





# STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	2	34

STANDARD PLAN NO.	TITLE	DATE
B-01 ●	NOTES & MISCELLANEOUS DETAILS	05/31/07
B-03	BACKFILL DETAILS AT EARTH RETAINING STRUCTURES	05/31/07
B-12	PRESTRESSED CONCRETE PILES & COMPRESSION SPLICE CAN DETAILS	05/31/07
B-12A	PRESTRESSED CONCRETE PILES, PILE & COMPRESSION SPLICE CAN DETAILS & NOTES	05/31/07
B-12B	PILE INTERACTION DIAGRAM	05/31/07
B-13	PRESTRESSED CONCRETE PILE BUILD-UP DETAILS	05/31/07

D-01	CATTLE GATE	05/31/07
D-02	CHAIN LINK FENCE WITH TOPRAIL	05/31/07
D-03	CHAIN LINK FENCE WITHOUT TOPRAIL	05/31/07
D-04	WIRE FENCE WITH METAL POSTS	05/31/07
D-05	TYPICAL DETAILS OF CURBS AND/OR GUTTERS	05/31/07
D-06	TYPICAL DETAIL OF REINFORCED CONCRETE DROP DRIVEWAY	05/31/07
D-07	CENTERLINE AND REFERENCE SURVEY MONUMENTS	05/31/07
D-08	STREET SURVEY MONUMENT	05/31/07
D-15	CONCRETE SIDEWALK	05/31/07
D-16	P.C.C. BUS PAD	05/31/07
D-17	P.C.C. BUS PAD	05/31/07
D-18	P.C.C. PAVEMENT LAYOUT	05/31/07
D-19	P.C.C. PAVEMENT W/ PERMEABLE BASE JOINT DETAILS	05/31/07
D-20	P.C.C. PAVEMENT W/ PERMEABLE BASE JOINT DETAILS	05/31/07
D-21	P.C.C. LONGITUDINAL JOINT DETAILS	05/31/07
D-22	P.C.C. CONNECTION TO CURBS AND GUTTERS	05/31/07
D-23	JOINTS	05/31/07

L-01	TREE PLANTING	08/16/06
L-02	TREE PLANTING	08/16/06
L-03	TREE TRANSPLANTING	08/16/06
L-04	PALM PLANTING	08/16/06
L-05	SHRUB PLANTING	08/16/06
L-06	LANDSCAPE DETAILS	08/16/06
L-07	LANDSCAPE DETAILS	08/16/06
L-08	LANDSCAPE DETAILS	08/16/06
L-09	LANDSCAPE DETAILS	08/16/06
L-10	LANDSCAPE DETAILS	08/16/06
L-11	PLANTING NOTES	08/16/06
L-12	IRRIGATION DETAILS	08/16/06
L-13	IRRIGATION DETAILS	08/16/06
L-14	IRRIGATION DETAILS	08/16/06
L-15	IRRIGATION DETAILS	08/16/06
L-16	IRRIGATION DETAILS	08/16/06
L-17	IRRIGATION DETAILS	08/16/06
L-18	IRRIGATION DETAILS	08/16/06
L-19	IRRIGATION DETAILS	08/16/06
L-20	IRRIGATION DETAILS	08/16/06
L-21	IRRIGATION DETAILS	08/16/06
L-22	IRRIGATION DETAILS	08/16/06
L-23	IRRIGATION DETAILS	08/16/06
L-24	IRRIGATION NOTES	08/16/06

STANDARD PLAN NO.	TITLE	DATE
H-01A	TYPE A CATCH BASIN	05/31/07
H-01B	TYPE B CATCH BASIN	05/31/07
H-01C	TYPE C CATCH BASIN	05/31/07
H-01D	TYPE D CATCH BASIN	05/31/07
H-01E	CATCH BASIN SECTIONS	05/31/07
H-02A	TYPE A1 CATCH BASIN	05/31/07
H-02B	TYPE B2 CATCH BASIN	05/31/07
H-02C	TYPE C1 CATCH BASIN	05/31/07
H-02D	TYPE D1 CATCH BASIN	05/31/07
H-02E	CATCH BASIN SECTION	05/31/07
H-03	TYPE A,B, AND C STORM DRAIN MANHOLE	05/31/07
H-04	TYPE D STORM DRAIN MANHOLE	05/31/07
H-05	TYPICAL REINFORCING DETAILS FOR DRAINAGE STRUCTURES	05/31/07
H-06	TYPICAL REINFORCING DETAILS FOR DRAINAGE STRUCTURES	05/31/07
H-07	CATCH BASIN AND MANHOLE CASTINGS	05/31/07
H-08	TYPE 1A-9 AND 1A-9P GRATED DROP INLET	05/31/07
H-09	TYPE 2A-9 AND 2A-9P GRATED DROP INLET	05/31/07
H-10	TYPE A-9 OR A-9P STEEL FRAMES	05/31/07
H-11	TYPE A-9 AND A-9P STEEL GRATES	05/31/07
H-12	TYPE 61614P AND 1211214P GRATED DROP INLET	05/31/07
H-13	TYPE 61616P AND 1211216P GRATED DROP INLET	05/31/07
H-14	TYPE 61214P GRATED DROP INLET	05/31/07
H-15	TYPE 1211214, 1211214P, 1211216, 1211216P STEEL FRAME AND GRATES	05/31/07
H-16	TYPE 61614, 61614P, 61616, 61616P STEEL FRAME AND GRATES	05/31/07
H-17	TYPE 61214 STEEL FRAMES AND GRATES	05/31/07
H-18	TYPE 61214P STEEL GRATES	05/31/07
H-19	TYPE 61614B STEEL FRAME AND GRATES	05/31/07
H-20	CEMENT RUBBLE MASONRY STRUCTURES	05/31/07
H-21	CONCRETE AND CEMENT RUBBLE MASONRY STRUCTURES	05/31/07
H-22	INLET/OUTLET STRUCTURE	05/31/07
H-23	INLET/OUTLET STRUCTURE	05/31/07
H-24	FLARED END SECTION FOR CULVERTS	05/31/07
H-25	FLARED END SECTION FOR CULVERTS	05/31/07
H-26	CONCRETE SPILLWAY INLET	05/31/07
H-27	CAP COUPLING DETAILS STANDARD JOINT	05/31/07
H-28	REINFORCED CONCRETE COLLAR & JACKET	05/31/07
H-29	UNDERDRAIN CLEANOUT STEEL FRAME AND COVER	05/31/07
H-30	UNDERDRAIN CONNECTION TO DRAINAGE STRUCTURE	05/31/07

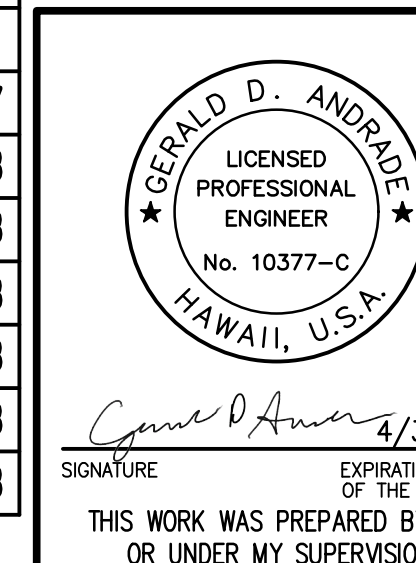
TE-01	SIGN HEIGHT AND LOCATION	07/11/08
TE-1A ●	SIGN INSTALLATION	07/11/08
TE-02A	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-02B	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-02C	GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	05/31/07
TE-03A	GALVANIZED SQUARE TUBE SIGN POST MOUNTING	05/31/07
TE-03B	GALVANIZED SQUARE TUBE SIGN POST MOUNTING	05/31/07
TE-04 ●	REGULATORY SIGNS	07/11/08
TE-05 ●	WARNING SIGNS	07/11/08
TE-06	MISCELLANEOUS SIGNS	07/11/08
TE-07 ●	CONSTRUCTION SIGNS	07/11/08
TE-08	MISCELLANEOUS INTERSECTION SIGNS	07/11/08

STANDARD PLAN NO.	TITLE	DATE
TE-09	BIKE ROUTE SIGN & SUPPLEMENTARY PLATES	07/11/08
TE-10	INTERSTATE ROUTE MARKER	07/11/08
TE-11	STATE ROUTE MARKER AND AUXILIARY MARKERS	07/11/08
TE-12	STATE ROUTE MARKER AND BORDER DETAIL FOR GUIDE SIGNS	07/11/08
TE-12A	ROUTE SIGN ASSEMBLIES	07/11/08
TE-13	STREET NAME SIGN ON MAST ARM	07/11/08
TE-14 ●	MISCELLANEOUS REFLECTOR MARKERS	07/11/08
TE-15 ●	OBJECT MARKERS	07/11/08
TE-16	MILE POSTS	07/11/08
TE-17A	CANTILEVER OVERHEAD SIGN ELEVATION & DETAILS	05/31/07
TE-17B	CANTILEVER SIGN FRAME DETAIL AND SECTION	05/31/07
TE-17C	CANTILEVER SIGN FRAME DETAIL	05/31/07
TE-17D	CANTILEVER SIGN FRAME SECTION	05/31/07
TE-17E	CANTILEVER SIGN FRAME DETAILS	05/31/07
TE-18A	TWO POST OVERHEAD SIGN FRAME ELEVATIONS	05/31/07
TE-18B	TWO POST SIGN FRAMING PLAN SECTION	05/31/07
TE-18C	TWO POST SIGN FRAMING SECTIONS AND DETAILS	05/31/07
TE-18D	TWO POST SIGN FRAME DETAILS	05/31/07
TE-18E	TWO POST SIGN FRAME DETAILS	05/31/07
TE-19A	OVERHEAD SIGN FRAMING SCHEDULE	05/31/07
TE-19B	SIGN POST DRILLED SHAFT FOUNDATION	05/31/07
TE-19C	SPREAD FOOTING	05/31/07
TE-19D	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.1	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.2	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.3	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.4	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19D.5	SIGN FRAME FOUNDATION SCHEDULE	05/31/07
TE-19E	ANCHORAGE DETAILS	05/31/07
TE-19F	ANCHORAGE DETAILS	05/31/07
TE-19G	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
TE-19H	LUMINAIRE WALKWAY SUPPORT	05/31/07
TE-19J	FIXED MESSAGE LUMINAIRE SUPPORT	05/31/07
TE-19K	MISCELLANEOUS SIGN DETAILS	05/31/07
TE-19L	MISCELLANEOUS SIGN DETAILS	05/31/07
TE-19M	MISCELLANEOUS SIGN FRAME DETAILS	05/31/07
TE-20	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20A	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20B	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-20C	SUPPORTS FOR GROUND MOUNTED GUIDE SIGN	05/31/07
TE-21A	SIGN BREAKAWAY MOUNTS	05/31/07
TE-21B	SIGN BREAKAWAY MOUNTS	05/31/07
TE-22	LAMINATED ALUMINUM SIGN PANELS (OVERHEAD)	05/31/07
TE-23	LAMINATED ALUMINUM SIGN PANELS (GROUND MOUNTED)	07/11/08
TE-24	SOLID ALUMINUM EXTRUDED SIGN PANEL AND ACCESSORY DETAILS	05/31/07
TE-25	GUIDE SIGNS LUMINAIRE MOUNTINGS	05/31/07
TE-26	RAISED PAVEMENT MARKERS AND STRIPING	07/11/08
TE-27	RAISED PAVEMENT MARKERS AND STRIPING	07/11/08
TE-28	ENTRANCE AND EXIT PAVEMENT MARKINGS	07/11/08
TE-28A	MISCELLANEOUS PAVEMENT MARKINGS	07/11/08
TE-29	PAVEMENT ARROWS AND SYMBOLS	07/11/08
TE-30	PAVEMENT ALPHABETS, NUMBERS & SYMBOLS	07/11/08

STANDARD PLAN NO.	TITLE	DATE
TE-31	PAVEMENT ALPHABETS, NUMBERS & SYMBOLS	07/11/08
TE-32	TYPE I & II TRAFFIC SIGNAL SYSTEM MISC. DETAILS	05/31/07
TE-33	TYPE II TRAFFIC SIGNAL SYSTEM	08/16/06
TE-33A.1	TYPE II TRAFFIC SIGNAL STANDARD	05/31/07
TE-33A.2	TYPE II TRAFFIC SIGNAL STANDARD	05/31/07
TE-34	LOOP DETECTOR DETAILS	07/11/08
TE-35	LOOP DETECTORS & DUCT DETAILS	07/11/08
TE-36	TRAFFIC SIGNAL DETAILS	07/11/08
TE-37	PULLBOX & COVER DETAILS	07/11/08
TE-37A	TYPE "A" TRAFFIC PULLBOX	05/31/07
TE-37B	TYPE "A" TRAFFIC PULLBOX REINFORCING	05/31/07
TE-37C	TYPE "B" TRAFFIC PULLBOX	05/31/07
TE-37D	TYPE "B" TRAFFIC PULLBOX REINFORCING	05/31/07
TE-37E	TYPE "B" TRAFFIC PULLBOX FOUNDATION	05/31/07
TE-37F	TYPE "C" TRAFFIC PULLBOX	05/31/07
TE-37G	TYPE "C" TRAFFIC PULLBOX REINFORCING	05/31/07
TE-37H	TYPE "C" TRAFFIC PULLBOX FOUNDATION	05/31/07
TE-37J	TRAFFIC PULLBOX COVER AND DETAILS	05/31/07
TE-38	TYPE III TRAFFIC SIGNAL STANDARD	05/31/07
TE-38A.1	TYPE III TRAFFIC SIGNAL STANDARD	05/31/07
TE-38A.2	TYPE III TRAFFIC SIGNAL STANDARD	05/31/07
TE-39	METAL GUARDRAIL CONNECTION TO CONCRETE BARRIER	07/11/08
TE-40	CONCRETE BARRIER TRANSITION	05/31/07
TE-40A	CONCRETE BARRIER TRANSITION SECTIONS	05/31/07
TE-41	GUARDRAIL TYPE 4 (RIGID BARRIER)	05/31/07
TE-42	PORTABLE CONCRETE BARRIER	05/31/07
TE-43	PORTABLE CONCRETE BARRIER	05/31/07
TE-44	GUARDRAIL TYPE 4 MISCELLANEOUS DETAILS	07/11/08
TE-45 ●	BARRICADES	07/11/08
TE-46	DELINEATION & PAVEMENT MARKINGS AT NARROW BRIDGES	07/11/08
TE-47	HIGHWAY LIGHT STANDARD	05/31/07

NOTE:  
STANDARD PLANS APPLICABLE TO THIS PROJECT ARE INDICATED BY A " ● " NEXT TO THE STANDARD PLAN NO. (FOR EXAMPLE: D-07 ● )

ORIGINAL PLAN NO. \_\_\_\_\_  
DATE \_\_\_\_\_  
DRAWN BY \_\_\_\_\_  
DESIGNED BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
SURVEY PLOTTED BY \_\_\_\_\_  
NOTE BOOK QUANTITIES BY \_\_\_\_\_



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**STANDARD PLANS SUMMARY**  
*KUHIO HIGHWAY  
Hanalei Bridge Repair  
FAP Proj. No. BR-0560(016)*  
Scale: None Date: July 2022  
SHEET No. N-1 OF 7 SHEETS



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	3	34

GENERAL NOTES:

- The scope of work for this project consists of repairing the existing Hanalei Bridge by replacing the timber decking, stringers, and wearing surface, replacing steel bolts, replacing corroded steel members, abrasive blasting and painting the entire structure, cleaning vegetation from the existing bridge structure, installation, maintenance, and removal of temporary erosion control measures, and work zone traffic control.
- Subsection 105.16(A) - Subcontract Requirements requires the Contractor to perform work amounting to not less than 30 percent of the total contract cost less deductible items.
- The Contractor's attention is directed to the following Sections of the Standard Specifications and the Special Provisions: Subsection 104.09 - Maintenance of Traffic; Subsection 105.09 - Coordination Between the Contractors; Subsection 107.06 - Contractor Duty Regarding Public Convenience; Subsection 107.12 - Protection of Persons and Property; and Section 645 - Work Zone Traffic Control.
- The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
- All existing utilities, whether or not shown on the plans, shall be protected at all times by the Contractor during construction unless specified on the plans to be abandoned. All existing utility/light poles, overhead utilities and guy poles/wires shall remain in place and operational. The Contractor shall be held liable for any damages incurred to the existing utilities as a result of his operations. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at no cost to the County. No delays or extensions of contract time will be allowed as a result of these required repairs.
- The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities, and existing structures from damages due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
- The existing drainage system shall be kept functional at all times during construction. Furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to the various contract items.
- No material or equipment shall be stockpiled or otherwise stored within State right-of-way except at locations shown on the plans or designated in writing and approved by the Engineer. The Contractor shall be responsible for obtaining additional staging area if required.
- When trench excavation is adjacent to existing structures or facilities, the Contractor is responsible for properly sheeting and bracing the excavation and stabilizing the existing ground to render it safe and secure from possible slides, cave-ins, and settlement. Provide beams, struts, or underpinning as necessary. This work shall be considered incidental to various contract items.

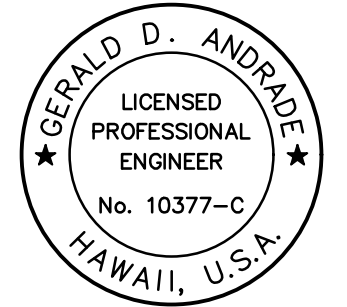
GENERAL NOTES, CONT:

- All graded areas and all grassed areas damaged by construction activities shall be planted in accordance with Specifications Section 641 - Hydro-Mulch Seeding. This work shall be considered incidental to the various contract items.
- Work required to complete the project but not itemized specifically in the proposal shall be considered incidental to the various contract items and shall not be paid for separately.
- The Contractor shall conduct his operations so as to offer the least possible obstructions and inconvenience to the public and he shall have under construction no greater length or amount of work that he can execute properly with due regard to the rights of the public.
- Guardrail Paint:
  - Contractor shall shop coat all members. Field coating shall consist of touch up only.
  - Color for top coat shall be gray color. Intermediate coat shall have a contrasting light color. Finish for top coat shall not be gloss or high gloss.
  - See special coating options in the schedule below.

ABBREVIATIONS:

⊕	BASELINE	N	NORTH
BMP	BEST MANAGEMENT PRACTICES	NTS	NOT TO SCALE
BOT.	BOTTOM	O/H.	OVERHEAD ELECTRICAL
CLR	CLEARANCE	o/s	OFFSET
CONC	CONCRETE	PCCP	PORTLAND CEMENT CONCRETE PAVEMENT
D	DRAIN LINE	PVMT	PAVEMENT
DI	DRAIN INLET	R	RADIUS
DIA.	DIAMETER	RD	ROAD
E/ELEC	ELECTRICAL	RT.	RIGHT
ES	EDGE OF SHOULDER	R/W	RIGHT-OF-WAY
EP	EDGE OF PAVEMENT	S.E.	SUPERELEVATION
ELEV	ELEVATION	SF	SQUARE FEET
EMB	EMBANKMENT	SHT	SHEET
EXC	EXCAVATION	ST	STREET
EXIST.	EXISTING	STA.	STATION
FH	FIRE HYDRANT	STD	STANDARD
GW	GUY WIRE	T	TANGENT
HMA	HOT MIX ASPHALT	TYP.	TYPICAL
INV.	INVERT	U/G	UNDER GROUND
LF	LINEAR FEET	UP	UTILITY POLE
Lt.	LEFT	VAR	VARIABLE
MB	METER BOX	W	WATER
MIN.	MINIMUM	WMH/WM	WATER MANHOLE
		WV	WATER VALVE

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



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**GENERAL NOTES AND ABBREVIATIONS**

KUHIO HIGHWAY  
Hanalei Bridge Repair  
FAP Proj. No. BR-0560(016)

Signature: *Gerald D. Andrade* 4/30/24  
EXPIRATION DATE OF THE LICENSE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Scale: None

Date: July 2022



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	4	34

NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY:

- The Contractor shall obtain a permit to perform work upon State Highways from the State Highways' District Engineer, at 1720 Haleukana Street, Lihue, Hawaii, prior to commencement of work within the State's Highway Right-of-Way.
- Construction and restoration of all existing highway facilities within the State's Right-of-Way, including the legal relations and responsibility to the public, shall be in accordance with the current Standard Specifications for Road, Bridge and Public Works Construction, and the Specifications for Installation of Miscellaneous Improvements within State highways, of the State Highways Division.
- Work shall be performed only between the hours shown in Special Provisions 645, unless otherwise permitted by the District Engineer.
- The Contractor shall provide, install and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective facilities, and shall take all necessary precautions for the protection, convenience, and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the "Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways," adopted by the Director of Transportation, and the current U.S. Federal Highways Administration "Manual on Uniform Traffic Control Devices, Part VI - Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility and Incident Management Operations."
- Lane closures shall conform to the traffic control plans incorporated in these construction plans and must be approved by the Division prior to the issuance of the permit.
- No material and/or equipment shall be stockpiled or otherwise stored within the State's Highway Right-of-Way except at locations designated in writing and approved by the District Engineer.
- The Contractor shall exercise care to minimize damages to existing highway improvements. All damages shall be repaired by the Contractor, at his expense, to the satisfaction of the District Engineer.
- Approval of permit construction plans shall be valid for a period of one (1) year from the date of notification of approval to the applicant. In the event construction does not commence within this one-year period, the applicant will be required to resubmit the construction plans for the Division's review and reapproval.
- All regulatory, guide, and construction signs and barricades shall have a high-intensity reflective background.
- The Contractor shall inform the State Highways' Permit Office (241-3000) at least two (2) days prior to closing any lanes.

NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY, CONT':

- Driveways shall be kept open unless the owners of the properties using these Rights-of-Way are otherwise provided for satisfactory.
- Where pedestrian walkways exist, they shall be maintained in a safe and passable condition, or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be approved. All walkways shall conform to ADA requirements.
- The Contractor shall reference, to the satisfaction of the District Engineer, all existing traffic signs, posts and pavement markings prior to the commencement of construction. The contractor shall replace or repair all traffic signs, posts, and pavement markings disturbed by his activities, at his expense, unless directed otherwise by the District Engineer or his representative.
- The Contractor shall exercise care when performing work in, on or adjacent to the State's Highway Right-of-Way. Damages to existing facilities shall be immediately reported to the respective utility companies, and/or County or State agencies. The repair work shall be done at the Contractor's expense.
- The Contractor shall implement Best Management Practice (BMP) measures for all work within the State Highway.
- The Contractor shall notify the State Highways' Maintenance Engineer (241-3000), three (3) working days prior to commencing work.
- The permit to perform work upon State Highways may be revoked because of default in any of the following, but not limited to conditions:
  - Work performed before or after permitted hours
  - Failure to maintain roadway surfaces in a smooth and safe condition
  - Failure to clean up construction debris generated from project work
  - Failure to provide proper traffic control
  - Failure to replace damaged pavement markings and signs
- The Contractor shall notify the State Highways Permit Office (241-3000) at least two days prior to performing any trench restoration work. This work shall include any backfilling and compacting of trench material; any placing and compacting of base course material; and paving operations. Any trench restoration work performed by the Contractor that is not witnessed by a State representative will be required to be removed and restored with a State representative present. All restoration work will be done at the Contractor's expense.
- The Contractor will make every effort to minimize the use and the duration of use of steel plates. All steel plates shall have a non-skid surface. The State may require the backfilling and patching of trenches due to the excessive usage of steel plates.
- After completion of the project, the Owner and/or Contractor, shall submit one complete set of "as-built" plans to the Highways Division.

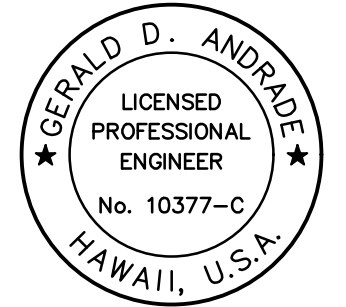
PUBLIC HEALTH, SAFETY, AND CONVENIENCE NOTES:

- The Contractor shall observe and comply with all Federal, State, and Local laws required for the protection of public health and safety and environmental quality.
- The Contractor, at his own expense, shall keep the project and its surrounding areas free from dust nuisance. The work shall be in conformance with the air pollution standards and regulations of the State Department of Health. The County may require supplementary measures as necessary.
- The Contractor's attention is directed to Chapter 448, Public Health Regulations, Department of Health, State of Hawaii, "Community Noise Control for Oahu" in which maximum allowable noise levels have been set. If the construction activities for this project will exceed the allowable noise levels, the Contractor will be required to obtain a permit from the Director of the Department of Health. The Contractor shall obtain a copy of Chapter 448 and become familiar with the noise level restrictions and the procedures for obtaining a Permit for construction activities.
- The Contractor is to comply with the directions of the State of Hawaii Occupation Safety and Health Law (DOSH).

HISTORICAL PRESERVATION NOTES:

- Should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find, and the find shall be protected from further damage. The Contractor shall cordon off the area and immediately notify the Planning Department at (808) 241-4050 and the State Historic Preservation Division at (808) 692-8015, which will assess the significance of the find and recommend the appropriate mitigation measures, if necessary. In addition, if human burial are found, the Contractor shall immediately notify the County of Kauai Police Department.

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

	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	<b>GENERAL NOTES</b>
	<b>KUHIO HIGHWAY</b> <b>Hanalei Bridge Repair</b> <b>FAP Proj. No. BR-0560(016)</b>
SIGNATURE: <i>Gerald D. Andrade</i> EXPIRATION DATE OF THE LICENSE: 4/30/24	Scale: None Date: July 2022
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION	SHEET No. N-3 OF 7 SHEETS



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	5	34

NOTES FOR PROTECTED SPECIES:

1. HAWAIIAN SEABIRDS

- Hawaiian petrel or 'ua'u (*Pterodroma sandwichensis*)
- Newell's shearwater or 'a'o (*Puffinus auricularis newelli*)
- Hawai'i distinct population segment (DPS) of band-rumped storm petrel or 'akē'akē (*Oceanodroma castro*)

Construction activity shall be restricted to daylight hours during the seabird peak fallout period (September 15-December 15) to avoid the use of nighttime lighting that could attract seabirds. The limited temporary night time work outside of the peak seabird fallout period shall be shielded to prevent upward radiation and directed away from any nearby beach habitats.

All outdoor lights shall be shielded to prevent upward radiation. A selection of acceptable seabird-friendly lights can be found online at the Kaua'i Seabird Habitat Conservation website (2013).

2. HAWAIIAN HOARY BAT OR 'ŌPE'APE'A (*LASIURUS CINEREUS SEMOTUS*)

Any fences that are erected as part of the project shall have barbless wire to prevent entanglements of the Hawaiian hoary bat on barbed wire.

No trees taller than 15 feet (4.6 m) shall be trimmed or removed as a result of this project between June 1 and September 15, when juvenile bats that are not yet capable of flying may be roosting in the trees.

3. HAWAIIAN GOOSE OR NĒNĒ (*BRANTA SANDVICENSIS*)

Do not approach, feed, or disturb the Hawaiian goose.

A qualified biologist shall survey the area for nesting nēnē before construction (in coordination with the waterbird surveys), and after any subsequent delay in work of 3 or more days (during which birds may attempt nesting). The results of the pre-construction survey would be submitted to the Engineer.

If Hawaiian goose are loafing, foraging, or otherwise present within the project area during the breeding season, which extends from September through April, have a trained biologist survey the area near the project prior to work each day. Survey biologists should be familiar with the nesting behavior of the Hawaiian goose, nest identification, and identification of young.

- Surveys should be repeated if there is a delay in work of three days or more (during which the birds may attempt to nest).
- If nests or vulnerable young are observed within 150 feet of the project work, immediately cease all work and contact the Service for further guidance.

