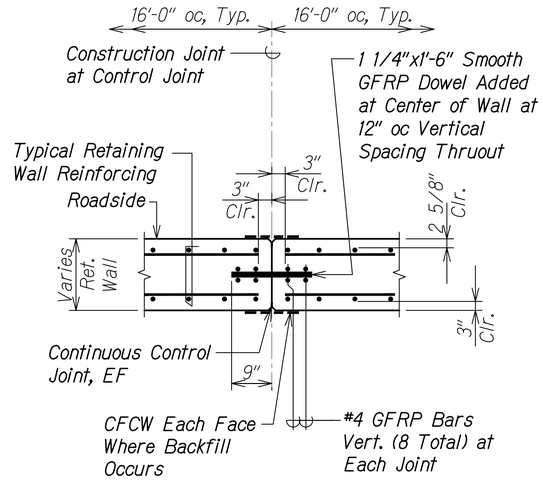
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	411	466



TYPICAL CONTROL JOINT IN WALL

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

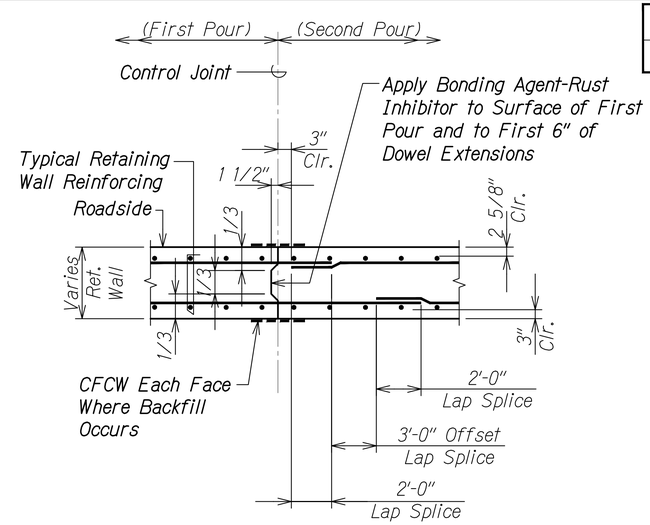
1 SC1.1 SC1.1



TYPICAL CONTRUCTION JOINT AT CONTROL JOINT LOCATION IN WALL

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

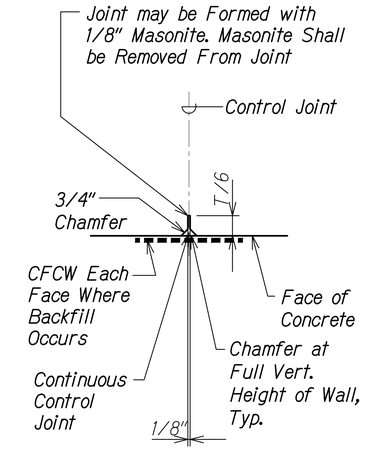
2 SC1.1 SC1.1



TYPICAL CONSTRUCTION JOINT IN WALL

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

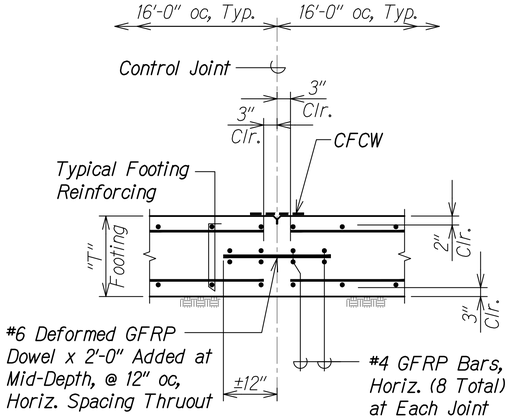
3 SC1.1 SC1.1



CONTROL JOINT DETAIL

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

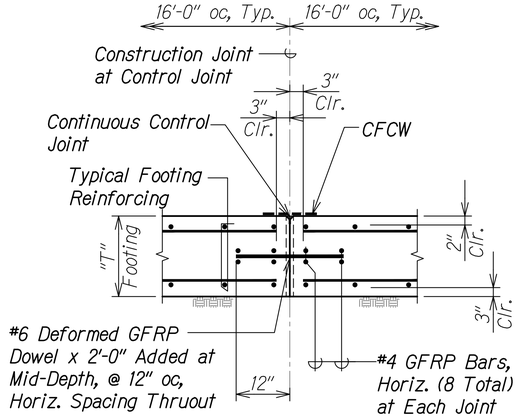
7 SC1.1 SC1.1



TYPICAL CONTROL JOINT IN FOOTING

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

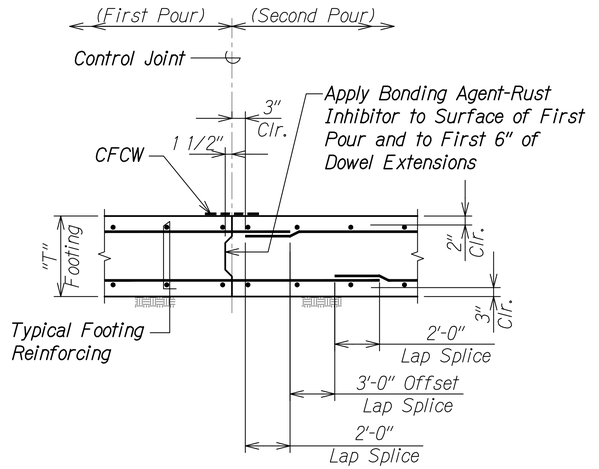
4 SC1.1 SC1.1



TYPICAL CONTRUCTION JOINT AT CONTROL JOINT LOCATION IN FOOTING

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

5 SC1.1 SC1.1



TYPICAL CONSTRUCTION JOINT IN RETAINING WALL FOOTING

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

6 SC1.1 SC1.1

LEGEND:

T Wall or Footing Thickness

NOTE:

Joints may be saw cut or tooled with similar depth and width.

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL JOINT DETAILS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

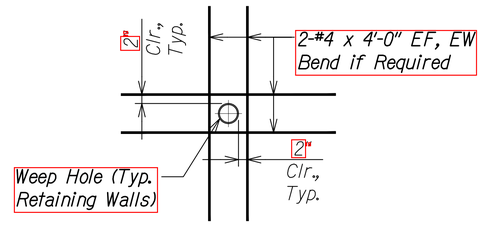
Scale: As Noted — Date: December 2022

SHEET No. SC1.1 OF 11 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0101 JT DTLS.DWG PLOT TIME: 01-04-23, 10:10 AM)

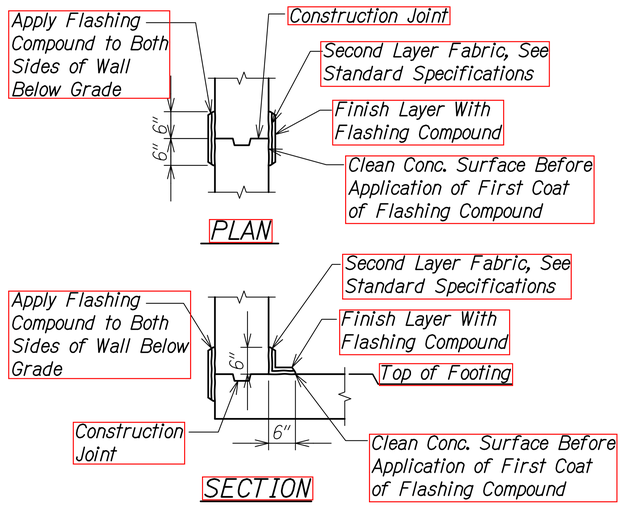
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 412	466



ADDED REINF. AT WEEP HOLES IN CONCRETE WALL

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

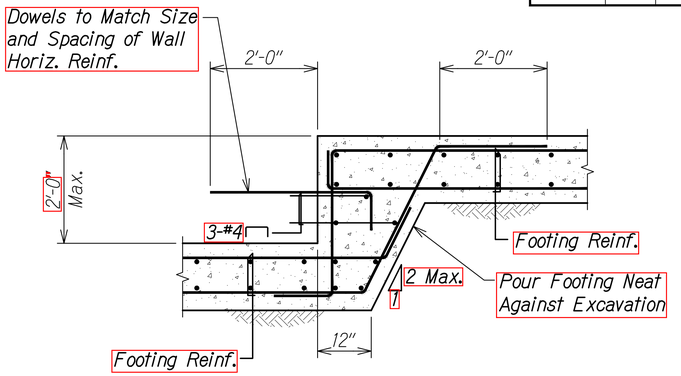
1 SC1.2 SC1.2



TYP. CONT. FLASHING COMPOUND WATERPROOFING (CFCW) DETAILS

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

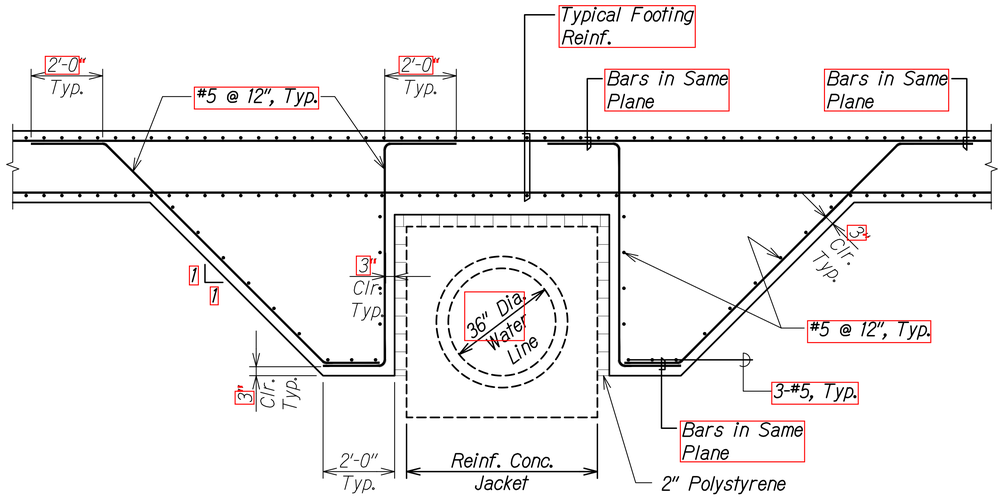
2 SC1.2 SC1.2



TYP. WALL STEP FOOTING

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

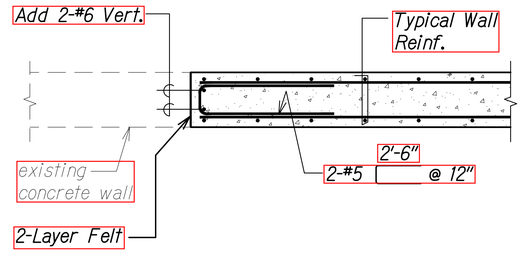
3 SC1.2 SC1.2



THICKENED FOOTING AT WATERLINE

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

4 SC2.11 SC1.2 SC3.18



△2 END OF WALL DETAIL

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

5 SC1.2 SC1.2

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

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4-30-24

SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL DETAILS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC1.2 OF 11 SHEETS

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) DATE

No.	REVISION	DATE
2	Added Detail	4/7/23

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

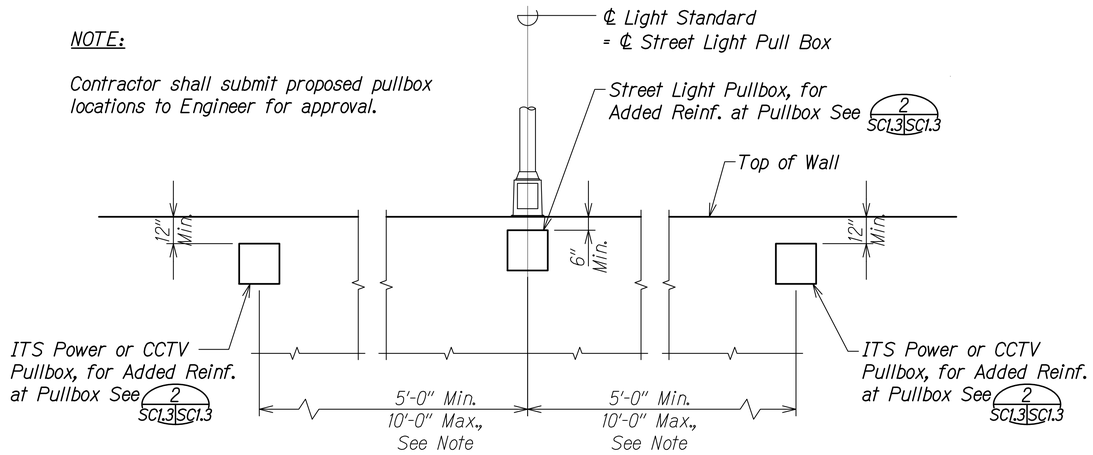
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ADD. 412

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	413	466

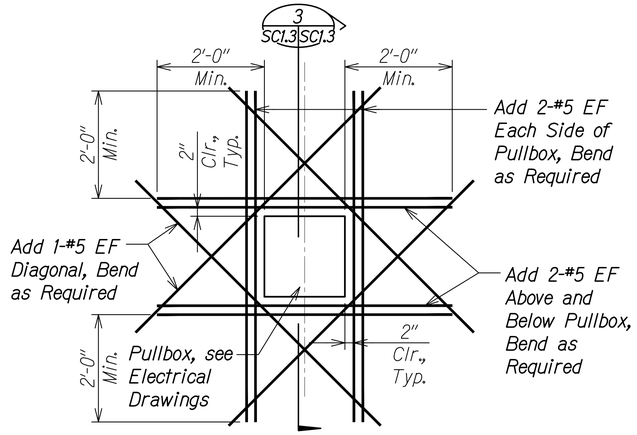
NOTE:

Contractor shall submit proposed pullbox locations to Engineer for approval.



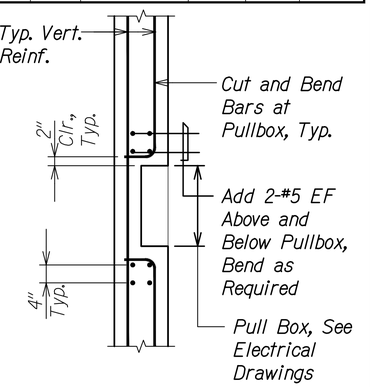
PULLBOX LAYOUT 1 SC1.3|SC1.3

Scale: 3/8" = 1'-0"



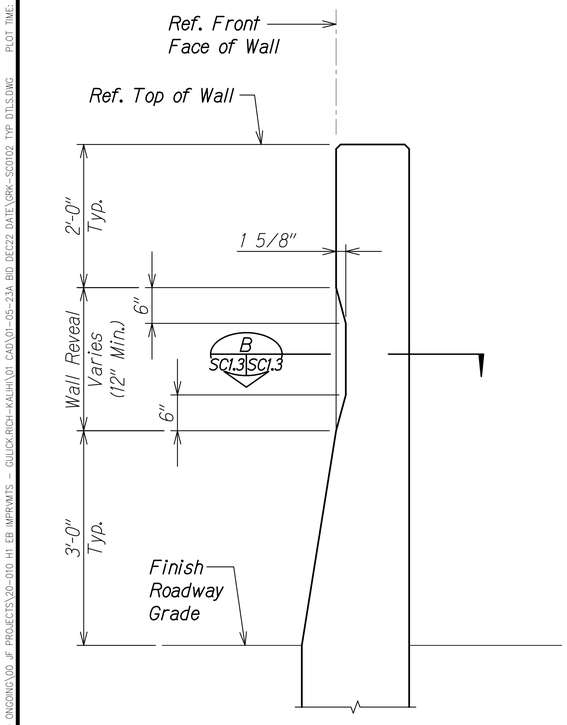
ADDED REINF. AT ELECTRICAL PULLBOX 2 SC1.3|SC1.3

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



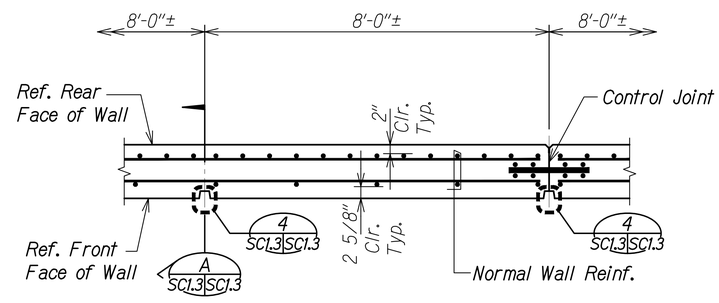
WALL SECTION 3 SC1.3|SC1.3

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



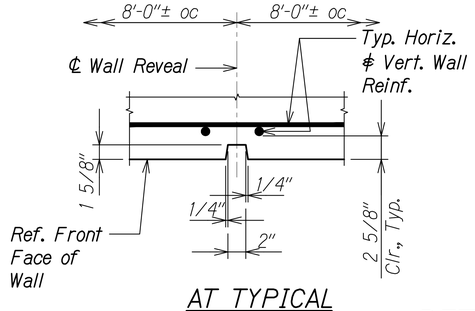
SECTION A SC1.3|SC1.3

Scale: 1" = 1'-0"

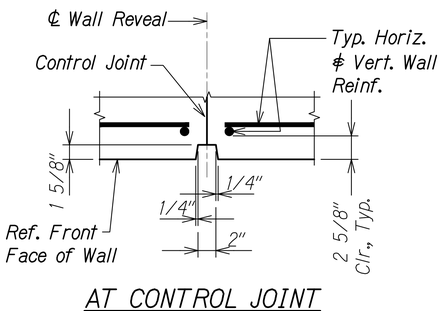


PARTIAL PLAN B SC1.3|SC1.3

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



AT TYPICAL



AT CONTROL JOINT

DETAIL 4 SC1.3|SC1.3

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

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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4-30-24

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL REVEAL AND PULLBOX SECTIONS AND DETAILS

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

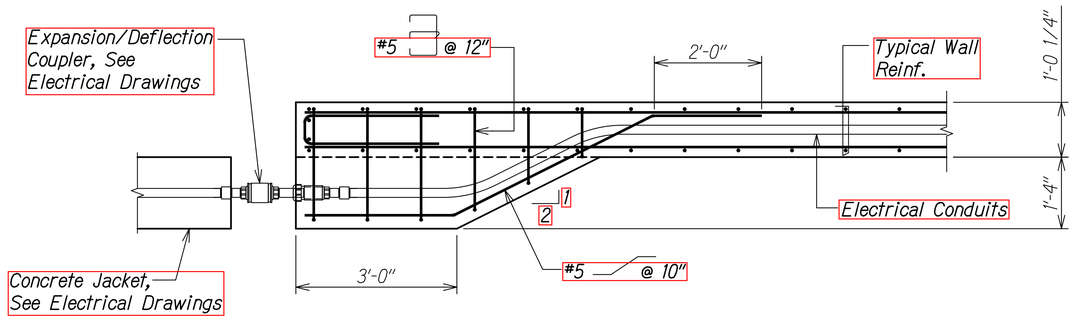
Scale: As Noted Date: December 2022

SHEET No. SC1.3 OF 11 SHEETS

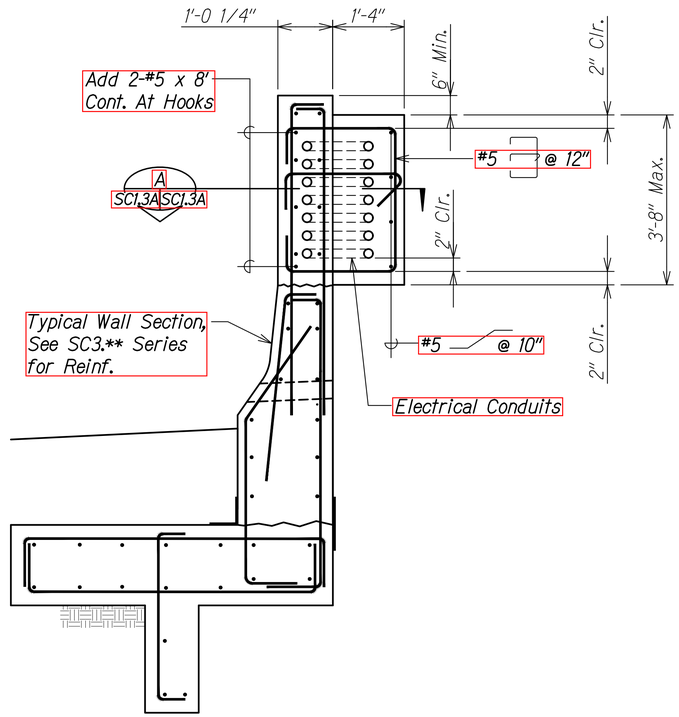
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	DRAWN BY	
	TRACED BY	
NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
No.	CHECKED BY	

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK/RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0102 TYP DTLS.DWG PLOT TIME: 01-04-23, 10:10 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 413S-1	466



SECTION A
Scale: 3/4" = 1'-0" SC1.3A SC1.3A



SECTION B
Scale: 3/4" = 1'-0" SC1.3A SC1.3A

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-17-23 ADD2\GRK-SC0102 TYP DTLS ADD2.DWG PLOT TIME: 04-17-23, 9:11 AM)

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

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WALL SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

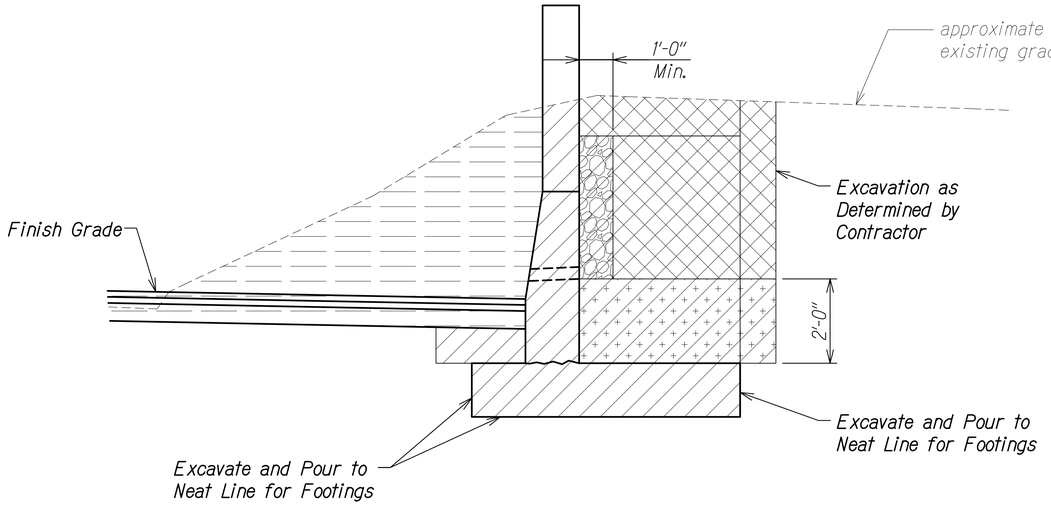
Scale: As Noted Date: December 2022

SHEET No. SC1.3A OF 11 SHEETS

DATE	REVISION
4/7/23	2 New Sheet

ADD. 413S-1

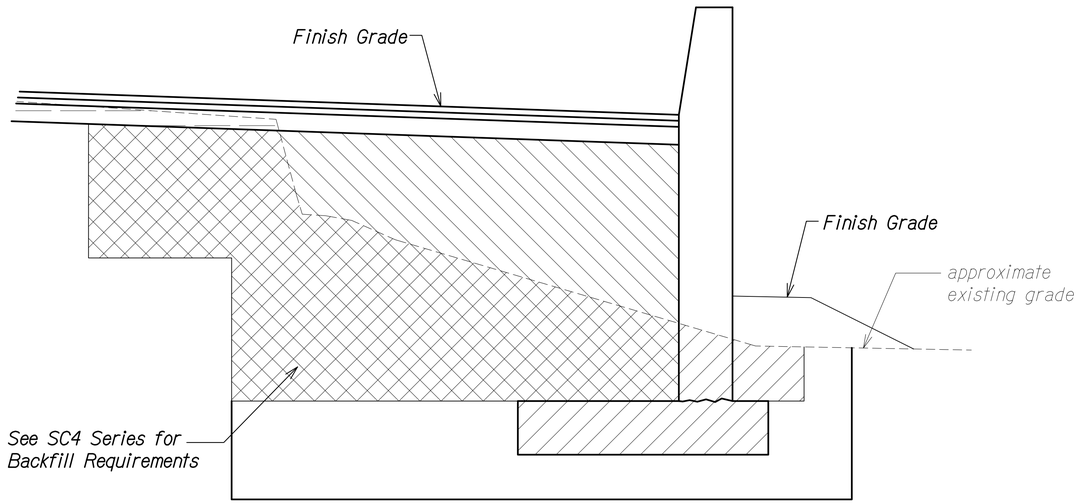
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	414	466



STRUCTURE EXCAVATION AND BACKFILL SECTION AT CUT WALL

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

A SC1.4 | SC1.4



STRUCTURE EXCAVATION AND BACKFILL SECTION AT FILL WALL

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

B SC1.4 | SC1.4

LEGEND:

- Structure Excavation
- Structure Backfill
- Filter Material Wrapped in Filter Fabric
- Impervious Material

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL EXCAVATION AND BACKFILL SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

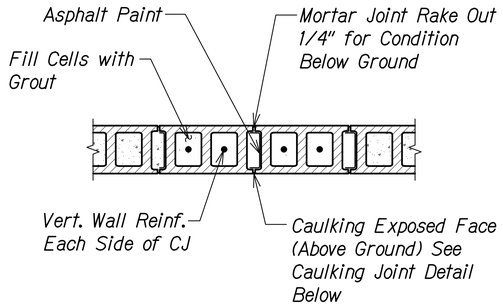
Scale: As Noted Date: December 2022

SHEET No. SC1.4 OF 11 SHEETS

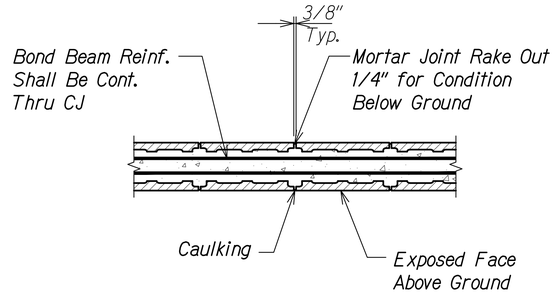
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0102 TYP DTLS.DWG PLOT TIME: 01-04-23, 10:10 AM)

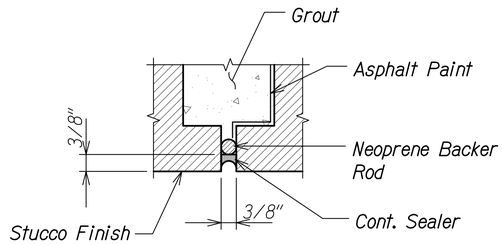
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	415	466



CJ AT TYP. CMU WALL



CJ AT BOND BEAM



CJ AT CAULKING JOINT (EXPOSED FACE)

Not to Scale

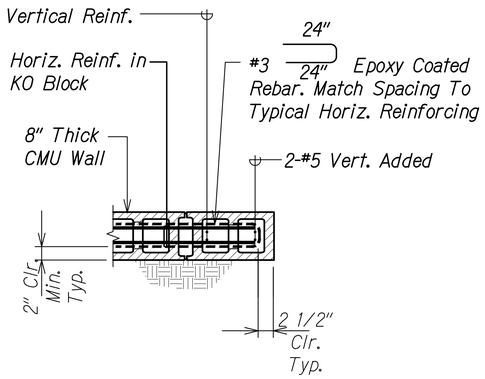
NOTE:

Unless noted otherwise space Control Joints at 16'-0" oc max.

TYPICAL MASONRY WALL CONTROL JOINT (WCJ) DETAILS

1 SC1.5 | SC1.5

Scale: 1" = 1'-0"



LAP LENGTH OF VERT. REINF. IN CMU WALL**	
BAR SIZE	Ld (IN.)
#4	2'-8"
#5	3'-4"
#6	4'-2"
#7	4'-10"

** Unless Otherwise Noted

END OF WALL DETAIL

2 SC1.5 | SC1.5

Scale: 1" = 1'-0"

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0102 TYP DTLS.DWG PLOT TIME: 01-04-23, 10:11 AM)

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
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4-30-24

SIGNATURE DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

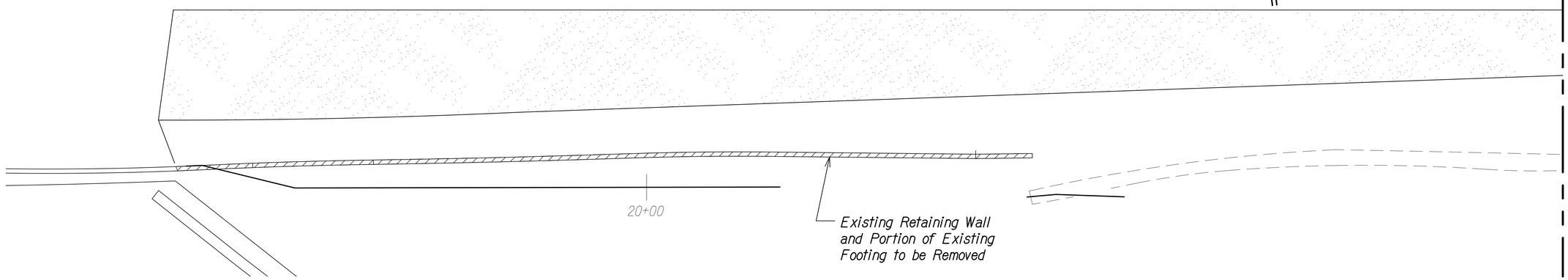
TYPICAL CMU WALL DETAILS

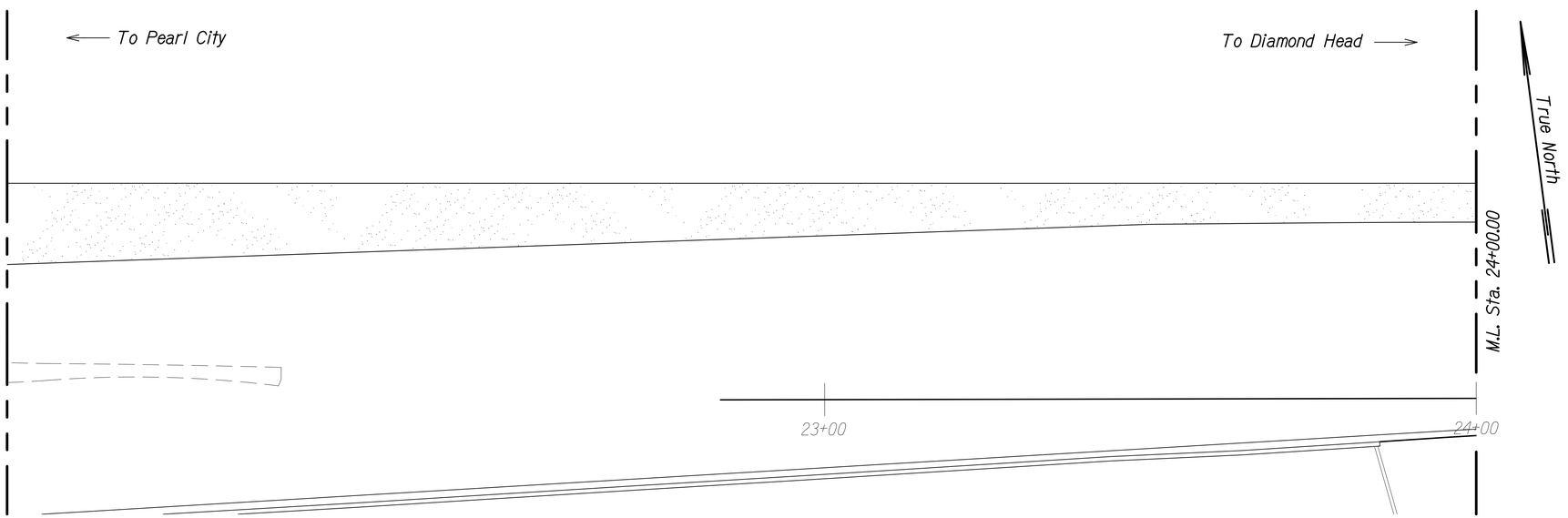
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC1.5 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	416	466





RETAINING WALL DEMOLITION PLAN

Scale: 1" = 10'-0"

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0106 WALL DEMOL PLAN.DWG PLOT TIME: 01-04-23, 10:11 AM)

RUSS S. MIYAHARA
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HAWAII, U.S.A.

