# Drawing Symbol Legend



FINISH GRADE

ABE: AVERAGE BUILDING ELEVATION ABV: ABOVE AFF: ABOVE FINISHED FLOOR ADJ: ADJUSTABLE AGG: AGGREGATE A/C: AIR-CONDITIONING ALT: ALTERNATE AB: ANCHOR BOLT APPROX: APPROXIMATE APPD: APPROVED ASPH: ASPHALT AWNG: AWNING AVG: AVERAGE

**BSMT: BASEMENT** BSBL: BLDG SETBACK LINE BM: BEAM BRG: BEARING BMK: BENCH MARK BLK: BLOCK **BLKG: BLOCKING** BD: BOARD BOT: BOTTOM **BLDG: BUILDING BDRM: BEDROOM BTWN: BETWEEN** BTU: BRITISH THERMAL UNITS **BTUH: BRITISH THERMAL** UNITS PER HOUR BW: BOTH WAYS

CAB: CABINET CANT: CANTILEVER CRPT: CARPET CSMT: CASEMENT CI: CAST IRON **CB: CATCH BASIN** CLG: CEILING CLR: CLEAR (ANCE) CO: CASED OPENING COL: COLUMN CONC: CONCRETE CONN: CONNECTION CMU: CONCRETE MASONRY UNIT CONST: CONSTRUCTION CONT: CONTINUOUS OR CONTINUE CORR: CORRUGATED CRPT: CARPET CF: CUBIC FOOT CY: CUBIC YARD CFM: CUBIC FEET PER MINUTE CJ: CONTROL JOINT COMP: COMPOSITION

D DBL: DOUBLE DEMO: DEMOLISH DEPT: DEPARTMENT D (CONTINUED) DTL: DETAIL DIAG: DIAGONAL DIA: DIAMETER DISP: DISPOSAL DR: DOOR DN: DOWN DH: DOUBLE HUNG DS: DOWNSPOUT DWG: DRAWING DW: DISHWASHER DEG: DEGREE DL: DEAD LOAD DS: DOWNSPOUT

E: EAST EA: EACH EB: EXPANSION BOLT EXIST/(E): EXISTING ELEC: ELECTRICAL EL: ELEVATION EQ: EQUAL EQUIP: EQUIPMENT EXP: EXPOSED EXT: EXTERIOR EW: EACH WAY EXC: EXCAVATE

FOC: FACE OF CONCRETE FOF: FACE OF FINISH FOS: FACE OF STUDS FLR: FLOOR/FLOORING FD: FLOOR DRAIN FT: FEET/FOOT FTG: FOOTING FDN: FOUNDATION FURN: FURNACE FURR: FURRING FV: FIELD VERIFY FE: FIRE EXTINGUISHER FF: FINISH FLOOR FIXT: FIXTURE FPL: FIREPLACE

GA: GAGE, GAUGE GALV: GALVANIZED GB: GRAB BAR GL: GLAZING GLS: GLASS GLS BLK: GLASS BLOCK GRD: GRADE GWB: GYPSUM WALL BOARD GC: GENERAL CONTRACTOR GFI: GROUND FAULT INTERRUPTED GPM: GALLONS PER MINUTE GPS: GALLONS PER SECOND GRD: GRADE

#### WALL LEGEND

- - EXISTING WALL TO REMOVE
  - PARTIAL HEIGHT WALL W/ W
  - STAIR GUARDRAIL
- POST/COLUMN
- (SIZE PER PLAN)

NORTH ARROW



# Abbreviations

H HDWD: HARDWOOD HDWR: HARDWARE HDR: HEADER HVAC: HEATING/VENTILATION/ AIR CONDITIONING HT: HEIGHT HC: HOLLOW CORE

HC: HOLLOW CORE HORIZ: HORIZONTAL HB: HOSE BIB HR: HOUR HGT: HEIGHT HW: HOT WATER

I ID: INSIDE DIAMETER INCL: INCLUDED INSUL: INSULATION INT: INTERIOR INTM: INTERMEDIATE INFO: INFORMATION INSP: INSPECT INV: INVERT IE: INVERT ELEVATION

JST: JOIST JB: JUNCTION BOX JT: JOINT

<u>K</u> KIT: KITCHEN KO: KNOCKOUT KWH: KILOWATT HOUR

LAM: LAMINATE LAV: LAVATORY LAT: LATERAL LB: LAG BOLT L: LENGTH LF: LINEAL FOOT LT: LIGHT LVR: LOUVER LWT: LIGHTWEIGHT LWC: LIGHTWEIGHT CONCRETE LH: LEFT HAND LIB: LIBRARY LIN: LINEAR LL: LIVE LOAD LV: LOW VOLTAGE

M MANUF: MANUFACTURE(R) MAX: MAXIMUM MECH: MECHANICAL MC: MEDICINE CABINET MLDG: MOLDING MLWK: MILLWORK MTL: METAL MIN: MINIMUM MISC: MISCELLANEOUS MAINT: MAINTENANCE <u>M (CONTINUED)</u> MATL: MATERIAL MIR: MIRROR MLDG: MOLDING

N: NORTH NIC: NOT IN CONTRACT NTS: NOT TO SCALE NOM: NOMINAL NR: NOISE REDUCTION

Des: Obscure Obs: Obscure Oc: On Center Od: Outside Diameter Op: Opaque Opng: Opening Oa: Overall Oh: Overhead Ohd: Overhead Ohd: Overhead Opp: Opposite Ovfl: Overflow

P PNL: PANEL PED: PEDESTAL PERF: PERFORATED PERIM: PERIMETER PL: PLATE PL HT: PLATE HEIGHT PLWD: PLYWOOD PT: POINT PREFAB: PREFABRICATED PCF: POUND PER CUBIC

FOOT PLF: POUNDS PER LINEAL FOOT

PSF: POUNDS PER SQUARE FOOT PSI: POUNDS PER SQUARE INCH PICT: PICTURE PVMT: PAVEMENT PBD: PARTICAL BOARD PERP: PERPENDICULAR PKG: PARKING PLMB: PLUMBING PS: PLUMBING STACK PVG: PAVING

QUAL: QUALITY QTR: QUATER QTY: QUANTITY

K RAD: RADIUS REF: REFERENCE REFR: REFRIGERATOR REINF: REINFORCING REQD: REQUIRED RTN: RETURN

# **Project Information**

|         |         |                     | <b>,</b>                 |   |
|---------|---------|---------------------|--------------------------|---|
|         | MATERIA | AL LEGEND           | PROJECT DESC             | CONSTRUCT A NEW SINGLE-FAMILY DWELLING WITH AN ATTACHED GARAGE  |
|         |         | EARTH               | CODE(S)                  | 2018 INTERNATIONAL BUILDING CODE (IBC)<br>2018 WASHINGTON STATE IBC AMENDMENTS<br>2018 INTERNATIONAL RESIDENTIAL CODE (IBC)   |
| Ð       |         | CONCRETE            |                          | 2018 INTERNATIONAL RESIDENTIAL CODE (IRC)<br>2018 WASHINGTON STATE IRC AMENDMENTS<br>2018 WASHINGTON STATE ENERGY CODE (WSEC)<br>2018 INTERNATIONAL FIRE CODE (IFC) |
|         |         | GRAVEL              |                          | 2018 WASHINGTON STATE IFC AMENDMENTS<br>2018 UNIFORM PLUMBING CODE (UPC)<br>2018 INTERNATIONAL MECHANICAL CODE (IMC)  |
| OOD CAP |         | BRICK OR CMU        |                          | 2018 WASHINGTON STATE IMC AMENDMENTS<br>2020 NATIONAL ELECTRICAL CODE (NEC)   |
|         |         | PLYWOOD             | ZONING                   | R-12  |
|         |         |                     | PARCEL NO                | 544930-0057   |
|         |         | WOOD, SOLID MEMBER  | LEGAL DESC               | PORS 11-13, MERCER BEACH PARK ADD LOT 2 CITY OF<br>MERCER ISLAND SHORT SUBDIVISION NO SEB19-001<br>RECORDING NO 20200708900038 (BEING A PORTION OF                  |
|         |         | STEEL               | SITE AREA                | 9,386 SF (0.22 ACRES)   |
|         |         | RIGID INSULATION    | SOIL BEARING             | PER SOILS REPORT PREPARED BY GEOTECH<br>CONSULTANTS, INC  |
|         |         | BATT INSULATION     | SEISMIC ZONE             | D   |
|         |         | BLOWN-IN INSULATION | WIND EXPOSURE            | B / 85 MPH (110 MPH/ULT)  |
|         |         | GYPSUM WALL BOARD   | CONST TYPE/<br>OCCUPANCY | VB / R-3 (RESIDENCE) & U (PRIVATE GARAGE)   |
|         |         | FINISHED WOOD       |                          |   |
|         |         |                     | FIRE CODE                | NFPA 13R FIRE SPRINKLER SYSTEM TO BE INSTALLED<br>NFPA 72 "HOUSEHOLD" MONITORED FIRE ALARM TO BE<br>INSTALLED   |
|         |         |                     |                          |   |

R (CONTINUED) RA: RETURN AIR **REV: REVISION (S)** REVISED ROW: RIGHT OF WAY R: RISER RD: ROOF DRAIN RM: ROOM RO: ROUGH OPENING R&S: ROD & SHELF **RB: RUBBER REBAR: REINFORCING BAR** REG: REGISTER RF: ROOF RH: RIGHT HAND RM: ROOM **RPM: REVOLUTIONS PER** MINUTE

SECT: SECTION

SG: SAFETY GLASS SHTG: SHEATHING SHT: SHEET SHLV: SHELVING SHWR: SHOWER SIM: SIMILAR SKYLT: SKYLIGHT SC: SOLID CORE SOG: SLAB-ON-GRADE SPKR: SPEAKER SST: STAINLESS STEEL STD: STANDARD SUSP: SUSPENDED S: SOUTH SPEC: SPECIFICATION (S) SQ: SQUARE STL: STEEL STOR: STORAGE SD: STORM DRAIN STRUCT: STRUCTURAL SH: SINGLE HUNG S4S: SURFACED 4 SIDES SAN: SANITARY SCH: SCHEDULE SF: SQUARE FOOT STC: SOUND TRANSMISSION CLASS SY: SQUARE YARD SYS: SYSTEM

TEL: TELEPHONE TV: TELEVISION THK: THICK (NESS) T&G: TONGUE AND GROOVE T&B: TOP & BOTTOM TOS: TOP OF SLAB TOC: TOP OF SLAB TOC: TOP OF CONCRETE TOP: TOP OF PLATE TOW: TOP OF PLATE TOW: TOP OF WALL TB: TOWEL BAR T: TREAD TYP: TYPICAL T (CONTINUED) THRU: THROUGH TP: TOILET PAPER HOLDER TPTN: TOILET PARTITION

ŪNFIN: UNFINISHED UNO: UNLESS NOTED OTHERWISE UTIL: UTILITY UC: UNDERCUT UL: UNDERWRITERS LABORATORIES

V VB: VAPOR BARRIER VG: VERTICAL GRAIN VERT: VERTICAL VCT: VINYL COMPOSTION TILE VIF: VERIFY IN FIELD

VS: VENT STACK

W/: WITH W/O: WITH OUT WH: WATER HEATER WP: WATERPROOF(ING) WWF: WELDED WIRE FABRIC W: WEST WDW: WINDOW WD: WOOD WC: WATERCLOSET WF: WIDE FLANGE WGLS: WIRED GLASS WI: WROUGHT IRON WM: WIRE MESH

ÝD: YARD YR: YEAR

# **Building Data**

| FAR SUMMARY   |              |
|---|--------------|
| MAIN FLOOR (ADU)  | 411          |
| MAIN FLOOR  | 2,235        |
| UPPER FLOOR   | 1,612        |
| STAIR DEDUCTION (AT UPPER FLR)  | (-93)        |
| TOTAL PROPOSED FAR SF   | 4,165        |
| $\frac{\text{ALLOWABLE FAR}}{9,386 \text{ SF (LOT AREA) x 0.40}} = 3,754$<br>$\frac{\text{ADDITIONAL ADU AREA}}{\text{TOTAL ALLOWABLE FAR SF}} = 4,165$ |              |
| SQUARE FOOTAGE SUMMARY  |              |
| MAIN FLOOR (ADU)  | 411          |
| MAIN FLOOR  | 1,809        |
| UPPER FLOOR   | <u>1,612</u> |
| TOTAL HEATED AREA   | 3,832        |
| GARAGE  | 426          |
| CVR'D PORCH   | 133          |
| CVR'D PATIO   | 84           |

# **Design Criteria**

| GROUND                   | WIND DESIGN                             |                        | SEISMIC                         | SUBJECT TO DAMAGE FROM   |                        |                   |  |
|--------------------------|---|------------------------|---------------------------------|--------------------------|------------------------|-------------------|--|
| SNOW<br>LOAD             | Speed<br>(mph)                          | Topographic<br>effects | DESIGN<br>CATEGORY              | Weathering               | Frost line<br>depth    | Termite           |  |
| 25                       | 85                                      | No                     | D <sub>2</sub>                  | Moderate                 | 12"                    | None to<br>Slight |  |
| WINTER<br>DESIGN<br>TEMP | ICE BARRIER<br>UNDERLAYMENT<br>REQUIRED |                        | FLOOD<br>HAZARDS                | AIR<br>FREEZING<br>INDEX | MEAN<br>ANNUAL<br>TEMP |                   |  |
| 24°F                     |   | No                     | (a) 1989<br>(b) May 16,<br>1995 | 250                      | 52.8°F                 |                   |  |

|  | Drawi   | ng Index  |  | <b>C</b>   |   |
|--|---|---|--|--|---|
| A0.0   | ABBREVIATIONS / DRAWI<br>SITE INFORMATION / BUI<br>DRAWING INDEX  | NG SYMBOLS LEGEND / PROJECT &<br>_DING DATA / DESIGN CRITERIA / PROJECT TEAM /  | <u> </u>   |  | sn, Inc.  |
| Archite  | ectural Drawings  |   |  | P.O. Box 4   | 176   |
| A0.1<br>A0.2<br>A0.3<br>A1.0<br>A1.1<br>A2.0<br>A3.0<br>A4.0<br>A5.0<br>A6.0<br>A7.0<br>A7.1<br>A8.0<br>A9.0<br>A9.1 | NOT USED<br>2018 WSEC COMPLIANCE<br>GENERAL NOTES<br>ARCHITECTURAL SITE PL<br>AVERAGE BUILDING ELEY<br>FOUNDATION VENTILATION<br>NOT USED<br>MAIN FLOOR PLAN<br>UPPER FLOOR PLAN<br>NOT USED<br>EXTERIOR ELEVATIONS<br>EXTERIOR ELEVATIONS<br>FLASHING & SIDING NOTE<br>BUILDING SECTIONS 'A-A<br>WALL SECTIONS / STAIR | AN<br>VATION<br>DN & ATTIC VENTILATION PLANS<br>S<br>'& 'B-B'<br>CONSTRUCTION   | WRITTEN DII<br>HAVE PRECE<br>CONTRACTO<br>SITE CONDIT<br>CONSTRUCT<br>RESPONSIBI<br>TO THE DES<br>CW DESIGN,<br>VARIATIONS<br>CONDITIONS<br>CONDITIONS<br>CONDITIONS<br>VARIATIONS<br>VARIATIONS<br>VARIATIONS<br>VARIATIONS<br>VARIATIONS<br>VARIATIONS<br>VARIATIONS<br>VARIATIONS<br>VARIATIONS<br>CONDITIONS<br>CONDITIONS<br>CONDITIONS<br>CONDITIONS<br>CONDITIONS<br>CONDITIONS<br>CONDITIONS<br>CONDITIONS<br>CONTRACTOR | Additional and a second states and a second state and a second states and a second states and a second state and a second states and a second states and a second state and a second states and a second state and a second s | 98057<br>(office)<br>2 (fax)<br>2021<br>n, Inc<br>DRAWINGS SHALL<br>D DIMENSIONS.<br>DIMENSIONS AND<br>DIMENSIONS AND<br>DIMENSIONS AND<br>DIMENSIONS AND<br>DIMENSIONS AND<br>CONTRACTORS<br>(ALL DISCREPANCIES<br>HEY ARE IDENTIFIED.<br>ED OF ANY<br>NA AND/OR<br>D PRIOR TO<br>R THE CONTRACTOR<br>LITY FOR COST TO<br>Y LIABILITY IS<br>R LIABILITY IS<br>R LIABILITY IS<br>R LIABILITY TO YOU<br>NOT EXCEED THE<br>R THE DRAWINGS<br>ANY UNAUTHORIZED<br>GS BY THE<br>RTY SHALL HOLD CW |
| Struct   | ural Drawings   |   | DESIGN, INC  | . HARMLESS FROM AN   | IY AND ALL CLAIMS.  |
| S1<br>S2<br>S3<br>S4<br>S5<br>S6<br>S7<br>S8   | SHEAR WALL PLANS AND<br>PIPE PILE AND GRADE BE<br>FOUNDATION PLAN<br>MAIN FLOOR FRAMING PI<br>UPPER FLOOR FRAMING<br>UPPER ROOF FRAMING P<br>STRUCTURAL DETAILS<br>STRUCTURAL DETAILS   | ONOTES<br>EAM PLAN<br>LAN<br>AND LOWER ROOF FRAMING PLAN<br>PLAN  |  |  |   |
| Civil D<br>-<br>Surve<br>1 OF 1<br>Mecha<br>SEPARA   | y Drawings<br>y Drawings<br>SITE BOUNDARY & TOPO<br>anical Drawings<br>TE PERMIT OBTAINED BY OT<br>cal Drawings<br>TE PERMIT OBTAINED BY OT   | GRAPHY SURVEY<br>HERS   | Amarican Classin Homas - 8003  | 8003 SE 20th Street  | Mercer Island, WA   |
| SEPARA   | TE PERMIT OBTAINED BY OT  | HERS  |  |  |   |
| Plumb  | ing Drawings  |   |  |  |   |
| SEPARA   | TE PERMIT OBTAINED BY OT  | HERS  |  |  |   |
| PROPE<br>REDMC<br>9675 SE<br>MERCE<br>206-588<br>BUILDIE<br>CW DE  | <b>Projec</b><br>RTY OWNER<br>DND BUILDERS, LLC<br>= 36TH ST, SUITE 105<br>:R ISLAND, WA 98040<br>3-1147<br><u>NG DESIGNER</u><br>SIGN, INC   | CONTRACTOR<br>REDMOND BUILDERS, LLC<br>9675 SE 36TH ST, SUITE 105<br>MERCER ISLAND, WA 98040<br>206-588-1147<br>STRUCTURAL ENGINEER<br>MYERS ENGINEERING    | No.<br>- S<br>1 -<br>2 -<br>3 -<br>4 -<br>5 -<br>6 -<br>7 -<br>8 -<br>9 -  | Remarks  | Date<br>t 05/18/21<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-   |
| PO BO<br>RENTO   | ( 476<br>N, WA 98057  | 3206 - 50TH STREET COURT, SUITE 210-B<br>GIG HARBOR, WA 98335   | Shoot  | Name:  |   |
| 425-271<br>SURVE<br>TERRA<br>10801 M<br>BELLE\<br>425-458  | 1-0082<br><u>YOR</u><br>NE<br>/AIN ST, SUITE 102<br>/UE, WA 98004<br>3-4488   | 253-858-3248<br><u>CIVIL ENGINEER</u><br>INTERLAKEN ENGINEERING AND DESIGN, PLLC<br>7001 SEAVIEW AVE NW, SUITE 160-388<br>SEATTLE, WA 98117<br>206-470-9572 | (  | Cover Sł   | neet  |
|  |   |   | Scale:   |  |   |
|  |   |   | Project  | No: 21003  | 0.0001  |
|  |   |   | Date:  | May 1<br>Bv: WIR   | 8, 2021   |
|  |   |   | Status:  | Subm   | ittal Set 1.1   |
|  |   |   |  | A0.  | 0   |

