



Pend Oreille County

Community Development Department

P. O. Box 5066 Newport, Washington 99156-5066 Phone: 509-447-4821

Rick Cruse
Building Inspector/Fire Marshall

Dennis Alliger
Building Inspector/Permit Tech

RESIDENTIAL BUILDING PERMIT APPLICATION

- | | | | |
|---|---|---|--|
| <input type="checkbox"/> New Construction | <input type="checkbox"/> Addition/Remodel | <input type="checkbox"/> Accessory Building | <input type="checkbox"/> Change of Use/Occupancy |
| <input type="checkbox"/> HVAC Mechanical | <input type="checkbox"/> Fireplace / Pellet Stove | <input type="checkbox"/> Plumbing | <input type="checkbox"/> Other (write description on page 2) |

JOB SITE INFORMATION

Site Address: _____
Parcel #: _____ Subdivision: _____ Lot: _____
Legal Description: _____

PROPERTY OWNER CONSENT INFORMATION

Are you the property owner? Yes No

*If you are not the property owner, you will be required to submit a completed Landowner/Agent Consent Form.

BUILDING OWNER/APPLICANT

Name: _____
Mailing Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____ Email: _____

GENERAL CONTRACTOR

Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____ Email: _____
Contractor License #: _____

ENGINEER (if applicable)

Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____ Email: _____

ARCHITECT (if applicable)

Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____ Email: _____

PLUMBING CONTRACTOR (if applicable)

Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____ Email: _____

MECHANICAL CONTRACTOR (if applicable)

Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____ Email: _____
Contractor License #: _____

WORK DETAIL

Project Description: _____

TOTAL PROJECT VALUATION (includes cost of labor and materials):

\$ _____

Land Use Zone:	Occupancy Class:	Construction Type:
NEW CONSTRUCTION DETAILS (COMPLETE ALL THAT APPLY)		
Number of Bedrooms:	Deck/Covered Patio (sq ft):	Fire District:
Number of Bathrooms:	Average Height to Peak:	Septic Permit #:
Basement (sq ft):	Building Dimensions:	Water Source:
Main Floor (sq ft):	Impervious Surface Area:	
Second Story (sq ft):	Heat Source:	Floodplain YES NO
Garage (sq ft):		Critical Areas/Wetlands YES NO

ADDITIONAL INFORMATION

Will you be installing a fire alarm/sprinkler system? Yes No

NOTICE

A separate permit is required for electrical through State of Washington Department of Labor & Industries.

Per RCW 19.27.097, each applicant for a building permit of a building necessitating potable water shall provide evidence of an adequate water supply for the intended use of the building. Evidence may be in the form of a water right permit from the Department of Ecology, a letter from an approved water purveyor stating the ability to provide water, or another form sufficient to verify the existence of an adequate water supply. Each applicant applying for a building permit in which sewage or wastewater may originate, shall obtain an on-site sewage disposal permit from Tri-County Health District prior to issuance of a building permit for said building. Please attach a copy of your approved on-site sewage disposal permit from Tri-County Health District.

PERMIT FEES*

Fees are established by the Board of County Commissioners and are subject to change. The building official will assign the permit fee when plans of the project are reviewed. Permits are valid for one year from issue date and may be renewed for \$55.00 per year for a total of four additional times (maximum five years). Payment is to be made payable to Pend Oreille County (POC). Applications may be delivered to the Community Development Department at: 418 S. Scott Ave, Newport, WA 99156; or mailed to: P.O. Box 5066 Newport, WA 99156.

I hereby certify that I have read and examined this application and know the same to be true and correct. All provisions of laws and ordinances governing this type of work will be complied with, whether specified herein or not. The granting of a permit does **not** presume to give authority to violate or cancel the provisions of any other federal, state, or local law regulating construction or the performances of construction.

Signature: _____ **Date:** _____



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RESIDENTIAL BUILDING PERMIT APPLICATION CHECKLIST

WHAT IS THIS?

The purpose of this checklist is to guide you through the process of obtaining a building permit for a residential structure or accessory structure (garage, interior remodel, etc.). Information contained below is not intended to be a comprehensive list of information required for obtaining your permit as requirements for specific buildings or uses may vary. It is intended to give you a general outline of the permitting process.