If during the biologist's survey, the Hawaiian geese are loafing, foraging, or otherwise present within the project area, the USFWS will be contacted for further guidance to consider implementing reduced speed limits when the work is near the active roadway, and inform project personnel and contractors about the presence of this threatened species on-site. Speed limits will be reduced during work in active construction areas.

All regular on-site staff shall be trained to identify nēnē and shall know the appropriate steps to take if nēnē are present on-site. Training would not be necessary if a biological monitor is present for the duration of the construction.

4. HAWAIIAN WATERBIRDS

- Hawaiian stilt or ae'o (*Himantopus mexicanus knudseni*)
- Hawaiian coot or 'alae ke'o ke'o (*Fulica americana alai*)
- Hawaiian gallinule or 'alae 'ula (*Gallinula galeata sandvicensis*)
- Hawaiian duck or koloa (*Anas wyvilliana*)

In areas where vegetated streambanks would be disturbed, waterbird nest searches shall be conducted by a qualified biologist before any work is conducted and after any subsequent delay in work of 3 or more days (during which birds may attempt nesting). The results of the pre-construction survey shall be submitted to the Engineer.

If a waterbird nest with eggs or chicks/ducklings is discovered in the construction limits, work within 100 ft of nests or active broods would cease until the young have fledged and left the area.

Waterbird nests, chicks, or broods found before or during construction shall be reported to the USFWS within 48 hours of discovery for further guidance.

All regular on-site construction staff would be trained to identify waterbirds and take appropriate conservation measures when the waterbirds are present, including within equipment staging areas.

5. SEA TURTLES

- Hawksbill sea turtle or 'ea (*Eretmochelys imbricata*)
- Central North Pacific distinct population segment of the green sea turtle or honu (*Chelonia mydas*)

All regular on-site staff shall be trained to identify sea turtles and trained on appropriate steps to take if these species are present on-site.

Construction activities shall not take place if a sea turtle is within 150 feet (46 m) of the construction area. Construction can only begin after the animal voluntarily leaves the area. If a sea turtle is noticed after work has already begun, that work may continue only if, in the best judgment of the biological monitor, that there is no way for the activity to adversely affect the animal(s).

Any construction-related debris that may pose an entanglement threat to sea turtles shall be removed from the construction area at the end of each day and at the conclusion of the construction project.

Workers shall not attempt to feed, touch, ride, or otherwise intentionally interact with any listed species.

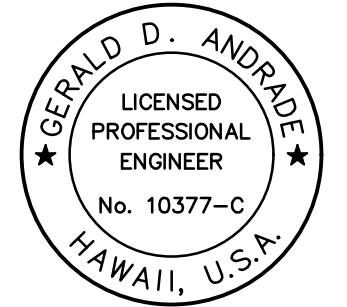
To avoid and minimize project impacts to sea turtles from lighting, the project will minimize the use of lighting on or near beaches and shield project related lights, so the light is not visible from any beach. If lights cannot be fully shielded or if headlights must be used, the light source will be fully enclosed with light filtering tape or filters.

In-water work at night shall be avoided, unless emergency maintenance and repair of erosion and sediment controls are necessary to meet permit conditions.

6. NEWCOMB'S TREE SNAIL (*ERINNA NEWCOMBI*)

In the event that 'Ōhi'a is found in the project area where clearing will occur, a trained biologist will survey the area for tree snails using USFWS methodology described in "Interim Guidelines for Conducting Tree Snail Surveys in the Mariana Islands" (methods also apply throughout the Hawaiian Archipelago for other listed tree snail species).

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	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	<b>GENERAL NOTES</b>
SIGNATURE: <i>Gerald D. Andrade</i> EXPIRATION DATE OF THE LICENSE: 4/30/24 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION	KUHIO HIGHWAY Hanalei Bridge Repair FAP Proj. No. BR-0560(016)
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NOTES FOR PROTECTED SPECIES (CON'T):

7. WATER QUALITY BMPS, AS APPLICABLE

Turbidity and siltation from project-related work shall be minimized and contained through the appropriate use of erosion control practices, effective silt containment devices, and the curtailment of work during adverse weather and tidal/flow conditions.

Erosion and sediment control measures shall be in place before initiating earth-moving activities. Functionality shall be maintained throughout the construction period. For earth-moving activities initiated to address imminent health and safety concerns, erosion and sediment control measures shall be in place as soon as practicable.

When it is not possible to avoid times of the year when high rainfall is expected, enhancing the capacity of existing controls, adding additional control measures, or installing contingency measures shall be implemented.

Inspection shall be documented, and records for all inspections and repairs shall be maintained on-site. When a device proves inadequate, it shall be immediately redesigned or replaced until it is effective.

Control measures (i.e., silt fences, sand bag barriers, sediment traps, geotextile mats, and other measures intended for soil/sediment trapping) shall be inspected and repaired as needed within 24 hours after a rainfall event of 0.25 inch or greater over a 24-hour period. During periods of prolonged rainfall, a daily inspection shall occur, unless extended heavy rainfall makes access impossible or hazardous.

Construction shall be sequenced to minimize the exposure time of the cleared surface area.

The Contractor shall be required to prepare a spill prevention, control and countermeasure (SPCC) plan before beginning work or as soon as practicable. The SPCC shall describe preventative measures including the location of refueling and storage facilities and the handling of hazardous material. The SPCC shall describe actions to be taken in case of a spill. Hazardous materials shall be properly stored and managed in accordance with local, State, and Federal regulations.

Appropriate materials to contain and clean potential spills shall be stored at the work site and be readily available. Spill kits shall be available on-site at locations where hazardous materials are used. Spill kits shall be inspected regularly and supplies replaced as needed. Staff shall be trained on spill prevention and cleanup.

Absorbent pads shall be stored on-site to facilitate the cleanup of petroleum spills. At fueling sites, containment booms and skimmers shall be stored, in addition to absorbent pads.

Return flow or run-off from material stored at inland dewatering or storage sites shall be prevented.

All project-related materials and equipment placed in the water shall be free of pollutants.

The project manager or heavy equipment operators shall perform daily pre-work equipment inspections for cleanliness and leaks. All heavy equipment operations shall be postponed or halted should a leak be detected, and they shall not proceed until the leak is repaired and the equipment is cleaned.

Fueling of land-based vehicles and equipment shall take place at least 50 feet (15.24 m) away from the water, preferably over an impervious surface. Fueling of vessels shall be done at approved fueling facilities.

Portable toilets for sanitary waste management shall be serviced regularly.

A plan shall be developed to prevent debris and other wastes from entering or remaining in the marine environment during the project.

No contamination (trash or debris disposal, invasive species introductions, attraction of non-native pests, etc.) of adjacent habitats (reef flats, channels, open ocean, stream channels, wetlands, beaches, forests, etc.) shall result from project-related activities.

Any soil exposed near water as part of the project shall be protected from erosion (with plastic sheeting, filter fabric etc.) after exposure and stabilized as soon as practicable (with native or non-invasive vegetation matting, hydroseeding, etc.).

All debris removed from the marine/aquatic environment shall be disposed of at an approved site. Solid waste and construction and demolition debris would be properly managed.

Clearing and grubbing would be held to the minimum necessary for grading, access, and equipment operation.

Revegetation success shall be monitored by Contractor to ensure sufficient vegetation cover has established. Relevant erosion and sediment control BMPs shall not be removed until sufficient vegetative cover is re-established or hillside stabilization measures (i.e., soil nails) are deemed sufficiently in place. If vegetation fails to establish, corrective actions shall be taken where necessary.

Do not stockpile or store project-related materials or equipment near the water (i.e., intertidal zones, reef flats, stream channels, etc.)

Soil stockpiles shall be located away at least 50 feet from concentrated runoff and water features, covered with plastic or other waterproof material when practicable, and surrounded by silt fences or other erosion control BMPs.

Concrete wash-outs shall be located 50 feet from storm drain inlets, open drainage areas, and waterbodies, and shall be maintained as needed.

8. BMPS TO PREVENT THE INTRODUCTION AND SPREAD OF INVASIVE SPECIES

See Special Provision Section 621 - Invasive Species Management for additional requirements.

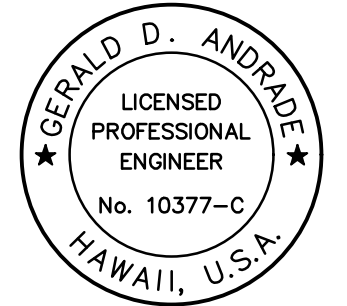
The area beyond the construction limits shall not be disturbed. Trees, shrubs or vegetated areas temporarily damaged by construction operations shall be re-vegetated.

Temporarily disturbed areas shall be revegetated with non-invasive plant species appropriate for the project area.

Invasive species controls shall be maintained to ensure that all materials transported from off-site are free of such species.

To avoid the unintentional introduction or transport of new terrestrial invasive species, all construction equipment and vehicles arriving from outside Kaua'i shall be washed and inspected before entering the project area. In addition, construction materials arriving from outside Kaua'i shall be washed and/or visually inspected (as appropriate) for excessive debris, plant materials, and invasive or harmful non-native species (plants, amphibians, reptiles, and insects). When possible, raw materials (gravel, rock, and soil) shall be purchased from a local supplier on Kaua'i to avoid introducing non-native species not present on the island. Inspection and cleaning activities shall be conducted at a designated location.

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 <p>GERALD D. ANDRADE LICENSED PROFESSIONAL ENGINEER No. 10377-C HAWAII, U.S.A.</p> <p><i>Gerald D. Andrade</i> SIGNATURE EXPIRATION DATE OF THE LICENSE: 4/30/24</p> <p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION</p>	<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p><b>GENERAL NOTES</b></p> <p><b>KUHIO HIGHWAY Hanalei Bridge Repair FAP Proj. No. BR-0560(016)</b></p>
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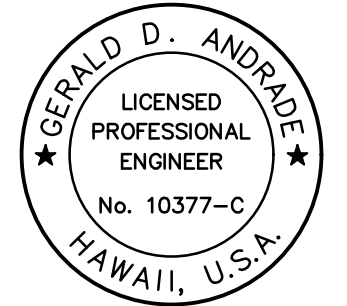


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UTILITY NOTES FOR KIUC

1. All work on utility facilities shall be done in strict accordance with the Specifications and Requirements of Kauai Island Utility Cooperative (KIUC) for the facilities within their jurisdiction.
2. The Contractor shall closely coordinate all work with KIUC.
3. These notes are not intended to be used in place of the Service Installation Manual, please refer to Service Installation Manual for all service issues.
4. Contractor shall contact Kauai Island Utility Cooperative's (KIUC) Baseyard Supervisor, Ken Yamamoto, at 246-4343 prior to start of work on KIUC facilities and for scheduling site inspections.
5. Contractor shall contact KIUC's Baseyard Supervisor, Ken Yamamoto at 246-4343 for Design Approvals, Standard Detail drawings and any items not addressed in these notes or drawings.
6. All Contractors entering KIUC facilities must be approved by KIUC and must have proper licensing and insurance coverage. Contact KIUC Baseyard Supervisor, Ken Yamamoto at 246-4343 for details.
7. All trenches and pullboxes must be inspected by KIUC prior to backfilling and concrete-encasing operations. For detailed trenching and backfilling requirements refer to KIUC's Service Installation Manual.
8. The Contractor shall provide a Poly-line 200 lb. test line or equivalent as a pulling wire in all 1", 2", 3" and 4" conduits. In 5" and 6" conduits, the Contractor shall install Neptco WP1800 Muletape as a pulling line.
9. All conduits, pullboxes, handholes, and manholes shall be cleaned and free from objectionable materials. Conduit ends shall be adequately covered until the Conductor is installed by the Electric Company. (Cover's shall be Carlon Plug with Pull Tab Series P258 equivalent or better)
10. For all conduit other than services, refer to Conduit Schedule on drawings.
11. For all services where the conductor is 1/0 or less, the distance from KIUC's handhole and customer's meter is less than 125 feet, and not crossing any driveways or roads the conduit shall be 2 inch Schedule 40 PVC. For services greater than 125 feet, contact KIUC Planner for field verification and underground service requirements. Any deviations will require KIUC written approval.
12. Primary and secondary conduits for new line extensions shall be schedule 40 PVC. (Carlon P#C Duct Type DB equivalent or better) Under driveways and roadways, the conduits shall be encased in a minimum of 3 inch concrete jacket extending 12" outside the edge of pavement.
13. Schedule 80 PVC conduit may be substituted for the concrete encased Schedule 40 PVC for service conduit only crossing under unpaved Private driveways and roadways from KIUC pole/handhole to Customer's meter. If concrete driveway will be built over service conduit immediately after conduit is installed, then Schedule 40 PVC may be used provided that it meets with Rule No. 21.
14. All primary and secondary conduits which are crossing State or County roadways shall be Schedule 40 PVC encased in a minimum 3 inch concrete jacket, which shall extend a minimum of 12 inches outside of the edge of pavement.
15. Electrical supply ducts, when installed near communication cables, shall be separated from communication duct systems and buried communication cables or conductors by not less than 3 inches of concrete or 12 inches of earth when paralleling or crossing.
16. Chairs shall be installed and spaced at a maximum of 5 feet separation when concrete encasing conduits.
17. All conduits shall enter boxes at 90 degree angle, perpendicular and flush to the wall with bell ends to prevent cable damage.
18. 90 degree conduit bends shall be factory made with a minimum radius of 3 feet in trench runs.
19. Conduit bends exceeding 90 degrees will not be accepted.
20. A 36 inch minimum horizontal clearance shall be maintained when running KIUC conduits parallel to water and sewer lines. If clearance is less than 36 inches, KIUC conduit shall be concrete encased.
21. No foreign pullboxes, handholes, manholes, concrete slabs/boxes, structures, etc. are to be installed over KIUC facilities with the exception of HTCO, CATV or waterline conduit crossings. Such crossing must be approved by KIUC's Service Assurance Department and KIUC conduit to be concrete encased. Concrete encasement must be minimum of 3 inch encasement and extend a minimum of 1 foot beyond crossing conduit or pipe.
22. Yellow marker tape to be placed 1 foot above electrical conduits in the trench during backfilling. (E-Z Code WBT 6 inch wide 4 mill Polyethylene Protect-A-Line Warning Tape NA-0708 "Electric Line" in yellow, equivalent or better)
23. Unless otherwise noted, the top of all conduits shall be at a depth of 24 inches.
24. All handholes, pullboxes, and manholes shall be Walker Industries Type or approved equal. Contact KIUC prior to ordering underground boxes for vendor approval. Customer to submit Manufacturer's Shop Drawings if substituting from Walker Industries Type.
25. Typically, the top of all electrical utility boxes shall be 1 inch above finish grade, single phase transformer pads shall be 2 inches above finish grade, and three phase transformer pads shall be 4 inches above finish grade unless otherwise noted. (special conditions may apply to sidewalks, roadways, etc. see specific location notation)
26. At no time shall cement mortar, wood or any other material be used between pre-cast sections of KIUC pullboxes, handholes, or manholes. The permanent installation of wooden wedges to level or raise the pre-cast sections shall not be permitted.
27. A minimum of 6 inches of #3 Crushed Rock Backfill shall be placed loosely beneath the bottom section of handholes and pullboxes. Crushed rock or other foreign materials are not to be placed inside handholes and pullboxes.

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 <p>GERALD D. ANDRADE LICENSED PROFESSIONAL ENGINEER No. 10377-C HAWAII, U.S.A.</p>	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION  <b>UTILITY NOTES</b>  <u>KUHIO HIGHWAY</u> <u>Hanalei Bridge Repair</u> <u>FAP Proj. No. BR-0560(016)</u>
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UTILITY NOTES FOR HAWAIIAN TELCOM

- All work on utility facilities shall be in strict accordance with specifications and requirements of Hawaiian Telcom for the facilities within their jurisdiction.
- The Contractor shall closely coordinate all work with Hawaiian Telcom. The Contractor shall notify Hawaiian Telcom's Jimmy Sone at 808-241-5052 or Duke Sardinha at 808-371-2962, or their designated Representative, at least four weeks in advance of any work involving the Hawaiian Telcom facilities.
- Unless otherwise indicated, all conduits, sweeps, couplings, adapters and bell ends shall be Schedule 40 PVC if direct buried. If concrete encased, conduits may be GT42 2" or 4" PVC meeting GTE Specification GTS-8342. Two inch bends are available with a 24" or 36" radius. Four inch bends are available with a 36" or 48" radius. Refer to HTCO Standard Drawing 34028 for installation.
- All conduits shall be cleaned and be free from objectionable materials with its ends adequately covered until Hawaiian Telcom installs its cable facilities.
- Contractor shall maintain 6" minimum separation between water pipe and direct buried utility ducts at intersection of water pipe and direct buried utility ducts. When utility ducts are concrete encased at intersections of water pipe and utility ducts, a 3" minimum separation between water pipe and concrete encasement shall be maintained. Stones, Rocks, etc. shall not be used with backfill material, only select materials shall be used as a backfill material.
- A 4" wide warning tape orange in color with a black imprinted message "Warning - Stop Digging - Call Hawaiian Telcom, Communications Cable Buried Below, Failure to Comply Could Result in Legal Action" shall be placed 12" below the surface over the duct or concrete jacket for the entire length of duct installations. See HTCO Standard Drawing 34028. Recommended tape is manufactured by Thor Enterprises, Inc. Sun Prairie, WI 53590 (1-800-827-8467) Part Numbers DTOGTE-41 (1000') and DTOGTE-46 (6000'). Equivalent tapes are acceptable.
- After the ducts are installed a mandrel not less than 12" long and having a diameter of 1/4" less than the inside diameter of the duct, shall be pulled through each duct after which a brush with stiff bristles shall be pulled through to make certain that no particles of earth, sand or gravel have been left in the line. Main duct runs except riser ducts and cross-connect pedestal ducts should be constructed with long smooth riding sweeps. Offsets and elevation changes shall be constructed with not less than 20 foot radius Telcom Inspector. Approved duct runs with less than 20 foot radius shall utilize a flexible mandrel followed by a stiff bristle brush. A flexible mandrel having a diameter of 1/4" less than the inside diameter will be utilized on 2" duct runs after which a brush with stiff bristles shall be pulled through.

- Install Neptco WP1800P Muletape in all new ducts after testing. The Neptco Muletape is available in 3,000', 6,500' and 10,000' reels. The Neptco Muletape is prelubricated and printed with sequential footage marking. Using the Neptco Muletape, The Contractor shall measure at least one duct of a common duct run. The distance shall be marked on the record prints and submitted to the Hawaiian Telcom Inspector for record keeping.
- All conduits shall enter boxes at a 90 degree angle and be flush to the wall with flared or junior end bells to prevent cable damage.
- The Contractor shall furnish and install a No. 4 bare copper ground wire (direct buried) from all transformer pad ground rods to the nearest Hawaiian Telcom pullbox, as specified in HTCO Standard Drawing 34045. Install one 5/8" x 8' ground rod in all other Hawaiian Telcom 435T, 435TB6 and 4' x 6' Type 1 boxes, except in the Type 436T meter boxes (12" x 20"). Ground rods are to extend 4" above the finished pullbox/handhole floor (grade) and be located 4" from the pullbox corner.

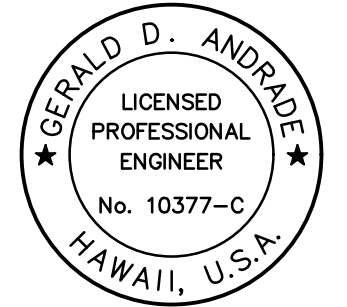
UTILITY NOTES FOR SPECTRUM

- The Contractor shall take necessary precaution not to damage existing cables. Any work involving existing cables shall be done in the presence of Spectrum's Inspector or his representative.
- Any work required to relocate CATV facilities shall be done by Spectrum and the Contractor shall be responsible for all coordination requirements and associated costs.
- Any damage to Spectrum's facilities shall be reported to Spectrum's Repair Dispatch Department at 625-8437 or 625-8666.
- All Construction must be inspected and approved by Spectrum prior to the installation of any of its facilities and the energizing of its system.
- Contractor and/or Customer shall provide Spectrum with sufficient installation time in their occupancy time table.

UTILITY NOTES FOR SANDWICH ISLES COMMUNICATIONS

- The Contractor shall take necessary precaution not to damage existing cables. Any work involving existing cables shall be done in the presence of SIC's Inspector or his representative.
- The Contractor shall notify SIC's project manager, Lily Duran at 808-284-3683 or 808-540-5772, or their designated representative, at least four weeks in advance of any work involving the SIC facilities.

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 <p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p><b>UTILITY NOTES</b></p> <p><b>KUHIO HIGHWAY</b> <b>Hanalei Bridge Repair</b> <b>FAP Proj. No. BR-0560(016)</b></p> <p>SIGNATURE: <i>Gerald D. Andrade</i> 4/30/24 EXPIRATION DATE OF THE LICENSE</p> <p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION</p>	<p>Scale: None</p> <p>Date: July 2022</p>
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**WATER POLLUTION AND EROSION CONTROL NOTES:**

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**A. GENERAL:**

1. See Special Provisions Section 209 - Water Pollution and Erosion Control. Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment. In addition, Appendix A lists potential pollutant sources and corresponding BMPs used to mitigate the pollutants.
2. Follow the guidelines in the current HDOT Construction Best Management Practices Field Manual in developing, installing and maintaining the Best Management Practices (BMP) for the project. For any conflicting requirements between the Manual and applicable bid documents, the applicable bid documents will govern. Should a requirement not be clearly described within the applicable bid documents, the Contractor shall notify the Engineer immediately for interpretation. For the purposes of clarification under Note A.2, "applicable bid documents" include the construction plans, standard specifications, Special Provisions, Permits, and the Storm Water Pollution Prevention Plan (SWPPP) when applicable.
3. Follow the guidelines in the Honolulu's City & County "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Maui, Molokai, Kauai, and Hawaii.
4. The Engineer may assess liquidated damages of up to \$27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209 and special provisions, for every day of non-compliance. There is no maximum limit on the amount assessed per day.
5. The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.
6. If necessary, install a rain gage prior to any field work including the installation of any site-specific best management practices. The rain gage shall have a tolerance of at least 0.05 inches of rainfall. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. Do not install in a location where rain water may splash into rain gage. The rain gage installation shall be stable and plumbed. Do not begin field work until the rain gage is installed and site-specific best management practices are in-place.
7. Submit Site-Specific BMP Plan to the Engineer along with a completed Site-Specific BMP Review Checklist within 21 calendar days of date of award. The Site-Specific BMP Review Checklist may be obtained from <http://www.stormwaterhawaii.com>.

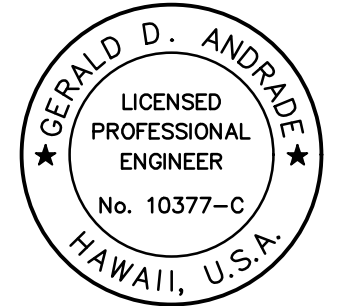
**B. WASTE DISPOSAL:**

1. **Waste Materials**  
Collect and store all waste materials in a securely lidded metal dumpster or roll off container with cover to keep rain out or loss of waste during windy conditions. The dumpster shall meet all local and State solid waste management regulations. Deposit all trash and construction debris from the site in the dumpster. Empty the dumpster weekly or when the container is two-thirds full, whichever is sooner. Do not bury construction waste materials onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Post notices stating these practices in the office trailer, on a weatherproof bulletin board, or other accessible location acceptable to the Engineer. The Contractor shall be responsible for seeing that these procedures are followed. Submit the Solid Waste Disclosure Form for Construction Sites to the Engineer within 21 calendar days of date of award. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly. This should also include documentation from any intermediary facility where solid waste is handled or processed.
2. **Hazardous Waste**  
Dispose all hazardous waste materials in the manner specified by local or State regulations and by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.

3. **Sanitary Waste**  
Collect all sanitary waste from the portable units a minimum of once per week, or as required. Position sanitary facilities where they are secure and will not be tipped over or knocked down.
- C. **EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:**
  1. For projects with an NPDES Permit for Construction Activities, inspect at the following intervals. For construction areas discharging to nutrient or sediment impaired waters, inspect all control measures at least once each week and within 24 hours of any rainfall event of 0.25 inches or greater within a 24 hour period. For construction areas discharging to waters not impaired for nutrient or sediments, inspect all control measures weekly. Inspections are only required during the project's normal working hours. The discharge point water classification may be found in the SWPPP.
  2. For projects without an NPDES Permit for Construction Activities, inspect all control measures weekly.
  3. Maintain all erosion and sediment control measures in good working order. If repair is necessary, initiate repair immediately and complete by the close of the next work day if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance. When installation of a new erosion or sediment control or a significant repair is needed, install the new or modified control or complete the repair no later than 7 calendar days from the time of discovery. "Immediately" means the Contractor shall take all reasonable measures to minimize or prevent discharge of pollutants until a permanent solution is installed and made operational. If a problem is identified at a time in the day in which it is too late to initiate repair, initiation of repair shall begin on the following work day.
  4. Remove built-up sediment from silt fence when it has reached one-third the height of the fence. Remove sediment from other perimeter sediment control devices when it has reached one-half the height of the device.
  5. Inspect silt screen or fence for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. Inspect and verify the bottom of the silt screen is buried a minimum of 6 inches below the existing ground.
  6. Inspect temporary and permanent seeding and planting for bare spots, washouts and healthy growth.
  7. Complete and submit to the Engineer a maintenance inspection report within 24 hours after each inspection.

8. Provide a stabilized construction entrance at all points of exit onto paved roads to reduce vehicle tracking of sediments. Include stabilized construction entrance in the Water Pollution, Dust, and Erosion Control submittals. Minimum length should be 50 feet. Minimum width should be 30 feet. Minimum depth should be 12 inches or as recommended by the soils engineer and underlain with geo-textile fabric. If minimum dimensions cannot be met, provide other stabilization techniques that remove sediment prior to exit. Clean the paved street adjacent to the site entrance daily or as required to remove any excess mud, cold-planed materials, dirt or rock tracked from the site. Do not hose down the street without containing or vacuuming wash water. Cover dump trucks hauling material from the construction site with a tarpaulin. Remove sediment tracked onto the street, sidewalk, or other paved area by the end of the day in which the track-out occurs.
9. Include designated Concrete Washout Area(s) in the Water Pollution, Dust, and Erosion Control submittals.
10. Submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.
11. Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

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DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN NOTE BOOK No.	_____

 SIGNATURE: <i>Gerald D. Andrade</i> EXPIRATION DATE OF THE LICENSE: 4/30/24 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <hr/> <b>WATER POLLUTION &amp; EROSION CONTROL NOTES</b> <hr/> KUHIO HIGHWAY Hanalei Bridge Repair FAP Proj. No. BR-0560(016)
	Scale: None Date: July 2022 SHEET No. EC-1 OF 5 SHEETS



**WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):**

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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12. Contain, remove, and dispose slurry generated from saw cutting of pavement in accordance with approved BMP practices. Do not allow discharge into the drainage system or State waters.
13. For projects with an NPDES Permit for Construction Activities, immediately initiate stabilizing exposed soil areas upon completion of earth-disturbing activities for areas where earth-disturbing activities have permanently or temporarily ceased. Earth-disturbing activities have permanently ceased when clearing and excavation within any area of the construction site that will not include permanent structures has been completed. Earth-disturbing activities have temporarily ceased when clearing, grading, and excavation within any area of the site that will not include permanent structures will not resume (i.e., the land will be idle) for a period of 14 or more calendar days, but such activities will resume in the future. For construction areas discharging into waters not impaired for nutrients sediments, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities. For construction areas discharging into nutrient or sediment impaired waters, complete initial stabilization within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities. Classification of water at the discharge point may be found in the SWPPP.
14. For projects without an NPDES Permit for Construction Activities, complete initial stabilization within 14 calendar days after the temporary or permanent cessation of earth-disturbing activities.

**D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:**

**1. Materials Pollution Prevention Plan**

- a. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.