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STATE OF HAWAII
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HIGHWAYS DIVISION

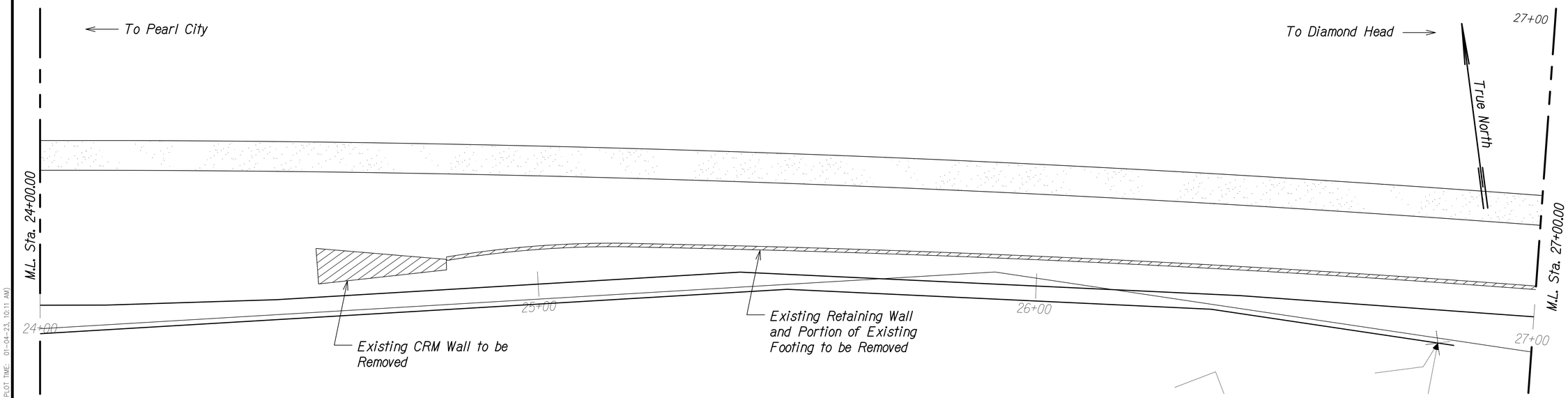
RETAINING WALL DEMO. PLAN
STA. 19+12.05 TO STA. 24+00.00

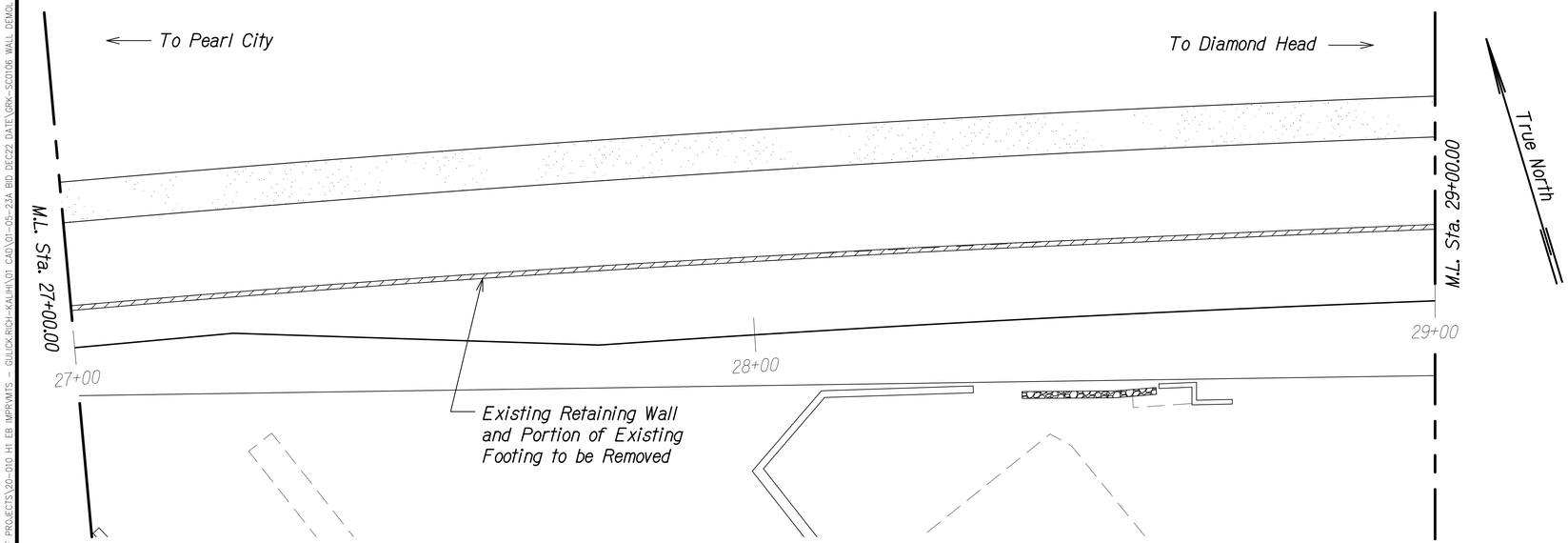
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC1.6 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	417	466





RETAINING WALL DEMOLITION PLAN

Scale: 1" = 10'-0"

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0106 WALL DEMOL PLAN.DWG PLOT TIME: 01-04-23, 10:11 AM)

RUSS S. MIYAHARA
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SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

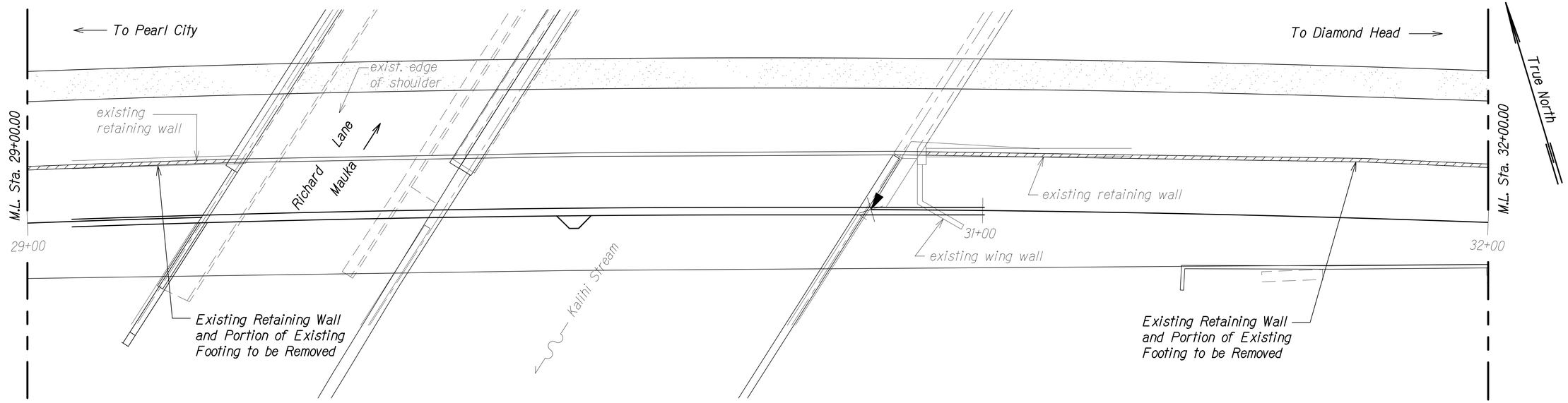
RETAINING WALL DEMO. PLAN
STA. 24+00.00 TO STA. 29+00.00

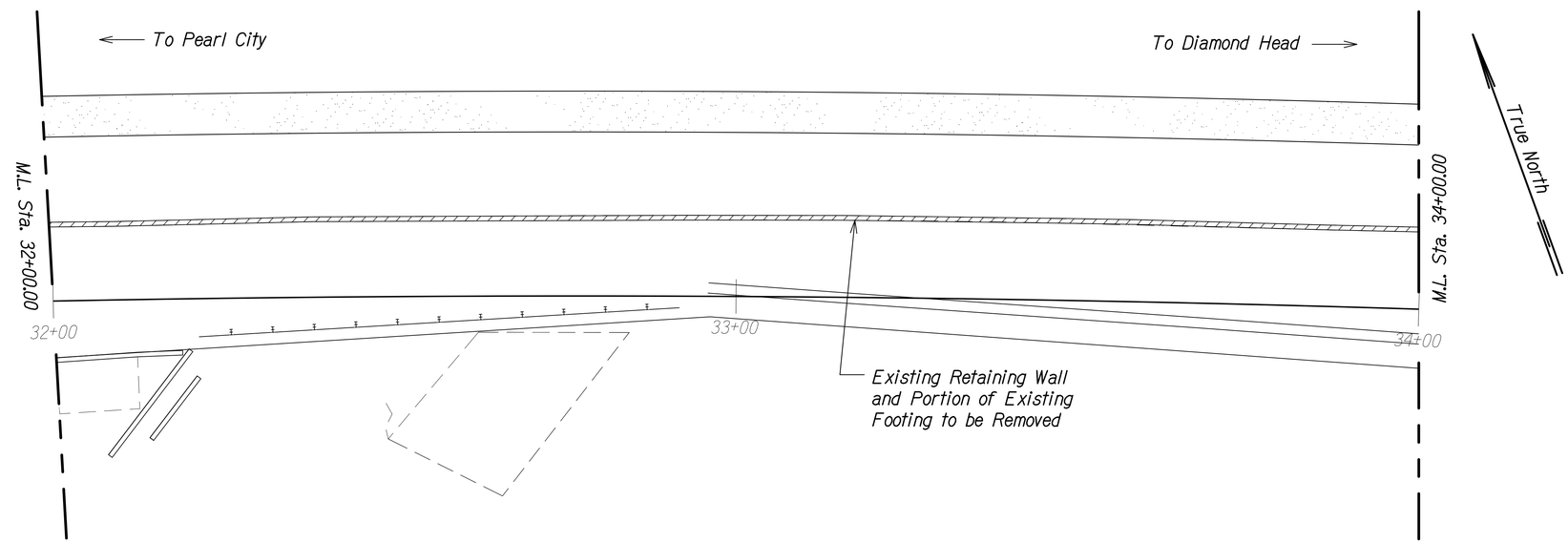
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC1.7 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	418	466





RETAINING WALL DEMOLITION PLAN

Scale: 1" = 10'-0"

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0106 WALL DEMOL PLAN.DWG PLOT TIME: 01-04-23, 10:12 AM)

RUSS S. MIYAHARA
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

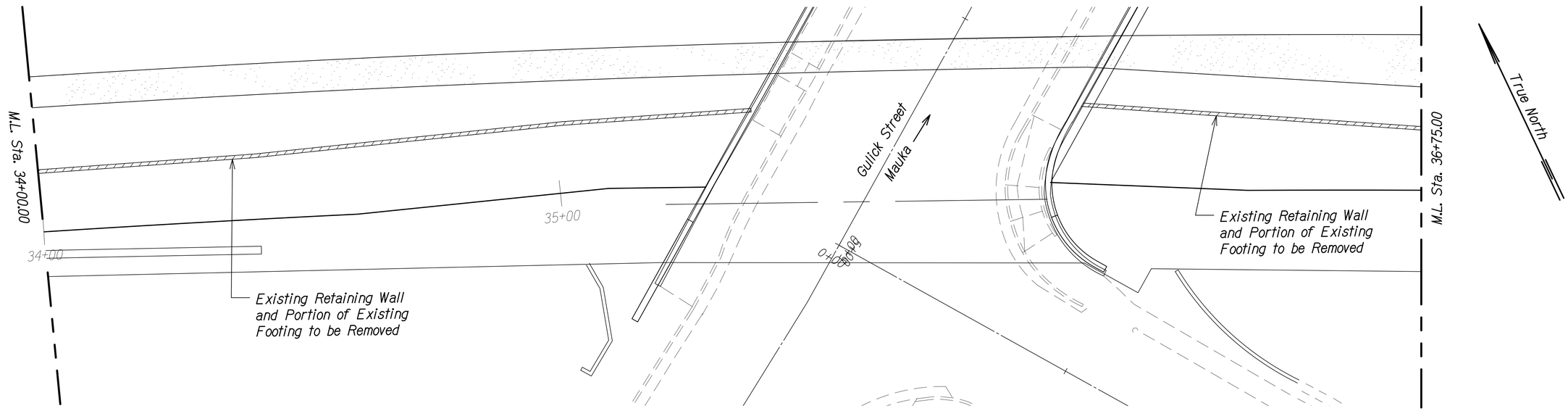
RETAINING WALL DEMO. PLAN
STA. 29+00.00 TO STA. 34+00.00

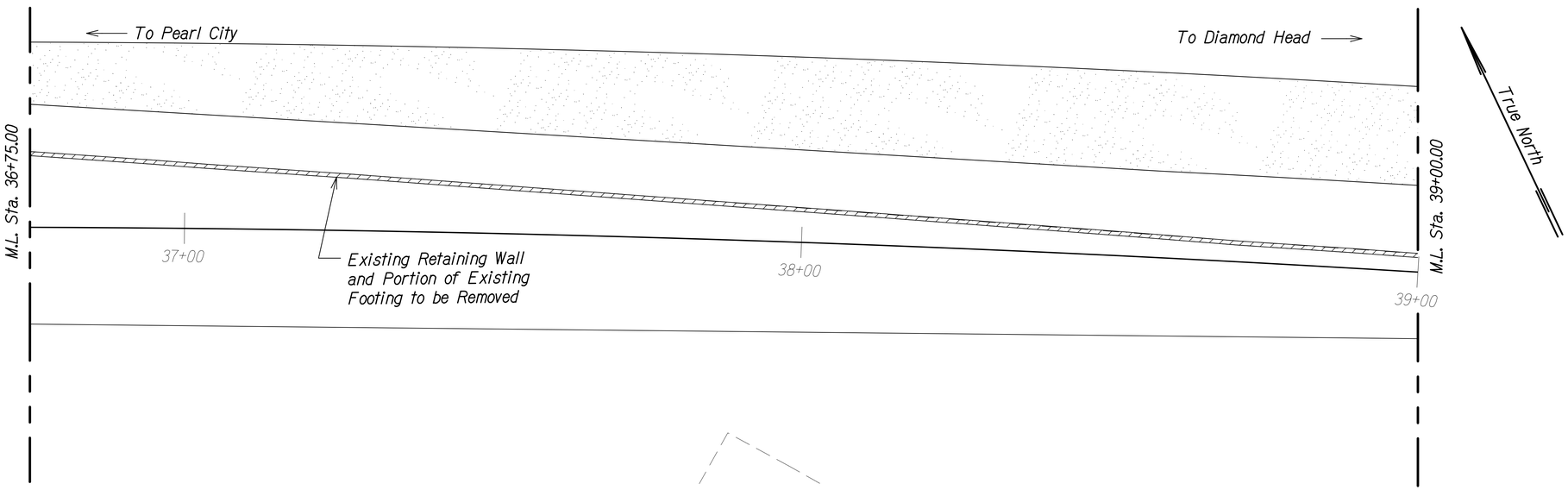
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC1.8 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	419	466





RETAINING WALL DEMOLITION PLAN

Scale: 1" = 10'-0"

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL DEMO. PLAN
STA. 34+00.00 TO STA. 39+00.00

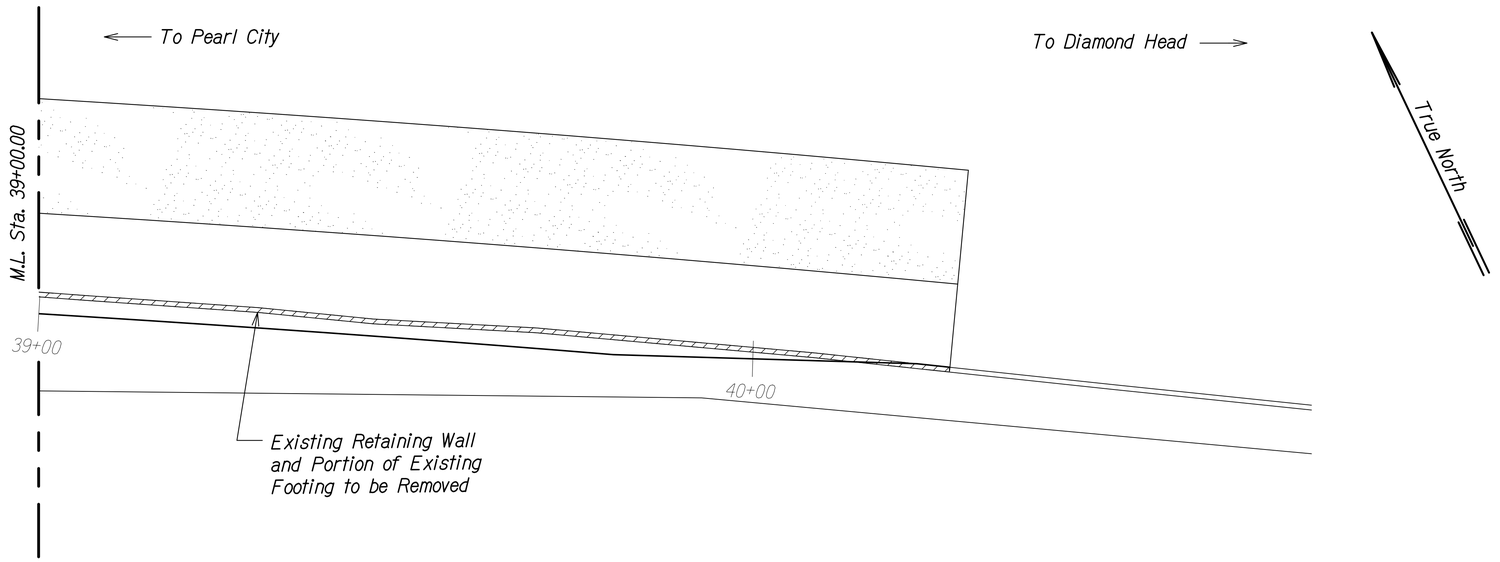
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC1.9 OF 11 SHEETS

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0106 WALL DEMOL PLAN.DWG PLOT TIME: 01-04-23, 10:12 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	420	466



RETAINING WALL DEMOLITION PLAN

Scale: 1" = 10'-0"

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0106 WALL DEMOL PLAN.DWG PLOT TIME: 01-04-23, 10:12 AM)

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

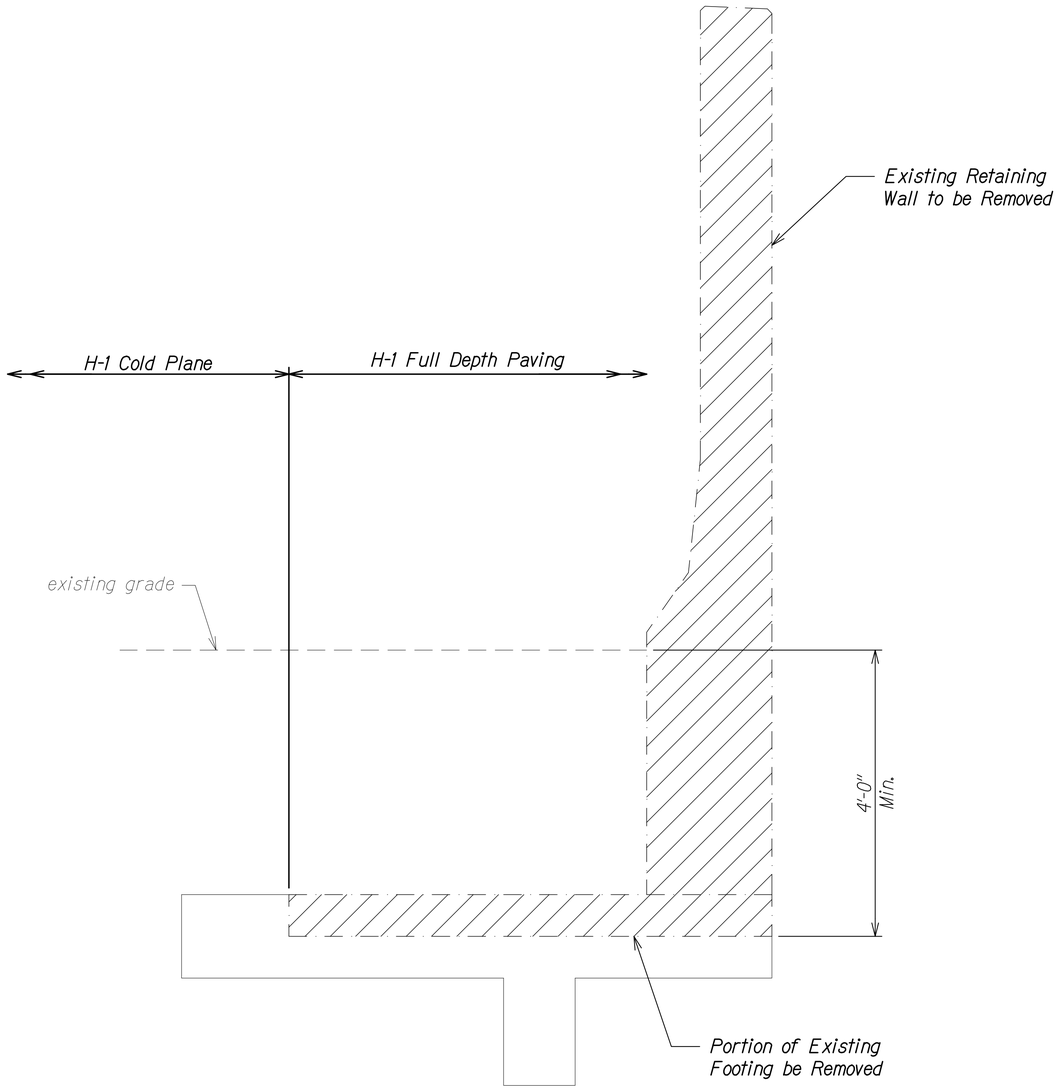
RETAINING WALL DEMO. PLAN
STA. 39+00.00 TO STA. 40+34.77

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC1.10 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	421	466



SECTION A
Scale: 1" = 1'-0" SC1.11 | SC1.11

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0111 WALL DEMOL SEC.DWG PLOT TIME: 01-04-23, 10:12 AM)

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NO. 9444-S
HAWAII, U.S.A.

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4-30-24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

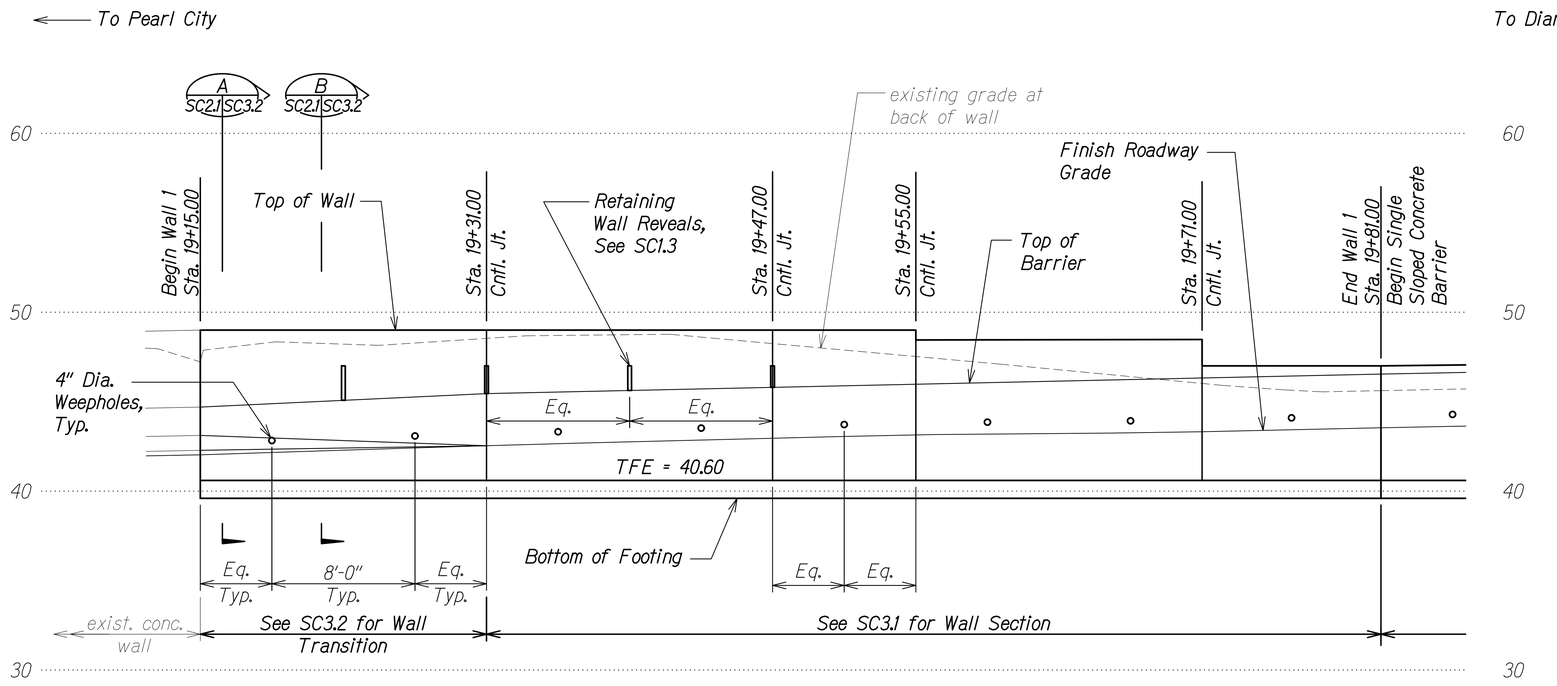
RETAINING WALL DEMO. SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC1.11 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	422	466



WALL 1 PROFILE - STA. 19+15 TO STA. 19+81 (A SC2.1 | SC2.1)

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

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL 1 PROFILE STA. 19+15 TO STA. 19+81

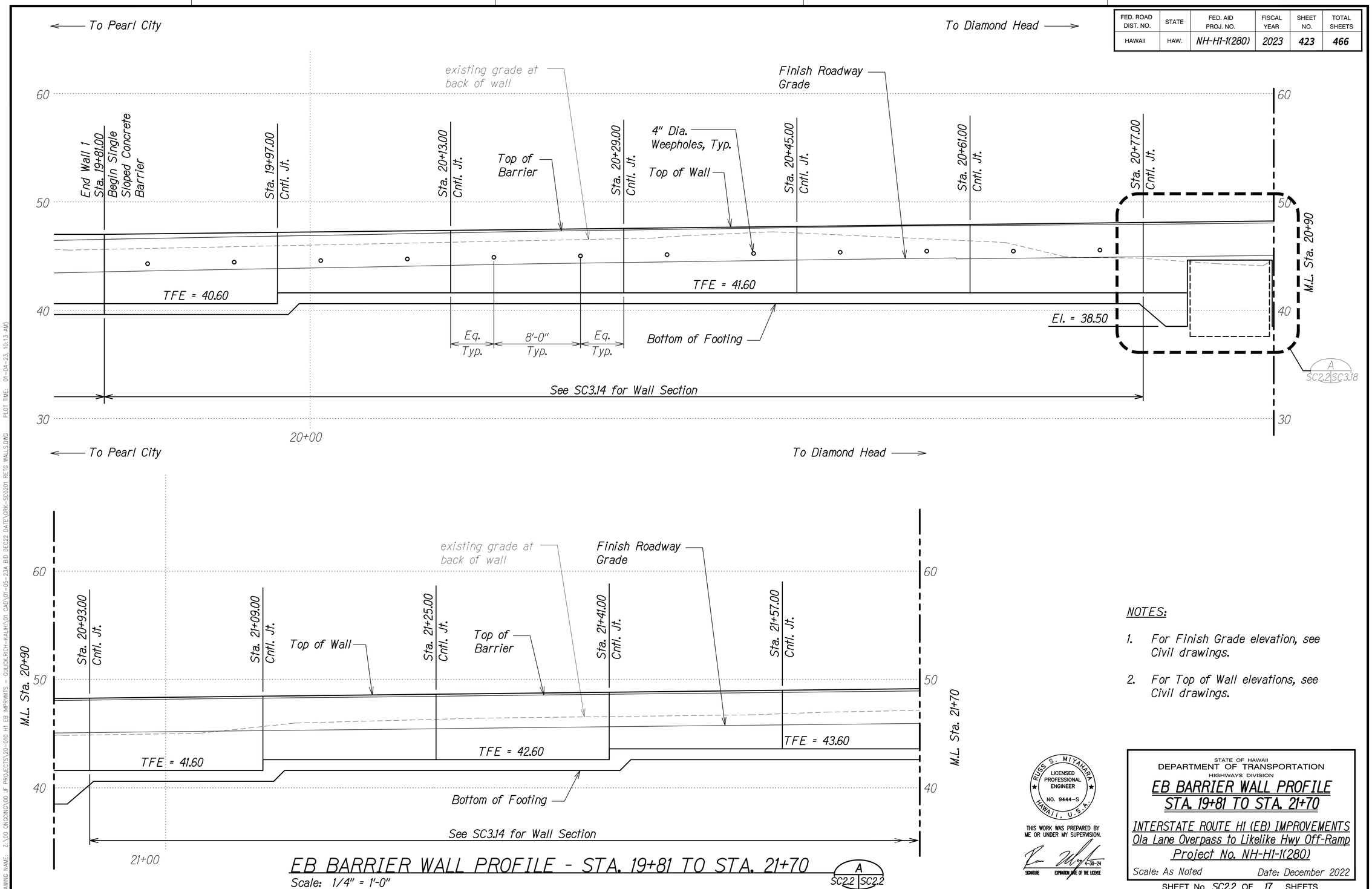
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC2.1 OF 17 SHEETS

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0201 RETG WALLS.DWG PLOT TIME: 01-04-23, 10:13 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	423	466



EB BARRIER WALL PROFILE - STA. 19+81 TO STA. 21+70

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

A SC2.2 | SC2.2

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0201 RETG WALLS.DWG PLOT TIME: 01-04-23, 10:13 AM)

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

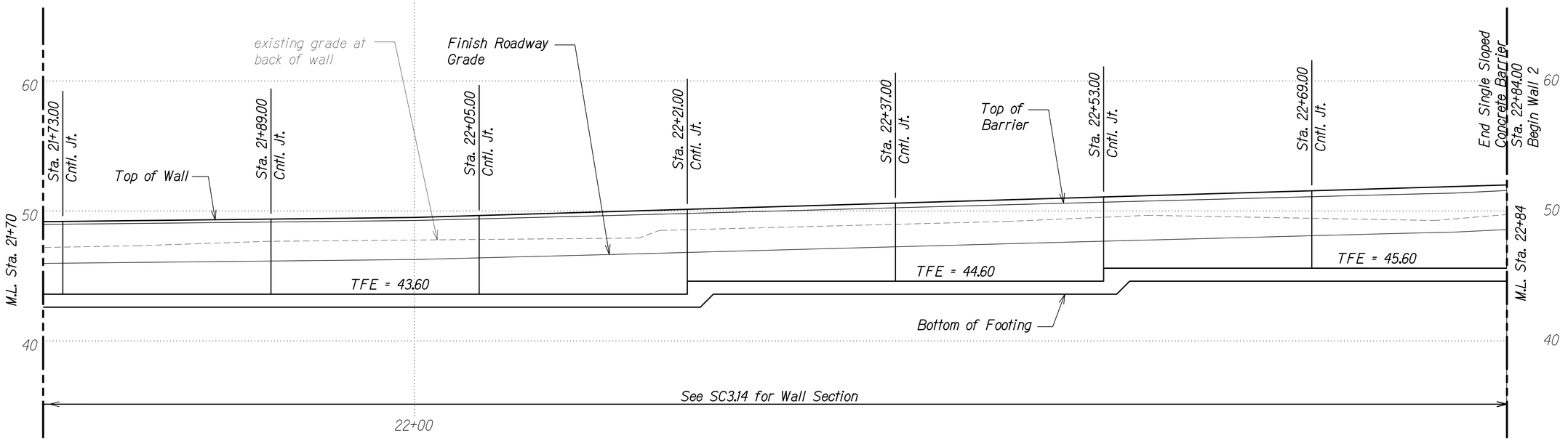
EB BARRIER WALL PROFILE
STA. 19+81 TO STA. 21+70

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC2.2 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	424	466



EB BARRIER WALL PROFILE - STA. 21+70 TO STA. 22+84

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

A SC2.3 | SC2.3

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EB BARRIER WALL PROFILE
STA. 21+70 TO STA. 22+84

