GENERAL NOTES

- See also:
 - Special notes on drawings
 - Contract Special Provisions.
 - Hawaii Standard Specifications for Road, Bridges and Public Works Construction, 1999
- Discrepancies contractor shall verify all dimensions and conditions and shall report any discrepancies in writing to the Engineer before commencing work or ordering materials.
- All new materials and workmanship shall conform to the requirements of the local building code in addition to the codes cited.
- Details shown on drawings shall be typical for all similar conditions. Modify details for special conditions as directed by the Engineer. CONSTRUCTION NOTES
- Neither the professional activities of representatives of the State of Hawaii (the State) including SSFM International, Inc. (SSFM), nor the presence of the State and SSFM or the State's and SSFM's employees at a construction site, shall relieve the general contractor and any other entity of their obligations, duties, and responsibilities including, but not limited to, construction means, methods, sequences, techniques, or procedures necessary for performing, superintending, or coordinating all portions of the work of construction in accordance with the contract documents and any health or safety precautions required by any regulatory agencies.
- The Contractor shall notify the Engineer at least 48 hours in advance for excavations, installing reinforcing, and concrete
- Construction loading shall not exceed the design live load unless special shoring is provided. Allowable loads shall be reduced in areas where the structure has not attained its full design strength.
- See architectural drawings for chamfers, edge radii, drips, reglets, finishes, and other non-structural items not shown or specified on structural drawings.
- Fill material:

EARTHWORK NOTES

- Shall be "non-expansive" in character, and of an acceptable gradation. Samples shall be submitted or shown to the State Testing Lab for approval before delivery to the site.
- Fill under slabs on grade shall meet requirements for "Aggregate for Untreated Base" (3/4" max).
- Compaction:
- Backfill around footings and foundations shall be compacted in 6" layers.
- Fill shall be placed in successive loose layers 6" deep which shall each be compacted at optimum moisture content to a compaction equal to or better than 95% of maximum density as determined by ASTM D 1557.
- All excavations shall be protected and guarded by the Contractor against danger to life, limb and property.
- All excavations shall be considered incidental to various contract items unless shown in the proposal schedule.

EARTHWORK NOTES (CON'T)

Shoring, sheeting, cribbing and lagging, as required to preserve the excavations, earth banks and adjacent structures and property free from damage resulting from the work shall be provided and installed by the Contractor at no cost to the State.

CONCRETE BLOCK NOTES

- All standard units shall be 2-cell type conforming to ASTM C90, f'm=1,500psi, unless otherwise shown.
- Minimum reinforcing, unless otherwise shown, shall be:
 - Vertical bars #5 at 32" o.c. with bars also at ends, corners, and intersections. Provide dowels same as for concrete walls.
 - Horizontal steel 2— #4 at 32" o.c. and #5 at top of walls with connections to concrete walls or columns as shown. Reinforcing shall be continuous around all corners and intersections.
- All cells shall be solidly filled with grout.
- Provide vertical control joints in walls at 60 feet o.c. subject to Engineer's approval.
- Reinforcement grade, bar bends, details, laps, etc., shall be the same as for concrete.
- Concrete block units shall be laid in running bond pattern unless otherwise specified and/or shown.
- Mortar shall conform to ASTM C270, type M or S.
- Grout shall conform to ASTM C476 with a minimum strength of 2500 psi.

CONCRETE NOTES

All concrete shall develop the following minimum ultimate compressive strengths, with corresponding maximum size of aggregates and slumps as follows (unless shown elsewhere in schedules):

		28 day Strength	Maximum Size		
	Element	(psi)	Aggregate	Slump	
7	1. Footings and pedestals	Class A	1 1/2"	3 1/2"±1/2"	
,	2 Slabs	4000	3 / /"	3 1 /0"±1 /0"	

- Admixtures: Use of admixture at Contractor's option, but subject to Engineer's approval.
- Unless otherwise shown, construction joints shall be located by the Contractor subject to the approval of the Engineer. They shall be so located as to least Impair the strength of the structure and to minimize shrinkage stresses. Provide dowels as directed and thoroughly clean and roughen surfaces before proceeding with next pour (this requirement applies to floors and walls).
- The use of any calcium chloride in any concrete is prohibited.

REINFORCING STEEL NOTES

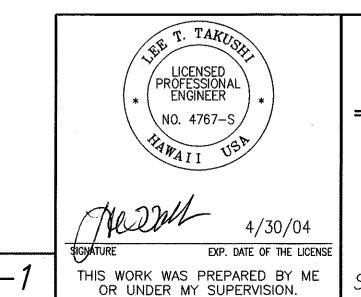
- A. Strengths unless otherwise noted on plans, all reinforcing bars shall be ASTM A615, Grade 60. Stirrups and ties shall be Grade 40.
- B. Splices:
 - Lengths shall be 48 bar diameters or 2'-0" whichever is greater, unless otherwise shown.
 - Locations unless shown otherwise:
 - Walls horizontal reinforcing alternately staggered 3'-0" apart.
 - Slabs:
 - Top bars at midspan
 - Bottom bars at supports
- C. Minimum concrete clear cover:
 - Footings, etc., poured against earth . . . 3" Footings, etc., poured against
 - Pedestals (from ties or stirrups) . . 1 1/2"
 - Walls and slabs exposed to weather or ground:
 - (a) #5 bar or smaller 1 1/2"

forms and later exposed to earth . . . 2"

- (b) #6 bar or larger 2'
- D. Bar bends, hooks, and offsets shall be in accordance with The ACI recommendations.
- E. Minimum reinforcing: if not otherwise shown, minimum reinforcing shall be as follows:
 - Slabs: #4 at 12" top and bottom with top bars extended 3 feet beyond supports or bent 12" into support at the far face. Bottom bars shall extend 6" into support and shall be hooked.