#### Window, Skylight and Door Schedule

Project Information CW PO E Rent American Classic Homes - SE 20th Residence 80xx SE 20th Street lercer Island, WA 98040 Ref. U-factor Exempt Swinging Door (24 sq. ft. max.) Exempt Glazed Fenestration (15 sq. ft. max.) Vertical Fenestration (Windows and doors) Component

| Description             | Ref. | U-factor |
|-------------------------|------|----------|
| Powder Room             |      | 0.28     |
| Foyer (entry doors)     |      | 0.28     |
| Den                     |      | 0.28     |
| Den                     |      | 0.28     |
| Dining                  |      | 0.28     |
| Butlers Pantry          |      | 0.28     |
| Kitchen                 |      | 0.28     |
| Kitchen                 |      | 0.28     |
| Nook                    |      | 0.28     |
| Greatroom               |      | 0.28     |
| Studio ADU              |      | 0.28     |
| Studio ADU (entry door) |      | 0.28     |
| Bath (Studio ADU)       |      | 0.28     |
| Garage/House door       |      | 0.28     |
| Bedroom 4               |      | 0.28     |
| Bath 3                  |      | 0.28     |
| Master Bedroom          |      | 0.28     |
| Master Bedroom          |      | 0.28     |
| Master Bedroom          |      | 0.28     |
| Master Bath             |      | 0.28     |
| Master Bath             |      | 0.28     |
| Bedroom 2               |      | 0.28     |
| Bedroom 2               |      | 0.28     |
| Bath 2                  |      | 0.28     |
| Bedroom 3               |      | 0.28     |
|                         |      |          |
|                         |      |          |
|                         |      |          |
|                         |      |          |
|                         |      |          |
|                         |      |          |
|                         |      |          |
|                         |      |          |
|                         |      |          |

| format  | ion       |             |       |                   |   |        |      |
|---------|-----------|-------------|-------|-------------------|---|--------|------|
| sign, I | nc        |             |       |                   |   |        |      |
| 476     |           |             |       |                   |   |        |      |
| WA      | 9805      | 1           |       |                   |   |        |      |
|         | Wid       | th          | Heid  | aht               |   |        |      |
| Ot      | Fee       | t Incł      | ' Fee | t <sup>Inch</sup> |   | Area   | UA   |
| Q       |           | Ì           |       | Ì                 |   |        | 0.0  |
|         |           | +           |       |                   |   | 0.0    | 0.0  |
|         |           |             |       |                   | I | 0.0    | 0.0  |
|         |           |             |       |                   |   |        |      |
|         | Wid       | th          |       | sht               |   |        |      |
| Ot      | Foo       | un<br>⊾Incł |       | JIII.<br>₊Inch    |   | Aree   | 114  |
| QI.     | ree<br>la | ۱<br>6      | Fee   | 0                 |   | Area   | 0A   |
| 1       | 2         | 0           | 5     | 0                 |   | 12.5   | 3.0  |
|         | 0         | 0           | 0     | 0                 |   | 48.0   | 13.4 |
| 2       | 3         | 6           | 6     | 6                 |   | 36.0   | 10.0 |
| 3       | 2         | 0           | 2     | 0                 |   | 18.8   | 5.2  |
| 3       | 3         | 0           | 6     | 0                 |   | 54.0   | 15.1 |
| 1       | 4         | 0           | 1     | 6                 |   | 6.0    | 1.6  |
| 2       | 3         | 0           | 1     | 6                 |   | 9.0    | 2.5  |
| 1       | 6         | 0           | 4     | 6                 |   | 27.0   | 7.5  |
| 1       | 12        | 0           | 8     | 0                 |   | 96.0   | 26.8 |
| 3       | 3         | 0           | 6     | 0                 |   | 54.0   | 15.1 |
| 4       | 3         | 0           | 5     | 0                 |   | 60.0   | 16.8 |
| 1       | 3         | 0           | 8     | 0                 |   | 24.0   | 6.7  |
| 1       | 2         | 0           | 5     | 0                 |   | 10.0   | 2.8  |
| 1       | 2         | 0           | 0     | 0                 |   | 24.0   | 6.7  |
| 1<br>0  | 2         | 0           | 5     | 0                 |   | 24.0   | 0.7  |
| 4       | 3         | 0           | 5     | 0                 |   | 30.0   | 0.4  |
| 1       | 2         | 0           | 4     | 0                 |   | 8.0    | Z.Z  |
| 1       | 8         | 0           | 5     | 0                 |   | 40.0   | 11.2 |
| 3       | 3         | 0           | 5     | 0                 |   | 45.0   | 12.6 |
| 3       | 3         | 0           | 2     | 0                 |   | 18.0   | 5.0  |
| 2       | 2         | 0           | 2     | 0                 |   | 12.5   | 3.5  |
| 2       | 2         | 6           | 4     | 6                 |   | 22.5   | 6.3  |
| 4       | 3         | 0           | 5     | 0                 |   | 60.0   | 16.8 |
| 2       | 3         | 0           | 2     | 0                 |   | 12.0   | 3.3  |
| 1       | 2         | 0           | 4     | 0                 |   | 8.0    | 2.2  |
| 2       | 3         | 0           | 5     | 0                 |   | 30.0   | 8.4  |
|         |           |             |       |                   |   | 0.0    | 0.0  |
|         |           |             |       |                   |   | 0.0    | 0.0  |
|         |           |             |       |                   |   | 0.0    | 0.0  |
|         |           |             |       |                   |   | 0.0    | 0.0  |
|         |           |             |       |                   |   |        | 0.0  |
|         |           |             |       |                   |   | 0.0    | 0.0  |
|         |           |             |       |                   |   |        | 0.0  |
|         |           |             |       |                   |   | 0.0    | 0.0  |
|         |           |             |       |                   |   | 0.0    | 0.0  |
|         |           |             |       |                   |   | 0.0    | 0.0  |
|         |           |             |       |                   |   | 1 0.01 | 0.0  |

2018 Washington State Energy Code – Residential Prescriptive Energy Code Compliance for All Climate Zones in Wash Single Family – New & Additions (effective February 1, 2021)

|                         | These requirements a<br>dwelli   | pply to all IRC building<br>ngs and multiple single   | g types, including<br>e-family dwelling   | g detached one<br>gs (townhouse   |  |
|-------------------------|--|---|---|---|--|
|                         | Project Informa  | rtion   |   | Contact Infor   |  |
| AC                      | H - SE 20th Residence  |   | CW Design, Inc  |   |  |
| 80×                     | x SE 20th Street, Mercer Islar   | nd WA 98040   | PO Box 476, Ren   | iton WA 98057   |  |
| Inst<br>inco<br>add     | ructions: This single-family<br>prporate the minimum valu<br>itional credits are checked   | / project will use the re<br>les listed. Based on the<br>as chosen by the perm  | equirements of the size of the struc nit applicant.   | e Prescriptive<br>ture, the appro   |  |
| Pro <sup>.</sup><br>Fen | vide all information from the<br>estration Requirements by (   | e following tables as bui<br>Component, Table R406  | lding permit draw<br>.2 - Fuel Normaliz   | rings: Table R40<br>ation Credits ar  |  |
| Aut                     | horized Representative   |   |   | Date  |  |
|                         |  | All Climate Zone  | es (Table R402.1.1)   |   |  |
|                         |  | R-Valu  | e ª   |   |  |
| Fen                     | estration U-Factor <sup>b</sup>  | n/a   |   |   |  |
| Sky                     | light U-Factor <sup>b</sup>  | n/a   |   |   |  |
| Gla                     | zed Fenestration SHGC <sup>b,e</sup>   | n/a   |   |   |  |
| Cei                     | ing <sup>e</sup>   | 49  | 49  |   |  |
| Wo                      | od Frame Wall <sup>g,h</sup>   | 21 in   | 21 int  |   |  |
| Flo                     | or   | 30  |   |   |  |
| Bel                     | ow Grade Wall <sup>c,h</sup>   | 10/15/21 i  | nt + TB   |   |  |
| Slat                    | o <sup>, a, r</sup> R-Value & Depth  | 10, 2   | ft  |   |  |
| a                       | <i>R</i> -values are minimums. <i>U</i> -fa<br>than the label or design thic<br>Table A101.4 shall not be les  | actors and SHGC are max<br>kness of the insulation, tl<br>ss than the <i>R</i> -value specif  | imums. When insune compressed <i>R</i> -v<br>ried in the table.                                       | lation is installe<br>value of the insu                                     |  |
| C<br>C                  | "10/15/21 +5TB" means R-1<br>the interior of the wall, or R-<br>the interior of the basement<br>the interior of the basement<br>means R-5 thermal break be | 0 continuous insulation c<br>-21 cavity insulation plus<br>: wall. "10/15/21 +5TB" s<br>: wall plus R-5 continuous<br>:tween floor slab and bas | on the exterior of the a thermal break be<br>hall be permitted to<br>insulation on the<br>ement wall. | he wall, or R-15<br>etween the slab<br>o be met with R<br>interior or exter |  |
| d                       | K-10 continuous insulation is  | s required under heated   | siab on grade floor   | s. see Section R  |  |
| e                       | For single ratter- or joist-val  | itted cellings, the insulation<br>of the exterior wall.   | on may be reduced   | a to K-38 if the f  |  |
| f                       | R-7.5 continuous insulation<br>slab insulation when applied<br>meet the requirements for t   | Installed over an existing<br>I to existing slabs comply<br>hermal barriers protectir   | slab is deemed to<br>ing with Section R5<br>ng foam plastics.   | be equivalent to<br>503.1.1. If foam  |  |
| g                       | For log structures developed<br><i>climate zone</i> 5 of ICC 400.  | l in compliance with Stan   | dard ICC 400, log v   | walls shall meet  |  |
| h                       | Int. (intermediate framing) of framing 16 inches on center   | denotes framing and insu<br>, 78% of the wall cavity ir   | lation as described<br>sulated and heade  | in Section A103<br>ers insulated wit  |  |

Prescriptive Path – Single Family

insulation.

2018 Washington State Energy Code-R

| hington |             |  |
|---------|-------------|--|
| )       | Version 1.0 |  |

e- and two-family

Path below and opriate number of

02.1 - Insulation and and 406.3 - Energy Credits.

04/06/2021

| U-Factor <sup>a</sup> |  |
|-----------------------|--|
| 0.30                  |  |
| 0.50                  |  |
| n/a                   |  |
| 0.026                 |  |
| 0.056                 |  |
| 0.029                 |  |
| 0.042                 |  |

n/a ed in a cavity that is less ulation from Appendix

continuous insulation on o and the basement wall at R-13 cavity insulation on

erior of the wall. "5TB" R402.2.9.1.

full insulation depth to the required perimeter plastic is used, it shall

t the requirements for

3.2.2 including standard ith a minimum of R-10





0.00

#### **Overhead Glazing (Skylights)** Component



Sum of Overhead Glazing Area and UA Overhead Glazing Area Weighted U = UA/Area

Total Sum of Fenestration Area and UA (for heating system sizing calculations) 765.3 214.27

#### 2018 Washington State Energy Code – Residential Prescriptive Energy Code Compliance for All Climate Zones in Washington Single Family – New & Additions (effective February 1, 2021)

Each dwelling unit *in a residential building* shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

1. Small Dwelling Unit: 3 credits

Dwelling units less than 1,500 sf in conditioned floor area with less than 300 sf of fenestration area. Additions to existing building that are greater than 500 sf of heated floor area but less than 1,500 sf. 2. Medium Dwelling Unit: 6 credits

All dwelling units that are not included in #1 or #3

3. Large Dwelling Unit: 7 credits Dwelling units exceeding 5,000 sf of conditioned floor area

4. Additions less than 500 square feet: 1.5 credits

All other additions shall meet 1-3 above Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

|                    | Summary of Ta                                     | ble R406.2                           |  |            |  |
|--------------------|---|--------------------------------------|--|------------|--|
| Heating<br>Options | Fuel Normalization Descriptions                   | Credits - s<br>heating               | elect ONE<br>option  | User Notes |  |
| 1                  | Combustion heating minimum NAECA <sup>b</sup>     | 0.0                                  |  |            |  |
| 2                  | Heat pump <sup>c</sup>                            | 1.0                                  | •  |            |  |
| 3                  | Electric resistance heat only - furnace or zonal  | -1.0                                 |  |            |  |
| 4                  | DHP with zonal electric resistance per option 3.4 | 0.5                                  |  |            |  |
| 5                  | All other heating systems                         | -1.0                                 |  |            |  |
| Energy<br>Options  | Energy Credit Option Descriptions                 | Credits - s<br>energy optic<br>categ | edits - select ONE<br>gy option from each<br>category <sup>d</sup> |            |  |
| 1.1                | Efficient Building Envelope                       | 0.5                                  |  |            |  |
| 1.2                | Efficient Building Envelope                       | 1.0                                  |  |            |  |
| 1.3                | Efficient Building Envelope                       | 0.5                                  | •  |            |  |
| 1.4                | Efficient Building Envelope                       | 1.0                                  |  |            |  |
| 1.5                | Efficient Building Envelope                       | 2.0                                  |  |            |  |
| 1.6                | Efficient Building Envelope                       | 3.0                                  |  |            |  |
| 1.7                | Efficient Building Envelope                       | 0.5                                  |  |            |  |
| 2.1                | Air Leakage Control and Efficient Ventilation     | 0.5                                  | •  |            |  |
| 2.2                | Air Leakage Control and Efficient Ventilation     | 1.0                                  |  |            |  |
| 2.3                | Air Leakage Control and Efficient Ventilation     | 1.5                                  |  |            |  |
| 2.4                | Air Leakage Control and Efficient Ventilation     | 2.0                                  |  |            |  |
| 3.1ª               | High Efficiency HVAC                              | 1.0                                  |  |            |  |
| 3.2                | High Efficiency HVAC                              | 1.0                                  |  |            |  |
| 3.3ª               | High Efficiency HVAC                              | 1.5                                  |  |            |  |
| 3.4                | High Efficiency HVAC                              | 1.5                                  |  |            |  |
| 3.5                | High Efficiency HVAC                              | 1.5                                  | •  |            |  |
| 3.6ª               | High Efficiency HVAC                              | 2.0                                  |  |            |  |
| 4.1                | High Efficiency HVAC Distribution System          | 0.5                                  |  |            |  |
| 4.2                | High Efficiency HVAC Distribution System          | 1.0                                  |  |            |  |

#### Mercer Island, V Heating \$ To see detailed i Design To Instructio

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Area of Bi Condition Instruction

Instructio Glazing a Instruct

Skylights Instruction Insulation Attic

> Single Ra Instruction

Slab Belo Instruction Slab on C

Location of Instruction

Figure 1.

Energy Options 5.1<sup>d</sup> Effi 5.2 Effi 5.3 Effi 5.4 Effi 5.5 Effi 5.6 Effi 6.1<sup>e</sup> Ren 7.1 App

Prescriptive Path – Single Family

2018 Washington State Energy Code-R

#### Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 Washington State Energy Code (WSEC) and ACCA Manuals J and S. This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads. Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some

values will be calculated for you. If you do not see the selection you need in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 956-2042 for assistance.

