2021 IBC LATERAL ANALYSIS AND GRAVITY LOAD ENGINEERING

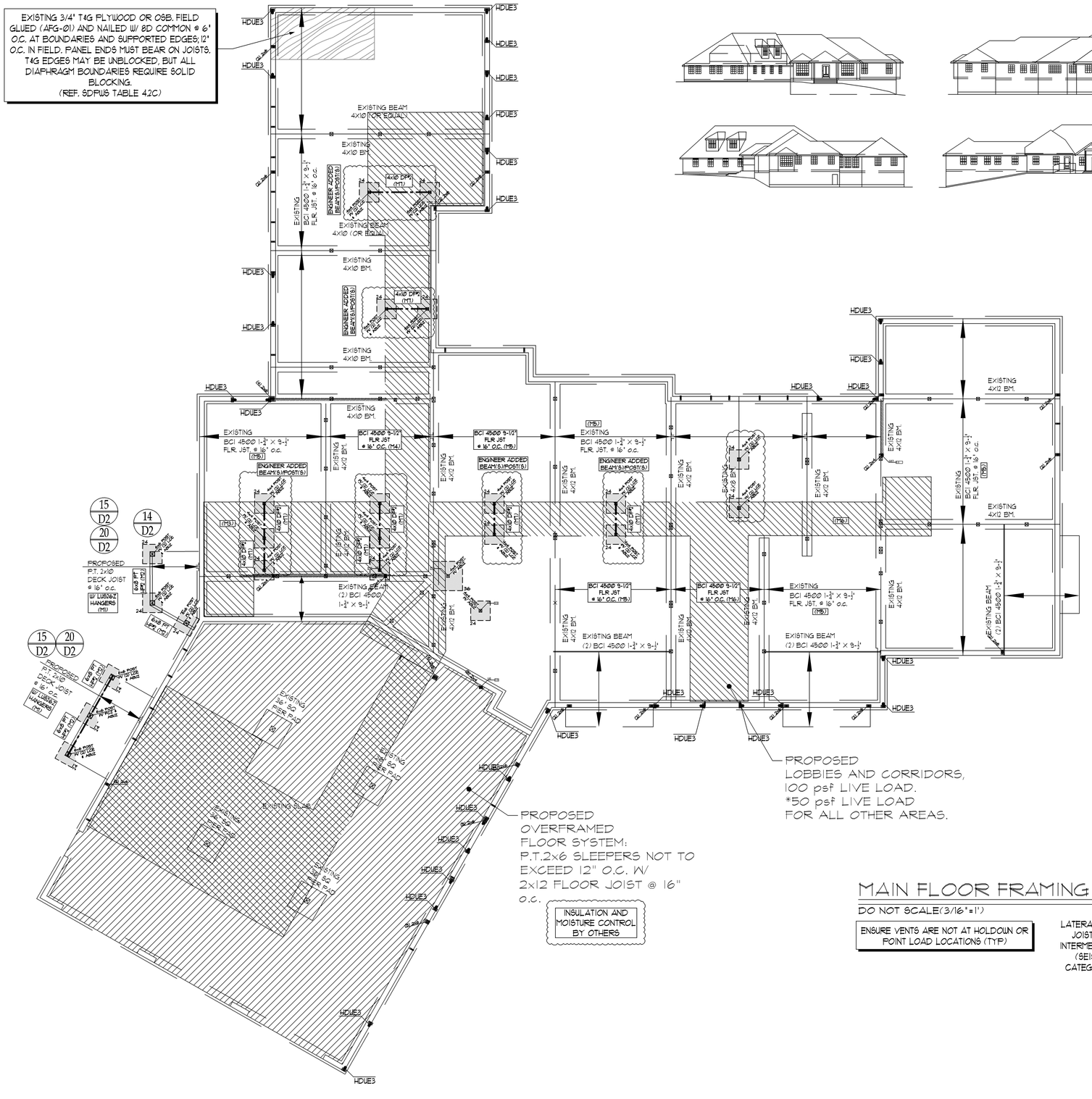
PROJECT NUMBER: 260037
FOR: PORT GAMBLE S'KLALLAM TRIBE
PLAN: S'KLALLAM TRIBE RESOURCE BUILDING

DESIGN CRITERIA

BASE ROOF SNOW LOAD	RISK CATEGORY	FROST DEPTH	APPROX. ELEVATION	WIND DESIGN: WIND SPEED (V) (IBC)	WIND DESIGN: WIND EXPOSURE	SEISMIC DESIGN: SEISMIC SPECTRAL RESPONSE S1	SEISMIC DESIGN: SEISMIC SPECTRAL RESPONSE Ss	SEISMIC DESIGN: (IBC) SEISMIC DESIGN CATEGORY	SEISMIC DESIGN: SITE SOIL CLASS.	SLOPE PER OWNER	SPECIAL SITE CONDITIONS PER OWNER	GEOTECH REPORT PER OWNER
25 PSF	II	12"	250 FT	98 MPH	B	0.461g	1.305g	D	D	<15%	NONE	NONE

VALUES OBTAINED FROM JURISDICTION, STATE, AND NATIONAL AGENCIES — VALUES PROVIDED BY BUILDER OR OWNER

EXISTING 3/4" T&G PLYWOOD OR OSB. FIELD GLUED (AFG-01) AND NAILED W/ 8D COMMON @ 6" O.C. AT BOUNDARIES AND SUPPORTED EDGES; 12" O.C. IN FIELD. PANEL ENDS MUST BEAR ON JOISTS. T&G EDGES MAY BE UNBLOCKED, BUT ALL DIAPHRAGM BOUNDARIES REQUIRE SOLID BLOCKING.
(REF. SDPWS TABLE 4.2C)



PROPOSED OVERFRAMED FLOOR SYSTEM: P.T.2x6 SLEEPERS NOT TO EXCEED 12" O.C. W/ 2x12 FLOOR JOIST @ 16" O.C.

INSULATION AND MOISTURE CONTROL BY OTHERS

PROPOSED LOBBIES AND CORRIDORS, 100 psf LIVE LOAD. *50 psf LIVE LOAD FOR ALL OTHER AREAS.

MAIN FLOOR FRAMING / FOUNDATION PLAN ENGINEERING

DO NOT SCALE(3/16"=1')

ENSURE VENTS ARE NOT AT HOLDOWN OR POINT LOAD LOCATIONS (TYP)

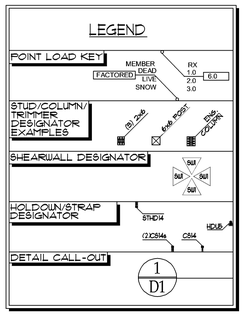
LATERAL RESTRAINT AT JOIST END & EACH INTERMEDIATE SUPPORT (SEISMIC DESIGN CATEGORY D R502.7)

HOLDOWN & TENSION TIE SCHEDULE

SIMPSON PRODUCT MODEL NUMBER CAPACITY*	FASTENERS: NAILS	FASTENERS: SCREWS	ANCHOR BOLT
HDUE3 - HF MEMBER 3340# HDUE3 - DF MEMBER 3780#	N/A	(7) ¼"x 3" SDS	SABR 5/8x24
HDUE5 - HF MEMBER 4700# HDUE5 - DF MEMBER 5375#	N/A	(10) ¼"x 3" SDS	SABR 5/8x24
HDUE7 - HF MEMBER 6580# HDUE7 - DF MEMBER 7870#	N/A	(13) ¼"x3" SDS	SABR 5/8x24
HDUE9 - HF MEMBER 7895# HDUE9 - DF MEMBER 9390#	N/A	(16) ¼"x 3-1/2" SDS	SABR 7/8x28
HDUE11 - HF MEMBER 10850# HDUE11 - DF MEMBER 13110#	N/A	(23) ¼"x 3-1/2" SDS	SABR 1x30
STHD14/STHD14RJ - 3695#	(2) STUDS W/ (24) 16d SINKER	N/A	N/A
MSTC48B3 - 3900# MSTC66B3 - 4490#	PER MFR	N/A	N/A
CS14 - 2490#	(18) 8d EACH END	N/A	N/A

HOLDOWN NOTES:
(1) INSTALL ALL SHEAR ANCHORS PER MANUFACTURER INSTRUCTIONS
(2) ALL METAL CONNECTORS COMING IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE SIMPSON "Z-MAX", TRIPLE ZINC COATED, OR HOT DIPPED GALVANIZED FOR CORROSION PROTECTION.
(3) SUBSTITUTION WITH NON-SIMPSON ANCHORS WITH ENGINEER'S APPROVAL
(4) STHD14RJ INSTALLATION AT RIM JOIST LOCATIONS ONLY (RJ=RIM JOIST)

LEGEND



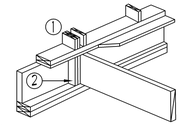
FOOTING PAD SCHEDULE

FOR 1500 PSF SOIL BEARING PADS TO BEAR ON NATIVE SOIL OR STRUCTURAL FILL

24	24"x24"x8" W/(2) #4 EACH WAY
30	30"x30"x10" W/(4) #4 EACH WAY
36	36"x36"x12" W/(4) #4 EACH WAY
42	42"x42"x12" W/(5) #4 EACH WAY
48	48"x48"x12" W/(6) #4 EACH WAY
	ALL OTHER PADS #4 REBAR AT 8" ON CENTER U.N.O.

WHEN SPECIFIED, ABUZ FB W/ 5/8"X6" TITEN HD OR 5/8"X6" EXPANSION BOLT. POST PER PLAN

SQUASH BLOCKING



(1) STUD(S) FOR POINT LOAD FROM ABOVE
(2) SQUASH BLOCK(S) REQUIRED UNDER STUD(S) WHERE INDICATED ON ENGINEERING.

NO.	DATE	REVISIONS

Architectural plans carry all dimensions. This engineering is for structure only.

DO NOT SCALE

Structure engineering governs if there are conflicts between the architectural and structural plans. Any conflicts are to be report to the designer prior to commencement of any construction proceeding. Any conflicts not reported prior to construction will be the cause of delays and remedial work incurred are the sole responsibility of the contractor.