Concrete	Cleaning Solvents
Detergents	Wood
Paints (enamel and latex)	Masonry Block
Metal Studs	Herbicides and Pesticides
Tar	Curing Compounds
Fertilizers	Adhesives
Petroleum Based Products	

- b. Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. Make an effort to store only enough product as is required to do the job.
- c. Store all materials stored onsite in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
- d. Keep products in their original containers with the original manufacturer's label.
- e. Do not mix substances with one another unless recommended by the manufacturer.
- f. Whenever possible, use a product up completely before disposing of the container.
- g. Follow manufacturer's recommendations for proper use and disposal.
- h. Conduct a daily inspection to ensure proper use and disposal of materials onsite.

**2. Hazardous Material Pollution Prevention Plan**

- a. Keep products in original containers unless they are not resealable.
- b. Retain original labels and Safety Data Sheets (SDS), formerly Material Safety Data Sheets (MSDS).
- c. Dispose of surplus products according to manufacturers' instructions and local and State regulations.

**3. Onsite and Offsite Product Specific Plan**

The following product specific practices shall be followed onsite:

- a. **Petroleum Based Products:**  
Monitor all onsite vehicles for leaks and perform regular preventive maintenance to reduce the chance of leakage. Store petroleum products in tightly sealed containers which are clearly labeled. Apply asphalt substances used onsite according to the manufacturer's recommendation.

**b. Fertilizers:**

Apply fertilizers used only in the minimum amounts recommended by the manufacturer and federal, state, and local requirements. Avoid applying just before a heavy rain event. Apply at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth. Once applied, work fertilizer into the soil to limit exposure to storm water. Do not apply to storm conveyance channels with flowing water. Storage shall be in a covered shed or in an area where fertilizer will not come into contact with precipitation or stormwater. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

**c. Paints:**

Seal and store all containers when not required for use. Do not discharge excess paint to the drainage system, sanitary sewer system, or State waters. Dispose properly according to manufacturers' instructions and State and local regulations.

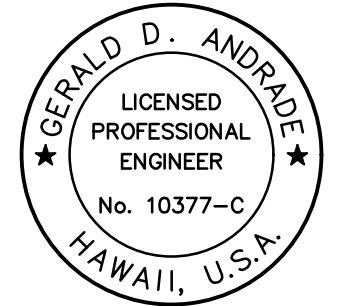
**d. Concrete Trucks:**

Washout or discharge concrete truck drum wash water only at a designated site as far as practicable from storm drain inlets or State waters. Do not discharge water in the drainage system or State waters. Disposal by percolation is prohibited. Clean disposal site as required or as requested by the Engineer.

**4. Spill Control Plan**

- a. Post a spill prevention plan to include measures to prevent and clean up each spill.
- b. The Contractor shall be the spill prevention and cleanup coordinator. Designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. Post the names of responsible spill personnel in the material storage area on a weatherproof bulletin board or other accessible location acceptable to the Engineer and in the office trailer onsite.
- c. Clearly post manufacturers' recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of the information and cleanup supplies.
- d. Keep ample materials and equipment necessary for spill cleanup in the material storage area onsite.
- e. Clean up all spills immediately after discovery.
- f. Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- g. Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, the Contractor shall notify the Engineer as soon as the Contractor has knowledge of the discharge. The Engineer will notify the National Response Center (NRC) at (800) 424-8802, the Clean Water Branch during regular business hours at 586-4309, and the Hawaii State Hospital Operator at 247-2191 and the Clean Water Branch (DOH-CWB) via email at [cleanwaterbranch@doh.hawaii.gov](mailto:cleanwaterbranch@doh.hawaii.gov) during non-business hours immediately. The Contractor shall also provide to the Engineer, within 7 calendar days of knowledge of the release, a description of the release, the circumstances leading to the release, and the date of the release. The Engineer will provide this information to the DOH-CWB. The Engineer will provide information to the NRC if requested.

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No.	_____

	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	<p><b>WATER POLLUTION &amp; EROSION CONTROL NOTES</b></p> <p><b>KUHIO HIGHWAY</b>  <b>Hanalei Bridge Repair</b>  <b>FAP Proj. No. BR-0560(016)</b></p>
SIGNATURE: <i>Gerald D. Andrade</i> EXPIRATION DATE OF THE LICENSE: 4/30/24	Scale: None Date: July 2022
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**WATER POLLUTION AND EROSION CONTROL NOTES (Cont.):**

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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**E. PERMIT REQUIREMENTS:**

1. The calculated land disturbance area for this project based on the construction plans is 0.50 acres not including Contractor Staging and Storage areas. If the total of the disturbed area and the Contractor Staging and Storage area is one acre or greater, the Contractor shall obtain the NPDES Construction Activities Permit using HDOT's latest SWPPP template. See Hawaii Administrative Rules Chapter 11-55, Appendix C for the definition of land disturbance. The Contractor shall be responsible for obtaining the required NPDES Construction Activities Permit and complying with the requirements of HAR 11-55 including, but not limited to:
  - a. Deadlines for initiating and completing initial stabilization
  - b. Increased inspection frequency and installation of rain gage if applicable
  - c. Deadlines to initiate and complete repairs to BMPs
  - d. Reporting requirements and corrective action reports
2. Comply with all applicable State and Federal Permit conditions.

**F. SITE-SPECIFIC BMP REQUIREMENTS:**

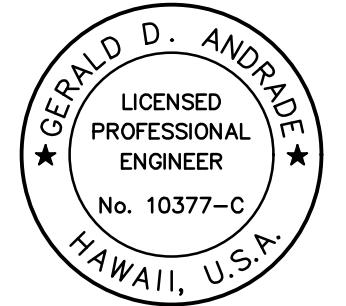
Each BMP below is referenced to the corresponding section of the current HDOT Construction Best Management Practices Field Manual and appropriate Supplemental Sheets. The Manual may be obtained from the HDOT Statewide Stormwater Management Program Website at <http://www.stormwaterhawaii.com/resources/contractors-and-consultants/> under Construction Best Management Practices Field Manual. Supplemental BMP sheets are located at <http://www.stormwaterhawaii.com/resources/contractors-and-consultants/storm-water-pollution-prevention-plan-swppp/> under Concrete Curing and Irrigation Water.

The requirements for Water Pollution, Dust, and Erosion Control submittals are included in Section 209 of the Hawaii Standard Specifications for Road and Bridge Construction dated 2005 and applicable Special Provisions. A list of pollutant sources and corresponding BMP used to mitigate the pollutants are included in Section 209 of the Special Provisions under Appendix A.

Follow the requirements below:

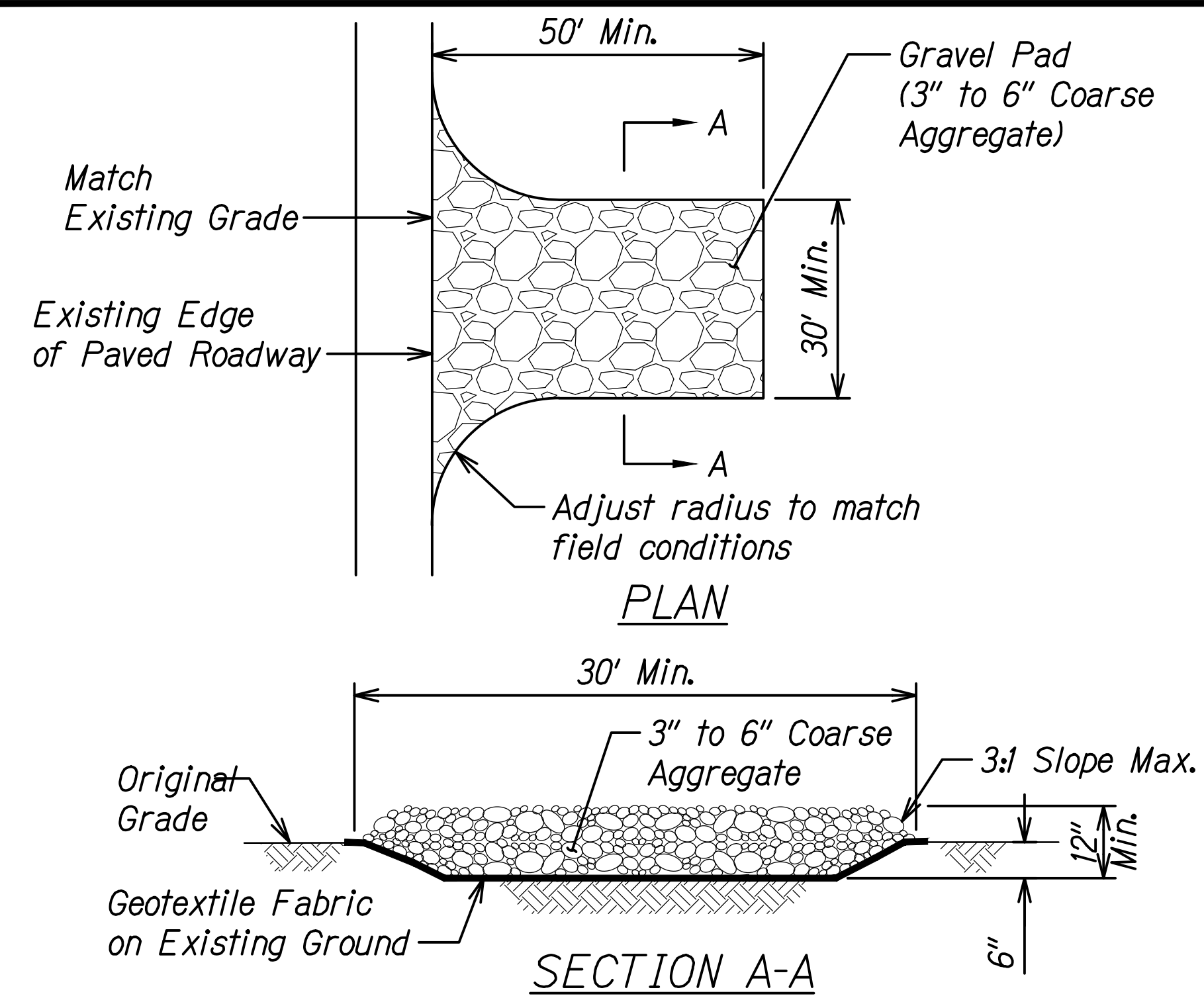
1. Protect all Drainage Inlets receiving runoff from disturbed areas (SC-1).
2. Contain on-site runoff using Perimeter Sediment Controls
  - a. SC-7 Silt Fence or Filter Fabric Fence
  - b. SC-2 Vegetated Filter Strips and Buffers
  - c. SC-6 Compost Filter Berm/Sock
  - d. SC-8 Sandbag Barrier
  - e. SC-9 Brush or Rock Filter
3. Control offsite runoff from entering construction area
  - a. EC-3 Run-On Diversion
  - b. EC-6 Earth Dike, Swales, and Ditches
4. Incorporate applicable Site Management BMP
  - a. SM-1 Employee Training
  - b. SM-2 Material Storage and Handling
  - c. SM-3 Stockpile Management
  - d. SM-6 Solid Waste Management
  - e. SM-7 Sanitary Waste Management
  - f. SM-9 Hazardous Materials and Waste Management
  - g. SM-10 Spill Prevention and Control
  - h. SM-11 Vehicle and Equipment Cleaning
  - i. SM-12 Vehicle and Equipment Maintenance
  - j. SM-13 Vehicle and Equipment Refueling
  - k. SM-14 Scheduling
  - l. SM-15 Location of Potential Sources of Sediment
  - m. SM-16 Staging Area
  - n. SM-17 Preservation of Existing Vegetation
  - o. SM-19 Dust Control
5. Contain pollutants within the Construction Staging/Storage Area BMP with applicable Perimeter Sediment Controls and Site Management BMP. Include a Stabilized Construction Entrance/Exit (SC-11) for all areas which exit onto a paved street. Restrict vehicle access to these points.
6. Manage Concrete Waste including installing a Concrete Washout Area (SM-4) and properly disposing of Concrete Curing Water (California Stormwater BMP Handbook NS-12 Concrete Curing).
7. Remove saw cut slurry and hydrodemolition water from the site by vacuuming. Provide storm drain protection and/or perimeter sediment controls during saw cutting and hydrodemolition work.

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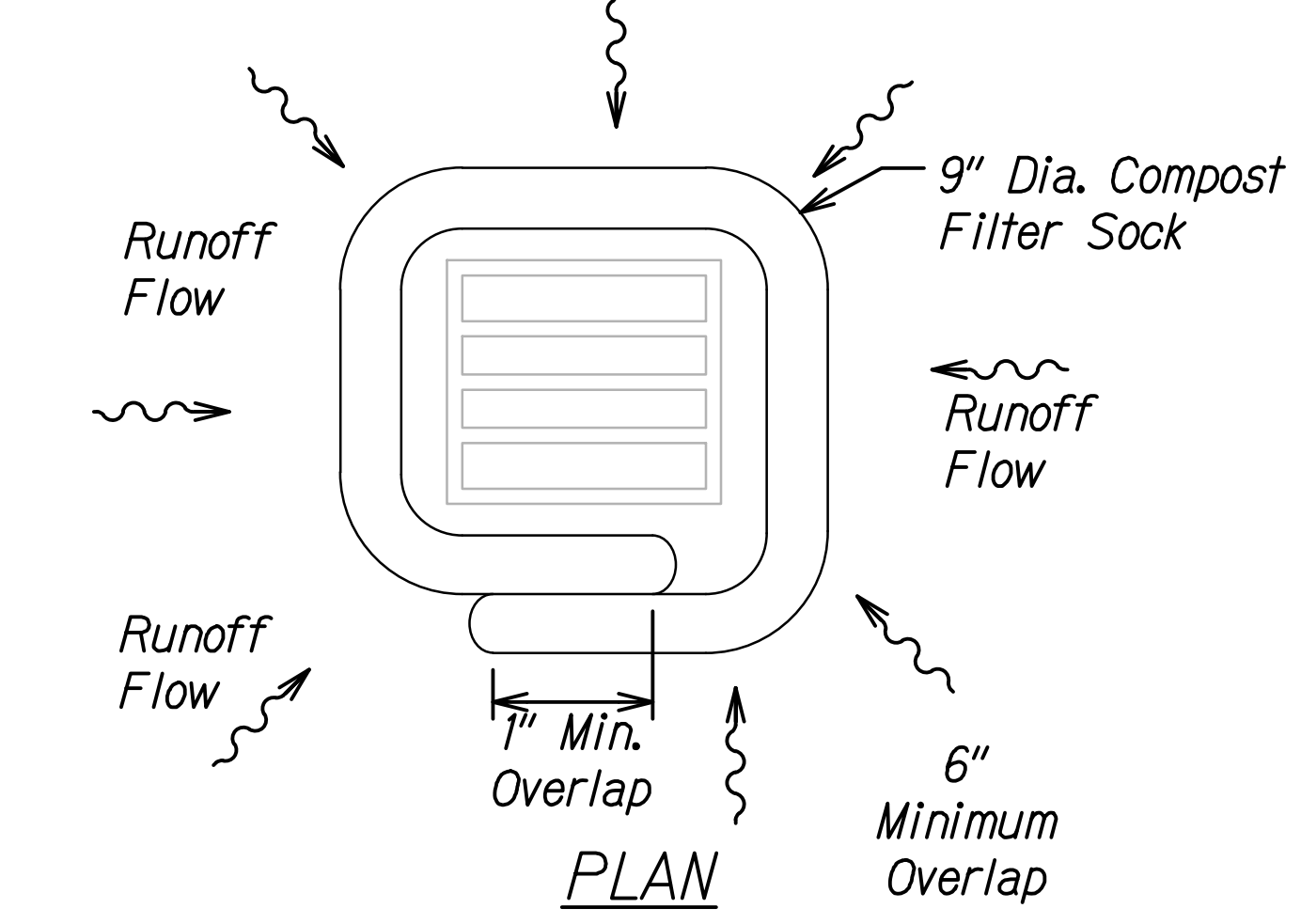
 SIGNATURE: <i>Gerald D. Andrade</i> EXPIRATION DATE OF THE LICENSE: 4/30/24 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION  <b>WATER POLLUTION &amp; EROSION CONTROL NOTES</b>  <u>KUHIO HIGHWAY</u> <u>Hanalei Bridge Repair</u> <u>FAP Proj. No. BR-0560(016)</u>
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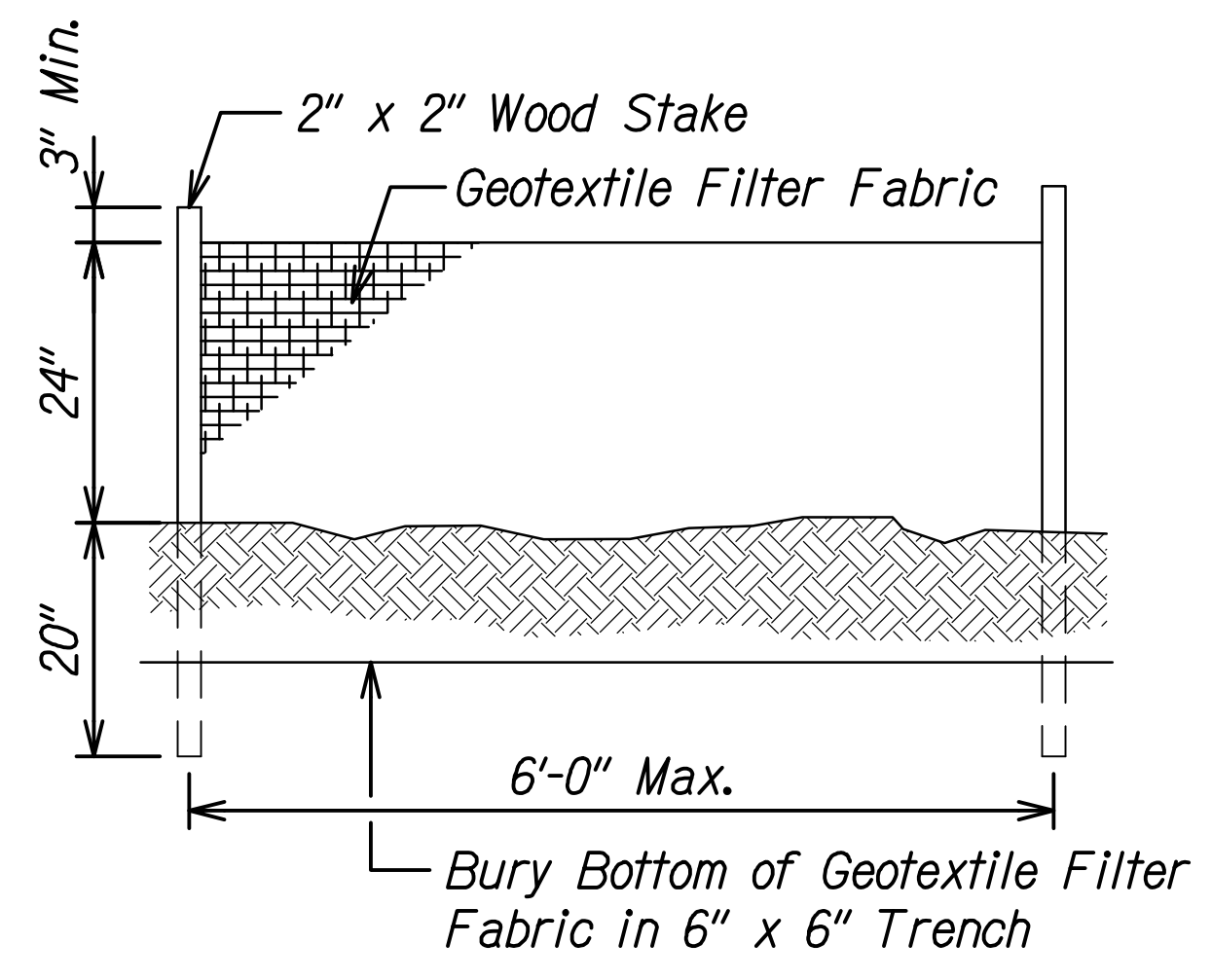


**TEMPORARY CONSTRUCTION STABILIZATION**  
Not to Scale



**COMPOST FILTER SOCK DRAIN INLET PROTECTION DETAIL**  
Not to Scale

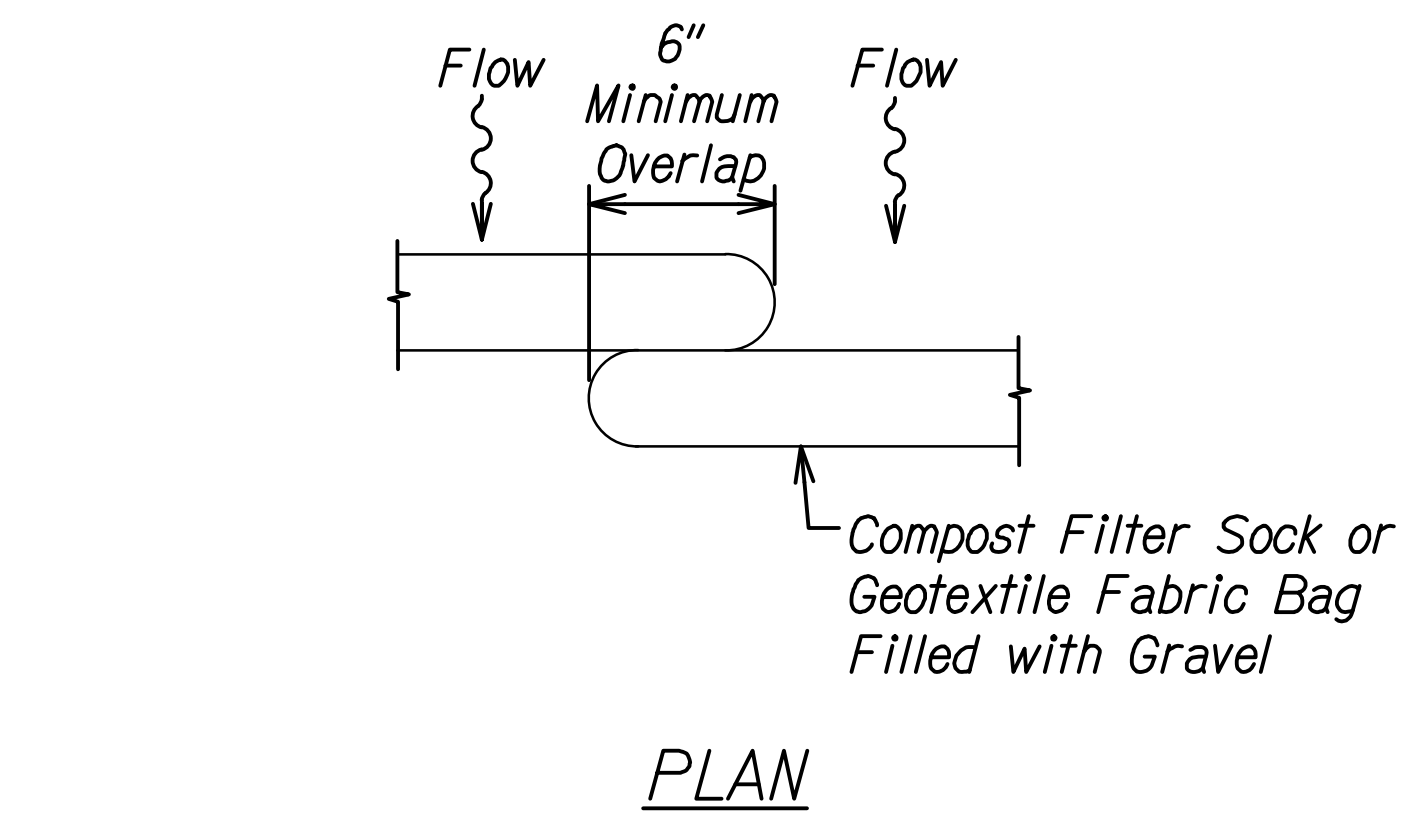
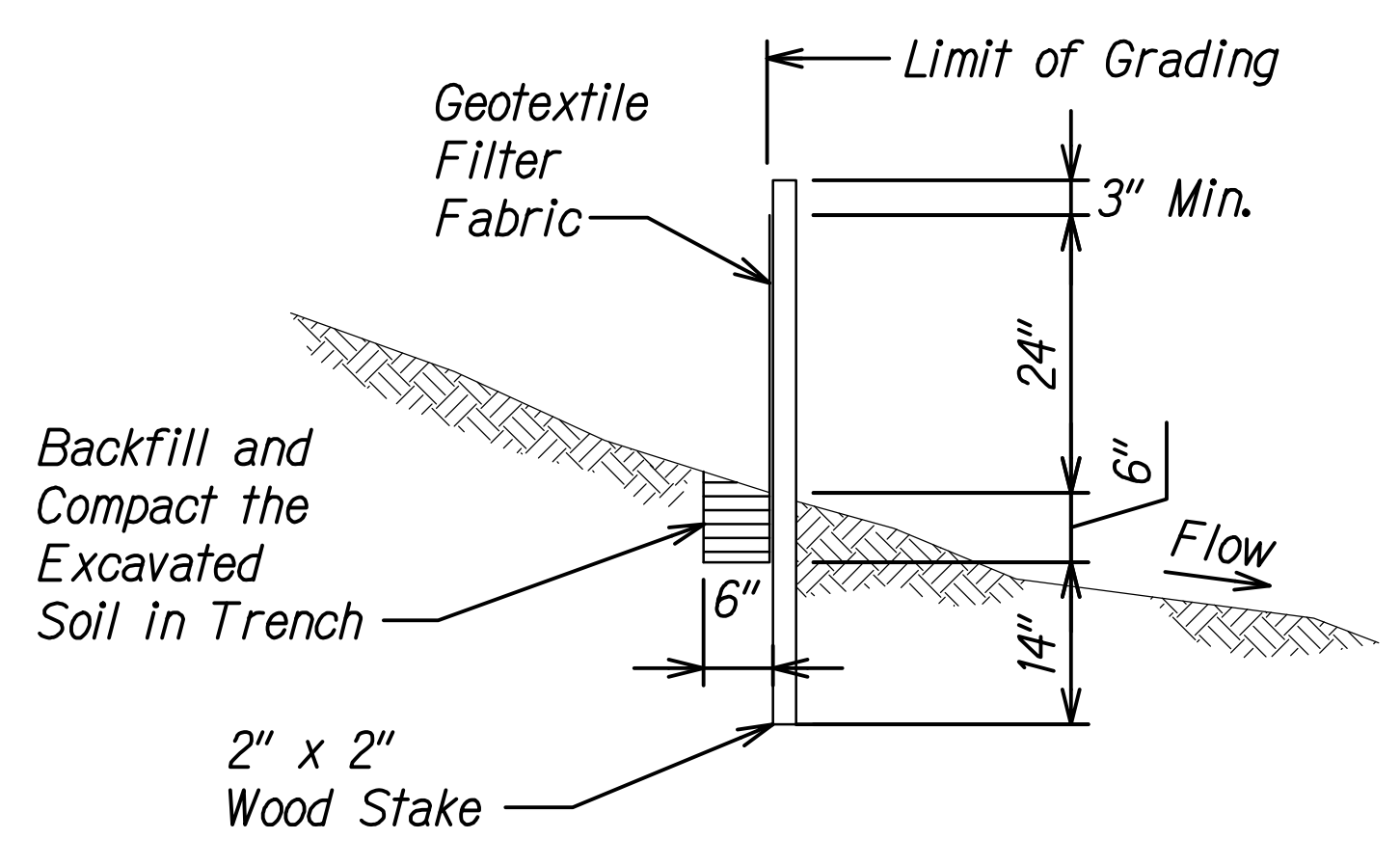
- COMPOST FILTER SOCK NOTES:**
1. Remove accumulated sediment when depth reaches 1/3 the barrier height.
  2. Sock material and compost shall be removed at the completion of construction (or a phase of construction) and shall be disposed or properly.
  3. No staking is required for slopes < 4:1.
  4. Compost shall not contain biosolids and should be consistent with United States Environmental Protection Agency guidelines.



