

INDEX OF STRUCTURAL DRAWINGS

Table with 6 columns: FED. ROAD DIST. NO., STATE, FEDERAL AID PROJ. NO., FISCAL YEAR, SHEET NO., TOTAL SHEETS. Values: HAWAII, HAW., NH-0300(205), 2024, 122, 197

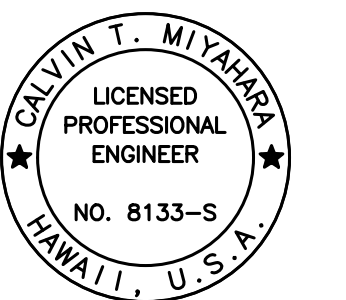
Table with 2 columns: SHT NO., DESCRIPTION. Lists drawings S1.1 to S5.6.

Table with 2 columns: SHT NO., DESCRIPTION. Lists drawings S5.7 to S9.5.

Table with 2 columns: SHT NO., DESCRIPTION. Lists drawings S10.1 to S12.1.

Table with 2 columns: SURVEY PLOTTED BY, DATE; DRAWN BY; DESIGNED BY; QUANTITIES BY; CHECKED BY.

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-10-24\PS&E BID\DSU2-S0101 INDEX.DWG PLOT TIME: 01-11-24 2:24 PM



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Signature: Calvin Miyahara, 10/2023

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION. INDEX OF STRUCTURAL DRAWINGS. INTERSTATE ROUTE H-1 AND H-201 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B. FAP NO. NH-0300(205). Scale: None Date: Oct. 2023 SHEET No. S1.1 OF 5 SHEETS

STRUCTURAL GENERAL NOTES

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 123	197

1. Standard Specifications and Plans:

- A. Hawaii Department of Transportation (HDOT), Hawaii Standard Specifications for Road and Bridge Construction, 2005.
- B. HDOT Highways Division Design Branch - Standard Plans dated 2008.

2. Design Specifications:

- A. American Association of State Highway and Transportation Officials (AASHTO) 2020 "LRFD Bridge Design Specifications", 9th Edition as amended by HDOT document dated August 8, 2014 with subject title "Design Criteria for Bridges and Structures".
- B. AASHTO 2015 "LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals", 1st Edition, including all Interim Revisions through 2022.
- C. HDOT document dated August 8th, 2014 with subject title "Design Criteria for Bridges and Structures" and HDOT memorandum dated January 8, 2018 with subject title "Changes to Design Criteria for Bridges and Structures".

3. General:

- A. Before preparation of shop drawings for the sign support frame structures, the Contractor shall verify in the field the exact location of each anchor bolt and the elevations of existing grades, roadway, bridge decks, bent caps, corbels, barriers, pedestals, center medians, etc.

4. Wind Loads:

- A. Basic Wind Speed: 145 mph
- B. Recurrence Interval: 1700 years
- C. Fatigue Importance Factor shall be based on Fatigue Category I.
- D. Galloping and natural wind gusts have been considered for cantilevered sign structures.
- E. Natural wind gusts have been considered for all sign structures.
- F. Sign structures have been designed for a truck induced gust based on a truck speed of 20 mph over the posted speed.
- G. An additional 9 square foot sign that is centered 10-feet above finish grade is included in the design for all sign structures.
- H. Railing Test Level: TL-2 - HIEB-260

TL-3 - HIWB-421 and 78WB-853

5. Steel:

- A. All structural steel shall conform to the following requirements:
 - 1. Plates, splice plates, and cover plates, ASTM A709, fy = 36 ksi
 - 2. Angles ASTM A709, fy = 36 ksi
 - 3. Base Plates and Wide Flanges ASTM A709, fy = 50 ksi
 - △ 4. Tube Rail ASTM A500B, fy = 46 ksi
 - △ 5. All others ASTM A709, fy = 36 ksi
- B. All new steel structures shall be ASTM A123 hot-dip zinc galvanized after fabrication. Post-galvanizing quenching/passivation shall not be utilized if steel is going directly to paint. Coordinate with coating Contractor.
- △ C. Vent holes shall be provided in members for hot-dip zinc galvanized operation. Size and location of holes shall be determined by galvanizing contractor, unless otherwise shown on the drawings. Vent hole sizes and locations shall be included on the structural steel shop drawings. All holes, other than base plates, and where noted shall be filled with zinc plugs following galvanizing operation.
- D. All shop fabricated holes shall be full-size drilled or sub-punched and reamed.
- E. Plates for columns, cover plates, base plates, angles, HSS tubes, wide flange sections, and anchor bolts shall meet the longitudinal Charpy V-Notch requirements for a non-fracture critical member in Zone 1.
- F. Steel plates for columns shall be cut and fabricated so that the primary direction of rolling is parallel to the column length. For splice plates, the direction shall be parallel to the direction of the splice. For base plates, the direction shall be parallel to the direction of vehicular traffic.
- △ G. Bolts which connect steel to steel shall be high-strength bolts conforming to ASTM F3125, Grade A325, Type 1. Bolts shall be ordered such that threads are excluded from the shear plane. Bolts shall be snug tightened unless otherwise shown on plans. All pretensioned/slip-critical bolts shall utilize Direct Tension Indicating (DTI) washers. Bolts shall be inspected following installation.
- H. Anchor bolts which connect steel to concrete shall be high-strength threaded rods conforming to ASTM F1554, Grade 105 and shall be straight rod with anchor plate details at the end as shown in the contract drawings. Anchor bolts shall be pretensioned by the turn of the nut method. See anchor bolt pretensioning schedule.
- △ I. New anchor bolts shall utilize a double nut connection with a leveling nut and top nut.
- J. All nuts shall be ASTM A563 DH heavy-hex and all hardened washers shall be ASTM F436. DTI Washer shall be ASTM F959 and shall be installed under either the bolt head or a hardened washer.

5. Steel (Cont.):

- K. Threaded couplers shall be ASTM A194 heavy-hex and capable of developing 125% of the full yield strength of the anchor bolts.
- L. All hardware, including bolts, anchor bolts, nuts, washers, and couplers shall be ASTM A153 hot-dip zinc galvanized. Nut and coupler threads may be chased following the galvanizing process.
- M. All welding shall conform to the latest ANSI/AASHTO/AWS D1.5 Bridge Welding Code. Welding shall be performed in accordance with a Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) as required in AWS D1.5 and approved by the Engineer. The WPS variables shall be within the parameters established by the filler-metal manufacturer.
- N. All weld sizes are shown in inches.
- O. All welds shall utilize E70XX Electrodes where Shielded Metal Arc Welding is utilized. Where other welding processes are used, filler metal shall have matching strength to base metal.
- P. All welding shall be done in a manner to minimize distortion.
- Q. Field welding shall not be permitted except at field splice locations as shown on the drawings.
- R. Shop welds and field welds shall be identified in the shop drawings.
- S. Fabricate sign structures with camber as specified on the plans. Two post sign structures shall have a smooth parabolic camber.

ORIGINAL PLAN	DATE
DRAWN BY	DATE
DESIGNED BY	DATE
QUANTITIES BY	DATE
CHECKED BY	DATE

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSUZ-S0102 GENNOTES ADD1.DWG PLOT TIME: 01-25-24, 4:03 PM



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SIGNATURE: *Calvin T. Miyahara* 1-25-24

1/25/24	△ Add. 1 - Revised Notes
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: None Date: Oct. 2023

SHEET No. **SI.2** OF 5 SHEETS

STRUCTURAL GENERAL NOTES

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 124	197

6. Concrete:

- A. All concrete, other than drilled shaft concrete, shall have a minimum 28-day compressive strength $f'_c = 5000$ psi, maximum W/C ratio of 0.45, and a maximum cementitious material content of 615 (lbs/cyd) unless otherwise noted. Concrete mix shall contain glass fibers, SRA, and a corrosion inhibitor.
- B. An alkali-resistant glass macro fiber shall be added to the concrete mix. The fiber shall have an aspect ratio of 67 and a length of 1 1/2". The dosage shall be 13 lbs per cubic yard of concrete.
- C. A shrinkage reducing admixture such as Masterlife SRA 35 or approved equal shall be added to the concrete mix. The dosage requirement shall be 128 ounces per cubic yard of concrete or as approved by the Manufacturer.
- i* D. A migrating corrosion inhibitor amine carboxylate water-based admixture shall be added to the concrete mix. The minimum dosage requirement shall be 24 ounces per cubic yard of concrete.
- i* E. Drilled shaft concrete shall have a minimum 28-day compressive strength $f'_c = 4,500$ psi, maximum w/c ratio of 0.45, and a maximum cementitious material content of 720 (lbs/cyd). Concrete mix shall contain a corrosion inhibitor. For drilled shaft concrete see Special Provisions Section 511.
- i* F. All concrete must comply with the CO2 footprint reduction requirements of Special Provisions Section 601.
- i* G. For very early strength latex modified concrete (VESLMC) requirements, see Special Provisions Section 540.

7. Steel Reinforcing:

- A. All reinforcing steel shall be ASTM A615 Grade 60 deformed bars unless otherwise noted.
- B. Reinforcing steel shall be ASTM A706 Type W where welded connections are required.
- C. The clear cover, measured from the surface of the concrete to the face of any reinforcing bars, shall be as follows, except as otherwise shown.
- 1). Concrete cast against and permanently exposed to earth = 3" unless otherwise noted
 - 2). All others unless otherwise noted = 2"
- D. Reinforcing bars shall be detailed in accordance with the latest edition of the American Concrete Institute (ACI) Detailing Manual, unless otherwise noted.
- E. Reinforcing bars shall be placed and installed in accordance with the CRSI Manual of Standard Practice and CRSI Placing Reinforcing Bars, unless otherwise noted.

7. Steel Reinforcing (Cont.):

- F. Minimum clear spacing between parallel bars shall be 1 1/2 times the diameter of bars (for non-bundled bars). In no case shall the clear distance between edge of the bars be less than 1 1/2 times the maximum size of the coarse aggregate or 1 1/2", whichever is greater.
- G. All dimensions relating to reinforcing bars are to centers of bars unless otherwise noted.
- H. Reinforcing bars shall be securely tied at all intersections and lap splices except where the spacing of intersections is less than one foot in each directions, in which case alternate intersections shall be tied.

8. Construction Notes:

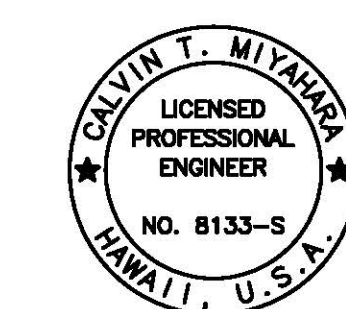
- A. The Contractor shall verify all dimensions and site conditions and shall report any discrepancies in writing to the Engineer before commencing work or ordering materials.
- B. The Contractor shall verify all site conditions and not rely upon these plans for existing dimensions, elevations and azimuths. Roadway location, gutters, curbs and sidewalks, etc., conditions may differ from those shown.
- C. The Contractor shall be solely responsible for the protection of adjacent properties, utilities and existing and new structures from damage due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
- i* D. The Contractor shall verify the location of all utility lines and notify the respective owners before commencing with excavation, temporary piling or sheeting, or drilled shaft installation.
- E. Except as otherwise noted, all vertical dimensions are measured plumb.
- F. For concrete finish see Standard Specifications.
- G. Construction joints may be relocated or additional ones added subject to the acceptance of the Engineer.
- H. Unless otherwise noted, all exposed concrete edges shall be chamfered 3/4" x 3/4".
- I. Prior to performing any drilling or coring operations into existing reinforced concrete, the Contractor shall verify the location of all existing reinforcing steel using an appropriate ground penetrating radar rebar scanner. Inform the Engineer of any conflicts, for review, if the planned drilled/cored hole cannot be moved.
- J. Epoxy anchoring material shall be an injectable, two-component adhesive that has a current Evaluation Service Report from ICC-ES (International Code Council Evaluation Service Inc.) and has a characteristic bond strength, $\tau_{k,uncr}$, of at least 1,600 psi for a #5 reinforcing bar at Temperature Range A.
- K. Epoxy anchoring adhesive shall be injected into drilled hole using a piston-plug delivery system when installed overhead.

8. Construction Notes (Cont.):

- L. All individuals performing drilled reinforcing dowel work shall hold a current ACI/CRSI Adhesive Anchor Installer certification.
- M. Drilling procedures, equipment, material and certifications shall be submitted to the Engineer for approval.
- N. In no case shall any adhesive anchor be installed closer than 6-inches to any concrete edge or joint unless shown on plans.
- i* O. All holes drilled into concrete that go unused shall be completely filled with a fast setting, two-component, polymer-modified, non-sag, cementitious patching and repair mortar containing a migratory corrosion inhibitor and approved by the Engineer.
- P. All drilled holes shall have dowels installed within same work shift or shall otherwise be completely filled with a patching and repair mortar.
- Q. Contractor shall follow all epoxy anchoring adhesive Manufacturer's Printed Installation Instructions (MPII).
- R. Location of drilled holes in existing concrete for reinforcing steel dowels as shown on the plans are approximate. Prior to placing holes in concrete, the Contractor shall locate all reinforcing steel, anchor bolts, thru bolts holes, etc. and adjust the location of the drilled holes to clear all of them. Final hole locations are subject to the acceptance of the Engineer.
- S. Epoxy shall fully cure prior to pouring concrete around reinforcing steel dowels.
- T. All holes shall be hammer drilled using a hollow bit connected to a vacuum system in accordance with a current Evaluation Service Report from ICC-ES.
- U. All demolition work of concrete, unless otherwise explicitly stated, shall be performed using no larger than a 30-lb demolition hammer.

ORIGINAL PLAN	DATE
DRAWN BY	DATE
TRACED BY	DATE
DESIGNED BY	DATE
QUANTITIES BY	DATE
CHECKED BY	DATE

DRAWING NAME: Z:\00_ORG\CON\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01_CAD\01-XX-24\ADD\DSUZ-S0102_GENNOTES_ADD1.DWG PLOT TIME: 01-25-24, 4:03 PM



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Calvin T. Miyahara
SIGNATURE EXPIRES ONE YEAR FROM DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: None Date: Oct. 2023

SHEET No. **SI.3** OF 5 SHEETS

1/25/24	<i>i</i> Add. 1 - Revised Notes
DATE	REVISION

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 125	197

STRUCTURAL GENERAL NOTES

8. Construction Notes (Cont.):

- V. When only portions of concrete are to be demolished the intersections between the demolished concrete and the concrete that are to remain shall have a 1/2-inch deep sawcut around the entire perimeter of the demolished area.
- W. All existing concrete substrate surfaces which new concrete is poured against shall be roughened to a minimum 1/4" amplitude and Saturated Surface Dry (SSD) prior to the placement of new concrete.
- X. All existing reinforcing shall remain in place unless otherwise noted. Any existing reinforcing damaged during concrete removal that was not permitted to be removed shall be repaired, with approval from the Engineer, at no cost to the State.
- Y. Existing reinforcing that is to be partially removed shall be cut back to provide 2" clear from finish concrete surface.
- Z. New concrete surfaces shall match the finish of the existing structure. Any reveals, patterns, or decorative features shall also match the existing structure, unless otherwise noted.
- AA. Aluminum members, stainless steel and other dissimilar metals in contact with structural steel shall be isolated with an appropriate dielectric material as approved by the Engineer.
- AB. Anchor bolts shall be installed using a template to ensure proper layout. Anchor bolts shall be installed with misalignments of less than 1:40 from vertical. After installation, firm contact shall exist between the anchor bolt nuts, washers, and base plate on any anchor bolt installed in a misaligned position.
- AC. New roadway signs shall be installed before existing signs are removed. Existing roadway signs shall be removed immediately after new signs are installed, unless otherwise approved by the Engineer.
- AD. Existing pavement, concrete, riprap, etc. shall be restored to its original condition after completion of work.
- AE. All attachments on the sign structures shall be considered as part of the sign structure and its removal will not be paid for separately.
- AF. Existing sign structures H201R-874, H1WB-421, and H2NBR-722 are believed to contain lead-based paint in excess of 5000 PPM as defined by the U.S. Environmental Protection Agency (EPA). See Special Provisions Section 695 for removal and disposal requirements.
- AG. Existing sign structures H1EB-104, H1EBR-260, and 78WB-853 are believed to contain lead-containing paint below the 5000 PPM concentration threshold.
- AH. The Contractor is responsible for conducting work in accordance with 29 CFR 1926.62 OSHA Lead Construction Standard including an air monitoring assessment during lead paint disturbance if necessary.

- AI. The Contractor is responsible for conducting their own independent paint chip sampling of the existing sign structures to identify the presence, extent, and condition of existing paint suspected of containing lead.
- AJ. The Contractor shall perform a thorough survey of all sign structure locations to verify elevations of existing grades, roadway, bridge decks, bent caps, corbels, barriers, pedestals, center medians, etc. and to verify sign structure lengths and heights. This survey shall be performed prior to the submittal of structural steel and reinforcing steel shop drawings.
- AK. The Contractor shall disconnect all power to the existing signs. The electrical lines shall be capped and stored in the closest State of Hawaii DOT pull box, unless otherwise noted.

9. Coating:

- A. New sign structures shall be hot-dip zinc galvanized prior to being coated with an epoxy intermediate and a highly weatherable Fluoropolymer top coat.
- B. Sign structures shall be coated at an offsite location by an approved SSPC-QP-3 certified shop. Submit written coating procedures to the Engineer for review and approval prior to starting work. Only touch up coating shall be allowed at the construction site.
- C. Finish color shall be Dark Green.
- D. See Special Provisions Section 675 and 697 for further coating requirements including surface preparation and stripe coating.

10. Foundation Notes:

- A. The Foundation Design is based upon recommendations contained in the Geotechnical Engineering Exploration report dated July 24, 2023. The report shall be considered as a part of the construction documents and its recommendations shall be implemented unless otherwise directed by the Engineer. The Contractor may obtain a copy of the report at the State of Hawaii, Department of Transportation, Highways Division, upon written request to the Engineer.

ORIGINAL PLAN	DATE
DRAWN BY	DATE
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DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSU2-S0102 GENNOTES ADD1.DWG PLOT TIME: 01-25-24, 4:04 PM



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Calvin Miyahara
4-23-24
SIGNATURE EXPIRES ONE YEAR FROM DATE

1/25/24	Add. 1 - Revised Notes
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES

**INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)**

Scale: None Date: Oct. 2023

SHEET No. **514** OF 5 SHEETS

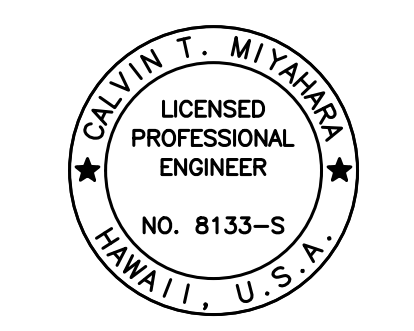
SYMBOLS AND ABBREVIATIONS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	126	197

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

SURVEY PLOTTED BY _____ DATE _____ DRAWN BY _____ TRACED BY _____ DESIGNED BY _____ QUANTITIES BY _____ CHECKED BY _____	ORIGINAL PLAN _____ NOTE BOOK _____ No. _____
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DRAWING NAME: ZA 00 ONGOING 16-0062-DESTINATION SIGNS PH 3B-STAGE 2 01 CAD 01-10-24 P5&E BID DLSU2-S0105 SYM&ABBREV.DWG PLOT TIME: 01-11-24, 2:25 PM



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE: *Calvin T. Miyahara* DATE: 10-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

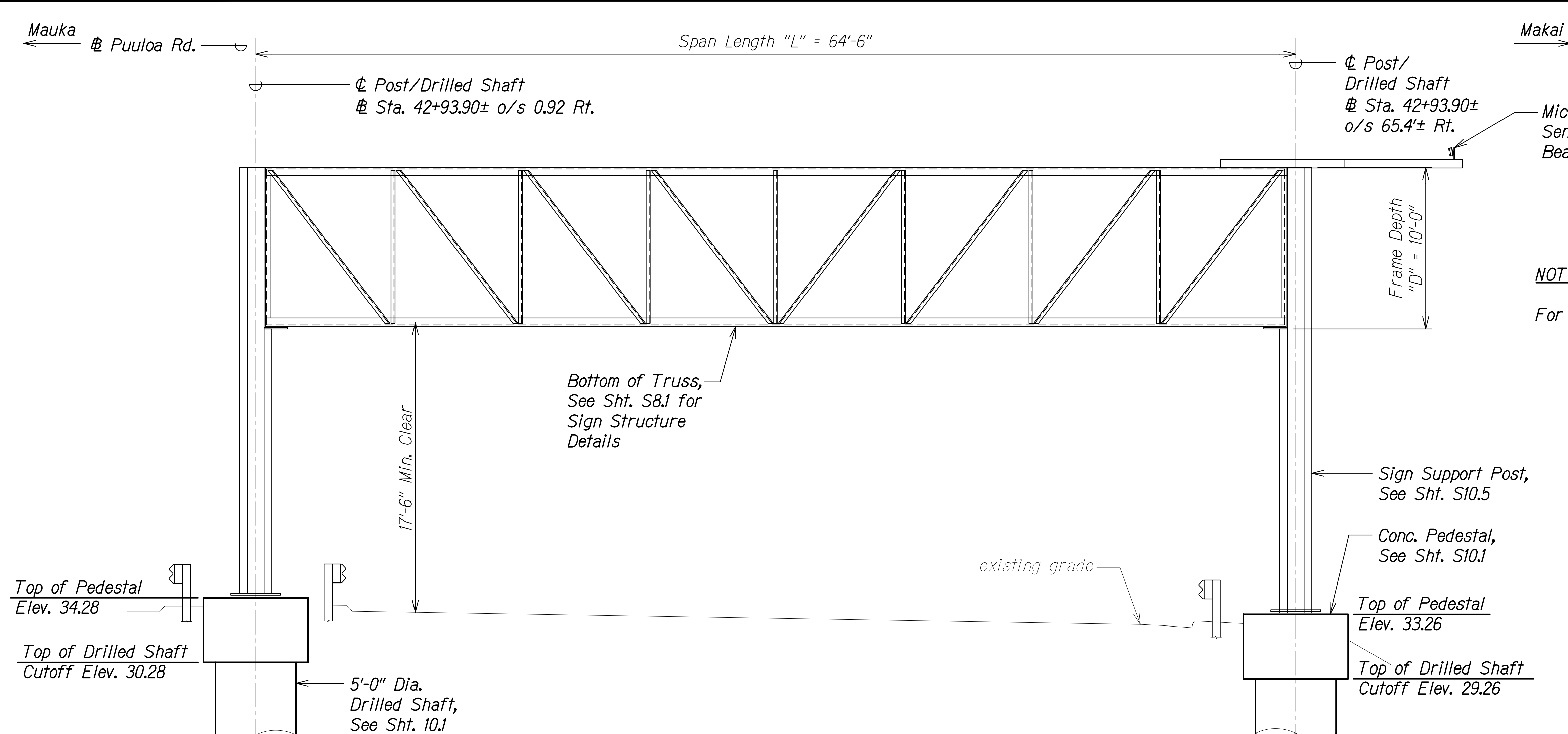
SYMBOLS AND ABBREVIATIONS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: None Date: Oct. 2023

SHEET No. 515 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	127	197



NOTE:
For sign structure schedule, see Sht. S11.1.

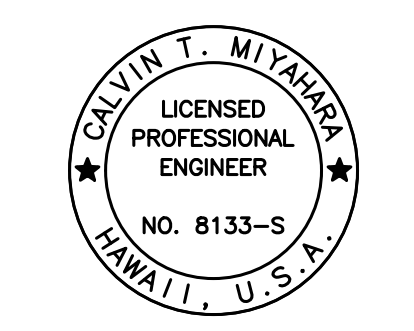
NEW SIGN STRUCTURE H201R-874 ELEVATION
Scale: 1/4" = 1'-0" A
S2.1 S2.1



EXISTING SIGN STRUCTURE H201R-874

ORIGINAL PLAN	DATE
NOTE BOOK	
No.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-10-24.P5&E BID\DSU2-S0201 H1EBR-874-ELEV.DWG PLOT TIME: 01-11-24, 2:25 PM



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calvin Miyahara
SIGNATURE EXPIRATION DATE OF THE LICENSE 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

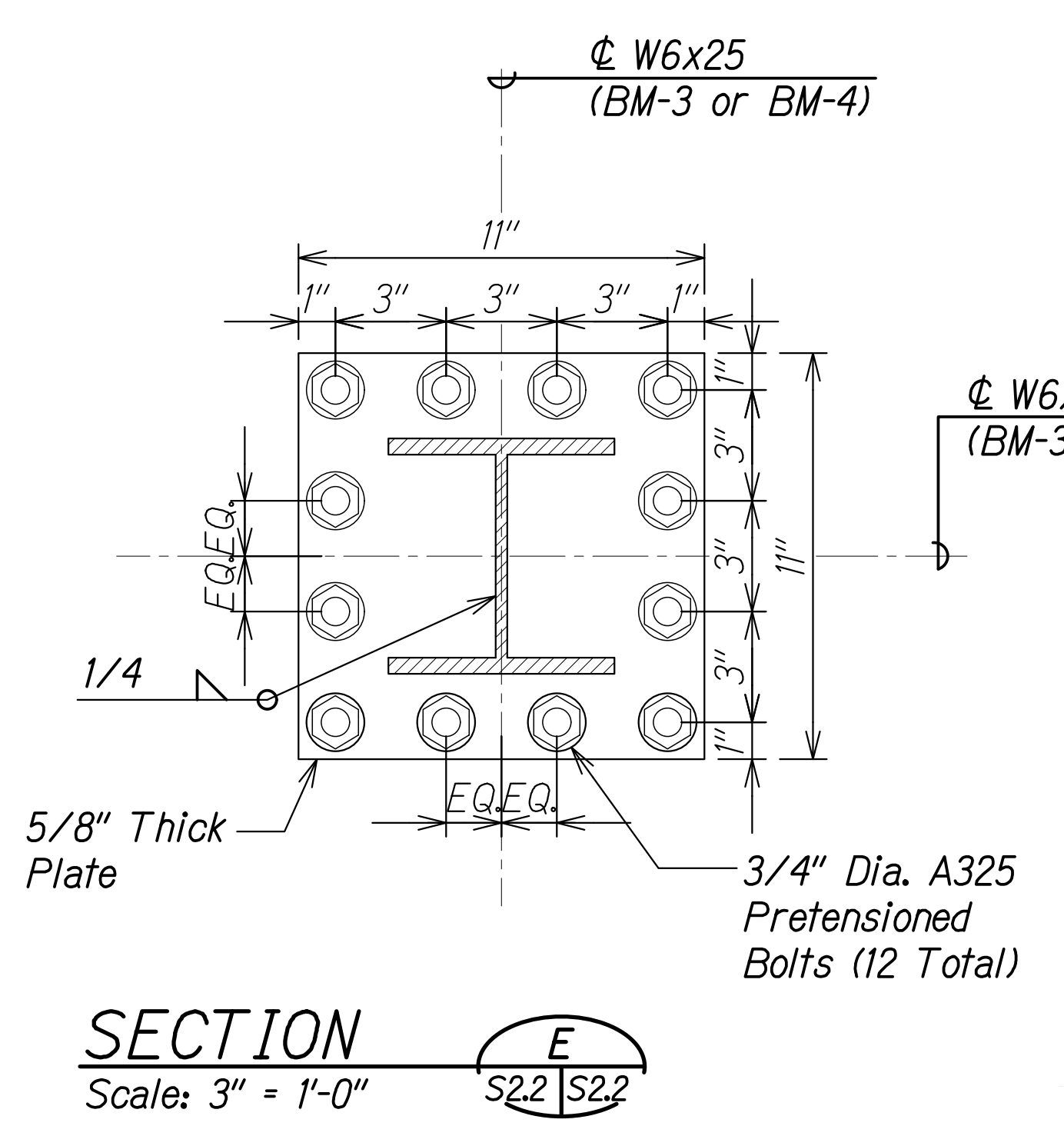
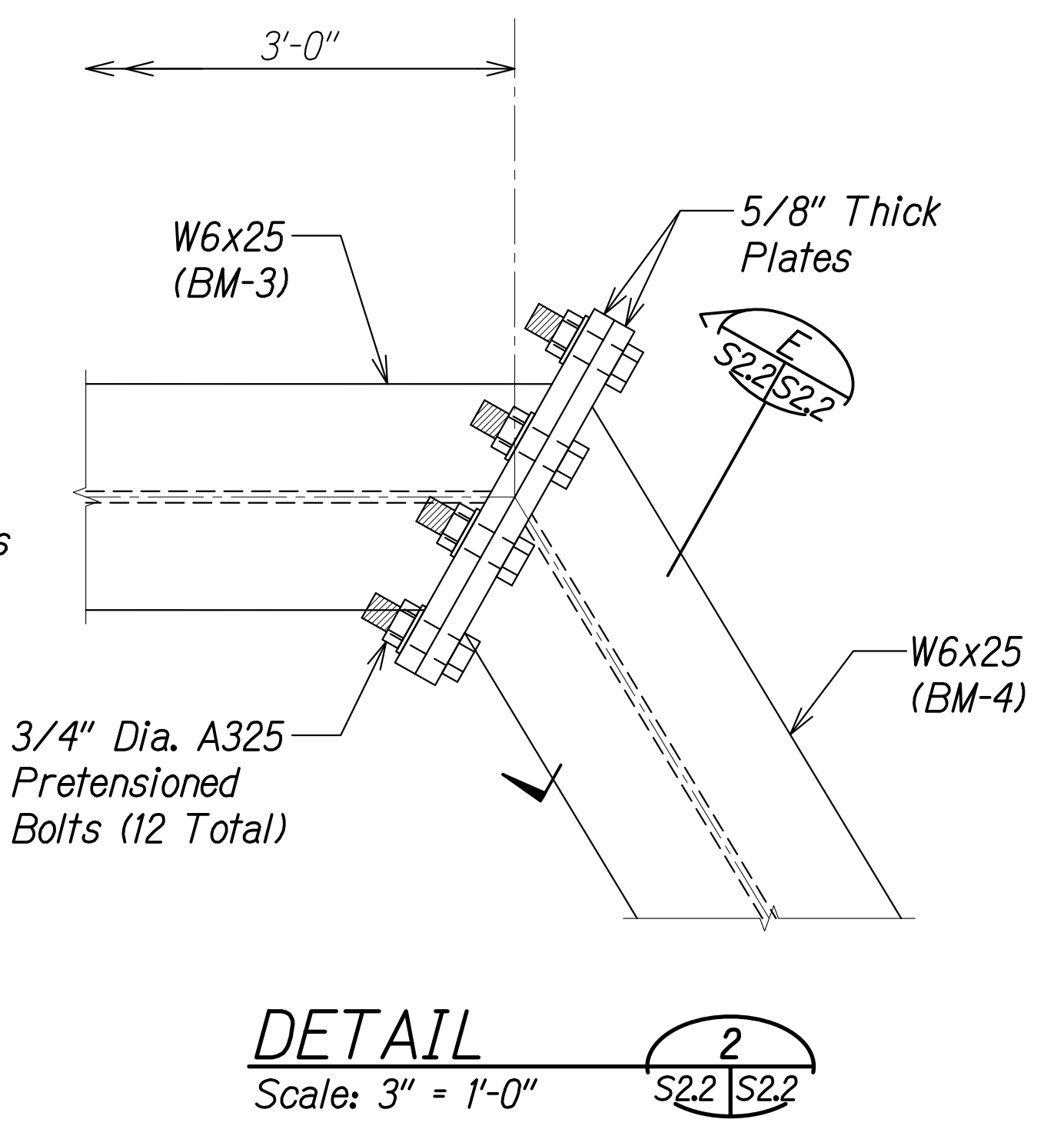
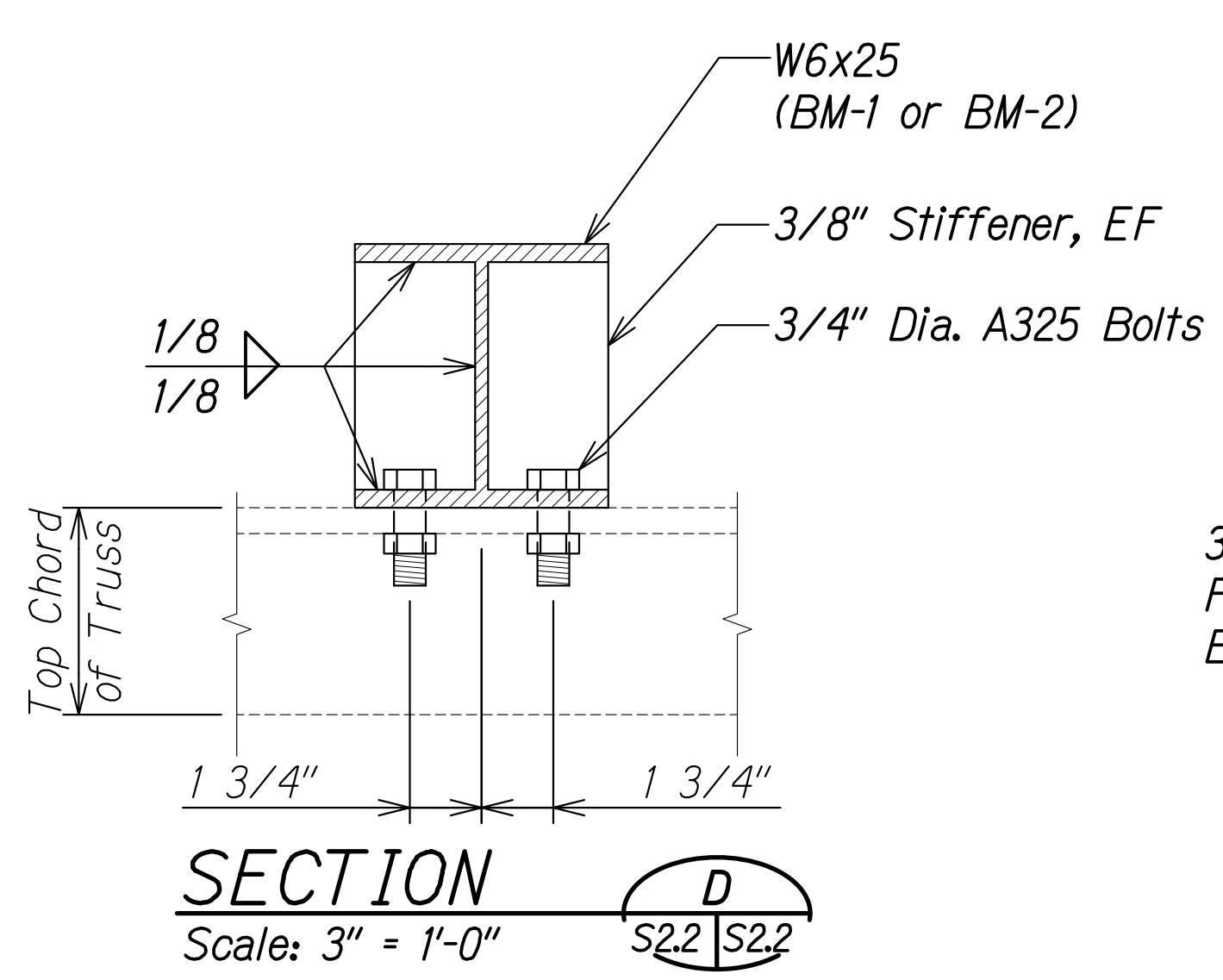
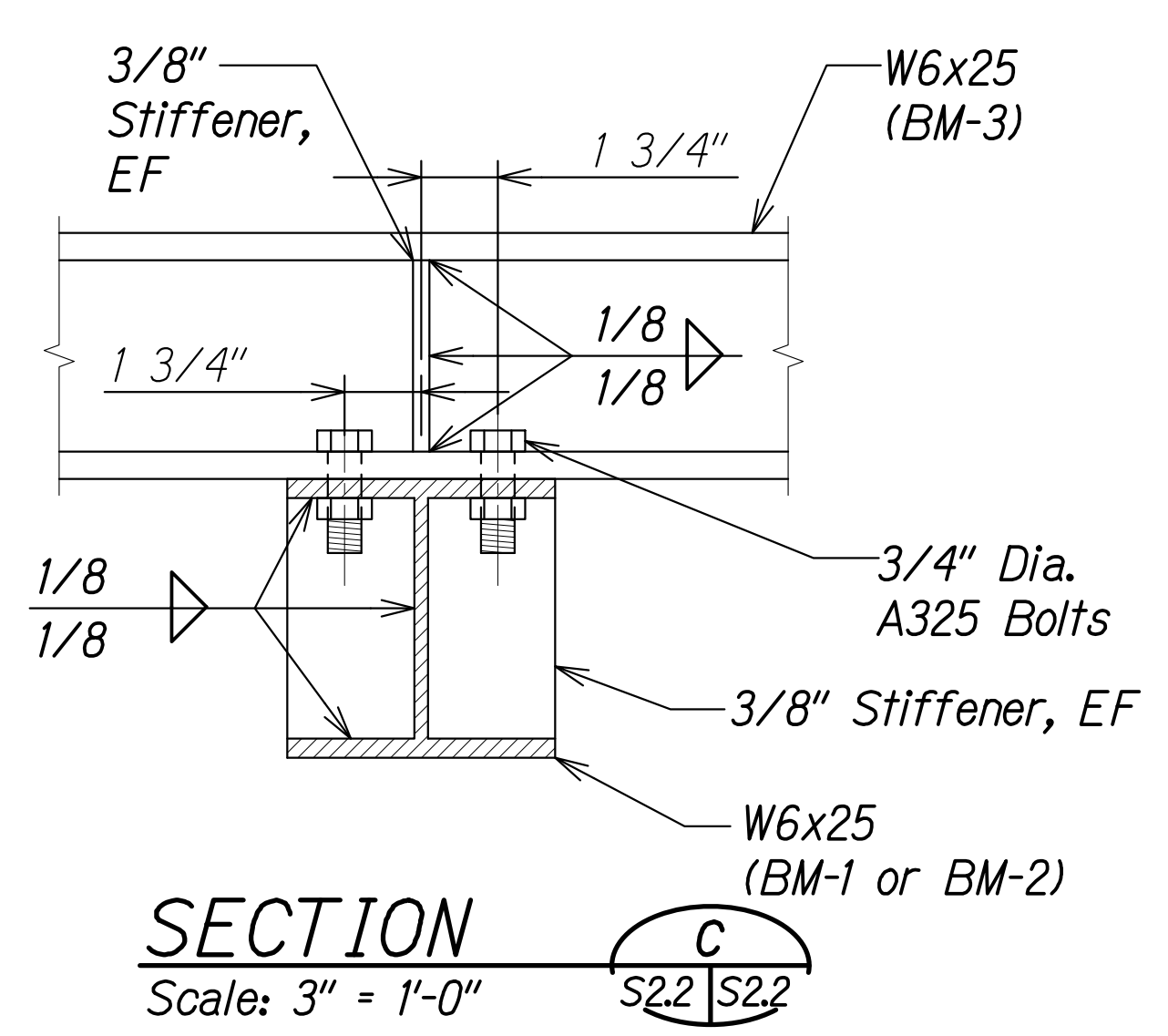
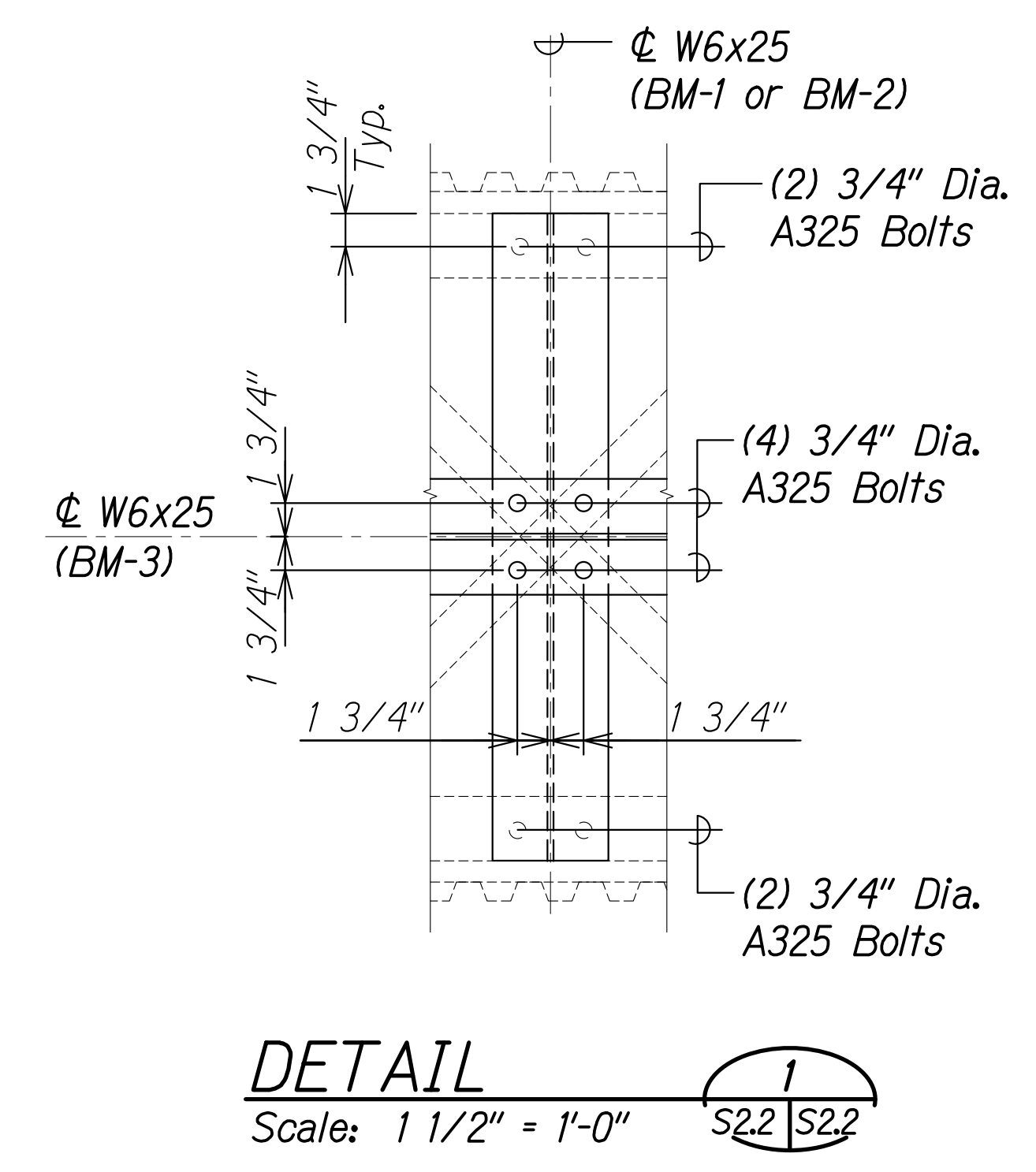
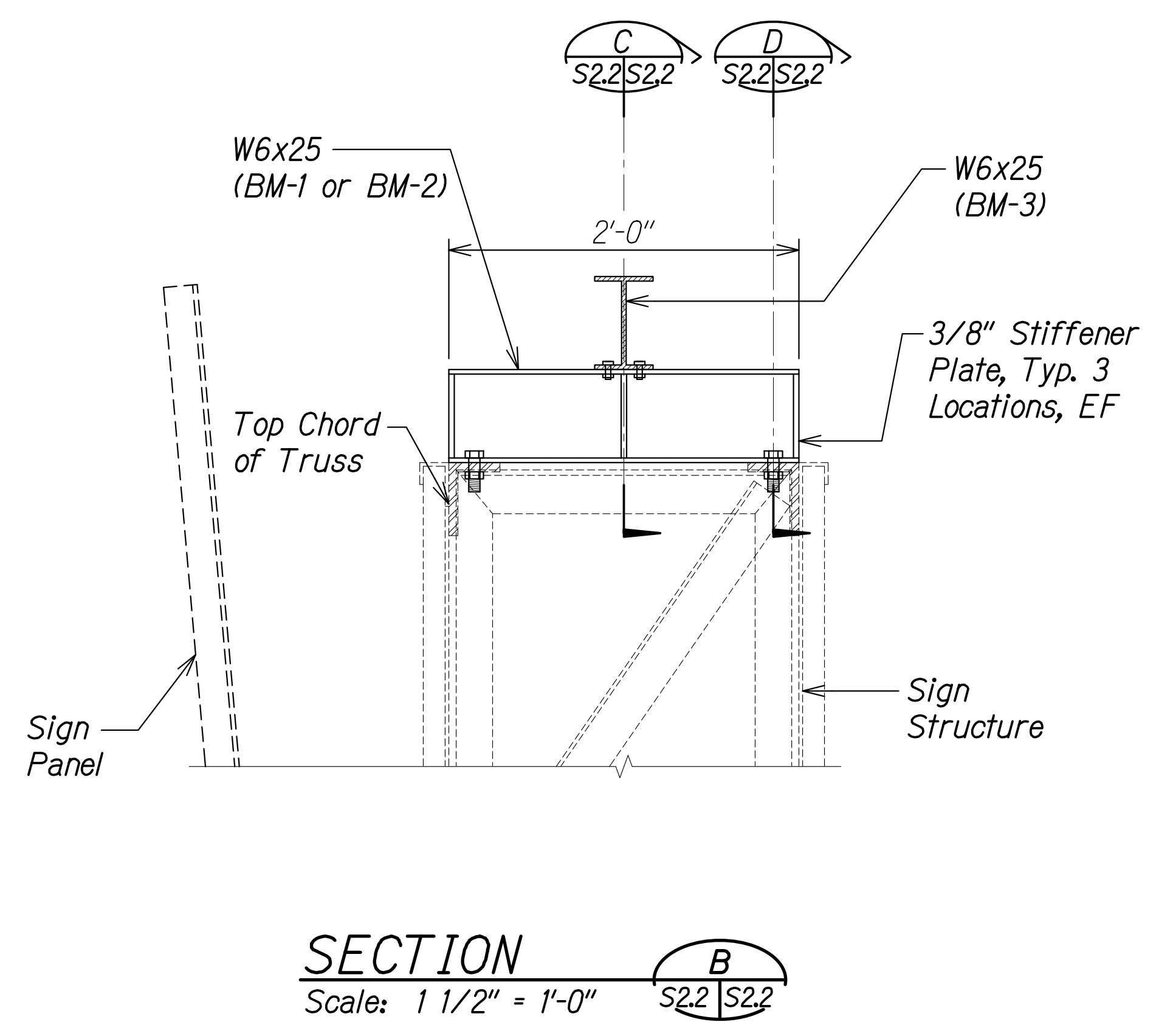
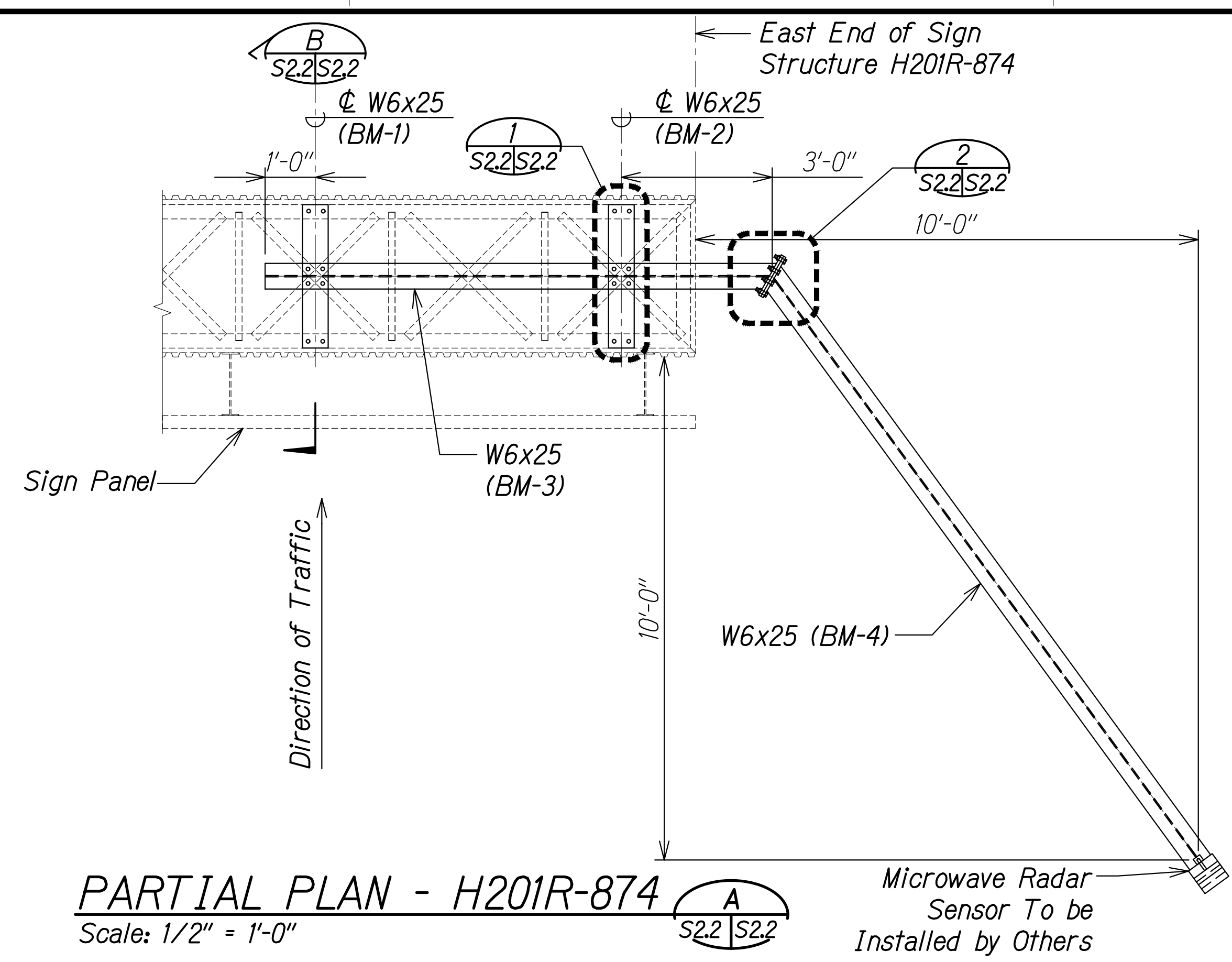
**SIGN STRUCTURE H201R-874
ELEVATION**

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

SHEET No. S2.1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	128	197



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

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Calvin Miyahara
SIGNATURE EXPIRATION DATE OF THE LICENSE

NOTE:
Ship W6x25 Beams and Hardware Loose. To be field installed by General Contractor. Installation of Microwave Radar Sensors by Others.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN STRUCTURE H201R-874
MICROWAVE RADAR SUPPORT PLAN, SECTS, AND DETAILS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

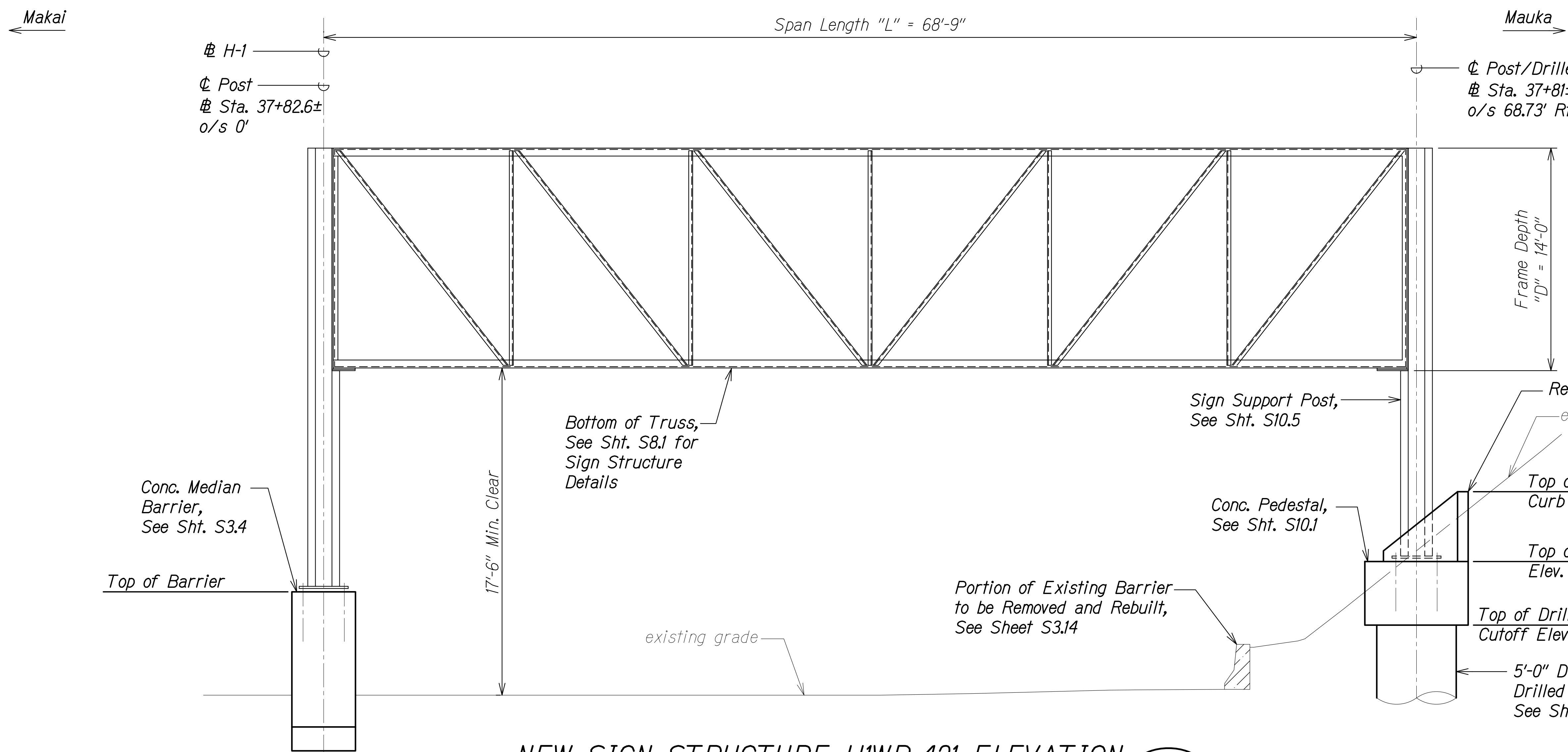
Scale: As Noted Date: Oct. 2023

SHEET No. S2.2 OF 2 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-10-24.P5&E BID\DSUZ-S0201 H1EBR-874-ELEV.DWG PLOT TIME: 01-11-24, 2:26 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	129	197

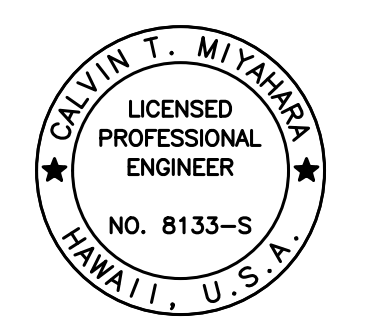


Note:
For sign structure schedule, see Sht. S11.1.

NEW SIGN STRUCTURE H1WB-421 ELEVATION
Scale: 1/4" = 1'-0" A
S3.1 | S3.1



EXISTING SIGN STRUCTURE H1WB-421



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Calvin Miyahara
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**SIGN STRUCTURE H1WB-421
ELEVATION**

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

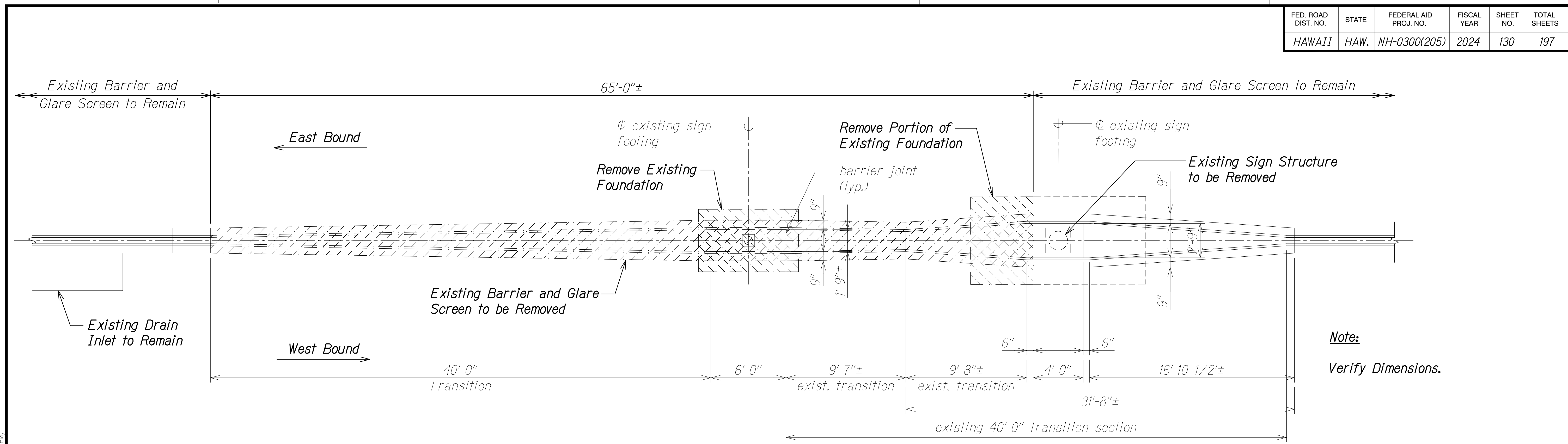
Scale: As Noted Date: Oct. 2023

SHEET No. S3.1 OF 14 SHEETS

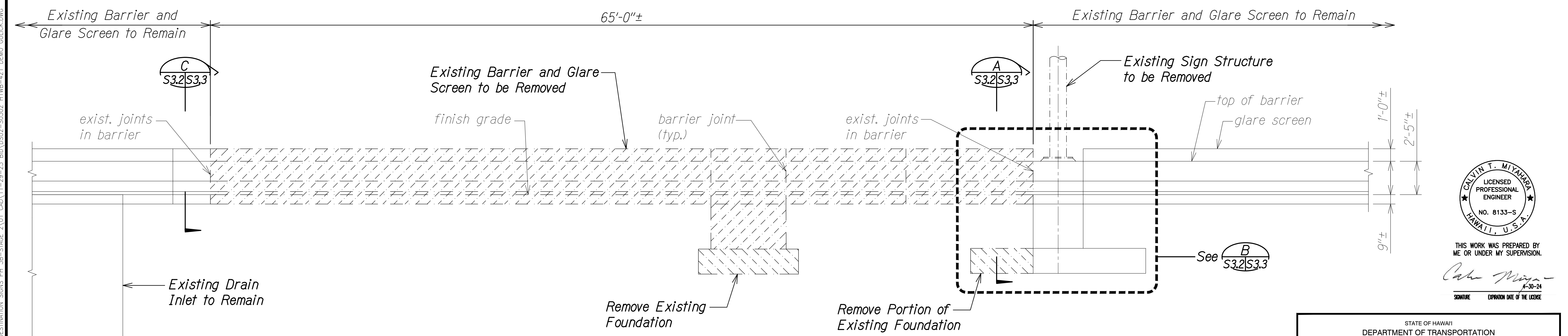
ORIGINAL PLAN	DATE
NOTE BOOK	
No.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-10-24.P5&E BID\DSUZ-S0301 H1WB-421 ELEV.DWG PLOT TIME: 01-11-24, 2:26 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	130	197



DEMO PLAN A
 Scale: 1/4" = 1'-0" S3.2 | S3.2

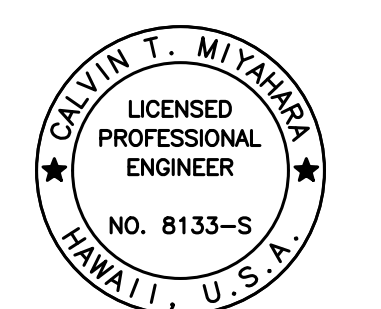


DEMO ELEVATION A
 Scale: 1/4" = 1'-0" S3.2 | S3.2

Note:
 Any dowels rebar or bolts that are to remain shall be cut off and sealed with epoxy. See detail 1.

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSU2-S0302-H1WB-421 DEMO.GULICK.DWG PLOT TIME: 11-28-23, 7:14 PM



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Calvin Miyakawa
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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

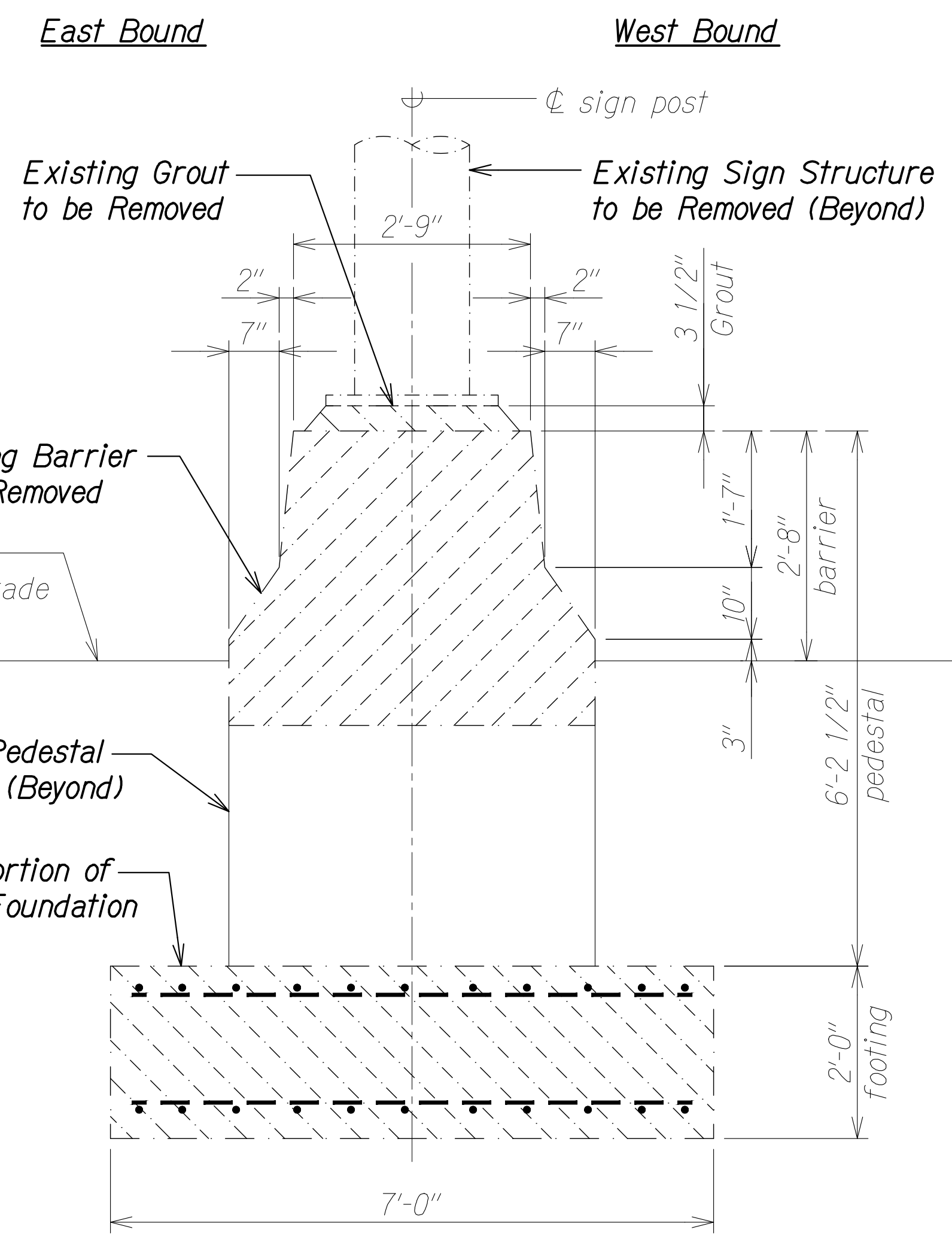
**SIGN STRUCTURE H1WB-421
 DEMO PLAN AND ELEVATION**

INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

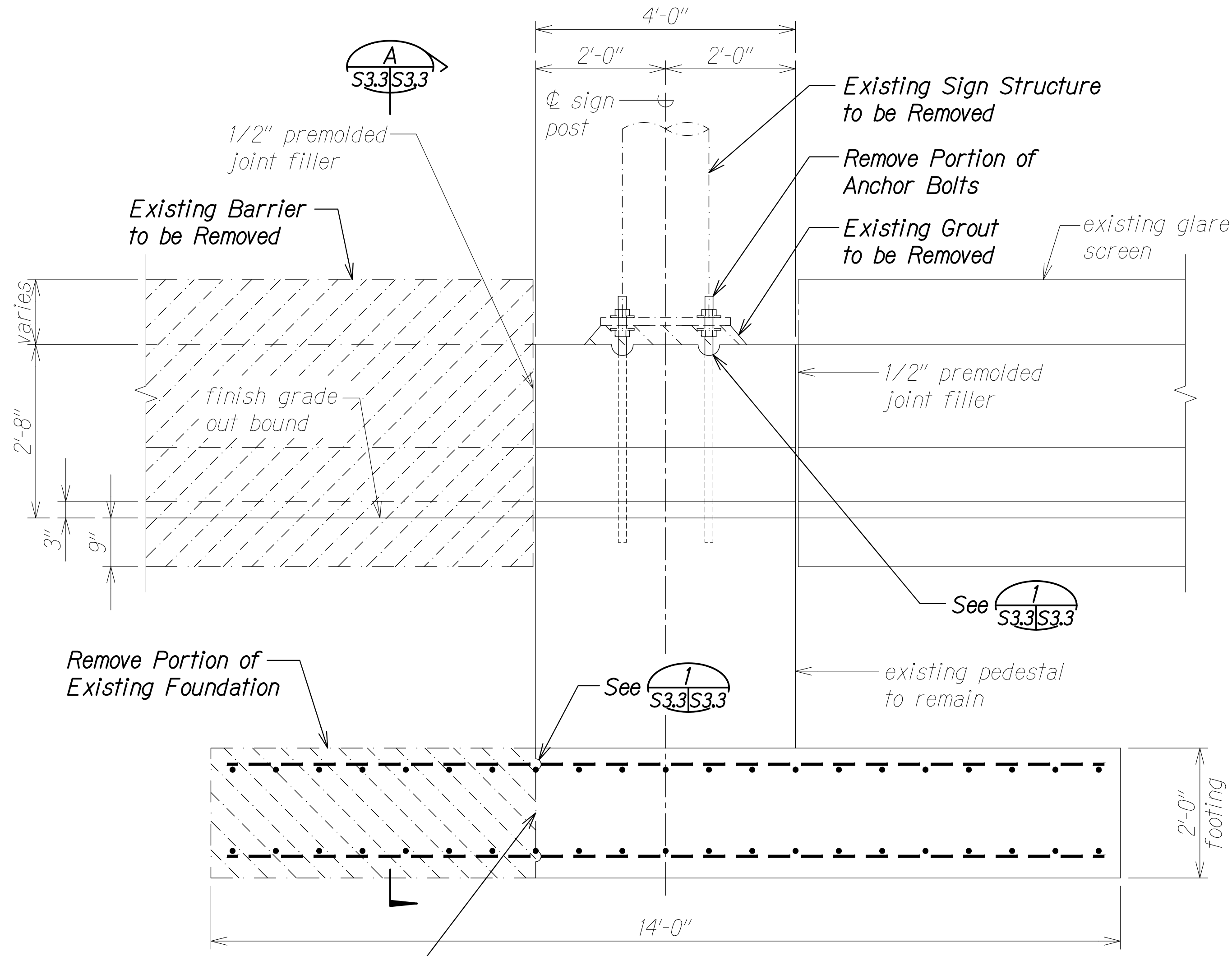
Scale: As Noted Date: Oct. 2023

SHEET No. S3.2 OF 14 SHEETS

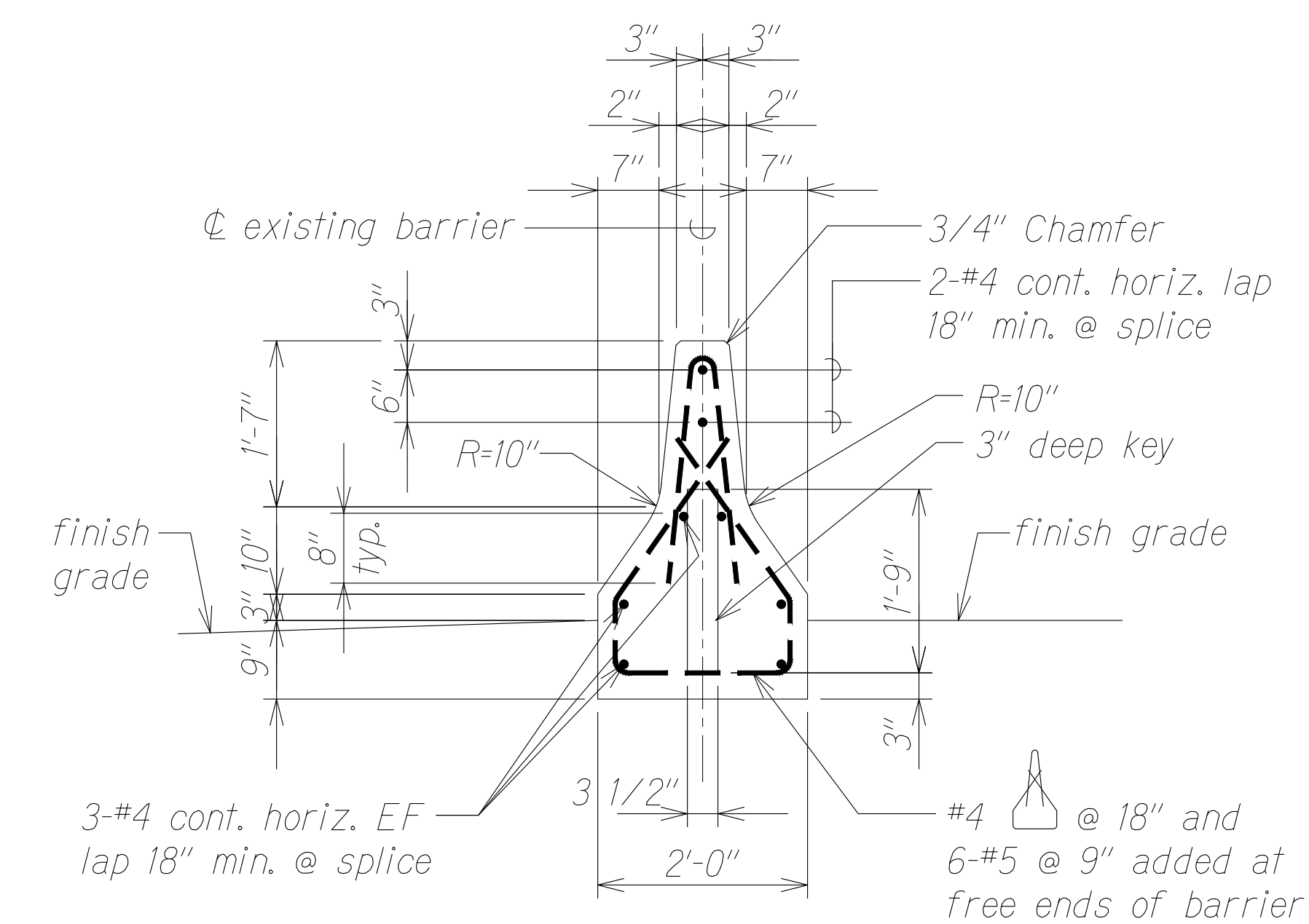
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	131	197



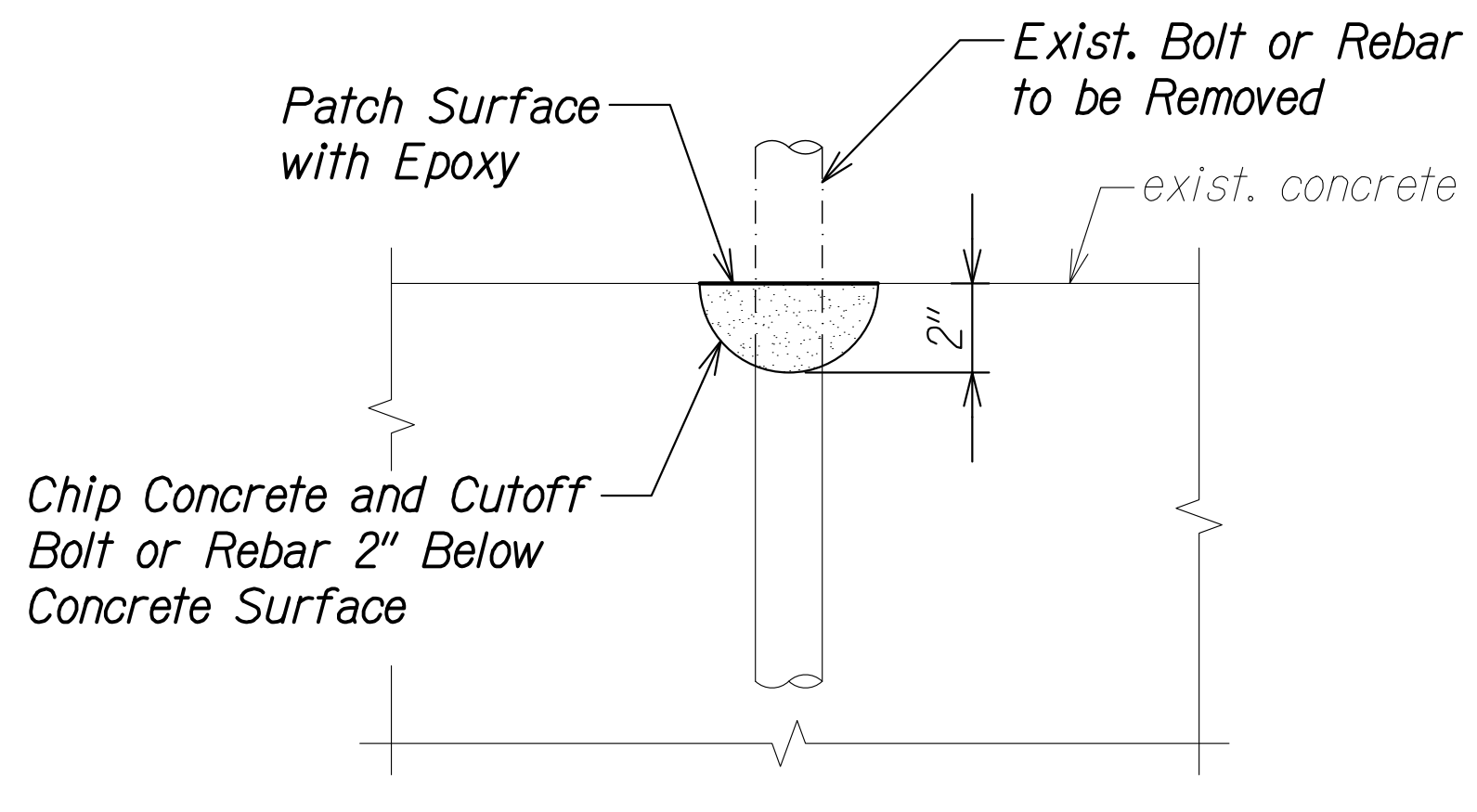
SECTION A
Scale: 3/4" = 1'-0"
S3.2 | S3.3



SECTION B
Scale: 3/4" = 1'-0"
S3.2 | S3.3



SECTION C
Scale: 3/4" = 1'-0"
S3.2 | S3.3

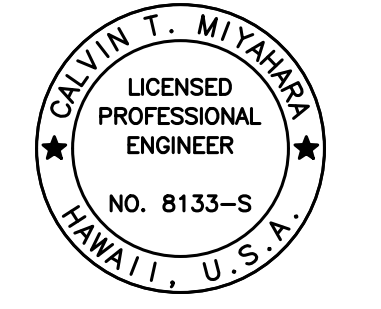


TYPICAL PATCHING DETAIL
Scale: 3" = 1'-0"
S7.2 | S3.3 | S3.3

Note:
See Standard Plan sheet TE-41 for additional information.

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S0302-H1WB-421 DEMO GULLICK.DWG PLOT TIME: 11-28-23, 7:15 PM



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Calvin Miyakawa
SIGNATURE EXP. DATE OF THE LICENSE

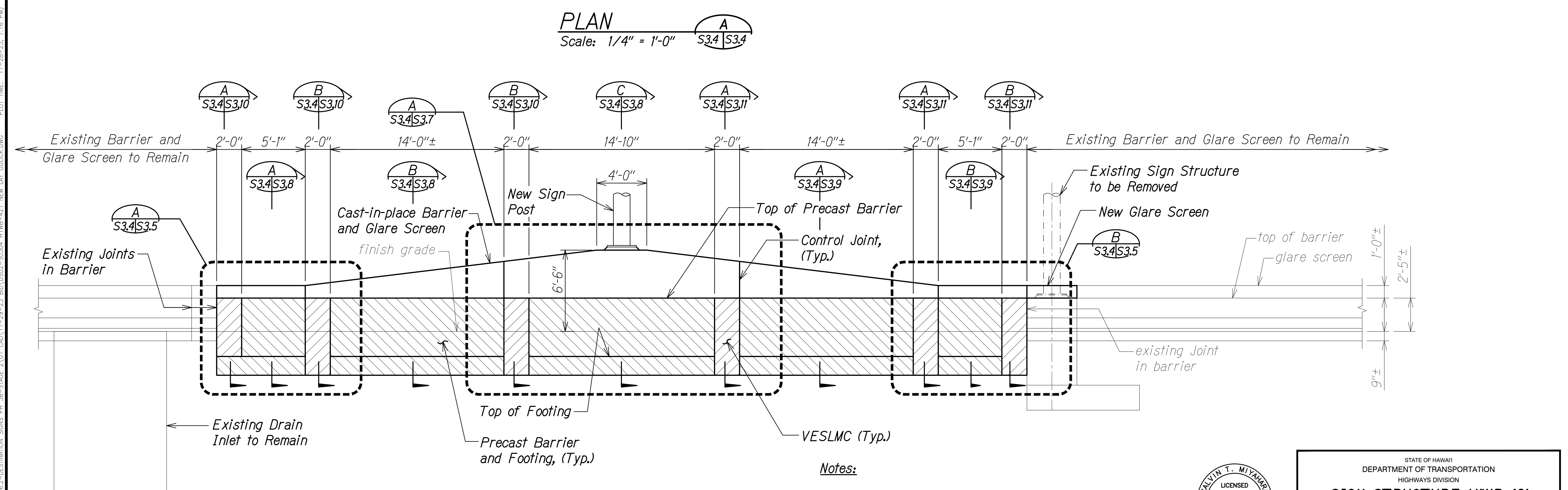
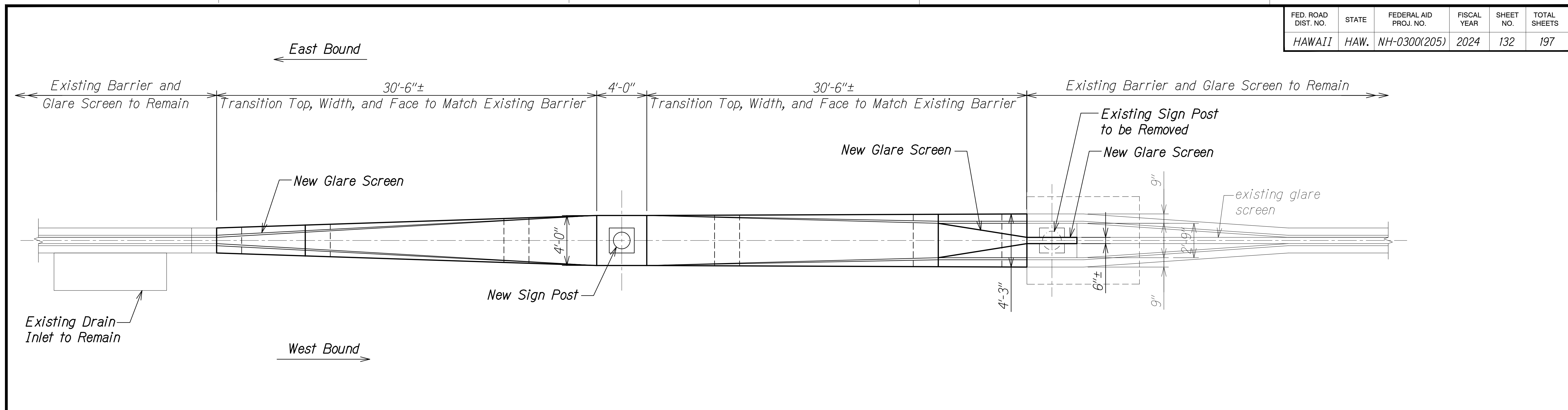
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN STRUCTURE H1WB-421
DEMO SECTIONS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023
SHEET No. S3.3 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	132	197



- Legend:**
- VESLMC Barrier and Footing
 - Precast Barrier and Footing

- Notes:**
- All top and face transitions shall be uniform and consistent with no abrupt changes.
 - Any dowels at expansion joint that remains shall be cut off flush with concrete and the dowel and surrounding concrete surface coated with epoxy.