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Hodge engineering inc.

PORT GAMBLE S'KLALLAM TRIBE
S'KLALLAM TRIBE RESOURCE BUILDING
7764 NE 288TH ST
KINGSTON, WA 98346

BUILDING CODE	2021 IBC
WIND EXP.	B 98 MPH
SEISMIC DESIGN CATEGORY	D
ROOF SNOW LOAD	25 PSF

ENG. P.E.	JOHN H.
DATE	03.19.2026
REVIEW	ZACK C.
ENG. P.E.	IAN H.
SHEET	**S1**
	1 OF **6** SHEETS
PROJECT NUMBER	260037

IAN EDWARD HODGE — STATE OF WASHINGTON — 24010607 — REGISTERED PROFESSIONAL ENGINEER
03/19/2026

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25 PSF	II	12"	250 FT	98 MPH	B	0.461g	1.305g	D	D	<15%	NONE	NONE
VALUES OBTAINED FROM JURISDICTION, STATE, AND NATIONAL AGENCIES										VALUES PROVIDED BY BUILDER OR OWNER		

ROOF SHEATHING SCHEDULE
24" O.C. TRUSS/RAFTERS

SNOW LOAD (UP TO)	NOMINAL THICKNESS	SPAN RATING
40 PSF	7/16"	24/16

LONG DIMENSIONS PERPENDICULAR TO ROOF JOIST WITH EDGE SUPPORT.
RSHEET2.1V7

LEGEND

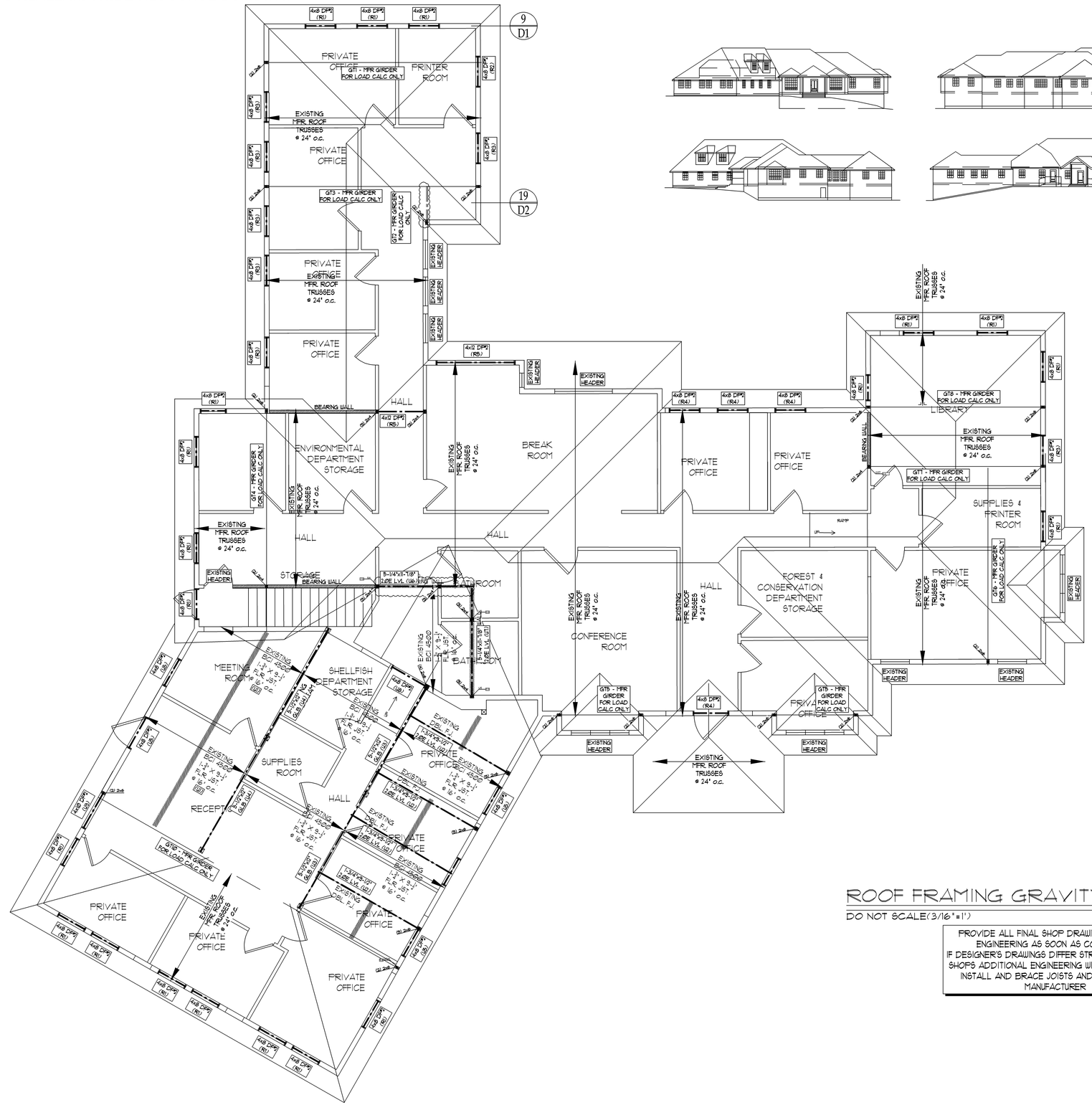
POINT LOAD KEY — MEMBER: FACTORED DEAD / LIVE / SNOW; RX: 5.0 / 2.0 / 3.0; 6.0

STUD/COLUMN/TRIMMER DESIGNATOR EXAMPLES: (3) 2x6; 4x6 POST; 4x6 COLUMN

SHEARWALL DESIGNATOR: OUT / SW3 / SW3 / OUT

HOLDDOWN/STRAP DESIGNATOR: STHD14; HDU8; (2)CS14; CS14

DETAIL CALL-OUT: 1 / D1



ENTIRE ROOF IS EXISTING, GIRDERS LOCATED BY DESIGNER

03/19/2026

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ROOF FRAMING GRAVITY LOAD ENGINEERING

DO NOT SCALE(3/16"=1')

PROVIDE ALL FINAL SHOP DRAWINGS TO HODGE ENGINEERING AS SOON AS COMPLETED.
IF DESIGNER'S DRAWINGS DIFFER STRUCTURALLY FROM SHOPS ADDITIONAL ENGINEERING WILL BE REQUIRED.
INSTALL AND BRACE JOISTS AND TRUSSES PER MANUFACTURER

NO.	DATE	REVISIONS

Architectural plans carry all dimensions. This engineering is structural.

DO NOT SCALE

Structure engineering governs if there are conflicts between the architectural and structural drawings. Any other conflicts are to be report to the designer and contractor before any work proceeding. Any conflicts not reported before proceeding may result in delays and remedial work incurred are the sole responsibility of the contractor.

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PORT GAMBLE S'KLALLAM TRIBE
S'KLALLAM TRIBE RESOURCE BUILDING
7764 NE 288TH ST
KINGSTON, WA 98346

BUILDING CODE	2021 IBC
WIND EXP.	B 98 MPH
SEISMIC DESIGN CATEGORY	D
ROOF SNOW LOAD	25 PSF

ENG. P.E.	JOHN H.
DATE	03.19.2026
REVIEW	ZACK C.
ENG. P.E.	IAN H.
SHEET	**S2**
	2 OF **6** SHEETS
PROJECT NUMBER	260037

03/19/2026

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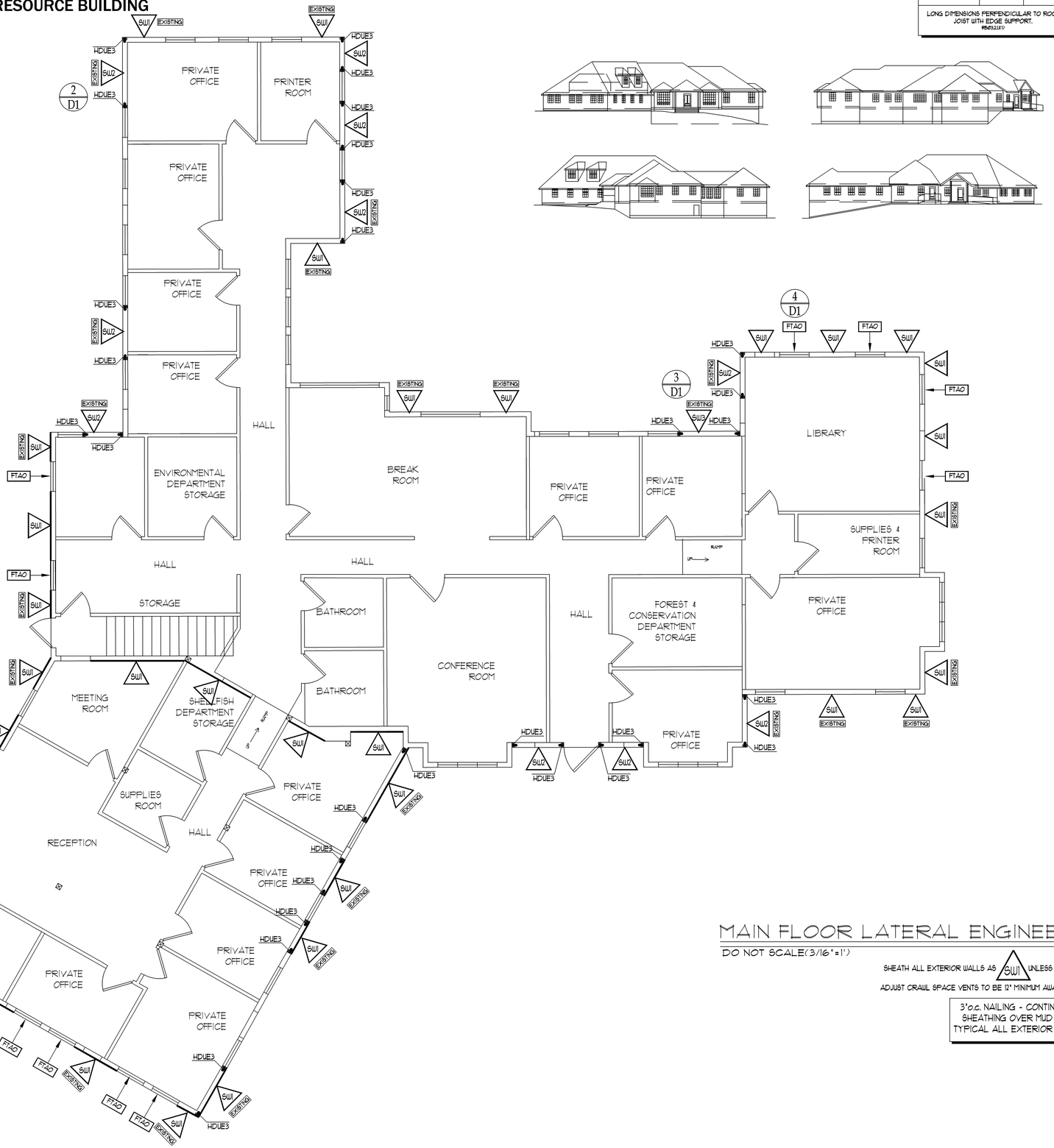
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25 PSF	II	12"	250 FT	98 MPH	B	0.461g	1.305g	D	D	<15%	NONE	NONE