| Le Homes - SE 20th Residence<br>tree:<br>WA 93000<br>g System Type: ○ All Cher System ◎ Heat Nump<br>de Instructions for each section, place your cursor on the word "Instructions"<br>Temperature<br>uctions<br>Temperature<br>Underson Area<br>Underson Area<br>Unders  | formation   | Contact Information  |
|---|---|--|
| Interest       PO Box 476         VA 98000       Revton, WA 98007         g System Type:       () All Other Systems       (e) Instructions         of instructions for each section, place your cursor on the word "Instructions"       1         Temporature       Design Temporature Difference (AT)       45         If Building       At endorry 0 agreese; - Outdoor Design Tomp       45         Itioned Floor Area       0.028       765       214.28         U-Factor X       Area       UA       0.280       765       214.28         U-Factor X       Area       UA       0.026       2.625       68.25         Instructions       0.49       U-Factor X       Area       UA       UA         U-Factor X       Area       UA       UA       0.026       2.839       65.98       UFactor X       Area       UA         U-Grade Walls (ree Figure 1)       U-Factor X       Area       UA       UA       0.028       Conditioned Sos  | Clasic Homes - SE 20th Residence                      | CW Design, Inc   |
| We seeked       We seeked         g System Type:       All Other Systems       In the target         et instructions       Itemers and instructions.       Itemers and instructions         itemers and instructions       Itemers and instructions.       Design Temperature       45         itemers and instructions       Itemers and instructions.       Output       45         itemers and instructions       Conditioned Floor Area (sg ft)       0.8322       Conditioned Volume         g colling Height       U-Factor X       Area =       UA         uctions       U-Bactor X       Area =       UA         U-Factor X       Area =       UA       0.260          ion       U-Factor X       Area =       UA       0.262       68.25         U-Factor X       Area =       UA       0.026       2.825       68.25         I unders       I-A area       UA       0.026       2.825       68.25         I unders       I-A area       UA       0.026       2.825       68.25         I unders       I-A area       UA       0.026       2.837       104.47         U-Factor X       Area       UA       0.026       2.837       104.47         U-factor X <td>th Street</td> <td>PO Box 476</td>  | th Street   | PO Box 476   |
| g System 1ype: All Other Systems Internations of the Rung<br>de instructions for each section, place your cursor on the word "Instructions" (Conditioned System)<br>de instructions Internet internation (Conditioned System)<br>felicities (Conditioned Floor Area<br>(Section Area<br>United System)<br>felicities (Conditioned Floor Area<br>(Section Area<br>United System)<br>ge Ceiling Height<br>United System (Section Area<br>United System)<br>ge Ceiling Height<br>United System (Section Area<br>United System)<br>United System)<br>United System (Section Area<br>United System)<br>United System (Sect  | and, wA 98040   |  |
| def instructions       for each section, place your cursor on the word "Instructions"       45         vections       Design Temperature Difference (AT)       45         itioned Floor Area       0.3832       Conditioned Volume       3.832         ge Celling Height       Conditioned Volume       3.838       U-Factor X Area = UA       0.280       7055       214.28         uctions       U-Factor X Area = UA       0.280       7055       214.28       U-Factor X Area = UA         uctions       U-Ga       U-Factor X Area = UA       0.280       7055       214.28         U-Factor X Area = UA       0.280       7055       214.28       U-Factor X Area = UA         uctions       Lu-Factor X Area = UA       0.026       2.825       68.25         U-Factor X Area = UA       0.026       2.897       104.47         uctions       R-21 intermediate       0.025       2.897       104.47         uctions       R-31       U-Factor X Area UA       0.028       0.025       104.47         uctions       R-31       U-Factor X Area UA       0.028       0.028       0.028       0.028       104.47         uctions       R-31       No delw Grade with project.       U-Factor X Area UA       0.028       10.47      <  | ting System Type:                                     | is ( ) Heat Pump   |
| for protecture         unclose         unclose         for indicended in this project.           Design Temperature Difference (ΔT)         ΔT = indicer/f0 dispense) - Outdoor Design Temp         Subscription         AT = indicer/f0 dispense) - Outdoor Design Temp         45             f Building         titicened Floor Area         unclose         Conditioned Floor Area         (so filling Height   | etailed instructions for each section, place your cur | rsor on the word "Instructions"  |
| Unitions       Letters Island <ul> <li>Design Temperature Difference (AT)</li> <li>AT = induor (70 segmen) - outdoor Design Temp</li> </ul> 45         f Building       Itioned Floor Area              Conditioned Floor Area (sq ft) <ul> <li>gard Doors</li> <li>U-28</li> <li>U-29</li> <li>U-28</li> <li>U-28</li> <li>U-29</li> <li>U-28</li> <li>U-29</li> <li>U-29</li> <li>U-298</li> <li>U-298</li></ul>   | ign Temperature                                       |  |
| f Building         titionad Floor Area         uctions       Conditioned Floor Area (sq ft)         ge Ceiling Height       0.3832         uctions       U-Factor X         uctions       R-4         uctions       U-Factor X         uctions       R-4         uctions       R-2         uctions       R-2         uctions       R-2         uctions       No valued ceilings         uctions       No valued ceilings         uctions       R-2         uctions       R-2         uctions       R-2         uctions       R-3 </td <td>Mercer Island</td> <td>Design Temperature Difference (<math>\Delta</math>T) 45</td>  | Mercer Island   | Design Temperature Difference ( $\Delta$ T) 45   |
| f Building         Wittioned Floor Area         Victions       Conditioned Floor Area (sq ft)         ge Ceiling Height       0.3832         ge Ceiling Height       0.3633         ge do Doors       V-Factor         victions       V-Factor         uctions       U-Factor         U-Factor       X         Average Ceiling Height       0.280         victions       U-Factor         U-Factor       X         Average =       UA         0.50       Z         U-Factor       X         Average       UA         0.50       Z         U-Factor       X         Average       UA         U-Factor       X         Average       UA         U-Factor       X         Average       UA         U-Factor       X         Average       UA         0.028       Z         U-Factor       X         Average       UA         0.028       Z         U-Factor       X         Length       UA         0.028       Z         U-Factor       X<  |   | The second secon |
| Itioned Floor Area   witchos   Conditioned Floor Area (sq ft)   ge Celling Height   witchos   Average Celling Height   witchos   (Ju 28   U-Factor   X   Area    U-Factor   X    Area    U-Factor   X    Area   U-Factor   X    Area    U-Factor   X    Area   U-Factor   X    Area   U-Factor   X    Area   U-Factor   X    Area   U-Factor   X   Area   U-Factor   X    Area   U-Factor   X    Area   U-Factor   X    Area   U-Factor    X    Area  | a of Building   |  |
| Unitions       Conditioned Floor Area (sq ft)       3.832         ge Ceiling Height       Conditioned Volume         uctions       U-Factor       X         uctions       U-22       0.280       765       214.28         U-Factor       X       Area       UA       0.280       765       214.28         U-Factor       X       Area       UA       0.50           ion       U-Factor       X       Area       UA       0.260       2.625       68.25         uctions       R.40       0.026       2.625       68.25   | onditioned Floor Area                                 |  |
| ge Calling Height       Conditioned Volume         9.3       35,638         gend Doors       U-Factor       X Area       =       UA         uctions       U-28       U-Factor       X Area       =       UA         U-Eactor       X Area       =       UA       0.280       765       214.28         U-Factor       X Area       =       UA       0.50           ion       U-Factor       X Area       =       UA       0.280       66.25         e Rafter or Joist Vaulted Ceilings       U-Factor       X Area       UA          a Grade Walls (see Figure 1)       U-Factor       X Area       UA         uctions       R.3       U-Factor       X Area       UA         uctions       No below Grade in this project.       U-Factor       X Area       UA         uctions       Ivo Stab Below Grade in this project  | nstructions Conditioned Floor Area (sq ft)            | 3,832  |
| uctions       Average Ceiling Height (ft)       9.3       35,638         g and Doors       0.280       765       214.28         uctions       U-Bactor       X       Area       UA         0.280       765       214.28       U-Factor       X       Area       UA         uctions       U-Factor       X       Area       UA       0.50       2.14.28         uctions       U-Factor       X       Area       UA       0.50       2.14.28         uctions       R-49       U-Factor       X       Area       UA       0.026       2.625       68.25         a Rafter or Joist Vaulted Ceilings       U-Factor       X       Area       UA       0.026       2.639       65.95         uctions       R-21 Intermediate       U-Factor       X       Area       UA       0.028       U-Factor       X       Area       UA       0.028       U-Factor       X       Length       UA       0.028       UA       0.028       UA       0.028       UA       0.0208       UA       0.0208       UA       UA       0.0208       UA       0.0208       UA       UA       0.0208       UA       UA       0.0208       UA       UA  | erage Ceiling Height                                  | Conditioned Volume   |
| g and Doors<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions<br>uctions | nstructions Average Ceiling Height (ft)               | <b>9.3</b> 35,638  |
| uctions $U_{0.28}$ 0.280       765       214.28         hts       uctions       0.50       Area       UA         uctions       0.50       X       Area       UA         uctions       R-49       0.026       2,625       68.25         e After or Joist Vaulted Cellings       U-Factor       X       Area       UA         uctions       No Vaulted Cellings       U-Factor       X       Area       UA         uctions       No Vaulted Cellings       U-Factor       X       Area       UA         uctions       No Vaulted Cellings in this project.       U-Factor       X       Area       UA         uctions       R-29       U-Factor       X       Area       UA         uctions       R-38       U-Factor       X       Area       UA         uctions       R-38       U-Factor       X       Length       UA         uctions       No Stab Below Grade Walls in this project.       U-Factor       X       Length       UA         uctions       No Stab Below Grade in this project.       U       Factor       X       Length       UA         uctions       No Stab Below Grade in this project.       U       Duc  | zing and Doors  | U-Factor X Area = UA   |
| UL28       UL28       UL428         UUT       UUT       UUT       UUT         Uutions       UUT       Area       UA         Uutions       R-49       UL428       UL428         Uutions       R-49       UL428       UL428         Uutions       R-49       UL428       UL428         Uutions       R-49       UL428       UL428         Uutions       No Vaulted Ceilings       UL428       UL428         Uutions       No Vaulted Ceilings       UL428       UL428         Uutions       R-21 Intermediate       UL427       Area       UA         Uutions       R-21 Intermediate       UL528       Encor       X Area       UA         Uutions       No Stab on Grade in this project.       UL428       UL428       UL428         Uutions       No Stab on Grade in this project.       UL428       UL428   | nstructions   |  |
| Ints U-Factor X Area = UA   0.50 0.50   ion U-Factor X Area = UA   0.026 2.625 68.25 0.9   ion U-Factor X Area UA 0.026   ion U-Factor X Area UA 0.025   ion 0.025 2.639 65.98 0.025 2.639   ion No Slab Below Grade walls in this project. Ion Ion   ion No Slab Below Grade in this project. Ion Ion   ion of Ducts Ion Ion Ion Ion   ion of Ducts Ion Ion Ion Ion   ion of UA Space Ion Ion Ion   Ion Sum of UA 512.98 Ion Ion   Ion Ion Ion Ion Ion Ion <t< td=""><td>U-0.28</td><td>▼ 0.280 <u>765</u> 214.28</td></t<>   | U-0.28  | ▼ 0.280 <u>765</u> 214.28  |
| uctions       0.50          ion       U-Factor       X       Area       UA         uctions       R.49       0.026       2.825       68.25         a Rafter or Joist Vaulted Ceilings       U-Factor       X       Area       UA         uctions       No Vaulted Ceilings       U-Factor       X       Area       UA         uctions       R.21 Intermediate       U-Factor       X       Area       UA         uctions       R.38       U-Factor       X       Area       UA         uctions       R.38       U-Factor       X       Area       UA         0.025       2.639       65.98       U-Factor       X       Area       UA         uctions       No Below Grade Walls (see Figure 1)       U-Factor       X       Area       UA         uctions       No Slab Below Grade in this project.       Image: Conditioned Space       Image: Conditioned Space       UA         uctions       Conditioned Space       Image: Conditioned Space       Image: Conditioned Space       Image: Conditioned Space         uctions       Conditioned Space       Image: Condition   | lights  | U-Factor X Area = UA   |
| uctions       R-49       U-Factor       X       Area       UA         0.026       2.625       68.25         Uctors       No Valued Cellings       U-Factor       X       Area       UA         uctors       No Valued Cellings in this project.       U-Factor       X       Area       UA         uctors       R-21 Intermediate       U-Factor       X       Area       UA         uctors       R-38       U-Factor       X       Area       UA         uctors       Ive Stab Below Grade Walls (see Figure 1)       U-Factor       X       Length       UA         uctors       Ive Stab Below Grade in this project.       UA       .0.028       .0.028          on of Ducts       Ive Stab on Grade in this project.       UA            uctors       Ive Stab on Grade in this project.       UA            uctors       Ive Stab on Grade in this project.  | nstructions   | 0.50   |
| uctions       R-49       U-Factor       X       Area       =       UA         0.026       2.625       66.25         e After or Joist Vaulted Ceilings       U-Factor       X       Area       UA         uctions       No Vaulted Ceilings       U-Factor       X       Area       UA         uctions       R-21 Intermediate       U-Factor       X       Area       UA         uctions       R-38       U-Factor       X       Area       UA         uctions       R-38       U-Factor       X       Area       UA         uctions       No Below Grade Walls (see Figure 1)       U-Factor       X       Area       UA         uctions       No Below Grade in this project.       U-Factor       X       Area       UA         uctions       No Slab Below Grade in this project.       U-Factor       X       Length       UA         uctions       No Slab Below Grade in this project.       U-Factor       X       Length       UA         uctions       No Slab Below Grade in this project.       U-Factor       X       Length       UA         uctions       No Slab Below Grade in this project.       U-Factor       X       Length       UA  | ulation   |  |
| uctions       R-49       0.026       2,625       68.25         e Rafter or Joist Vaulted Ceilings       U-Factor       X       Area       UA         uctions       No Vaulted Ceilings in this project.       U-Factor       X       Area       UA         e Grade Walls (see Figure 1)       U-Factor       X       Area       UA         uctions       R-38       U-Factor       X       Area       UA         outions       R-38       U-Factor       X       Area       UA         uctions       R-38       U-Factor       X       Area       UA         uctions       R-38       U-Factor       X       Area       UA         uctions       No Below Grade Walls in this project.       U-Factor       X       Area       UA         uctions       No Slab Below Grade in this project.       U-Factor       X       Length       UA         uctions       No Slab Below Grade in this project.       U       Duct Leakage Coefficient       1.00         uctions       No Slab on Grade in this project.       U       Duct to at AT       Jace at   | tic   | U-Factor X <u>Area</u> = UA  |
| a Rafter or Joist Vaulted Ceilings       U-Factor       X       Area       UA         uctions       No Vaulted Ceilings in this project.       U-Factor       X       Area       UA         a Grade Walls (see Figure 1)       U-Factor       X       Area       UA         uctions       R-38       U-Factor       X       Area       UA         uctions       No Below Grade Walls in this project.       U-Factor       X       Area       UA         uctions       No Slab Below Grade in this project.       V       F-Factor       X       Length       UA         uctions       In Slab on Grade in this project.       V       F-Factor       X       Length       UA         uctions       Conditioned Space       Duct Leakage Coefficient       1.00       Sum of UA       Sum of UA × ΔT         Arizeakage Heat Load       So NA × 0.018       Maximum Heat Load       40,404       Btu / Hoi         Jabove Grade       So NA × 1.70.018       Building and Duct H  | R-49  | ▼ 0.026 2,625 68.25  |
| a ratio of Joist valued Cellings       U-Factor       X       Area       UA         uctions       No Valued Cellings in this project.       •   | anle Roffer er Joiet Vaulted Cellinge                 |  |
| No Vaulted Cellings in this project.       Image: Conde Walls (see Figure 1)       U-Factor       X       Area       UA         uctions       R-38       U-Factor       X       Area       UA         or Grade Walls (see Figure 1)       U-Factor       X       Area       UA         uctions       No Below Grade Walls in this project.       U-Factor       X       Area       UA         O.025       2,639       65.98       U-Factor       X       Area       UA         uctions       No Below Grade Walls in this project.       U-Factor       X       Area       UA         uctions       No Slab Below Grade in this project.       U       Factor       X       Length       UA         uctions       No Slab below Grade in this project.       U       Factor       X       Length       UA         uctions       Conditioned Space       U       Factor       X       Length       UA         uctions       Conditioned Space       U       Duct Leakage Coefficient       1.00         Sum of UA       512.98       Envelope Heat Load       23,084       Btu / Hoi         Sum of UA       So       So       So       17,320       Btu / Hoi         So       So   | ngle Kaiter or Joist vaulted Cellings                 | U-Factor X Area UA   |
| a Grade Walls (see Figure 1)       U-Factor       X       Area       UA         uctions       R-21 Intermediate       U       Jobs       2,937       164.47         s       U-Factor       X       Area       UA       0.025       2,639       65.98         v Grade Walls (see Figure 1)       U-Factor       X       Area       UA       0.026       2,639       65.98         v Grade Walls (see Figure 1)       U-Factor       X       Area       UA       0.028  | No Vaulted Ceilings in this project.                  |  |
| uctions       R-21 Intermediate       ●       0.056       2.937       164.47         s       U-Factor       X       Area       UA         0.025       2,639       65.98         V Grade Walls (see Figure 1)       U-Factor       X       Area       UA         uctions       No Below Grade Walls in this project.       ●       0.028   | oove Grade Walls (see Figure 1)                       | U-Factor X Area UA   |
| Superior       U-Factor       X       Area       UA         or       0.025       2,639       65.98         U-Factor       X       Area       UA         0.025       2,639       65.98         U-Factor       X       Area       UA         0.026       2,639       65.98         U-Factor       X       Area       UA         0.028       U-Factor       X       Area       UA         0.028       U-Factor       X       Area       UA         0.028       U-Factor       X       Length       UA         0.028       U-Factor       X       Length       UA         0.028       U-Factor       X       Length       UA         0.303        F-Factor       X       Length       UA         uctions       No Slab Below Grade in this project.       V       F-Factor       X       Length       UA         uctions       Conditioned Space       T       UA           Utions       Conditioned Space       O       Duct Leakage Coefficient       1.00         Sum of UA x AT       Air Leakage Heat Load       17,320       Btu / Hot <td>nstructions</td> <td>0.056 2.937 164.47</td>   | nstructions   | 0.056 2.937 164.47   |
| s<br>uctions<br>R-38<br>v Grade Walls (see Figure 1)<br>uctions<br>No Below Grade in this project.<br>→<br>On Grade (see Figure 1)<br>uctions<br>No Slab Below Grade in this project.<br>→<br>On Grade (see Figure 1)<br>uctions<br>No Slab Below Grade in this project.<br>→<br>On Grade (see Figure 1)<br>uctions<br>No Slab on Grade in this project.<br>→<br>On Grade (see Figure 1)<br>uctions<br>Conditioned Space<br>↓<br>Duct Leakage Coefficient<br>1.00<br>Sum of UA<br>Sum of Duct Isat<br>Sullding and Duct Heat Load<br>Sum of building heat Ioss x 1.10<br>Ducts in conditioned space: sum of building heat Ioss x 1.10<br>Sum of building and building and duct heat Ioss x 1.40 for forced air furmace<br>Building and duct heat Ioss x 1.25 for heat pump  | R-21 Intermediate                                     |  |
| uctions       R-38       •       0.025       2,639       65.98         v Grade Walls (see Figure 1)       •       0.028       •       •       •         uctions       No Below Grade Walls in this project.       •   | pors  | U-Factor X Area UA   |
| w Grade Walls (see Figure 1)       U-Factor       X       Area       UA         0.028   | R-38  | 0.025 2,639 65.98  |
| Vorticate Walls (see Figure 1)       U-Factor       X       Area       UA         uctions       No Below Grade Walls in this project.       0.028   | low Credo Wollo (                                     |  |
| No Below Grade Walls in this project.       ●       0.028         Below Grade (see Figure 1)       ●       ●         uctions       No Slab Below Grade in this project.       ●         on Grade (see Figure 1)       ●       ●         uctions       No Slab on Grade in this project.       ●         on of Ducts       ■       ■         uctions       Conditioned Space       ■         Image: Conditioned Space       ■       ■         Understand       Sum of UA       512.98         Envelope Heat Load       23,084       Btu / Hoi         Sum of UA × ΔT       17,320       Btu / Hoi         Volume x 0.6 × ΔT × 0.018       Building Design Heat Load       40,404       Btu / Hoi         Volume x 0.6 × ΔT × 0.018       Building and Duct Heat Load       40,404       Btu / Hoi         Ducts in conditioned space: sum of building heat loss x 1.0       Ducts in conditioned space: sum of building heat loss x 1.0         Ducts in conditioned space: sum of building heat loss x 1.1       Building and Duct Heat Load       40,404       Btu / Hoi         Ducts in conditioned space: sum of building heat loss x 1.0       Ducts in conditioned space: sum of building heat loss x 1.0       Building and duct heat loss x 1.40 for forced air furnace Building and duct heat loss x 1.25 for heat pump  | nstructions   |  |
| Below Grade (see Figure 1)       F-Factor       X       Length       UA         on Grade (see Figure 1)        F-Factor       X       Length       UA         on of Ducts        F-Factor       X       Length       UA         on of Ducts         F-Factor       X       Length       UA         on of Ducts               Sum of UA       512.98        1.00           Sum of UA x ΔT       11,00       17,320       Btu / Hou       Sum of UA x ΔT       17,320       Btu / Hou         Main Leakage Heat Load       40,404       Btu / Hou             Below Grade                Main Leakage + envelope Heat Load       40,404       Btu / Hou             Below Grade                Leakage Heat Load       40,404       Btu / Hou   | No Below Grade Walls in this project.                 |  |
| uctions       No Slab Below Grade in this project.       0.303          on Grade (see Figure 1)       F-Factor X Length UA       UA         uctions       No Slab on Grade in this project.        UA         on of Ducts       Duct Leakage Coefficient 1.00          Sum of UA       512.98          Envelope Heat Load       23,084 Btu / Hot         Sum of UA × $\Delta T$ Above Grade       17,320 Btu / Hot         Below Grade       40,404 Btu / Hot         Ducts in unconditioned space: sum of building heat loss x 1.00       Ducts in unconditioned space: sum of building heat loss x 1.10         Ducts in unconditioned space: sum of building heat loss x 1.10       Ducts in unconditioned space: sum of building heat loss x 1.10         Building and Duct Heat Load       40,404 Btu / Hot       Ducts in unconditioned space: sum of building heat loss x 1.00         Building and duct heat loss x 1.40 for forced air furnace Building and duct heat loss x 1.40 for forced air furnace Building and duct heat loss x 1.25 for heat pump  | ab Below Grade (see Figure 1)                         | F-Factor X Length UA   |
| Ference       Value         poin Grade (see Figure 1)       Ference       Value         uctions       No Slab on Grade in this project.       Puct Leakage Coefficient         00 of Ducts       Duct Leakage Coefficient       1.00         00 of Ducts       Sum of UA       512.98         00 of UA       Sum of UA       23,084         00 of UA       Sum of UA × ΔT       Air Leakage Heat Load       23,084         00 of UA       Sum of UA × ΔT       Air Leakage Heat Load       17,320       Btu / Hou         00 of Uame × 0.6 × ΔT × 0.018       Building Design Heat Load       40,404       Btu / Hou         00 Ducts in unconditioned space: sum of building heat loss × 1.10       Ducts in conditioned space: sum of building heat loss × 1.10         00 Ducts in unconditioned space: sum of building heat loss × 1.10       Building and duct heat loss × 1.40 for forced air furnace Building and duct heat loss × 1.40 for forced air furnace Building and duct heat loss × 1.25 for heat pump  | nstructions   | 0.303  |
| F-Factor       X       Length       UA         uctions       No Slab on Grade in this project.            On of Ducts       Duct Leakage Coefficient       1.00         Sum of UA       512.98         Envelope Heat Load       23,084       Btu / Hot         Sum of UA x ΔT       17,320       Btu / Hot         Above Grade       100       23,084       Btu / Hot         Below Grade       0.6 x ΔT x 0.018       17,320       Btu / Hot         Ducts in unconditioned space: sum of building heat loss x 1.10       Ducts in unconditioned space: sum of building heat loss x 1.10         Ducts in conditioned space: sum of building heat loss x 1       Maximum Heat Equipment Output       50,505       Btu / Hot         Building and duct heat loss x 1.40 for forced air furnace       Building and duct heat loss x 1.25 for heat pump       Stude       Stude       Stude   | No shab below drade in this project.                  |  |
| No Slab on Grade in this project.       Duct Leakage Coefficient         uctions       I.00         Sum of UA       512.98         Envelope Heat Load       23,084         Building Design Heat Load       17,320         Building Design Heat Load       40,404         Building and Duct Heat Load       50,505         Building and duct heat loss x 1.40       50,505         Building and duct heat loss x 1.25 for heat pump  | ab on Grade (see Figure 1)                            | F-Factor X Length UA   |
| Sum of Ducts       Duct Leakage Coefficient         1.00       1.00         Sum of UA       512.98         Image: Sum of UA       23,084         Building Design Heat Load       23,084         Building Design Heat Load       17,320         Building Design Heat Load       40,404         Building and Duct Heat Load       50,505         Building and duct heat loss x 1.40 for forced air furmace       Building and duct heat loss x 1.25 for heat pump  | No Slab on Grade in this project.                     | ▼  |
| Sum of Duct Leakage Coefficient<br>1.00         Sum of UA $512.98$ Envelope Heat Load $23,084$ Btu / Hou<br>Sum of UA $\times \Delta T$ Above Grade $17,320$ Btu / Hou<br>Building Design Heat Load $40,404$ Btu / Hou<br>Building and Duct Heat Load         Building and Duct Heat Load $40,404$ Btu / Hou<br>Building heat loss $\times 1.10$ Ducts in unconditioned space: sum of building heat loss $\times 1.10$ Ducts in unconditioned space: sum of building heat loss $\times 1.10$ Ducts in and duct heat loss $\times 1.40$ for forced air furmace<br>Building and duct heat loss $\times 1.25$ for heat pump  |   |  |
| Conditioned Space       Duct Leakage Coefficient         1.00       1.00         Sum of UA       512.98         Envelope Heat Load       23,084       Btu / Hou         Sum of UA x $\Delta T$ 17,320       Btu / Hou         Above Grade       17,320       Btu / Hou         Building Design Heat Load       40,404       Btu / Hou         Air leakage + envelope heat loss       10       10         Building and Duct Heat Load       40,404       Btu / Hou         Ducts in unconditioned space: sum of building heat loss x 1.10       10       10         Ducts in conditioned space: sum of building heat loss x 1.10       10       10         Building and duct heat loss x 1.40 for forced air furnace       10       10         Building and duct heat loss x 1.25 for heat pump       50,505       Btu / Hou   | ation of Ducts  |  |
| Image: Sum of UA       512.98         Sum of UA × ΔT       Sum of UA × ΔT         Above Grade       17,320       Btu / Hou         Below Grade       40,404       Btu / Hou         Building Design Heat Load       40,404       Btu / Hou         Air leakage + envelope heat loss       40,404       Btu / Hou         Ducts in unconditioned space: sum of building heat loss x 1.10       Ducts in conditioned space: sum of building heat loss x 1.10         Ducts in orditioned space: sum of building heat loss x 1.40       50,505       Btu / Hou         Building and duct heat loss x 1.40 for forced air furnace       Building and duct heat loss x 1.25 for heat pump  | Conditioned Space                                     | Duct Leakage Coefficient   |
| Sum of UA       512.98         Envelope Heat Load       23,084       Btu / Hou         Sum of UA × ΔT       17,320       Btu / Hou         Above Grade       17,320       Btu / Hou         Below Grade       40,404       Btu / Hou         Building Design Heat Load       40,404       Btu / Hou         Air leakage + envelope heat loss       40,404       Btu / Hou         Ducts in unconditioned space: sum of building heat loss x 1.10       Ducts in unconditioned space: sum of building heat loss x 1.10         Ducts in unconditioned space: sum of building heat loss x 1.40 for forced air turace       Btu / Hou         Building and duct heat loss x 1.40 for forced air turace       Btu / Hou         Building and duct heat loss x 1.25 for heat pump       So,505   |   |  |
| Envelope Heat Load       23,084       Btu / Hote         Sum of UA x ΔT       Air Leakage Heat Load       17,320       Btu / Hote         Above Grade       17,320       Btu / Hote       Volume x 0.6 x ΔT x 0.018         Below Grade       40,404       Btu / Hote       Air leakage + envelope heat loss         Building and Duct Heat Load       40,404       Btu / Hote         Ducts in unconditioned space: sum of building heat loss x 1.10       Ducts in conditioned space: sum of building heat loss x 1.10         Building and duct heat Equipment Output       50,505       Btu / Hote         Building and duct heat loss x 1.40 for forced air furnace       Building and duct heat loss x 1.25 for heat pump   |   | Sum of UA 512.98   |
| Above Grade23,004Btt / HotAbove Grade17,320Btt / HotBelow Grade17,320Btt / HotVolume $x$ $0.6 \times \Delta T \times 0.018$ 0.018Building Design Heat Load40,404Btt / HotAir leakage + envelope heat loss0.011Building and Duct Heat Load40,404Btt / HotDucts in unconditioned space: sum of building heat loss $x$ 1.10Ducts in conditioned space: sum of building heat loss $x$ 1.10Building and duct heat Equipment Output50,505Btt / HotBuilding and duct heat loss $x$ 1.25 for heat pump  |   | Envelope Heat Load 22.004 Ptu (Hear  |
| Above Grade<br>Above Grade<br>Above Grade<br>Air Leakage Heat Load<br>Air Leakage Heat Load<br>Air leakage + envelope heat loss<br>Building and Duct Heat Load<br>Air leakage + envelope heat loss<br>Building and Duct Heat Load<br>Autor Leakage + envelope heat loss<br>Autor Leakage + envelope heat loss<br>Building and Duct Heat Load<br>Autor Leakage + envelope heat loss<br>Autor Leakage + envelope heat loss<br>Building and Duct Heat Load<br>Autor Leakage + envelope heat loss<br>Autor Leakage + envelope heat loss<br>Building and Duct Heat Load<br>Autor Leakage + envelope heat loss<br>Building and Duct Heat Load<br>Autor Leakage + envelope heat loss<br>Building and Duct Heat Load<br>Autor Leakage + envelope heat loss<br>Autor Leakage + envelope heat loss<br>Building and Duct Heat Load<br>Autor Leakage + envelope heat loss<br>Autor  |   | Sum of UA x AT   |
| Above Grade       Volume x 0.6 x \Delta T x 0.018         Building Design Heat Load       40,404       Btu / Hou         Air leakage + envelope heat loss       Air leakage + envelope heat loss         Building and Duct Heat Load       40,404       Btu / Hou         Ducts in unconditioned space: sum of building heat loss x 1.10       Ducts in conditioned space: sum of building heat loss x 1         Maximum Heat Equipment Output       50,505       Btu / Hou         Building and duct heat loss x 1.40 for forced air furnace       Building and duct heat loss x 1.25 for heat pump  | $\sim$  | Air Leakage Heat Load 17,320 Btu / Hour  |
| Above Grade       40,404       Btu / Hou         Below Grade       Air leakage + envelope heat loss       40,404       Btu / Hou         Building and Duct Heat Load       40,404       Btu / Hou         Ducts in unconditioned space: sum of building heat loss x 1.10       Ducts in conditioned space: sum of building heat loss x 1.10         Ducts in conditioned space: sum of building heat loss x 1.40       50,505       Btu / Hou         Building and duct heat loss x 1.40 for forced air furnace       Building and duct heat loss x 1.25 for heat pump       Hou  |   | Volume x $0.6 \times \Delta T \times 0.018$  |
| Below Grade       Air leakage + envelope heat loss         Building and Duct Heat Load       40,404       Btu / Hot         Ducts in unconditioned space: sum of building heat loss x 1.10       Ducts in conditioned space: sum of building heat loss x 1         Maximum Heat Equipment Output       50,505       Btu / Hot         Building and duct heat loss x 1.40 for forced air furnace       Building and duct heat loss x 1.25 for heat pump  | Above Grade   | Building Design Heat Load40,404Btu / Hour  |
| Ducts in unconditioned space: sum of building heat loss x 1.10         Ducts in conditioned space: sum of building heat loss x 1         Maximum Heat Equipment Output       50,505         Building and duct heat loss x 1.40 for forced air furnace         Building and duct heat loss x 1.25 for heat pump  | Below Grade   | Air leakage + envelope heat loss   |
| Ducts in conditioned space: sum of building heat loss x 1         Ducts in conditioned space: sum of building heat loss x 1         Maximum Heat Equipment Output       50,505         Building and duct heat loss x 1.40 for forced air furnace         Building and duct heat loss x 1.25 for heat pump   |   | Durung and Duct neat Load 40,404 Btu / Hour<br>Ducts in unconditioned space: sum of building beat loss x 1.10  |
| Maximum Heat Equipment Output50,505Btu / HouBuilding and duct heat loss x 1.40 for forced air furnaceBuilding and duct heat loss x 1.25 for heat pump   |   | Ducts in conditioned space: sum of building heat loss x 1  |
| Building and duct heat loss x 1.40 for forced air furnace<br>Building and duct heat loss x 1.25 for heat pump   |   | Maximum Heat Equipment Output 50,505 Btu / Hour  |
| Duiluing and duct heat loss x 1.20 for heat pullip  |   | Building and duct heat loss x 1.40 for forced air furnace<br>Building and duct heat loss x 1.25 for heat nump  |
|   |   | Bunung and duot near 1055 x 1.20 for near pump   |
|   |   |  |

