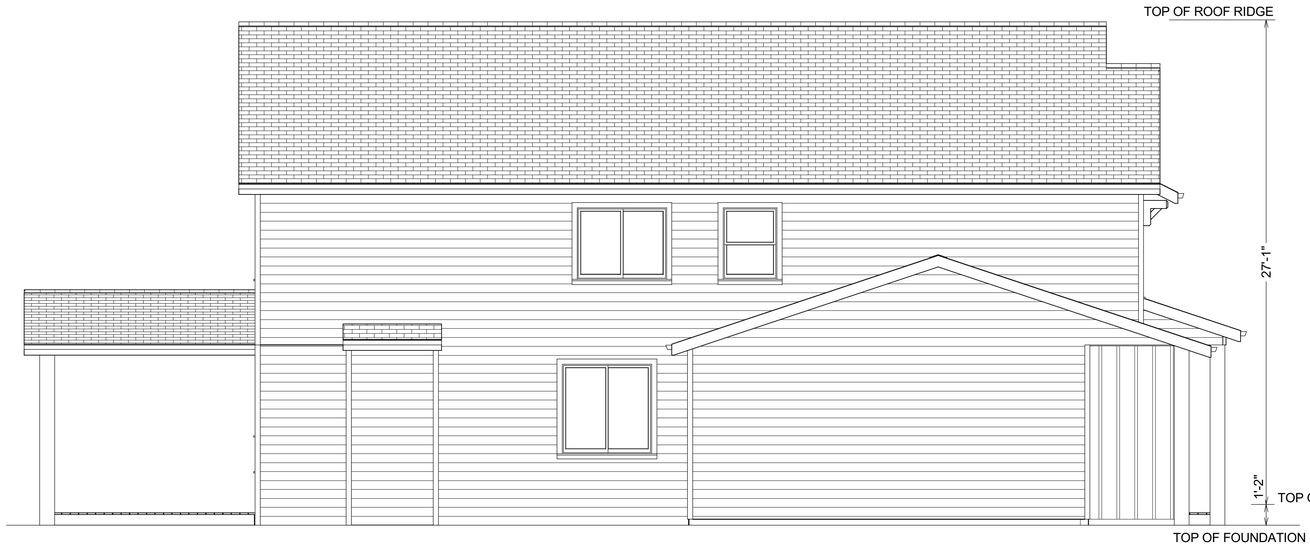
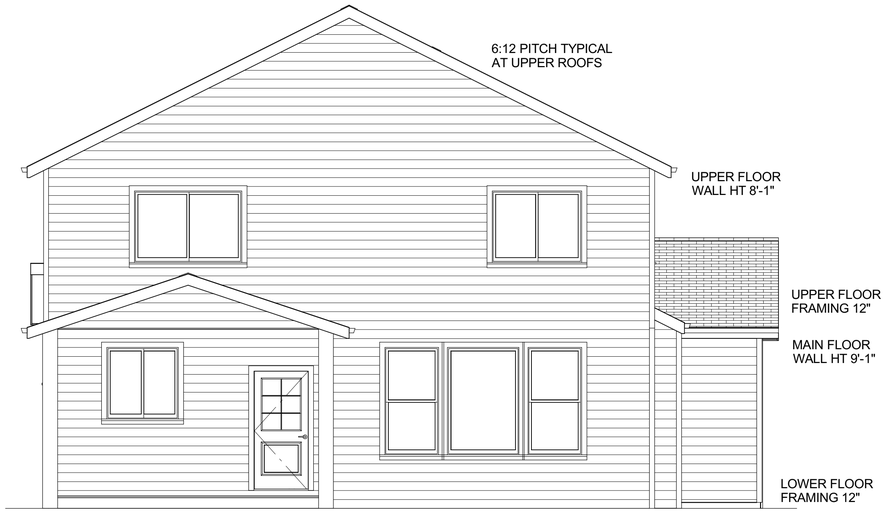
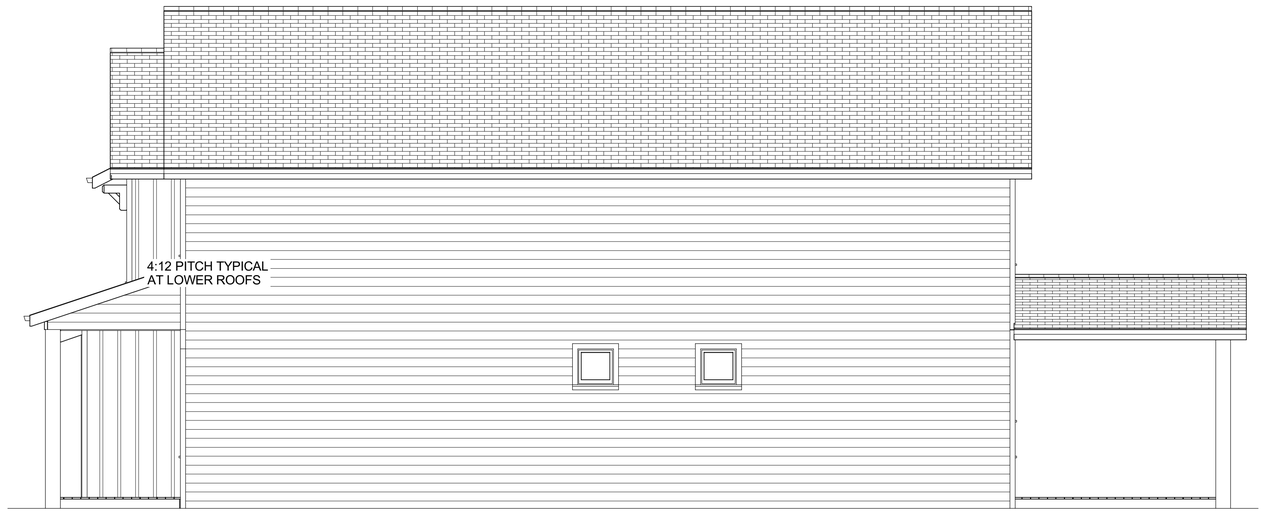


LEFT ELEVATION
SCALE: 1/4 IN = 1 FT

FRONT ELEVATION
SCALE: 1/4 IN = 1 FT



REAR ELEVATION
SCALE: 1/4 IN = 1 FT



RIGHT ELEVATION
SCALE: 1/4 IN = 1 FT

(12) 8X16 FOUNDATION
VENTS REQUIRED

APPROXIMATE FOOTAGE SUMMARY

LOWER LEVEL LIVING	1136
UPPER LEVEL LIVING	1465
TOTAL LIVING	2601
GARAGE AREA	685
COVERED PORCHES	264

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DATE:
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2622

SHEET:
1

M1505.4.1 System design. The whole-house ventilation system shall consist of one or more supply or exhaust fans, or a combination of such, and associated ducts and con-trols. Local exhaust or supply fans are permitted to serve as such a system. Outdoor air ducts connected to the return side of an air handler shall be considered as providing sup-ply ventilation.

M1505.4.2 System controls. The whole-house mechani-cal ventilation system shall be provided with controls that enable manual override.

M1505.4.3 Mechanical ventilation rate. The whole-house mechanical ventilation system shall provide outdoor air at a continuous rate as determined in accordance with Table M1505.4.3(1) or Equation 15-1. Ventilation rate in cubic feet per minute = (0.01 × total square foot area of house) + [7.5 × (number of bedrooms + 1)] Equation 15-1

Exception: The whole-house mechanical ventilation system is permitted to operate intermittently where the system has controls that enable operation for not less than 25 percent of each 4-hour segment and the ventila-tion rate prescribed in Table M1505.4.3(1) is multiplied by the factor determined in accordance with Table M1505.4.3(2).

M1505.4.4 Local exhaust rates. Local exhaust systems shall be designed to have the capacity to exhaust the mini-mum airflow rate determined in accordance with Table M1505.4.4.

Mechanical Ventilation

This Project Floor Area	2601
This Project Number of Bedrooms	3
This Project Requires	60 CFM

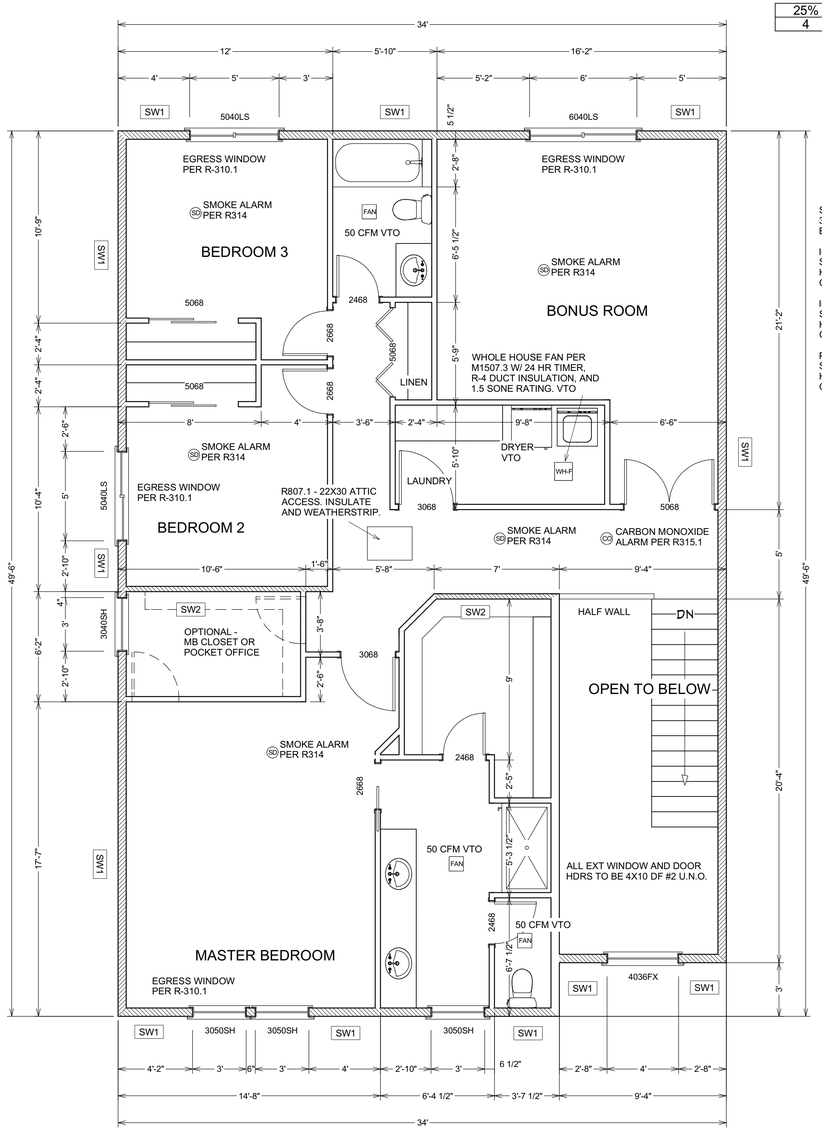
Whole House Ventilation fresh air supply to be provided by exhaust fans