Cold-Formed Steel Notes

- A. Existing Metal Shop Building purlins and girts are to be removed and replaced with new cold-formed metal framing. The Contractor shall have the new purlins and girts designed by a registered professional structural engineer according to portions of the 1994 Uniform Building Code and the current Metal Systems Manual of the Metal Building Manufacturer's Association. The design calculations and any drawings shall bear the seal of a registered professional engineer (Hawaii registration).
- B. Design loads:
 - All building dead loads plus the following: 1. Roof live loadSee Design Data 3. Seismic loads See Design Data



STATE OF HAWA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURAL GENERAL NOTES

WAIMEA BASEYARD IMPROVEMENTS WAIMEA BASEYARD PROJ. No. HWY-H-05-00M

Scale: As Noted

FED. ROAD STATE

PROJ. NO.

HAWAII HAW. HWY-H-05-00M 2003

FISCAL SHEET TOTAL YEAR NO. SHEETS

19

Date:February, 2003

OF 15 SHEETS SHEET No.

METAL DECKING NOTES

- Metal decking shall be capable of supporting the loads specified on the drawings for the indicated spans.
- Minimum gage thickness of metal decking shall be 22 gage.
- Deflection of roof decking shall not exceed 1/240 of span under full design load.
- All metal deck units shall be attached to their supports and to each other to create a continuous diaphragm capable of resisting diaphragm shears of at least 460 pounds per foot for roofs. Minimum fastening shall consist of fusion welds. Manufacturer's specifications shall be followed for attachment requirements.
- Steel deck work shall be in accordance with the "Basic Design Specifications" of the Steel Deck Institute.

STRUCTURAL STEEL NOTES

- Unless otherwise noted, all structural steel members, angles etc., shall conform to ASTM A36. Hollow structural steel members shall conform to ASTM A500 Grade B.
- All welding —— whether shop or field —— shall be done by certified welders only.
- Unless shown otherwise all connections shall develop the full strength of member connected for shear and flexure.
- Plate inserts embedded in concrete shall have the anchors (bars or rods) fully welded to develop the full strength of the anchors.
- Unless shown otherwise, all embedded bolts, anchors, plates, inserts, etc., shall be hot-dipped galvanized after fabrication.
- Prime and paint according to manufacturer's recommendations and as follows (final color to be selected by the State):
 - 1. Surface preparation: Near White Cleaning per SSPG-SP10.
 - Primer: shop applied; one (1) coat; inorganic zinc rich primer. 2.5-4.0 (dft). field touch-up primer to be organic zinc rich primer, 2.5 - 4.0 (dft).
 - Intermediate coat: epoxy polyamide, 4.0 6.0 (dft).
 - Finish coat: aliphatic polyurethane, 2.0 3.0 (dft).
 - All primers and paints shall be subject to the approval of the engineer. Acceptable manufacturers include Ameron, Carboline, International Paint, and Valspar.
- Unless shown otherwise, all bolts shall be ASTM A325, galvanized. Anchor bolts shall be ASTM A307, galvanized.
- All structural members shall be galvanized.

TIMBER NOTES

- Timber species and grade:
 - See specifications.
 - Beams and stringers: Douglas fir; no. 1.
 - Posts and timbers: Douglas fir; no. 1.
 - Light framing (2" to 4" thick, 2" to 4" wide), plates, Blocking, and studs (2" to 4" thick", 2" to 8" wide): Hemlock, hem, or Douglas fir; No. 2 for walls.
 - Decking: Douglas fir; no. 2.
- Wood treatment: see specifications.

TIMBER NOTES (CON'T)

- The contractor shall verify all framing conditions with the floor framing plans. Special attention shall be required for coordination of architectural details and elevations with framing requirements.
- Unless specified otherwise, all posts shall be aligned from top of concrete footings or slab to roof framing system (or upper floor framing system).

MINIMUM NAILING SCHEDULE

TIMBED COMMECTION SCHEDULE			
Solid blocking to joist	4 – 8d		
Continuous header to stud, toe nail	4 – 8d		
Built-up corner studs	16d at 36" o.c.		
Rafter (or truss) to plate, toe nail	3 – 8d		
Top plate, laps, and intersections, face nail	2 – 16d		
Upper plate to lower plate, face nail	16d at 16" O.c.		
Lower plate to stud, face nail	2 - 20d		
• •	2 _ 20d		
Double top plate:			
Stud to sole plate, toe nail	4 - 8d		
Sole plate to joist or blocking, face nail	16d at 16" o.c.		
Bridging to joist, toe nail each end	2 – 8d		
Joist to top plate or girder, toe nail	3 – 8d		
Connection	Common nailing		
Commonstian	Cananaan nailina		

TIMBER CONNECTION SCHEDULE

Condition	Simpson connector
4 x 4 post to concrete foundation	CB
$4 \times 4'$ or $2 - 2 \times 4$ post to $4 \times beam$	CC
Joists framing into side beam	BCC
Joist on top of supporting beam	H10
Notes: All metal connectors shall be galvanize	d.
All specified Simpson connectors may be subtituted with approved equal.	0 <i>e</i>

SPECIAL INSPECTION NOTES

- Special inspection provisions of section 1701 of the 1994 Uniform Building Code (as amended by the County of Hawaii) govern portions of the structural work as described in the construction documents. The Special Inspector shall be hired by the State.
- The following structural work for this project require special inspections:
 - Concrete
 - Reinforcing Steel
 - Welding
 - Structural Masonry
- Timber Connectors
- The minimum responsibilities of the Special Inspector shall be as outlined in the "Special Inspection Recommended Standard" of Practice", 2nd edition, published by the Structural Engineers Association of Hawaii.
- It shall be the responsibility of the General Contractor to notify the Special Inspector of all items requiring special inspection a minimum of 48 hours in advance.
- Special inspections do not relieve the General Contractor of his responsibilities to complete the project in accordance with the construction documents and to be responsible for safety on the jobsite.

SPECIAL INSPECTION NOTES (CON'T)

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-H-05-00M	2003	20	40

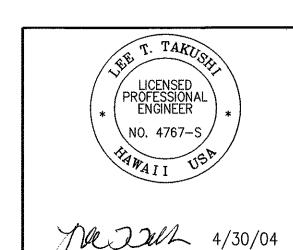
- F. The Special Inspector shall submit a final report to the Building Department, Architect, Structural Engineer and State stating whether the work requiring special inspection was, to the best of his/her knowledge, in conformance with the construction documents and the applicable workmanship provisions of the building code.
- The Special Inspector shall be certified as a special inspector by the Building Department or the International Conference of Building Officials (ICBO).