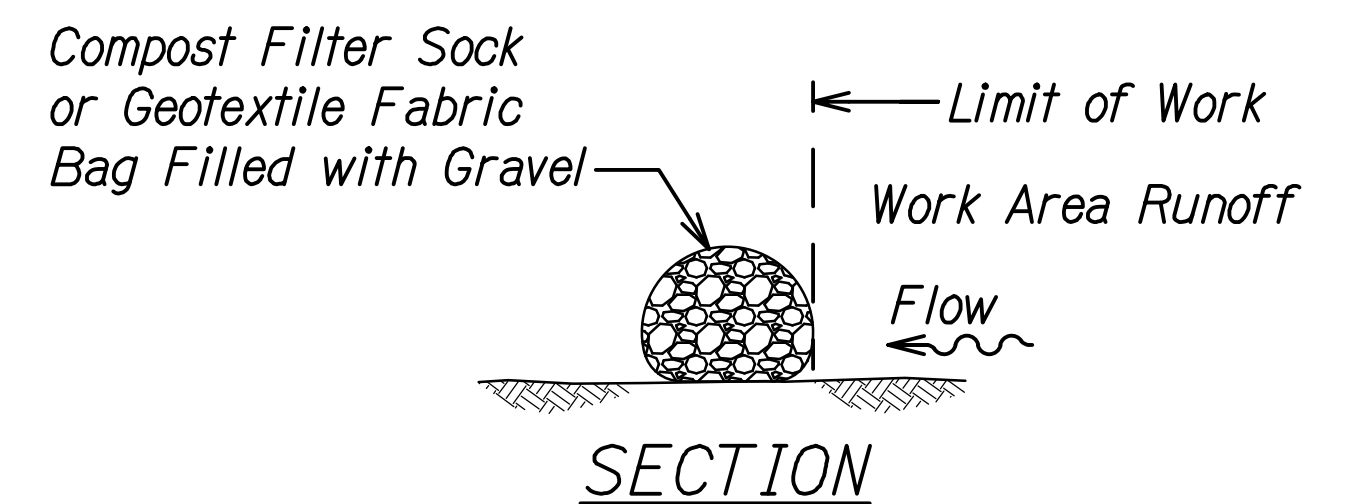
**SILT FENCE DETAIL**  
Not to Scale

**SILT FENCE NOTES:**

1. The filter fabric shall be a minimum of 36 inches wide.
2. If silt fence is obtained from manufacturer as a package (i.e. fabric attached to post) the manufacturer's installation instructions shall be adhered to.



**PLAN**



**SECTION**

**NOTE:**

Sediment Filter can be either Compost Filter Sock and/or Geotextile Fabric Bag filled with Gravel.

**SEDIMENT FILTER DETAIL**  
Not to Scale

**STAGING AREA NOTES:**

1. Place and tack down geotextile fabric over sheet plastic at staging area.
2. Place Compost Filter Sock or silt fence along low end of staging area perimeter to filter staging area runoff.
3. Place drip pans under all vehicles and equipment.
4. Provide spill kits at all staging areas.
5. Secure and provide secondary containment for portable toilets.
6. Contractor to install temporary construction stabilization entrances for staging areas. See details on this Sheet.

**STORAGE AREA NOTES:**

1. Place Compost Filter Sock along storage area perimeter to filter runoff.
2. Contractor to install temporary construction stabilization entrances for storage areas. See details on this Sheet.

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STATE OF HAWAII  
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HIGHWAYS DIVISION

**WATER POLLUTION & EROSION CONTROL DETAILS**

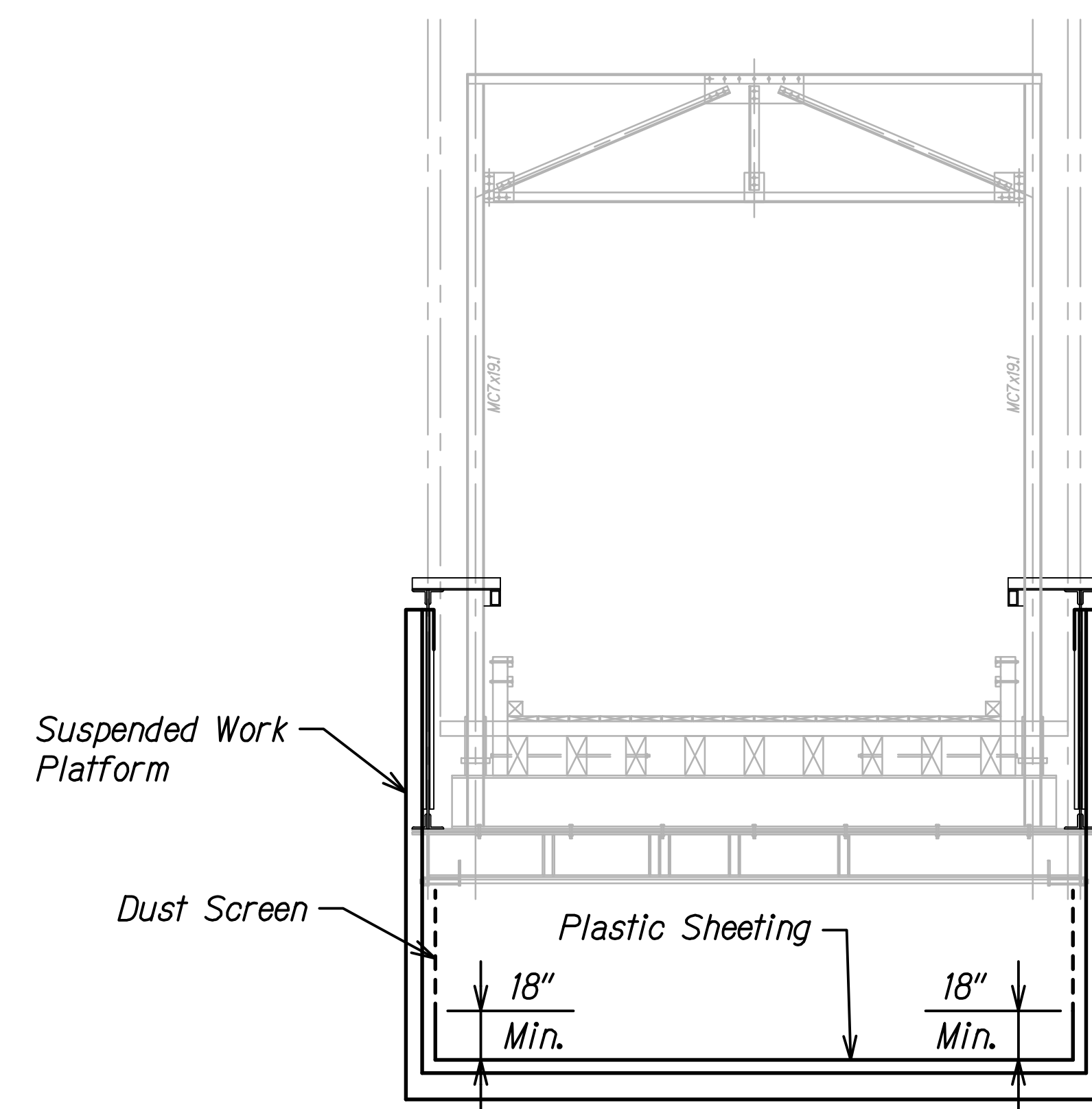
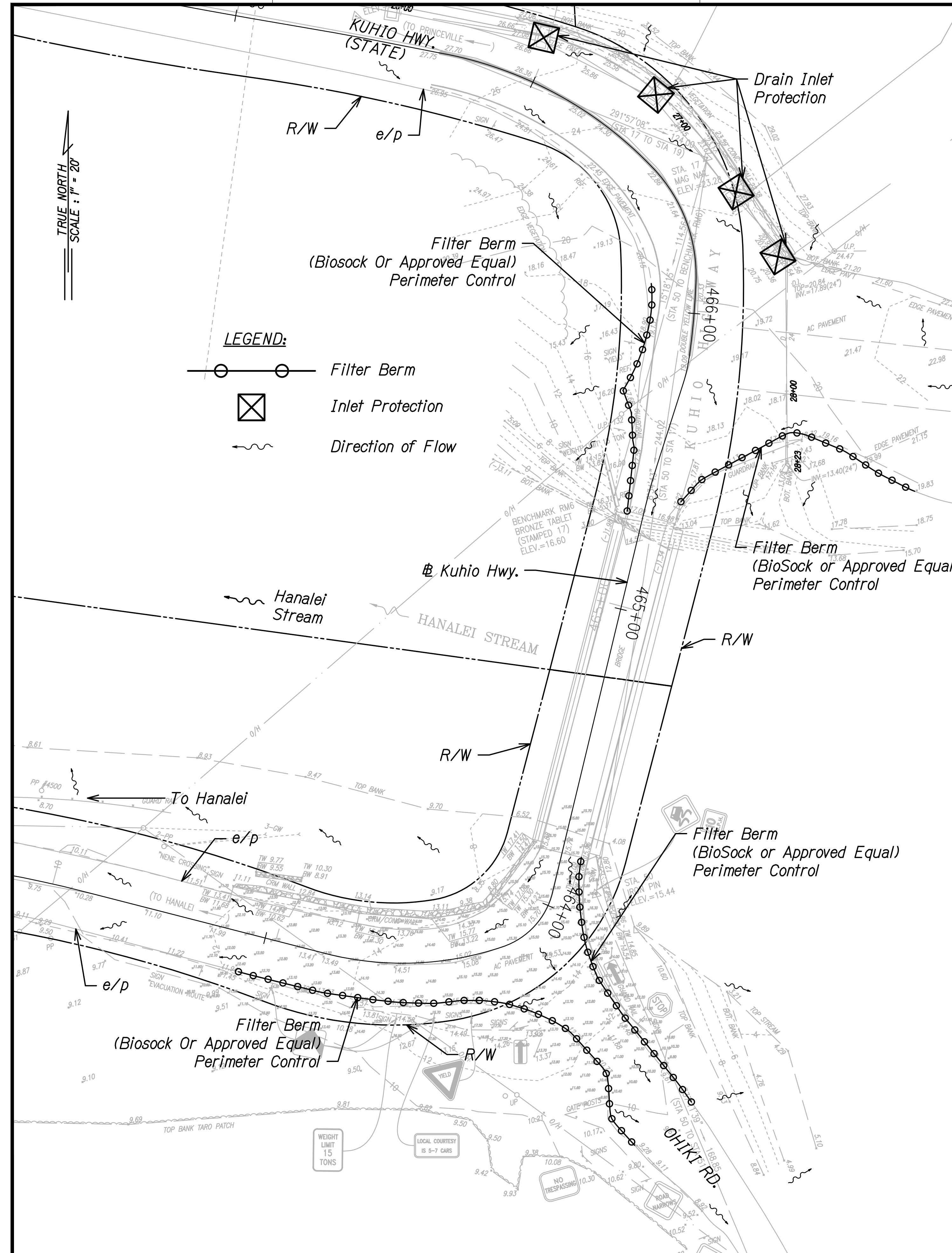
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**BMP DETAIL**  
Not to Scale

**NOTES:**

- This Suggested BMP Plan Is Presented To Clarify Requirements Of The Project. See Sheet 4.1 For Recommended Phasing Of Work.
- Sediment And Erosion Control BMP Measures Shown In The Contract Documents Are Minimum BMPs Requirements And Do Not Constitute An Acceptable And/Or Complete Sediment Control Plan. The Contractor Shall Incorporate Additional BMPs Based Upon Their Means And Methods Considering Site Conditions And Construction Sequence In Accordance With The Contract Documents Including Applicable Permit Document Requirements. Cost Shall Be Included In Pay Item 209.1000, Installation, Maintenance, Monitoring, And Removal Of BMP And Work Platform.
- Contractor Shall Submit Structural Plans And Calculations For Any Work Platforms For Review And Acceptance. Structural Plans Shall Be Designed And Stamped By An Engineer Licensed In The State Of Hawaii.
- Work Platforms Shall Not Be Supported From The Ground Below The Ordinary High Water Mark.
- Install Dust Screens To Control Construction Debris, Fugitive Dust, and Water, E.G., Hydrodemolition, Wash Down, From Entering The Stream or Falling On Its Banks Below.
- Install A Plastic Sheet Lined Catchment System In Such A Matter As to Prevent Liquid And Debris From Falling Into The Stream Or Its Banks Below. Sheetting Should Be Durable Enough to Withstand The Foot Traffic And Construction Work That Occurs On Top Of The Work Platform With Minimal Development Of Holes. Install A Screen To Prevent Any Flying Debris Or Liquids From Falling Into The Stream Below. Also, The Surface Of The Working Area Shall Be Slip-Resistant When Wet.
- Inspect Plastic Sheetting For Damage And Water Tightness Before And After Any Work That May Cause Debris Or Liquids. Also Regularly, During The Required BMP Inspections In Accordance With The Project's Accepted Erosion Control Plan. Repair Plastic Sheetting Immediately Stopping Work To Repair. Report Failure Of The Catchment Or Screen System That Allowed Any Liquid And Debris From Falling Into The Stream Or Its Banks Below. Replace Plastic Sheetting Before Any Work That May Cause Debris Or Liquids If Holes Develop That Cannot Be Repaired To The Satisfaction Of The Engineer. Remove Any Debris From The Stream or Banks Below.
- Follow All Applicable HIOSH And OSHA Regulations, Including Those Related To Enclosed Spaces And Work Above Water.
- Contractor Shall Remove Temporary Platform When Extreme Weather Conditions That May Result In Flooding Are Anticipated.

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Signature: *Gerald D. Andrade*  
4/30/24  
EXPIRATION DATE OF THE LICENSE

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**EROSION CONTROL PLAN**

**KUHIO HIGHWAY**  
**Hanalei Bridge Repair**  
**FAP Proj. No. BR-0560(016)**

Scale: As Shown      Date: July 2022

SHEET No. EC-5 OF 5 SHEETS















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**PAVEMENT MARKING AND SIGNING NOTES:**

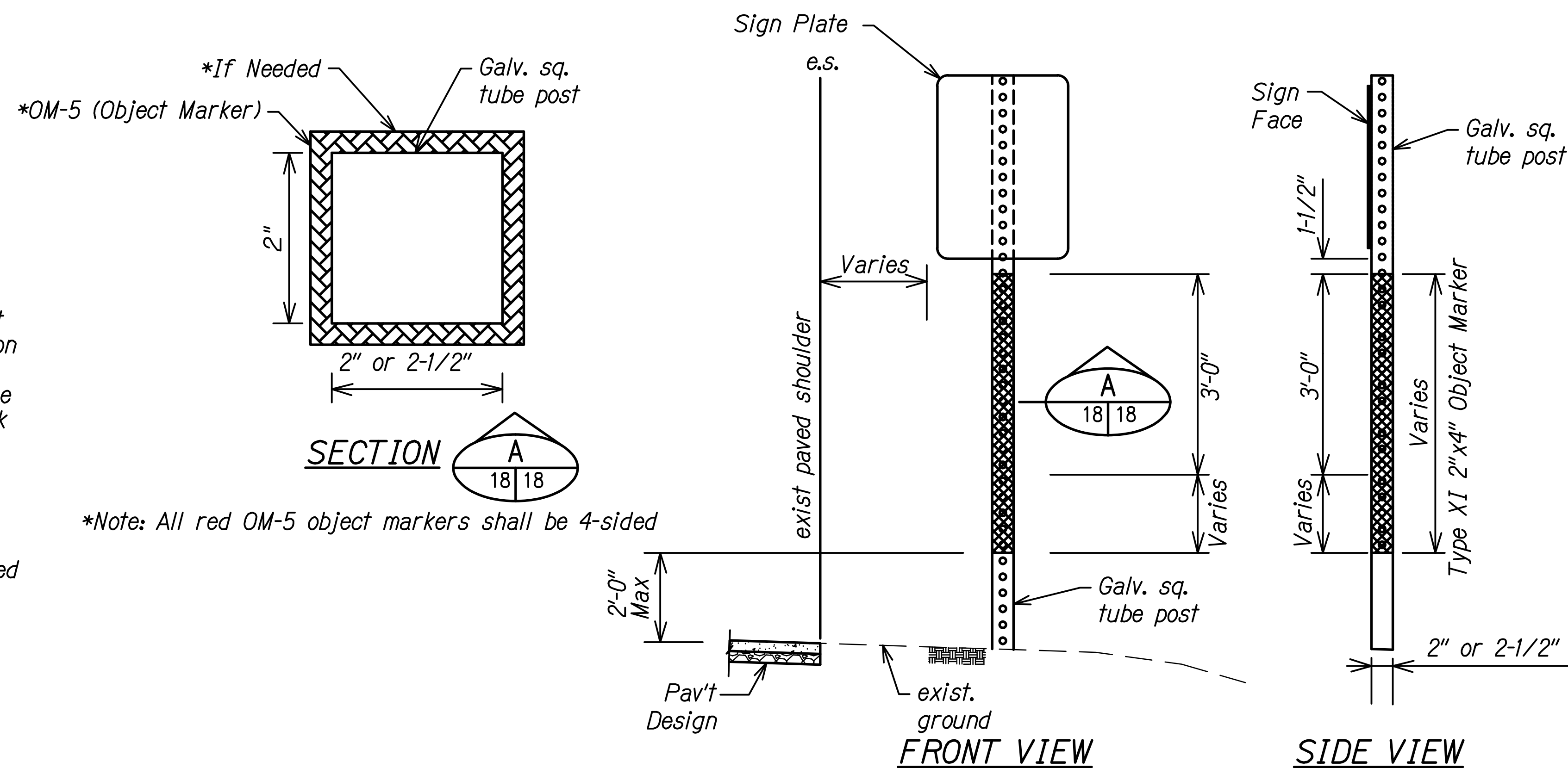
- All sign panels shall conform to Section 630, 631 and 632 of Special Provisions, DOT standard plans, and the latest editions and amendments of the following FHWA publications:
  - "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD)
  - "Standard Highway Signs"
  - "Standard Alphabets for Highway Signs"
- The Contractor shall backfill all holes, depressions and pits left by the removal of the existing signs with embankment material and grass all areas exposed.
- Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
- Existing pavement markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. The costs shall be incidental to the various pavement marking items.
- Final locations of all signs shall be approved by the Engineer prior to any installation work.
- Existing signs, object markers and reflector markers not shown on these plans shall remain as posted unless otherwise directed by the Engineer. Removal and disposal of existing signs and/or posts as designated on these plans shall be incidental to the various signing items.
- All pavement striping shall be as noted on the legend or plans.
- All preformed pavement marking tapes over existing pavement shall be applied with an approved primer as recommended by the tape's manufacturer and as approved by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.
- The Contractor shall erect advanced construction warning signs at the beginning and at the end of the project site. Construction warning signs shall be placed as indicated on the plans or as directed by the Engineer. The signs shall be kept in place for the duration of the project and shall be maintained by the Contractor. These signs shall be placed in addition to the required traffic control signs called for in Section 645 - Work Zone Traffic Control. The advanced construction warning signs shall be new and become the property of the State. The Contractor shall remove, clean and deliver the signs and posts to the Kauai District Baseyard or as directed by the Engineer of the project.
- Existing signs that are to be replaced shall not be removed until new signs are installed as replacements, or the messages are no longer necessary.
- Backing for all new regulatory and warning signs shall not be spliced.
- Removal of existing signs, delineators and posts, as directed by the Engineer or as shown on the plans, shall be considered incidental to the various signing items.
- Contractor shall replace all Reflector Markers shown on the plans.
- All pavement striping, legends and symbols shall be retroreflective thermoplastic compound pavement markings.
- Location of pavement markers is shown schematically. For exact location of markers in relation to stripe, see Standard Plans TE-26, TE-27 & TE-28.
- The Contractor shall remove all RM-2 Markers along the roadside and within the pavement area which conflict with the proposed construction.
- All temporary signs shall be marked on their back side with the Contractor's name and the project number.

**PAVEMENT MARKING AND SIGNING LEGEND:**

-  8" White Edge Stripe (Tape, Type I or Thermoplastic Extrusion)
-  Stop Bar (White) (Tape, Type III or Thermoplastic Extrusion)
-  New or Relocated Sign (Single & Double Post)
-  Existing Sign
-  Reflector Marker (RM-3) w/ Post
-  Replace Existing Sign(s) with New Sign(s) and Post
-  Existing Sign(s) to Remain
-  Remove Existing Sign and Post

**OBJECT MARKER (OM-5) NOTES:**

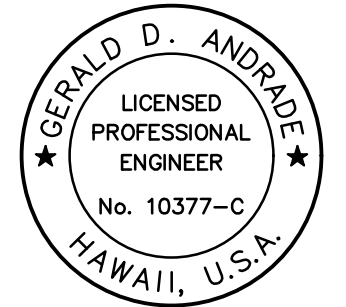
- Object markers (OM-5) shall be installed on all existing and proposed regulatory and warning sign posts within the project limits.
- If a strip of retroreflective material is used on a sign support, it shall be at least 2 inches in width, it shall be placed for the full length of the support from the sign to within 2 feet above the edge of roadway, and its color shall match the background color of the sign, except that the color of the strip for the "YIELD" and "DO NOT ENTER" signs shall be red.
- All red OM-5 object markers shall cover 4 sides of the sign post. All other OM-5 object marker colors shall cover 3 sides of the sign post, facing all directions of traffic.
- Background of object marker shall be retroreflectorized with Type XI retroreflective sheeting.



**OBJECT MARKER (OM-5) DETAIL @ TRAFFIC SIGN POST**

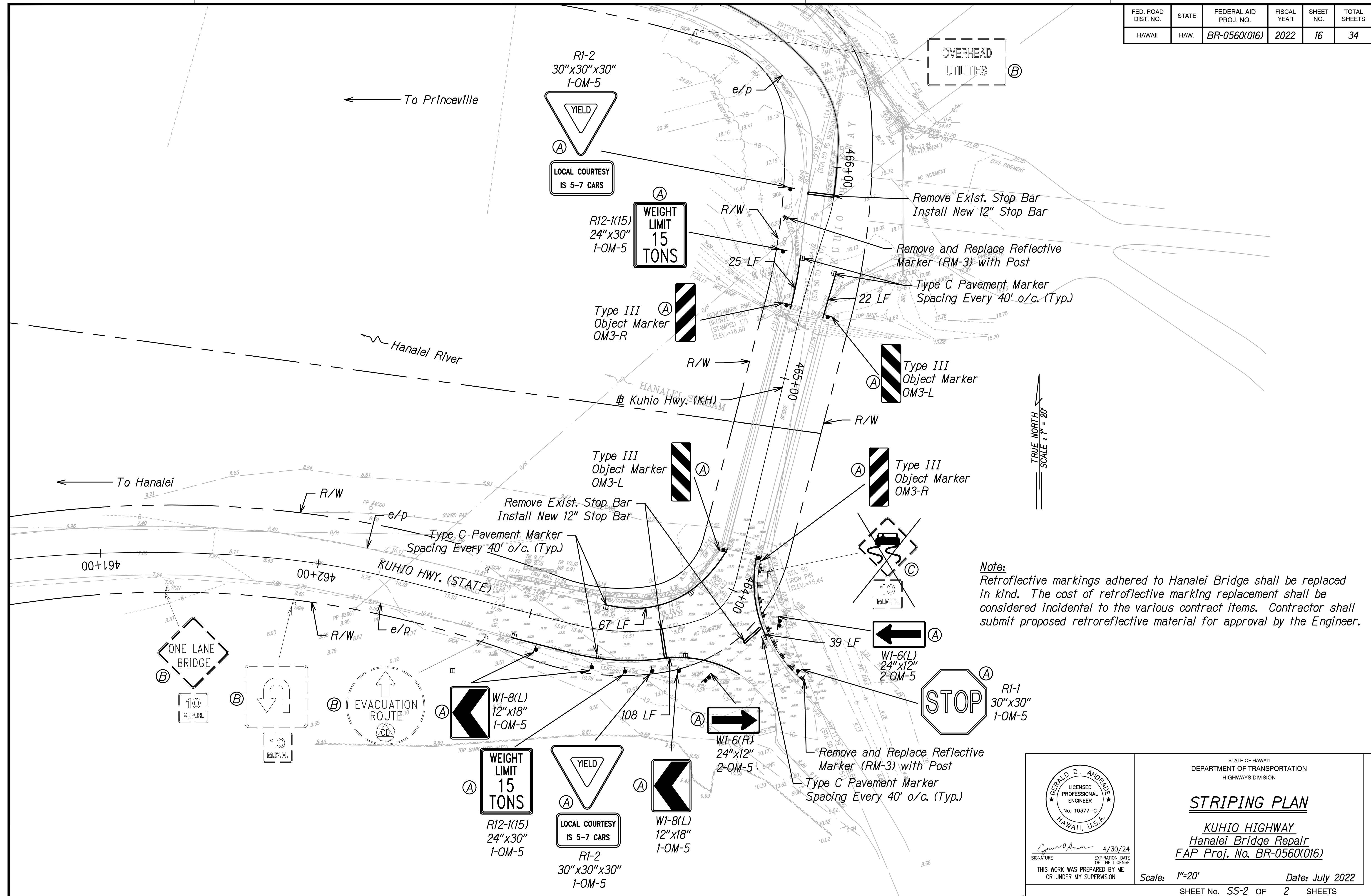
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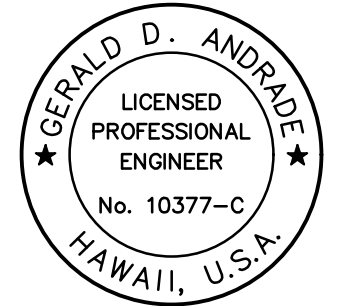
 <p>GERALD D. ANDRADE LICENSED PROFESSIONAL ENGINEER No. 10377-C HAWAII, U.S.A.</p> <p><i>Gerald D. Andrade</i> SIGNATURE 4/30/24 EXPIRATION DATE OF THE LICENSE</p> <p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION</p>	<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p><b>SIGNING AND PAVEMENT MARKINGS</b></p> <p><b>NOTES AND LEGEND</b></p> <p><b>KUHIO HIGHWAY</b> <b>Hanalei Bridge Repair</b> <b>FAP Proj. No. BR-0560(016)</b></p>
	Scale: None
	Date: July 2022
	SHEET No. SS-1 OF 2 SHEETS



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	16	34



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

  
 SIGNATURE: *Gerald D. Andrade* 4/30/24  
 EXPIRATION DATE OF THE LICENSE: \_\_\_\_\_  
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**STRIPING PLAN**  
KUHIO HIGHWAY  
Hanalei Bridge Repair  
FAP Proj. No. BR-0560(016)  
 Scale: 1"=20' Date: July 2022  
 SHEET No. SS-2 OF 2 SHEETS













FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	17	34

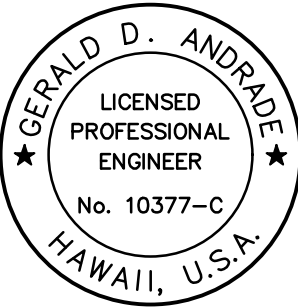
## GENERAL NOTES FOR TRAFFIC CONTROL PLAN

- Only Traffic Control Plans for major construction activities are shown. The Contractor shall develop his own Traffic Control Plans in accordance with Section 645 of the Special Provisions for activities to complete work not covered by the Traffic Control Plans. The Contractor shall submit the Traffic Control Plans to the Engineer for approval. This work is included and paid under Pay Item 645.1000 - Traffic Control- Hanalei Bridge Repair.
- The Contractor shall make minor adjustments to fit field conditions with approval of the Engineer.
- Cones or delineators shall be extended to a point where they are visible to approaching traffic.
- Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
- Flaggers and/or police officers shall be in sight of each other or in direct communications at all times.
- Sign spacings (L), taper lengths (T), and spacings of cones or delineators shall be as shown in Table 645-I of Section 645 in the Specifications, unless otherwise noted on HDOT's Traffic Control Plans.
- All traffic lanes shall be minimum of 10 feet wide.
- All signs shall be promptly removed or covered whenever the message is not applicable or not in use.
- The backs of all signs for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces).
- At the end of each day's work or as soon as the work is completed, the Contractor shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation.
- Existing conflicting pavement markings shall be removed and temporary pavement markings shall be installed before traffic patterns are changed.
- The locations of pavement markings, signs, and delineators used in the Traffic Control shall be as shown on the plans, Contractor's approved Traffic Control Plans, and/or as determined in the field by the Engineer.
- Damage to signs, temporary pavement markers, and delineators caused by the public or Contractor's negligence shall be repaired or replaced by the Contractor at the Contractor's expense.
- Signs for night work shall be retroreflective and shall be mounted with a Type B high intensity flasher. The flasher shall be considered incidental to Pay Item 645.1000 - Traffic Control-Hanalei Bridge Repair.
- Steel plates for covering trenches shall have a skid resistant surface. The skid resistant surface shall be maintained throughout its use. Steel plates shall be installed in such a manner as to minimize movement from its intended location and minimize noise when traffic crosses over it (i.e., steel plates shall not generate any noise impact). Payment for steel plates shall be considered incidental to the various contract items. Steel plates will not be allowed in the travelway for posted speeds in excess of 35 mph.
- The Contractor shall limit the extent of trench and excavation work for pavement reconstruction to an area that can be satisfactorily backfilled in one work day.
- Work zone limits shown for each traffic control phase encompass all work items to be completed in that particular phase. The length of the work zone may be reduced to accommodate the Contractor's actual work zone for that time period, provided it has been accepted by the Engineer, and all tangents, tapers, and buffer lengths are maintained.
- The Contractor will be restricted to lane closures as specified in Special Provision Section 645.
- All temporary signs shall be marked on their back side with the Contractor's name and the project number.
- All Type II Barricades and Positive Barriers shall include one Steady Burn Warning Light. Payment shall be considered incidental to Pay Item 645.1000 - Traffic Control - Hanalei Bridge Repair.