New residential construction in Pend Oreille County, Lone, Cusick, Usk, Metaline and Metaline Falls must conform to all adopted city, state, and federal codes, including but not limited to the 2012 International Residential, 2012 Mechanical and 2012 Firecodes, 1997 Uniform Plumbing code, the 2012 Washington State Energy code, subdivision, and various other local, state and federal laws. Design criteria 50 pounds per square foot minimum (snow load on the roof), Wind speed 110MPH, Seismic Zone Design Category C and Exposure C.

PERMIT PROCESS

Following submittal of a complete application, staff will distribute the application to various departments for review and compliance with adopted county standards. The applicant will be notified of any additional information or changes needed to the project.

Upon completion of the project, in which all necessary inspections have been completed, necessary fees paid, and all permits/approvals have been given, a Certificate of Occupancy will be issued (if applicable) allowing occupancy of the structure.

WHAT INFORMATION IS NEEDED

The following information must be provided. Should any of the following minimum information not be provided, the application may not be accepted nor processed. A complete application includes:

- | | |
|--|---|
| <input type="checkbox"/> Approved Site Evaluation Application (2 copies) | <input type="checkbox"/> Energy Calculation Worksheets (2 copies) |
| <input type="checkbox"/> Completed <i>Residential Building Permit</i> Application | <input type="checkbox"/> Floor Joist Calculations including layout (2 copies, if engineered joists) |
| <input type="checkbox"/> Signed <i>Landowner Consent</i> Form (if applicant is not property owner) | <input type="checkbox"/> Roof Truss Calculations including layout (stamped, 2 copies) |
| <input type="checkbox"/> Building Plans (2 sets, see checklist) | <input type="checkbox"/> Septic, Water, & Sewer Disposal Information |
| <input type="checkbox"/> Engineered Brace Panel Detail (stamped, 2 copies) | <input type="checkbox"/> Completed <i>Checklist</i> Required |

Potable Water

Per the Washington State Building Code (RCW 19.27.097), each applicant for a building permit of a building necessitating potable water shall provide evidence of an adequate water supply for the intended use of the building. Evidence may be in the form of:

- A water right from Washington Department of Ecology
- A letter from an approved water purveyor stating the ability to provide water
- A form sufficient to verify existence of an adequate water supply
 - A Well Log will satisfy this requirement

For **Public/Community Water Systems**, you will need to provide a letter or form from the water system owner or operator stating that their system is able and willing to supply potable water to your proposed building site and the location of the proposed building site has been reviewed. Please include the water system's identification number assigned by the Washington State Department of Health.

For **Private Wells**, potable water must be tested by a laboratory certified* by the State of Washington and meet the following standards prior to issuance of a building permit:

- | | |
|---|----------------------------------|
| • Bacteria Test <ul style="list-style-type: none">○ Coliform Bacteria: None Present | • Lead: Not more than .015 mg/L |
| • Inorganic Test <ul style="list-style-type: none">○ Arsenic: Not more than .01 mg/L | • Nitrate: Not more than 10 mg/L |
| | • Uranium: Not more than 30 mg/L |

Sewage Disposal

Per Washington State Law (RCW 19.27.031(4), RCW 43.20.050, WAC 246-271-020, WAC 246-272-20501), all plumbing fixtures, drains, appurtenances, and appliances used to receive or discharge liquid wastes or sewage shall be connected to the building's drainage system.

–AND–

Prior to issuance of a building permit for a building in which sewage or wastewater may originate, the applicant shall obtain:

- A letter or form from an approved sewer system owner or operator stating that their system is able and willing to accept sewage and/or wastewater from said building. The letter or form shall also state the owner or operator has reviewed the location of the proposed structure, OR
- An approved on-site sewage disposal permits from the Northeast Tri-County Health District (509) 447-3131

WILL I NEED OTHER PERMITS/APPROVALS?

Additional permits and/or approvals may be required prior to the issuance of a building permit. If the building is located within a Special Flood Hazard Area (SFHA), A Floodplain Development Permit (FDP) from the Community Development Department will be required. SFHA's are determined by Flood Insurance Rate Maps (FIRMs) produced by the Federal Emergency Management Agency (FEMA). A floodplain determination will be made by the application reviewer as part of the Site Evaluation Application review.

Work in/or around critical areas like wetlands, aquifer recharge areas, rivers/streams, or steep slopes will require review and approval by the Community Development Department and may require review by the Washington Department of Fish and Wildlife and/or other agencies.