#### 2018 Washington State Energy Code – Residential Prescriptive Energy Code Compliance for All Climate Zones in Washington Single Family – New & Additions (effective February 1, 2021)

| Single Failing - New & Additio   |     |    | y 1, 2021j      |            |  |  |  |  |
|--|-----|----|-----------------|------------|--|--|--|--|
| Summary of Table P406 2 (cont.)  |     |    |                 |            |  |  |  |  |
| Energy Credit Option Descriptions (cont.)<br>Energy Credit Option Descriptions (cont.) |     |    |                 |            |  |  |  |  |
| icient Water Heating   | 0.5 | v  |                 |            |  |  |  |  |
| icient Water Heating   | 0.5 |    |                 |            |  |  |  |  |
| icient Water Heating   | 1.0 |    |                 |            |  |  |  |  |
| icient Water Heating   | 1.5 |    |                 |            |  |  |  |  |
| icient Water Heating   | 2.0 | •  |                 |            |  |  |  |  |
| icient Water Heating   | 2.5 |    |                 |            |  |  |  |  |
| newable Electric Energy (3 credits max)  | 1.0 |    |                 |            |  |  |  |  |
| pliance Package  | 0.5 |    |                 |            |  |  |  |  |
| Total Credits  |     | 60 | Calculate Total | Clear Form |  |  |  |  |

lotal Credits 6.0 a. An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.

b. Equipment listed in Table C403.3.2(4) or C403.3.2(5)

c. Equipment listed in Table C403.3.2(1) or C403.3.2(2)

d. You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.

e. 1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max.

See the complete Table R406.2 for all requirements and option descriptions. f. Use the single radiobutton in the upper right of the second column to deselect radiobuttons in that group.

Please print only pages 1 through 3 of this worksheet for submission to your building of

Prescriptive Path – Single Family

2018 Washington State Energy Code-R

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# General Notes:

THE FOLLOWING "GENERAL NOTES" ARE EXCERPTS FROM THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC). THESE EXCERPTS ARE NOT INTENDED TO EXPRESS THE ENTIRE 2018 IRC REQUIREMENTS. THE BUILDING(S) REFERENCED WITHIN THESE DRAWINGS SHALL BE CONSTRUCTED BY A LICENSED CONTRACTOR, KNOWLEDGEABLE OF CURRENT STATE & LOCAL BUILDING CODES INCLUDING STANDARD CONSTRUCTION METHODS.

FOUNDATION DRAINAGE: IRC Section R401.3 Drainage. Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection that does not create a hazard. Lots shall be graded to drain surface water away from foundation walls. The grade shall fall a minimum of 6 inches within the first 10 feet. *Exception:* Where lot lines, walls, slopes or other physical barriers prohibit 6 inches within 10 feet, drains or swales shall be constructed to ensure drainage away from the structure. Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2 percent away from the building. **IRC Section R405.1 Concrete or masonry foundations.** Drains shall be provided around all concrete or masonry foundations that retain earth and enclose habitable or useable spaces located below grade. Drainage tiles, gravel, or crushed stone drains, perforated pipe or other approved systems or materials shall be installed at or below the area to be protected and shall discharge by gravity or mechanical means into an approved drainage system. Gravel or crushed stone drains shall extend at least 1-foot beyond the outside edge of the footing and 6 inches above the top of the footing and be covered with an approved filter membrane material. The top of open joints of drain tiles shall be protected with strips of building paper. Perforated drains shall be surrounded with an an approved filter membrane or the filter membrane shall cover the washed gravel or crushed rock covering the drain. Drainage tiles or perforated pipe shall be placed on a minimum 2 inches of washed gravel or crushed rock at least one sieve size larger than the tile joint opening or perforation and covered with not less than 6 inches of the same material.

UNDER-FLOOR VENTILATION: IRC Section R408.1 Ventilation. The under-floor space between the bottom of the floor joists and the earth under any building (except space occupied by a basement) shall have ventilation openings through foundation walls or exterior walls. The minimum net area of ventilation openings shall not be less than 1 square foot for each 150 square feet of under-floor space area, unless the ground surface is covered by a Class 1 vapor retarder material. When a Class 1 vapor retarder material is used, the minimum net area of ventilation openings shall not be less than 1 square foot for each 1,500 square feet of under-floor space area. One such ventilating opening shall be within 3 feet of each corner of the building. **IRC Section R408.2 Openings for under-floor ventilation.** The minimum net ventilation openings shall not be less than 1 square foot for each 150 square feet of under-floor area. One ventilation opening shall be within 3 feet of each corner of the building. Ventilation openings shall be covered for their height and width with any of the following materials provided that the least dimension of the covering shall not exceed 1/4 inch: 1) Perforated sheet metal plates not less than 0.070 inch thick. 2) Expanded sheet metal plates not less than 0.047 inch thick. 3) Cast-iron grill or grating. 4) Extruded load-bearing brick vents. 5) Hardware cloth of 0.035 inch wire or heavier. 6) Corrosion-resistant wire mesh, with the least dimension being 1/8 inch. *Exception:* The total area of ventilation openings shall be permitted to be reduced to 1/1,500 of the under-floor area where the ground surface is covered with an approved Class 1 vapor retarder material and the required openings are placed to provide cross ventilation of the space. The installation of operable louvers shall not be prohibited.

**ROOF VENTILATION: IRC Section R806.1.** Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space be ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch minimum and 1/4 inch maximum. Ventilation openings having a least dimension larger than 1/4 inch shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of 1/16 inch minimum and 1/4 inch maximum. Openings in roof framing members shall conform to the requirements of Section R802.7. Required ventilation openings shall open directly to the outside air. **IRC Section R806.2.** The minimum net free ventilating area shall be 1/150 of the area of the vented space. *Exception:* The minimum net free ventilation area shall be 1/300 of the vented space provided one or more of the following conditions are met: 1) In climate Zones 6, 7 and 8, a class I or II vapor retarder is installed on the warm-in-winter side of the ceiling. 2) At least 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located no more than 3 feet below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided by eave or cornice vents. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet below the ridge or highest point of the space shall be permitted. **IRC Section R806.3.** Where eave or cornice vents are installed, insulation shall not block the free flow of air. A minimum of a 1-inch space shall be provided between the insulation and the roof sheathing and at the location of the vent.

PROTECTION AGAINST DECAY: IRC Section 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 for the species, product, preservative and end use. Preservatives shall be listed in Section 4 of AWPA U1. 1) Wood joists or the bottom of a wood structural floor when closer than 18 inches or wood girders when closer than 12 inches to the exposed ground in crawl spaces or unexcavated area located within the periphery of the building foundation. 2) All wood framing members that rest on concrete or masonry exterior foundation walls and are less than 8 inches 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 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 from the ground or less than 2 inches 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 of framing members. IRC Section R317.1.1 Field treatment. Field-cut ends, notches and drilled holes of preservative-treated wood shall be treated in the field in accordance with AWPA M4. IRC Section R317.1.2 Ground Contact. All wood in contact with the ground, embedded in concrete in direct contact with the ground or embedded in concrete exposed to the weather that supports permanent structures intended for human occupancy shall be approved pressure-preservative-treated wood suitable for ground contact use, except untreated wood may be used where entirely below groundwater level or continuously submerged in fresh water

COLUMNS AND POSTS: IRC Section R317.1.4. Wood columns. Wood columns shall be approved wood of natural decay resistance or approved pressure-preservative-treated wood. *Exceptions:* 1) Columns exposed to the weather or in basements when supported by concrete piers or metal pedestals projecting 1 inch above a concrete floor or 6 inches above exposed earth and the earth is covered by an approved impervious moisture barrier. 2) Columns in enclosed crawl spaces or unexcavated areas located within the periphery of the building when supported by a concrete pier or metal pedestal at a height more than 8 inches from exposed earth and the earth is covered by an approved impervious moisture barrier. **IRC Section R407.3: Structural requirements.** The columns shall be restrained to prevent lateral displacement at the bottom end. Wood columns shall not be less than 4 inches by 4 inches. Steel columns shall not be less than 3-inch diameter Schedule 40 pipe manufactured in accordance with ASTM A 53 Grade B or approved equivalent.

FASTENERS: IRC Section R317.3.1: Fasteners for preservative-treated wood. Fasteners, including nuts and washers, for preservative-treated wood shall be of hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. Coating types and weights for connectors in contact with preservative-treated wood shall be in accordance with the connector manufacturer's recommendations. In the absence of manufacturer's recommendations, a minimum of ASTM A 653 type G185 zinc-coated galvanized steel, or equivalent, shall be used. *Exceptions:* 1) One-half-inch diameter or greater steel bolts. 2) Fasteners other than nails and timber rivets shall be permitted to be of mechanically deposited zinc-coated steel with coating weights in accordance with ASTM B 695, Class 55, minimum. 3) Plain carbon steel fasteners in SBX/DOT and zinc borate preservative-treated wood in an interior, dry environment shall be permitted.

WOOD WALL FRAMING: IRC Sections 602.3.1: The size, height and spacing of studs shall be in accordance with Table R602.3 (5). *Exceptions:* 1) Utility grade studs shall not be spaced more than 16 inches on center, shall not support more than a roof and ceiling, and shall not exceed 8 feet in height for exterior walls and load-bearing walls or 10 feet for interior nonload-bearing walls. 2) Studs more than 10 feet in height which are in accordance with Table R602.3.1. IRC Section R602.3.2: Wood stud walls shall be capped with a double top plate installed to provide overlapping at corners and intersections with bearing partitions. End joints in top plates shall be offset at least 24 inches. Joints in plates need not occur over studs. Plates shall not be less than 2-inches nominal thickness and have a width at least equal to the width of the studs. **IRC Section R602.3.4**: Studs shall have a full bearing on a nominal 2-by or larger plate or sill having a width at least equal to the width of the studs.

# (general notes cont)

STUDS - DRILLING AND NOTCHING: IRC Section 602.6: Drilling and notching of studs shall be in accordance with the following: 1) Notching. Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25 percent of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40 percent of a single stud width. 2) Drilling. Any stud may be bored or drilled, provided that the diameter of the resulting hole is no more than 60 percent of the stud width, the edge of the hole is no more than 5/8 inch to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior walls or bearing partitions drilled over 40 percent and up to 60 percent shall also be doubled with no more than two successive doubled studs bored. See IRC Section 602.6, figures R602.6(1) and R602.6(2).

DWELLING/GARAGE OPENING PROTECTION: IRC Sections R302.5.1: Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1-3/8 inches in thickness, solid or honeycomb core steel doors not less than 1-3/8 inches thick, or 20-minute fire-rated doors, equipped with a self-closing device.

**DWELLING/GARAGE FIRE SEPARATION: IRC Sections R302.6:** The garage shall be separated from the residence and attics with not less than 1/2-inch gypsum board or equivalent applied to the garage side. The garage shall be separated from all habitable rooms above the garage with not less than 5/8-inch Type 'X' gypsum board or equivalent. All structure(s) supporting floor/ceilling assemblies used for separation required by this section shall be not less than 1/2-inch gypsum board or equivalent, Table R302.6.

FIREBLOCKING: IRC Sections R302.11: In combustible construction, fireblocking shall be provided to cut off all concealed draft openings (both vertical and horizontal) and to form an effective fire barrier between stories, and between a top story and the roof space. Fireblocking shall be provided in wood-frame construction in the following locations: 1) In concealed spaces of stud walls and partitions, including furred spaces and parallel rows of studs or staggered studs; as follows: 1.1) Vertical at the ceiling and floor levels. 1.2) Horizontally at intervals not exceeding 10 feet. 2) At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings. 3) In concealed spaces between stair stringers at the top and bottom of the run. Enclosed spaces under stairs shall comply with IRC Section R302.7. 4) At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion. The material filling this annular space shall not be required to meet the ASTM E 136 requirements. 5) For the fireblocking of chimneys and fireplaces, see IRC Section R1003.19. 6) Fireblocking of cornices of a two-family dwelling is required at the line of dwelling unit separation.

