FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	91	120

General:

A. Workmanship and materials shall conform to the building code of the City and County of Honolulu (Amended IBC 2012 Edition). However, where reference is made to performance conforming to other standards the more stringent shall apply.
B. The contractor shall take field measurements and verify field conditions and shall compare such field measurements and conditions with the drawings before commencing the work. Report in writing to the engineer all inconsistencies or omissions.
C. The contractor shall be responsible for methods of construction, work and job safety. The contractor shall provide temporary shoring and bracing as required for stability of structural members and systems.
D. Details noted as typical on structural drawings shall apply in all conditions unless specifically shown or noted otherwise.
E. The contractor shall be responsible for coordinating the work of all trades.
F. The contractor shall be responsible for protection of the adjacent properties, structures, streets, and utilities during the construction period. Any damage or deteriorated property shall be restored to the condition prior to the beginning of work or better at no cost to the owner.

Design Criteria:

A. Live loads
   1. Roof ---------- 20 psf
   2. Floor ---------- 125 psf
B. Soils
   1. Allowable bearing capacity:---------- 3000 psf
   2. Foundation coefficient of friction:---------- 0.35
C. Wind design data
   1. Basic wind speed (3-second gust, ultimate):---------- 130 mph
   2. Risk category:---------- II
   3. Exposure category:---------- D
D. Earthquake design data
   1. Risk category:---------- II
   2. Mapped spectral response accelerations
      a. Short period:---------- 0.574g
      b. 1-sec period:---------- 0.166g
   3. Site class:---------- D
   4. Design category:---------- D

Reinforcing Steel:

A. New reinforcing steel shall be deformed bars conforming to ASTM A615, Grade 60.
B. Welded reinforcing steel shall be low alloy deformed bars conforming to ASTM A706, Grade 60.
C. Plain welded wire fabric shall conform to ASTM A185, galvanized; deformed welded wire fabric shall conform to A497, galvanized. Only flat sheets of welded wire fabric shall be used. No rolled welded wire fabric reinforcement will be allowed.
D. Clear concrete coverage for reinforcing bars shall be as follows, unless otherwise noted:
   1. Footing, wall, etc. Cast against earth:---------- 3"
   2. Footing, wall etc. Formed and exposed to earth:---------- 2"
   3. Wall faces exposed to earth or weather: ---------- 2"
   4. All others:---------- 2"

Reinforcing Steel Continue:

E. Splices:
   1. Reinforcing steel shall be spliced only where indicated on plans. Provide lap splice length per typical details and schedule, unless otherwise noted.
   2. Plain welded wire fabric shall be lapped 8 inches or one full mesh plus 2 inches, whichever is greater.
   3. Deformed welded wire fabric shall be lapped 12 inches or one full mesh plus 2 inches, whichever is greater. The overlap measured between the outmost cross wires of each fabric sheet shall not be less than 2.0 inches.
   4. Offset laps of adjoining welded wire fabric sheet widths to prevent continuous laps in either direction.
F. Bar bends and hook shall be "standard hooks" in accordance with ACI 318.

Concrete:

A. Concrete construction shall conform to american concrete institute ACI 318.
B. Concrete shall be normal weight and shall have the following minimum 28 days compressive strength of 4000 psi.
C. All inserts, anchor bolts, plates, etc. Embedded in concrete shall be H.D. Galvanized unless other wise noted.
D. Conduits, pipes, and sleeves passing through concrete area not conforming to typical details shall be located and submitted to the engineer for approval.
E. Construction joints may be located by the contractor and submitted to the engineer for approval. Construction joints shall be made and located as not to impair the strength of the structure and to minimize shrinkage stresses. All construction joints shall be cleaned, laitance removed and wetted. See typical details for specific requirements.
F. Non-shrink grouts shall be premixed compound consisting of non-metallic. Aggregate and shall be in accordance with ASTM C1107. Non-shrink grout shall be non-staining types, cement, water reducing and plasticizing agents capable of developing minimum compressive strength of 4,000 psi in 3 days and 7,000 psi in 28 days.
G. Joint filler shall be ASTM D1751 or ASTM D994; asphalt impregnated fiberboard or felt 1/2 inch thick.
H. Unless otherwise noted, chamfer all concrete edges 3/4".
I. Concrete delivery tickets shall record all free water in the mix: at batching by plant, for consistency by driver, and any additional request by contractor if permitted by the mix design.
J. Reinforcing bars, anchor bolts, inserts and other items to be cast in the concrete shall be secured in position prior to placement of concrete.

Structural Steel:

A. Fabrication and erection of structural steel shall conform to the American Institute of Steel Construction manual of steel construction, thirteenth edition.
B. Structural steel shall conform to ASTM A36 unless otherwise noted.
C. Bolts shall conform to ASTM A307, Grade A unless otherwise noted.
D. Welds and welding procedures shall conform to the Structural Welding Code AWS D1.1 of the American Welding Society.
E. Welding shall be performed by welders prequalified for welding procedures to be used.
F. Welding electrodes shall be E70xx.
G. All anchor bolts, plates, and other items to be cast in concrete shall be hot-dipped galvanized according to ASTM A153 unless otherwise noted.

Concrete Masonry Units (CMU):

A. Concrete masonry units shall be type ii, normal weight hollow load-bearing units conforming to ASTM C-90 and have a minimum compressive strength of 1,500 psi. The units shall be sampled and tested per ASTM C-140.
B. Mortar shall be type m conforming to ASTM C270 and have a minimum compressive strength of 1900 psi at 28 days. Pre-measured bags for mortar are permitted if in conformance with all requirements stated above.
C. Grout shall conform to ASTM C476 with a minimum compressive strength of 2,000 psi at 28 days. The compressive strength of grout shall be determined in accordance with ASTM C-1019.
D. All cells and bond courses shall be grouted.
E. Masonry construction shall comply with section 2104 of the IBC and ACI 530.1-11 / TMS 402-05, unless noted otherwise.
F. Grout lift height shall not exceed five (5) feet.
G. When grouting is stopped for one hour or longer, horizontal construction joints shall be formed by stopping the grout pour 1 1/2 inches below the top of the uppermost unit.
H. The contractor shall locate contraction joints so as not to impair the strength of the structure and to minimize shrinkage stresses. Submit location of contraction joints to the engineer for approval, unless location is specifically noted. Maximum spacing between contraction joints shall be 25 feet, unless noted otherwise.
I. Walls shall be constructed in conventional running bond, unless otherwise noted.
J. See architectural drawings for laying pattern, height of units, surface texture, and joint type.
K. Exposed joints shall be finished with a concaved compressed finish, unless otherwise noted.
L. Open-ended blocks may be substituted for standard concrete masonry units at contractor's option.

Vapor Barrier:

Vapor barrier shall have the following qualities:

A. Conform to ASTM E 1745 class A.
B. Minimum thickness of 15 mils.
C. Minimum wvtr as tested by ASTM E 96 of 0.008.

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

KEN KAZUO HAYASHIDA
LICENSED PROFESSIONAL ENGINEER
No. 6818-S
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION

KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL GENERAL NOTES - 1

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. S-1 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

91

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	92	120

Foundation:

A. Foundation design is based on Geotechnical Report by Geolabs, inc., dated October 27, 2016.
B. Contractor shall provide de-watering of excavated areas, as required.
C. Contractor shall provide design and installation of all cribbing, sheeting, and shoring necessary to preserve excavations and earth banks. Shoring shall conform to OSHA regulations.
D. Footings shall bear on undisturbed in-situ firm soils bottom of footings shall be compacted to provide a relatively firm and smooth bearing surface prior to placement of reinforcing steel and concrete. If soft and/or loose materials are encountered at the bottom of footing excavations, they shall be over-excavated to expose the underlying firm materials. The over-excavated area shall be backfilled with select granular material compacted to a minimum of 90% relative compaction or the footing bottom may be extended down to the underlying competent material. Contractor may substitute flowable concrete or the granular material upon approval from the engineer.
E. Excavations for footings shall be approved by the licensed geotechnical engineer in State of Hawaii (provided by contractor) prior to placement of concrete and reinforcing.
F. Engineered fill and backfill shall be in accordance with section 703.20 of the Hawaii Standard Specifications for Road and Bridge construction, 2005 edition.
G. Fill should be moisture conditioned to within two percent of the optimum moisture content and placed in horizontal lifts not to exceed six inches. Fill shall be compacted to minimum 90% relative density as measured by ASTM D1557, method A or D.
H. Controlled low-strength material (CLSM) shall be in accordance with entire section 314 of the Hawaii Standard Specifications for Road and Bridge construction, 2005 edition. The CLSM shall be placed as shown in the drawings or as approved by the engineer in writing.

Dimension Lumber:

A. Wood used for supporting loads shall be identified by the grade mark of a lumber grading or inspection agency that has been approved by an accreditation body that complies with American Softwood Lumber Standard DOC PS 20 or equivalent.
B. Unless noted otherwise, wood used for supporting loads shall have the following grades or better:
   1. 2x: ---------- grade no. 2
C. Wood structural panels shall conform to the requirements for their type in DOC PS 1 or PS 2. Each panel or member shall be identified for grade and glue type by the trademarks of an approved testing agency.
D. Wood supporting permanent structures shall be preservative treated and conform to the requirements of the applicable AWPA standard for the species, product, preservative, and end use. Preservative shall conform to AWPA C2.
E. Wood required to be preservative treated shall bear the quality mark of an inspection agency.
F. Wood shall be at a moisture content of 19 percent or less before being covered with insulation, interior wall finish, floor coverings or other materials.
G. The number and size of nails connecting wood members shall not be less than that set forth in table 2304.9.1. Nails shall be stainless steel common nails.