WILL MY APPLICATION OR PERMIT EXPIRE?

Permits are valid for one year from issue date and may be renewed for \$55.00 per year for a total of four additional times (maximum five years). Permit fees, to be determined by the building inspector after plan review. The check is to be made payable to Pend Oreille County. Applications may be delivered to the Community Development Department in the lower level of the courthouse in Newport or mailed to P.O. Box 5066 Newport WA. 99156

Forest Practice Act

Certain land use activity may require a Forest Practice Application/Notification (FPA/N) and a Notice of Conversion. Activities that may trigger Forest Practices regulations include:

1. Harvesting timber and selling for payment or trading for goods and services
2. Road construction (examples) > 600' in length
3. Crossing a stream within a Wetland or Riparian
4. Management Zone Road Maintenance (i.e., bridge or culvert replacement)

Contact WA DNR to see if a Forest Practice Application is required:

Washington Department of Natural Resources

Northeast Region

225 S. Silke Rd.

Colville, WA 99114

(509) 684-7474

STRUCTURAL PLAN SUBMITTALS

Req Sub

- A. Elevations - Front, Sides, and Rear** (Minimum 1/8" scale)
 - 1. With peak of roof and wall height including basement

- B. Foundation Plan - Crawlspace, Basement, or Slab on Grade** (Minimum 1/8" scale)
 - 1. Footing size, location, and depth to finished grade level
 - 2. Perimeter concrete foundation wall sizes
 - 3. Crawlspace ventilation
 - 4. Supporting wood cripple walls or beams
 - 5. Thickened concrete pads supporting beams or girder trusses.
 - 6. Horizontal and vertical reinforcement size and spacing
 - 7. Concrete or masonry unit width
 - 8. Earth to wood separation distance
 - 9. Anchor bolt or hold down type, size, and spacing

- C. Floor Plan - Each Level (finished or unfinished) with dimensions** (Minimum 1/8" scale)
 - 1. Floor joist directions, size and spacing
 - 2. Header, beam, or concrete lintel sizes and types
 - 3. Brace wall line, bracing panel locations, types, and sizes
 - 4. Water heater and furnace locations
 - 5. Exhaust fan locations
 - 6. Deck or concrete patio sizes and locations
 - 7. Window and door locations and sizes
 - 8. Window well locations and sizes
 - 9. Room usage labels
 - 10. Smoke and carbon monoxide detector locations
 - 11. Attic and crawl space access locations
 - 12. Sheathing or concrete floor size and insulation

- D. Roof Plan** (Minimum 1/8" scale)
 - 1. Slope, roofing material, underlayment, ice barrier protection, and drip edge
 - 2. Sheathing type and size
 - 3. Truss or rafter size, spacing, and connections
 - 4. Engineered truss calculations
 - 5. Rafter and over frame direction, size and spacing
 - 6. Ridge, eave, and valley lines
 - 7. Beam and girder size and location
 - 8. Attic insulation, air space baffle, and ventilation

- E. Ceiling Plan** (Minimum 1/8" scale)
 - 1. Joist size and spacing
 - 2. Size and type of ceiling gypsum wallboard

- F. Wall** (Minimum 1/8" scale)
 1. Height, top plate, stud size and spacing, sole plate.
 2. Exterior sheathing size and type.
 3. Siding, exterior house wrap.
 4. Insulation, vapor barrier, and gypsum wallboard.
 5. Garage portal framing.

- G. Miscellaneous Construction Details** (Minimum 1/8" scale)
 1. Radon system with 6 mil vapor barriers.
 2. Deck location with floor plan, side view, and dimensions.
 3. Deck floor joist, decking direction, size and spacing.
 4. Deck footings, posts, beams, size, location, and connections.
 5. Stairway tread rise and run, handrail or guardrail height, spacing, and connections.

- H. Residential Energy Code**
 1. Forms if applicable.

