Residential Permit Application Packet

THIS PACKET CONTAINS THE FOLLOWING FORMS THAT YOU NEED TO READ, COMPLETE, SAVE AS PDFS AND **UPLOAD TO EPERMITTING as part of your complete submittal**:

- ❑ Pre-Submittal Checklist for Zoning Items (2 pages)
- ❑ Residential Energy Form (3 pages)
- ❑ Public Works Combined Permit (2 pages)
- ❑ Property Owner Statement Regarding Construction Responsibilities* (2 pages)
- ❑ Mechanical Permit Application (1 page)
- ❑ Residential Site Plan Checklist (1 page)
- ❑ Tree Removal Permit Application (2 pages)

* Only if property owner is acting as general contractor

OTHER REQUIRED SUBMITTALS:
For assistance preparing site and/or landscape plans, please utilize the **Residential Site Plan Checklist** included in this packet.

- ■ Site and Landscape Plan
- ■ Architectural and Structural Plans
- ■ Engineering (where required by design)
- ■ Truss Calculations (where required by design)

ALL of the above items must be PDFs uploaded through ePermitting BEFORE your application will be considered for review

OTHER VERY IMPORTANT INFORMATION IN THIS PACKET:

- ❖ Naming Your Documents as PDFs (1 page)
- ❖ Prescriptive Solar Photovoltaic Installation Checklist (For solar permit applications only) (2 pages)
- ❖ Oregon Residential Construction Requirements (9 pages)

PRE-SUBMITTAL CHECKLIST FOR ZONING ITEMS

PLEASE REVIEW THESE ITEMS FIRST.

If you answer **YES** to any of these first three conditions, you will need to provide the requested documentation certifying that you have received the necessary approvals and or permits prior to applying for your building permit.

1. FLOOD ZONE: (check one)

   - ☐ YES, the site is in the Flood Zone.

   YOU MUST OBTAIN AN APPROVED FLOODPLAIN DEVELOPMENT PERMIT PRIOR TO SUBMITTING A BUILDING PERMIT APPLICATION.

   - ☐ No, the site is not in the Flood Zone, so a Floodplain Development Permit is not needed prior to submitting the building permit application.

2. BLUFF HAZARD EROSION ZONES: (check one)

   - ☐ Yes, the site is in the Bluff Hazard Erosion Zone.

   YOU MUST OBTAIN AN APPROVED GEOLOGIC HAZARD REVIEW APPLICATION PRIOR TO SUBMITTING A BUILDING PERMIT APPLICATION.

   - ☐ No, the site is not in the Bluff Hazard Erosion Zone, so a Geologic Hazard Review Application Approval is not needed prior to submitting the building permit application.

3. NATURAL RESOURCES OVERLAY ZONE: (check one)

   - ☐ Yes, the site is in the Natural Resources Overlay Zone

   YOU MUST OBTAIN THE REQUIRED NATURAL RESOURCES DEVELOPMENT REVIEW APPROVAL, NATURAL RESOURCES DEVELOPMENT VARIANCE APPROVAL, DELINEATION, as well as ALL FEDERAL AND STATE APPROVALS PRIOR TO SUBMITTING A BUILDING PERMIT APPLICATION.

   - ☐ Yes, the site is in the Natural Resources Overlay Zone but the site plan clearly shows that no development is taking place within the Natural Resources Overlay Zone and I have completed all required delineations with concurrence from applicable state agencies PRIOR to submitting this building permit application.

   - ☐ No, the site is not in the Natural Resources Overlay Zone.

City of Lincoln City | 801 SW Highway 101 | PO Box 50 | Lincoln City, OR 97367 | 541.996.2153
Planning & Community Development | www.lincolncity.org | planning@lincolncity.org

4. BUILDING HEIGHT:

    - Yes, the submittal package includes ALL FOUR BUILDING ELEVATIONS showing the measurement from the existing grade to the top of the roof at the center of the elevation, per Lincoln City Municipal Code 17.52.190. The average of the measurements is equal to, or less than, the maximum building height of the property's zone.

5. BUILDING SETBACKS:

    - Yes, the site plan clearly shows, identifies, and labels the distance from each property line to all portions of the structure, including eaves, porches, decks, balconies, walls, foundation, etc., as well to the entrance of the garage/carport.
    - Yes, the site plan clearly shows that all minimum building setback requirements are met as required by Lincoln City Municipal Code.

6. LANDSCAPING:

    - Yes, the submittal package includes a landscaping plan that meets the requirements of Lincoln City Municipal Code Chapter 17.55.

7. DRIVEWAY WIDTH:

    - Yes, the site plan shows, identifies, and labels the driveway location, dimensions, and type of surface that meets the requirements of Lincoln City Municipal Code Sections 17.56.030 and 17.56.070.

I hereby declare under penalty of perjury under the laws of the State of Oregon that the foregoing information is true, complete, and accurate. I further declare under penalty of perjury under the laws of the State of Oregon that I have completely and accurately depicted the requirements of Lincoln City Municipal Code on the submitted plans and that I am responsible for compliance with Lincoln City Municipal Code, regardless of what may or may not be shown on the submitted plans.