Table M1505.4.3(1)
Continuous Whole House Mechanical Ventilation

Fl Area	0-1 Bdrs	2-3 Bdrs	4-5 Bdrs	6-7 Bdrs	>7 Bdrs
<1500	30	45	60	75	90
1501-3000	45	60	75	90	105
3001-4500	60	75	90	105	120
4501-6000	75	90	105	120	135
6001-7500	90	105	120	135	150
>7500	105	120	135	150	165

Table M1505.4.3(2)
Runtime Percentage and Multiplying Factor

25%	33%	50%	66%	75%	100%
4	3	2	1.5	1.3	1



UPPER FLOOR PLAN
SCALE 1/4"=1 FT

SMOKE DETECTORS SHALL BE INSTALLED NOT LESS THAN 3 FT HORIZONTALLY FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAINS A TUB OR SHOWER. R314

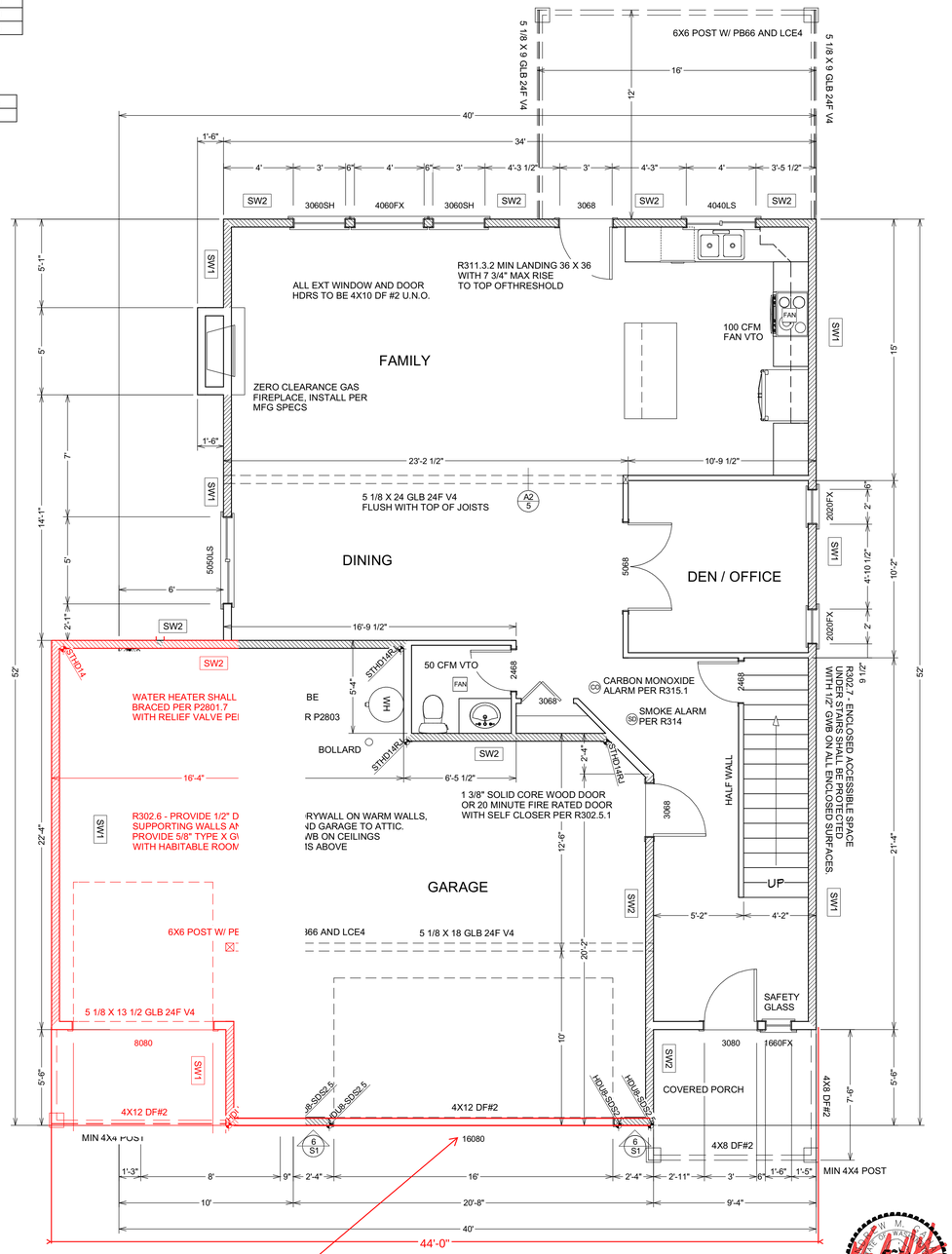
IONIZATION SMOKE ALARMS:
SHALL NOT BE INSTALLED LESS THAN 20 FT HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.

IONIZATION SMOKE ALARMS WITH AN ALARM-SILENCING SWITCH SHALL NOT BE INSTALLED LESS THAN 10 FT HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.

PHOTO ELECTRIC SMOKE ALARMS:
SHALL NOT BE INSTALLED LESS THAN 6 FT HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.

R311.3.1 Floor elevations at the required egress doors. Landings or finished floors at the required egress door shall be not more than 11/2 inches (38 mm) lower than the top of the threshold.
Exception: The landing or floor on the exterior side shall be not more than 73/4 inches (196 mm) below the top of the threshold provided the door does not swing over the landing or floor.
Where exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

R311.3.2 Floor elevations for other exterior doors. Doors other than the required egress door shall be provided with landings or floors not more than 73/4 inches (196 mm) below the top of the threshold.
Exception: A top landing is not required where a stairway of not more than two risers is located on the exterior side of the door, provided that the door does not swing over the stairway.



LOWER FLOOR PLAN
SCALE 1/4"=1 FT

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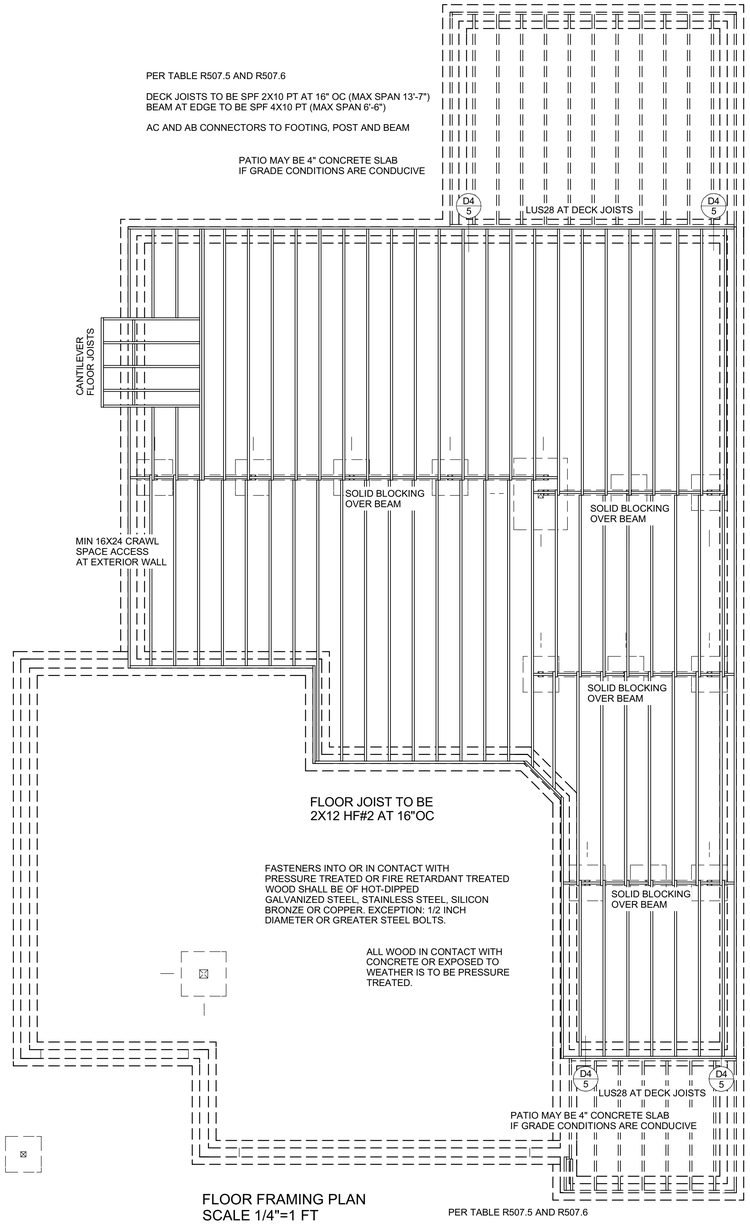
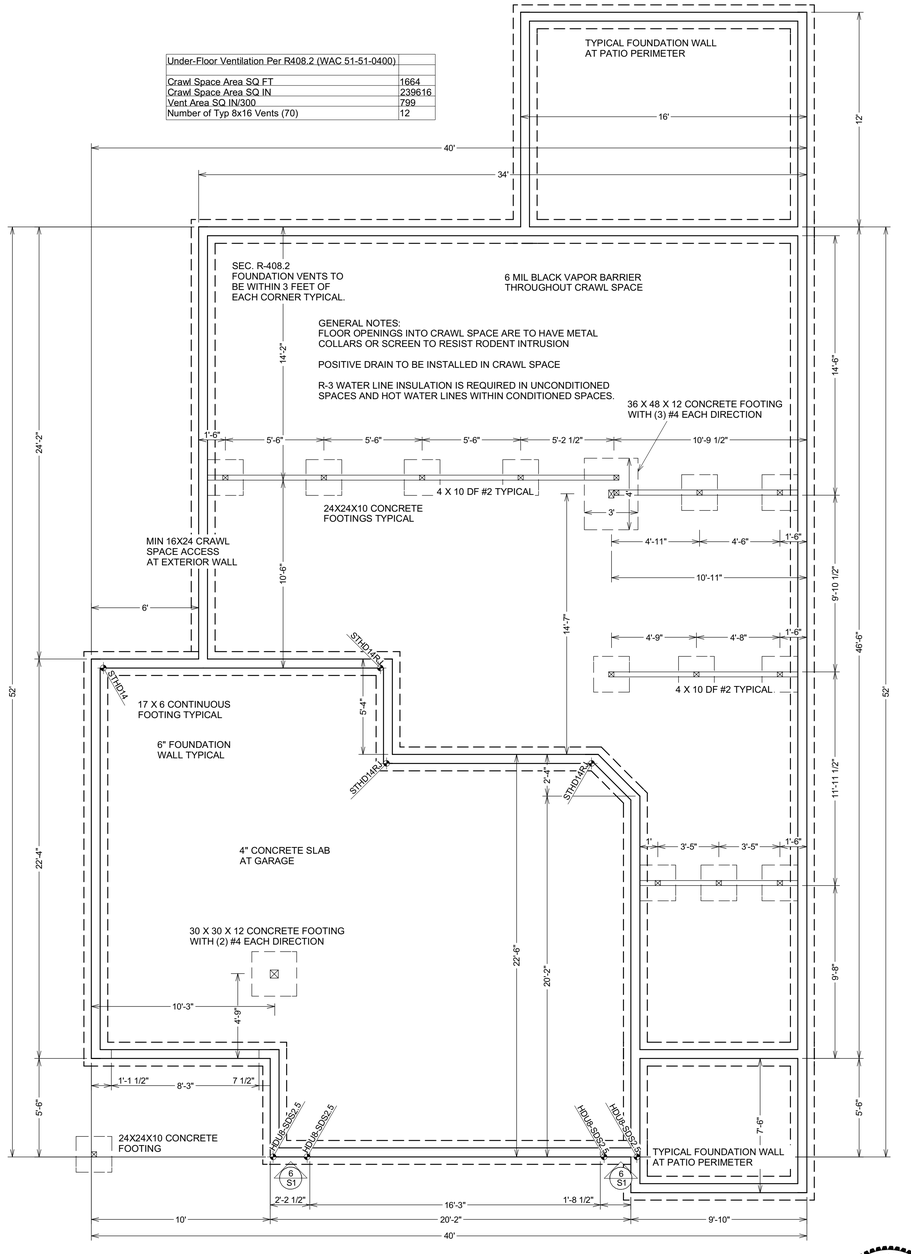