BUILDING DEPARTMENT NOTIFICATION

- A. The Hawaii County Building Department requires the following inspections:
 - 1. preconstruction
 - 2. foundations
 - 3. framing
 - 4. final
- It shall be the responsibility of the General Contractor to notify the Building Department 48 hours prior to each inspection.

DESIGN DATA

- Superimposed live loads:
- B. Additional loads:
- C. Lateral loads:
 - Uniform building code 1994 edition; zone 3; Seismic:
 - Importance factor = 1.0
 - Wind: Uniform building code - 1994 edition 80 mph Design wind velocity; exposure "D"; importance
- Factor = 1.0Foundations:
 - Allowable soil bearing pressure = 2,500 psf (assumed)
 - Passive pressure = 200 pcf (assumed)
 - Coefficient of friction = 0.35 (assumed)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

EXP. DATE OF THE LICENSE

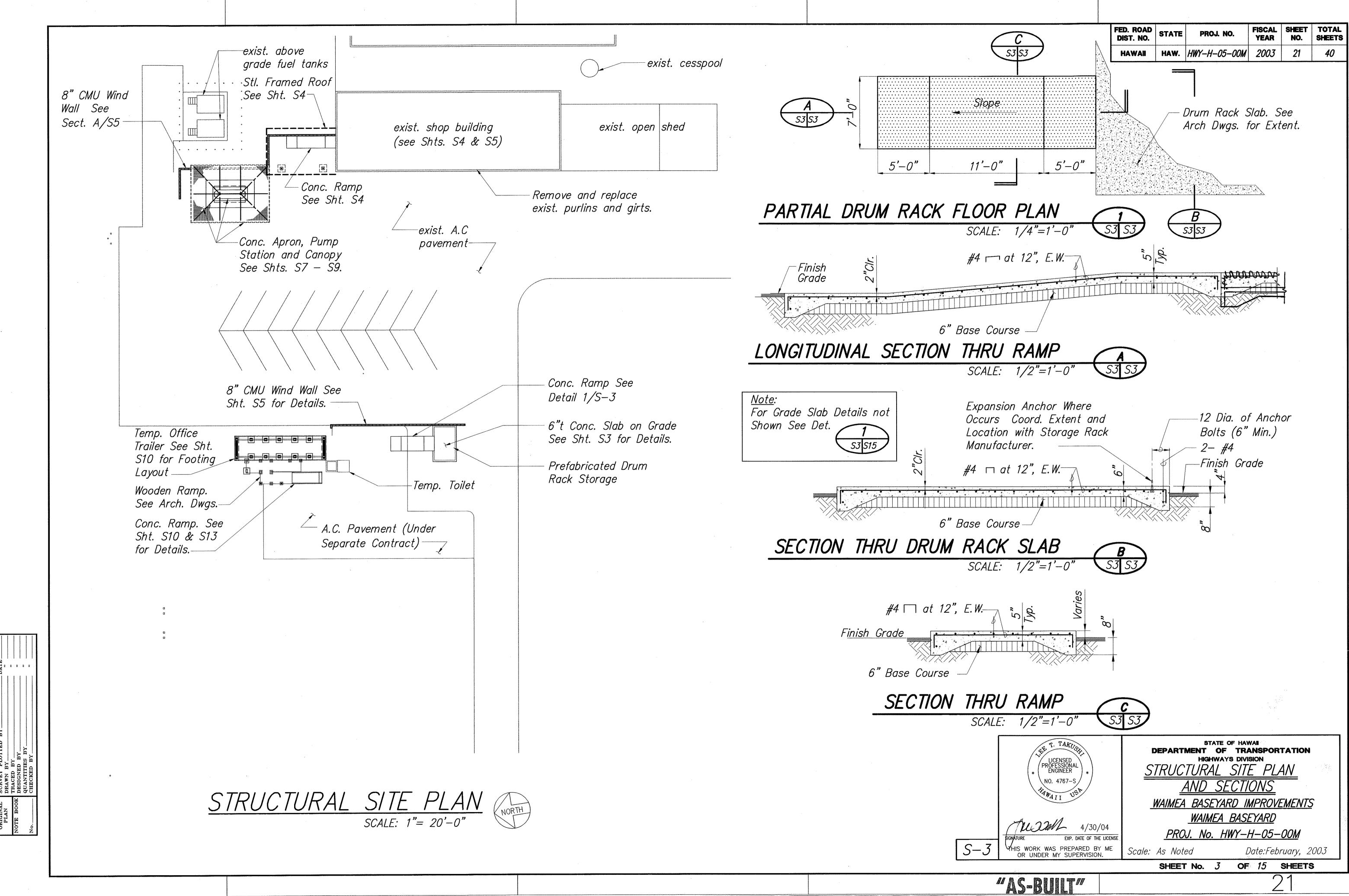
STATE OF HAWAI DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURAL GENERAL NOTES