_____

Printed name of Property Owner

_____

Signature of Property Owner Date

City of Lincoln City | 801 SW Highway 101 | PO Box 50 | Lincoln City, OR 97367 | 541.996.2153
Planning & Community Development | www.lincolncity.org | planning@lincolncity.org

RESIDENTIAL ENERGY FORM

NORTHWEST CODE
PROFESSIONALS

144 East 14th Avenue
Eugene, Oregon 97401
Phone: (541) 484-9043
Fax: (541) 484-6859
www.nwcodepros.com

RESIDENTIAL INFORMATION		
Date:	Building permit number:	
Owner's name:		
Job address:		
City:	State:	ZIP:

INSTRUCTIONS

Select the type of construction. If the project is an addition, select the applicable addition type and enter the selected measures accordingly; print and sign your name. Submit this form with your permit application or your project will be placed on hold until the required information is provided. (Code Reference: **2023** Oregon Residential Specialty Code)

☐ **New construction.** All conditioned spaces within residential buildings shall comply with Table N1101.1(1) and one additional measure from Table N1101.1(2).

☐ **Additions.** Additions to existing buildings or structures may be made without making the entire building or structure comply if the new additions comply with the requirements of this chapter. [See ORSC Section N1101.3]

- ☐ **Large additions.** Additions that are equal to or more than 600 square feet in area are required to select one measure from Table N1101.1(2).
  Enter the selected Table N1101.1(2) additional measure _____
- ☐ **Small additions.** Additions that are less than 600 square feet in area are required to select **one** measure from Table N1101.1(2) **or** select **one** measure from Table N1101.3.
  - ☐ Selected Table N1101.1(2) additional measure _____
  - ☐ **or** Selected Table N1101.3.2 additional measure ____
- ☐ **Exception:** Additions that are less than 225 square feet in area are not required to comply with Table N1101.1(2) or Table N1101.3.2

For reference Tables N1101.1(2) and N1101.3.2 are included in this form below.

Note: *Depending on the additional measure you have selected, there may be sub-options that you will have to specify. Check the appropriate box, if provided.*

Applicant's printed name:_____ Applicant's signature:_____

TABLE N1101.1(2)
ADDITIONAL MEASURES

MEASURE NUMBER	MEASURE DESCRIPTION
1	**HIGH-EFFICIENCY HVAC SYSTEM[a]** a. Gas-fired furnace or boiler AFUE 94 percent, or b. Air source heat pump HSPF 10.0/14.0 SEER cooling or 8.5 HSPF2 / 15.0 SEER2, or c. Ground-source heat pump COP 3.5 or ENERGY STAR rated
2	**HIGH-EFFICIENCY WATER HEATING SYSTEM** a. Natural gas/propane water heater with minimum 0.90 UEF, or b. Electric heat pump water heater with minimum 3.45 UEF, or c. Natural gas/propane tankless/instantaneous heater with minimum 0.80 UEF and drain water heat recovery unit installed on a minimum of one shower/tub-shower
3	**WALL INSULATION UPGRADE** Exterior walls—U-0.045/R-21 conventional framing with R-5.0 continuous insulation
4	**ADVANCED ENVELOPE** Windows—U-0.21 (Area-weighted average), and Flat ceiling[b]—U-0.017/R-60, and Framed floors—U-0.026/R-38 or slab edge insulation to F-0.48 or less (R-10 for 48″; R-15 for 36″ or R-5 fully insulated slab)
5	**DUCTLESS HEAT PUMP (Dwelling units with all-electric heat)** a. Provide ductless heat pump of minimum HSPF 10.0 or HSPF2 9.0 in primary zone replaces zonal electric heat sources, and b. Provide programmable thermostat for all heaters in bedrooms
6	**HIGH-EFFICIENCY THERMAL ENVELOPE UA[c]** Proposed UA is 8 percent lower than the code UA
7	**2.75 ACH AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION** Achieve a maximum of 2.75 ACH50 whole-house air leakage when third-party tested and provide a whole-house ventilation system, including heat recovery with a minimum sensible heat recovery efficiency of not less than 66 percent and total fan efficacy of 1.6 CFM/Watt (combined input for supply and exhaust).

For SI: 1 square foot = 0.093 m^2, 1 watt per square foot = 10.8 W/m^2.

a. Appliances located within the building thermal envelope shall have sealed combustion air installed. Combustion air shall be ducted directly from the outdoors.

b. The maximum vaulted ceiling surface area shall not be greater than 50 percent of the total heated space floor area unless vaulted area has a *U*-factor not greater than U-0.026.

c. In accordance with Table N1104.1(1), the Proposed UA total of the Proposed Alternative Design shall be a minimum 8 percent less than the Code UA total of the Standard Base Case.

TABLE N1101.3
SMALL ADDITION ADDITIONAL MEASURES (select one)

MEASURE NUMBER	MEASURE DESCRIPTION
1	Increase the ceiling insulation of the existing portion of the home as specified in Table N1101.2.
2	Replace all existing single-pane wood or aluminum windows to the *U*-factor as specified in Table N1101.2.
3	Insulate the existing floor, crawl space or basement wall systems as specified in Table N1101.2 and install 100 percent of permanently installed lighting fixtures as CFL, LED or linear fluorescent, or a minimum efficacy of 40 lumens per watt as specified in Section N1107.2.
4	Test the entire dwelling with a blower door and exhibit not more than 4.5 air changes per hour @ 50 Pascals.
5	Seal and performance test the duct system.
6	Replace existing 80-percent AFUE or less gas furnace with a 94-percent AFUE or greater system.
7	Replace existing electric radiant space heaters with a ductless mini split system with a minimum HSPF of 10.0 or HSPF2 of 9.0.
8	Replace existing electric forced-air furnace with an air source heat pump with a minimum HSPF of 9.5 or HSPF2 of 8.1.
9	Replace existing water heater with one of the following: a. Natural gas/propane water heater with minimum UEF 0.90, or b. Electric heat pump water heater with minimum 3.45 UEF.