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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN STRUCTURE HWB-421
PLAN AND ELEVATION

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

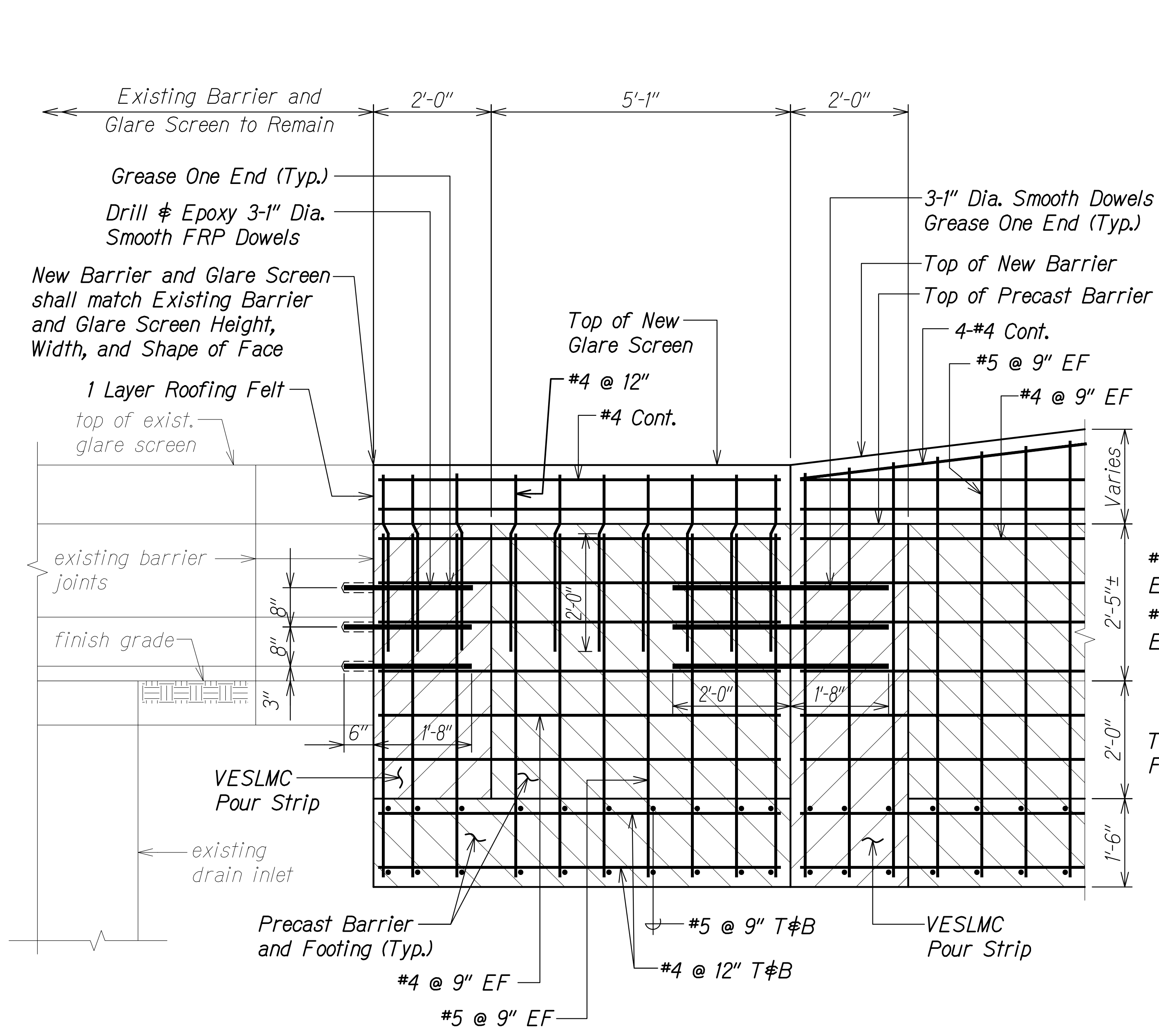
Scale: As Noted Date: Oct. 2023

SHEET No. S3.4 OF 14 SHEETS

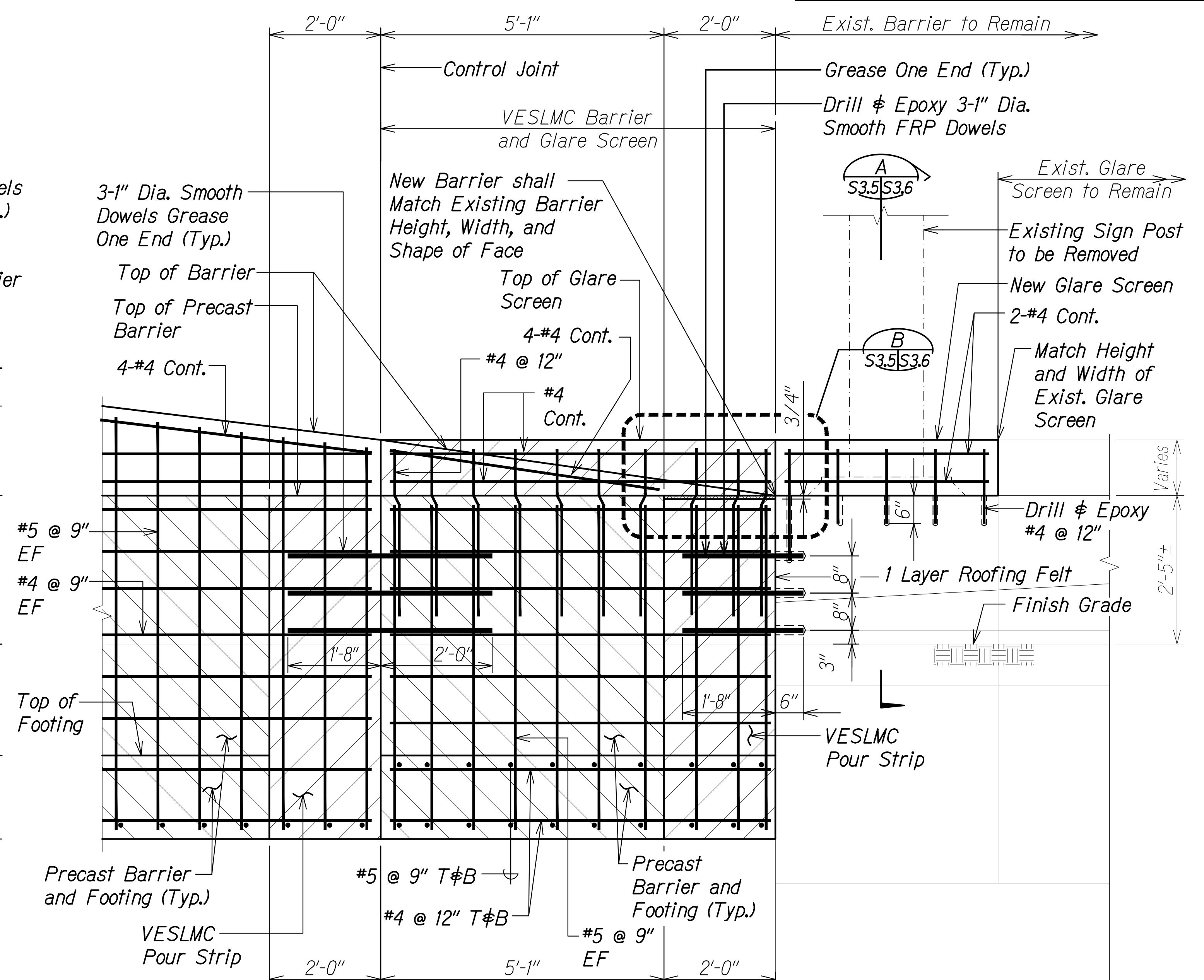
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSU2-S0304 HWB-421 NEW LAY GULUCK.DWG PLOT TIME: 11-28-23, 7:16 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	133	197



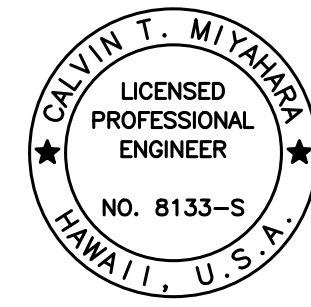
SECTION A
Scale: 3/4" = 1'-0" S3.4 | S3.5



SECTION B
Scale: 3/4" = 1'-0" S3.4 | S3.5

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSU2-S0304 H1WB-421 NEW LAY GULLUCK.DWG PLOT TIME: 11-28-23, 7:17 PM


 CALVIN T. MIYAHARA
 LICENSED PROFESSIONAL ENGINEER
 NO. 8133-S
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calvin Miyahara
 SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN STRUCTURE H1WB-421

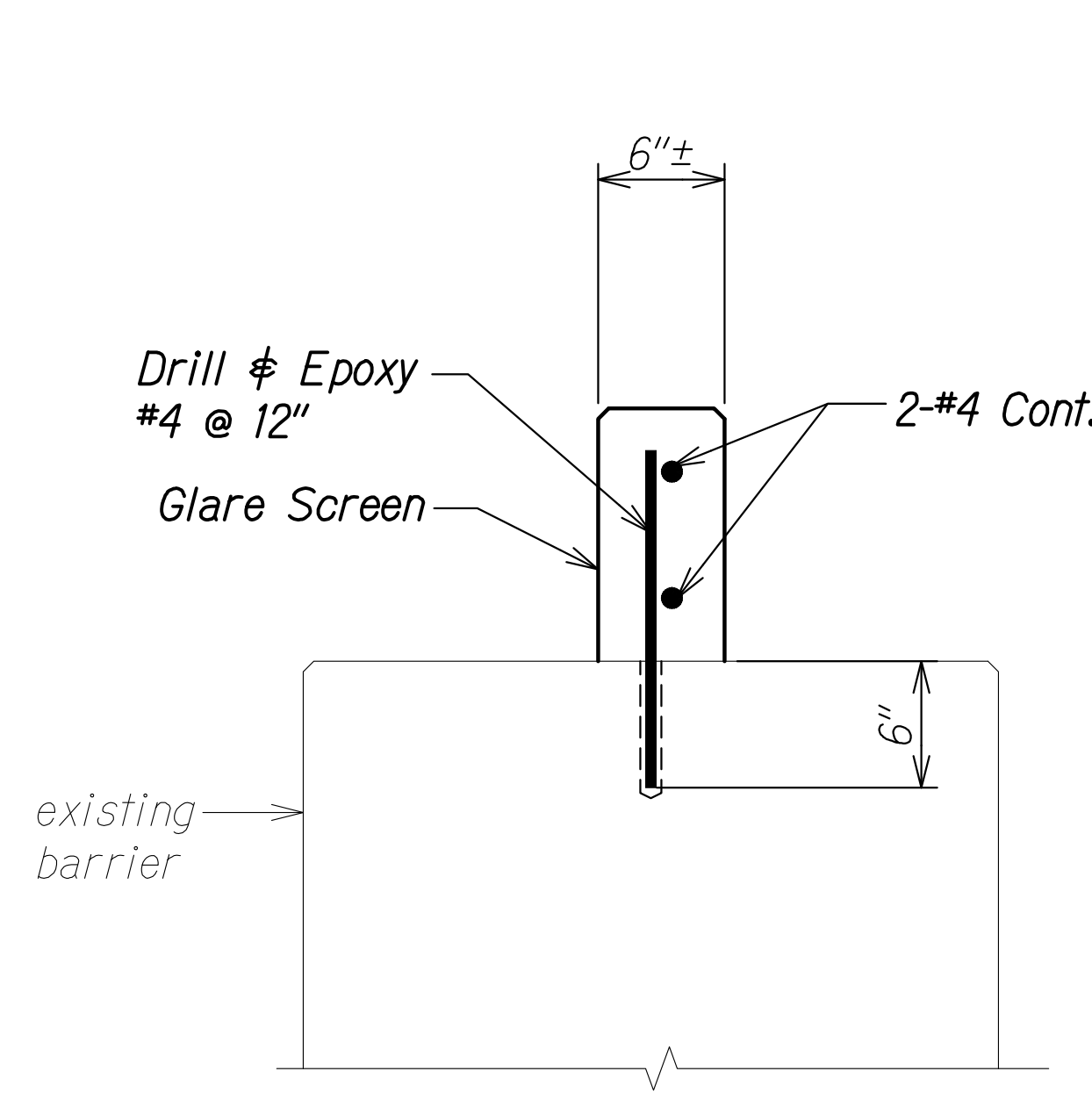
SECTIONS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

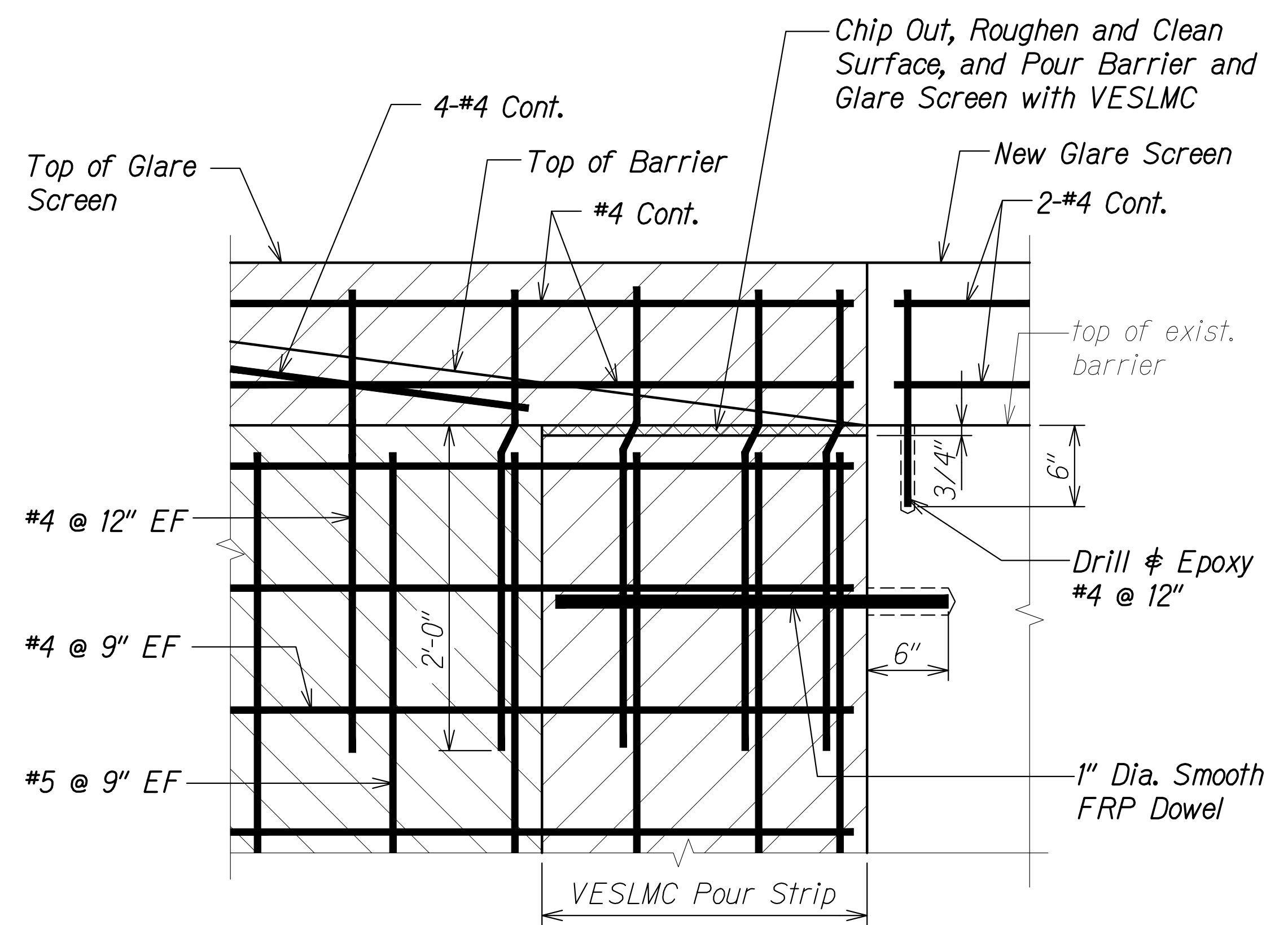
Scale: As Noted Date: Oct. 2023

SHEET No. S3.5 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	134	197



SECTION A
Scale: 1 1/2" = 1'-0" S3.5 | S3.6



SECTION B
Scale: 1 1/2" = 1'-0" S3.5 | S3.6

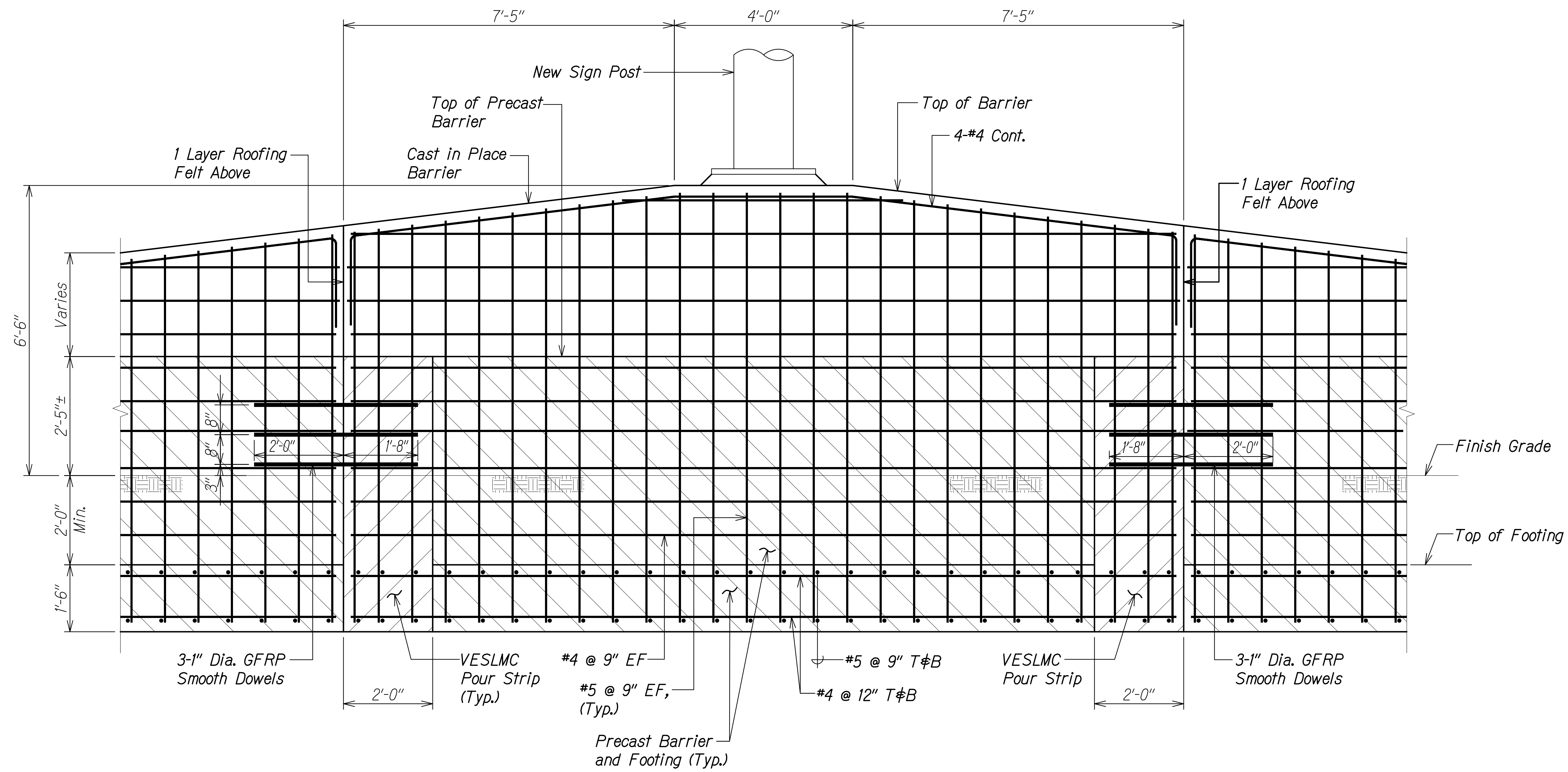
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S0304 HWB-421 NEW LAY GULLICK.DWG PLOT TIME: 11-28-23, 7:18 PM

CALVIN T. MIYAHARA
 LICENSED PROFESSIONAL ENGINEER
 NO. 8133-S
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calvin Miyahara
 SIGNATURE EXPIRATION DATE OF THE LICENSE: 4-30-24

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
SIGN STRUCTURE HWB-421
SECTIONS
 INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)
 Scale: As Noted Date: Oct. 2023
 SHEET No. S3.6 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	135	197



SECTION A
 Scale: 3/4" = 1'-0" S3.4 S3.7

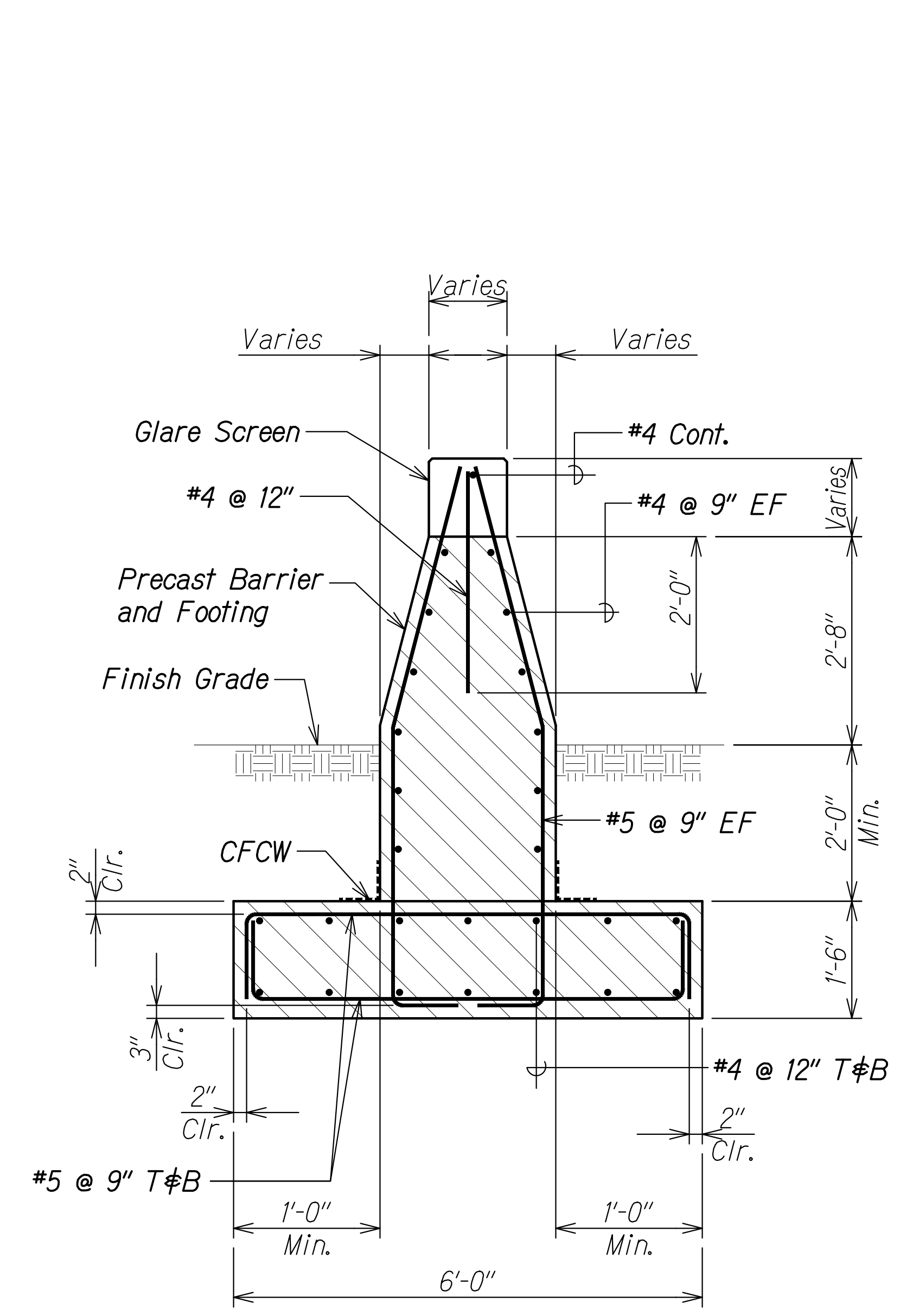
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S0304-H1WB-421 NEW LAY GULLICK.DWG PLOT TIME: 11-28-23, 7:19 PM

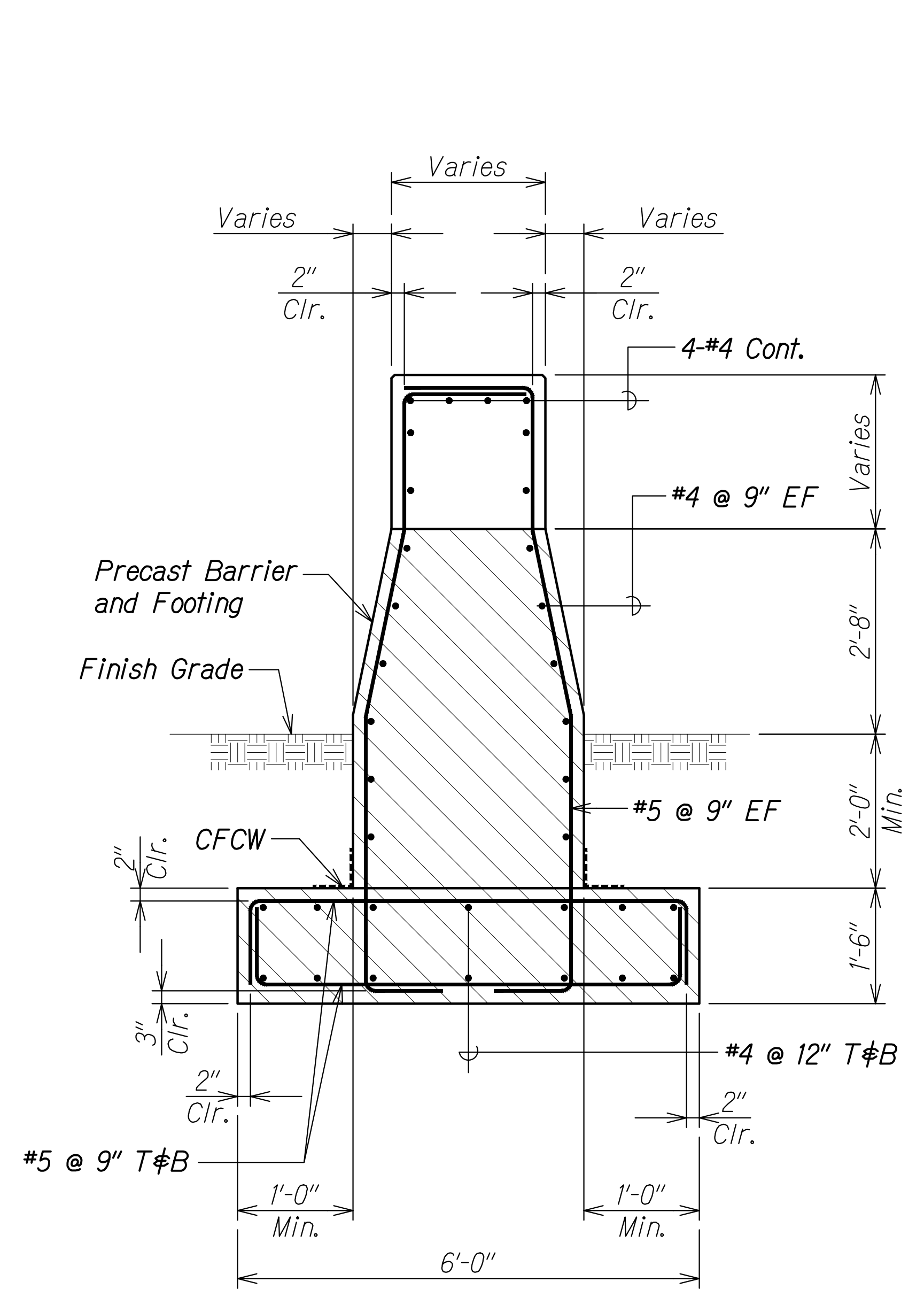
CALVIN T. MIYAMA
 LICENSED PROFESSIONAL ENGINEER
 NO. 8133-S
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calvin Miyama
 SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
SIGN STRUCTURE H1WB-421
SECTION
 INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)
 Scale: As Noted Date: Oct. 2023
 SHEET No. S3.7 OF 14 SHEETS

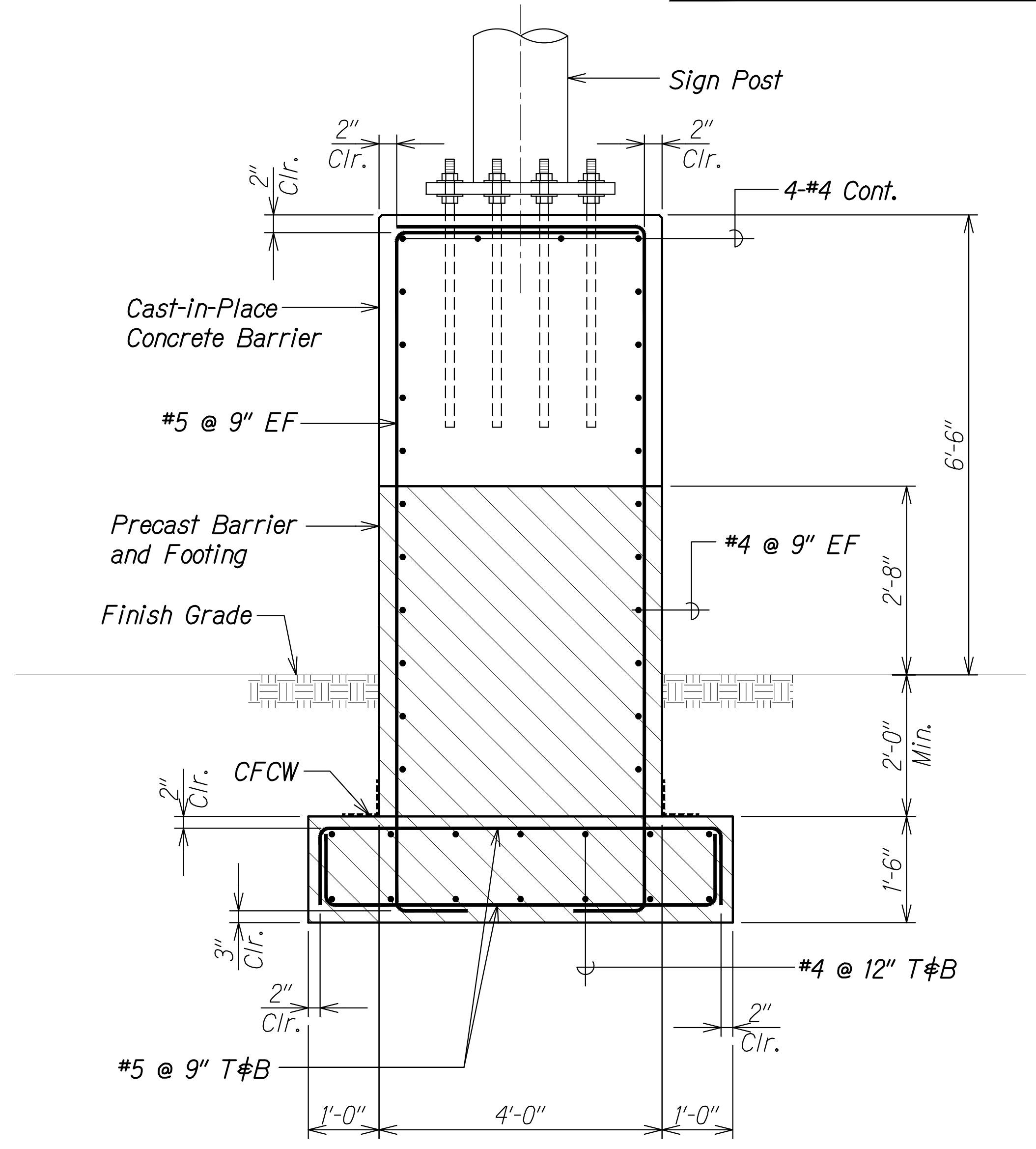
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	136	197



SECTION A
Scale: 3/4" = 1'-0" S3.4 | S3.8



SECTION B
Scale: 3/4" = 1'-0" S3.4 | S3.8



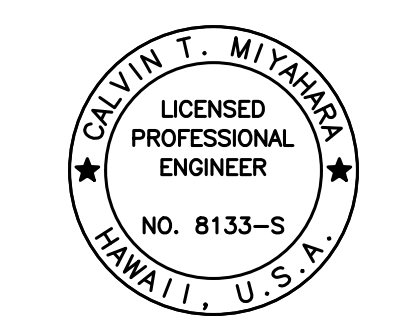
SECTION C
Scale: 3/4" = 1'-0" S3.4 | S3.8

Notes:

1. Leveling jacks shall be used to ensure precast barriers are plumb.
2. After leveling precast barriers, fill all voids under barrier footing with grout.
3. An installation plan for the precast barrier and footing shall be submitted for approval by the Engineer. This shall include all product data.
4. 2'-8" from finish grade to top of precast barrier and 2'-0" min. from finish grade to top of footing applies to both sides of barrier.

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSU2-S0308 HWB-421 SECTS GULICK.DWG PLOT TIME: 11-28-23, 7:21 PM



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN STRUCTURE HWB-421

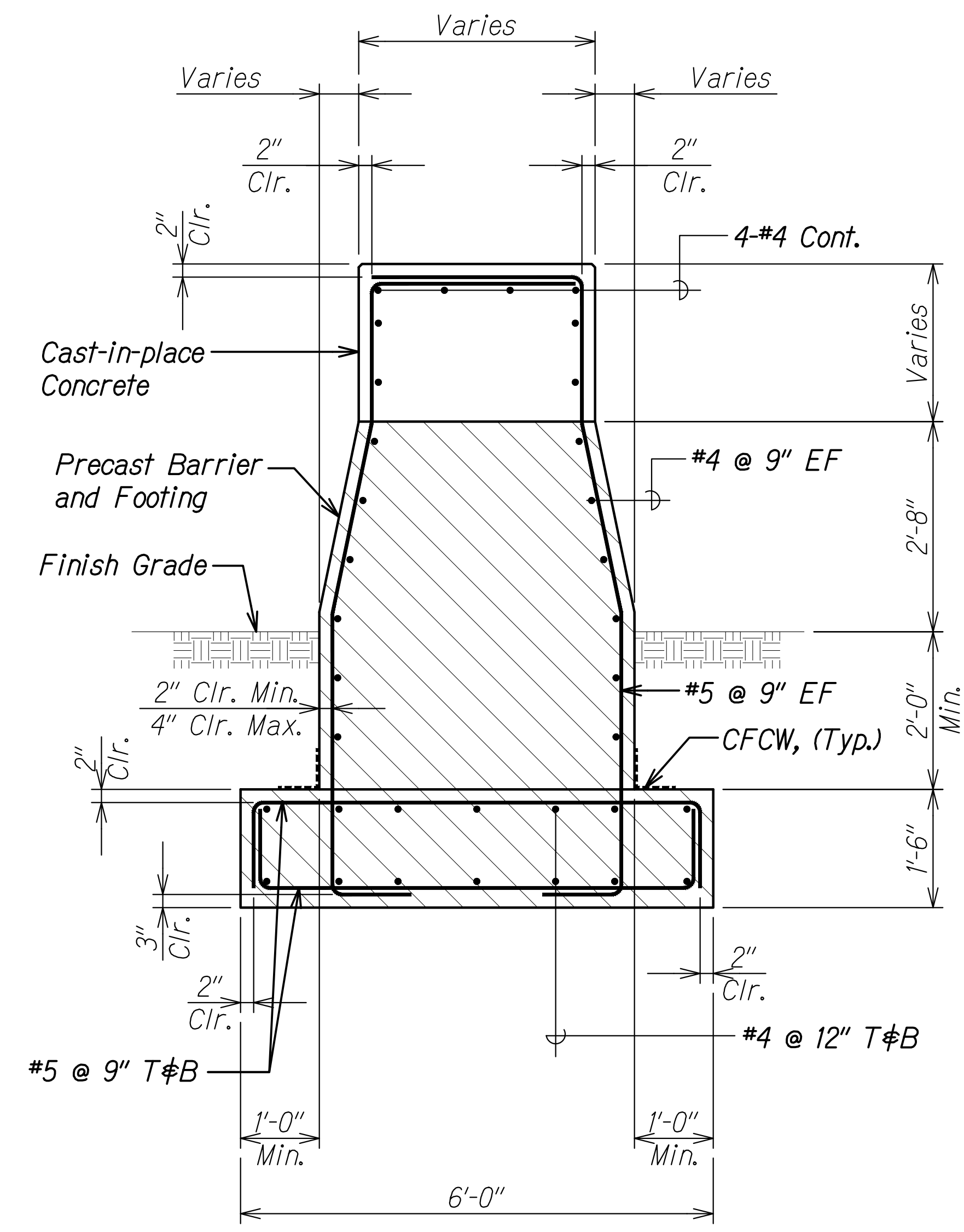
SECTIONS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

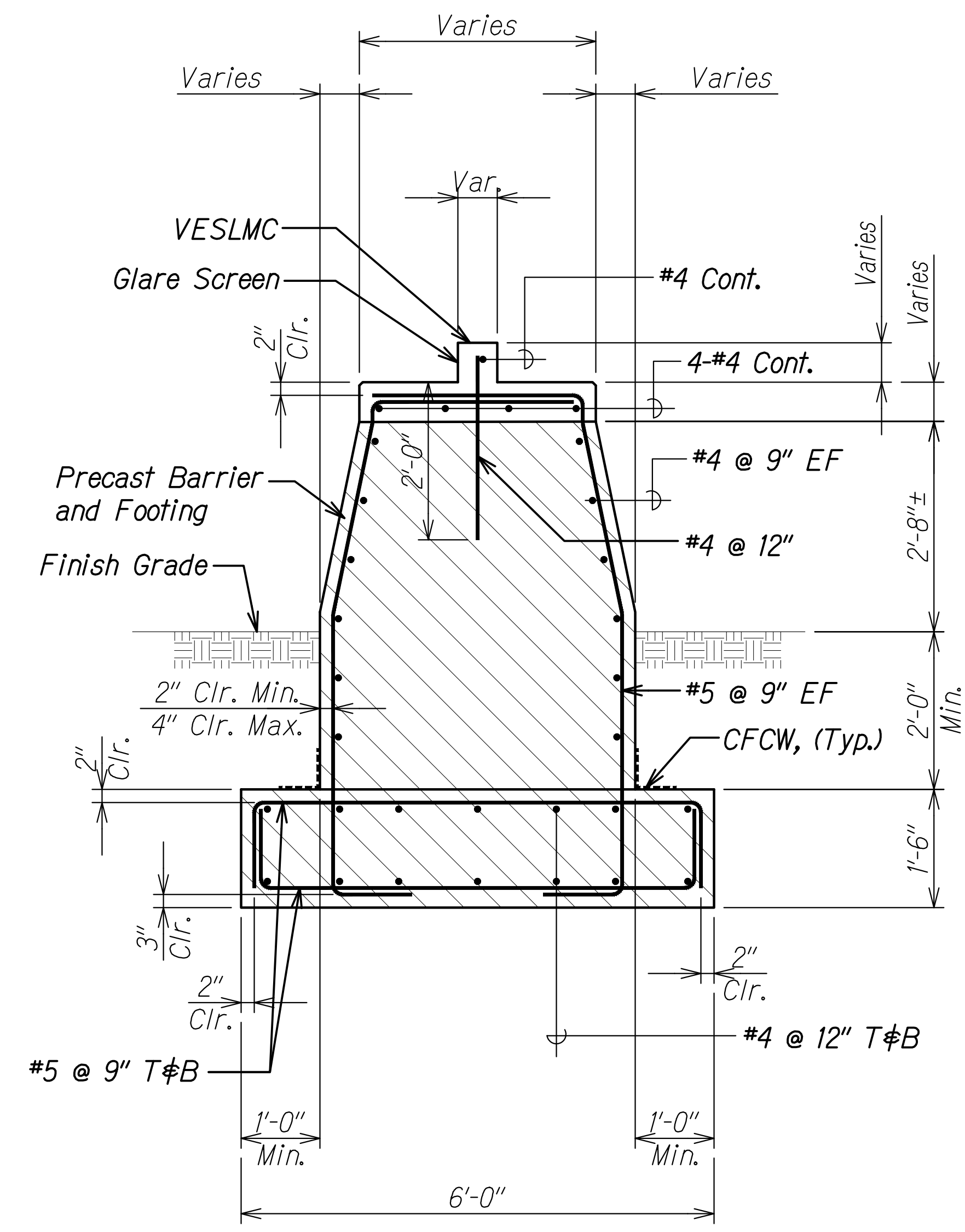
Scale: As Noted Date: Oct. 2023

SHEET No. S3.8 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	137	197



SECTION A
Scale: 3/4" = 1'-0" S3.4 | S3.9



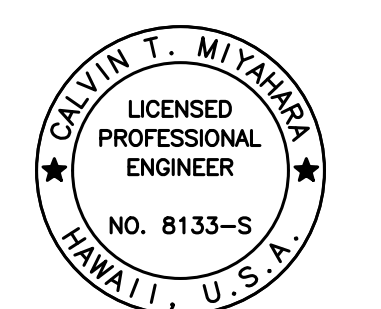
SECTION B
Scale: 3/4" = 1'-0" S3.4 | S3.9

Notes:

- Leveling jacks shall be used to ensure precast barriers are plumb.
- After leveling precast barriers, fill all voids under barrier footing with grout.
- An installation plan for the precast barrier and footing shall be submitted for approval by the Engineer. This shall include all product data.
- 2'-8" from finish grade to top of precast barrier and 2'-0" min. from finish grade to top of footing applies to both sides of barrier.

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S0308 HWB-421 SECTS GULLECK.DWG PLOT TIME: 11-28-23, 7:21 PM



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SIGNATURE EXPIRATION DATE OF THE LICENSE 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN STRUCTURE HWB-421

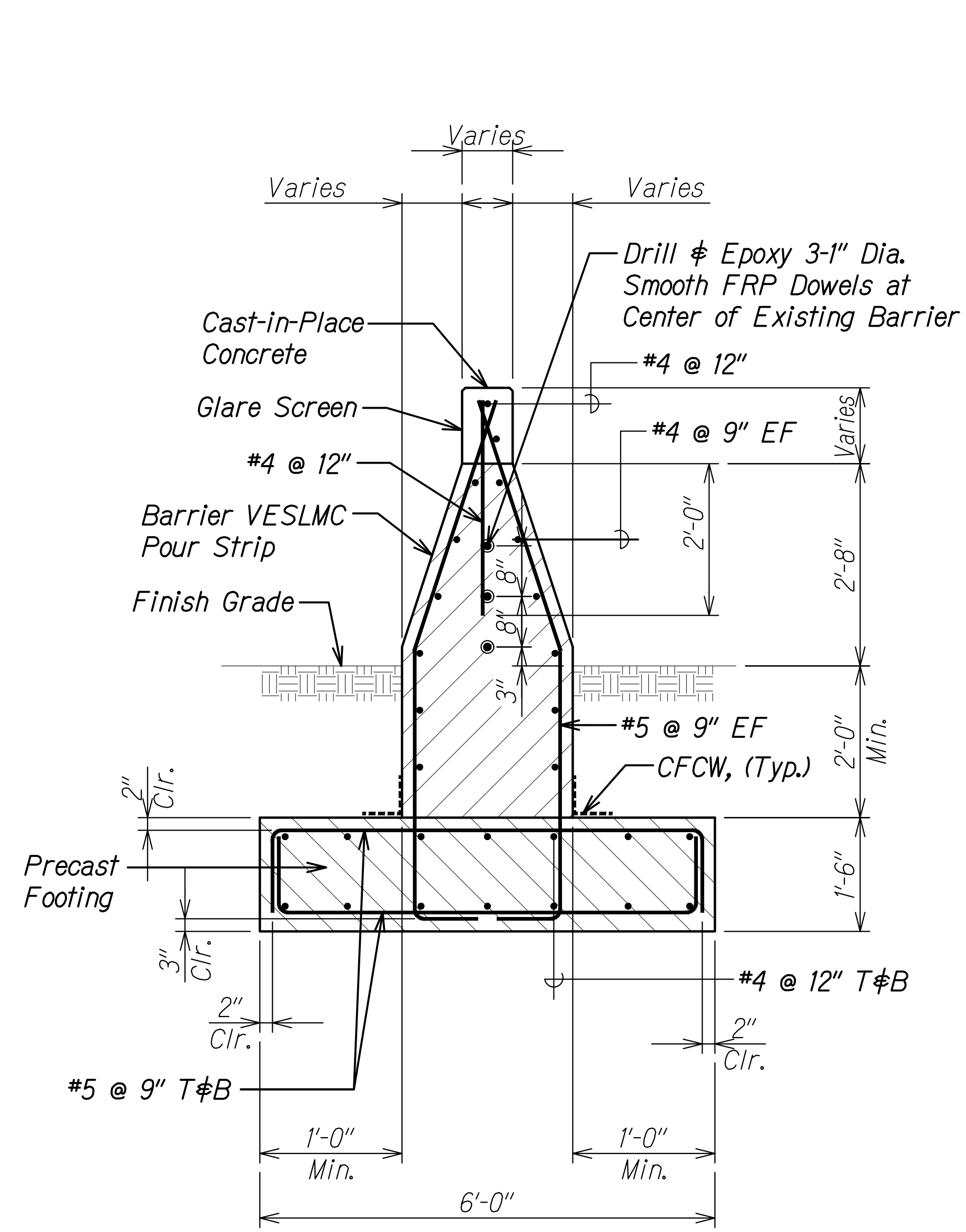
SECTIONS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

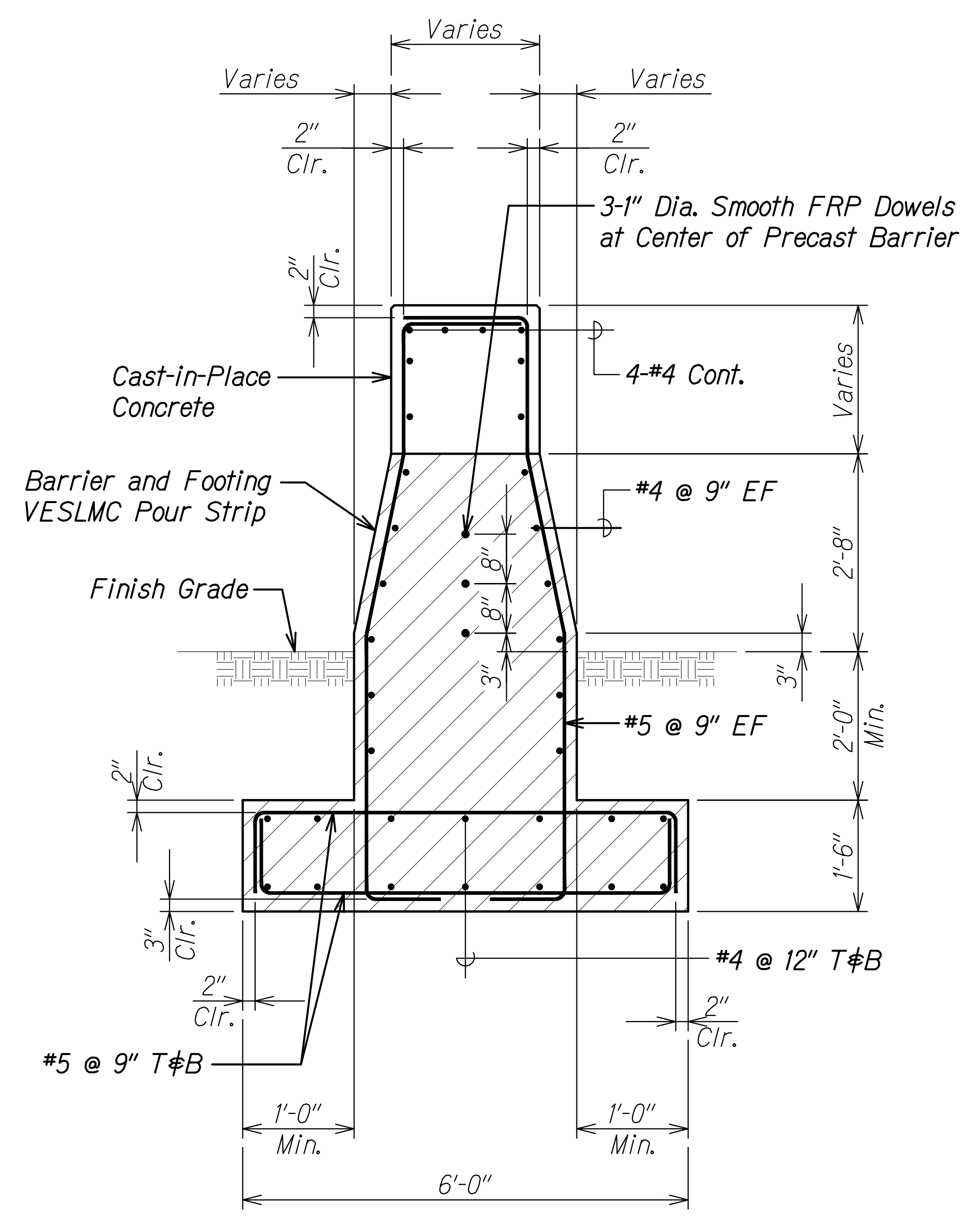
Scale: As Noted Date: Oct. 2023

SHEET No. S3.9 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	138	197



SECTION A
Scale: 3/4" = 1'-0" S3.4 S3.10



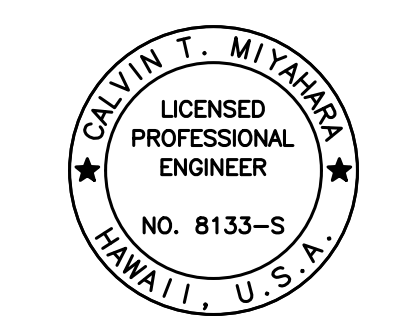
SECTION B
Scale: 3/4" = 1'-0" S3.4 S3.10

Note:

2'-8" from finish grade to top of precast barrier and 2'-0" min. from finish grade to top of footing applies to both sides of barrier.

ORIGINAL PLAN	DATE
NOTE BOOK	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S0308 HWB-421 SECTS GULUCK.DWG PLOT TIME: 11-28-23, 7:21 PM



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Calvin Miyahara
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

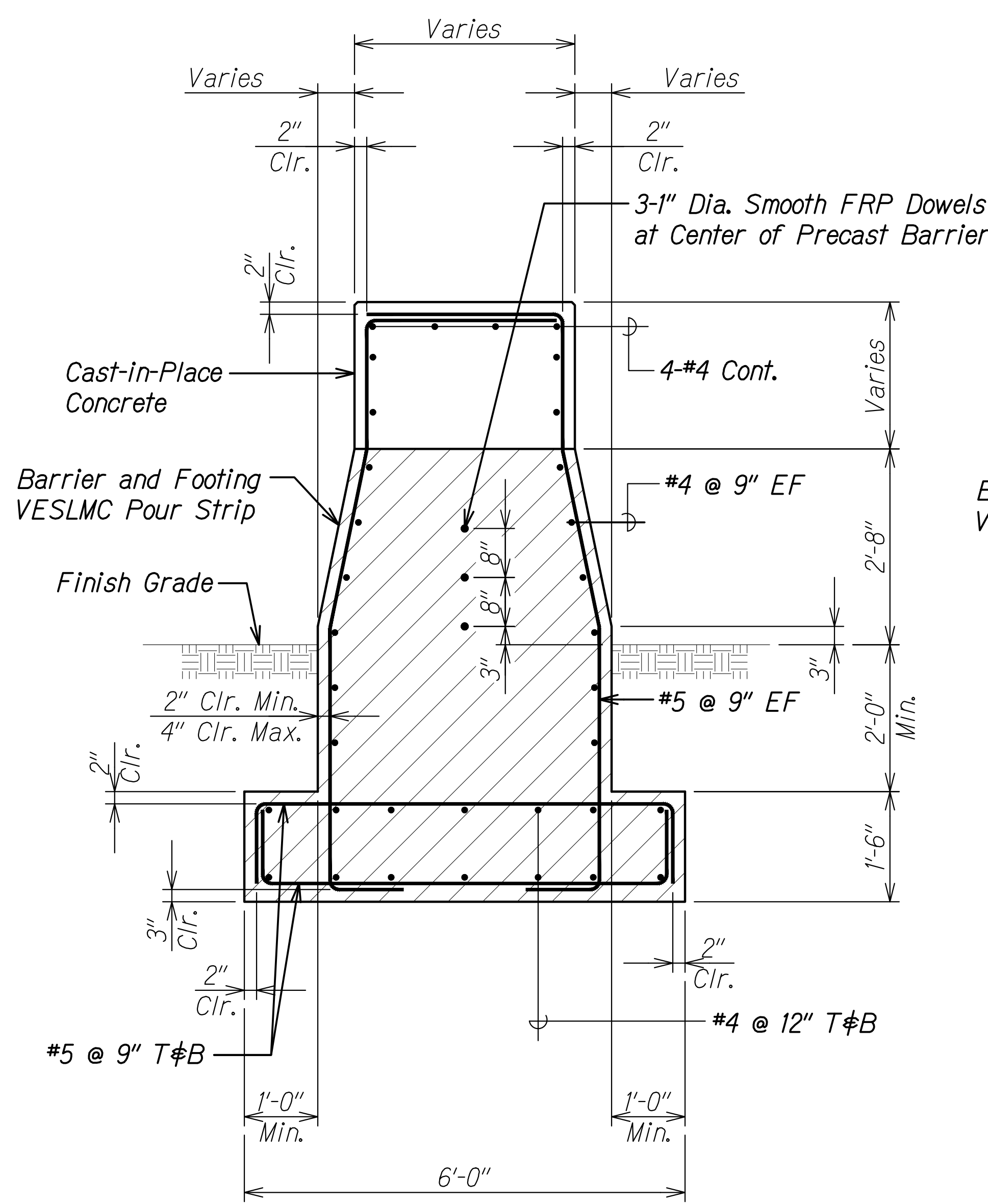
TYPICAL PRECAST BARRIER DETAILS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

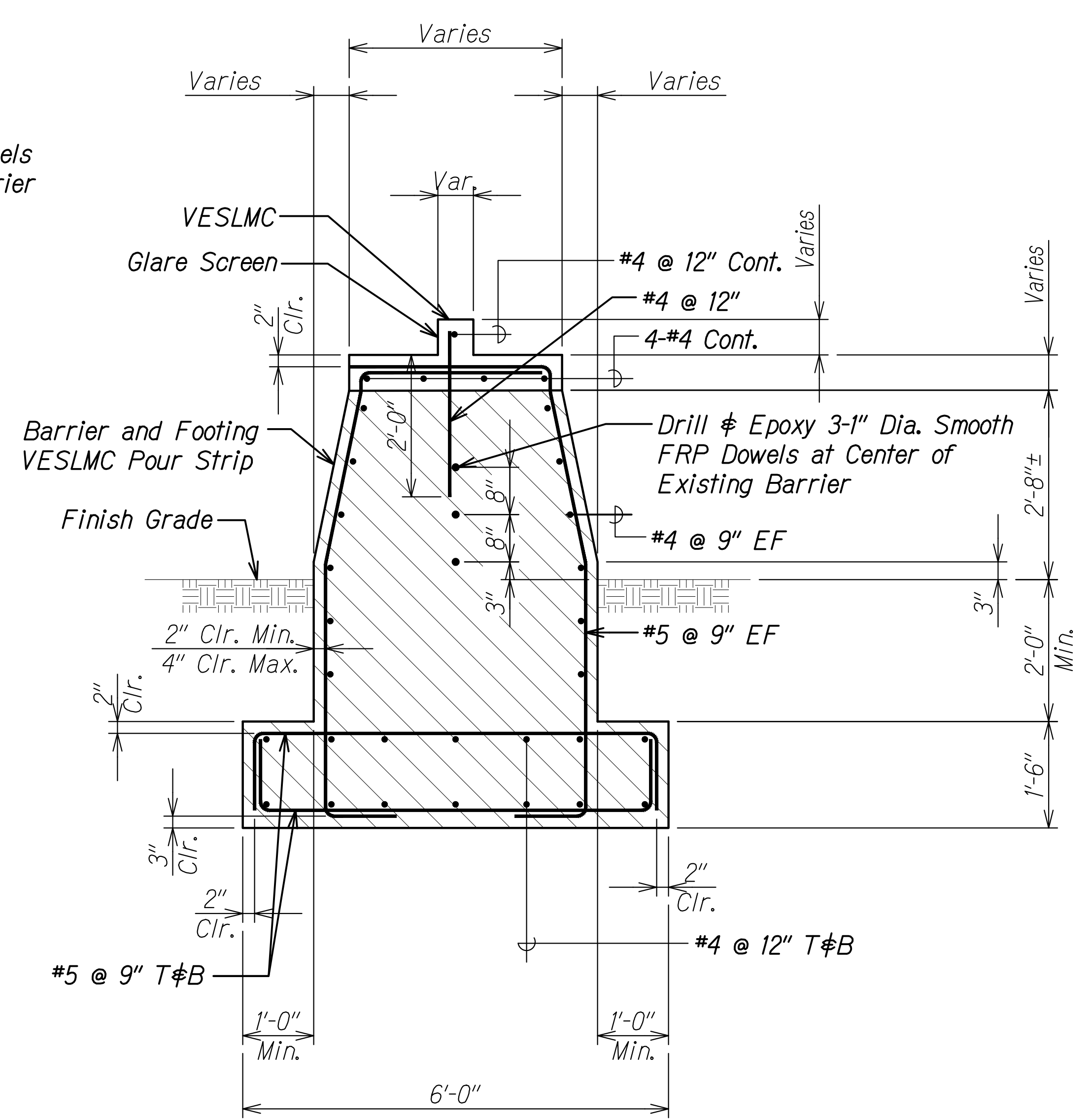
Scale: As Noted Date: Oct. 2023

SHEET No. S3.10 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	139	197



SECTION A
Scale: 3/4" = 1'-0" S3.4 S3.11



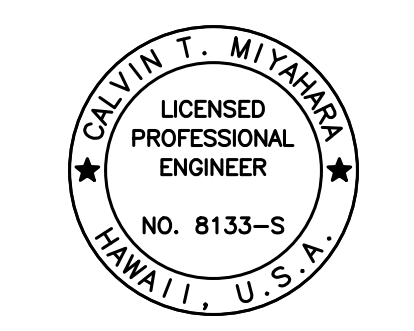
SECTION B
Scale: 3/4" = 1'-0" S3.4 S3.11

Note:

2'-8" from finish grade to top of precast barrier and 2'-0" min. from finish grade to top of footing applies to both sides of barrier.

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S0308 HWB-421 SECTS GULLECK.DWG PLOT TIME: 11-28-23, 7:22 PM



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN STRUCTURE HWB-421

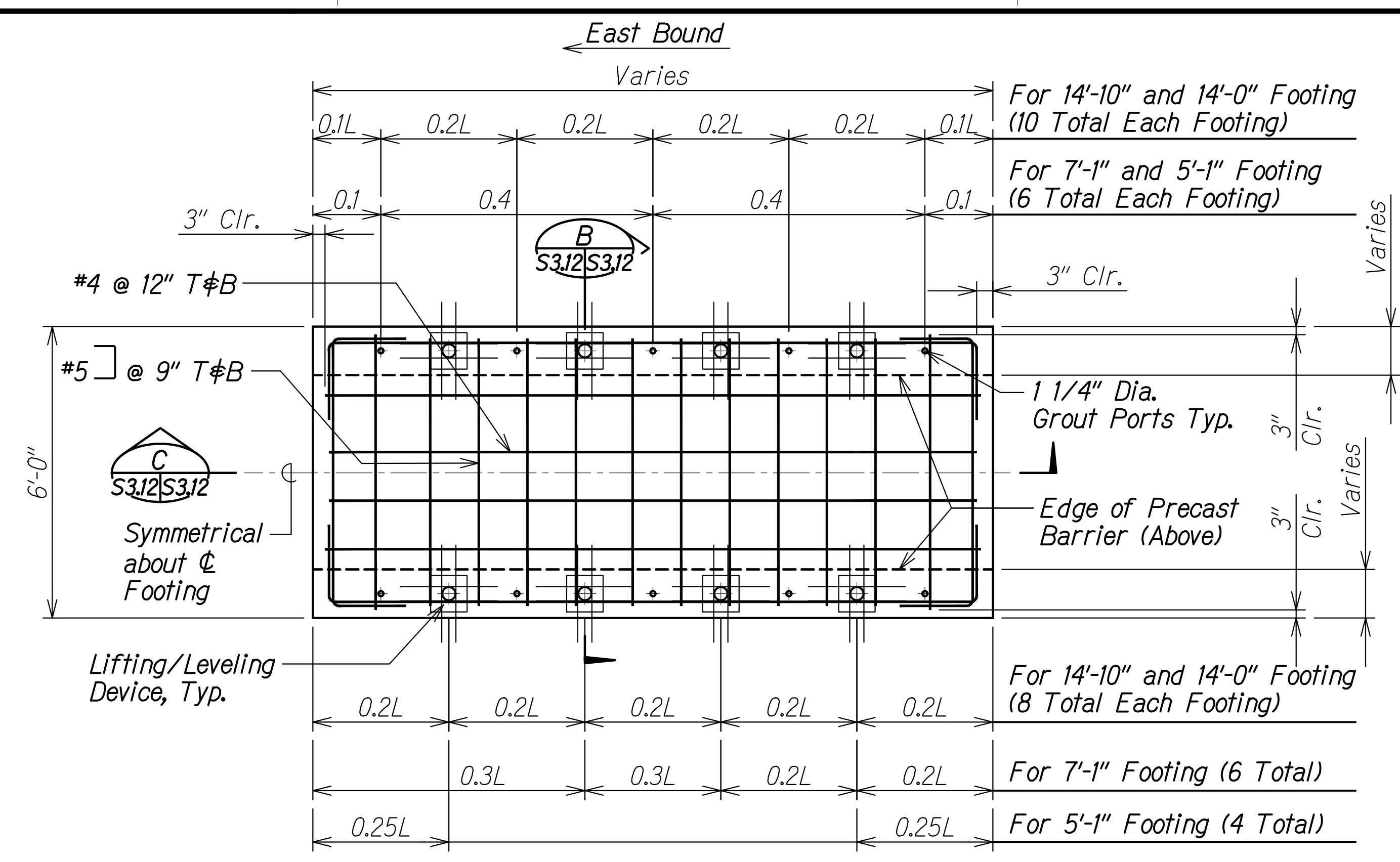
SECTIONS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

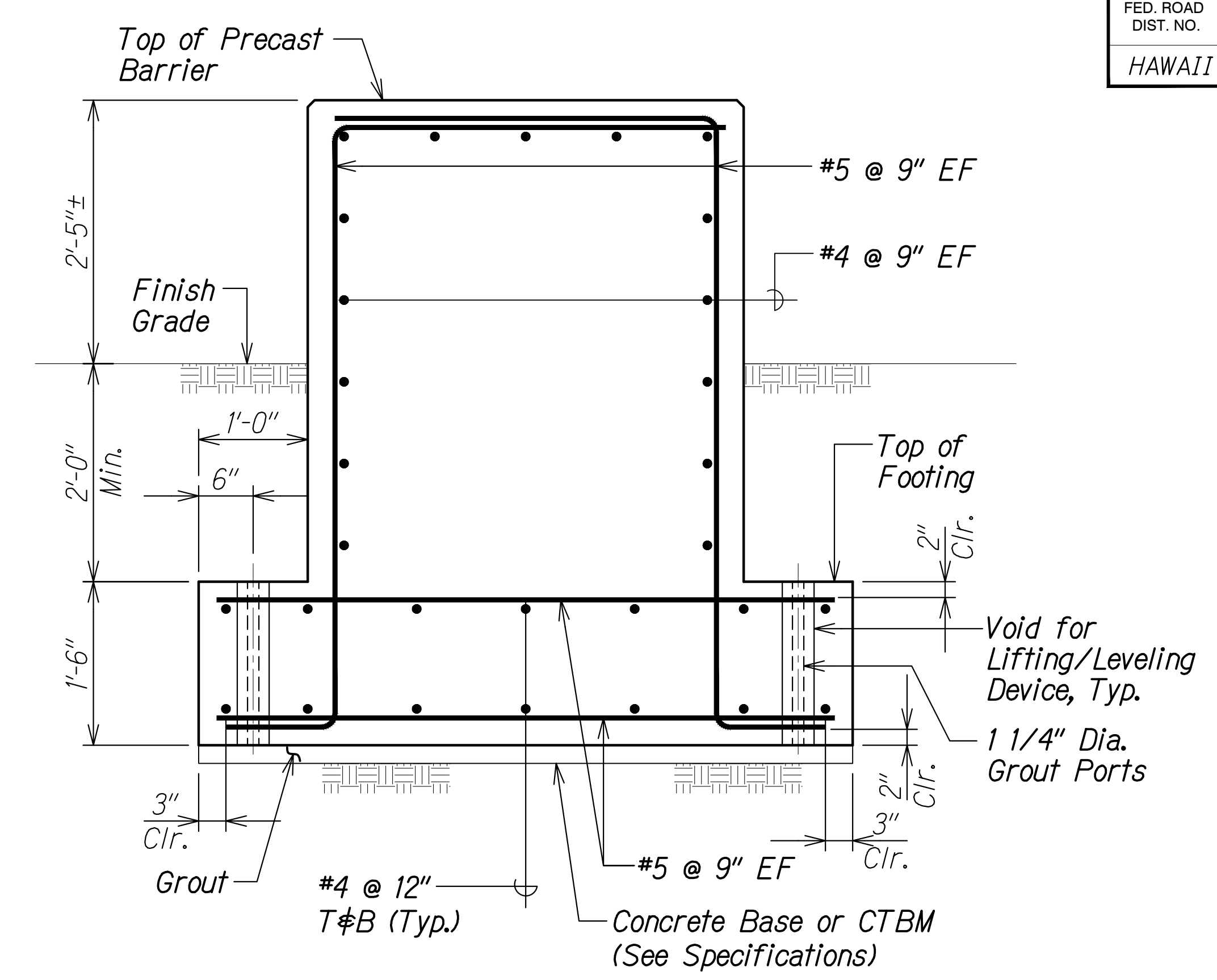
SHEET No. S3.11 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	140	197



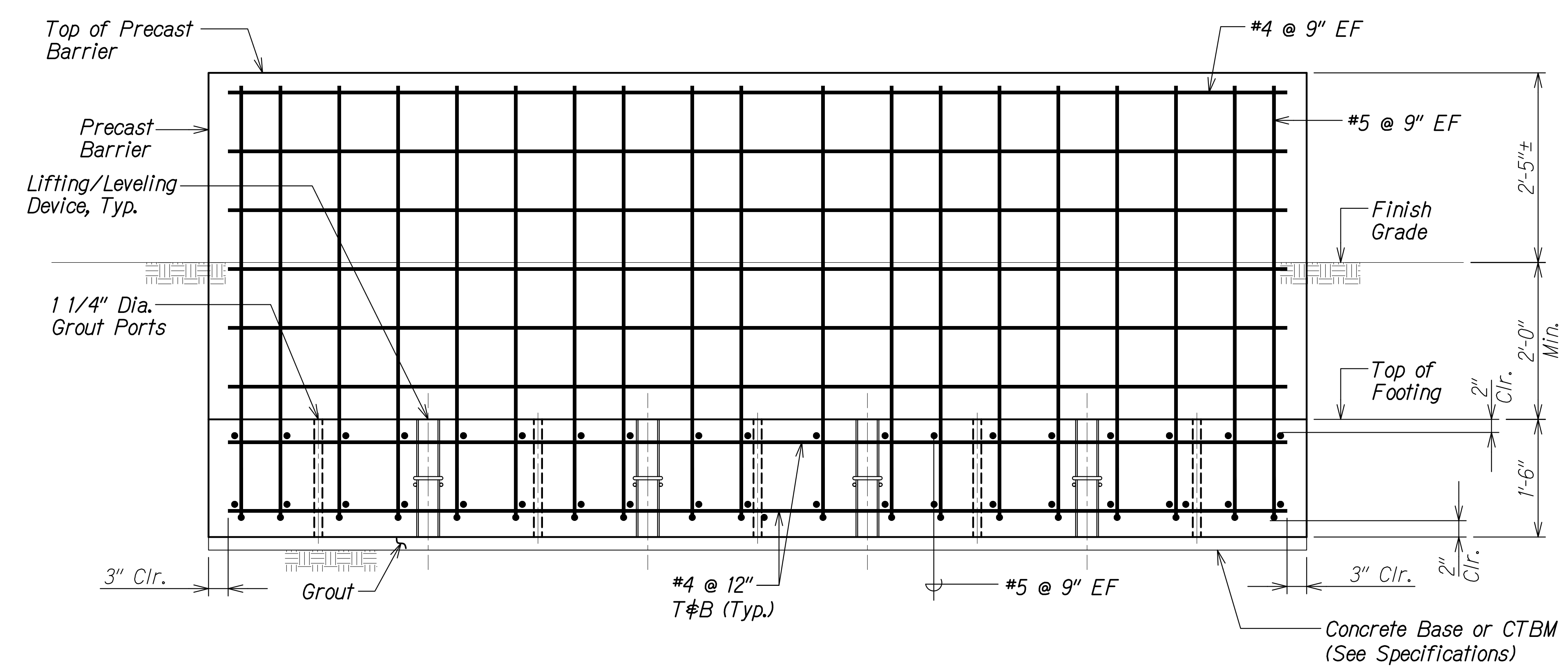
FOOTING PLAN A
Scale: 1/2" = 1'-0"
S3.12 | S3.12

Note:
For grout port details lifting/leveling device, see sheet S3.13.



SECTION B
Scale: 1" = 1'-0"
S3.12 | S3.12

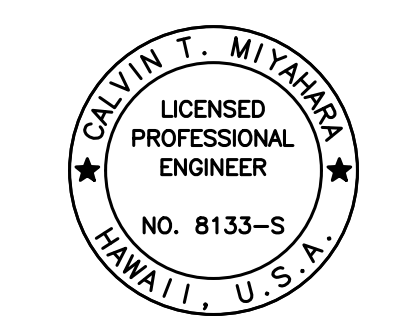
Note:
For 7'-1" footing, wall is 5'-1" long.



PRECAST CONCRETE C
Scale: 1" = 1'-0"
S3.12 | S3.12

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSU2-S0312.DET.DWG PLOT TIME: 11-28-23 7:20 PM



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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

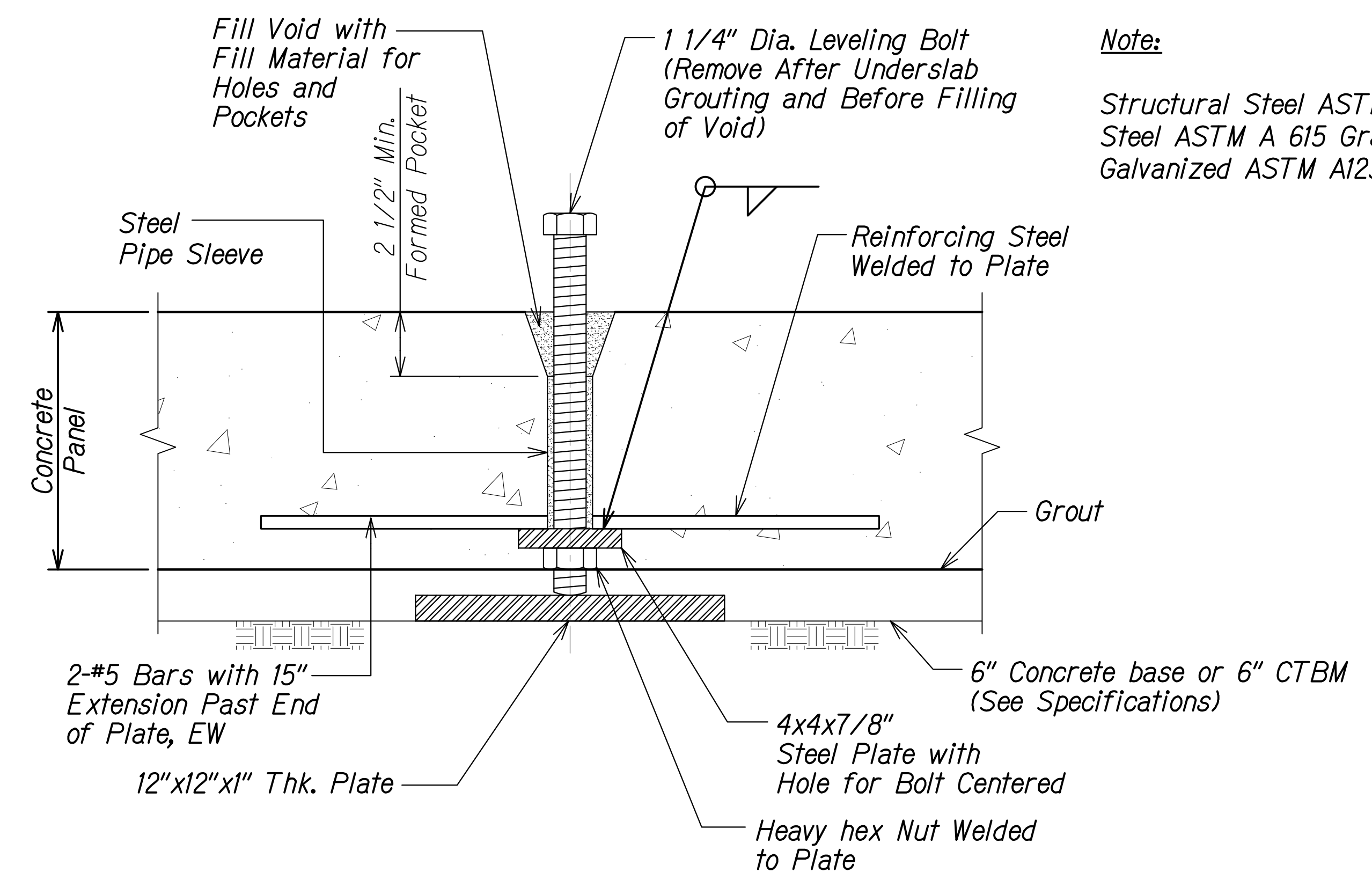
TYPICAL PRECAST BARRIER DETAILS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

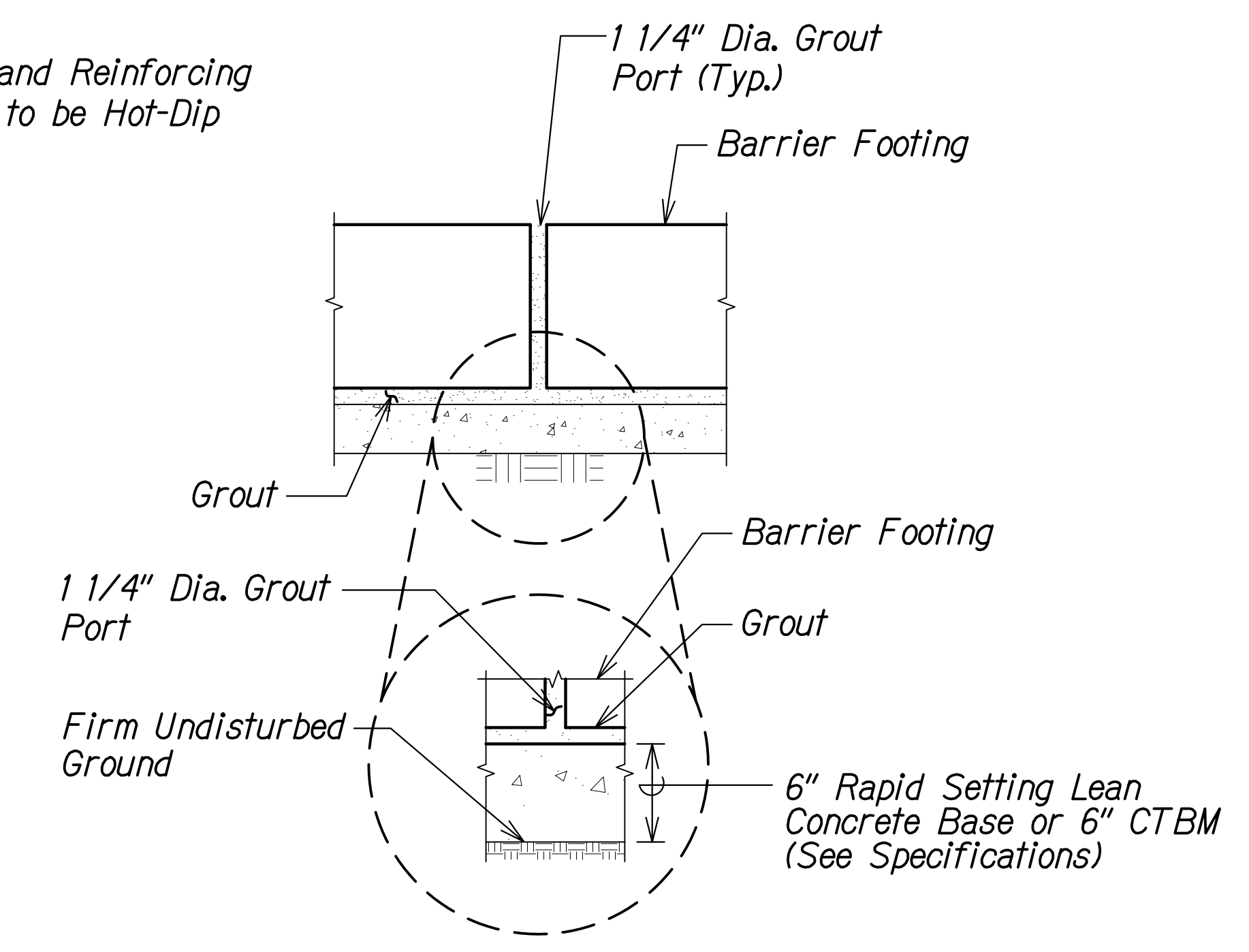
SHEET No. S3.12 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	141	197



Note:
Structural Steel ASTM A36 and Reinforcing Steel ASTM A 615 Grade 60 to be Hot-Dip Galvanized ASTM A123.

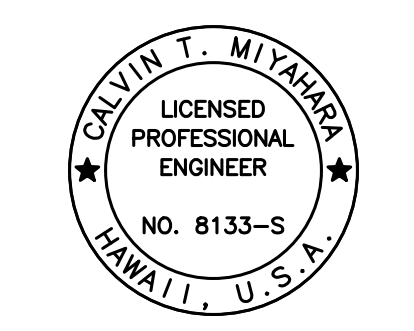
LIFTING/LEVELING DEVICE DETAIL 1
Scale: 3" = 1'-0" S3.12 S3.13



GROUT PORT UNDERSLAB VOID 2
Not to Scale S3.13 S3.13

ORIGINAL PLAN	DATE
NOTE BOOK	
No.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S0313 DET.DWG PLOT TIME: 11-28-23 7:24 PM



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

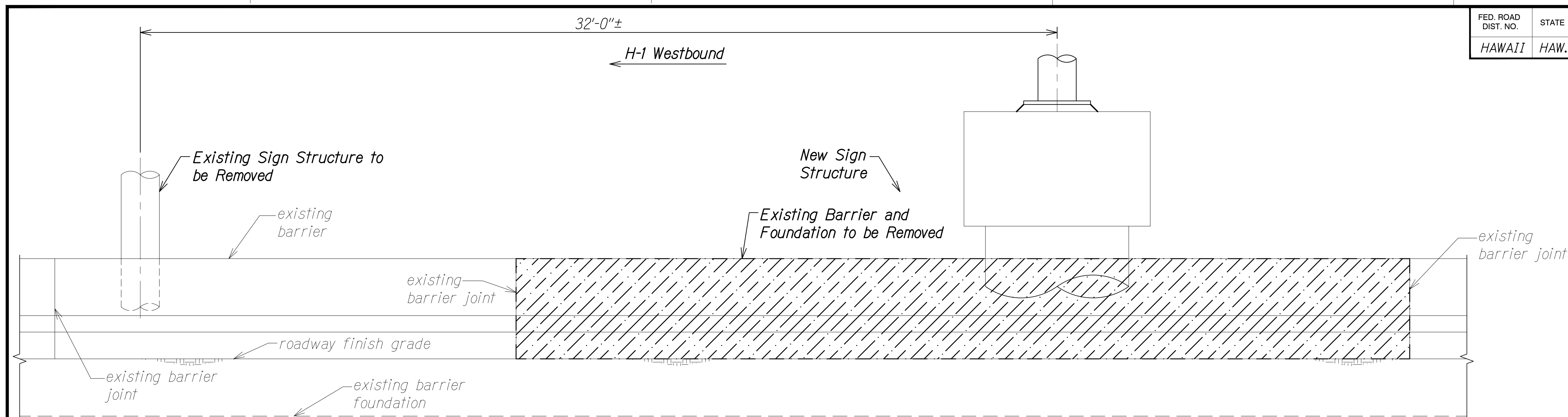
TYPICAL PRECAST BARRIER DETAILS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

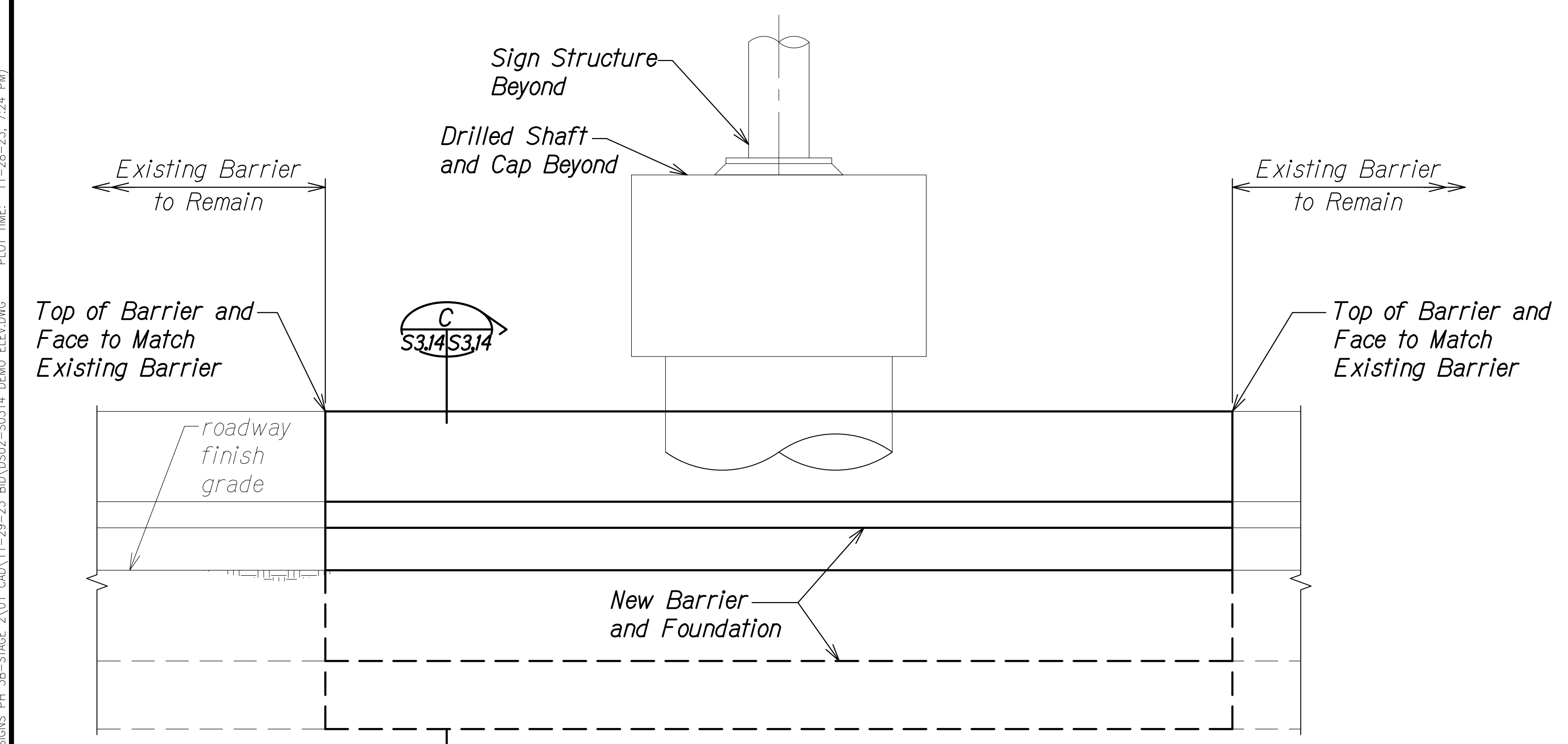
Scale: As Noted Date: Oct. 2023

SHEET No. S3.13 OF 14 SHEETS

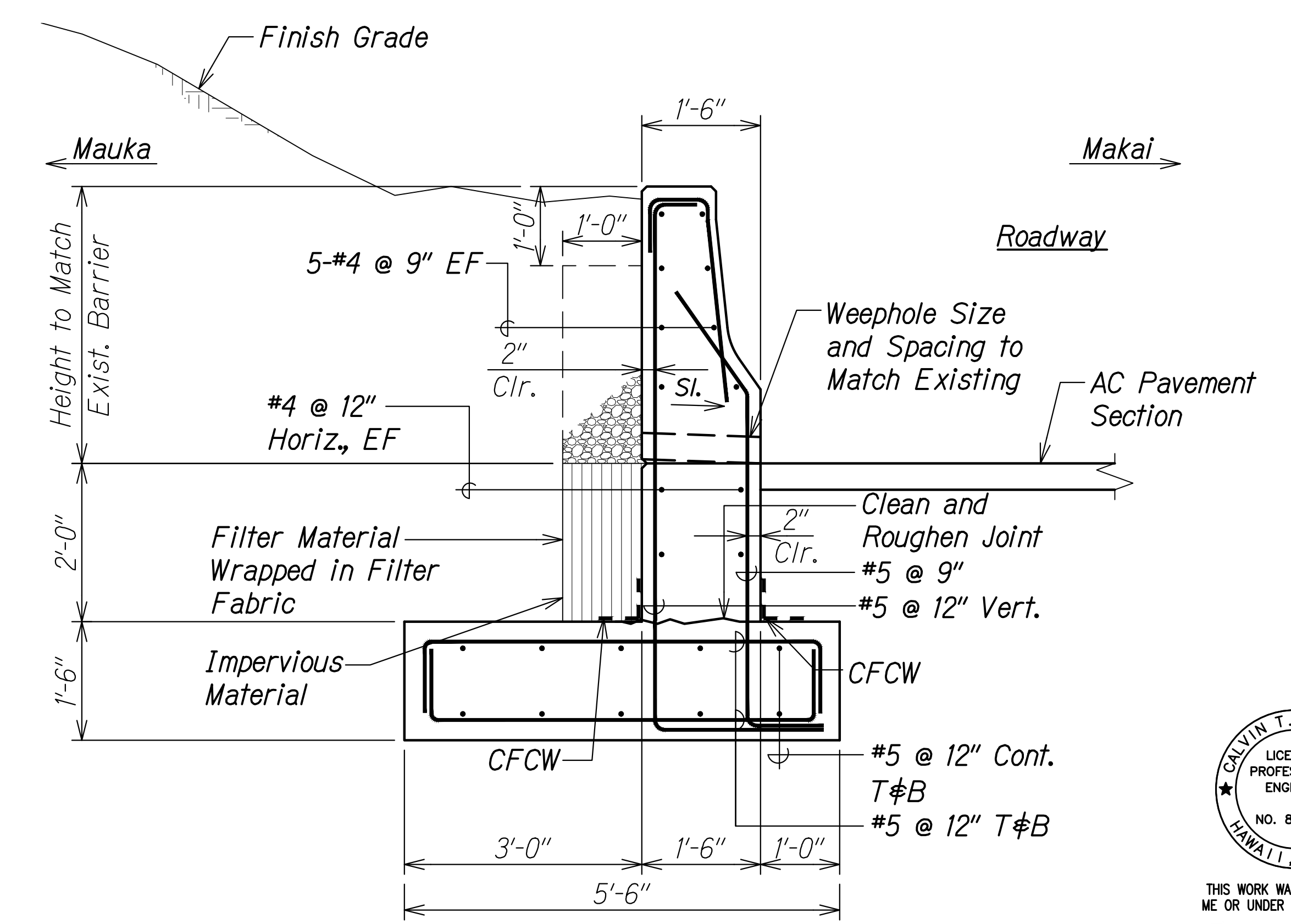
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	142	197



DEMO ELEVATION A
Scale: 1/2" = 1'-0" S3.14 | S3.14



ELEVATION B
Scale: 1/2" = 1'-0" S3.14 | S3.14



RETAINING WALL SECTION C
Scale: 3/4" = 1'-0" S3.14 | S3.14

NOTE:
Removal and reconstruction of barrier is optional. The cost of removal and reconstruction of barrier, excavation and backfill shall be considered incidental to the sign structure.