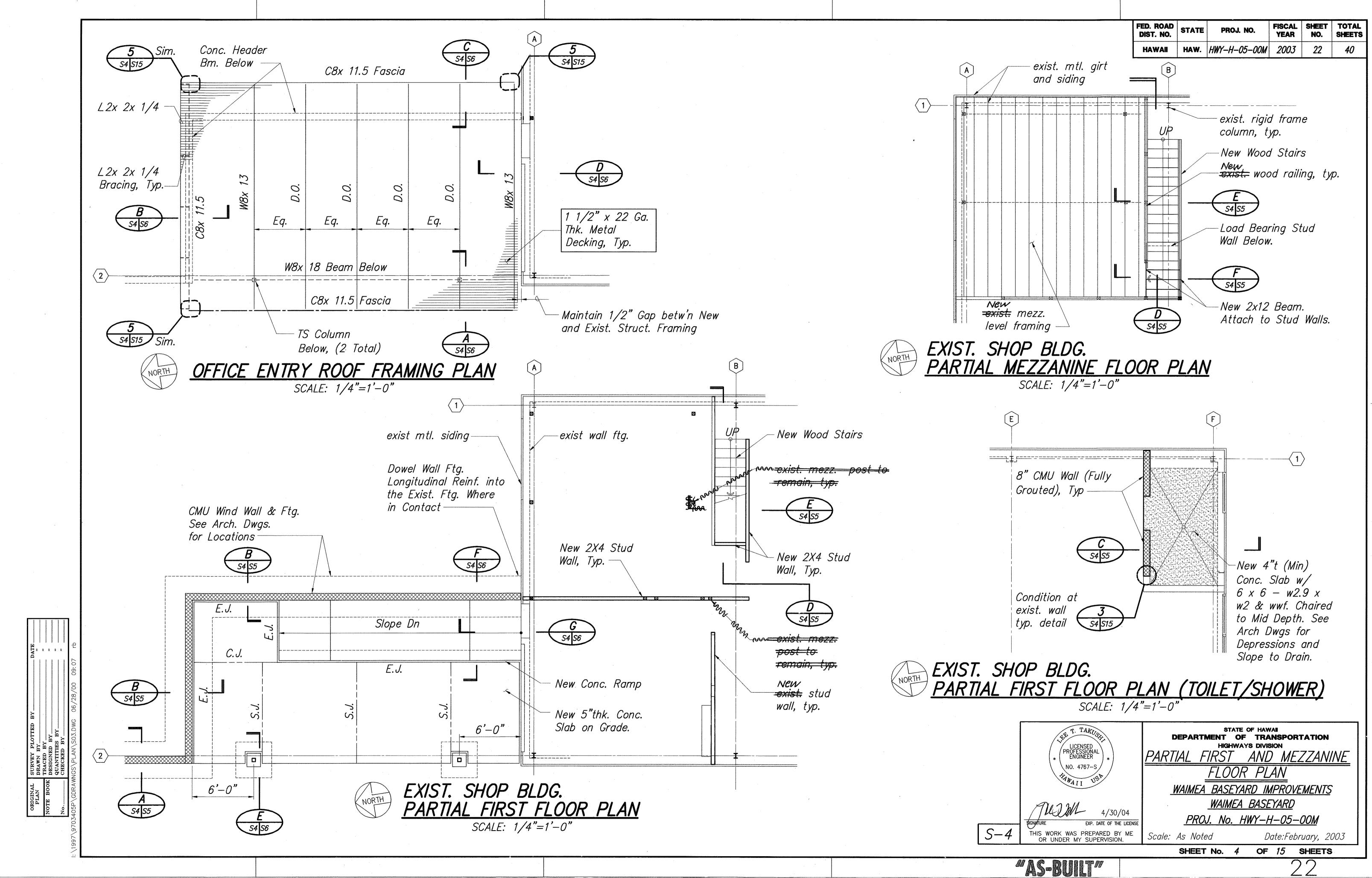
WAIMEA BASEYARD IMPROVEMENTS WAIMEA BASEYARD PROJ. No. HWY-H-05-00M