UNDER-STAIR PROTECTION: IRC Section R302.7: Enclosed accessible space under stairs shall have walls, under-stair surface and any soffits protected on the enclosed side with 1/2-inch gypsum board.

STAIRWAY WIDTH: IRC Section R311.7.1: Stairways shall not be less than 36 inches in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4.5 inches on either side of the stairway and the minimum clear width of the stairway at and below handrail height, including treads and landings, shall not be less than 31.5 inches where a handrail is installed on one side and 27 inches where handrails are provided on both sides. Exception: The width of spiral stairways shall be in accordance with IRC Section R11.7.10.1.

**STAIRWAY HEADROOM: IRC Section R311.7.2:** The minimum headroom in all parts of the stairway shall not be less than 6 feet 8 inches measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway. *Exception:* Where the nosings of treads at the side of a flight extend under the edge of a floor opening through which the stair passes, the floor opening shall be allowed to project horizontally into the required headroom a maximum of 4-3/4 inches.

STAIRWAY TREADS AND RISERS: IRC Section R311.7.5.1: The maximum riser height shall be 7-3/4 inches. The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch. **IRC Section R311.7.5.2:** The minimum tread depth shall be 10 inches. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch. **IRC SECTION R311.7.5.2.1**: Consistently shaped winders at the walkline shall be allowed within the same flight of stairs as rectangular treads and do not have to be within 3/8 inch of the rectangular tread depth. Winder treads shall have a minimum tread depth of 10 inches measured between the vertical planes of the foremost projection of adjacent treads at the intersections of the walkline. Winder treads shall have a minimum tread depth of 6 inches at any point within the clear width of the stair. Within any flight of stairs, the largest winder tread depth at the walkline shall not exceed the smallest winder tread by more than 3/8 inch.

STAIRWAY LANDINGS: IRC Section R311.7.6: There shall be a floor or landing at the top and bottom of each stairway. The minimum width perpendicular to the direction of travel shall be no less than the width of the flight served. Landings of shapes other than square or rectangular shall be permitted provided the depth at the walk line and the total area is not less than that of a guarter circle with a radius equal to the required landing width. Where the stairway has a straight run, the minimum depth in the direction of travel shall not be less than 36 inches. *Exception:* A floor or landing is not required at the top of an interior flight of stairs, including stairs in an enclosed garage, provided a door does not swing over the stairs

STAIRWAY ILLUMINATION: IRC Section R303.7: All interior and exterior stairways shall be provided with a means to illuminate the stairs, including the landings and treads. Interior stairways shall be provided with an artificial light source located in the immediate vicinity of each landing of the stairway. For interior stairs the artificial light sources shall be capable of illuminating treads and landings to levels not less than 1 foot-candle (11 lux) measured at the center of treads and landings. Exterior stairways shall be provided with an artificial light source located in the immediate vicinity of the top landing of the stairway. Exterior stairways providing access to a basement from the outside grade level shall be provided with an artificial light source located in the immediate vicinity of the bottom landing of the stairway. *Exception:* An artificial light source is not required at the top and bottom landing, provided an artificial light source is located directly over each stairway section. **IRC Section R303.7.1:** Where lighting outlets are installed in interior stairways, there shall be a wall switch at each floor level to control the lighting outlet where the stairway has six or more risers. The illumination of exterior stairways shall be controlled from inside the dwelling unit. *Exception:* Lights that are continuously illuminated or automatically controlled.

HANDRAILS: IRC Section R311.7.8: Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers. **IRC Section R311.7.8.1**: Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches and not more than 38 inches. *Exceptions:* 1) The use of a volute, turnout or starting easing shall be allowed over the lowest tread. 2) When handrail fittings or bendings are used to provide continuous transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height. **IRC Section R311.7.8.2** Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1-1/2 inch between the wall and the handrails. **Exceptions:** 1) Handrails shall be permitted to be interrupted by a newel post at the turn. 2) The use of a volute, turnout, starting easing or starting newel

shall be allowed over the lowest tread.

**<u>GUARDS:</u>** IRC Section R312.1: Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches measured vertically to the floor or grade below at any point within 36 inches horizontally to the edge of the open side. Insect screening shall not be considered as a guard. **IRC Section R312.1.2:** Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads.

#### DWELLING/GARAGE DUCT PROTECTION: IRC Sections R302.5.2: Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage sheet steel or other approved material and shall have no openings into the garage.

## (general notes cont)

GUARDS (continued): Exception: 1) Guards on the open sides of stairs shall have a height not less than 34 inches measured vertically from a line connecting the leading edges of the treads. 2) Where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be less than 34 inches and not more than 38 inches measured vertically from a line connecting the leading edges of the treads.

CEILING HEIGHT: IRC Section R305.1: Habitable space, hallways, bathrooms, toilet rooms, laundry rooms and portions of basements containing these spaces shall have a ceiling height of not less than 7 feet. *Exceptions:* 1) For rooms with sloped ceilings, at least 50 percent of the required floor area of the room must have a ceiling height of at least 7 feet and no portion of the required floor area may have a ceiling height of less than 5 feet. 2) Bathrooms shall have a minimum ceiling height of 6 feet 8 inches at the center of the front clearance area for fixtures. The ceiling height above fixtures shall be such that the fixture is capable of being used for its intended purpose. A shower or tub equipped with a showerhead shall have a minimum ceiling height of 6 feet 8 inches above a minimum 30 inches by 30 inches at the showerhead. **IRC Section R305.1.1:** Portions of basements that do not contain habitable space, hallways, bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6 feet 8 inches. **Exception:** 1) Beams, girders, ducts or other obstructions may project to within 6 feet 4 inches of the finished floor.

ACCESS: IRC Section R408.4: Access shall be provided at all under-floor spaces. Access openings through the floor shall be a minimum of 18 inches by 24 inches. Openings through a perimeter wall shall be not less than 16 inches by 24 inches. When any portion of the through-wall access is below grade, an areaway not less than 16 inches by 24 inches shall be provided. The bottom of the areaway shall be below the threshold of the access opening. Through wall access openings shall not be located under a door to the residence. See Section M1305.1.4 for access requirements where mechanical equipment is located under floors. **IRC Section R807.1**: Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that exceed 30 square feet and have a vertical height of 30 inches or greater. The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members. The rough-framed opening shall not be less than 22 inches by 30 inches and shall be located in a hallway or other readily accessible location. When located in a wall, the opening shall be a minimum of 22 inches wide by 30 inches high. When access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches at some point above then access measured vertically from the bottom of ceiling framing members. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.

WINDOW WELLS: IRC Section R310.2: The minimum horizontal area of the window well shall be 9 square feet, with a minimum horizontal projection and width of 36 inches. The area of the window well shall allow the emergency escape and rescue opening to be fully opened. *Exception:* The ladder or steps required by IRC Section R310.2.1 shall be permitted to encroach a maximum of 6 inches into the required dimensions of the window well. **IRC Section R310.2.1:** Window wells with a vertical depth greater than 44 inches shall be equipped with a permanently affixed ladder or steps useable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with IRC Sections R311.7 and R311.8. Ladders or rungs shall have an inside width of at least 12 inches, shall project at least 3 inches from the wall and shall be spaced not more than 18 inches on center vertically for the full height of the window well.

WINDOW SILLS: IRC Section R312.2.2.1: In dwelling units, where the opening of an operable window is located more than 72 inches above finished grade of surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches above the finished floor of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4-inch diameter sphere where such openings are located within 24 inches of the finished floor. *Exceptions:* 1) Windows whose openings will not all a 4-inch diameter sphere to pass through the opening when the opening is in its largest opened position. 2) Openings that are provided with window fall prevention devices that comply with Section R312.2.2.2. 3) Openings the are provided with fall prevention devices that comply with ASTM F 2090. 4) windows that are provided with opening limiting devices that comply with Section R310.1.1.

**EMERGENCY ESCAPE AND RESCUE OPENINGS: IRC Section R310.1:** Basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Such opening shall open directly into a public street, public alley, yard or court. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with IRC Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with IRC Section R310.2 Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way. *Exception:* Basements used only to house mechanical equipment and not exceeding total floor area of 200 square feet. **IRC Section R310.1.1:** All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet. *Exception:* Grade floor openings shall have a minimum net clear opening of 5 square feet. **IRC Section R310.1.2**: The minimum net clear opening height shall be 24 inches. **IRC Section R310.1.3**: The minimum net clear opening width shall be 20 inches. **IRC Section R310.1.4:** Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge.

WATER-RESISTANT GYPSUM BACKING BOARD: IRC Section R702.3.8: Gypsum board used as a base or backer for adhesive application of ceramic tile or other nonabsorbent material shall conform with ASTM C 1396, C 1178 or C 1278. Use of water-resistant gypsum backing board shall be permitted to be used on ceilings where framing spacing does not exceed 12 inches o.c. for <sup>1</sup>/<sub>2</sub>" thick or 16 inches o.c. for 5/8" thick gypsum board. Water resistant gypsum wallboard shall not be installed over a vapor retarder, or on ceilings in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer. **IRC Section R702.3.8.1**: Water-resistant gypsum backing board shall not be used where there will be direct exposure to water, or in areas subject to continuous high humidity.

BATHTUB AND SHOWER SPACES: IRC Section R307.2: Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower compartments shall be finished with a nonabsorbent surface. Such wall surfaces shall extend to a height of not less than 6 feet above the floor.

WEATHER RESISTANT SHEATHING PAPER: IRC Section R703.2: One layer of No. 15 asphalt felt, free from holes and breaks, complying with ASTM D226 for Type 1 felt or other approved water-resistive barrier shall be applied over studs or sheathing of all exterior walls. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer not less than 2 inches. Where joints occur, felt shall be lapped not less than 6 inches. The left or other approved material shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to meet the requirements of the exterior wall envelope as described in Section R703.1. *Exception:* Omission of the water-resistive barrier is permitted in the following situations: 1) In detached accessory buildings. 2) Under exterior wall finish materials as permitted in Table R703.4. 3) Under paperbacked stucco lath when the paper backing is an approved weather-resistive sheathing paper.

FLASHING: IRC Section R703.8: Approved corrosion-resistant flashing shall be applied shingle-fashion in such a manner to prevent entry of water into wall cavity or penetration of water to the building structural framing components. Self-adhered membranes used as flashing shall comply with AAMA 711. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at all of the following locations: 1) Exterior window and door openings. Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage. 2) At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings. 3) Under and at the ends of masonry, wood or metal copings and sills. 4) Continuously above all projecting wood trim. 5) Where exterior porches, decks or stairs attach to a wall or floor assembly of wood-frame construction. 6) At wall and roof intersections. 7) At built-in gutters..

## (general notes cont)

EXTERIOR COVERING: IRC Section R703: Exterior walls shall provide the building with a weatherresistant exterior wall envelope. The exterior wall envelope shall include flashing as described in Section R703.8. Ensure proper fastening for type used per Table R703.4.

**HEATING: IRC Section 303.9:** When the winter design temperature in Table R301.2(1) is below 60 degrees F, every dwelling unit shall be provided the heating facilities capable of maintaining a minimum room temperature of 68 degrees F at a point 3 feet above the floor and 2 feet from exterior walls in all habitable rooms at the design temperature. The installation of one or more portable space heaters shall not be used to achieve compliance with this section.

SMOKE DETECTORS: IRC Section R314.1: All smoke alarms shall be listed in accordance with UL 217 and installed in accordance with the provisions of this code and the household fire warning equipment provisions of NFPA 72. IRC Section 314.2: Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification device(s), it shall become a permanent fixture of the occupancy and owned by the homeowner. The system shall be monitored by an approved supervising station and be maintained in accordance with NFPA 72. *Exceptions:* Where smoke alarms are provided meeting the requirements of Section R314.3. **IRC Section 314.5:** When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Smoke alarms shall be installed in the following locations: 1) In each sleeping room. 2) Outside each separate sleeping area in the immediate vicinity of the bedrooms. 3) On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without on intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level. **IRC Section 314.3.1:** When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings. *Exceptions:* 1)Work involving the exterior surface of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section. 2) Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section. **IRC Section 314.4:** Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms shall be interconnected. *Exceptions:* 1) Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power. 2) Interconnection and hard-wiring of smoke alarms in existing areas shall not be required where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for hard-wiring and interconnection without the removal of interior finishes.

CARBON MONOXIDE ALARMS: IRC Section R315.1: For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages. **IRC Section R315.3:** Where work requiring a permit occurs in existing dwellings that have attached garages or in existing dwellings within which fuel-fired appliances exist, carbon monoxide alarms shall be provided in accordance with Section R315.1. **IRC Section R315.4:** Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

WATER HEATERS: IRC Section P2801.7: In seismic design categories D and townhouses in seismic design category C, water heaters shall be anchored or strapped in the upper one-third (1/3) and in the lower one-third (1/3) of the appliance to resist a horizontal force equal to one-third (1/3) of the operating weight of the water heater, acting in any horizontal direction, or in accordance with the manufacturer's recommendations. At the lower point, a minimum distance of 4 inches shall be maintained above the controls with the strapping. **IRC Section P2801.6:** Water heaters having an ignition source shall be elevated such that the source of ignition is not less than 18 inches above the garage floor.

HAZARDOUS LOCATIONS (GLAZING): IRC Section R308.4: The following shall be considered specific nazardous locations for the purposes of glazing: R308.4.1) Glazing in all fixed and operable panels of swinging, sliding and bifold doors. *Exceptions:* 1) Glazed openings of a size through which a 3-inch diameter sphere is unable to pass. 2) Decorative glazing. **R308.4.2)** Glazing in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24-inch arc of the door in a closed position and whose bottom edge is less than 60 inches above the floor or walking surface. *Exceptions:* 1) Decorative glazing. 2) When there is an intervening wall or other permanent barrier between the door and the glazing. 3) Glazing in walls on the latch side of and perpendicular to the plane of the door in a closed position. 4)Glazing adjacent to a door where access through the door is to a closet or storage area 3 feet or less in depth. 5) Glazing that is adjacent to the fixed panel of patio doors. **R308.4.3**) Glazing in an individual fixed or operable panel that meets all of the following conditions: 3.1) The exposed area of an individual pane is larger than 9 square feet; and 3.2) The bottom edge of the glazing is less than 18 inches above the floor; and 3.3) The top edge of the glazing is more than 36 inches above the floor; and 3.4) One or more walking surfaces are within 36 inches, measured horizontally and in a straight line, of the glazing. *Exceptions:* 1) Decorative glazing. 2) When a horizontal rail is installed on the accessible side(s) of the glazing 34 to 38 inches above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot without contacting the glass and be a minimum of 1-1/2 inches in cross sectional height. 3) Outboard panes in insulating glass units and other multiple glazed panels when the bottom edge of the glass is 25 feet or more above grade, a roof, walking surfaces or other horizontal [within 45 degrees of horizontal] surface adjacent to the glass exterior. **R308.4.4**) All glazing in guards and railings, including structural baluster panels and nonstructural in-fill panels, regardless of area or height above a walking surface shall be considered a hazardous location. **R308.4.5**) Glazing in walls, enclosures or fences containing or facing hot tubs, whirlpools, saunas, steam rooms, bathtubs, showers and indoor or outdoor pools where the bottom exposed edge of the glazing is less than 60 inches measured vertically above any standing or walking surface shall be considered a hazardous location. This shall apply to single glazing and all panes in multiple glazing. *Exceptions:* Glazing that is more than 60 inches, measured horizontally and in a straight line, from the waters edge of a bathtub, hot tub, spa, whirlpool or swimming pool. **R308.4.6**) Glazing where the bottom exposed edge of the glazing is less than 36 inches above the plane of the adjacent walking surface of stairways, landings between flights of stairs and ramps shall be considered a hazardous location. *Exceptions:* 1) When a rail is installed on the accessible side(s) of the glazing 24 to 38 inches above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot without contacting the glass and be a minimum of 1-1/2 inches in cross sectional height. 2) Glazing 36 inches or more measured horizontally from the walking surface. R308.4.7) Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches above the landing and within 60 inches horizontally of the bottom tread shall be considered a hazardous location. *Exception:* The glazing is protected by a guard complying with Section R312 and the plane of the glass is more than 18 inches from the guard.



NSTRUCTION PHASE. IT IS THE CONTRACTORS SPONSIBILITY TO REPORT ANY/ALL DISCREPAN D THE DESIGNER AT THE TIME THEY ARE IDENT W DESIGN, INC MUST BE NOTIFIED OF ANY ATIONS FROM THE DIMENSIONS AND/OR DITIONS SHOWN ON THESE DRAWINGS. ANY S IATION(S) SHALL BE RESOLVED PRIOR TO OCEEDING WITH ANY WORK, OR THE CONTRAC TIFY SAME. IN THE EVENT ANY LIABILITY IS IPOSED ON CW DESIGN, INC, OUR LIABILITY TO Y ND/OR ANY THIRD PARTY SHALL NOT EXCEED TH PAID TO CW DESIGN, INC. FOR THE DRAWINGS ODUCED FOR THIS PROJECT. ANY UNAUTHORI TERATIONS OF THESE DRAWINGS BY THE TRACTOR AND/OR THIRD PARTY SHALL HOLD

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## General Notes

## Scale: Project No: 21003 May 18, 2021 Date: Drawn By: WJB Status: Submittal Set 1.



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| Image: State Area       938 57         And Markan Market State Sta   | INTERDISCIPTE COVERAGE         STUTATION       1000  | ROOF AREA:<br>DRIVEWAY :<br>TOTAL PROPOSED LOT<br>MAXIMUM LOT COVERA  | COVERAGE:<br>GE:   | 3,206 SF<br>332 SF<br>3,538 SF<br>(37.69%)<br>3,754 SF<br>(40.00%)   | Copyright 2021<br>CW Design, Inc  |
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| 8 -   9 -     Sheet Name: Site Plan   Scale: Scale:   Project No: 21003 Date:   Date: May 18, 2021   Drawn By: WJB   |  |   |  |  | A10   |





**ROOF VENTILATION PLAN** 

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|---|--|
| TYP ROOF FRAMING NOTES<br>ROOF DESIGN LOAD:<br>LIVE LOAD - 25 PSF<br>DEAD LOAD - 15 PSF<br>18" EAVE AT 5:12 ROOF (TYP UNO)<br>13.75" EAVE AT 7:12 ROOF (TYP UNO)<br>13.75" EAVE AT 7:12 ROOF (TYP UNO)<br>12" GABLE END (TYP UNO)<br>INSTALL TEMPORARY BRACING AS REQUIRED UNTIL ALL<br>PERMANENT CONNECTIONS AND STIFFENERS HAVE BEEN<br>INSTALLED<br>PROVIDE EAVE VENT BLOCKS W/ (3) 2" DIA VENT HOLES<br>PER BLOCK, SCREENED W/ 1/4" WIRE MESH, AT EVERY<br>TRUSS BAY (TYP UNO)<br>VERTICAL FLASHING AND COUNTER-FLASHING SHALL<br>NOT BE LESS THAN 0.019 INCH (NO 26 GALVANIZED SHEET<br>GAUGE) CORROSION- RESISTANT METAL<br>INSTALL VALLEY FLASHING IN ACCORDANCE WITH THE<br>MANUFACTURER'S INSTALLATION INSTRUCTIONS, (IRC<br>SECTION R905.2.8.2)<br>STANDING SEAM METAL ROOF MATERIAL  | American Classic Homes - 8003<br>8003 SE 20th Street<br>Mercer Island, WA  |
| SYMBOL LEGEND         SYMBOL       DESCRIPTION         Image: Symbol sym | No.         Remarks         Date           -         Submittal Set         05/18/2           1         -         -           2         -         -           3         -         -           4         -         -           5         -         -           6         -         -           7         -         -           8         -         -           9         -         -           Sheet Name:         Fdn Vent Plan /<br>Roof Vent Plan         -           Scale:         3/16"=1'-0"         -           Project No:         21003         -           Date:         May 18, 2021         -           Drawn By:         WJB         - |