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

DRAWING NAME: Z:\00_ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01_CAD\11-29-23_BID\DSU2-S0314 DEMO ELEVATION.PLOT TIME: 11-28-23, 7:24 PM



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SIGNATURE EXP. DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

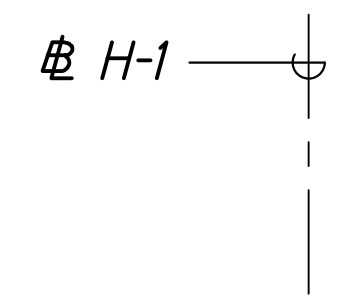
DEMO ELEVATION

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

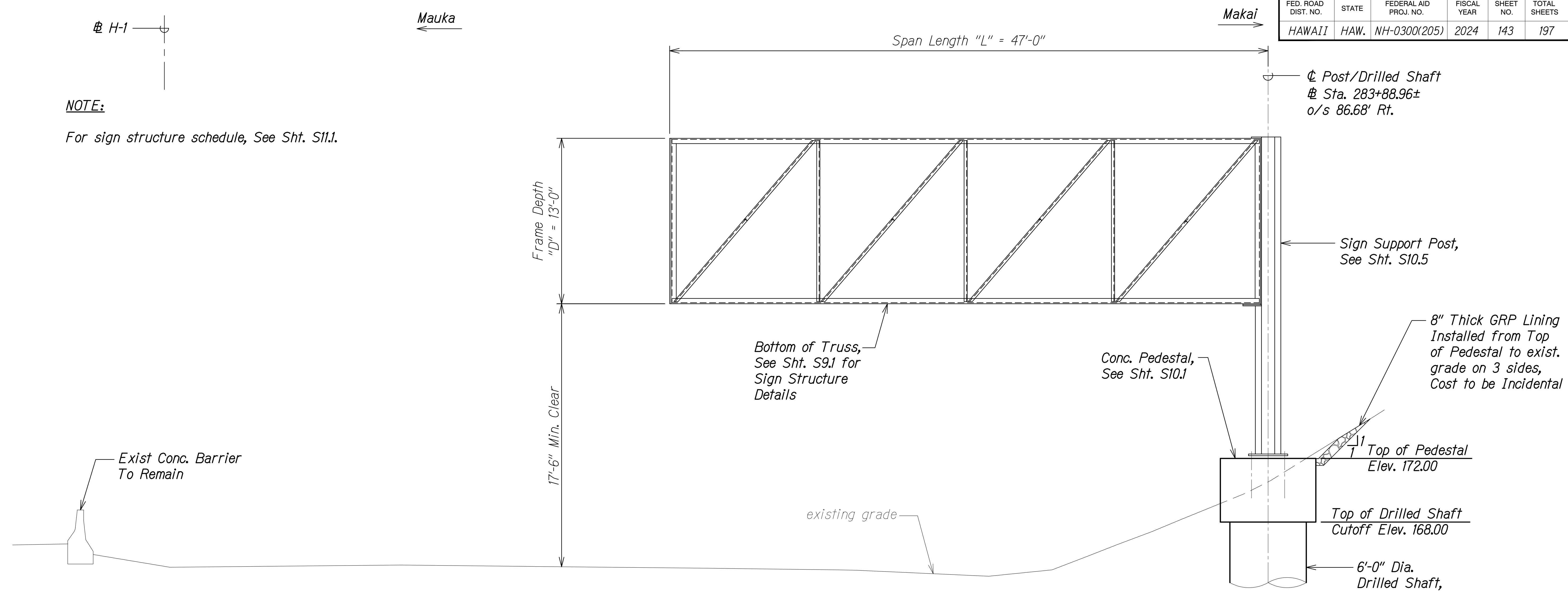
Scale: As Noted Date: Oct. 2023

SHEET No. S3.14 OF 14 SHEETS

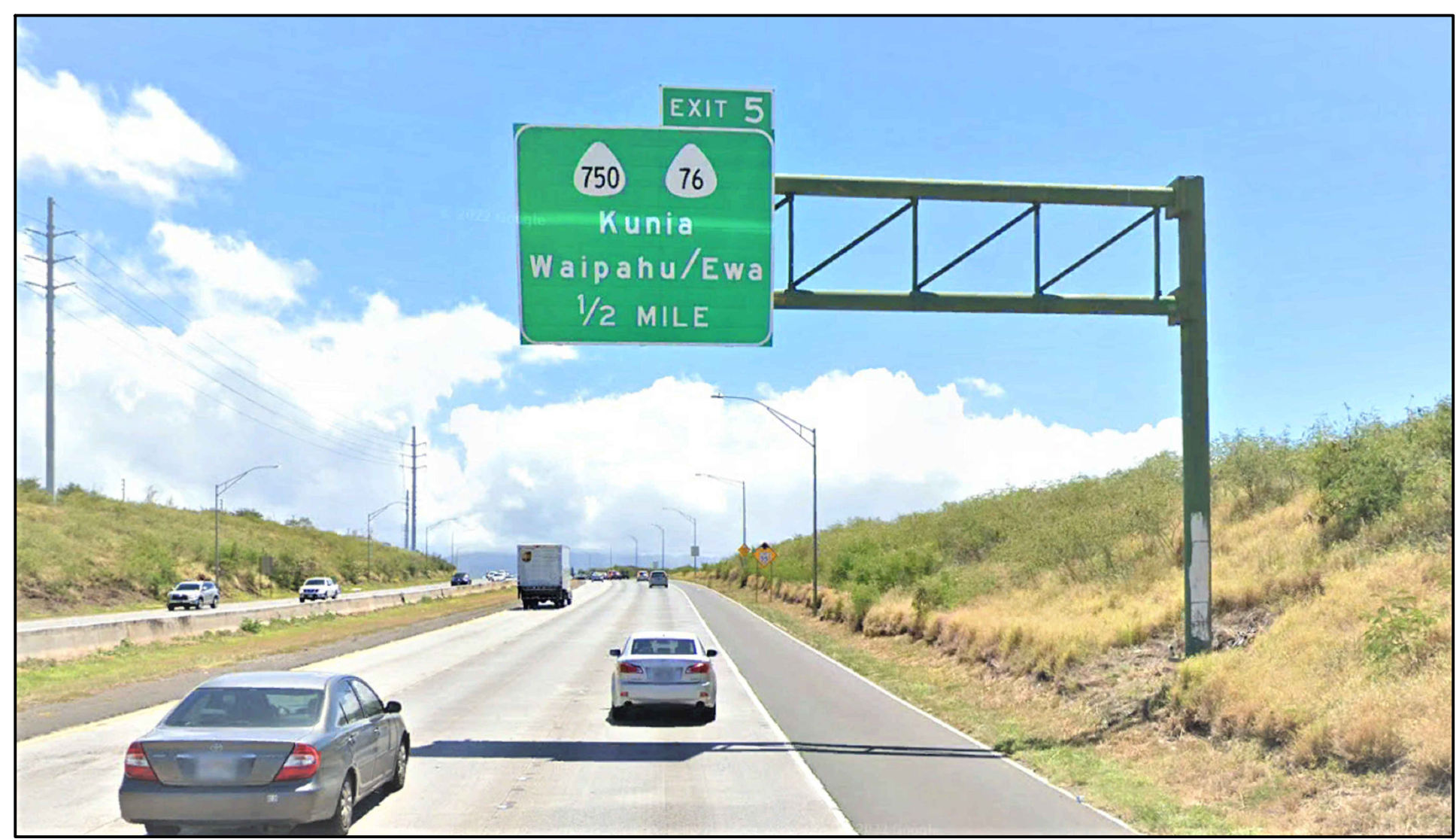
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	143	197



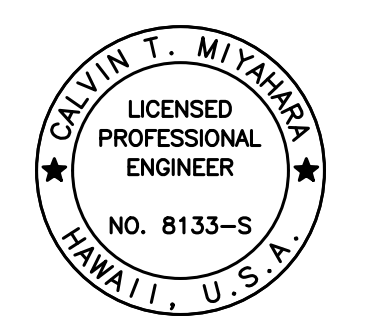
NOTE:
For sign structure schedule, See Sht. S11.1.



NEW SIGN STRUCTURE H1EB-104 ELEVATION
Scale: 1/4" = 1'-0"
A
S4.1 | S4.1



EXISTING SIGN STRUCTURE H1EB-104



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**SIGN STRUCTURE H1EB-104
ELEVATION**

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

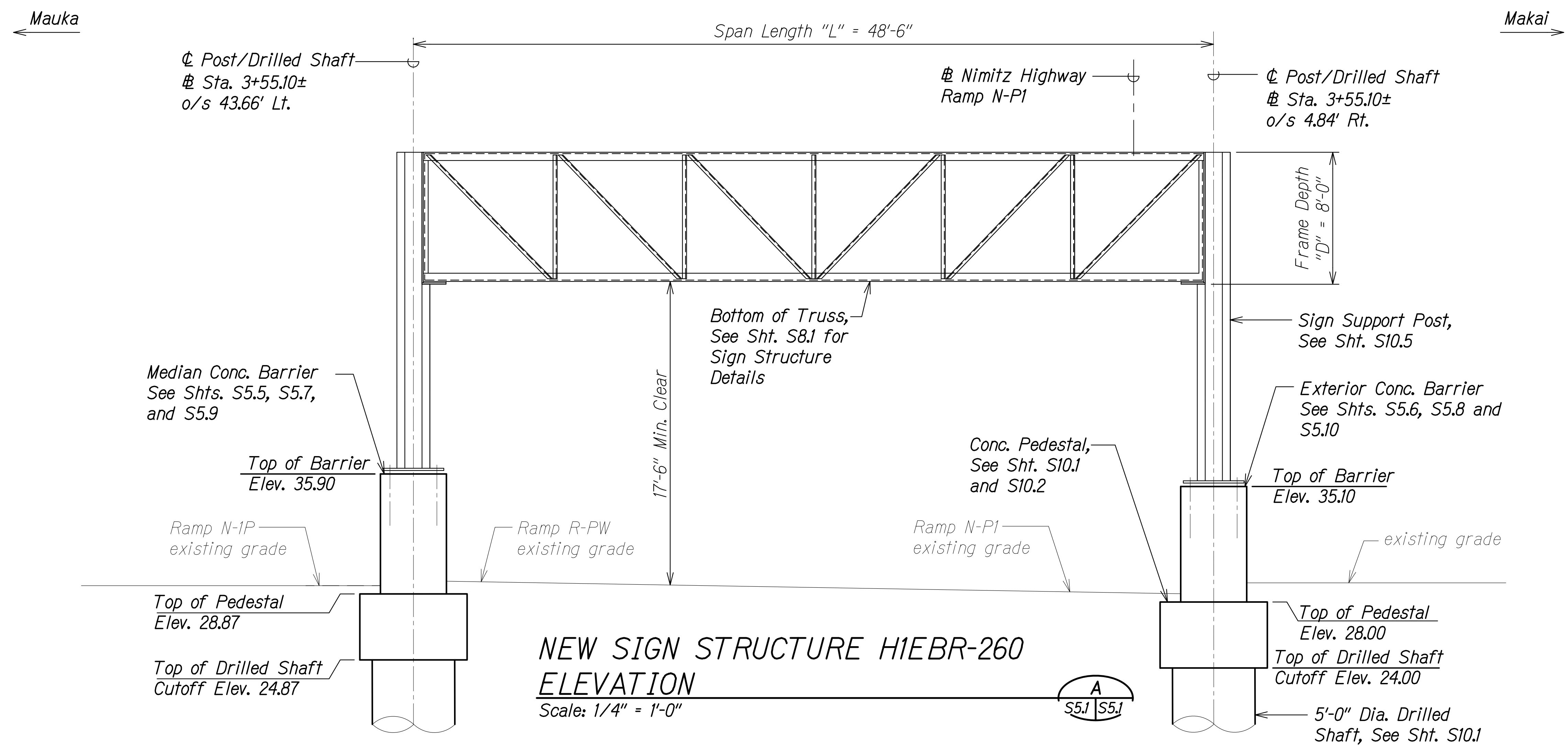
Scale: As Noted Date: Oct. 2023

SHEET No. S4.1 OF 1 SHEETS

ORIGINAL PLAN	DATE
NOTE BOOK	
No.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S0401 H1EB-104 ELEV.DWG PLOT TIME: 11-28-23, 7:25 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	144	197



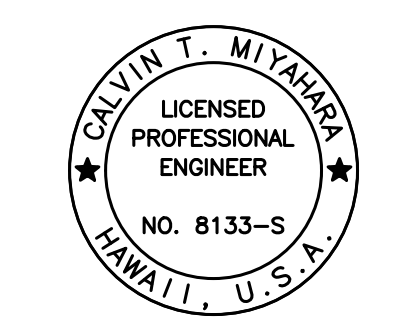
NOTE:
For sign structure schedule, See Sht. S11.1.



EXISTING SIGN STRUCTURE HIEBR-260

ORIGINAL PLAN	DATE
NOTE BOOK	
No.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-10-24.P5&E BID\DSUZ-S0501 HIEBR-260-ELEV.DWG PLOT TIME: 01-11-24, 2:27 PM



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Calvin Miyahara
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

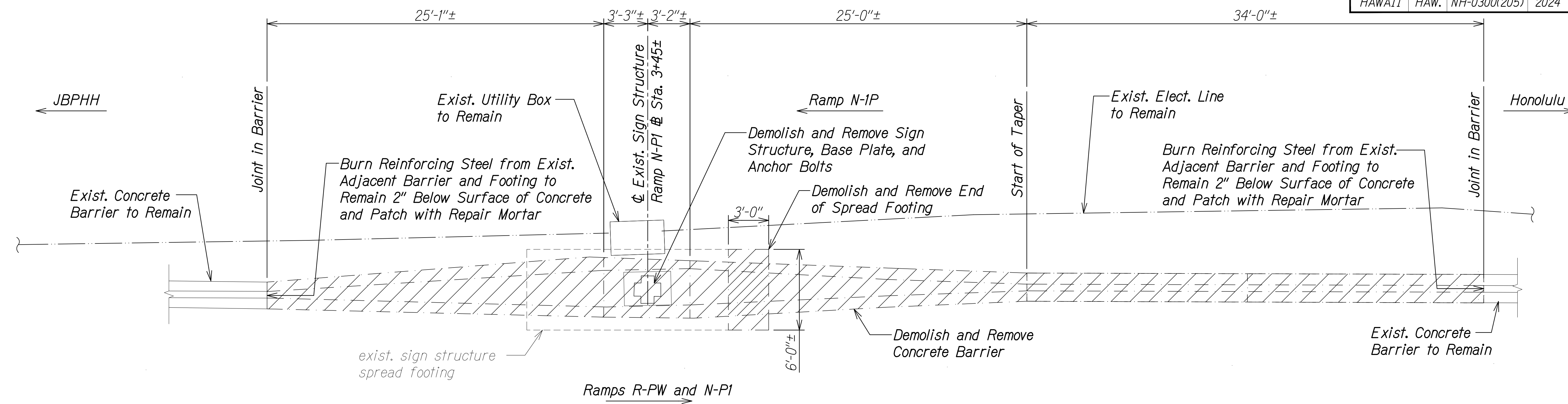
SIGN STRUCTURE HIEBR-260
ELEVATION

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

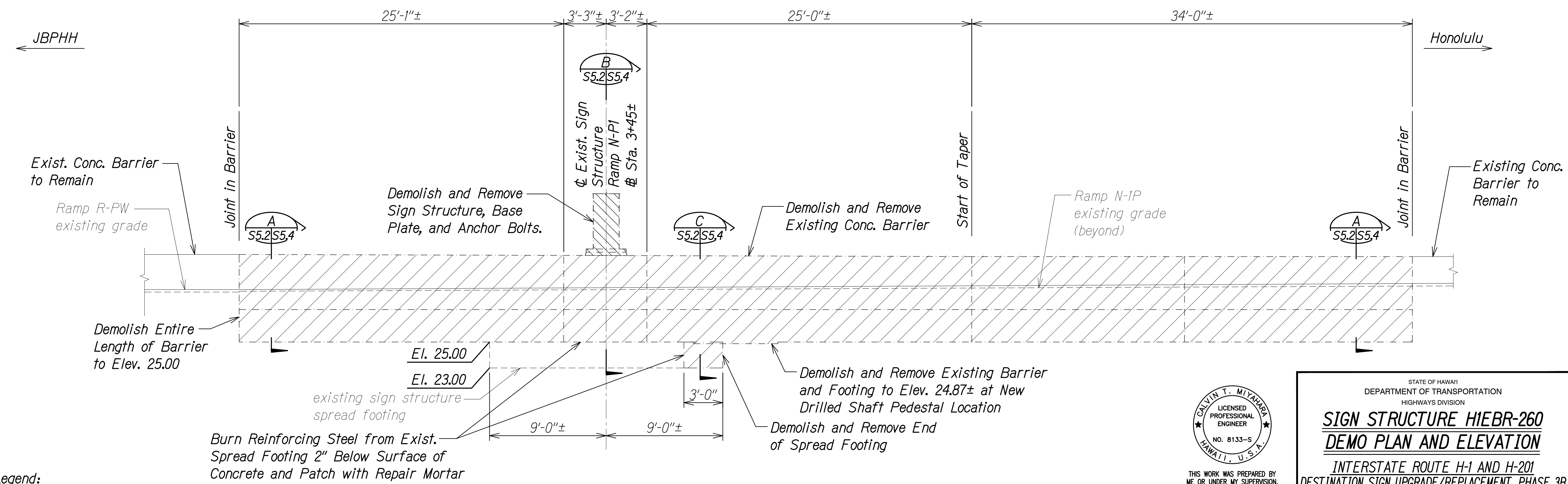
Scale: As Noted Date: Oct. 2023

SHEET No. S5.1 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	145	197



MEDIAN BARRIER DEMOLITION PLAN A
 Scale: 1/4" = 1'-0" S5.2 | S5.2



MEDIAN BARRIER DEMOLITION ELEVATION B
 Scale: 1/4" = 1'-0" S5.2 | S5.2

Legend:
 Demolish and Remove

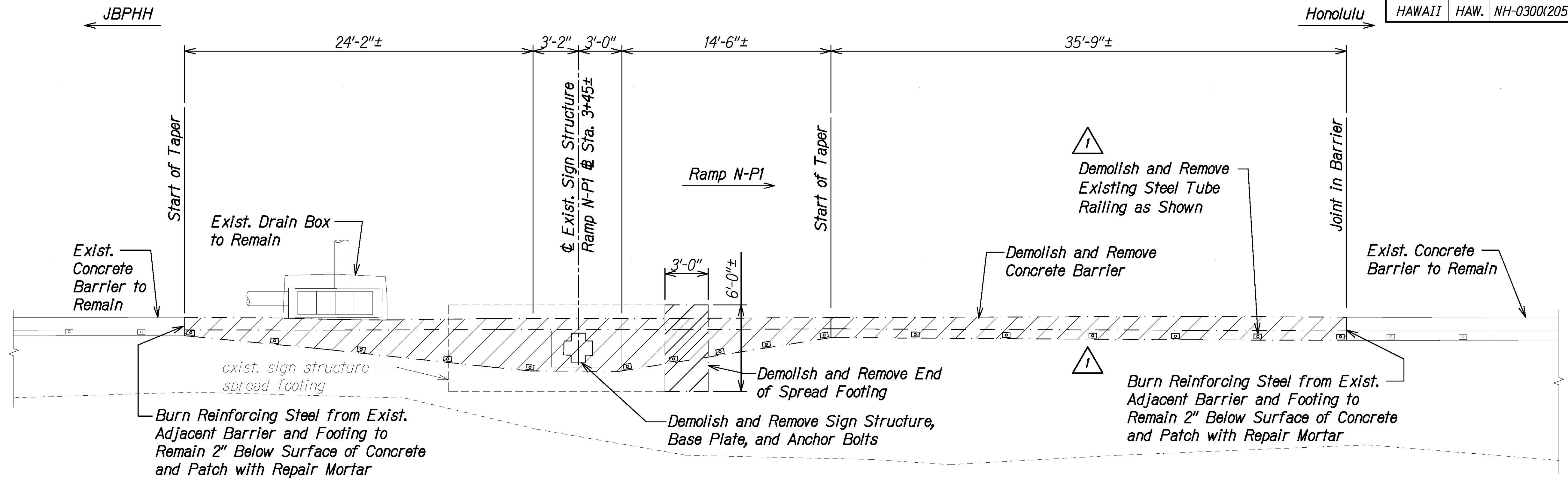
DATE	_____
SURVEY PLOTTED BY	_____
ORIGINAL PLAN	_____
DRAWN BY	_____
DESIGNED BY	_____
NOTE BOOK	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-10-24.P5&E BID\DSU2-S0502 HIEBR-260-PLAN.DWG PLOT TIME: 01-11-24, 2:27 PM

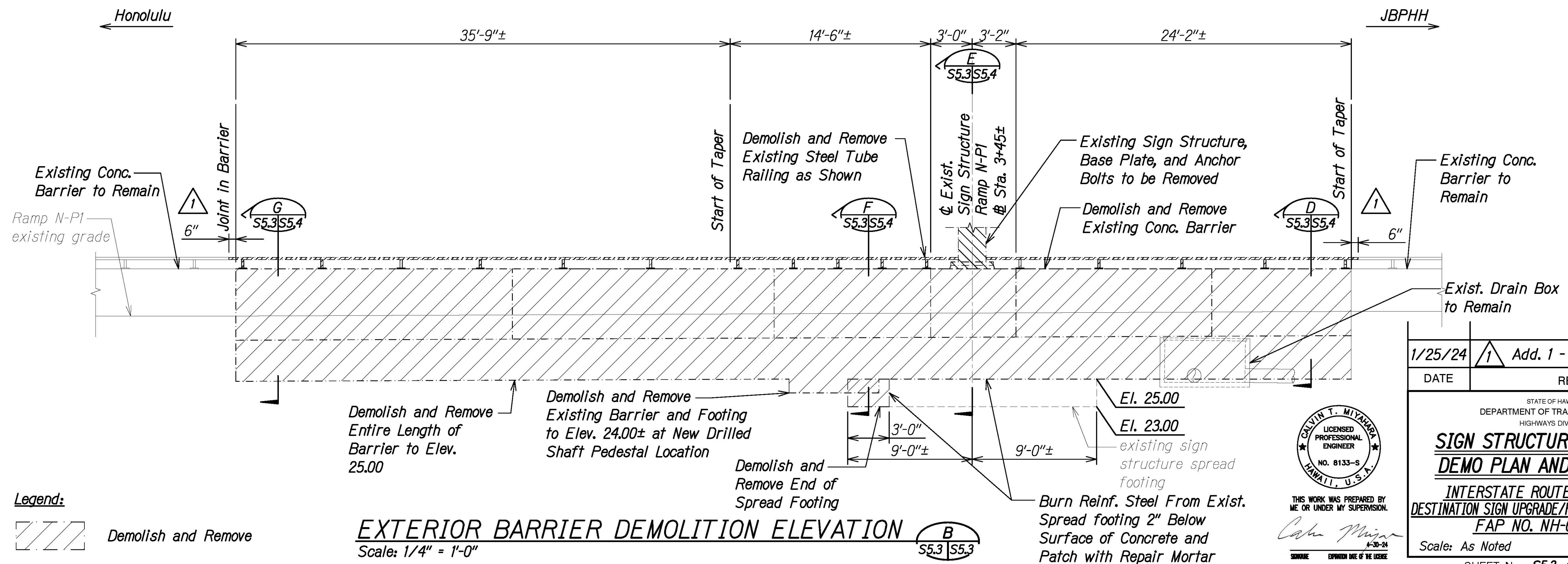
CALVIN T. MIYAHARA
 LICENSED PROFESSIONAL ENGINEER
 NO. 8133-S
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calvin Miyahara
 SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
SIGN STRUCTURE HIEBR-260
DEMO PLAN AND ELEVATION
 INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)
 Scale: As Noted Date: Oct. 2023
 SHEET No. S5.2 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 146	197



EXTERIOR BARRIER DEMOLITION PLAN
Scale: 1/4" = 1'-0"
A
S5.3 | S5.3



EXTERIOR BARRIER DEMOLITION ELEVATION
Scale: 1/4" = 1'-0"
B
S5.3 | S5.3

Legend:
[Hatched Box] Demolish and Remove

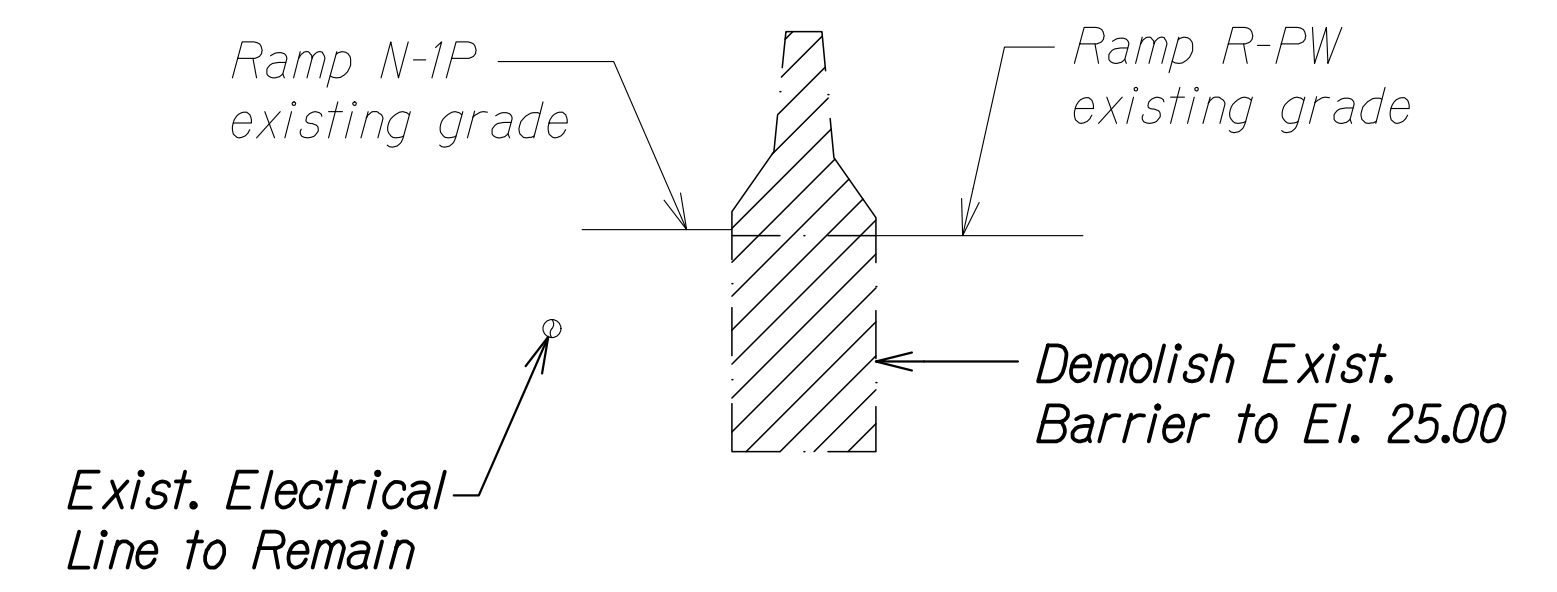
CALVIN T. MIYAKAWA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calm Mijun
4-30-24
SIGNATURE EXPIRES END OF THE LICENSE

DATE	1/25/24	REVISION	1 Add. 1 - Revised Details
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION			
SIGN STRUCTURE HIEBR-260 DEMO PLAN AND ELEVATION			
INTERSTATE ROUTE H-1 AND H-201 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B FAP NO. NH-0300(205)			
Scale:	As Noted	Date:	Oct. 2023
SHEET No. S5.3 OF 11 SHEETS			

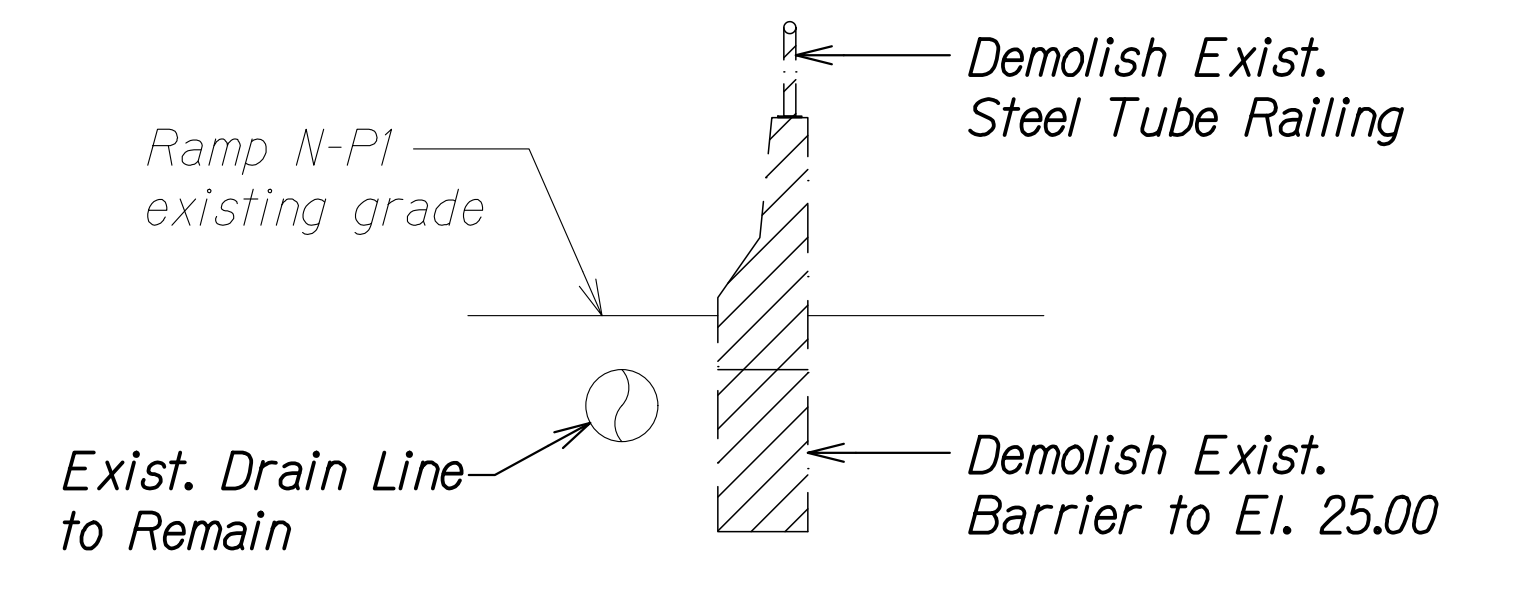
DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
DESIGNED BY: _____
NOTE BOOK: _____
QUANTITIES BY: _____
CHECKED BY: _____
No. _____

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSU2-S0502 HIEBR-260-PLAN-ADD1.DWG PLOT TIME: 01-25-24, 4:04 PM

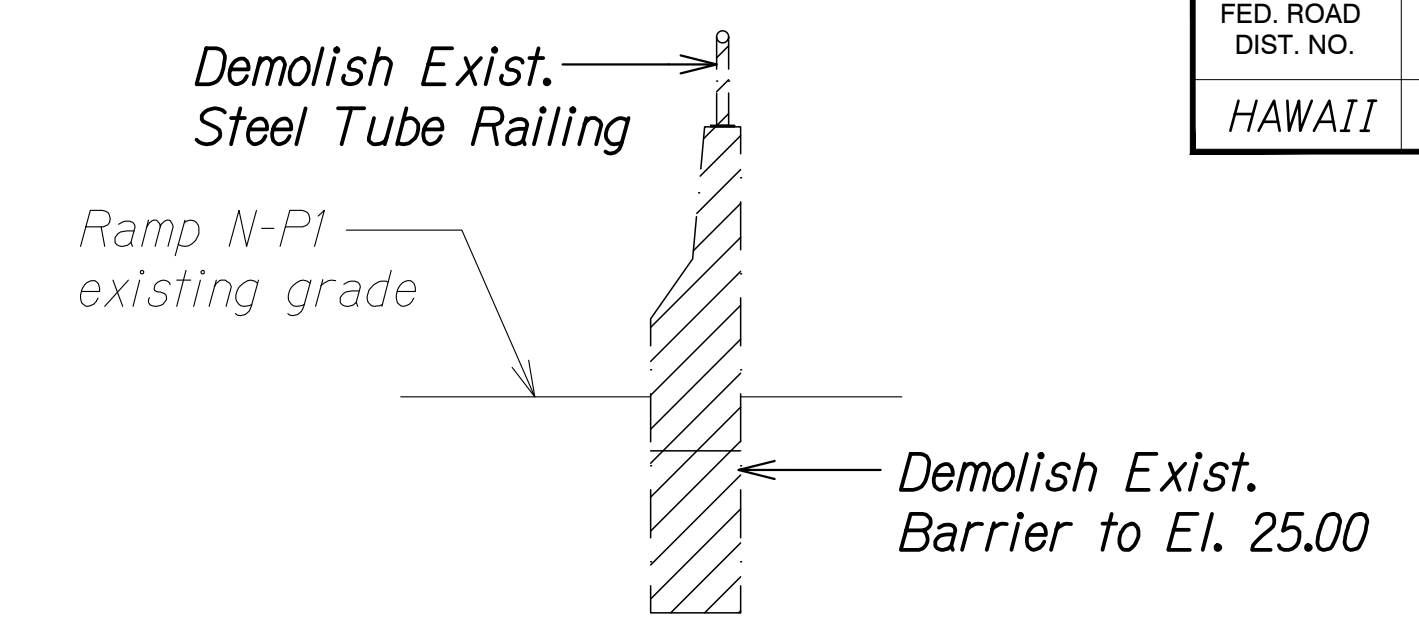
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	147	197



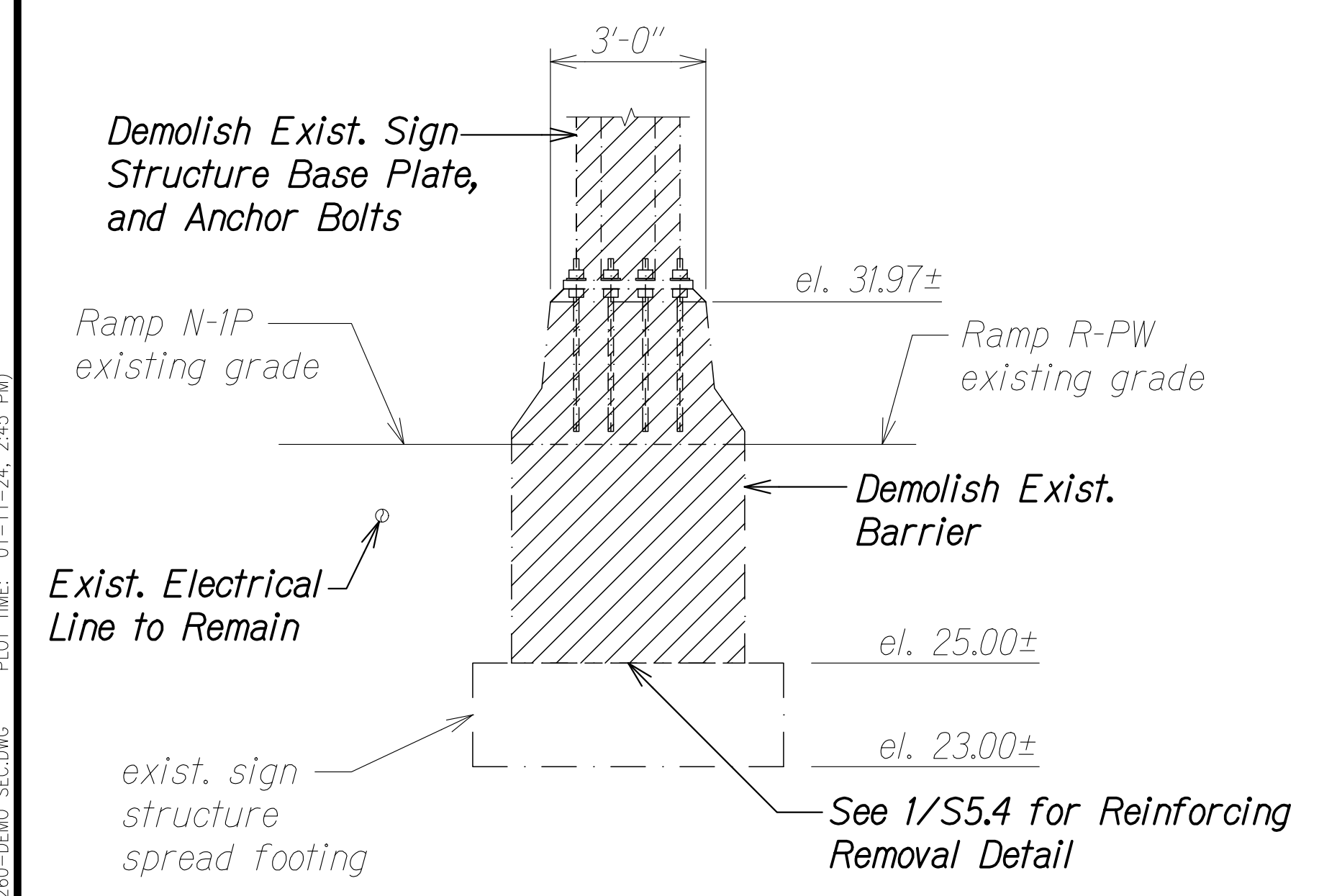
**MEDIAN BARRIER
DEMOLITION SECTION A**
Scale: 3/8" = 1'-0" S5.2 | S5.4



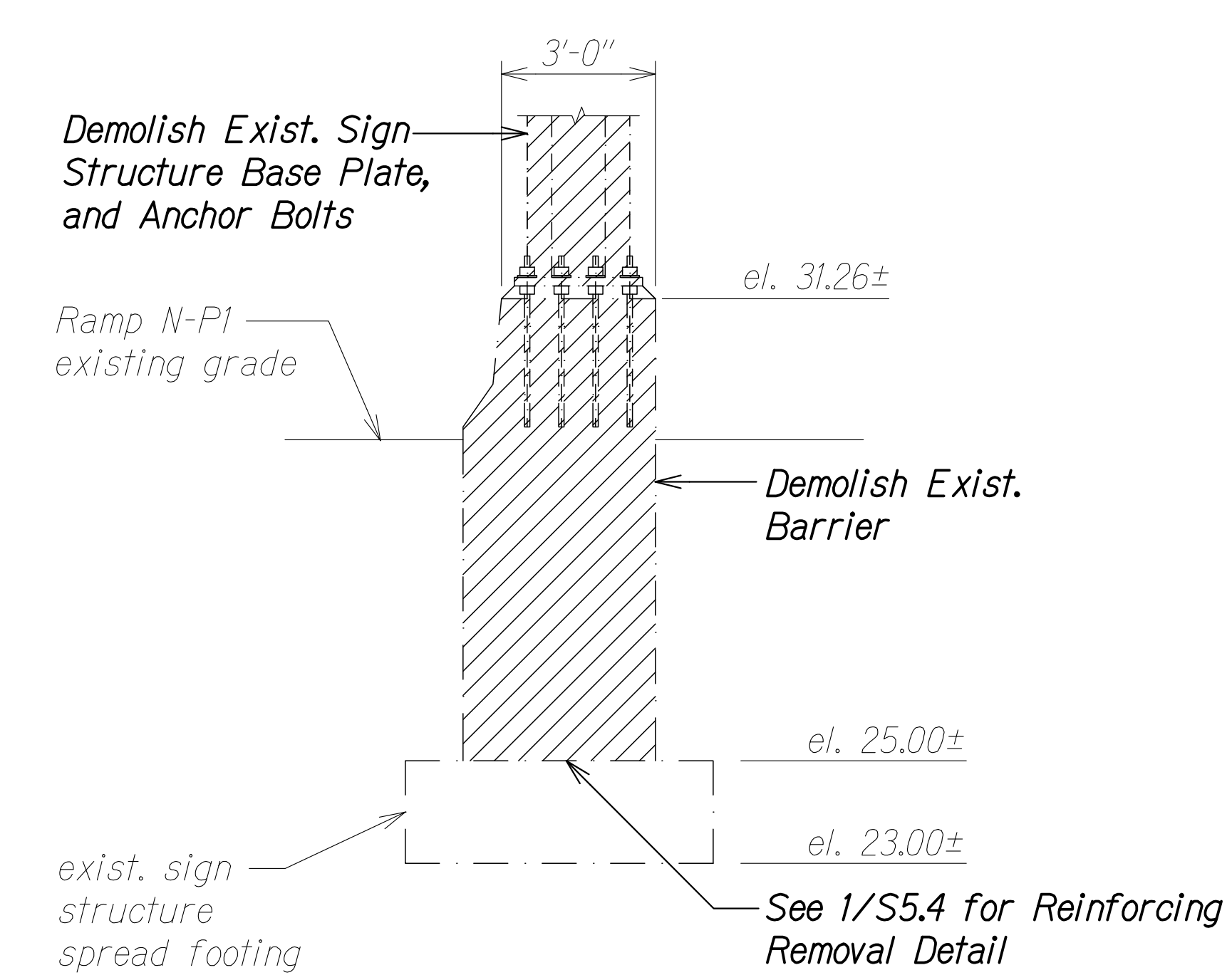
**EXTERIOR BARRIER
DEMOLITION SECTION D**
Scale: 3/8" = 1'-0" S5.3 | S5.4



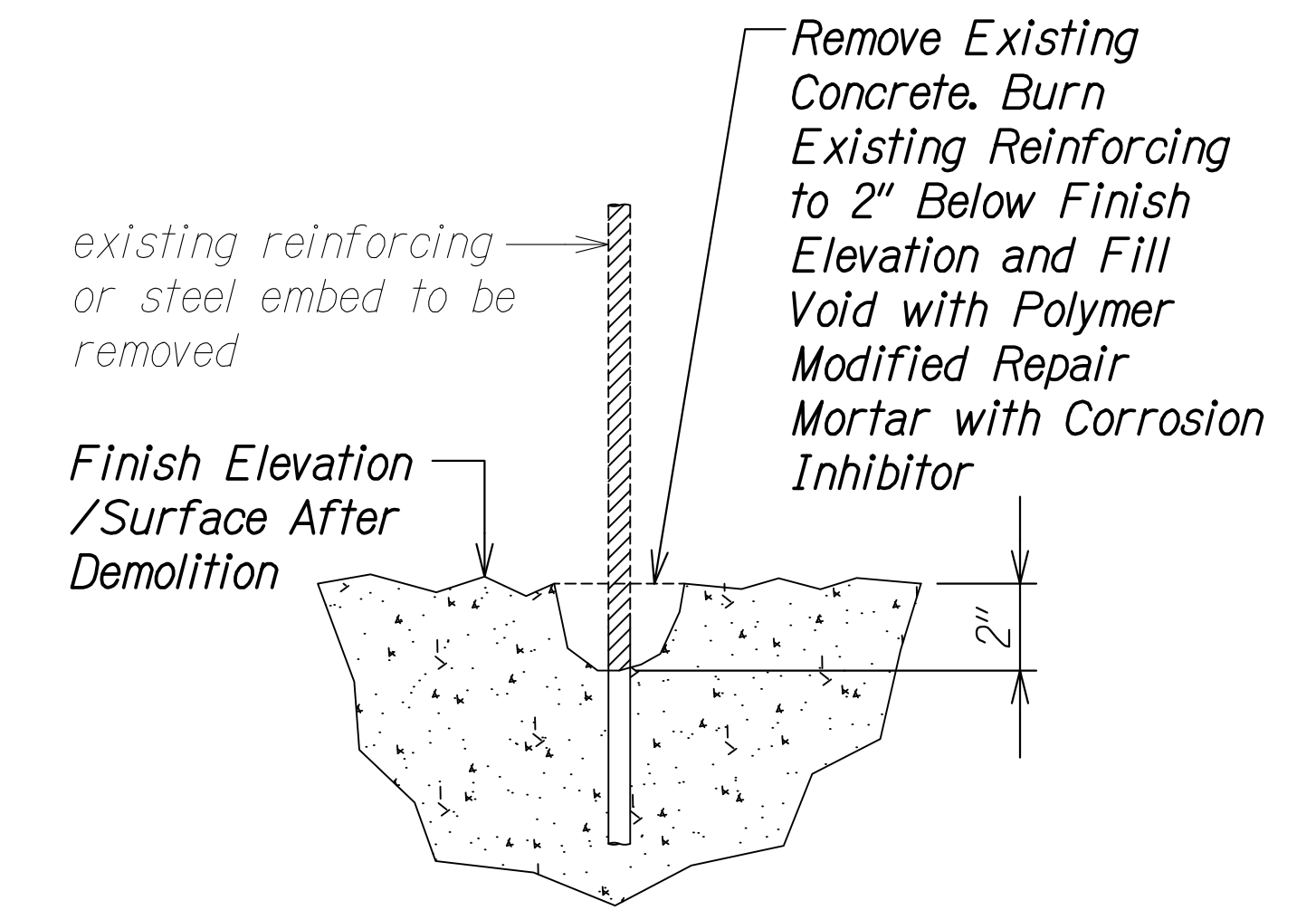
**EXTERIOR BARRIER
DEMOLITION SECTION G**
Scale: 3/8" = 1'-0" S5.3 | S5.4



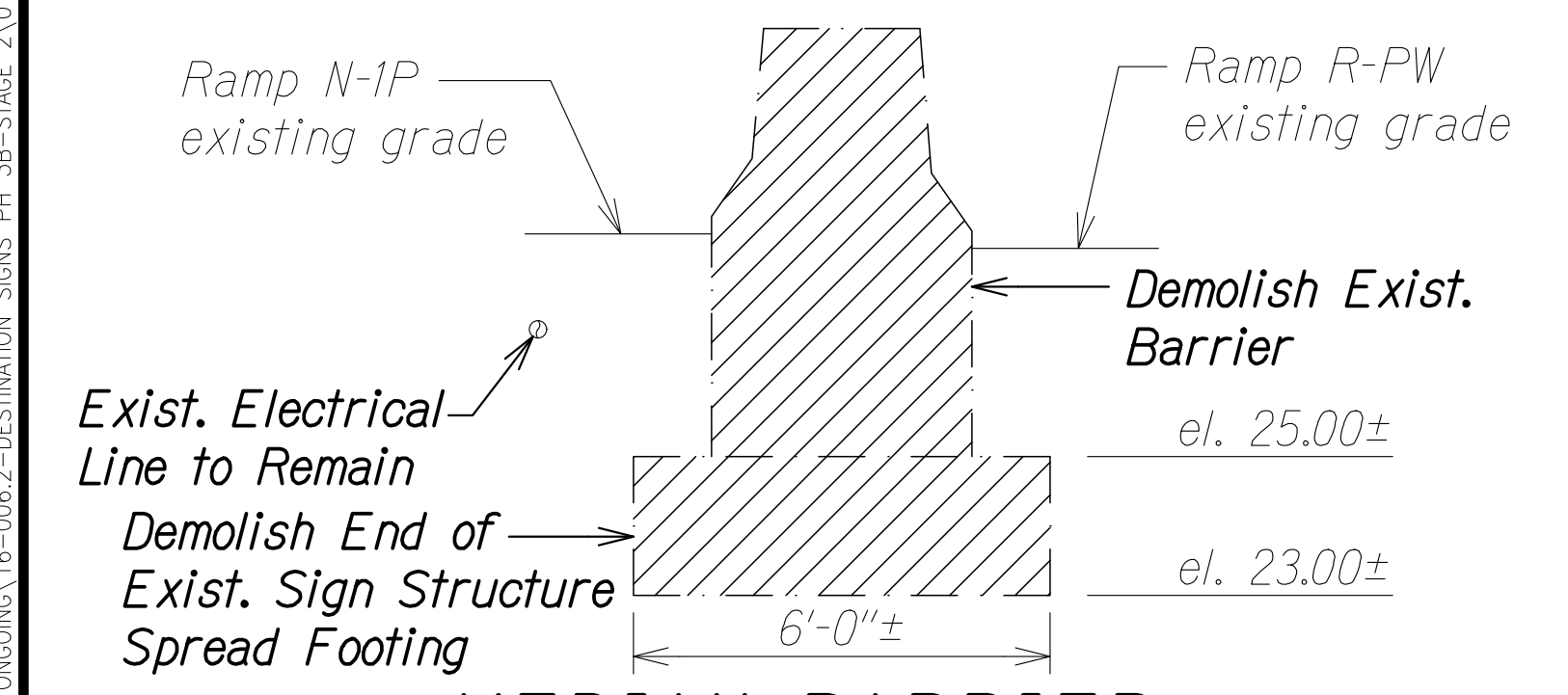
**MEDIAN BARRIER
DEMOLITION SECTION B**
Scale: 3/8" = 1'-0" S5.2 | S5.4



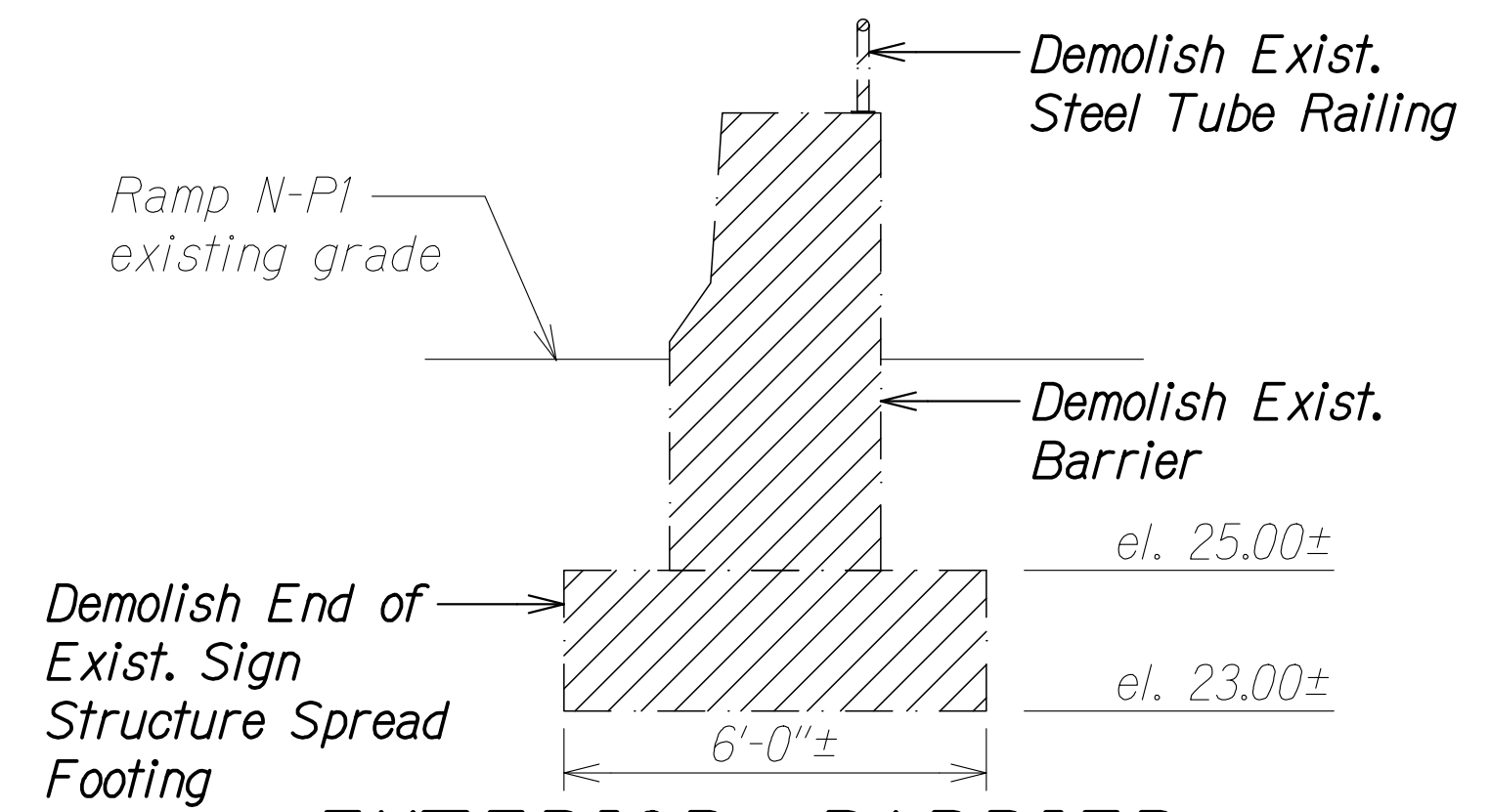
**EXTERIOR BARRIER
DEMOLITION SECTION E**
Scale: 3/8" = 1'-0" S5.3 | S5.4



**REINFORCING
REMOVAL DETAIL 1**
Scale: 3" = 1'-0" S5.4 | S5.4



**MEDIAN BARRIER
DEMOLITION SECTION C**
Scale: 3/8" = 1'-0" S5.2 | S5.4



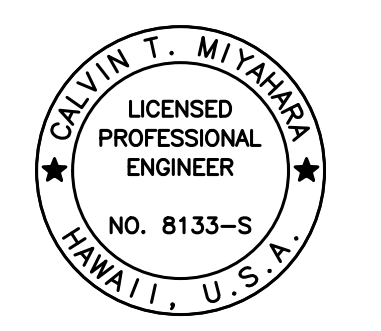
**EXTERIOR BARRIER
DEMOLITION SECTION F**
Scale: 3/8" = 1'-0" S5.3 | S5.4

LEGEND:
 Demolish and Remove

NOTE:
 All structure excavation work shall be considered incidental to the demolition and removal of exist. concrete barriers and footings.

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

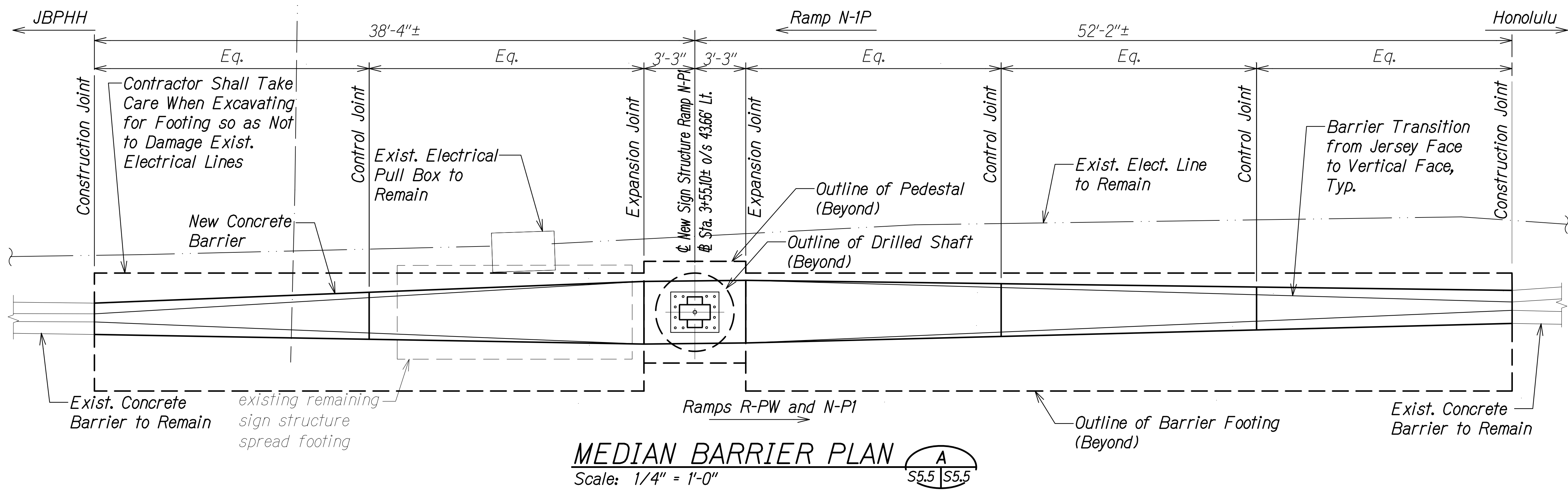
DRAWING NAME: ZA00 ONGOING 16-0062-DESTINATION SIGNS PH 3B-STAGE 2 01 CAD 01-10-24.P3&E BID\DSUZ-S0504 HIEBR-260-DEMO SECTIONS PLOT TIME: 01-11-24, 2:45 PM



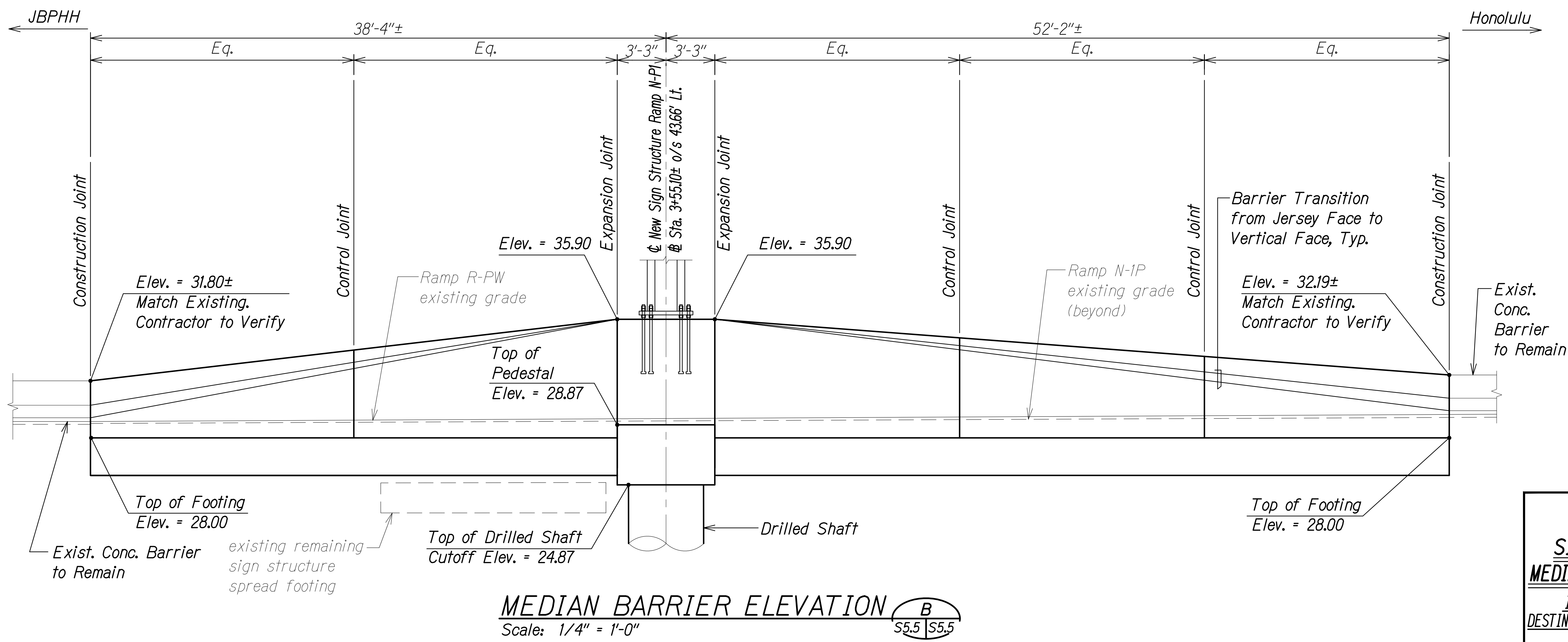
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calvin Miyahara
 SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**SIGN STRUCTURE HIEBR-260
 DEMO SECTIONS**
 INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)
 Scale: As Noted Date: Oct. 2023
 SHEET No. S5.4 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	148	197



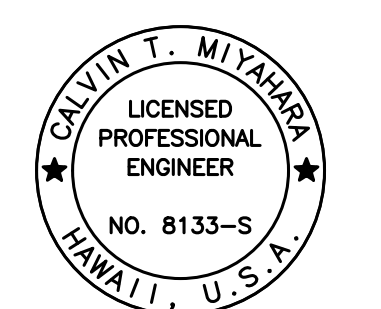
MEDIAN BARRIER PLAN A
Scale: 1/4" = 1'-0"
S5.5 | S5.5



MEDIAN BARRIER ELEVATION B
Scale: 1/4" = 1'-0"
S5.5 | S5.5

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-10-24.P5&E BID\DSUZ-S0605 HIEBR-260-PLAN.DWG PLOT TIME: 01-11-24, 2:29 PM



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calvin Miyakawa
SIGNATURE EXPIRATION DATE OF THE LICENSE 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

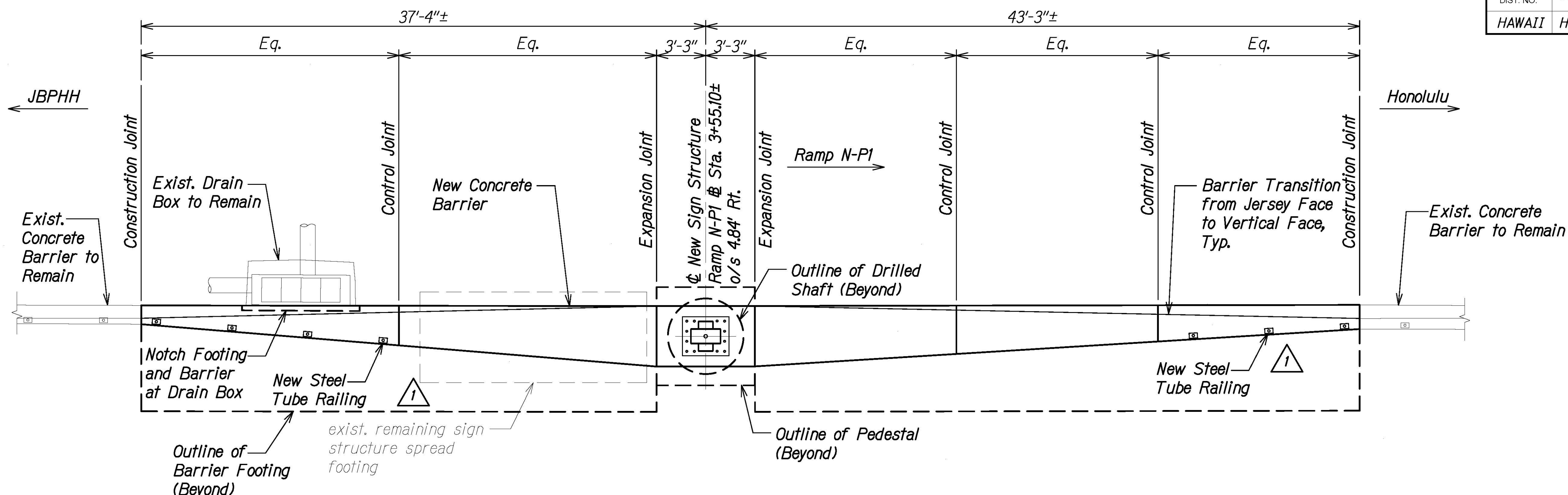
SIGN STRUCTURE HIEBR-260
MEDIAN BARRIER PLAN AND ELEVATION

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

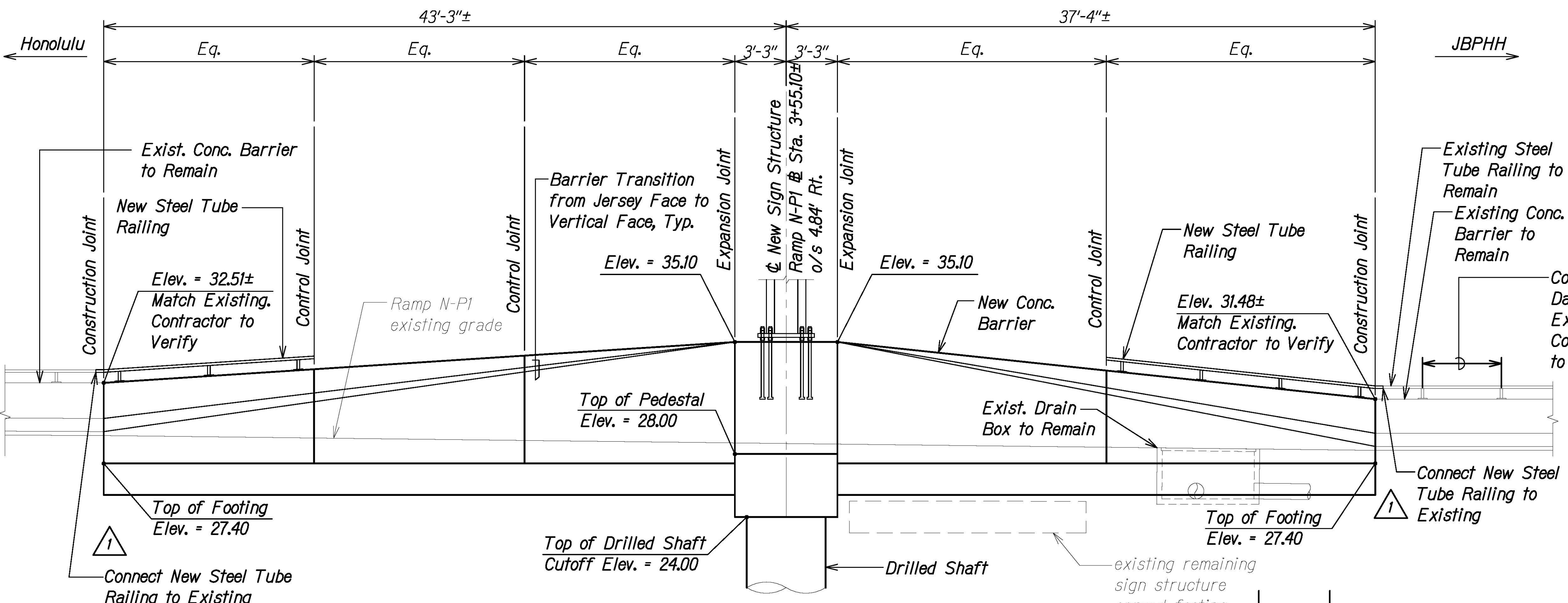
Scale: As Noted Date: Oct. 2023

SHEET No. S5.5 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 149	197



EXTERIOR BARRIER PLAN (A)
Scale: 1/4" = 1'-0" S5.6 | S5.6

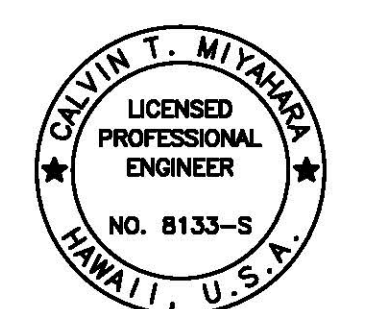


EXTERIOR BARRIER ELEVATION (B)
Scale: 1/4" = 1'-0" S5.6 | S5.6

DATE	BY

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSU2-S0505 HIEBR-260-PLAN-ADD1.DWG PLOT TIME: 01-25-24, 4:04 PM

Contractor to Straighten Damaged Section of Existing Tube Railing. Cost Shall be Incidental to Various Work



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calvin Miyahara
4-23-24
SIGNATURE EXPIRES ONE YEAR FROM DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN STRUCTURE HIEBR-260
EXTERIOR BARRIER PLAN AND ELEVATION

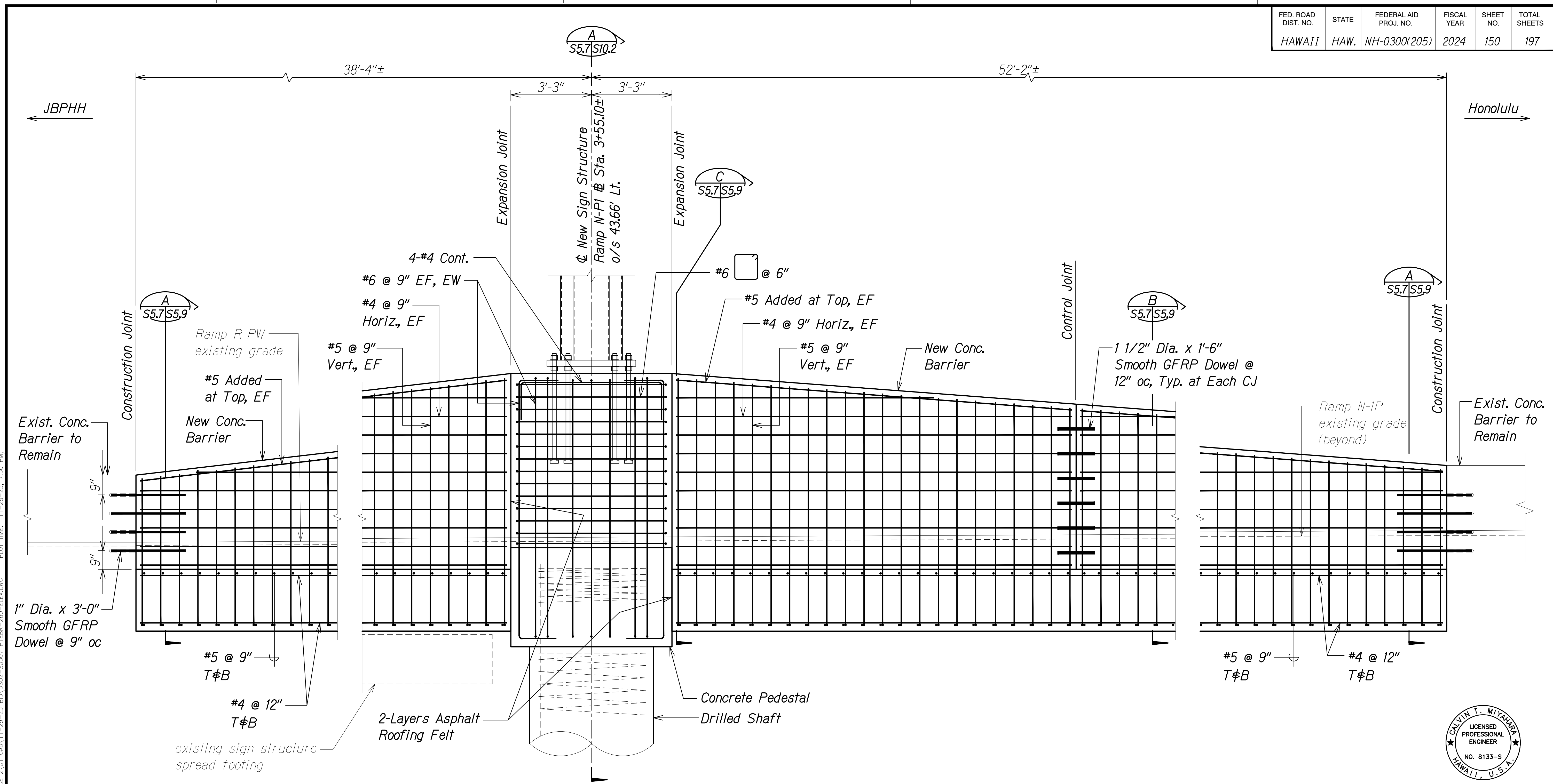
INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

SHEET No. S5.6 OF 11 SHEETS

DATE	REVISION
1/25/24	1 Add. 1 - Revised Details

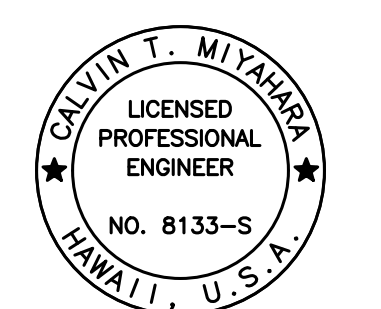
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	150	197



MEDIAN BARRIER REINFORCING ELEVATION
 Scale: 1/2" = 1'-0" A
S5.7/S5.7

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S0507 HIEBR-260-ELEV.DWG PLOT TIME: 11-28-23, 7:30 PM



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calvin Miyahara
 SIGNATURE EXPIRES DATE OF THE LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

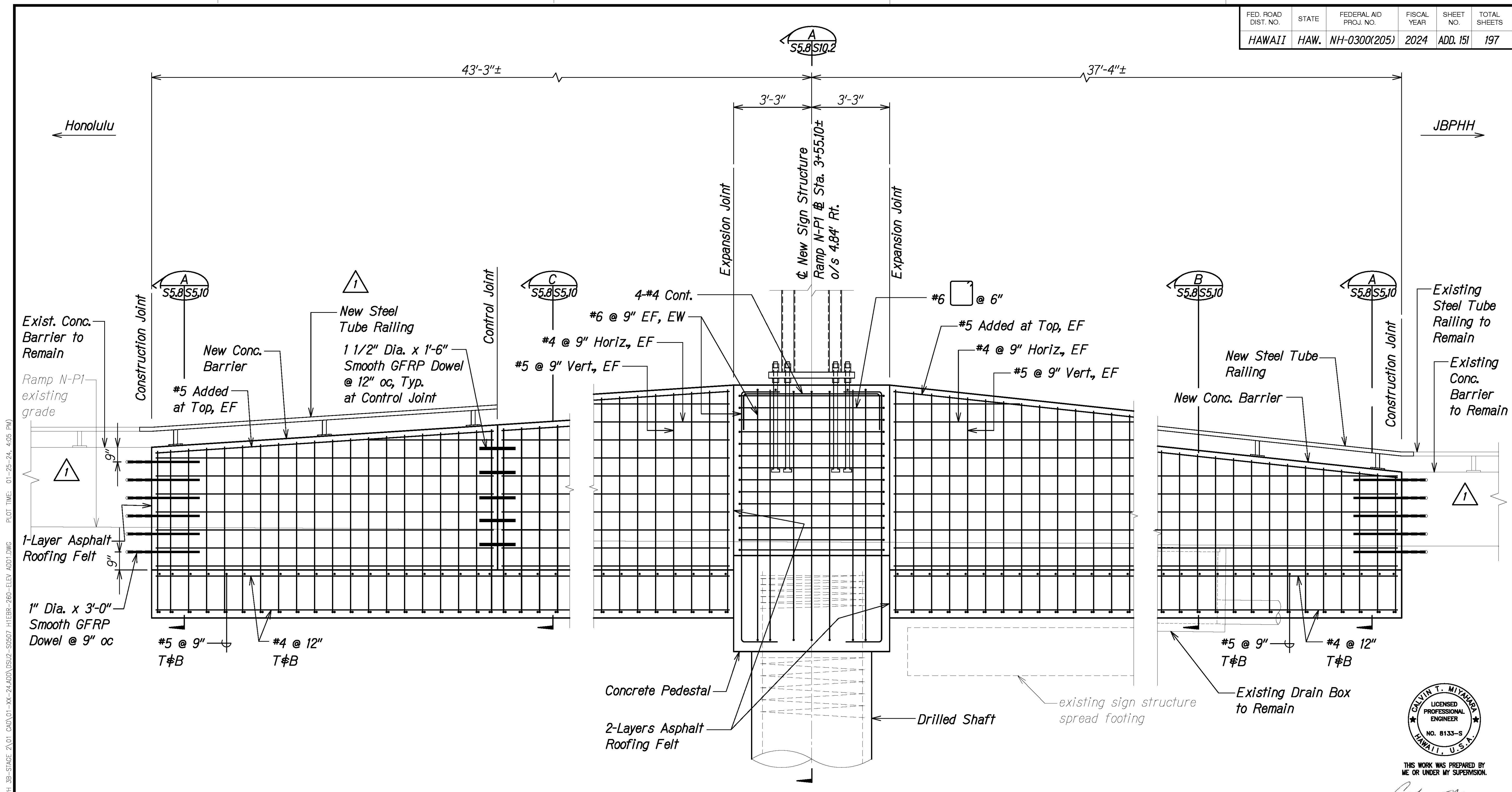
**SIGN STRUCTURE HIEBR-260
 MEDIAN BARRIER REINFORCING ELEVATION**

INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

SHEET No. S5.7 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 151	197



EXTERIOR BARRIER REINFORCING ELEVATION
 Scale: 1/2" = 1'-0" A
S5.8 | S5.8

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSUZ-S0507 HIEBR-260-ELEV ADD1.DWG PLOT TIME: 01-25-24, 4:05 PM



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calvin Miyahara
 1-23-24
 SIGNATURE EXPIRES END OF THE LICENSE

DATE	1/25/24	REVISION	1 Add. 1 - Revised Details
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

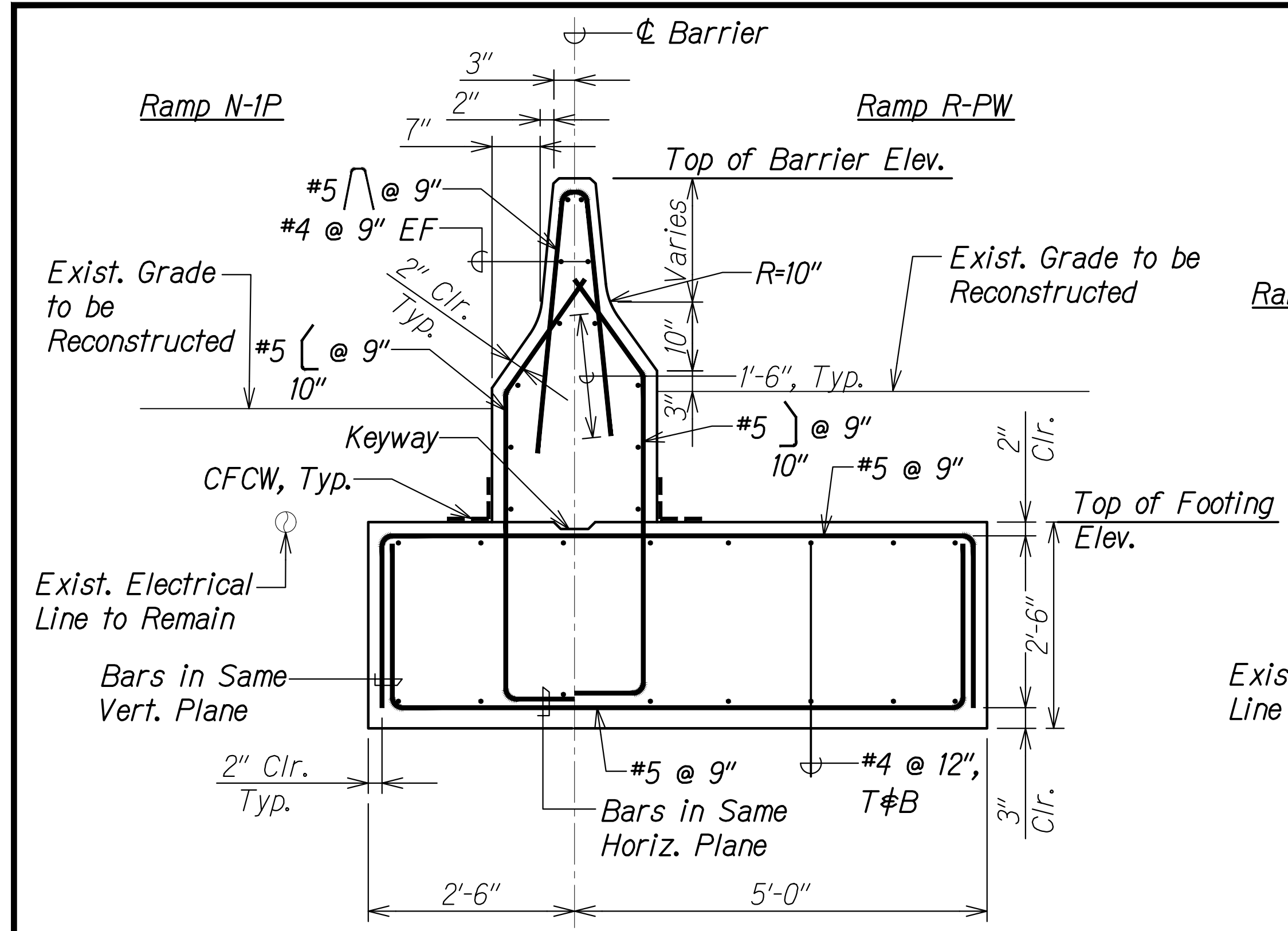
SIGN STRUCTURE HIEBR-260
EXTERIOR BARRIER REINFORCING ELEVATION

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

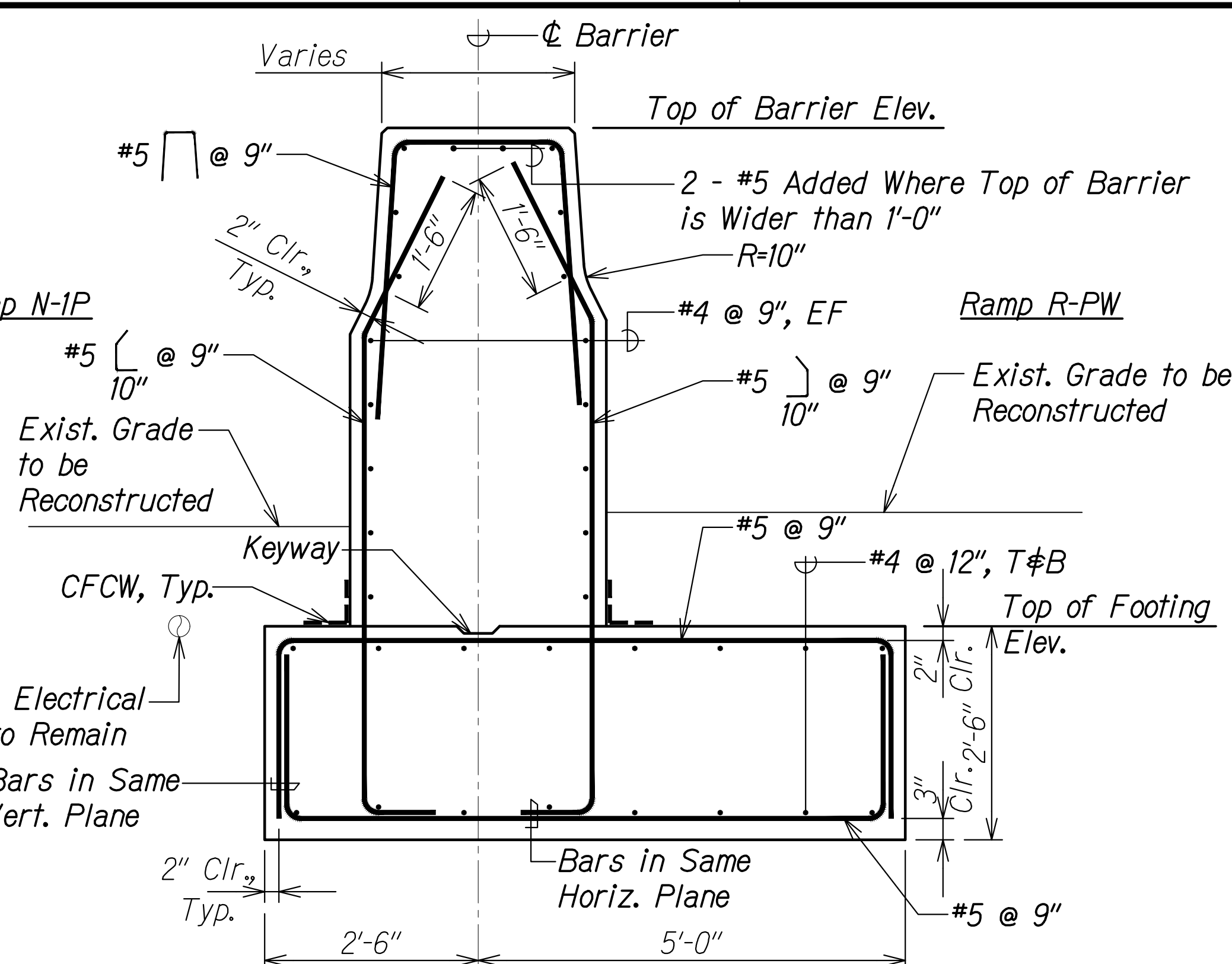
Scale: As Noted Date: Oct. 2023

SHEET No. S5.8 OF 11 SHEETS

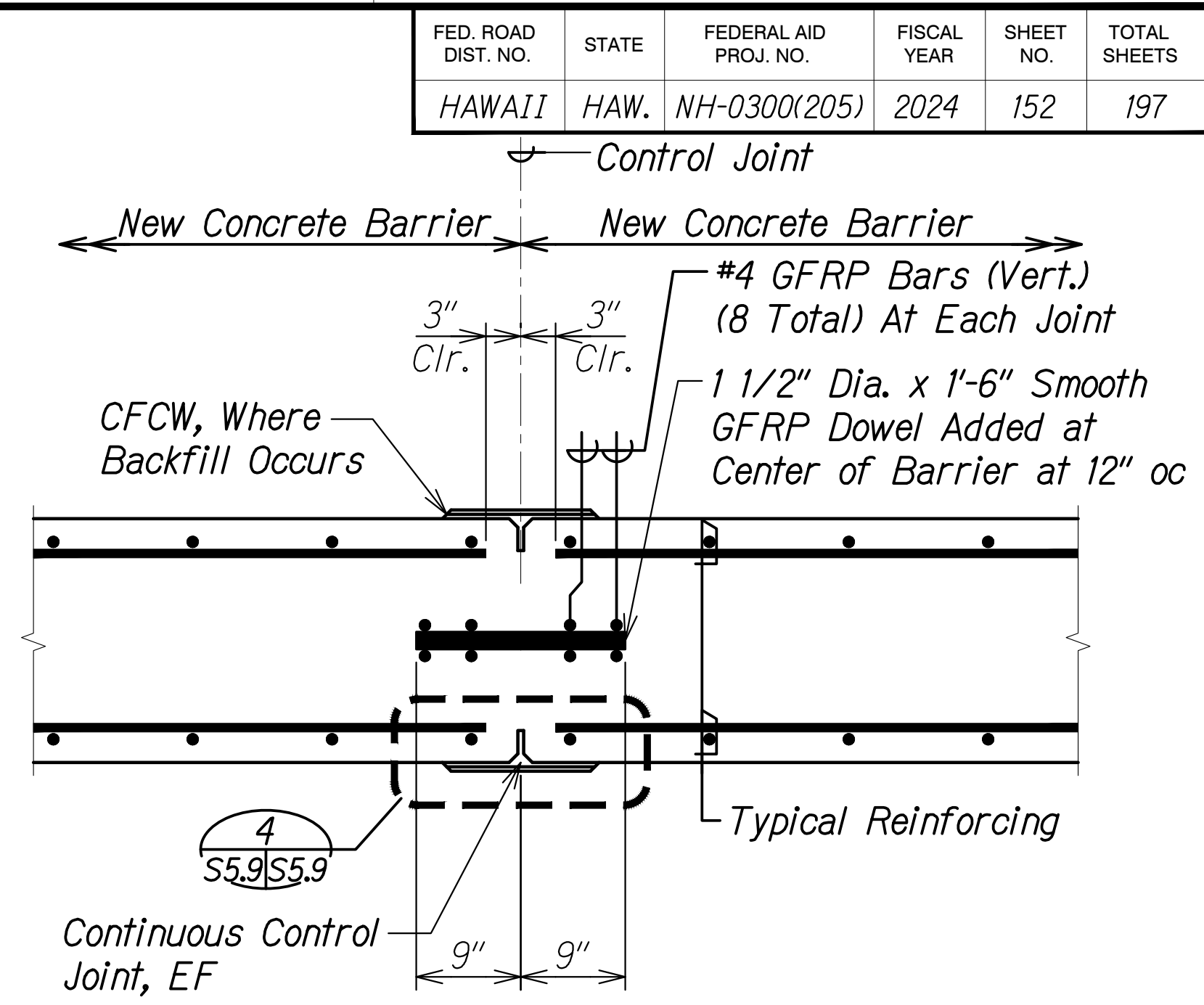
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	152	197