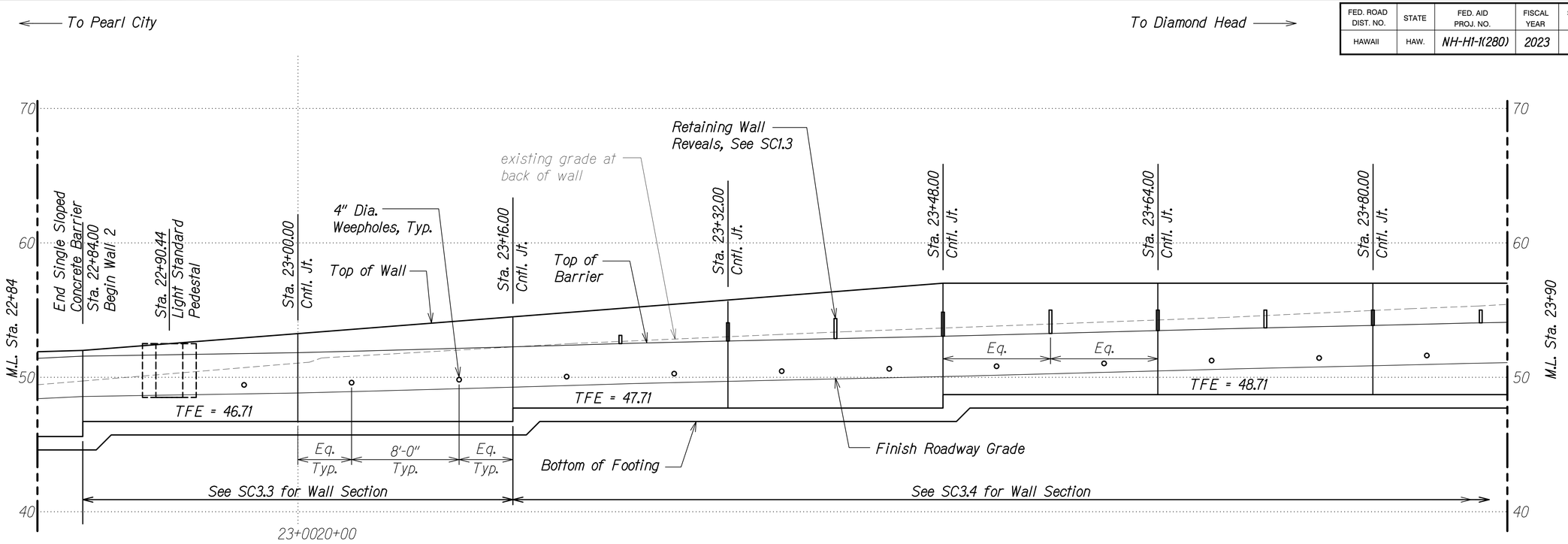
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC2.3 OF 17 SHEETS

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK:RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0201 RETG WALLS.DWG PLOT TIME: 01-04-23, 10:13 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	425	466



WALL 2 PROFILE - STA. 22+84 TO STA. 24+70

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

A SC2.4 | SC2.4

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0201 RETG WALLS.DWG PLOT TIME: 01-04-23, 10:13 AM)

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

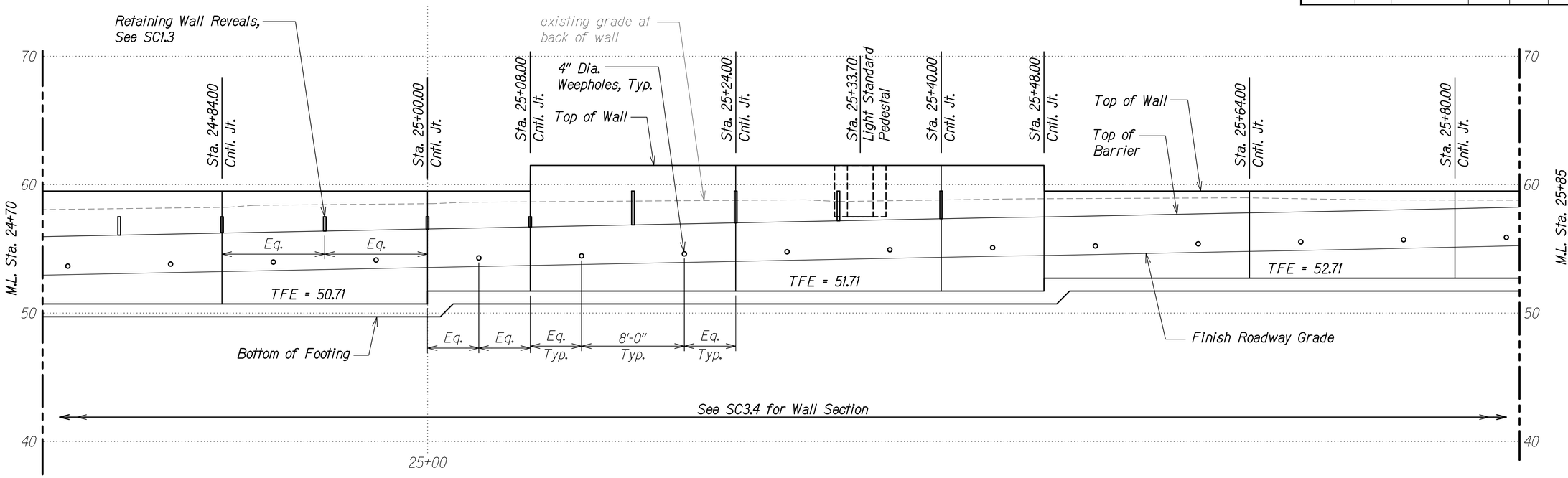
RETAINING WALL 2 PROFILE STA. 22+84 TO STA. 24+70

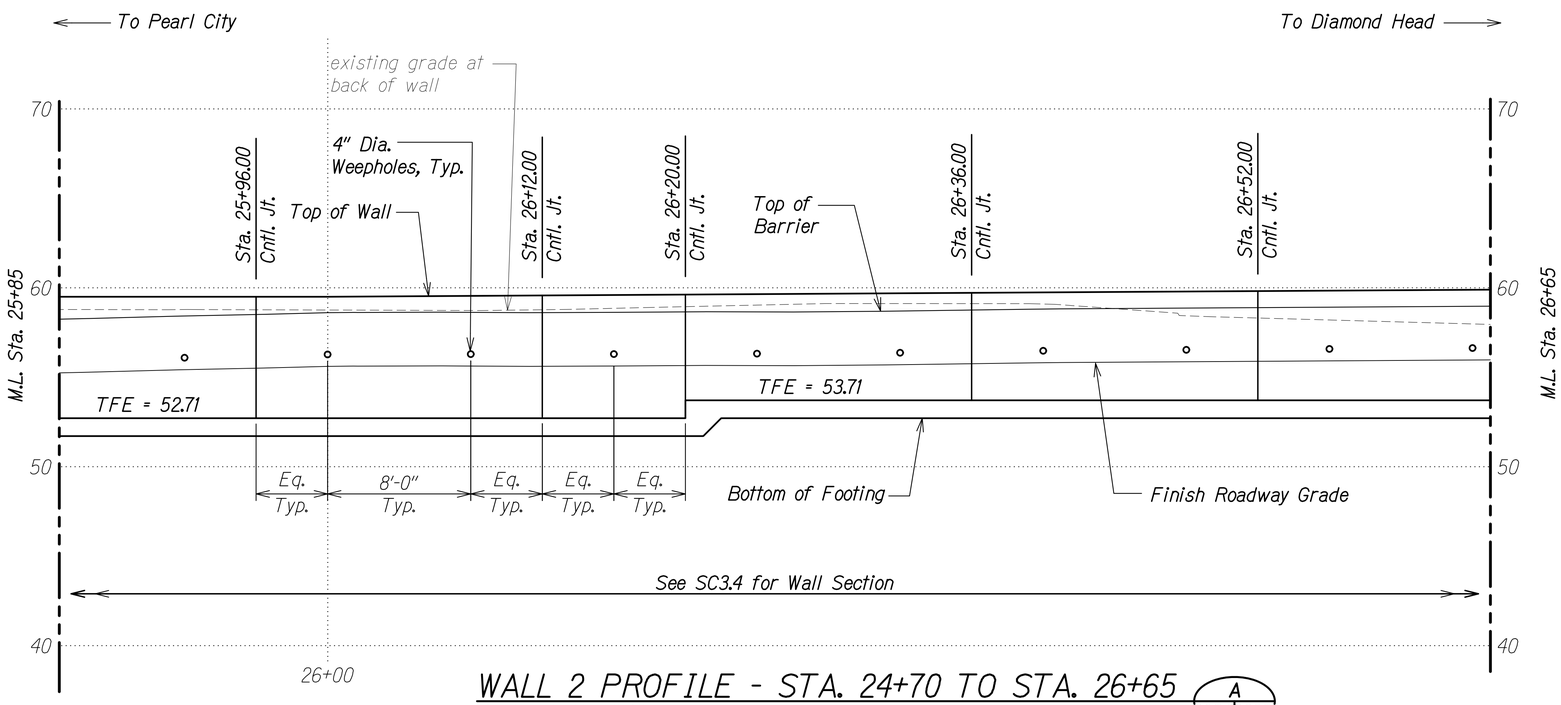
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC2.4 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	426	466





WALL 2 PROFILE - STA. 24+70 TO STA. 26+65

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

A
SC2.5 | SC2.5

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - QUICKRICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0201 RETG WALLS.DWG PLOT TIME: 01-04-23, 10:14 AM)

RUSS S. MIYAHARA
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HAWAII, U.S.A.

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4-30-24
SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

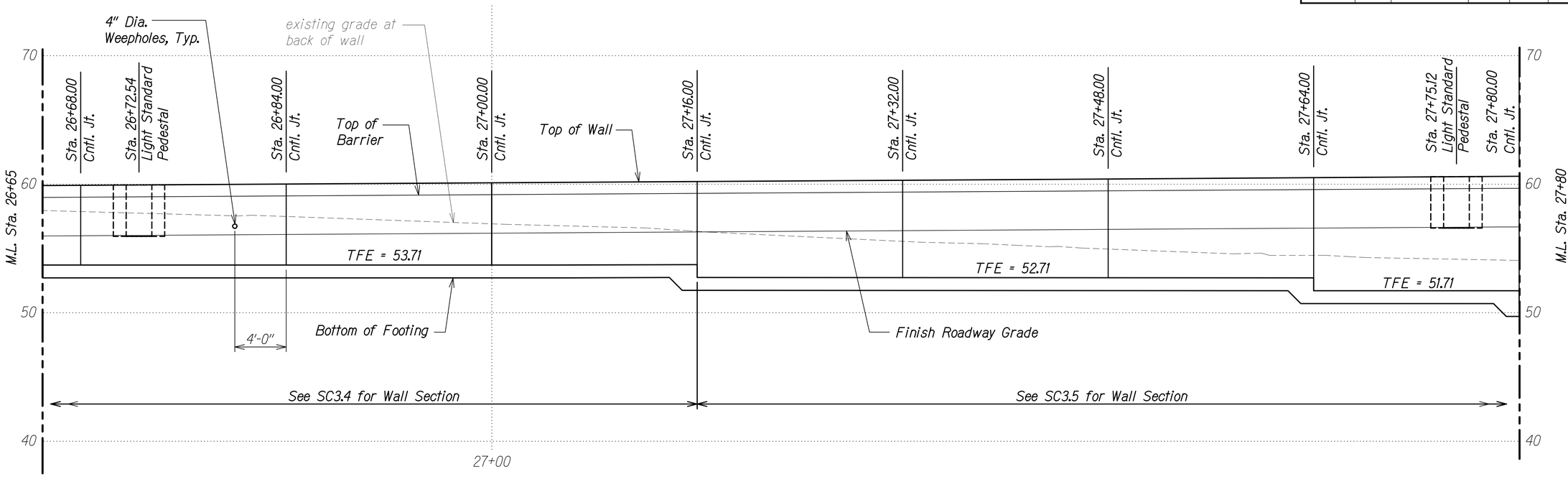
RETAINING WALL 2 PROFILE
STA. 24+70 TO STA. 26+65

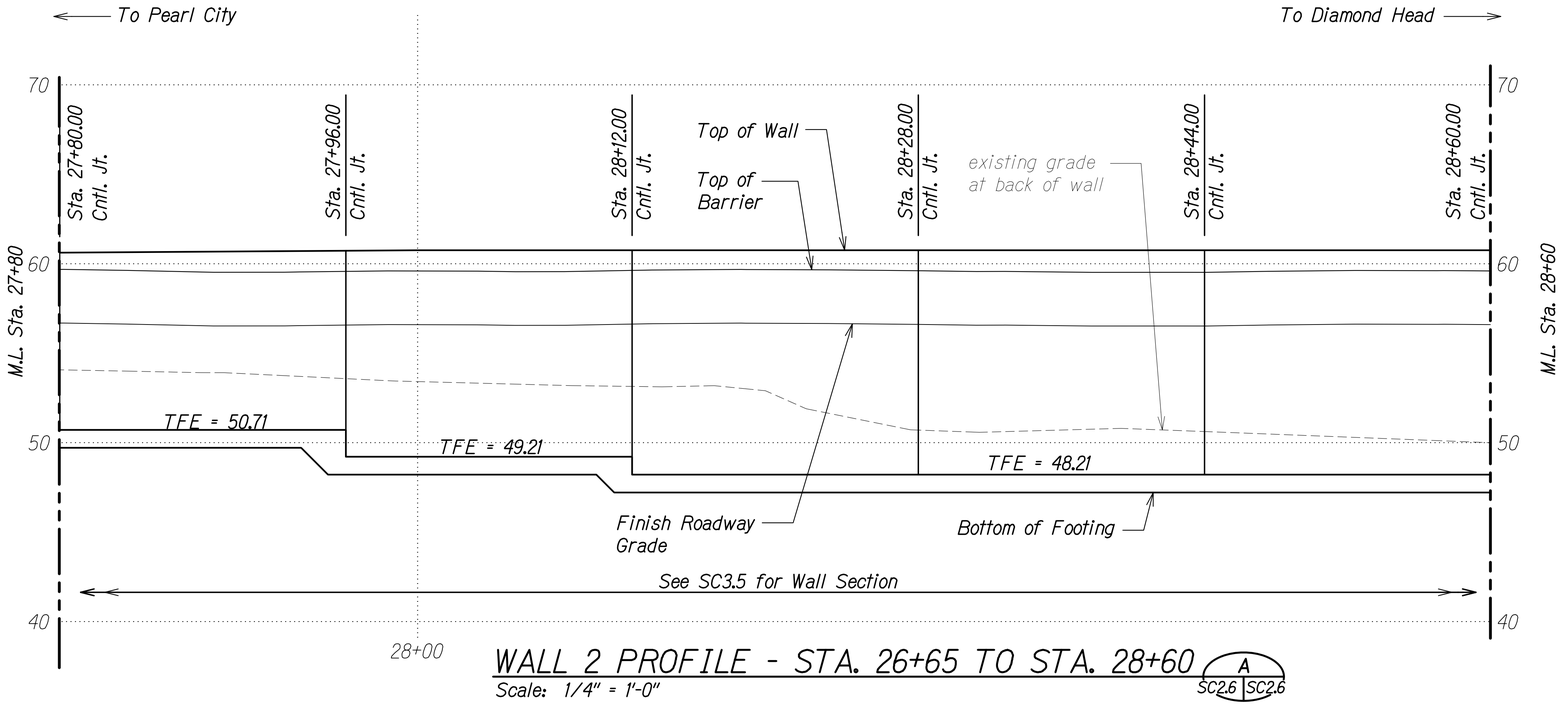
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SC2.5 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	427	466





WALL 2 PROFILE - STA. 26+65 TO STA. 28+60

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

A SC2.6 | SC2.6

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.

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

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4-30-24

SIGNATURE — EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL 2 PROFILE
STA. 26+65 TO STA. 28+60

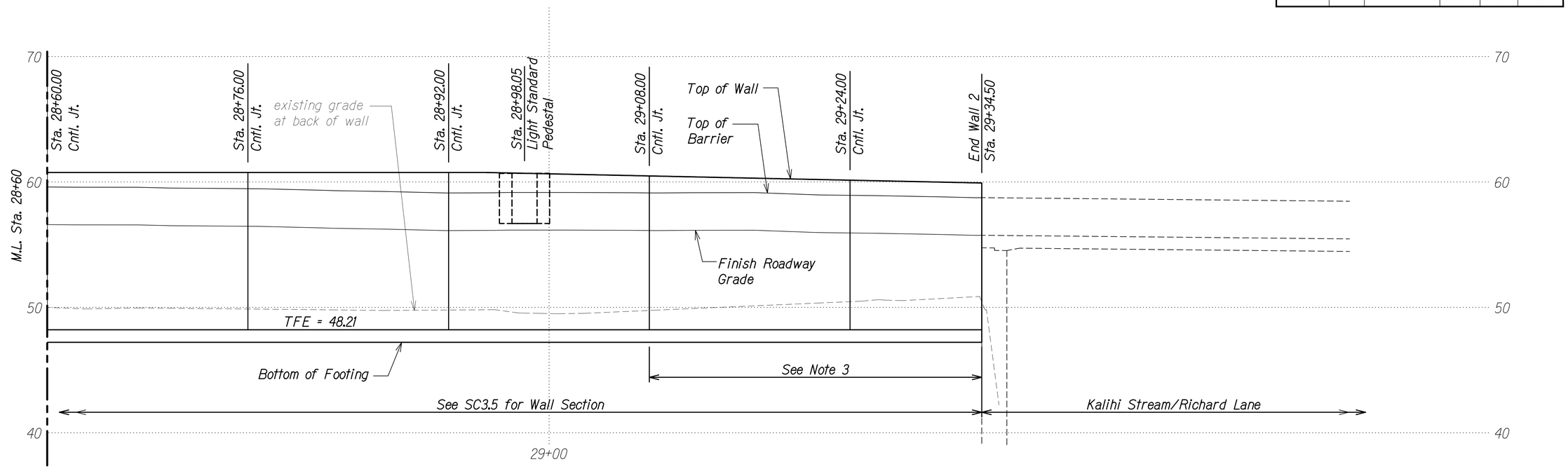
INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SC2.6 OF 17 SHEETS

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0201 RETG WALLS.DWG PLOT TIME: 01-04-23, 10:14 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	428	466



WALL 2 PROFILE - STA. 28+60 TO STA. 29+34.50

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

A SC2.7 | SC2.7

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.
3. The Contractor shall demolish and construct Kalihi Stream/Richard Lane abutment and wingwalls prior to constructing portions of wall 2. Install temporary shoring as required to prevent damage or undermining of new or existing structures.

ORIGINAL PLAN
NOTE BOOK
No.

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

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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4-30-24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL 2 PROFILE
STA. 28+60 TO STA. 29+34.50

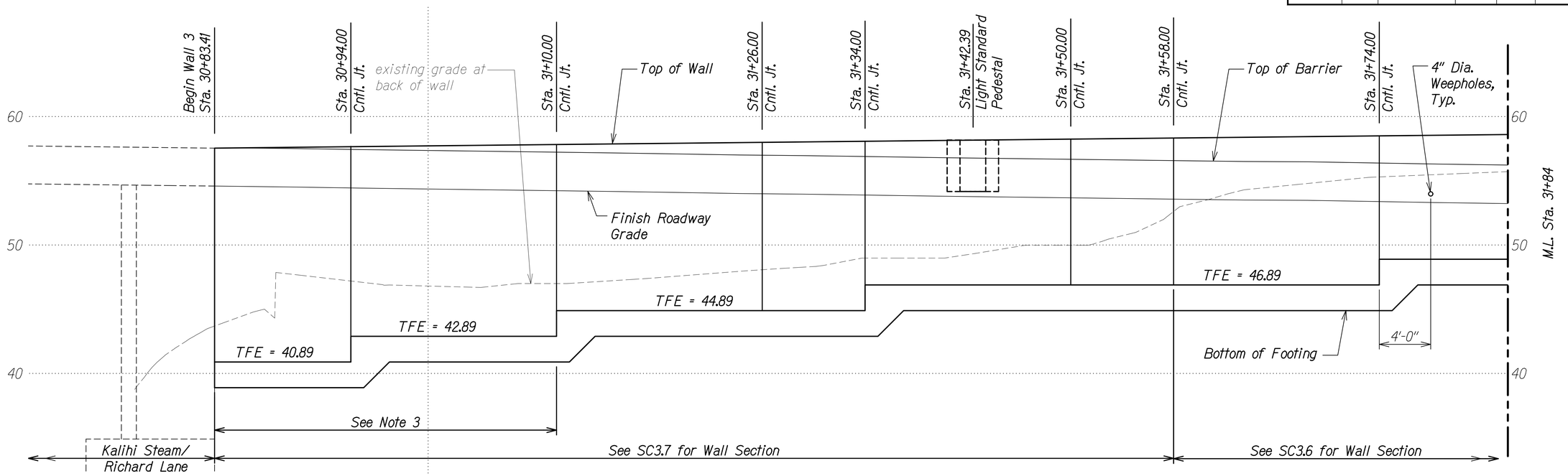
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

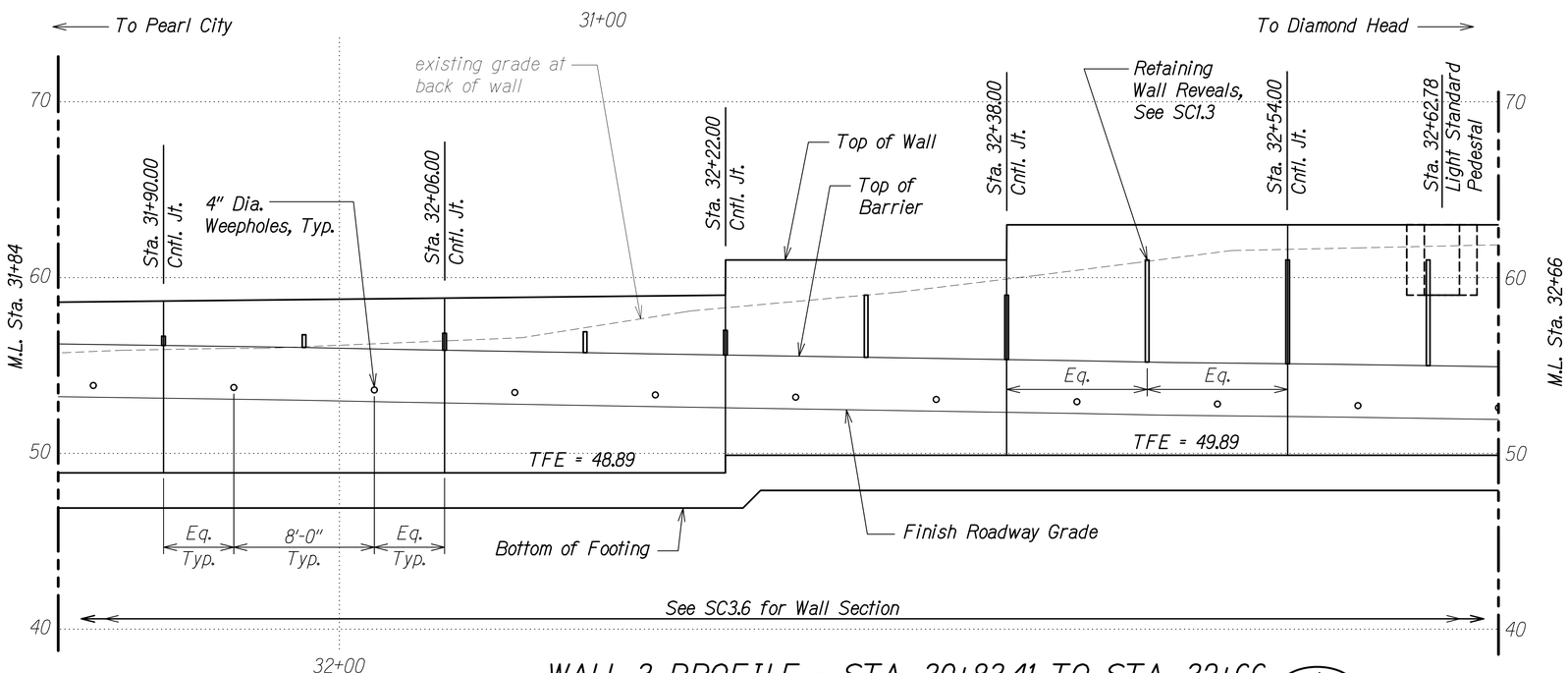
Scale: As Noted Date: December 2022

SHEET No. SC2.7 OF 17 SHEETS

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK/RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0201 RETG WALLS.DWG PLOT TIME: 01-04-23, 10:14 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	429	466





NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.
3. The Contractor shall demolish and construct Kalihi Stream/Richard Lane abutment and wingwalls prior to constructing portions of wall 3. Install temporary shoring as required to prevent damage or undermining of new or existing structures.

WALL 3 PROFILE - STA. 30+83.41 TO STA. 32+66

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

A SC2.8 | SC2.8

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

DRAWING NAME: Z:\DO ONGOING\DO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0201 RETG WALLS.DWG PLOT TIME: 01-04-23, 10:14 AM)

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

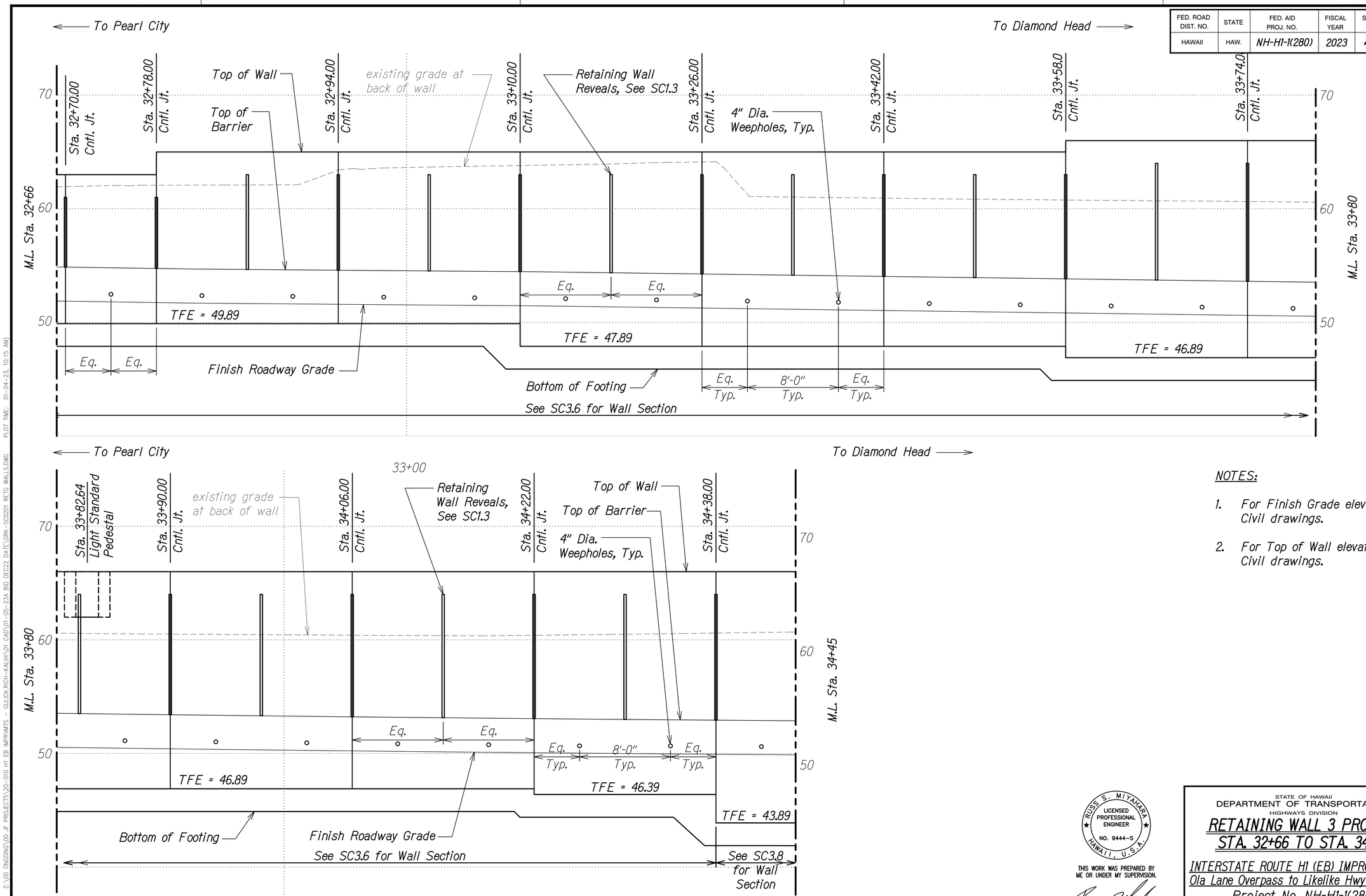
RETAINING WALL 3 PROFILE STA. 30+83.41 TO STA. 32+66

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC2.8 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	430	466



WALL 3 PROFILE - STA. 32+66 TO STA. 34+45

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

A SC2.9 | SC2.9

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB MPRVMTS - GULICK,RICH-KALIHA\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0201 RETG WALLS.DWG PLOT TIME: 01-04-23, 10:15 AM)

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

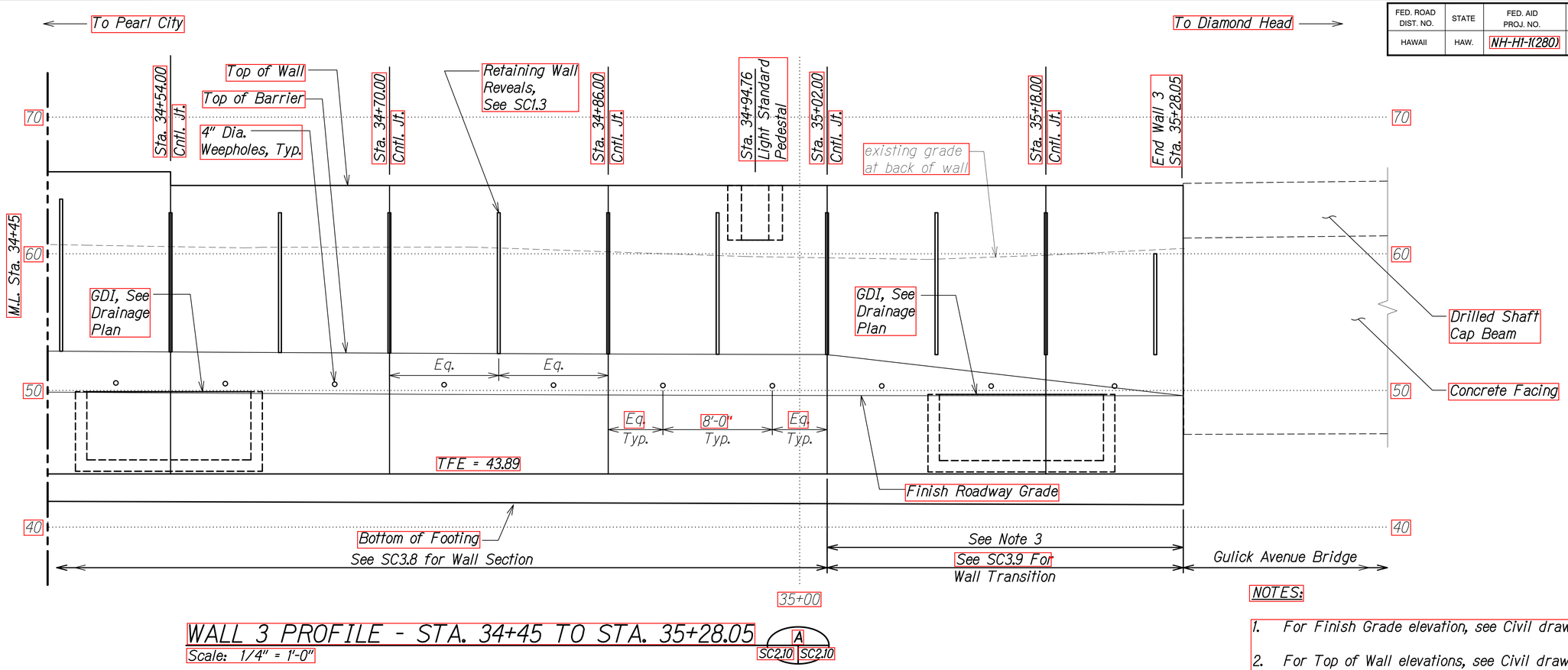
RETAINING WALL 3 PROFILE STA. 32+66 TO STA. 34+45

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC2.9 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 431	466



WALL 3 PROFILE - STA. 34+45 TO STA. 35+28.05

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

A SC2.10 SC2.10

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.
3. The Contractor shall demolish and construct Gulick Avenue abutment drilled shaft cap beam prior to constructing portion of wall 3. Install temporary shoring as required to prevent damage or undermining of new or existing structures. (2)
4. Probing and grouting shall be done for Retaining Wall 3 from Sta. 34+50 to Sta. 35+28.05. Probe holes shall be spaced 10'-0" on-center each way. See Special Provisions Section 660.