Dimension Lumber Continue:

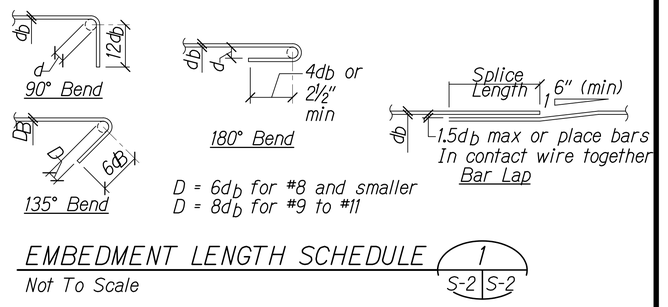
H. Nails for wood structural panel sheathing shall be placed no less than 3/8 inch from the panel edge, not more than 12 inches apart along intermediate supports, and 6 inches along panel edge bearings. Sheet type sheathing shall be arranged so that the width of a sheet shall not be less than 2 feet.
I. Metal framing anchors shall be Simpson strong tie, stainless steel or approved equal. Install per manufacturer's recommendations.
J. Place a layer of 30# roofing felt between all wood members and concrete masonry surfaces.

Special Inspections:

A. The contractor shall be responsible for ensuring that special inspection of portions of the work as required by the building code is made at the appropriate time. The contractor shall submit statement of responsibility to the owner and building department prior to the commencement of work. The contractor shall give timely notice of when and where inspections are to be made and provide access for the inspector. Frequency of inspection is defined in the IBC, section 1704 tables, as amended by the city. The contractor shall correct defective work at no additional cost to the state and pay for re-inspection as required.
B. Special inspectors shall keep records of inspections. Reports shall indicate that work inspected was done in conformance with approved construction documents. The inspector shall submit a final signed report to the state and engineer who in turn shall submit a written statement to the city certifying receipt of the final inspection letter and documenting that there are no known unresolved code requirements.
C. The following type of work listed in the IBC, section 1704, as amended by the city, requires special inspection:
   1. Inspection of fabricator/shop unless work is done by a registered and approved fabricator shop.
      a. Pre-engineered trusses
   2. Concrete construction
      a. Placement of reinforcing steel
      b. Concrete pour inspection not required per exceptions below:
         i. Concrete footings supporting buildings three stories or less in height that are fully supported on earth or rock and designed for f'c=2,500 psi.
         ii. Non structural slabs support directly on ground.
   3. Masonry construction
      a. Placement of reinforcing steel
      b. Mortar and mortar joints
      c. Placement of grout
   4. Complete load path and uplift ties.

Minimum Splice & Embedment Lengths					
Concrete Strength = 4,000 psi					
	Lap Splice		Embedment		
			Straight		
Bar Size	Bot Bar or Wall Bar	Top Bar	Bot Bar or Wall Bar	Top Bar	W/ Std Hook
#3,#4	20"	26"	16"	20"	10"
#5	26"	34"	20"	26"	12"
#6	30"	40"	24"	30"	16"
#7	44"	58"	34"	44"	18"

Notes:
1. Lengths are for concrete with rebar spaced 6 bar diameters minimum. Increase 25% for bars spaced less than 6 bar diameters.
2. "top bars" are horizontal bars with 12" or more of concrete cast below.



EMBEDMENT LENGTH SCHEDULE — 1 / S-2 | S-2

Not To Scale

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KEN KAZUO HAYASHIDA — LICENSED PROFESSIONAL ENGINEER — No. 6818-S — HAWAII, U.S.A.

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SIGNATURE — 4/30/22 LIC. EXPIRATION

KAI HAWAII, INC.

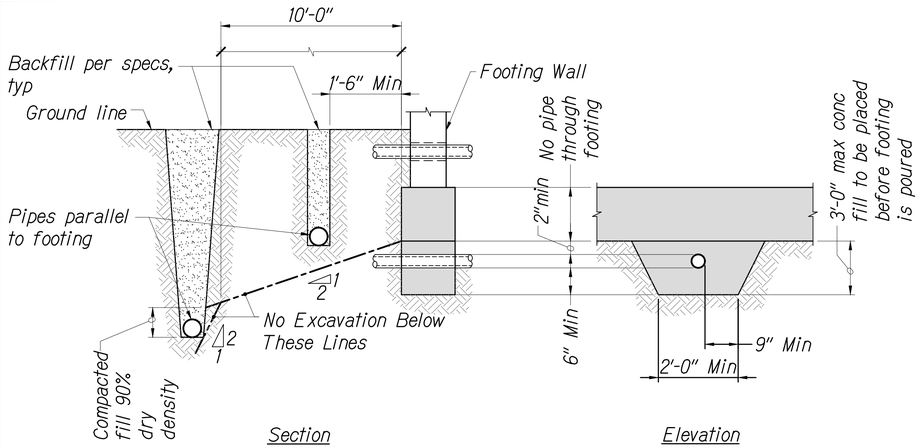
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL
GENERAL NOTES - 2
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

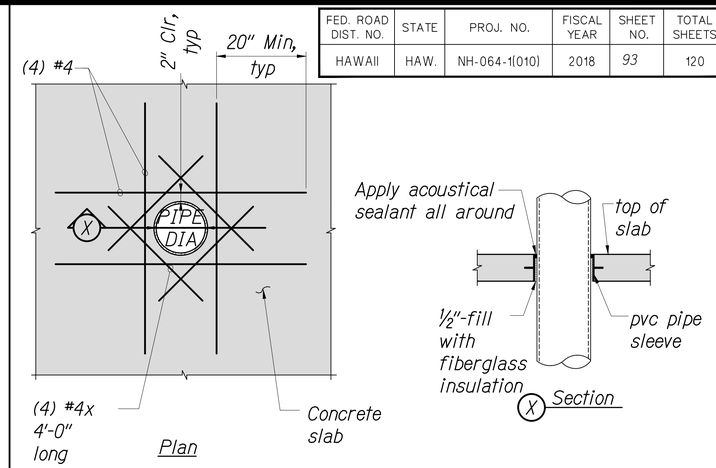
SHEET No. S-2 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E



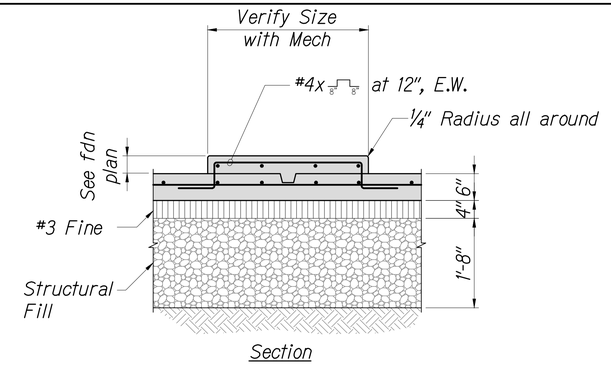
Notes:
1. For pipe perpendicular to footing more than 3'-0" below bottom of footing, trench may be backfilled with compacted fill. See specifications.
2. Depth of footing may be affected by location of pipes. General contractor shall determine exact depth and location of pipes prior to excavation for footings.

TYPICAL PIPE AT FOOTING DETAIL 1
Not To Scale — S-3 | S-3

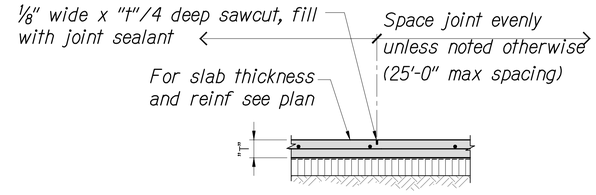


TYPICAL PIPE PENETRATION THRU FLOOR SLAB 2
Not To Scale — S-3 | S-3

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	93	120



EQUIPMENT PAD DETAIL 3
Not To Scale — S-3 | S-3



Notes:
1. Saw cutting shall occur as soon as concrete surface is firm enough to not be torn by cutting blade and before shrinkage cracking occurs, but no later than 12 hours after concrete has been poured.
2. Submit jointing plans for review.