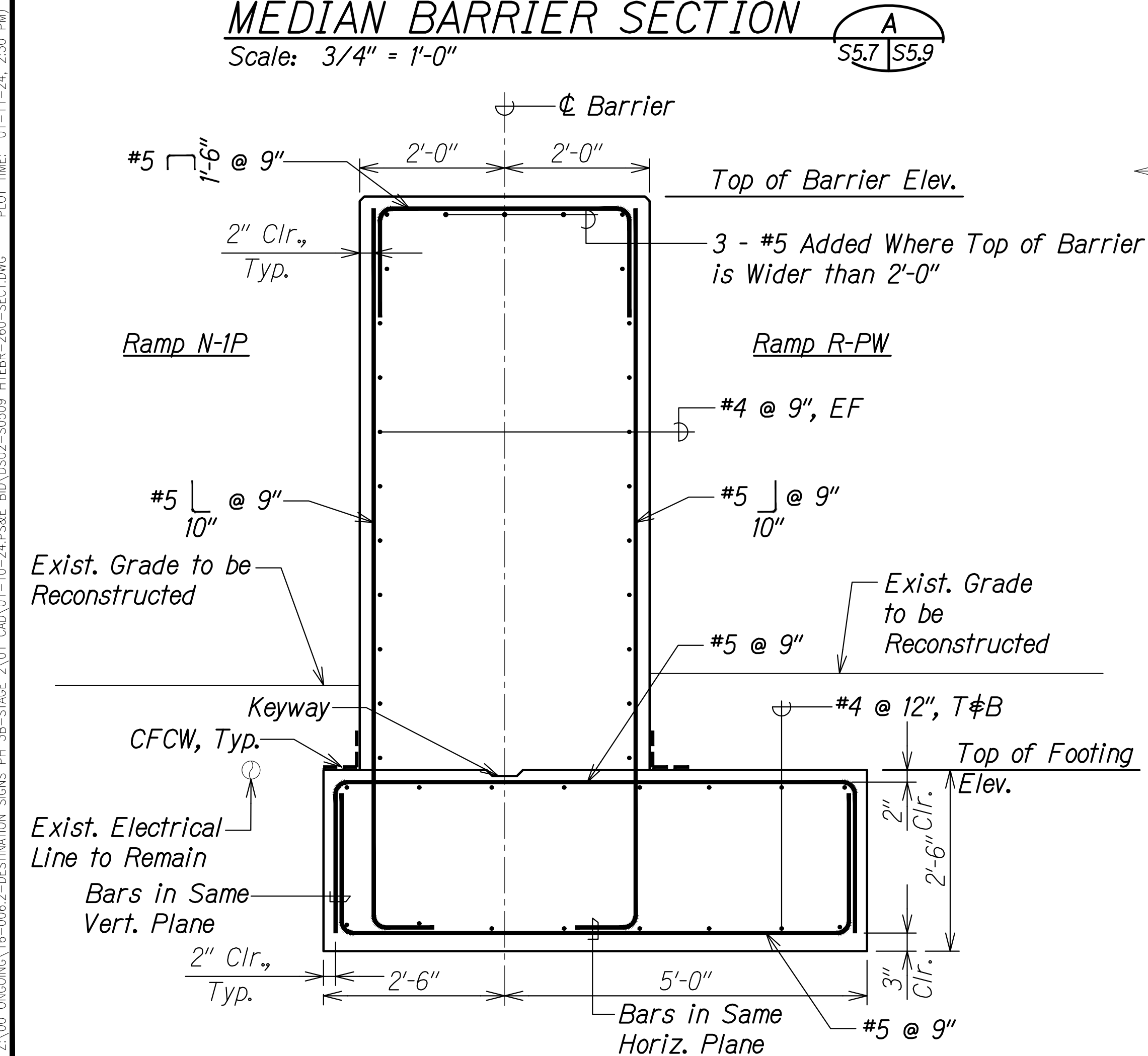
MEDIAN BARRIER SECTION A
Scale: 3/4" = 1'-0"



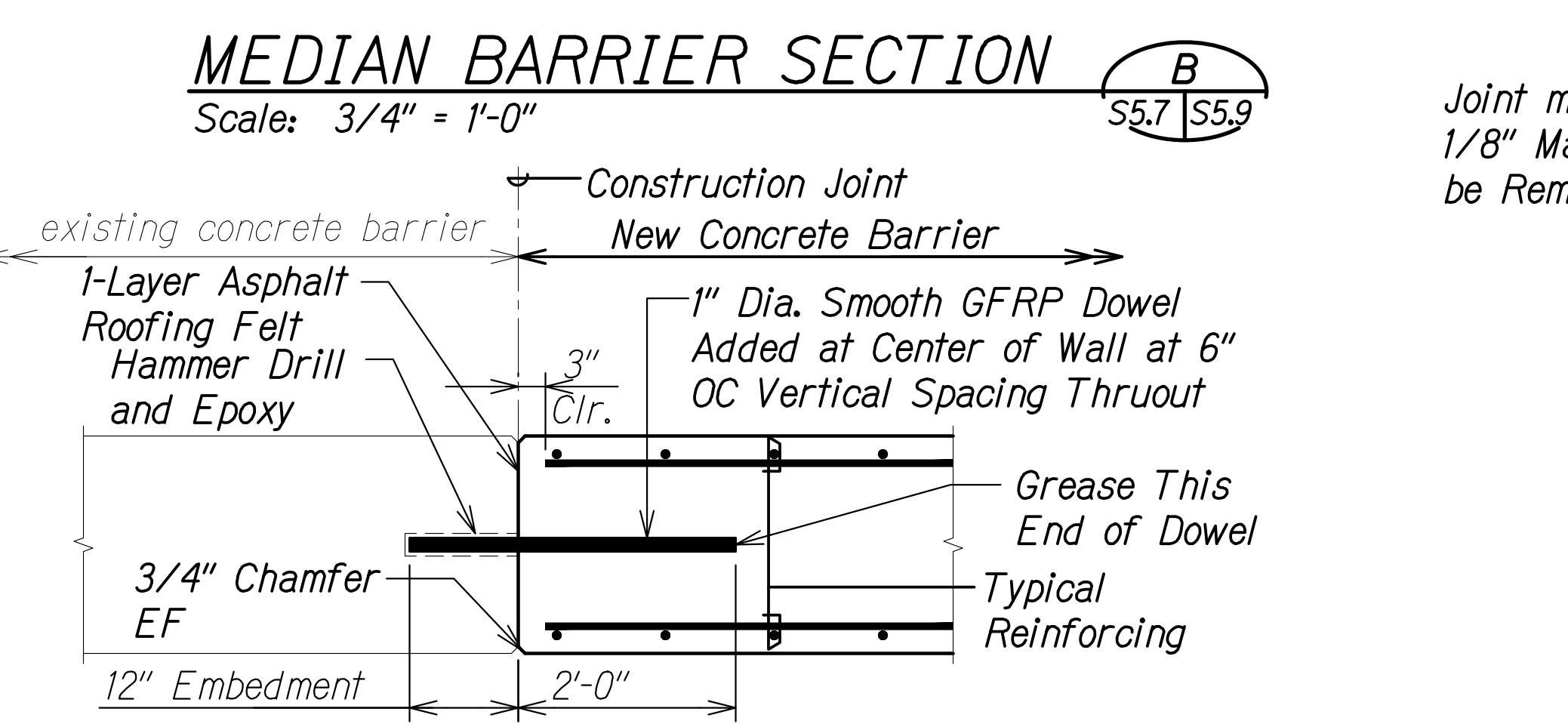
MEDIAN BARRIER SECTION B
Scale: 3/4" = 1'-0"



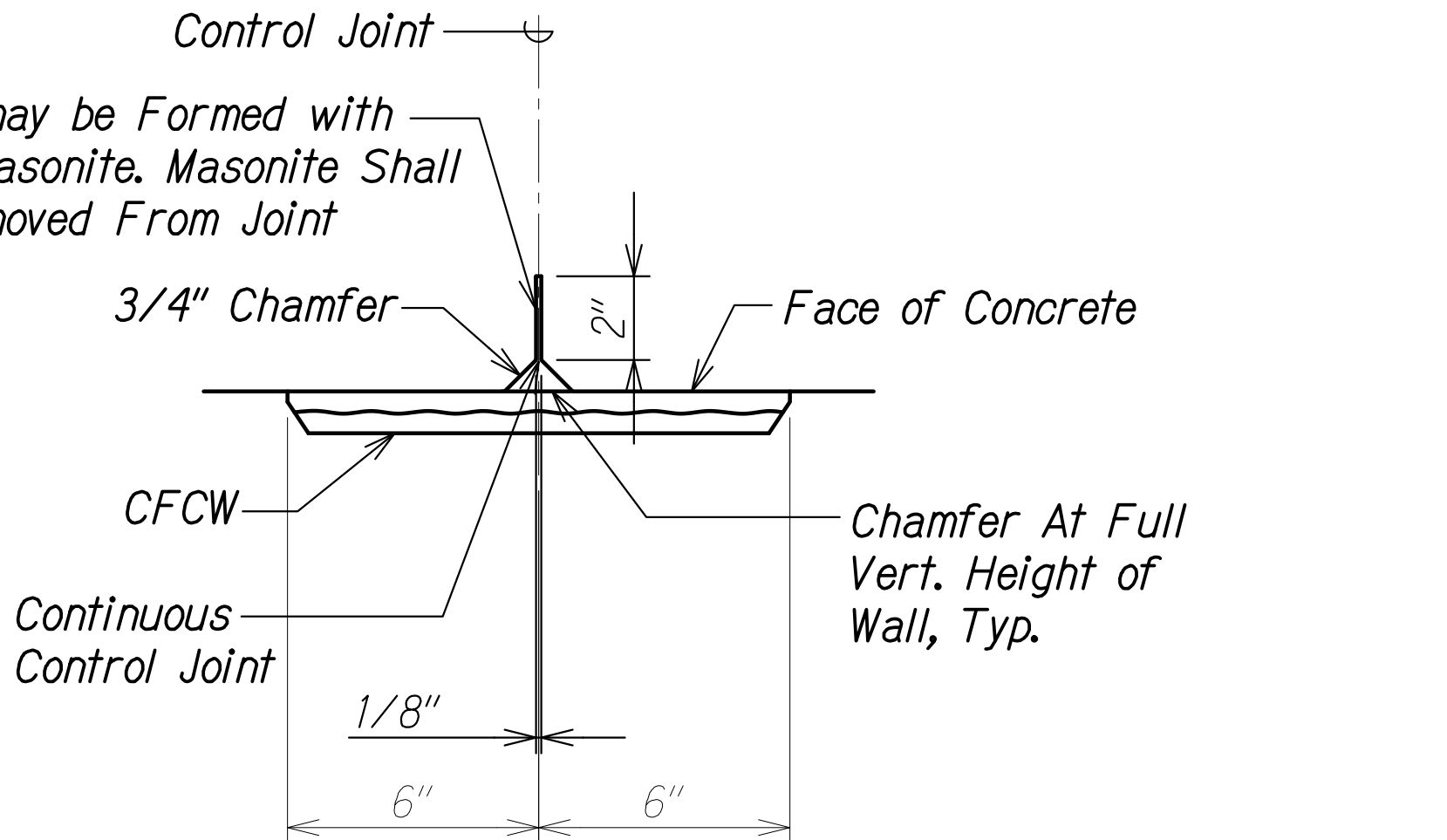
CONTROL JOINT DETAIL 3
Scale: 1" = 1'-0"



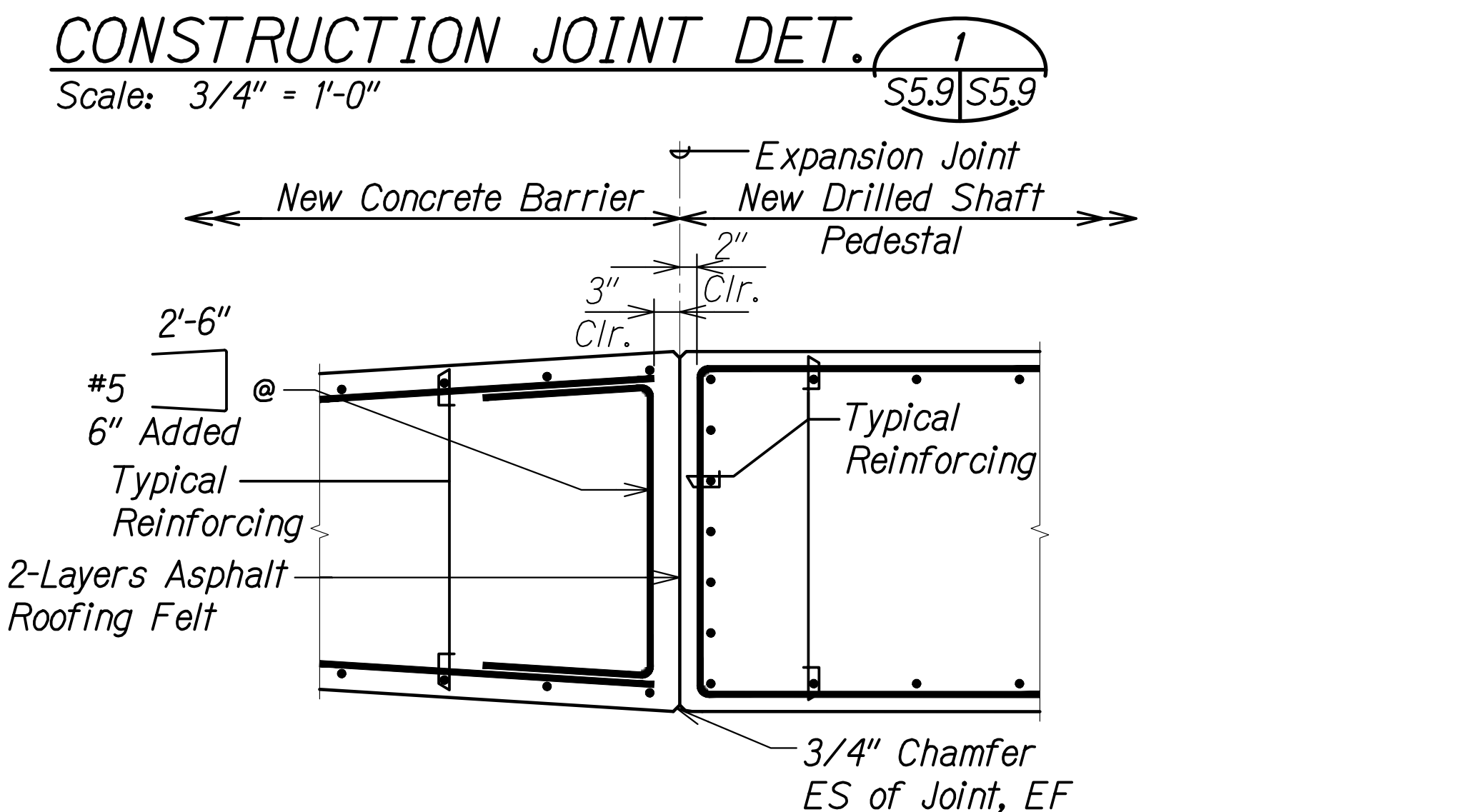
MEDIAN BARRIER SECTION C
Scale: 3/4" = 1'-0"



CONSTRUCTION JOINT DET. 1
Scale: 3/4" = 1'-0"



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



EXPANSION JOINT DET. 2
Scale: 3/4" = 1'-0"

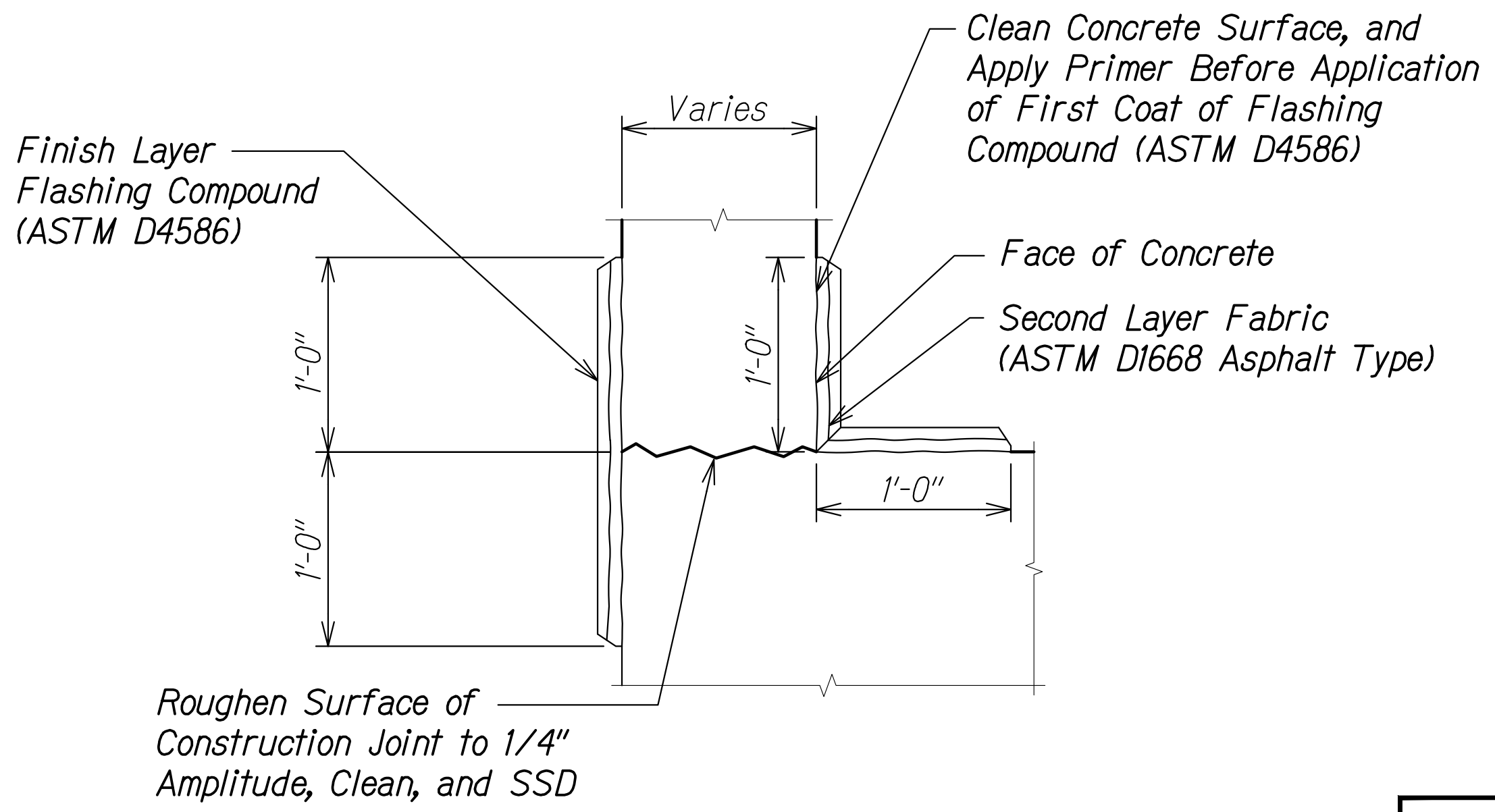
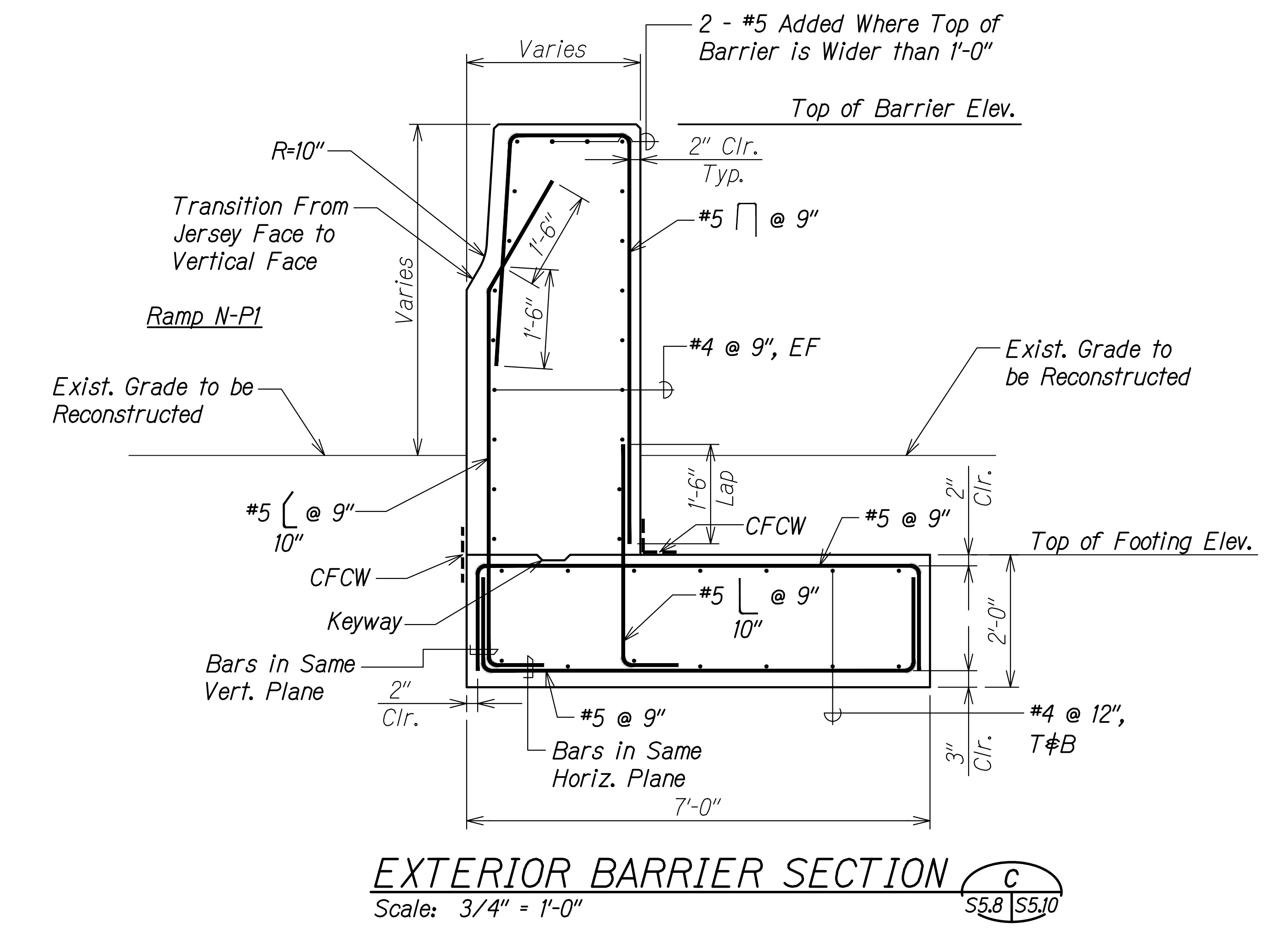
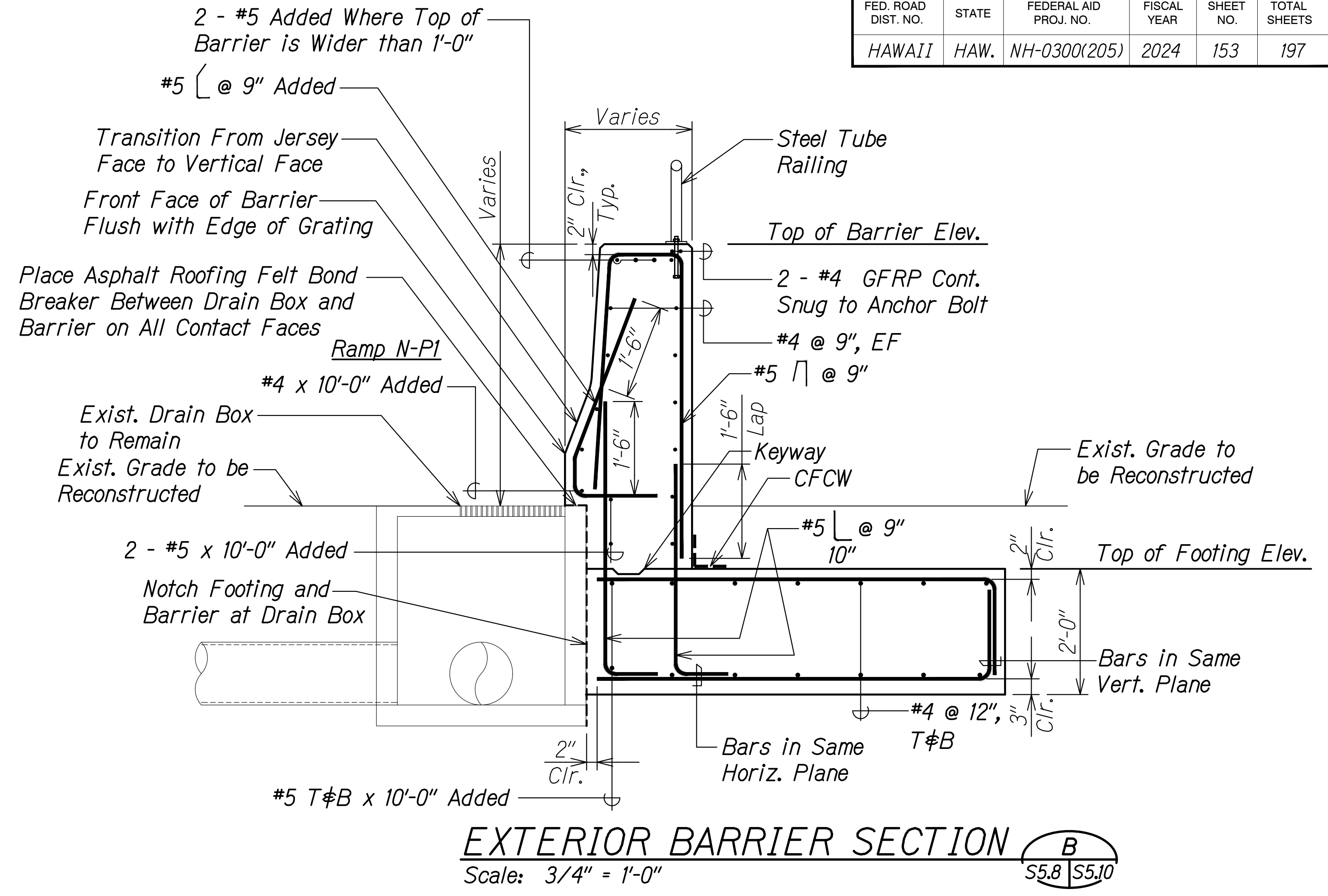
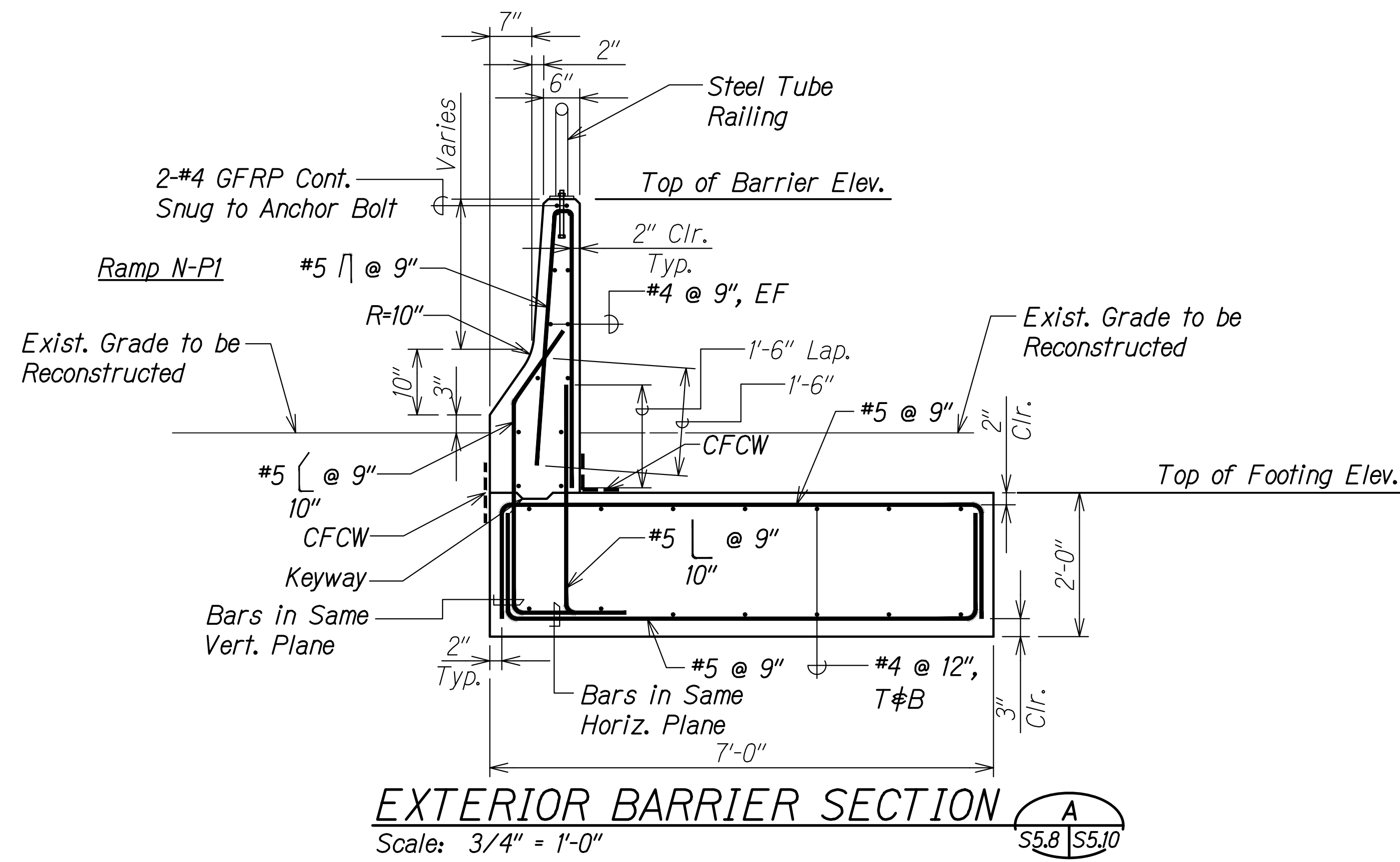
DATE	_____
SURVEY PLOTTED BY	_____
ORIGINAL PLAN	_____
DESIGNED BY	_____
TRACED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-10-24.P3&E BID\DSUZ-S0609 HIEBR-260-SECTION A PLOT TIME: 01-11-24, 2:30 PM

CALVIN T. MIYAKAWA
LICENSED PROFESSIONAL ENGINEER
NO. 8133-S
HAWAII, U.S.A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
C. Mijakawa
4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
SIGN STRUCTURE HIEBR-260
BARRIER SECTIONS
INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)
Scale: As Noted Date: Oct. 2023
SHEET No. S5.9 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	153	197



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

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Signature: Calvin Miyakawa
4-30-24
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**SIGN STRUCTURE HIEBR-260
BARRIER SECTIONS**

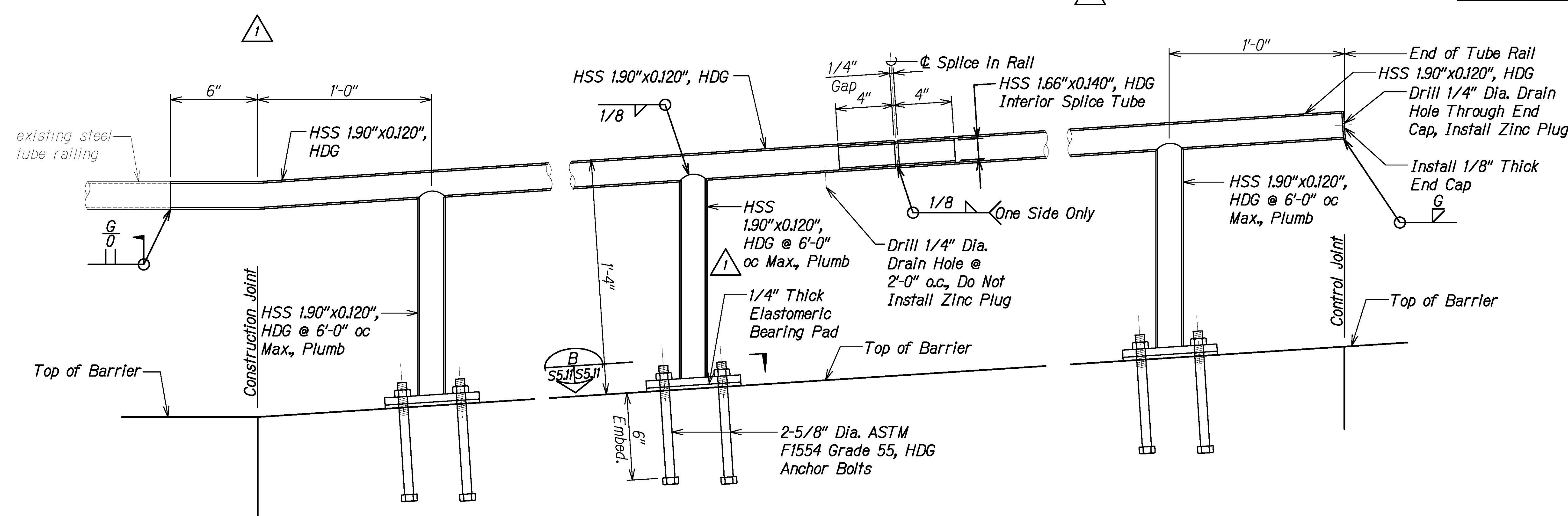
INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

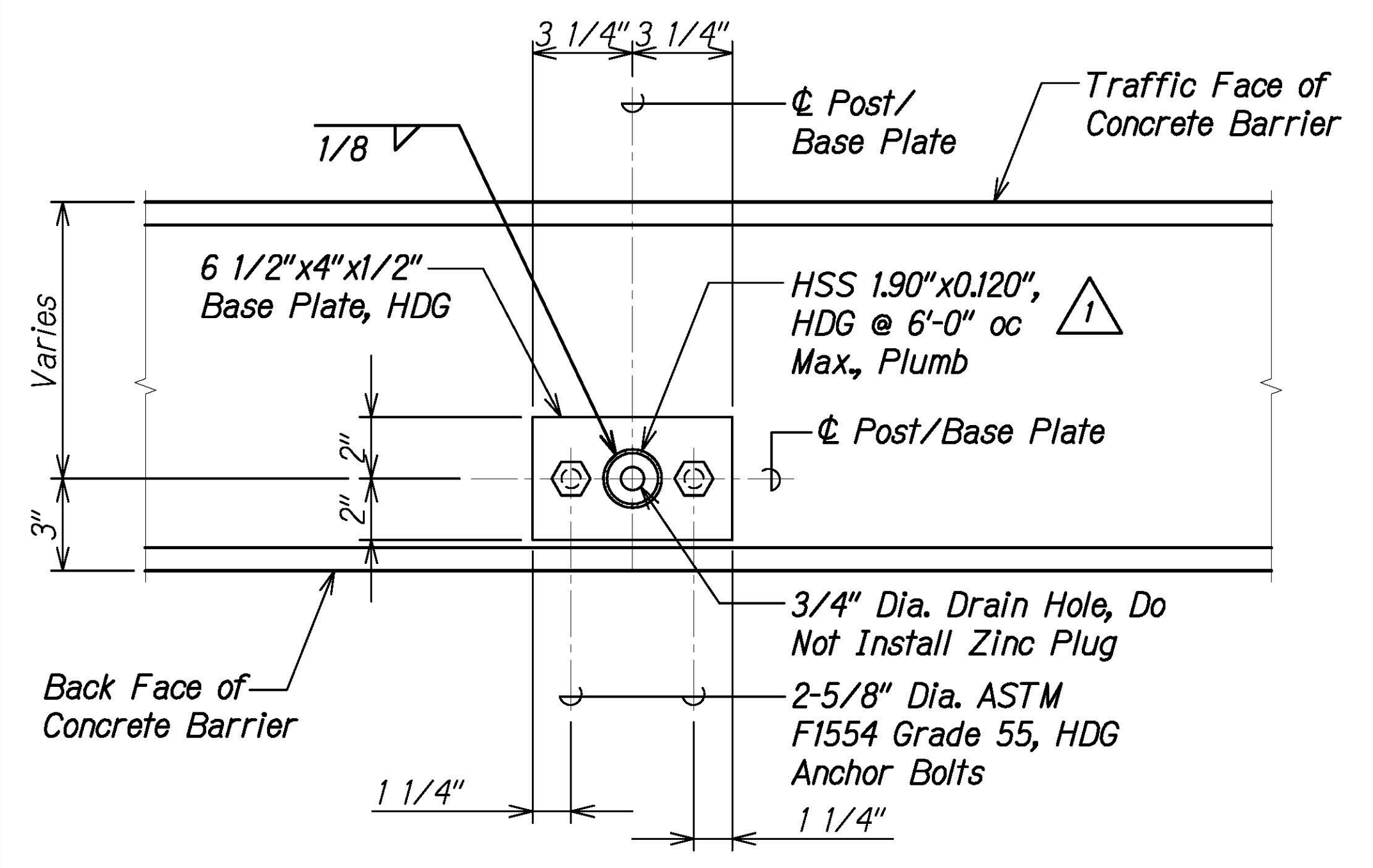
SHEET No. S5.10 OF 11 SHEETS

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

DRAWING NAME: Z:\00_ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01_CAD\01-10-24.P5&E BID\DSUZ-S0509 HIEBR-260-SECTION A.PLOT TIME: 01-11-24, 2:31 PM



TUBE RAIL DETAILS
Scale: 3" = 1'-0"



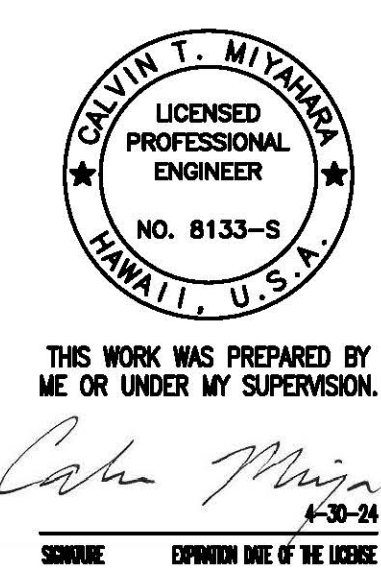
SECTION B
Scale: 3" = 1'-0"

NOTES:

- Steel tube rail and its components shall be considered incidental to the various pay items and will not be measured or paid for separately.
- Steel tube rail assembly shall be hot-dip zinc galvanized in accordance with ASTM A123 after fabrication.
- Field welding shall not be allowed unless where explicitly shown. Approved field welds shall be repaired using a zinc based solder in accordance with ASTM A780. Cold galvanizing will not be allowed.
- Tube rail splice locations shall be determined by the Contractor, if needed. Limit quantity to no more than one splice per 20'-0" of length.
- Contractor shall verify all field dimensions prior to submitting tube rail shop drawings to Engineer for review and approval.

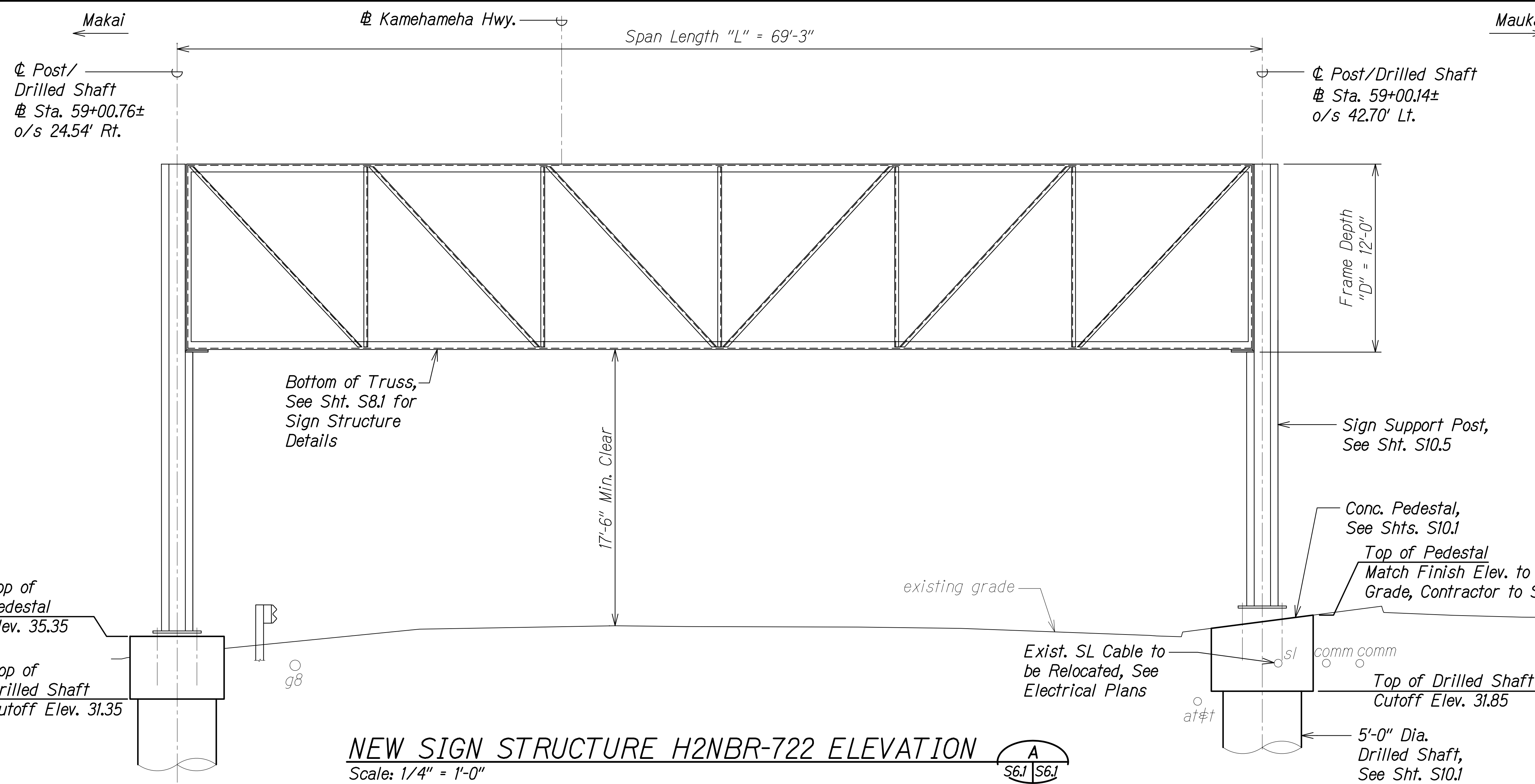
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSUZ-S0509 HIEBR-260-SECT ADD1.DWG PLOT TIME: 01-25-24, 4:08 PM



1/25/24	1	ADD. 1 - Added Details and Notes
DATE	REVISION	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
SIGN STRUCTURE HIEBR-260		
TUBE RAIL DETAILS		
INTERSTATE ROUTE H-1 AND H-201 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B FAP NO. NH-0300(205)		
Scale: As Noted	Date: Oct. 2023	
SHEET No. S5.11 OF 11 SHEETS		

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	155	197



NOTE:
For sign structure schedule,
See Sht. S11.1.

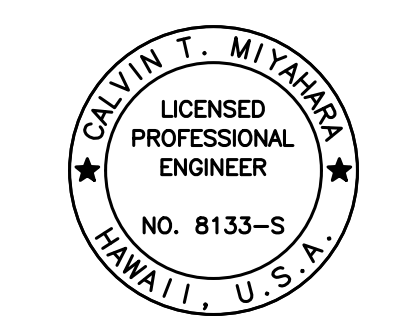
NEW SIGN STRUCTURE H2NBR-722 ELEVATION
Scale: 1/4" = 1'-0"
A
S6.1 | S6.1



EXISTING SIGN STRUCTURE H2NBR-722

ORIGINAL PLAN	DATE
NOTE BOOK	
No.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S0601 H2NBR-722-ELEV.DWG PLOT TIME: 11-28-23 7:35 PM



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ME OR UNDER MY SUPERVISION.
Calvin Miyahara
SIGNATURE EXPIRATION DATE OF THE LICENSE 4-30-24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

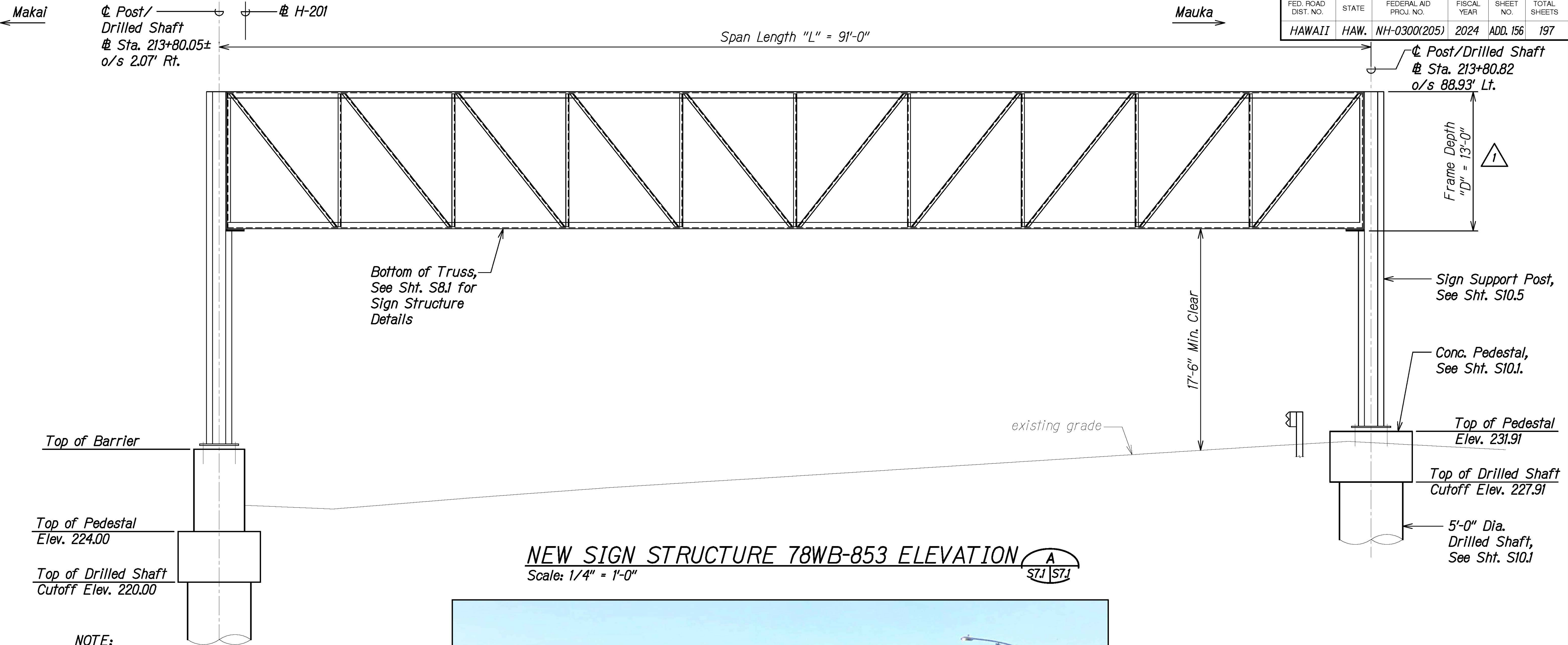
**SIGN STRUCTURE H2NBR-722
ELEVATION**

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

SHEET No. S6.1 OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 156	197



NEW SIGN STRUCTURE 78WB-853 ELEVATION
 Scale: 1/4" = 1'-0"
 A
 S7.1 | S7.1

NOTE:
 For sign structure schedule, see Sht. S11.1.



EXISTING SIGN STRUCTURE 78WB-853

DATE	REVISION
1/25/24	1 Add. 1 - Revised Dimension



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 Calvin Miyahara
 1-23-24
 SIGNATURE EXPIRES END OF THE LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

SIGN STRUCTURE 78WB-853
ELEVATION

INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

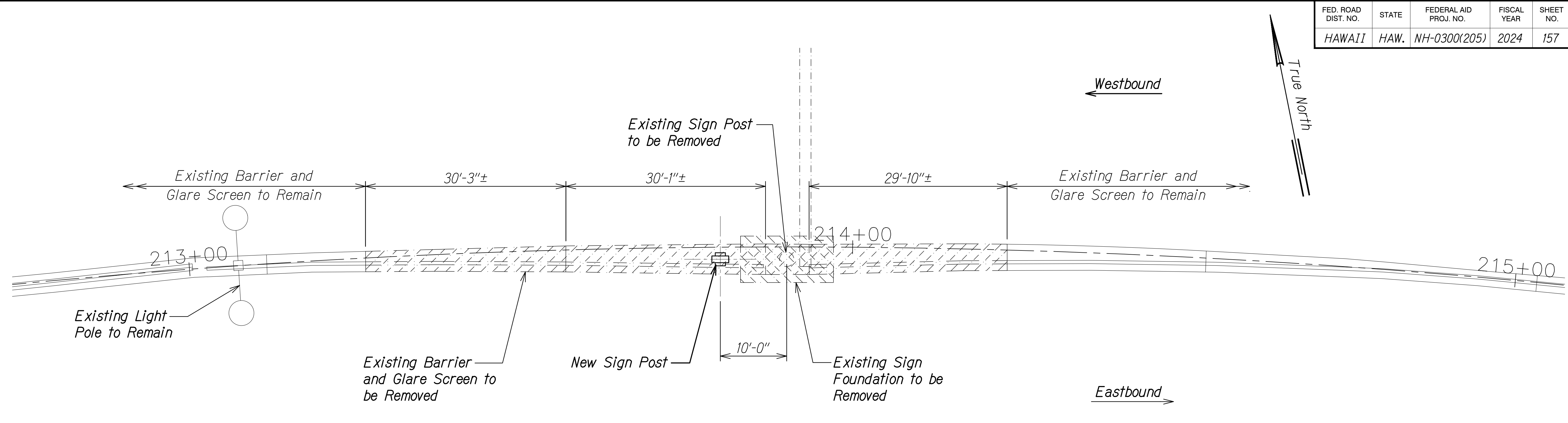
Scale: As Noted Date: Oct. 2023

SHEET No. **S7.1** OF 6 SHEETS

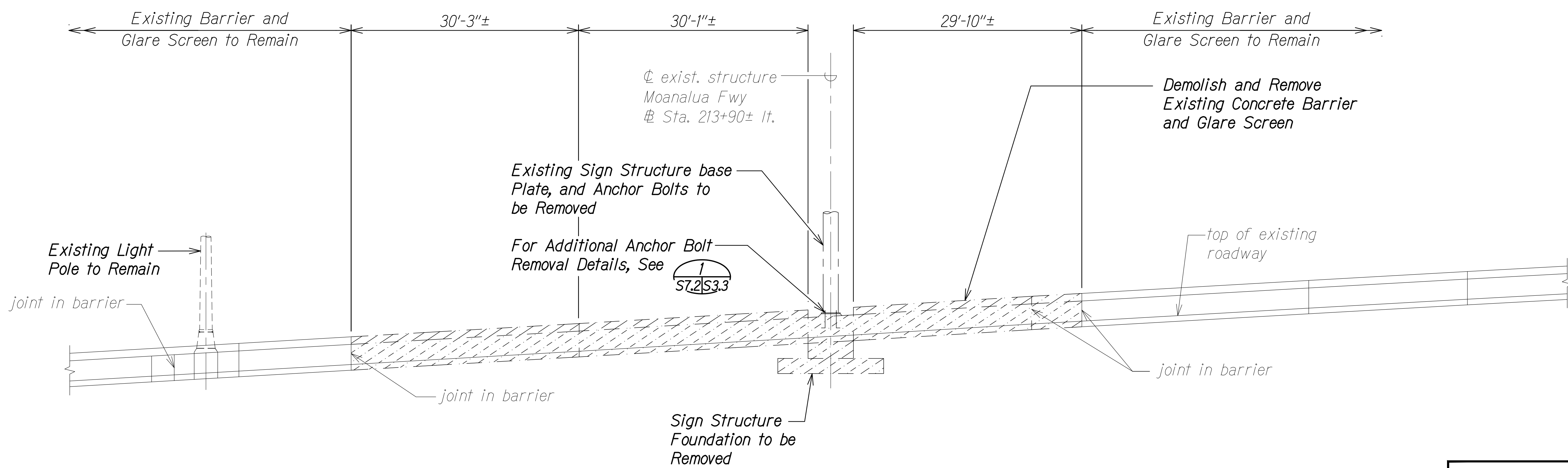
ORIGINAL PLAN	DATE
NOTE BOOK	
NO.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24.ADD\DSU2-S0701_78WB-853-ELEV ADD1.DWG PLOT TIME: 01-25-24, 4:09 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	157	197



DEMO PLAN A
Scale: 1/8" = 1'-0" S7.2 S7.2

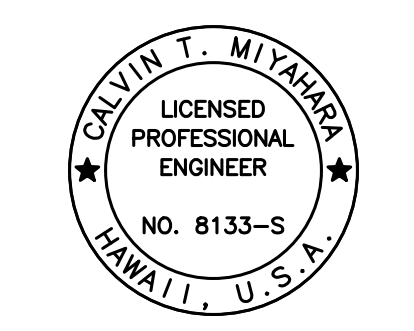


DEMO SECTION B
Scale: 1/8" = 1'-0" S7.2 S7.2

LEGEND:
 Demolish and remove

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S0702 78WB-853-DEMO AND ELEV.DWG PLOT TIME: 11-28-23, 7:36 PM



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calvin Miyakawa
 SIGNATURE EXPIRATION DATE OF THE LICENSE 4-30-24

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

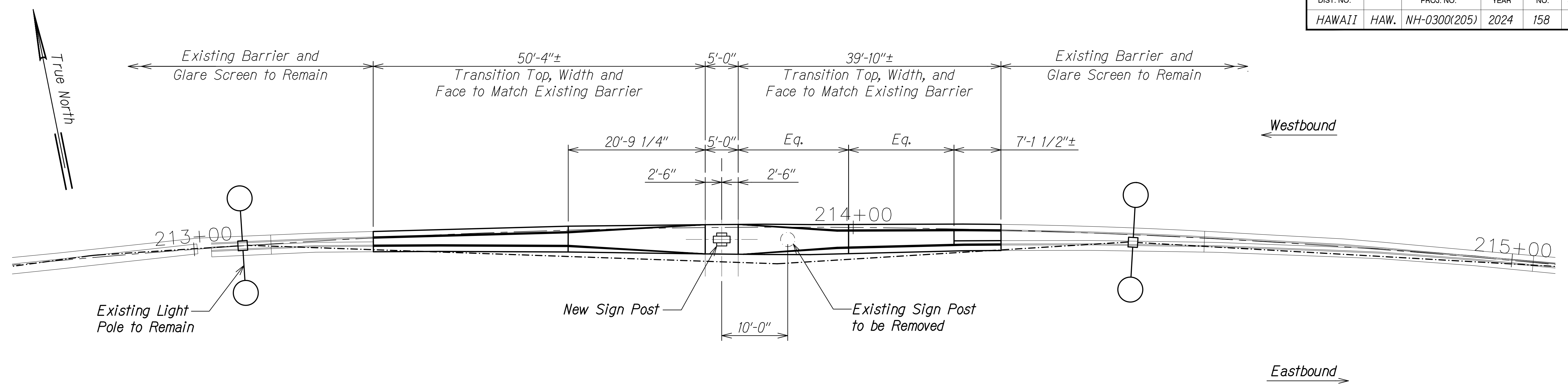
SIGN STRUCTURE 78WB-853
DEMO PLAN AND ELEVATION

INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

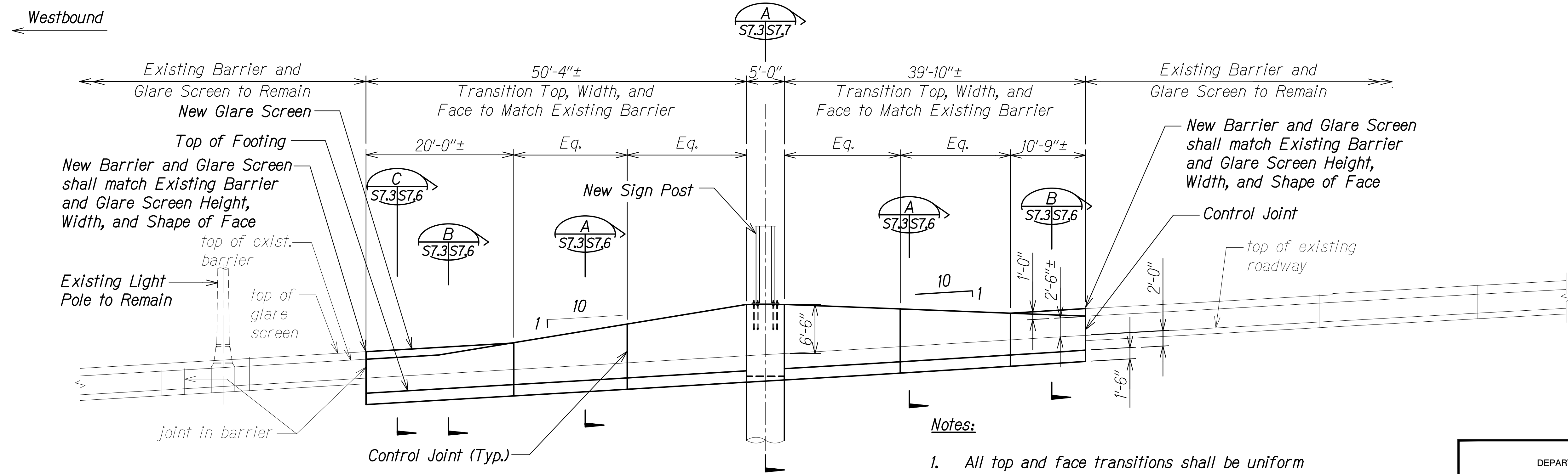
Scale: As Noted Date: Oct. 2023

SHEET No. S7.2 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	158	197



PLAN
Scale: 1/8" = 1'-0" A
S7.3 | S7.3

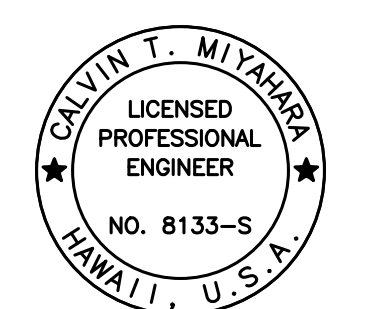


SECTION B
Scale: 1/8" = 1'-0" B
S7.3 | S7.3

- Notes:**
- All top and face transitions shall be uniform and consistent with no abrupt changes.
 - Any dowels at expansion joint that remains shall be cut off flush with concrete and the dowel and surrounding concrete surface coated with epoxy.

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DS12-50703 78WB-853-PLAN AND ELEV.DWG PLOT TIME: 11-29-23, 9:48 AM



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

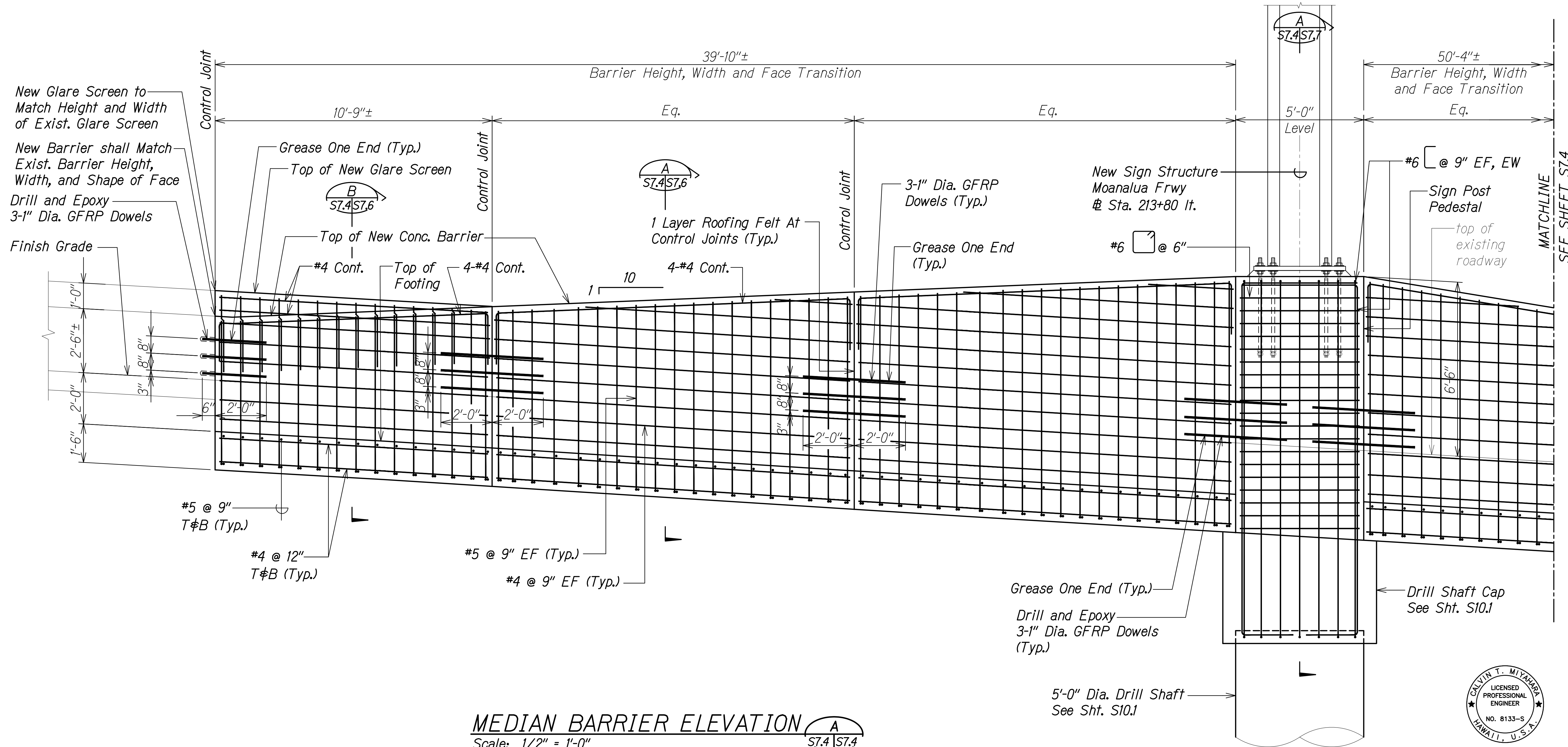
SIGN STRUCTURE 78WB-853
PLAN AND ELEVATION

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

SHEET No. S7.3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	159	197

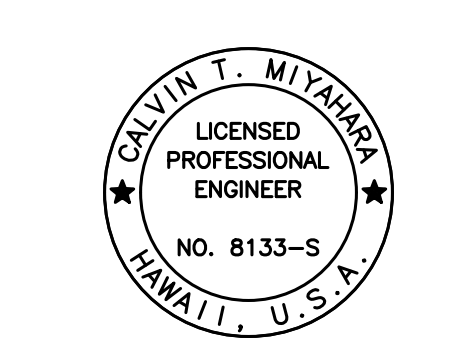


New Glare Screen to Match Height and Width of Exist. Glare Screen
 New Barrier shall Match Exist. Barrier Height, Width, and Shape of Face
 Drill and Epoxy
 3-1" Dia. GFRP Dowels
 Finish Grade

MEDIAN BARRIER ELEVATION A
 Scale: 1/2" = 1'-0" S7.4 | S7.4

ORIGINAL PLAN	DATE
NOTE BOOK	
NO.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-50703 78WB-853-PLAN AND ELEV.DWG PLOT TIME: 11-28-23, 7:39 PM



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

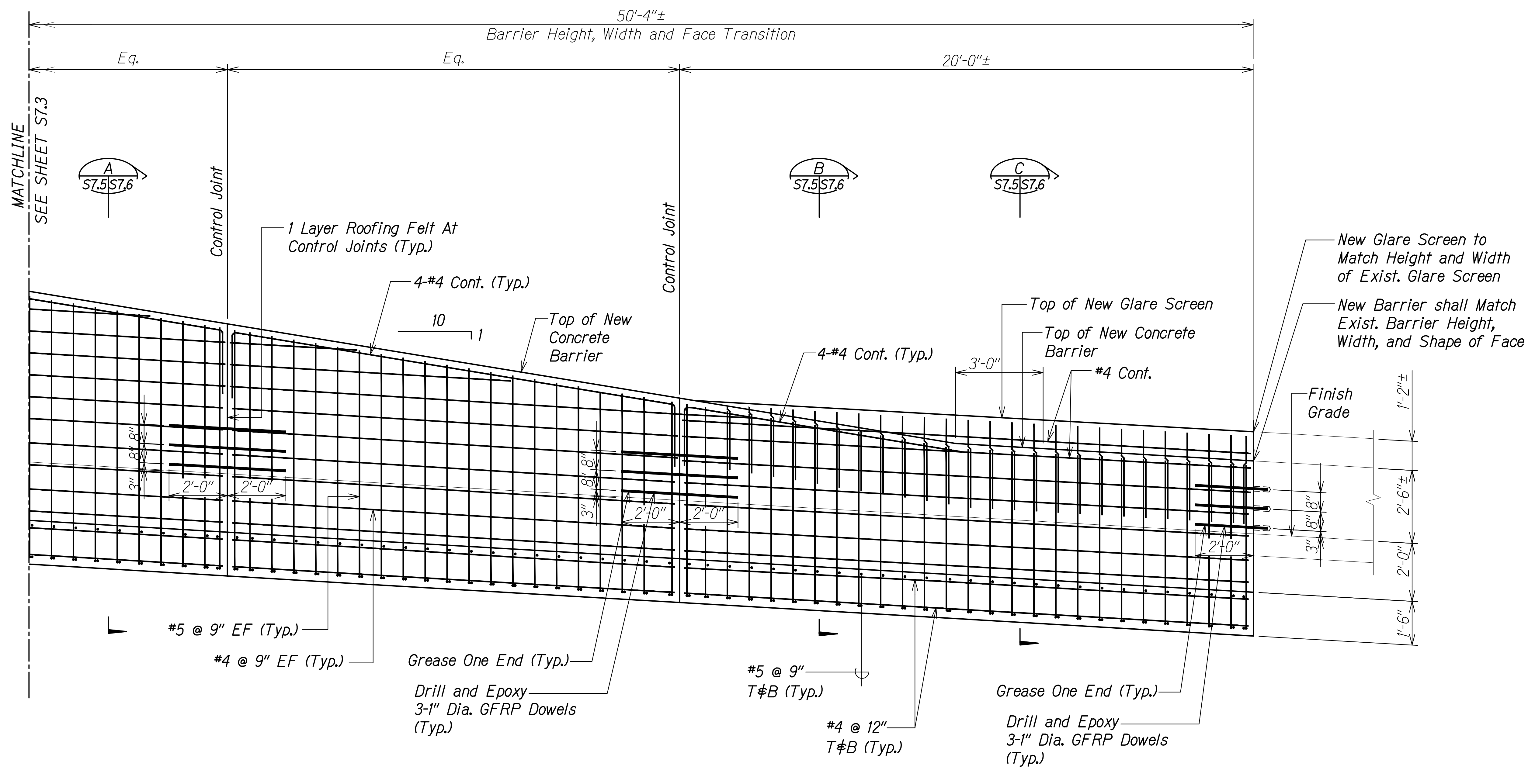
SIGN STRUCTURE 78WB-853
ELEVATION

INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

SHEET No. S7.4 OF 6 SHEETS

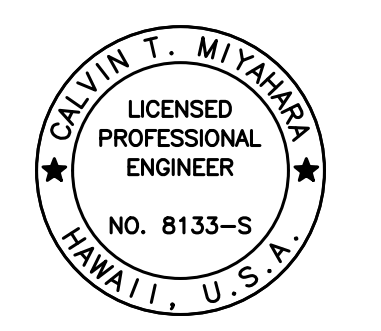
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	160	197



MEDIAN BARRIER ELEVATION A
 Scale: 1/2" = 1'-0" S7.5 | S7.5

ORIGINAL PLAN	DATE
NOTE BOOK	
No.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-50703 78WB-853-PLAN AND ELEV.DWG PLOT TIME: 11-28-23, 7:39 PM



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 SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

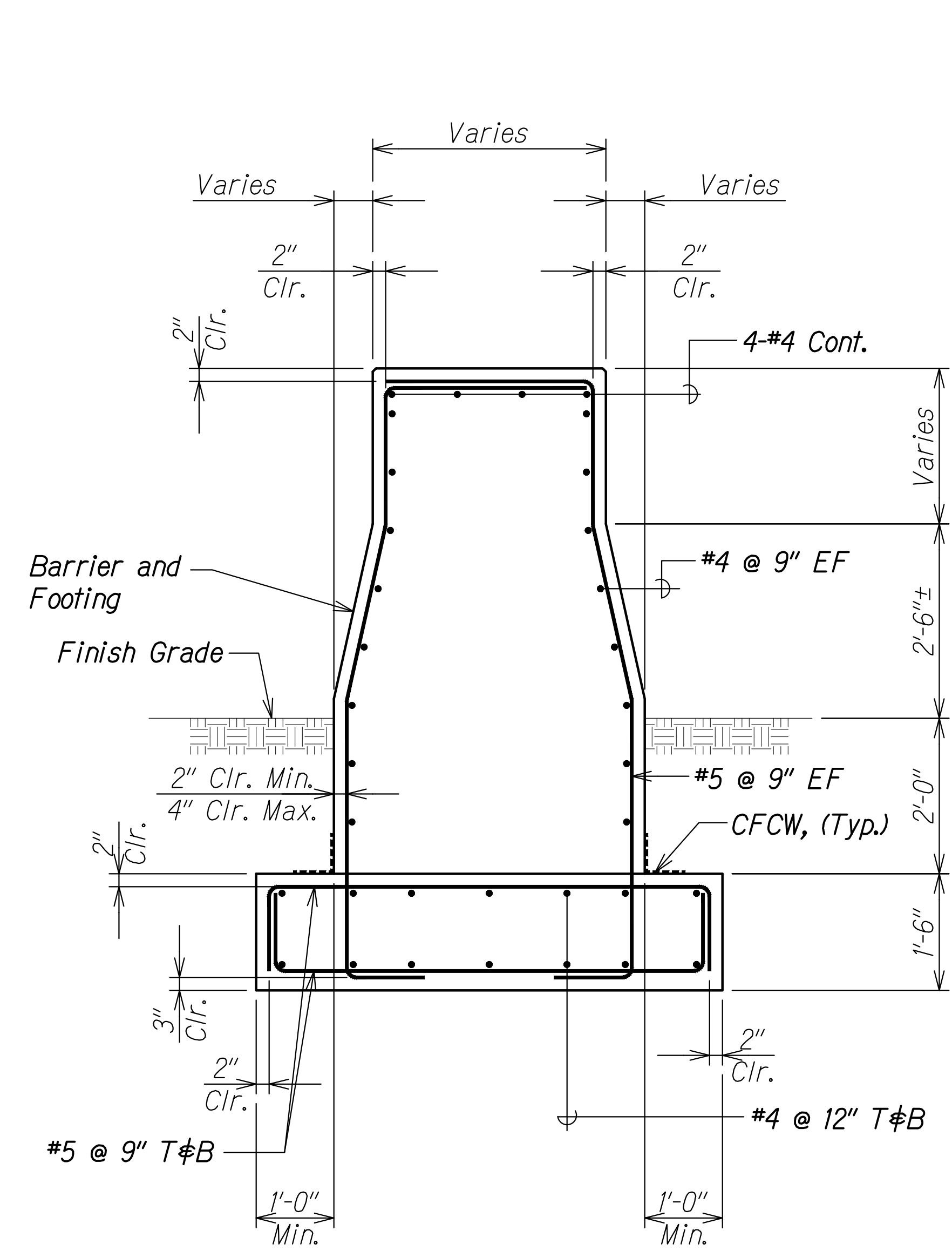
SIGN STRUCTURE 78WB-853
ELEVATION

INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

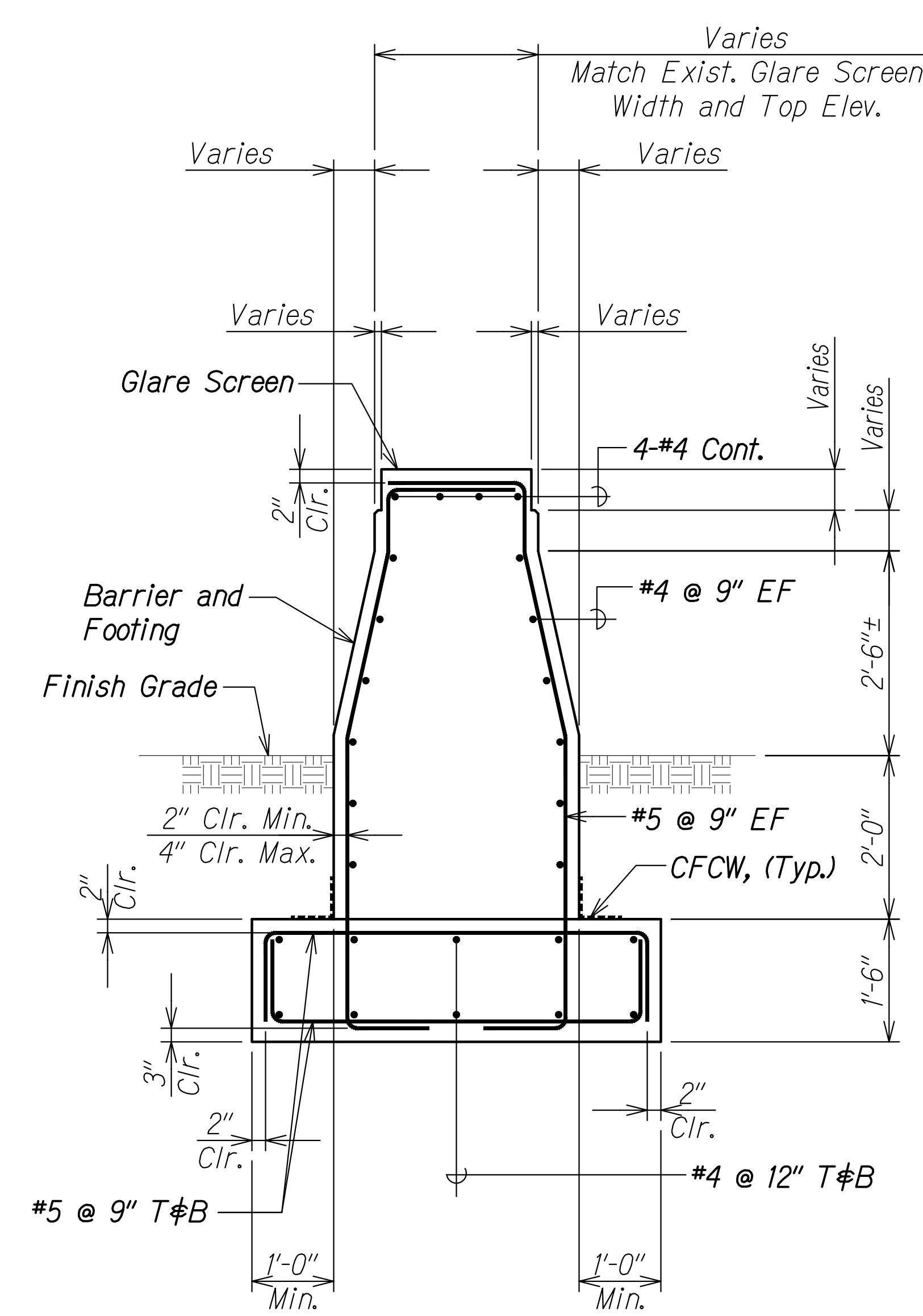
Scale: As Noted Date: Oct. 2023

SHEET No. S7.5 OF 6 SHEETS

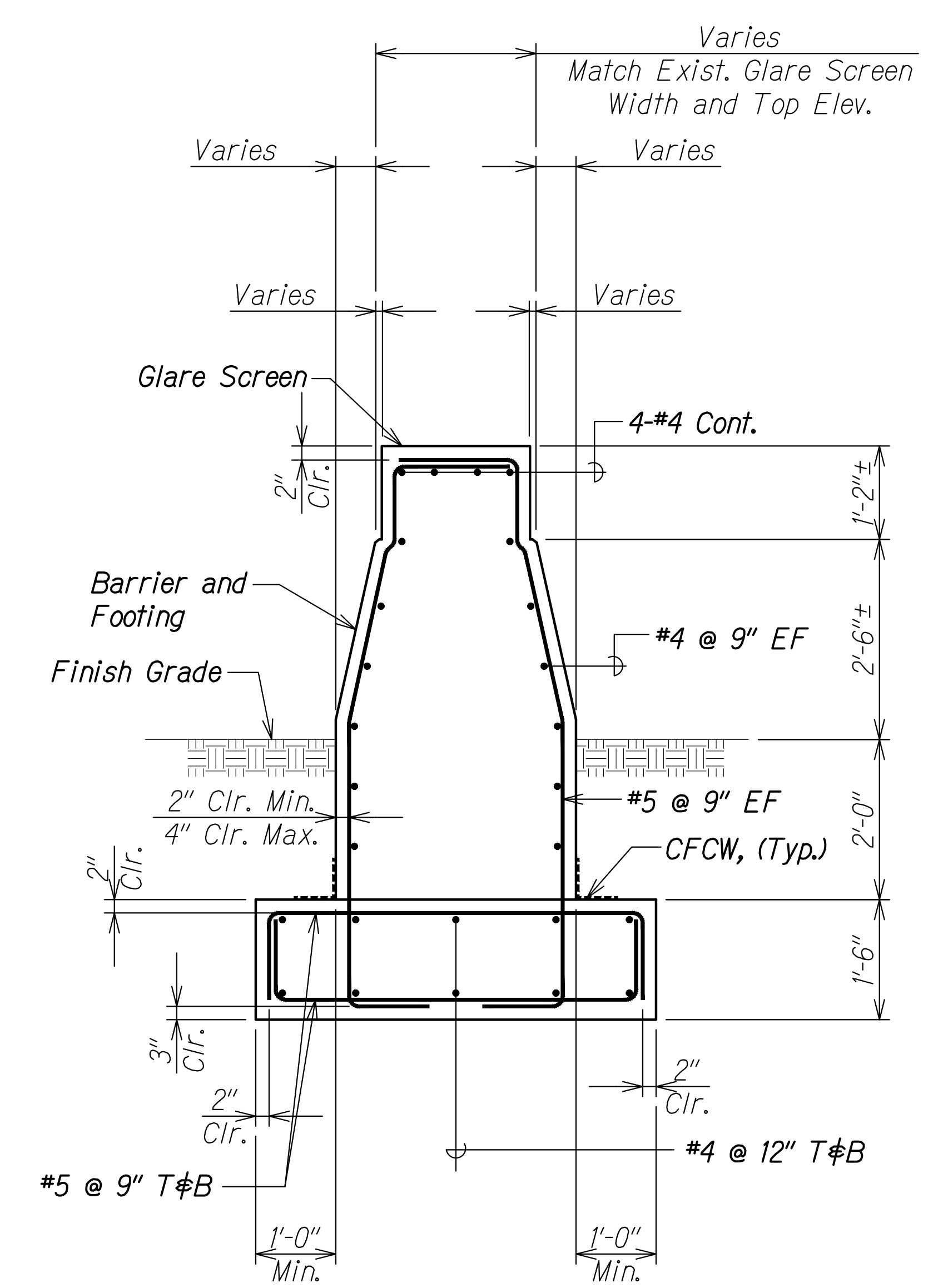
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	161	197



SECTION A
Scale: 3/4" = 1'-0"
S7.3 S7.6
S7.4



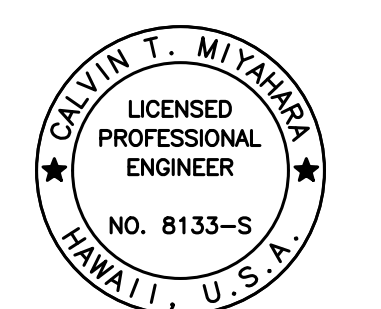
SECTION B
Scale: 3/4" = 1'-0"
S7.4 S7.6
S7.5



SECTION C
Scale: 3/4" = 1'-0"
S7.3 S7.6
S7.5

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S0706 78WB-853-SECTS.DWG PLOT TIME: 11-28-23 7:41 PM



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN STRUCTURE 78WB-853

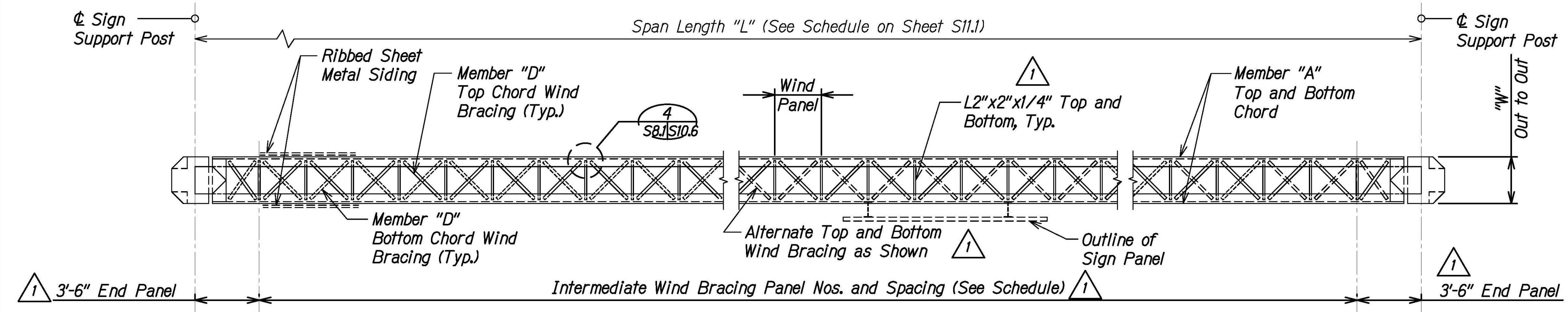
SECTIONS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

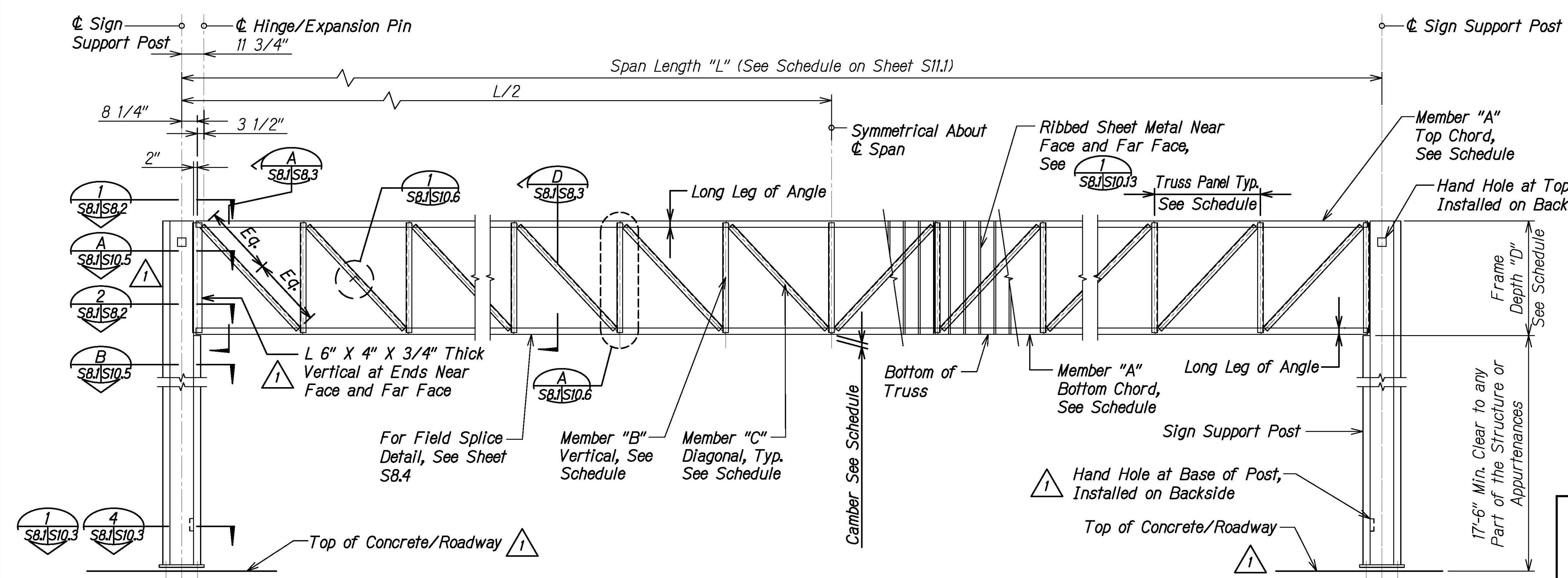
SHEET No. S7.6 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 162	197



- NOTES:**
1. For sign structure schedule see sheet S11.1.
 2. This sign structure type shall be paid for under "Type I" as shown on the proposal schedule.
 3. Truss panels at each end are measured from back of angle at end vertical members to angle at intermediate vertical members.