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| 9'-1 1/8" MAIN  | FLOOR PLAN NOTES  |   |  |   |
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| -2x6 HF#2 STU<br>-R-10 RIGID IN   | JDS AT 16" OC<br>SUL AT WDW/DR HEADERS (E)  | (TR WALL)   |  | v.cwdesigninc.com   |
| -R-21 INSULAT<br>-1/2" GWB  | ΠΟΝ   |   | F<br>Ren   | P.O. Box 476<br>ton, WA 98057   |
| INTERIOR WA<br>-1/2" GWB AT<br>-2x4 STUDS A                             | LL CONSTRUCTION (TYP UNO):<br>EACH SIDE<br>T 16" OC   |   |  | 5-271-0082 (office)<br>25-988-0112 (fax)  |
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| ALL WOOD IN<br>PRESSURE-TF  | CONTACT WITH CONCRETE TO<br>REATED.   | DBE   | WRITTEN DIMENS<br>HAVE PRECEDENC<br>CONTRACTOR SH/<br>SITE CONDITIONS<br>CONSTRUCTION P  | IONS ON THESE DRAWINGS SHAL<br>E OVER SCALED DIMENSIONS.<br>ALL VERIFY ALL DIMENSIONS AND<br>FOR THIS PROJECT, PRIOR TO T<br>HASE. IT IS THE CONTRACTORS  |
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| ALL DOORS A<br>CENTER (UNC<br>ARE 5.5" FROI                             | ND WINDOWS ARE MEASURED<br>)). ALL DOORS THAT ARE NOT<br>M CORNERS.   | TO THE<br>DIMENSIONED,  |  |   |
| DISHWASHER<br>JPC SEC 807.<br>WITH SMOOT<br>SHALL EXHAU                 | SHALL BE INSTALLED WITH AI<br>4. RANGE HOOD DUCT SHALL<br>H INNER WALLS, SHALL BE AIR<br>JST TO THE OUTSIDE PER IMC                               | R GAP PER<br>BE METAL<br>TIGHT, AND<br>SEC 505                | 03   |   |
| ALL EXHAUST<br>FROM PROPE   | S SHALL TERMINATE NOT LES<br>RTY LINES; 3 FEET FROM   | S THAN 3 FEET   | 80   |   |
| )PERABLE/NO<br>ND 10 FEET<br>VHERE OPEN<br>/1506.3                      | DN-OPERABLE OPENINGS INTC<br>FROM MECHANICAL AIR INTAK<br>IING IS 3 FEET ABOVE AIR INTA   | O THE BUILDING<br>ES EXCEPT<br>KE, PER IRC                    | - Se   | eet<br>VA   |
|   | 2018 WSEC NOTES   | SHALL   | Į Ž  | , Str   |
| COMPLETE AI<br>RESIDENTIAL<br>BE POSTED O<br>URNACE IS L<br>OCATION INS | ND POST AN "INSULATION CER<br>CONSTRUCTION". THE CERTI<br>N A WALL IN THE SPACE WHEF<br>OCATED, A UTILITY ROOM, OR<br>SIDE THE BUILDING (WSEC R40 | TIFICATE FOR<br>FICATE SHALL<br>RE THE<br>AN APPROVED<br>1.3) | sic Hc   | 20th<br>sland   |
| AIR LEAKAGE<br>IOUR, AND SI<br>PROVIDE A W<br>SIGNED BY TH              | SHALL NOT EXCEED 5 AIR CHA<br>HALL BE TESTED PER WSEC RA<br>RITTEN REPORT OF THE TEST<br>HE TESTING PARTY.  | NGES PER<br>402.4.1.2.<br>RESULTS,                            | Class  | 3 SE<br>rcer  |
| DUCT LEAKAO<br>THE BUILDING<br>NSPECTION. (                             | GE TEST RESULTS SHALL BE P<br>G INSPECTOR PRIOR TO AN AP<br>(WSEC R402.4)   | ROVIDED TO<br>PROVED FINAL                                    | ican   | 800<br>Me   |
| ROVIDE A "E<br>HERMOSTAT<br>YSTEM WITH                                  | NERGY STAR CERTIFIED" PRO<br>FOR THE PRIMARY SPACE CO<br>IN EACH DWELLING UNIT. (WS   | GRAMMABLE<br>DNDITIONING<br>EC R403.1.1)                      | mer  |   |
| MINIMUM OI<br>IGHTING FIX<br>WSEC R404.1                                | F 90 PERCENT OF PERMANENT<br>TURES SHALL BE HIGH-EFFICA<br>)  | TLY INSTALLED<br>CY LAMPS.                                    | Ā  |   |
| SYMROL  | SYMBOL LEGEND   |   |  |   |
|   | 110v SMOKE ALARM, HARD-V  | VIRED &   |  |   |
| - SD  | IN LERCONNECTED WITH BA   | N MONOXIDE  |  |   |
| SDCM  | DETECTOR (COMBO UNIT), H<br>INTERCONNECTED WITH BA  | IARD-WIRED &<br>TTERY BACKUP                                  |  |   |
|   | EFVTOS (EXHAUST FAN, VEI<br>OUTSIDE) MINIMUM 80 CFM   | NT TO   |  |   |
|   | HEAT REGISTER. VERIFY LC<br>WITH MECH CONTRACTOR  | DCATIONS  | No. F  | Remarks Date  |
| DS  | DOWNSPOUT FROM ROOF   |   | 1 -<br>2 -   | -   |
|   |   |   | 3 -  | -   |
|   |   | 411<br>2,235  | 4 - 5 -  | -   |
| STAIR DEDU  | UK<br>ICTION (AT UPPER FLR)   | 1,612<br>(-93)  | 6 -  | -   |
|   | EAR   | 4,105   | 7 -  | -   |
| 9,386 SF (LO<br>ADDITIONAL<br>TOTAL ALLO                                | T AREA) x 0.40 = $3,754$<br>ADU AREA = $411$<br>WABLE FAR SF = $4,165$  |   | 9 -  | -   |
| SQ  | UARE FOOTAGE SUMM   | ARY   | Sheet Na   | me:   |
| MAIN FLOOF<br>MAIN FLOOF<br>UPPER FLOO<br>TOTAL HEAT                    | R (ADU)<br>R<br>DR<br>TED AREA  | 411<br>1,809<br><u>1,612</u><br>3,832                         | Mair   | n Floor Plan  |
| GARAGE<br>CVR'D PORC  | ж   | 426<br>133  |  | A / A III - A II - A III  |
| CVR'D PATIC   | )   | 84  | Scale:   | 1/4"=1'-0"  |
|   |   |   |  | May 10 2004   |
|   |   |   |  | way 18, 2021  |
|   |   |   | Drawn By:  |   |
|   | N   |   | Status:  | Submittal Set 1   |
| (   |   | δ'<br>-   |  | 4.0   |
|   |   |   |  |   |



A9.Ø

| 4           |   | FLOOR PLAN NOTI   | ES  | $\boldsymbol{\mathcal{C}}$  |   |   |  |
|-------------|---|---|---|---|---|---|--|
|             | 9'-1 1/8" UPPEF<br>B'-0" WDW HDF<br>EXTERIOR WA<br>SIDING PER E<br>VAPOR BARRI<br>WALL SHEATH<br>2x6 HF#2 STU<br>R-10 RIGID INS<br>R-21 INSULAT<br>1/2" GWB<br>NTERIOR WAL<br>1/2" GWB AT E<br>2x4 STUDS AT<br>NSTALL TEMP<br>PERMANENT C<br>NSTALL FIRE I<br>HEIGHT, STAIF | FLOOR PLAN NOTI<br>R FLOOR PLATE HEIGHT (<br>R FLOOR PLATE HEIGHT (<br>R HT ABV UPPER FLR (TYP<br>LL CONSTRUCTION (TYP<br>LEVATIONS<br>ER<br>IING PER PLAN<br>DS AT 16" OC<br>SUL AT WDW/DR HEADER<br>ION<br>L CONSTRUCTION (TYP L<br>ACH SIDE<br>16" OC<br>ORARY BRACING AS REC<br>ONNECTIONS AND STIFF<br>BLOCKING AT ALL WALLS<br>S AND AT ALL PLUMBING<br>S (TYP LIND) FREED OC | ES<br>TYP UNO)<br>P UNO)<br>UNO):<br>S (EXTR WALL)<br>S (EXTR WALL)<br>JNO):<br>QUIRED UNTIL ALL<br>ENERS HAVE BEEN<br>S OVER 10'-0" IN<br>S AND MECHANICAL |   | WWW.<br>P.<br>Rento<br>425-<br>429<br>CC CL   | DESIGN<br>Cwdesigninc<br>O. Box 47<br>on, WA 98<br>-271-0082 (o<br>5-988-0112 (<br>opyright 2<br>W Design,  | I, INC.<br>.com<br>6<br>3057<br>ffice)<br>fax)<br>021<br>Inc   |
|             | AT ALL SHOWI<br>A MIN OF +72"<br>NSTALL FURR<br>DUCTWORK, E<br>NSTALL 2x BL<br>ATTACHMENT<br>NSTALL 1/2" G<br>(TYP UNO).  | S (TYP UNO). FIREBLOCK<br>ERS STALLS, WALLS TO E<br>ABOVE THE FLOOR .<br>ING AS NEEDED TO CON<br>LECTRICAL WIRING OR F<br>OCKING (FULL STUD DEP<br>OF UPPER CABINETS (TY<br>WB AT ALL USEABLE ARE   | CEAL MECHANICAL<br>CEAL MECHANICAL<br>CLUMBING PIPES.<br>TH) FOR<br>(P UNO).  | SITE CC<br>CONST<br>RESPO<br>TO THE<br>CW DE<br>VARIAT<br>PROCE<br>SHALL<br>RECTIF<br>IMPOSI<br>AND/OI<br>FEE PA<br>PRODU<br>ALTER, | ONDITIONS F:<br>RUCTION PH,<br>NSIBILITY TO<br>E DESIGNER /<br>SIGN, INC MU<br>TIONS FROM '<br>TIONS SHOW<br>EDING WITH<br>ACCEPT FULL<br>TON(S) SHALL<br>EDING WITH<br>ACCEPT FULL<br>TON CW DE<br>ID TO CW DE<br>ID TO CW DE<br>ID TO CW DE<br>ICED FOR THI<br>ATIONS OF TH | OR THIS PROJEC<br>ASE. IT IS THE CO<br>REPORT ANY/ALL<br>AT THE TIME THE<br>IST BE NOTIFIED O<br>THE DIMENSIONS<br>N ON THESE DRA<br>BE RESOLVED P<br>ANY WORK,OR TI<br>L RESPONSIBILTY<br>HE EVENT ANY LI<br>SIGN, INC, OUR L<br>PARTY SHALL NO<br>SIGN, INC, FOR TI<br>IS PROJECT. ANY<br>HESE DRAWINGS | T, PRIOR TO THE<br>DNTRACTORS<br>LISCREPANCIES<br>Y ARE IDENTIFIED.<br>DF ANY<br>AND/OR<br>WINGS. ANY SUCH<br>RIOR TO<br>HE CONTRACTOR<br>FOR COST TO<br>ABILITY IS<br>IABILITY TO YOU<br>JT EXCEED THE<br>HE DRAWINGS<br>( UNAUTHORIZED<br>BY THE |
| (<br>/<br>( | (TYP UNO).<br>ALL DOORS AN<br>CENTER (UNO<br>ARE 5.5" FROM  | ID WINDOWS ARE MEASU<br>). ALL DOORS THAT ARE   | JRED TO THE<br>NOT DIMENSIONED,   | CONTR   | ACTOR AND/<br>N, INC. HARML   | OR THIRD PARTY<br>ESS FROM ANY A  | SHALL HOLD CW<br>ND ALL CLAIMS.  |
|             | ARE 5.5" ÈROM<br>ALL EXHAUST<br>FROM PROPER<br>OPERABLE/NO<br>AND 10 FEET F<br>WHERE OPEN<br>M1506.3  | I CORNERS.<br>S SHALL TERMINATE NO<br>RTY LINES; 3 FEET FROM<br>N-OPERABLE OPENINGS<br>ROM MECHANICAL AIR II<br>ING IS 3 FEET ABOVE AIR   | T LESS THAN 3 FEET<br>INTO THE BUILDING<br>NTAKES EXCEPT<br>INTAKE, PER IRC   |   | American Classic Homes - 8003   | 8003 SE 20th Street   | Mercer Island, WA  |
|             |   |   |   | No  | . Re  | emarks  | Date   |
|             |   |   |   | 1   | -   |   | -  |
| E           | SYMBOL  | SYMBOL LEGEN<br>DESCRIPT  | ID<br>ION   | 3   | -   |   | -  |
|             | ●SD   | 110v SMOKE ALARM, HA  | ARD-WIRED &<br>H BATTERY BACKUP   | 5   | -   |   | -  |
|             | ●<br>SDCM   | 110v SMOKE ALARM/CA<br>DETECTOR (COMBO UN<br>INTERCONNECTED WIT   | KBON MONOXIDE<br>IIT), HARD-WIRED &<br>H BATTERY BACKUP   | 7<br>8  | -   |   | -  |
|             |   | EFVTOS (EXHAUST FAN<br>OUTSIDE) MINIMUM 80  | N, VENT TO<br>CFM   | 8<br>9  | -   |   | -  |
|             | M   | HEAT REGISTER. VERI<br>WITH MECH CONTRAC  | FY LOCATIONS<br>FOR   | She   | et Nam  | ne:   |  |
|             | DS  | DOWNSPOUT FROM RC   | OF  | L   | Jpper   | <sup>-</sup> Floor  | Plan   |
|             | C   | N<br>1' 2' 4'   | 8'  | Sca<br>Proj<br>Date<br>Dra  | le:<br>ect No<br>e:<br>wn By:<br>tus:   | 1/4"=1'-<br>: 21003<br>May 18,<br>WJB<br>Submitt  | 0"<br>2021<br>al Set 1.1   |
|             |   | 1' 3' 6'  | J   | L ا   | _   |   |  |

<u>A9.0</u>





- \_\_\_\_\_



52.13' (AVG BLDG ELEV)



A7.0

![](_page_9_Figure_0.jpeg)

![](_page_9_Figure_1.jpeg)

![](_page_9_Figure_2.jpeg)

55.54' MAX RIDGE HT (AVG BLDG ELEV+30')

![](_page_9_Figure_3.jpeg)

![](_page_9_Picture_4.jpeg)

![](_page_10_Figure_0.jpeg)

MINDOW FLASHING DETAILS

![](_page_10_Picture_3.jpeg)

#### PAINTING

DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products. Factory-primed James Hardie products must be painted within 180 days of installation. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

| R<br>WRITTEN DIM<br>HAVE PRECED<br>CONTRACTOR<br>SITE CONDITI<br>CONSTRUCTION<br>SITE CONDITI<br>CONSTRUCTION<br>SITE CONDITI<br>CONSTRUCTION<br>SITE CONDITIONS<br>SITE CONDITIONS<br>CONTRACTOR<br>FREE PAID TO<br>CONTRACTOR<br>DESIGN, INC. F | P.O. Box<br>enton, WA<br>425-988-011<br>COpyright<br>CW Design<br>ENSIONS ON THESE<br>425-988-011<br>Copyright<br>CW Design<br>ENSIONS ON THESE<br>SENCE OVER SCALE<br>8 SHALL VERIFYALL<br>ONS FOR THIS PRO<br>DON PHASE. IT IS TH<br>TTO REPORT ANY<br>SHALL BE RESOLVE<br>WITH ANY WORK, OU<br>THULL RESPONSIB<br>E. IN THE EVENT AN<br>SHALL BE RESOLVE<br>WITH ANY WORK, OU<br>THILL RESPONSIB<br>E. IN THE EVENT AN<br>CW DESIGN, INC, OU<br>THISP PROJECT.<br>S OF THESE DRAWING<br>AND/OR THIRD PARTY SHALL<br>CW DESIGN, INC, OU<br>THISP PROJECT.<br>S OF THESE TRAWING<br>AND/OR THIRD PARTY SHALL<br>CW DESIGN, INC, OU<br>THISP PROJECT.<br>S OF THESE TRAWING<br>AND/OR THIRD PARTY SHALL<br>CW DESIGN, INC, OU<br>THISP PROJECT. | A DATE OF ANY<br>CONTRACTORS<br>A DATE OF ANY<br>CONTRACTORS<br>A DATE OF ANY<br>CONTRACTORS<br>A DATE OF ANY<br>CONTRACTORS<br>A DATE ON TRACTORS<br>A DATE ON TRAC |
|---|---|--|
| American Classic Homes - 8003   | 8003 SE 20th Street   | Mercer Island, WA  |
| No.<br>- Si   | Remarks<br>ubmittal Se  | Date<br>t 05/18/21   |
| 2 -<br>3 -  |   | -  |
| 4 -<br>5 -  |   |  |
| о -<br>7 -<br>8 -   |   |  |
| 9 -   |   | -  |
| Sheet N<br>F<br>Si  | Name:<br>lashing<br>ding De   | and<br>etails  |
| Scale:  | NTS   |  |
| Project<br>Date:  | No: 21003<br>May 1  | 8, 2021  |
| Drawn E   | By: WJB   | -, _~_   |
| Status:   | Subm  | ittal Set 1.1  |
|   | A8.   | 0  |

![](_page_11_Figure_0.jpeg)

![](_page_11_Figure_1.jpeg)

![](_page_12_Figure_0.jpeg)

B

YPICAL WALL SECTION

(A)

## TYPICAL WALL SECTION

![](_page_12_Figure_4.jpeg)

## **TYPICAL CONSTRUCTION MATERIALS**

![](_page_12_Figure_6.jpeg)

#### STAIRWAYS:

- -HEADROOM MIN 6'-8" (SPIRAL 6'-6")
- -MIN STAIRWAY WIDTH ABOVE HANDRAIL 36" -ILLUMINATION REQUIRED FOR STAIRS AND LANDINGS -EXTERIOR STAIR LIGHTING AT TOP LANDING, CONTROL
- INSIDE DWELLING -INTERIOR STAIR LIGHT CONTROL TOP AND BOTTOM OF STAIRS
- (WITH 6 OR MORE RISERS) -MIN STAIR AND LANDING WIDTH 36 INCHES (31/2 INCH CLEAR IF
- 1 HANDRAIL, 27 INCHES CLEAR IF 2 HANDRAILS)
- -MAX RISER HEIGHT 73/4" INCHES
- -MIN TREAD DEPTH 10 INCHES
- -MIN RISER HEIGHT 4 INCHES
- -RISER OR TREAD MAX DIFFERENTIAL 3/8" INCHES -WINDERS-TREAD MIN 6 INCHES AT INNER EDGE
- -WINDER MIN 10 INCHES TREAD DEPTH WITHIN 12 INCHES FROM INSIDE
- -NOSING NOT REQUIRED ON STAIRS WITH TREADS GREATER THAN OR EQUAL TO 11 INCHES
- -ACCESSIBLE SPACE BELOW STAIRS REQUIRES 1/2" GYPSUM BOARD (1-HR CONSTRUCTION)

#### HANDRAILS:

- -GRIPPABLE RAIL REQUIRED IF 4 OR MORE RISERS
- -HANDRAIL HEIGHT MIN 34" AND MAX 38"
- -MAX PROJECTION INTO STAIRWAY IS 4 1/2" -ENDS SHALL RETURN TO WALL OR NEWEL POST OR VOLUTE
- -HANDRAIL TO BE CONSTRUCTED TO RESIST 200 POUND POINT LOAD IN ANY DIRECTION
- -HANDRAIL ON OPEN SIDE OF STAIRS MUST NOT ALLOW 4 INCH SPHERE TO PASS THROUGH
- -OPEN RISERS, NO OPENING GREATER THAN 4 INCHES EXCEPT 6 INCHES ALLOWED AT TREAD/RIDER/RAIL TRIANGLE