SLAB CONTROL JOINT DETAIL 4
Not To Scale — S-3 | S-3

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL DETAILS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

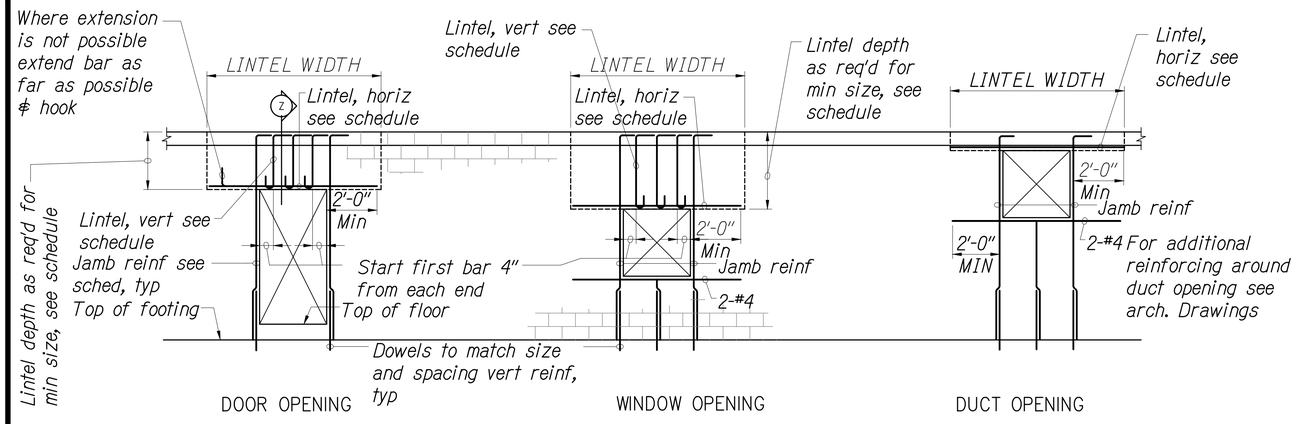
Scale: As Noted — Date: January 2021

SHEET No. S-3 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

93

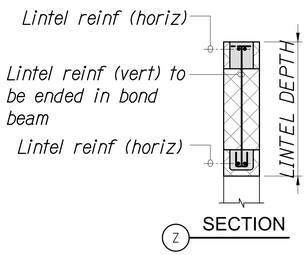
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	94	120



TYPICAL CMU WALL OPENING LINTEL BEAM DETAIL

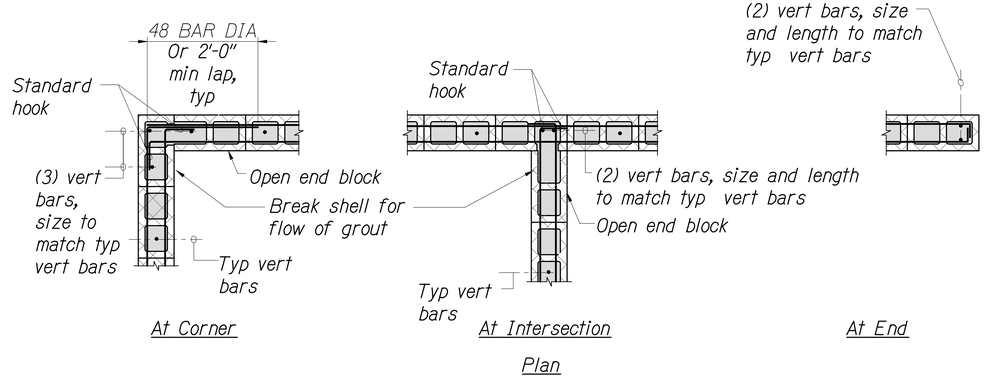
Not To Scale

1 / S-4 | S-4



Opening Schedule				
Opening Width	Lintel Depth (Minimum)	Reinforcing		
		Jamb	Lintel Horiz	Lintel Vert
W < 5'-0"	2'-8"	(2) #5	(2) #4	#4 at 8"
5'-1" < w < 7'-0"	2'-8"	(2) #6	(2) #5	#4 at 8"
7'-1" < w < 9'-0"	2'-8"	(2) #7	(2) #8	#5 at 8"
9'-1" < w < 17'-0"	3'-6"	(2) #8	(2) #8	#5 at 8"

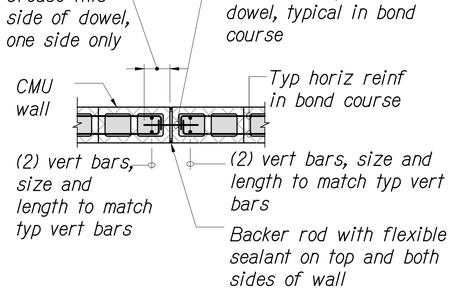
Note: All walls shall be solid grouted.



CMU WALL REINFORCING AT BOND BEAM

Not To Scale

2 / S-4 | S-4



CONTROL JOINT FOR CMU WALL

Not To Scale

3 / S-4 | S-4

Notes:
1. Control joints shall be a maximum of 25'-0" apart and 10'-0" minimum from corner, or as shown on plans.
2. Control joint shall be continuous vertical line from top of footing to top of wall.
3. All horizontal reinforcing shall be discontinuous across control joints, except bond course at the top of walls.

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NOTE BOOK	TRACED BY	WC
	DESIGNED BY	
No.	QUANTITIES BY	
	CHECKED BY	

KEN KAZUO HAYASHIDA
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KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURAL CMU DETAILS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

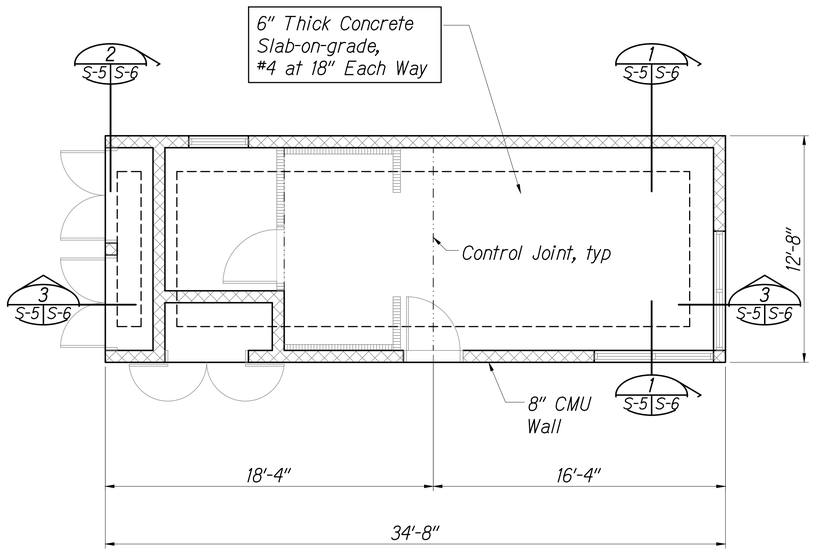
Scale: As Noted Date: January 2021

SHEET No. S-4 OF 120 SHEETS

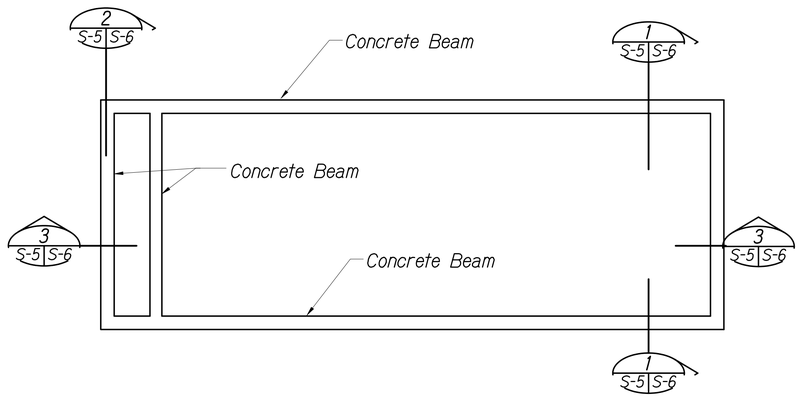
RMTC JOB NO. : 1-19548-0E

94

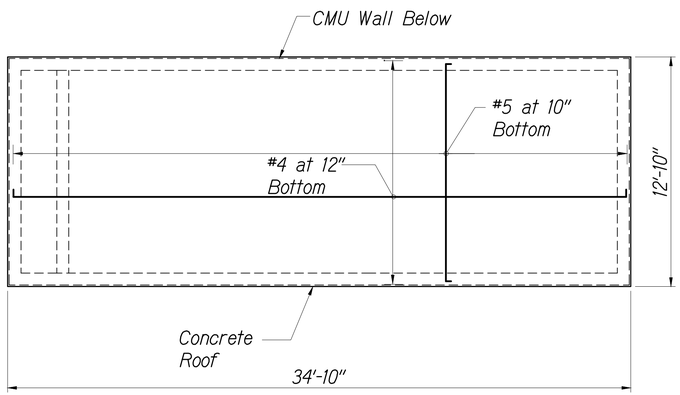
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	95	120



FOUNDATION PLAN VIEW 2 S-5 S-5
Scale: 1/4" = 1'-0"



FRAMING PLAN VIEW 1 S-5 S-5
Scale: 1/4" = 1'-0"



ROOF PLAN VIEW 3 S-5 S-5
Scale: 1/4" = 1'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY	RSY	DATE
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NOTE BOOK	TRACED BY	WC	
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KEN KAZUO HAYASHIDA LICENSED PROFESSIONAL ENGINEER No. 6818-S HAWAII, U.S.A.