Reference tables out of the ORSC for convenience:

TABLE N1101.1(1)
PRESCRIPTIVE ENVELOPE REQUIREMENTS[a]

BUILDING COMPONENT	STANDARD BASE CASE		LOG HOMES ONLY	
	Required Performance	Equivalent Value[b]	Required Performance	Equivalent Value[b]
Wall insulation—above grade	U-0.059[c]	R-21 Intermediate[c]	Note d	Note d
Wall insulation—below grade[e]	C-0.063	R-15 c.i. / R-21	C-0.063	R-15/R-21
Flat ceilings[f]	U-0.021	R-49	U-0.020	R-49A[h]
Vaulted ceilings[g]	U-0.033	R-30 Rafter or R-30A[g, h] Scissor Truss	U-0.027	R-38A[h]
Underfloors	U-0.033	R-30	U-0.033	R-30
Slab-edge perimeter[l]	F-0.520	R-15	F-0.520	R-15
Heated slab interior[i]	N/A	R-10	N/A	R-10
Windows[j]	U-0.27	U-0.27	U-0.27	U-0.27
Skylights	U-0.50	U-0.50	U-0.50	U-0.50
Exterior doors[k]	U-0.20	U-0.20	U-0.54	U-0.54

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m^2, 1 degree = 0.0175 rad,
N/A = Not Applicable.

a. As allowed in Section N1104.1, thermal performance of a component may be adjusted, provided that overall heat loss does not exceed the total resulting from conformance to the required *U*-factor standards. Calculations to document equivalent heat loss shall be performed using the procedure and approved *U*-factors contained in Table N1104.1(1).

b. *R*-values used in this table are nominal for the insulation only in standard wood-framed construction and not for the entire assembly.

c. Wall insulation requirements apply to all exterior wood-framed, concrete or masonry walls that are above grade. This includes cripple walls and rim joist areas. Nominal compliance with R-21 insulation and Intermediate Framing (Section N1104.5.2) with insulated headers.

d. The wall component shall be a minimum solid log or timber wall thickness of $3^1/_2$ inches.

e. Below-grade wood, concrete or masonry walls include all walls that are below grade and do not include those portions of such wall that extend more than 24 inches above grade. R-21 for insulation in framed cavity; R-15 continuous insulation.

f. Insulation levels for ceilings that have limited attic/rafter depth such as dormers, bay windows or similar architectural features totaling not more than 150 square feet in area may be reduced to not less than R-21. Where reduced, the cavity shall be filled (except for required ventilation spaces). R-49 insulation installed to minimum 6-inch depth at top plate at exterior of structure to achieve *U*-factor.

g. Vaulted ceiling surface area exceeding 50 percent of the total heated space floor area shall have a *U*-factor not greater than U-0.026 (equivalent to R-38 rafter or scissor truss with R-38 advanced framing).

h. A = Advanced frame construction. See Section N1104.6.

i. Heated slab interior applies to concrete slab floors (both on and below grade) that incorporate a radiant heating system within the slab. Insulation shall be installed underneath the entire slab in addition to perimeter insulation.

j. Glass doors shall comply with window performance requirements. Windows exempt from testing in accordance with Section N1104.4 shall comply with window performance requirements if constructed with aluminum with thermal break, wood, vinyl, reinforced vinyl aluminum-clad wood, or insulated fiberglass frames, and double-pane glazing with low-emissivity coatings of 0.10 or less. Buildings designed to incorporate passive solar elements may include glazing with a *U*-factor greater than 0.35 by using Table N1104.1(1) to demonstrate equivalence to building envelope requirements.

k. A maximum of 28 square feet of exterior door area per dwelling unit can have a *U*-factor of 0.54 or less.

l. Minimum 24-inch horizontal or vertical below grade. The minimum total distance of 24 inches may be a combination of the horizontal and vertical planes. If a horizonal plane is used on the exterior of the slab, it must be a minimum of 12 inches below finished grade.

TABLE N1101.2
EXISTING BUILDING COMPONENT REQUIREMENTS

BUILDING COMPONENTS	REQUIRED PERFORMANCE	EQUIVALENT VALUE
Wall insulation	U-0.083	R-15
Flat ceiling	U-0.025	R-49
Vaulted ceiling > 10 inches nominal rafter depth	U-0.040	R-25
Vaulted ceiling ≤ 10 inches nominal rafter depth	U-0.047	R-21
Underfloor > 10 inches nominal joist depth	U-0.028	R-30
Underfloor ≤ 10 inches nominal joist depth	U-0.039	R-25
Slab-edge perimeter	N/A	N/A
Windows and glazed doors	U-0.30	U-0.30
Skylights	U-0.50	U-0.50
Exterior doors	U-0.20	R-5

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m^2.
N/A = Not Applicable.