- I. Site Evaluation Plan**
 1. Minimum 8½" x 11" size paper
 2. North Arrow
 3. Geographic ID, or Property ID
 4. Actual property configuration including dimensions
 5. Adjacent street names
 6. Actual structural footprint of existing and proposed structures with dimensions identified, including all impervious surfaces (sidewalks, driveways, concrete patios, etc.)
 7. Existing and proposed building setbacks to property lines including dimensions
 8. Distances (in feet) between existing and proposed primary and accessory structures.
 9. Location and dimensions of utility easements
 10. Location of sewer and potable water connection, including distances between the two
 11. Location and dimension of driveway approach
 12. Building footprint and square footage
 13. Site address

**I hereby verify that I have read and examined this checklist and have submitted the information as noted on this checklist.
 All provisions of laws and ordinances governing this type of work will be complied with whether specified herein or not.**

APPLICANT SIGNATURE

DATE

PRINTED NAME



Pend Oreille County

Community Development Department

P. O. Box 5066 Newport, Washington 99156-5066 Phone: 509-447-4821

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Dennis Alliger
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MECHANICAL AND VENTILATION

JOB ADDRESS: _____

FURNACE BRAND: _____

FURNACE MODEL #: _____

ECM OR VARIABLE SPEED BLOWER? YES NO

TOTAL CONDITIONED FLOOR AREA _____ SF

OF BEDROOMS _____

REQ AIR FLOW _____ CFM

*TABLE 403.8.1 *TABLE 2A *TABLE M1507.3.3 (1)

CONTINUOUS VENTILATION

INTERMITTENT VENTILATION

* REFER TO TABLE 403.8.5.1 OR M1507.3.3 (2)

EFFICIENCY RATING _____ CFM / WATT

* REFER TO TABLE R403.51

RUN % _____

FACTOR _____

INSTALLED AIR FLOW _____ CFM

METHOD

WHOLE HOUSE SUPPLY FAN

VOLUME _____ DUCT SIZE _____

WA ST AMENDED IMC 403.8.5.2
WAC 51-51-1507 IRC SECTION M1507.3.4

*REFER TO TABLE: IMC 403.8.5.2 OR IRC M1507.3.6.2 FOR SIZING
*PROVIDE SUBMITTAL FOR VERIFICATION

WHOLE HOUSE EXHAUST FAN WITH OUTDOOR AIR INLETS

MAKE _____

MODEL _____

VENTILATION RATE AT .25 W.G. _____

SONE RATING AT .1 W.G. _____

WA ST AMENDED IMC 403.8.6
WAC 51-51-1507 IRC SECTION M1507.3.4

*PROVIDE SUBMITTAL FOR VERIFICATION

INTEGRATED FORCED AIR SYSTEM

VOLUME _____ CFM

DUCT SIZE _____

WA ST AMENDED IMC 403.8.7
WAC 51-51-1507 IRC SECTION M1507.3.5
WA STATE AMENDED IMC R403.5.1 ***EXCEPTION***

FLEX DUCT

RIGID DUCT

*PROVIDE SUBMITTAL FOR VERIFICATION

HEAT RECOVERY VENTILATOR (HRV / ERV)

MAKE _____

MODEL _____

VENTILATION RATE AT .25 W.G. _____

SONE RATING AT .1 W.G. _____

WA ST AMENDED IMC 403.8.6
WAC 51-51-1507 IRC SECTION M1507.3.7

*PROVIDE SUBMITTAL FOR VERIFICATION

ALTERNATE SYSTEM DESIGN

MAKE _____

MODEL _____

VENTILATION RATE AT .25 W.G. _____

SONE RATING AT .1 W.G. _____

WA ST AMENDED IMC 403.8.11
ASHRAE 62.2-2010

*PROVIDE SUBMITTAL FOR VERIFICATION
*REFER TO TABLE 2A

TABLE M1507.3.3(1), 403.8.1, 2A					
(Square Feet)	NUMBER OF BEDROOMS				
	0 - 1	2 - 3	4 - 5	6 - 7	>7
	Airflow in CFM				
<1,500	30	45	60	75	90
1,501 – 3,000	45	60	75	90	105
3,001 – 4,500	60	75	90	105	120
4,501 – 6,000	75	90	105	120	135
6,001 – 7,500	90	105	120	135	150
>7,501	105	120	135	150	165

**TABLE R403.5.1
MECHANICAL VENTILATION SYSTEM FAN EFFICACY**

FAN LOCATION	AIR FLOW RATE MINIMUM (CFM)	MINIMUM EFFICACY (CFM / WATT)	AIR FLOW RATE MAXIMUM (CFM)
Range Hood	Any	2.8 cfm/watt	Any
In-line fan	Any	2.8 cfm/watt	Any
Bathroom, utility room	10	1.4 cfm/watt	<90
Bathroom, utility room	90	2.8 cfm/watt	Any