SIGNATURE 4/30/22 LIC. EXPIRATION

KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGH STA. BLDG. PLAN

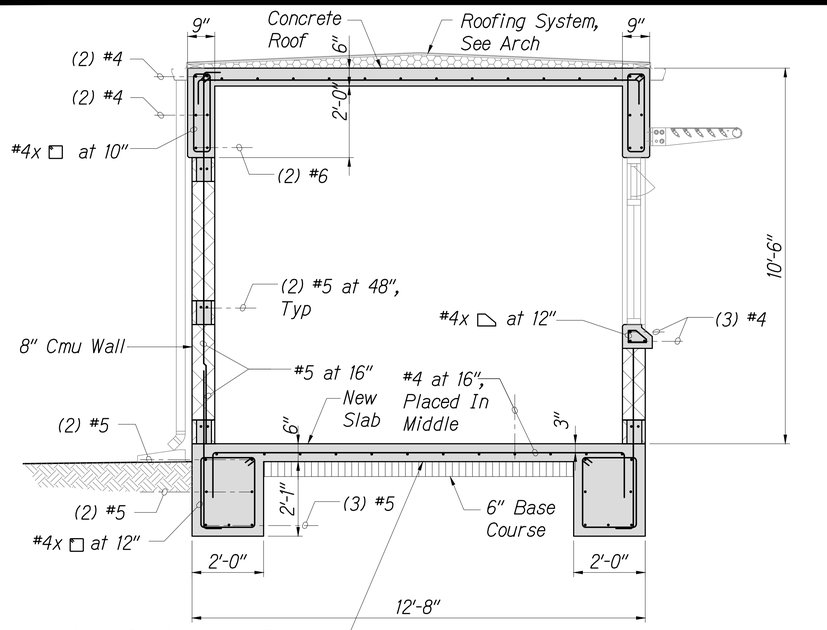
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

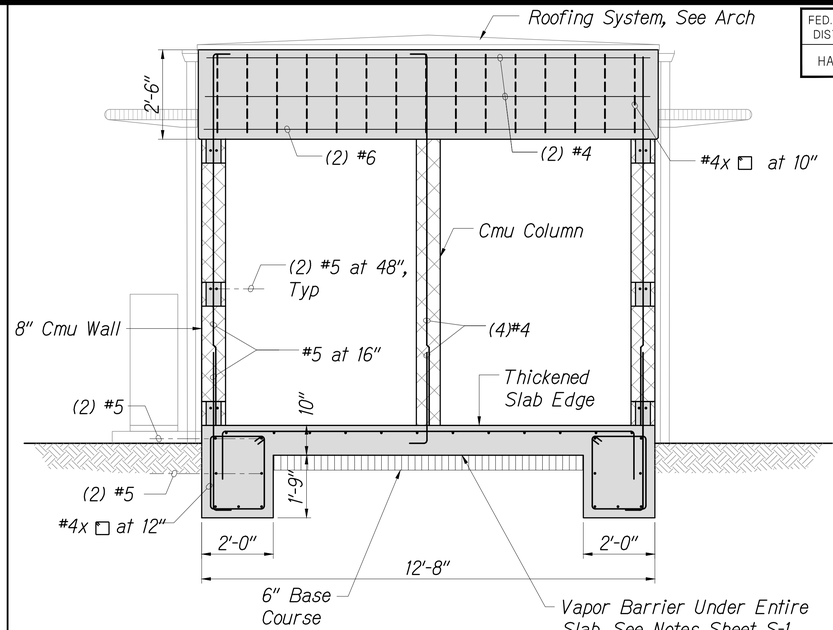
SHEET No. S-5 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

95



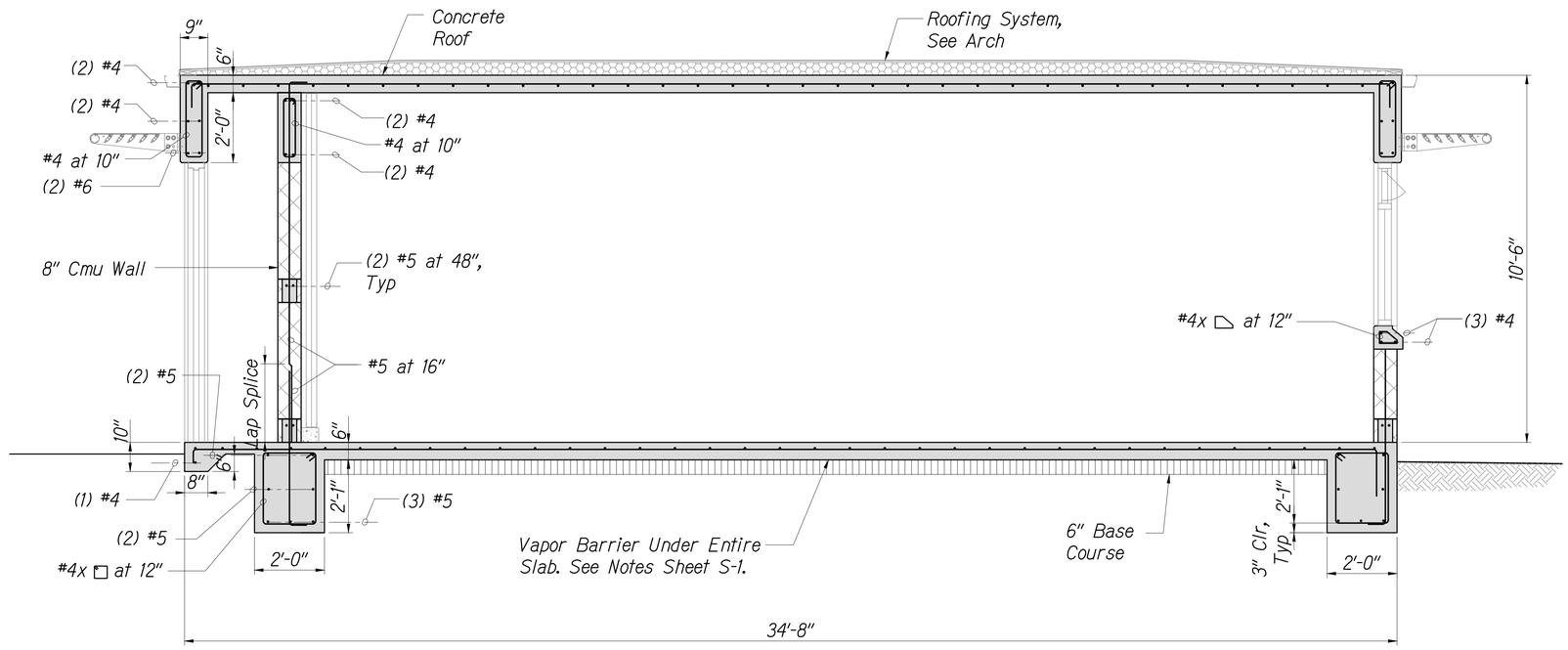
BUILDING SECTION 1
Scale: 1/2" = 1'-0"
S-6 | S-6



BUILDING SECTION 2
Scale: 1/2" = 1'-0"
S-6 | S-6

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	96	120

Note:
Roof slab reinforcing not shown for clarity.



BUILDING SECTION 3
Scale: 1/2" = 1'-0"
S-6 | S-6

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY RSY	
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No. 6818-S
HAWAII, U.S.A.

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SIGNATURE 4/30/22 LIC. EXPIRATION
KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGH STA. BLDG. SECTIONS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

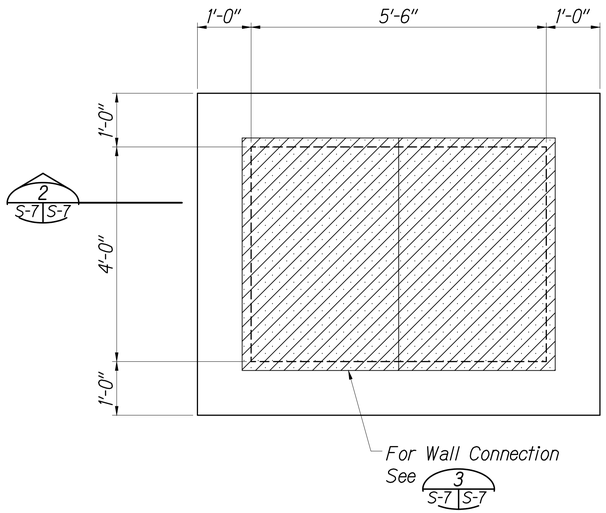
Scale: As Noted Date: January 2021

SHEET No. S-6 OF 120 SHEETS

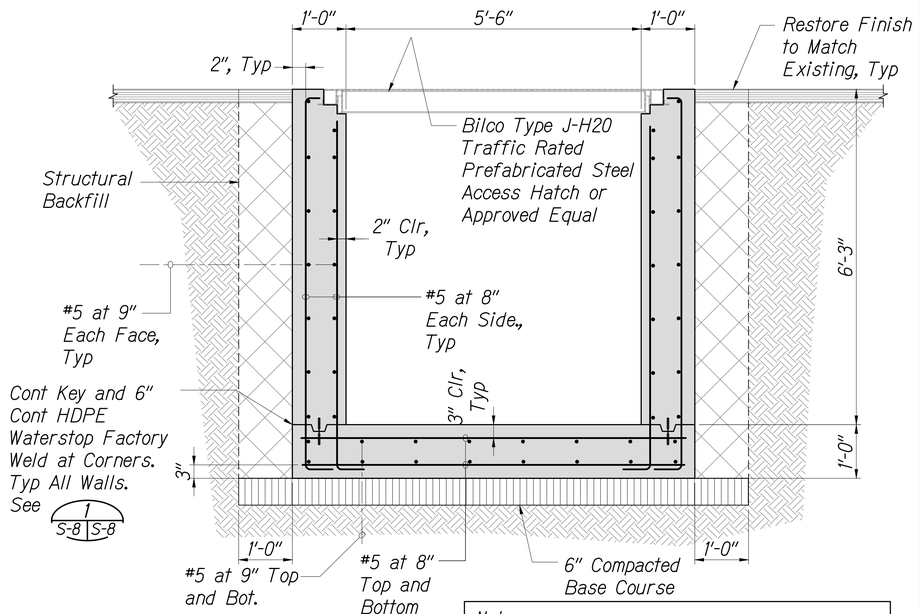
RMTC JOB NO. : 1-19548-0E

96

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	97	120

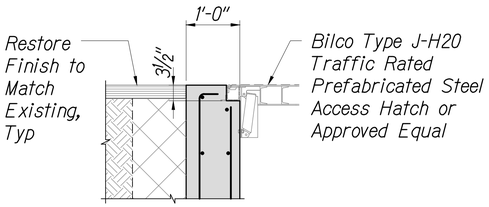


UTILITY VAULT PLAN 1 (S-7 | S-7)
Scale: 3/4" = 1'-0"