FLOOR FRAMING PLAN
SCALE 1/4"=1 FT

Under-Floor Ventilation Per R408.2 (WAC 51-51-0400)	
Crawl Space Area SQ FT	1664
Crawl Space Area SQ IN	239616
Vent Area SQ IN/300	799
Number of Typ 8x16 Vents (70)	12



FOUNDATION PLAN
SCALE 1/4"=1 FT

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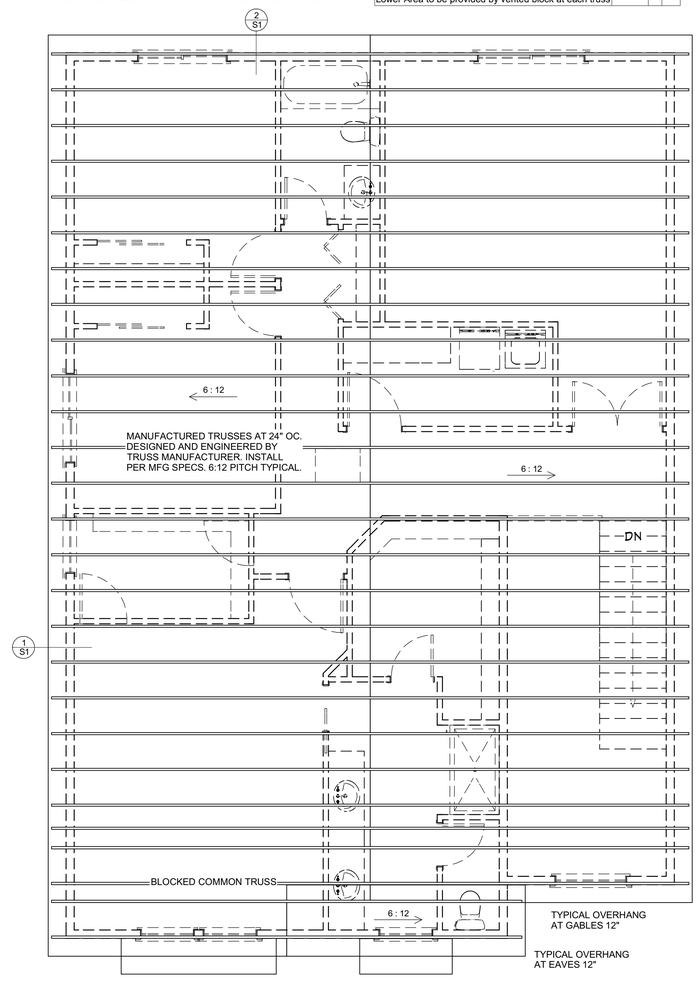
SHEET: 3

STATE OF WASHINGTON
4422
REGISTERED
PROFESSIONAL ENGINEER
11/8/2022

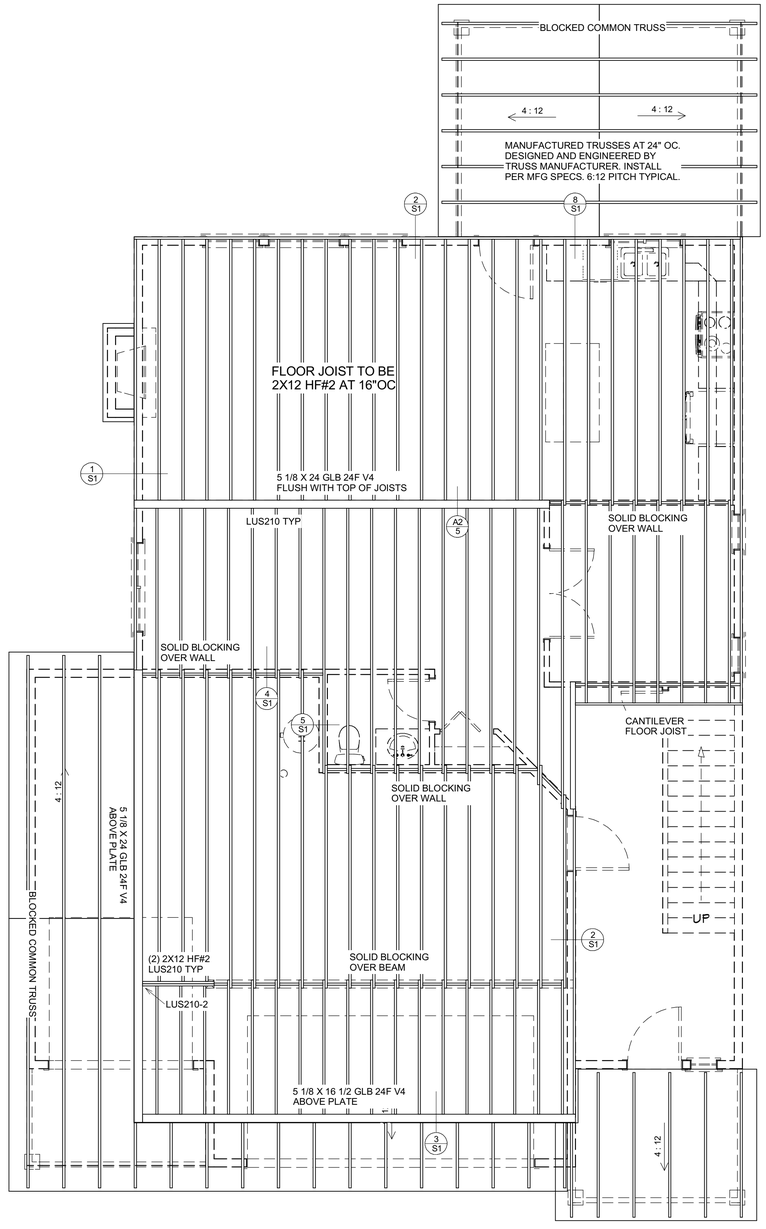
TRUSS MANUFACTURER TO SUPPLY DETAILED PLAN AND ENGINEERING FOR ROOF TRUSSES

ATTIC VENTILATION: VENTED BLOCKING AND GABLE END VENTING IS NOT ALLOWED WHEN THE EXTERIOR WALL IS 5 FT OR LESS FROM THE PROPERTY LINE OR WHEN THE EAVE OR OVERHANG IS LESS THAN 5 FT FROM THE PROPERTY LINE.

Upper Attic Ventilation Per R806.2			
Attic Area SQ FT	1664		
Attic Area SQ IN	239616		
Vent Area SQ IN/300	798.72		
Upper Area 40-50%	319	to	399
Number of Typ 7x7 Vents (36.75)	9	to	11
Lower Area to be provided by vented block at each truss			



ROOF PLAN
SCALE 1/4"=1 FT



UPPER FLOOR
FRAMING PLAN
SCALE 1/4"=1 FT

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SHEET:
4

GENERAL NOTES

ALL CONSTRUCTION SHALL COMPLY WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE, 2018 INTERNATIONAL BUILDING CODE, AND THE 2018 WASHINGTON STATE ENERGY CODE.

R-408.2 (WAC 51-51) UNDERFLOOR VENTILATION REQUIRES 1 SQ FT OF NET FREE CROSS VENTILATION FOR EACH 300 SQ FT OF UNDERFLOOR AREA COVERED.

R-408.4 UNDERFLOOR ACCESS: MINIMUM 18" X 24" CLEAR ACCESS THROUGH FLOOR, MIN 16" X 24" THROUGH EXT WALL.