Note: To the greatest in extent practical, in some instances.

PUBLIC WORKS COMBINED PERMIT

LINCOLN CITY PUBLIC WORKS DEPARTMENT
801 SW HWY 101 - PO BOX 50 Lincoln City, OR 97367 (541) 996-2154

Please read through this permit and fill out all areas as completely as possible. Make sure initials and signatures are made where appropriate. If you have questions about the information herein, please call the phone number above.

MAP & TAX LOT NUMBER:	**COMBINED PUBLIC WORKS PERMIT NUMBER:**
PROPERTY ADDRESS:	**BUILDING PERMIT FILE NUMBER:**
	APPLICATION DATE:
	EXPIRATION DATE:
PROPERTY OWNER:	**GENERAL CONTRACTOR:**
OWNER ADDRESS:	**CONTRACTOR ADDRESS:**
OWNER PHONE:	**CONTRACTOR PHONE:**

GRADING/EXCAVATING/FILL WORK TO BE DONE:

FILL MATERIAL (cubic yards):	**EXCAVATED MATERIAL (cubic yards):**
SOURCE OF FILL MATERIAL:	**DESTINATION OF EXCAVATED MATERIAL:**

PUBLIC RIGHT OF WAY WORK TO BE DONE:

- ☐ DRIVEWAY APPROACH
- ☐ CURB/ GUTTER
- ☐ UTILITY INSTALLATION
- ☐ STREET REPAIR
- EROSION CONTROL
- ☐ DITCH/ CULVERT
- ☐ SIDEWALK
- OTHER:

ALL RIGHT OF WAY WORK SHALL BE COMPLETED IN ACCORDANCE WITH LCPW STANDARDS AND SPECIFICATIONS

(1) All construction shall meet or exceed Lincoln City standards & specifications
(2) Property owner shall be responsible for condition of street repair for one (1) year after approved occupancy
(3) Crushed rock placed for pipe bedding or backfill shall be compacted per LCPW & APWA standards
(4) Asphalt patching shall be completed as a "T-Cut". Edges shall be free of Spalling, cracks, uplifting, or undermined sub-grade.
(5) Edges of permanent paving shall be tack & sand sealed.
(6) Asphalt shall be compacted to 92% compaction with a maximum surface Smoothness deviation of 1/8 inch per APWA specification 00756.55(a).
(7) In the event of street closures due to construction the contractor must notify all
(8) Emergency services and erect all necessary traffic control according to MUTCD and ODOT standard requirements.
(9) All inspections shall be coordinated with **minimum** 48-hour notice.
(10) Trench patching shall be completed **no later** than two (2) days after trench Work and inspection. The city reserves the right to (1) complete repairs and bill the Contractor accordingly AND/OR (2) pursue citations as allowed under LCMC 12.12
(11) All tree removal work requested shall be completed in accordance with LCMC 17.52.220. Tree removal requiring a permit per LCMC 17.52.220 shall only Be completed following acquisition of a Tree Removal Permit.

Scan below to view Lincoln City Public Work's full standards. (www.lincolncity.org/departments/public-works)

SCAN ME

Revised 12/20/2021

LINCOLN CITY PUBLIC WORKS DEPARTMENT
801 SW HWY 101 - PO BOX 50 Lincoln City, OR 97367 (541) 996-2154

SEWER CONNECTION APPLICATION

☐ RESIDENTIAL ☐ COMMERCIAL

PUMP TO BE MAINTAINED BY:

IS PUMP SYSTEM TO BE USED? YES ☐ NO ☐

IF 'YES' SEE LCPW STANDARDS – CHAPTER 2

Sewer Connection Inspection Approval **Date**

WATER CONNECTION APPLICATION

BILLING ADDRESS:

FIRE LINE SIZE: (mark size applicable)
☐ 6" ☐ 8" ☐ Other
Other:

METER SIZE: (mark meter size being requested for installation)
☐ 5/8" ☐ 1" ☐ 1-1/2" ☐ 2" ☐ OTHER

METER TYPE:
☐ RESIDENTIAL ☐ COMMERCIAL

I, the property owner of _____, understand that it is my responsibility as part of this permit to: (address)

(1) Extend the water main, if required.
(2) Extend the sewer main, if required.
(3) Culvert the driveway, if required.
(4) Mitigate all drainage problems so adjacent and downstream properties will not be adversely impacted.
(5) Contact all other pertinent utilities for their construction standards with which I must comply.
(6) Install erosion control devices in compliance with Municipal Code Ordinance 12.08. The Technical Guidance Manual for Erosion Prevention & Sedimentation Control is available at the Public Works Department; or contact Public Works personnel for assistance at (541) 996-2154.
(7) Ensure that all contractors/ subcontractors obtain a city Occupation Tax Permit before commencing work.