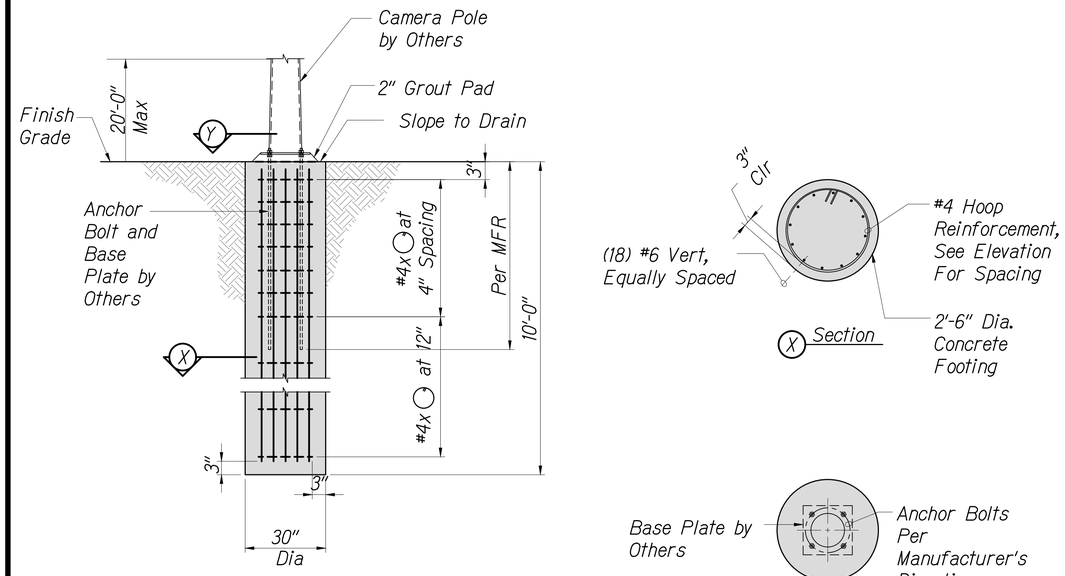
Note:
Build top of wall surface per manufacturer's recommendation to fit hatch.

UTILITY VAULT SECTION 2 (S-7 | S-7)
Scale: 3/4" = 1'-0"

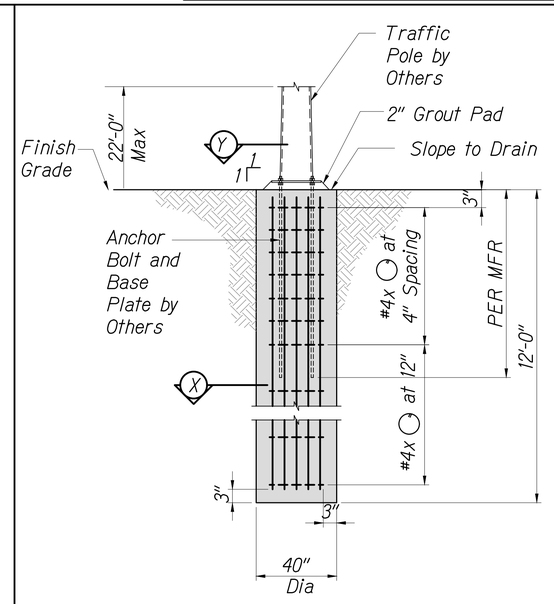


Note:
Build top of wall surface per manufacturer's recommendation to fit hatch.

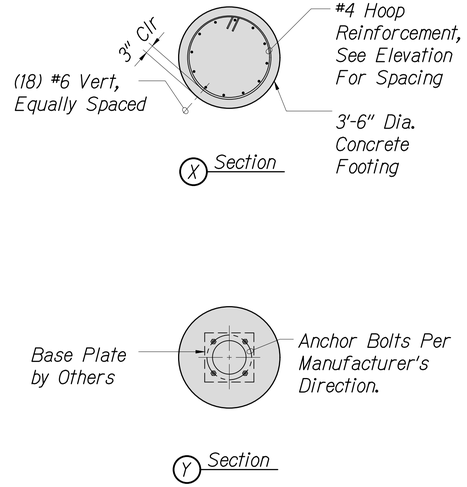
HATCH TO WALL DETAIL 3 (S-7 | S-7)
Scale: 3/4" = 1'-0"



CAMERA POLE FOUNDATION - ELEVATION 4 (S-7 | S-7)
Scale: 3/4" = 1'-0"



TRAFFIC SIGNAL POLE FOUNDATION - ELEVATION 5 (S-7 | S-7)
Scale: 3/4" = 1'-0"



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

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KEN KAZUO HAYASHIDA — LICENSED PROFESSIONAL ENGINEER — No. 6818-S — HAWAII, U.S.A.

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KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

VAULT & POLE DETAILS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

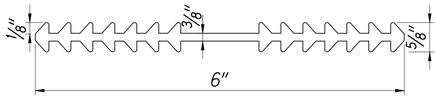
Scale: As Noted Date: January 2021

SHEET No. S-7 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

97

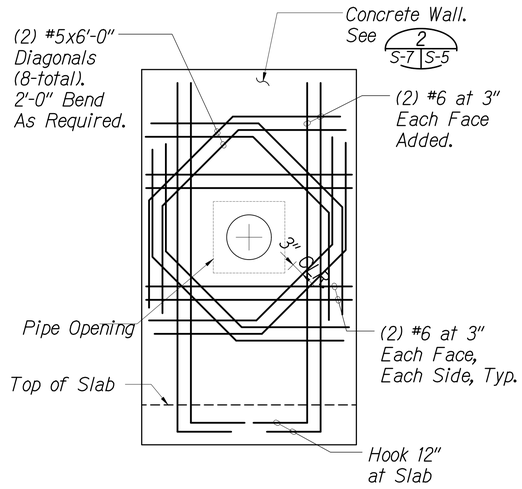
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	98	120



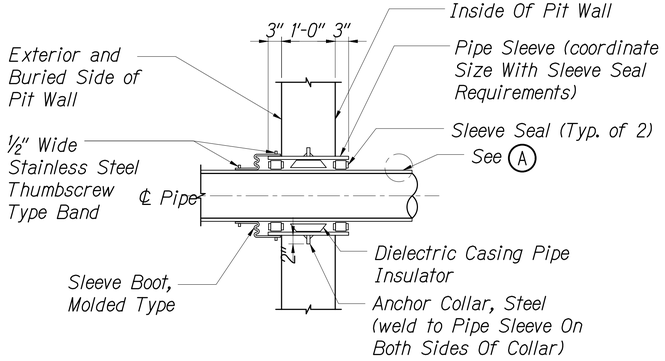
Earth Shield High Density Polyethylene (HPDE)
Pe637

Note:
Waterstop Shall be "Earth Shield Pe637" or Approved Equal

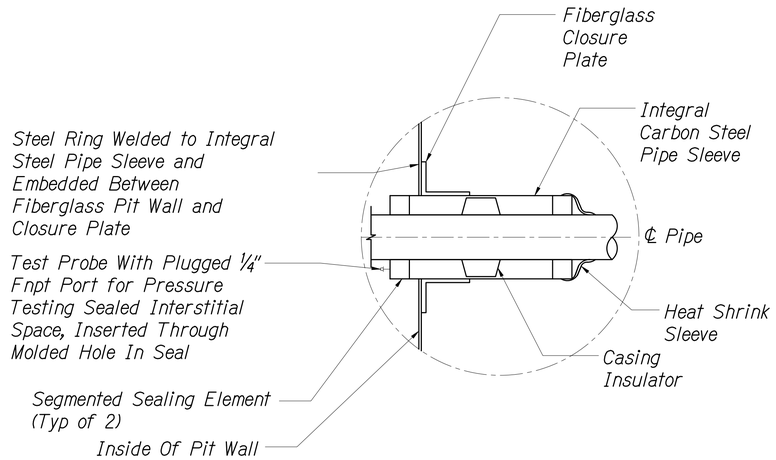
FUEL RESISTANT WATERSTOP (1 / S-8 | S-8)
Not to Scale



WALL PIPE OPENING ADDED REBARS DETAIL (2 / S-8 | S-8)
Not to Scale



CONCRETE PIT PENETRATION (3 / S-8 | S-8)
Not to Scale



A FIBERGLASS PIT PENETRATION

ORIGINAL PLAN	SURVEY PLOTTED BY	RSY	DATE
NOTE BOOK	DRAWN BY		
No.	TRACED BY	WC	
	DESIGNED BY		
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LICENSED PROFESSIONAL ENGINEER
No. 6818-S
HAWAII, U.S.A.