BOX TRUSS PLAN - TOP AND BOTTOM WIND BRACE FRAMING
 Scale: 3/8" = 1'-0"
 A
 S8.1 | S8.1



BOX TRUSS SIGN STRUCTURE ELEVATION
 Scale: 3/8" = 1'-0"
 B
 S8.1 | S8.1

DATE	REVISION
1/25/24	1 Add. 1 - Revised Callouts

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**BOX TRUSS SIGN STRUCTURE
 PLAN AND ELEVATION**

INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

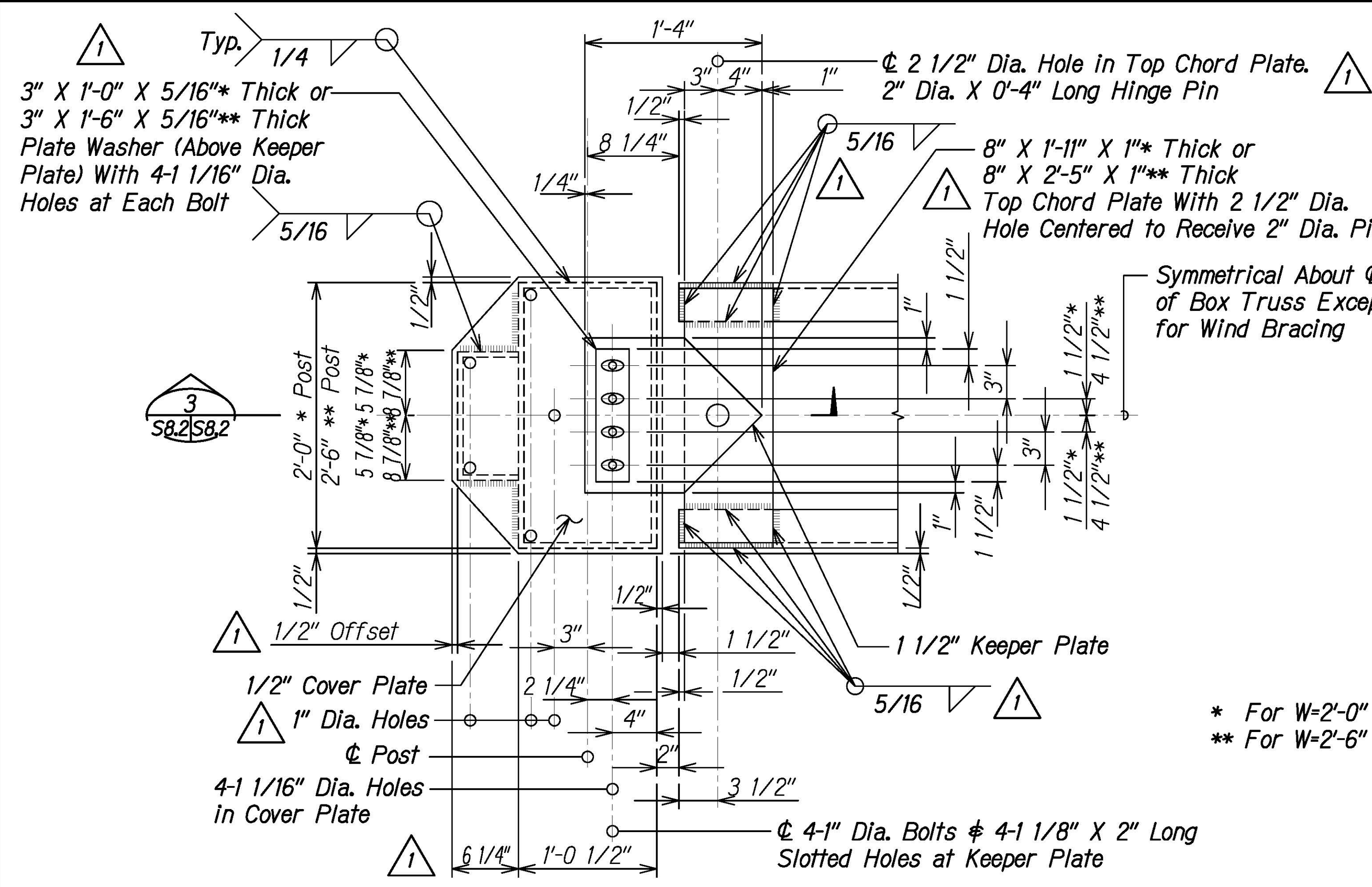
SHEET No. S8.1 OF 4 SHEETS



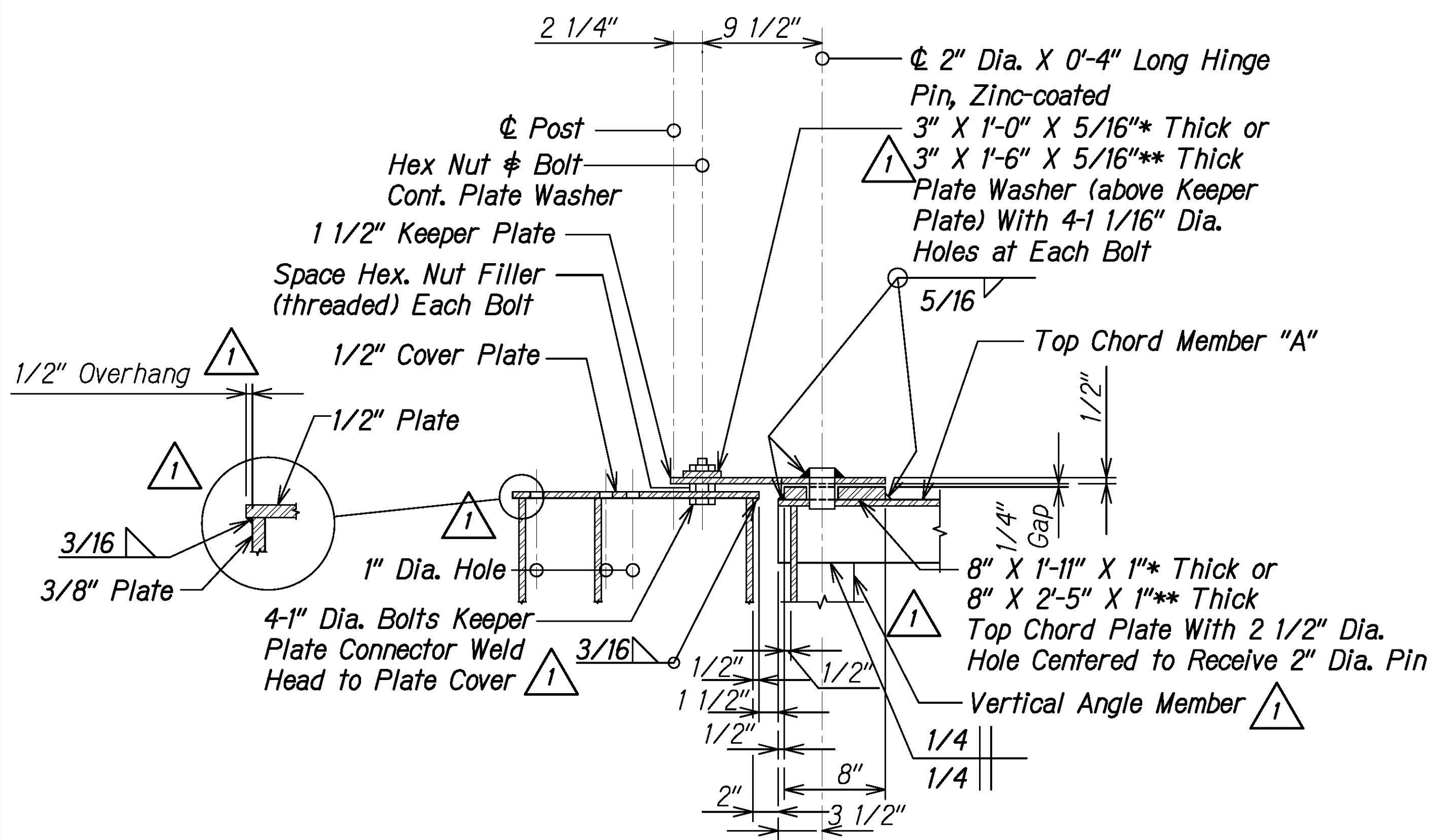
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 Calvin Miyahara
 LICENSED PROFESSIONAL ENGINEER
 NO. 8133-S
 HAWAII, U.S.A.

ORIGINAL PLAN DATE: _____
 DRAWN BY: _____
 TRACED BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____

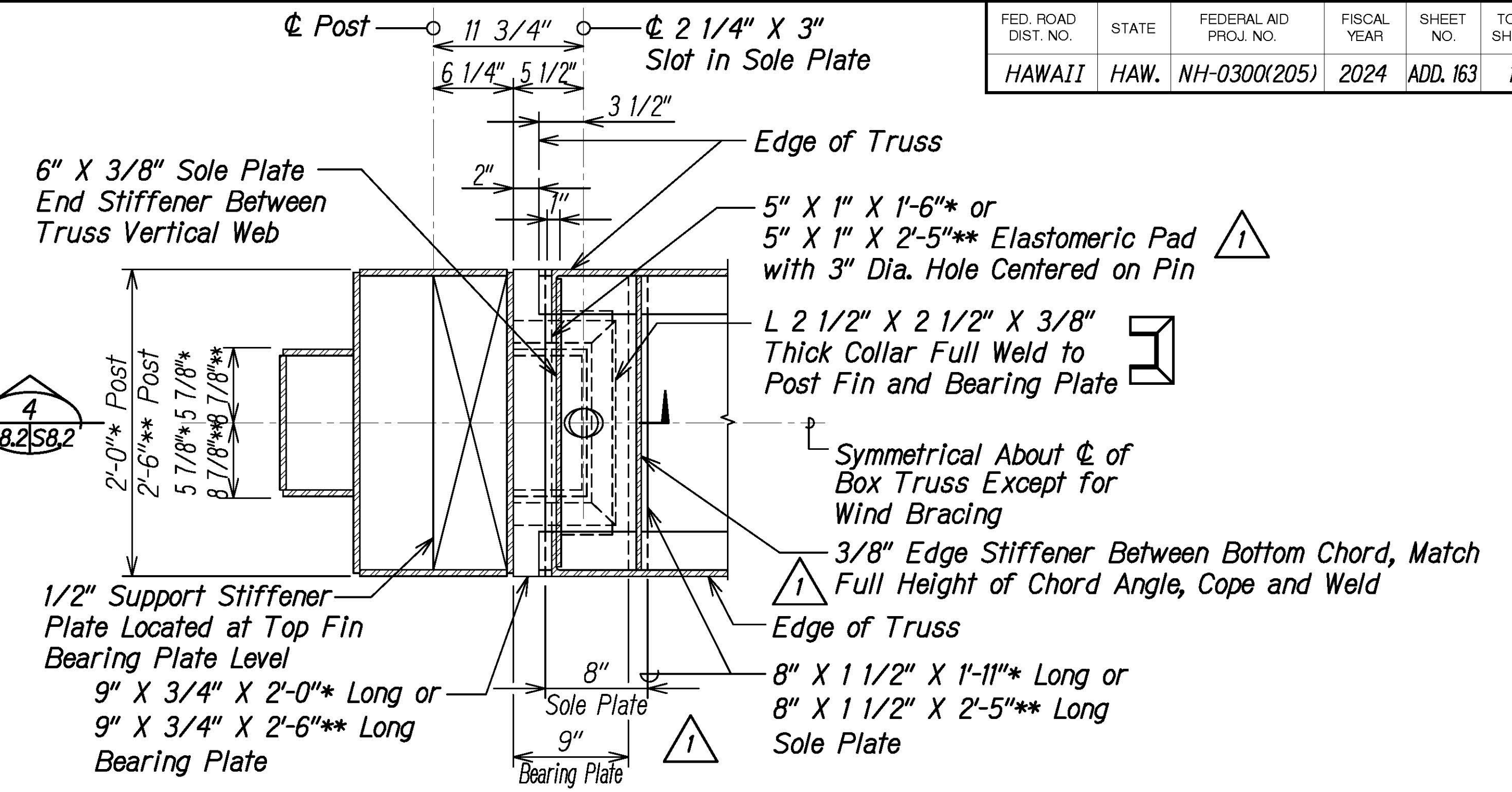
DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSU2-S0801 TO S0806 TYP BOX TRUSS SIGN ADD1.DWG PLOT TIME: 01-25-24 4:09 PM



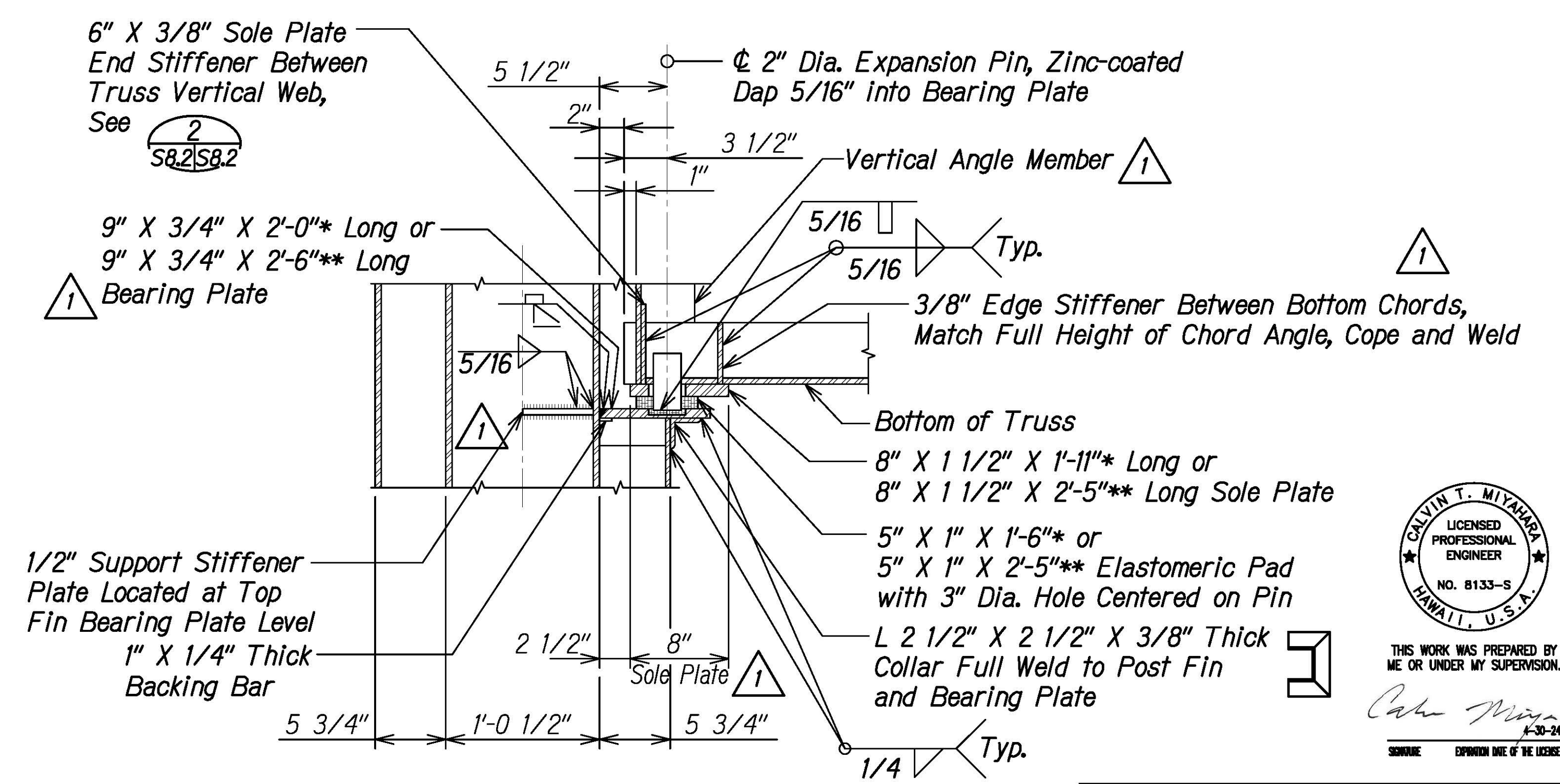
PLAN AT TOP OF COLUMN 1
Scale: 1 1/2" = 1'-0"



TYPICAL UPPER JUNCTURE CONNECTION DETAIL 3
Scale: 1 1/2" = 1'-0"



PLAN AT TRUSS BEARING SUPPORT 2
Scale: 1 1/2" = 1'-0"



TYPICAL LOWER JUNCTURE CONNECTION DETAIL 4
Scale: 1 1/2" = 1'-0"

DATE: _____
DRAWN BY: _____
DESIGNED BY: _____
CHECKED BY: _____
SURVEY PLOTTED BY: _____
NOTE BOOK: _____
QUANTITIES BY: _____
ORDERED BY: _____

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24.ADD\DSU2-S0B01 TO S0B06 TYP BOX TRUSS SIGN ADD1.DWG PLOT TIME: 01-25-24, 4:10 PM

DATE	1/25/24	REVISION	1 Add. 1 - Revised Callouts
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**BOX TRUSS SIGN STRUCTURE
DETAILS**

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

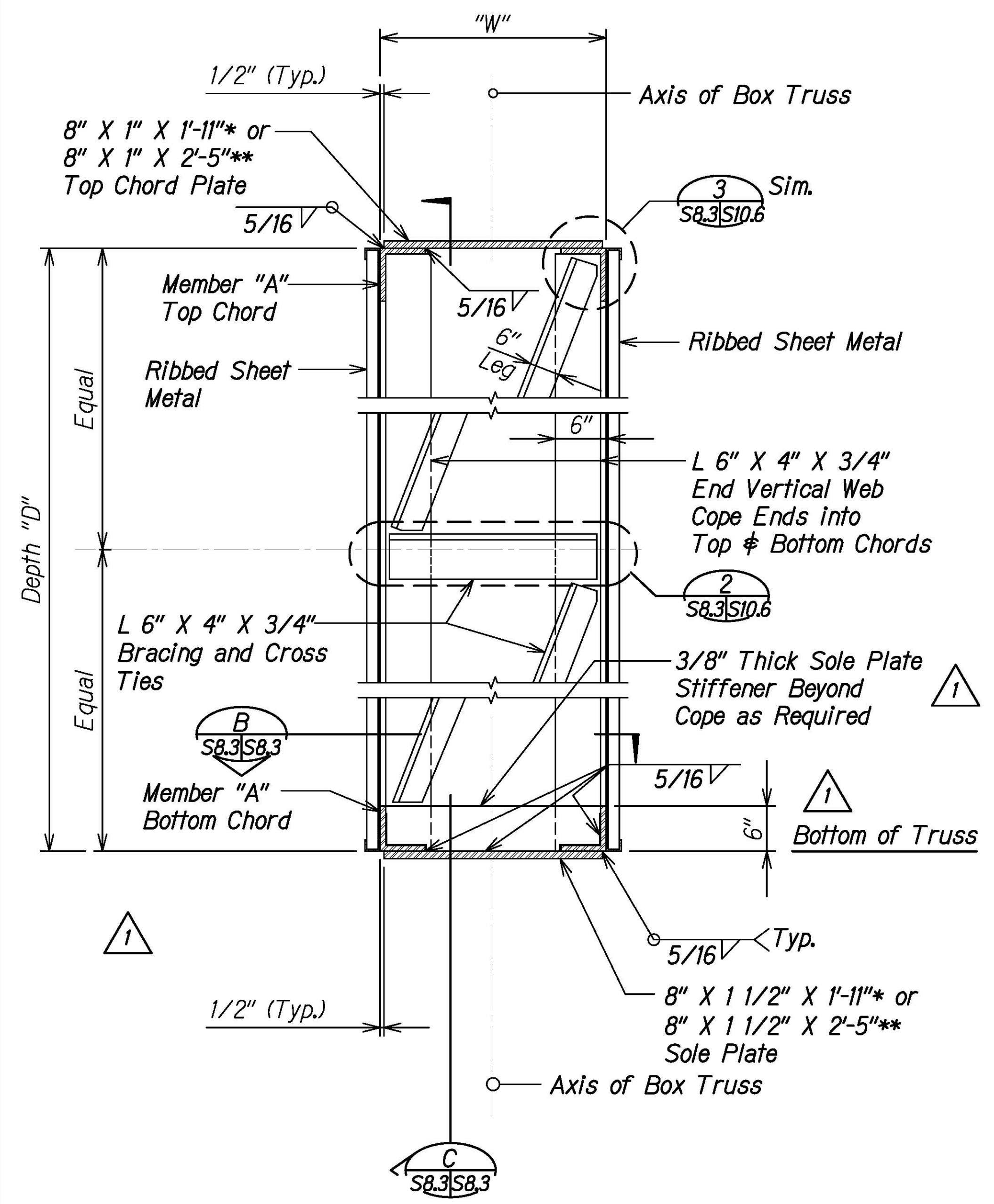
Scale: As Noted Date: Oct. 2023

SHEET No. S8.2 OF 4 SHEETS

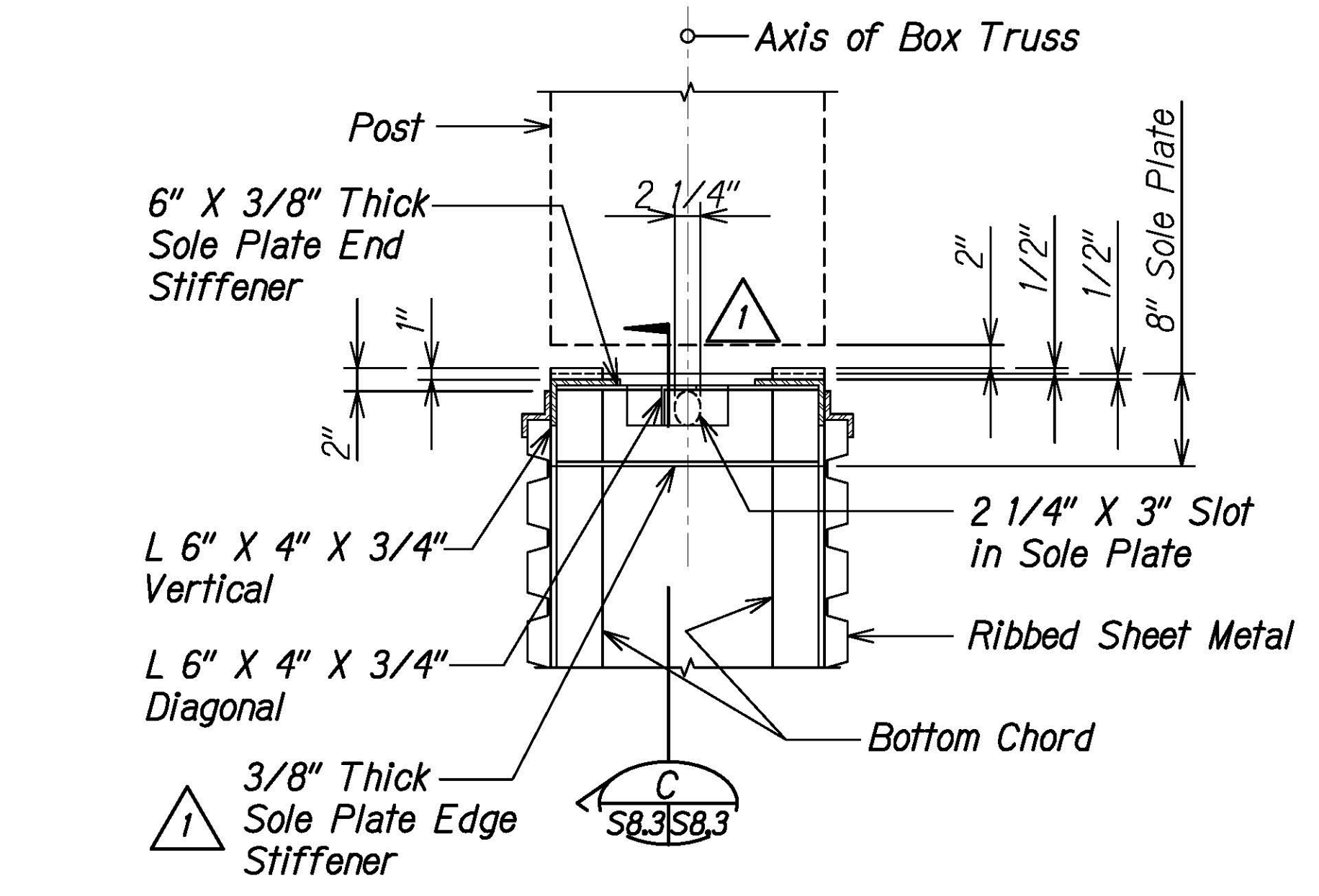


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1-30-24
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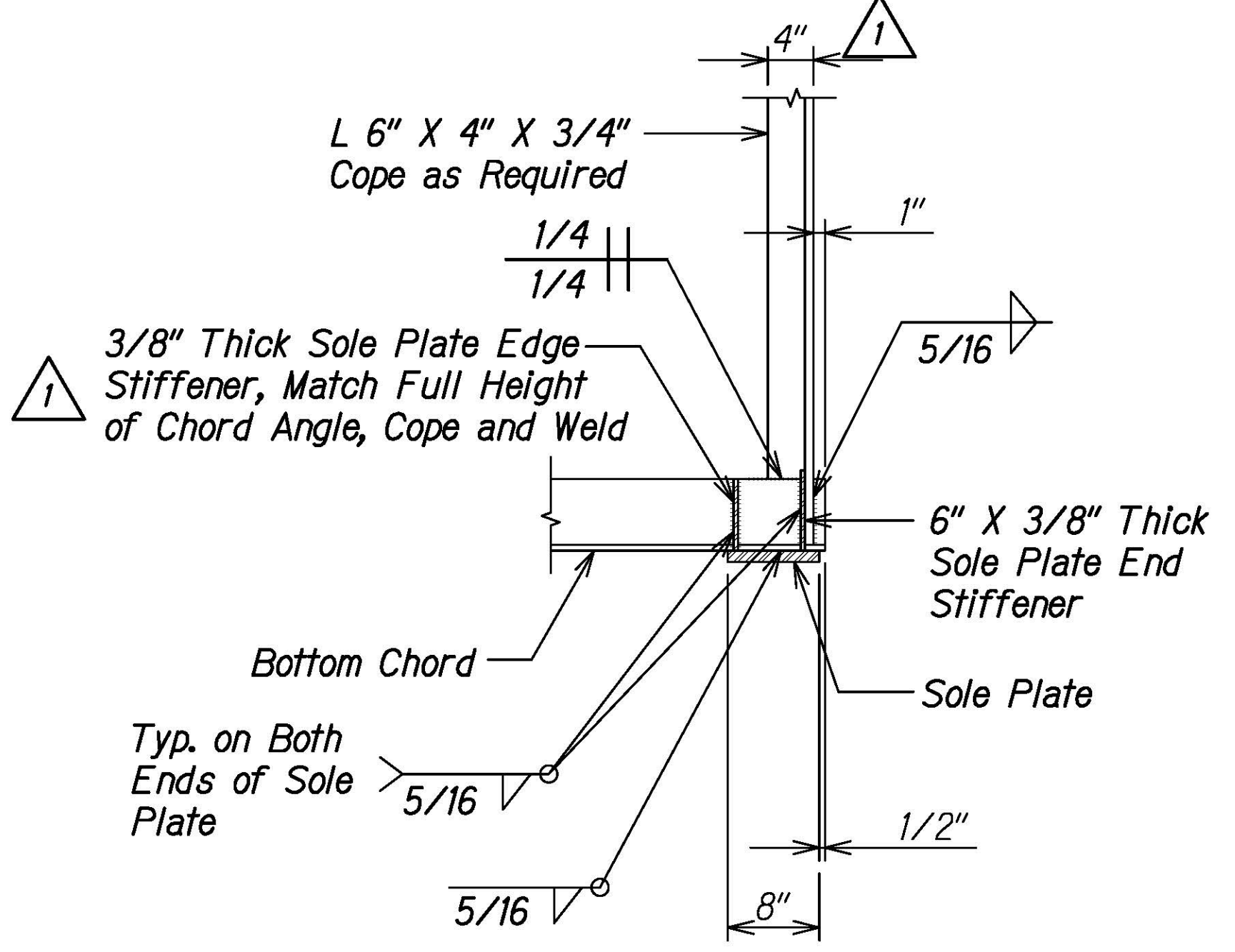
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 164	197



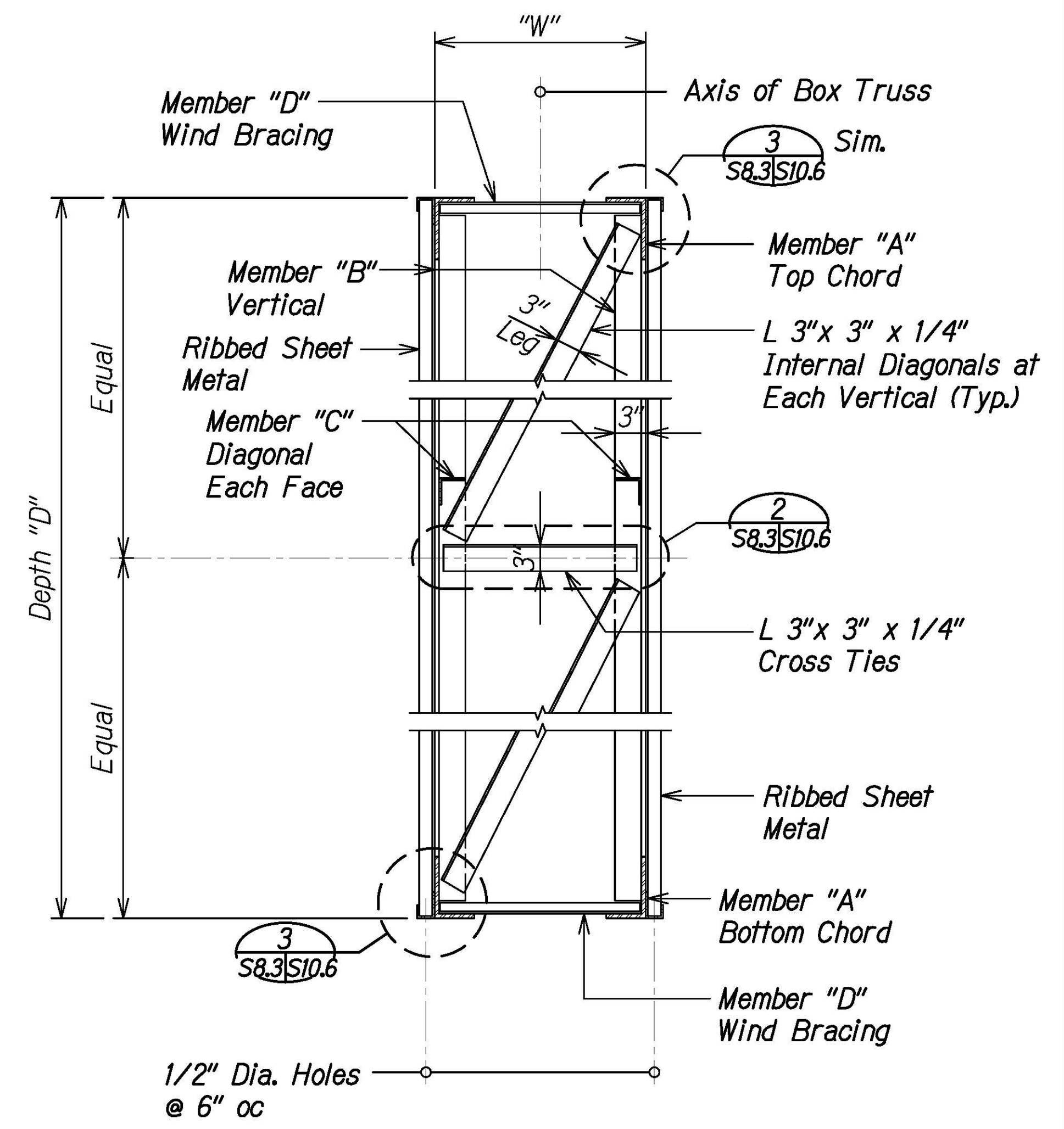
SECTION AT ENDS A
Scale: 1" = 1'-0"



SECTION B
Scale: 1" = 1'-0"



SECTION C
Scale: 1" = 1'-0"



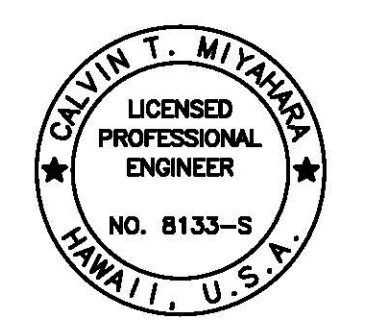
TYPICAL SECTION D
Scale: 1" = 1'-0"

NOTES:

1. See S8.1 for sign structure elevation.
2. See S11.1 for sign structure schedule.

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSUZ-S0801 TO S0806 TYP BOX TRUSS SIGN ADD1.DWG PLOT TIME: 01-25-24 4:10 PM



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1-23-24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BOX TRUSS SIGN STRUCTURE
SECTIONS

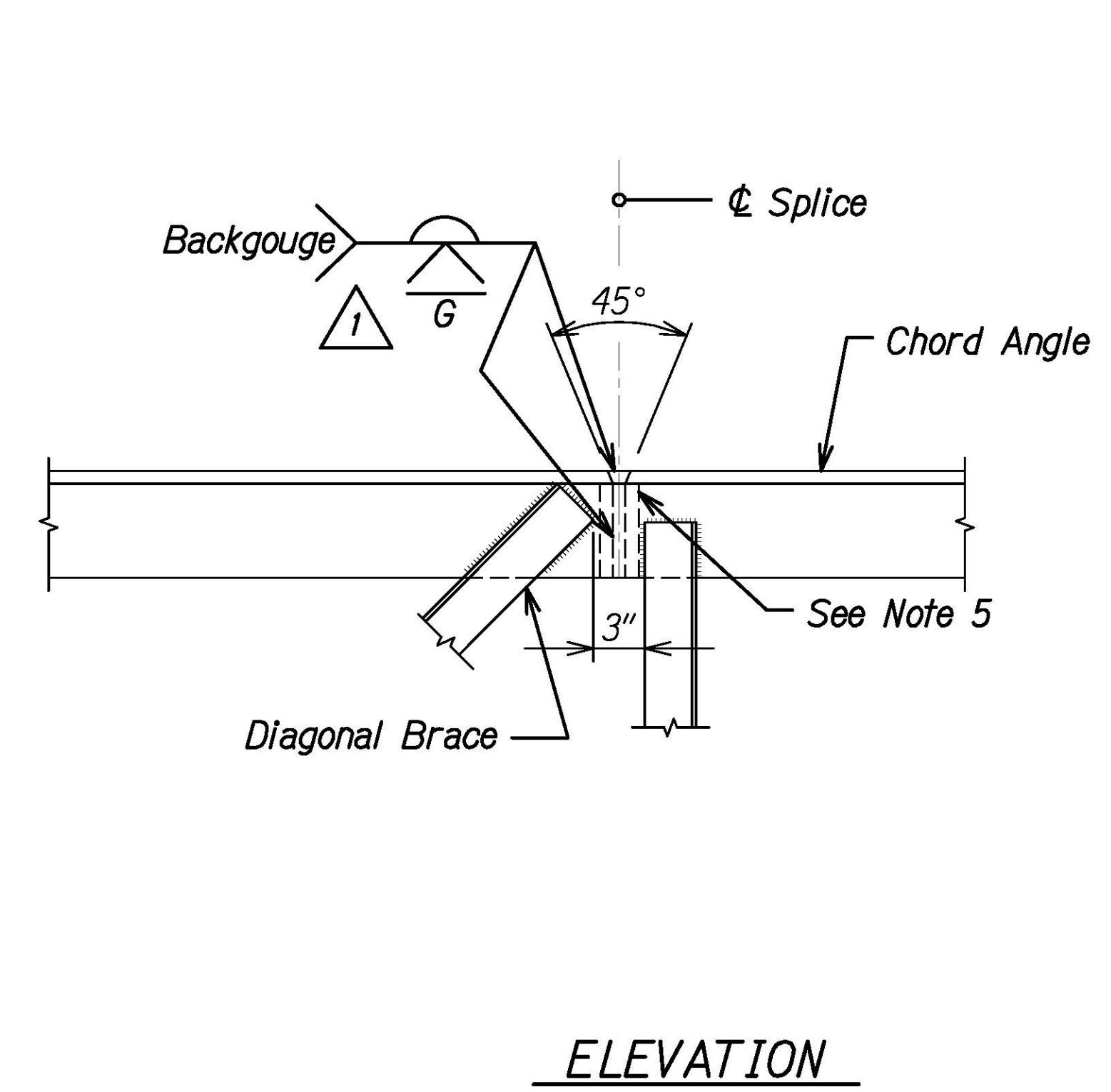
INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

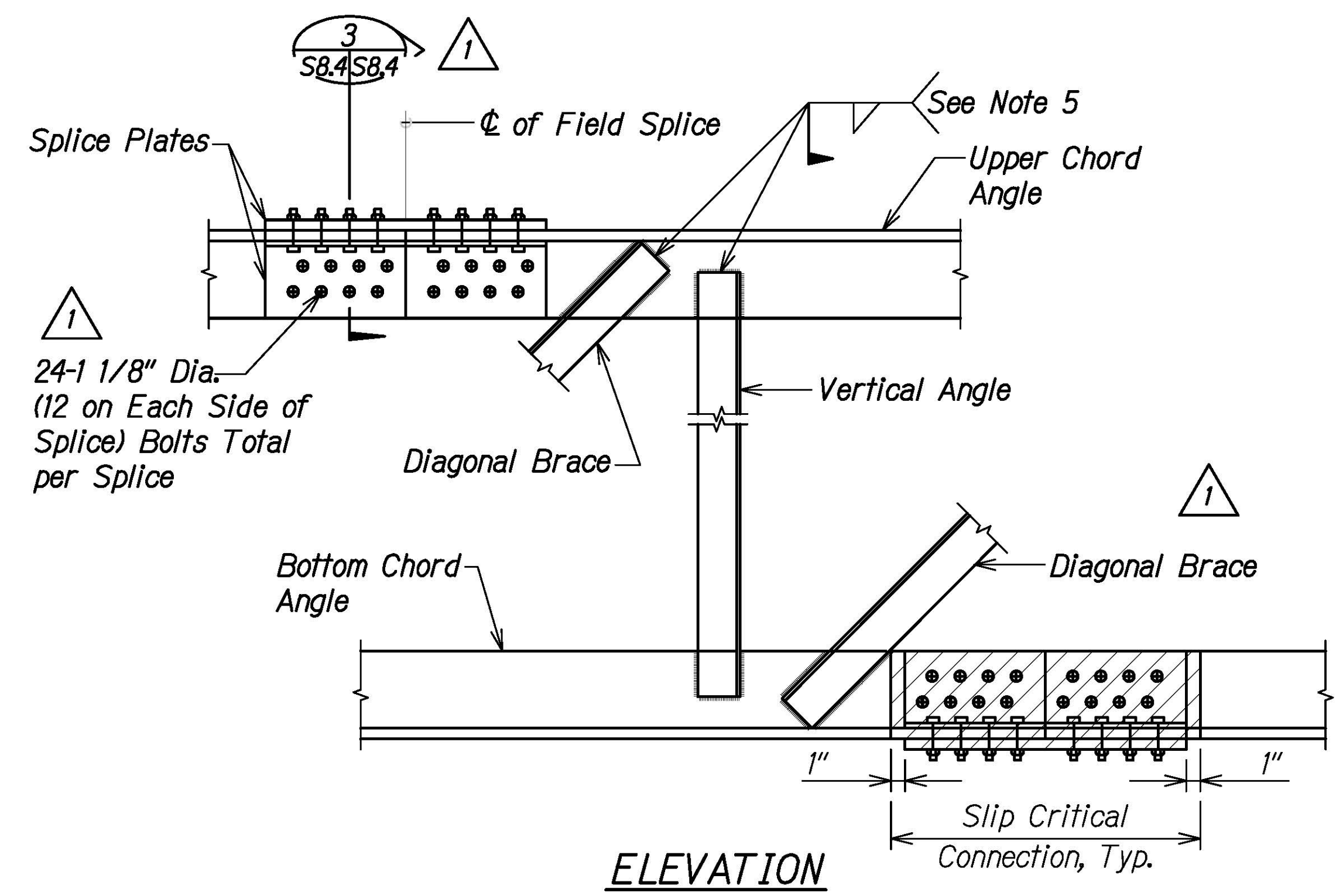
SHEET No. S8.3 OF 4 SHEETS

DATE	1/25/24	REVISION	1 Add. 1 - Revised Callouts
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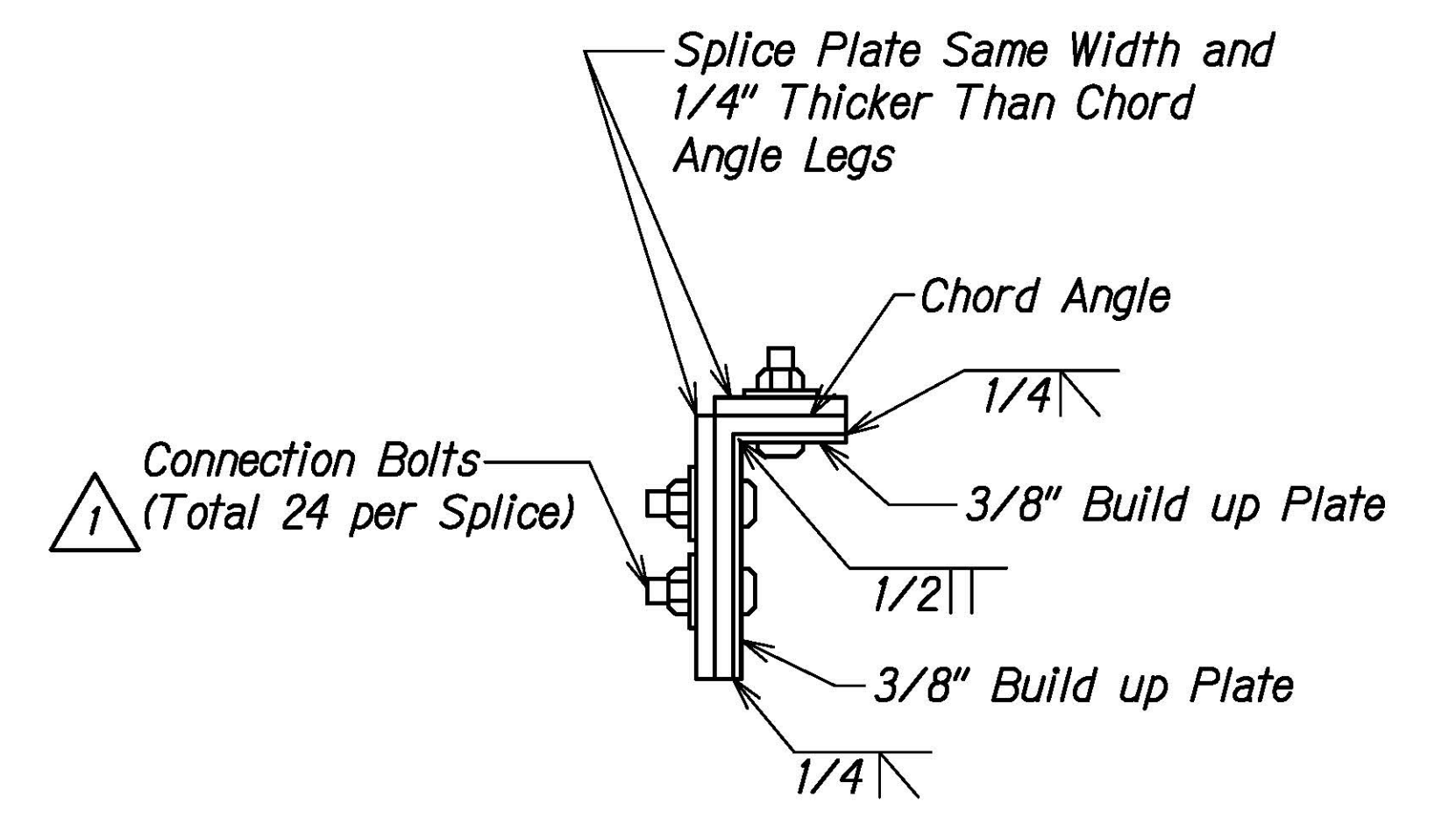
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 165	197



TYPICAL SHOP SPLICE DETAIL 1
 Scale: 1 1/2" = 1'-0" S8.4 | S8.4



TYPICAL FIELD SPLICE DETAIL 2
 Scale: 1 1/2" = 1'-0" S8.4 | S8.4



SECTION 3
 Scale: 1 1/2" = 1'-0" S8.4 | S8.4

LEGEND:


Do not shop paint. To be field painted following pre-tensioned bolting.

- SPLICE NOTES:**
- Splices are for signs with 2 posts. No splices are allowed for cantilever sign frames.
 - Splice location of top and bottom chords at each truss shall be staggered and at alternate locations. Submit splice locations on shop fabrication drawings to the Engineer for approval.
 - In no case shall splices be located at ends or near midspan of truss.
 - The build-up plates welded to the angle legs on the inside shall be welded before punching/drilling the bolt holes. They shall be the same length as the splice plate.
 - All galvanized metal surfaces damaged by field splice welding shall be properly cleaned, and repaired by a zinc-based solder in accordance with ASTM A780, and coated using the approved paint system.

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSUZ-S0801 TO S0806 TYP BOX TRUSS SIGN ADD1.DWG PLOT TIME: 01-25-24, 5:04 PM

DATE	REVISION
1/25/24	1 Add. 1 - Revised Callouts



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4-23-24

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

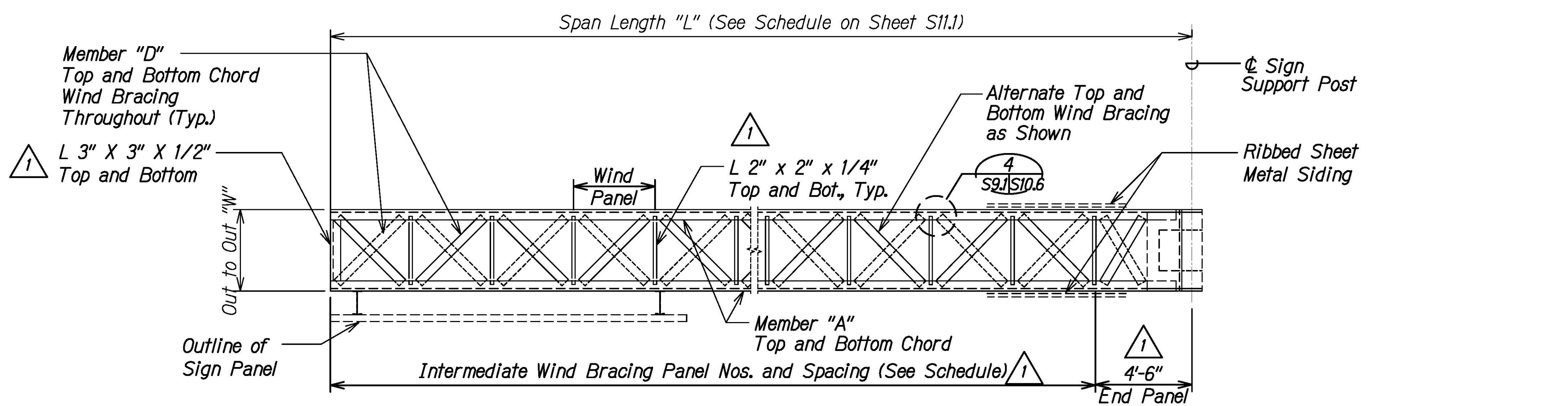
BOX TRUSS SIGN STRUCTURE
DETAILS

INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

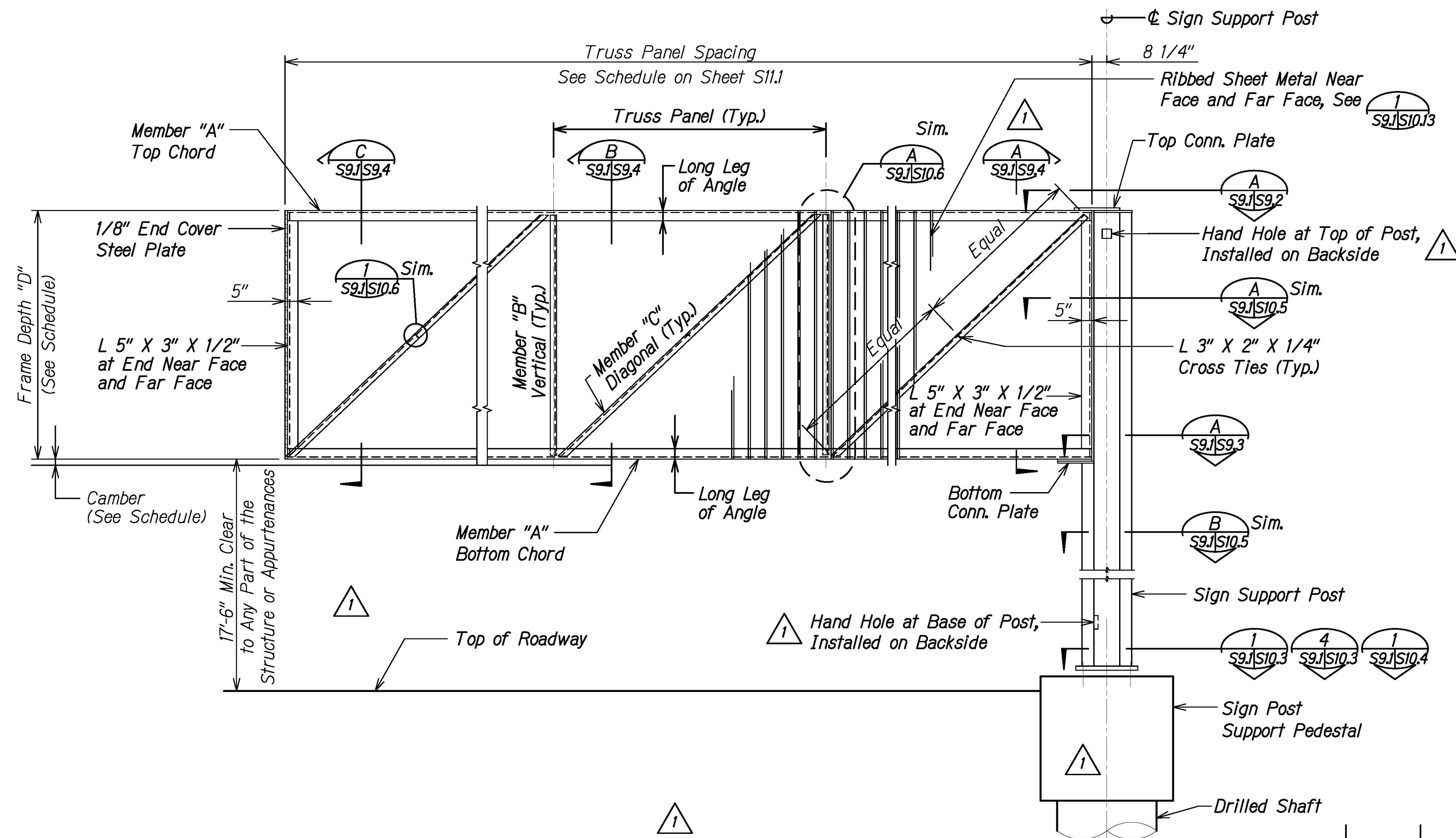
SHEET No. **S8.4** OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 166	197



CANTILEVER BOX TRUSS PLAN - TOP AND BOTTOM WIND BRACE FRAMING
 Scale: 3/8" = 1'-0"

- NOTES:**
1. Truss panels at each end are measured from back of angle at end vertical members to angles at intermediate vertical members.
 2. For sign structure schedule see sheet S11.1.
 3. This sign structure type shall be paid for under "Type II" as shown on the proposal schedule.



CANTILEVER BOX TRUSS ELEVATION
 Scale: 3/8" = 1'-0"

DATE	REVISION
1/25/24	1 Add. 1 - Revised Callouts

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**CANTILEVER BOX TRUSS SIGN STRUCTURE
 PLAN AND ELEVATION**

INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

SHEET No. S9.1 OF 5 SHEETS

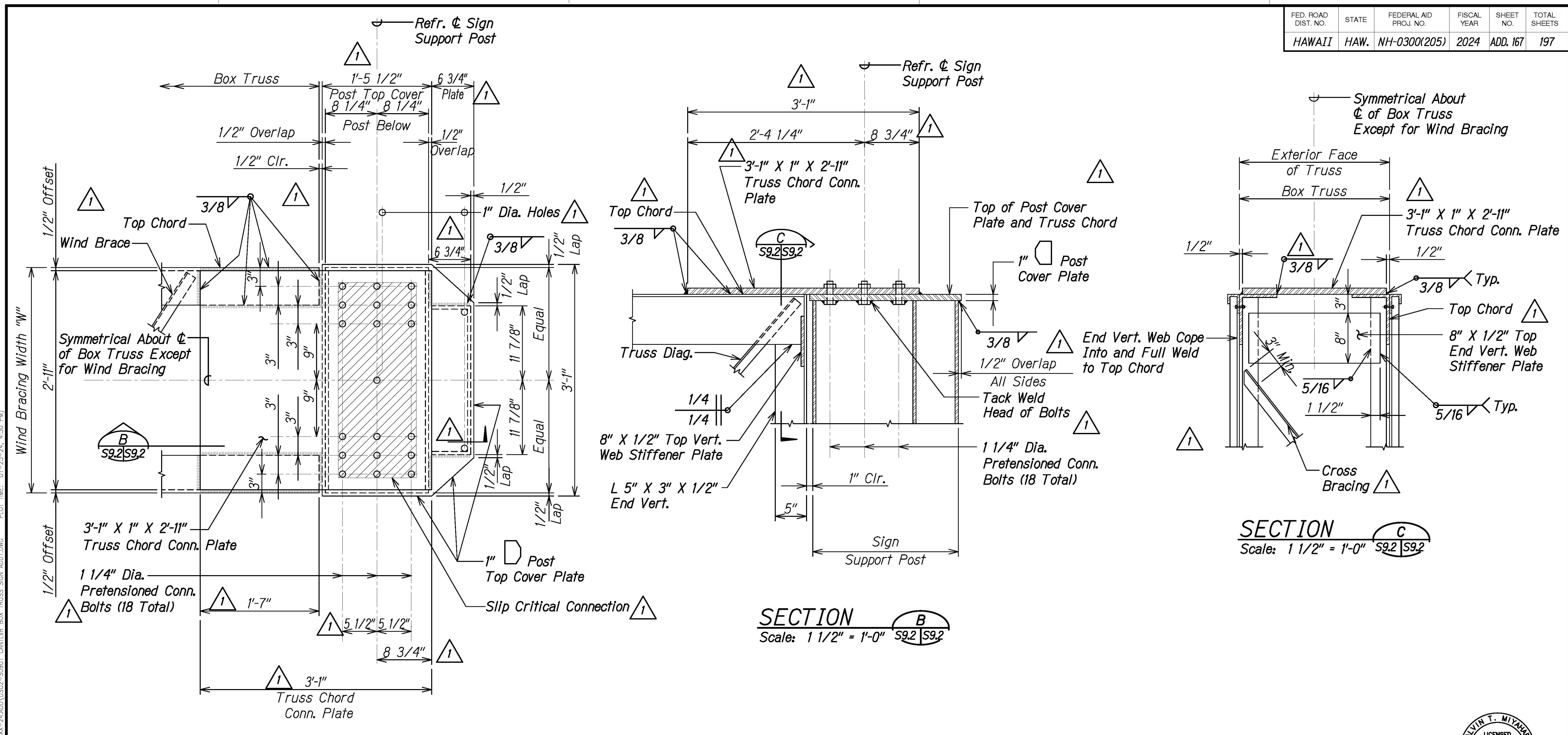


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 Calvin Miyahara
 LICENSED PROFESSIONAL ENGINEER
 HAWAII, U.S.A.

ORIGINAL PLAN	DATE
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DS12-S0901 CANTILEVER BOX TRUSS SIGN ADD1.DWG PLOT TIME: 01-25-24 4:11 PM

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 167	197



PLAN - DETAIL AT TOP OF COLUMN A
 Scale: 1 1/2" = 1'-0" S9.1 | S9.2

1
LEGEND:

Do not shop paint top surface of post cover plate or either surface of truss chord conn. plate. Top of truss chord conn. plate to be field painted following pre-tensioned bolting.

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSU2-S0901 CANTILEVER BOX TRUSS SIGN ADD1.DWG PLOT TIME: 01-25-24, 4:50 PM



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 HIGHWAYS DIVISION

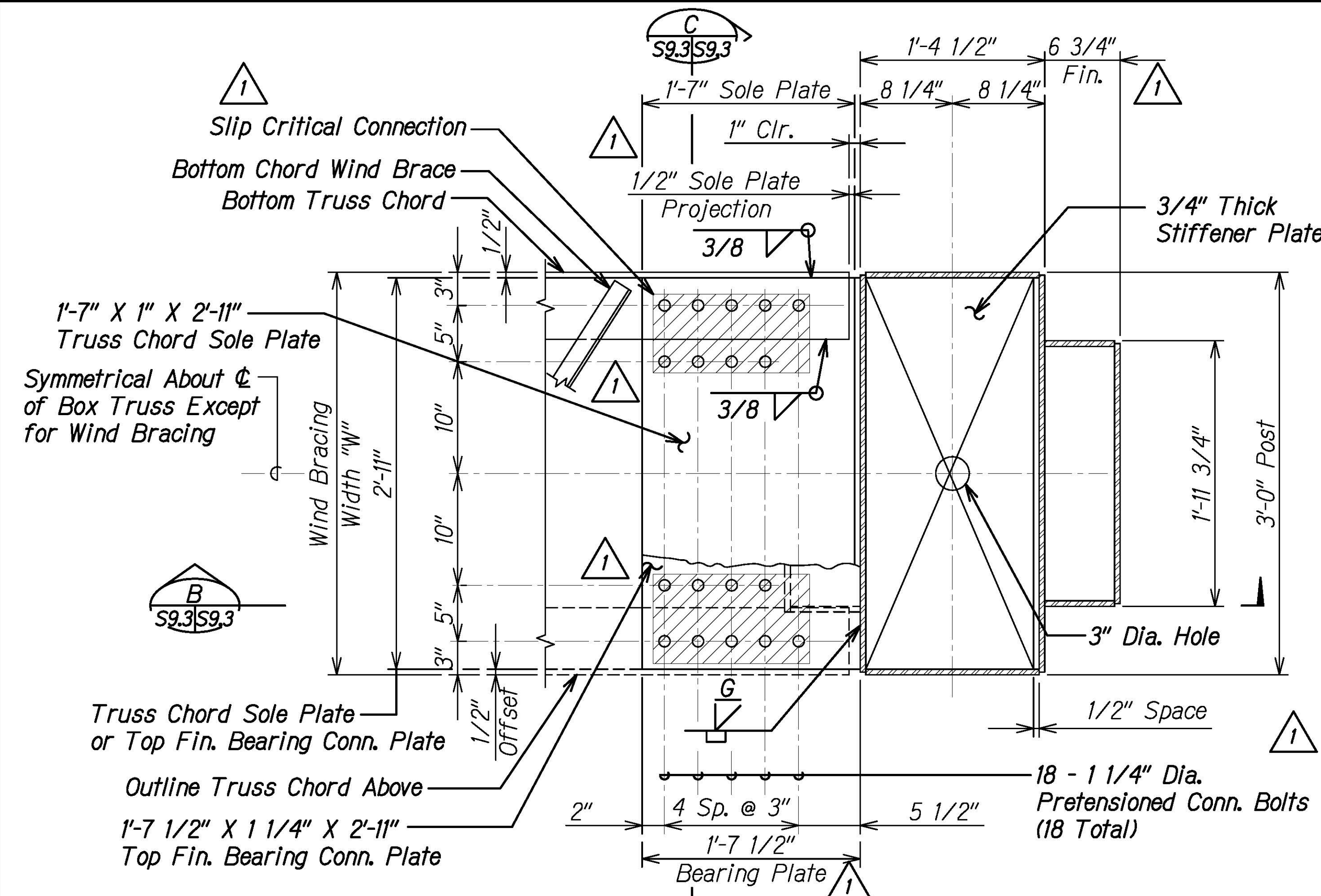
CANTILEVER BOX TRUSS SIGN STRUCTURE
DETAIL AND SECTIONS
 INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

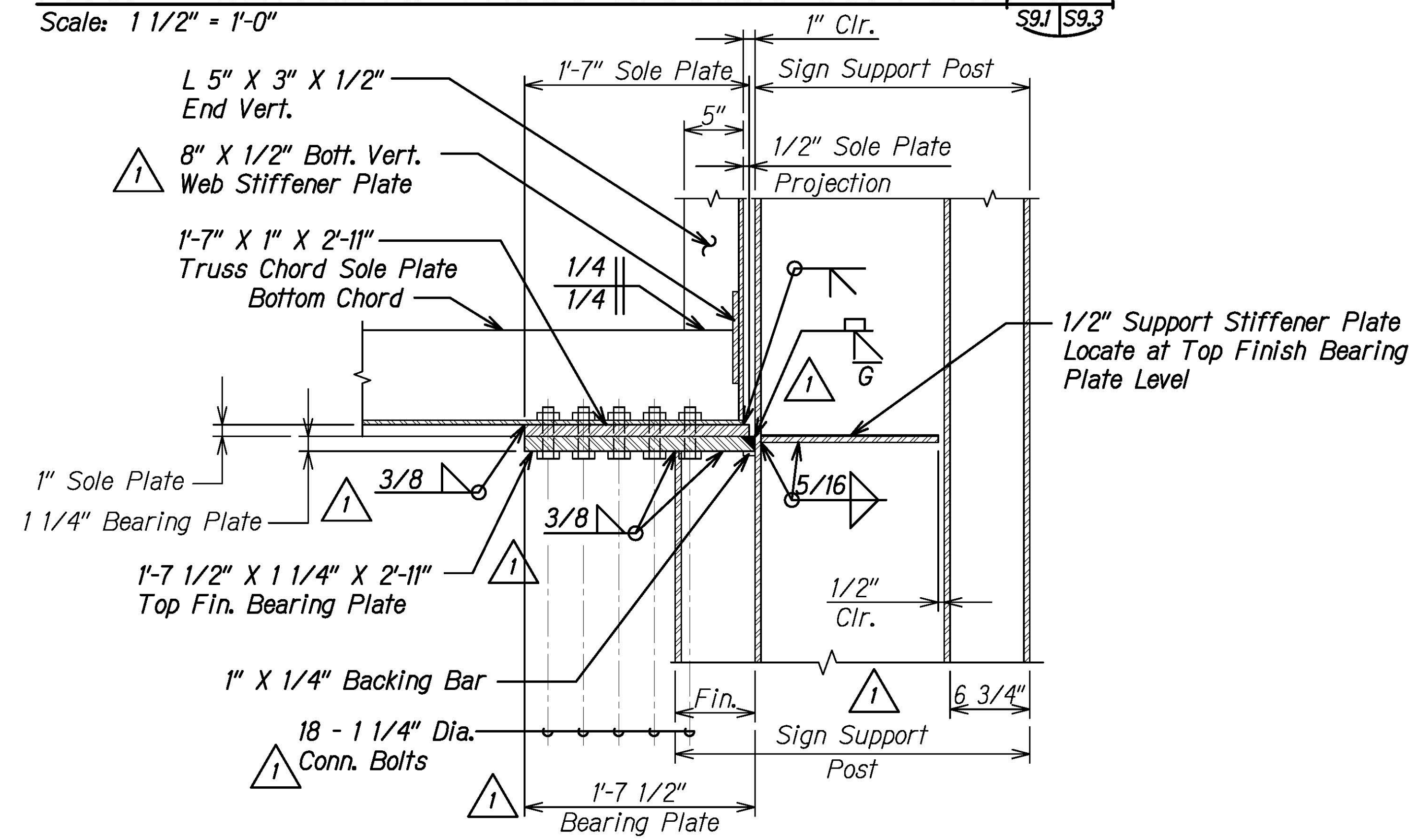
SHEET No. S9.2 OF 5 SHEETS

DATE	1/25/24	REVISION	1 Add. 1 - Revised Callouts
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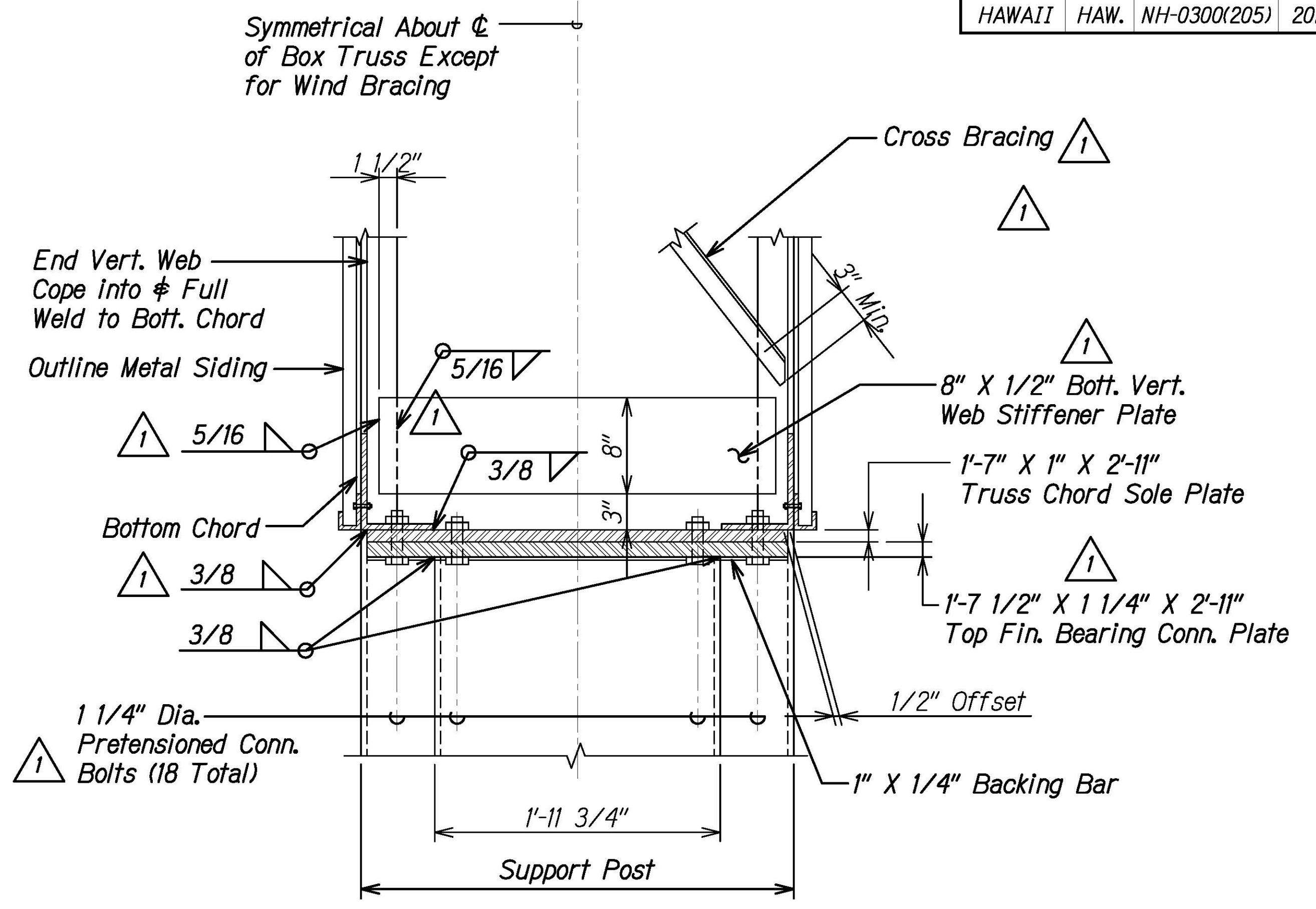
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 168	197



PLAN - DETAIL AT TRUSS BEARING SUPPORT
 Scale: 1 1/2" = 1'-0"



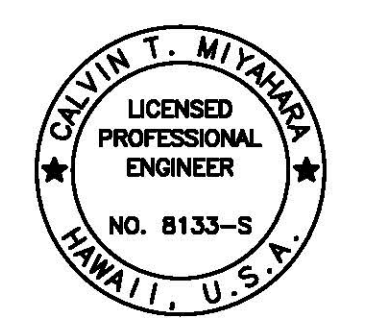
SECTION B
 Scale: 1 1/2" = 1'-0"



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

LEGEND:

Do not shop paint top or bottom surface of sole plate or bearing plate. Do not shop paint top surface of truss chord horizontal leg. Top of sole plate and truss chord as well as bottom of bearing plate to be field painted following pre-tensioned bolting.



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 Calvin Miyahara
 4-23-24
 SIGNATURE EXPIRES END OF THE LICENSE

DATE	BY

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSUZ-S0901 CANTILEVER BOX TRUSS SIGN ADD1.DWG PLOT TIME: 01-25-24, 4:52 PM

DATE	REVISION
1/25/24	1 Add. 1 - Revised Callouts

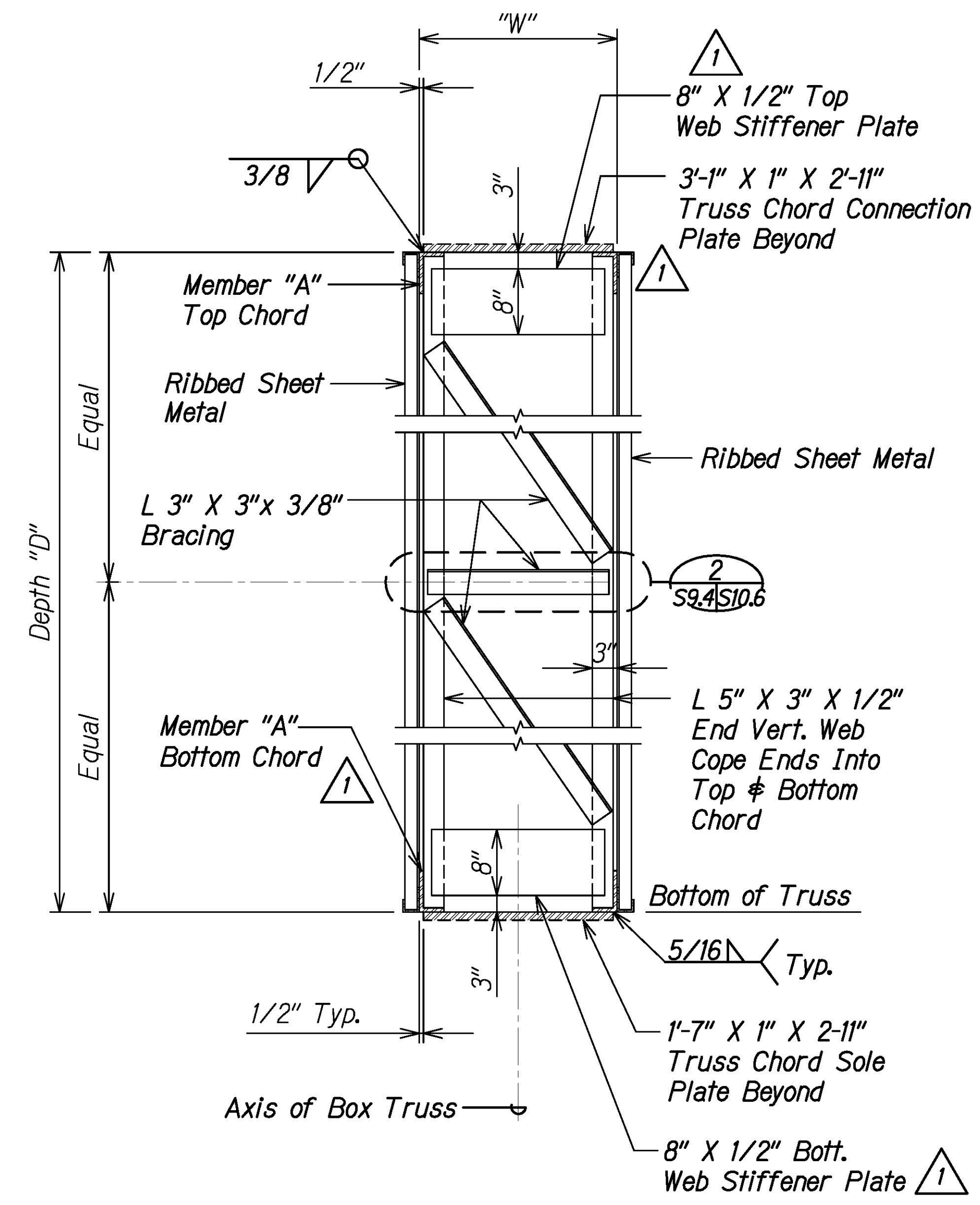
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

CANTILEVER BOX TRUSS SIGN STRUCTURE
DETAIL AND SECTIONS
 INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

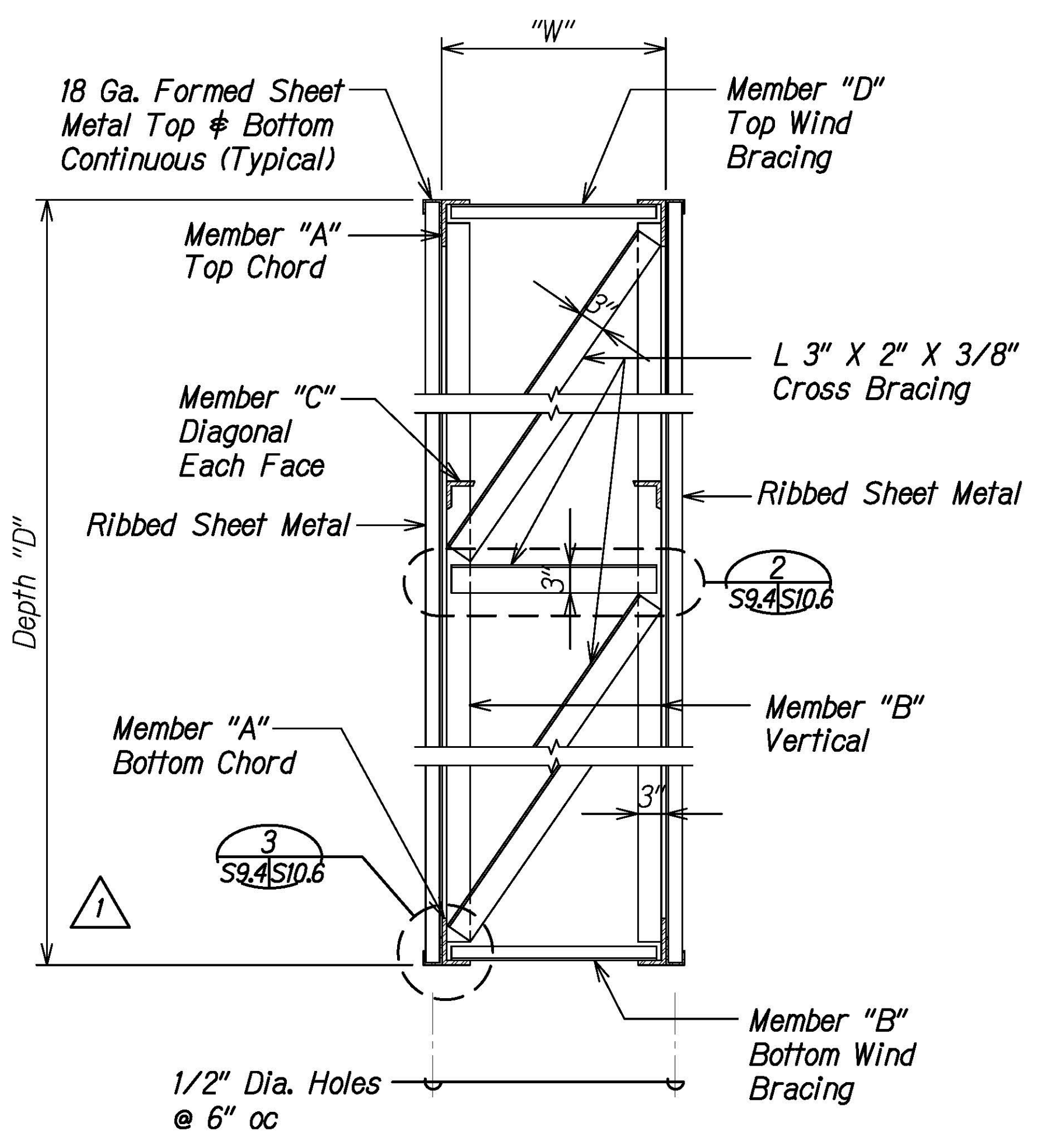
Scale: As Noted Date: Oct. 2023

SHEET No. S9.3 OF 5 SHEETS

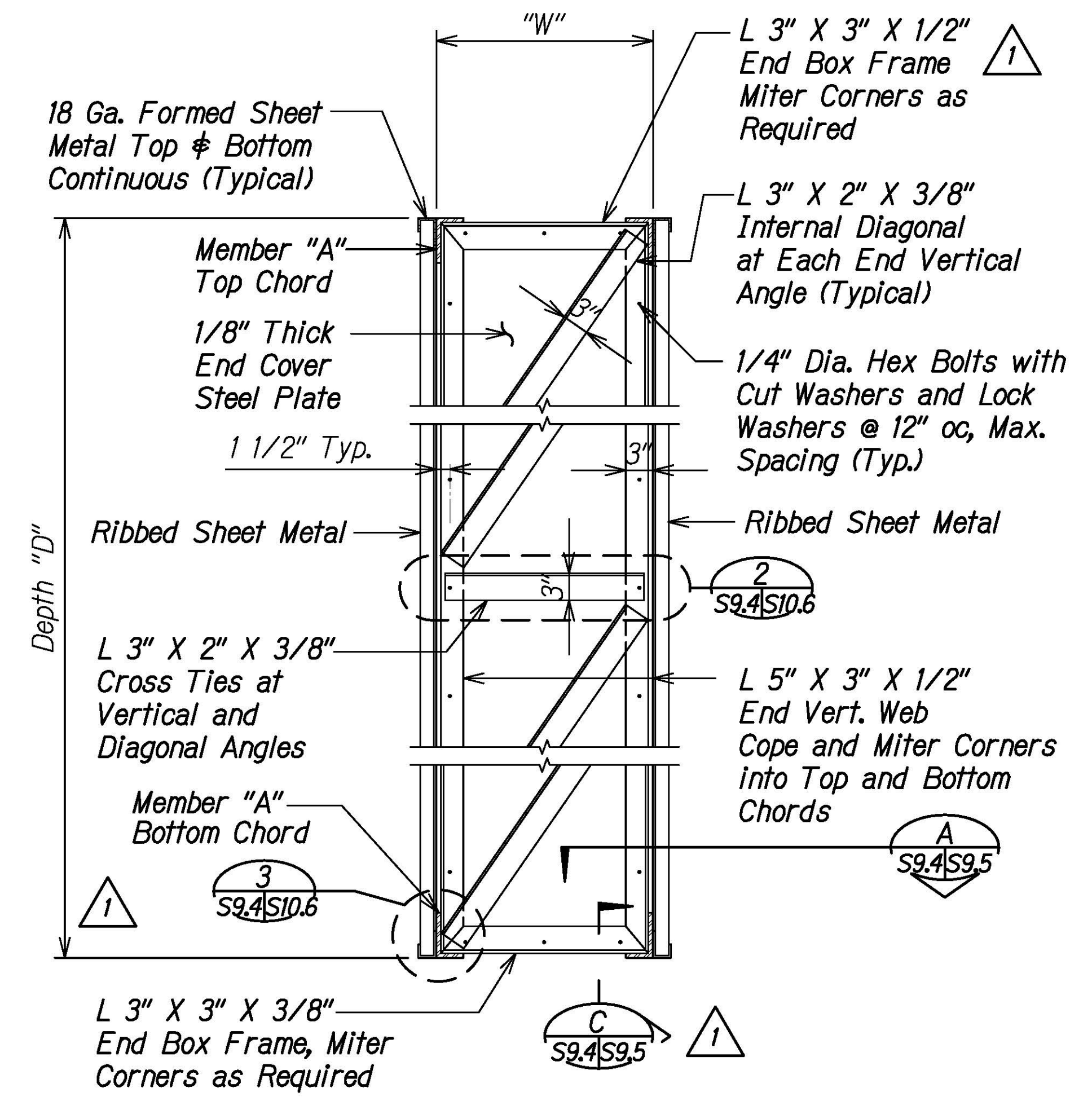
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 169	197



SECTION AT COLUMN END A
Scale: 1" = 1'-0"



TYPICAL SECTION B
Scale: 1" = 1'-0"



SECTION AT FREE END C
Scale: 1" = 1'-0"

- NOTES:**
1. See S9.1 for sign structure elevation.
 2. See S11.1 for sign structure schedule.