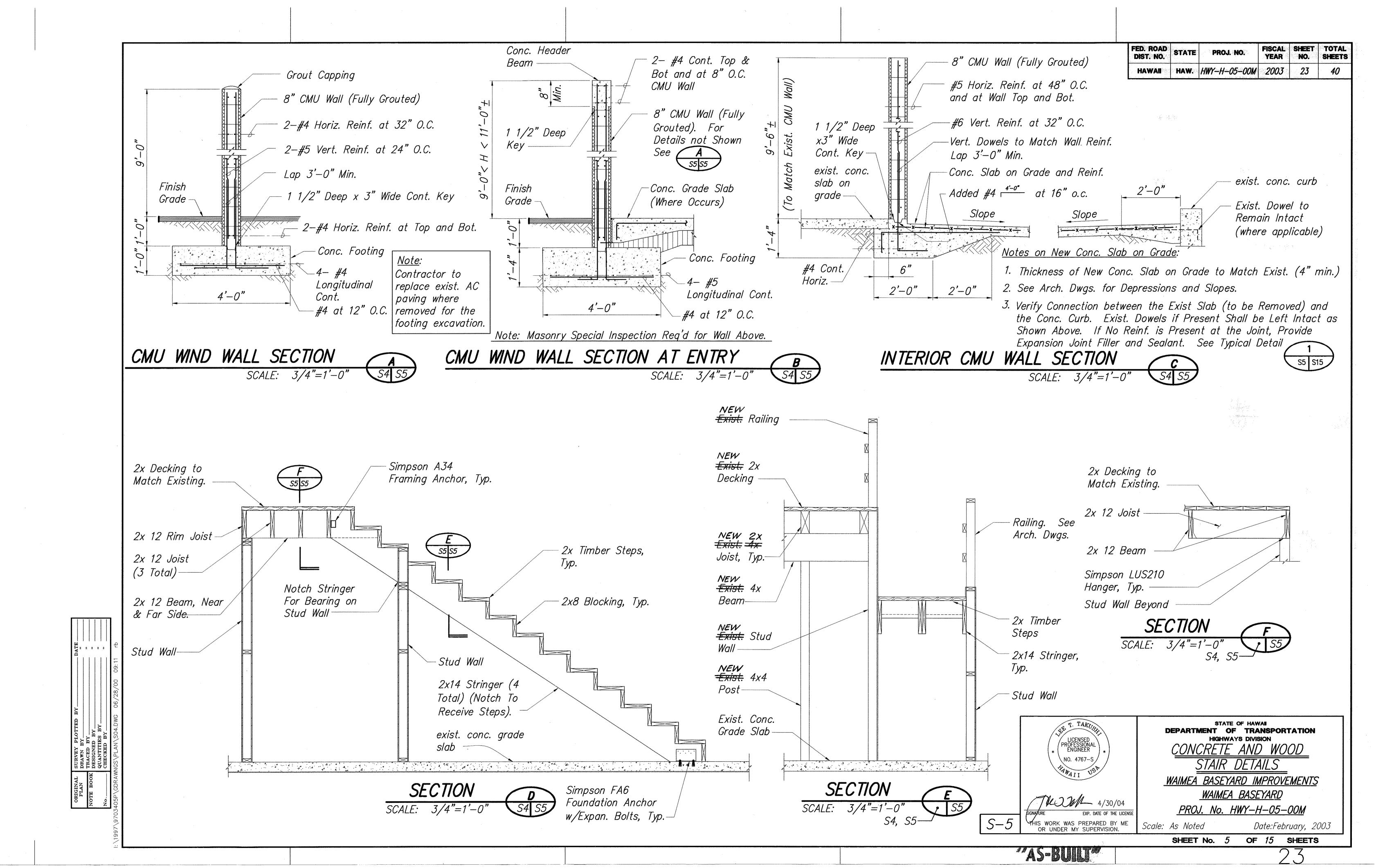
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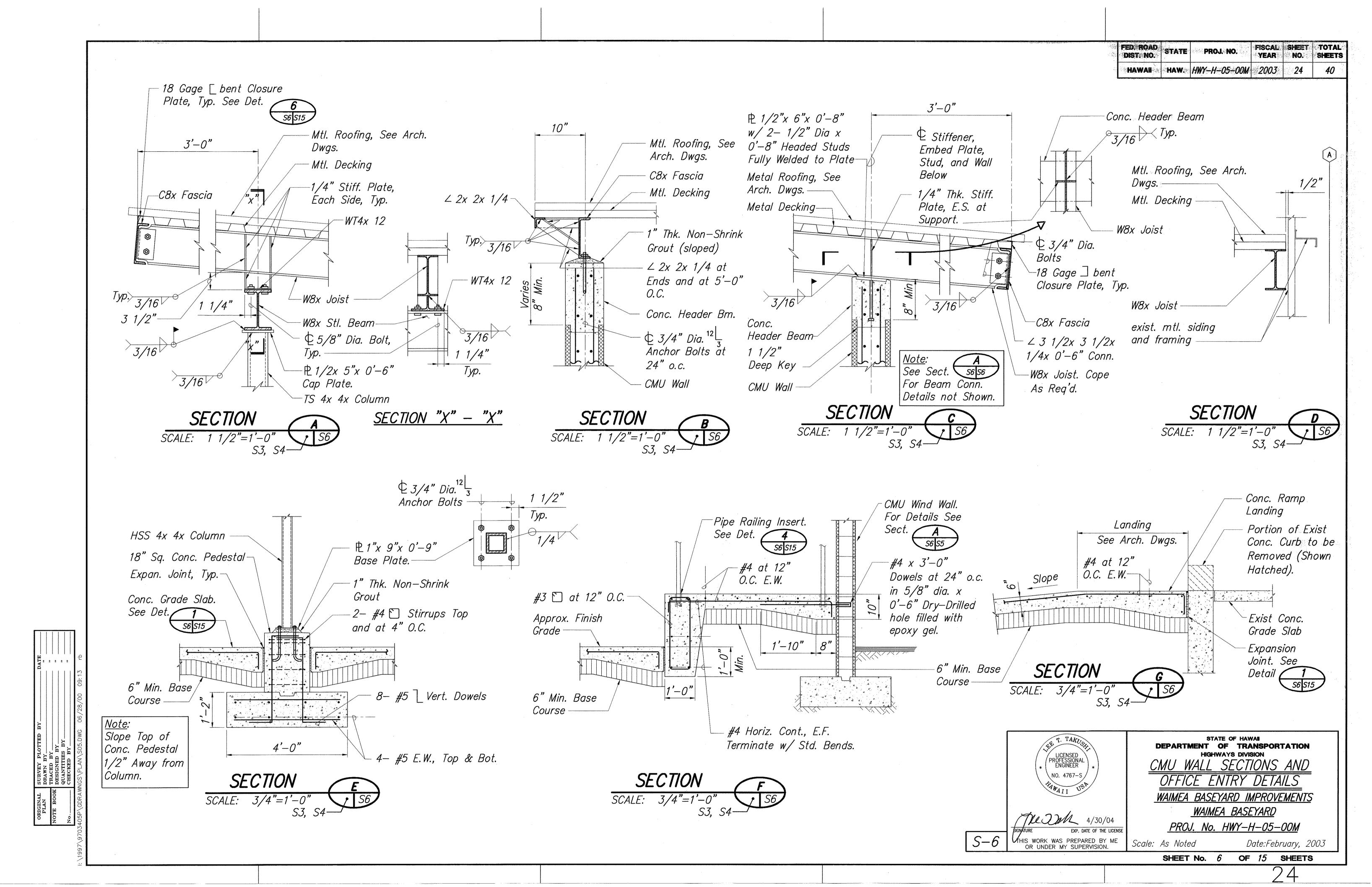