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KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WatERStoP and PIPE OPENING DETAIL

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

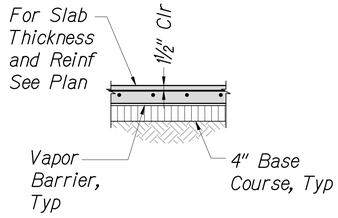
Scale: As Noted Date: January 2021

SHEET No. S-8 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

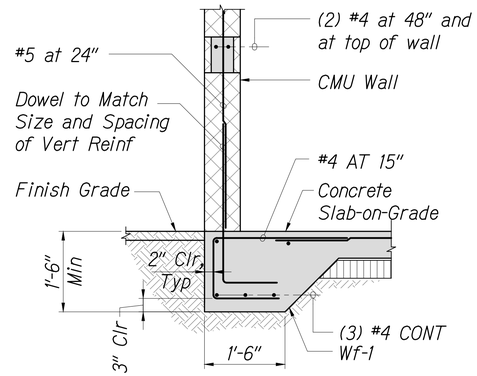
98

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	98	120

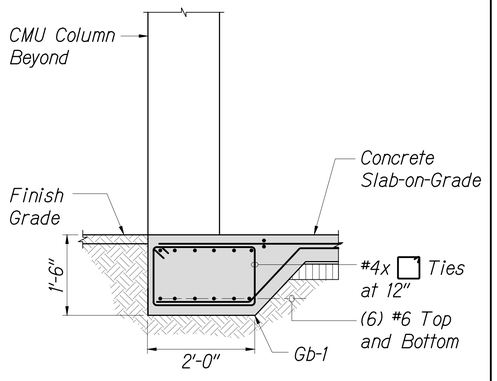


Slab On Grade Notes:
1. Thickness of slab-on-grade shown are minimum and shall be maintained at all sloped and depressed areas.
2. For floor elevations, depressed slabs locations, slopes to drain, and equipment pad and curb locations see architectural, electrical and mechanical drawings.

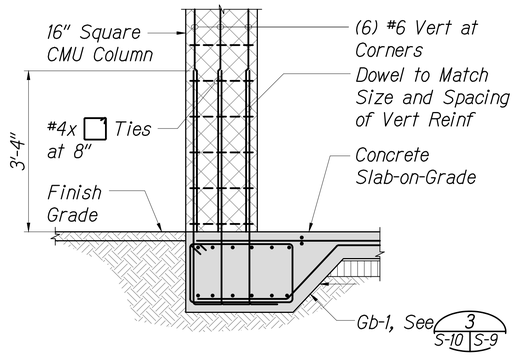
TYPICAL SLAB-ON-GRADE DETAILS — 1 / S-9 | S-9
No Scale



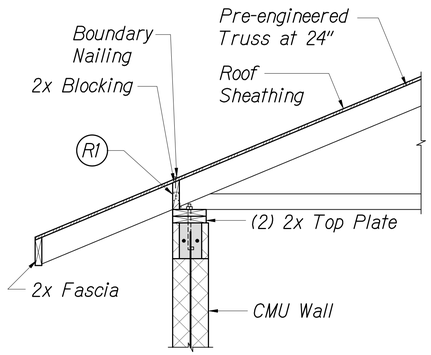
SECTION — 2 / S-10 | S-9
Scale: 3/4" = 1'-0"



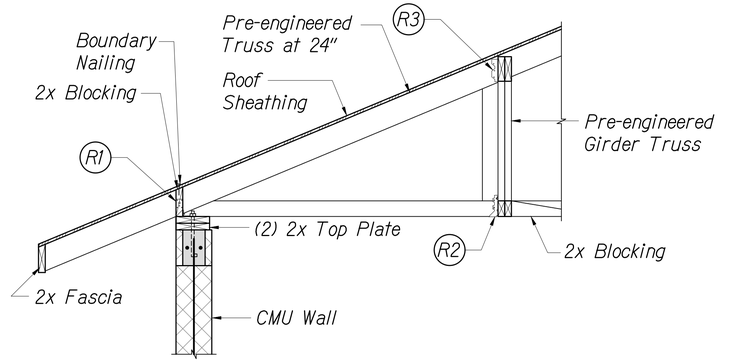
SECTION — 3 / S-10 | S-9
Scale: 3/4" = 1'-0"



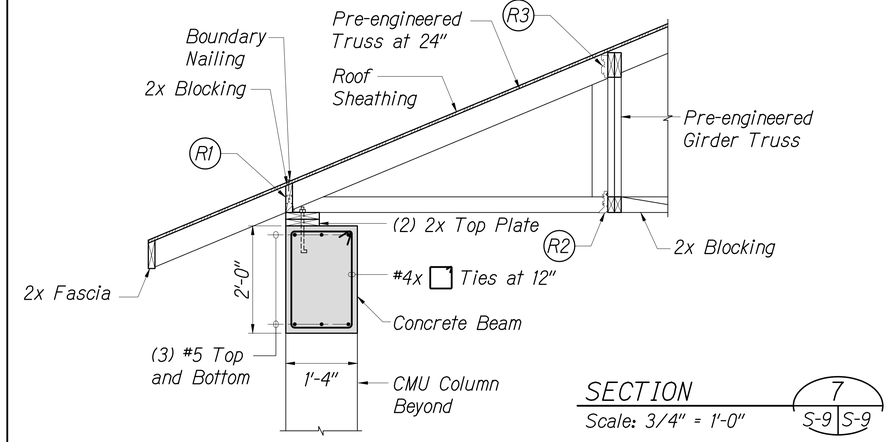
SECTION — 4 / S-10 | S-9
Scale: 3/4" = 1'-0"



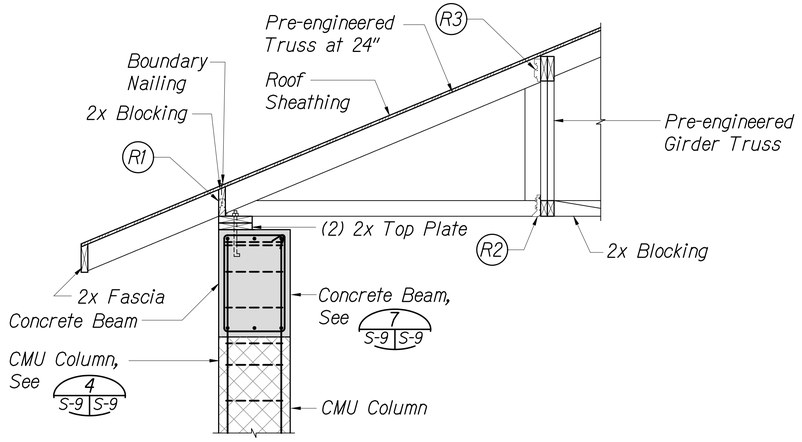
SECTION — 5 / S-11 | S-9
Scale: 3/4" = 1'-0"



SECTION — 6 / S-11 | S-9
Scale: 3/4" = 1'-0"



SECTION — 7 / S-9 | S-9
Scale: 3/4" = 1'-0"



SECTION — 8 / S-11 | S-9
Scale: 3/4" = 1'-0"

0' 1' 2' 3' 4'
3/4" = 1'-0"

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

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KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