VALUES OBTAINED FROM JURISDICTION, STATE, AND NATIONAL AGENCIES — VALUES PROVIDED BY BUILDER OR OWNER



ROOF SHEATHING SCHEDULE
24" O.C. TRUSS/RAFTERS

SNOW LOAD (UP TO)	NOMINAL THICKNESS	SPAN RATING
40 PSF	7/16"	24/16
LONG DIMENSIONS PERPENDICULAR TO ROOF JOIST WITH EDGE SUPPORT. RS6522.1(1)		

SHEAR WALL NAILING SCHEDULE

8d = 2-1/2" x Ø.131"

SHEAR WALL LABEL	APA RATED SHEATHING	NAIL SIZE & SPACE @ EDGES	STUD & BLOCKING @ ADJOINING EDGES	2x BOTTOM PLATE TO RIM BELOW	DBL TOP PLATE TO RIM JOIST	ANCHOR BOLT TO CONCRETE BELOW	CAPACITY(PLF) SEISMIC / WIND (DF VALUES) (HF x Ø.83)
SW1	7/16" OSB ONE SIDE	8d @ 6" O.C.	2x STUD	16d @ 6" O.C.	(2) 16d @ 16" O.C.	5/8" @ 48" O.C. 1/2" @ 36" O.C.	260 / 365
SW2	7/16" OSB ONE SIDE	8d @ 4" O.C.	3x STUD or (2) 2x STUD	16d @ 4" O.C.	(2) 16d @ 16" O.C.	5/8" @ 40" O.C. 1/2" @ 28" O.C.	380 / 532
SW3	7/16" OSB ONE SIDE	8d @ 3" O.C.	(2) 2x STUD	16d @ 4" O.C.	(2) 16d @ 16" O.C.	5/8" @ 24" O.C. 1/2" @ 17" O.C.	490 / 686
SW4	7/16" OSB ONE SIDE	8d @ 2" O.C.	(2) 2x STUD	16d @ 4" O.C.	LTP4 @ 16" O.C.	5/8" @ 21" O.C. 1/2" @ 15" O.C.	640 / 895
SW6	7/16" OSB BOTH SIDES	8d @ 3" O.C.	(2) 2x STUD	16d @ 4" O.C.	LTP4 @ 16" O.C.	5/8" @ 12" O.C. 1/2" @ 8" O.C.	980 / 1370

SHEAR WALL NOTES:
(1) INSTALL PANELS VERTICALLY.
(2) WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2X FRAMING SHALL BE STAGGERED SO JOINTS ON THE OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUDS.
(3) BLOCKING IS REQUIRED AT ALL PANEL EDGES.
(4) PROVIDE SHEAR WALL SHEATHING AND NAILING FOR THE ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF FULL HEIGHT WALLS ARE DESIGNATED BY EXTERIOR OF THE BUILDING, CORRIDORS, WINDOWS, OR DOORWAYS OR AS DESIGNATED ON THE PLANS. SEE PLANS FOR HOLDOWN REQUIREMENTS.
(5) SHEATHING EDGE NAILING IS REQUIRED AT ALL HOLDOWN POSTS.
(6) INTERMEDIATE FRAMING TO BE WITH 2X MINIMUM MEMBERS. FIELD NAILING IS 12" O.C. UNLESS NOTED OTHERWISE.
(7) BASED ON Ø.131" x 1-1/2" LONG NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING. USE Ø.131" x 2-1/2" LONG NAILS WHEN NAILING THROUGH SHEATHING.
(8) DBL STUDS MAY BE USED IN LIEU OF 3X MATERIAL.
(9) WHERE PLATE ATTACHMENTS SPECIFY (2) ROWS OF NAILS, PROVIDE DOUBLE JOIST, RIM OR EQUAL. ATTACH PER DETAILS.
(10) ANCHOR BOLTS SHALL BE PROVIDED W/ STEEL PLATE WASHERS 3" x 3" x 3", EMBED ANCHORS A MINIMUM OF 7" INTO THE CONCRETE.
(11) PRESSURE TREATED MATERIALS CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS. PROVIDE HOT-DIPPED GALVANIZED (ELECTRO PLATING NOT PERMITTED) NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC.) FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED FRAMING MEMBERS.
(12) AS AN OPTION TO FRAMING CLIPS SHEATHING IS TO EXTEND FROM MUDSILL TO TOP OF DOUBLE TOP PLATE FOR SINGLE STORY, AND FROM MUDSILL TO MIDDLE OF STRUCTURAL RIM FOR TWO (+) STORY STRUCTURES. SEE SHEAR NAILING BUILDING SECTION DETAIL.
(13) 5/16" PLYWOOD SHEATHING MAY BE USED IN PLACE OF THE 7/16" OSB SHEATHING PROVIDED THAT ALL STUD SPACING IS 16" O.C. MAX.
(14) SHEARWALL DESIGNATED WITH AN ASTERISK (*) MAY BE SHEATHED WITH PERFORMANCE CATEGORY 7/16 SMART PANEL T1-11 OR 5/16 HARDIE PANEL.
(15) SIMPSON MASAP (STANDARD INSTALLATION) MAY BE SUBSTITUTED FOR ANCHOR BOLT. USE 1/2" AB SPACING.

HOLDOWN & TENSION TIE SCHEDULE

SIMPSON PRODUCT MODEL NUMBER CAPACITY*	FASTENERS: NAILS	FASTENERS: SCREWS	ANCHOR BOLT
HDUE3 - HF MEMBER 3340# HDUE3 - DF MEMBER 3790#	N/A	(7) 1/4"x 3" SDS	SABR 5/8x24
HDUE5 - HF MEMBER 4760# HDUE5 - DF MEMBER 5375#	N/A	(10) 1/4"x 3" SDS	SABR 5/8x24
HDUE7 - HF MEMBER 6580# HDUE7 - DF MEMBER 7612#	N/A	(13) 1/4"x3" SDS	SABR 5/8x24
HDUE9 - HF MEMBER 7995# HDUE9 - DF MEMBER 9390#	N/A	(16) 1/4"x 3-1/2" SDS	SABR 7/8x28
HDUE11 - HF MEMBER 10990# HDUE11 - DF MEMBER 13162#	N/A	(23) 1/4"x 3-1/2" SDS	SABR 1x30
STHD14/STHD14RJ - 3695#	(2) STUDS W/ (24) 16d SINKER	N/A	N/A
MSTC48B3 - 3920# MSTC66B3 - 4490#	PER MFR	N/A	N/A
CS14 - 2490#	(18) 8d EACH END	N/A	N/A

HOLDOWN NOTES:
(1) INSTALL ALL SHEAR ANCHORS PER MANUFACTURER INSTRUCTIONS.
(2) ALL METAL CONNECTORS COMING IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE SIMPSON "Z-MAX", TRIPLE ZINC COATED, OR HOT DIPPED GALVANIZED FOR CORROSION PROTECTION.
(3) SUBSTITUTION WITH NON-SIMPSON ANCHORS WITH ENGINEER'S APPROVAL.
(4) STHD14RJ INSTALLATION AT RIM JOIST LOCATIONS ONLY (RJ=RIM JOIST)

LEGEND

POINT LOAD KEY — MEMBER: DEAD / LIVE / SNOW; FACTORED; RX 1.0 / 2.0 / 3.0; 6.0

STUD/COLUMN/TRIMMER DESIGNATOR EXAMPLES — (2) 2x6; 6x6 POST; (3)2x6 COLUMN

SHEARWALL DESIGNATOR — SW1 / SW2 / SW3

HOLDOWN/STRAP DESIGNATOR — STHD14; (2)CS14; CS14; HDUE3

DETAIL CALL-OUT — 1 / D1

MAIN FLOOR LATERAL ENGINEERING

DO NOT SCALE(3/16"=1')

SHEATH ALL EXTERIOR WALLS AS SW1 UNLESS NOTED OTHERWISE.