DATE	REVISION
4/7/23	(2) Revised Station

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL 3 PROFILE
STA. 34+45 TO STA. 35+28.05

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

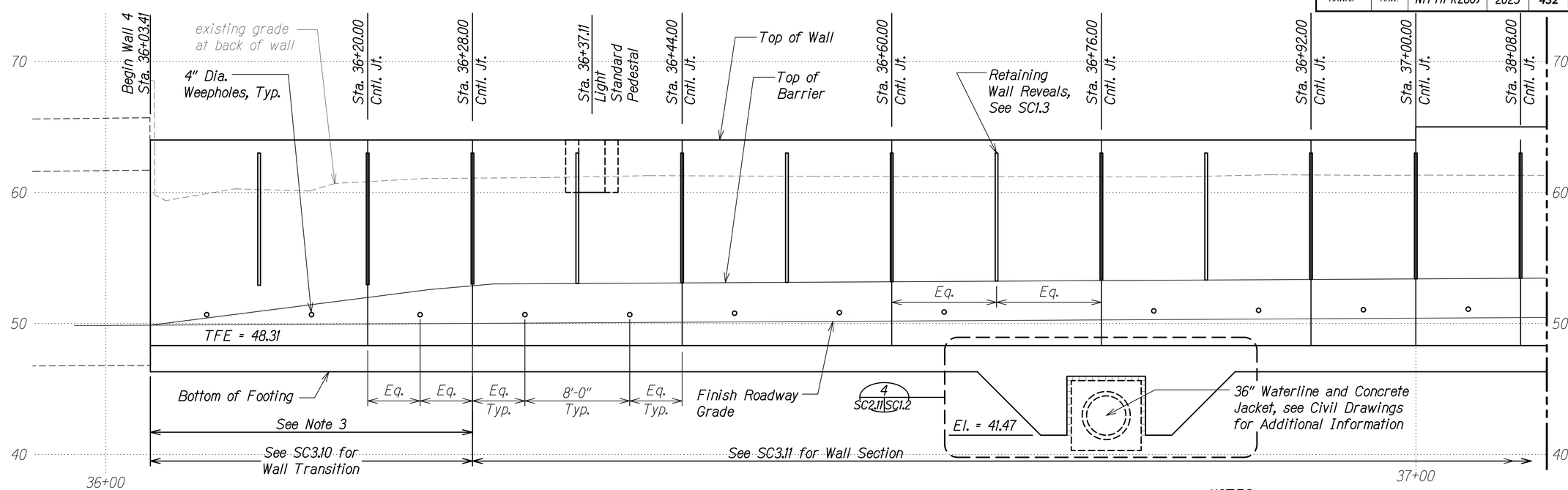
SHEET No. SC2.10 OF 17 SHEETS

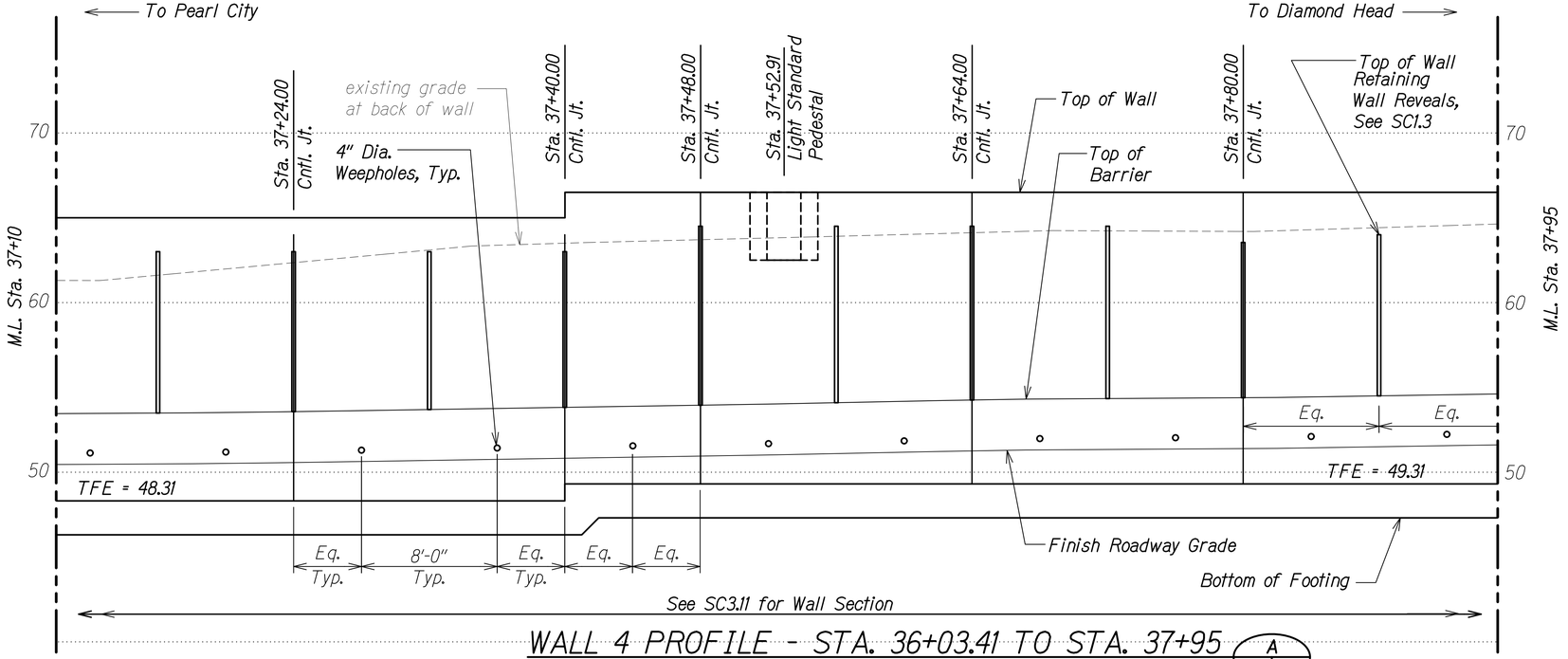
ORIGINAL PLANS | NOTE BOOK No. | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

DRAWING NAME: Z:\OO ONGONG\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0201 RETG WALLS ADD2.DWG PLOT TIME: 04-10-23, 3:47 PM)

ADD. 431

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	432	466





WALL 4 PROFILE - STA. 36+03.41 TO STA. 37+95

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

A SC2.11 | SC2.11

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.
3. The Contractor shall demolish and construct Gulick Avenue abutment drilled shaft cap beam prior to constructing portion of wall 4. Install temporary shoring as required to prevent damage or undermining of new or existing structures.
4. Probing and grouting shall be done for Retaining Wall 4 from Sta. 36+03.41 to Sta. 40+27.58. Probe holes shall be spaced 10'-0" on-center each way. See Special Provisions Section 660.

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) — DATE

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL 4 PROFILE STA. 36+03.41 TO STA. 37+95

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

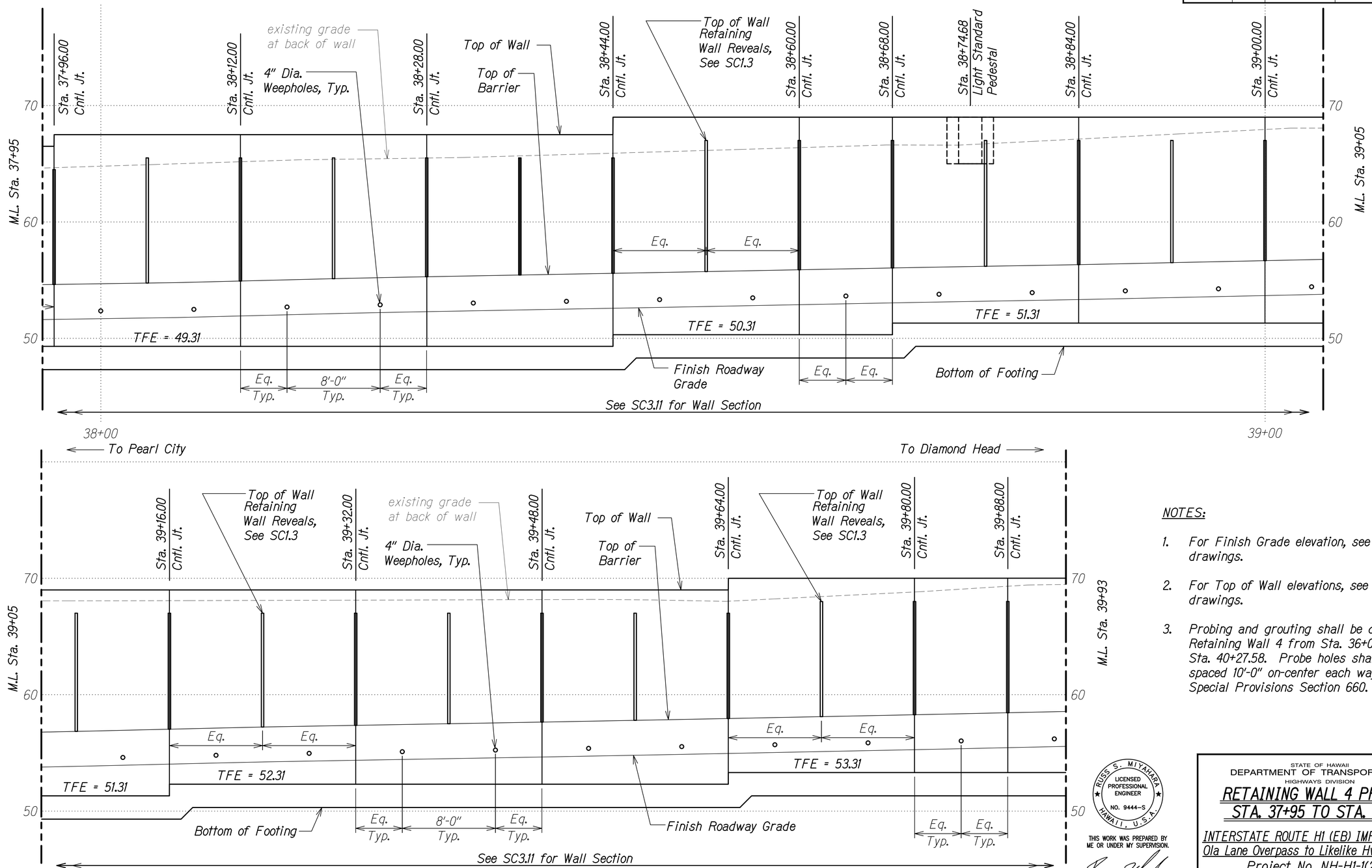
Scale: As Noted — Date: December 2022

SHEET No. SC2.11 OF 17 SHEETS

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0201 RETG WALLS.DWG PLOT TIME: 01-04-23, 10:15 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	433	466



WALL 4 PROFILE - STA. 37+95 TO STA. 39+93

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

A SC2.12 | SC2.12

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.
3. Probing and grouting shall be done for Retaining Wall 4 from Sta. 36+03.41 to Sta. 40+27.58. Probe holes shall be spaced 10'-0" on-center each way. See Special Provisions Section 660.

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

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RETAINING WALL 4 PROFILE
STA. 37+95 TO STA. 39+93

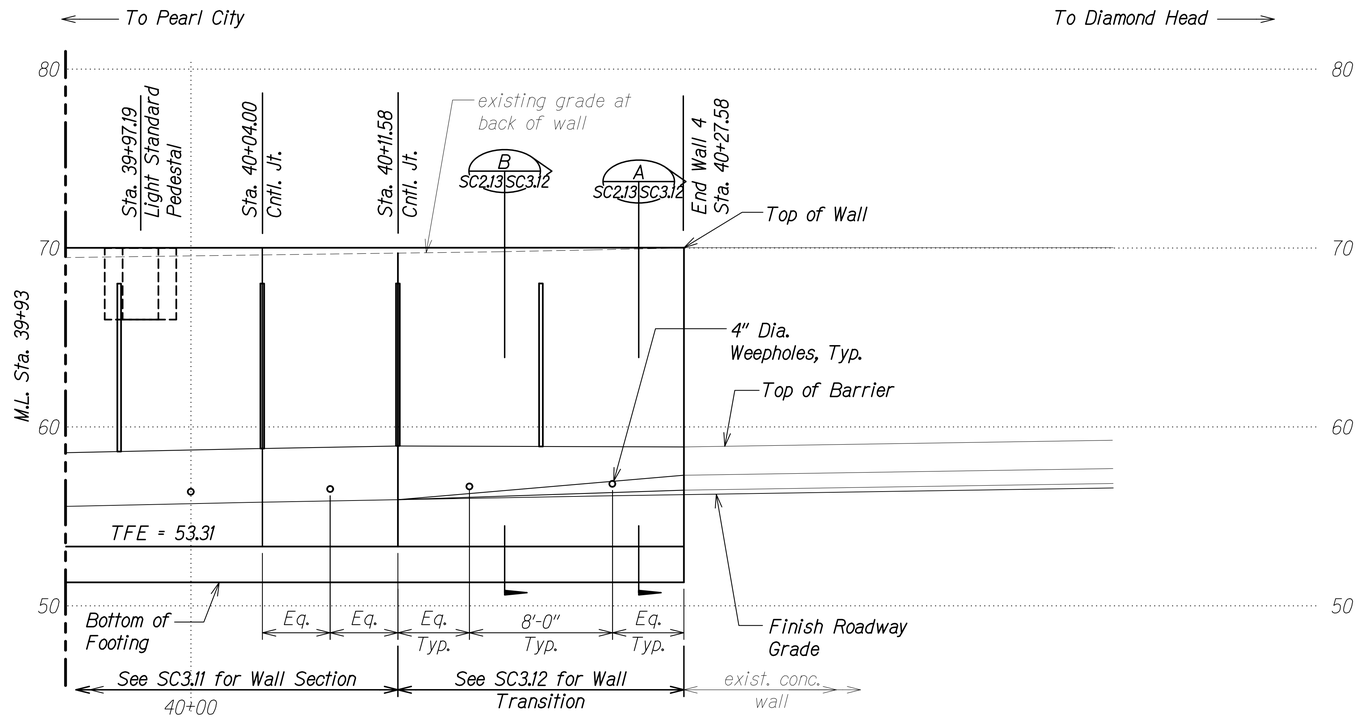
INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC2.12 OF 17 SHEETS

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0201 RETG WALLS.DWG PLOT TIME: 01-04-23, 10:15 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	434	466



WALL 4 PROFILE - STA. 39+93 TO STA. 40+27.58

A
SC2.13 | SC2.13

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

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.
3. Probing and grouting shall be done for Retaining Wall 4 from Sta. 36+03.41 to Sta. 40+27.58. Probe holes shall be spaced 10'-0" on-center each way. See Special Provisions Section 660.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK:RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0201 RETG WALLS.DWG PLOT TIME: 01-04-23, 10:16 AM)

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

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4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

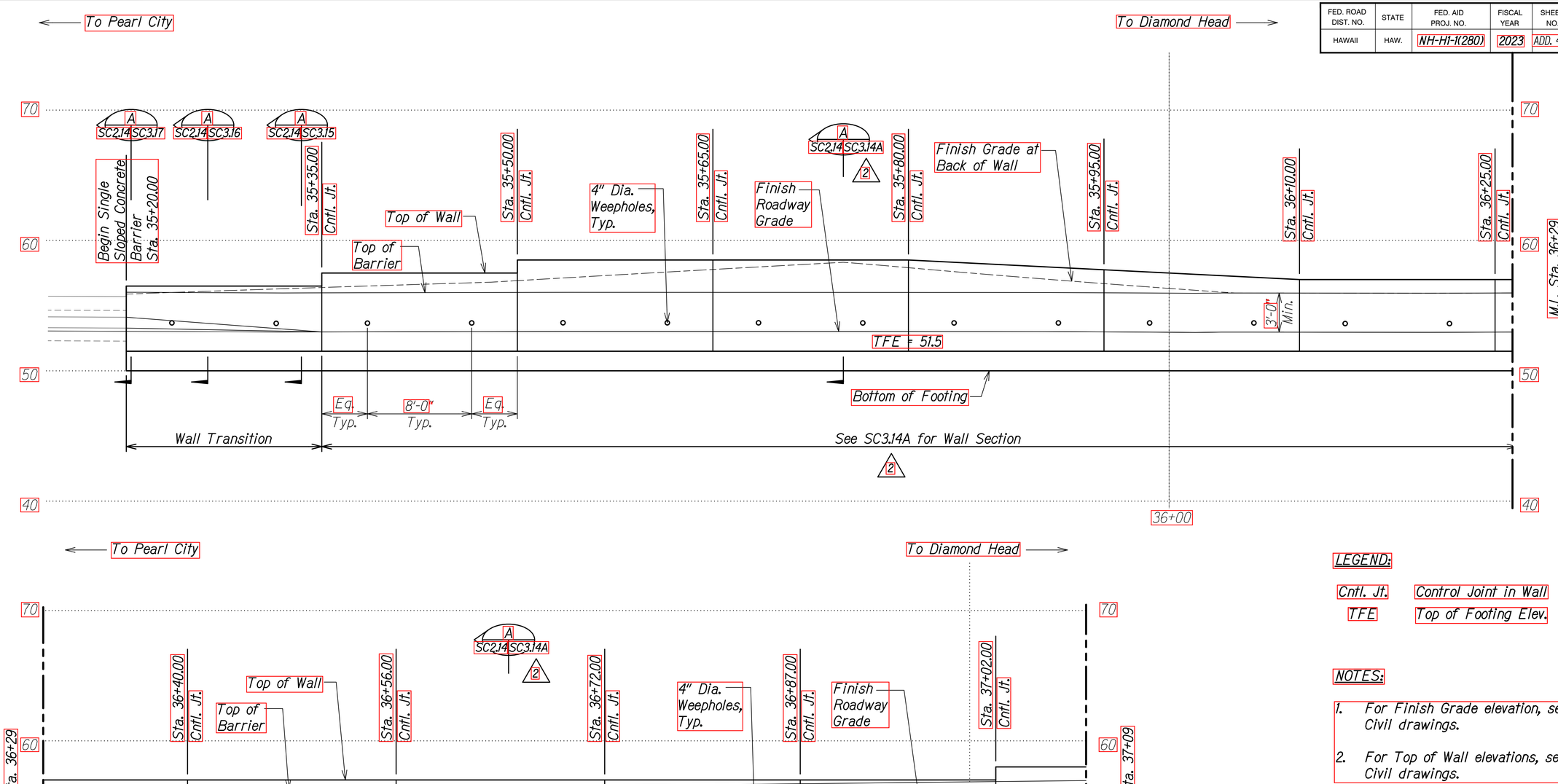
RETAINING WALL 4 PROFILE
STA. 39+93 TO STA. 40+27.58

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC2.13 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 435	466



WB BARRIER WALL PROFILE - STA. 35+20 TO STA. 37+09

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

A SC2.14 | SC2.14

LEGEND:

Cntl. Jt.	Control Joint in Wall
TFE	Top of Footing Elev.

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.

DATE	REVISION
4/7/23	2 Revised Sheet Reference

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WB BARRIER WALL PROFILE STA. 35+20 TO STA. 37+09

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC2.14 OF 17 SHEETS

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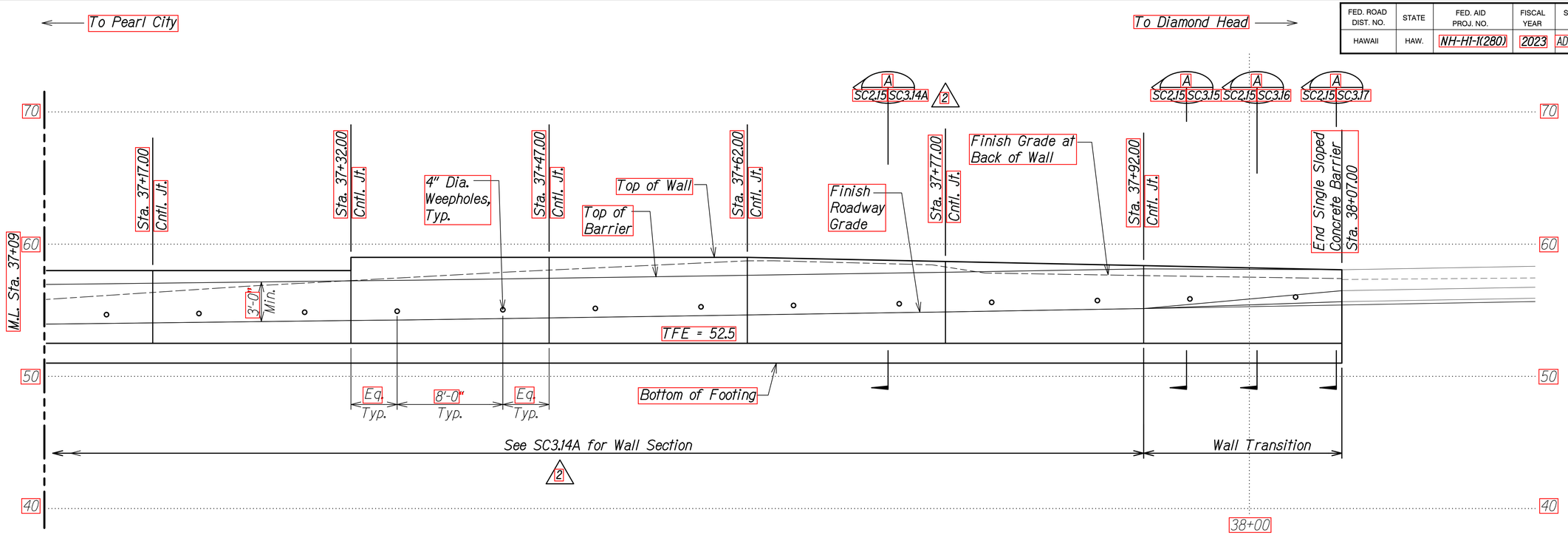
SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0201 RETG WALLS ADD2.DWG PLOT TIME: 04-10-23, 3:47 PM)

ADD. 435

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 436	466



WB BARRIER WALL PROFILE - STA. 37+09 TO STA. 38+07

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

A SC2.15 SC2.15

LEGEND:

Cntl. Jt.	Control Joint in Wall
TFE	Top of Footing Elev.

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.

DATE	REVISION
4/7/23	2 Revised Sheet Reference

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WB BARRIER WALL PROFILE
STA. 37+09 TO STA. 38+07

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC2.15 OF 17 SHEETS

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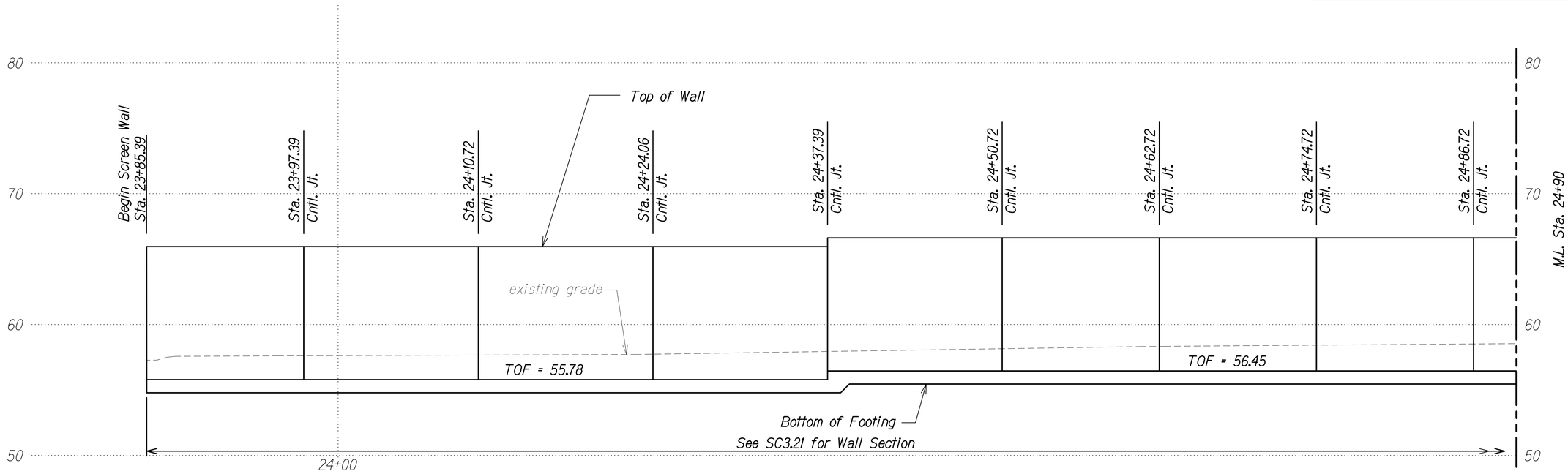
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SIGNATURE OPERATION DATE OF THE LICENSE

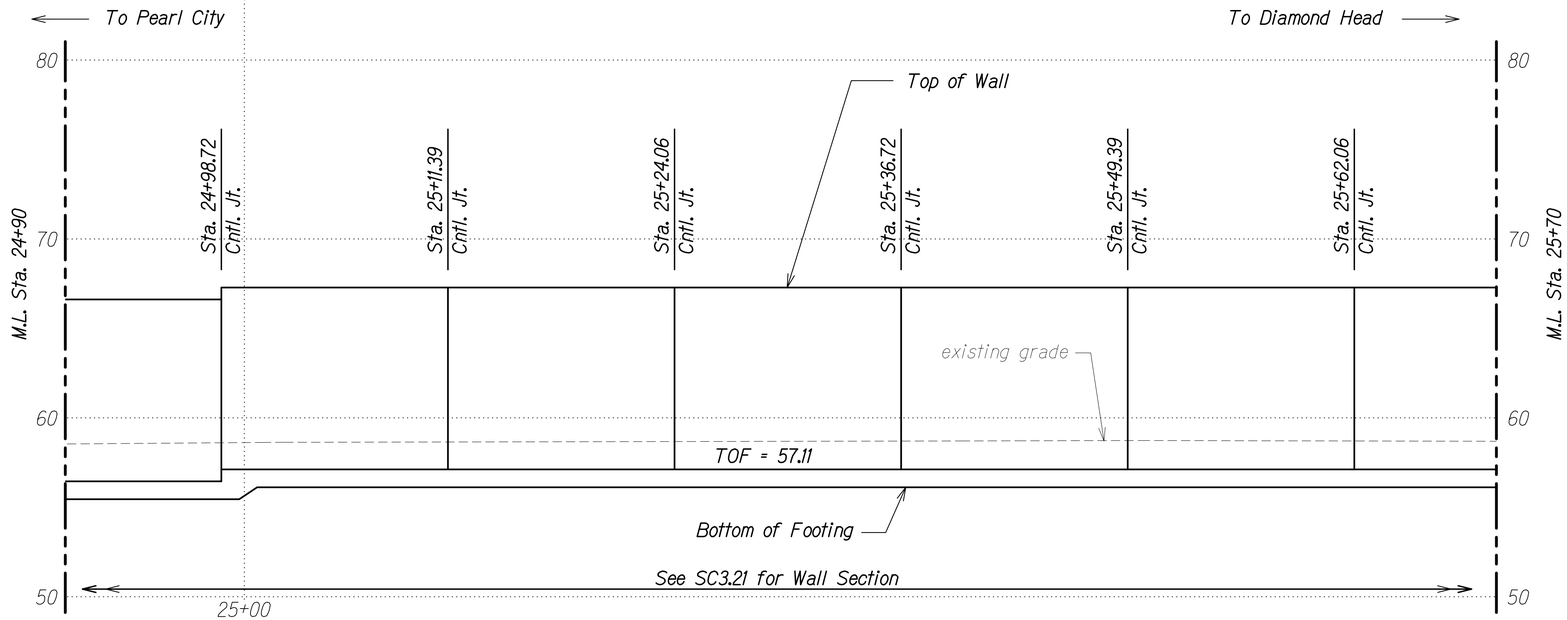
ORIGINAL PLAN	DATE
NOTE BOOK	SURVEY PLOTTED BY
No.	DRAWN BY
	TRACED BY
	DESIGNED BY
	QUANTITIES BY
	CHECKED BY

DRAWING NAME: Z:\OO ONGONG\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIH\01 CAD\04-10-23 ADD2\GRK-SC0201 RETG WALLS ADD2.DWG PLOT TIME: 04-10-23, 3:47 PM)

ADD. 436

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	437	466





SCREEN WALL PROFILE - STA. 23+85.39 TO STA. 25+70

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

A
SC2.16 | SC2.16

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GUICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0216 SCREEN WALL.DWG PLOT TIME: 01-04-23, 10:17 AM)

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

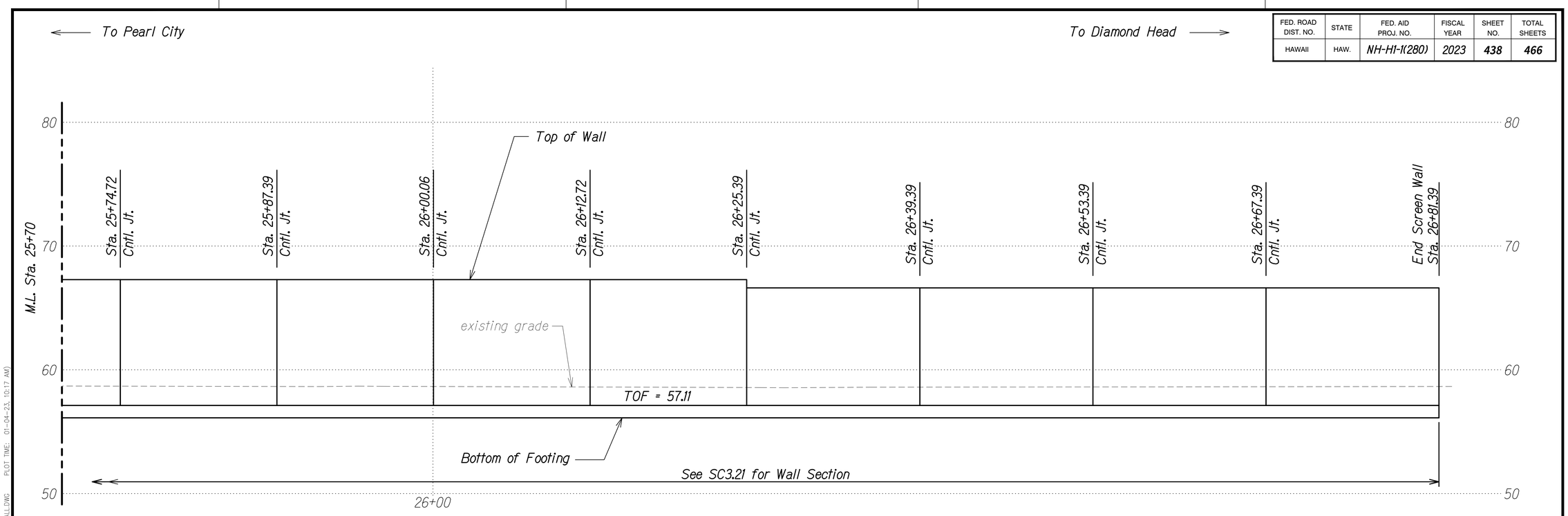
SCREEN WALL PROFILE
STA. 23+85.39 TO STA. 25+70

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC2.16 OF 17 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-H1-1(280)	2023	438	466



SCREEN WALL PROFILE - STA. 25+70 TO STA. 26+81.39

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

A SC2.17 | SC2.17

NOTES:

1. For Finish Grade elevation, see Civil drawings.
2. For Top of Wall elevations, see Civil drawings.

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

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

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SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SCREEN WALL PROFILE
STA. STA. 25+70 TO STA. 26+81.39

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted — Date: December 2022

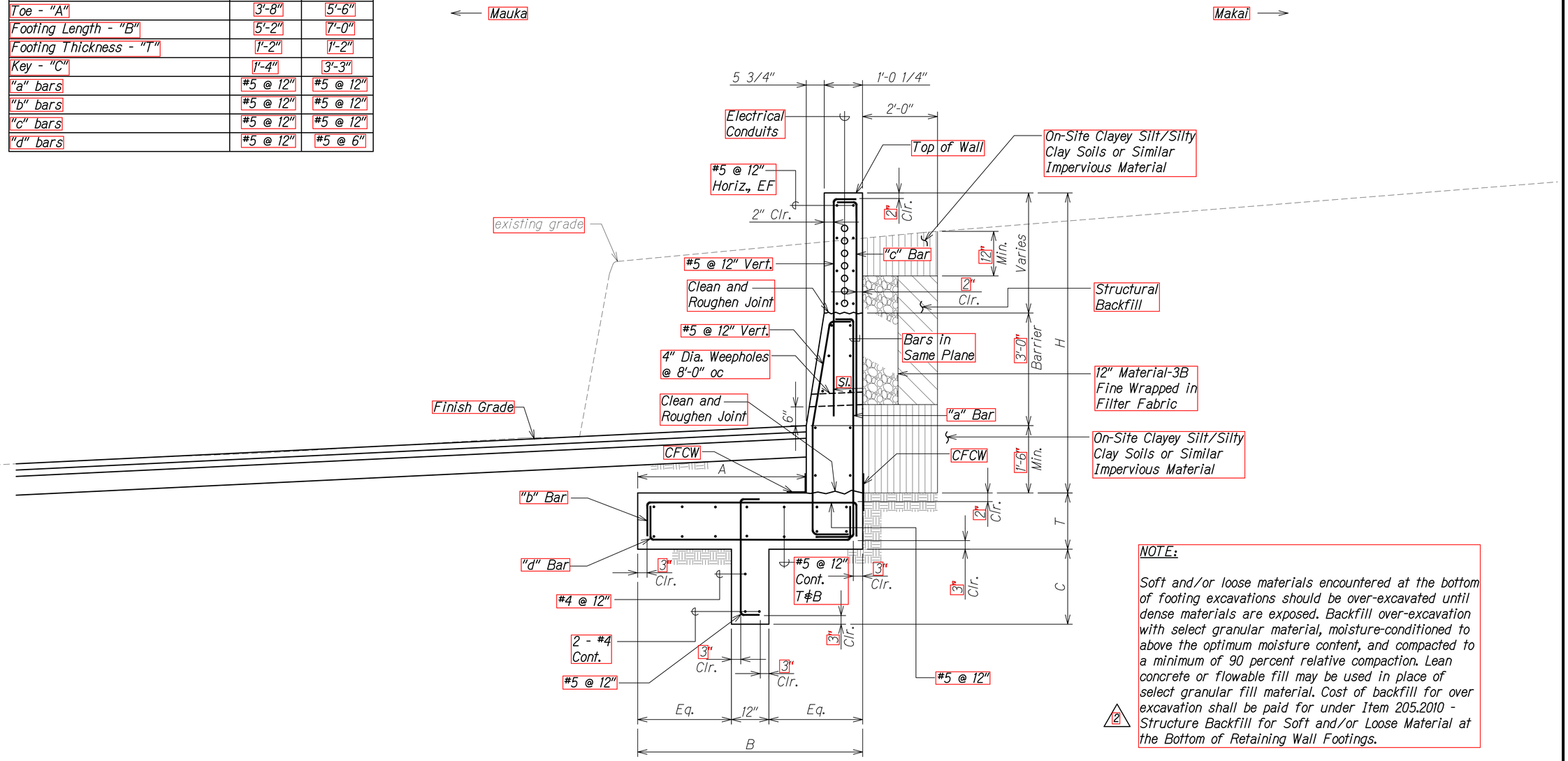
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DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK RICH+KALIHI\01 CAD\01-05-23A BID DEC'22 DATE\GRK-SC0216 SCREEN WALL.DWG PLOT TIME: 01-04-23, 10:17 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 439	466

DIMENSIONS AND REINFORCING STEEL

Design Height - "H"	6'-6" Max.	8'-6" Max.
Toe - "A"	3'-8"	5'-6"
Footing Length - "B"	5'-2"	7'-0"
Footing Thickness - "T"	1'-2"	1'-2"
Key - "C"	1'-4"	3'-3"
"a" bars	#5 @ 12"	#5 @ 12"
"b" bars	#5 @ 12"	#5 @ 12"
"c" bars	#5 @ 12"	#5 @ 12"
"d" bars	#5 @ 12"	#5 @ 6"



TYPICAL WALL 1 SECTION

A SC3.1 | SC3.1

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

NOTE:

Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings.