R-317.1 WOOD FLOOR JOIST CLOSER THAN 18" AND WOOD GIRDERS CLOSER THAN 12" FROM THE EXPOSED GROUND MUST BE PRESSURE TREATED.

FASTENERS INTO OR IN CONTACT WITH PRESSURE TREATED OR FIRE RETARDANT TREATED WOOD SHALL BE OF HOT-DIPPED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. EXCEPTION: 1/2 INCH DIAMETER OR GREATER STEEL BOLTS.

R-806.2 ATTIC VENTILATION REQUIRES NET FREE CROSS VENTILATION 1/150 OF ATTIC AREA. OR 1/300 IF 40-50 PERCENT IS UPPER VENTILATION. VENTED BLOCKING AND GABLE END VENTING IS NOT ALLOWED WHEN THE EXTERIOR WALL IS 5 FT OR LESS FROM THE PROPERTY LINE OR WHEN THE EAVE OR OVERHANG IS LESS THAN 5 FT FROM THE PROPERTY LINE. WHEN APPLICABLE SEE D2

R-807 ATTIC ACCESS REQUIRES 22" X 30" MIN CLEAR OPENING IN A READILY ACCESSIBLE AREA. 30" MIN HEADROOM, INSULATE AND WEATHERSTRIP

R-310 EGRESS OPENINGS SHALL HAVE A SILL HEIGHT OF NOT MORE THAN 44" ABOVE THE FLOOR WITH A MIN OF 5.7 SQUARE FEET, A MIN WIDTH OF 20" AND A MIN HEIGHT OF 24".

R-314.3 INTERCONNECTED SMOKE ALARMS SHALL BE INSTALLED IN EACH SLEEPING ROOM, IN THE IMMEDIATE VICINITY OUTSIDE EACH SLEEPING AREA AND ON EACH STORY.

SMOKE DETECTORS SHALL BE INSTALLED NOT LESS THAN 3 FT HORIZONTALLY FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAINS A TUB OR SHOWER. R314

IONIZATION SMOKE ALARMS: SHALL NOT BE INSTALLED LESS THAN 20 FT HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.

IONIZATION SMOKE ALARMS WITH AN ALARM-SILENCING SWITCH SHALL NOT BE INSTALLED LESS THAN 10 FT HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.

PHOTO ELECTRIC SMOKE ALARMS: SHALL NOT BE INSTALLED LESS THAN 6 FT HORIZONTALLY FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.

R315.1 CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.

R-308.4 SAFETY GLAZING IS REQUIRED AT ENCLOSURES FOR TUBS AND SHOWERS AND WHEN PLACED WITHIN 24" ARC OF EITHER VERTICAL EDGE OF DOOR AND GLAZING IS LESS THAN 60" ABOVE FLOOR.

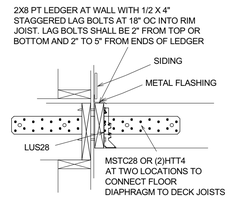
M-1503 RANGE HOOD SHALL DISCHARGE TO THE OUTDOORS THROUGH A SINGLE WALL DUCT THE DUCT SERVING THE HOOD SHALL HAVE A SMOOTH INTERIOR SURFACE, SHALL BE AIR TIGHT AND SHALL BE EQUIPPED WITH A BACKDRAFT DAMPER.

R319.1 BUILDINGS SHALL HAVE APPROVED ADDRESS NUMBERS. MIN SIZE 4 IN WITH 1/2 IN STROKE AND CONTRASTING BACKGROUND AND VISIBLE FROM STREET.

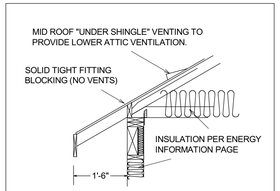
DESIGN CRITERIA

ROOF LIVE LOAD 25 - ROOF DEAD LOAD 15
FLOOR LIVE LOAD 40 - FLOOR DEAD LOAD 10
DECK LIVE LOAD 60 - DECK DEAD LOAD 10

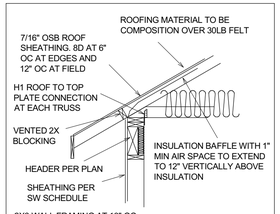
WIND SPEED BASIC / ULTIMATE 85 / 110
SEISMIC CAT. D



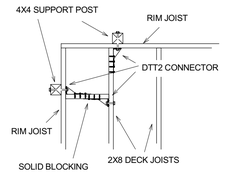
D4 DECK CONNECTION TO WALL



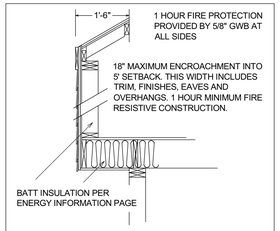
NOTE: GABLE ENDS THAT ARE DIRECTLY UP AGAINST 5 FT SETBACK SHALL HAVE NO GABLE VENTS
E2 ROOF OVERHANG INTRUDING INTO 5 FT PROPERTY LINE SETBACK



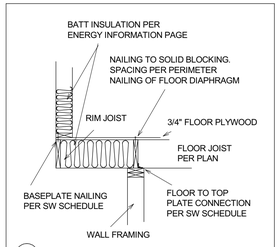
E1 TYPICAL ROOF TO WALL AND HEADER SECTION



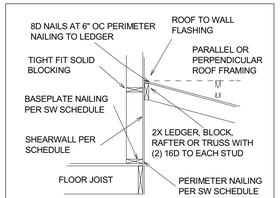
D3 4X4 DECK RAILING POST SUPPORT



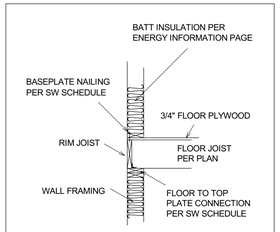
D2 18" CANTILEVER INTRUDING INTO 5 FT PROPERTY LINE SETBACK



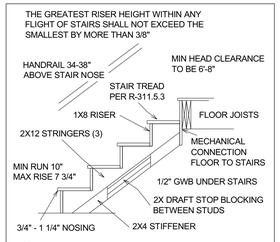
D1 CANTILEVER UPPER FLOOR



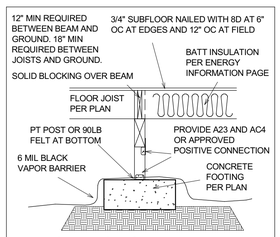
C3 TYPICAL PARALLEL OR PERPENDICULAR LOWER ROOF TO WALL CONNECTION



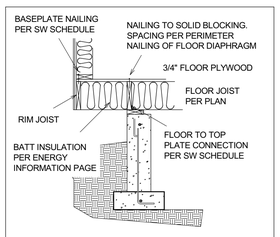
C2 TYPICAL UPPER FLOOR JOIST SECTION



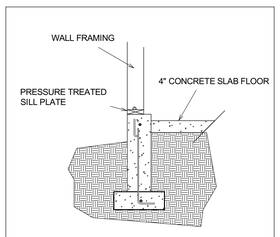
C1 TYPICAL STAIR SECTION



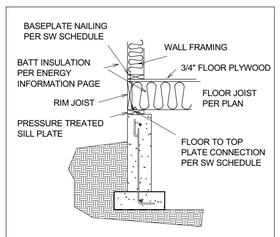
B4 CRAWL SPACE BEAM SUPPORT SECTION



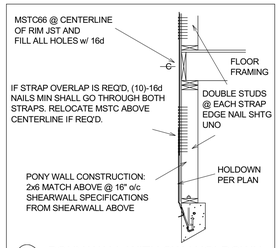
B3 CANTILEVER LOWER FLOOR



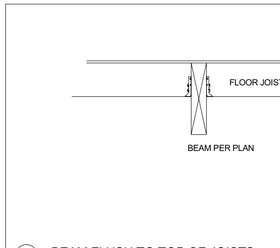
B2 FOUNDATION AT GARAGE SLAB FLOOR



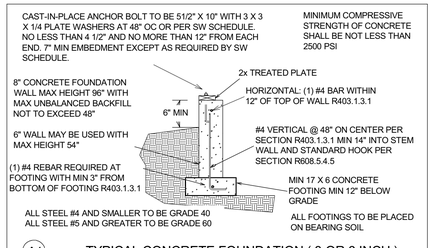
B1 FOUNDATION AT FRAMED FLOOR JOIST



A3 PONY WALL WITH SW / HOLDOWN



A2 BEAM FLUSH TO TOP OF JOISTS



A1 TYPICAL CONCRETE FOUNDATION (8 OR 6 INCH)

The following Washington State Energy Code information is required:

a. Post Energy Code Compliance Certificate within 3 ft. of electrical panel (these are available at www.energy.wsu.edu/code)
b. Provide door blower test affidavit by final building inspection
c. Provide (1) programmable thermostat
d. Provide duct sealing affidavit by final inspection
e. A minimum of 75% of all interior lighting shall be high efficiency
f. All required insulation and glazing values
g. Building framing cavities shall not be used for ducts or plenums. Installation of ducts in exterior walls, floors, or ceilings shall not displace required envelope insulation.

Project Information
Buckwood LLC
Plan - Buckwood 10

Messages / Results
Proposed UA is better than baseline by 5%

ANALYSIS SET UP

What code compliance pathway are you using?	Prescriptive Path Compliance with Option 1 (preferred)
Project Building Type?	New Construction
Occupancy Type?	R1 Single family homes and duplexes
Code Version?	WSEC 2018
Classification:	Medium Dwelling Unit – 2601 sq. ft.
Baseline Description:	Code Baseline - Baseline and proposed window areas are equal.
About Your Selection:	Up to 15 sf exempt window and 24 sf exempt door allowable

RESULTS - Comparison of Baseline and Proposed Design

Component Performance, R occupancies	Baseline U	Baseline Area	Baseline UA	Proposed Design U	Proposed Design Area	Proposed Design UA
Doors U =	0.300	64	19.2	0.300	64	19.2
Overhead Glazing U =	0.500	0	0.0		0	0.0
Vertical Glazing U =	0.300	253	75.9	0.280	253	70.8
Flat/Vaulted Ceilings U =	0.027	1,664	44.9	0.027	1,664	44.9
Wall (above grade) U =	0.056	2,581	144.5	0.054	2,581	139.4
Floors over Crawlspace U =	0.029	1,664	48.3	0.025	1,664	41.6
Slab on Grade F =	0.540	0	0.0		0	0.0
Below Grade Wall U =	0.042	0	0.0		0	0.0
Below Grade Slab F =	0.570	0	0.0		0	0.0
Target UA Total			332.8	Proposed UA Total		315.9
Target Credits			6.0	Proposed Credits		6.0 from Tables 406.2 and 406.3
				UA Percent Reduction		5%
				Difference		16.9

If the Proposed UA ≤ the Target UA, and the Proposed Credits from Table 406.2 are ≥ those required in Section R406.2, then the home meets the 2015 WSEC.