ADJUST CRAWL SPACE VENTS TO BE 12" MINIMUM AWAY FROM HOLDOWNS

3"o.c. NAILING - CONTINUOUS SHEATHING OVER MUD SILL TYPICAL ALL EXTERIOR WALLS

NO.	DATE	REVISIONS

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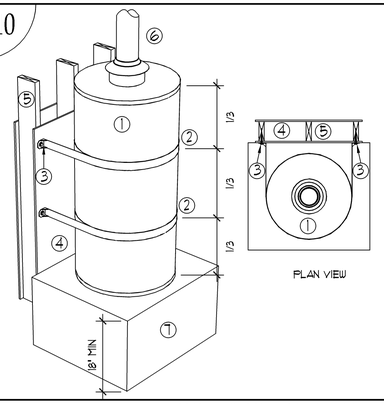
BUILDING CODE	2021 IBC
WIND EXP.	B 98 MPH
SEISMIC DESIGN CATEGORY	D
ROOF SNOW LOAD	25 PSF

ENG. P.E.	JOHN H.
DATE	03.19.2026
REVIEW	ZACK C.
ENG. P.E.	IAN H.
SHEET	S3
	3 OF 6 SHEETS
PROJECT NUMBER	260037

IAN EDWARD HODGE — STATE OF WASHINGTON — 24010667 — REGISTERED PROFESSIONAL ENGINEER — 03/19/2026

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10



1. WATER HEATER
2. WATER HEATER SEISMIC STRAPS LOCATED 1/3 AWAY FROM TANK CAP AND BASE.
3. LAG BOLT PER SEISMIC STRAP MFR ANCHOR INTO 2X STUD 4 PLACES
4. DRYWALL PER PLAN
5. 2X STUDWALL
6. VENT FLUTE
7. ANCHOR BASE TO WALL

WATER HEATER STRAPPING

10 D1

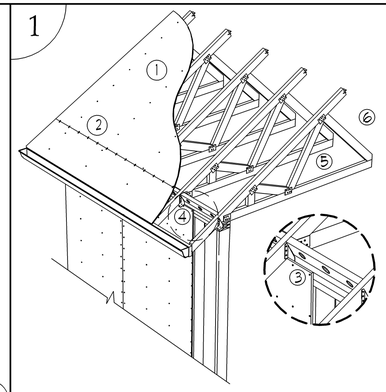
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5 D1

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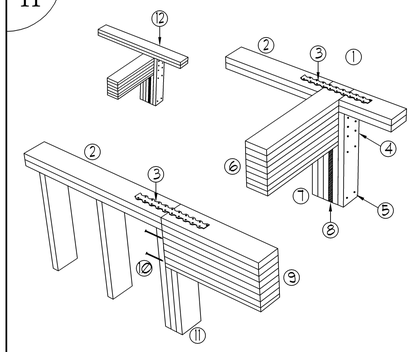


1. SHEATHING PER ROOF SHEATHING SCHEDULE. STAGGER SHEETS W/ 1/8" MIN GAP. EDGE CLIPS RECOMMENDED FOR 24/16 RATED SHEATHING WITH MAXIMUM SPAN 24 INCHES
2. 8d NAILS @ 6" O.C. AT "BIRD BLOCKING" SHEATHING BREAK
3. EXTEND WALL SHEATHING TO TOP OF DOUBLE TOP PLATE
4. SIMPSON H1 @ EACH TRUSS OR RAFTER PERPENDICULAR TOP PLATE INTERSECTION U.N.O. (2) H2.5A FOR MULTI PLY
5. MFR TRUSSES @ 24" O.C. W/ PLAN ROOF SHEATHING NAIL W/ 8d @ 6" O.C. FOR PANEL EDGES AND 12 O.C. IN FIELD
6. SHEATH ALL GABLE ENDS USING SW1 SHEARWALL SCHEDULE

ROOF SHEATHING

1 D1

11



1. CUT TOP PLATE OR DROP BEAM DO NOT CUT BEAM
2. DOUBLE TOP PLATE
3. SIMPSON ST22 OR 22"CS14 W/(18)10d OR DROP BEAM W/ CONTINUOUS TOP PLATE. STRAP MAY BE PLACED ON SIDE OF TOP PLATE
4. (6) 16d NAILS
5. (2) 16d NAILS @ 16" O.C.
6. BEAM PER PLAN
7. 2X CRIPPLES
8. PLYWOOD FILLER (AS REQUIRED)
9. HEADER PER PLAN
10. (2) 16d NAILS
11. DOUBLE 2X TRIMMER STUDS MIN. FOR >6' OPENING U.N.O.
12. NO STRAP REQUIRED IF CONTINUOUS TOP PLATE

BEAM AND HEADER END SUPPORT

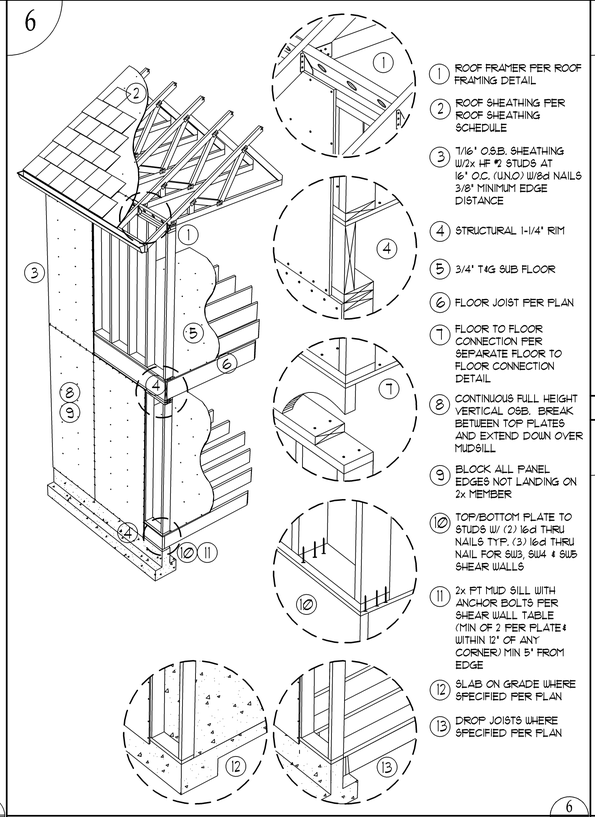
11 D1

8

NOT USED

8 D1

6

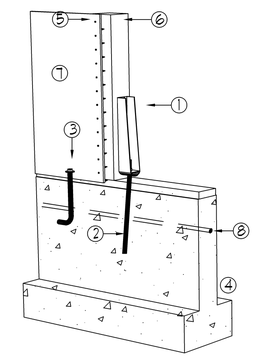


1. ROOF FRAMER PER ROOF FRAMING DETAIL
2. ROOF SHEATHING PER ROOF SHEATHING SCHEDULE
3. 7/16" O.S.B. SHEATHING W/2x HF #2 STUDS AT 16" O.C. (U.N.O.) W/8d NAILS 3/8" MINIMUM EDGE DISTANCE
4. STRUCTURAL 1-1/4" RIM
5. 3/4" T&G SUB FLOOR
6. FLOOR JOIST PER PLAN
7. FLOOR TO FLOOR CONNECTION PER SEPARATE FLOOR TO FLOOR CONNECTION DETAIL
8. CONTINUOUS FULL HEIGHT VERTICAL OSB. BREAK BETWEEN TOP PLATES AND EXTEND DOWN OVER MUDSILL
9. BLOCK ALL PANEL EDGES NOT LANDING ON 2x MEMBER
10. TOP/BOTTOM PLATE TO STUDS W/ (2) 16d THRU NAILS TYP. (3) 16d THRU NAIL FOR SW3, SW4 & SW5 SHEAR WALLS
11. 2x PT MUD SILL WITH ANCHOR BOLTS PER SHEAR WALL TABLE (MIN OF 2 PER PLATE & WITHIN 12" OF ANY CORNER) MIN 5" FROM EDGE
12. SLAB ON GRADE WHERE SPECIFIED PER PLAN
13. DROP JOISTS WHERE SPECIFIED PER PLAN

SHEAR WALL NAILING & BUILDING SECTION

6 D1

2



1. HDU PER PLAN
2. ATR W/SIMPSON SET, EPOXY EMBED PER PLAN. FOLLOW ALL SIMPSON 4 JURISDICTION REQUIREMENTS. USE OF 80 PSI AIR 4 SECOND, NYLON BRUSH, AIR AGAIN REQUIRED
3. ANCHOR BOLT SPACING PER PLAN
4. STEM WALL & FOOTING
5. SHEARWALL NAILING PER PLAN
6. 6x6 DF #2 POST REQUIRED FOR HDU8. (2) 2x6 FOR HDU5 (U.N.O.)
7. SHEATHING PER PLAN
8. EXISTING #4 REBAR

HDU TO EXISTING FOUNDATION CONNECTION

2 D1

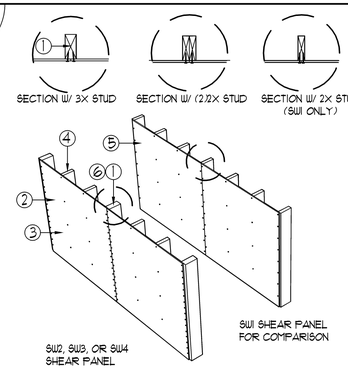
12

NOT USED

12 D1

NOT USED

3



1. 3x MEMBER AT ADJOINING PANEL EDGES FOR SW2, SW3 AND SW4 SHEAR WALL
2. SW2 SHEAR WALL 8d NAIL: 4" EDGE - 12" FIELD
   SW3 SHEAR WALL 8d NAIL: 3" EDGE - 12" FIELD
   SW4 SHEAR WALL 8D NAIL: 2" EDGE - 12" FIELD
3. 7/16" OSB SHEATHING
4. 2x MEMBER FOR SHEAR WALLS MID PANEL (FIELD)
5. SHEAR WALL PER PLAN
6. (2) 2X MAY BE USED IN PLACE OF 3X PER SHEAR WALL NOTES

SW2, SW3, SW4 SHEAR WALL NAILING

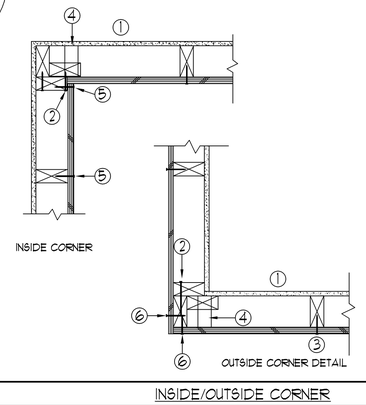
3 D1

13

NOT USED

13 D1

9



1. GYPSUM WALL BOARD INSTALLED W/5d COOLER NAILS @ 8" O.C. OR TYPE S/W SCREWS @ 16" O.C.
2. 16d NAIL @ 12" O.C. (U.N.O.)
3. 8d NAIL @ 12"O.C. ON ALL FRAMING MEMBERS NOT AT PANEL EDGES (U.N.O.)
4. ORIENTATION OF CORNER STUD MAY VARY
5. 8d NAIL @ 6" O.C. ALL FRAMING MEMBERS AT PANEL EDGES & 12" O.C. ON ALL FRAMING MEMBERS NOT AT PANEL EDGES
6. 8d NAIL @ 6" O.C. (ALL PANEL EDGES)(U.N.O.)