2

DATE	REVISION
4/7/23	2 Revised Note

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL 1 SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

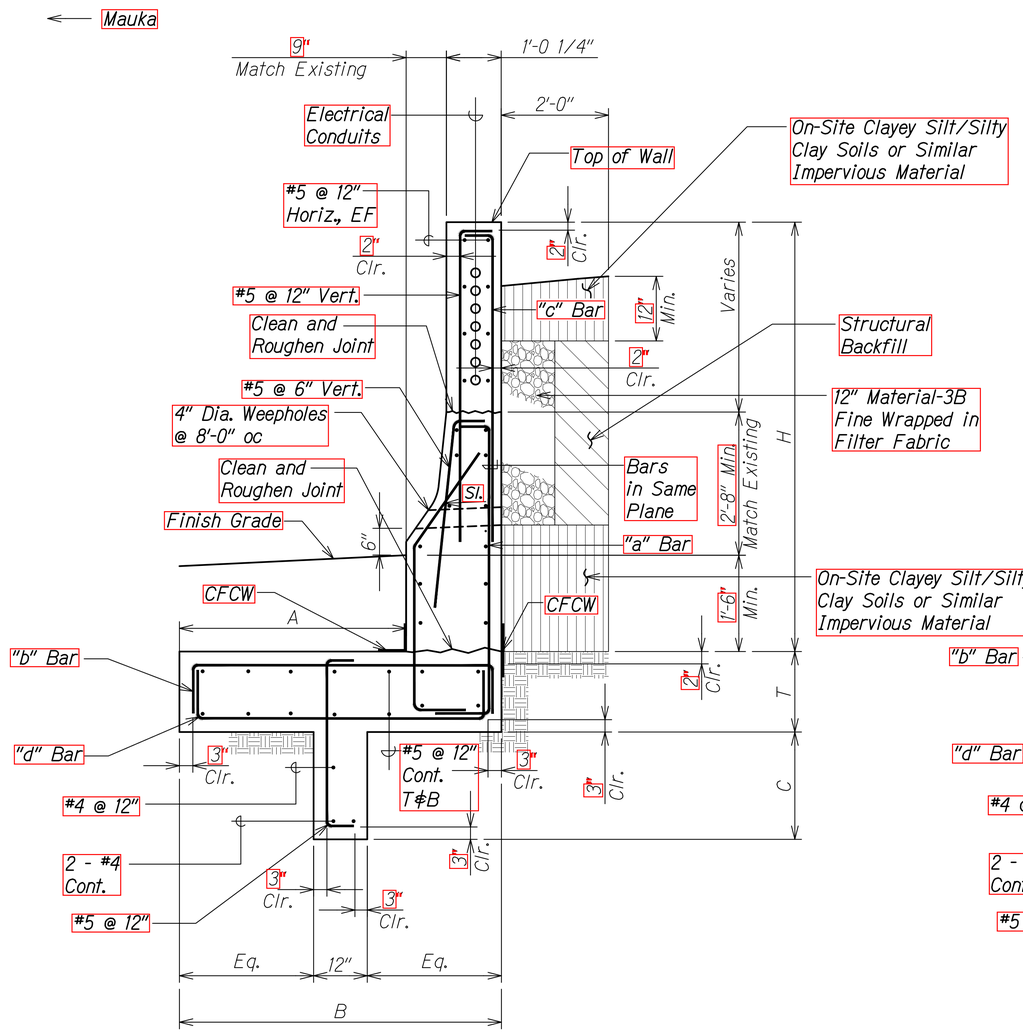
SHEET No. SC3.1 OF 21 SHEETS

ADD. 439

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS — GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0301 WALL SECT ADD2.DWG PLOT TIME: 04-10-23, 3:48 PM)

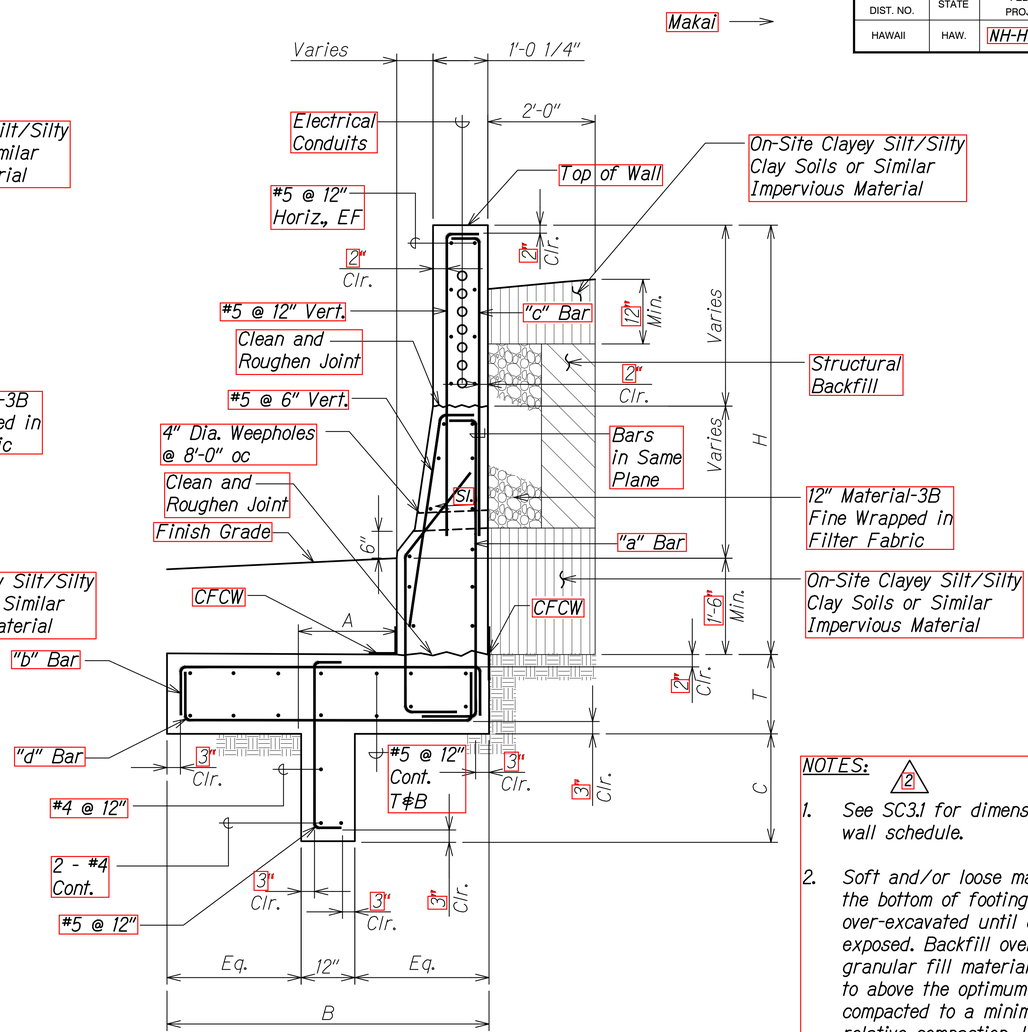
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 440	466



TYPICAL WALL 1 TRANSITION SECTION (A)

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

SC2.1 SC3.2



TYPICAL WALL 1 TRANSITION SECTION (B)

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

SC2.1 SC3.2

NOTES:

1. See SC3.1 for dimension and reinforcing wall schedule.
2. Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular fill material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings.

DATE	REVISION
4/7/23	2 Revised Notes

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL 1 SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.2 OF 21 SHEETS

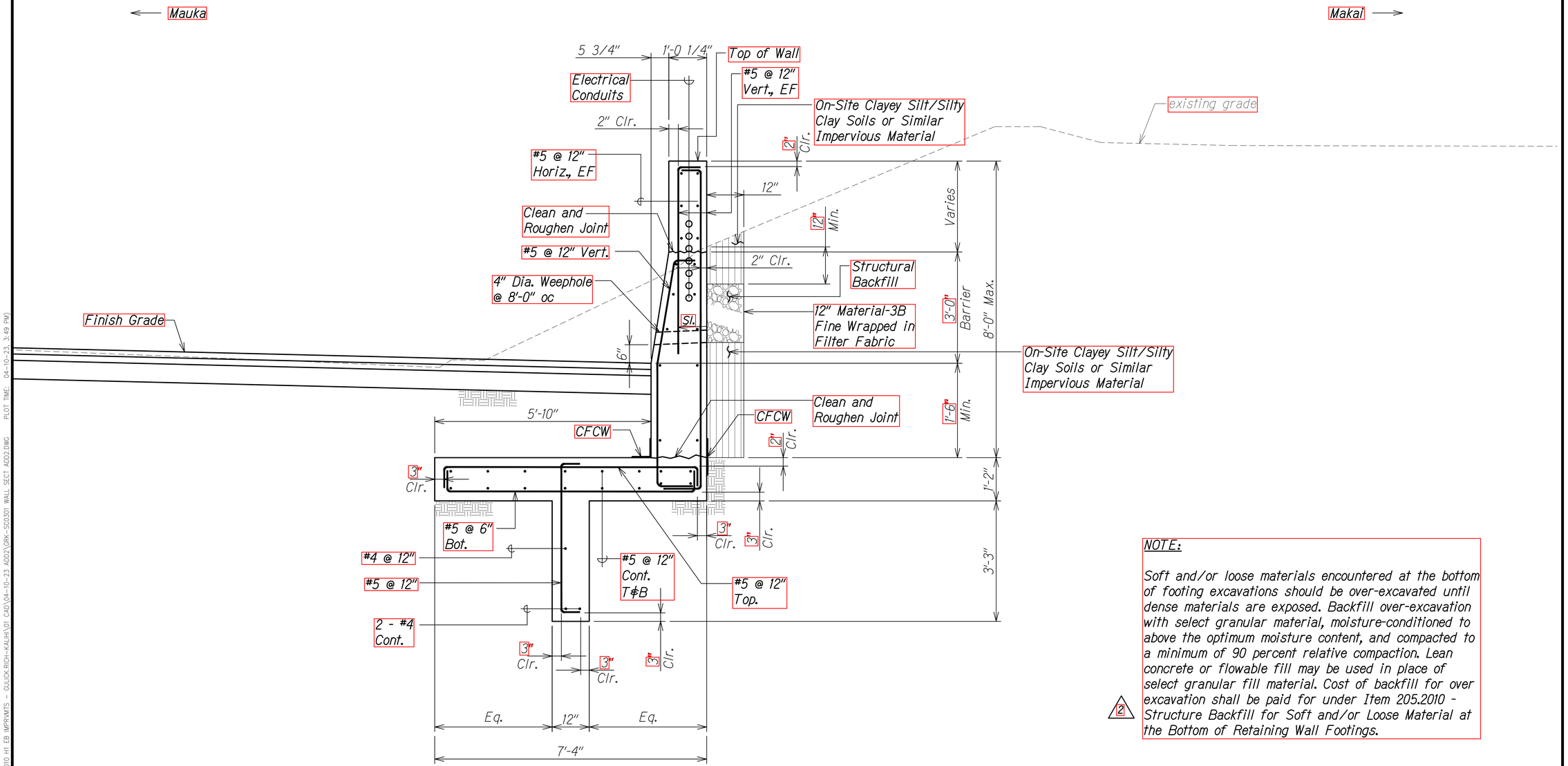
ADD. 440

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

NOTE BOOK | No.

DRAWING NAME: Z:\OO ONGONG\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0301 WALL SECT ADD2.DWG PLOT TIME: 04-10-23, 3:48 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 441	466



WALL 2 SECTION
STA 22+84 TO 23+16

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

A SC3.3 | SC3.3

NOTE:

Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings.

2

DATE	REVISION
4/7/23	2 Revised Note

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WALL 2 SECTION
STA 22+84 TO 23+16

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.3 OF 21 SHEETS

ADD. 441

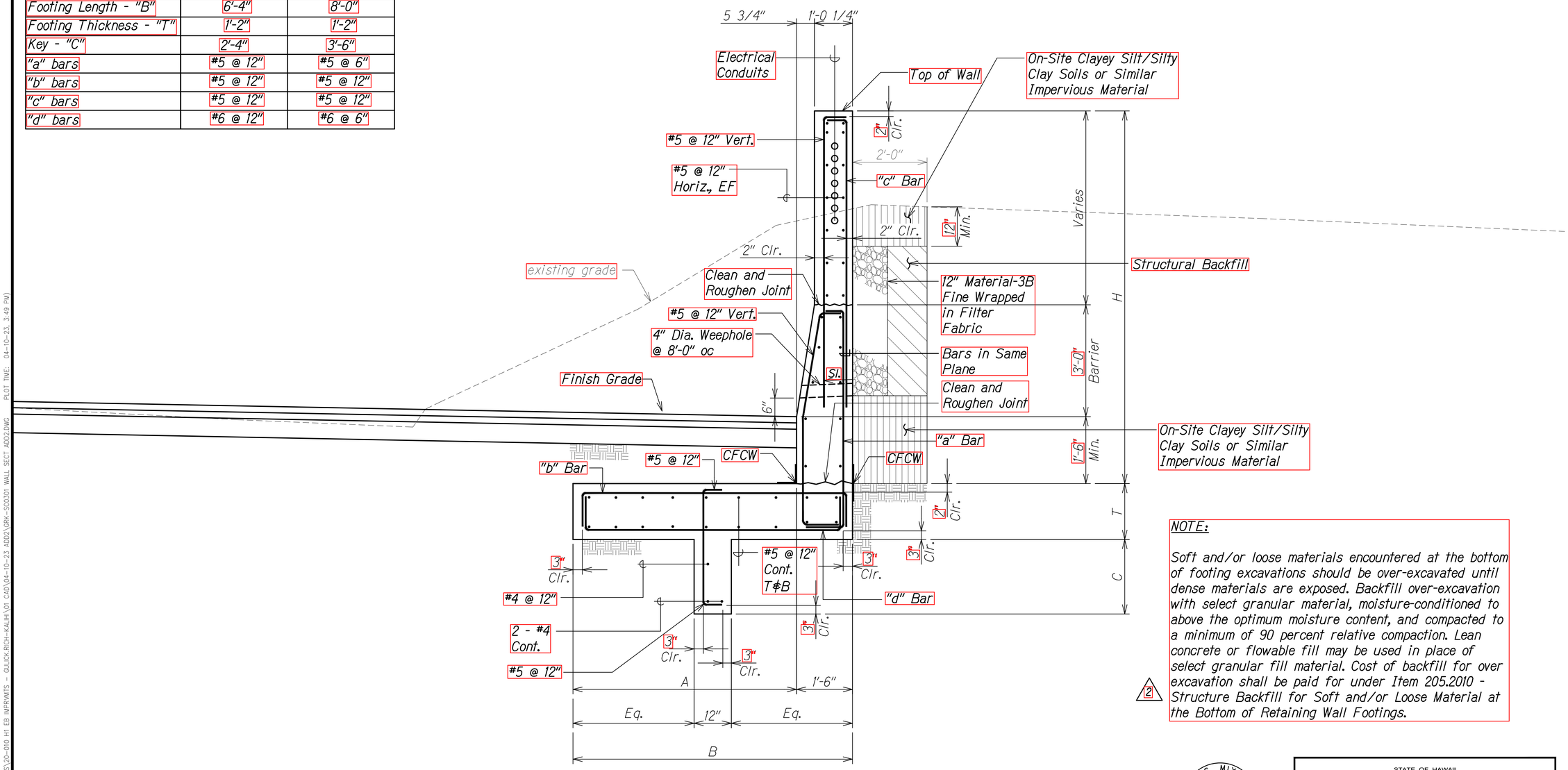
ORIGINAL PLAN | NOTE BOOK No. | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0301 WALL SECT ADD2.DWG PLOT TIME: 04-10-23, 3:49 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 442	466

DIMENSIONS AND REINFORCING STEEL

Design Height - "H"	8'-0" Max.	10'-0" Max.
Toe - "A"	4'-10"	6'-6"
Footing Length - "B"	6'-4"	8'-0"
Footing Thickness - "T"	1'-2"	1'-2"
Key - "C"	2'-4"	3'-6"
"a" bars	#5 @ 12"	#5 @ 6"
"b" bars	#5 @ 12"	#5 @ 12"
"c" bars	#5 @ 12"	#5 @ 12"
"d" bars	#6 @ 12"	#6 @ 6"



NOTE:

Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings.

2

TYPICAL WALL 2 SECTION CUT CONDITION

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

A SC3.4 | SC3.4

DATE	REVISION
4/7/23	2 Revised Note

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

NOTE BOOK | No.

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GUJICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0301 WALL SECT ADD2.DWG PLOT TIME: 04-10-23, 3:49 PM)

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL 2 SECTION CUT CONDITION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

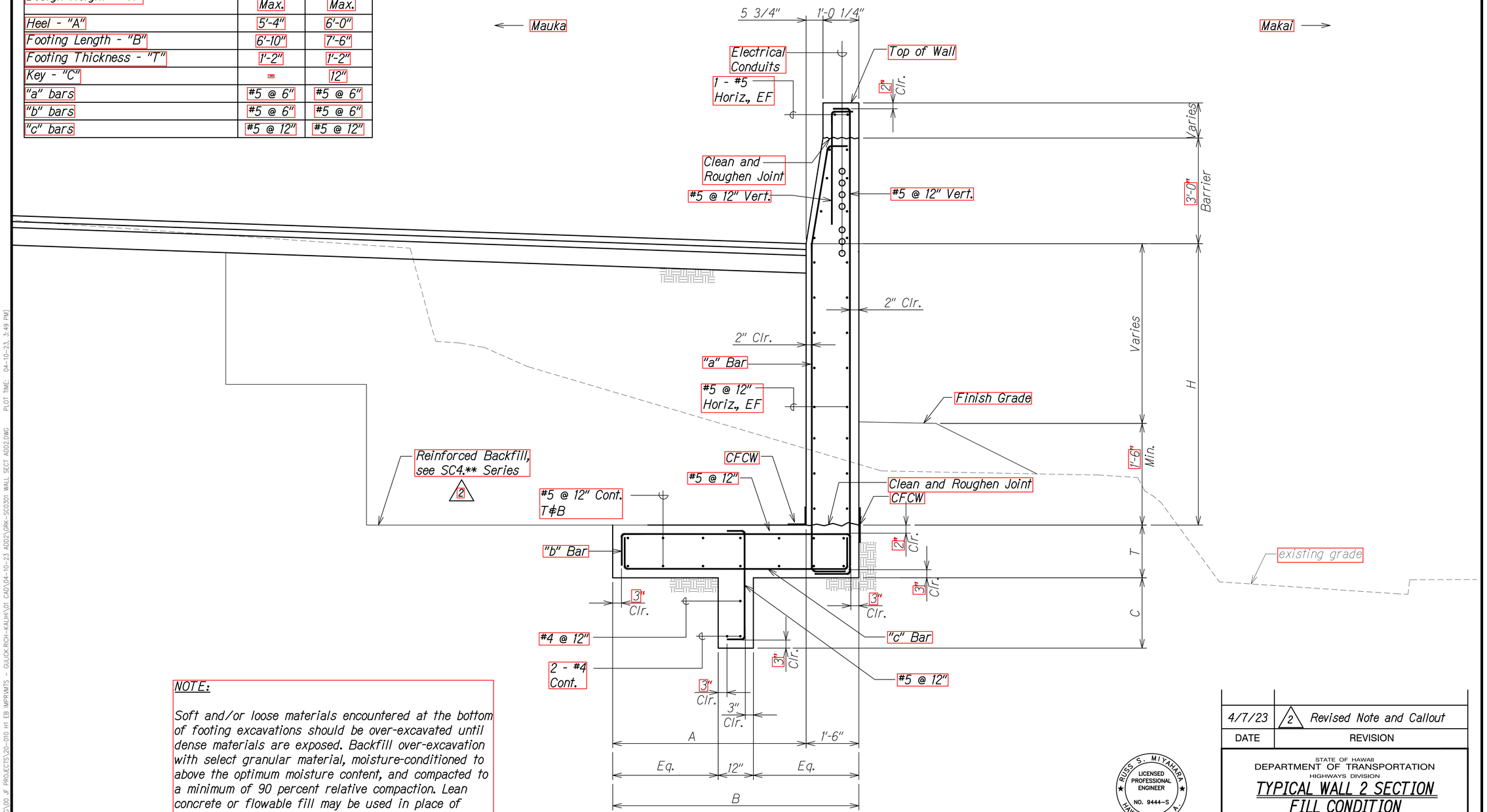
SHEET No. SC3.4 OF 21 SHEETS

ADD. 442

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 443	466

DIMENSIONS AND REINFORCING STEEL

Design Height - "H"	7'-0" Max.	9'-0" Max.
Heel - "A"	5'-4"	6'-0"
Footing Length - "B"	6'-10"	7'-6"
Footing Thickness - "T"	1'-2"	1'-2"
Key - "C"	-	12"
"a" bars	#5 @ 6"	#5 @ 6"
"b" bars	#5 @ 6"	#5 @ 6"
"c" bars	#5 @ 12"	#5 @ 12"



NOTE:

Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings.

2

TYPICAL WALL 2 SECTION FILL CONDITION

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

A SC3.5 | SC3.5

DATE		REVISION
4/7/23	2	Revised Note and Callout

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL 2 SECTION FILL CONDITION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.5 OF 21 SHEETS

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

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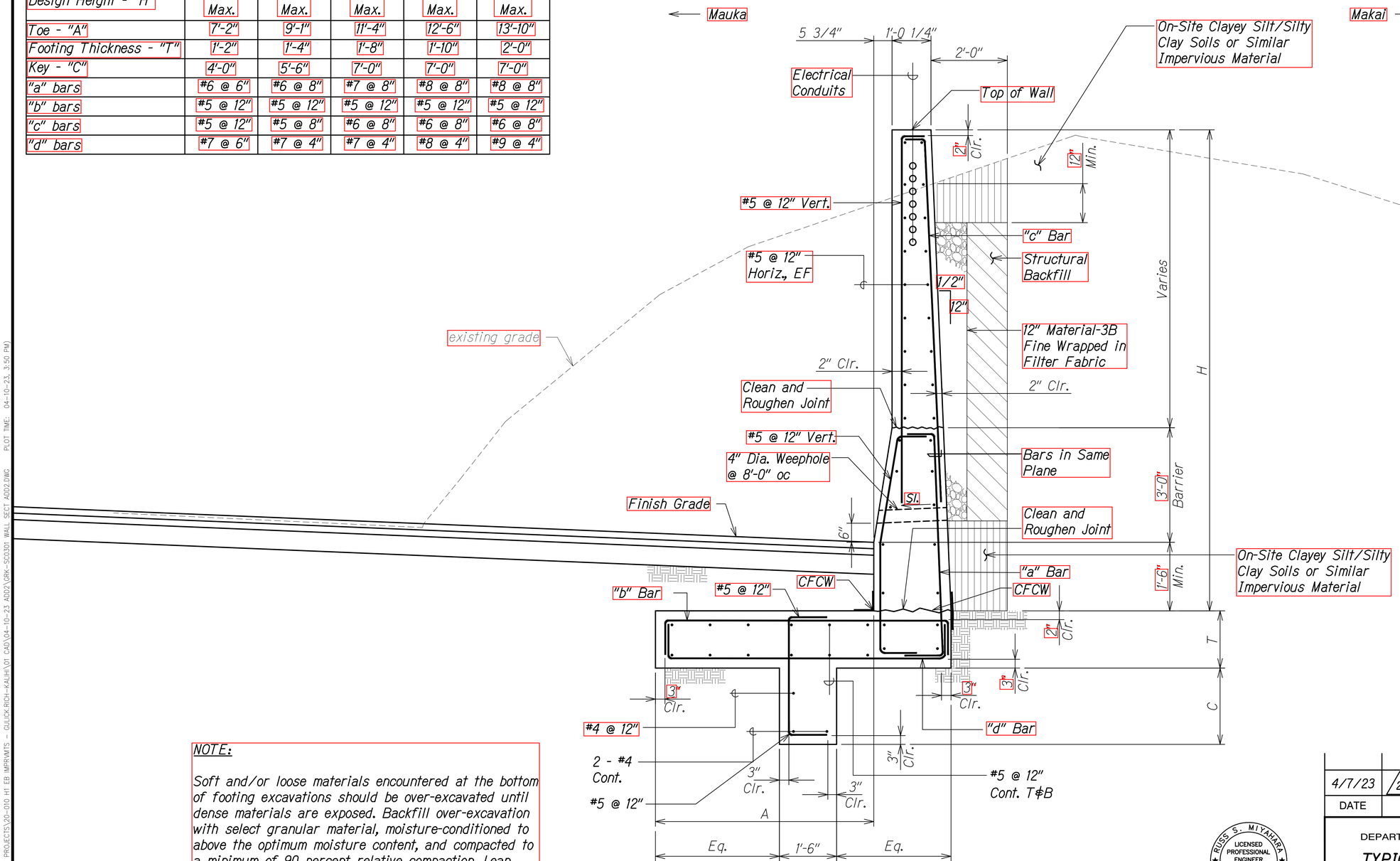
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NOTE BOOK | No.

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 444	466

DIMENSIONS AND REINFORCING STEEL

Design Height - "H"	12'-0" Max.	14'-0" Max.	16'-0" Max.	18'-0" Max.	20'-0" Max.
Toe - "A"	7'-2"	9'-1"	11'-4"	12'-6"	13'-10"
Footing Thickness - "T"	1'-2"	1'-4"	1'-8"	1'-10"	2'-0"
Key - "C"	4'-0"	5'-6"	7'-0"	7'-0"	7'-0"
"a" bars	#6 @ 6"	#6 @ 8"	#7 @ 8"	#8 @ 8"	#8 @ 8"
"b" bars	#5 @ 12"	#5 @ 12"	#5 @ 12"	#5 @ 12"	#5 @ 12"
"c" bars	#5 @ 12"	#5 @ 8"	#6 @ 8"	#6 @ 8"	#6 @ 8"
"d" bars	#7 @ 6"	#7 @ 4"	#7 @ 4"	#8 @ 4"	#9 @ 4"



NOTE:

Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings.

2

TYPICAL WALL 3 SECTION CUT CONDITION

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

A | SC3.6 | SC3.6

DATE		
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4/7/23	2 Revised Note
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL 3 SECTION CUT CONDITION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.6 OF 21 SHEETS

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NO. 9444-S
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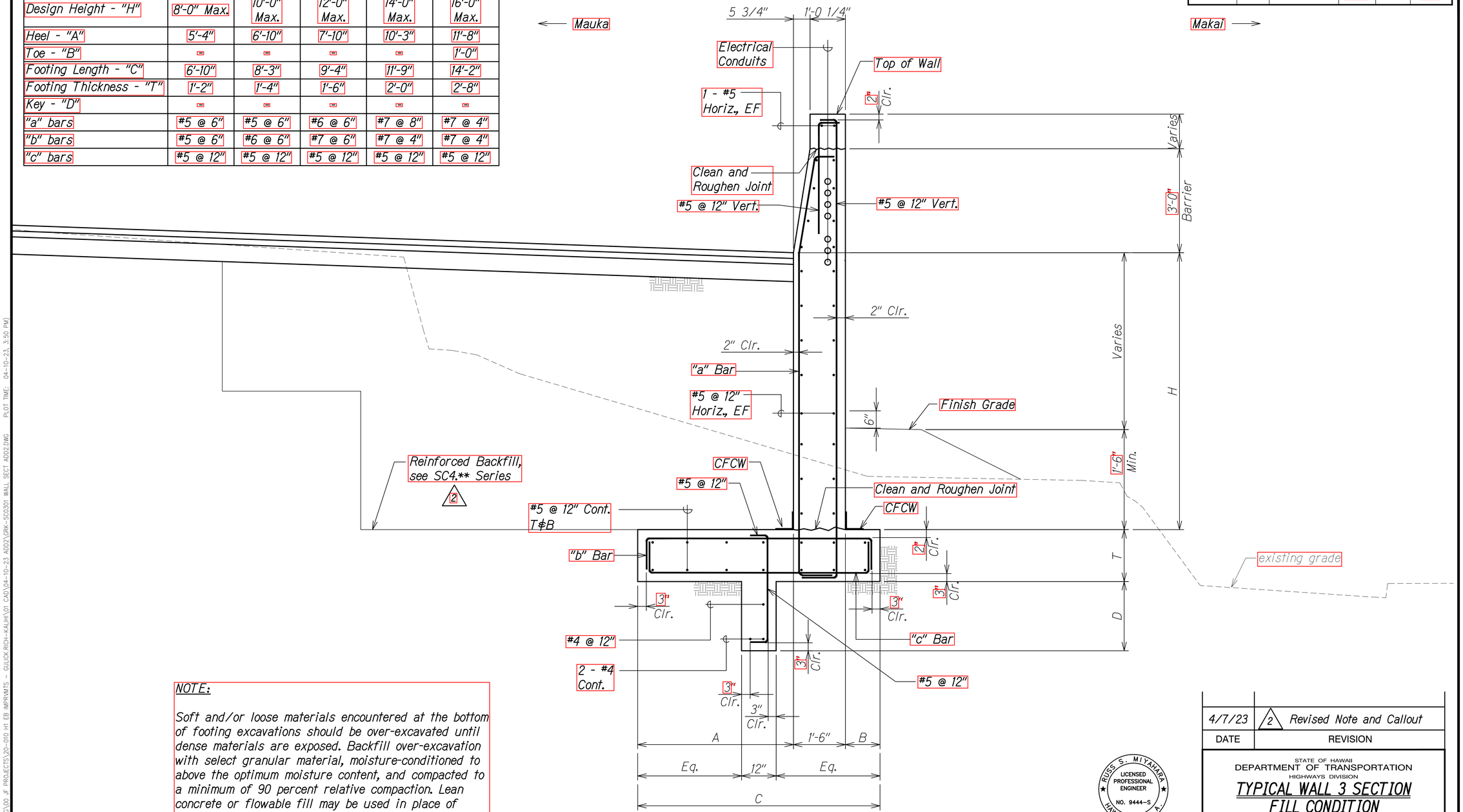
ADD. 444

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK.RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0301 WALL SECT ADD2.DWG PLOT TIME: 04-10-23, 3:50 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 445	466

DIMENSIONS AND REINFORCING STEEL

Design Height - "H"	8'-0" Max.	10'-0" Max.	12'-0" Max.	14'-0" Max.	16'-0" Max.
Heel - "A"	5'-4"	6'-10"	7'-10"	10'-3"	11'-8"
Toe - "B"	-	-	-	-	1'-0"
Footing Length - "C"	6'-10"	8'-3"	9'-4"	11'-9"	14'-2"
Footing Thickness - "T"	1'-2"	1'-4"	1'-6"	2'-0"	2'-8"
Key - "D"	-	-	-	-	-
"a" bars	#5 @ 6"	#5 @ 6"	#6 @ 6"	#7 @ 8"	#7 @ 4"
"b" bars	#5 @ 6"	#6 @ 6"	#7 @ 6"	#7 @ 4"	#7 @ 4"
"c" bars	#5 @ 12"	#5 @ 12"	#5 @ 12"	#5 @ 12"	#5 @ 12"



NOTE:

Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings.