#### GUARDRAILS:

-REQUIRED FOR ANY WALK-OFF DISTANCE THAT IS GREATER THAN 30 INCHES ABOVE ADJACENT FLOOR OR GRADE

- -SCREENED PORCHES REQUIRE GUARDRAILS IF WALK-OFF DISTANCE IS GREATER THAN 30 INCHES ABOVE ADJACENT FLOOR OR GRADE -(MINIMUM HEIGHT 42 INCHES IN MULTI-FAMILY) OR MINIMUM 36 INCHES IF ONLY ACCESSIBLE FROM ONE UNIT (34 INCHES IF STAIR HANDRAIL)
- -MAXIMUM OPENING LESS THAN 4 INCHES EXCEPT 6 INCHES ALLOWED AT TREAD/RISER/RAIL TRIANGLE -OPEN RISERS ON STAIRS MUST NOT ALLOW 4 INCH SPHERE TO PASS
- THROUGH -GUARDRAIL TO BE CONSTRUCTED TO RESIST 200 POUND POINT LOAD IN
- ANY DIRECTION

#### FOUNDATION CONSTRUCTION:

|          | PER STRUCTURAL SPECS                          |
|----------|---|
| M WALL:  | PER STRUCTURAL SPECS                          |
| BOLTS:   | PER STRUCTURAL SPECS                          |
|          | PER STRUCTURAL SPECS                          |
| GRADE:   | PER STRUCTURAL SPECS                          |
| JLATION: | R-10 RIGID INSULATION (UNDER FULL SLAB)       |
|          | (FOR SLAB-ON-GRADE <24" BELOW ADJACENT GRADE) |
| JLATION: | R-5 THERMAL BREAK (FULL SLAB PERIMETER)       |
|          | (FOR SLAB-ON-GRADE >24" BELOW ADJACENT GRADE) |
|          |   |

#### MAIN FLOOR FRAMING CONSTRUCTION

| ISTS: | PER PLAN                              |
|-------|---------------------------------------|
| DN:   | R-38 HIGH DENSITY OVER UNHEATED AREAS |
| R:    | PER STRUCTURAL SPECS                  |
| NISH: | PER BUILDER SPECS                     |
|       |                                       |

#### MAIN FLOOR EXTERIOR WALL CONSTRUCTION:

|        | 1/2" GWB / 5/8" TYPE 'X' GWB AT GARAGE |
|--------|--|
| MING:  | 2x6 STUDS (SPACING PER PLAN)           |
| DN:    | R-21 BATT WITH VAPOR BARRIER           |
| THING: | PER STRUCTURAL SPECS                   |
| PAPER: | 60 MINUTE BUILDING PAPER (MIN)         |
|        | PER PLAN                               |
|        |  |

#### UPPER FLOOR FRAMING CONSTRUCTION:

| DISTS: | PRE-MANUF FLOOR TRUSSES (SPACING PER PLAN) |
|--------|--|
| ON:    | R-38 HIGH DENSITY OVER UNHEATED AREAS      |
| DR:    | PER STRUCTURAL SPECS                       |
| NISH:  | PER BUILDER SPECS                          |

#### UPPER FLOOR EXTERIOR WALL CONSTRUCTION:

|         | 1/2" GWB                       |
|---------|--------------------------------|
| AMING:  | 2x6 STUDS (SPACING PER PLAN)   |
| ON:     | R-21 BATT WITH VAPOR BARRIER   |
| ATHING: | PER STRUCTURAL SPECS           |
| PAPER:  | 60 MINUTE BUILDING PAPER (MIN) |
|         | PER PLAN                       |

#### **ROOF FRAMING CONSTRUCTION:**

| :       | PRE-MANUF TRUSSES PER PLAN   |
|---------|------------------------------|
| ON:     | R-49 BLOWN-IN OR             |
|         | R-38 HIGH DENSITY (PER PLAN) |
| NG:     | PER STRUCTURAL SPECS         |
| T EAVE: | HARDIE SOFFIT BOARD          |
| PAPER:  | 30# BUILDING PAPER (MIN)     |
| ):      | COMPOSITION SHINGLES         |

| American Classic Homes - 8003<br>8003 SE 20th Street<br>Mercer Island, WA   |
|---|
| No.         Remarks         Date           -         Submittal Set         05/18/21           1         -         -           2         -         -           3         -         -           4         -         -           5         -         -           6         -         -           7         -         -           8         -         -           9         -         - |

| Scale:      | 3/4" = 1'-0"      |  |  |
|-------------|-------------------|--|--|
| Project No: | 21003             |  |  |
| Date:       | May 18, 2021      |  |  |
| Drawn By:   | WJB               |  |  |
| Status:     | Submittal Set 1.1 |  |  |
| A9.1        |                   |  |  |

BUILDING CODE: 2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), AND BY REFERENCE, THE 2018 INTERNATION REGIDENTIAL CODE (IRC) AS AMENDED BY LOCAL JURISDICTION.

ROOF LIVE LOAD = 25 PSF SNOW (GROUND SNOW = 30 PSF) ROOF DEAD LOAD = 15 PSF

FLOOR LIVE LOAD = 40 PSF (30 PSF AT SLEEPING AREAS)

FLOOR DEAD LOAD = 15 PSF

BALCONIES & DECKS = 60 PSF (LIVE LOAD) + 10 PSF (DEAD LOAD) WIND SPEED (NOMINAL 3 SEC GUST) = 100 MPH FOR RISK CATEGORY 11, EXPOSURE "C", Kzt=1.00

SOIL SITE CLASS "D", SEISMIC CATEGORY DI/D2, SS=1.38, SdS=0.92

OCCUPANCY GROUP: R-3 CONSTRUCTION TYPE: V-B

CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS OF PROJECT AND REPORT ANY OMISSIONS / DISCREPANCIES TO ARCHITECT AND/OR ENGINEER OF RECORD FOR RESOLUTION PRIOR TO COMMENCING WORK. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS ARCHITECT AND/OR ENGINEER OF RECORD ARE NOT RESPONSIBLE FOR DISCREPANT CONDITIONS RESULTING FROM UNAUTHORIZED WORK PERFORMED BY THE CONTRACTOR

#### DEFERRED SUBMITTAL ITEMS

THE FOLLOWING IS A LIST OF ITEMS THAT ARE NOT INCLUDED IN THIS PLAN AND SHOULD BE PROVIDED BY THE BUILDER AT TIME OF APPLICATION FOR PERMIT OR AS A DEFERRED SUBMITTAL ITEM: - ALTERNATIVE I-JOIST/BEAM MANUFACTURER PLANS.

#### - MANUFACTURED TRUSS DESIGNS AND LAYOUTS

#### GENERA

FOUNDATION DESIGN IS BASED ON AN ALLOWABLE SOIL BEARING OF 1500 PSF EXTERIOR FOOTINGS SHALL BEAR 18" (MINIMUM) BELOW FINISHED GRADE. ALL FOOTINGS TO BEAR ON FIRM UNDISTURBED EARTH BELOW ORGANIC SURFACE SOILS. BACKFILL TO BE THOROUGHLY COMPACTED.

BOLT HEADS AND NUTS BEARING AGAINST WOOD TO BE PROVIDED WITH Ø.229"x3"x3" PLATE WASHERS WOOD BEARING ON OR INSTALLED WITHIN I" OF MASONRY OR CONCRETE TO BE PRESSURE REATED WITH AN APPROVED PRESERVATIVE. FOUNDATION SILL BOLTS (MIN. 7" EMBED.) TO BE 5/8" DIAMETER AT 6'-0" O.C. (4'-0" AT BUILDINGS OVER 2 STORIES) UN.O.

METAL FRAMING CONNECTORS TO BE MANUFACTURED BY SIMPSON STRONG-TIE OR USP STEEL CONNECTORS

#### CONCRETE

MINIMUM COMPRESSIVE STRENGTH OF CONCRETE

|  | MINIMUM COMPRESSIVE STRENGTH (f'c) AT 28 DAYS |  |
|--|---|--|
| TTPE OR LOCATIONS OF CONCRETE CONSTRUCTION   | MODERATE WEATHERING POTENTIAL                 |  |
| BASEMENT WALLS, FOUNDATION FOOTINGS, BASEMENT SLABS,<br>4 INTERIOR SLABS ON GRADE (EXCEPT GARAGE) NOT<br>EXPOSED TO THE WEATHER              | 2,500 psi                                     |  |
| BASEMENT WALLS, FOUNDATION WALLS, EXTERIOR WALLS,<br>PORCHES, STEPS, GARAGE & CARPORT SLABS, & OTHER<br>CONCRETE WORK EXPOSED TO THE WEATHER | 3,000 psi (6% air entrained +/- 1%)           |  |

CONCRETE MIXTURE SHALL CONTAIN AT LEAST OF  $5\frac{1}{2}$  sacks of cement per cubic yard CONCRETE "BATCH TICKET" SHALL BE AVAILABLE ON SITE FOR REVIEW BY BUILDING OFFICIAL VERTICAL REINFORCING STEEL TO COMPLY WITH ASTM A615 GRADE 40 (GRADE 60 AT WALLS RETAINING MORE THAN 4FT OF SOIL)

## CARPENTR

#### GENERAL

ALL NAILING TO COMPLY WITH REQUIREMENTS OF IRC TABLE R602.3(1) AND/OR IBC TABLE 2304.10.1 ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED. FIELD CUT ENDS, NOTCHES, AND DRILLED HOLES OF PRESSURE TREATED LUMBER SHALL BE RETREATED IN THE FIELD IN ACCORDANCE WITH AWPA M4. PER IRC 319.3. FASTENERS FOR PRESSURE PRESERVATIVE AND FIRE RETARDANT TREATED WOOD SHALL BE OF HOT-DIPPED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER.

6" MIN. CLEARANCE BETWEEN WOOD AND EARTH. 12" MIN, CLEARANCE BETWEEN FLOOR BEAMS AND EARTH.

18" MIN. CLEARANCE BETWEEN FLOOR JOIST AND EARTH.

#### FASTENER DIMENSIONS

ALL NAILS SPECIFIED ON THIS PLAN SHALL BE OF THE DIAMETER AND LENGTH LISTED BELOW OR AS PER APPENDIX L OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) 8d COMMON (Ø.131" DIA., 2-1/2" LENGTH), 8d BOX (Ø.113" DIA, 2-1/2" LONG), 10d COMMON (Ø.148" DIA., 3" LONG) IØd BOX (Ø.128" DIA., 3" LENGTH), 16d COMMON (Ø.162" DIA, 3-1/2" LONG), 16d SINKER (Ø.148 DIA, 3-1/4" LONG). 5d COOLER (0.086" DIA., 1-5/8" LONG ), 6d COOLER (0.092" DIA., 1-7/8" LONG)

#### LUMBER GRADES

FRAMING LUMBER SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN PRODUCTS ASSOCIATION OR THE WEST COST LUMBER INSPECTION BUREAU. ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED LUMBER GRADING AGENCY AND SHALL HAVE THE FOLLOWING UNADJUSTED MINIMUM DESIGN PROPERTIES, UNLESS NOTED OTHERWISE.

| JOISTS:        | <u>WOOD TYPE:</u>  |
|----------------|--|
| 2×4 to 2×8     | HF #2 - Fb=850 psi, Fv=150 psi, Fc=1300 psi, E=1300000psi    |
| 2×10 OR LARGER | HF #2 - Fb=850 psi, Fv=150 psi, Fc=1300 psi, E=1300000psi    |
| BEAM           |  |
| 4×             | DF-L #2 - Fb=900 psi, Fv=180 psi, Fc=1350 psi, E=1600000psi  |
| 6× OR LARGER   | DF-L #2 - Fb=875 psi, Fv=170 psi, Fc=600 psi, E=1300000psi   |
| <u>STUDS</u>   |  |
| 2×4 \$ 2×6     | HF STUD - Fb=675 psi, Fv=150 psi, Fc=800 psi, E=1200000psi   |
| 2×8 OR LARGER  | HF #2 - Fb=975 psi, Fv=150 psi, Fc=1300 psi, E=1300000psi    |
| POSTS          |  |
| 4×4            | DF-L #2 - Fb=900 psi, Fv=180 psi, Fc=1350 psi, E=1600000psi  |
| 4×6            | DF-L #2 - Fb=900 psi, Fv=180 psi, Fc=1350 psi, E=1600000psi  |
| 6×6 OR LARGER  | DF-L #1 - Fb=1200 psi, Fv=170 psi, Fc=1000 psi, E=1600000psi |

#### GLUED-LAMINATED BEAM (GLB)

SHALL BE 24F-V4 FOR SINGLE SPANS & 24F-V8 FOR CONTINUOUS OR CANTILEVER SPANS WITH THE FOLLOWING MINIMUM PROPERTIES: Fb = 2,400 PSI, Fv = 165 PSI, Fc = 650 PSI (PERPENDICULAR), E = 1,800,000 PSI.

ENGINEERED WOOD BEAMS AND I-JOIST CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SPECIFICATIONS FOR APPROVAL BY BUILDING OFFICIAL. DESIGN, FABRICATION AND ERECTION IN ACCORDANCE WITH THE LATEST ICC EVALUATION REPORT.

BEAMS DESIGNATED AS "LSL" SHALL HAVE THE MINIMUM PROPERTIES: F6 = 2,325 P61, FV = 310 P61, Fc = 800 P61 (PERPENDICULAR), E = 1,550,000 P6

BEAMS DESIGNATED AS <u>"LVL"</u> SHALL HAVE THE MINIMUM PROPERTIES: F6 = 2,600 P61, FV = 285 P61, Fc = 750 P61 (PERPENDICULAR), E = 1,900,000 P61. BEAMS DESIGNATED AS "PSL" SHALL HAVE THE MINIMUM PROPERTIES:

Fb = 2,900 PSI, Fv = 290 PSI, Fc = 750 PSI (PERPENDICULAR), E = 2,000,000 PSI. CALCULATIONS SHALL INCLUDE DEFLECTION AND CAMBER REQUIREMENTS. DEFLECTION SHALL BE LIMTED AS FOLLOWS:

FLOOR LIVE LOAD MAXIMUM = L/480, FLOOR TOTAL LOAD MAXIMUM = L/240. PREFABRICATED WOOD TRUSSES

PRE-FABRICATED WOOD TRUSSES SHALL BE DESIGNED TO SUPPORT SELF WEIGHT PLUS LIVE LOADS & IMPOSED DEAD LOADS AS STATED IN THE GENERAL NOTES. TRUSSES SHALL BE DESIGNED & STAMPED BY A REGISTERED DESIGN PROFESSIONAL AND FABRICATED ONLY FROM THOSE DESIGNS. NON-BEARING WALLS SHALL BE HELD AWAY FROM THE TRUSS BOTTOM CHORD W/ AN APPROVED FASTENER (SUCH AS SIMPSON STC) TO ENSURE THAT THE TRUSS BOTTOM CHORD DOES NOT BEAR ON THE WALL. ALL PERMANENT TRUSS MEMBER BRACING SHALL BE INSTALLED PER THE TRUSS DESIGN DRAWINGS.

ROOF/WALL/FLOOR SHEATHING

ROOF SHEATHING SHALL BE MINIMUM % SHEATHING W/  $^{2}\%$  SPAN INDEX U.N.O. WALL SHEATHING, INCLUDING GABLES, SHALL BE  $\frac{1}{6}$  SHEATHING W/  $\frac{24}{6}$  SPAN INDEX MINIMUM U.N.O., FLOOR SHEATHING SHALL BE MINIMUM  $\frac{23}{32}$  T&G SHEATHING W/ 48/4 SPAN INDEX MINIMUM U.N.O., MINIMUM NAILING SHALL BE 8d COMMON NAILS @ 6" O.C. @ PANEL EDGES \$ 12" O.C. IN PANEL FIELD U.N.O. ON SHEAR WALL SCHEDULE. ROOF AND FLOOR SHEATHING SHALL BE LAID OUT W/ LONG DIMENSION PERPENDICULAR TO FRAMING MEMBERS W/ END LAPS STAGGERED. WALL SHEATHING, INCLUDING GABLES, SHALL BE FULLY BLOCKED & EDGE NAILED AT ALL UNSUPPORTED SHEATHING PANEL EDGES. STAIR FRAMING

UNLESS NOTED OTHERWISE SPECIFIED, TYPICAL STAIR FRAMING SHALL CONSIST OF 2X12 STAIR STRINGERS SPACED AT NO MORE THAN 18" O.C. AND REINFORCED W/ 2X6 SCABS ATTACHED W/ 10d COMMON NAILS STAGGERED AT 8" O.C., STRINGERS SHALL BE SUPPORTED AT UPPER END BY BEARING ON TOP PLATE OF WALL OR APPROVED CONNECTOR TO FLOOR BEAM SUCH AS SIMPSON LRU OR LSC. LANDINGS SHALL CONSIST OF CONVENTIONAL PLATFORM FRAMING W/ MINIMUM 2×6 JOISTS @ 16" O.C.

![](_page_13_Figure_39.jpeg)

15FT HORIZONTAL CSHP18 STRAP AT TOP & BOTTOM OF WINDOW OPENING W/ 8d COMMON NAILS. ADD 2X4 FLAT BLOCKING AS

![](_page_13_Figure_41.jpeg)

UPPER FLOOR SHEAR WALL KEY PLAN SCALE: 1/8"=1'-Ø"

14FT HORIZONTAL CSHP18 STRAP

|  | SHEAR WALL SCHEDULE   |       |                             |                  |                                      |  |                               |                    |  |
|--|---|-------|-----------------------------|------------------|--------------------------------------|--|-------------------------------|--------------------|--|
| WALL<br>MARK   | SHEATHING<br>THICKNESS  | SIDES | SHEAR PANEL<br>EDGE NAILING | FIELD<br>NAILING | FRAMING @<br>ABUTTING<br>PANEL EDGES | SOLE/BASE PLATE<br>NAILING TO JOIST OR<br>BLKG/RIM BELOW | ANCHOR BOLT<br>DIA, & SPACING | SILL PLATE<br>SIZE | POST AT ENDS OF<br>SHEAR WALL/<br>HOLDOWN U.N.O.                             |
| P-6  | 7/16"   | ONE   | 8d @ 6" O.C.                | 12" O.C.         | 2×                                   | 16d SINKER NAILS<br>(Ø.148"x3¼") @ 8" O.C.               | 5/8" DIA. @ 60" O.C           | . 2×               | (2) 2X POST (FACE<br>NAIL W/ IØd<br>(Ø.131"x3") NAILS @<br>12" O.C (STAGGER) |
| P1-4   | 7/16"   | ONE   | 8d @ 4" O <u>.</u> C.       | 12" O.C.         | 2×                                   | 16d SINKER NAILS<br>(Ø.148"x3¼") @ 6" O.C.               | 5/8" DIA, @ 48" O.C.          | 2×                 | (2) 2X POST (FACE<br>NAIL W/ IØd<br>(Ø.131"x3") NAILS @<br>12" O.C (STAGGER) |
| H3   | H3 7/16" ONE SEE DETAIL H3 ON SHEET SI FOR NAILING SPACING, STRAP & HOLDOWN TYPES |       |                             |                  |                                      |  |                               |                    |  |
| . FRAMING SHALL BE 2X HEM-FIR @ 16" O.C. MAX UNLESS NOTED OTHERWISE IN SCHEDULE. |   |       |                             |                  |                                      |  |                               |                    |  |

2. SHEATHING PANELS MAY BE LAYED VERTICAL OR HORIZONTAL. BLOCK ALL HORIZONTAL EDGES W/ 2x OR 3x BLOCKING PER SCHEDULE (UN.O.)

3. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEARWALLS SHALL RECEIVE APA RATED SHEATHING OR ALL VENEER PLYWOOD SIDING OF EQUIVALENT THICKNESS AT POINT OF FASTENING ON PANEL EDGES, FULLY BLOCKED WITH MINIMUM NAILING OF 8d @ 6" O.C. EDGE, 12" O.C. FIELD.

5. ANCHOR BOLT SPACING IS 6'-0" O.C. (4'-0" AT BUILDINGS OVER 2 STORIES) UNLESS NOTED OTHERWISE IN SCHEDULE. MINIMUM OF 2 ANCHOR BOLTS PER PIECE OF FOUNDATION PLATE. ANCHOR BOLTS SPACED NO GREATER THAN 12" AND NO LESS THAN 1 TIMES THE ANCHOR BOLT DIAMETER AT ENDS AND SPLICES. PROVIDE 0.229"x3"x3" WASHERS AT ANCHOR BOLTS. PLATE WASHERS SHALL EXTEND TO WITHIN  $\frac{1}{2}$ " OF THE SHEATHED EDGE OF THE SILL PLATE ON WALLS W/ EDGE NAILING AT 4" O.C. OR TIGHTER. DO NOT RECESS BOLTS.