### LEGEND:

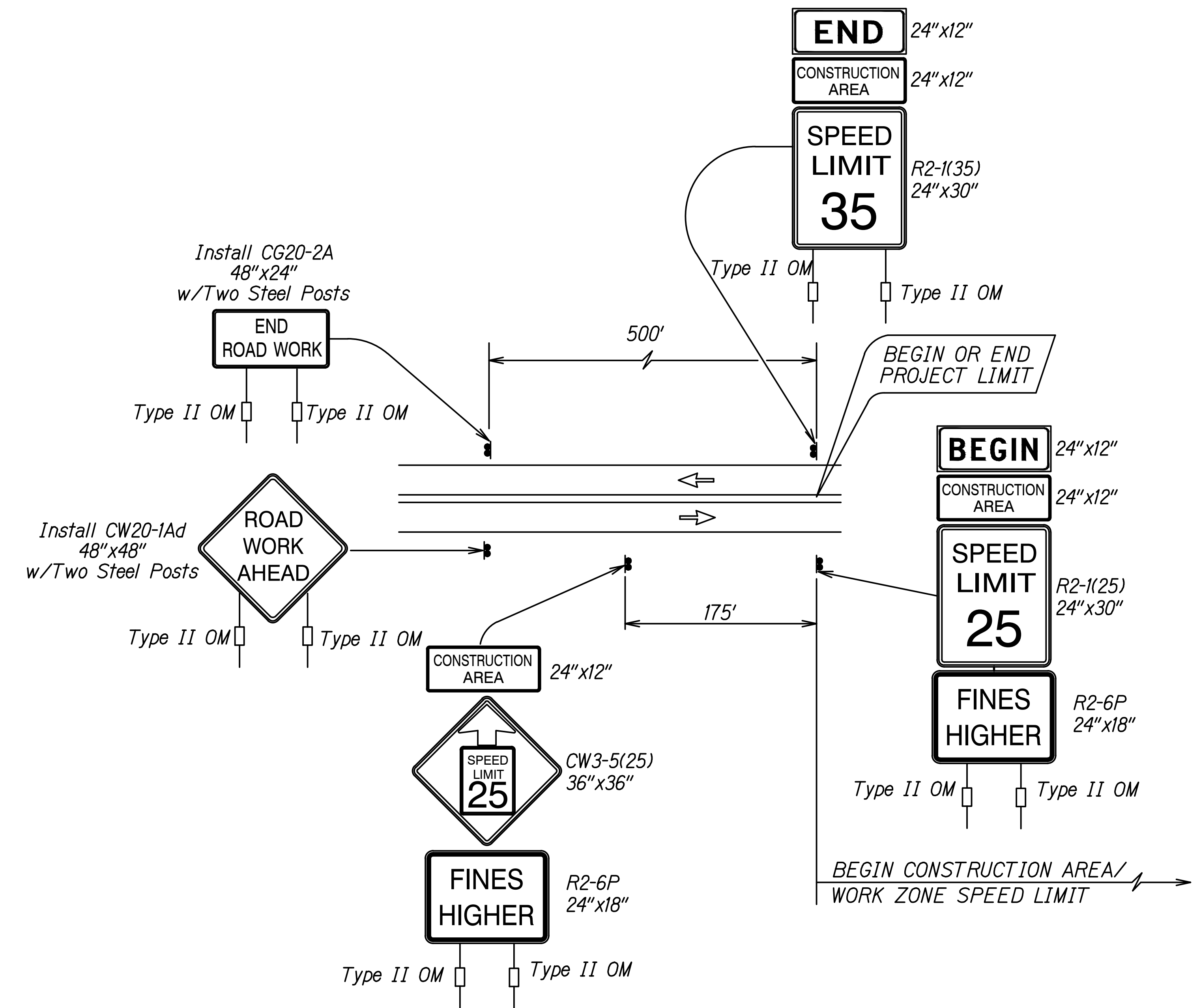
-  Work Area
-  Traffic Cones
-  Flagman
-  Sign
-  Direction of Traffic
-  Positive Protection Barrier
-  Terminal Impact Attenuator
-  Temporary Portable Traffic Signal
-  Portable Message Board
-  Type II Barricade

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

 SIGNATURE: <i>Gerald D. Andrade</i> EXPIRATION DATE OF THE LICENSE: 4/30/24 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION  <b>TRAFFIC CONTROL NOTES</b>  <u>KUHIO HIGHWAY</u> <u>Hanalei Bridge Repair</u> <u>FAP Proj. No. BR-0560(016)</u>
	Scale: None Date: July 2022



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	18	34

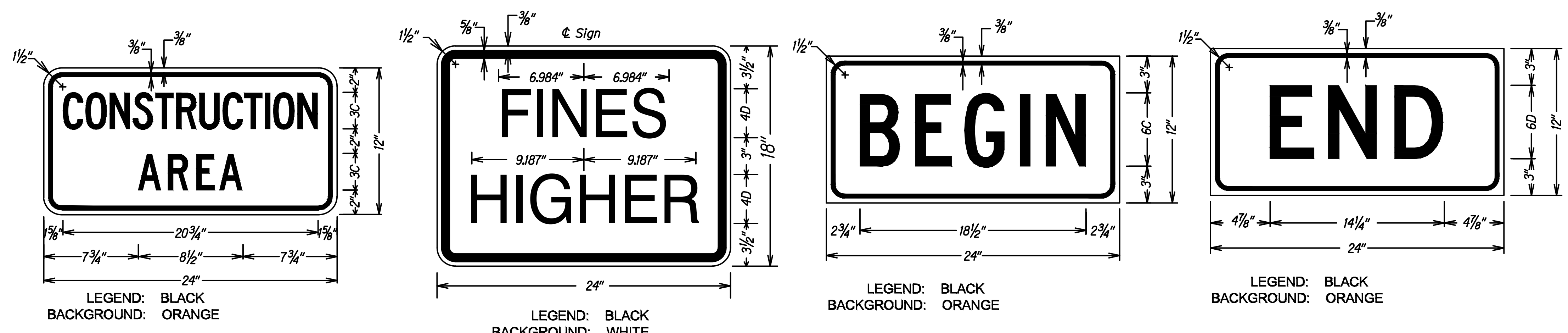


TYPICAL DETAIL FOR CONSTRUCTION SIGNS  
ON TWO LANE OR MULTILANE UNDIVIDED LOW SPEED HIGHWAY

Work Zone Notes:

1. This Work Zone Sign Plan is intended for use on long-term stationary work zones/construction phases (3 days or more). All work zones or construction phases less than 3 days duration will use Traffic Control Plans shown in Section 645 of the Special Provisions.
2. All existing regulatory speed limit signs with posts within the work zone/project limits shall be removed and replaced with work zone speed limit sign assemblies (R2-1(25) and CW3-5(25) with "CONSTRUCTION AREA" and R2-6P "FINES HIGHER" Supplemental Signs).
3. Construction sign assemblies shall be installed on both the approaching and trailing ends of each work zone as shown on this plan.
4. Each construction warning sign and work zone speed limit assembly shall have a minimum of two (2) Type II OM. Installation of each Type II OM shall be considered incidental to Item No. 645.1000 - Traffic Control
5. Upon the completion of all physical work or as directed by the Engineer, all construction signs and work zone speed limit assemblies shall be removed. All speed limit signs and posts that were existing at the start of the project within the work zone/project limits shall be restored back to their original locations and configurations. Dates, times, locations and description of work for each sign location shall be provided to the engineer in writing.
6. Placement of construction signs shall not obstruct the path of pedestrians and bicyclists.
7. The removal and restoration of existing regulatory speed limit signs shall be considered incidental to Item No. 645.1000 - Traffic Control.

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

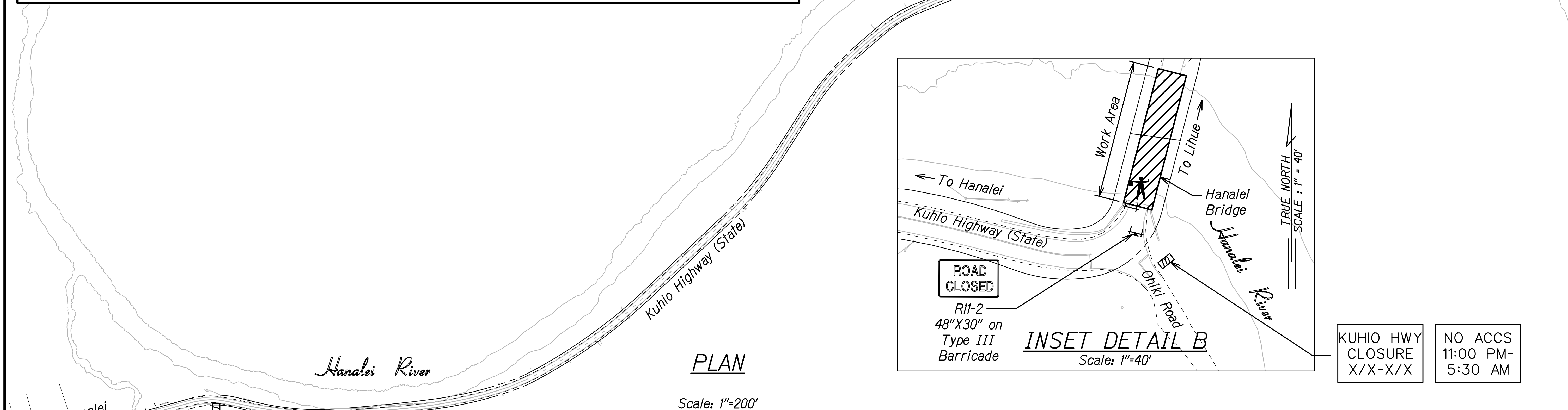
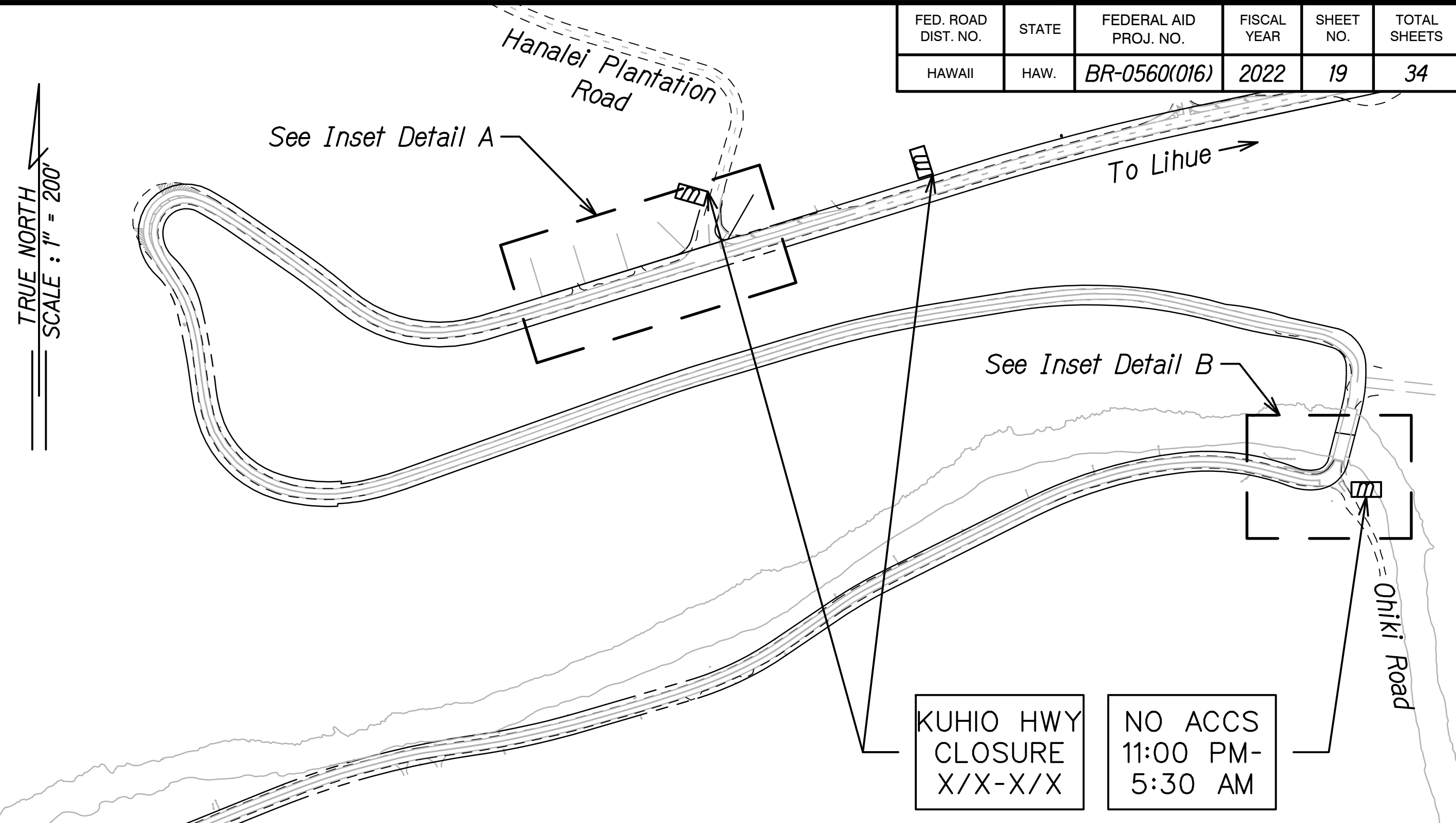
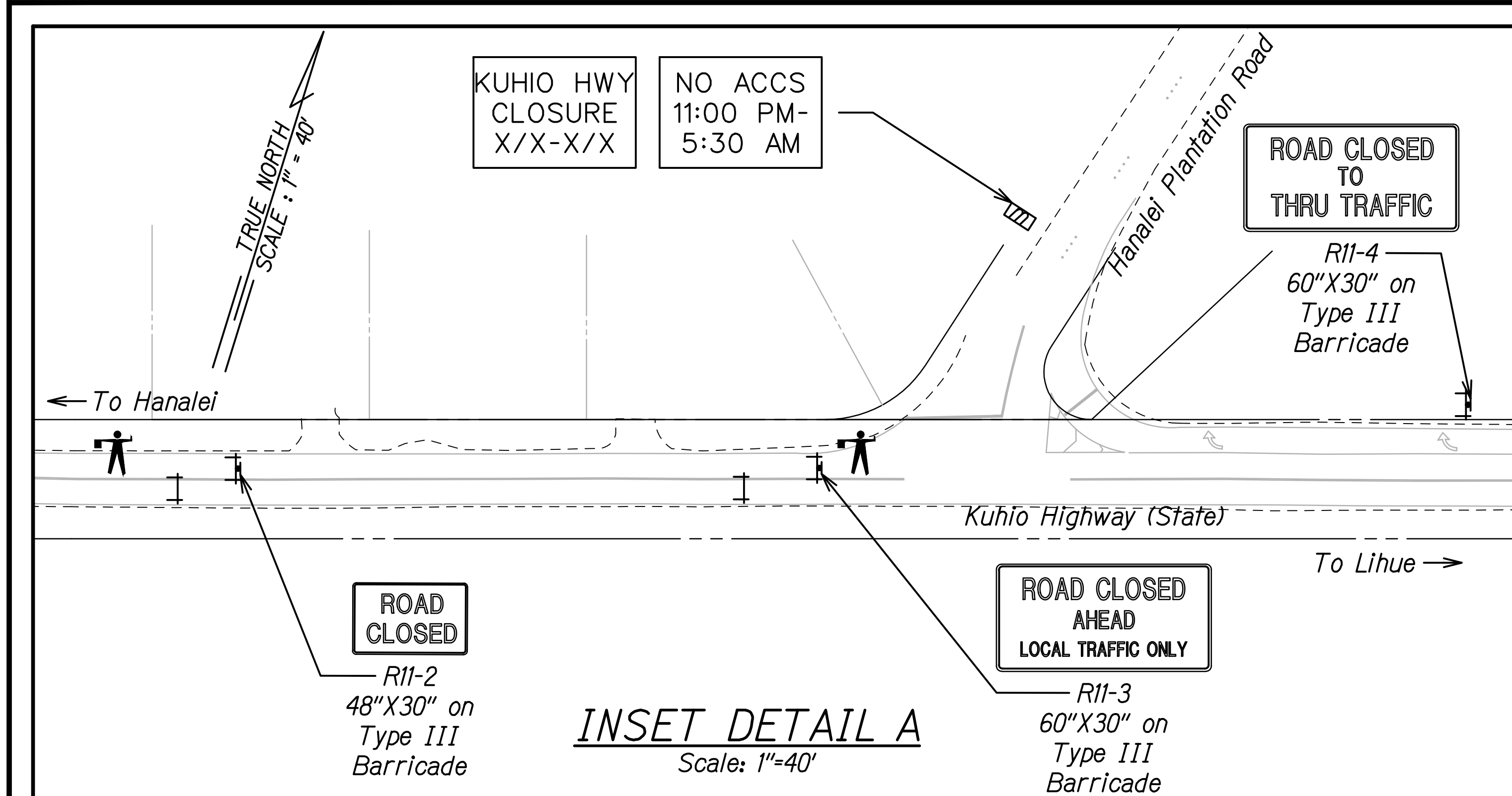


GERALD D. ANDRADO  
LICENSED PROFESSIONAL ENGINEER  
No. 10377-C  
HAWAII, U.S.A.  
Signature: *Gerald D. Andrado*  
EXPIRATION DATE OF THE LICENSE: 4/30/24  
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**LOW SPEED UNDIVIDED HIGHWAY**  
**WORK ZONE SIGNING PLAN, NOTES&DETAILS**  
KUHIO HIGHWAY  
Hanalei Bridge Repair  
FAP Proj. No. BR-0560(016)  
Scale: Not to Scale Date: July 2022  
SHEET No. TC-2 OF 3 SHEETS



FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	19	34



**KUHIO HWY CLOSURE X/X-X/X**  
**NO ACCS 11:00 PM-5:30 AM**

**NOTE:**  
 The Contractor shall provide and maintain portable message boards that display advanced closure dates and times. The boards shall be operational 24 hours a day three (3) days prior to the first highway closure. Boards shall remain for the duration of the nighttime full highway closure.

- LEGEND**
- Portable Message Board
  - Type III Barricade
  - Sign
  - Flagman

GERALD D. ANDRADE  
 LICENSED PROFESSIONAL ENGINEER  
 No. 10377-C  
 HAWAII, U.S.A.  
 Signature: *Gerald D. Andrade*  
 4/30/24  
 EXPIRATION DATE OF THE LICENSE  
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**TRAFFIC CONTROL PLAN**  
**ROADWAY FULL CLOSURE**  
**KUHIO HIGHWAY**  
**Hanalei Bridge Repair**  
**FAP Proj. No. BR-0560(016)**

Scale: As Shown Date: July 2022  
 SHEET No. TC-3 OF 3 SHEETS

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







# STRUCTURAL GENERAL NOTES

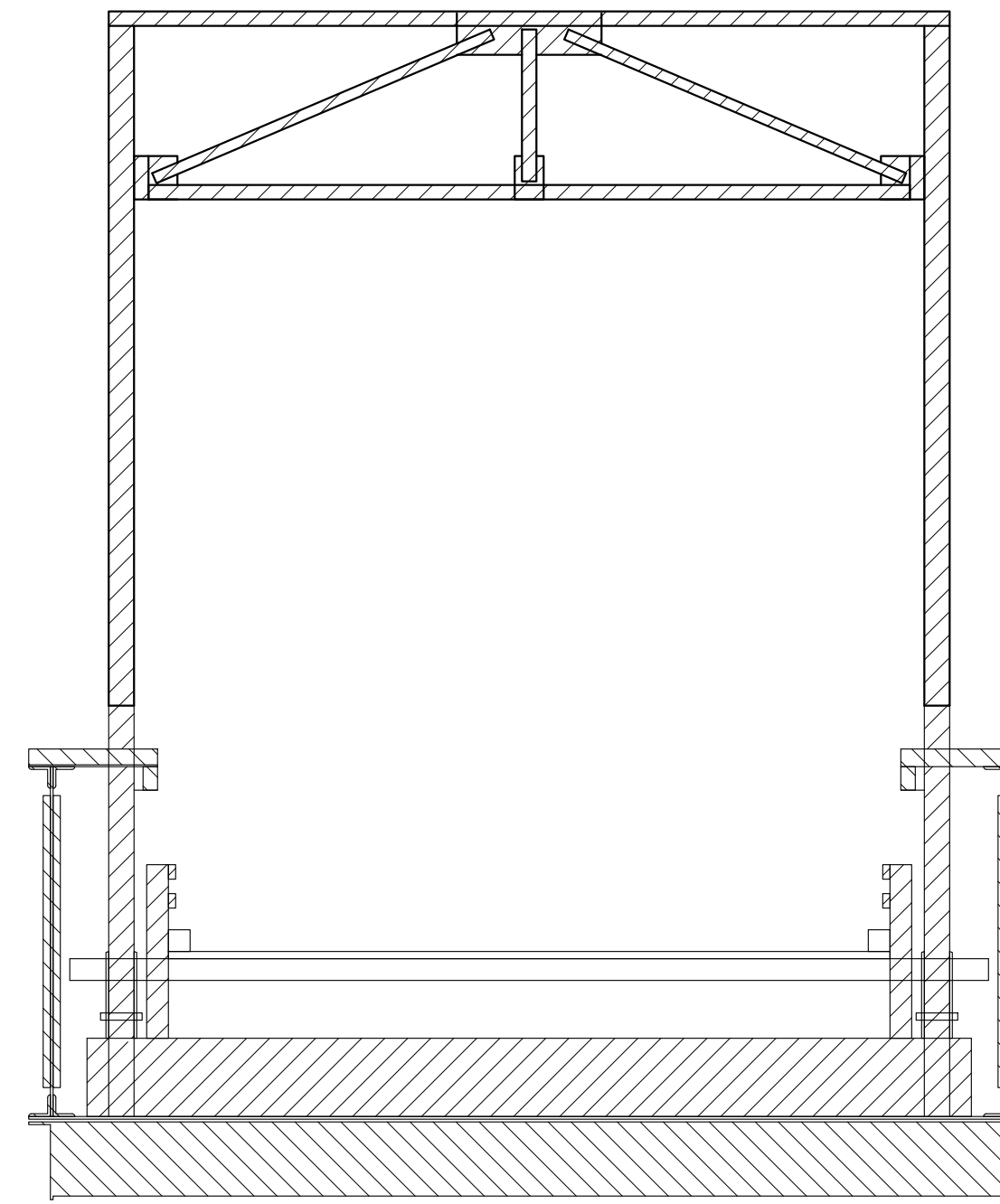
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	21	34

**4. Construction Notes (Cont.):**

- E. The total weight of the work platform (including Dead and Live Load) shall not exceed 15,000 lbs when factored using AASHTO LRFD unless determined by the Contractor's Engineer that it may be increased.
- F. The hanging work platform beneath the bridge shall not extend more than 20'-0" across the river at any given time. The Contractor shall take this into consideration during bidding. The Contractor shall be aware that the freeboard height between the river's Ordinary High Water mark and the soffit of the bridge is limited and river elevations fluctuate.
- G. The Contractor shall field verify all existing conditions, dimensions, and member sizes prior to fabrication of any bridge elements. The Engineer shall be notified immediately regarding any change of conditions or discrepancies between the plans and field investigation.
- H. The structural repair details shown on the plans are based on the Engineer's findings during the latest site investigation. If existing bridge members that are to remain, have significant deterioration or are so corroded such that they cannot be bolted or welded to, the Engineer shall be notified immediately. Revisions to the repair details or additional repairs that need to be made shall be paid for under Item 501.2000 - Additional Structural Steel Repairs.
- I. The Contractor shall coordinate all traffic control and lane closure requirements with the State DOT Highways Division. The Contractor shall notify the State a minimum of 11 days prior to any requests for traffic control or lane closures. Lane closures may be scheduled on weekdays from 9:00 PM to 4:00 AM.
- J. The Contractor shall be responsible for retaining the services of a Quality Control inspector to oversee all high strength bolting and welding inspection, including any non-destructive testing. Cost shall be incidental to the repair work. Reports shall be submitted to the Engineer for review and approval. All deficient work shall be corrected with no increase in cost to the State.
- K. The Contractor may obtain for review available As-Built drawings of the existing structure from the HDOT Highways Division, Design Branch located at Kakuhihewa Building, Room 609, 601 Kamokila Boulevard, Kapolei, HI 96707.