OWNER'S SIGNATURE **DATE**

FOLLOWING SECTIONS TO BE COMPLETED BY CITY STAFF

CITY REQUIRES THE FOLLOWING TO BE PROVIDED BY OWNER OR THEIR AGENT:

☐ TRAFFIC CONTROL ☐ 24 HOUR ADVANCED PUBLIC NOTICE
☐ EROSION PREVENTION & CONTROL ☐ BOND
OTHER: _____

ACCOUNT NUMBER:

SEWER AVAILABLE: YES ☐ NO ☐

BOND RECEIVED: YES ☐ NO ☐
For the Amount of $_____

INSIDE CITY LIMITS: YES ☐ NO ☐
BOND RETURNED:

DIRECTOR OF PUBLIC WORKS; or **DATE**

CITY ENGINEER **DATE**

PUBLIC WORKS INSPECTOR **DATE**

Revised 12/20/2021

Property Owner Statement
Regarding Construction Responsibilities

Oregon Law requires residential construction permit applicants who are not licensed with the Construction Contractors Board to sign the following statement before a building permit can be issued. **(ORS 701.325 (2))**

This statement is required for residential building, electrical, mechanical, and plumbing permits. Licensed architect and engineer applicants, exempt from licensing under ORS 701.010 (7), need not submit this statement. This statement will be filed with the permit.

Please check the appropriate box:

☐ I own, reside in, or will reside in the completed structure and my general contractor is:

Name _____ CCB# _____ Expiration Date _____

☐ I will inform my general contractor that all subcontractors who work on the structure must be licensed with the Construction Contractors Board.

or

☐ I will be performing work on property I own, a residence that I reside in, or a residence that I will reside in. If I hire subcontractors, I will hire only subcontractors licensed with the Construction Contractors Board. If I change my mind and hire a general contractor, I will select a contractor who is licensed with the CCB and will immediately give the name of the contractor to the office issuing this Building Permit.

I have read and understand the Information Notice to Homeowners About Construction Responsibilities, and I hereby certify that the information on this homeowner statement is true and accurate.

_____
Print Name of Permit Applicant

_____ _____
Signature of Permit Applicant Date

Permit #: _____

Address: _____

_____

Issued by: _____ Date: _____

This Copy for Permit Offices

Information Notice to Owners About
Construction Responsibilities
(ORS 701.325 (3))

Homeowners acting as their own general contractors to construct a new home or make a substantial improvement to an existing structure, can prevent many problems by being aware of the following responsibilities:

- Homeowners who use labor provided by workers not licensed by the Construction Contractors Board, may be considered an employer, and the workers who provide the labor may be considered employees. **As an employer, you must comply with the following:**
- **Oregon's Withholding Tax Law:** Employers must withhold income taxes from employee wages at the time employees are paid. You will be liable for the tax payments even if you don't actually withhold the tax from your employees. For more information, call the Department of Revenue at 503-378-4988.
- **Unemployment Insurance Tax:** Employers are required to pay a tax for unemployment insurance purposes on the wages of all employees. For more information, call the Oregon Employment Department at 503-947-1488.
- **Oregon's Business Identification Number (BIN):** is a combined number for both Oregon Withholding and Unemployment Insurance Tax. To file for a BIN, go online to the Oregon Business Registry. For questions, call 503-945-8091.
- **Workers Compensation Insurance:** Employers are subject to the Oregon Workers Compensation Law, and must obtain Workers Compensation Insurance for their employees. If you fail to obtain Workers Compensation Insurance, you could be subject to penalties and be liable for all claim costs if one of your workers is injured on the job. For more information, call the Workers Compensation Division at the Department of Consumer and Business Services at 800-452-0288.
- **Tax Withholding:** Employers must withhold Social Security Tax and Federal Income Tax from employee wages. You may be liable for the tax payment, even if you didn't actually withhold the tax. For a Federal EIN number, go online to www.irs.gov.

Other Responsibilities of Homeowners:

- **Code Compliance:** As the permit holder for a construction project, the homeowner is responsible for notifying building officials at the appropriate times, so that the required inspections can be performed. Homeowners are also responsible for resolving any failure to meet code requirements that may be found through inspections.
- **Property Damage and Liability Insurance:** Homeowners acting as their own contractors should contact their insurance agent to ensure adequate insurance coverage for accidents and omissions, such as falling tools, paint overspray, water damage from pipe punctures, fire, or work that must be redone. Liability Insurance must be sufficient to cover injuries to persons on the job site who are not otherwise covered as employees by Workers Compensation Insurance.
- **Expertise:** Homeowners should make sure they have the skills to act as their own general contractor, and the expertise required to coordinate the work of both rough-in and finish trades.

CONSTRUCTION CONTRACTORS BOARD
PO Box 14140, Salem, OR 97309-5052
Telephone: 503-378-4621 – Fax: 503-373-2007
Website Address: www.oregon.gov/ccb

Lincoln City

RESIDENTIAL MECHANICAL PERMIT APPLICATION

This permit is issued under OAR 918-440-0010 and Lincoln City Municipal Code (LCMC) 15.04. Permits expire if work is not started within 180 days of issuance or if work is suspended for 180 days.