2

TYPICAL WALL 3 SECTION FILL CONDITION

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

A | SC3.7 | SC3.7

DATE	
4/7/23	2 Revised Note and Callout
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL 3 SECTION FILL CONDITION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.7 OF 21 SHEETS

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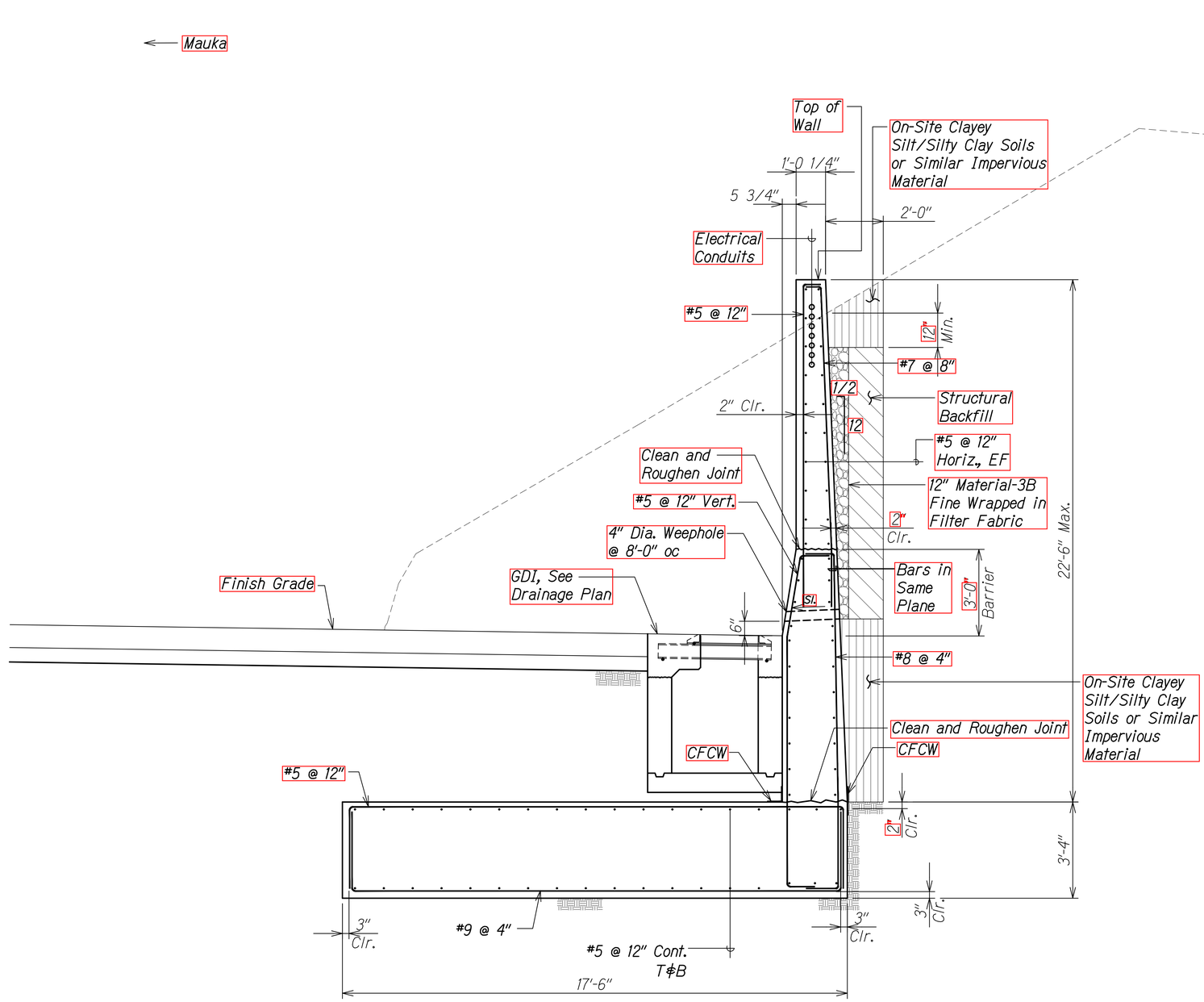
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No.	QUANTITIES BY	
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DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0301 WALL SECT ADD2.DWG PLOT TIME: 04-10-23, 3:50 PM)

ADD. 445

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 446	466



WALL 3 SECTION AT GDI (A) SC3.8 | SC3.8

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

NOTES:

1. Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular fill material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall bepaid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings. (2)

2. Probing and grouting shall be done for Retaining Wall 3 from Sta. 34+50 to Sta. 35+38.05. Probe holes shall be spaced 10'-0" on-center each way. See Special Provisions Section 660.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WALL 3 SECTION AT GDI

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.8 OF 21 SHEETS

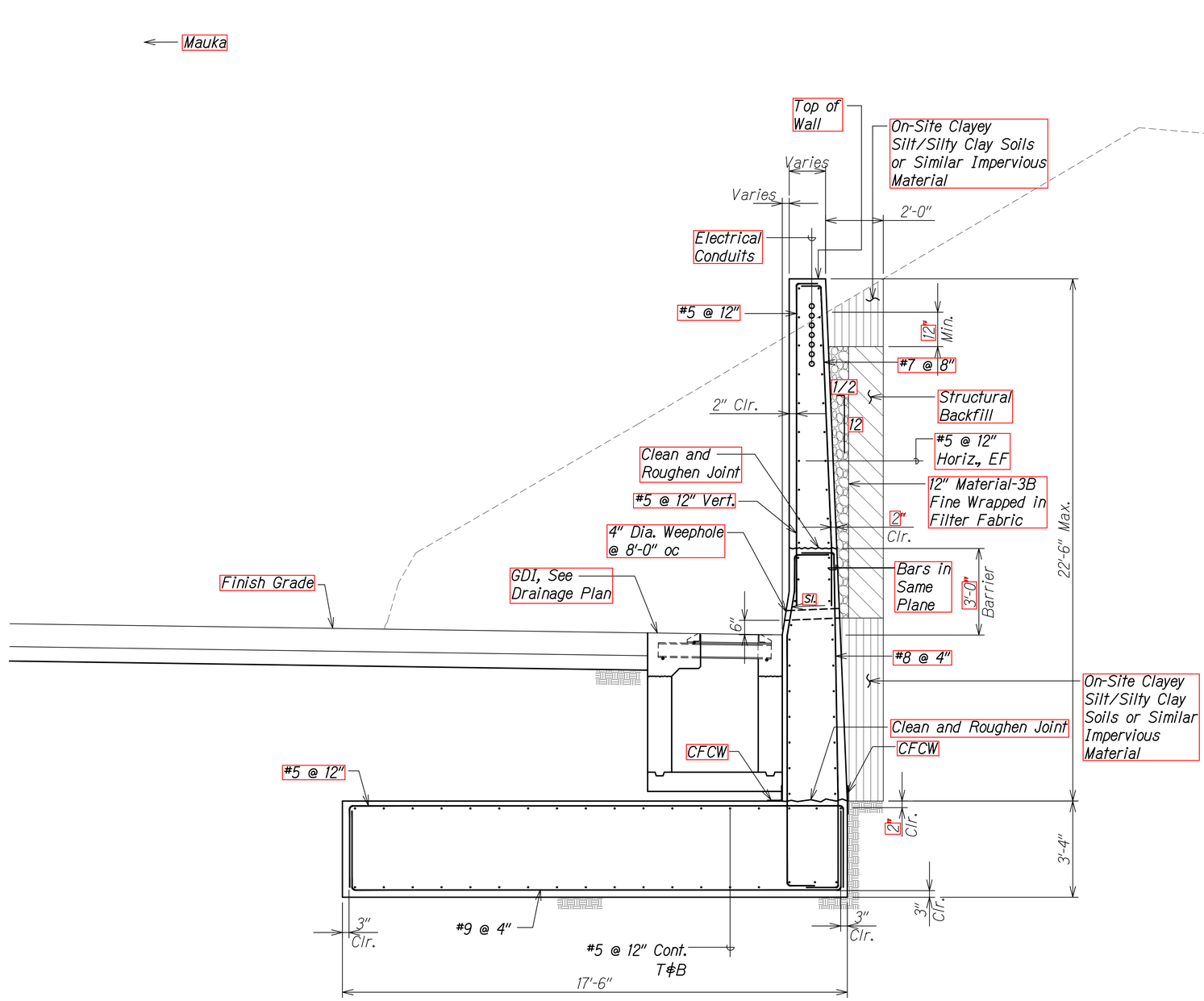
DATE	REVISION
4/7/23	(2) Revised Note

ADD. 446

ORIGINAL PLAN
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DATE

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\04-10-23 ADD2\GRK-SC0308 WALL SECT ADD2.DWG PLOT TIME: 04-10-23, 3:53 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 447	466



WALL 3 SECTION AT GDI (A) SC3.8 | SC3.9

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

NOTES:

1. Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular fill material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings.

2. Probing and grouting shall be done for Retaining Wall 3 from Sta. 34+50 to Sta. 35+38.05. Probe holes shall be spaced 10'-0" on-center each way. See Special Provisions Section 660.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WALL 3 SECTION AT GDI

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.9 OF 21 SHEETS

DATE	REVISION
4/7/23	(2) Revised Note

ADD. 447

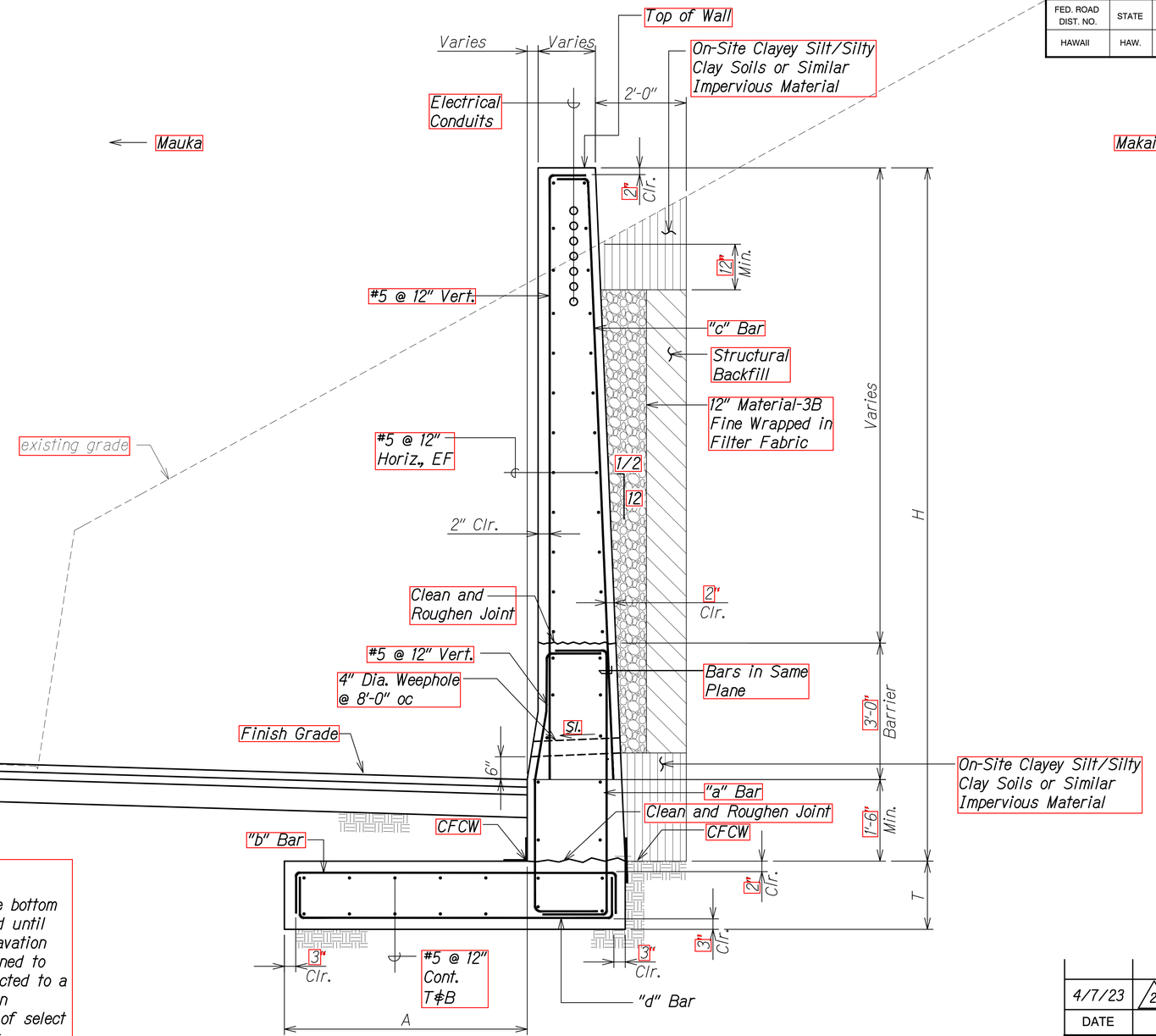
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 448	466

DIMENSIONS AND REINFORCING STEEL

Design Height - "H"	17'-0" Max	19'-0" Max
Toe - "A"	13'-6"	16'-2"
Footing Thickness - "T"	1'-10"	2'-2"
"a" bars	#8 @ 8"	#8 @ 8"
"b" bars	#5 @ 12"	#5 @ 12"
"c" bars	#6 @ 8"	#7 @ 8"
"d" bars	#8 @ 4"	#9 @ 4"



NOTES:

1. Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings. (2)

2. Probing and grouting shall be done for Retaining Wall 4 from Sta. 36+03.41 to Sta. 40+27.58. Probe holes shall be spaced 10'-0" on-center each way. See Special Provisions Section 660.

TYPICAL WALL 4 SECTION (A SC3.10 | SC3.10)

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

DATE		
4/7/23	2	Revised Note
DATE		REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL 4 SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.10 OF 21 SHEETS

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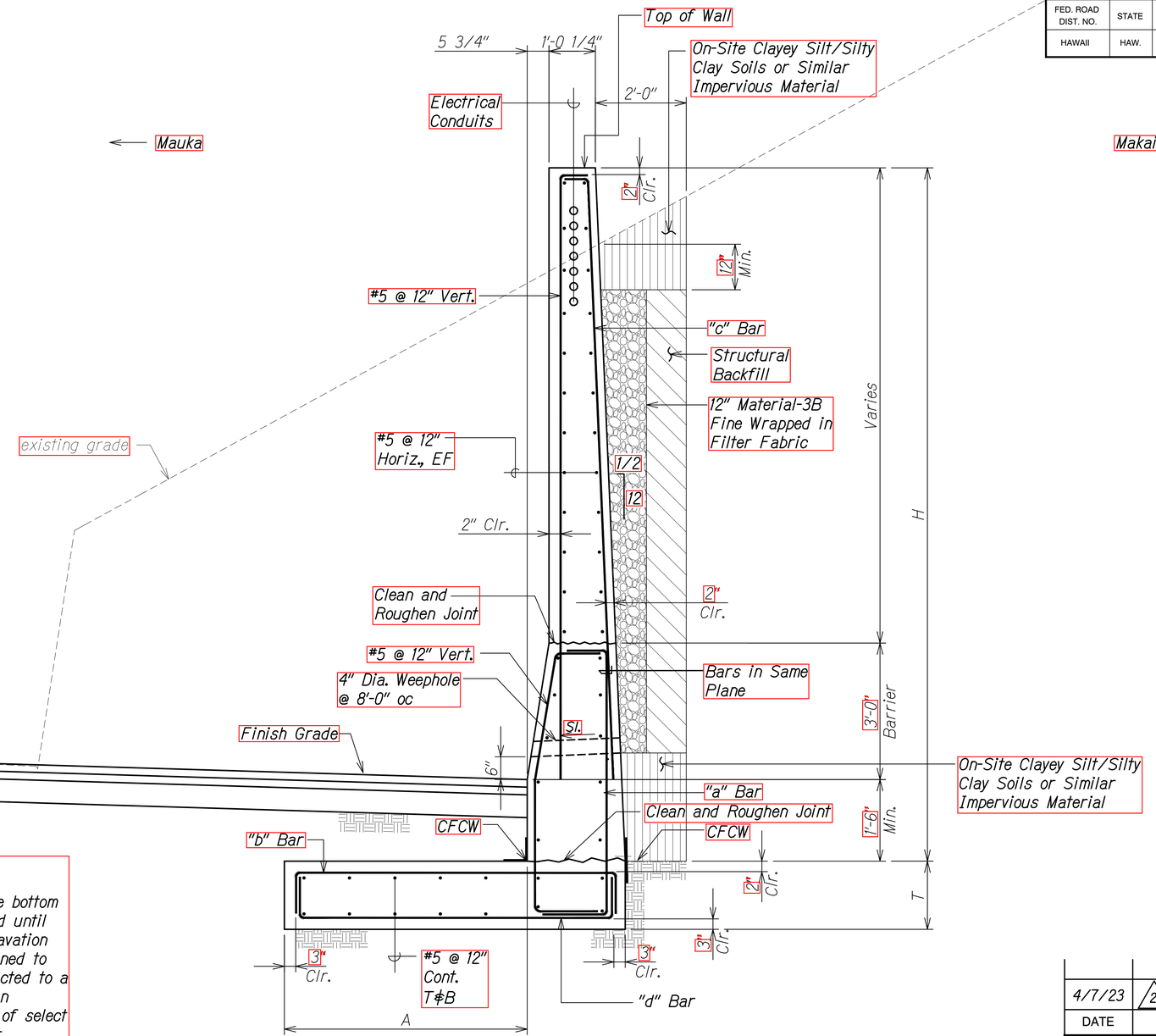
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ADD. 448

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 449	466

DIMENSIONS AND REINFORCING STEEL

Design Height - "H"	17'-0" Max	19'-0" Max
Toe - "A"	13'-6"	16'-2"
Footing Thickness - "T"	1'-10"	2'-2"
"a" bars	#8 @ 8"	#8 @ 8"
"b" bars	#5 @ 12"	#5 @ 12"
"c" bars	#6 @ 8"	#7 @ 8"
"d" bars	#8 @ 4"	#9 @ 4"



NOTES:

1. Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings. (2)

2. Probing and grouting shall be done for Retaining Wall 4 from Sta. 36+03.41 to Sta. 40+27.58. Probe holes shall be spaced 10'-0" on-center each way. See Special Provisions Section 660.

TYPICAL WALL 4 SECTION

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

A | SC3.11 | SC3.11

DATE		REVISION
4/7/23	2	Revised Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL 4 SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.11 OF 21 SHEETS

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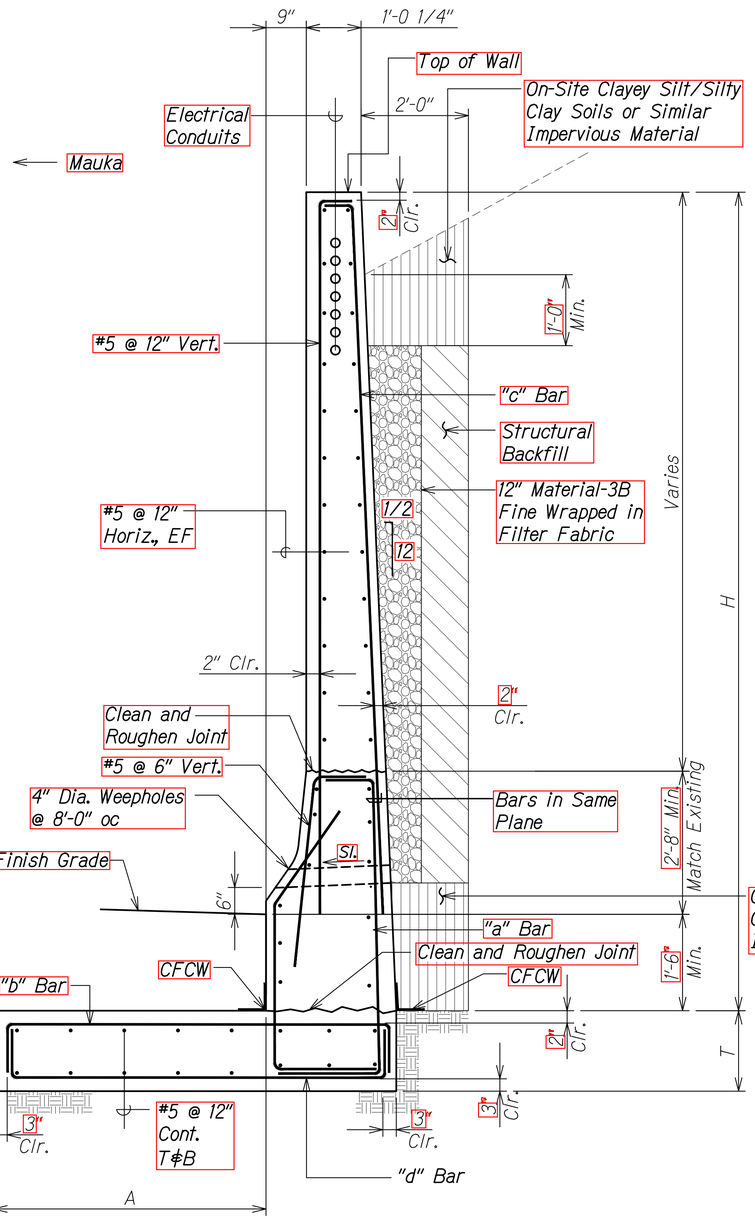
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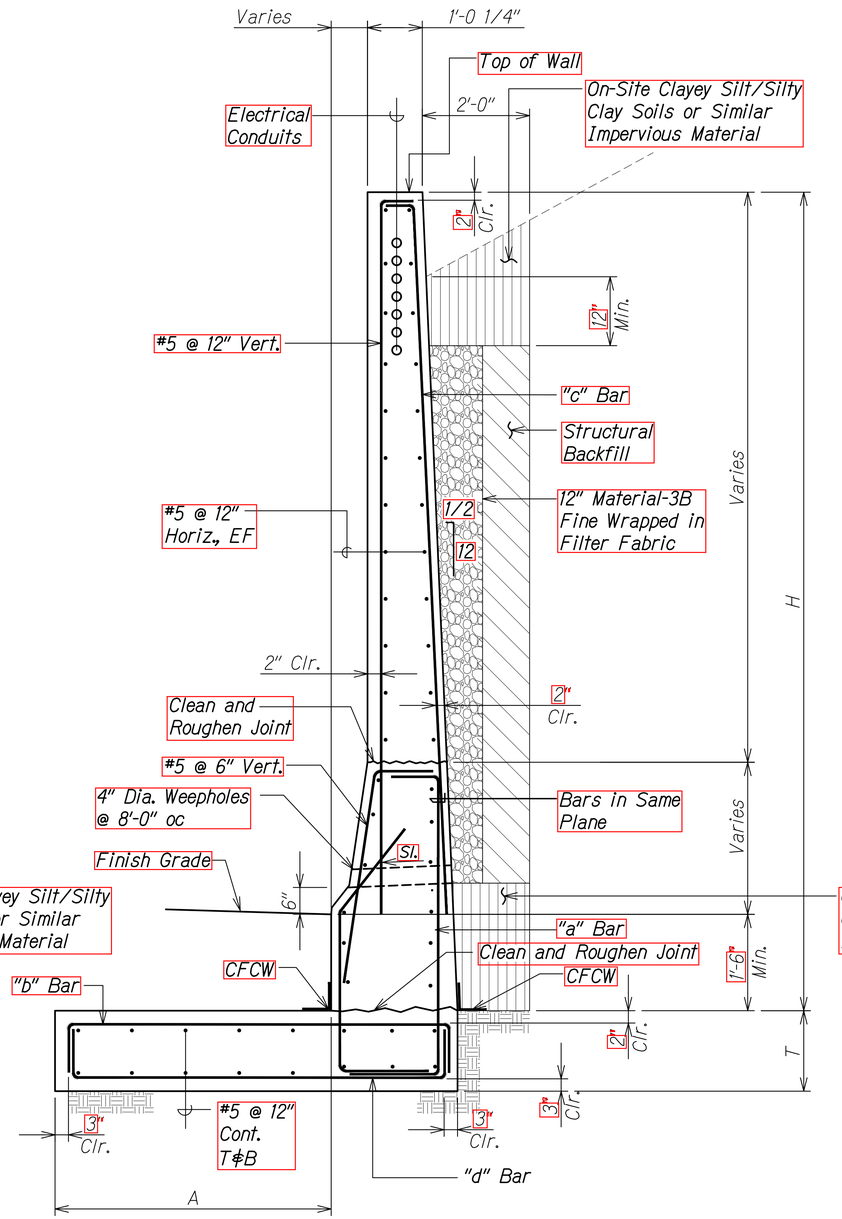
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 450	466



TYPICAL WALL 4 TRANSITION SECTION A

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

SC2.13 | SC3.12



TYPICAL WALL 4 TRANSITION SECTION B

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

SC2.13 | SC3.12

NOTES: (2)

1. See SC3.11 for dimension and reinforcing wall schedule.
2. Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular fill material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings. (2)
3. Probing and grouting shall be done for Retaining Wall 4 from Sta. 36+03.41 to Sta. 40+27.58. Probe holes shall be spaced 10'-0" on-center each way. See Special Provisions Section 660.

DATE		
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	CHECKED BY	

DATE	REVISION
4/7/23	(2) Revised Notes

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL 4 SECTIONS

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

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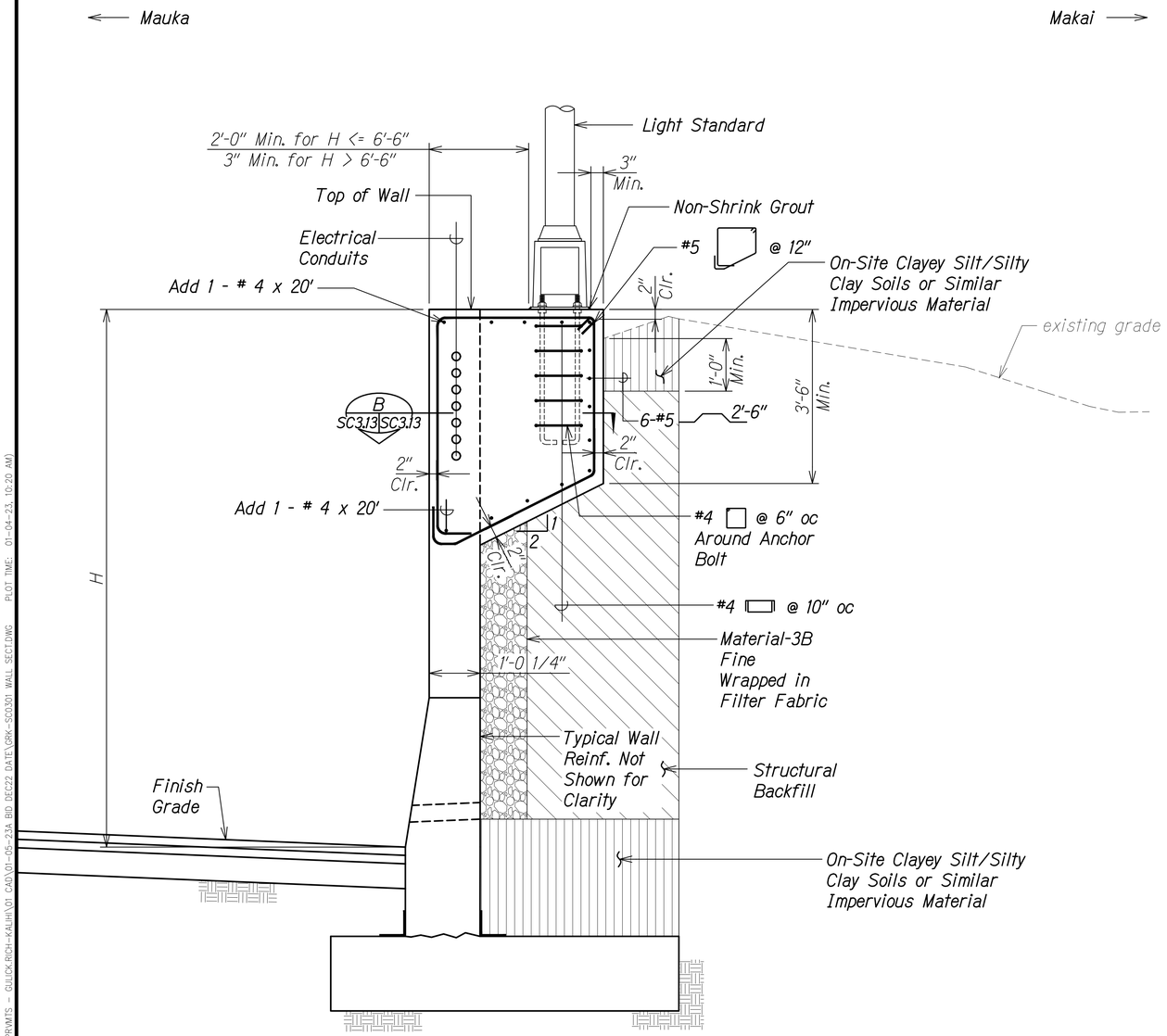
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SHEET No. SC3.12 OF 21 SHEETS

ADD. 450

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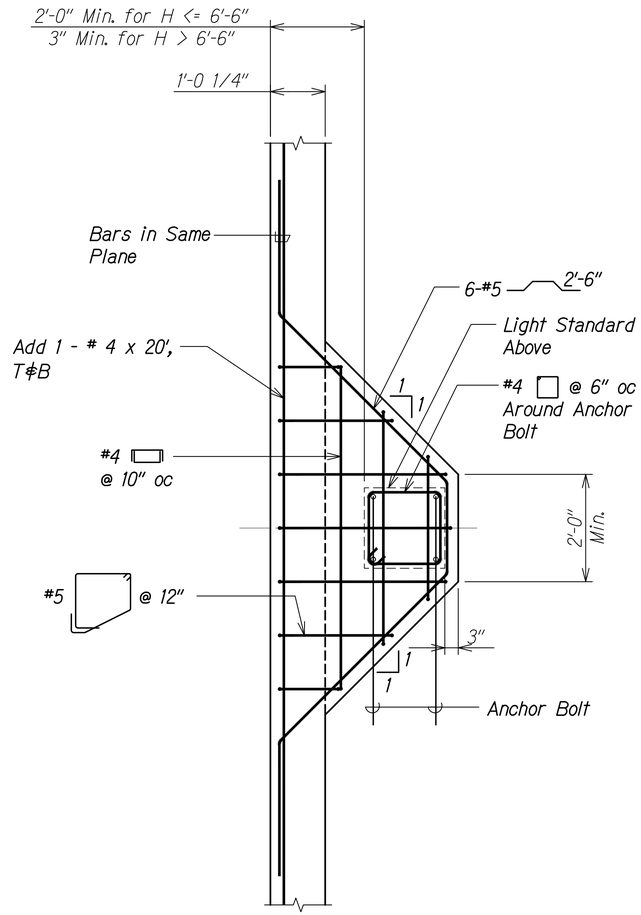
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	451	466



TYPICAL WALL SECTION AT LIGHT STANDARD

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

A SC3.13 SC3.13



SECTION

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

B SC3.13 SC3.13

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL WALL SECTION AT LIGHT STANDARD

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

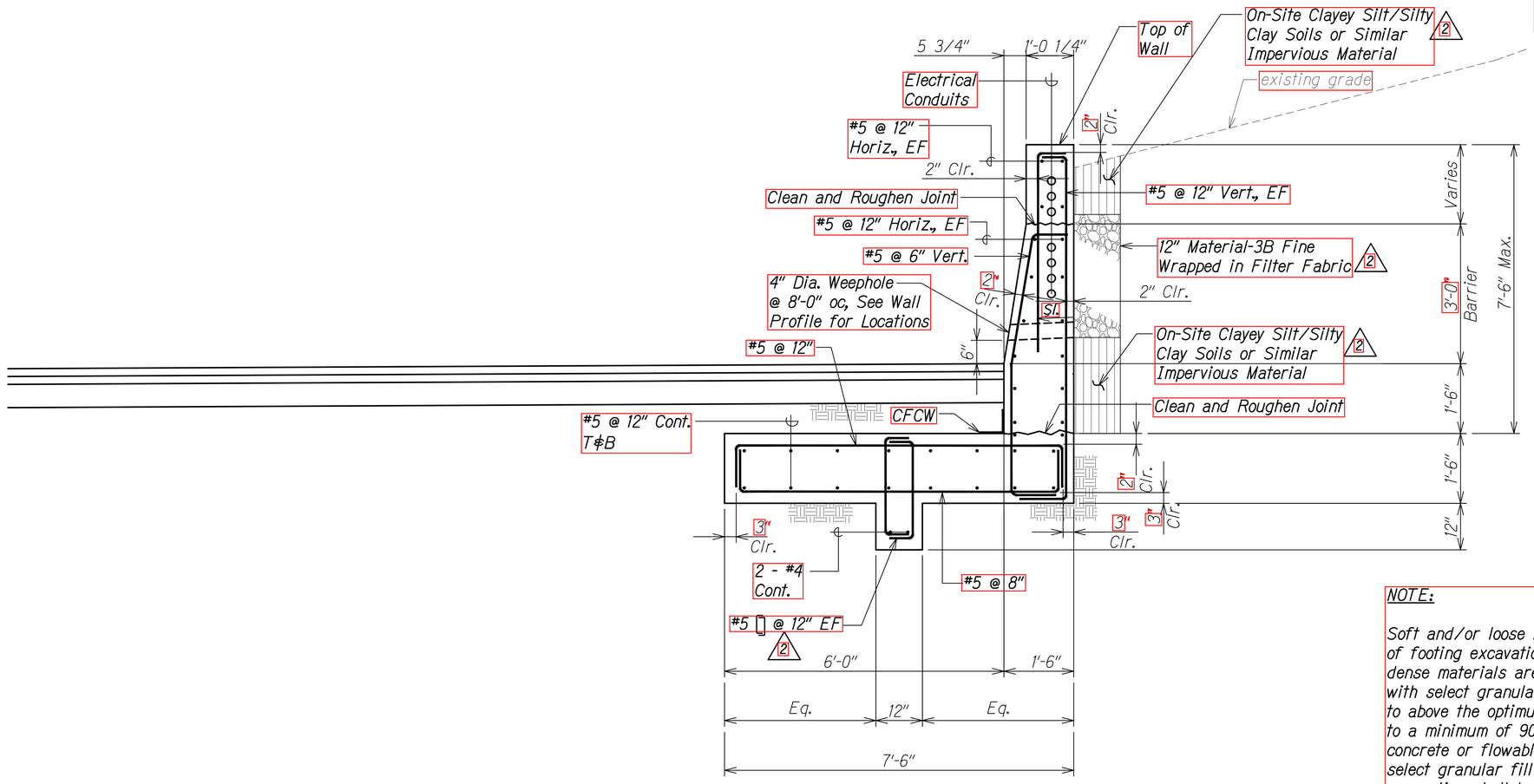
Scale: As Noted Date: December 2022

SHEET No. SC3.13 OF 21 SHEETS

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0301 WALL SECT.DWG PLOT TIME: 01-04-23, 10:20 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 452	466



NOTE:

Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular fill material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings.

