

CITY OF RENTON
Development Services Division
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2015 WSEC RESIDENTIAL COMPLIANCE CHECKLIST

THIS CHECKLIST MUST BE COMPLETED FOR ALL SINGLE FAMILY, TOWNHOME, RESIDENTIAL MULTIFAMILY 3 STORIES OR LESS AND DUPLEX NEW CONSTRUCTION AND ADDITIONS.

THIS CHECKLIST ALONG WITH THE APPROVED PLANS MUST BE KEPT ON THE JOB AT ALL TIMES. INSPECTORS CANNOT PERFORM INSPECTIONS WITHOUT IT.

- 1. Responsibility for information:** Although staff members will help you with general questions about completing this checklist, it is ultimately your responsibility to provide detailed information about heating systems, glazing, insulation, and other building specifications.
- 2. Page 1 Prescriptive Requirements – all of these requirements must be met**
- 3. Page 2 & 3 Credit Options:** Select credit options. Besides meeting the basic requirements you must also include credits in your home design.

Since this checklist will be evaluated for completeness and accuracy, you can avoid unnecessary permit delays by carefully providing all required information

EFFECTIVE 7/1/2016

ALL RESIDENTIAL OCCUPANCIES

ALL FUEL TYPES

PRESCRIPTIVE REQUIREMENTS

CEILINGS: WITH ATTICS	R-49
VAULTED AND RASIED HIPS	R-38

WALLS: ABOVE GRADE	R-21 INT - R-10 Rigid Insulation Required at Headers
BELOW GRADE INTERIOR	R-21 TB - R-5 Thermal Break Required between slab and foundation wall
Or RIGID	R-15 TB (Preferred method for moisture control)
EXTERIOR	R-10 TB (Preferred method for moisture control)
	No vapor barriers required or allowed on below grade walls

TB - R-5 Thermal Break Required between slab and foundation wall

FLOOR: SLAB ON GRADE:	R-30
	R-10
	Exterior – from <u>top</u> of slab - 24" vertically - Protected from sun and pests
	Interior – from <u>top</u> of slab - 24" vertically or horizontally – 2" nailer allowed
BELOW GRADE SLAB	R-5 Thermal Break Required between slab and foundation wall

GLAZING MAX: % OF FLOOR VERTICAL	Unlimited
U-FACTOR- OVERHEAD (Skylights)	.30
DOOR U-VALUE	.30

R-values are for wood frame assemblies only

CHAPTER 9 CREDITS

Additions < 500 sq ft are required to have **.5 credit**

Small dwelling units < 1500 sq ft and additions between 500 and 1500 sq ft are required to have **1.5 credits**

Medium dwelling unit 1500 sq ft to 4999 sq ft are required to have **3.5 credits**

Large dwelling unit greater than 5000 sq ft are required to have **4.5 credits**

EVERY OPTION YOU CHOOSE MUST BE SHOWN ON PLANS

OPTIONS

CREDITS

<input type="checkbox"/> 1a EFFICIENT ENVELOPE U-value = .28, Floor R-38, full slab insulation	.5
<input type="checkbox"/> 1b EFFICIENT ENVELOPE Floor R-38, U-value - .25, Walls R-21 + R-4 foam, full slab	1.0
<input type="checkbox"/> 1c EFFICIENT ENVELOPE Floor R-38, U-value - .22, Walls R-21 + R-12 foam, full slab	2.0
<input type="checkbox"/> 1d EFFICIENT ENVELOPE U-value - .24 You may not use 1a, 1b, or 1c	.5
<input type="checkbox"/> 2a AIR LEAKAGE CONTROL Air leakage to 3.0 AC/HR and high efficiency fan for Whole House fan not interconnected with furnace Whole house fan: Manufacturer/Model #: _____ Location: _____ Sone rating: _____	.5
<input type="checkbox"/> 2b AIR LEAKAGE CONTROL Air leakage to 2.0 AC/HR and HRV w/ efficiency of .70 Heat Recovery System: Manufacturer/Model #: _____ Efficiency Rating: _____	1.0
<input type="checkbox"/> 2c AIR LEAKAGE CONTROL Air leakage to 1.5 AC/HR and HRV w/ efficiency of .85 Heat Recovery System: Manufacturer/Model #: _____	1.5

Efficiency Rating: _____

Only one HVAC system may be chosen

3a High Efficiency HVAC **1**
Gas furnace AFUE of 94% or Gas Boiler AFUE of 92%
Furnace or Boiler: Manufacturer/Model #: _____
BTU Output: _____ Efficiency Rating: _____