Table R406.2 Fuel Normalization Credits

System No.	Full Description	Select System Type	Fuel Normalization Credits	Energy Credits	Total Credits
2	For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(1)C or C403.3.2(2) OR Air to water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590. Heat pump with electric resistance or fossil-fuel supplemental heat requires compliance with WSEC 403.1.2 "Heat Pump Supplementary Heat". Packaged Terminal Heat Pumps (PTAC-HP) requires an HSPF tested value (See SBC Interpretation dated December 2020).	Heat Pump, air-to-air or air to water	1.0	5.0	6.0

Table R406.3 Energy Credits

Option No.	Category			Select Options	Energy Credits	Brief Description of Selected Options*
1	Efficient Building Envelope			Option 1.3	0.5	U 0.28 Windows / R-38 floors or R-10 Fully insulated slab
2	Air Leakage Control and Efficient Ventilation			Option 2.1	0.5	3.0 ACH50 / High efficiency fans / For R-2, 0.3 cfm per ft2 at 50 Pa
3	High Efficiency HVAC			Option 3.6	2.0	Ductless Split System with no electric resistance in primary living areas
4	High Efficiency HVAC Distribution System				NA	
5.1	Efficient Water Heating				0.0	
5.2-5.6	Efficient Water Heating			Option 5.5	2.0	Tier 3 Water Heater
6	Renewable Electric Energy	2,000	kWh		0.0	
7	Appliance Package				0.0	
				Total Energy Credits	5.0	

*Please refer to WSEC 2018 Table R406.3 for complete option descriptions

Floor (over crawl or exterior)

Plan ID	Component Description	Ref.	Floor U		Area	UA
	R38 vented Joist 16oc (Option 1a-1c)	10-3	0.025		1,664	42
				Sum of Area and UA	1,664	42

Slab on Grade (less than 2 feet below grade)

Plan ID	Component Description	Ref.	Slab F		Slab Perim	FP
				Sum of Perimeter and FP	0	0

Below Grade Walls and Slabs

Plan ID	Component Description	Ref.	Wall U	Wall Area	Wall UA	Slab F	Slab Perim	Slab UA
				Sum of Area, Length and UA	0	0.0	0	0

R406 ADDITIONAL ENERGY EFFICIENCY REQUIREMENTS

Medium Dwelling Unit (1500-5000 SF) requires 6 points from table R406

This project selects the following:

EFFICIENT BUILDING ENVELOPE: 1.3

Prescriptive compliance is based on Table R402.1.1 with the following modifications:
Vertical fenestration U = 0.28
Floor R-38
Slab on grade R-10 perimeter and under entire slab
Below grade slab R-10 perimeter and under entire slab

0.5 CREDITS

AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTION: 2.1

Compliance based on R402.4.1.2:
Reduce the tested air leakage to 3.0 air changes per hour maximum at 50 Pascals
and
All whole house ventilation requirements as determined by Section M1507.3 of the International Residential Code or Section 403.8 of the International Mechanical Code shall be met with a high efficiency fan(s) (maximum 0.35 watts/cfm), not interlocked with the furnace fan (if present). Ventilation systems using a furnace including an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode.

To qualify to claim this credit, the building permit drawings shall specify the option being selected, the maximum tested building air leakage, and shall show the qualifying ventilation system and its control sequence of operation.

0.5 CREDITS

HIGH EFFICIENCY HVAC EQUIPMENT OPTION: 3.6

Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature.

To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).

2.0 CREDITS

EFFICIENT WATER HEATING OPTION: 5.5

Water heating system shall include one of the following:
Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.

2.0 CREDITS

FUEL NORMALIZATION CREDITS R406.2 System Type 2:

For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(1)C or C403.3.2(2)
or
Air to water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590

1.0 CREDITS

THERMAL ENVELOPE DETAILS - Proposed Design

Conditioned Floor Area, Proposed Design: 2,601 sq. ft
Classification: Medium Dwelling Unit

Exterior Doors

Plan ID	Component Description	Ref.	Door U	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
Exempt									0	0.0
	Code Target, U=0.30	-	0.30	1	3	0	8	0	24	7.2
	Code Target, U=0.30	-	0.30	2	3	0	6	8	40	12.0
									0	0.0
									0	0.0
									0	0.0
									0	0.0
									0	0.0
				Sum of Area and UA					64	19.2
				Exterior Doors Area Weighted U						0.300

Overhead Glazing

Plan ID	Component Description	Ref.	Glazing U	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
									0	-
									0	-
									0	-
									0	-
									0	-
				Sum of Area and UA					0	0
				Overhead Glazing Area Weighted U						-

Vertical Glazing Schedule

Rows to Show: 12

Plan ID	Component Description	Ref.	Glazing U	Qt.	Width Feet	Width Inch	Height Feet	Height Inch	Area	UA
Exempt									-	-
1	Option 1a: U=0.28	Table 406.2	0.28	1	1.0	8	6.00	0	9.0	2.52
2	Option 1a: U=0.28	Table 406.2	0.28	1	5	0	5	0	25	7.00
3	Option 1a: U=0.28	Table 406.2	0.28	2	3	0	6	0	36	10.08
4	Option 1a: U=0.28	Table 406.2	0.28	1	4	0	6	0	24	6.72
5	Option 1a: U=0.28	Table 406.2	0.28	1	4	0	4	0	16	4.48
6	Option 1a: U=0.28	Table 406.2	0.28	2	2	0	2	0	8	2.24
7	Option 1a: U=0.28	Table 406.2	0.28	1	4	0	3	8	14	3.92
8	Option 1a: U=0.28	Table 406.2	0.28	3	3	0	5	0	45	12.60
9	Option 1a: U=0.28	Table 406.2	0.28	1	3	0	4	0	12	3.36
10	Option 1a: U=0.28	Table 406.2	0.28	2	5	0	4	0	40	11.20
11	Option 1a: U=0.28	Table 406.2	0.28	1	6	0	4	0	24	6.72
12									-	-
				Sum of Area and UA					253.0	70.8
				Vertical Glazing Area Weighted U						0.280

Flat/Vaulted Ceilings

Plan ID	Component Description	Ref.	Attic U		Area	UA
	R49 blown Attic STD baffled (Code Target)	10-7	0.027		1,664	44.9
				Sum of Area and UA	1,664	44.9

Walls (Above Grade)

Plan ID	Component Description	Ref.	Wall U		Net Area	UA
	R21 cavity+R0 foam INT 2X6W Lap (Code Target)	10-5	0.054		2,581	139
				Sum of Area and UA	2,581	139

Heating System Sizing Worksheet - Proposed Design

Try Out NEEA's SpecPro: https://betterbuiltnw.com/resources/hvac-sizing-tool

Nearest Weather Station	Sedro Woolley 1 E	
Indoor Design Temperature	70 F	
Outdoor Design Temperature	19 F	
Design Temperature Difference (ΔT)	51 F	
Conditioned Floor Area	2,601 ft2	
Conditioned Volume	21,044 ft3	
System Type	Heat Pump	
Location of Ducts	Unducted	
Sum of UA, including exempt door and window	316	
Envelope Heat Load (Sum of UA X 3T)	16,113	Btu / Hour
Air Leakage Heat Load (Volume X 0.5 X (1/3 X 3T))	12,087	Btu / Hour
Building Design Heat Load (Air Leakage + Envelope Heat Loss	28,200	Btu / Hour
Building and Duct Heat Load (For ducts located in unconditioned space: Sum of Building Heat Loss X 1.1 / For ducts located in conditioned space or ductless: Sum of Building Heat Loss X 1	28,200	Btu / Hour
Maximum Heat Equipment Output (Building and Duct Heat Loss X 1.25 for heat pumps / Building and Duct Heat Loss X 1.40 for all other systems	35,250	Btu / Hour

EMERALD HOME DESIGN
www.emeraldplans.com
BUILDERS PLAN SERVICE

BUILDER: BUCKWOOD LLC
PROJECT: BUCKWOOD 10 - 2601 - GL

DATE: 11/9/2022
EHD JOB: 2622
SHEET: 5

ELECTRICAL AND HVAC
MARKUP PLANS
SCALE: 1/4 IN = 1 FT

EMERALD
HOME DESIGN
BUILDERS PLAN SERVICE
www.emeraldplans.com

BUILDER: BUCKWOOD LLC
PROJECT: BUCKWOOD 10 - 2601 - GL

DATE:
11/9/2022

EHD JOB:
2622

SHEET:
6

GENERAL STRUCTURAL NOTES

GENERAL

ALL CONSTRUCTION SHALL CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE (IBC), THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC) AND/OR OTHER GOVERNING CODE, AS REQUIRED BY LOCAL JURISDICTION.

STRUCTURAL DRAWINGS INDICATE TYPICAL AND GENERAL CONSTRUCTION DETAILS. WHERE DETAILS ARE NOT REFERENCED AT LOCATIONS OF SIMILAR CONFIGURATION TO DETAILS PROVIDED, SIMILAR DETAILS SHALL BE EMPLOYED. NOTES ON THE FOLLOWING INDIVIDUAL STRUCTURAL SHEETS SHALL TAKE PRECEDENCE OVER THESE GENERAL STRUCTURAL NOTES. ANY SPECIFICATION CONFLICTS THAT MAY OCCUR WITHIN THIS PLAN SET, THE CONTRACTOR SHALL DEFAULT TO THE MORE STRINGENT/ CONSERVATIVE SPECIFICATION.

THE CONTRACTOR SHALL REVIEW THE CONSTRUCTION DOCUMENTS IN FULL FOR ACCURACY AND ADEQUACY AS RELATED TO SITE CONDITIONS. ANY DISCREPENCIES SHALL BE SUBMITTED TO THE EOR BEFORE PROCEEDING.