Job Site Information					
Job Site Address:					
Map/Tax Lot#:					
Job Description:					

Fee Schedule			
ELECTRIC APPLIANCES	**Quantity**	**Fee**	**TOTAL**
Furnace (including ducts & vents)		$ 14.00	$ 0.00
Cooling Unit (repair/alter/add to heating appliance refrigeration unit or cooling system		$ 14.00	$ 0.00
Heater/Stove Vents		$ 14.00	$ 0.00
Exhaust Fan (appliances)		$ 14.00	$ 0.00
Range Hood		$ 14.00	$ 0.00
Water Heater		$ 14.00	$ 0.00
FUEL BURNING APPLIANCES			
Furnace		$ 25.00	$ 0.00
Wood Stove		$ 25.00	$ 0.00
Pellet Stove		$ 25.00	$ 0.00
Insert		$ 25.00	$ 0.00
Fireplace		$ 25.00	$ 0.00
Water Heater		$ 25.00	$ 0.00
Gas Connection (New or altered, any number)		$ 15.00	$ 0.00
Other		$ 20.00	$ 0.00
Supplemental Permit Fee		$ 35.00	$ 0.00
Deferred Submittal		$ 35.00	$ 0.00
		SUBTOTAL OF FEES**	$ 0.00
		MINIMUM PERMIT FEE of $55.00**	$ 55.00
		(**Use whichever is greater)	
		Add 12% State Surcharge	$ 0.00
		TOTAL FEES	$ 0.00

To be completed and uploaded into ePermitting as a PDF.

City of Lincoln City | 801 SW Highway 101 | PO Box 50 | Lincoln City, OR 97367 | 541.996.2153
Planning & Community Development | www.lincolncity.org | planning@lincolncity.org

Naming Your Documents as PDFs

You may or may not need all of the following documents, but those that you do need **must be saved as PDFs** and named as follows:

Standard Materials You **Will Likely Be Required** to Provide

DOCUMENT TYPE	REQUIRED NAME
All Architect's Drawings & Elevations	ARCHITECT PLANS*
Beam and member calculations	BEAM CALCS
Complete civil engineering plan set	CIVIL PLANS*
Floor system layout calculations	FLOOR SYSTEM
Lateral structural plans	LATERAL STRUCTURAL PLANS
Lateral structural calculations	LATURAL STRUCTURAL CALCS
ORSC energy form	ENERGY FORM
Public Works Combined Permit	PW PERMIT
Site and landscape plan	SITE AND LANDSCAPE PLAN
Truss calculations	TRUSS CALCS
Truss layout plan	TRUSS LAYOUT

** Save all sheets in this submittal as one single pdf document*

Other Building Permit Submittals You **May Be Required** to Provide

DOCUMENT TYPE	REQUIRED NAME
Boundary or Topo Survey	SURVEY
Floodplain development permit	FP PERMIT
Geotechnical report	GEO REPORT
Photometric analysis	PHOTO ANALYSIS
Wetlands delineation	WETLANDS

ADDITIONAL NOTES

- If you are submitting documents not listed above, please save as a PDF and name it using clear and descriptive text
- If you are submitting a document that is a REVISION to an already submitted document, please name it using the same REQUIRED NAME listed above with the addition of REV 1, REV 2, etc. For example, if you are submitting a revised Site and landscape plan you would name it SITE AND LANDSCAPE PLAN REV 1.

RESIDENTIAL SITE PLAN CHECKLIST

The following items shall be shown on the site plan. Indicate with a check mark (✓) that the information has been provided, or note as not applicable (NA). Once complete, sign and submit as part of your application. **Remember to save as a PDF.**

GENERAL ITEMS:	
☐	Scale and North Arrow
☐	Date of Preparation
☐	Property Owner Name, Address, and Phone Number
☐	Contractor Name, Address, and Phone Number
☐	Assessor's Map & Tax Lot
☐	Property line locations and dimensions
☐	Recorded easements shown, with dimensions and type
☐	Square footage of site and Total Lot Perimeter
EXISTING ITEMS:	
☐	Streets (street name, edge of pavement, curb, centerline, and intersection)
☐	Structures, buildings, fences, retaining walls
☐	Trees
☐	Storm drainage elements, such as ditches, culverts, pipes, inlets
☐	Wetlands, ponds, streams, creeks, riverbanks, or any other body of water inside or adjacent to the property
☐	Contours at 2-foot intervals
☐	Water and sanitary sewer lines, service connections, manholes, meters, etc.
PROPOSED ITEMS:	
☐	Setback distances
☐	Location, width, and depth of driveway, **and** type of surface (asphalt, concrete, pavers)
☐	Stormwater facilities (downspouts, footing drains, dry well, etc.)
☐	Erosion control measures
☐	Water, sewer, and power service connections, showing all street cuts if applicable
☐	Square footage of building coverage (percentage of the total lot or parcel covered by the footprint of all primary and accessory structures and buildings, including decks, balconies, porches, and stairs. Uncovered decks, porches, or stairs that are 30 inches or less from the ground are not included in the determination of building coverage.)
☐	Square footage of total impervious area (any surface that does not allow for the infiltration of water directly into the underlying earth. Impervious surfaces include rooftops and eaves, asphalt and concrete parking lots other than those surfaced with pervious materials, driveways, roads, sidewalks and pedestrian plazas, and standing water. Note: Uncovered, slatted decks are considered pervious. Gravel surfaces are considered pervious unless they cover impervious surfaces or are compacted.)
LANDSCAPING (these items may be included on the Site Plan or a separate Landscaping Plan):	
☐	Show proposed number of trees to meet the requirement of 1 tree per 150 feet of total lot perimeter
☐	Show proposed number of shrubs to meet the requirement of 1 shrub per 30 feet of total lot perimeter
☐	List the types of living and non-living groundcovers as required to cover all bare soils