3b High Efficiency HVAC **1**
Air-source Heat Pump HSPF of 9.0
Heat Pump: Manufacturer/Model #: _____
BTU Output: _____ Efficiency Rating: _____

3c High Efficiency HVAC **1.5**
Ground-source Heat Pump with COP of 3.3 or Water source Heat Pump with COP 3.6
Heat Pump: Manufacturer/Model #: _____
BTU Output: _____ Efficiency Rating: _____

3d High Efficiency HVAC **1**
Ductless Heat Pump – Required to be installed in largest zone of dwelling
Heat Pump: Manufacturer/Model #: _____
BTU Output: _____ Efficiency Rating: _____

4 High Efficiency Distribution **1**
All heating/cooling system parts must be within conditioned space and layout must be shown on plans
Electric resistance zonal and Ductless heat pumps cannot use this option
System efficiency of less than 80% not allowed

5a EFFICIENT WATER HEATING **.5**
Low flow plumbing fixtures – Showerhead and kitchen sink < or = 1.75 GPM
All other lavatory faucets rated at 1 GPM or less

5b EFFICIENT WATER HEATING **1**
Gas water heater with EF of .74 or ground source water heater meeting 3c
Water Heater: Manufacturer/Model #: _____
Efficiency Rating: _____

5c EFFICIENT WATER HEATING **1.5**
Gas water heater with EF of .91 or Electric Heat Pump with EF of 2.0 or Solar Supplemental
Water Heater: Manufacturer/Model #: _____
Efficiency Rating: _____

5d EFFICIENT WATER HEATING **.5**
A drain water heat recovery unit(s) installed which captures waste water heat from all showers
Plumbing layout required to show all specifics of design

6 RENEWABLE ELECTRIC ENERGY **.5**
On-site wind or solar generation - .5 credit for each 1200 kWh to a maximum of 3 credits

Total Credits Chosen = _____

VENTILATION

Exhaust ventilation shall be provided for each dwelling unit as follows:

**Table M1507.3.3(1)
Continuous Whole-House Mechanical Ventilation System Airflow Rate Requirements**

Dwelling Unit Floor Area (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

Location	Minimum CFM	Manufacturer and Model#	CFM (.1 W.G.)
Kitchen fan	100 CFM / 25 CFM		
Bathroom fan	65 CFM / 20 CFM		
Bathroom fan	65 CFM / 20 CFM		
Bathroom fan	65 CFM / 20 CFM		
Laundry fan	65 CFM / 20 CFM		
Whole house fan – Continuous Operation - Per above CFM requirements			
Location			
Sone Rating			

**Table M1507.3.3(2)
Intermittent Whole-House Mechanical Ventilation Rate Factors^{a, b}**

Run-Time Percentage in Each 4-Hour Segment	25%	33%	50%	66%	75%	100%
Factor ^a	4	3	2	1.5	1.3	1.0

^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.

Intermittent Whole house fan size required: Example: 3500 sf house with 4 beds needs 90 CFM fan running at 50% of the time = 90 x 2 = 180 CFM fan required. Fan must meet this CFM rated at .25wg.

Whole house fan – Intermittent Operation - Per calculation	CFM required from M1507.3.3(1) times Run time factor from M1507.3.3(2)	
Size of fan in CFM		
Manufacturer and Model Number		
Location		

Sone Rating		
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Whole house fan required in all new houses/dwelling units and all additions >500 square feet

Whole house fan must be ultra quiet and must be labeled "Whole House Ventilation"

Fresh air shall be provided for each dwelling unit as follows:

- Tested, screened, controllable, through wall port
- Vented window frames
- Integrated with a Central forced air furnace which delivers outside makeup air through ducting system and requires furnace fan to be controlled by a timer set at 8 hours/day

FRAMING PHASE

Vapor retarders shall be installed toward the warm surface and required to be rated at 1 perm dry cup or less

Select one option for floors, walls, and ceilings:

Floors:

- Plywood w/exterior glue
- Poly \geq 4 Mill
- Backed batts

Walls:

- Poly \geq 4 Mill
- Face-stapled backed batts
- Vapor Retarder Paint

Ceilings:

- Not required where ventilation space > 12" above insulation
- Face stapled backed batts
- Poly \geq 4 Mill
- Vapor Retarder Paint

FINAL PHASE

Blower door test must be completed and Residential Building Air Leakage Test form must be on jobsite. (See attachment)

Energy code Compliance Certificate must be completed and attached to wall within 3 feet of electrical panel. (See attachment)

Covers to be removed from exhaust fans so Inspector can verify compliance with code.