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL DESIGN, PERMITTING AND CONSTRUCTION OF ALL UTILITIES INCLUDING PLUMBING, ELECTRICAL AND HVAC. ANY STRUCTURAL MODIFICATIONS SHALL BE SUBMITTED TO THE EOR BEFORE PROCEEDING.

DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS SUPERCEDE. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DIMENSIONS (INCLUDING ROUGH OPENINGS) AND SHALL REVIEW ALL DIMENSIONS AND THEIR ACCURACY IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS BEFORE CONSTRUCTION.

THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE, INCLUDING SOIL CONDITIONS (UNLESS SOILS REPORT EXISTS), AND CONDITIONS RELATED TO EXISTING UTILITIES, EASEMENTS, AND/OR RIGHTS OF WAY.

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION, WORKMANSHIP AND JOBSITE SAFETY. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION AND SHALL PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL PERMANENT CONNECTIONS AND STIFFENINGS HAVE BEEN INSTALLED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS WITH THE BUILDING DEPARTMENT.

ANY AND ALL DISCREPANCIES BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER JOB-RELATED DRAWINGS, INCLUDING ARCHITECTURAL, CIVIL OR ANY OTHER CONSULTANT DRAWINGS SHALL BE PROVIDED TO THE EOR BEFORE PROCEEDING.

SOILS

SEE DESIGN CRITERIA FOR SOILS REPORT INFORMATION, IF APPLICABLE.

WHERE SOILS REPORT NOT PROVIDED, 2000 PSF SOIL BEARING ASSUMED. ASSUMED ALLOWABLE SOIL BEARING AND LATERAL PRESSURES SHALL BE FIELD-VERIFIED. BEARING SOIL SHALL BE FREE OF ORGANIC MATERIAL. EOR SHALL BE NOTIFIED OF ANY SOILS FOUND TO BE INADEQUATE TO REVIEW FOUNDATION ADEQUACY. SEE ADDITIONAL SOILS NOTES ON RETAINING WALL DETAILS, IF APPLICABLE.

FOUNDATION CONDITIONS

FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL (OR CONTROLLED, COMPACTED STRUCTURAL FILL) AT LEAST 18" BELOW EXISTING GRADE. ACTUAL ELEVATIONS OF FOOTINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. OVEREXCAVATION SHALL BE BACKFILLED USING LEAN CONCRETE (f'_c = 2000 PSI) OR STRUCTURAL BACKFILL.

STRUCTURAL FILL

STRUCTURAL FILL SHOULD CONSIST OF PREDOMINATELY WELL-GRADED, GRANULAR SOIL, FREE OF ORGANIC MATERIAL AND DEBRIS. FILL SHOULD BE PLACED IN MAXIMUM 8" LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT DETERMINED BY ASTM D-1557 TEST PROCEDURES. INFORMATION FOUND WITHIN SOILS REPORT, IF PROVIDED, SHALL TAKE PRECEDENCE. ANY SIGNIFICANT CONSTRUCTION FOUNDED ON STRUCTURAL FILL SHALL BE REVIEWED BY A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF WASHINGTON.

SPECIAL INSPECTIONS

SPECIAL INSPECTIONS SHALL BE PROVIDED AS REQUIRED BY THE BUILDING DEPARTMENT AND IBC SECTION 1704. THE OWNER SHALL BE RESPONSIBLE FOR RETAINING ANY SPECIAL INSPECTORS REQUIRED. ALL SPECIAL INSPECTION REPORTS SHALL BE PROVIDED TO THE EOR AS APPLICABLE. SEE CONCRETE SECTION FOR MORE ON SPECIAL INSPECTIONS.

SPECIAL INSPECTIONS AND TESTS OF SOILS (IBC 1705.6)

VERIFICATION AND INSPECTION	FREQUENCY		REFERENCES
	CONTINUOUS	PERIODIC	
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHEIVE THE DESIGN BEARING CAPACITY		X	
VERIFY EXCAVATIONS EXTEND TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X	
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X	
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X		
PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.		X	

WOOD FRAMING NOTES

GENERAL REQUIREMENTS

PROVIDE MINIMUM NAILING PER 2018 IBC TABLE 2304.10.1 (PROVIDED BELOW), UNLESS NOTED OTHERWISE. ALL WOOD IN CONTACT WITH CONCRETE AND/OR EXPOSED TO WEATHER SHALL BE PRESERVATIVE-TREATED BY AN APPROVED METHOD. ALL CUTS, NOTCHES AND EXPOSED ENDS TO BE RE-TREATED. DO NOT NOTCH, BEVEL OR DRILL STRUCTURAL MEMBERS, EXCEPT AS ALLOWED BY SECTIONS 2308.4.2.4 AND 2308.7.4, OR AS ALLOWED ELSEWHERE WITHIN THIS PLAN SET.

FRAMING LUMBER

STRUCTURAL LUMBER SHALL ADHERE TO THE FOLLOWING TABLE:

MEMBER	GRADING	f'_b (PSI)	f'_v (PSI)	$f'_{c\perp}$ (PSI)	$f'_{c,\perp}$ (PSI)
STUDS, SAWN FLOOR JOISTS, SAWN RAFTERS (2x LUMBER)	HF#2 OR BETTER (HEM FIR #2)	850	150	1300	405
POSTS, BEAMS, HEADERS (4x LUMBER AND GREATER)	DF#2 OR BETTER (DOUG FIR #2)	900	180	1350	625
LVL- LAMINATED VENEER LUMBER (FLUSH BEAMS, COLLECTORS, RAFTERS)	VERSA-LAM 3100 OR EQUIV	3100	285	3000	750
GLB - GLUED-LAMINATED BEAMS (DROPPED, EXPOSED, EXTERIOR, HEADERS)	24F-V4 - TYPICAL 24F-V8 - CANTILEVERED	2400/ 1850(-) 2400/ 2400(-)	265	1650	650
PSL - PARALLEL STRAND LUMBER (FLUSH BEAMS, HEADERS)	2.0E	2900	290	2900	750

2x_ TIMBER SHALL BE KILN DRIED. GRADES SHALL CONFORM TO "WWPA GRADING RULES FOR WESTERN LUMBER", LATEST EDITION.

ROOF DIAPHRAGMS

INSTALL MINIMUM 1/2" CDX PLYWOOD (32/16) OR 7/16" OSB SHEATHING. NAIL ALL SUPPORTED EDGES AND BOUNDARIES WITH 8d AT 6" O.C, AND INTERIOR SUPPORTS WITH 8d AT 12" O.C.; BLOCKING NOT REQUIRED, UNO. SEE ROOF FRAMING PLAN(S) FOR ADDITIONAL INFORMATION.

FLOOR DIAPHRAGMS

INSTALL MINIMUM 23/32" T&G STURD-I-FLOOR SHEATHING. GLUE AND NAIL ALL SUPPORTED EDGES AND BOUNDARIES WITH 10d AT 6" O.C., AND INTERIOR SUPPORTS WITH 10d AT 12" O.C.; BLOCKING NOT REQUIRED, UNO. SEE FLOOR FRAMING PLAN(S) FOR ADDITIONAL INFORMATION.

WOOD TRUSSES (IBC 2303.4)

PRE-FABRICATED WOOD TRUSSES TO BE DESIGNED PER IBC 2303.4.1.1 TO CARRY LOADS LISTED IN THE DESIGN CRITERIA SECTION AND ANY ADDITIONAL POINT LOADS, UNIFORM LOADS OR DRAG STRUT FORCES PROVIDED ON THE ROOF FRAMING PLAN(S).

TRUSS DESIGN DRAWINGS AND DOCUMENT SUBMITTAL SHALL INCLUDE STRESS ANLYSIS AND DEPICTION OF EACH TRUSS TYPE, AND SHALL INCLUDE A TRUSS LAYOUT. TRUSS ANALYSIS, LAYOUT AND INSTALLATION DOCUMENTS SHALL BEAR THE SEAL AND SIGNATURE OF AN ENGINEER LICENSED IN THE STATE OF WASHINGTON. APPROVED TRUSS DOCUMENTS SHALL REMAIN ON THE JOB SITE THROUGHOUT CONSTRUCTION.

PRE-FABRICATED TRUSSES SHALL NOT BE NOTCHED, DRILLED, CUT, SPLICED OR OTHERWISE ALTERED WITHOUT WRITTEN APPROVAL FROM THE TRUSS DESIGN ENGINEER. ALTERATIONS RESULTING IN THE ADDITION OF LOADS TO ANY MEMBER (E.G. HVAC EQUIPMENT, PIPING, ETC.) SHALL NOT BE PROHIBITED WITHOUT WRITTEN APPROVAL FROM THE TRUSS DESIGN ENGINEER.

UNLESS NOTED OTHERWISE, ALL TRUSSES SHALL BE SPACED AT 24" O.C. AND HAVE SIMPSON H1 CLIPS AT EXTERIOR WALLS. GABLE TRUSSES SHALL HAVE A35 CLIPS @ 24" O.C., UNO.

THE GENERAL CONTRACTOR SHALL PROVIDE THE EOR WITH A COPY OF THE APPROVED TRUSS DOCUMENTS FOR REVIEW. IF THE TRUSS DOCUMENTS WERE DEVELOPED SUBSEQUENT TO THE ISSUANCE OF THIS PLAN SET, THE TRUSS ANALYSES MAY RESULT IN REVISIONS TO THE BEAM CALCULATIONS ASSOCIATED WITH THIS PLAN SET.

FASTENERS

THE LATEST SIMPSON STRONG-TIE COMPANY, INC. PRODUCTS WERE USED AS A BASIS FOR THIS PROJECT. CONNECTORS BY ALTERNATE MANUFACTURERS MAY BE SUBSTITED PROVIDED THEY HAVE CURRENT ICC-ESR/IAPMO-ER APPROVAL FOR EQUIVALENT OR GREATER LOAD CAPACITIES. ALL FASTENERS AND CONNECTORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS.

NAILS AND STAPLES TO CONFORM TO IBC 2303.6 "NAILS AND STAPLES." ALL NAILING TO BE PROVIDED PER TABLE 2304.10.1 (PROVIDED BELOW). ALL NAILS SPECIFIED SHALL BE COMMON, UNO.