Signature (Required) **Date**

City of Lincoln City | 801 SW Highway 101 | PO Box 50 | Lincoln City, OR 97367 | 541.996.2153
Planning & Community Development | www.lincolncity.org | planning@lincolncity.org

Tree Removal Permit Application

PROPERTY OWNER INFORMATION:

NAME: _____
ADDRESS: _____
_____
PHONE: _____
E-MAIL: _____

PROPERTY INFORMATION FOR TREE REMOVAL:

TAX MAP AND LOT:_____
SITE ADDRESS:_____
Proposed number of trees to be removed: _____

REASON FOR REQUEST *(check all that apply):*

☐ My property is ADJACENT to a lot that contains a detached house, attached house, or duplex **AND** I own both properties **AND** the trees to be removed are within 100 feet of the dwelling **AND** no protected trees are being removed.

☐ My property is ADJACENT to a lot that contains a detached house, attached house, or duplex **AND** I have attached to this application the written permission from the property owner for the tree removal **AND** the trees to be removed are within 100 feet of the dwelling **AND** no protected trees are being removed.

☐ Removal of dead trees or diseased tree(s) weakened by age, storm, fire, or other injury.

☐ Removal of tree(s) to allow solar access to south face of buildings.

☐ Removal of tree(s) to allow topographical, reconnaissance, soil, and similar surveys.

☐ Removal of tree(s) to prevent the spread of disease or insects declared to be a nuisance by a government agency or certified arborist, or to correct or eliminate a verified natural hazard to the property owner, surrounding properties, or the community at large.

☐ Removal of tree(s) for the placement of structures and other improvements provided the city has approved a site plan, subdivision, planned development, or building permit, and a tree protection plan if one is required

_____ List the case number or building permit number.

REMOVAL OF TREES LESS THAN 6 INCHES IN DIAMETER IS PERMITTED WITHOUT A TREE REMOVAL PERMIT, UNLESS THEY ARE PROTECTED TREES.

City of Lincoln City | 801 SW Highway 101 | PO Box 50 | Lincoln City, OR 97367 | 541.996.2153
Planning & Community Development | www.lincolncity.org | planning@lincolncity.org

I HAVE INCLUDED THE FOLLOWING ITEMS (*check all that are applicable or write NA)*

☐ **A site plan must accompany this application with an "X" through each tree proposed for removal. (This is mandatory and must accompany all tree removal permit applications.)**

☐ **The adjacent dwelling is identified on the site plan, as well as the distance of each tree from that adjacent dwelling.**

☐ **The site plan must indicate which trees, if any, are being removed due to death or disease. Additionally, a report from a certified arborist must accompany this application testifying to the condition of the trees.**

☐ **The site plan must indicate which trees, if any, are being removed for solar access and must show the location of the buildings that need the solar access.**

☐ **The site plan must indicate which trees, if any, are being removed for survey access. Additionally, a statement from the individual needing the survey access must accompany this application explaining why the tree removal is necessary for the survey access.**

☐ **The site plan must indicate which trees, if any are being removed to prevent the spread of disease or insects. Additionally, a report from a certified arborist or declaration from a government agency must accompany this application stating the removal is necessary to prevent the spread if disease or insects.**

I hereby declare under penalty of perjury under the laws of the State of Oregon that the foregoing information is true, complete, and accurate. I have read and fully understand, and agree to meet, the criteria for tree removal as outlined in Lincoln City Municipal Code (LCMC) 17.52.220.

I acknowledge that providing false information in the application shall be a violation and grounds to deny the application, void the approval, and enjoin the use.

SIGNATURE:

_____ _____

Property Owner Date

_____ _____

Property Owner Date

- **TREE REMOVAL IS PROHIBITED, EXCEPT AS ALLOWED IN LCMC 17.52.220.**
- **REMOVAL OF TREES IN WETLANDS IS PROHIBITED.**
- **REMOVAL OF TREES AS PART OF COMMERCIAL FORESTRY OPERATIONS IS PROHIBITED.**
- **REMOVAL OF PROTECTED TREES IS PROHIBITED.**
- **TOPPING IS PROHIBITED, EXCEPT WHERE NECESSARY FOR UTILITY WORK OR PUBLIC SAFETY, IN WHICH CASE IT REQUIRES A TREE REMOVAL PERMIT.**

NORTHWEST CODE PROFESSIONALS

144 East 14th Avenue
Eugene, Oregon 97401
Phone: (541) 484-9043
Fax: (541) 484-6859
www.nwcodepros.com

Prescriptive Solar Photovoltaic Installation Checklist

Use this checklist to demonstrate compliance with the prescriptive photovoltaic (PV) requirements of Sections 3111.3.5.3 and 3111.3.4.8 of the Oregon Structural Specialty Code (OSSC). Separate electrical permits are required for the installations.

PART I – PROPERTY OWNER INFORMATION

Property owner name:	Phone number:	
Installation address:		
City:	State: Oregon	ZIP:
Structure on which modules are to be installed:		
Installer: ☐ Contractor ☐ Owner (If owner, skip to Part III)		

PART II – CONTRACTOR INFORMATION

Contractor name:	Phone number:
Email address:	
BCD business license #:	Contractor's CCB#:

PART III – STRUCTURAL CRITERIA

Roof structure requirements

*If "No" is selected for any item below, or if the supporting structure is a manufactured dwelling, the project **may not** be submitted using the prescriptive path.*

Check the appropriate boxes for each item as it applies to the project.