INSIDE/OUTSIDE CORNER

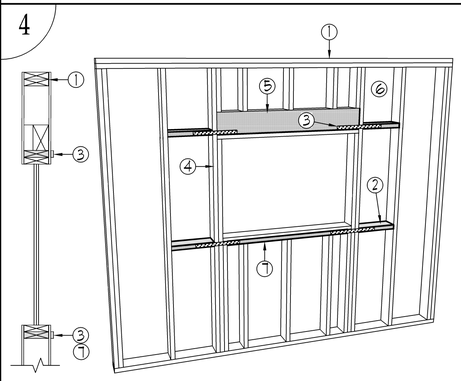
9 D1

7

NOT USED

7 D1

4



1. DOUBLE TOP PLATE
2. 2x6 BLOCKING TO MATCH STUD DEPTH
3. (1) LSTA15 STRAP AT WINDOW CORNERS, U.N.O.
4. KING STUD(S)
5. HEADER PER PLAN
6. SHEATH ALL STUDS INCLUDING PONY AND CRIPPLE STUDS
7. PROVIDE SECOND 2x6 PLATE BELOW WINDOW

APA FORCE TRANSFER AROUND OPENINGS

4 D1

REVISIONS			
NO.	DATE		

Architectural plans carry all dimensions. This engineering is for structure only.

DO NOT SCALE

Structural engineering governs if there are conflicts between the architectural and structural drawings. If any conflicts are to be report to the designer prior to commencement of any work or proceeding. Any conflicts not reported and any deviations from the plans will be delays and remedial work incurred are the sole responsibility of the contractor.

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Hodge engineering inc.

PORT GAMBLE S'KLALLAM TRIBE
S'KLALLAM TRIBE RESOURCE BUILDING
7764 NE 288TH ST
KINGSTON, WA 98346

BUILDING CODE	2021 IBC
WIND EXP.	B 98 MPH
SEISMIC DESIGN CATEGORY	D
ROOF SNOW LOAD	25 PSF

ENG. P.E.	JOHN H.
DATE	03.19.2026
REVIEW	ZACK C.
ENG. P.E.	IAN H.
SHEET	D1
	4 OF 6 SHEETS
PROJECT NUMBER	260037

IAN EDWARD HODGE — STATE OF WASHINGTON — 24010602 — REGISTERED PROFESSIONAL ENGINEER — 03/19/2026

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26

NOT USED

26
D2

22

NOT USED

22
D2

18

NOT USED

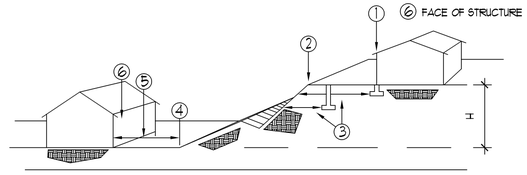
18
D2

14

SITE PLAN, STRUCTURE LOCATION, GEOTECHNICAL REPORT AND SITE WORK ARE THE RESPONSIBILITY OF THE BUILDER AND CIVIL/GEOTECHNICAL ENGINEER.

UNLESS A GEOTECHNICAL REPORT IS PROVIDED TO HODGE ENGINEERING THE BEARING SOILS ARE ASSUMED TO BE 1500 PSF OR 1000 PSF. WHEN PROVIDED, FOLLOW ALL DIRECTION OF THE GEOTECHNICAL REPORT.

1. FACE OF FOOTING
2. TOP OF SLOPE
3. H/3 BUT NEED NOT EXCEED 40' MAX
4. TOE OF SLOPE
5. H/2 BUT NEED NOT EXCEED 15' MAX
6. FACE OF STRUCTURE

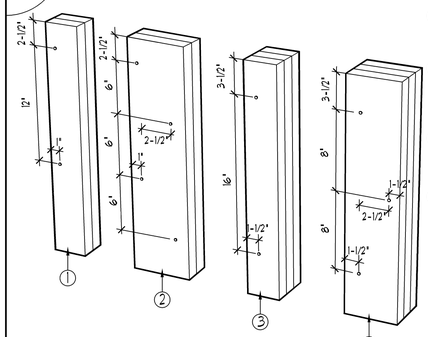


RC FIGURE R403.1.7.1

FOUNDATION CLEARANCE FROM SLOPES

14
D2

23



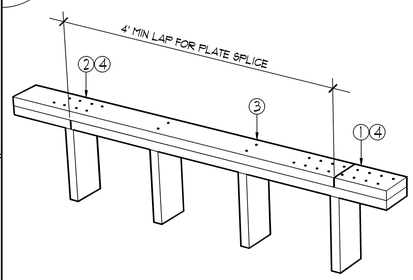
1. (2) 2x4 LAMINATIONS W/ (1) ROW OF STAGGERED 10d COMMON WIRE NAILS @ 12"oc
2. (2) 2x6 LAMINATIONS W/ (2) ROW OF STAGGERED 10d COMMON WIRE NAILS @ 6"oc EACH SIDE
3. (3) 2x4 LAMINATIONS W/ (1) ROW OF STAGGERED 30d COMMON WIRE NAILS @ 16"oc EACH SIDE
4. (3) 2x6 LAMINATIONS W/ (2) ROWS OF STAGGERED 30d COMMON WIRE NAILS 8"oc EACH SIDE

PER NDS 8.3.3 FIGURE 8C

NAILING SCHEDULE FOR BUILT-UP COLUMN

23
D2

19



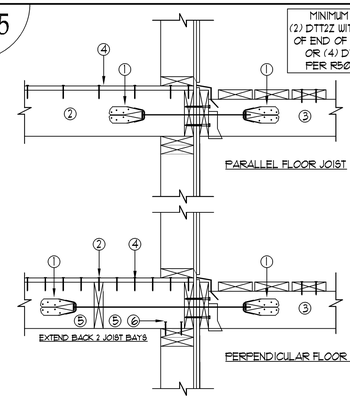
1. (8) 16d NAILS STAGGERED AT EACH SIDE OF TOP PLATE SPLICE.
2. (3) 16d NAILS STAGGERED AT EACH SIDE OF BOTTOM PLATE SPLICE.
3. (2) 16d NAILS @ 16" oc INTO STUDS
4. SIMPSON 36" CS14 MAY BE USED IN LIEU OF NAILING AS INDICATED/NOT SHOWN FOR CLARITY)

NOTE: PLATE SPLICE APPLIES WHEN NO OTHER SPLICE IS INDICATED.

PLATE SPLICE

19
D2

15



1. SIMPSON DTT2Z DECK HANGERS W/ 1/2" HDG ALL THREADED RODS
2. FLOOR JOIST PER PLAN. WEB STIFFENERS REQUIRED FOR MFR FLR JST APPLICATION
3. DECK JOISTS PER PLAN
4. FLOOR SHEATHING NAILING PARALLEL JOIST: 6" oc. PERPENDICULAR JOIST:3"oc
5. DOUBLE BLOCKING REQUIRED FOR PERPENDICULAR INSTALLATION W/ 1/4"x2-1/2" SDS SCREWS
6. TOE NAIL BLOCKING TO PLATE W/ (2) 16d NAILS

LATERAL DECK CONNECTION - DTT2Z / DTTIZ

15
D2

28

NOT USED

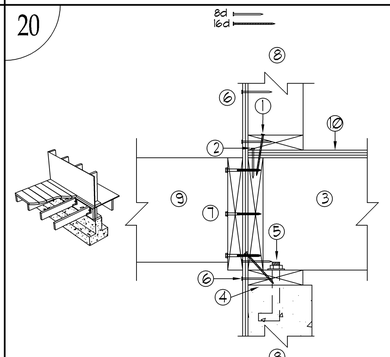
28
D2

24

NOT USED

24
D2

20

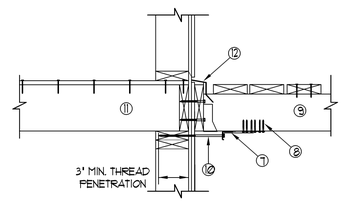


* SEE SHEARWALL TABLE FOR ADDITIONAL NAILING

* 1. 2X SOLE PLATE TO RIM W/16d @ 6" O.C. U.N.O. *
2. 3/4 T&G TO RIM: 8d @ 6" O.C.
3. 2X OR MFR FLOOR JOIST
* 4. RIM TO MUD SILL W/16d @ 4" O.C. U.N.O. *
5. ANCHOR BOLT PER PLAN
* 6. SHEATHING TO STUD SEE SHEAR WALL SCHEDULE
7. (3) SDS 1/4"x3-1/2" SCREWS STAGGERED @ 16" O.C. INTO STRUCTURAL 2x OR STRUCTURAL RIM
8. CONCRETE FOUNDATION
9. DECK JOISTS PER PLAN
10. 3/4" T & G FLOORING

DECK LEDGER CONNECTION

20
D2



NOT REQUIRED FOR DECKS ENTIRELY UNDER 30" ABOVE GRADE

1. SIMPSON DTTIZ DECK TENSION TIE
2. (6) #3 x 1-1/2" SIMPSON SD SCREWS (SHOWN) OR (8) Ø.148" x 1-1/2" NAILS
3. DECK JOISTS PER PLAN
10. 3/8" SIMPSON HDG LAG SCREW WITH HDG WASHER OR SDWH TIMBER-HEX HDG SCREW (SHOWN) INTO TOP PLATE, STUDS, OR HEADER
11. FLOOR JOIST PER PLAN
12. FLASHING BY OTHERS - SHOWN FOR REFERENCE ONLY

JOIST HANGER AND LEDGER ATTACHMENT PER PLAN

OPTION OF (1) DTT2Z IN LIEU OF (2) DTTIZ

LATERAL DECK CONNECTION - DTT2Z / DTTIZ

15
D2

29

NOT USED

29
D2

25

NOT USED

25
D2

21

NOT USED

21
D2

17

NOT USED

17
D2

NO.	DATE	REVISIONS

Architectural plans carry all dimensions. This engineering is structural only.