COMMON NAILS		
SIZE	LENGTH	DIAMETER
8d	$2^1/_2$"	0.131"
10d	3"	0.148"
16d	$3^1/_2$"	0.162"
16d SINKER	$3^1/_4$"	0.148"

CONCRETE NOTES

CONCRETE SHALL CONSIST OF PORTLAND CEMENT ASTM C-150 TYPE II OR TYPE I AND SHALL BE READY-MIXED PER ASTM C-94, MAXIMUM SLUMP 5". MINIMUM $5^1/_2$ SACKS OF CEMENT PER CUBIC YARD OF CONCRETE. SEGREGATION OF MATERIALS TO BE PREVENTED.

MINIMUM SPECIFIED COMPRESSIVE STRENGTH (f'_C AT 28 DAYS) ACI 318-14		
LOCATION/USE	f'_c (PSI)	SPECIAL INSPECTION & TESTING REQUIRED
FOOTING PADS & FOUNDATIONS NOT EXPOSED TO WEATHER	2500	NOT REQUIRED
PORCHES, PATIOS, DRIVEWAYS GARAGE SLABS	3000	NOT REQUIRED
FOUNDATION STEM WALLS AND INTERIOR SLABS ON GRADE	2500	NOT REQUIRED

REINFORCEMENT STEEL

REINFORCING STEEL #5 BARS AND LARGER SHALL BE GRADE 60 DEFORMED BARS, AND #3 AND #4 BARS SHALL BE GRADE 40, IN ACCORDANCE WITH ASTM A-615. LAP SPLICES 32 BAR DIAMETERS OR 18" MIN. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 AND SHALL BE 6X6 – W1.4 X W1.4. LAP ONE FULL MESH AT SPLICES. SEE CONCRETE DETAILS FOR MORE INFORMATION.

CONCRETE COVER REQUIREMENTS	
REINFORCING BAR LOCATION	MIN CONCRETE COVER
UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS AND LARGER)	2"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS AND SMALLER)	11/2"
COLUMNS AND BEAMS WITH BARS ENCLOSED IN STIRRUPS, TIES OR SPIRAL REINFORCEMENT	11/2"
SLABS, JOISTS AND INTERIOR FACES OF WALLS (#5 BARS AND SMALLER)	3/4"

SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION (IBC 1705.3)

VERIFICATION AND INSPECTION	FREQUENCY		REFERENCES
	CONTINUOUS	PERIODIC	
INSPECT REINFORCEMENT AND VERIFY PLACEMENT		X	IBC 1908.4 ACI 318: CH. 20, 25.2-3, 26.6.1-3
INSPECT ANCHORS CAST IN CONCRETE		X	ACI 318: 17.8.2
VERIFY REQUIRED DESIGN MIX		X	IBC 1904.1-2, 1908.2-3 ACI 318: CH. 19, 26.4.3-4
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE TEMPERATURE OF CONCRETE	X		IBC 1908.10 ASTM C172, C31 ACI 318: 26.5, 26.12
INSPECT CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X		IBC 1905.6-8 ACI 318: 26.5
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X	IBC 1908.9 ACI 318: 26.5.3-5
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE BEING POURED		X	ACI 318: 26.11.1.2(b)

DESIGN CRITERIA

WIND:
NOMINAL WIND SPEED – 85 MPH — RISK CATEGORY II
ULTIMATE WIND SPEED – 110 MPH — IMPORTANCE, I = 1.0
WIND EXPOSURE, B — K_{zt} = 1.00

SEISMIC:
EQUIVALENT LATERAL FORCE PROCEDURE
IMPORTANCE, Ie = 1.0 — S_s = 1.25
SITE CLASS, D — S_1 = 0.40
SEISMIC DESIGN CAT., D — S_{DS} = 1.00
SEIS. FORCE RES. SYS, A.15. — S_{D1} = NA
DESIGN BASE SHEAR = 11693 lbs — C_s = 0.16
RISK CATEGORY II — R = 6.5

LIVE LOADS:
ROOF 25 (SNOW)
FLOOR 40 PSF
DECKS 60 PSF

INSPECTIONS NO SPECIAL INSPECTIONS ARE REQUIRED. VERIFY INSPECTIONS REQUIRED WITH AUTHORITY HAVING JURISDICTION.

SOILS

GEOTECH EOR: **NA**
REPORT #: **NA**
WHERE SOILS REPORT NOT PROVIDED, 2000 PSF SOIL BEARING ASSUMED.

SCOPE OF STRUCTURAL WORK

- SEISMIC AND WIND ANALYSIS (LATERAL DESIGN)
- LATERAL DETAILING

MINIMUM FASTENING SCHEDULE (UNO) (PER 2018 IBC TABLE 2304.10.1

NO.	CONNECTION	NAILING, LOCATION (UNO)
1	BLOCKING BETWEEN JOIST/RAFTER OR TRUSSES TO TOP PLATE OR OTHER FRAMING ABOVE	(3) 8d, TOENAIL EACH END
2	BLOCKING BETWEEN JOIST/RAFTER OR TRUSSES NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	(2) 8d, TOENAIL EACH END
3	FLAT BLOCKING TO TRUSS AND WEB FILLER	16d FACE NAIL
4	JOISTS TO TOP PLATE OR GIRDER	(3) 8d, TOENAIL
5	CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS (NO THRUST)	(3) 16d
6	COLLAR TIE TO JOIST/RAFTER	(3) 10d
7	ROOF TRUSS TO TOP PLATE	(3) 10d, TOENAIL
8	ROOF JOIST/RAFTER TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2" RIDGE BEAM	(2) 16d, END NAIL
9	STUD TO STUD (NOT AT SHEAR WALLS)	16d @ 24" O.C., FACE NAIL
10	CONTINUOUS HEADER TO STUD	(4) 8d, TOENAIL
11	TOP PLATE TO TOP PLATE, AT END JOINTS	(8) 16d, EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)
12	SILL PLATE TO JOIST, RIM JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d @ 16" O.C., FACE NAIL
13	SILL PLATE TO JOIST, RIM JOIST OR BLOCKING AT BRACED WALL PANELS	(3) 16d @ 16" O.C., FACE NAIL
14	STUD TO SILL PLATE	(4) 8d, TOENAIL OR (2) 16d, END NAIL*
15	TOP PLATE TO STUD	(2) 16d, END NAIL
16	TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	(2) 16d, FACE NAIL
17	1" BRACE TO EACH STUD AND PLATE	(2) 8d, FACE NAIL
18	1" x 6" SHEATHING OR LESS TO EACH BEARING	(2) 8d, FACE NAIL
19	1" x 8" AND WIDER SHEATHING TO EACH BEARING	(3) 8d, FACE NAIL
20	JOIST TO SILL, TOP PLATE OR GIRDER	(3) 8d, TOENAIL
21	RIM JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8d @ 6" O.C., TOENAIL
22	1" x 6" SUBFLOOR OR LESS TO EACH JOIST	(2) 8d, FACE NAIL
23	2" SUBFLOOR TO JOIST OR GIRDER	(2) 16d, BLIND AND FACE NAIL
24	2" PLANKS (PLANK & BEAM - FLOOR & ROOF)	(2) 16d, EACH BEARING, FACE NAIL
25	BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	20d @ 32" O.C., FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES AND (2) 20d AT ENDS OF EACH SPLICE
26	LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	(3) 16d, EACH JOIST OR RAFTER, FACE NAIL
27	JOIST TO RIM JOIST	(3) 16d, END NAIL
28	BRIDGING OR BLOCKING TO JOIST	(2) 8d, EACH END, TOENAIL
	*USE (4) 16d END NAIL STUDS TO TOP AND SILL PLATES AT 2x10 STUDS	

UPSTATE engineering, inc.
22002 64TH AVE W. - SUITE 2C, MOUNTLAKE TERRACE WA 98043
TEL: (425)354-4105 SERVICES@UPST8.COM

UPSTATE STAMP

STATE OF WASHINGTON 44228 REGISTERED PROFESSIONAL ENGINEER
10/25/2022

STRUCTURAL DESIGN
STRUCTURAL NOTES
MIN CONNECTIONS

BYK CONSTRUCTION
BUCKWOOD - LOT 10

UPSTATE JOB # 1616

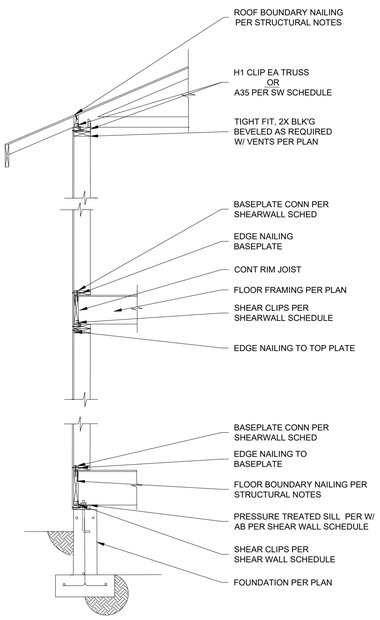
DRAWN BY:	CHECKED BY:
JBG	amg

REVISION DATE:	DESCRIPTION:
10/25/2022	VERSION 1

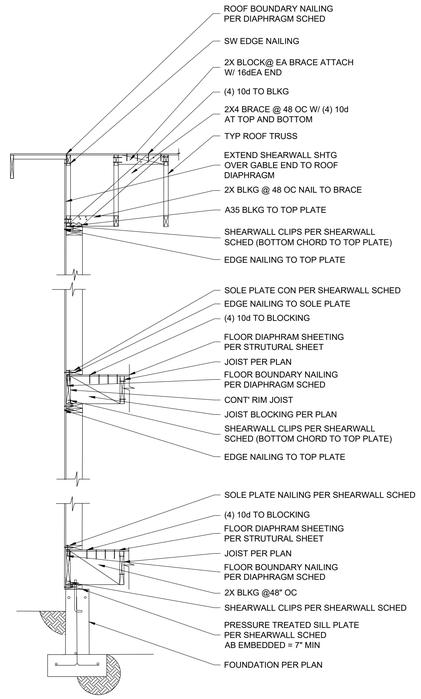
APPROVALS

S0

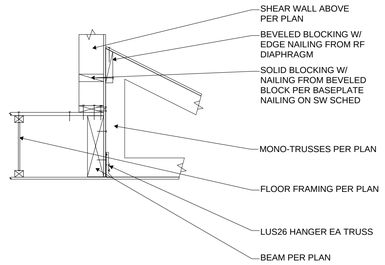
TYPICAL SHEAR FLOW DETAILS 1 AND 2 SHOULD BE EMPLOYED WHEREVER APPLICABLE UNLESS NOTED OTHERWISE