6. ALL NAILS FOR SHEAR WALLS SHALL BE COMMON OR GALVANIZED BOX NAILS (U.N.O.) ALL SPECIFIED NAILS SHALL HAVE THE FOLLOWING DIMENSIONS: 8d COMMON (Ø.131" DIA., 2½" LONG), 8d BOX (Ø.113" DIA., 2½" LONG), 10d COMMON (Ø.148" DIA., 3" LONG), 10d BOX (Ø.128" DIA., 3" LONG), 16d - COMMON (Ø.162" DIA., 3½" LONG), 16d SINKER (Ø.148" DIA., 3¼" LONG), 5d COOLER (Ø.Ø86" DIA., 1½" LONG), 6d COOLER (Ø.Ø92" DIA., 1½" LONG)

1. 1 $\frac{1}{4}$ " No. 6 DRYWALL SCREWS (TYPE W OR S) MAY BE SUBSTITUTED FOR NAILS LISTED AS 5d COOLER OR 6d COOLER FOR GYPSUM WALL BOARD SHEARWALLS

8. IN LIEU OF 3X VERTICALS AND BLOCKING AT PANEL EDGES, 2-2x'S W/ 10d (0.131"x3") FACE NAILS STAGGERED AT THE SAME SPACING AS PANEL EDGE NAILING MAY BE SUBSTITUTED. PLYWOOD EDGES TO BE CENTERED BETWEEN THE 2-2x MEMBERS (THIS ALTERNATIVE DOES NOT APPLY TO FOUNDATION SILL PLATES OR TO WALLS WITH 80 EDGE NAILING AT 2" O.C. OR 100 EDGE NAILING AT 3" O.C. OR 2" O.C. OR WALLS SHEATHED ON BOTH SIDES)

9. HOLDDOWNS AND STRAPS OF EQUIVALENT UPLIFT CAPACITY WITH CURRENT ICC EVALUATION REPORT OR SIMILAR MAY BE SUBSTITUTED FOR THOSE LISTED IN THE SHEARWALL SCHEDULE WITH PRIOR APPROVAL OF BUILDING OFFICIAL OR ENGINEER OF RECORD.

BELOW.

II. SIMPSON MASAP MUDSILL ANCHORS, MAY BE SUBSTITUTED (1) FOR (1) AT 2X SILL PLATES FOR THE 5/11 DIA. SILL PLATE ANCHOR BOLTS SPECIFIED.

4. NAILING APPLIES TO ALL STUDS, TOP AND BOTTOM PLATES, AND BLOCKING. PLYWOOD JOINT AND SILL PLATE NAILING SHALL BE STAGGERED

10. SQUASH BLOCKS IN FLOOR JOIST CAVITY ARE REQUIRED AT ENDS OF SHEAR WALLS WHERE FULL BEARING IS NOT PROVIDED BY THE FRAMING

# ш $\wedge$ VJ. 0

V

| REVISION: | INIT:       | DATE:                      |
|-----------|-------------|----------------------------|
|           |             |                            |
|           |             |                            |
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|           |             | DATE:<br>4-1-2 <i>0</i> 21 |
| <b>C1</b> | INIT:<br>MM |                            |
| 51        |             |                            |
|           |             | PROJECT #:<br>2357         |

![](_page_14_Figure_0.jpeg)

![](_page_15_Figure_0.jpeg)

- PROVIDE SOLID BLOCKING OVER SUPPORTS
- ALL FOOTINGS TO REST ON UNDISTURBED SOIL

![](_page_15_Figure_6.jpeg)

SCALE : 1/4"= 1'-Ø" - ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED - SOFFIT, VENT, AND INSULATE ALL CANTILEVERED AREAS

- PROVIDE SUPPLEMENTAL JOISTS/BLOCKING BELOW SHEAR WALLS AS INDICATED ON FRAMING PLAN PROVIDE SOLID FRAMING EQUAL TO THE WIDTH OF THE MEMBER BEING SUPPORTED (U.N.O.) - PROVIDE SUPPLEMENTAL BLOCKING IN FLOOR CAVITY BELOW SUPPORT POSTS FOR GIRDERS AND BEAMS - PROVIDE COPY OF CONCRETE "BATCH TICKET" ON SITE FOR REVIEW BY BUILDING OFFICIAL

| Salar Source Signation Street S | Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>Incer<br>In | LUNCE<br>NOS XX08<br>Inturytel.                             | MERCER ISLAND, WA                            |
|--|--|---|--|
|  |  |   |  |
| PROFILESSING   | R. M<br>F WASHIN<br>STERED<br>DISTERED<br>DNAL ENC<br>Digita<br>by Ma<br>PE<br>Date:<br>13:01  | ally signe<br>2021.04.                                      | d<br>5,<br>01                                |
| BUILDING DEPT. A   | R. M<br>F WASHIN<br>37172<br>DISTERED<br>DNAL ENC<br>Digita<br>by Ma<br>PE<br>Date:<br>13:01<br>PPROV  | ally signe<br>ark Myers<br>2021.04.<br>43 -07'00<br>AL STAN | d<br>,<br>01<br>)'<br><b>1P<del>5</del>:</b> |
| BUILDING DEPT. A   | R. M<br>F WASHIN<br>37172 EN<br>VISTERED<br>NAL ENC<br>Digita<br>by Ma<br>PE<br>Date:<br>13:01:<br>PPROV   | DATE:   | d<br>;,<br>01<br>)'<br><b>1PS:</b>           |
| BUILDING DEPT. A   | R. M<br>F WASHING<br>STITERED<br>DIGITA<br>by Ma<br>PE<br>Date:<br>13:01:<br>PPROV   | DATE:   | d<br>;,<br>01<br>)'<br><b>1PS:</b>           |
| BUILDING DEPT. A   | R. M<br>F WASHIN<br>ISTERED<br>DALENC<br>Digita<br>by Ma<br>PE<br>Date:<br>13:01:<br>PPROV   | DATE:<br>DATE:<br>4-1-20<br>INIT:<br>MM                     | d<br>;<br>01<br>)'<br><b>1PS:</b><br>21      |

![](_page_16_Figure_0.jpeg)

MAIN FLOOR JOISTS SHALL BE:  $2 \times 10 \text{ HF } = 2 \text{ JOISTS } = 16 \text{ O.C.}$ UNLESS NOTED OTHERWISE (U.N.O.)

DROPPED FRAMING FOR FLUSH ENTRY SHOWERS: PROVIDE 2×6 LEDGERS & BLOCKING AROUND PERIMETER TO ACCEPT EDGE NAILING. SECURE 2X6 TO PERIMETER FRAMING W/ 10d COMMON NAILS (Ø.148"x3") STAGGERED AT 6" O.C.

- ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED
- SOFFIT, VENT, AND INSULATE ALL CANTILEVERED AREAS
- EXTERIOR WALLS TO BE 2X6 AT 16" O.C., U.N.O.

- HEADERS 8FT OR LONGER SHALL BE PROVIDED W/ (2) TRIMMER (JACK) STUDS AT EACH END U.N.O.
- AND PROVIDE MATCHING POSTS IN WALL BELOW
- PROVIDE I-JOIST LAYOUT AND SPECS ON SITE FOR INSPECTION.

![](_page_16_Picture_12.jpeg)

- ALL DOOR/WINDOW HEADERS AT THIS LEVEL TO BE 4X10 DF #2 AT BEARING WALLS, U.N.O., 6'-0" MAX. SPAN

SCALE :  $\frac{1}{4}$ " = 1'-0"

- INTERIOR PARTITIONS TO BE 2X4 AT 16" O.C. (2X6 @ PLUMBING WALLS) U.N.O.

- PROVIDE SUPPLEMENTAL JOISTS/BLOCKING BELOW SHEAR WALLS AS INDICATED ON FRAMING PLAN

■ PROVIDE SOLID FRAMING EQUAL TO THE WIDTH OF THE MEMBER BEING SUPPORTED (U.N.O.)

- PROVIDE SUPPLEMENTAL BLOCKING IN FLOOR CAVITY BELOW SUPPORT POSTS FOR GIRDERS AND BEAMS

- IF AN ENGINEERED JOIST FLOOR FRAMING LAYOUT IS PROVIDED BY THE JOIST SUPPLIER, THAT JOIST LAYOUT SHALL SUPERCEDE THE JOIST LAYOUT INDICATED IN THE PLANS.

| STRUCTURAL PLANS  | AMERICAN CLASSIC HOMES<br>80xx SE 20th STREET<br>MERCER ISLAND, WA  |
|---|---|
| Myers En<br>3206 50th Str<br>Gig Ha<br>Ph:<br>Email: myer | reet Ct NW, Ste. 210-B<br>urbor, WA 98335<br>253-858-3248<br>ngineer@centurytel.net   |
| The The   | <sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37172</sup><br><sup>37</sup> |
| BUILDING DEPT.  | . APPROVAL STAMPS:  |
|   |   |
| REVISION:   | INIT: DATE:   |
| REVISION:   | INIT: DATE:<br>INIT: DATE:<br>DATE:<br>DATE:<br>4-1-2021<br>INIT:   |

![](_page_17_Figure_0.jpeg)

(2)16d NAILS @ TOP & BOTTOM OF 2x4 VERTICAL BLOCK - 2x6 (MIN) STRONGBACK, -RESTRAINED @ EACH END.

| 9'-1 $\ensuremath{\not }_{\ensuremath{\mathcal{B}}}$ " PLATE HT. BEARING WALL |
|---|
| 11'-6" PLATE HT. BEARING WALL   |

- SOFFIT, VENT, AND INSULATE ALL CANTILEVERED AREAS - EXTERIOR WALLS TO BE 2X6 AT 16" O.C., U.N.O.
- INTERIOR PARTITIONS TO BE 2X4 AT 16" O.C. (2X6 @ PLUMBING WALLS) U.N.O.
- PROVIDE SOLID FRAMING EQUAL TO THE WIDTH OF THE MEMBER BEING SUPPORTED (U.N.O.)
- AND PROVIDE MATCHING POSTS IN WALL BELOW - IF AN ENGINEERED JOIST FLOOR FRAMING LAYOUT IS PROVIDED BY THE JOIST SUPPLIER,
- PROVIDE I-JOIST LAYOUT AND SPECS ON SITE FOR INSPECTION. - PROVIDE VENTED BLOCKING AT REQUIRED TRUSS/RAFTER BAYS
- ALL MANUFACTURED TRUSSES: \* SHALL HAVE DESIGN DETAILS AND DRAWINGS ON SITE FOR FRAMING INSPECTION

2X6 TO PERIMETER FRAMING W/ 10d COMMON

NAILS (Ø.148"x3") STAGGERED AT 6" O.C.

- \* SHALL NOT BE FIELD ALTERED WITHOUT ENGINEER'S APPROVAL
- \* SHALL CARRY MANUFACTURER'S STAMP ON EACH TRUSS

![](_page_17_Figure_12.jpeg)

![](_page_17_Picture_13.jpeg)

- ALL DOOR/WINDOW HEADERS AT THIS LEVEL TO BE 4X10 DF #2 AT BEARING WALLS, U.N.O., 6'-0" MAX. SPAN

- PROVIDE SUPPLEMENTAL JOISTS/BLOCKING BELOW SHEAR WALLS AS INDICATED ON FRAMING PLAN - HEADERS 8FT OR LONGER SHALL BE PROVIDED W/ (2) TRIMMER (JACK) STUDS AT EACH END U.N.O.

- PROVIDE SUPPLEMENTAL BLOCKING IN FLOOR CAVITY BELOW SUPPORT POSTS FOR GIRDERS AND BEAMS

THAT JOIST LAYOUT SHALL SUPERCEDE THE JOIST LAYOUT INDICATED IN THE PLANS.

\* SHALL BE INSTALLED AND BRACED TO MANUFACTURER'S SPECIFICATION

SCALE : 1/4"= 1'-Ø"

| BORNAL ENCINE<br>PROPERTIES STONAL ENCINE<br>Date: 2021.04.01<br>13:02:15 -07'00' |       |                                  |  |  |
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Myers Engineering, LLC 3206 50th Street Ct NW, Ste. 210-B Gig Harbor, WA 98335

> Ph: 253-858-3248 Email: myengineer@centurytel.net

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![](_page_18_Figure_0.jpeg)

![](_page_18_Picture_1.jpeg)

- ALL MANUFACTURED TRUSSES:

- AND PROVIDE MATCHING POSTS IN WALL BELOW

![](_page_18_Picture_6.jpeg)

- PROVIDE VENTED BLOCKING AT REQUIRED TRUSS/RAFTER BAYS

SCALE :  $\frac{1}{4}$ " = 1'-0"

\* SHALL HAVE DESIGN DETAILS AND DRAWINGS ON SITE FOR FRAMING INSPECTION \* SHALL NOT BE FIELD ALTERED WITHOUT ENGINEER'S APPROVAL

\* SHALL BE INSTALLED AND BRACED TO MANUFACTURER'S SPECIFICATION

\* SHALL CARRY MANUFACTURER'S STAMP ON EACH TRUSS

- ALL BEAMS AND HEADERS AT THIS LEVEL TO BE 4X8 DF #2 AT BEARING WALLS, U.N.O., 6'-0" MAX. SPAN - HEADERS 8FT OR LONGER SHALL BE PROVIDED W/ (2) TRIMMER (JACK) STUDS AT EACH END U.N.O. ■ PROVIDE SOLID FRAMING EQUAL TO THE WIDTH OF THE MEMBER BEING SUPPORTED (U.N.O.) - PROVIDE SUPPLEMENTAL BLOCKING IN FLOOR CAVITY BELOW SUPPORT POSTS FOR GIRDERS AND BEAMS

![](_page_19_Figure_9.jpeg)

![](_page_19_Figure_10.jpeg)

![](_page_19_Figure_12.jpeg)

![](_page_19_Picture_14.jpeg)

![](_page_19_Figure_15.jpeg)

![](_page_19_Figure_16.jpeg)

![](_page_19_Figure_24.jpeg)

![](_page_19_Figure_33.jpeg)

![](_page_19_Figure_38.jpeg)

![](_page_20_Figure_0.jpeg)

![](_page_20_Figure_3.jpeg)

GABLE END TRUSS / SCALE: 3/4"=1"

(9)-

(1)

(5)

(2)

- 1, 2x4 OUTRIGGER @ 48" O.C. W/ FASCIA BOARD (IX MIN.) SECURED TO ENDS W/ (2) 10d NAILS
- ROOF SHEATHING W/ DIAPHRAGM EDGE NAILING TO GABLE TRUSS
- 3. SHEATHING SPLICE AT TOP PLATE OF WALL, FULLY SHEATH GABLE END TRUSS W/ EXTERIOR WALL SHEATHING PER PLAN W/ EDGE NAILING AT TOP 4 BOTTOM CHORD
- 4. 2x DIAGONAL BRACE @ 8FT O.C.
- 5. SECURE BRACE AT  $2 \times BLOCKING W/$ (3) IØd NAILS
- 6. SIMPSON A34 AT 2x BRACE
- 1. ATTACH GABLE TRUSS TO BACKER BOARD W/ 10d NAILS @ 6" O.C.
- 8. 2×6 CONTINUOUS BACKER BOARD SECURED TO TOP PLATE W/ 10d NAILS @ 6" O.C.
- 9. ROOF TRUSSES @ 24" O.C. PER PLAN

70

∫ SCALE: <sup>3</sup>/<sub>4</sub>"=1'

(4)——

S GIRDER TRUSS AT OVERFRAMING

- 1. 2× STUD WALL W/ SHEATHING ∉ NAILING PER SHEAR WALL SCHEDULE
- 2. FLOOR JOISTS PER PLAN.
- 3. JACK/MONO TRUSS PER PLAN W/ LUS HANGER TO RIM
- 4. 2X RIM JOIST MINIMUM W/ 8d TOE NAILS @ 6" O.C. TO TOP PLATE
- 5, JOISTS PER PLAN OR JOIST BLOCKING @ 24" O.C. IN FIRST BAY, TOE NAILED TO TOP PLATE W/(2)8d TOE NAILS
- 6. STUD WALL OR BEAM PER PLAN
- 1. ROOF DIAPHRAGM EDGE NAILING PER PLAN
- 8. 2X BLOCKING BETWEEN TRUSSES ATTACHED TO WALL W/ 10d NAILS STAGGERED AT 6" O.C.
- 9, 2× BLOCKING BETWEEN STUDS W/ (2) 10d COM. TOE NAILS PER STUD

(75) MONO/JACK TRUSS TO RIM SCALE: 3/4"=1'

(8)

![](_page_20_Figure_26.jpeg)

SHEAR BLOCKING @ INT. SHEAR WALL (76) SCALE: 3/4"=1"

![](_page_20_Figure_36.jpeg)

- CONVENTIONAL OVER FRAMING. WHERE VALLEY TRUSSES ARE USED SECURE VALLEY TRUSS TO SUPPORTING ROOF FRAMING W/ SIMPSON VTCR CLIPS @ 48" O.C.
- 3. ROOF SHEATHING CONTINUOUS BELOW OVERFRAMING, TRUSS TOP CHORDS W/O SHEATHING SHALL BE BRACED W/ 2x4 @ 24" O.C. ATTACHED W/ (2) 10d NAILS PER TRUSS
- 4. ROOF TRUSS PER PLAN
- 5. SIMPSON HUS26 OR USP THD26 FACE MOUNT HANGER U.N.O. PER TRUSS MANUF.

WALL BELOW

WALL BELOW

![](_page_20_Figure_41.jpeg)

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|---|-------|--|--|--|
| Myers Engineering, LLC<br>3206 50th Street Ct NW, Ste. 210-B<br>Gig Harbor, WA 98335<br>Ph: 253-858-3248<br>Email: myengineer@centurytel.net  |       |  |  |  |
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![](_page_21_Figure_0.jpeg)

![](_page_22_Figure_0.jpeg)

THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST-CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT CIVIL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS SPECIFIED ON THE APPROVED PLAN SET PRIOR TO FINAL

ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING: 1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A

MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL

3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:

A. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BIORETENTION (BMP T7.30), WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1. THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION. B. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A.) ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE

THE RESULTING SOIL SHOULD BE CONDUCIVE TO THE TYPE OF VEGETATION TO BE ESTABLISHED.

IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW: 1. LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION. 2. AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PREAPPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS

3. STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED

4. IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS. MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.

| ·                           |         |
|-----------------------------|---------|
| Hard Surface Data           |         |
| Existing Vegetation         | 9386 sf |
|                             |         |
| New Roof                    | 3206 sf |
| New Driveway/ Walkway       | 406 sf  |
| Total Proposed Hard Surface | 3612 sf |
| Proposed Vegetation         | 5774 sf |

#### **SEE C1 FOR TESC/ DEMO CSWPPP**

|                    |   | Revisions: | $\sim$             |
|--------------------|---|------------|--------------------|
|                    |   |            |                    |
| sign, PLLC<br>9572 | - |            | Drainage Site Plan |
| m                  |   |            | Scale: 1" = 10'    |

![](_page_23_Figure_0.jpeg)

| ED BY: _Interlaken Engineering and Design, PLLC |
|---|
| (206) 470 - 9572                                |
| <u>May 28, 2021</u>                             |
| Orifice #1 dia 0.5_ inch, elev 18.50            |
| ORIFICE #2 DIA $0.8$ inch, elev $20.67$         |
|   |

- TOP OF RISER TO BE 2" MIN ABOVE TOP OF SECOND ORIFICE ELBOW AND CANNOT BE LOWER THAN DETENTION PIPE CROWN

)TO CITY APPROVED DISCHARGE POINT

- INVERT ELEV \_20.50

### **SEE C2 FOR DRAINAGE SITE PLAN**

Revisions:

**Detention Detail** 

Scale: As Noted