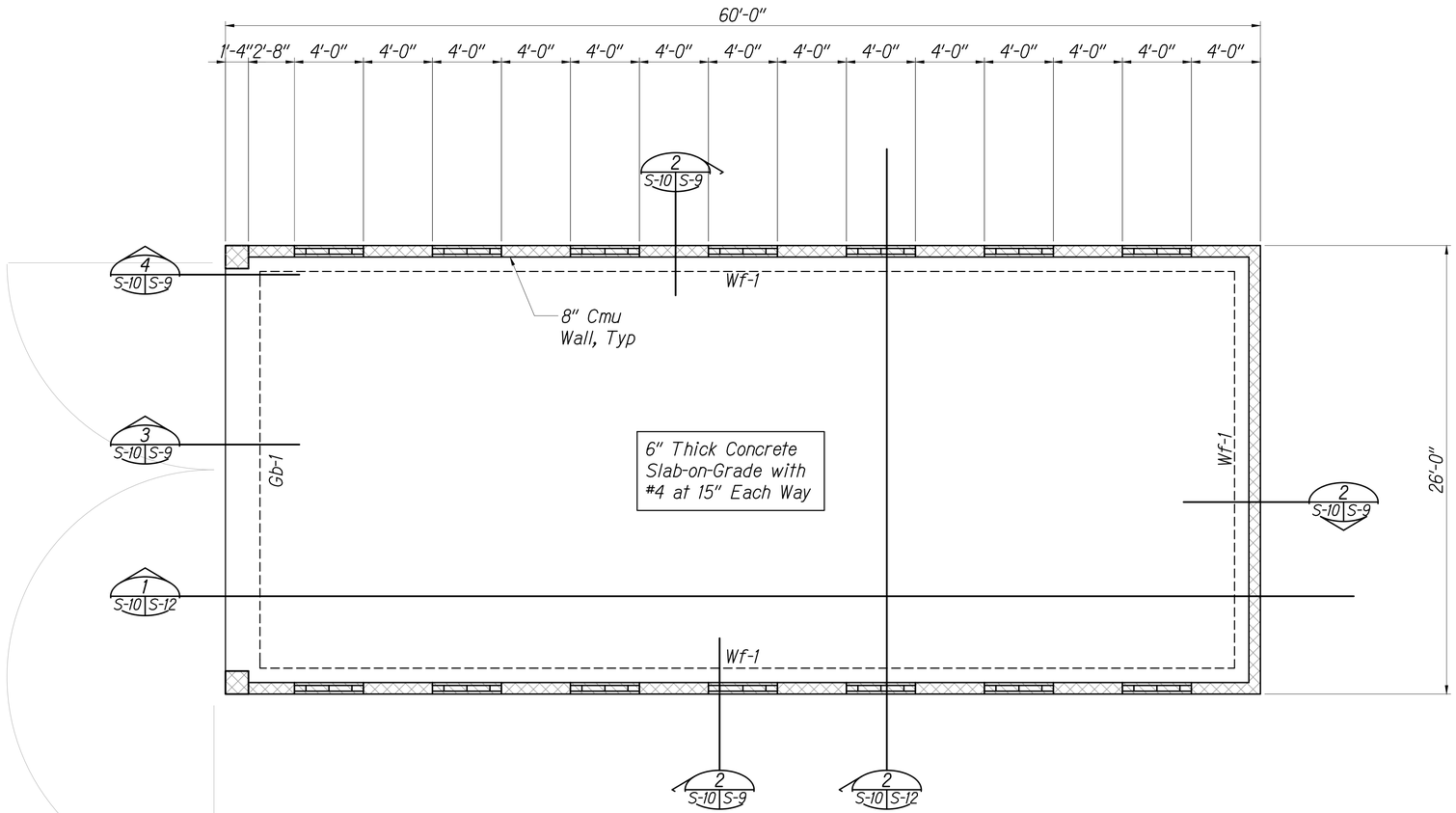
WEIGHING SCALE STORAGE
STRUCTURAL DETAILS
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted — Date: January 2021

SHEET No. S-9 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	100	120



FOUNDATION PLAN
Scale: 1/4" = 1'-0"
1 S-10 S-10

Legend

Wf-1	Indicates wall footing type, see 2/S-9
Gb-1	Indicates grade beam type, see 3/S-9 and 4/S-9
	Indicates change in elevation
	Indicates full height CMU wall
	Indicates partial height CMU wall

Slab-On-Grade Notes:

1. Thickness of slab-on-grade shown are minimum and shall be maintained at all sloped and depressed areas.
2. For floor elevations, depressed slabs locations, slopes to drain and equipment pad and curb locations, see architectural, electrical and mechanical drawings.
3. For exterior concrete slab-on-grade, see architectural and civil drawings.

Foundation Notes:

1. For dimensions not shown, see the architectural drawings.
2. For waterproofing requirements and details, see architectural drawings.

Reference Drawings:
General notes, see S-1
Typical slab-on-grade details, see 1/S-9
Typical concrete details, see S-9
Typical CMU wall details, see S-9

TRUE NORTH

0' 2' 4' 8' 12'
1/4" = 1'-0"

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

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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGHING SCALE STORAGE
FOUNDATION PLAN
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

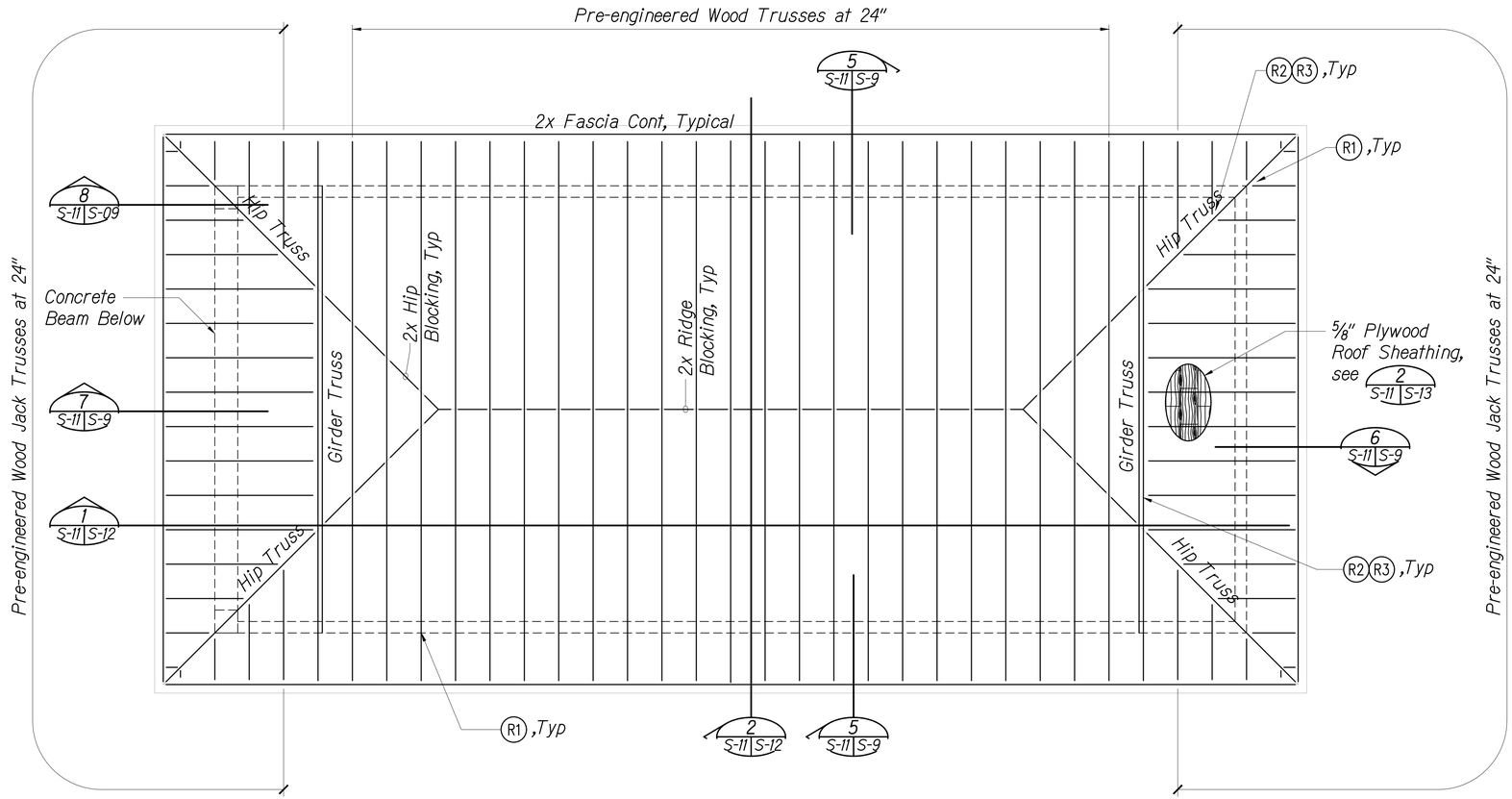
Scale: As Noted Date: January 2021

SHEET No. S-10 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E

100

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	101	120



ROOF FRAMING PLAN — 1 S-11 S-11
Scale: 1/4" = 1'-0"

TRUE NORTH

0' 2' 4' 8' 12'
1/4" = 1'-0"

Legend

- Indicates CMU wall below
- (R1) Indicates framing connector, see 3/S-13

Reference drawings:

General notes, see S-1 and S-2
Truss notes and elevations, see S-13
Typical roof framing details, see S-13

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGHING SCALE STORAGE
ROOF FRAMING PLAN
Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