**TABLE 403.8.5.2
PRESCRIPTIVE SUPPLY FAN DUCT SIZING**

Specified Volume from Table 403.8.1	Minimum Smooth Duct Diameter	Minimum Flexible Duct Diameter
50-90 cfm	4 inches	5 inches
90-150 cfm	5 inches	6 inches
150-120 cfm	6 inches	7 inches
250-400 cfm	7 inches	8 inches

**TABLE M1507.3.3(2)
INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS^{a,b}**

Run-Time Percentage in Each	25%	33%	50%	66%	75%	100%
Factor	4	3	2	1.5	1.3	1

a. For ventilation system run-time values between those given, the factors are permitted to be determined by interpolation.

b. Extrapolation beyond the table is prohibited

PEND OREILLE COUNTY
COMMUNITY DEVELOPMENT DEPARTMENT
418 S. Scott Avenue
P.O. Box 5066
Newport, WA 99156
(509) 447-4821
pendoreilleco.org



LANDOWNER/AGENT CONSENT FORM

I (we), the undersigned owner(s) of record of (*geographic ID or property ID*) _____
located at (*physical address*) _____, consent to and authorize
(*agent name*) _____ to act on my behalf for the purposes
of obtaining approval for (*development type*) _____
submitted to Pend Oreille County.

I (we), as the landowner(s) of the above-described property understand and agree to the following:

- I (we) am/are the legal owner(s) of the subject property and may act on behalf of all interested parties, financial and otherwise.
- I (we) am/are responsible for all activities occurring on the subject property to which an application is made.
- That Pend Oreille County, its officers, and staff shall not be held liable for any activities arising from the actions of the above-named agent.

Owner Contact Information

Property Owner(s): _____ Phone: _____
Mailing Address: _____
City: _____ State: _____ Zip: _____
E-mail: _____

Applicant Information

Authorized Agent: _____ Phone: _____
Mailing Address: _____
City: _____ State: _____ Zip: _____
E-mail: _____

APPLICANT SIGNATURE(S)

I certify that the information contained on this application is true, complete, and accurate to the best of my knowledge. I understand that the information will be used by Pend Oreille County for determining whether this proposal meets all development requirements.

PROPERTY OWNER

DATE: _____

AGENT/PRIMARY CONTACT

DATE: _____



Community Development Department

P. O. Box 5066 Newport,
 Phone: 509-447-4821
 Greg Snow
 Community Development Director

Washington 99156-5066
 Fax: 509-447-5890
 Rick J Cruse
 Building Inspector/ Fire Marshal

2012 Energy Code Information

Residential Application Submittal

- Completed Prescriptive, Total U-A Alternative or Performance method forms are required at time of residential application submittal.
- Forms are available in electronic format (Excel spreadsheet) at:
<http://www.energy.wsu.edu/BuildingEfficiency/EnergyCode.aspx#EnergyCodeWorksheets>
- Paper copies of the forms will be available at each jurisdiction.
- Consultants are commercially available to provide professional assistance and should be used as a primary resource
- Pend Oreille County is located in a climate zone 5B

Table R402.1.1
 Insulation and Filtration Requirements By Component

Fenestration U-Factor factor	0.30	0.30
Skylight U- Factor	0.50	0.50
Glazed Fenestration SHGC	NR	NR
Ceiling R-value	49	49
Wood Frame Wall R-value	21 int	21+5 CI
Mass Wall R-Value	21/21	21+ 5B
Floor R-Value	30	30
Below Grade Wall Value	10/15/21+ TB	10/15/21+ TB
Slab R-Value and Depth	10, 2 ft.	10, 4 ft.

Important Explanations:

Foot=304.8mm, ci = continuous insulation, int = intermediate framing.

R- Values are minimums. U-Factors and SHGC are maximums, when insulation is installed in a cavity which is less than the label or design thickness of the insulation, the compressed R-Value of the insulation from appendix table A10 1.4 shall not be less than the R-Value specified in the table.

The fenestration U-Factor column include skylights. The SHGC column applies to all glazed fenestration.

Exception: skylights may be excluded from glazed fenestration SHGC requirements and climate zone one through three where the SHGC for such skylights does not exceed 0.30.