DO NOT SCALE

Structure engineering governs if there are conflicts between the architectural and structural drawings. Any discrepancies or conflicts are to be report to the designer and resolved before construction may proceeding. Any conflicts not reported before construction may result in costly delays and remedial work incurred are the sole responsibility of the contractor.

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Hodge engineering inc.

PORT GAMBLE S'KLALLAM TRIBE
S'KLALLAM TRIBE RESOURCE BUILDING
7764 NE 288TH ST
KINGSTON, WA 98346

BUILDING CODE	2021 IBC
WIND EXP.	B 98 MPH
SEISMIC DESIGN CATEGORY	D
ROOF SNOW LOAD	25 PSF

ENG. P.E.	JOHN H.
DATE	Ø3.19.2026
REVIEW	ZACK C.
ENG. P.E.	IAN H.
SHEET	**D2**
	5 OF 6 SHEETS
PROJECT NUMBER	260037

JAMES EDWARD HODGE — STATE OF WASHINGTON — 24010607 — REGISTERED PROFESSIONAL ENGINEER — 3/19/2026

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1. GENERAL STRUCTURAL NOTES

ALL LATERAL LOAD RESISTING AND GRAVITY LOAD RESISTING STRUCTURAL MEMBERS ARE SHOWN ON THE ENGINEERING SHEETS AND DETAIL PAGES. THE 8x11 ENGINEERING CALCULATIONS DOCUMENT THE ANALYSIS USED TO DETERMINE THE STRUCTURAL MEMBERS OF THE ENGINEERING SHEETS.

THIS ENGINEERING HAS BEEN CALCULATED TO RESIST CODE SPECIFIED VERTICAL AND LATERAL (WIND & SEISMIC) FORCES AFTER THE COMPLETION OF ALL STRUCTURAL ELEMENTS. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE STRUCTURAL STABILITY DURING CONSTRUCTION INCLUDING JOB SITE SAFETY; ERECTION METHODS; TEMPORARY SHORING, FORMWORK AND BRACING; AND USE OF EQUIPMENT AND CONSTRUCTION PROCEDURES. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, ENGINEERING, AND/OR THE SITE CONDITIONS MUST BE PROMPTLY REPORTED TO THE ARCHITECT AND ENGINEER WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCIES SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK. THE GENERAL CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO CONSTRUCTION. IF THERE ARE CONFLICTS WITH ARCHITECTURAL DRAWINGS, CONTACT HODGE ENGINEERING IMMEDIATELY.

CONSTRUCTION OBSERVATION BY THE STRUCTURAL ENGINEER IS NOT PROVIDED. THIS ENGINEERING IS NOT INTENDED IN ANY WAY TO REVIEW OR APPROVE THE CONTRACTOR'S CONSTRUCTION PROCEDURES OR THE ARCHITECT'S WORK.

STANDARDS

ALL METHODS, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2021 INTERNATIONAL RESIDENTIAL CODE (IRC) AS AMENDED AND ADOPTED BY THE LOCAL BUILDING OFFICIAL OR APPLICABLE JURISDICTION. HODGE ENGINEERING HAS USED THE 2021 INTERNATIONAL BUILDING CODE (IBC) FOR WIND AND SEISMIC MODELING DUE TO THE ROBUSTNESS OF THE SOFTWARE RESOURCES AVAILABLE FOR THE IBC VS. THE IRC.

2. DESIGN CRITERIA

VERTICAL LOADS

IRC TABLE R301.5	
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS	
USE	LIVE LOAD
ATTICS WITHOUT STORAGE (UNINHABITABLE)	10 PSF
ATTICS WITH STORAGE (UNINHABITABLE)	20 PSF
DECKS	60 PSF
EXTERIOR BALCONIES	60 PSF
FIRE ESCAPES	40 PSF
GUARD RAILS AND HAND RAILS	200 POUNDS
GUARD RAIL INFILL COMPONENTS	50 POUNDS
PASSENGER VEHICLE GARAGES	50 PSF & 2000 POUNDS
ROOMS OTHER THAN SLEEPING ROOMS	40 PSF
SLEEPING ROOMS	30 PSF
STAIRS	40 PSF & 300 POUNDS

LATERAL FORCES

WIND:

ASCE 7-16 DIRECTIONAL PROCEDURE FOR BUILDINGS OF ALL HEIGHTS

SEISMIC:

SEISMIC IMPORTANCE FACTOR PER ASCE 7-16, Ie = 1.00
BUILDING OCCUPANCY RISK CATEGORY PER ASCE 7-16 TABLE 1.5-1 = II
SOIL SITE CLASS PER ASCE 7-16 TABLE 20.3-1 = PER PLAN
SEISMIC DESIGN CATEGORY IBC TABLE 1613.2.5(1) & 1613.2.5(2) = PER PLAN
ANALYSIS PROCEDURE USED = EQUIVALENT LATERAL FORCE ANALYSIS
RESPONSE MODIFICATION FACTOR R = 6.5

3. SOIL

HODGE ENGINEERING DOES NOT SPECIALIZE IN GEOTECHNICAL ENGINEERING AND THUS IS NOT EQUIPPED TO ASSESS THE SUITABILITY OF A SITE FOR CONSTRUCTION. SHOULD THERE BE ANY CONCERNS REGARDING THE SOIL'S BEARING CAPACITY OR SITE SLOPE THAT COULD IMPACT CONSTRUCTION, IT IS ESSENTIAL FOR THE BUILDER TO ENGAGE A GEOTECHNICAL ENGINEERING FIRM FOR EXPERT ADVICE. PROVIDE HODGE ENGINEERING WITH ANY GEOTECHNICAL INFORMATION PRIOR TO SITE PREPARATION. IF THE OWNER AND BUILDER, THROUGH THEIR FEASIBILITY STUDIES, DETERMINES THAT A GEOTECHNICAL REPORT IS NOT NEEDED THEN THE FOLLOWING SOIL PARAMETERS AND METHODS ARE ASSUMED BY HODGE ENGINEERING AND ACCEPTED BY THE OWNER AND BUILDER:

SOIL BEARING PRESSURE: 1500 PSF*
ACTIVE SOIL PRESSURE - UNRESTRAINED: 35 PCF
PASSIVE SOIL RESISTANCE: 200 PCF
COEFFICIENT OF SOIL FRICTION: 0.35
*1/3 INCREASE ALLOWED FOR SEISMIC OR WIND LOADING

ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED EARTH. THE USE OF COMPACTED STRUCTURAL FILL SHALL BE UNDER THE GUIDANCE OF A GEOTECHNICAL ENGINEER.

R401.4 SOIL TESTS. WHERE QUANTIFIABLE DATA CREATED BY ACCEPTED SOIL SCIENCE METHODOLOGIES INDICATE EXPANSIVE SOILS, COMPRESSIBLE SOILS, SHIFTING SOILS OR OTHER QUESTIONABLE SOIL CHARACTERISTICS ARE LIKELY TO BE PRESENT, THE BUILDING OFFICIAL SHALL DETERMINE WHETHER TO REQUIRE A SOIL TEST TO DETERMINE THE SOIL'S CHARACTERISTICS AT A PARTICULAR LOCATION.

SITE GRADING: THE GROUND IMMEDIATELY ADJACENT TO THE FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING PER. EXPANSIVE SOILS AND LOOSE FILL SHALL BE REMOVED.

FREE DRAINING BACKFILL MATERIAL FOR RETAINING AND BASEMENT WALLS:
CLEAN, FREE DRAINING, WELL GRADED SAND OR GRAVEL MATERIAL WHOSE MAXIMUM PARTICLE SIZE DOES NOT EXCEED 3/4" AND WHOSE FINES CONTENT (MATERIAL PASSING THE NO. 200 SIEVE) DOES NOT EXCEED 5%, WITH A MAXIMUM DUST RATIO
%PASSING U.S. NO. 200 SIEVE
% PASSING U.S. NO. 400 SIEVE = 2/3 MAX.

4. CONCRETE AND MASONRY

R404.1.3.3.1 COMPRESSIVE STRENGTH: THE (MIX DESIGN) MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL NOT BE LESS THAN 3,000 PSI IN BUILDINGS IN SEISMIC DESIGN CATEGORY D. NO TESTING OF CONCRETE STRENGTH IS REQUIRED UNLESS NOTED OTHERWISE.

WOOD SHALL NOT BE USED TO SUPPORT MASONRY UNLESS SPECIFICALLY NOTED OTHERWISE ON THE ENGINEERING S-SHEETS.

R403.1.3.4 INTERIOR BEARING AND BRACED WALL PANEL FOOTINGS SUPPORTING BEARING WALLS OR SHEAR WALLS, AND CAST MONOLITHICALLY WITH A SLAB ON GRADE, SHALL EXTEND TO A DEPTH OF NOT LESS THAN 12-INCHES BELOW THE TOP OF THE SLAB.

R403.1.6 ANCHOR BOLTS: ANCHOR BOLTS ARE PERMITTED TO BE LOCATED WHILE CONCRETE IS STILL PLASTIC AND BEFORE IT HAS SET. WHERE ANCHOR BOLTS RESIST PLACEMENT OR THE CONSOLIDATION OF CONCRETE AROUND ANCHOR BOLTS IS IMPEDED, THE CONCRETE SHALL BE VIBRATED TO ENSURE FULL CONTACT BETWEEN THE ANCHOR BOLTS AND CONCRETE.