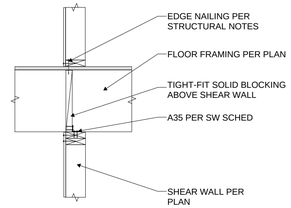
1 S1 TYPICAL SHEAR FLOW FRAMING PERP NTS



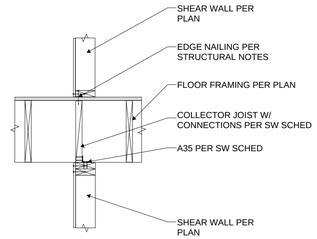
2 S1 SHEAR FLOW OFFSET SW - FLR PERP NTS



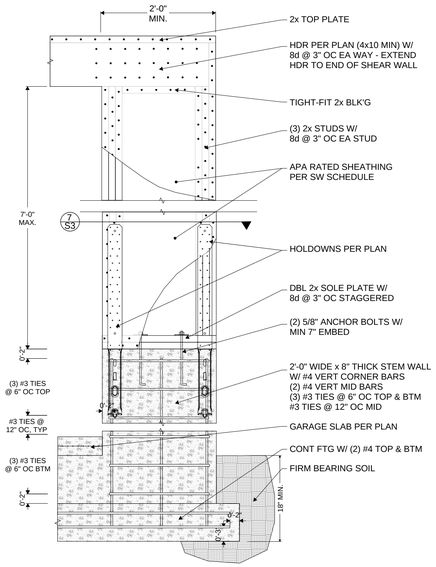
3 S1 SHEAR FLOW SW TO LOW RF TRUSS PERP NTS



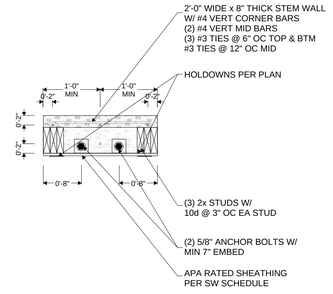
4 S1 SHEAR FLOW INT SW TO SW - FLR PERP NTS



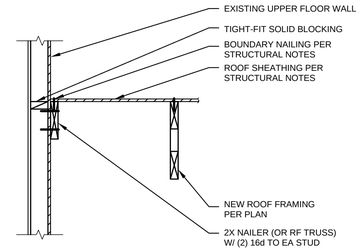
5 S1 SHEAR FLOW INT SW TO SW - FLR PRLL NTS



6 S1 RAISED SHEAR WALL (RSW) ELEVATION VIEW NTS



7 S1 RAISED SHEAR WALL (RSW) SECTION VIEW NTS



8 S1 SHEAR FLOW SW TO LOW RF TRUSS PERP NTS

SHEAR WALL AND HOLDOWN NOTES

(1) HOLDOWNS TO BE SIMPSON OR EQUIVALENT WHERE EQUIVALENT IS PERMITTED. LOCATE HOLDOWNS AT ENDS OF SHEARWALLS, UNO. INSTALL PER MANUFACTURER RECOMMENDATIONS FOR FOUNDATION MINIMUM END DISTANCE AND EMBEDMENT. EXTEND, THICKEN, DEEPEN, ETC. FOUNDATION TO MEET THE MANUFACTURER'S SPECIFICATIONS.

(2) CONSTRUCT CRIPPLE WALLS AND PONY WALLS TO MATCH SPECIFICATIONS OF THE SHEAR WALL ABOVE. CONSTRUCT GABLE END WALLS TO MATCH SPECIFICATIONS OF THE SHEAR WALL BELOW. CONSTRUCT CLERESTORY WALLS PER SW-1, UNO. ALL EXTERIOR WALLS TO BE CONSTRUCTED PER SW-1, UNO.

(3) 3X OR DBL 2X SILL PLATE REQUIRED.

(4) USE THREADED ROD AND COUPLER AS REQUIRED.

(5) COMMON NAILS, UNO: 8d = 0.131" x 2½"
10d = 0.148" x 3"
12d = 0.148" x 3¼"
16d = 0.148" x 3½"

(6) INSTALL H1 CLIPS AT EACH TRUSS/RAFTER END. INSTALL A35 @ 24" OC AT EACH GABLE END AND RIM JOIST (OR SOLID BLOCKING) TO TOP PLATE AND MUDSILL CONNECTION, UNO. WHERE SPACING TIGHTER THAN 24" OC IS SPECIFIED, INSTALL A35 CLIPS FROM SOLID BLOCKING TO DBL TOP PLATE, AND INSTALL H1 OR H2.5 CLIPS TO EACH TRUSS/RAFTER END. LTP4, LTP5 OR LS50 CAN BE SUBSTITUTED FOR A35 CLIPS PER SIMPSON.

(7) MINIMUM 3X OR DBL 2X STUDS REQUIRED AT ABUTTING PANEL EDGES. DBL STUDS TO BE LAMINATED W/ (2) 16d @ 6" OC.

(8) ANCHOR BOLTS SHALL BE EMBEDDED 7" MINIMUM INTO CONCRETE. MIN (2) BOLTS PER PIECE WITH ONE BOLT LOCATED NOT MORE THAN 2" OR LESS THAN (7) BOLT DIAMETERS FROM EACH END OF THE PIECE. MUD SILL TO BE 2X MINIMUM AND PRESSURE-TREATED.

(9) ALL SHEATHING TO BE APA RATED. SEE GENERAL STRUCTURAL NOTES.

NOTE SHEAR WALLLS AND HOLDOWNS LISTED BELOW MAY NOT ALL BE USED FOR THIS PARTICULAR PLAN.

HOLDOWN SCHEDULE

Date: 11/9/2022
Job #: 1616

MARK	HOLDOWN / STRAP *(1)	FASTENERS TO (2)-STUDS MIN U.N.O.	FOUNDATION ANCHOR *(1)(4)	COMMENTS
T-1	MSTC40	(8) - 16d sinkers to each connected element	N/A	
T-2	STHD14/14RJ	(38)/(30) - 16d	N/A	
T-3	HDU8-SDS2.5	(20) - SDS 0.25x2.5 WOOD SCREWS	SSTB28	MIN. DF/#2 4X POST

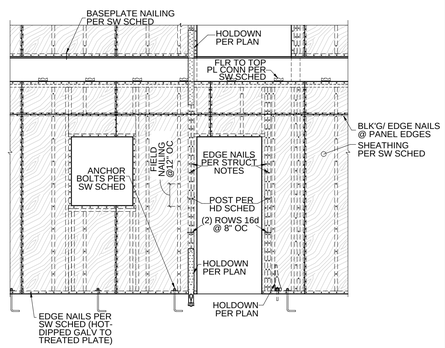
SHEARWALL SCHEDULE

Date: 11/9/2022
Job #: 1616

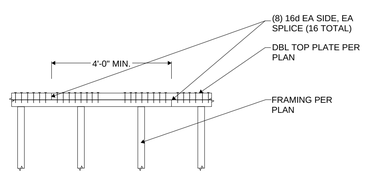
MARK *(2)	SHEATHING - APPLY TO 2x HF STUDS @ 16"o/c U.N.O. BELOW *(9)	SHEATHING EDGE NAILS *(5) ALL EDGES BLOCKED (do not penetrate past flush)	BASE PLATE NAILS *(5)	ROOF TO TOP PLATE, FLOOR TO TOP PLATE & SILL PLATE *(6)	SILL PLATE ANCHORS w/ 3" x 3" x 1/4" WASHERS *(8)
SW-1	7/16" OSB	8d @ 6" o/c (12" o/c field)	16d @ 12 " o/c	H1 @ 24 " o/c or A35 @ 24 " o/c	5/8"Ø x10" AB's @ 60 " o/c
SW-2	7/16" OSB	8d @ 4" o/c (12" o/c field)	16d @ 6 " o/c	A35 @ 20 " o/c	5/8"Ø x10" AB's @ 48 " o/c
SW-3	7/16" OSB *(7)	8d @ 3" o/c (12" o/c field)	16d @ 4 " o/c	A35 @ 15 " o/c	5/8"Ø x10" AB's @ 36 " o/c
SW-4	7/16" OSB Both Sides *(7)	8d @ 4" o/c staggered (12" o/c field)	16d @ 2½ " o/c	A35 @ 6 " o/c	5/8"Ø x10" AB's @ 22 " o/c *(3)
RSW	7/16" OSB Both Sides *(7)	8d @ 3" o/c staggered (12" o/c field)	SEE DETAIL 6/S1		

12 S1 SHEAR WALL SCHEDULE HOLDOWN SCHEDULE NTS

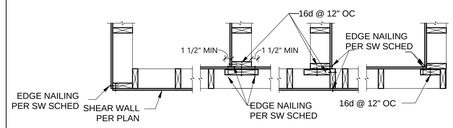
TYPICAL DETAILS 9 THROUGH 11 ARE NOT REFERENCED IN THE PLANS BUT SHOULD BE EMPLOYED WHEREVER APPLICABLE UNLESS NOTED OTHERWISE



9 S1 TYPICAL SHEAR WALL NTS



10 S1 TYP TOP PLATE SPLICE NTS



11 S1 TYPICAL SW INTERSECTIONS NTS

UPSTATE engineering, inc.
22002 64TH AVE W. - SUITE 2C, MOUNTLAKE TERRACE WA 98043
TEL: (425)354-4105 SERVICES@UPST8.COM

UPSTATE STAMP

STATE OF WASHINGTON 44228 REGISTERED PROFESSIONAL ENGINEER
10/25/2022

LATERAL DESIGN
TYPICAL SHEAR FLOW DETAILS

BYK CONSTRUCTION
BUCKWOOD - LOT 10

UPSTATE JOB # 1616

DRAWN BY:	CHECKED BY:
JBG	amg

REVISION DATE:	DESCRIPTION:
10/25/2022	VERSION 1

APPROVALS

S1