**5. Painting:**

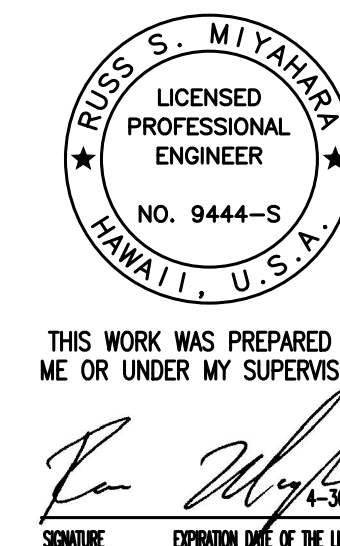
- A. See Special Provisions Section 697 for all coating requirements.
- B. The Contractor shall phase the timber decking work with the painting work such that the topside of all W21X93 transom beams are properly cleaned and coated.
- C. The specific coating requirements for the different areas of the bridge shall be as shown below:



- See Special Provisions Section 697 - Pratt Truss Coating Requirements
- See Special Provisions Section 697 - Warren Truss Coating Requirements

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

DRAWING NAME: Z:\00 ONGOING\00\_OF PROJECTS\21-009.1-HANAIEI BR. RPR-DOHA.01 CAD\09-28-22 BID SET\HTR-50001 GEN NOTES.LDWG PLOT TIME: 09-28-22 4:10 PM



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

## STRUCTURAL GENERAL NOTES

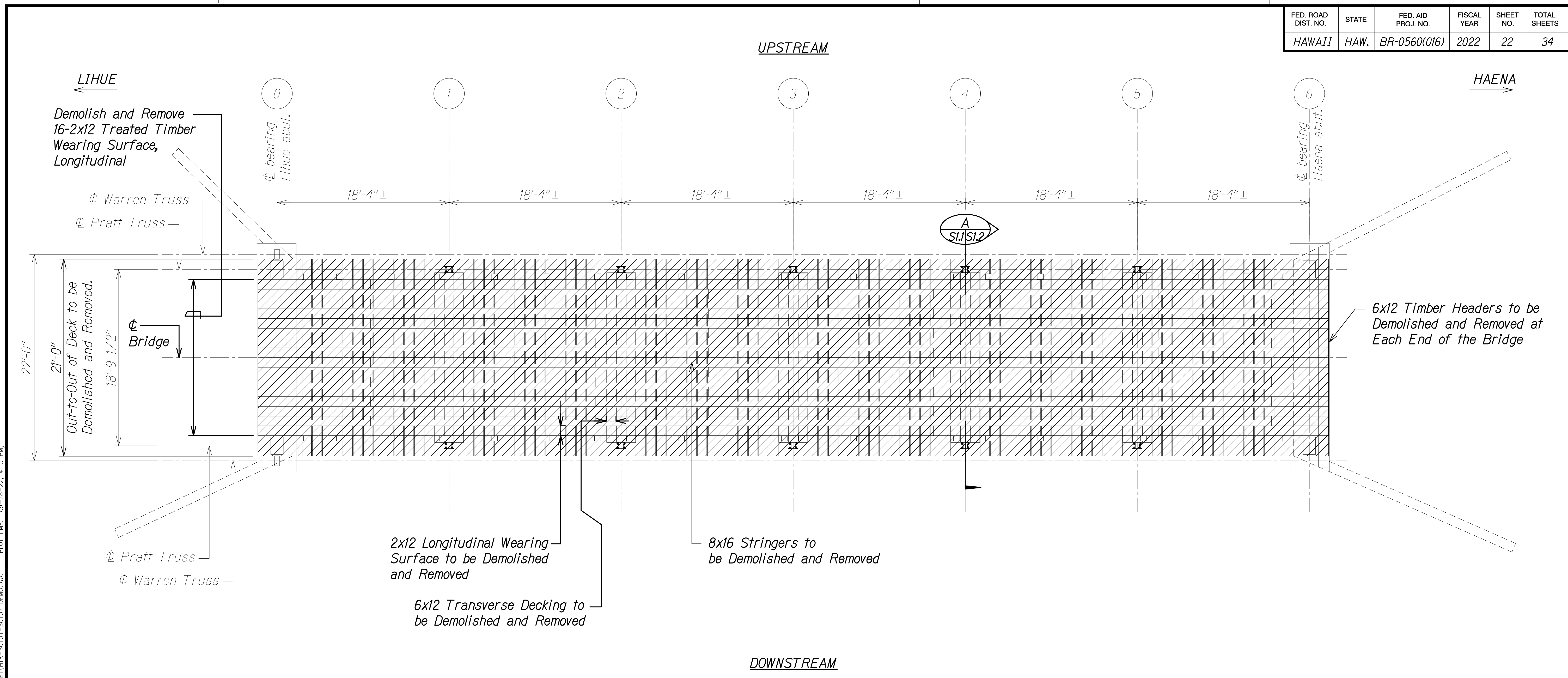
**KUHIO HIGHWAY**  
**Hanalei Bridge Repair**  
**FAP Proj. No. BR-0560(016)**

Scale: None Date: July 2022

SHEET No. S02 OF 2 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	22	34



**DECK DEMOLITION PLAN**  
 Scale: 3/16" = 1'-0" A  
S1.1 | S1.2

**Legend:**

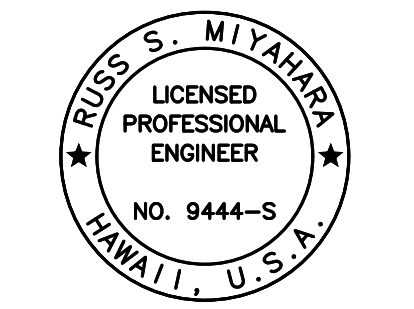
- Demolish and Remove 2x12 Apitong timber Wearing Surface, 6x12 treated timber transverse decking, 8x16 treated timber stringers, 6x6 timber curbs, and 6x12 timber headers.

**Note:**

The Contractor will need to phase the demolition work of the timber decking with the new timber decking work and painting requirements of the under deck steel transoms. See Structural General Notes, 4. Construction Notes I. for lane closure times. A work plan, detailing the specifics of the planned phasing shall be submitted to the Engineer for review and approval.

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

DRAWING NAME: Z:\00 ONGOING\00\_01 PROJECTS\21-009.1-HANAIEI BR. RPR-DOHA.01 CAD\09-28-22 BID SET\HTR-50101-50102 DEMO.DWG PLOT TIME: 09-28-22, 4:13 PM



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*Russ S. Miyahara*  
 SIGNATURE EXPIRATION DATE OF THE LICENSE 7-30-24

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**DECK DEMOLITION PLAN**

**KUHIO HIGHWAY  
 Hanalei Bridge Repair  
 FAP Proj. No. BR-0560(016)**

Scale: As Noted Date: July 2022

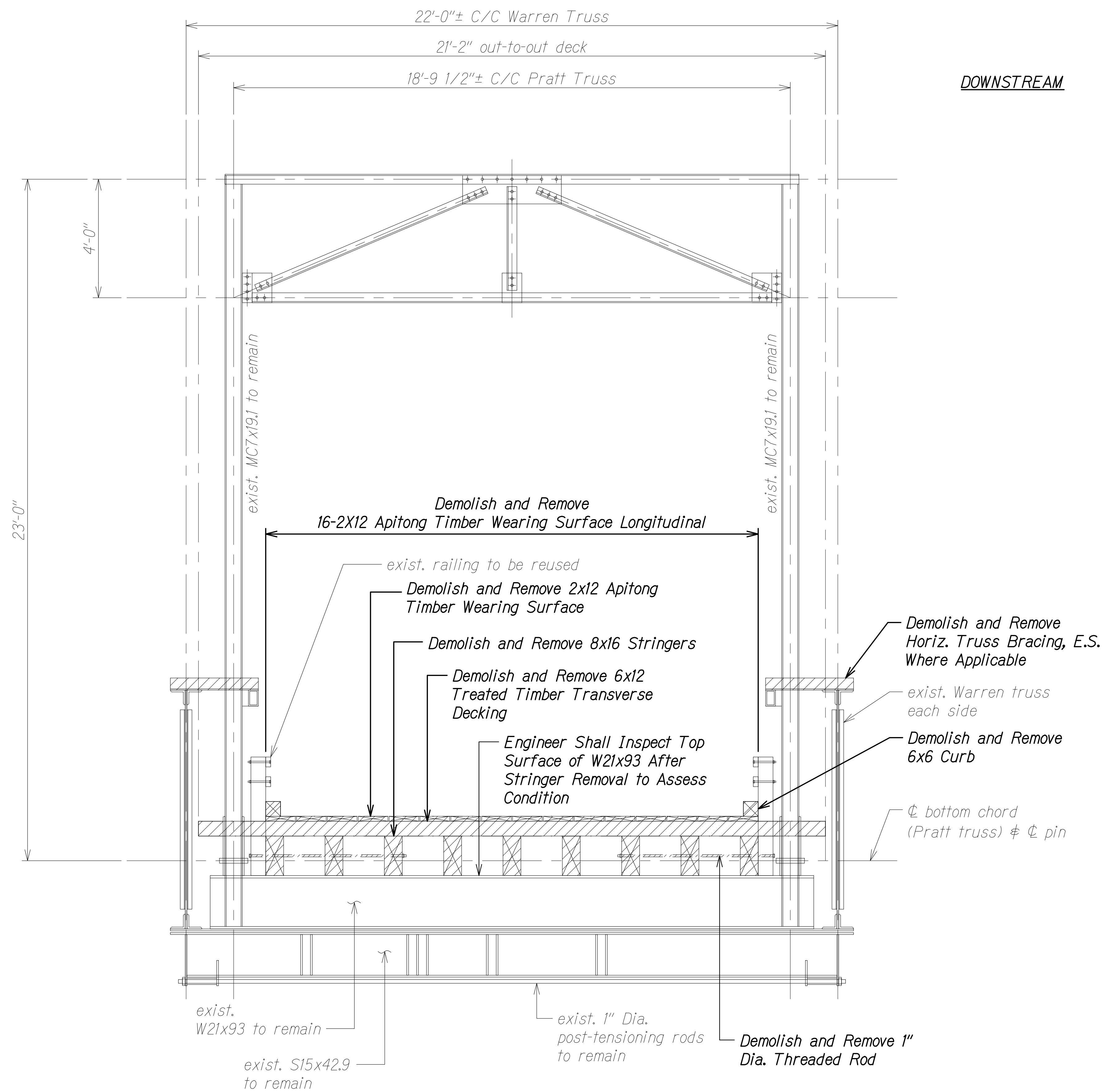
SHEET No. *SIJ* OF 2 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	23	34

UPSTREAM

DOWNSTREAM



Legend:

Demolish and Remove

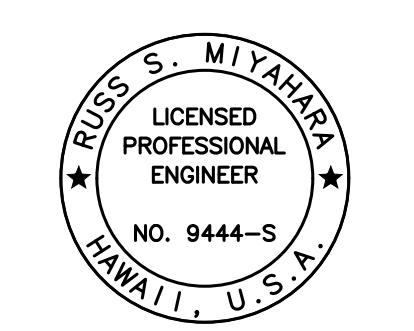
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
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DRAWING NAME: Z:\00 ONGOING\00\_OF PROJECTS\21-009.1-HANALEI BR. RPR-DOHA.01 CAD\09-28-22 BID SET\HTR-50101-50102 DEMO.DWG PLOT TIME: 09-28-22, 4:13 PM

**DEMOLITION SECTION A**

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

SI.1 | SI.2



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*Russ S. Miyahara*

30-24

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DEMOLITION SECTION**

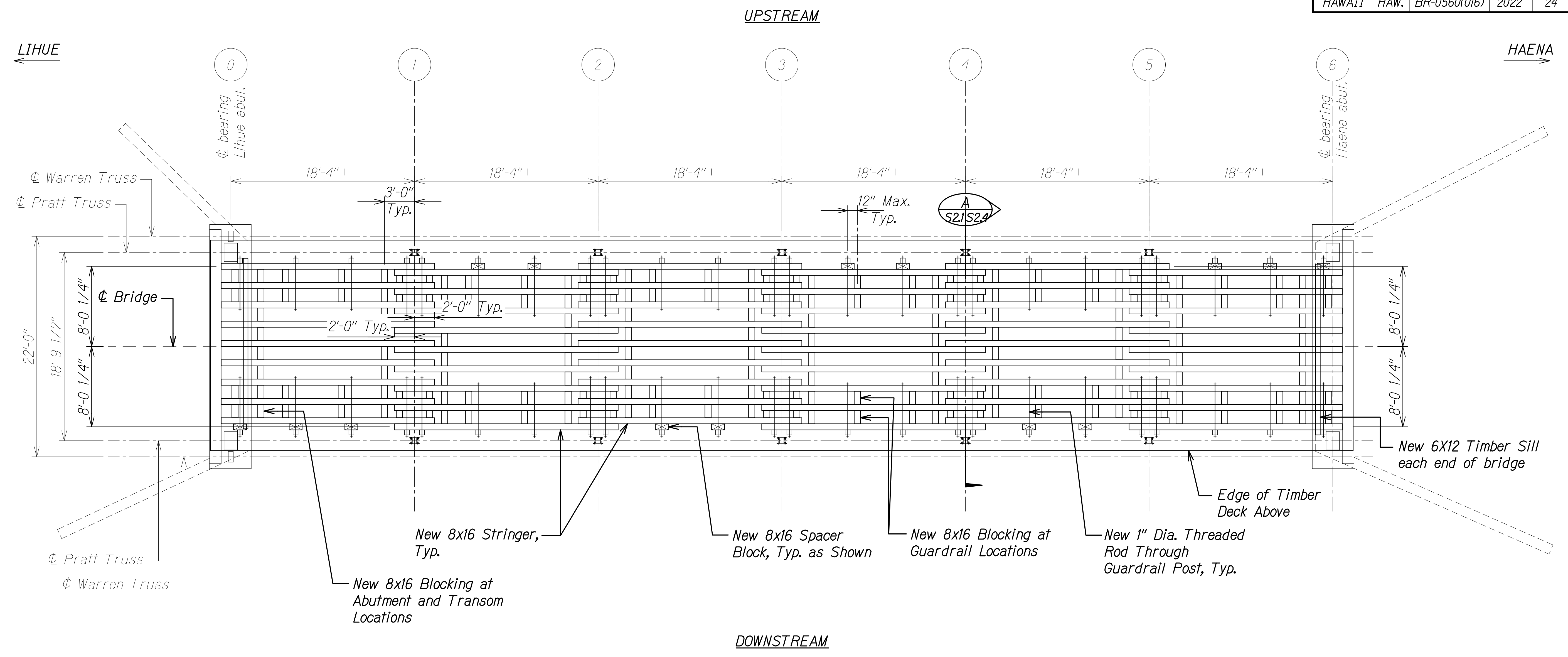
**KUHIO HIGHWAY**  
**Hanalei Bridge Repair**  
**FAP Proj. No. BR-0560(016)**

Scale: As Noted Date: July 2022

SHEET No. SI.2 OF 2 SHEETS



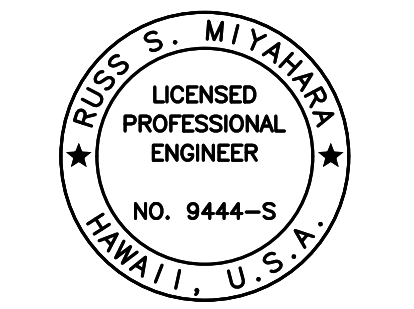
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	24	34



**STRINGER PLAN**  
 Scale: 3/16" = 1'-0"  
 A  
 S21 S21

DRAWING NAME: Z:\00 ONGOING\00\_OF PROJECTS\21-009.1-HANAIEI BR. RPR-DOHA.01 CAD\09-28-22 BID SET\HTR-S0201-S0204 REPAIR.DWG PLOT TIME: 09-28-22, 4:08 PM

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



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*Russ S. Miyahara*  
 SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**STRINGER PLAN**

**KUHIO HIGHWAY**  
**Hanaiei Bridge Repair**  
**FAP Proj. No. BR-0560(016)**

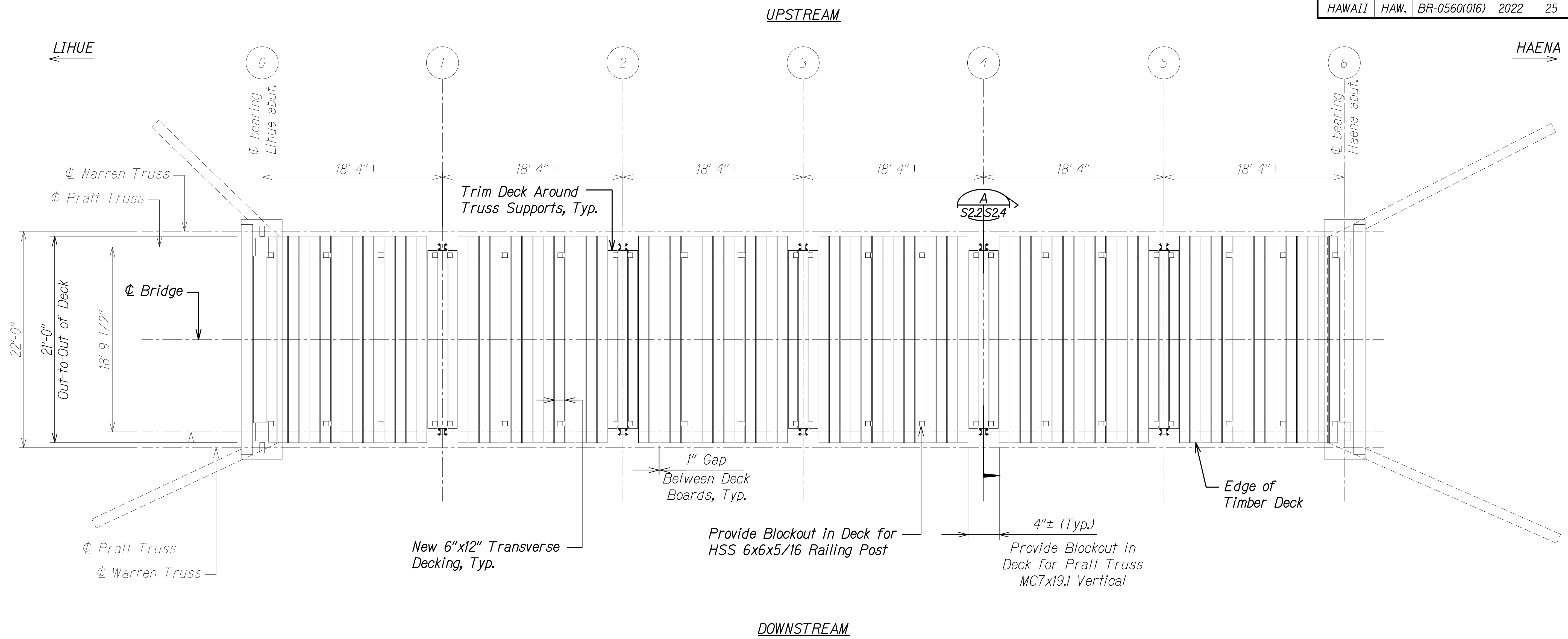
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SHEET No. S21 OF 5 SHEETS



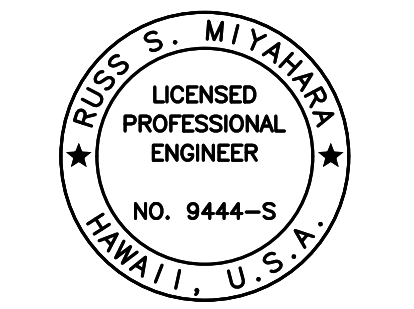
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	25	34

DRAWING NAME: Z:\00 ONGOING\00\_01 PROJECTS\21-009.1-HANAIEI BR. RPR-DOHA.01 CAD\09-28-22 BID SET\HTR-S0201-S0204 REPAIR.DWG PLOT TIME: 09-28-22, 4:08 PM



**DECKING PLAN** A  
 Scale: 3/16" = 1'-0" S2.2 | S2.2

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



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*Russ S. Miyahara*  
 SIGNATURE EXPIRATION DATE OF THE LICENSE 7-30-24

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**DECKING PLAN**

**KUHIO HIGHWAY**  
**Hanalei Bridge Repair**  
**FAP Proj. No. BR-0560(016)**

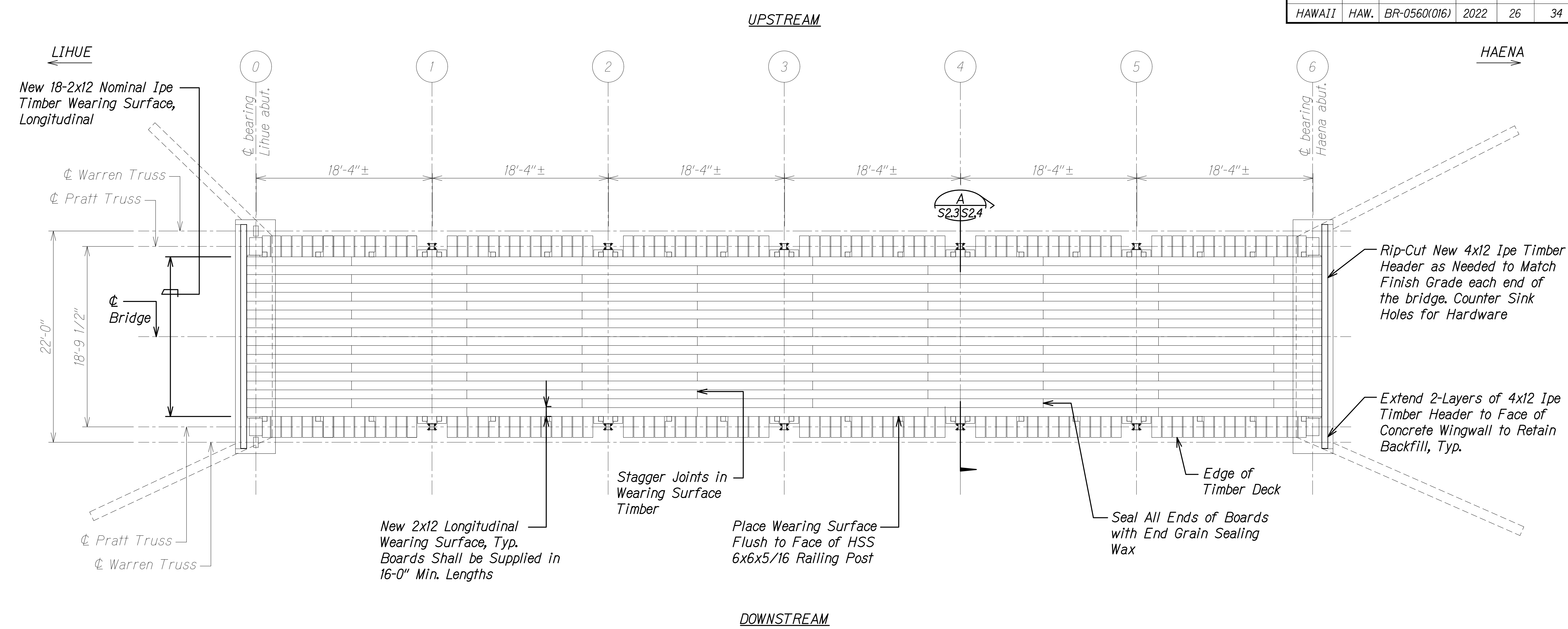
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SHEET No. S2.2 OF 5 SHEETS



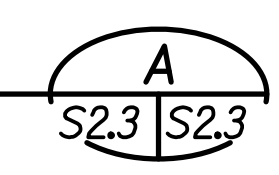
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HAWAII	HAW.	BR-0560(016)	2022	26	34

DRAWING NAME: Z:\00 ONGOING\00\_OF\_PROJECTS\21-009.1--HANALEI BR. RPR--DOHA.01 CAD\09-28-22 BID SET\HTR-S0201-S0204 REPAIR.DWG PLOT TIME: 09-28-22, 5:04 PM

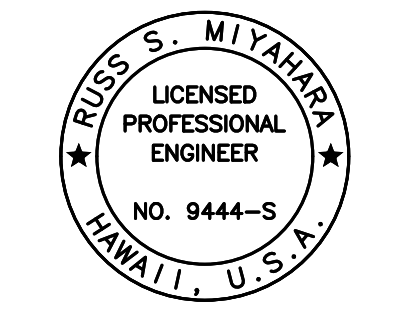


**WEARING SURFACE PLAN**

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



ORIGINAL PLAN	DATE
NO. _____	_____
DESIGNED BY	DATE
_____	_____
TRACED BY	DATE
_____	_____
QUANTITIES BY	DATE
_____	_____
CHECKED BY	DATE
_____	_____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
*Russ S. Miyahara*  
 SIGNATURE EXPIRATION DATE OF THE LICENSE 7-30-24