DAMPPROOFING AND WATERPROOFING: FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND FLOOR BELOW GRADE SHALL BE DAMPPROOFED FOLLOWING R406.1. IN AREAS WHERE A HIGH WATER TABLE OR OTHER SEVERE SOIL-WATER CONDITIONS ARE KNOWN TO EXIST, EXTERIOR FOUNDATION WALLS THAT RETAIN EARTH OR ENCLOSE INTERIOR SPACES AND FLOORS BELOW GRADE SHALL BE WATERPROOFED FOLLOWING R406.2

CONCRETE FLOORS ON GROUND SHALL HAVE A VAPOR RETARDER/GROUND COVER INSTALLED PER R506.2.3 AND SHALL BE PLACED BETWEEN THE CONCRETE FLOOR SLAB AND THE BASE COURSE OR THE PREPARED SUBGRADE WHERE A BASE COURSE DOES NOT EXIST. SEE R506.2.3 FOR EXCEPTIONS.

R405.1 FOUNDATION DRAINAGE: DRAINS SHALL BE PROVIDED AROUND CONCRETE OR MASONRY FOUNDATION THAT RETAIN EARTH AND ENCLOSE HABITABLE OR USEABLE SPACES LOCATED BELOW GRADE. DRAINAGE TILES, GRAVEL OR CRUSHED STONE DRAINS, AND PERFORATED PIPE SHALL BE INSTALLED AT OR BELOW THE TOP OF THE FOOTING OR BELOW THE BOTTOM OF THE SLAB AND SHALL DISCHARGE BY GRAVITY INTO AN APPROVED DRAINAGE SYSTEM.

CONCRETE MIX DESIGNS: SHALL BE MADE WITH PORTLAND CEMENT ASTM C-150 TYPE II OR TYPE I AND SHALL BE READY MIXED PER ASTM C-94. THE CONTRACTOR SHALL USE DESIGNED CONCRETE MIXES THAT MEET OR EXCEED THE REQUIREMENTS OF THE CONCRETE MIX TABLE FOR THE BEARING STRENGTH SPECIFIED. THE MIX DESIGNS SHALL FACILITATE ANTICIPATED PLACEMENT METHODS, WEATHER, TEMPERATURE, REBAR CONGESTION, AND ALL OTHER FACTORS REQUIRED TO PROVIDE A STRUCTURALLY SOUND AND ACCEPTABLE FINISHED PRODUCT. WATER REDUCING ADMIXTURES MAY BE USED TO MEET THESE REQUIREMENTS. MAXIMUM SLUMP SHALL BE 5".

ADMIXTURES: ADMIXTURES SHALL BE BY MASTER BUILDERS, W.R. GRACE, OR PRE-APPROVED EQUAL. ALL MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED.

REINFORCING STEEL: SHALL CONFORM TO ASTM A-615, GRADE 60. PLACE PER ACI 315 AND ACI 318. VERTICAL AND HORIZONTAL REINFORCEMENT SHALL BE THE LONGEST LENGTHS PRACTICAL. WHERE SPLICES ARE NECESSARY THE LENGTH OF LAP SPLICE SHALL BE A MINIMUM OF 30 INCHES FOR #4, 38 INCHES FOR #5, AND 45 INCHES FOR #6. THE MAXIMUM GAP BETWEEN NON-CONTACT PARALLEL BARS AT A LAP SPLICE SHALL NOT EXCEED 5 INCHES.

CRACKS: UNREINFORCED CONCRETE IS PRONE TO CRACKING. IMPLEMENTING MEASURES FOR SLAB CRACK CONTROL IS ADVISED TO MITIGATE UNDESIRED CRACKS. THIS SHOULD BE IN ACCORDANCE WITH THE PREFERENCES AND BUDGET SET BY THE OWNER. THE OWNER MUST SPECIFY THE TOLERABLE LEVEL OF SLAB CRACKING BEFORE CONSTRUCTION BEGINS AND REQUEST SUITABLE CRACK CONTROL METHODS.

CONCRETE MINIMUM COVER OVER REINFORCEMENT
CONCRETE CAST AGAINST EARTH = 3" EXPOSED TO WEATHER OR EARTH = 2"
WALLS AND SLABS NOT EXPOSED TO WEATHER = 3/4"

BOLTS

MACHINE BOLTS (M.B.): ASTM A-307, GRADE A
ANCHOR BOLTS (A.B.): ASTM F1554, GRADE 36, CLASS 2A

5. CARPENTRY

NAILS: CONNECTION DESIGNS ARE BASED ON "COMMON WIRE" NAILS WITH THE FOLLOWING PROPERTIES:

PENNYWEIGHT	DIAMETER (IN.)	LENGTH (IN.)
8d	0.131	2-1/2
10d	0.148	3
16d	0.162	3-1/2
20d	0.192	4

WOOD SHEATHING (STRUCTURAL): SHEATHING SHALL BE PLYWOOD (CDX) OR ORIENTED STRAND BOARD (OSB), PLYWOOD SHEATHING SHALL BE 5-PLY MINIMUM WHERE INDICATED AS 3/4" OR THICKER. WOOD SHEATHING SHALL BE "RATED SHEATHING" CONFORMING TO PS1-95 AND/OR PS2-92. ALL PANELS SHALL BEAR THE STAMP OF AN APPROVED GRADING AGENCY. SPAN RATING SHALL BE PROVIDED AS FOLLOWS: ROOF (24/16); WALLS (24/16); FLOORS (20" O.C.) UNLESS NOTED OTHERWISE. ALL WOOD SHEATHED WALLS SHALL BE BLOCKED AT ALL PANEL EDGES UNLESS NOTED OTHERWISE.

GLUE-LAMINATED MEMBERS: PER ANSI/AITC A190.1. MEMBERS SHALL BE COMBINATION 24F-V4 DOUGLAS FIR FOR SIMPLE SPANS AND 24F-V8 DOUGLAS FIR FOR CANTILEVERED SPANS AND TRUSS CHORDS (FB=2400 PSI, FV=240 PSI, E=1.8X10^6 PSI) AND DOUGLAS FIR COMBINATION 3 FOR COLUMNS AND TRUSS WEB MEMBERS, ALL WITH EXTERIOR GLUE. ALL MEMBERS TO HAVE AITC OR APA-EWS STAMP.

FRAMING LUMBER:
EACH PIECE SHALL BEAR THE GRADE TRADEMARK OF THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB), WESTERN WOOD PRODUCTS ASSOCIATION (WWPA), OR OTHER AGENCY ACCREDITED BE THE AMERICAN LUMBER STANDARD COMMITTEE (ALSC) TO GRADE UNDER ALSC CERTIFIED GRADING RULES.

SPECIES AND GRADE (BASE DESIGN VALUE) (U.N.O.)

1. 2X TO 4X JOISTS, PURLINS AND HEADERS. "DOUG FIR-LARCH" NO. 2 (Fb=900 PSI, Fv=180 PSI) OR "HEM-FIR" NO. 1 (Fb=975 PSI, Fv=150 PSI)
2. 6X POSTS AND COLUMNS. "DOUG FIR-LARCH" NO. 1 (Fc=1000 PSI)
3. EXTERIOR STUDS, INTERIOR BEARING WALLS "HEM-FIR" NO. 2
4. INTERIOR NON-BEARING STUD WALLS. "HEM-FIR" NO. 2 STUD GRADE
5. 2X & 3X T&G DECKING: "DOUG FIR-LARCH" COMMERCIAL (Fb=1650 PSI, E=1700 KSI)

COLUMNS: ALL COLUMNS NOT SPECIFIED OR OTHERWISE NOTED ON THE PLAN ARE TO BE TWO STUDS. MULTIPLE STUDS ARE TO BE SPIKE LAMINATED TOGETHER WITH (2) 16d NAILING AT 6" ON CENTER STAGGERED (U.N.O.). ALL COLUMNS SUPPORTING GIRDER TRUSSES OR GLUE LAMINATED BEAMS ARE TO BE THREE STUDS. ALL BEARING WALLS OVER 10' SHALL BE LATERALLY BRACED AT 4' O.C. CONTRACTOR SHALL VERIFY ALL POINT LOADS ARE SUPPORTED TO THE FOUNDATION.

FLOORING AND ROOFING: PLYWOOD SUBFLOORING SHALL BE $\frac{3}{4}$" T&G CDX GLUED AND NAILED. NAILING SHALL BE 8d @ 6" O.C. ALONG PANEL EDGES, AND 12" O.C. IN FIELD. STAGGER END LAPS. ROOF SHEATHING SHALL BE $\frac{3}{4}$" CDX OR $\frac{7}{16}$" OSB NAILED WITH 8d @ 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD. STAGGER END LAPS.

PRESERVATIVE TREATED WOOD REQUIREMENTS:
SECTION R317 PROTECTION OF WOOD AND WOOD-BASED PRODUCTS AGAINST DECAY
R317.1 LOCATION REQUIRED.
PROTECTION OF WOOD AND WOOD-BASED PRODUCTS FROM DECAY SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS BY THE USE OF NATURALLY DURABLE WOOD OR WOOD THAT IS PRESERVATIVE-TREATED IN ACCORDANCE WITH AWPA U1.