10/15/21+ TB means R- 10 continuous insulation on exterior of the wall, or R- 15 installation on the interior of the wall, or R -21 cavity insulation plus a thermal break between slab and the basement wall at the interior of the basement wall. 10/15/21+ TB shall be permitted to be met with R- 13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. T be means thermal break between floor slab and basement wall.

R-10 continuous insulation is required under heated slabs on grade floors. See section R402.2.9.1.

There are no SHGC in the Marines zone.

Basement wall insulation is not required in warm human locations as defined by figure R301.1 and table R301.1. Reserved.

First value is cavity insulation, second is continuous insulation or insulated siding, 13+5 means R – 30 cavity insulation plus R – five continuous insulation or insulated siding. If structural sheathing covers 40% or less of the exterior, continuous insulation R-value shall be permitted to be reduced by no more than R-3 and the locations where structural sheathing is used to maintain a consistent total sheathing thickness.

The second R-value applies when more than half the insulation is on the interior of the mass wall.

For single rafters or Joyce bolted ceilings, the insulation may be reduced to R-38.

Int. (Intermediate framing) denotes standard framing 16 inches on center with headers insulated with a minimum of R-10 insulation.

Log in solid timber walls with a minimum average thickness of 3.5 inches are exempt from these insulation requirements.

Residential Inspection Process

Duct Leakage Testing:

- Duct testing must be completed and the completed affidavit provided to the inspector before the approval to cover will be issued. Testing at mechanical rough in is highly recommended but no case can this test be conducted later than when the insulation inspection is approved and GWB can be installed. Results must be recorded on compliance certificate.
- Duct testing affidavit must be prepared by certified individual.
- The WSEC have some exceptions to the requirement for duct testing. See WSEC section R403.2.2.
- Condition air ducts may not be installed in the exterior building envelope.
- Building cavities may not be used as conditioned air ducts.
- Environmental duct may displace the minimum amount of insulation required to extend the duct to the exterior of the building envelope as required by code.

Building Air Leakage Testing:

- Blower door testing must be completed and results recorded on the compliance certificate no later than the time of final and prior to issuance of the Certificate of Occupancy.
- Jurisdictions will conduct some spot checking of blower door test. Builders will be notified initially at the time of permit issuance, and as time progresses, randomly by the inspector during the construction process if they require blower door test for a permitted residential structure is to be witnessed by jurisdiction staff.
- Be especially aware of ceiling around tub/shower traps.
- Important! The building air leakage test must pass with the code specified rate there are no exceptions or entities in the WSEC.

Lighting:

- A minimum of 75% of all permanently installed lighting fixtures shall be high efficient lamps as defined in the WSEC. Examples of high-efficiency lamps include: compact fluorescent bulbs (CFL) LED. Linear fluorescent fixtures must be fitted with T-8 or smaller lamps. Permanently installed outdoor lighting fixtures may be included in the 75%.

Training video/presentations available at WSU energy program office website

WASHINGTON STATE ENERGY CODE, RESIDENTIAL PROVISIONS

**TABLE 406.2
ENERGY CREDITS (DEBITS)**

OPTION	DESCRIPTION	CREDIT(S)
1a	<p>EFFICIENT BUILDING ENVELOPE 1a: Prescriptive compliance is based on Table R402.1.1 with the following modifications: Fenestration U . = 0.28 Floor R-38 Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab or Compliance based on Section R402.1.4: Reduce the Total UA by 5%.</p>	0.5
1b	<p>EFFICIENT BUILDING ENVELOPE 1b: Prescriptive compliance is based on Table R402.1.1 with the following modifications: Fenestration U . = 0.25 Wall R-21 plus R-4 Floor R-38 Basement wall R-21 int plus R-5 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab or Compliance based on Section R402.1.4: Reduce the Total UA by 15%.</p>	1.0
1c	<p>EFFICIENT BUILDING ENVELOPE 1c: Prescriptive compliance is based on Table R402.1.1 with the following modifications: Fenestration U . = 0.22 Ceiling and single-rafter or joist-vaulted R-49 advanced Wood frame wall R-21 int plus R-12 ci Floor R-38 Basement wall R-21 int plus R-12 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab or Compliance based on Section R402.1.4: Reduce the Total UA by 30%.</p>	2.0
2a	<p>AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2a: Compliance based on R402.4.1.2: Reduce the tested air leakage to 4.0 air changes per hour maximum and All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> shall be met with a high efficiency fan (maximum 0.35 watts/cfm), not interlocked with the furnace fan ventilation systems using a furnace including an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.</p>	0.5