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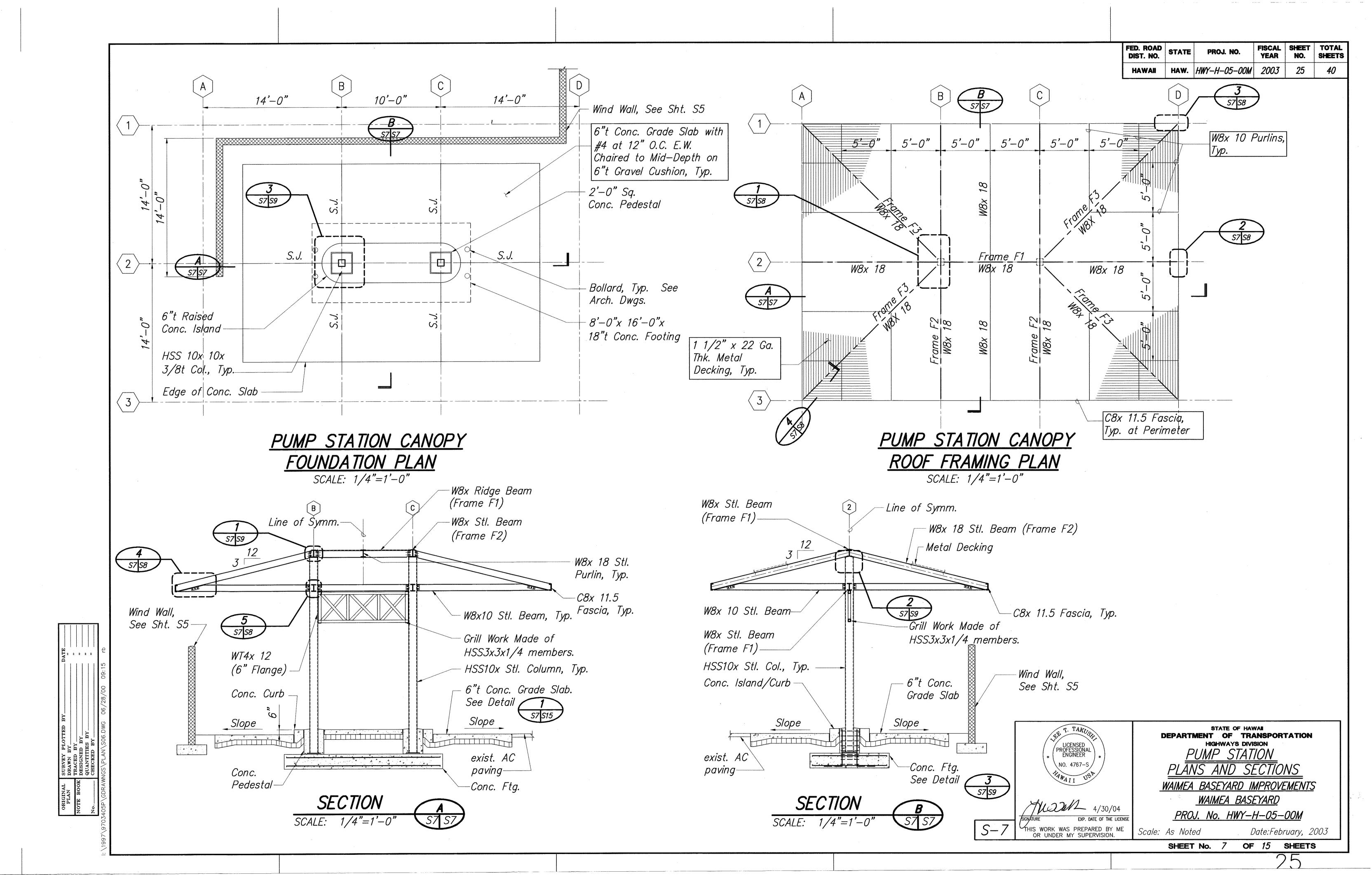
OF 15 SHEETS SHEET No. 2