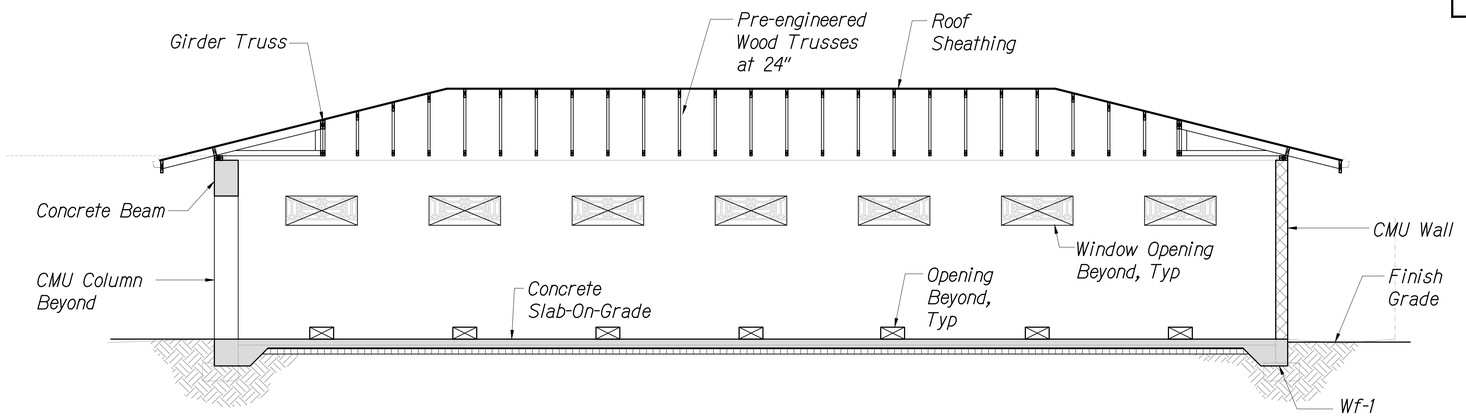
Scale: As Noted Date: January 2021

SHEET No. S-11 OF 120 SHEETS

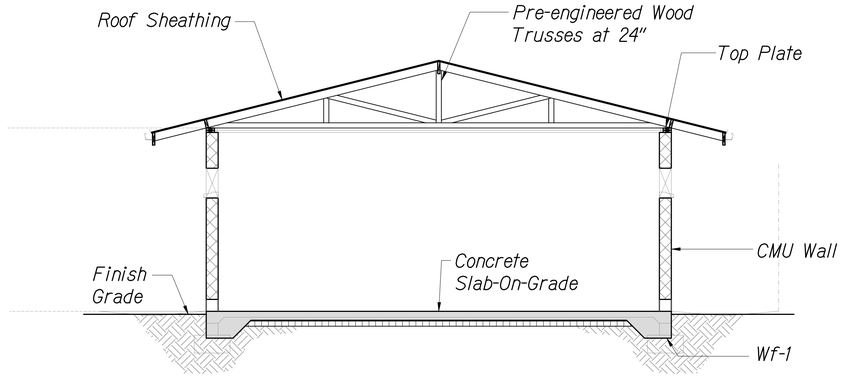
RMTC JOB NO. : 1-19548-0E

101

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	102	120



BUILDING SECTION 1
Scale: 1/4" = 1'-0"
S-10,S-11 | S-12



BUILDING SECTION 2
Scale: 1/4" = 1'-0"
S-10,S-11 | S-12

0' 2' 4' 8' 12'
1/4" = 1'-0"

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

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WEIGHING SCALE STORAGE SECTIONS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted Date: January 2021

SHEET No. S-12 OF 120 SHEETS

102

RMTC JOB NO. : 1-19548-0E

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-064-1(010)	2018	103	120

Metal-Plate Connected Wood Trusses:

A. Metal-plate-connected wood trusses shall comply with:
   1. TPI 1, National Design Standard for metal-plate-connected wood truss construction.
   2. TPI DSB, recommended design specification for temporary bracing of metal-plate-connected wood trusses.
   3. TIP HIB, commentary and recommendation for handling, installing and bracing metal-plate-connected wood trusses.

B. The fabricator shall be a member of tpi and have a minimum of 3 years successful experience in the fabrication of metal-plate-connected wood trusses. the fabricator shall have sufficient production capacity to produce, transport and deliver the required trusses without cause of delay in the work.

C. Truss construction documents shall be prepared or under the supervision of a qualified professional engineer licensed to practice in the state of hawaii and shall be provided to the building official and approved prior to installation. truss construction documents shall include, at a minimum, the information specified below:
   1. Show location, pitch, span, camber, configuration and spacing for each type of truss required.
   2. Indicate sizes, stress grade and species for lumber.
   3. Indicate locations of permanent bracing required to prevent buckling of individual truss members due to design loadS.
   4. Indicate type, size, material, finish, design values, orientation, and location of metal connector plates.
   5. Show splice details and bearing details.
   6. Include structural analysis data signed and sealed by the qualified professional engineer responsible for the design.

D. Wood shall be preservative treated.

E. Metal connector plates shall be hot dipped galvanized astm a 653, g60 coating designation, and not less than 0.036 inch.

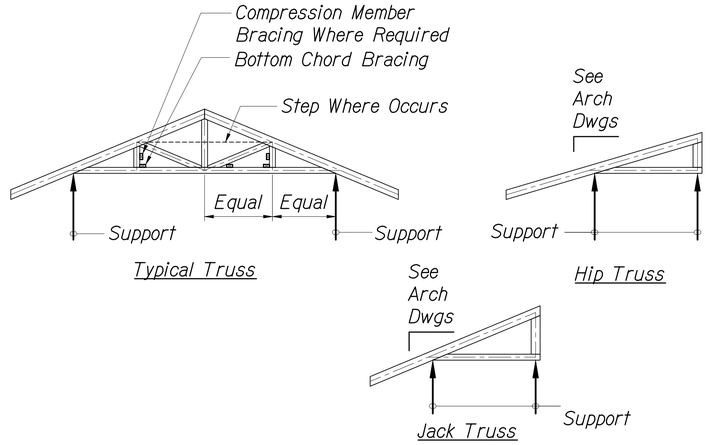
F. Truss members shall not be cut, notched, drilled, spliced or otherwise altered in any way without the approval of a registered design professional.

G. Multi-ply trusses shall be nailed to each other with 16d common nails at 10 inches o.c. along all truss members.

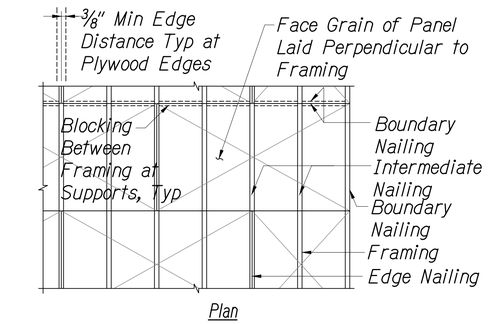
H. SEe architectural drawings for slopes of top and bottom chords.

I. Structural performance
   1. Roof dead load (not including self weight of trusses) =11 psf
   2. Roof live load top chord = 20 psf (reducible)
   3. Bottom chord live load = 10 psf

4. Wind loads in accordance with building code criteria noted on drawings
5. Load combinations in accordance with building code.
6. Top chord and bottom chord live load need not act concurrently.
7. Vertical deflection under total load shall be limited to 1/240 of span or 1 1/4", whichever is less.
8. Vertical deflection under live or wind load shall be limited to 1/360 of span or 3/4", whichever is less.
9. Wind loads along collector trusses are reversible. loads along top chord shall be transferred to bottom chord through truss member connections.
10. Minimum truss member sizes
    a. Top chord = 2x6
    b. Bottom chord = 2x4
    c. Web members = 2x4



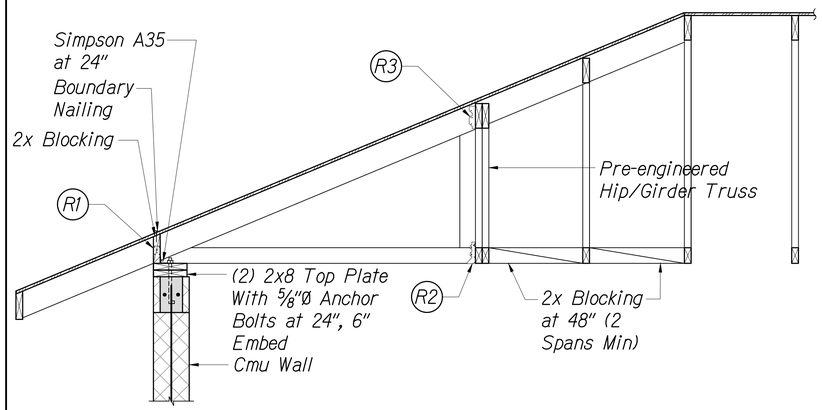
TRUSS ELEVATIONS — Not to Scale — 1 — S-11 | S-13



Plan

Fastening Schedule				
Location	Edge	Boundaries	Intermediate	Remarks
Roof	8d at 6"	8d at 6"	8d at 12"	

SHEATHING SCHEDULE — Not to Scale — 2 — S-11 | S-13



At Typical, Girder, Jack/Hip Truss

Connector Schedule					
Member	Support	(R1)	(R2)	(R3)	(R4)
Typical Truss	Wall/Beam, Girder Truss	Simpson H10	-	-	-
Jack Truss	Wall/Beam, Hip/Girder Truss	Simpson H1	Simpson LUS26	Simpson LS50	-
Hip Truss	Wall/Beam, Hip/Girder Truss	(2) Simpson LS50	Simpson SUR/L26	Simpson LS50	-
Girder Truss	Wall/Beam	(2) Simpson H25A	-	-	-

TYPICAL TRUSS CONNECTION DETAIL — Not to Scale — 3 — S-11 | S-13

TYPICAL MINIMUM WOOD TRUSS WEB BRACE DET — Not to Scale — 4 — S-11 | S-13

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

KEN KAZUO HAYASHIDA — LICENSED PROFESSIONAL ENGINEER — No. 6818-S — HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" IS DEFINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RULES, ENTITLED "PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS."

SIGNATURE — 4/30/22 — LIC. EXPIRATION

KAI HAWAII, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STORAGE ROOF FRAMING SECTIONS AND DETAILS

Sand Island Access Road
Truck Weigh Station
Federal Aid Project No. NH-064-1(010)

Scale: As Noted — Date: January 2021

SHEET No. S-13 OF 120 SHEETS

RMTC JOB NO. : 1-19548-0E