2

TYPICAL BARRIER WALL SECTION

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

A
SC3.13 SC3.14

DATE	REVISION
4/7/23	2 Added Backfill Information and Note Revised Reinforcing

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL BARRIER WALL SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

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LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

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SIGNATURE EXPIRATION DATE OF THE LICENSE

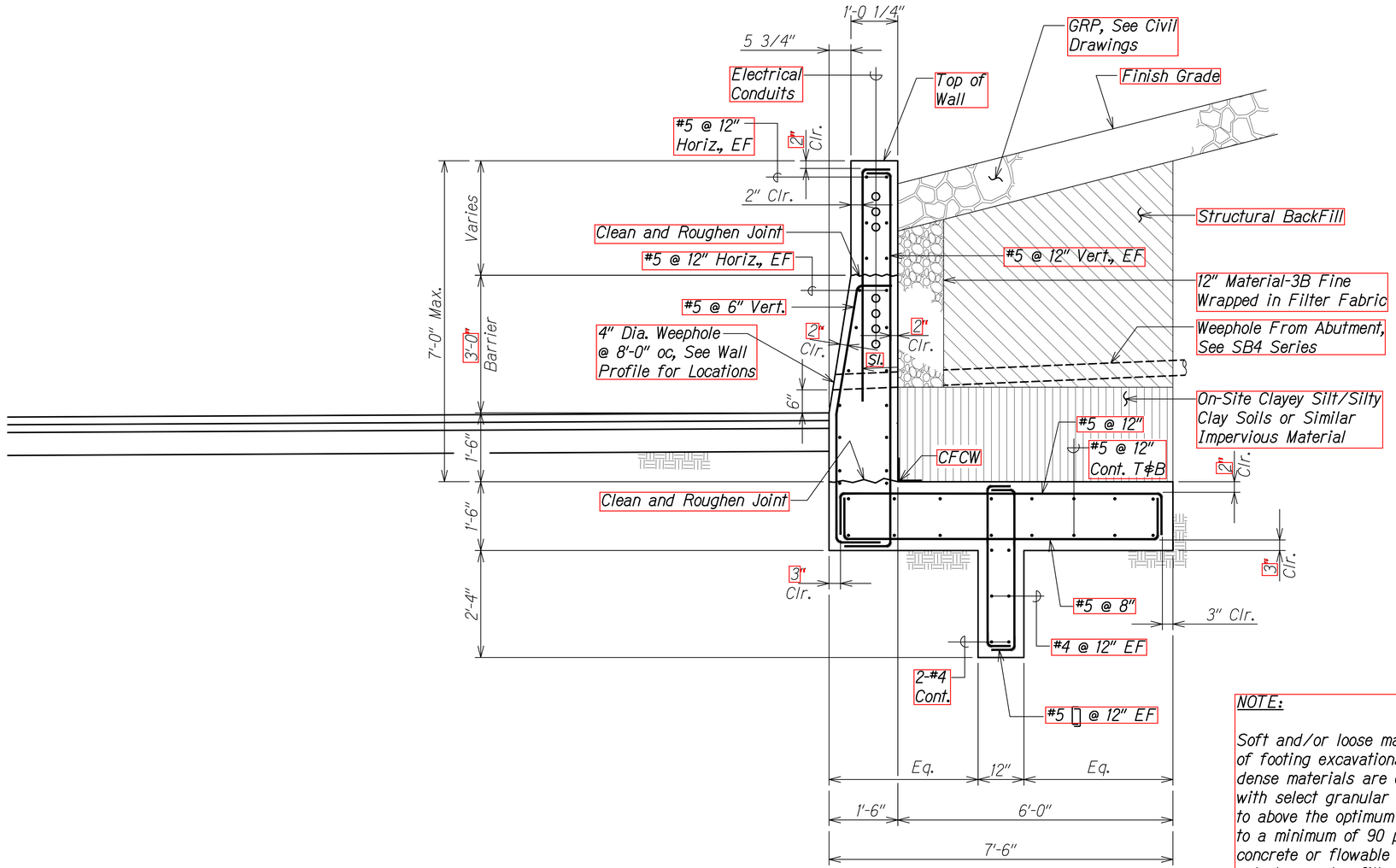
SHEET No. SC3.14 OF 21 SHEETS

ADD. 452

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GU\ICK.RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0314 WALL SECT-BARRIER ADD2.DWG PLOT TIME: 04-10-23, 3:54 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 452S-1	466



2 TYPICAL BARRIER WALL SECTION

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

A
SC2.14 SC3.14A
SC2.15

NOTE:

Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular fill material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings.

DATE	REVISION
4/7/23	2 New Sheet

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL BARRIER WALL SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.14A OF 21 SHEETS

ADD. 452S-1

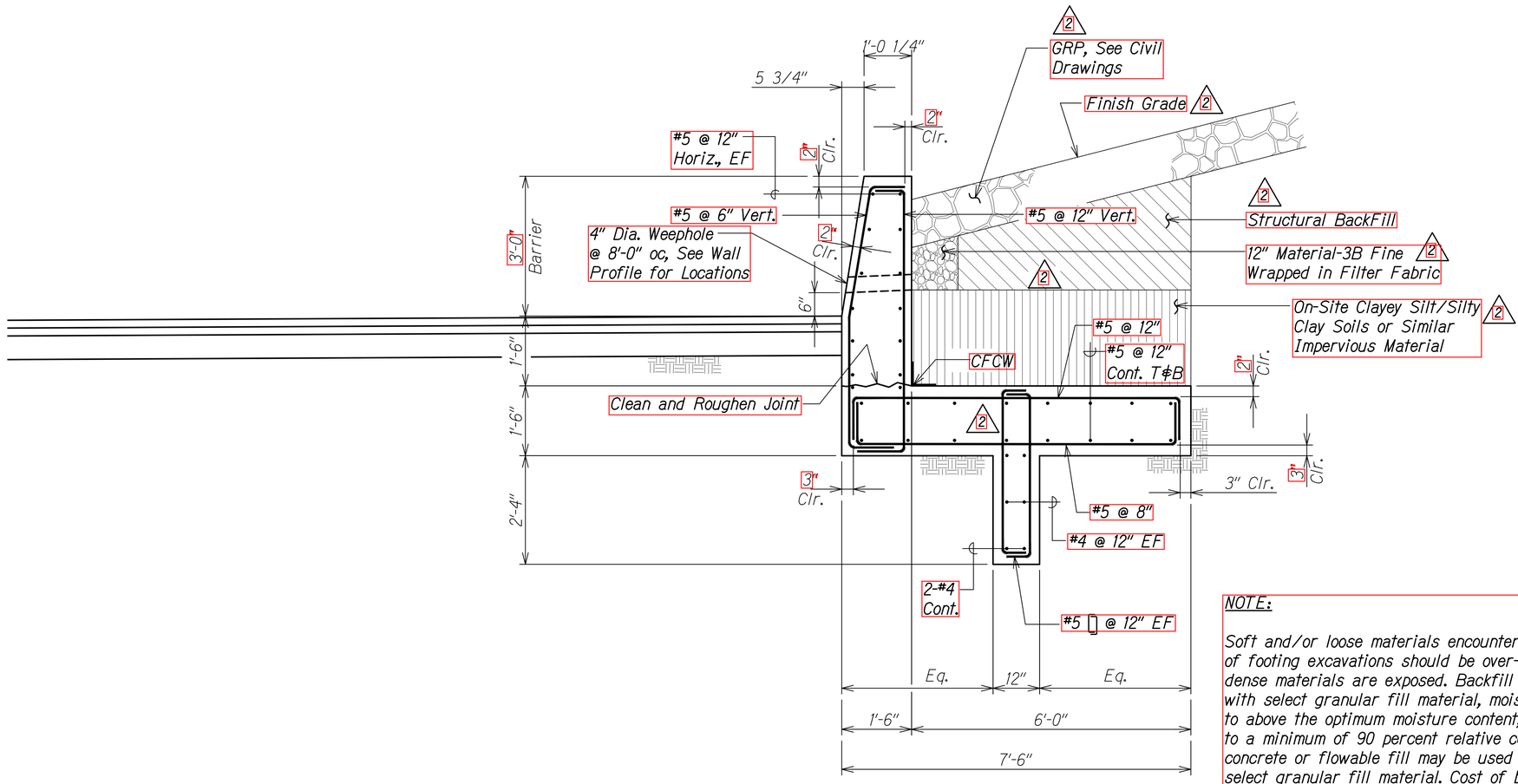
DATE

ORIGINAL PLAN
NOTE BOOK No.

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0314 WALL SECT-BARRIER ADD2.DWG PLOT TIME: 04-10-23, 3:55 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 453	466



NOTE:

Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular fill material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings. (2)

TYPICAL BARRIER WALL SECTION

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

A SC2.14 SC3.15 SC2.15

DATE	REVISION
4/7/23	(2) Revised Footing, Note, and Added Backfill Information

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL BARRIER WALL SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.15 OF 21 SHEETS

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

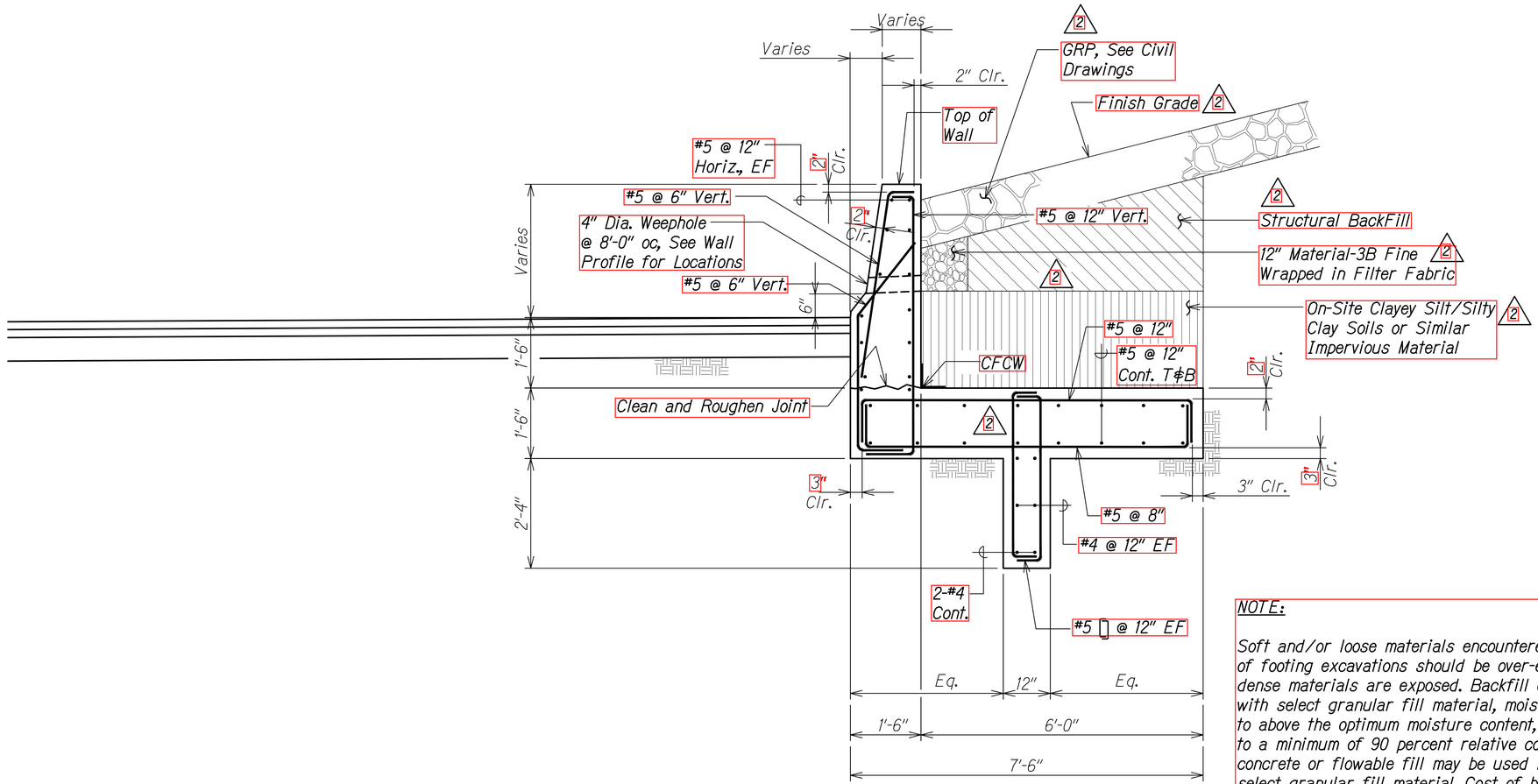
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ORIGINAL PLAN	SURVEY PLOTTED BY
NOTE BOOK	DRAWN BY
No.	TRACED BY
	DESIGNED BY
	QUANTITIES BY
	CHECKED BY
	DATE

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0314 WALL SECT-BARRIER ADD2.DWG PLOT TIME: 04-10-23, 3:55 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 454	466



TYPICAL BARRIER WALL SECTION

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

A SC2.14 SC3.16 SC2.15

NOTE:

Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular fill material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings. 2

DATE	REVISION
4/7/23	2 Revised Footing, Note, and Added Backfill Information

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL BARRIER WALL SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.16 OF 21 SHEETS

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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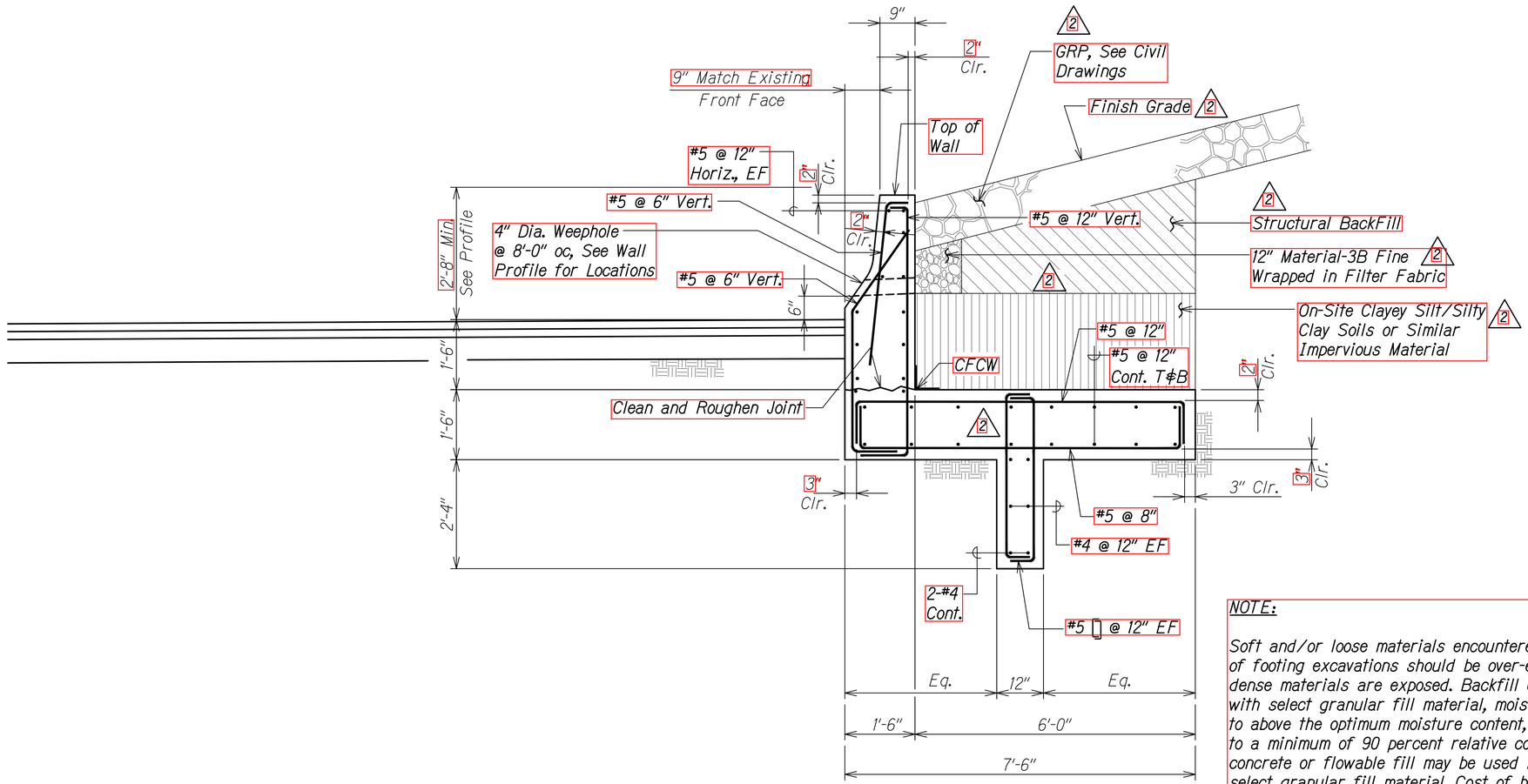
SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\04-10-23 ADD2\GRK-SC0314 WALL SECT-BARRIER ADD2.DWG PLOT TIME: 04-10-23, 3:55 PM)

ADD. 454

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 455	466



TYPICAL BARRIER WALL SECTION

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

A
SC2.14 SC3.17
SC2.15

NOTE:

Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular fill material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings. (2)

DATE	REVISION
4/7/23	(2) Revised Footing, Note, and Added Backfill Information

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

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TYPICAL BARRIER WALL SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.17 OF 21 SHEETS

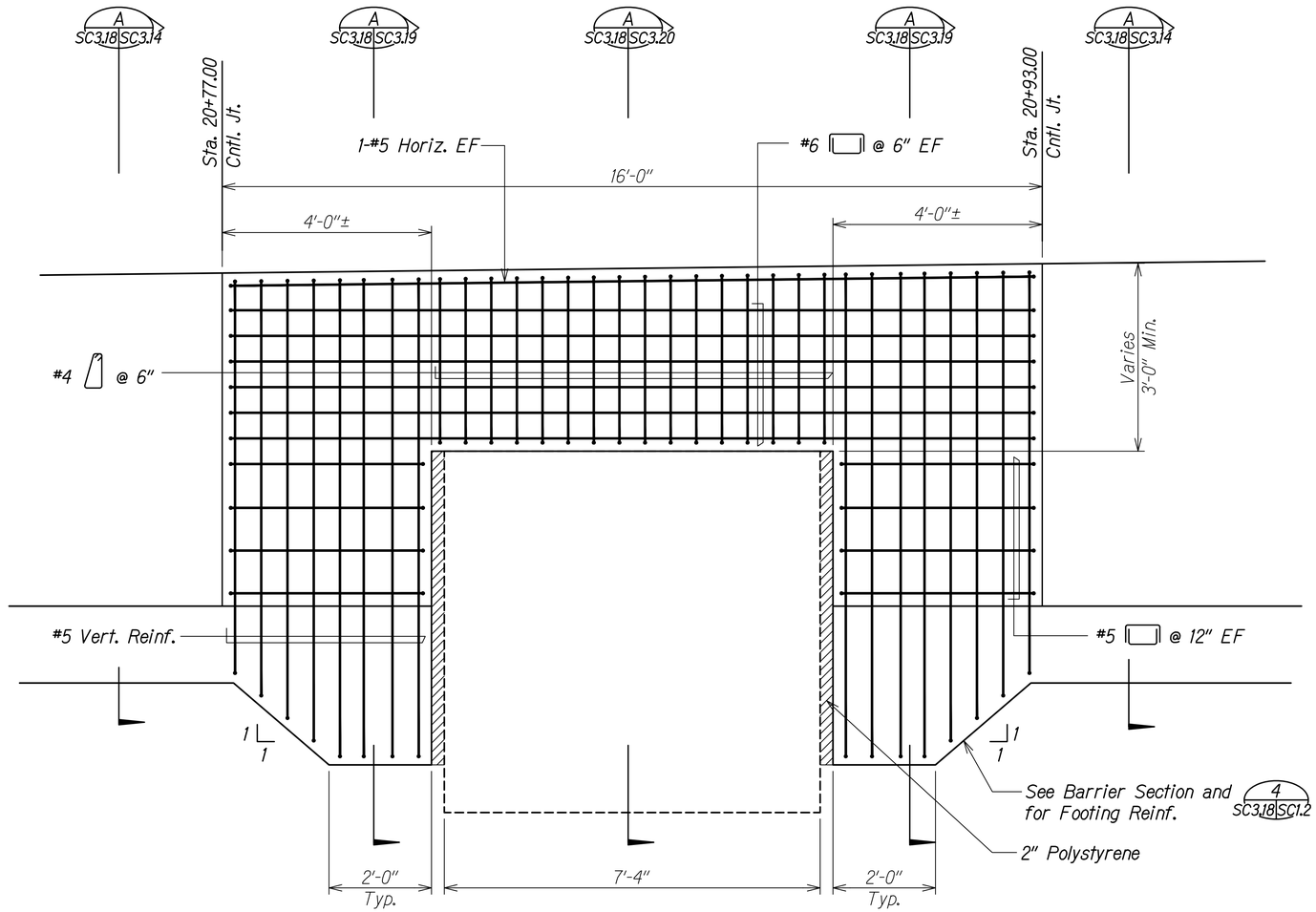
ADD. 455

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

DATE

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0314 WALL SECT-BARRIER ADD2.DWG PLOT TIME: 04-10-23, 3:56 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	456	466



BARRIER WALL ELEVATION AT GDI

A
SC2.2 SC3.18

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

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0318 WALL INLET.DWG PLOT TIME: 01-04-23, 10:22 AM)

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

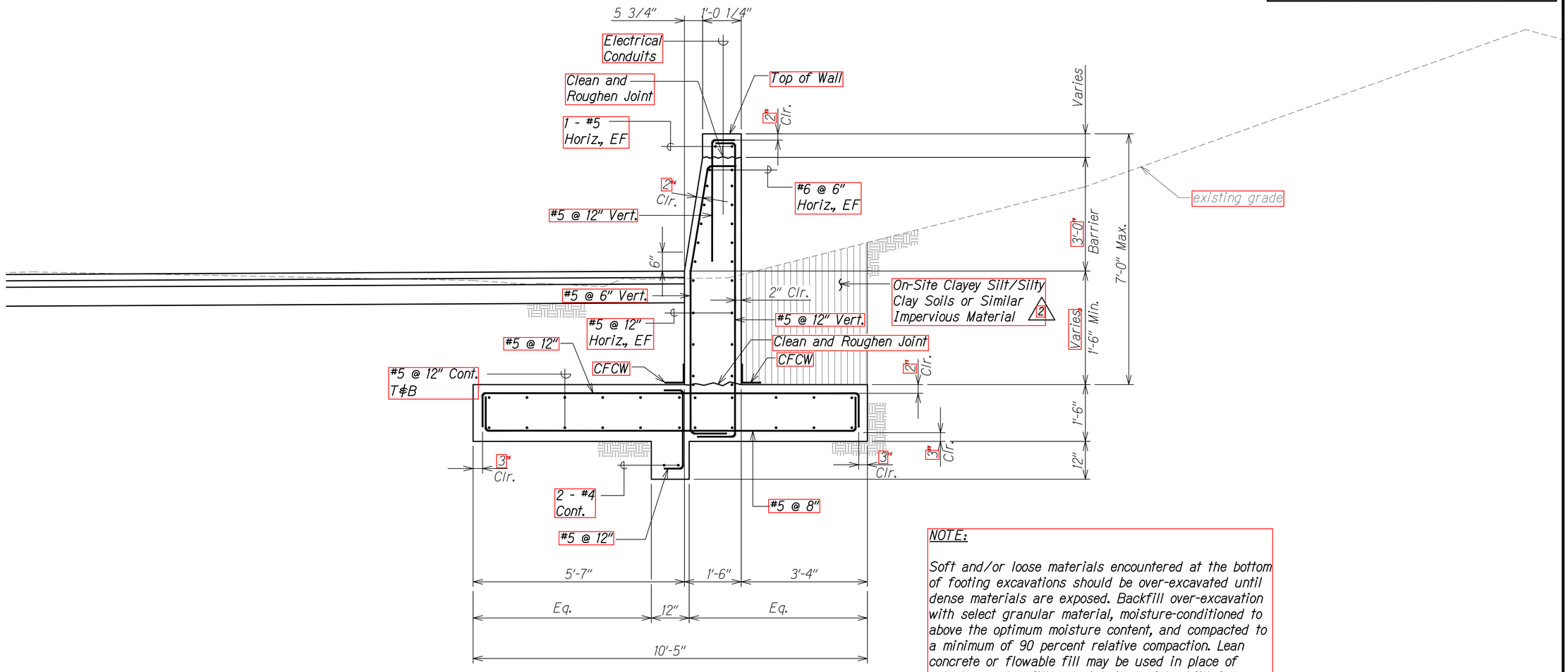
BARRIER WALL ELEVATION AT GDI

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.18 OF 21 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 457	466



NOTE:

Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings.

2

TYPICAL BARRIER WALL SECTION

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

A

SC3.18 SC3.19

DATE	

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

ORIGINAL PLAN

NOTE BOOK
No.

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0318 WALL INLET ADD2.DWG PLOT TIME: 04-10-23, 3:56 PM)

DATE	REVISION
4/7/23	2 Added Backfill Information and Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL BARRIER WALL SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

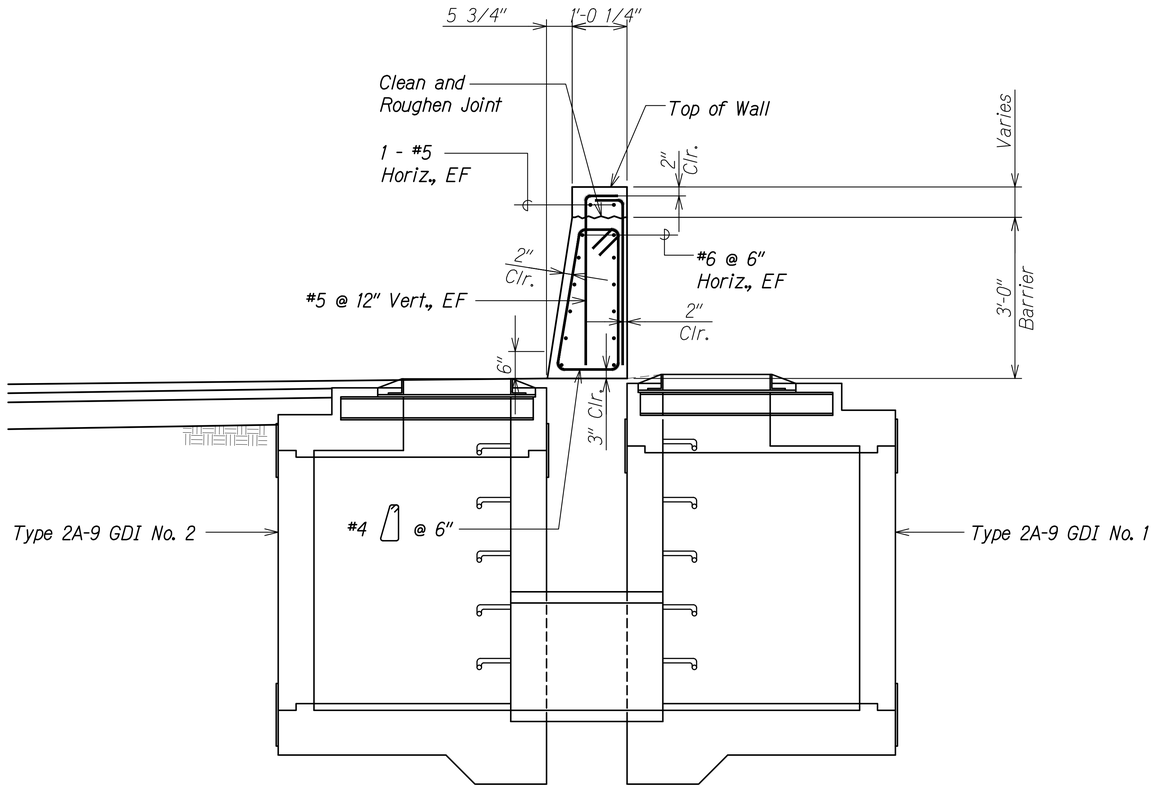
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4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

SHEET No. SC3.19 OF 21 SHEETS

ADD. 457

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	458	466



TYPICAL BARRIER WALL SECTION

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

A
SC3.18 | SC3.20

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0318 WALL INLET.DWG PLOT TIME: 01-04-23, 10:23 AM)

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

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4-30-24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

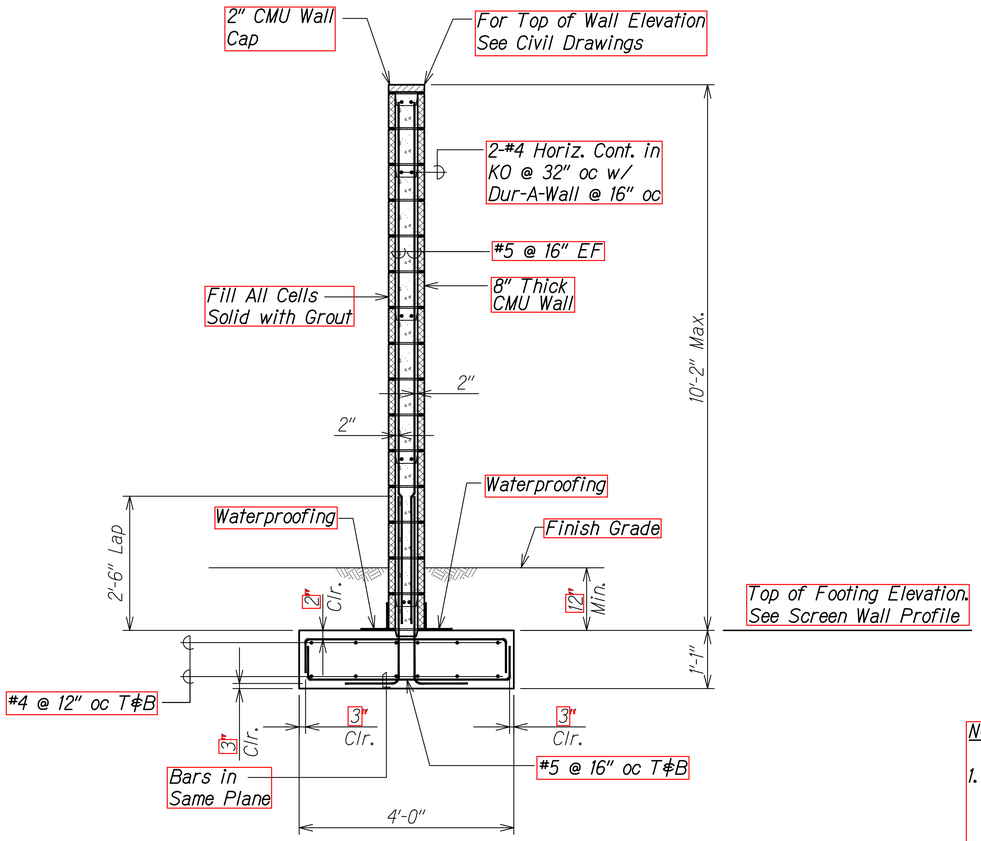
TYPICAL BARRIER WALL SECTION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.20 OF 21 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 459	466



TYPICAL SCREEN WALL SECTION

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

A SC3.21 SC3.21

NOTES:

1. Cost for excavation and backfill, reinforcing, and concrete for screen wall shall be incidental to Item 694.1000 Concrete Masonry Unit.