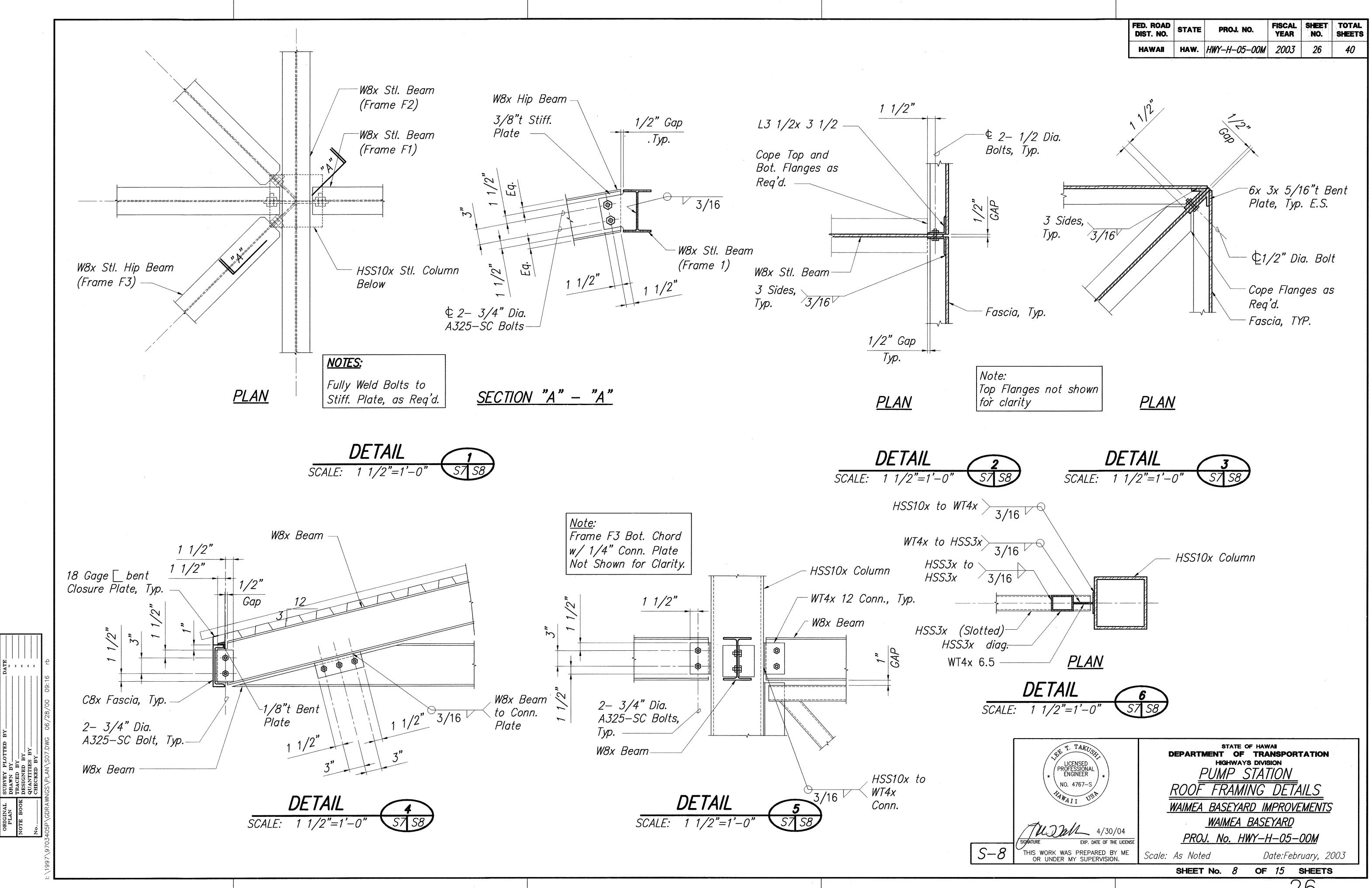


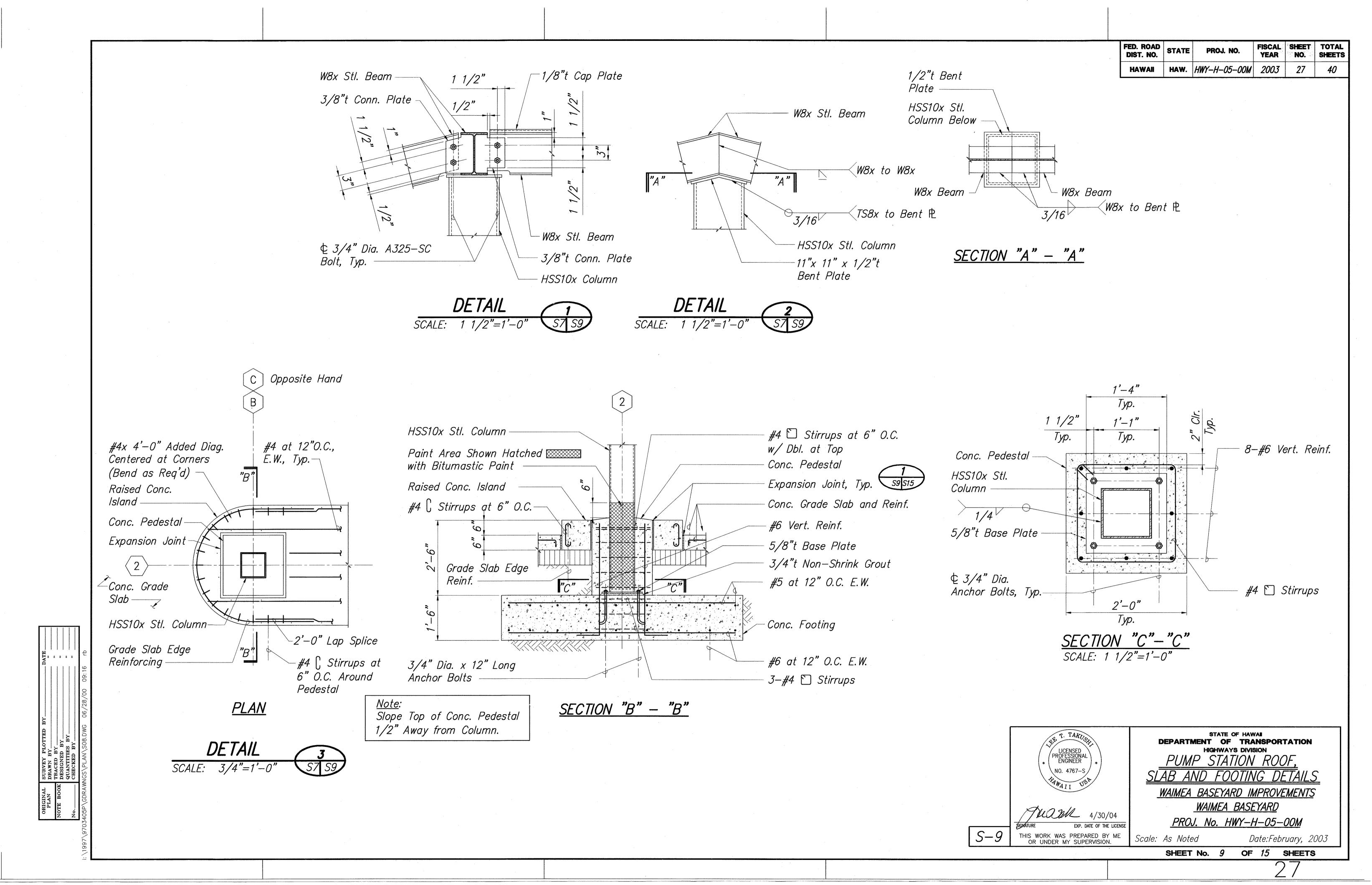