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**WEARING SURFACE PLAN**

**KUHIO HIGHWAY**  
**Hanalei Bridge Repair**  
**FAP Proj. No. BR-0560(016)**

Scale: As Noted Date: July 2022

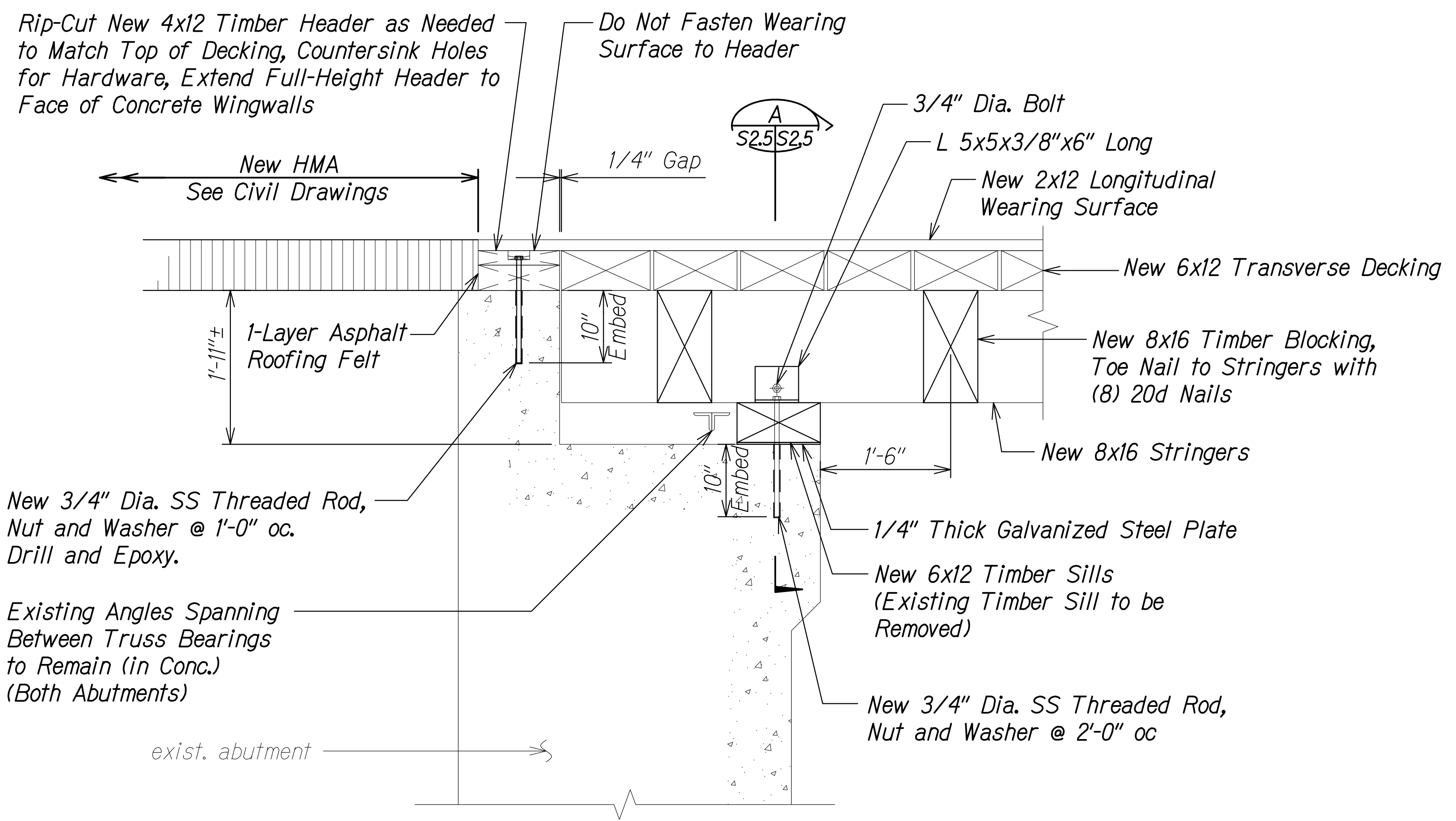
SHEET No. S2.3 OF 5 SHEETS



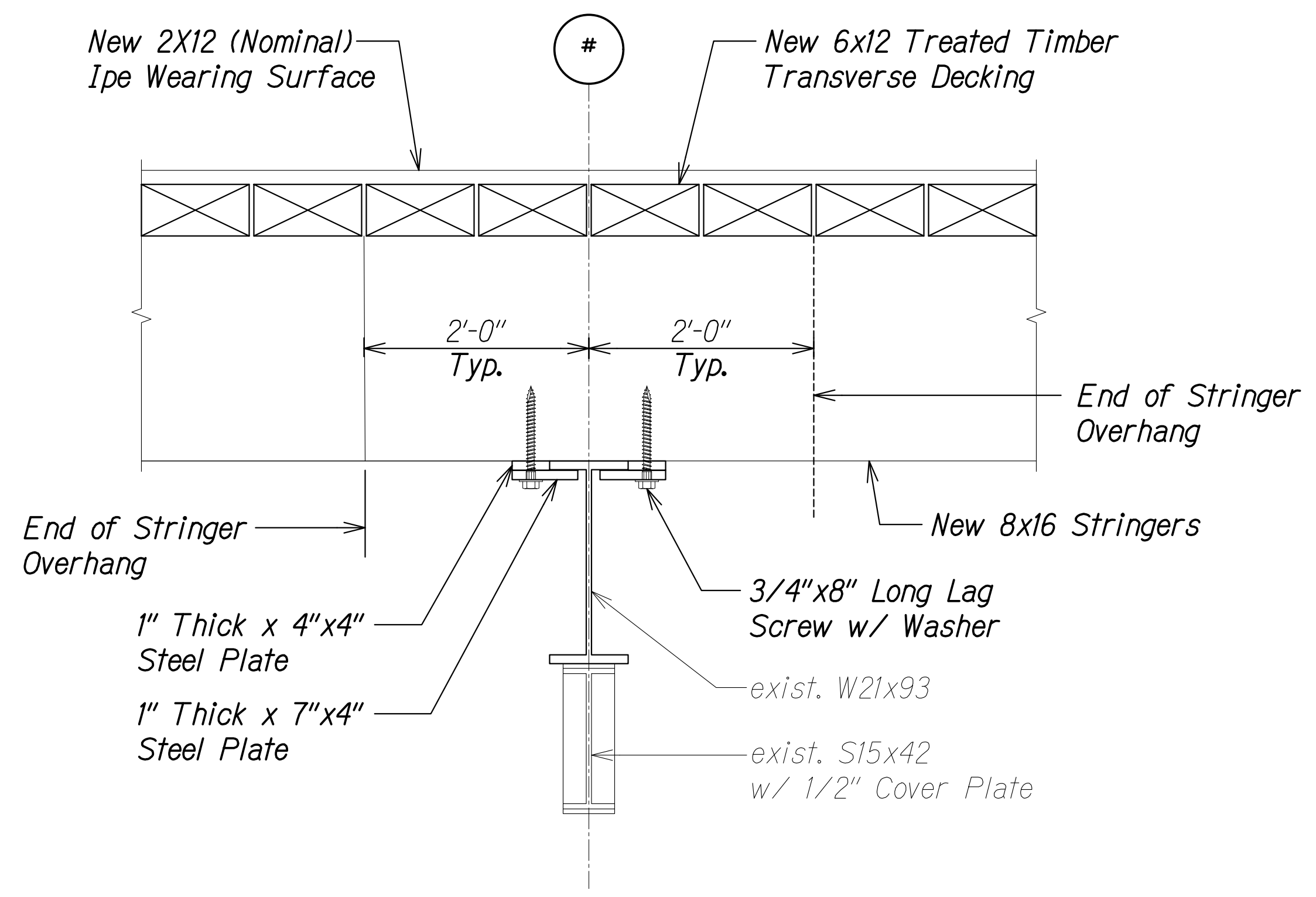




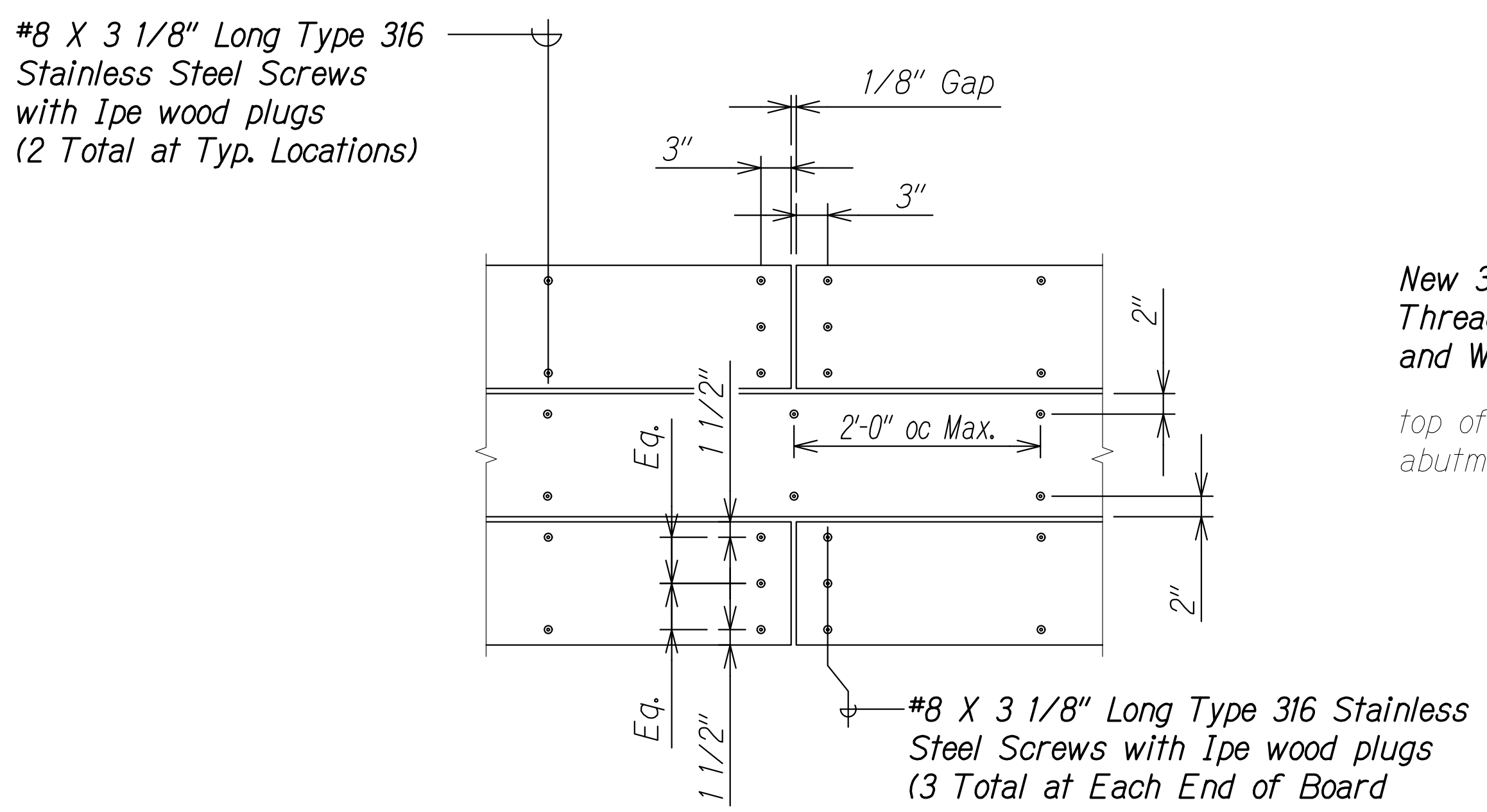
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	28	34



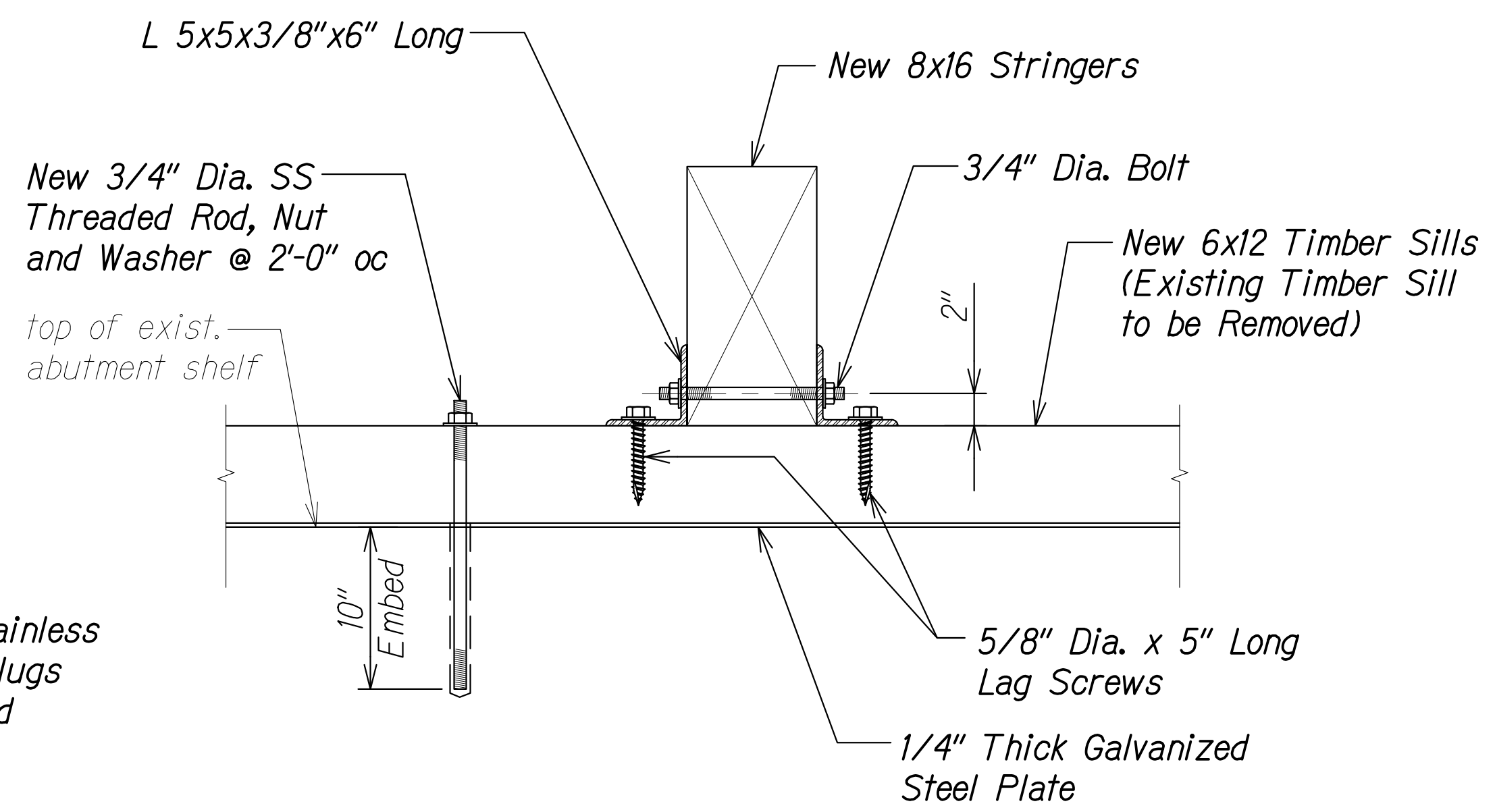
**DECK DETAIL AT ABUTMENT** (1)  
Scale: 1" = 1'-0" S2.5 | S2.5



**STRINGER KEEPER PLATE DETAIL** (2)  
Scale: 1" = 1'-0" S2.5 | S2.5



**WEARING SURFACE FASTENING DETAIL** (3)  
Scale: 1" = 1'-0" S2.5 | S2.5



**SECTION A**  
Scale: 1" = 1'-0" S2.5 | S2.5

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____

DRAWING NAME: Z:\00 ONGOING\00\_01 PROJECTS\21-009.1-HANAIEI BR. RPR-DOHA.01 CAD\09-28-22 BID SET\HTR-S0205 REPAIR.DWG PLOT TIME: 09-28-22, 4:38 PM

**RUSS S. MIYAHARA**  
LICENSED PROFESSIONAL ENGINEER  
NO. 9444-S  
HAWAII, U.S.A.

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*Russ S. Miyahara*  
SIGNATURE EXPIRATION DATE OF THE LICENSE 7-30-24

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TYPICAL DETAILS AND SECTION**

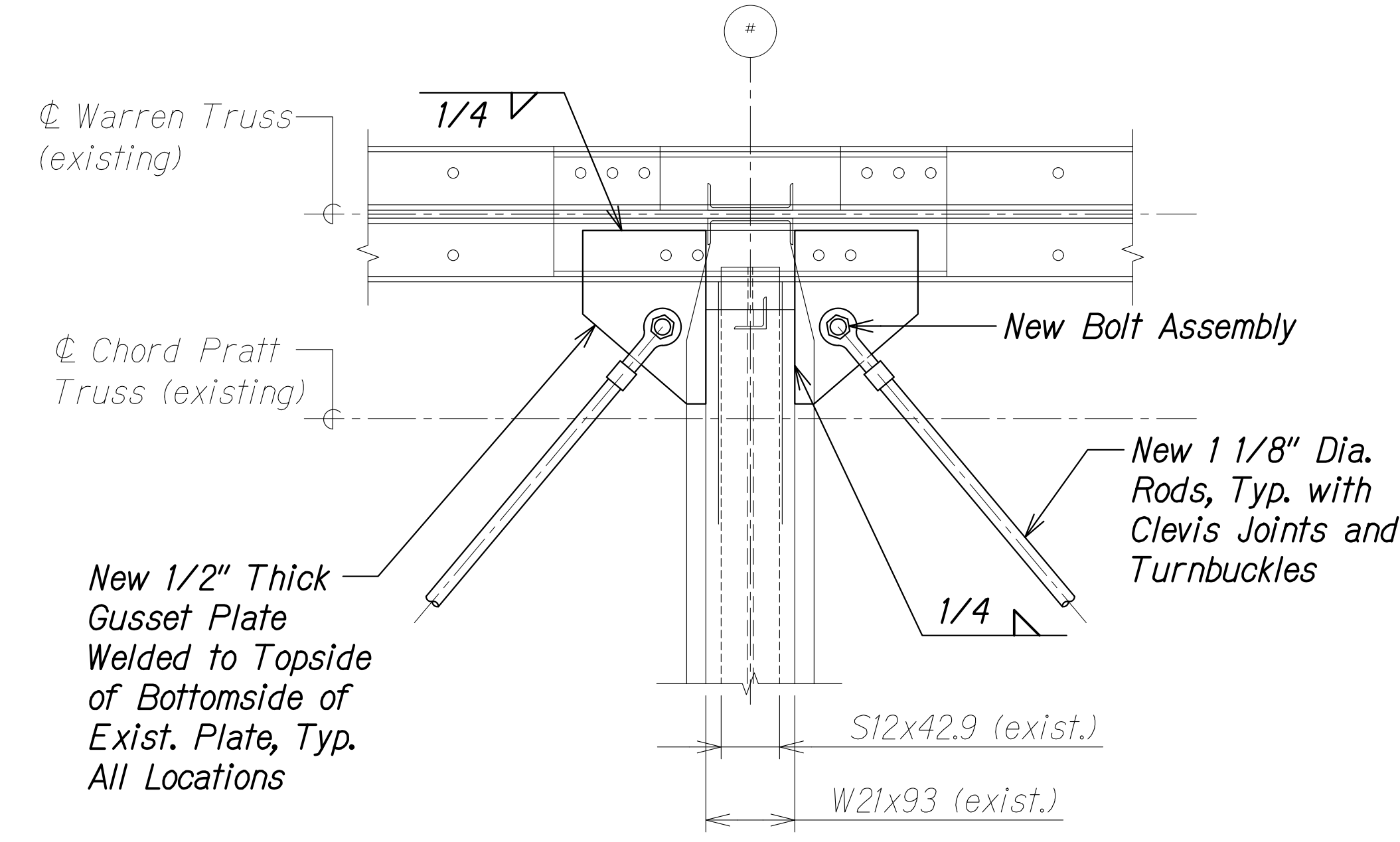
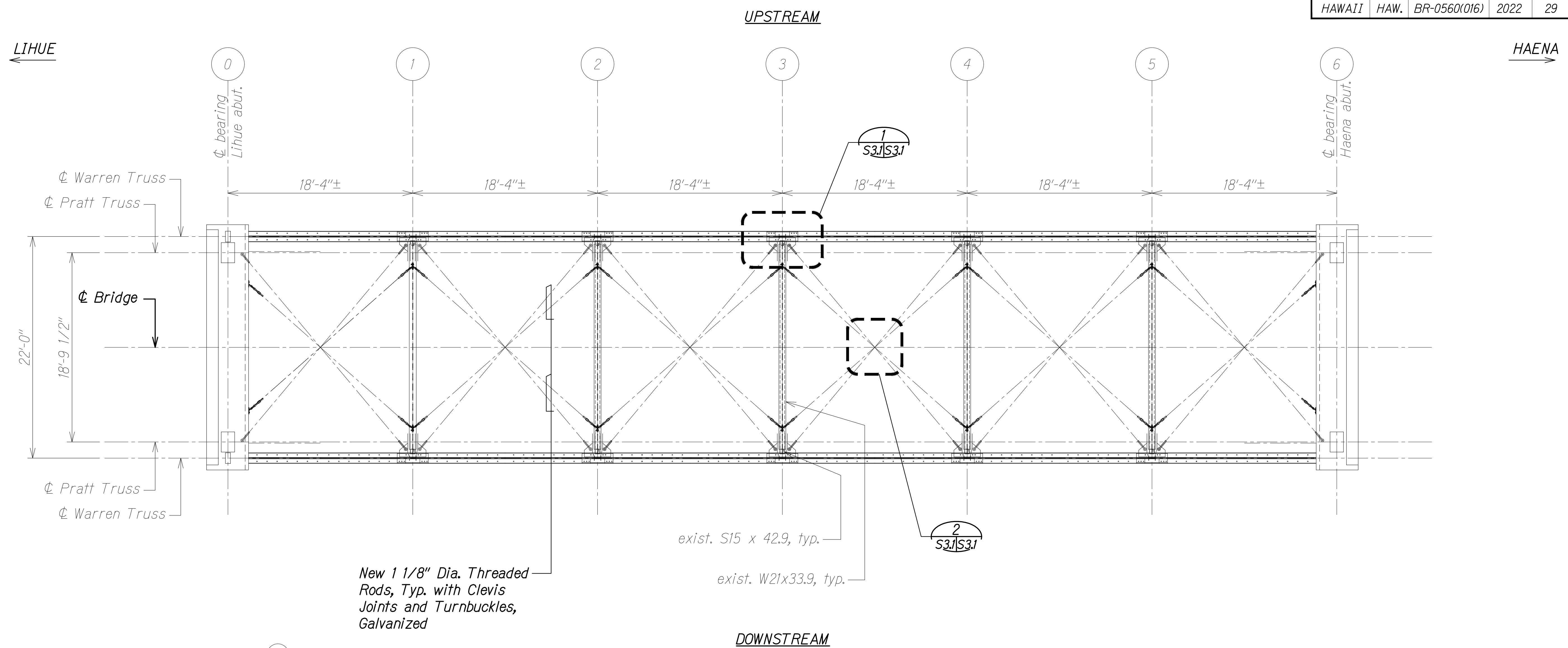
**KUHIO HIGHWAY**  
**Hanaie Bridge Repair**  
**FAP Proj. No. BR-0560(016)**

Scale: As Noted Date: July 2022

SHEET No. S2.5 OF 5 SHEETS

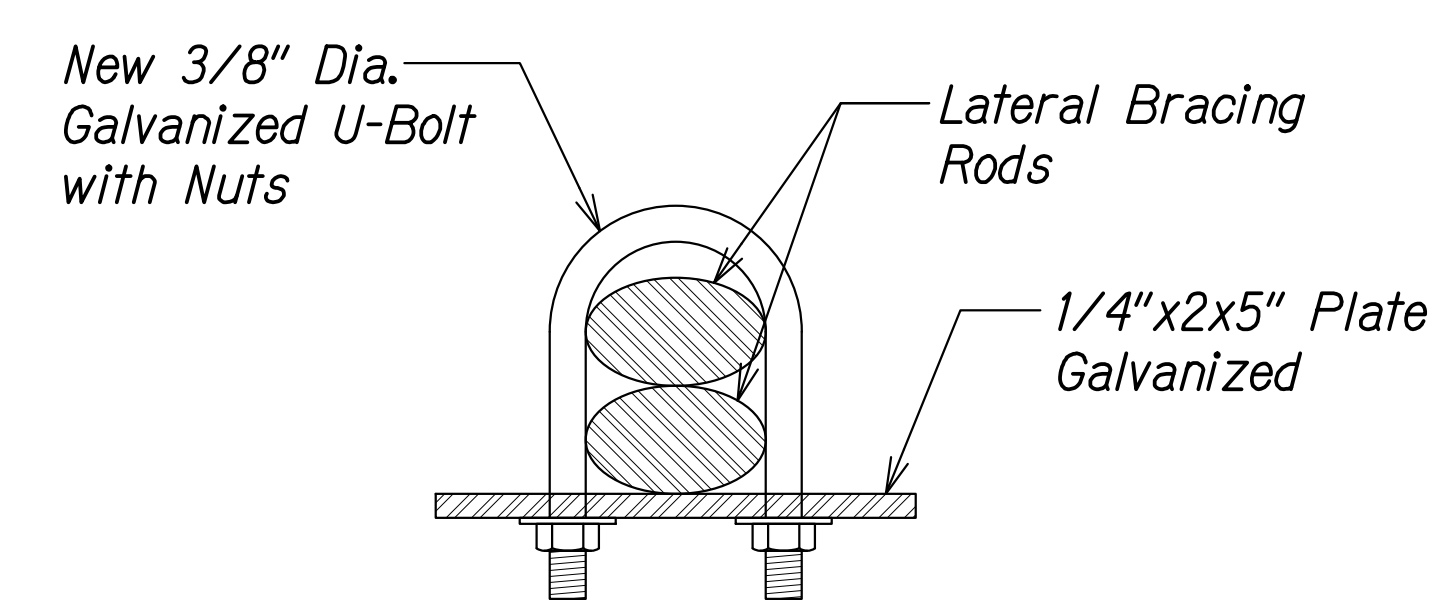


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	29	34



**DETAIL 1**  
Scale: 1" = 1'-0" S3.1/S3.1

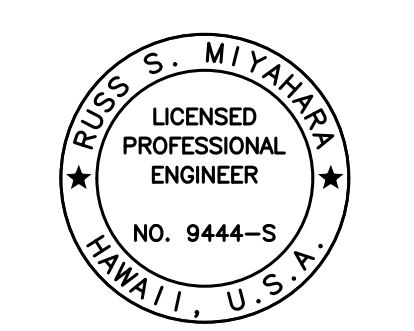
**LOWER CHORD BRACING PLAN A**  
Scale: 3/16" = 1'-0" S3.1/S3.1



**DETAIL 2**  
Scale: 6" = 1'-0" S3.1/S3.1

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____

DRAWING NAME: ZA:00 ONGONGONG.OO.JF PROJECTS.21-009.1-HANAIEI BR. RPR-DOHA.01 CAD:09-28-22 BID SET:HR-50301 TO 50304 WARREN/DWG PLOT TIME: 09-28-22, 4:56 PM



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HIGHWAYS DIVISION

**LOWER CHORD BRACING PLAN**

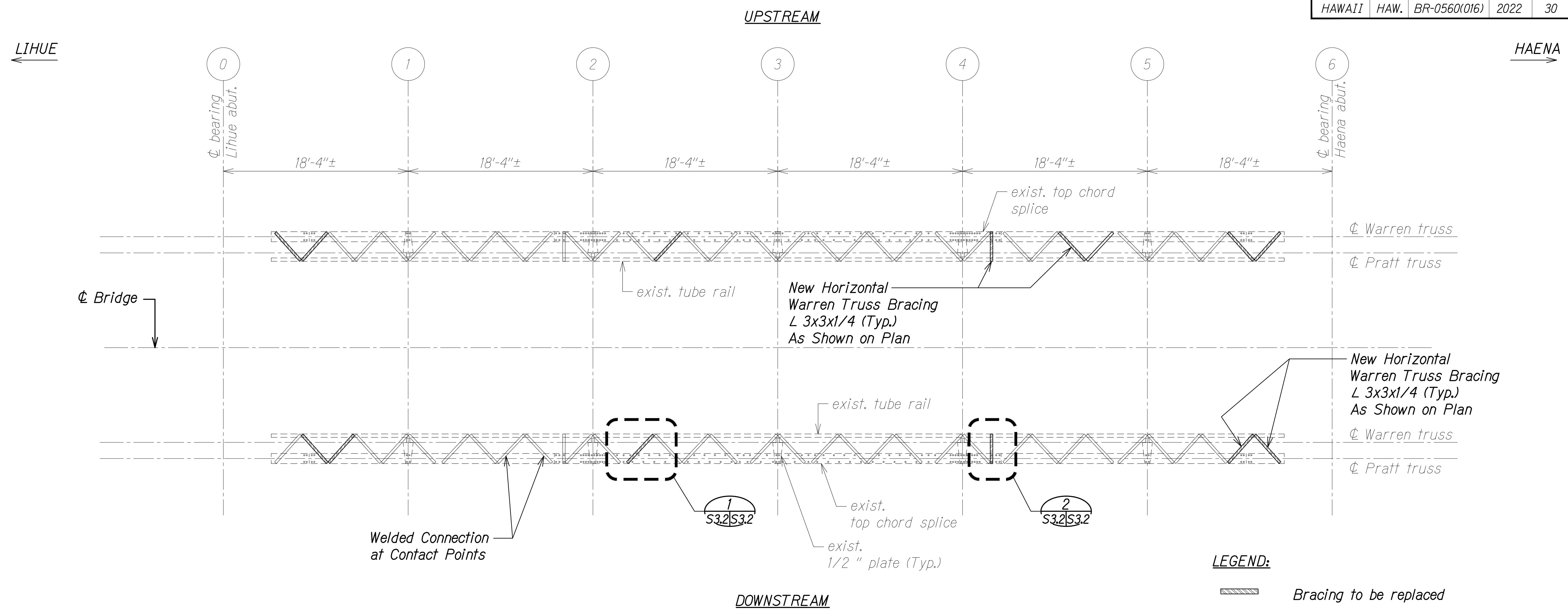
**KUHIO HIGHWAY**  
**Hanaiei Bridge Repair**  
**FAP Proj. No. BR-0560(016)**