1. IN CRAWL SPACES OR UNEXCAVATED AREAS LOCATED WITHIN THE PERIPHERY OF THE BUILDING FOUNDATION, WOOD JOISTS OR THE BOTTOM OF A WOOD STRUCTURAL FLOOR WHERE CLOSER THAN 18 INCHES (457 MM) TO EXPOSED GROUND, WOOD GIRDERS WHERE CLOSER THAN 12 INCHES (305 MM) TO EXPOSED GROUND, AND WOOD COLUMNS WHERE CLOSER THAN 8 INCHES (204 MM) TO EXPOSED GROUND.
2. WOOD FRAMING MEMBERS, INCLUDING COLUMNS, THAT REST DIRECTLY ON CONCRETE OR MASONRY EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 8 INCHES (203 MM) FROM THE EXPOSED GROUND.
3. SILLS AND SLEEPERS ON A CONCRETE OR MASONRY SLAB THAT IS IN DIRECT CONTACT WITH THE GROUND UNLESS SEPARATED FROM SUCH SLAB BY AN IMPERVIOUS MOISTURE BARRIER.
4. THE ENDS OF WOOD GIRDERS ENTERING EXTERIOR MASONRY OR CONCRETE WALLS HAVING CLEARANCES OF LESS THAN 1/2 INCH (12.7 MM) ON TOPS, SIDES AND ENDS.
5. WOOD SIDING, SHEATHING AND WALL FRAMING ON THE EXTERIOR OF A BUILDING HAVING A CLEARANCE OF LESS THAN 6 INCHES (152 MM) FROM THE GROUND OR LESS THAN 2 INCHES (51 MM) MEASURED VERTICALLY FROM CONCRETE STEPS, PORCH SLABS, PATIO SLABS AND SIMILAR HORIZONTAL SURFACES EXPOSED TO THE WEATHER.
6. WOOD STRUCTURAL MEMBERS SUPPORTING MOISTURE-PERMEABLE FLOORS OR ROOFS THAT ARE EXPOSED TO THE WEATHER, SUCH AS CONCRETE OR MASONRY SLABS, UNLESS SEPARATED FROM SUCH FLOORS OR ROOFS BY AN IMPERVIOUS MOISTURE BARRIER.
7. WOOD FURRING STRIPS OR OTHER WOOD FRAMING MEMBERS ATTACHED DIRECTLY TO THE INTERIOR OF EXTERIOR MASONRY WALLS OR CONCRETE WALLS BELOW GRADE EXCEPT WHERE AN APPROVED VAPOR RETARDER IS APPLIED BETWEEN THE WALL AND THE FURRING STRIPS OR FRAMING MEMBERS.
8. PORTIONS OF WOOD STRUCTURAL MEMBERS THAT FORM THE STRUCTURAL SUPPORTS OF BUILDINGS, BALCONIES, PORCHES OR SIMILAR PERMANENT BUILDING APPURTENANCES WHERE THOSE MEMBERS ARE EXPOSED TO THE WEATHER WITHOUT ADEQUATE PROTECTION FROM A ROOF, EAVE, OVERHANG OR OTHER COVERING THAT WOULD PREVENT MOISTURE OR WATER ACCUMULATION ON THE SURFACE OR AT JOINTS BETWEEN MEMBERS.

EXCEPTION:SAWN LUMBER USED IN BUILDINGS LOCATED IN A GEOGRAPHICAL REGION WHERE EXPERIENCE HAS DEMONSTRATED THAT CLIMATIC CONDITIONS PRECLUDE THE NEED TO USE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD WHERE THE STRUCTURE IS EXPOSED TO THE WEATHER.

9. WOOD COLUMNS IN CONTACT WITH BASEMENT FLOOR SLABS UNLESS SUPPORTED BY CONCRETE PIERS OR METAL PEDESTALS PROJECTING NOT LESS THAN 1 INCH (25 MM) ABOVE THE CONCRETE FLOOR AND SEPARATED FROM THE CONCRETE PIER BY AN IMPERVIOUS MOISTURE BARRIER.

PRESERVATIVE TREATED WOOD FASTENER REQUIREMENTS:

ALL METAL CONNECTORS LESS THAN 1/2" DIAMETER (R317.3.1) COMING IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE SIMPSON Z-MAX, TRIPLE ZINC COATED, OR HOT DIPPED GALVANIZED.
CCA: CHROMATED COPPER ARSENATE NOT PERMITTED.
SBX: DOT SODIUM BORATE
ACQ: ALKALINE COPPER QUAT
CBA AND CA: COPPER AZOLE

G60, G90, AND G185 PER ASTM A23 FOR CONNECTORS, AND ASTM A153 FOR FASTENERS. MECHANICALLY GALVANIZED FASTENERS PER ASTM B695, CLASS 55 OR GREATER.

GENERAL CARPENTRY NOTES: STAGGER ALL NAILING TO PREVENT SPLITTING OF WOOD MEMBERS. PRESSURE-TREAT ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY. HOLES AND CUTS IN PLATES SHOULD BE TREATED WITH A 20% SOLUTION OF COPPER NAPHTHENATE. BOLT HOLES IN WOOD MEMBERS SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN THE BOLT DIAMETER. PROVIDE CUT WASHERS WHERE BOLT HEADS, NUTS AND LAG SCREW HEADS BEAR ON WOOD. PROVIDE A MINIMUM 3x3x.229 PLATE WASHER ON ALL ANCHOR BOLTS WHICH CONNECT MUD SILLS TO FOUNDATION. DO NOT NOTCH OR DRILL STRUCTURAL MEMBERS. REFER TO PRESERVATIVE TREATED WOOD REQUIREMENTS TABLE FOR GALVANIZING REQUIREMENTS FOR CONNECTORS AND FASTENERS.

IT IS GOOD FRAMING PRACTICE TO USE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND MORE THAN $\frac{1}{2}$ THE LENGTH AND AROUND OPENINGS UNLESS DESIGNED BY A FLOOR JOIST MANUFACTURER.

POSITIVE CONNECTIONS SHALL BE PROVIDED AT ALL FRAMING CONNECTIONS TO ENSURE AGAINST UPLIFT AND LATERAL DISPLACEMENT. SIMPSON ST-12 STRAP TIES MAY BE USED FOR MANY POSITIVE CONNECTIONS.

METAL-PLATE-CONNECTED WOOD TRUSSES: SPECIAL INSPECTIONS OF WOOD TRUSSES WITH OVERALL HEIGHTS OF 60 INCHES OR GREATER SHALL BE PERFORMED TO VERIFY THAT THE INSTALLATION OF THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE. FOR WOOD TRUSSES WITH A CLEAR SPAN OF 60 FEET OR GREATER, THE SPECIAL INSPECTOR SHALL VERIFY DURING CONSTRUCTION THAT THE TEMPORARY INSTALLATION RESTRAINT/BRACING IS INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE.

FASTENING SCHEDULE FOR WOOD STRUCTURAL MEMBERS IRC R602.3(1)

ITEM	TYPE	CONNECTION
STUD TO STUD	10d	16" O.C. FACE NAIL
STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS	10d	12" O.C. FACE NAIL
BUILT UP HEADER 2x TO 2x HEADER WITH HALF-INCH SPACER	16d	12" O.C. EACH EDGE FACE NAIL
CONTINUOUS HEADER TO STUD	(4) 8d	TOE NAIL
ADJACENT FULL-HEIGHT STUD TO END OF HEADER	(4) 10d	END NAIL
TOP PLATE TO TOP PLATE	10d	12" FACE NAIL
DOUBLE TOP PLATE SPLICE	(12) 10d	FACE NAIL ON EACH SIDE OF 24" MINIMUM SPLICE
BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING	10d (NOT BRACED WALL)	12" O.C. FACE NAIL
BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST, OR BLOCKING	(4) 10d AT BRACED WALL	16" O.C. FACE NAIL
TOP OR BOTTOM PLATE TO STUD	(3) 10d	END NAIL
TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	(3) 10d	FACE NAIL
JOIST TO SILL, TOP PLATE OR GIRDER	(3) 10d	TOE NAIL
RIM JOIST, BAND JOIST OR BLOCKING TO SILL OR TOP PLATE (ROOF ALSO)	8d	6" O.C. TOE NAIL
BAND OR RIM JOIST TO JOIST	(4) 10d	END NAIL
CONNECTIONS ARE COMMON NAILS U.N.O		

LAG SCREWS: SHALL BE OF A DIAMETER INDICATED ON DRAWINGS WITH A MINIMUM OF 8x DIAMETER EMBEDMENT IN SUPPORTING MEMBER UNLESS NOTED OTHERWISE. CLEARANCE HOLE FOR THE SHANK SHALL BE THE SAME DIAMETER AS THE SHANK AND THE SAME DEPTH OF PENETRATION AS THE UNTHREADED PORTION OF THE SHANK. THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 60 TO 75% OF THE SHANK DIAMETER AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION. THE THREADED PORTION OF THE SCREW SHALL BE INSERTED IN ITS LEAD HOLE BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER. SOAP OR OTHER LUBRICANT SHALL BE USED ON THE SCREWS OR IN THE LEAD HOLE TO FACILITATE INSERTION AND TO PREVENT DAMAGE TO THE SCREW.

R502.11.2 TRUSSES SHALL BE BRACED TO PREVENT ROTATION AND PROVIDE LATERAL STABILITY IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE CONSTRUCTION DOCUMENTS FOR THE BUILDING AND ON THE INDIVIDUAL TRUSS DESIGN DRAWINGS. IN THE OF SPECIFIC BRACING REQUIREMENTS, TRUSSES SHALL BE BRACED IN ACCORDANCE WITH THE ACCEPTED INDUSTRY PRACTICES OF THE SBCA BUILDING COMPONENT SAFETY INFORMATION (BCSI) GUIDE.

PERMANENT BRACING IS TO FOLLOWING THE TEMPORARY BRACING REQUIRED BY BCSI FIGURE B1-24B AND B1-28 INCLUDING TOP CHORD LATERAL RESTRAINTS 24X12' OR GREATER LAPPED OVER TWO TRUSSES, REPEAT DIAGONAL BRACES FOR EACH SET OF (4) TRUSSES,

R502.11.4 TRUSS DESIGN DRAWINGS, PREPARED IN COMPLIANCE WITH ANSI/TPI 1 BY A REGISTERED DESIGN PROFESSIONAL, SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND APPROVED PRIOR TO INSTALLATION.

NO.	DATE	REVISIONS

Architectural plans carry all dimensions. Plus engineering drawings. Do not scale.

DO NOT SCALE

Structure engineering governs if there are conflicts between the architecture and structure drawings. If there are conflicts are to be report to the designer prior to construction or permitting. Any conflicts not reported prior to construction are the responsibility of the builder. Any resulting delays and remedial work incurred are the sole responsibility of the contractor.

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BUILDING CODE	2021 IBC
WIND EXP.	B 98 MPH
SEISMIC DESIGN CATEGORY	D
ROOF SNOW LOAD	25 PSF

ENG. P.E.	JOHN H.
DATE	03.19.2026
REVIEW	ZACK C.
ENG. P.E.	IAN H.
SHEET	N1
	6 OF 6 SHEETS
PROJECT NUMBER	260037

IAN EDWARD HODGE STATE OF WASHINGTON 24019907 REGISTERED PROFESSIONAL ENGINEER
03.19.2026

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