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSUZ-S0901 CANTILEVER BOX TRUSS SIGN ADD.DWG PLOT TIME: 01-25-24, 4:11 PM



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Calvin Miyahara
1-23-24
SIGNATURE EXPIRES ONE YEAR FROM DATE

DATE	REVISION
1/25/24	1 Add. 1 - Revised Callouts

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CANTILEVER BOX TRUSS SIGN STRUCTURE

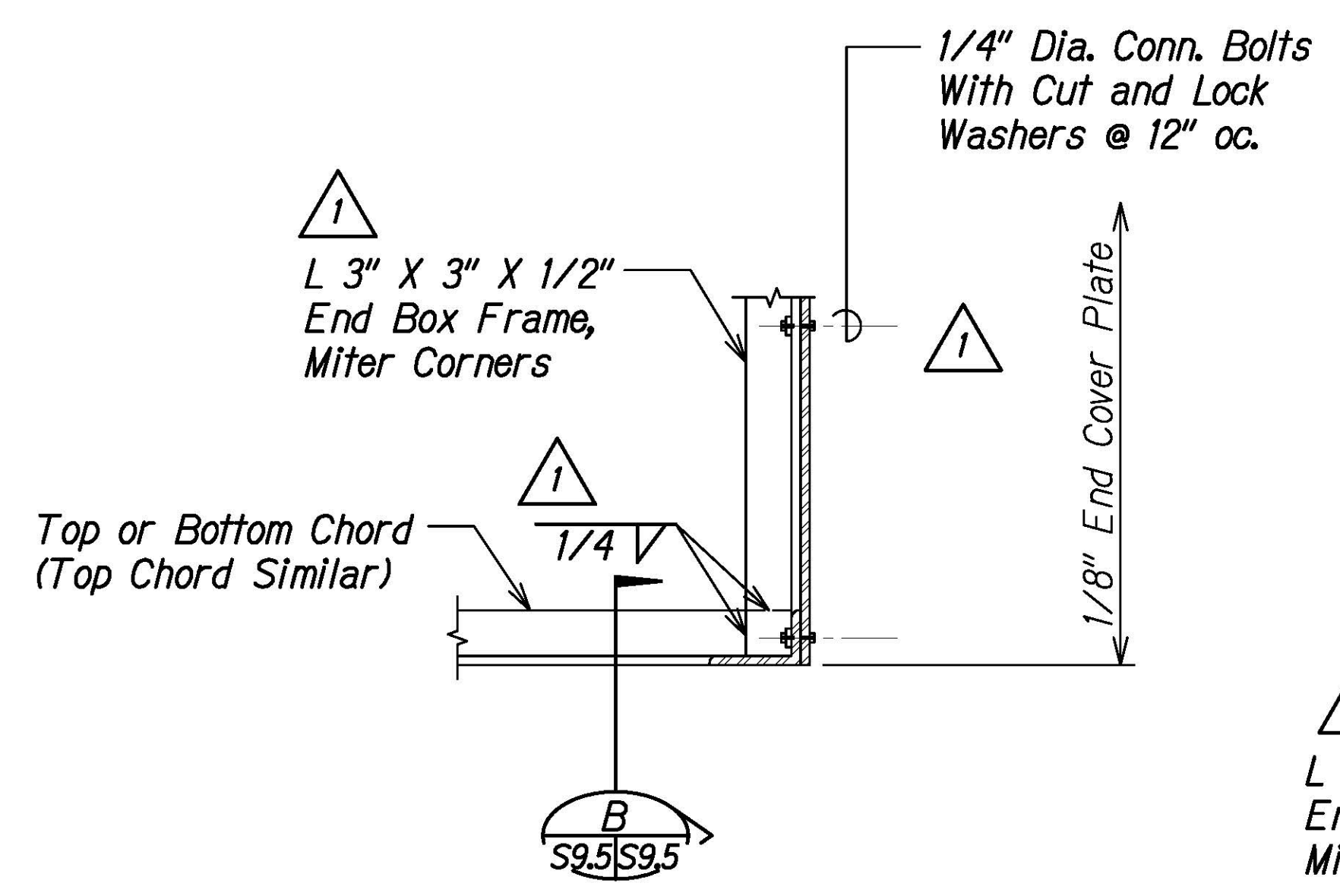
SECTIONS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

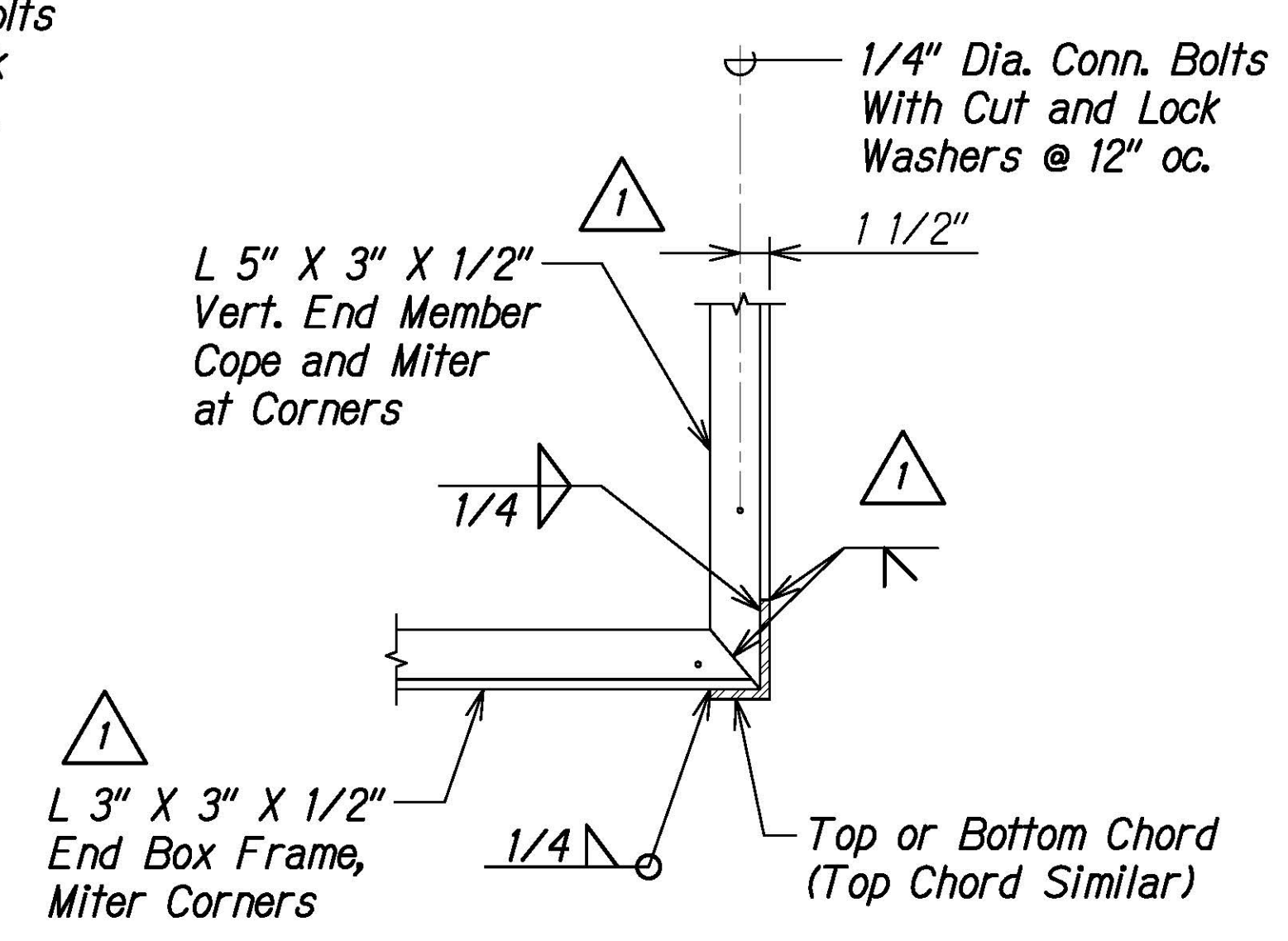
Scale: As Noted Date: Oct. 2023

SHEET No. S9.4 OF 5 SHEETS

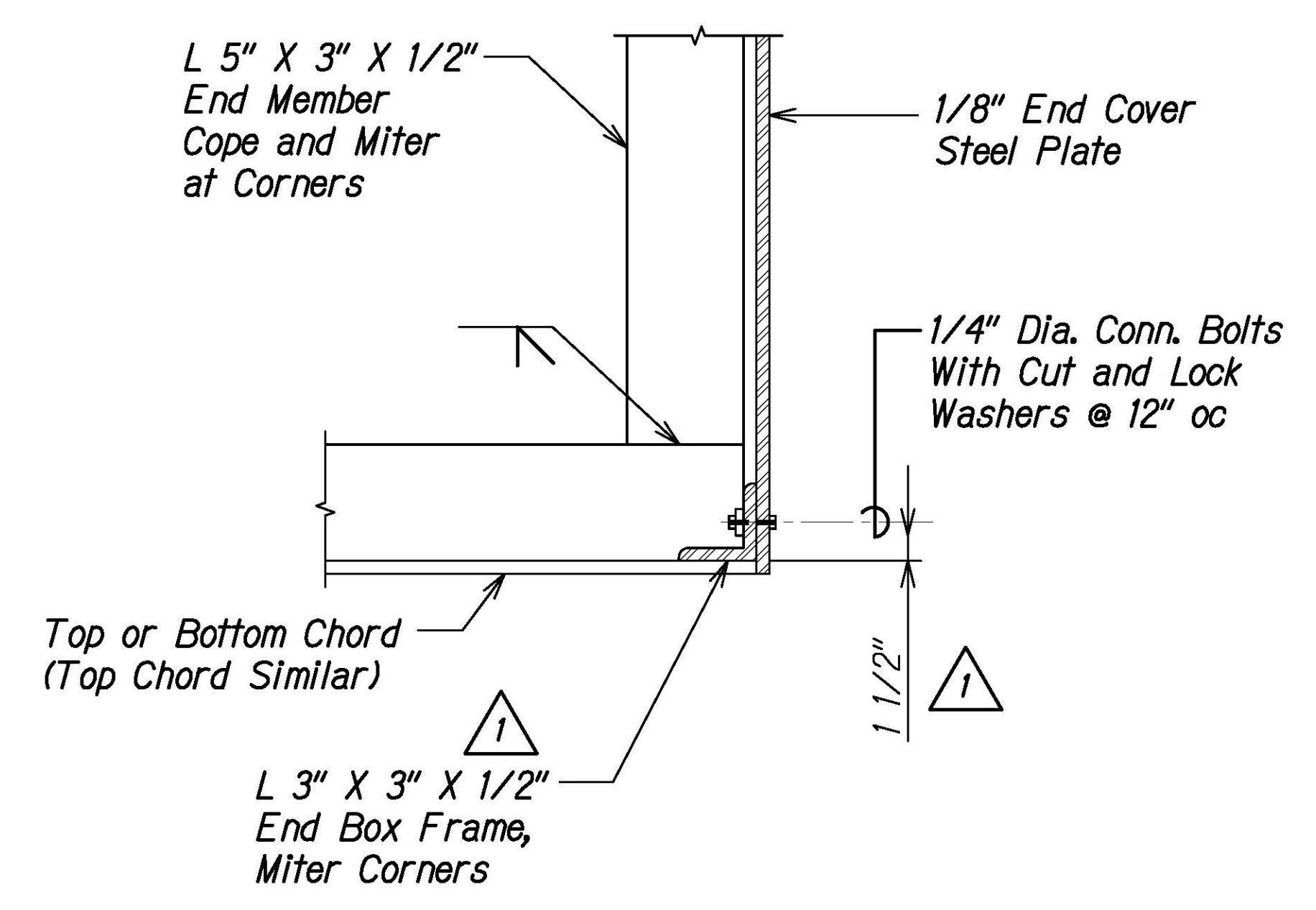
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 170	197



PLAN AT FREE END A
Scale: 1 1/2" = 1'-0" S9.4 | S9.5



SECTION B
Scale: 1 1/2" = 1'-0" S9.5 | S9.5



SECTION C 1
Scale: 1 1/2" = 1'-0" S9.4 | S9.5

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSUZ-S0901 CANTILEVER BOX TRUSS SIGN ADD1.DWG PLOT TIME: 01-25-24, 4:12 PM



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Calvin Miyahara
4-23-24
SIGNATURE EXPIRES ONE YEAR FROM DATE OF SIGNATURE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CANTILEVER BOX TRUSS SIGN STRUCTURE

SECTIONS

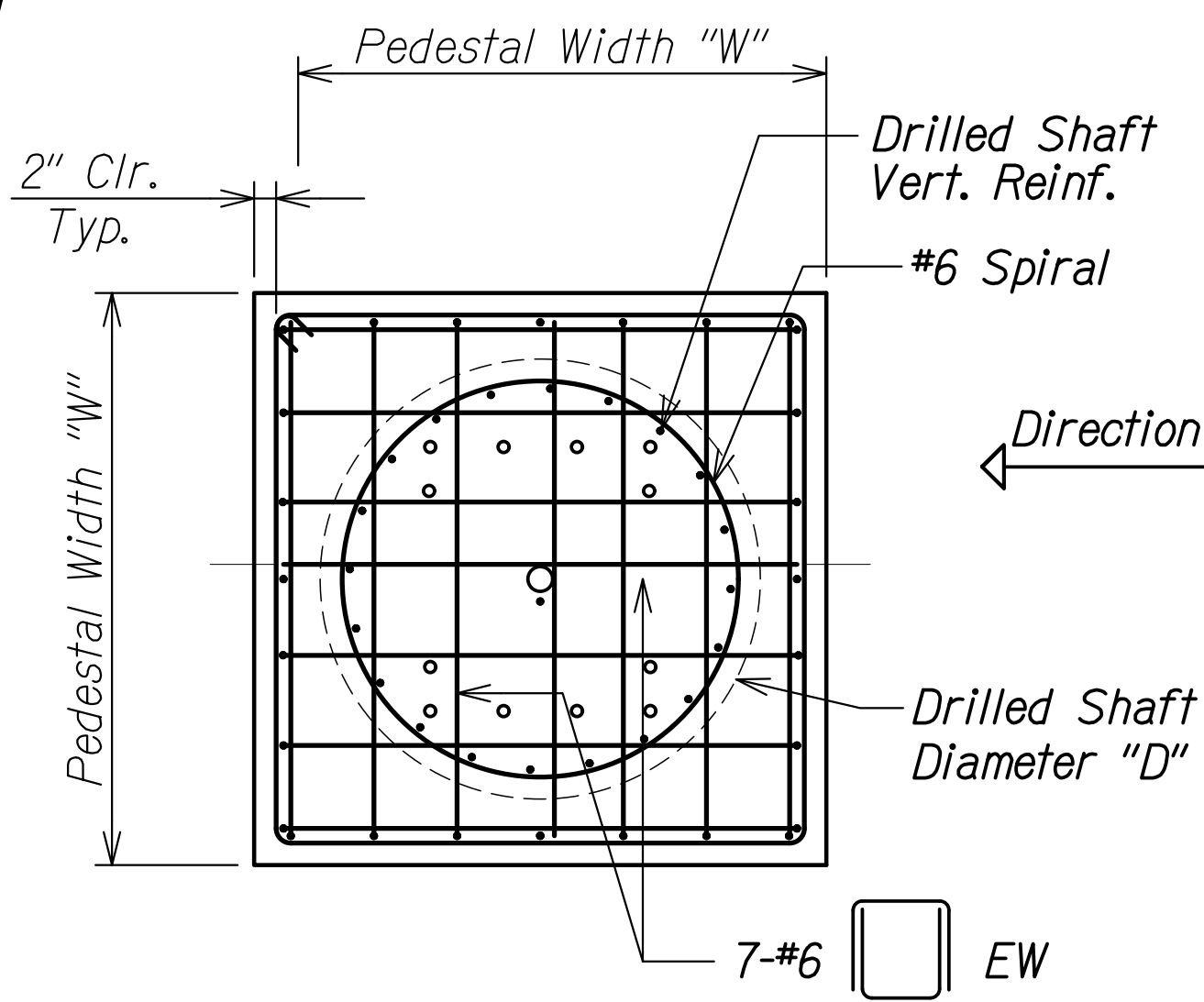
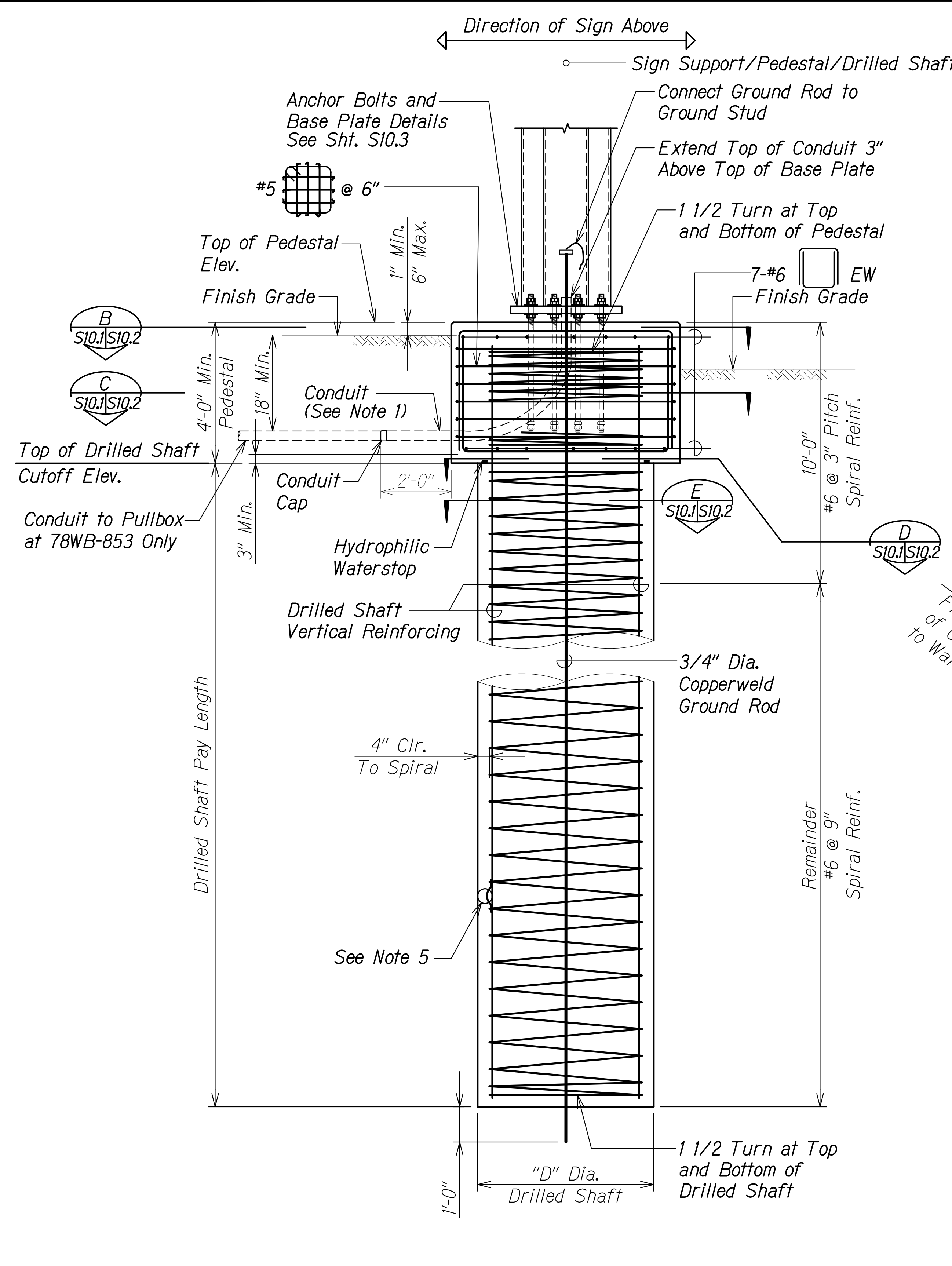
INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

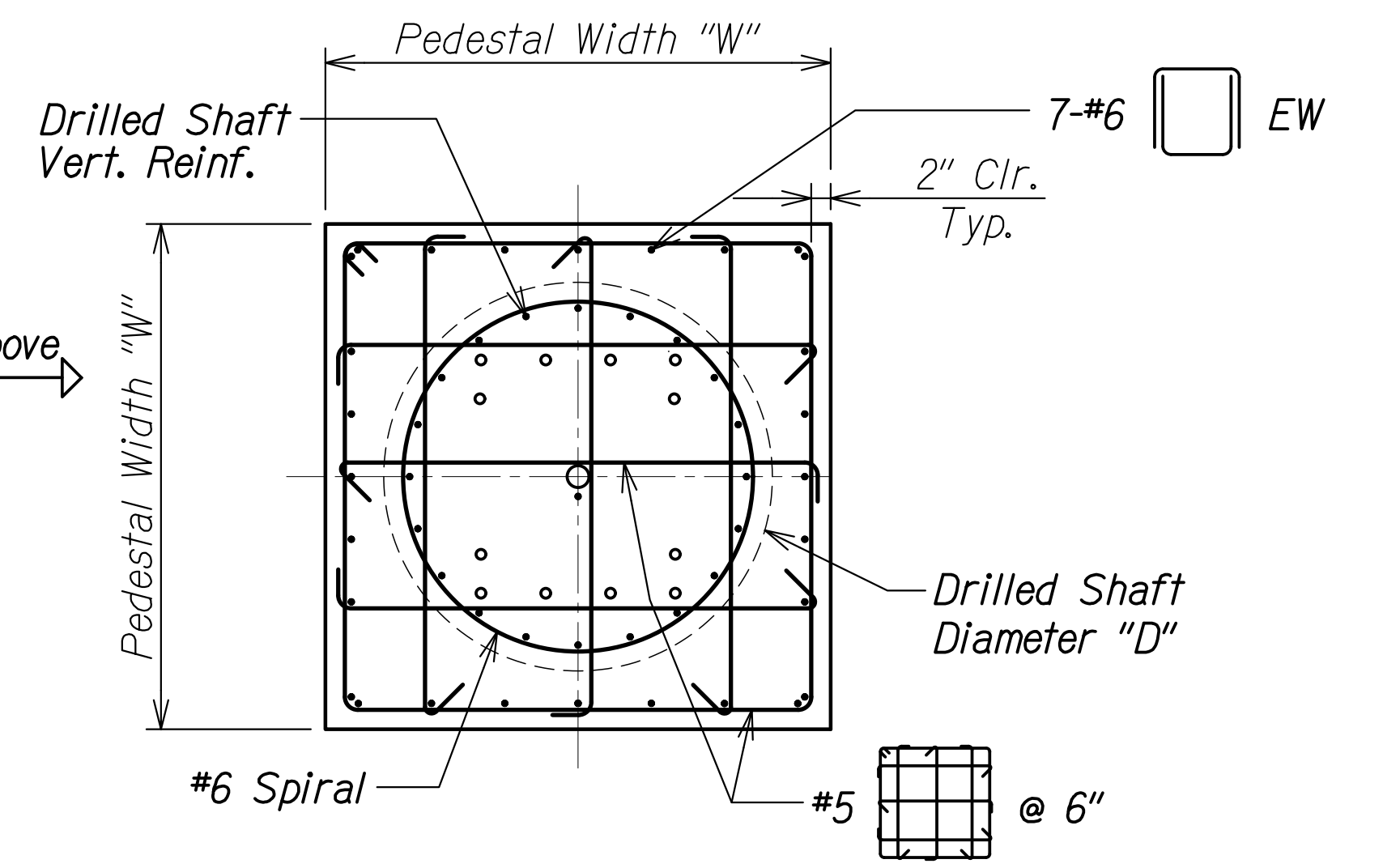
SHEET No. S9.5 OF 5 SHEETS

1/25/24	1	Add. 1 - Revised Callouts
DATE		REVISION

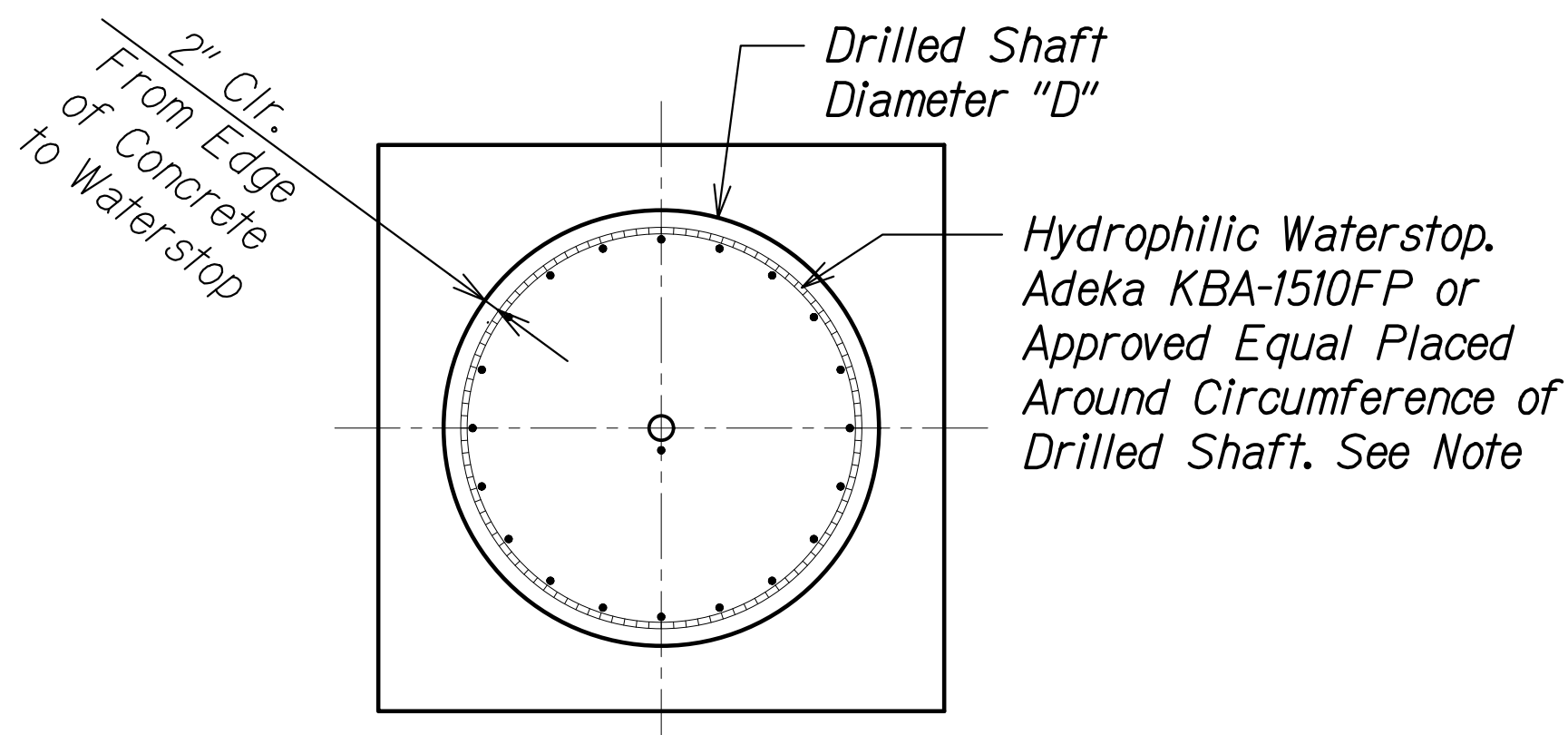
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	171	197



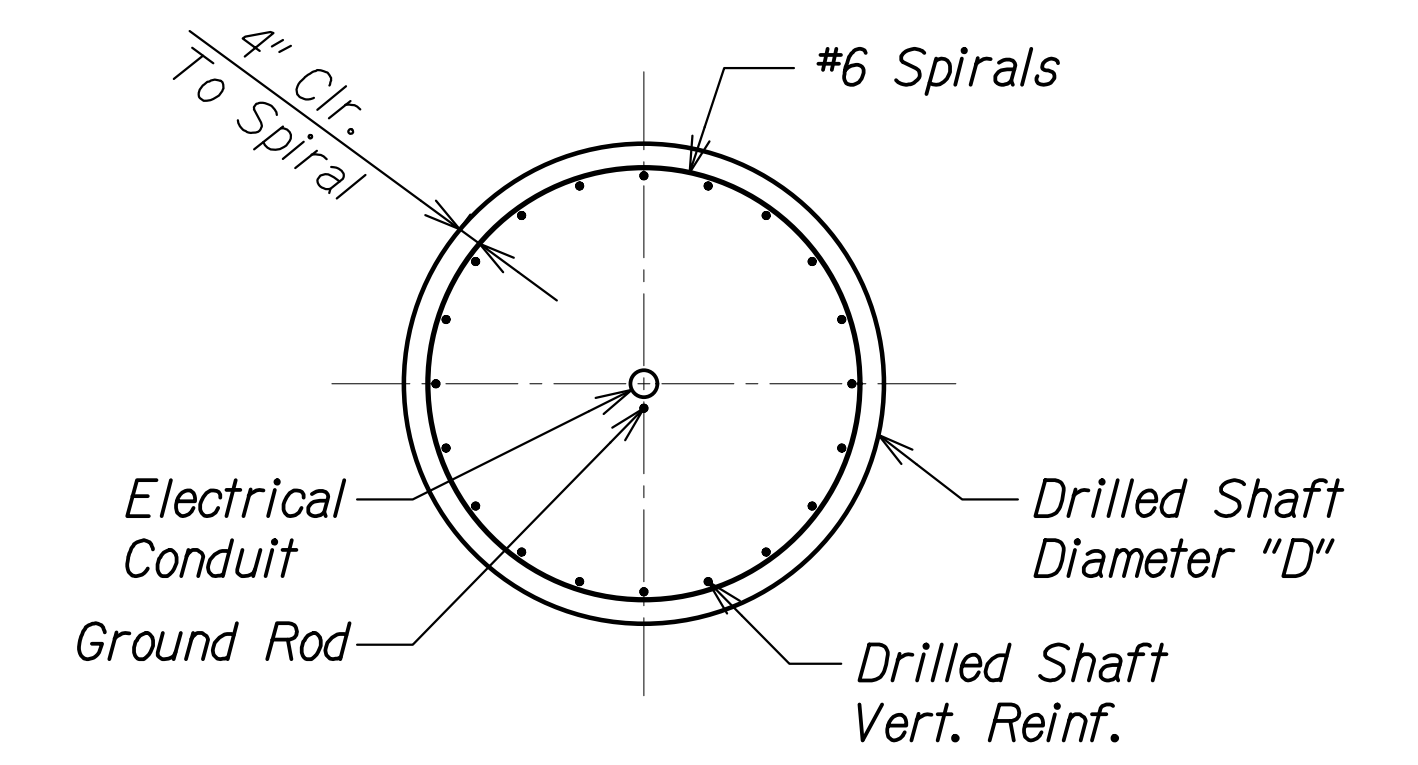
SECTION B
Scale: 1/2" = 1'-0" S10.1 S10.1



SECTION C
Scale: 1/2" = 1'-0" S10.1 S10.1



SECTION D
Scale: 1/2" = 1'-0" S10.1 S10.1

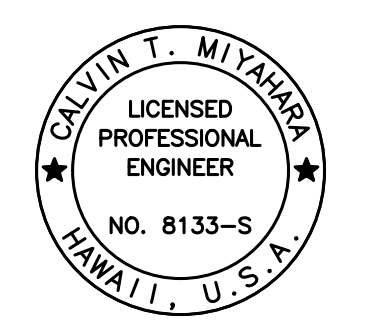


SECTION E
Scale: 1/2" = 1'-0" S10.1 S10.1

DRILLED SHAFT A
Scale: 1/2" = 1'-0" S10.1 S10.1

NOTES:

1. Install (1)-3" Dia. conduit stub-up at all sign structure locations. Cap end of conduit underground. Position conduit so as not to interfere with roadway traffic, guardrails, other adjacent utility lines, etc. See Electrical Plans for specific details at Sign Structure 78WB-853.
2. Grounding conductor shall be bonded to sign support's ground stud as directed by the Engineer.
3. Drilled shaft vertical reinforcing shall be placed so that it does not conflict with the anchor and anchor plates.
4. Hydrophilic Waterstop shall be submitted to the Engineer for review and approval.
5. See Special Provision Section 511 for concrete spacer requirements.



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Calvin Miyahara
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DRILLED SHAFT AND PEDESTAL

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

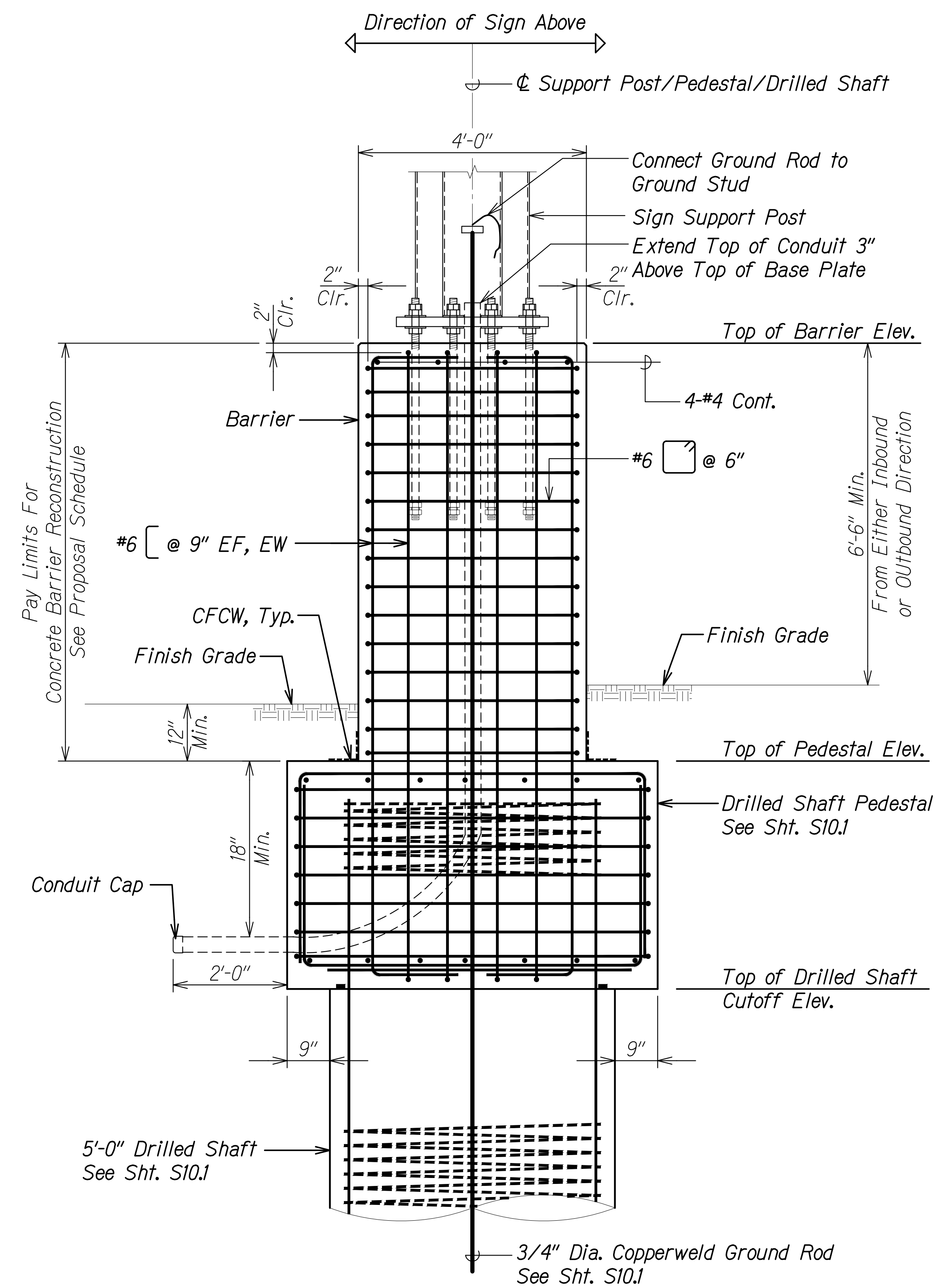
Scale: As Noted Date: Oct. 2023

SHEET No. S10.1 OF 13 SHEETS

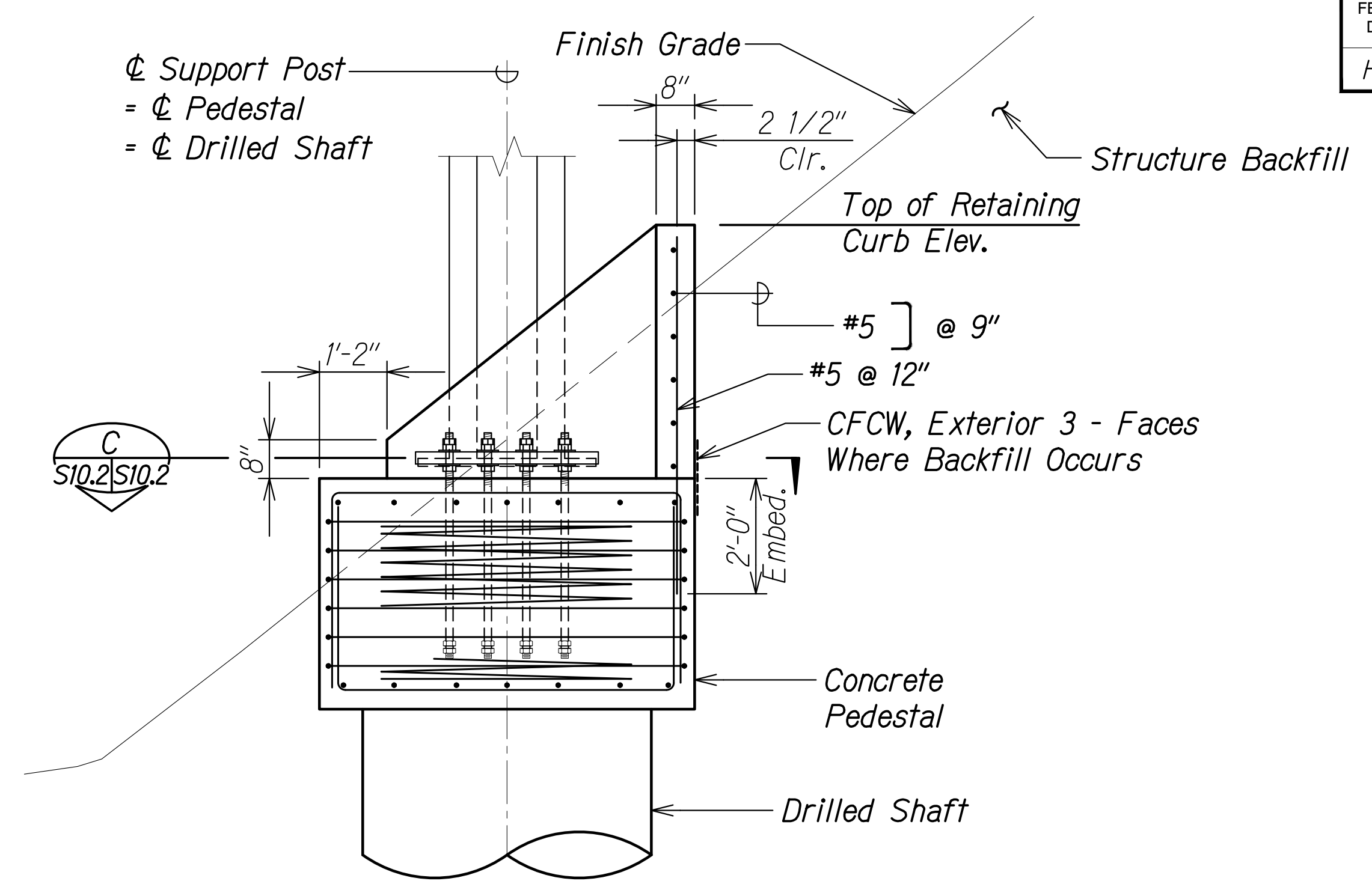
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-10-24.P5&E BID\DS12-S1001.TYP DS PEDESTAL.DWG PLOT TIME: 01-11-24 2:53 PM

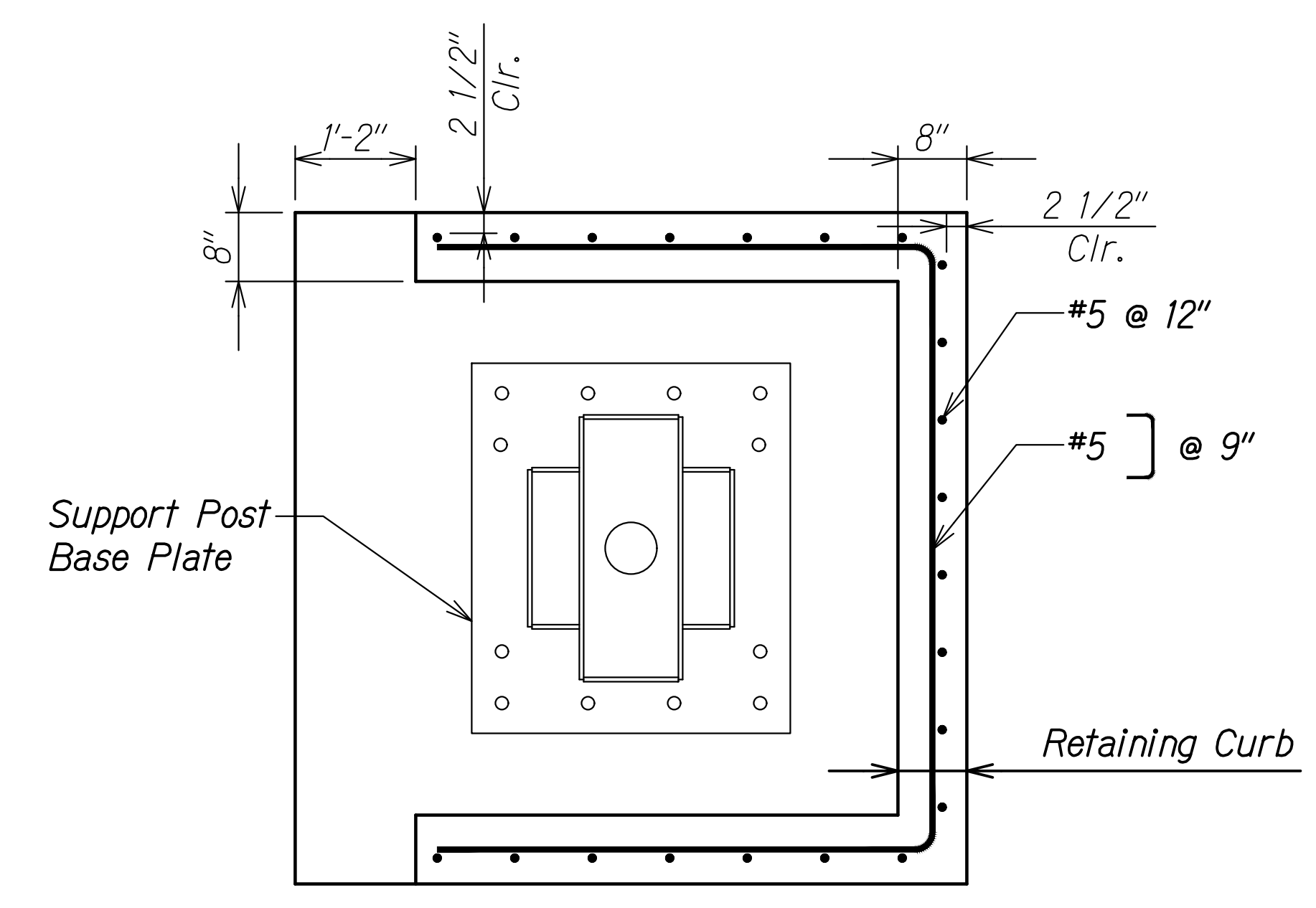
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	172	197



SECTION A
Scale: 3/4" = 1'-0"
S5.7 | S10.2
S5.8, S7.3, S7.4



RETAINING CURB ELEVATION B
Scale: 1/2" = 1'-0"
S10.2 | S10.2

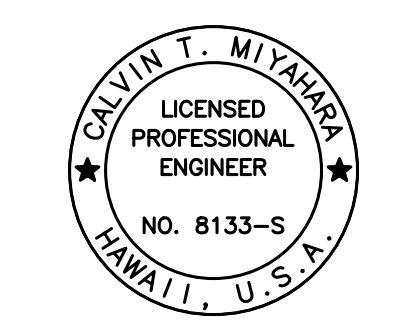


SECTION C
Scale: 3/4" = 1'-0"
S10.2 | S10.2

NOTE:
Payment for retaining curb and structure backfill shall be incidental to other work.

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-10-24.P5&E BID\DSU2-S1002-H1EBR-260-D1LS.DWG PLOT TIME: 01-11-24 2:56 PM



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

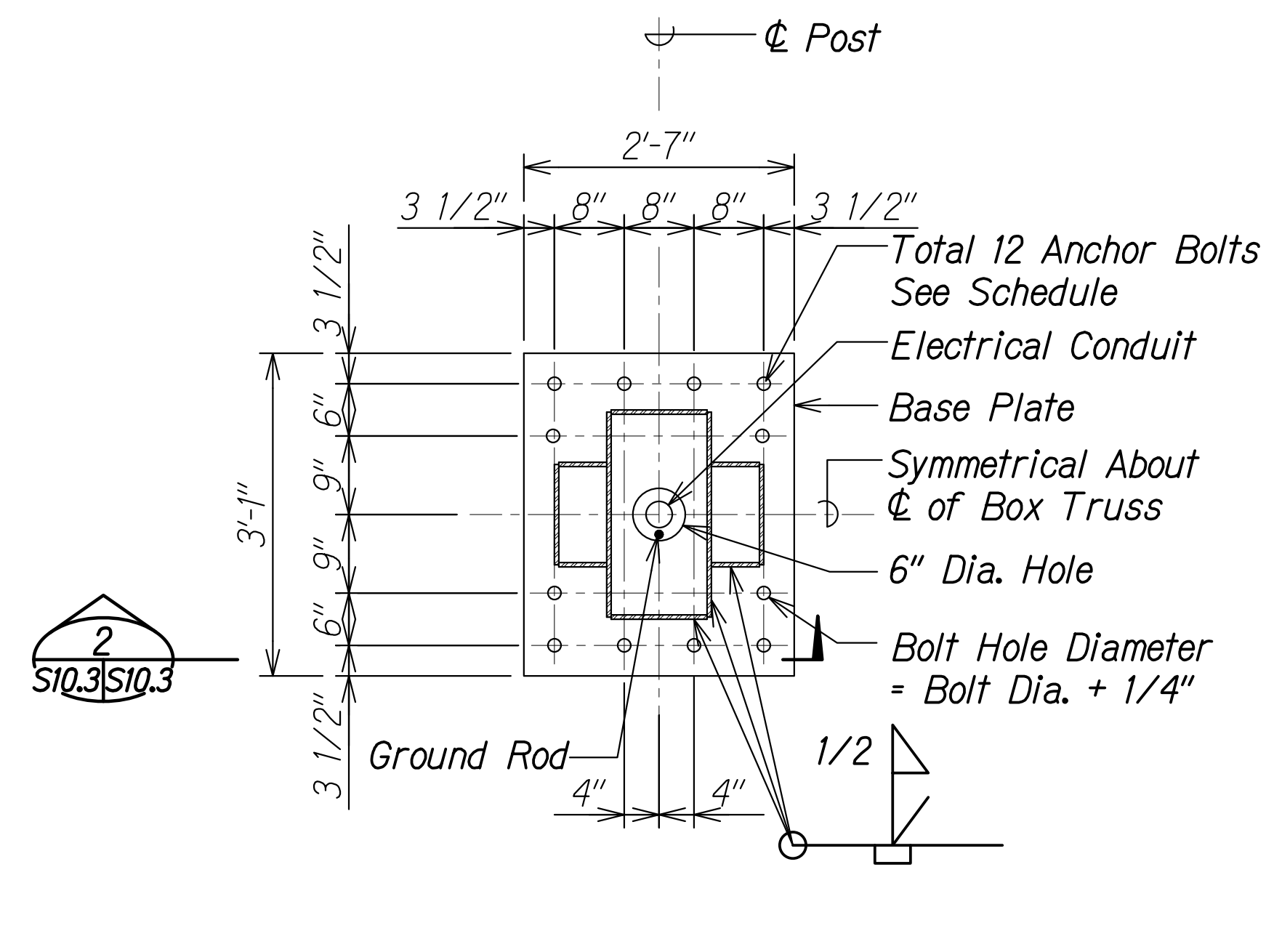
**TYPICAL DRILLED SHAFT,
PEDESTAL, BARRIER, AND CURB**

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

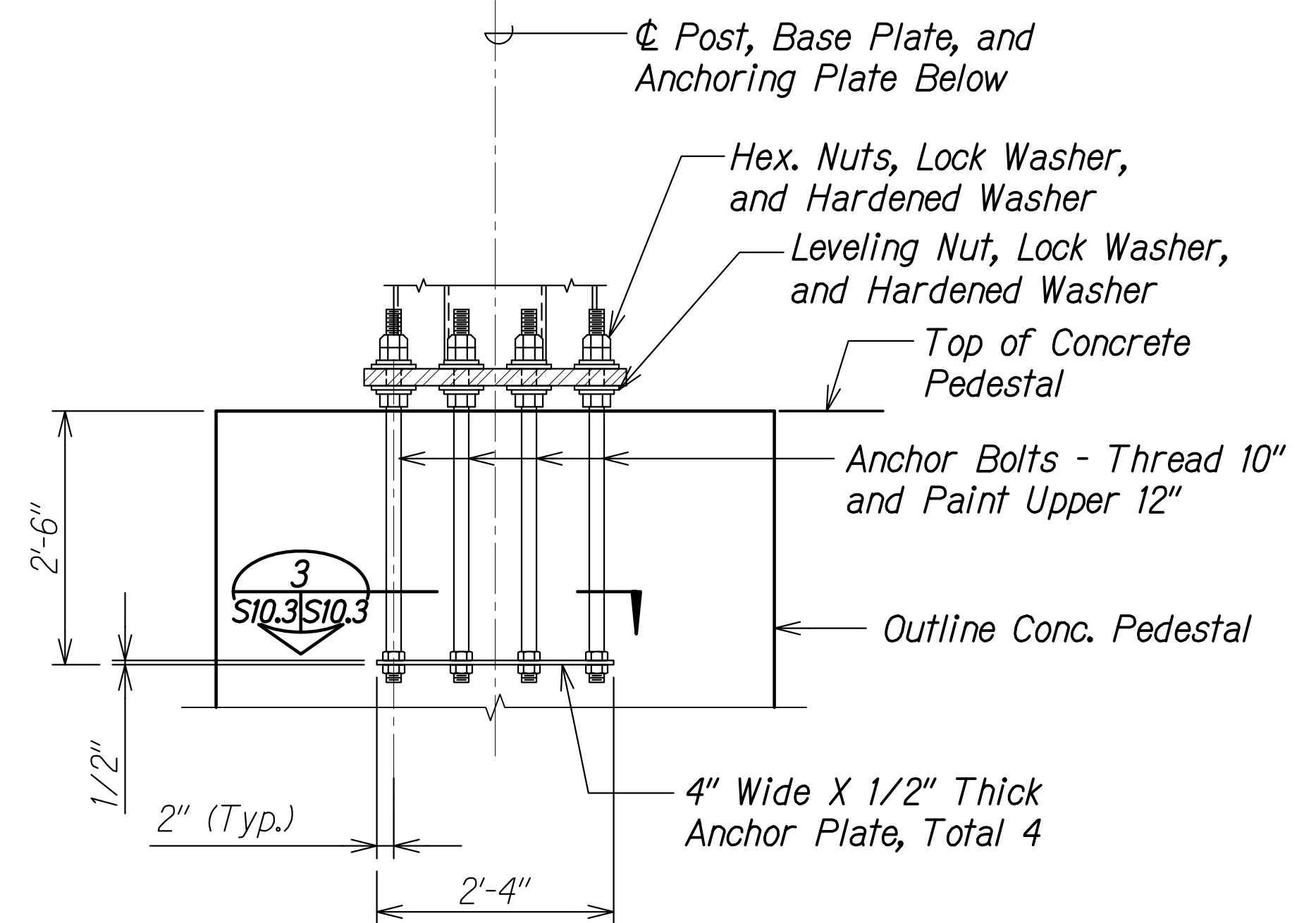
SHEET No. S10.2 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	173	197



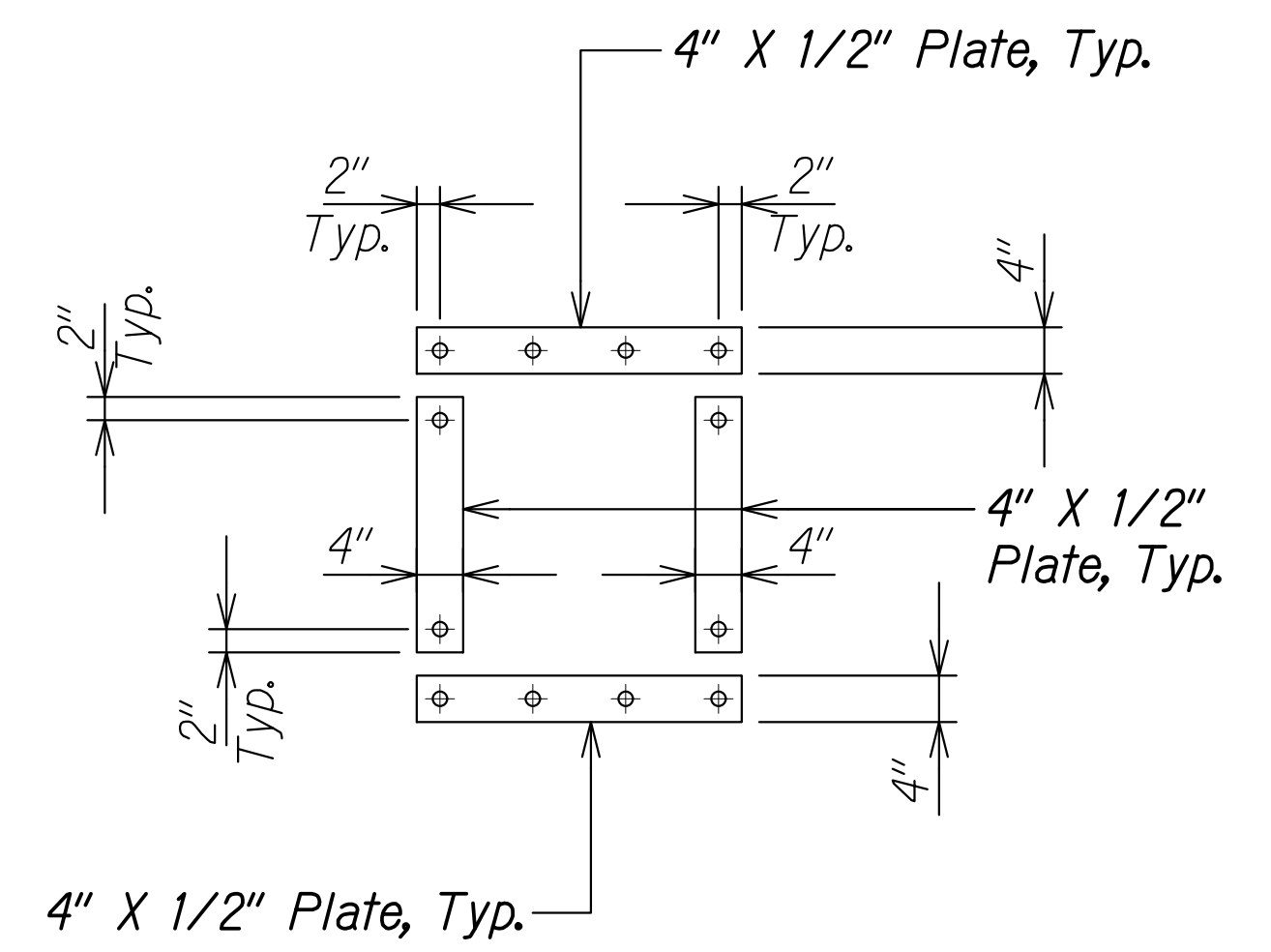
PLAN

TYPICAL BASE PLATE DETAIL
"W"=2'-0" FOR BOX TRUSS STRUCTURE
 Not to Scale

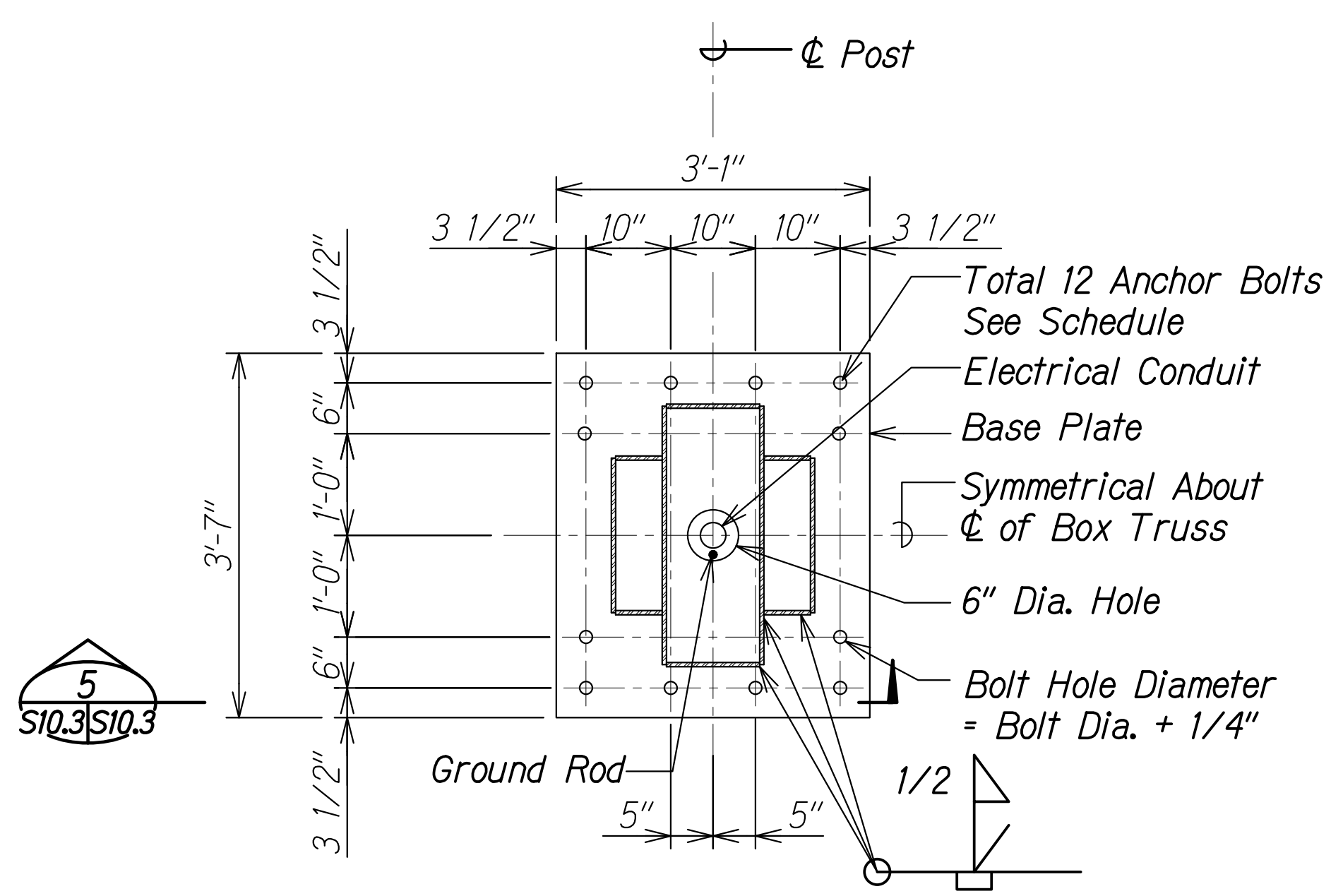


PLAN

ANCHORAGE DETAIL
"W"=2'-0" FOR BOX TRUSS STRUCTURE
 Not to Scale

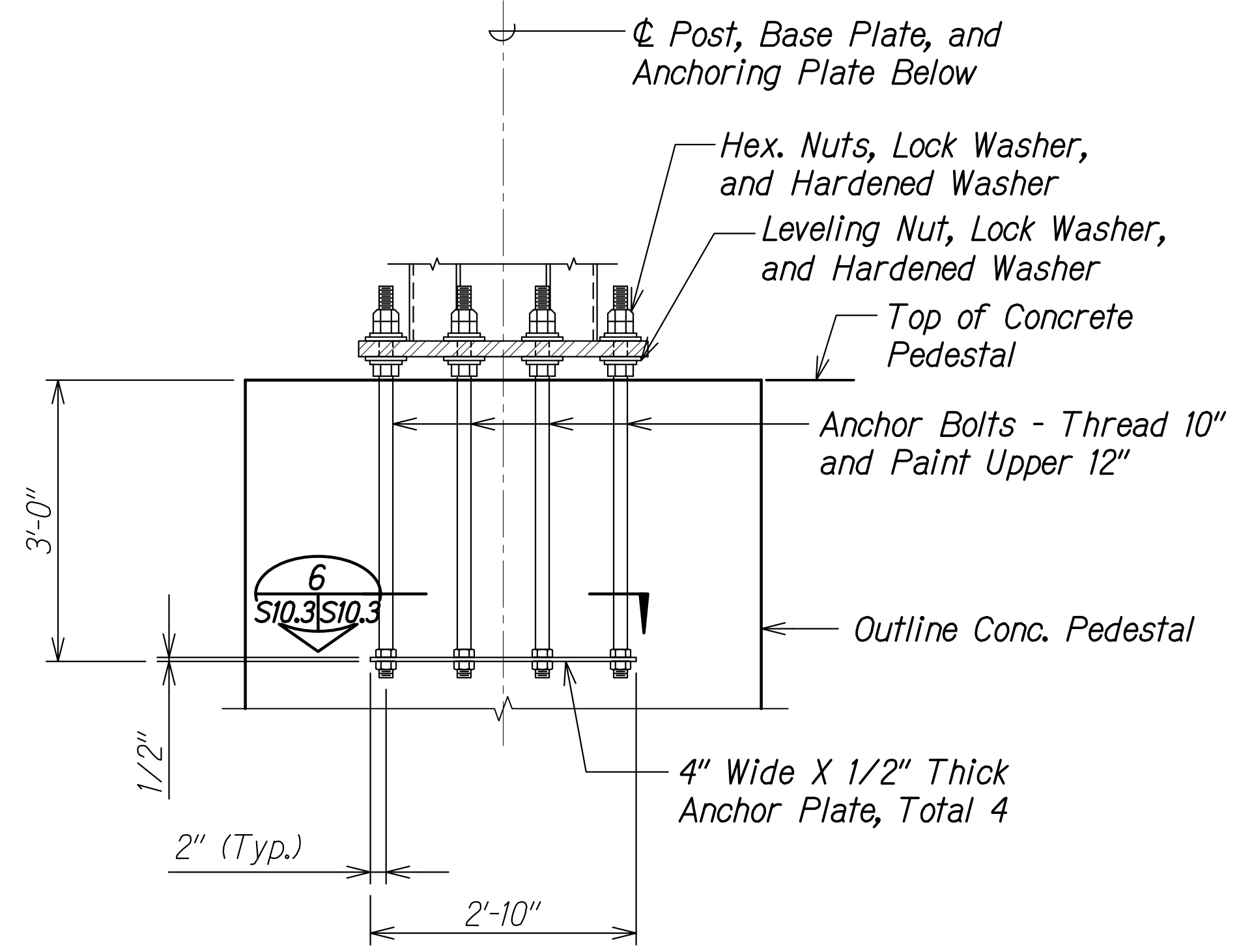


SECTION 3
 Not to Scale



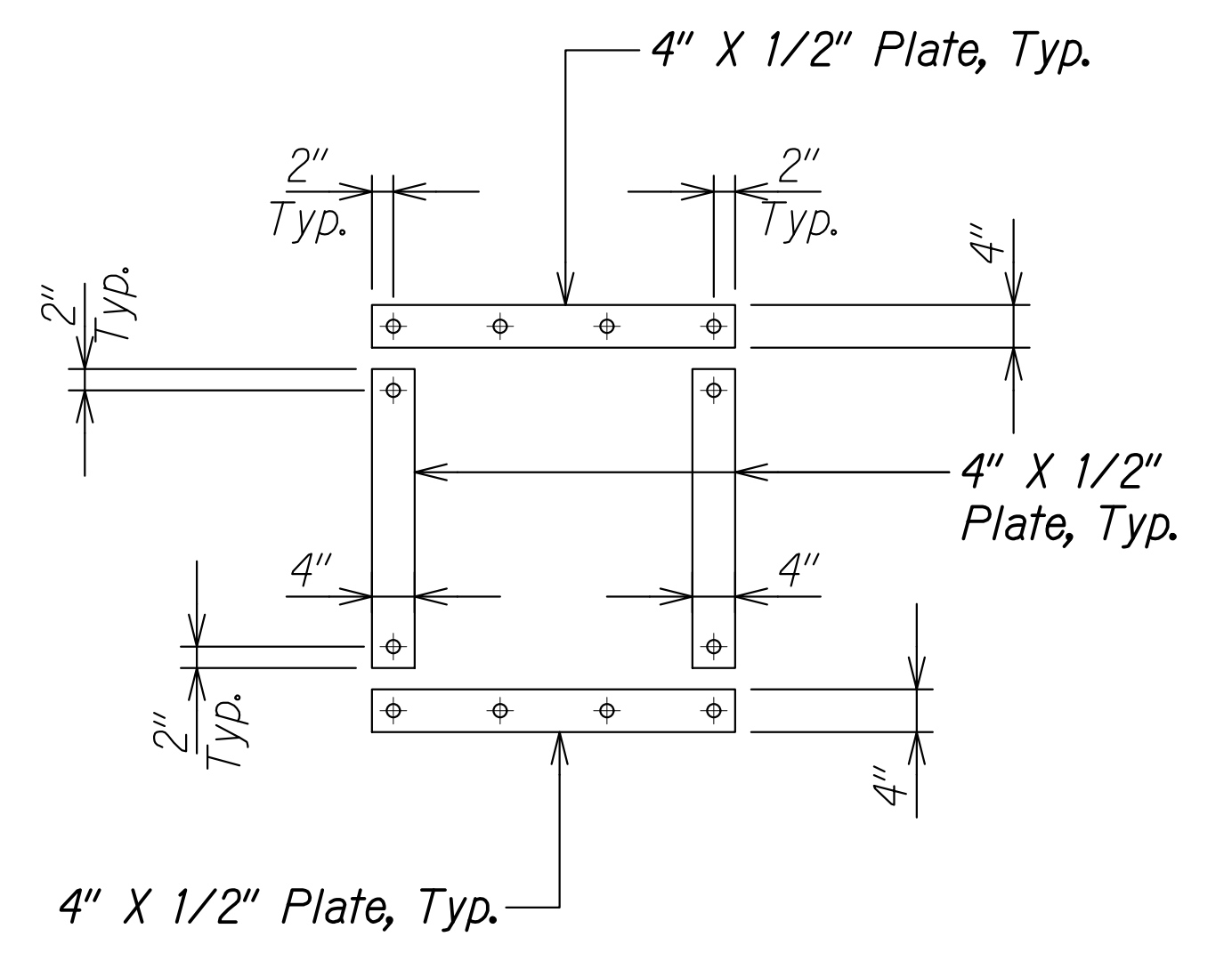
PLAN

BASE PLATE DETAIL
"W"=2'-6" FOR BOX TRUSS STRUCTURE
 Not to Scale



PLAN

TYPICAL ANCHORAGE DETAIL
"W"=2'-6" FOR BOX TRUSS STRUCTURE
 Not to Scale



SECTION 6
 Not to Scale

CALVIN T. MIYAKAWA
 LICENSED PROFESSIONAL ENGINEER
 NO. 8133-S
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
 SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

TYPICAL BASE PLATE AND ANCHOR BOLT DETAILS

INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

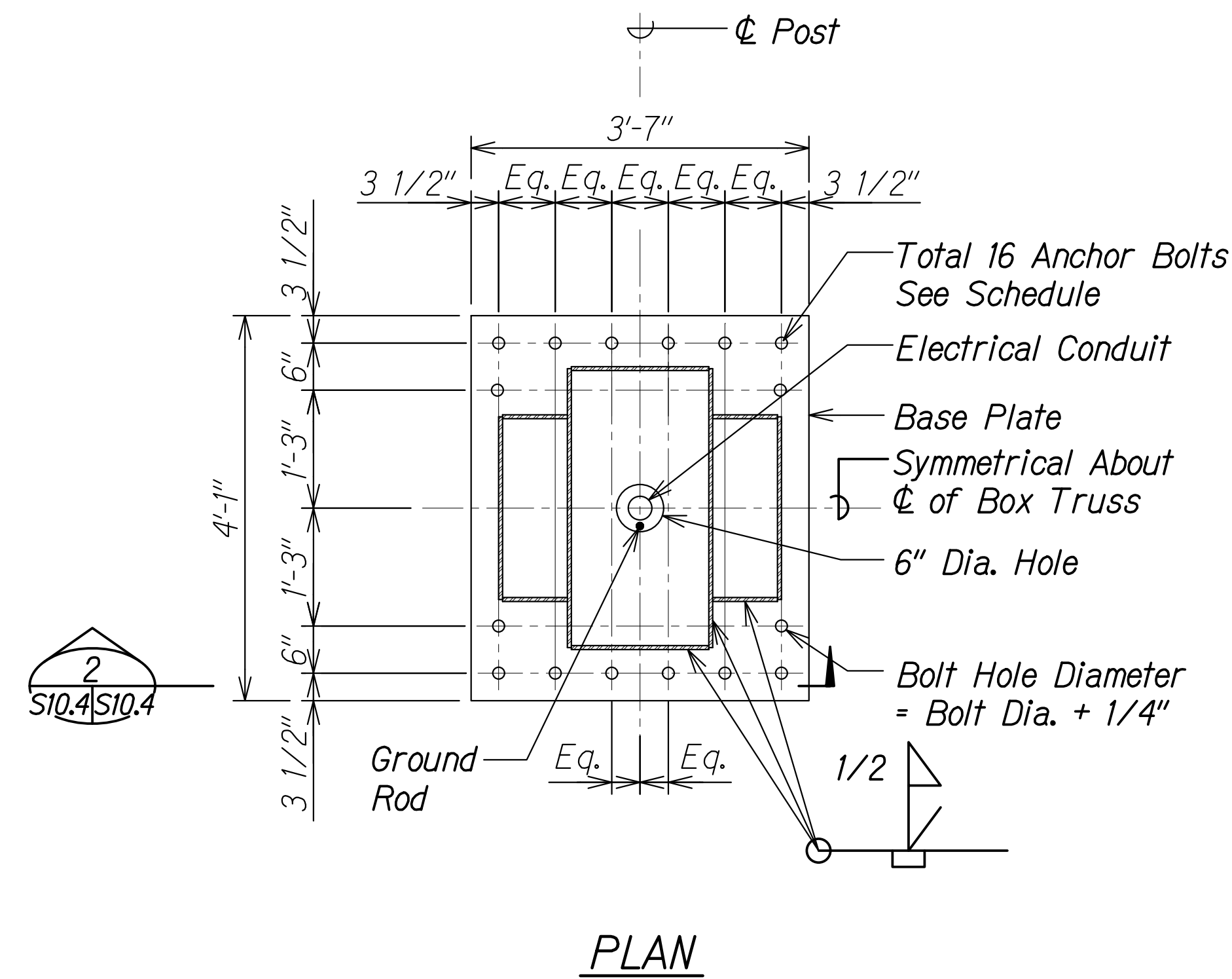
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SHEET No. S10.3 OF 13 SHEETS

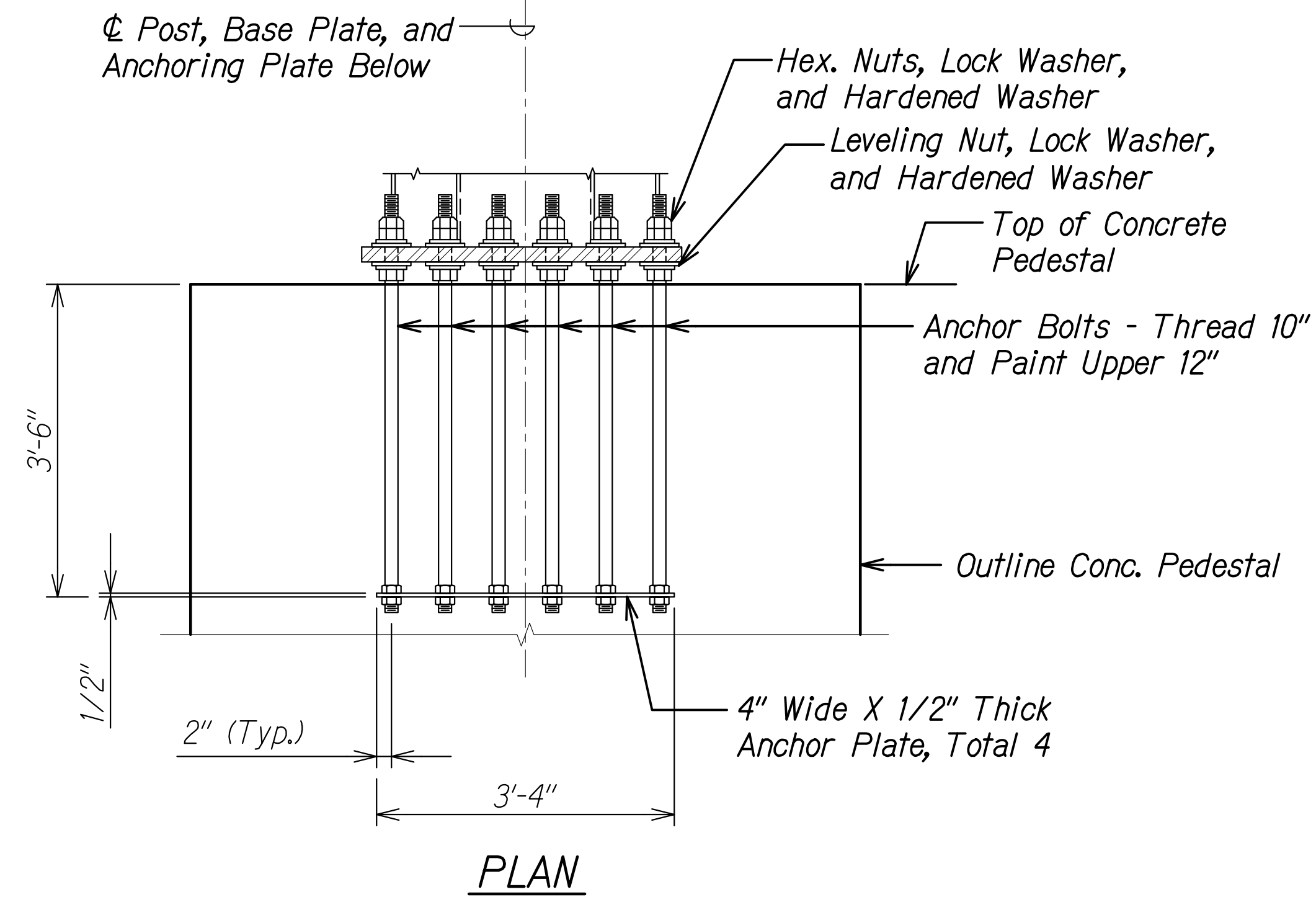
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
DESIGNED BY	_____
NOTE BOOK	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-10-24.P5&E B10\DS12-S1003.TYP D11.S.DWG PLOT TIME: 01-11-24, 2:33 PM

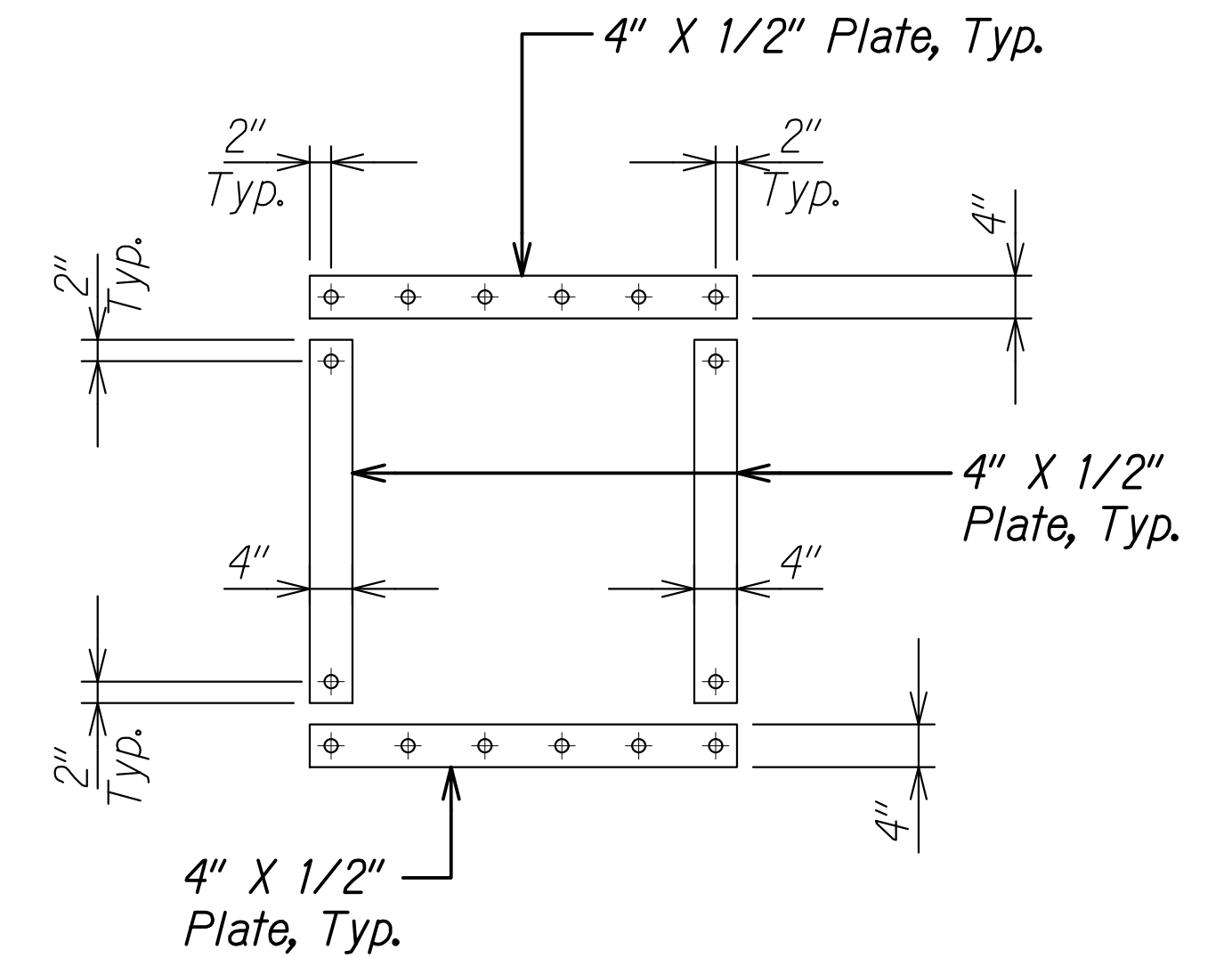
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	174	197