Scale: As Noted Date: July 2022

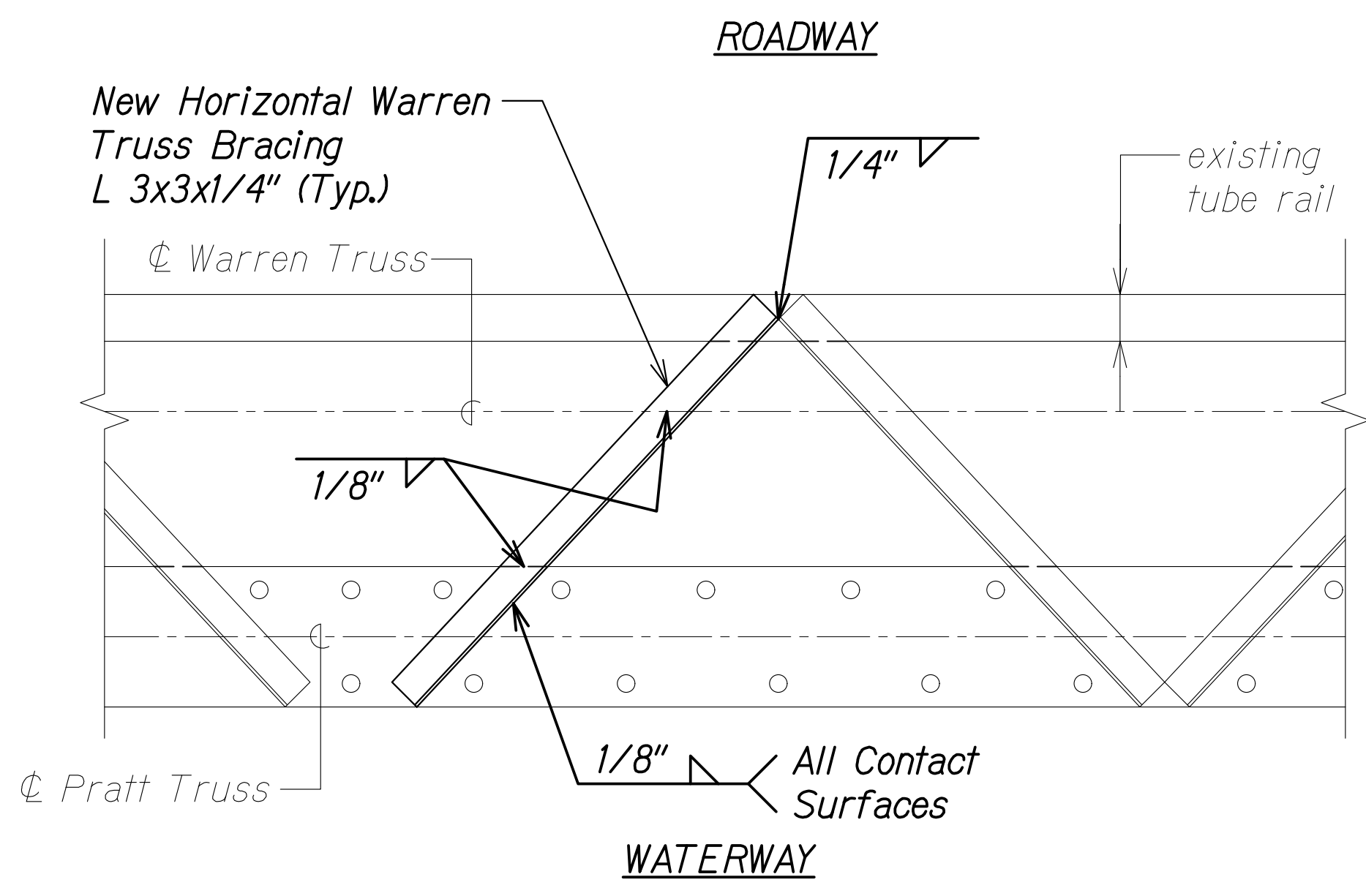
SHEET No. S3.1 OF 5 SHEETS



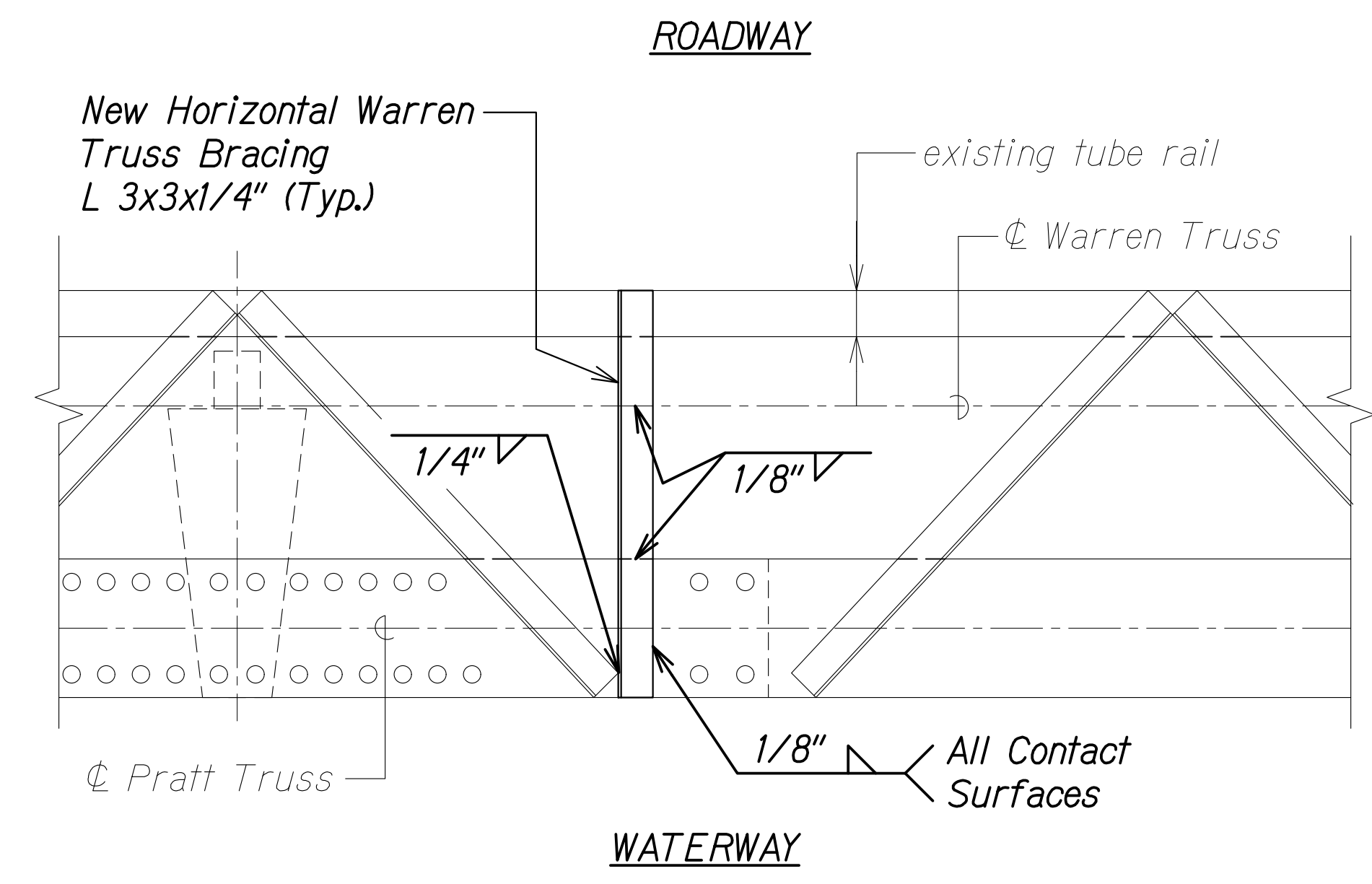
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	30	34



**UPPER WARREN CHORD PLAN** A  
 Scale: 3/16" = 1'-0" S3.2 | S3.2



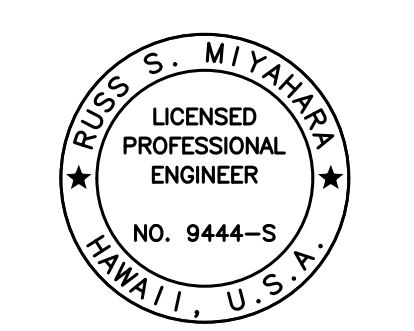
**DETAIL 1** 1  
 Scale: 1" = 1'-0" S3.2 | S3.2



**DETAIL 2** 2  
 Scale: 1" = 1'-0" S3.2 | S3.2

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

DRAWING NAME: Z:\00 ONGOING\00\_OF PROJECTS\21-009.1-HANAIEI BR. RPR-DOHA.01 CAD\09-28-22 BID SET\HTR-50301 TO 50304 WARREN.DWG PLOT TIME: 09-28-22, 5:01 PM



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**UPPER WARREN CHORD  
 PLAN AND DETAILS**

**KUHIO HIGHWAY  
 Hanalei Bridge Repair  
 FAP Proj. No. BR-0560(016)**

Scale: As Noted Date: July 2022

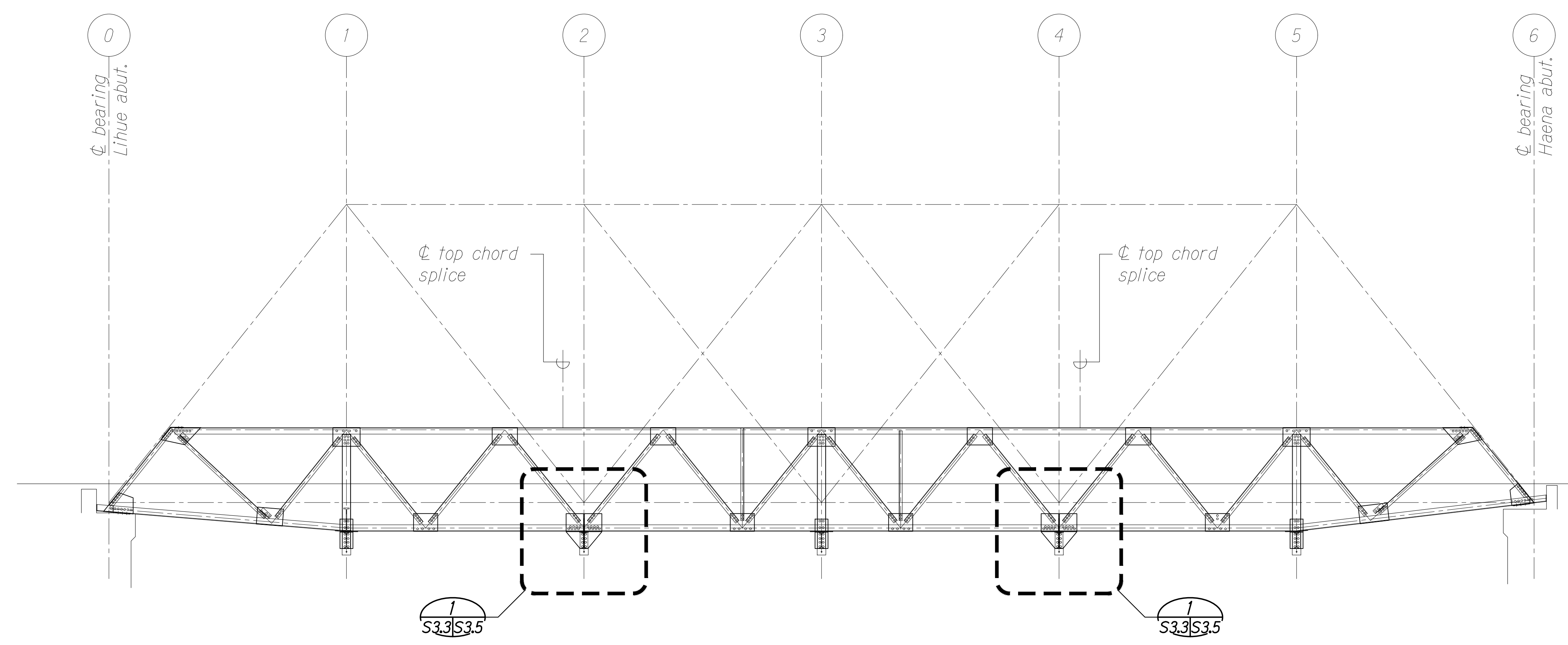
SHEET No. S3.2 OF 5 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	31	34

LIHUE ←

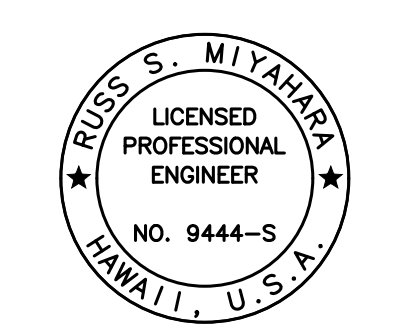
→ HAENA



**DOWNSTREAM ELEVATION - WARREN TRUSS** A  
 Scale: 3/16" = 1'-0" S3.3 | S3.3

ORIGINAL PLAN	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

DRAWING NAME: Z:\00 ONGOING\00\_OF PROJECTS\21-009.1-HANAIEI BR. RPR-DOHA.01 CAD\09-28-22 BID SET\HTR-S0301 TO S0304 WARRENLDWG PLOT TIME: 09-28-22, 5:02 PM



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STATE OF HAWAII  
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 HIGHWAYS DIVISION

**DOWNSTREAM WARREN TRUSS**  
**ELEVATION**

**KUHIO HIGHWAY**  
**Hanaiei Bridge Repair**  
**FAP Proj. No. BR-0560(016)**

Scale: As Noted Date: July 2022

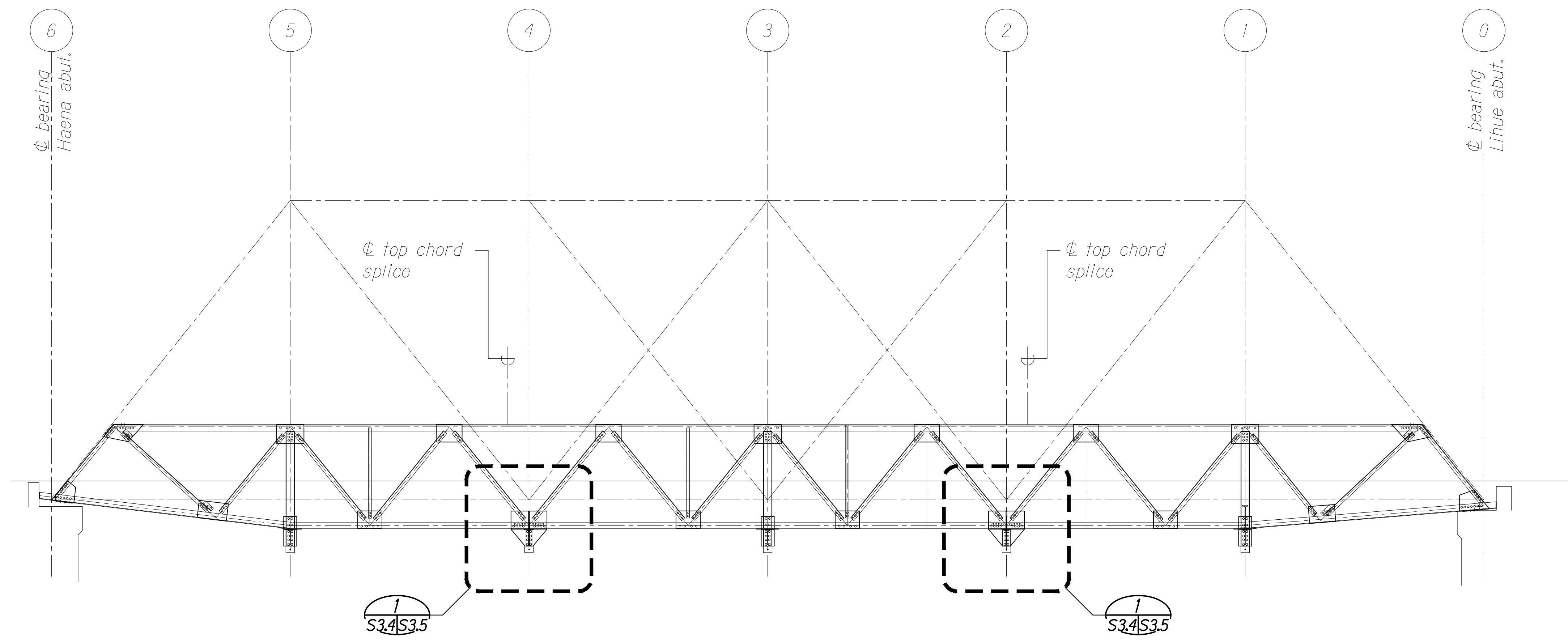
SHEET No. S3.3 OF 5 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	32	34

HAENA ←

→ LIHUE



**UPSTREAM ELEVATION - WARREN TRUSS** A  
 Scale: 3/16" = 1'-0"

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

DRAWING NAME: Z:\00 ONGOING\00\_OF PROJECTS\21-009.1-HANALEI BR. RPR-DOHA.01 CAD\09-28-22 BID SET\HTR-S0301 TO S0304 WARREN.DWG PLOT TIME: 09-28-22, 5:02 PM



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STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**UPSTREAM WARREN TRUSS**  
**ELEVATION**

**KUHIO HIGHWAY**  
**Hanalei Bridge Repair**  
**FAP Proj. No. BR-0560(016)**

Scale: As Noted Date: July 2022

SHEET No. S3.4 OF 5 SHEETS

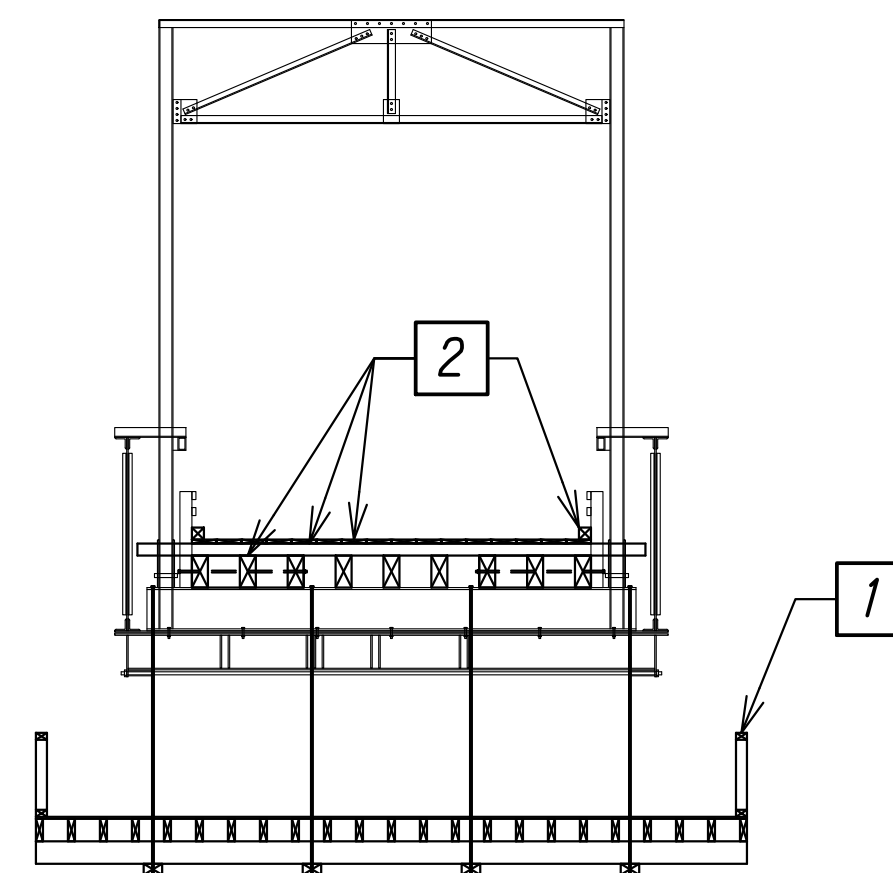






FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0560(016)	2022	34	34

STAGE 1



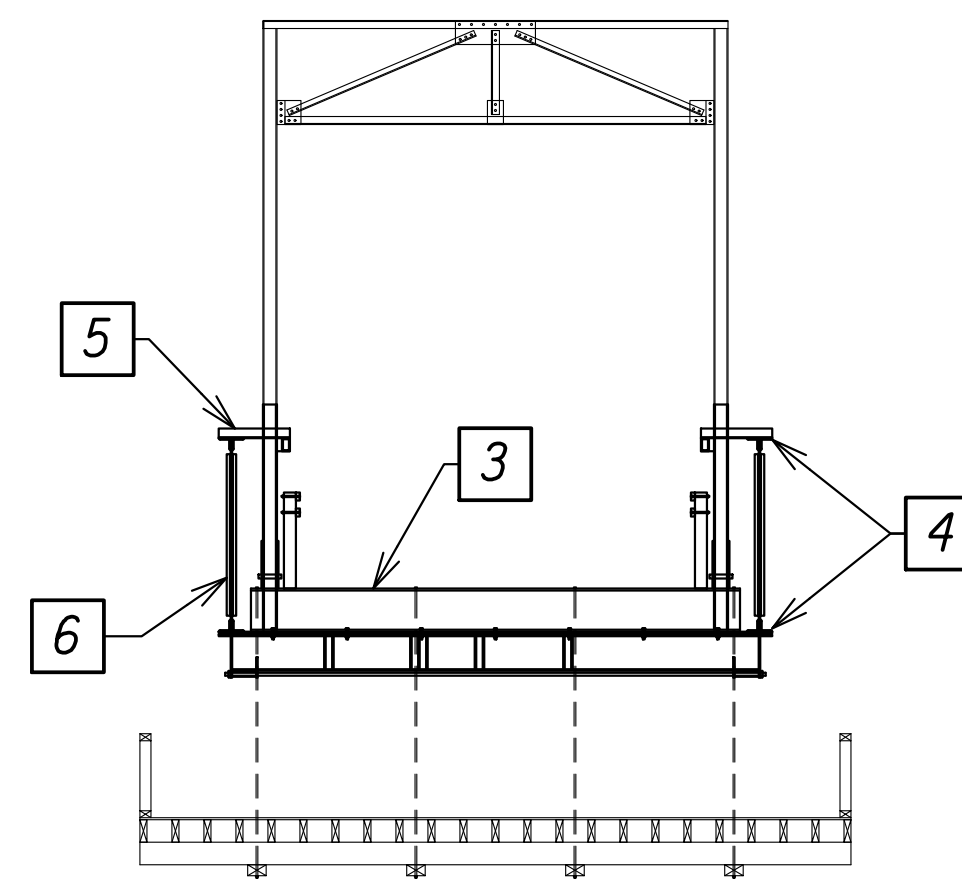
**CONSTRUCTION STAGE 1**

- 1 Install work platform and BMP containment.
- 2 Demolish and remove timber stringers, blocking, decking, wearing surface, and curb.

**CONSTRUCTION SEQUENCE NOTE:**

- 1. The Contractor shall submit a construction phasing plan detailing the order of operation of all activities. This includes phasing of deck demolition, deck replacement, and painting operations taking into account the limited lane closure times.

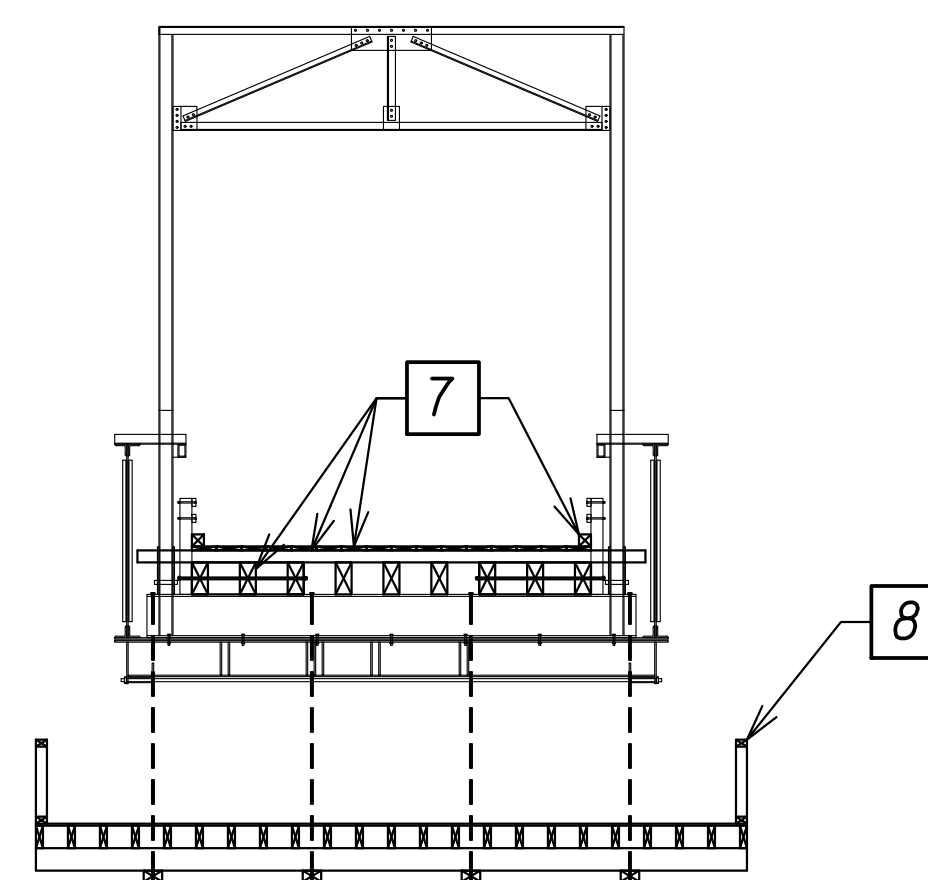
STAGE 2



**CONSTRUCTION STAGE 2**

- 3 Repair top of steel floorbeam, if necessary, following removal of timber stringers.
- 4 Repair upper and lower chords of Warren Truss.
- 5 Replace horizontal bracing on top chord of Warren Truss.
- 6 Clean and paint lower section of bridge members.

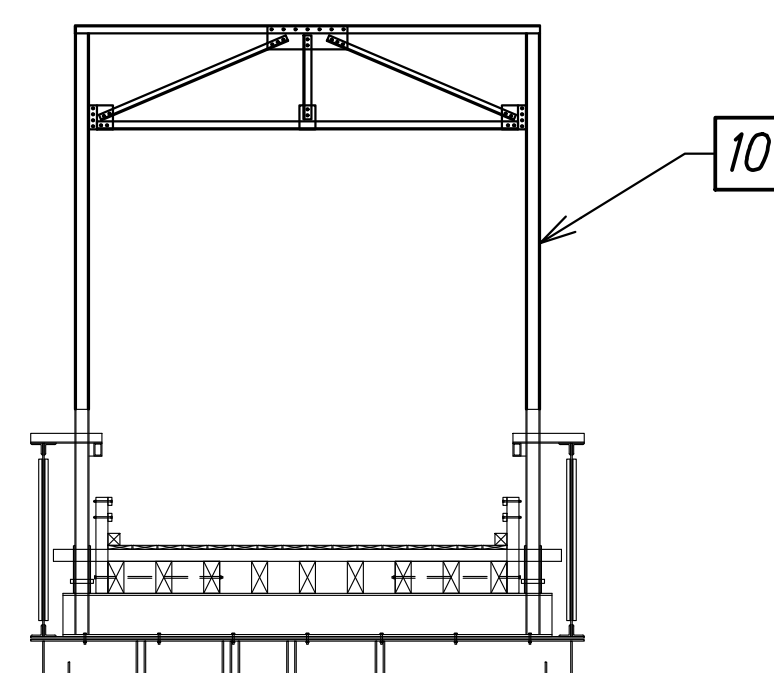
STAGE 3



**CONSTRUCTION STAGE 3**

- 7 Install new timber stringers, blocking, decking, wearing surface, and curb.
- 8 Remove work platform.
- 9 Repeat steps 1 through 8 as needed until full bridge span is completed.

STAGE 4

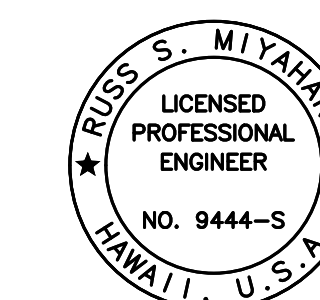


**CONSTRUCTION STAGE 4**

- 10 Paint bridge members above deck level.

ORIGINAL PLAN	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

DRAWING NAME: Z:\00 ONGOING\00\_0F PROJECTS\21-009.1--HANALEI BR. RPR-DOHA.01 CAD\09-28-22 BID SET\HTR-50401 CON\_SEQ.DWG PLOT TIME: 09-28-22, 4:18 PM



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**CONSTRUCTION SEQUENCE**

**KUHIO HIGHWAY  
Hanalei Bridge Repair  
FAP Proj. No. BR-0560(016)**

Scale: As Noted Date: July 2022

SHEET No. 34/ OF 1 SHEETS