2b	<p>AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2b: Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 2.0 air changes per hour maximum and All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.70. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.</p>	1.0
2c	<p>AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2c: Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 1.5 air changes per hour maximum and All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.85. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.</p>	1.5
3a	<p>HIGH EFFICIENCY HVAC EQUIPMENT 3a: Gas, propane or oil-fired furnace with minimum AFUE of 95% To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.</p>	0.5
3b	<p>HIGH EFFICIENCY HVAC EQUIPMENT 3b: Air-source heat pump with minimum HSPF of 8.5 To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.</p>	1.0
3c	<p>HIGH EFFICIENCY HVAC EQUIPMENT 3c: Closed-loop ground source heat pump; with a minimum COP of 3.3 or Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6 To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.</p>	2.0
3d	<p>HIGH EFFICIENCY HVAC EQUIPMENT 3d: DUCTLESS SPLIT SYSTEM HEAT PUMPS, ZONAL CONTROL: In homes where the primary space heating system is zonal electric heating, a ductless heat pump system shall be installed and provide heating to at least one zone of the housing unit. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.</p>	1.0
4	<p>HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM:^a All heating and cooling system components installed inside the conditioned space. All combustion equipment shall be direct vent or sealed combustion. Locating system components in conditioned crawl spaces is not permitted under this option. Electric resistance heat is not permitted under this option. Direct combustion heating equipment with AFUE less than 80% is not permitted under this option. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and shall show the location of the heating and cooling equipment and all the ductwork.</p>	1.0

5a	<p>EFFICIENT WATER HEATING 5a: Water heating system shall include one of the following: Gas, propane or oil water heater with a minimum EF of 0.62 or Electric water heater with a minimum EF of 0.93. and for both cases All showerhead and kitchen sink faucets installed in the house shall be rated at 1.75 GPM or less. All other lavatory faucets shall be rated at 1.0 GPM or less.^b To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and shall specify the maximum flow rates for all showerheads, kitchen sink faucets, and other lavatory faucets.</p>	0.5
5b	<p>EFFICIENT WATER HEATING 5b: Water heating system shall include one of the following: Gas, propane or oil water heater with a minimum EF of 0.82 or Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems or Electric heat pump water heater with a minimum EF of 2.0 and meeting the standards of NEEA's Northern Climate Specifications for Heat Pump Water Heaters or Water heater heated by ground source heat pump meeting the requirements of Option 3c. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of the minimum energy savings.</p>	1.5
6	<p>RENEWABLE ELECTRIC ENERGY: For each 1200 kWh of electrical generation provided annually by on-site wind or solar equipment a 0.5 credit shall be allowed, up to 3 credits. Generation shall be calculated as follows: For solar electric systems, the design shall be demonstrated to meet this requirement using the National Renewable Energy Laboratory calculator PVWATTS. Documentation noting solar access shall be included on the plans. For wind generation projects designs shall document annual power generation based on the following factors: The wind turbine power curve; average annual wind speed at the site; frequency distribution of the wind speed at the site and height of the tower. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the photovoltaic or wind turbine equipment type, provide documentation of solar and wind access, and include a calculation of the minimum annual energy power production.</p>	0.5

- a. **Interior Duct Placement.** Ducts included as Option 4 of Table R406.2 shall be placed wholly within the heated envelope of the housing unit. The placement shall be inspected and certified to receive the credits associated with this option.

Exception: Ducts complying with this section may have up to 5% of the total linear feet of ducts located in the exterior cavities or buffer spaces of the dwelling. If this exception is used the ducts will be tested to the following standards:

Post-construction test: Leakage to outdoors shall be less than or equal to 1 CFM per 100 ft² of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test.

- b. **Plumbing Fixtures Flow Ratings.** Low flow plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following requirements:
1. Residential bathroom lavatory sink faucets: Maximum flow rate - 3.8 L/min (1.0 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1.
 2. Residential kitchen faucets: Maximum flow rate - 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1.
 3. Residential showerheads: Maximum flow rate - 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1.