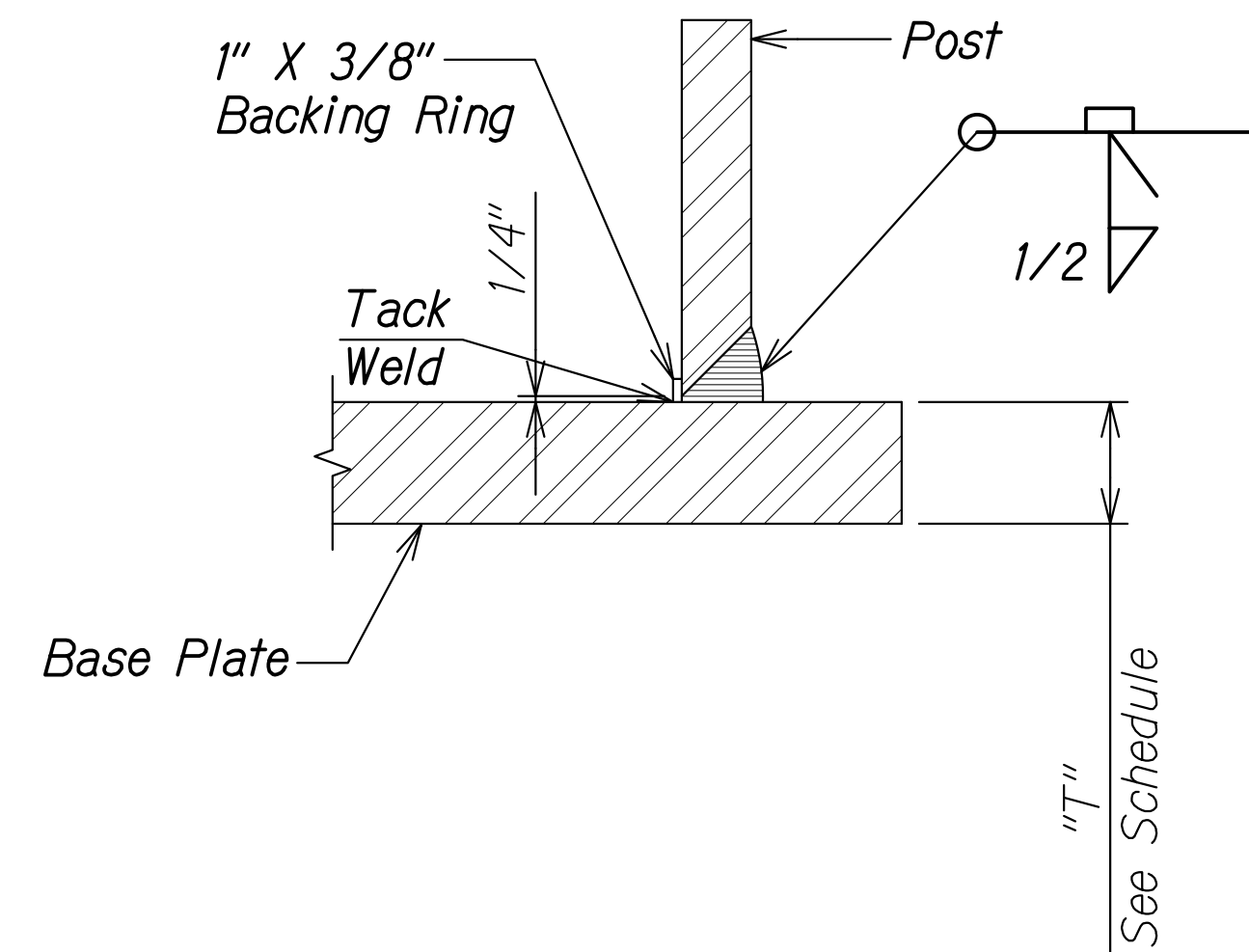
TYPICAL BASE PLATE DETAIL
"W"=3'-0" FOR BOX TRUSS STRUCTURE
 Not to Scale



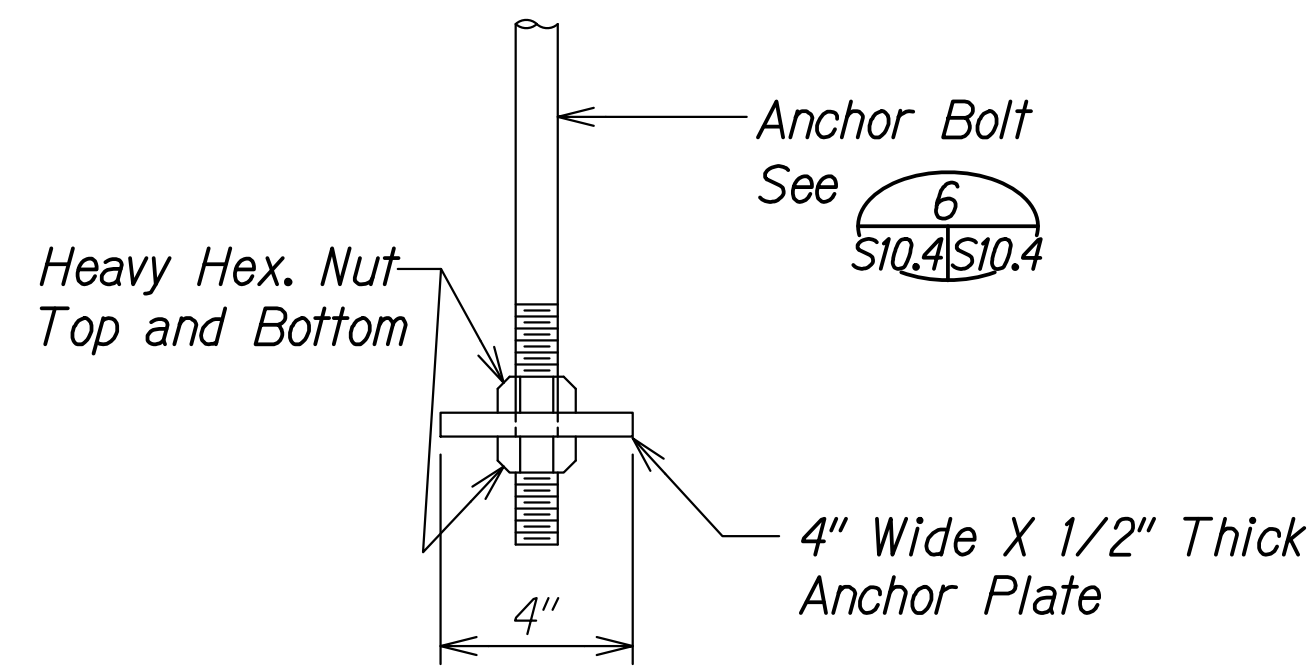
ANCHORAGE DETAIL
"W"=3'-0" FOR BOX TRUSS STRUCTURE
 Not to Scale



SECTION
 Not to Scale

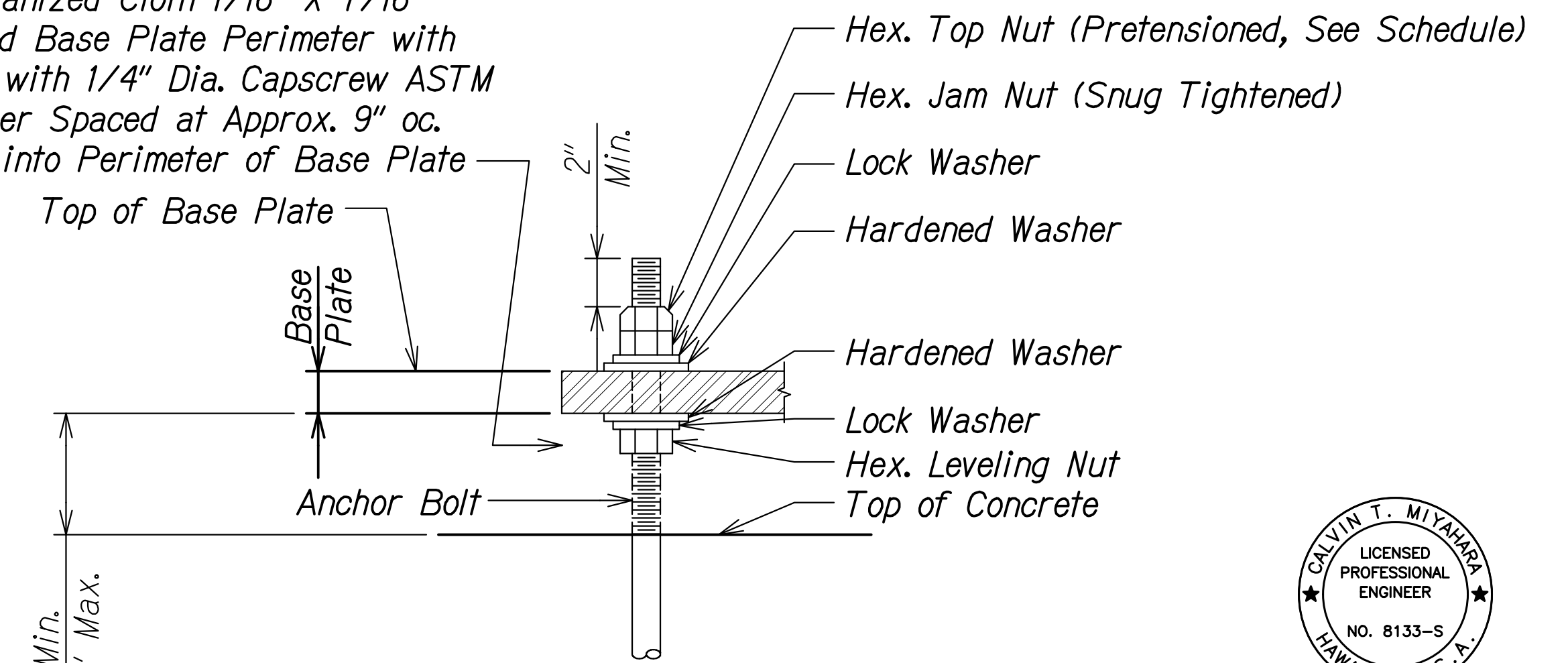


TYPICAL POST TO BASE PLATE WELDING DETAIL
 Not to Scale

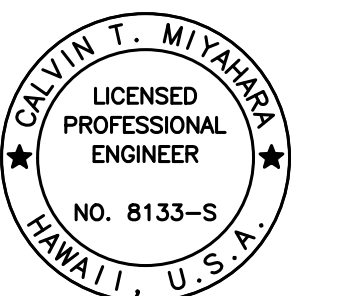


ANCHOR PLATE DETAIL
 Not to Scale

Provide Welded Galvanized Cloth 1/16" X 7/16" Square. Wrap Around Base Plate Perimeter with 3" Min. Lap. Fasten with 1/4" Dia. Capscrew ASTM F593 with SS Washer Spaced at Approx. 9" oc. Drilled and Tapped into Perimeter of Base Plate



TYPICAL BASE PLATE ANCHOR BOLT CONNECTION DETAIL
 Not to Scale



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Calvin Miyahara
 SIGNATURE EXPIRES DATE OF THE LICENSE

ORIGINAL PLAN	DATE
NOTE BOOK	
NO.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-10-24.P5&E BID\DSU2-S1004 TYP BASE PL DTL.S.DWG PLOT TIME: 01-11-24, 2:34 PM

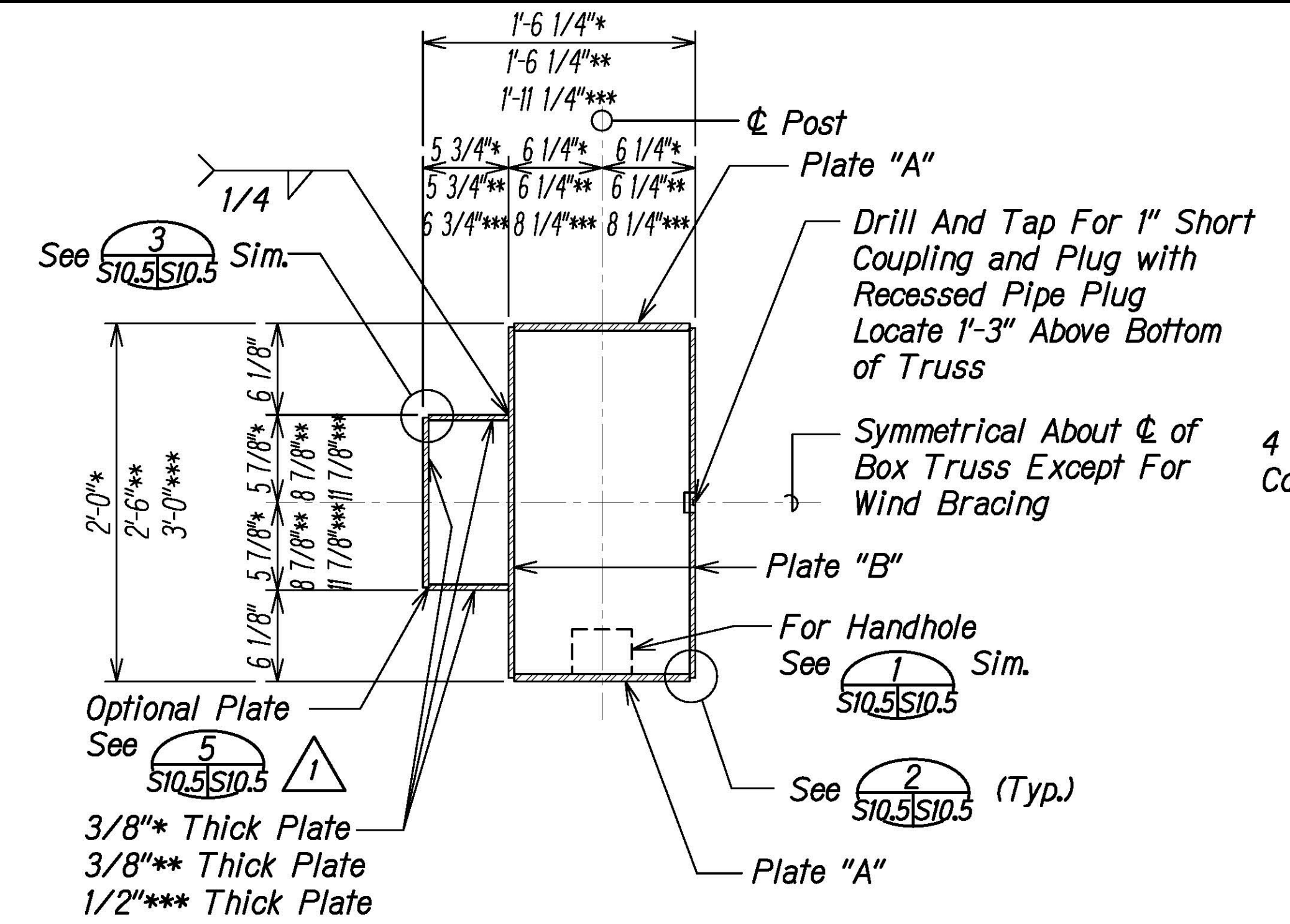
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

TYPICAL BASE PLATE AND ANCHOR BOLT DETAILS

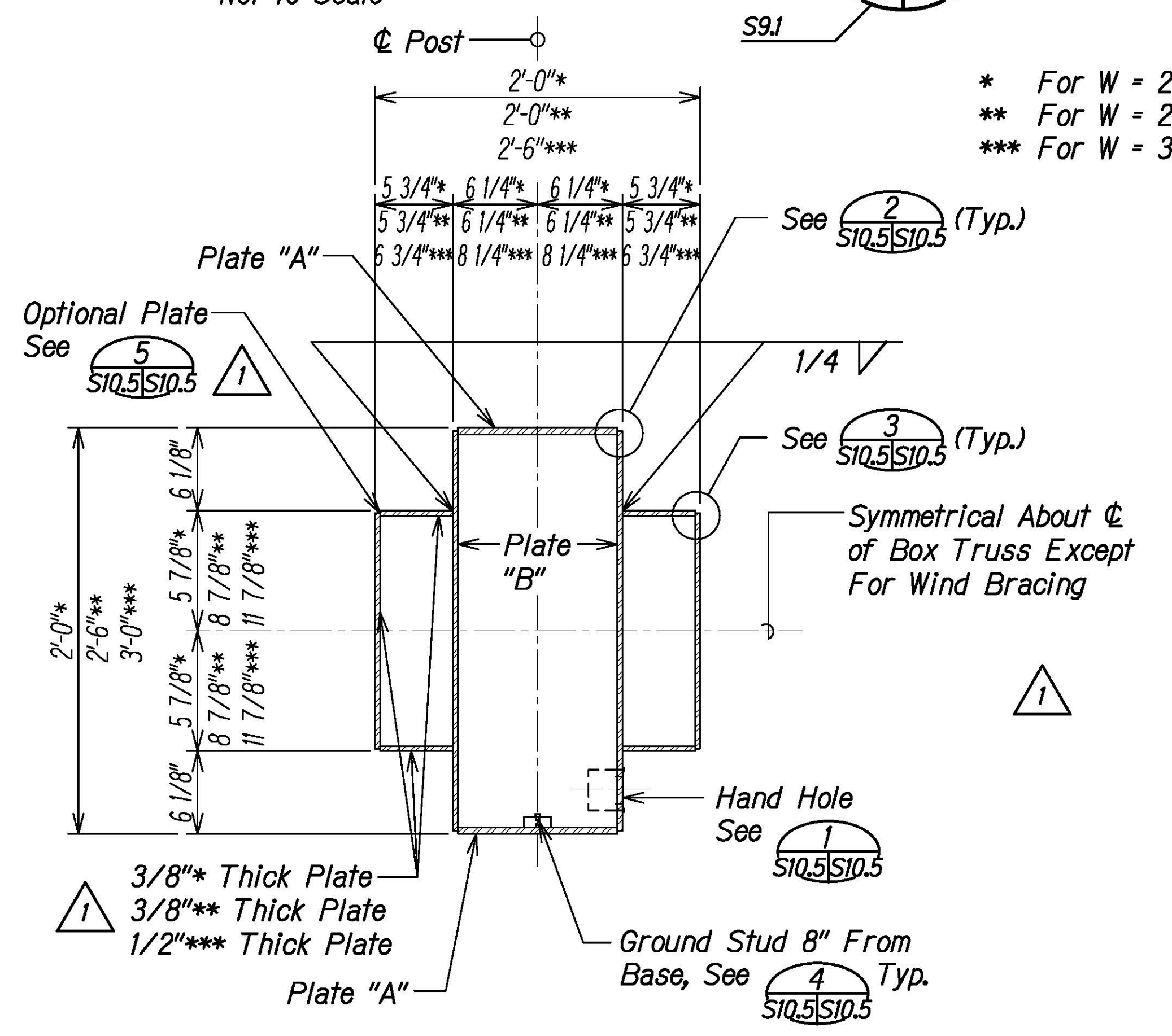
INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

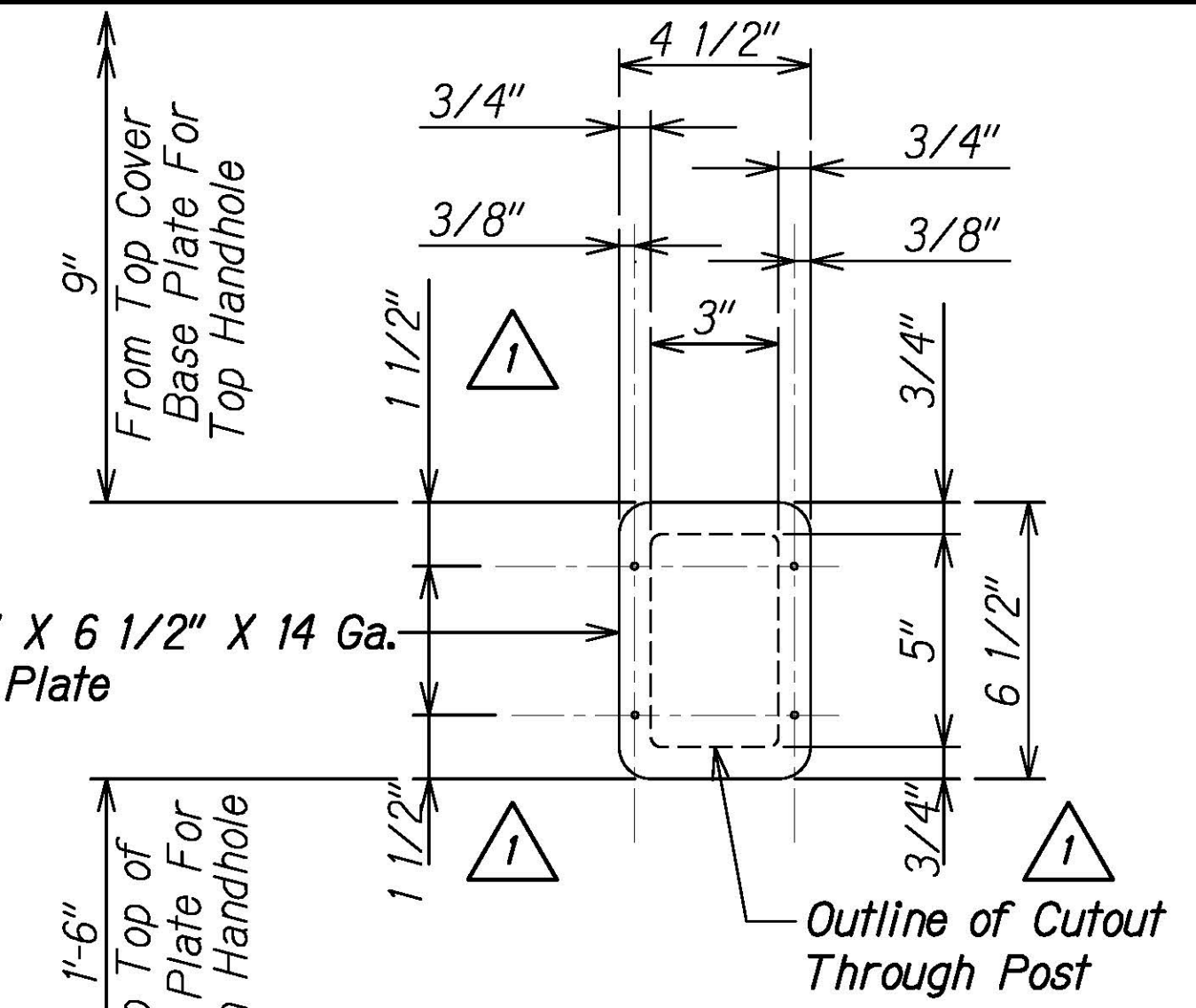
SHEET No. S10.4 OF 13 SHEETS



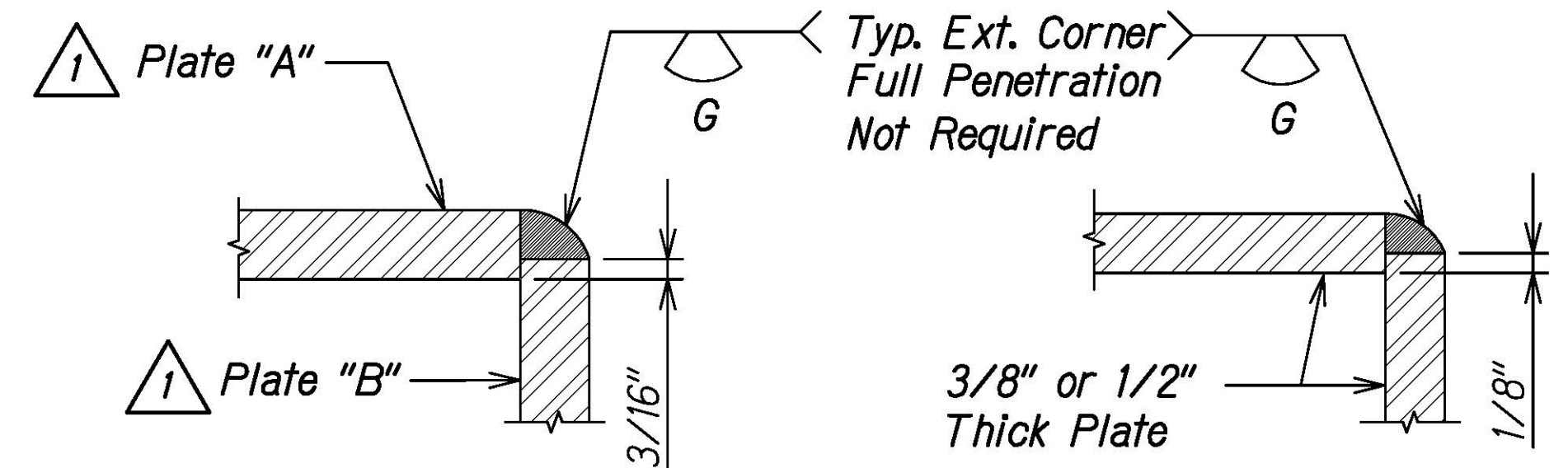
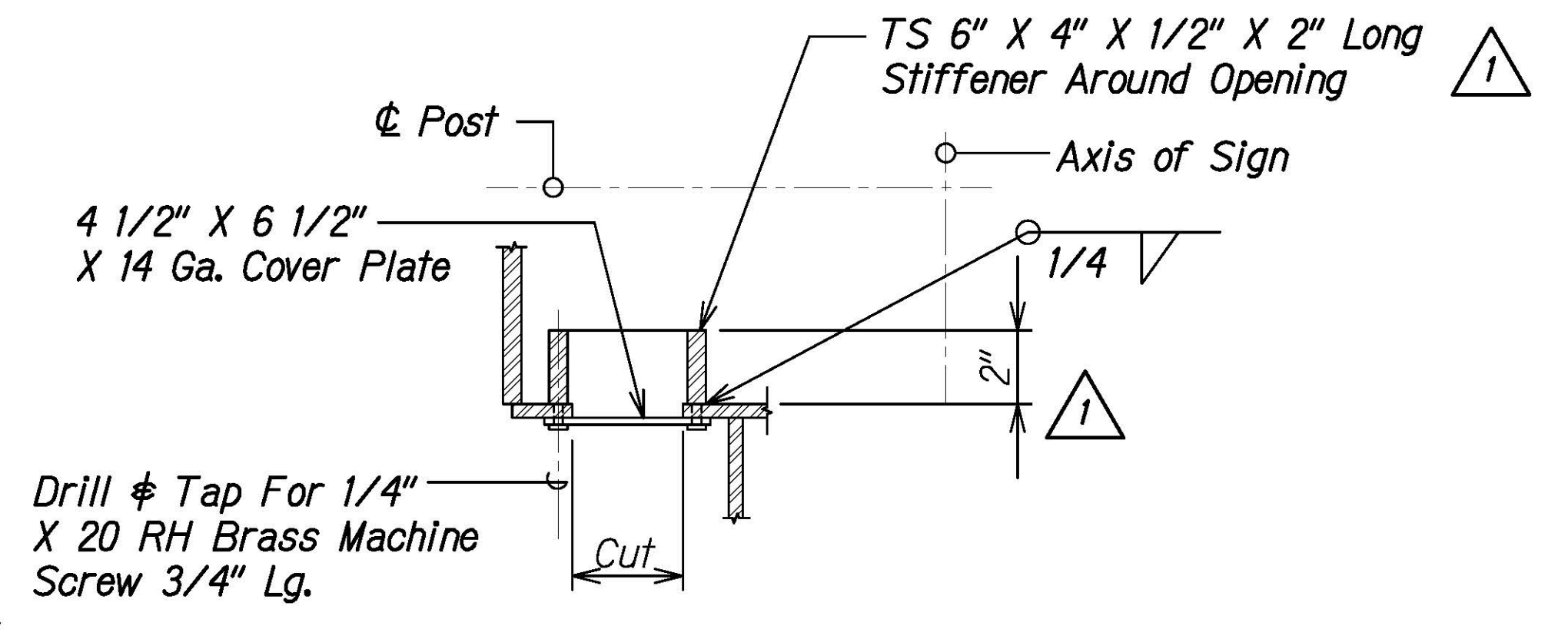
TYPICAL COLUMN SECTION ABOVE BEARING SUPPORT
Not to Scale
S8.1 | S10.5



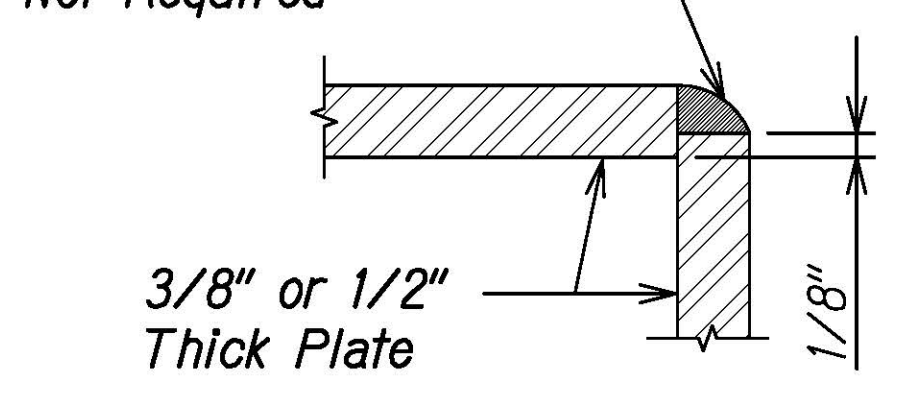
TYPICAL COLUMN SECTION BELOW BEARING SUPPORT
Not to Scale
S8.1 | S10.5



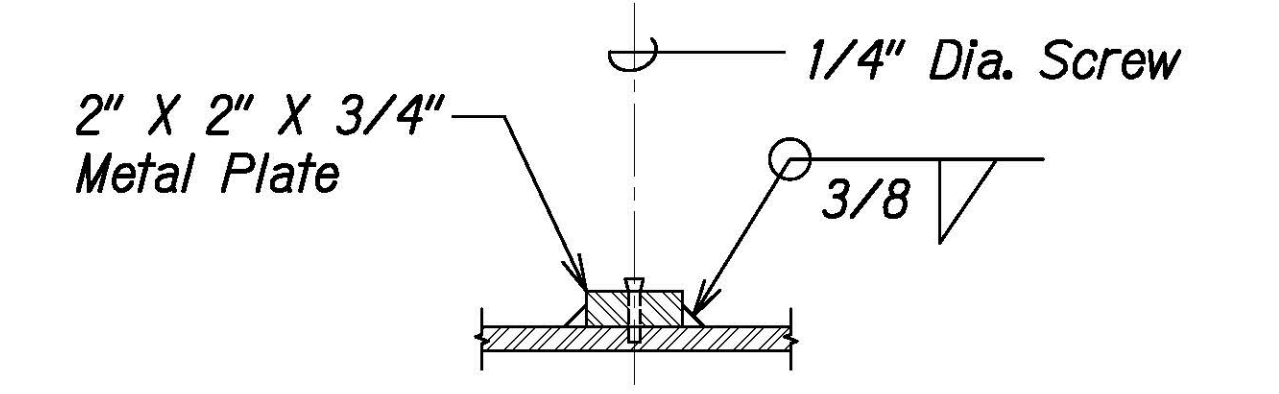
ELEVATION
TYPICAL HANDHOLE AND COVER PLATE DETAIL
Not to Scale
S10.5 | S10.5



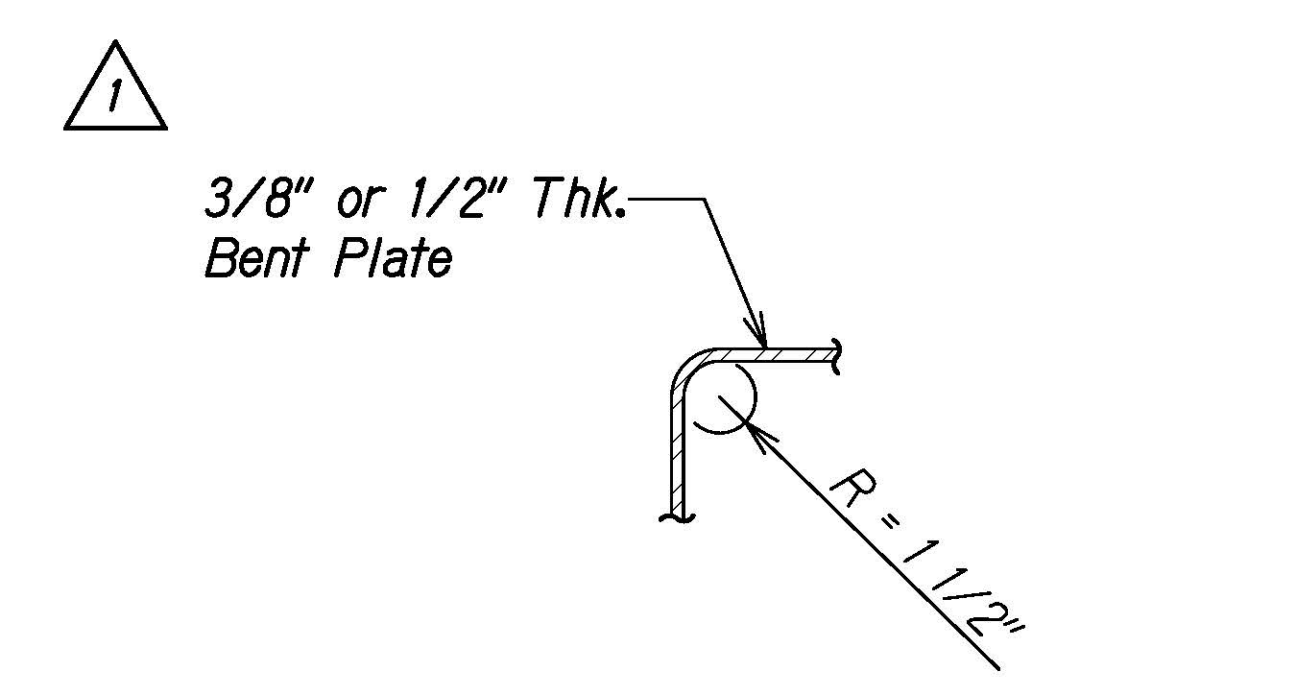
CONN. DETAIL 2
Not to Scale
S10.5 | S10.5



CONN. DETAIL 3
Not to Scale
S10.5 | S10.5

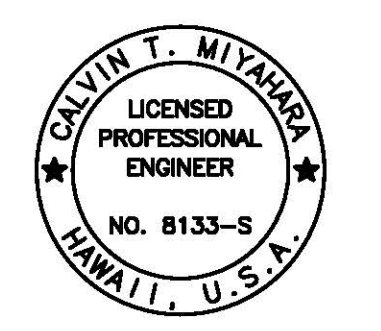


TYPICAL GROUND STUD DETAIL
Not to Scale
S10.5 | S10.5



OPTIONAL PLATE DETAIL
Not to Scale
S10.5 | S10.5

NOTE:
Locate hand holes and ground studs on backside of column (trailing edge of traffic).



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Calvin Miyahara
4-30-24
SIGNATURE EXPIRES ONE YEAR FROM DATE OF ISSUE

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DS102-S1005 TYP DTL.S ADD1.DWG PLOT TIME: 01-25-24, 4:12 PM

DATE	1/25/24	REVISION	1 Add. 1 - Revised Details
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

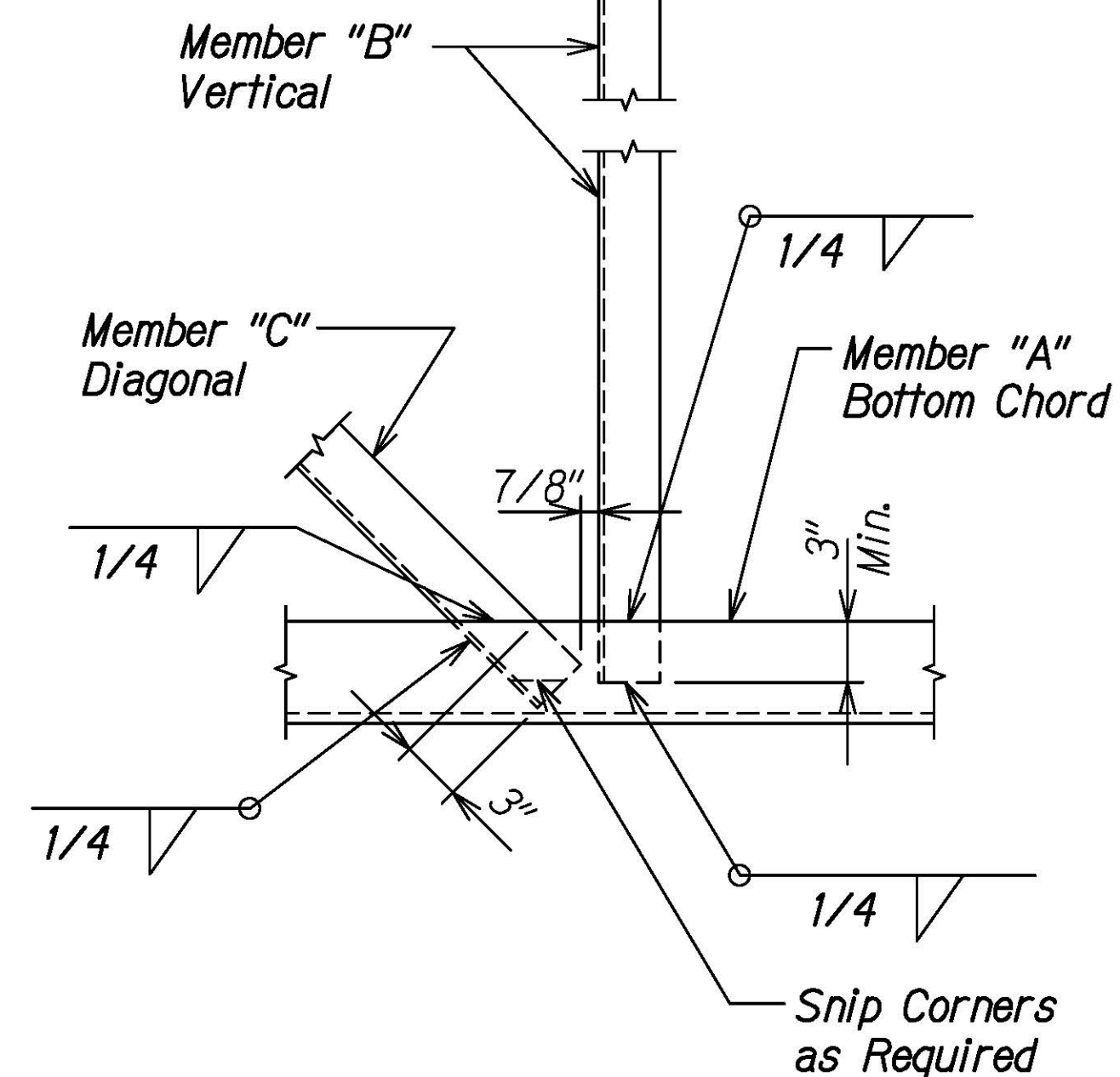
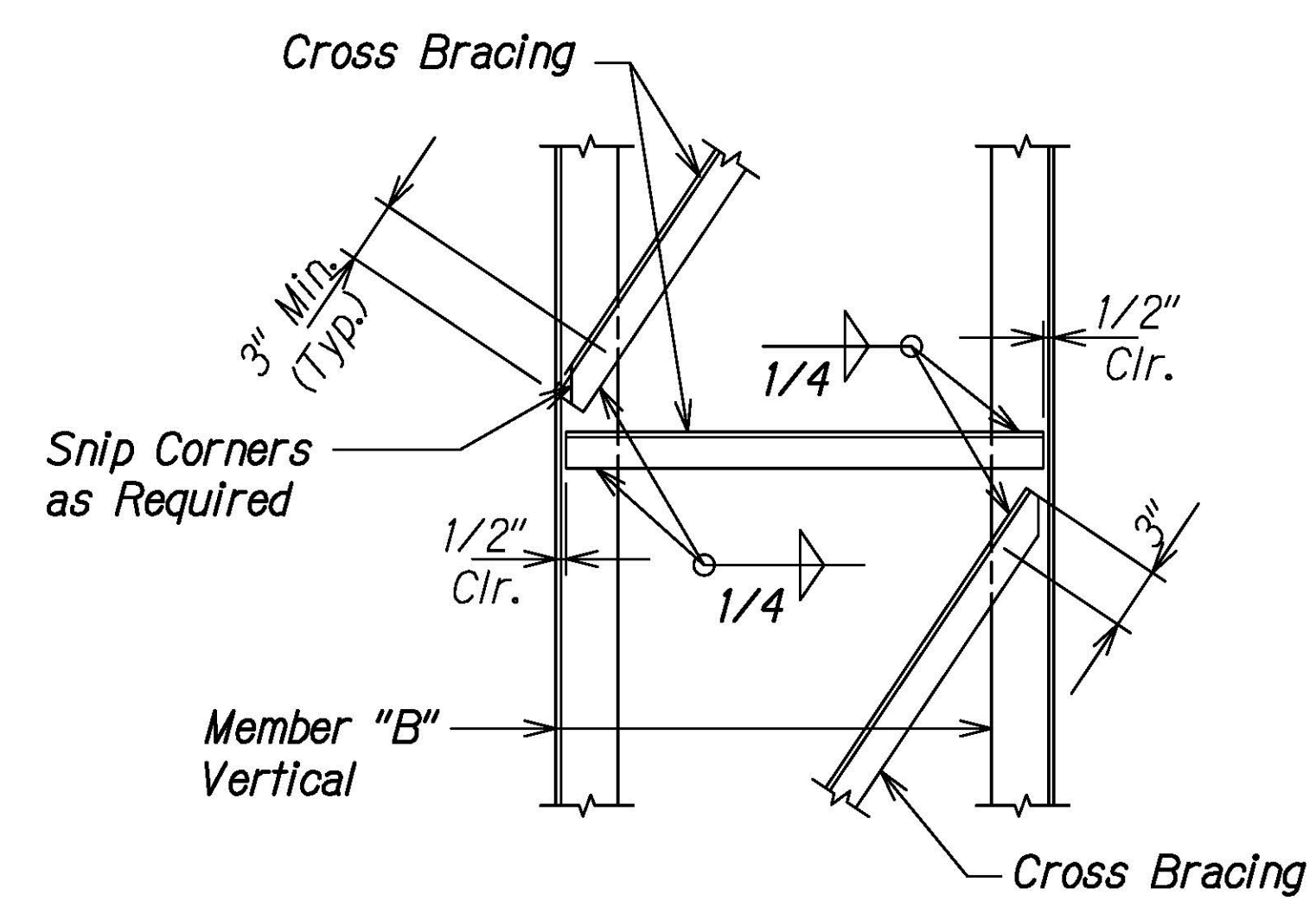
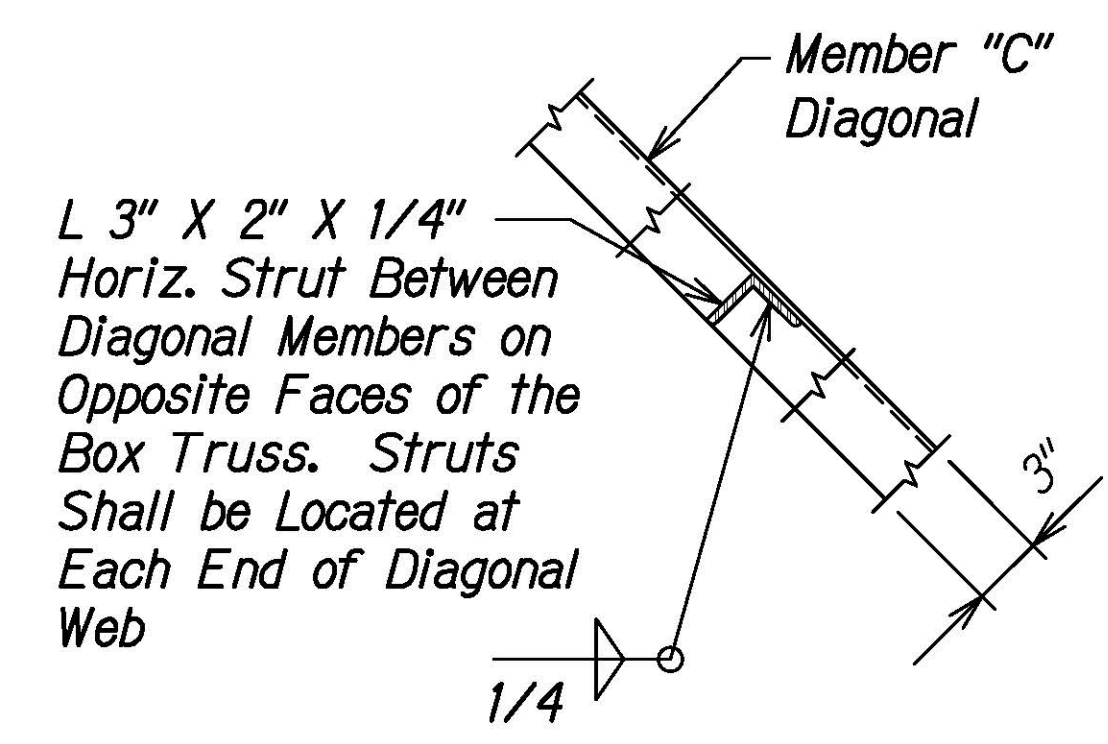
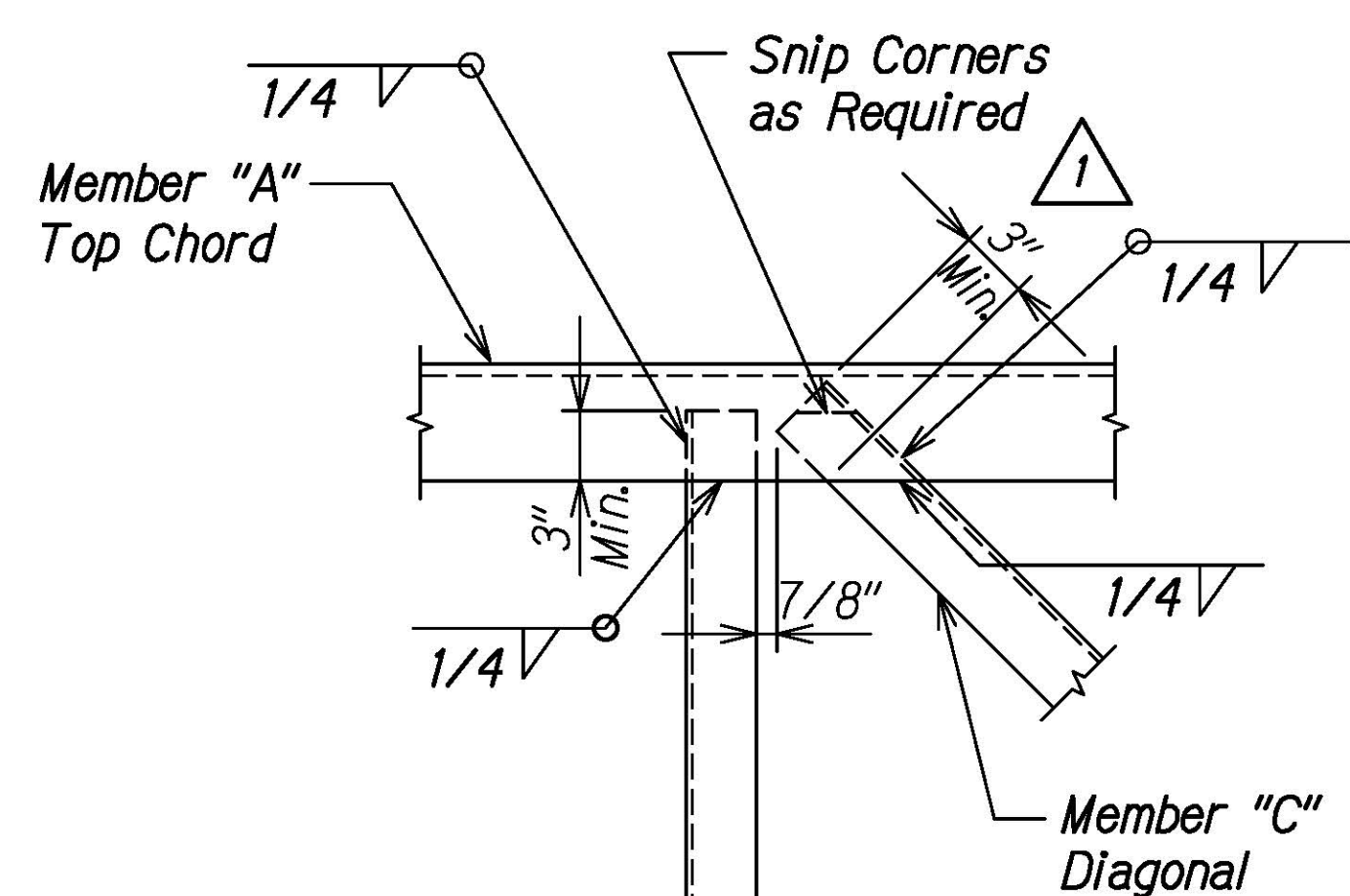
TYPICAL COLUMN SECTIONS AND DETAILS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

SHEET No. **S10.5** OF 13 SHEETS

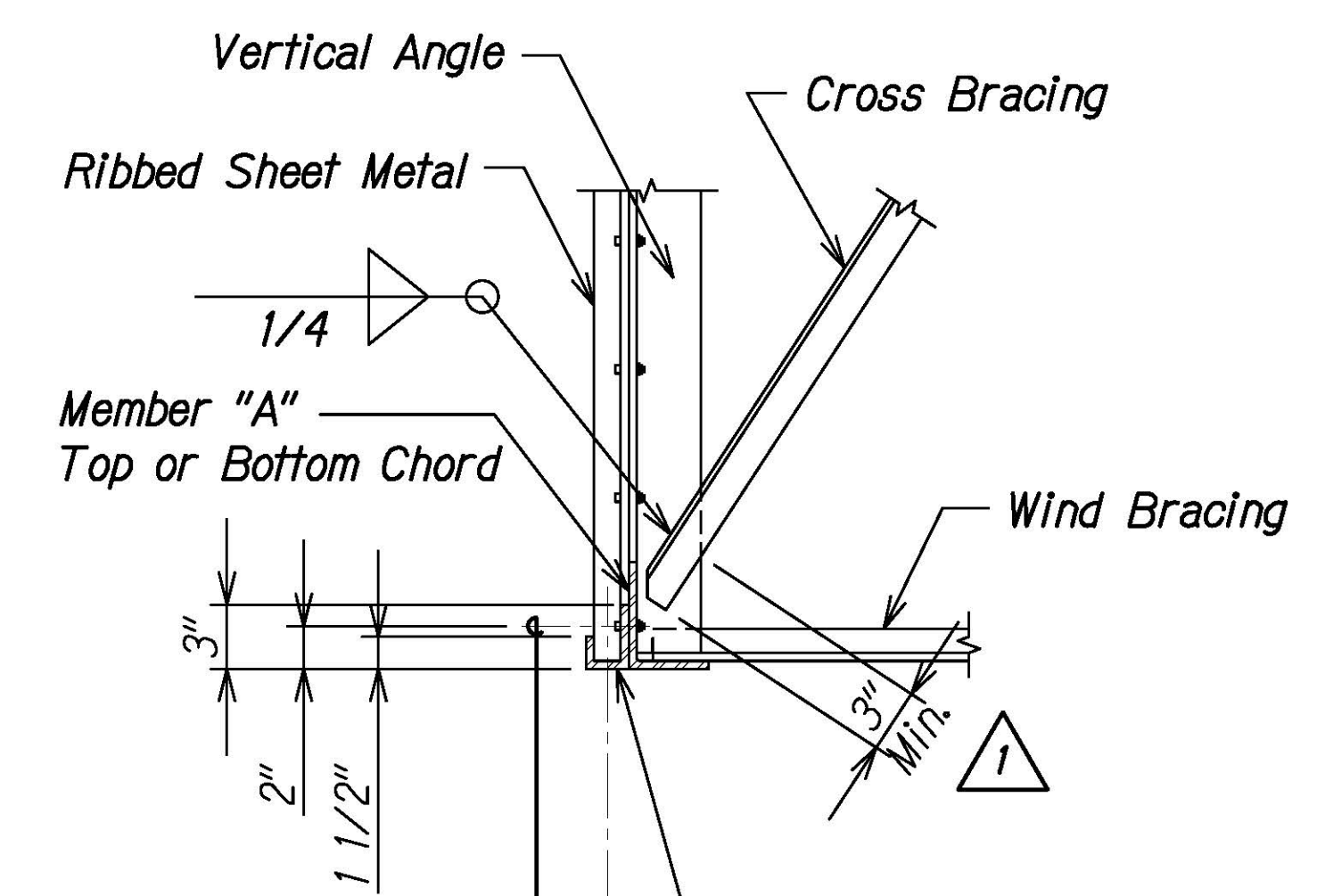
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 176	197



TYP. CONN. DETAIL 1
Not to Scale
S9.1 S8.1 S10.6

TYP. DETAIL 2
Not to Scale
S8.3 S7.5 S10.6

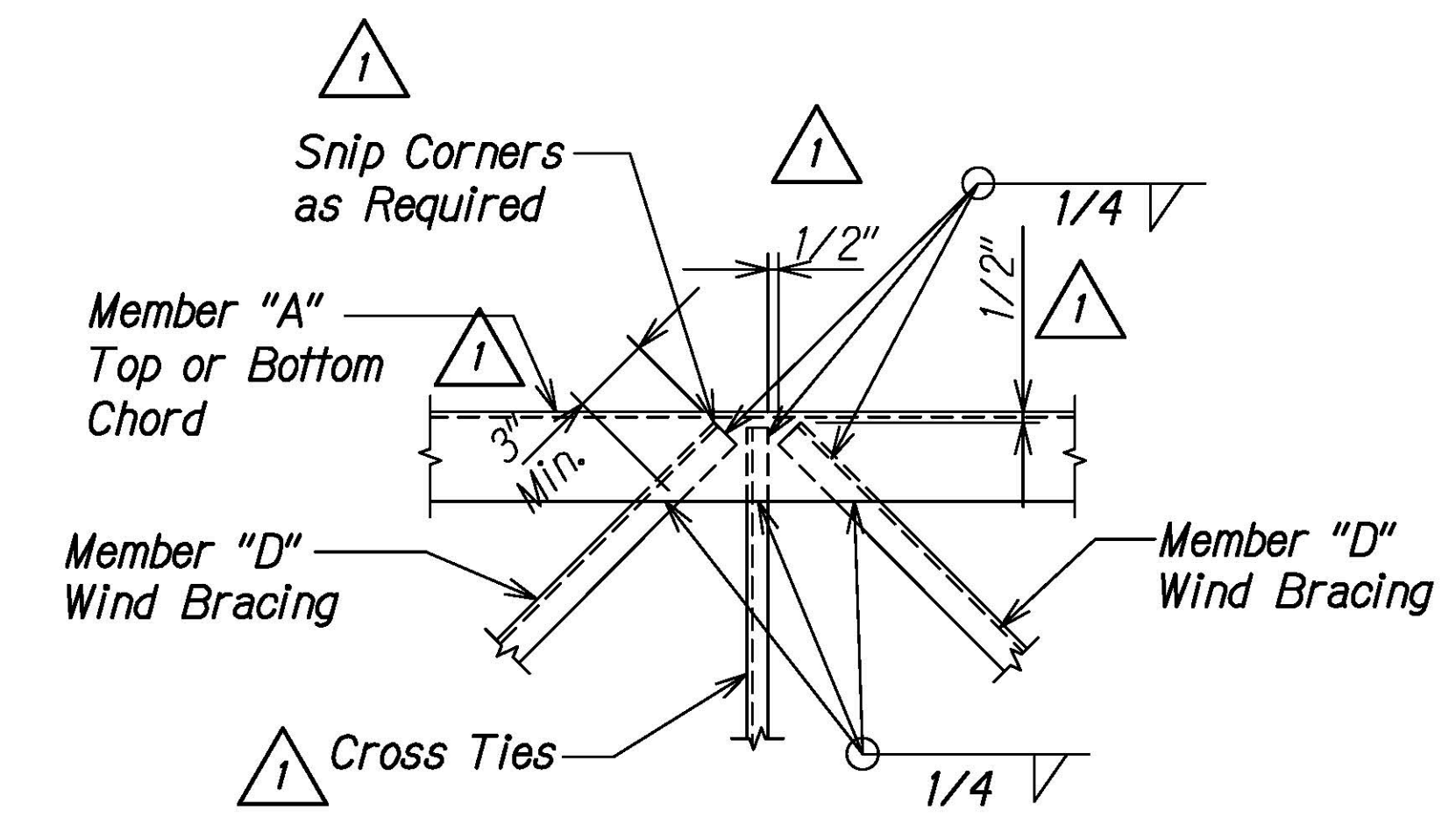
TYPICAL SECTION A
Not to Scale
S9.1 S8.1 S10.6



1/4" Hex. Head Bolt, Nut, Flat Washer and Lock Washer @ 6" oc
Provide 1/2" Dia. Hole @ 6" oc, at Bottom Chord Only

NOTE:
At top chord similar except as noted.

TYPICAL DIAGONAL CROSS BRACING CONNECTION DETAIL 3
Not to Scale
S9.6 S8.3 S10.6



TYPICAL TOP AND BOTTOM WIND BRACING CONNECTION DETAIL 4
Not to Scale
S9.1 S8.1 S10.6

ORIGINAL PLAN	DATE
NOTE BOOK	
NO.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DS12-S1006 TYP DTL'S ADD.DWG PLOT TIME: 01-25-24, 4:13 PM



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Calvin Miyahara
4-30-24
SIGNATURE EXPIRES END OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL CONNECTION DETAILS

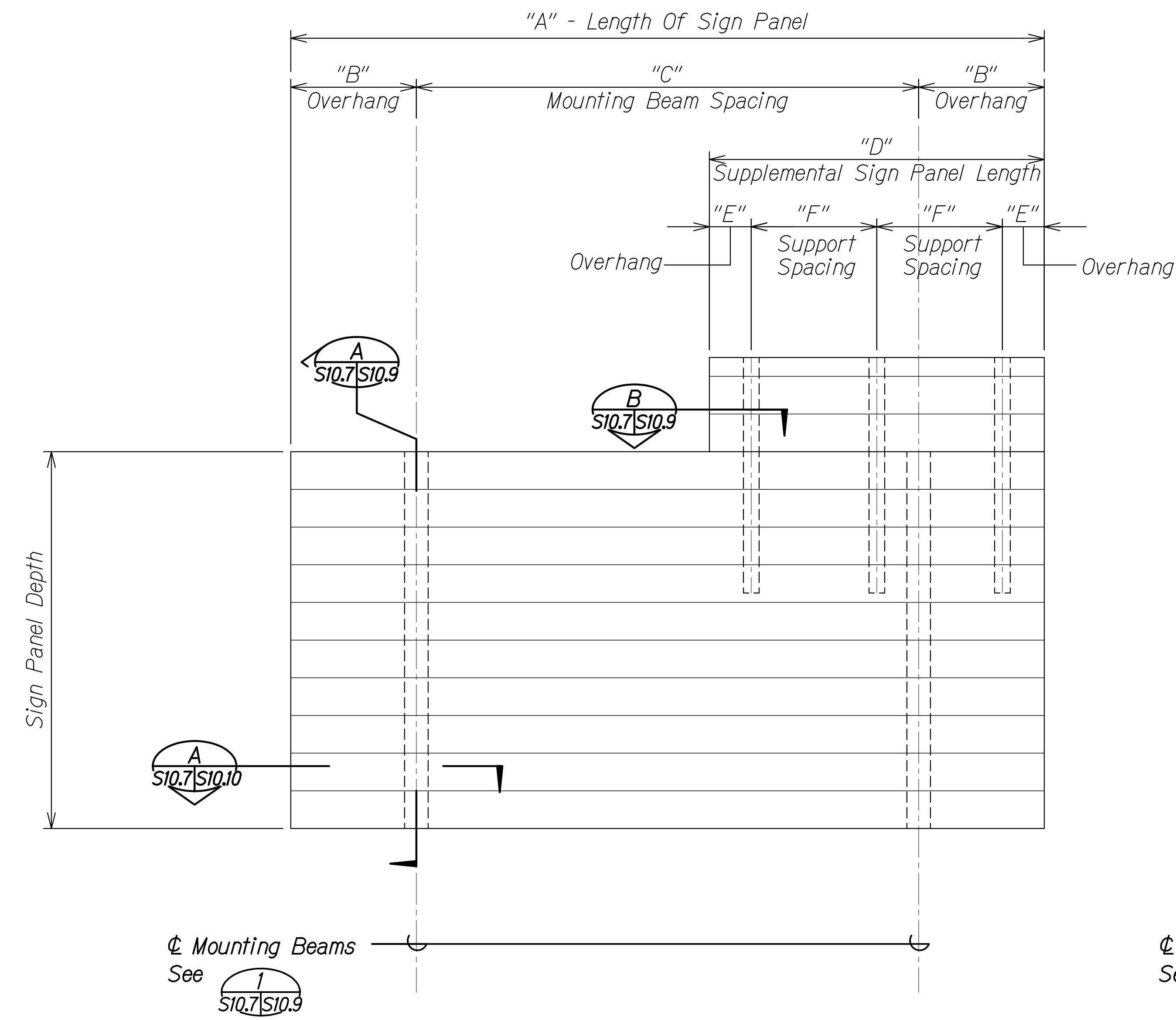
INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

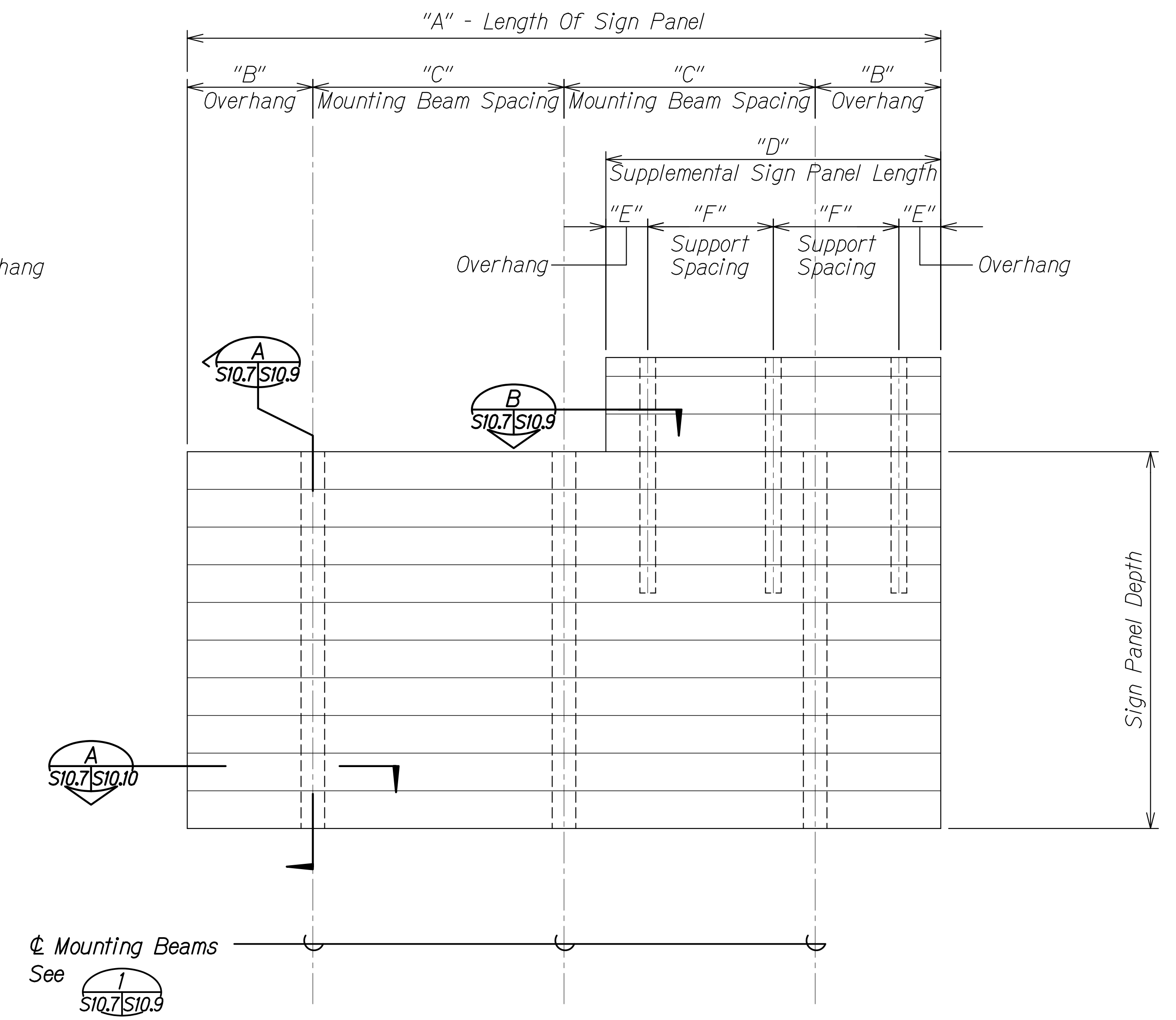
SHEET No. S10.6 OF 13 SHEETS

DATE	REVISION
1/25/24	1 Add. 1 - Revised Callouts

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	177	197



SIGN PANEL LENGTH - 5'-0" TO 14'-0"



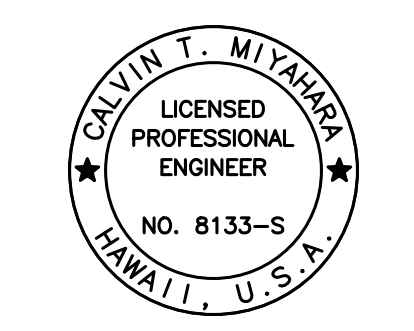
SIGN PANEL LENGTH - 15'-0" TO 29'-0"

TYPICAL SIGN PANEL ELEVATION
Not to Scale

- NOTES:**
- See schedule on sheet S10.10 for "A", "B", and "D" dimensions.

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DS12-S1007 TYP DITS.DWG PLOT TIME: 11-28-23, 7:48 PM



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

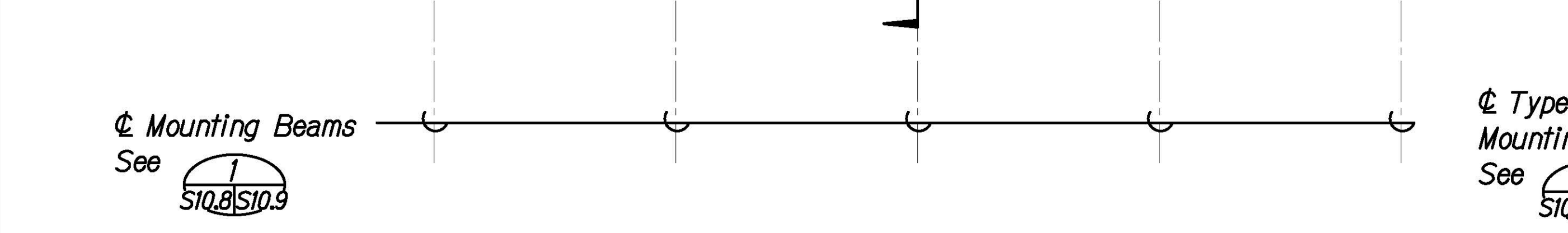
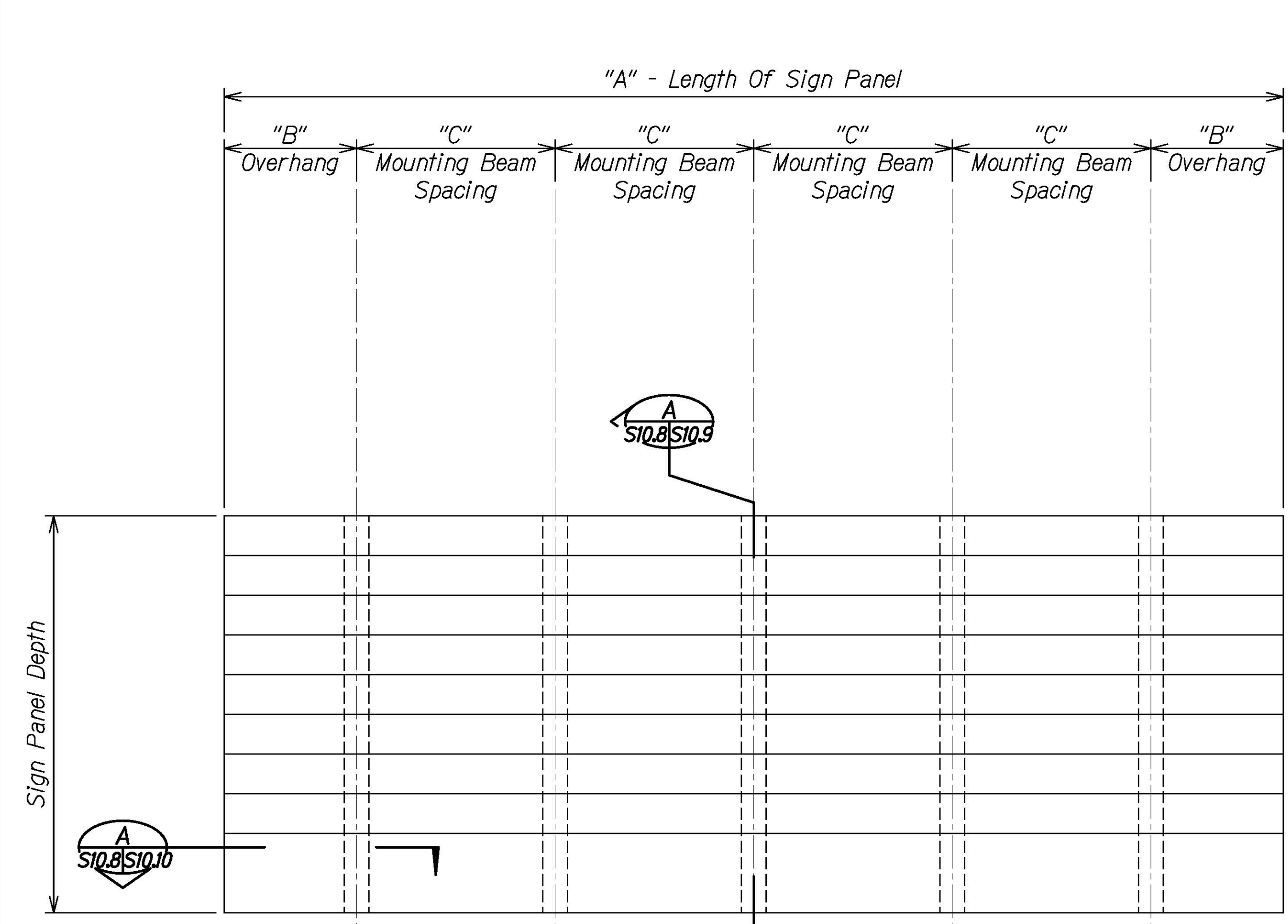
TYPICAL SIGN PANEL ELEVATION

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

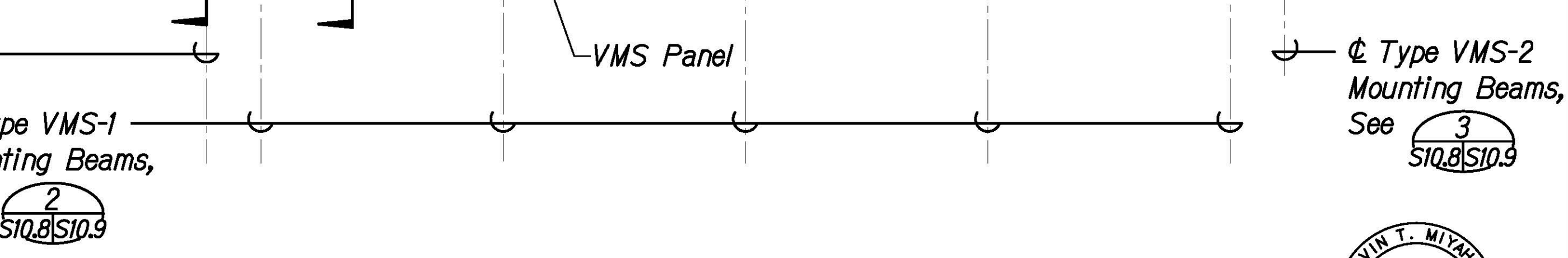
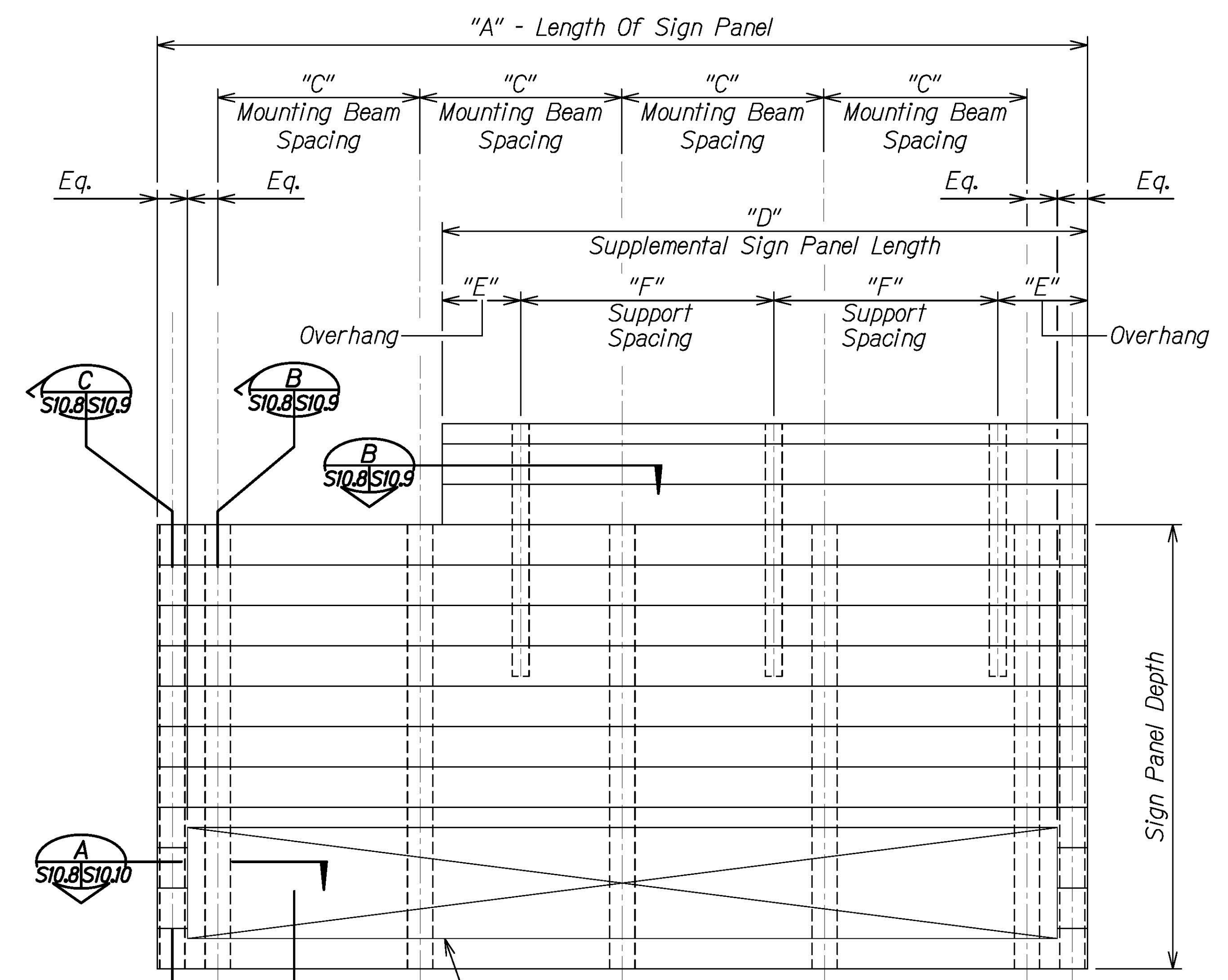
SHEET No. S10.7 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 178	197



SIGN PANEL LENGTH - 39'-0"

TYPICAL SIGN PANEL ELEVATION
Not to Scale



SIGN PANEL WITH VMS

NOTE:
See schedule on sheet S10.10 for "A", "B", and "D" dimensions.