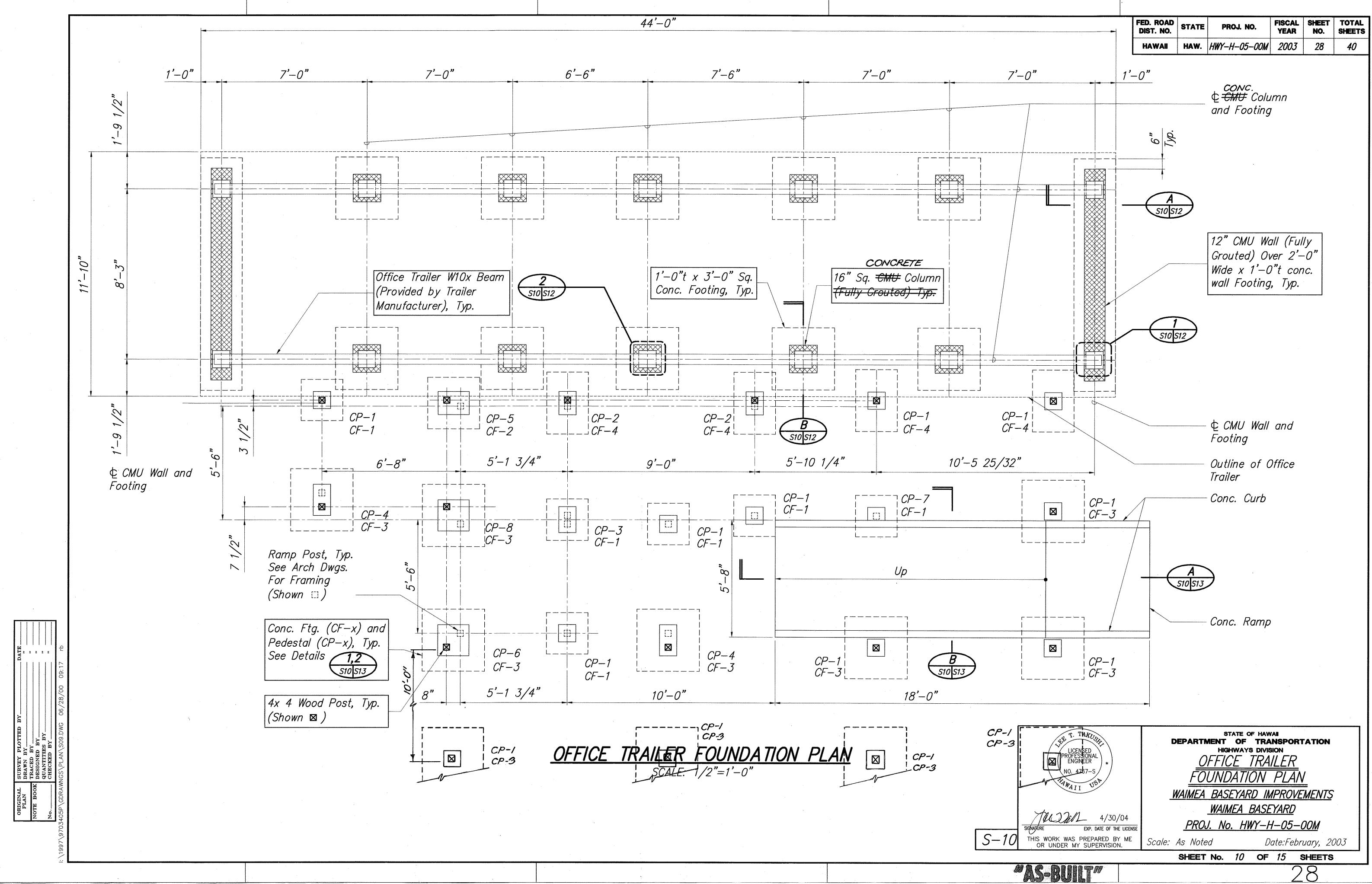


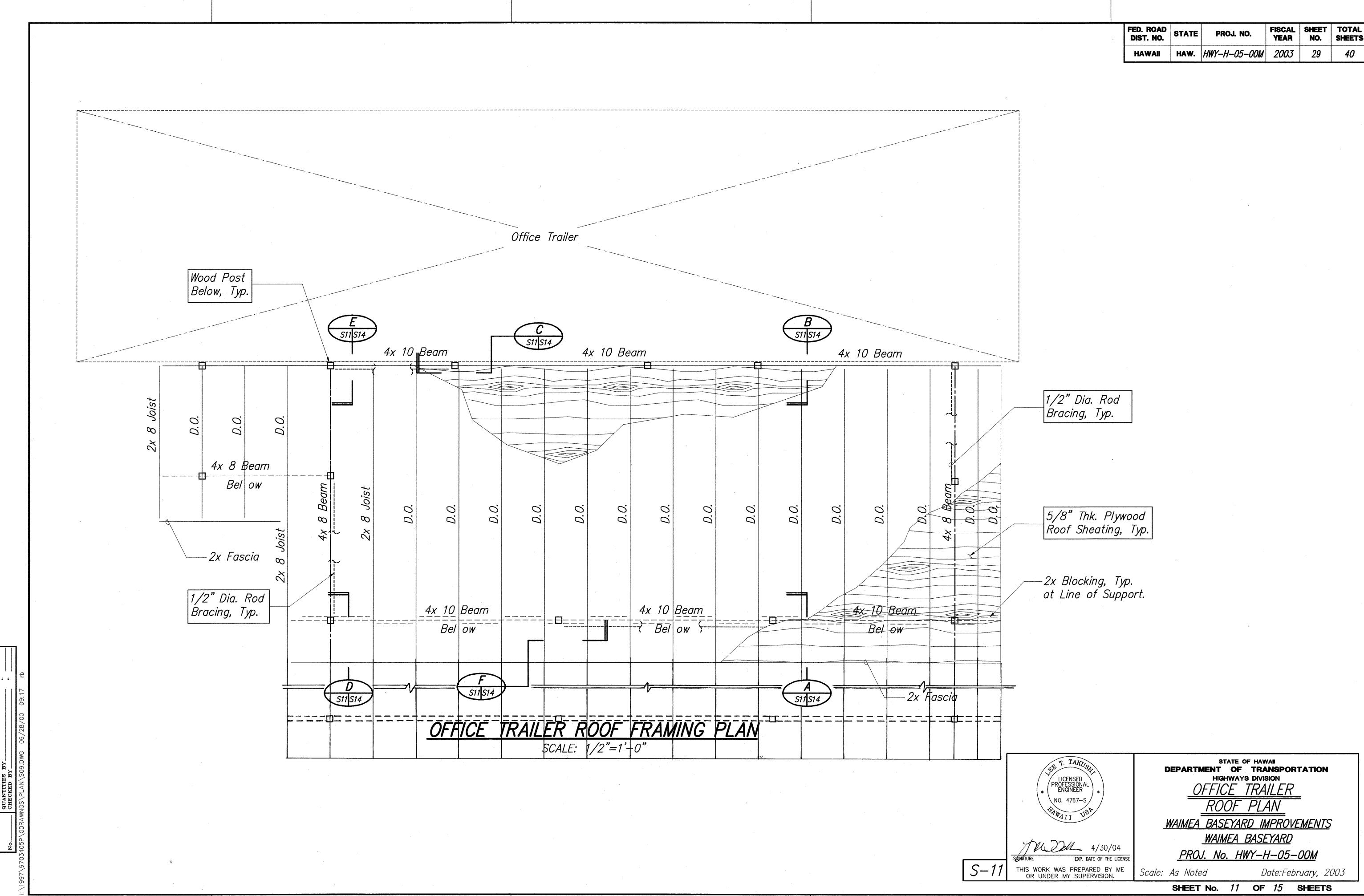












"AS-BUILT"