2. Soft and/or loose materials encountered at the bottom of footing excavations should be over-excavated until dense materials are exposed. Backfill over-excavation with select granular material, moisture-conditioned to above the optimum moisture content, and compacted to a minimum of 90 percent relative compaction. Lean concrete or flowable fill may be used in place of select granular fill material. Cost of backfill for over excavation shall be paid for under Item 205.2010 - Structure Backfill for Soft and/or Loose Material at the Bottom of Retaining Wall Footings.

△2

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL SCREEN WALL SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC3.21 OF 21 SHEETS

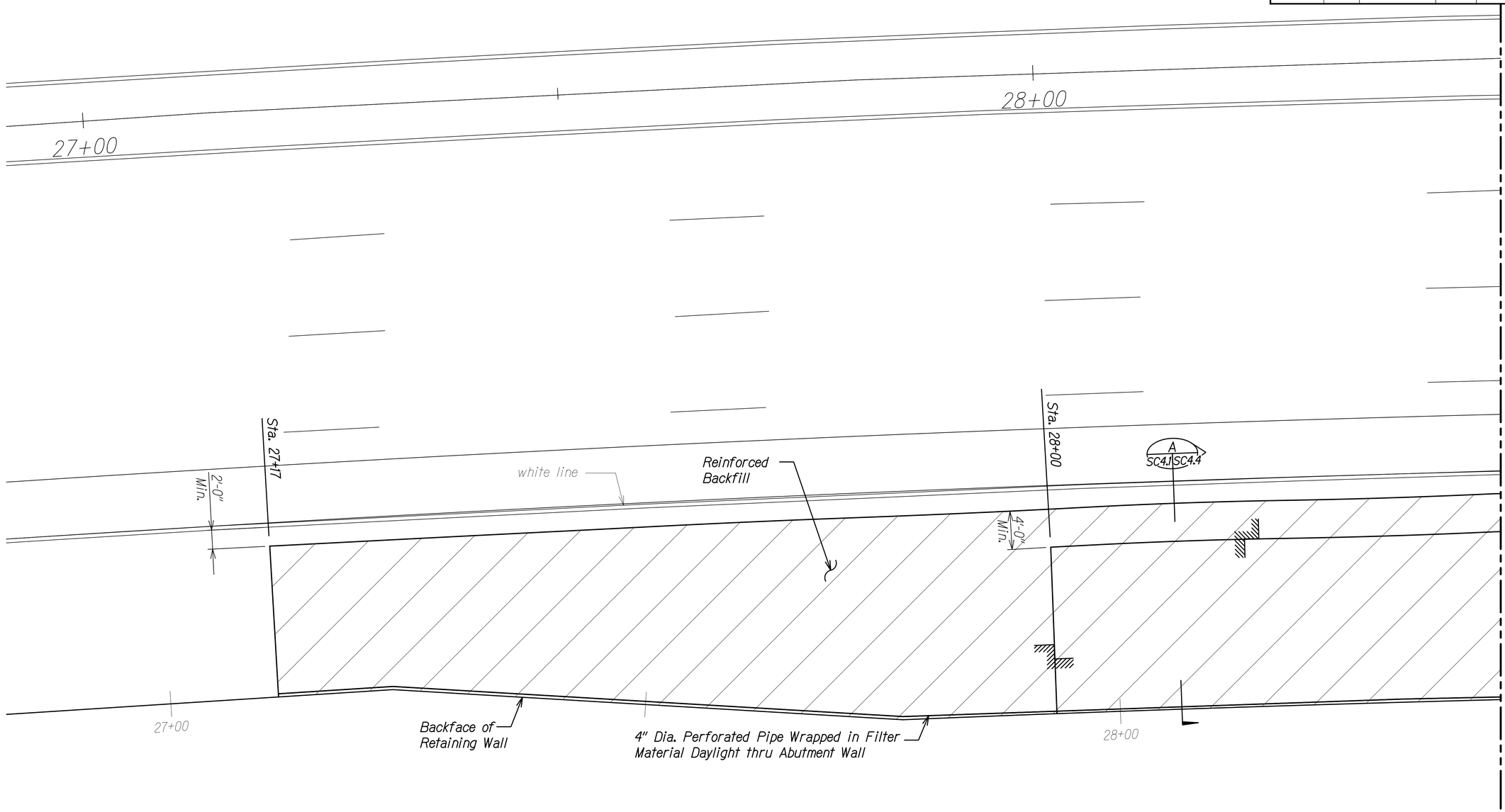
DATE	REVISION
4/7/23	△2 Revised Note

ADD. 459

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SC0321 CMU SECT ADD2.DWG PLOT TIME: 04-10-23, 4:08 PM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	460	466



REINFORCED BACKFILL PLAN AT RICHARD LANE

Scale: 3/16" = 1'-0"

A SC4.1 | SC4.1

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KAUHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0401-BKFL PLAN.DWG PLOT TIME: 01-04-23, 10:23 AM)

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

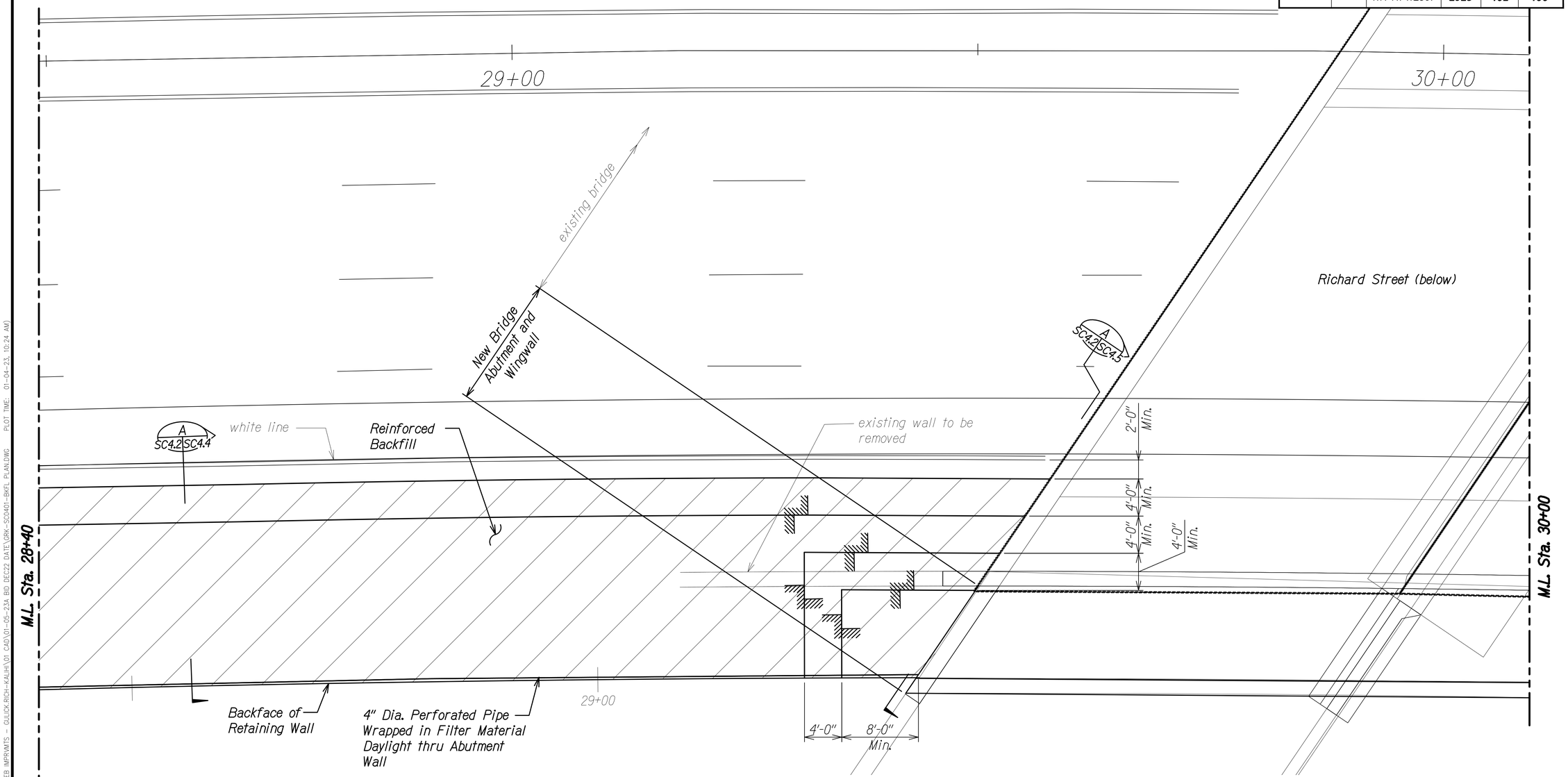
RICHARD LANE
REINFORCED BACKFILL PLAN

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC4.1 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	461	466



REINFORCED BACKFILL PLAN AT RICHARD LANE

Scale: 3/16" = 1'-0"

A SC4.2 SC4.2

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

ORIGINAL PLAN	
NOTE BOOK	
No.	

DRAWING NAME: Z:\GO ONGOING\GO0 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0401-BKFL PLAN.DWG PLOT TIME: 01-04-23, 10:24 AM)

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

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SIGNATURE 4-30-24 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

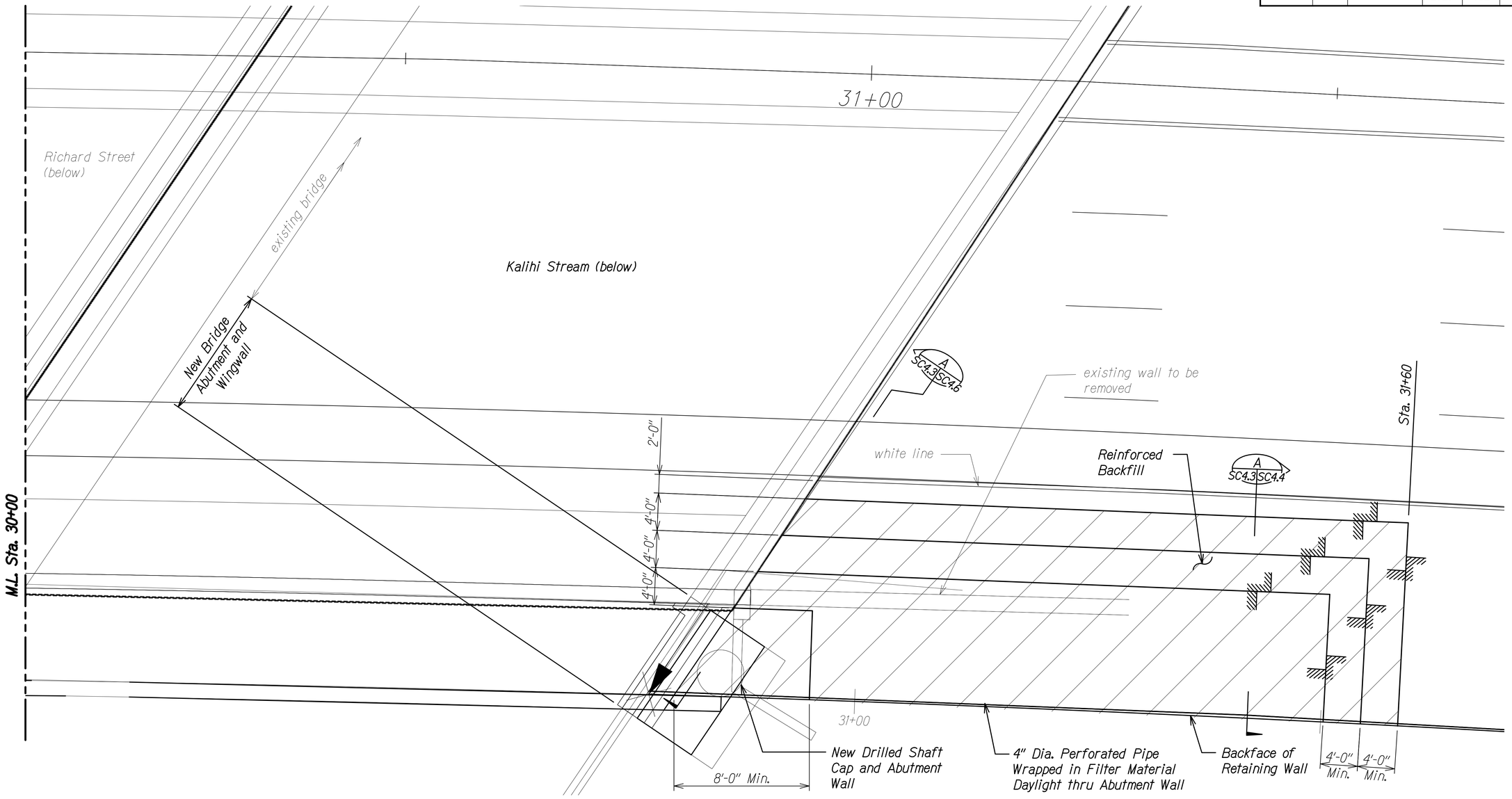
RICHARD LANE
REINFORCED BACKFILL PLAN

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC4.2 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	462	466



REINFORCED BACKFILL PLAN AT KALIHI STREAM

Scale: 3/16" = 1'-0"

A
SC4.3 | SC4.3

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0401-BKFL PLAN.DWG PLOT TIME: 01-04-23, 10:24 AM)

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

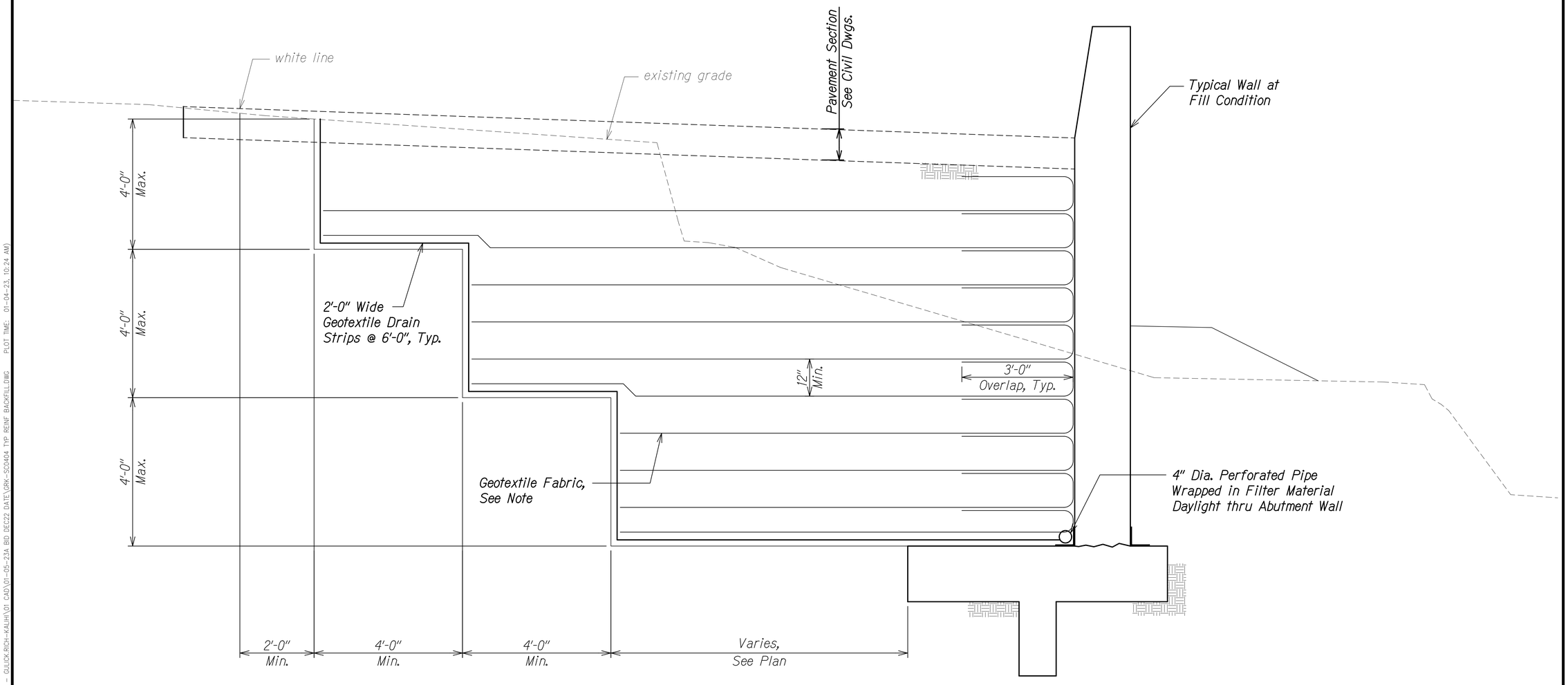
KALIHI STREAM
REINFORCED BACKFILL PLAN

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC4.3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	463	466



NOTE:

Geotextile shall be biaxial, woven polypropylene, with a minimum ultimate tensile strength of 4,800 pounds per foot.

TYPICAL REINFORCED BACKFILL AT FILL CONDITION

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

A
SC4.1 | SC4.4
SC4.2

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK:RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0404 TYP REINF BACKFILL.DWG PLOT TIME: 01-04-23, 10:24 AM)

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

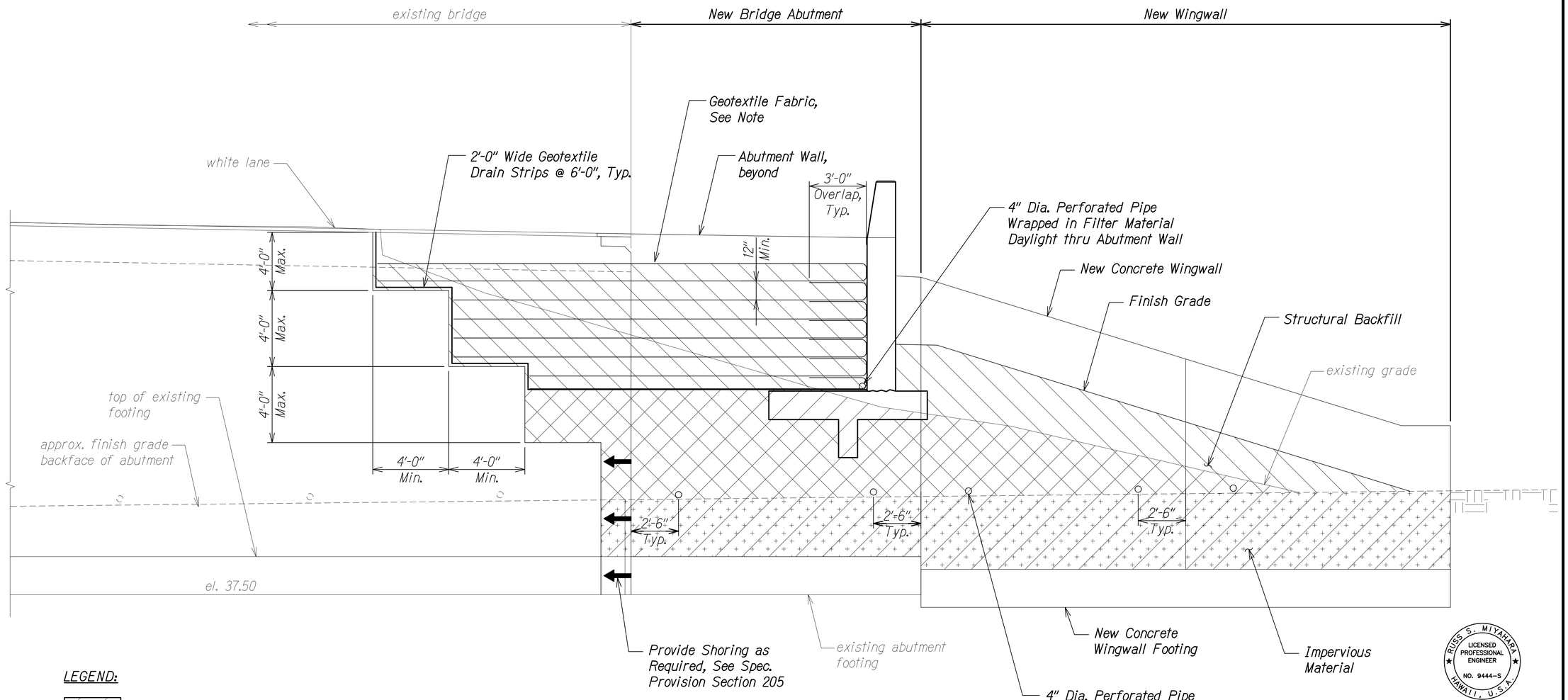
TYPICAL REINFORCED BACKFILL AT FILL CONDITION

INTERSTATE ROUTE H1 (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-H1-1(280)

Scale: As Noted Date: December 2022

SHEET No. SC4.4 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	464	466



LEGEND:

- Structure Excavation
- Structure Backfill
- Impervious Material

NOTE:

Geotextile shall be biaxial, woven polypropylene, with a minimum ultimate tensile strength of 4,800 pounds per foot.

REINFORCED BACKFILL AT RICHARD LANE RIGID FRAME

Scale: 3/8" = 1'-0"

A SC4.2 | SC4.5

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24

SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RICHARD LANE
REINFORCED BACKFILL

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

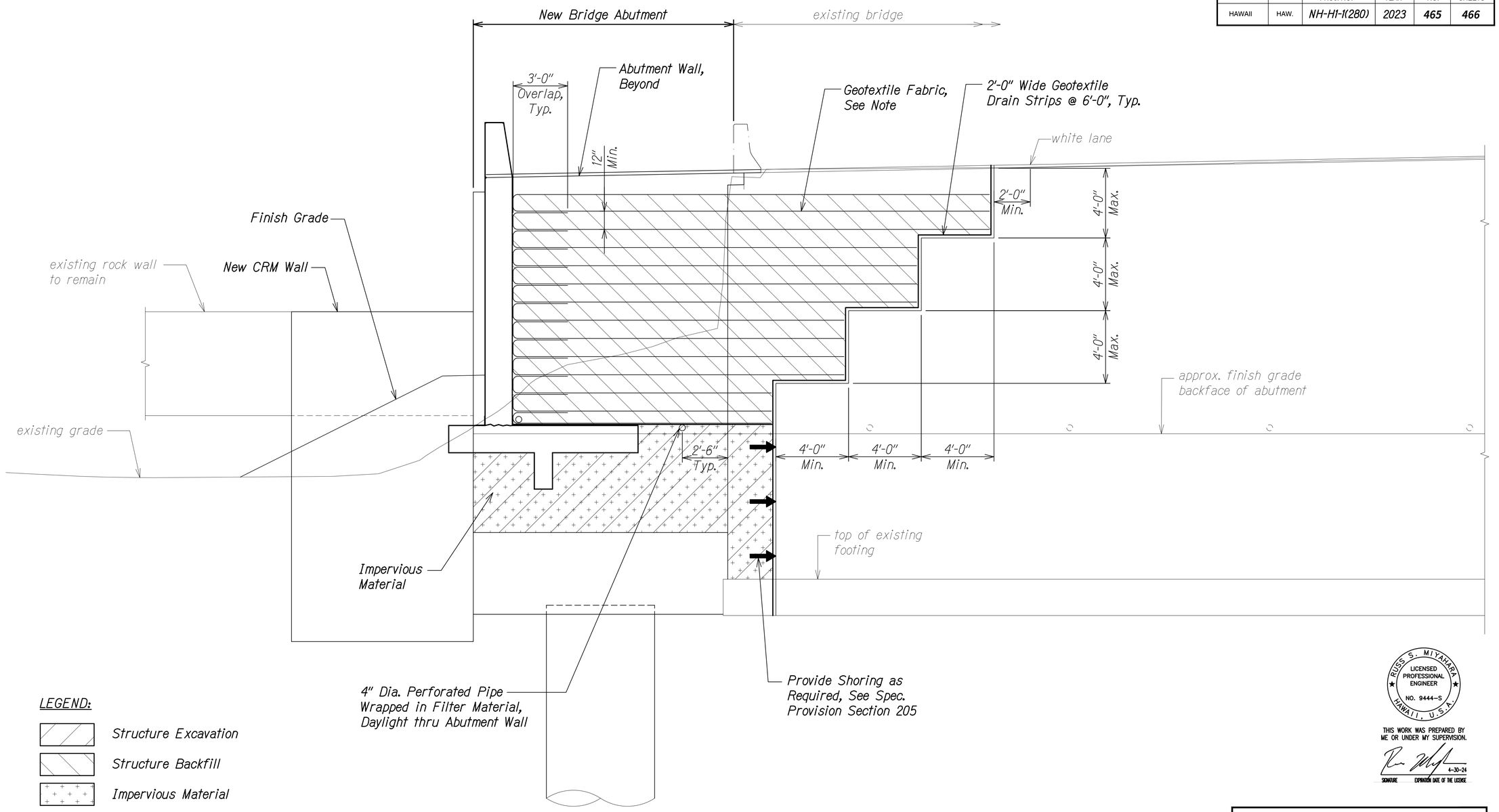
Scale: As Noted Date: December 2022

SHEET No. SC4.5 OF 6 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GULICK-RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0405-RICHARD BKFL.DWG PLOT TIME: 01-04-23, 10:25 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	465	466



LEGEND:

- Structure Excavation
- Structure Backfill
- Impervious Material

NOTE:

Geotextile shall be biaxial, woven polypropylene, with a minimum ultimate tensile strength of 4,800 pounds per foot.

REINFORCED BACKFILL AT KALIHI STREAM

Scale: 3/8" = 1'-0"

A SC4.3 | SC4.6

RUSS S. MIYAHARA LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

4-30-24

SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KALIHI STREAM
REINFORCED BACKFILL

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

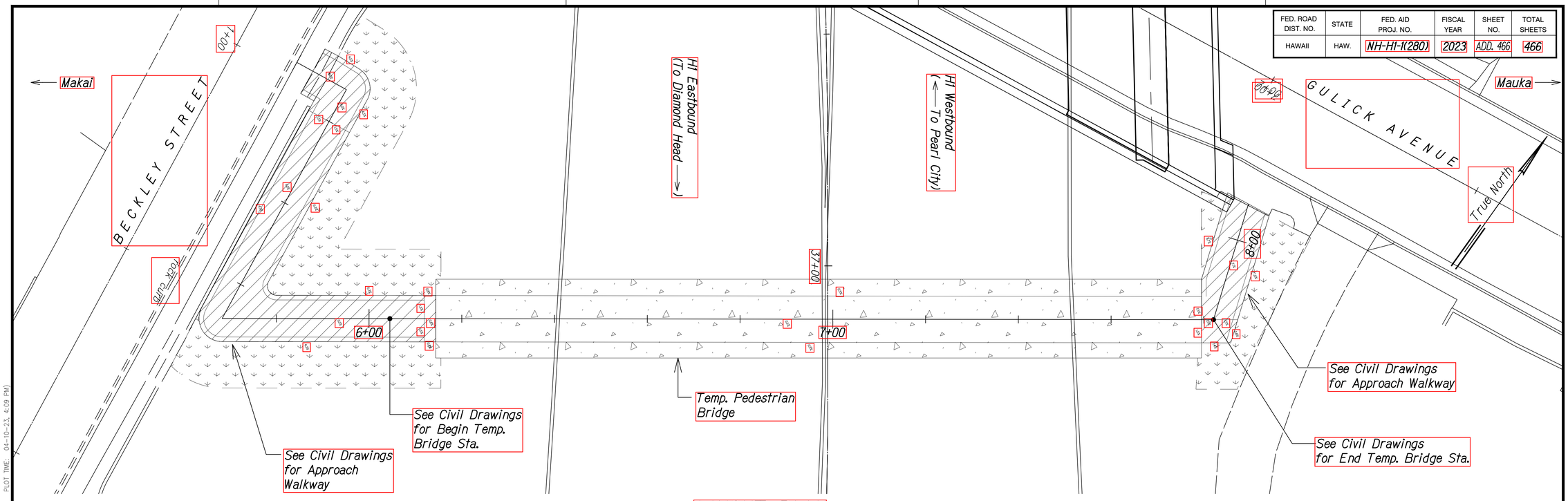
Scale: As Noted Date: December 2022

SHEET No. SC4.6 OF 6 SHEETS

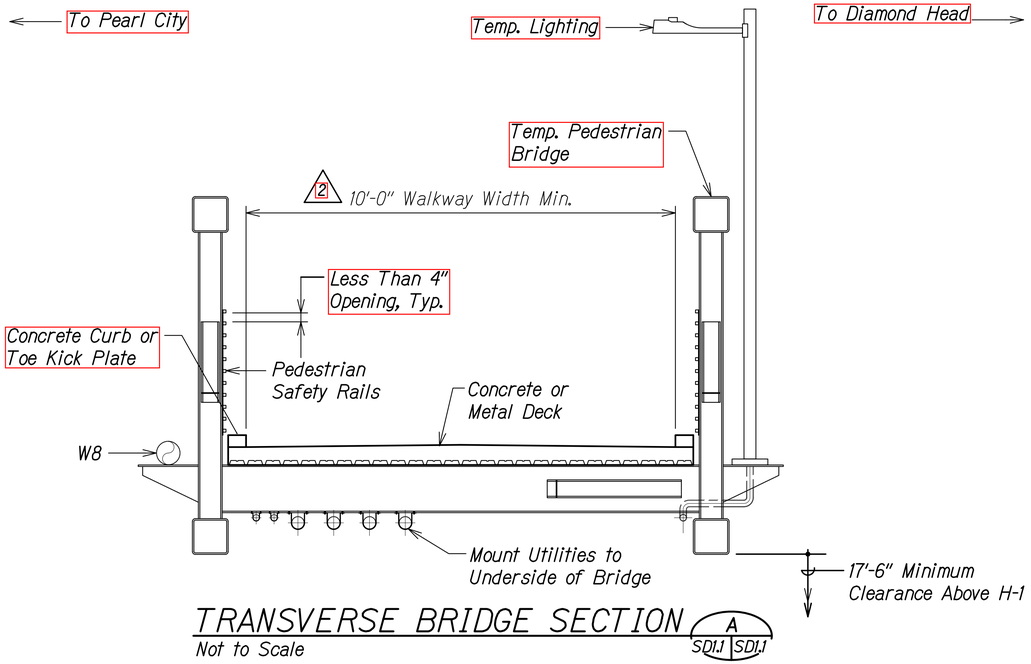
ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

DRAWING NAME: Z:\00 ONGOING\00 JF PROJECTS\20-010 HI EB IMPRVMTS - GUICK,RICH-KALIHI\01 CAD\01-05-23A BID DEC22 DATE\GRK-SC0406-KALIHI BKFL.DWG PLOT TIME: 01-04-23, 10:25 AM)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-HI-1(280)	2023	ADD. 466	466



LAYOUT PLAN
Scale: 3/32" = 1'-0"



TRANSVERSE BRIDGE SECTION
Not to Scale

A
SDI.1 | SDI.1

NOTES:

1. Plan and section shown are for illustrative purposes.
2. See Special Provision Section 512.
3. For temporary utilities on the Temp. Pedestrian Bridge, see Civil and Electrical Drawings.

ERIC Y. MATSUMOTO
LICENSED PROFESSIONAL ENGINEER
NO. 10156-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE — EXPIRATION DATE OF THE LICENSE: 4-30-24

APPROVED:

Manager and Chief Engineer, BWS (for work affecting BWS facilities State R/W & BWS easements only) — DATE

DATE	REVISION
4/7/23	2 Revised Dimension

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TEMP. PEDESTRIAN BRIDGE LAYOUT PLAN AND SECTION

INTERSTATE ROUTE HI (EB) IMPROVEMENTS
Ola Lane Overpass to Likelike Hwy Off-Ramp
Project No. NH-HI-1(280)

Scale: As Noted — Date: December 2022

SHEET No. SDI.1 OF 1 SHEETS

ADD. 466

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

DRAWING NAME: Z:\OO ONGOING\OO JF PROJECTS\20-010 H1 EB IMPRVMTS - GULICK,RICH-KALIHI\01 CAD\04-10-23 ADD2\GRK-SDI0101 TEMP PED BR ADD2.DWG PLOT TIME: 04-10-23, 4:09 PM)