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ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DS102-S1007 TYP DTL'S ADD.DWG PLOT TIME: 01-25-24, 4:13 PM

1/25/24	1	Add. 1 - Revised Note
DATE		REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

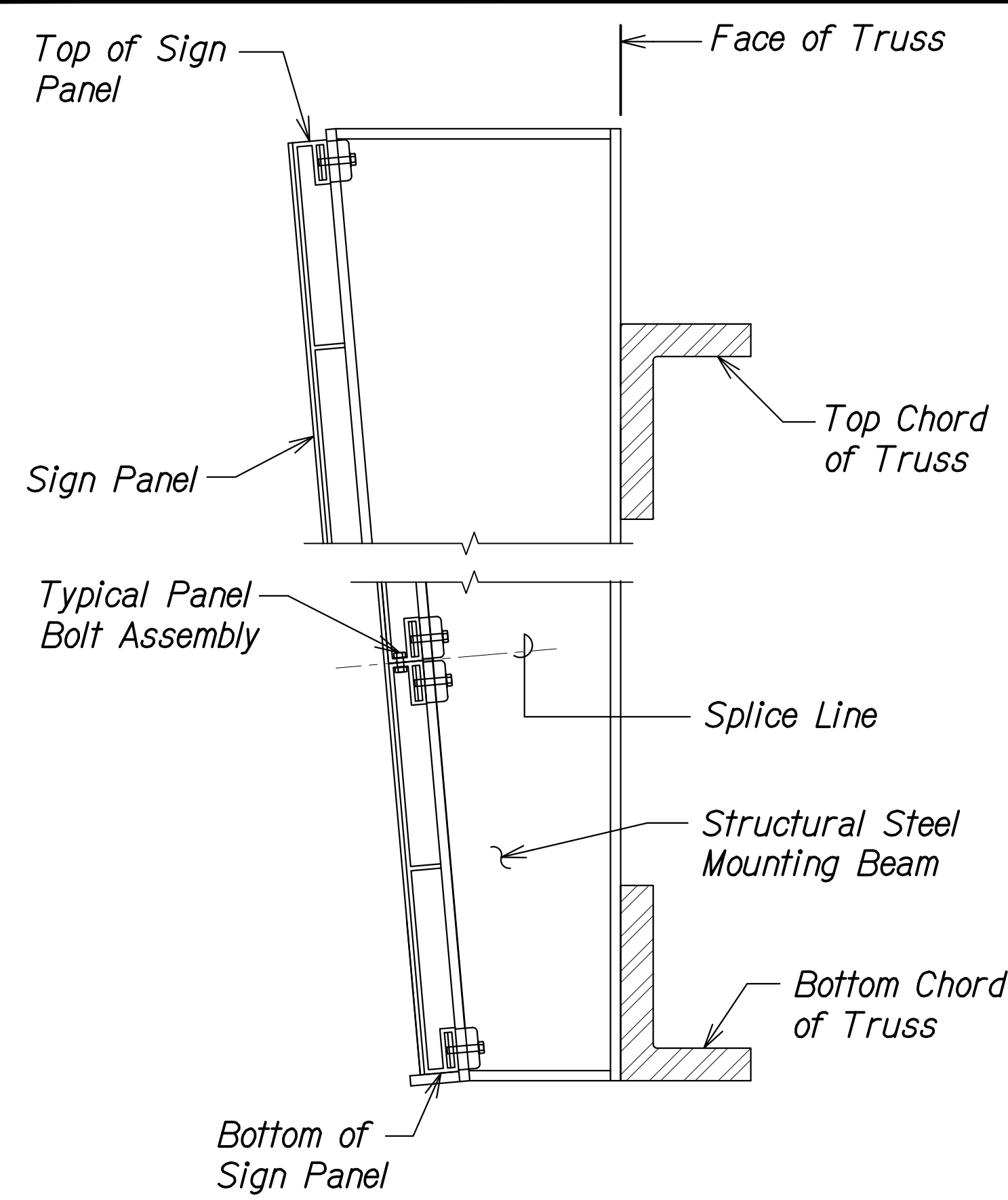
TYPICAL SIGN PANEL ELEVATION

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

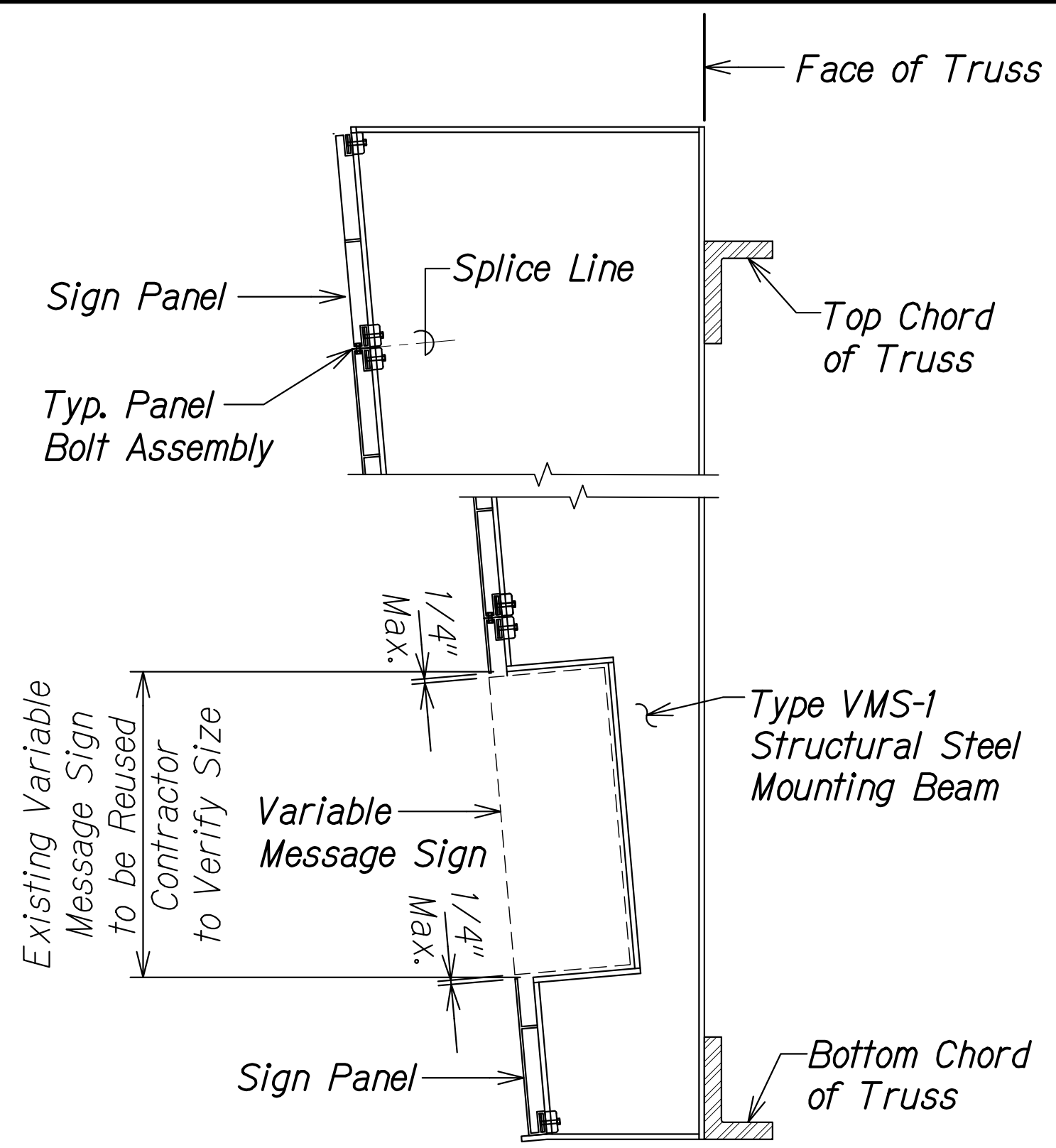
Scale: As Noted Date: Oct. 2023

SHEET No. **S10.8** OF 13 SHEETS

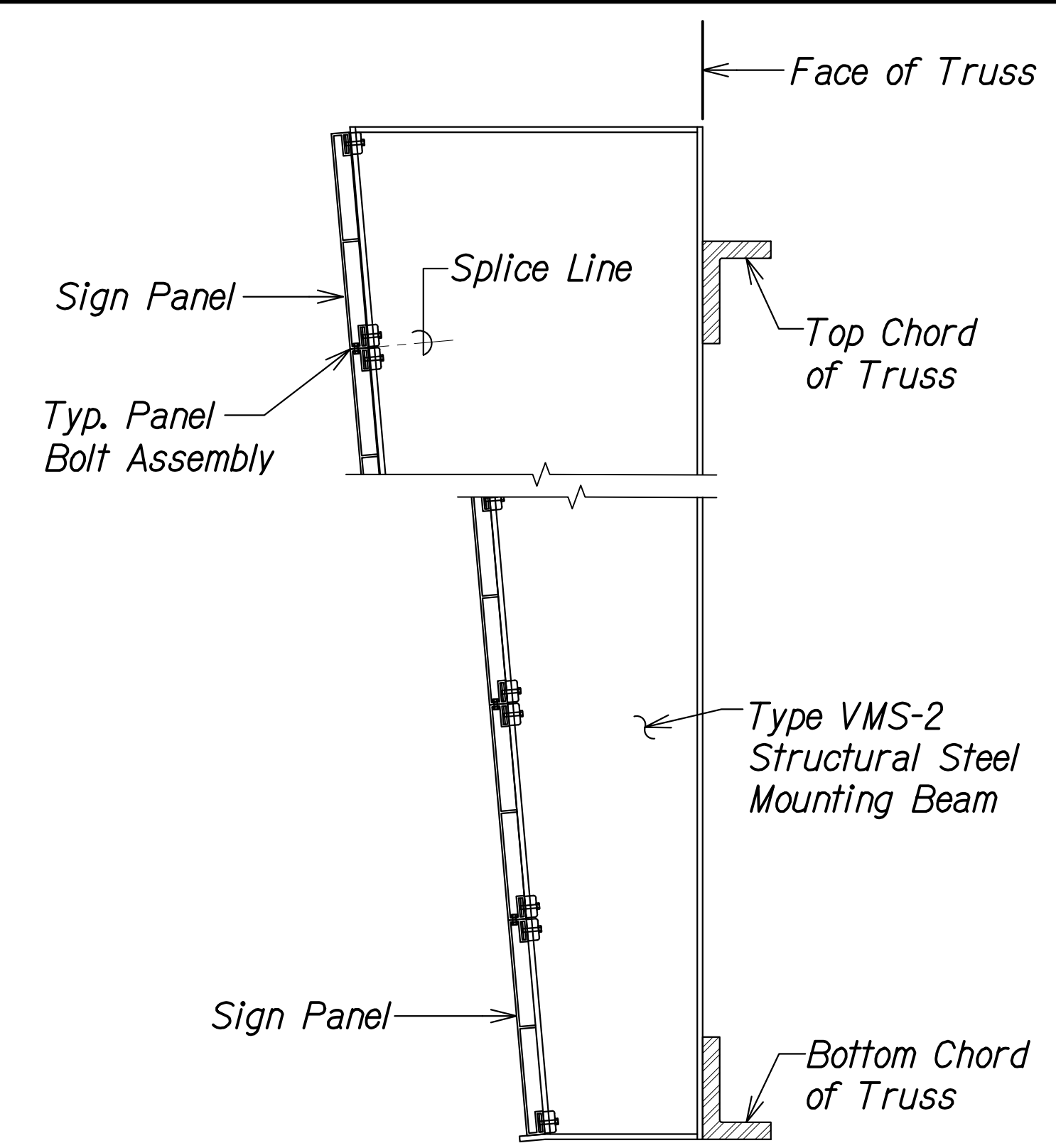
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	179	197



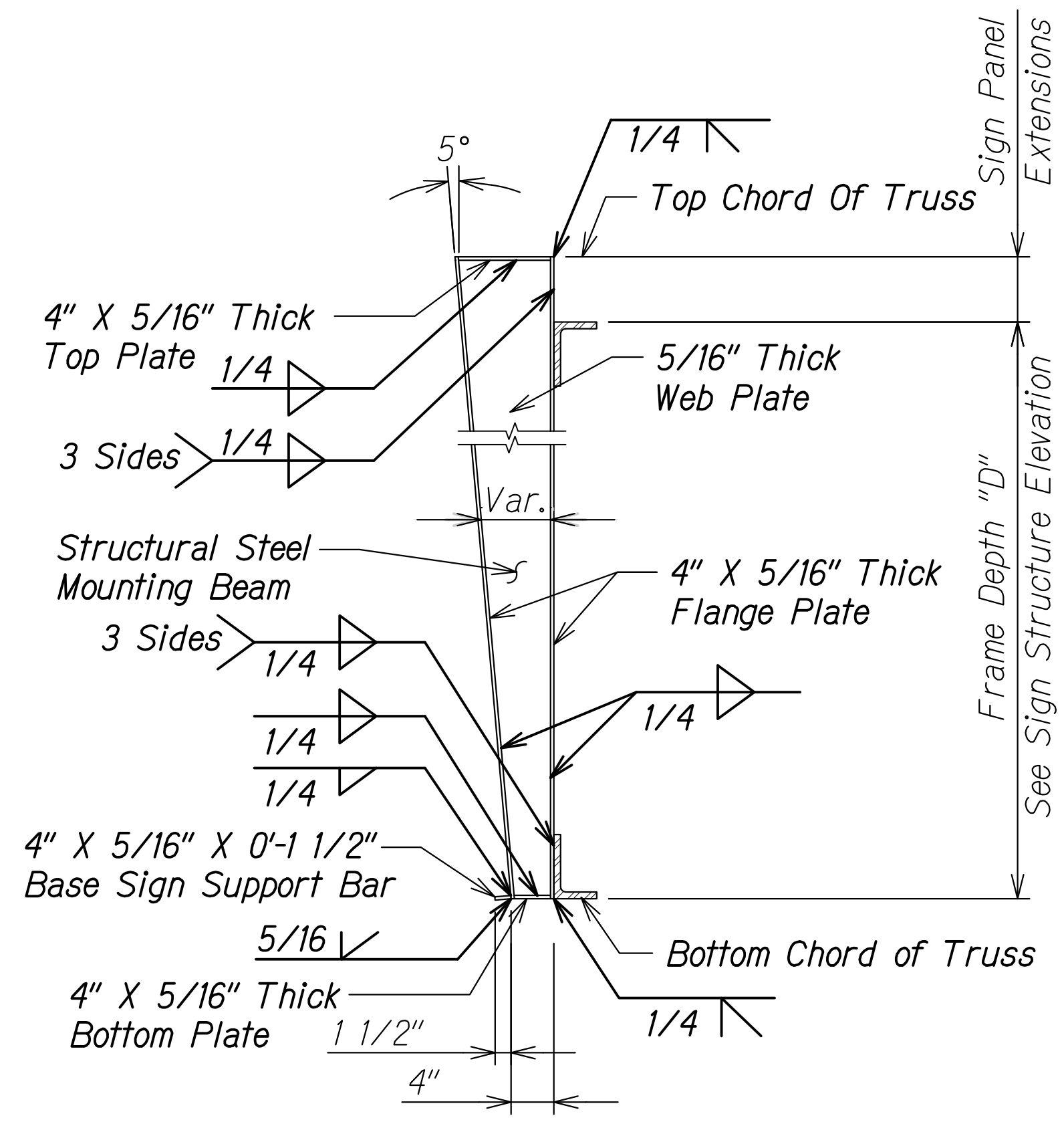
SECTION A
Not to Scale
S10.7 | S10.9
S10.8



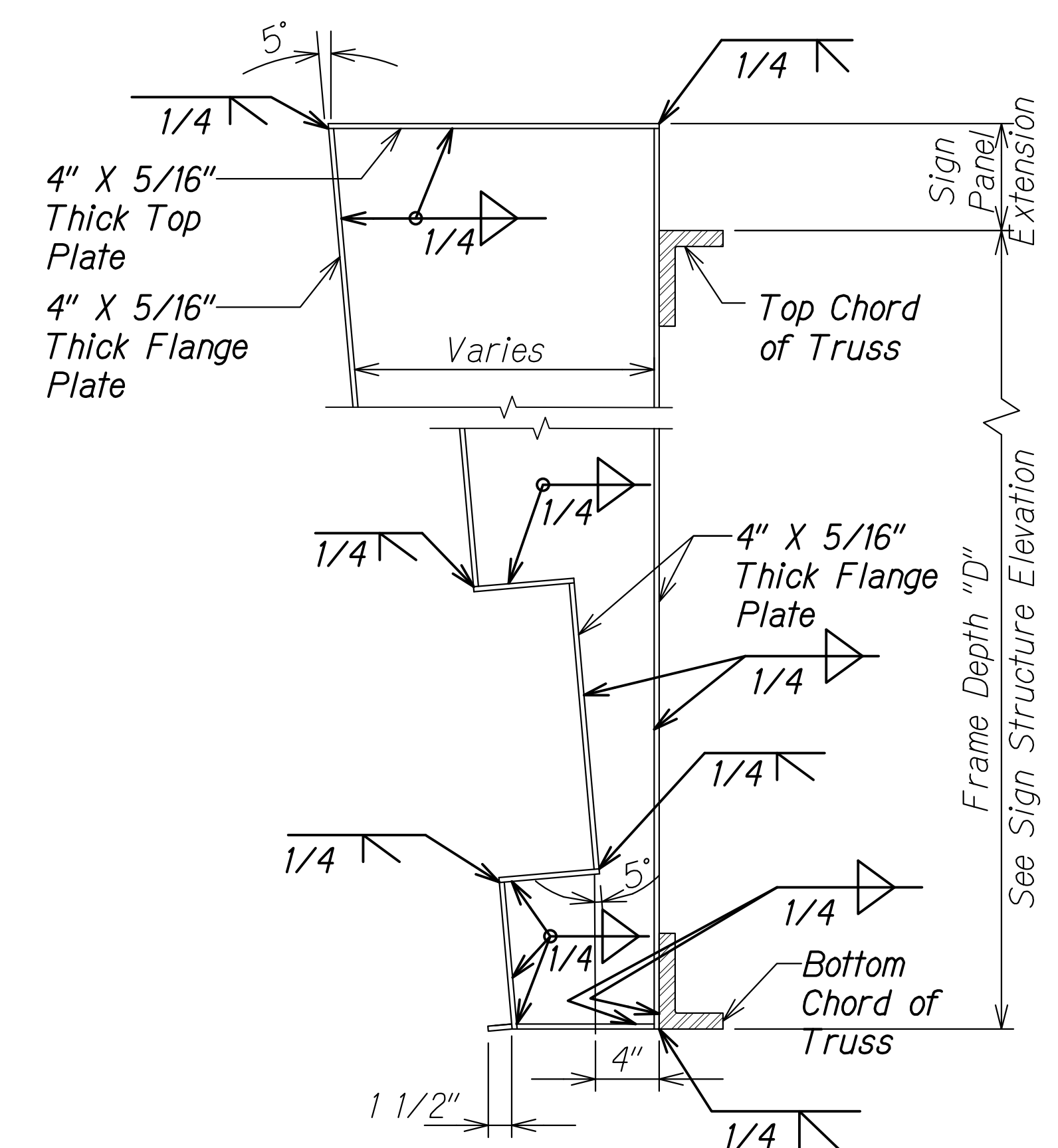
SECTION B
Not to Scale
S10.8 | S10.9



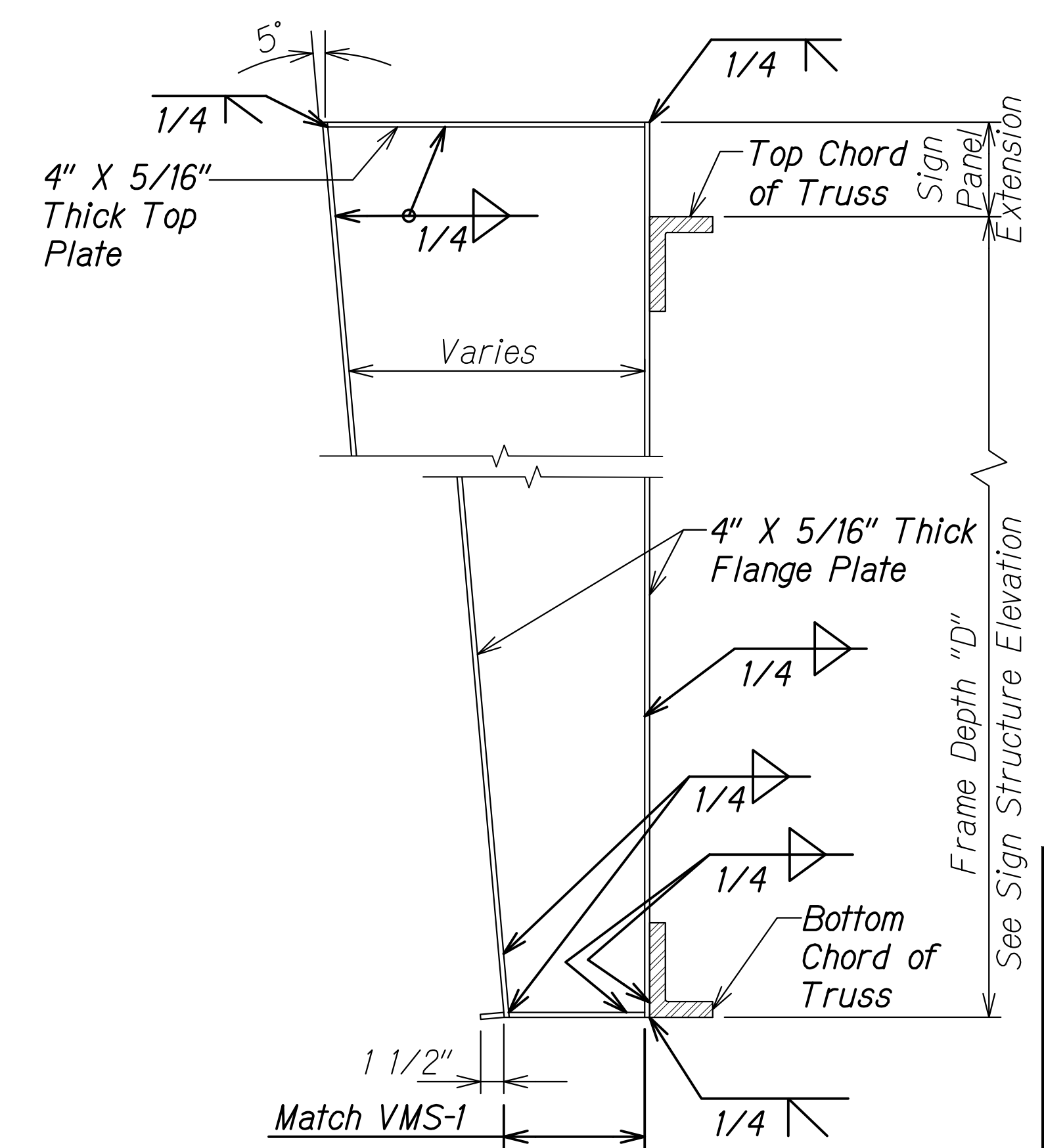
SECTION C
Not to Scale
S10.8 | S10.9



TYPICAL MOUNTING BEAM DETAIL
Not to Scale
S10.8 | S10.9 | S10.9



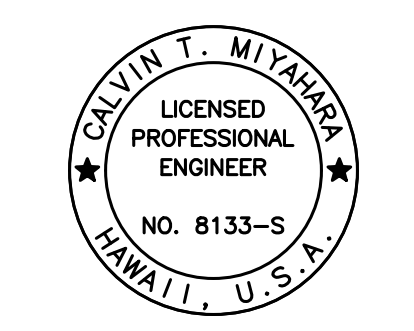
TYPE VMS-1 MOUNTING BEAM DETAIL
Not to Scale
S10.8 | S10.9



TYPE VMS-2 MOUNTING BEAM DETAIL
Not to Scale
S10.8 | S10.9

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DS12-S1009 TYP DITS.DWG PLOT TIME: 11-28-23, 7:49 PM



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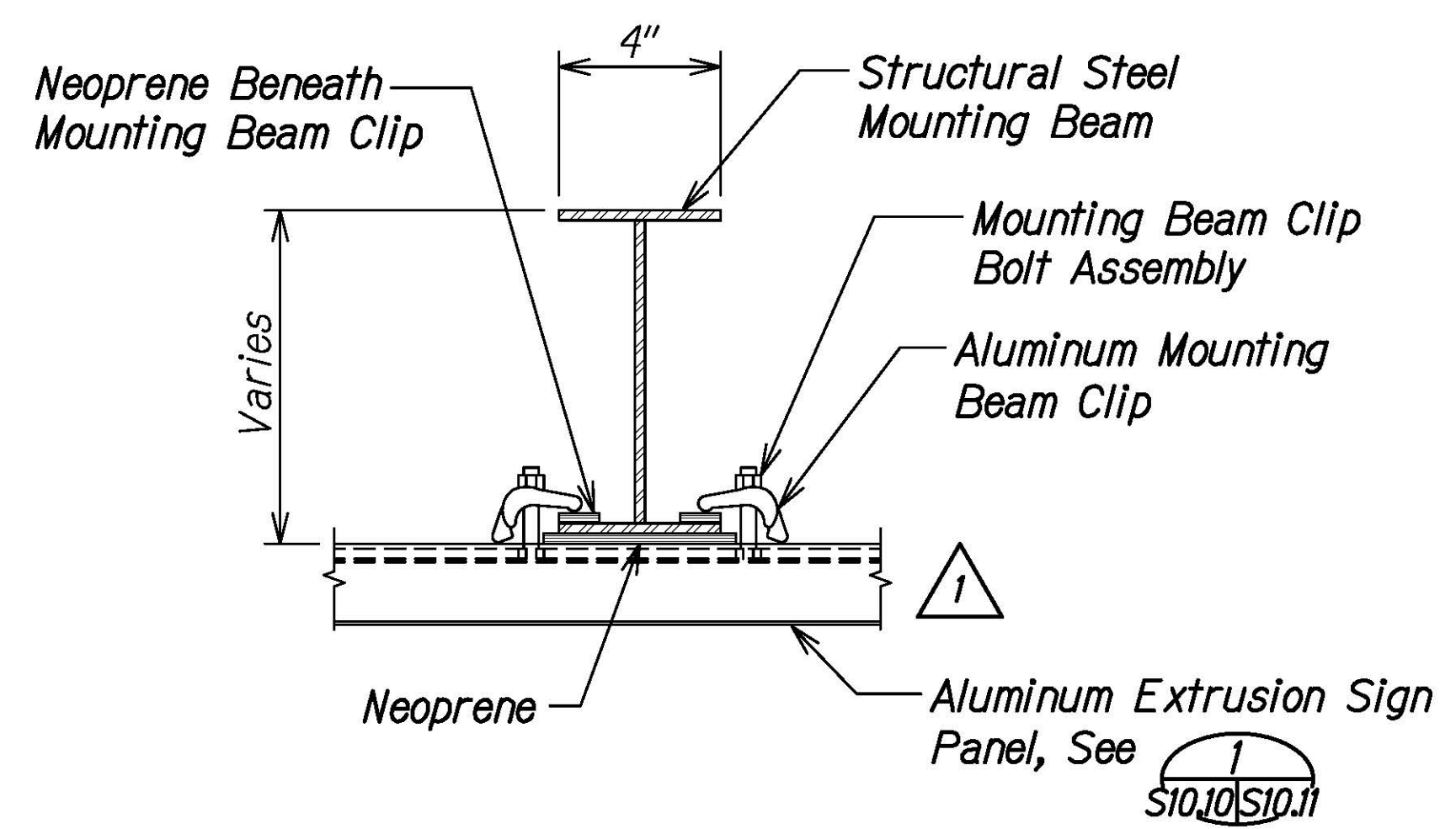
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL MOUNTING BEAM DETAILS

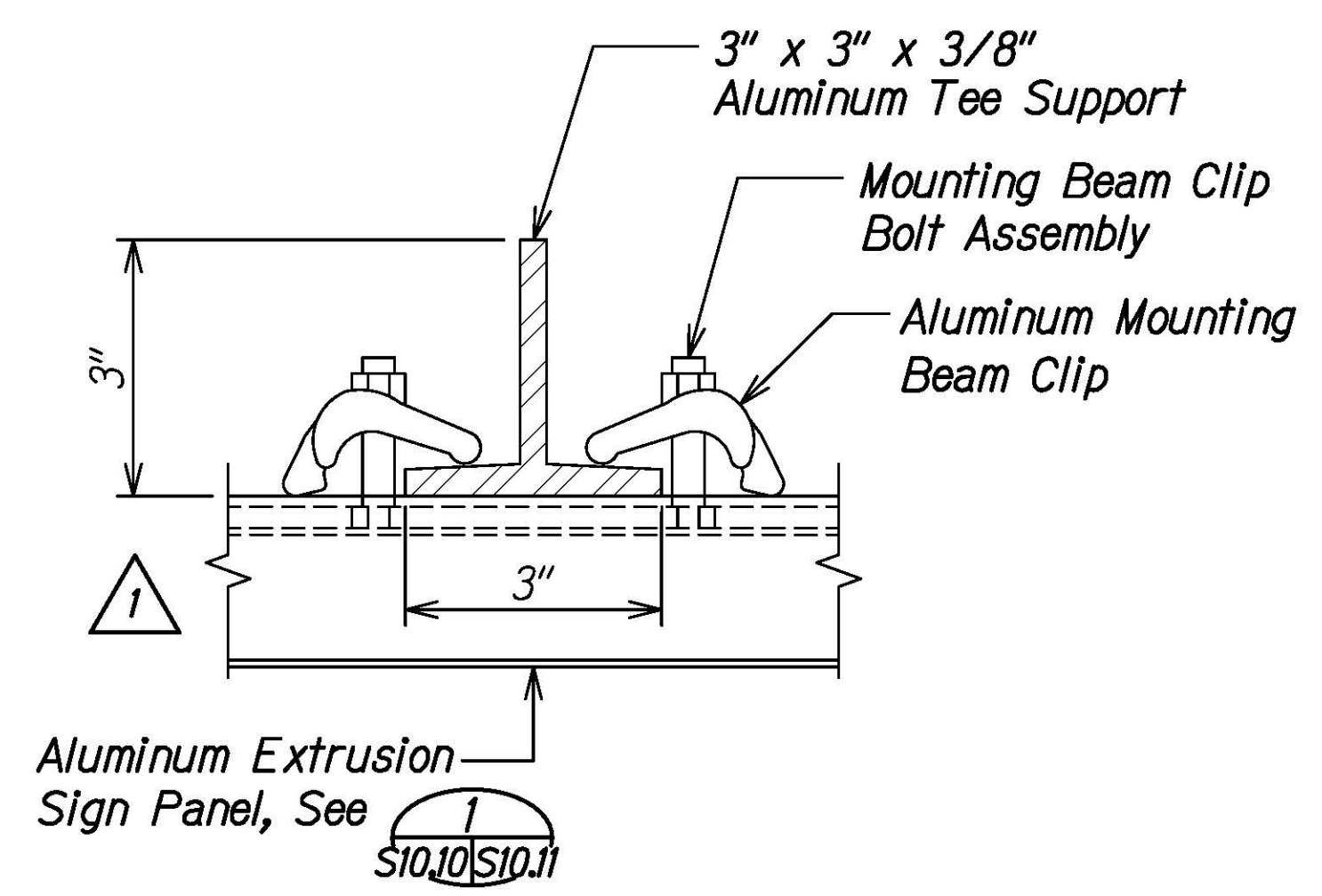
INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

SHEET No. S10.9 OF 13 SHEETS



SECTION A
Scale: 3" = 1'-0"
S10.7 S10.10
S10.8



SECTION B
Scale: 6" = 1'-0"
S10.7 S10.10



NOTES:

1. All sign panels longer than 39'-0" may either be fabricated as a single panel or as multiple adjoining single panels.
2. When multiple individual panels are to be joined to make a common face, the adjoining edges shall be assembled, cut, or milled to achieve a straight plane tolerance of +1/32" on each of the adjoining panel edges.

MOUNTING BEAM SCHEDULE

Sign Panel Length "A"	Number of Mounting Beams	Overhang "B"	Mounting Beam Spacing "C"
5'-0"	2	6"	4'-0"
6'-0"	2	6"	5'-0"
7'-0"	2	12"	5'-0"
8'-0"	2	12"	6'-0"
9'-0"	2	12"	7'-0"
10'-0"	2	18"	7'-0"
11'-0"	2	18"	8'-0"
12'-0"	2	24"	8'-0"
13'-0"	2	24"	9'-0"
14'-0"	2	24"	10'-0"
15'-0"	3	6"	7'-0"
16'-0"	3	6"	7'-6"
17'-0"	3	12"	7'-6"
18'-0"	3	12"	8'-0"
19'-0"	3	12"	8'-6"
20'-0"	3	18"	8'-6"
21'-0"	3	18"	9'-0"
22'-0"	3	24"	9'-0"
23'-0"	3	24"	9'-6"
24'-0"	3	24"	10'-0"
25'-0"	4	6"	8'-0"
26'-0"	4	12"	8'-0"
27'-0"	4	18"	8'-0"
28'-0"	4	24"	8'-0"
29'-0"	4	12"	9'-0"
39'-0"	5	18"	9'-0"

SUPPLEMENTAL SIGN PANEL SUPPORT SCHEDULE

Supplemental Sign Panel Length "D"	Number of Supports	Overhang "E"	Support Spacing "F"
9'-0"	3	6" Min. 12" Max.	3'-6" Min. 4'-0" Max.

ORIGINAL PLAN	DATE
NOTE BOOK	
NO.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSUZ-S1009.TYP DTL.S ADD1.DWG PLOT TIME: 01-25-24, 4:15 PM



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TYPICAL MOUNTING BEAM
DETAILS AND SCHEDULE**

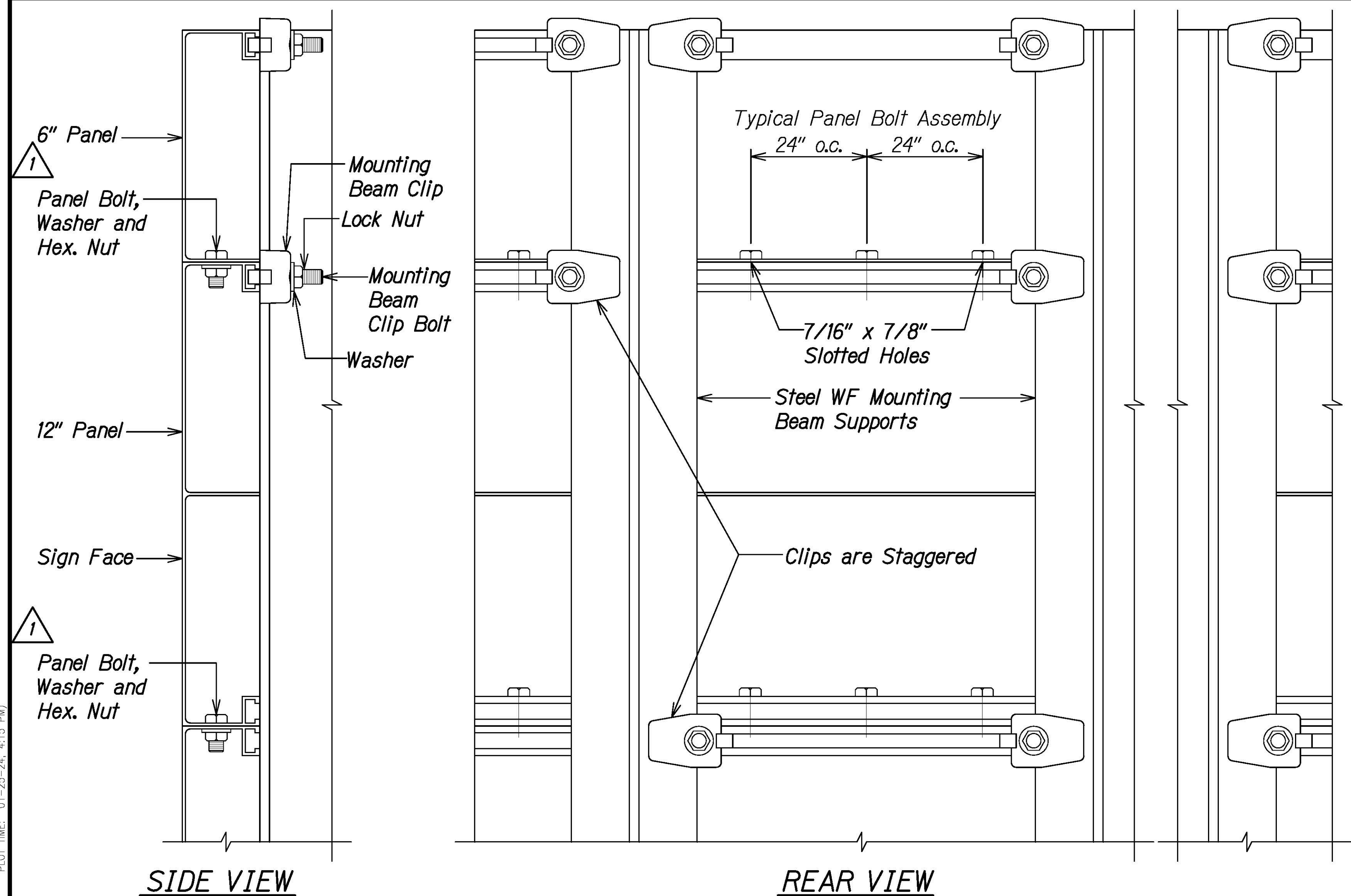
INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

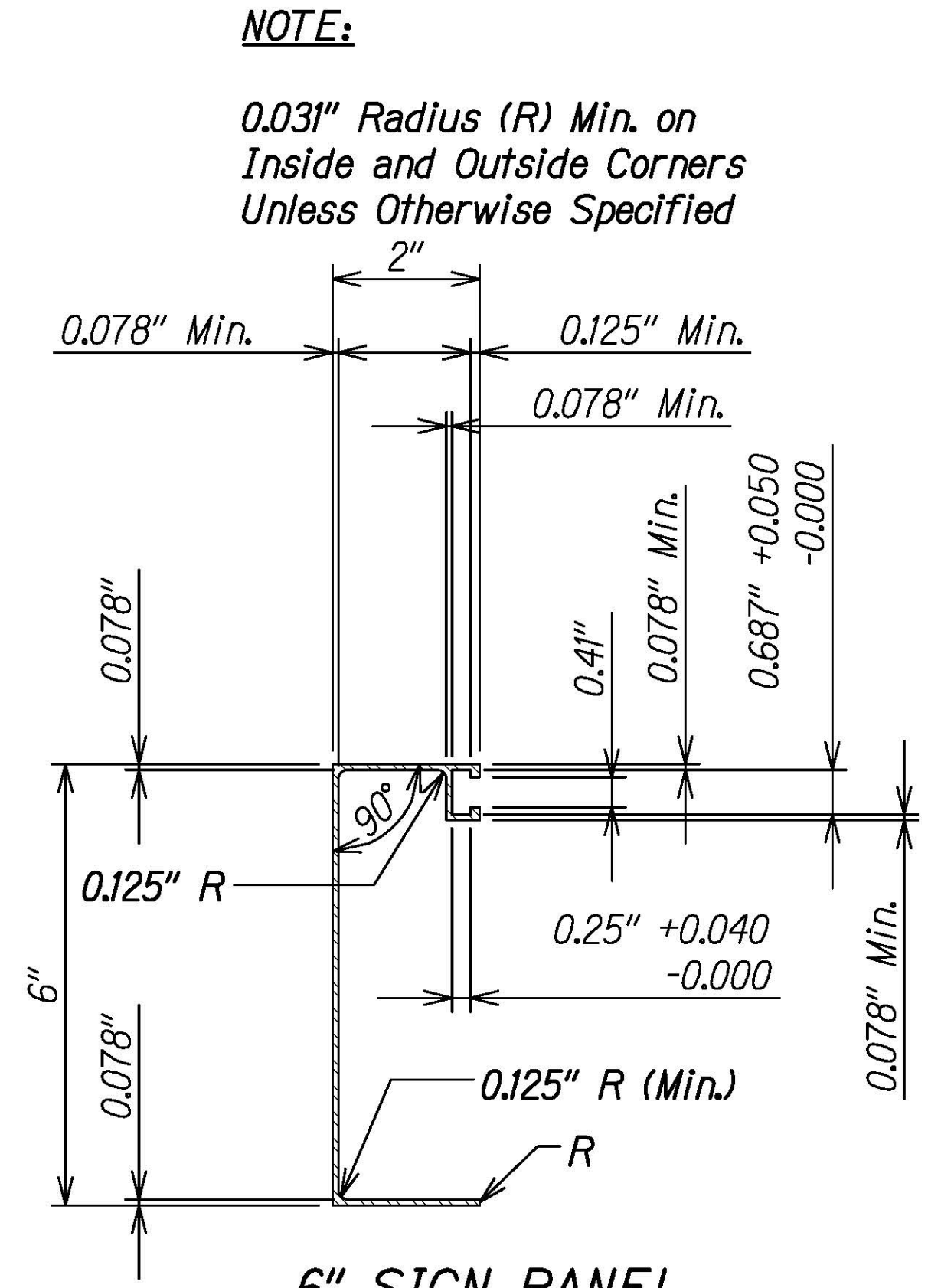
SHEET No. S1010 OF 13 SHEETS

1/25/24	1	Add. 1 - Revised Notes and Details
DATE	REVISION	

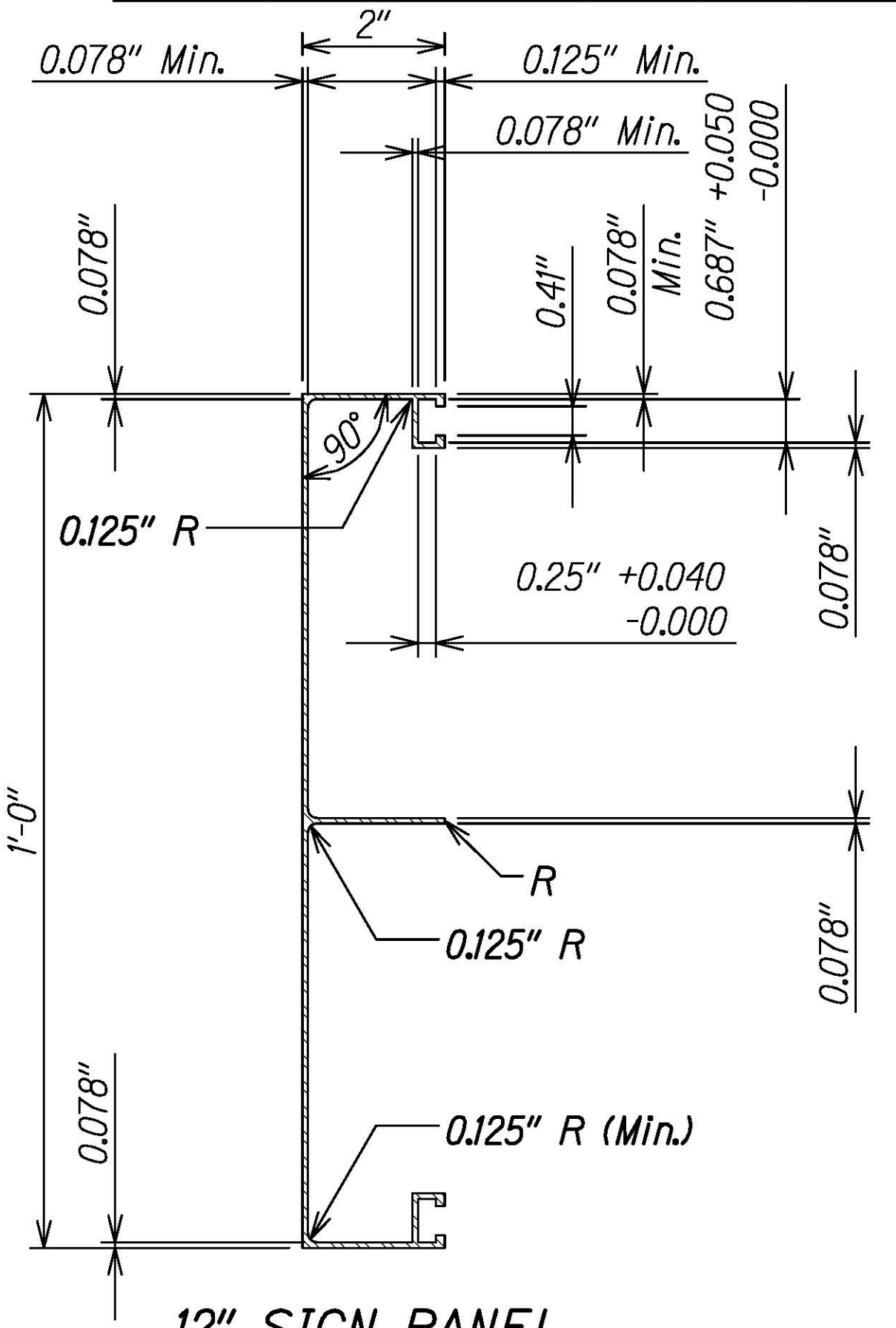
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	ADD. 181	197



TYPICAL SIGN ASSEMBLY A
Scale: 6" = 1'-0" S10.11 S10.11



6" SIGN PANEL
Wt./Lineal Ft. - 1.103 Lbs. Min.
Alloy - 6061 - F(1)
Moment Inertia - 0.487 in.⁴ Min.
Minimum Section Modulus - 0.341 in.³

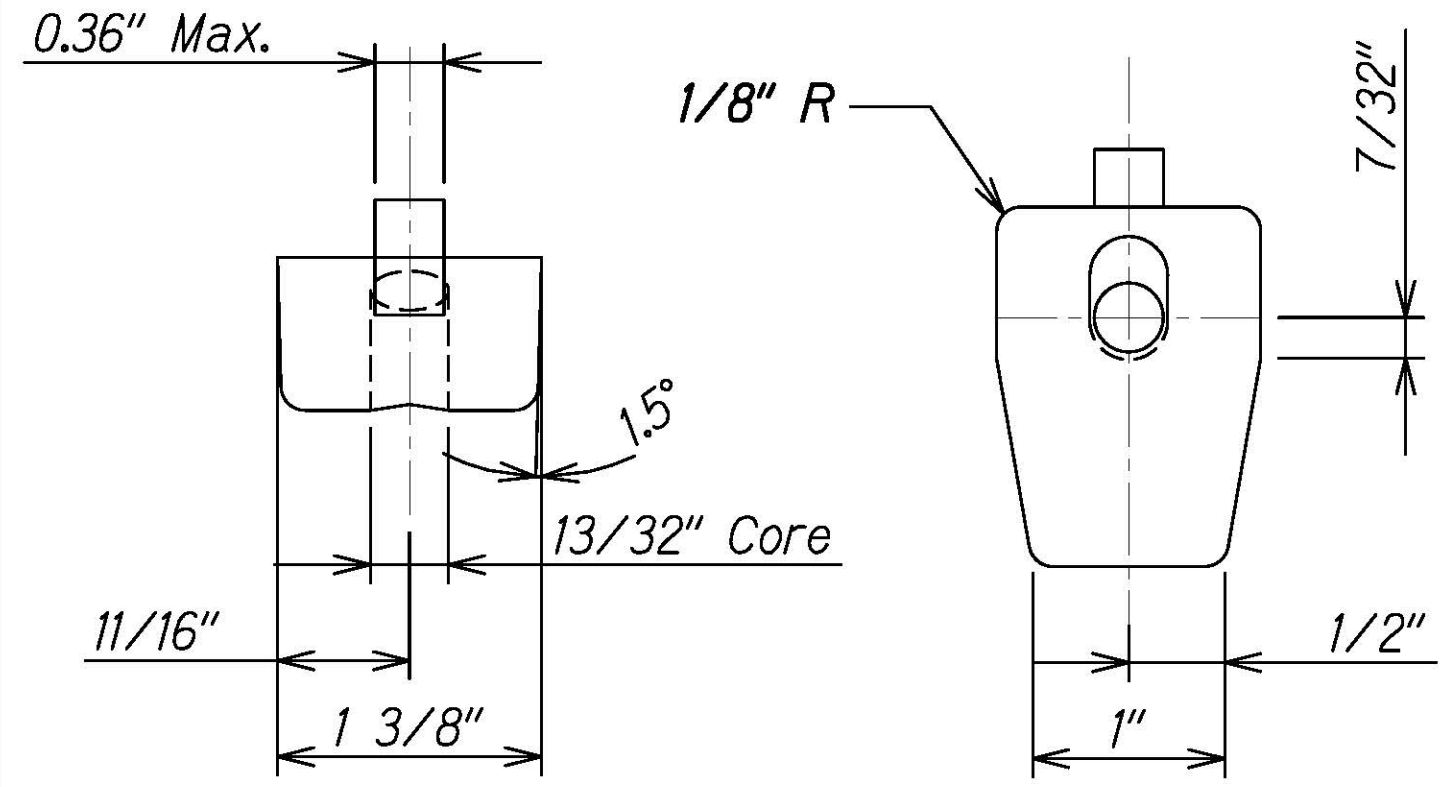


12" SIGN PANEL
Wt./Lineal Ft. - 2.690 Lbs. Min.
Alloy - 6061 - F(1)
Moment Inertia - 0.936 in.⁴ Min.
Minimum Section Modulus - 0.605 in.³

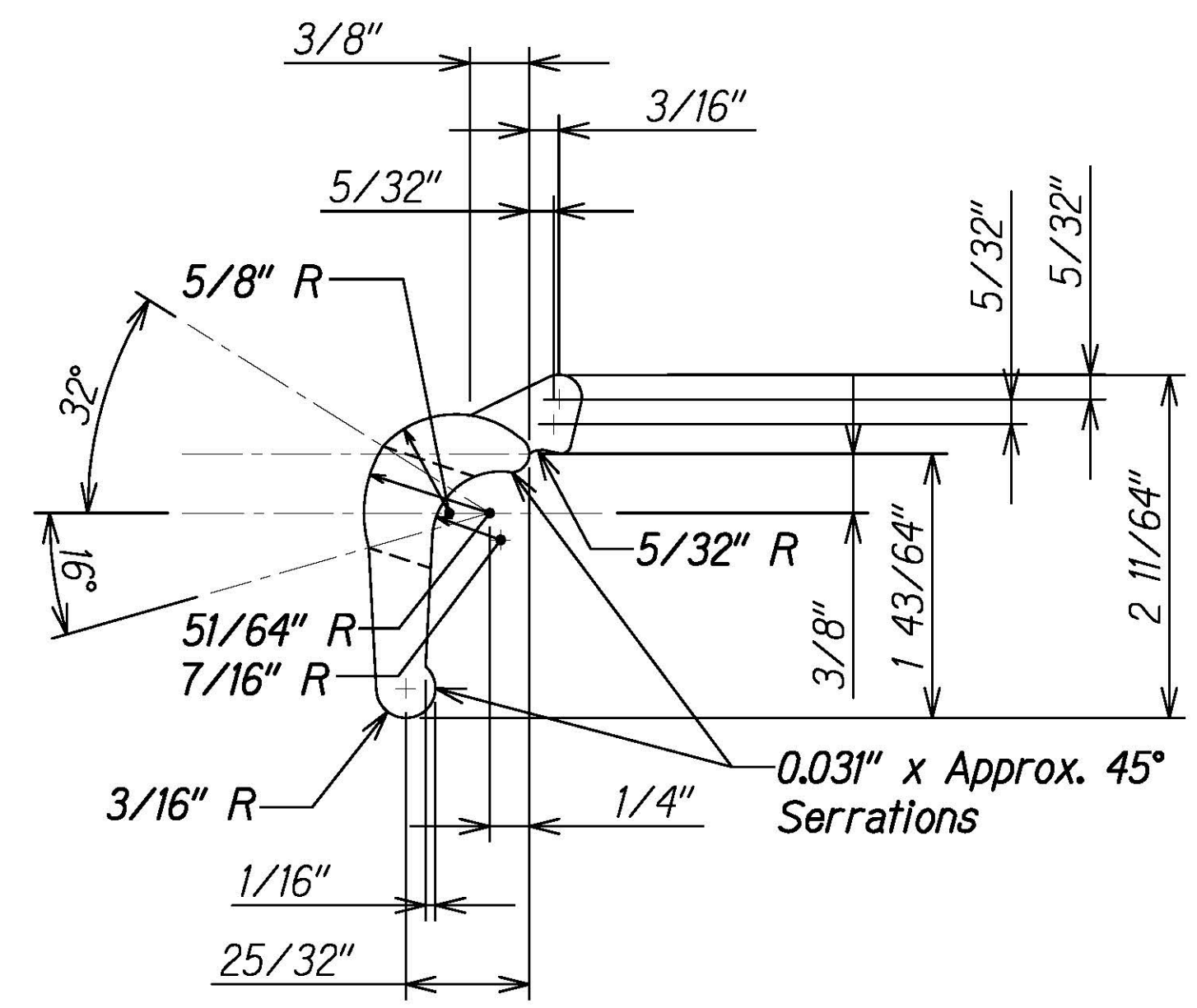
SOLID EXTRUDED SIGN PANEL DETAILS 1
Scale: 6" = 1'-0" S10.10 S10.11

NOTE:

Seams trimmed flush to 1/32" casting tolerance ±1/64"



MOUNTING BEAM CLIP DETAIL 2
Full Scale (Alloy 356-T6) S10.11 S10.11



MOUNTING BEAM CLIP BOLT ASSEMBLY DETAIL 3
Full Scale S10.11 S10.11

3/8" - 16 x 1 3/4" Long Sq. Hd. Bolt Alloy 2024-T4
3/8" - 16 Lock Nut-Alloy 2017-T4
25/32" ID x 3/4" OD x .09" Flat Washer-Alloy Alclad 2024-T4 1

PANEL BOLT ASSEMBLY DETAIL 4
Full Scale S10.11 S10.11

3/8" - 16 x 3/4" Long Hex. Hd. Bolt Alloy 2024-T4
3/8" - 16 Nut-Alloy 6061-T6
25/32" ID x 3/4" OD x .09" Flat Washer-Alloy Alclad 2024-T4 1

DATE	REVISION
1/25/24	Clarification of Notes

DATE	DESIGNED BY
	TRACED BY
	DESIGNED BY
	QUANTITIES BY
	CHECKED BY

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSUZ-S1011.TYP DTL.S ADDL.DWG PLOT TIME: 01-25-24 4:15 PM



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HIGHWAYS DIVISION

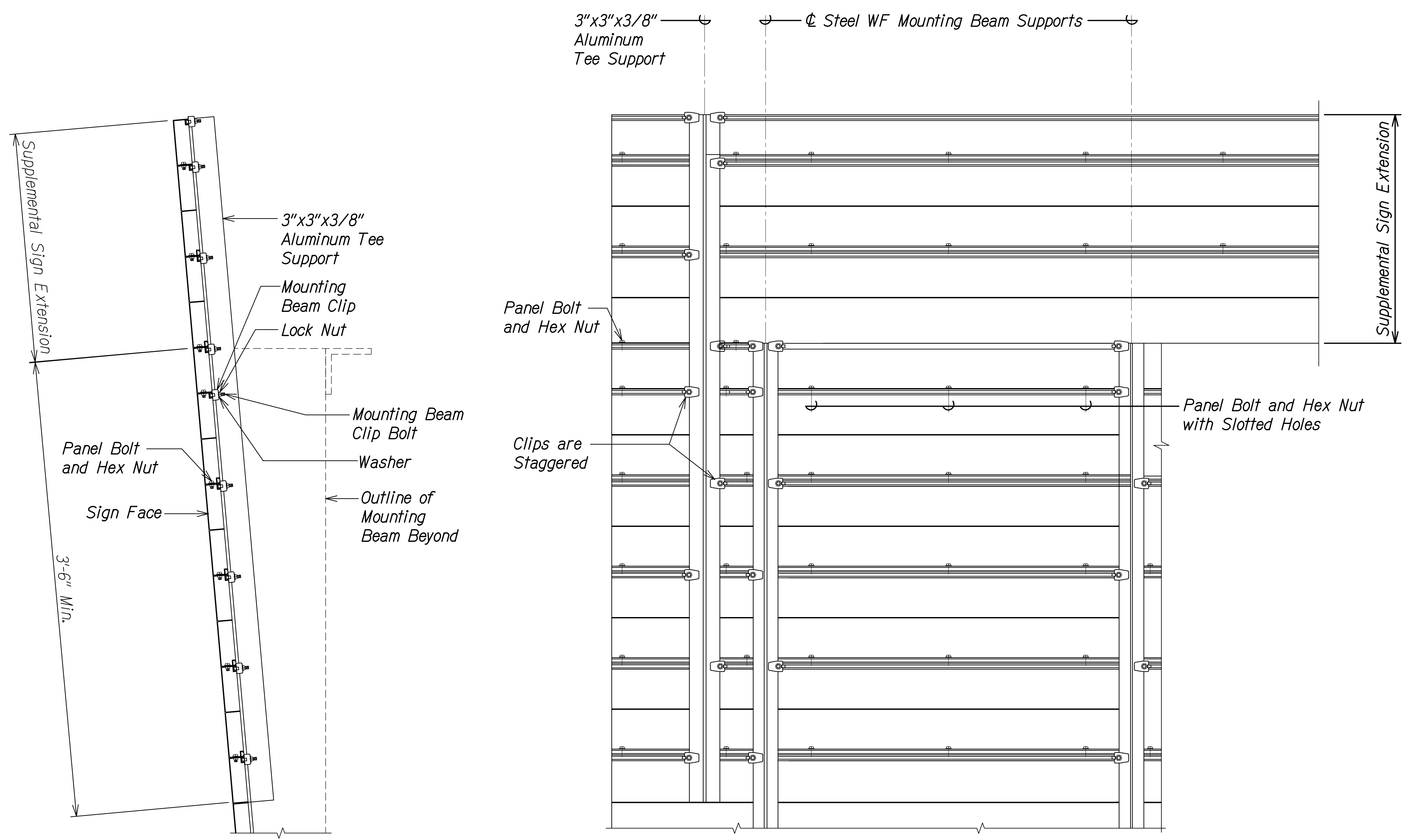
TYPICAL SIGN PANEL ASSEMBLY AND HARDWARE DETAILS

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

SHEET No. **S10.11** OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	182	197

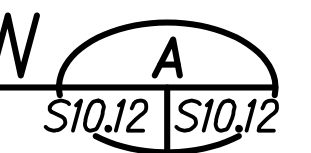


SIDE VIEW

REAR VIEW

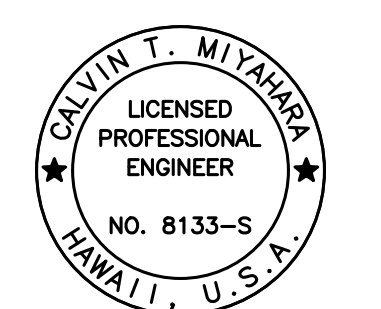
ASSEMBLY AT SUPPLEMENTAL SIGN EXTENSION

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



ORIGINAL PLAN	DATE
NOTE BOOK	
NO.	

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DSUZ-S1011 TYP DITS.DWG PLOT TIME: 11-28-23, 7:50 PM



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 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

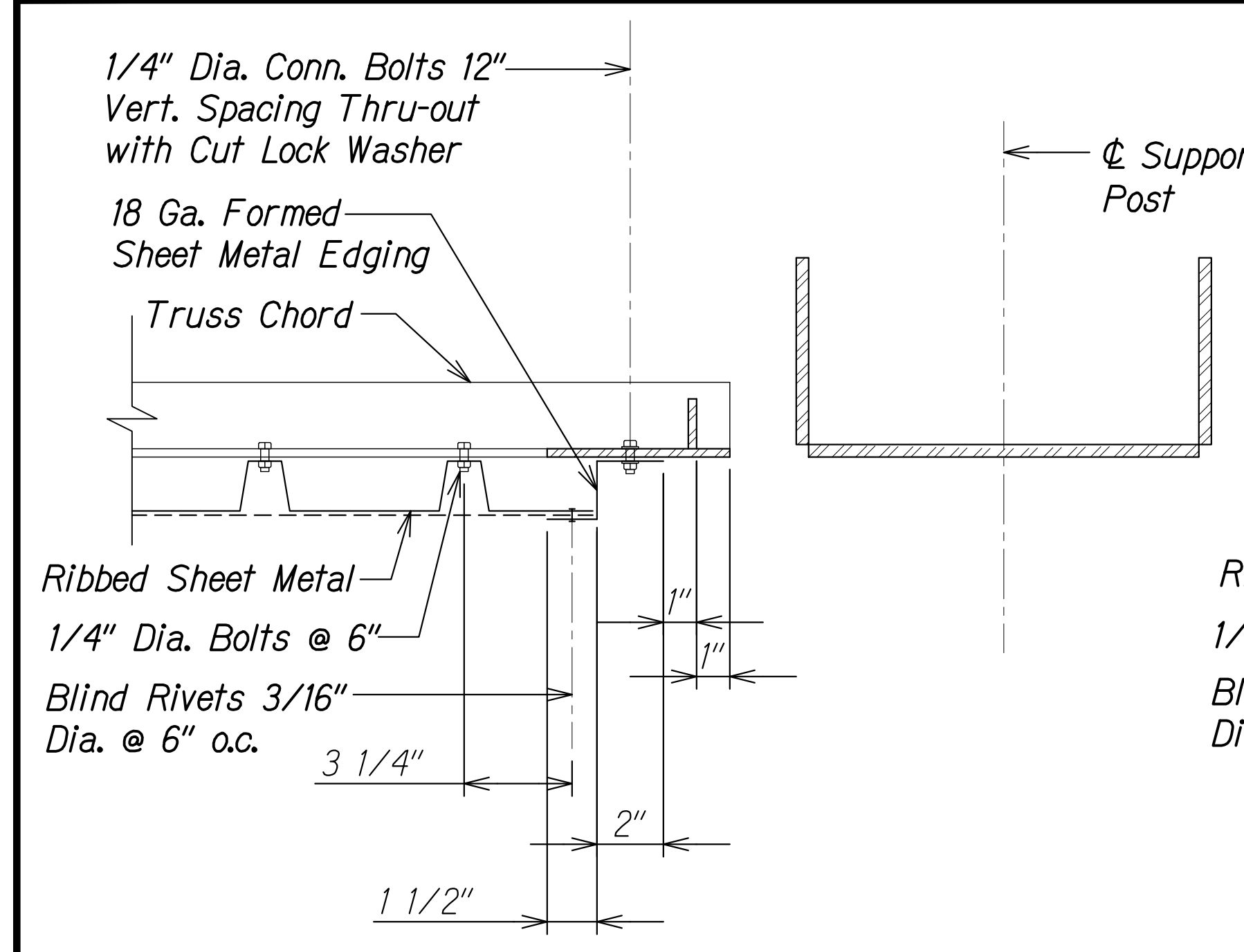
TYPICAL SIGN PANEL ASSEMBLY

INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

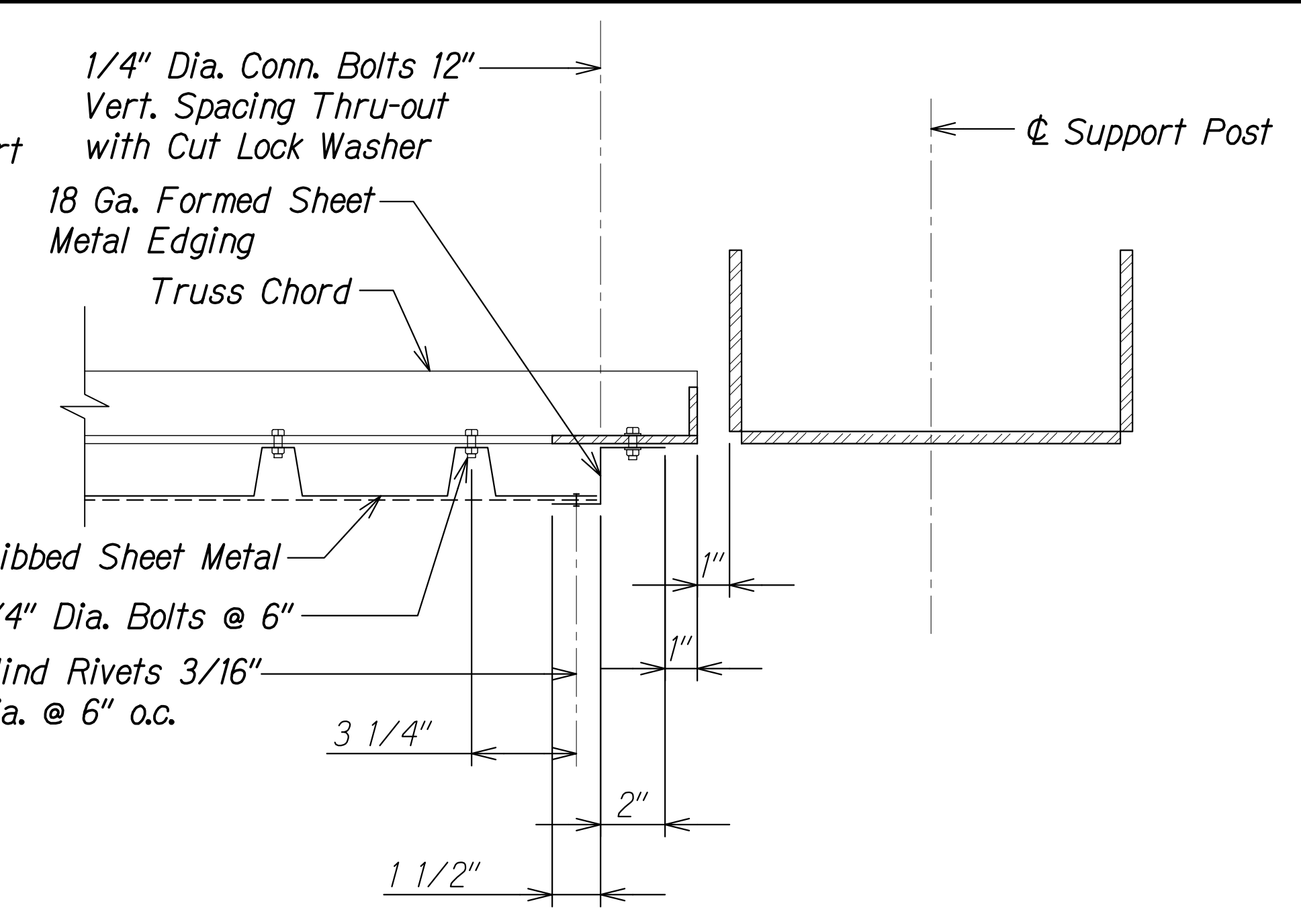
Scale: As Noted Date: Oct. 2023

SHEET No. S10.12 OF 13 SHEETS

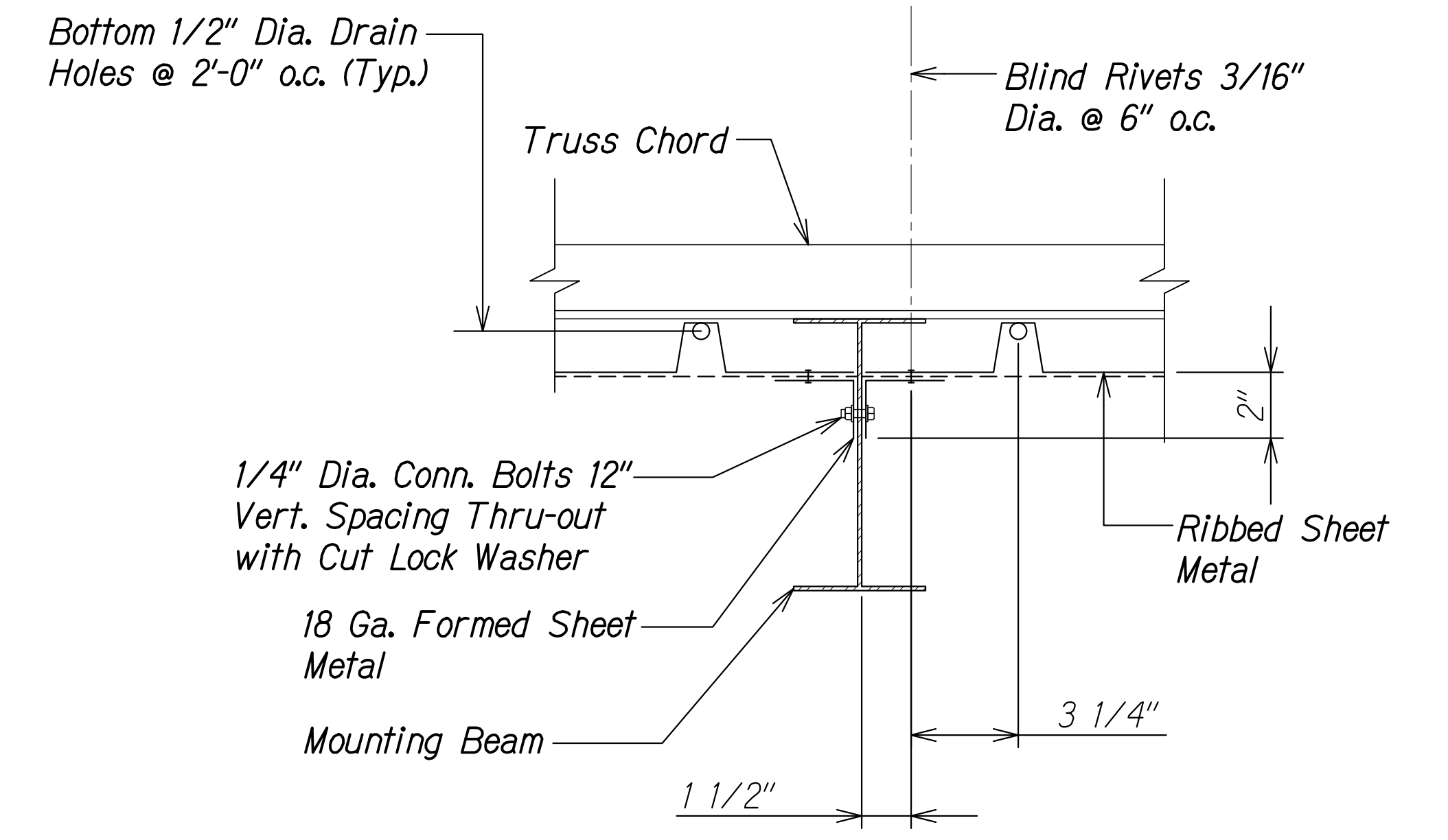
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	183	197



END AT SIGN SUPPORT
FOR TWO POST SIGN STRUCTURE

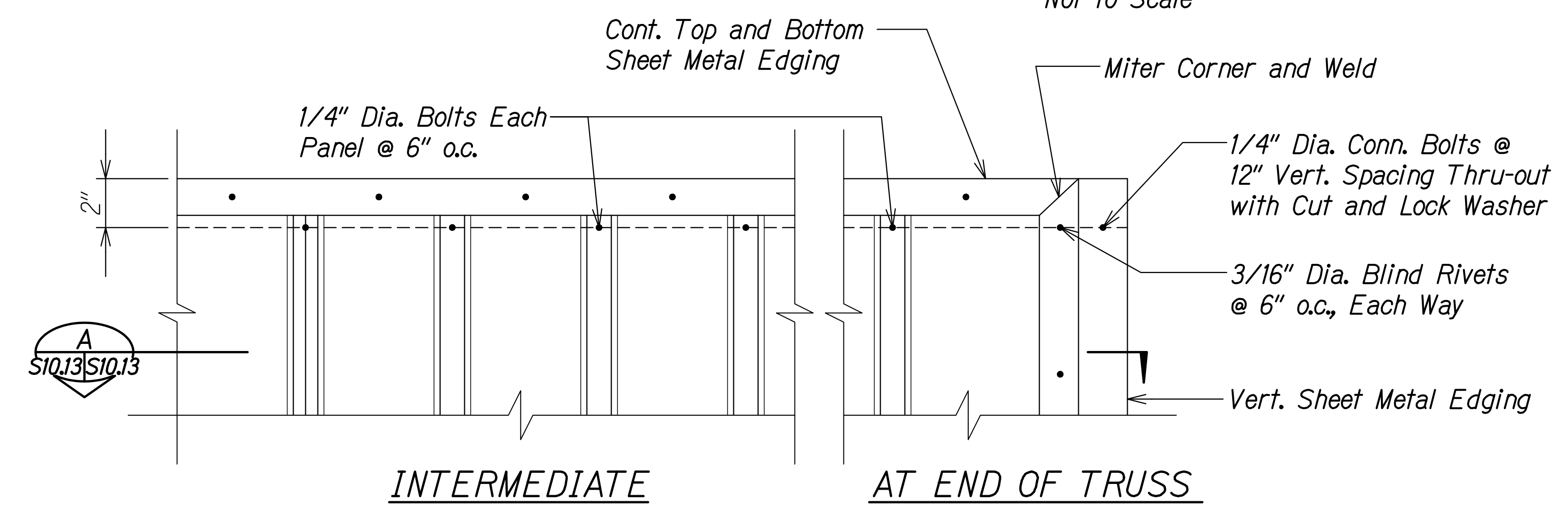


END AT SIGN SUPPORT
FOR CANTILEVER SIGN STRUCTURE



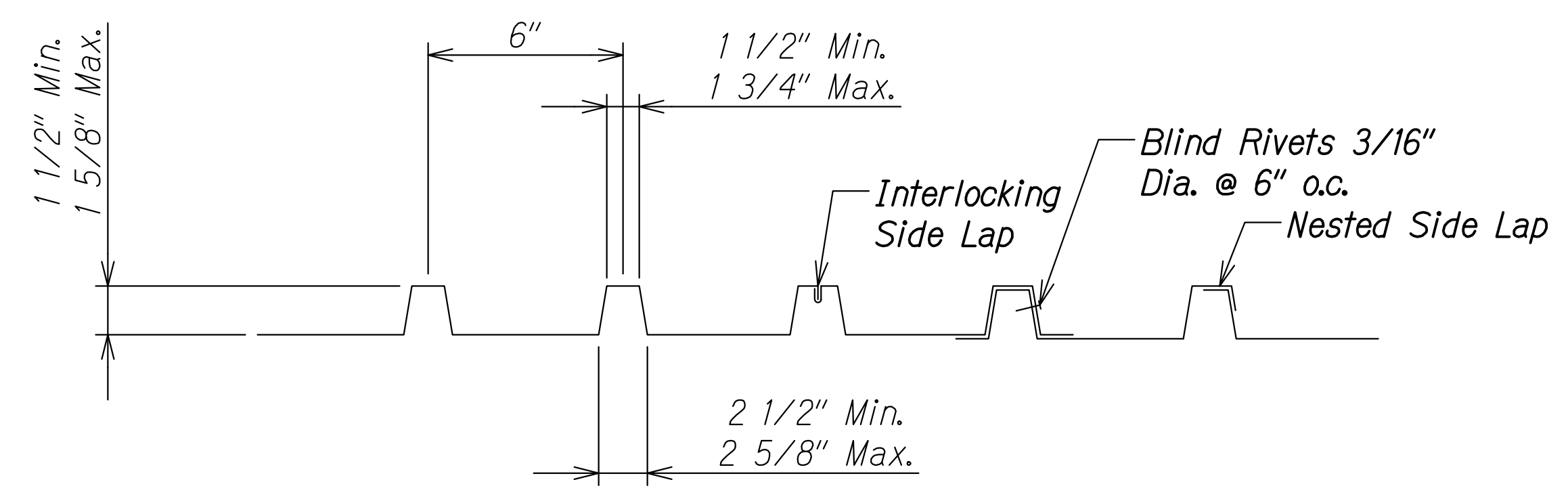
AT MOUNTING BEAM

TYPICAL HORIZONTAL SECTION AT POST A
Not to Scale S10.13 S10.13



INTERMEDIATE

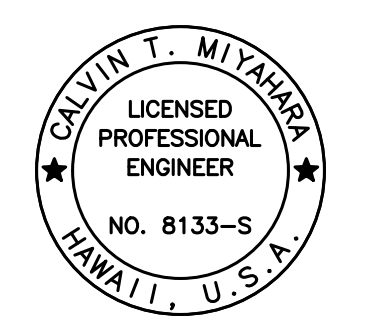
AT END OF TRUSS



TYPICAL RIBBED SHEET METAL DETAIL
Not to Scale 1
S8.1 S10.13
S9.1

RIBBED SHEET METAL NOTES:

1. All ribbed sheet metal formed edging and the connections shall be capable of resisting the loads described on the Structural General Notes sheet. The ribbed sheet metal shall span from top chord to bottom chord. Shop drawings and calculations shall be submitted to the Engineer for approval.
2. All ribbed sheet metal and formed edging shall be galvanized steel conforming to ASTM designation A653-SS, Grade 50 minimum with a minimum yield of 50 ksi. Coating designation shall conform to ASTM designation: A653, G90.
3. Ribbed sheet metal shall be a minimum 18 gage thickness for Sign Structures H201R-874, HIEBR-260, and 78WB-853. Ribbed sheet metal shall be a minimum 16 gage thickness for Sign Structures H2NBR-722, HIWB-421 and HIEB-104.
4. Connection bolts, nuts and washers to be hot-dip galvanized steel ASTM A307.
5. Blind rivets shall be galvanized and submitted to the Engineer for approval.



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STATE OF HAWAII
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HIGHWAYS DIVISION

**TYPICAL RIBBED SHEET
METAL DETAILS**

INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

SHEET No. S10.13 OF 13 SHEETS

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\11-29-23 BID\DS12-S10.13.TYP.DTL.SWG PLOT TIME: 11-28-23, 7:50 PM

SIGN STRUCTURE SCHEDULE

SIGN STRUCTURE	DIMENSIONS							FRAMING SIZES				CAMBER	REFERENCE DETAILS
	SPAN LENGTH "L"	DEPTH "D"	TRUSS PANELS NO.	SPACING	INT. WIND PANEL NOS.	SPACING	WIDTH "W"	MEMBER "A" T&B CHORDS	MEMBER "B" VERTICAL	MEMBER "C" DIAGONAL	MEMBER "D" T&B CHORD WIND BRACING		
1 H201R-874	64'-6"	10'-0"	8	Equal Spaces	24	Equal Spaces	2'-6"	L6 x 4 x 3/4	L3 1/2 x 3 x 1/4	L3 x 3 x 1/4	L2 x 2 x 1/4	1/2"	S8.1 - S8.6
2 H1WB-421	68'-9"	14'-0"	6	Equal Spaces	24	Equal Spaces	2'-6"	L6 x 6 x 1	L3 1/2 x 3 1/2 x 1/4	L3 1/2 x 3 x 1/4	L3 x 3 x 3/8	1/2"	S8.1 - S8.6
3 H1EB-104	47'-0"	13'-0"	4	Equal Spaces	17	Equal Spaces	3'-0"	L8 x 6 x 1	L3 1/2 x 3 x 1/4	L3 x 3 x 1/4	L3 x 3 x 3/8	5"	S9.1 - S9.5
4 H1EBR-260	48'-6"	8'-0"	6	Equal Spaces	20	Equal Spaces	2'-0"	L5 x 3 1/2 x 3/4	L3 x 3 x 1/4	L3 x 3 x 1/4	L2 x 2 x 1/4	1/2"	S8.1 - S8.6
5 H2NBR-722	69'-3"	12'-0"	6	Equal Spaces	24	Equal Spaces	2'-6"	L6 x 6 x 3/4	L3 1/2 x 3 x 1/4	L3 x 3 x 1/4	L3 x 3 x 3/8	1/2"	S8.1 - S8.6
6 78WB-853	91'-0"	13'-0"	10	Equal Spaces	34	Equal Spaces	2'-6"	L8 x 8 x 1	L3 1/2 x 3 1/2 x 1/4	L3 x 3 x 1/4	L3 x 3 x 1/2	1"	S8.1 - S8.6

SIGN STRUCTURE SCHEDULE

SIGN STRUCTURE	POST SIZES		BASE SIZES		FOUNDATION SIZES			
	POST PLATE "A"	POST PLATE "B"	BASE PLATE "T"	ANCHOR BOLT DIA. (TOTAL)	SHAFT DIAMETER "D"	SHAFT LENGTH "L"	PEDESTAL WIDTH "W"	DRILLED SHAFT VERT. REINF.
1 H201R-874	3/4"	3/4"	3"	2 1/2" Dia. (12)	5'-0"	28'-0"	6'-6"	20-#11
2 H1WB-421	3/4"	3/4"	3"	2 1/2" Dia. (12)	5'-0"	16'-0"	6'-6"	20-#11
3 H1EB-104	1"	1"	3"	3" Dia. (16)	6'-0"	18'-0"	7'-6"	28-#11
4 H1EBR-260	3/4"	3/4"	3"	2 1/2" Dia. (12)	5'-0"	22'-0"	6'-6"	20-#11
5 H2NBR-722	3/4"	3/4"	3"	2 1/2" Dia. (12)	5'-0"	28'-0"	6'-6"	20-#11
6 78WB-853	3/4"	3/4"	3"	2 1/2" Dia. (12)	5'-0"	28'-0"	6'-6"	20-#11

ANCHOR BOLT PRETENSIONING SCHEDULE

ANCHOR BOLT DIAMETER (IN.)	TOP NUT ROTATION BEYOND SNUG TIGHT
≤ 1 1/2	1/3 Turn
> 1 1/2	1/6 Turn

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

DRAWING NAME: Z:\00 ONGOING\16-0062-DESTINATION SIGNS PH 3B-STAGE 2\01 CAD\01-XX-24\ADD\DSUZ-S1101_SCHED_ADD.DWG PLOT TIME: 01-25-24, 4:16 PM



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STATE OF HAWAII
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HIGHWAYS DIVISION

SIGN STRUCTURE SCHEDULE

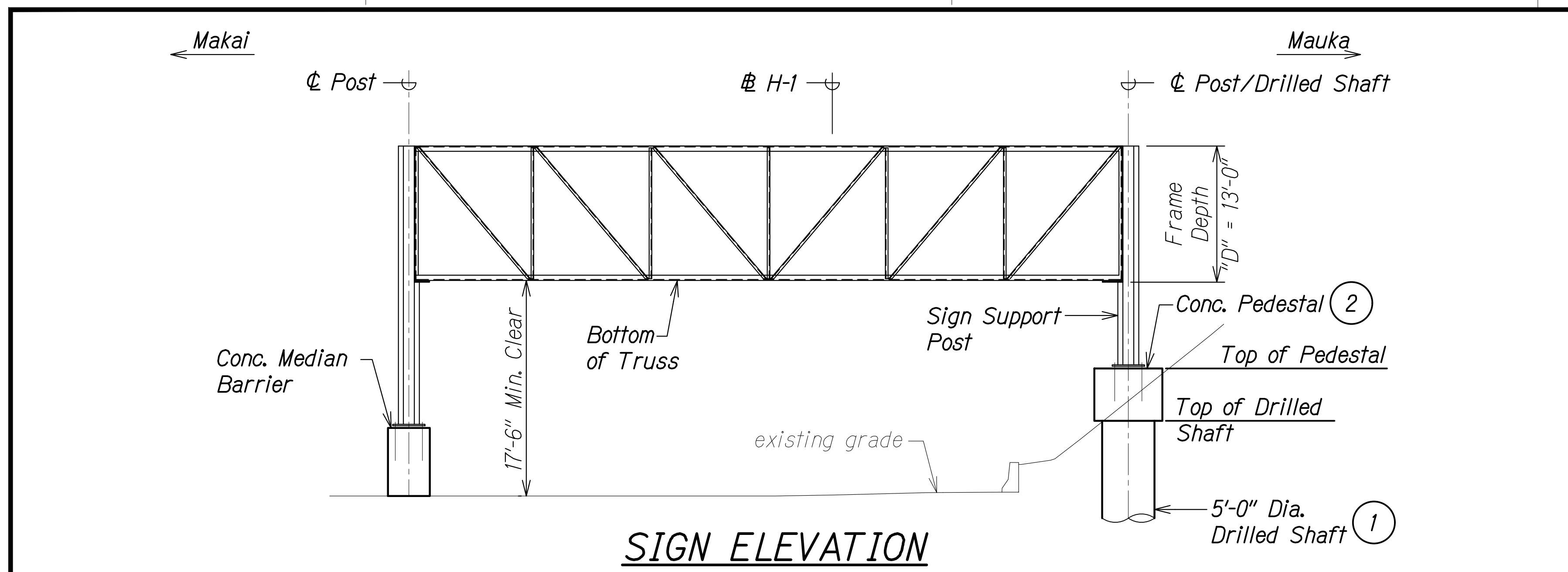
INTERSTATE ROUTE H-1 AND H-201
DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
FAP NO. NH-0300(205)

Scale: None Date: Oct. 2023

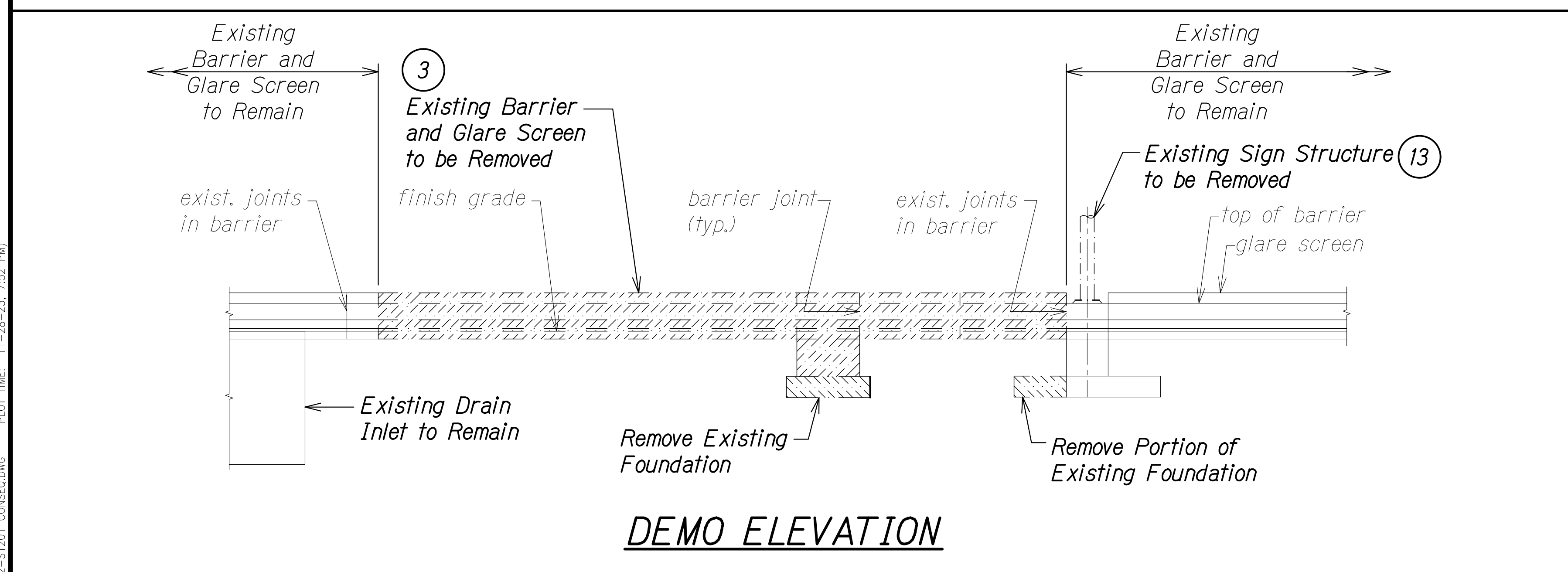
SHEET No. **184** OF 1 SHEETS

1/25/24	1	Add. 1 - Revised Schedule
DATE		REVISION

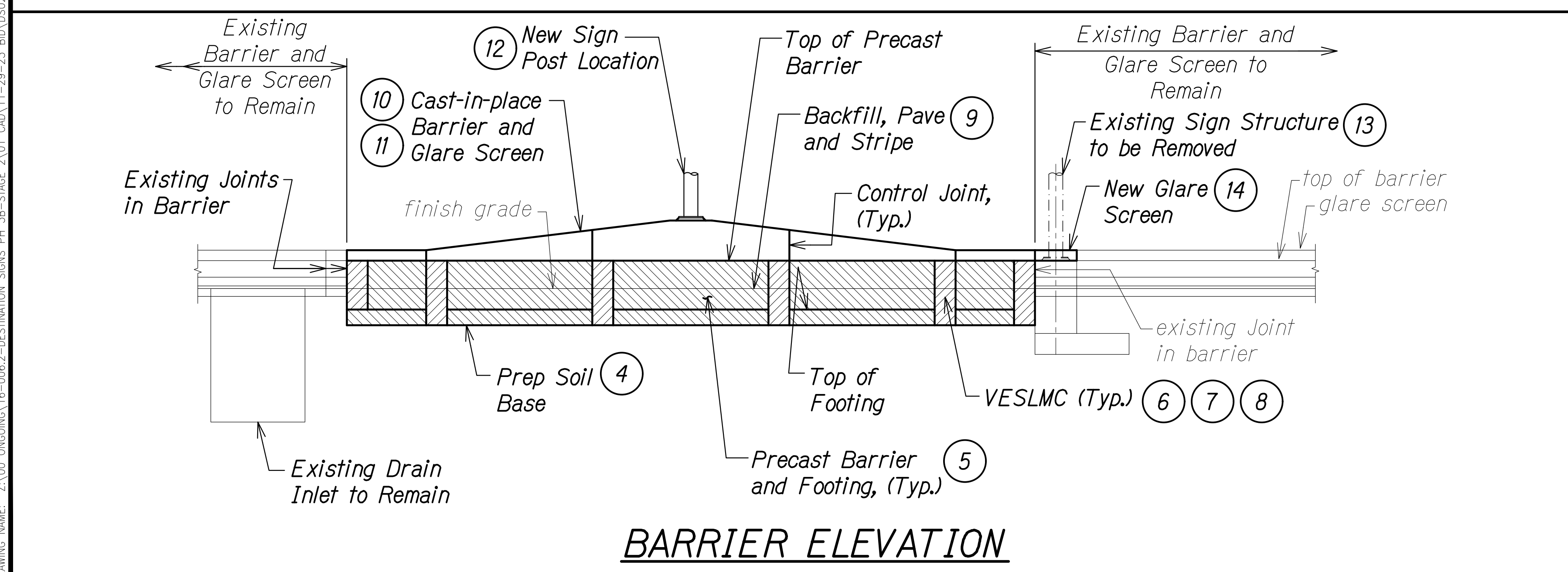
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-0300(205)	2024	185	197



SIGN ELEVATION



DEMO ELEVATION



BARRIER ELEVATION

CONSTRUCTION SEQUENCE - SIGN HIWB-421

Traffic Control Phase 3A

- ① Install drilled shaft
- ② Install drilled shaft pedestal

Traffic Control Phase 3D - First Weekend Closure

- ③ Remove existing barriers
- ④ Prep soil base
- ⑤ Install precast barriers and footings. Plumb with leveling jacks and grout under footings.
- ⑥ Install VESLMC pour strip rebars and form.
- ⑦ Pour VESLMC pour strips.
- ⑧ Strip forms after VESLMC attains 3000 psi strength.
- ⑨ Backfill, pave, and stripe. At this stage, the new barriers shall be fully functional.

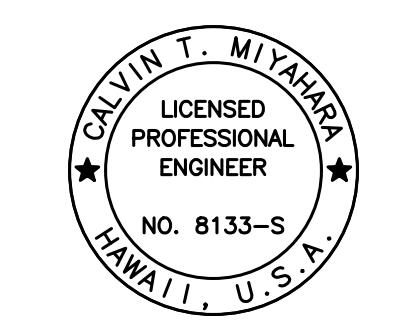
Traffic Control Phase 3D - Second Weekend Closure

- ⑩ Prep and pour cast in place top of barrier and glare screen.
- ⑪ Strip forms after concrete reaches 2500 psi.

Traffic Control Phase 3C - Full westbound closure and median eastbound lane

- ⑫ Install new sign structure including signs
- ⑬ Remove existing sign structure
- ⑭ Remove anchor bolts, patch concrete and complete glare screen

Note that work area shall be shielded by barriers or other traffic control devices as required in the Civil plans.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Calvin Miyakawa
 SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

CONSTRUCTION SEQUENCE

INTERSTATE ROUTE H-1 AND H-201
 DESTINATION SIGN UPGRADE/REPLACEMENT, PHASE 3B
 FAP NO. NH-0300(205)

Scale: As Noted Date: Oct. 2023

SHEET No. S121 OF 1 SHEETS

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

DRAWING NAME: ZA-00-ONGONGA-16-0062-DESTINATION SIGNS PH 3B-STAGE 2-01-CAD-11-29-23-BID.DSIZ-S1201-CONSEQ.DWG PLOT TIME: 11-28-23, 7:52 PM