- Structure is classified Risk Category I or II in accordance with OSSC 1604.5: ☐ Yes ☐ No
- Structure is of *conventional light-frame construction*: ☐ Yes ☐ No
- Supporting roof framing is one of the following: ☐ Yes ☐ No
  (*check one*) ☐ Pre-engineered trusses spaced ≤ 24 inches o.c.; **or**
  ☐ Rafters spaced ≤ 24 inches o.c. and spans comply with OSSC 2308.7.2 **or** ORSC R802.5, respectively
- Ground snow load does not exceed maximum load: ☐ Yes ☐ No
  (*check one*) ☐ ≤ 50 psf for structures under the ORSC, **or** ☐ ≤ 70 psf for structures under the OSSC
- The basic design wind speed does not exceed the following: ☐ Yes ☐ No
  (*check one*) ☐ ≤ 120 mph in Wind Exposure Category C for structures under the OSSC; **or**
  ☐ ≤ 135 mph in Wind Exposure Category B for structures under the OSSC; **or**
  ☐ ≤ 135 mph in Wind Exposure Category C for structures under the ORSC
- Roofing materials are metal, single-layer wood shingle or shake, or not more than two layers of composition shingle: ☐ Yes ☐ No
- Module height is less than 18 inches from the top of the module to the roof surface and complies with Figures 3111.3.5.3(1) and 3111.3.5.3(2): ☐ Yes ☐ No

PART III – STRUCTURAL CRITERIA (continued)

Loading requirements

Check the appropriate boxes for each item associated with the selected attachment method.

☐ **Attachment 1:** PV modules or racking is attached directly to the **roof framing or blocking**:

- Combined weight of PV modules and racking is not more than 4.5 psf: ☐ Yes ☐ No
- Spacing of PV modules or racking complies with one of the following: ☐ Yes ☐ No

(*check one*) ☐ ≤ 48 inches in any direction; **or**
☐ ≤ 24 inches in any direction where the following are true:

- Ground snow load is more than 36 psf
- Panels are located within 3 feet of a roof edge, hip, eave, or ridge
- Basic design wind speed is greater than 120 mph in Wind Exposure Category B
- Basic design wind speed is greater than 110 mph in Wind Exposure Category C

**If this is the appropriate attachment method and "No" is selected for any of the items above, the project may not be submitted using the prescriptive path.*

☐ **Attachment 2:** PV modules or racking is attached directly to **standing seam metal panels**:

- Combined weight of PV modules and racking is not more than 4.5 psf: ☐ Yes ☐ No
- **Clamps** comply with the following requirements:
  - Provide the following, allowable uplift capacity: ☐ Yes ☐ No

    (check one) ☐ Not less than 115 pounds and spaced at 60 inches o.c. or less; **or**
    ☐ Not less than 75 pounds and spaced at 48 inches o.c. or less.
  - Spacing between metal panel seams is not more than 24 inches ☐ Yes ☐ No
  - Spacing along a metal panel seam is not more than 60 inches ☐ Yes ☐ No
- **Metal roofing panels** comply with the following requirements:
  - Panel thickness is 26 gauge steel, minimum ☐ Yes ☐ No
  - Panel width is 18 inches or less ☐ Yes ☐ No
  - Attached with at least #10 screws at 24 inches o.c. ☐ Yes ☐ No
  - Installed over minimum ½-inch nominal wood structural panels attached to framing with 8d nails at 6 inches o.c. at panel edges and 12 inches o.c. field nailing ☐ Yes ☐ No

**If this is the appropriate attachment method and "No" is selected for any of the items above, the project may not be submitted using the prescriptive path.*

PART IV – ROOF DESIGN SITE PLAN

Roof design requirements

- Attach a simple structural plan showing the roof framing (rafter size, type, and spacing) and PV system racking attachment.
- System must be shown in sufficient detail to assess whether the requirements of Section 3111.3.5.3 have been met.
- The structural plan must be on 8.5-inch x 11-inch or larger paper.

PART V – PV MODULES

Manufacturer:

Model number:

Listing agency:

PART VI – PATHWAYS AND CLEARANCES

Pathway and clearance requirements

- Using the grid below or an attached 8.5-inch x 11-inch or larger paper, provide a simple drawing, indicating the location of the PV system in relation to buildings, structures, property lines, and, as applicable, flood hazard areas.
- The drawing must be shown in sufficient detail to assess whether the *pathway* requirements of Section 3111.3.4.8 or one of the exceptions have been met.

NORTHWEST CODE
PROFESSIONALS

OREGON RESIDENTIAL CONSTRUCTION REQUIREMENTS

These regulations shall be incorporated into this project in addition to any requirements appearing on the construction plans. Circled regulations are of significant importance. The approval of plans and specifications does not permit the violation of any section of the building code or other city ordinance or state law. It shall be the duty of every person who performs work to comply with the applicable codes. References are from the **2021 Oregon Residential Specialty Code which is based on the 2018 International Residential Code (IRC)** as adopted & effective October 1, 2021, unless noted otherwise. The below codes are portions of the code intended to be useful for a check list, but not the complete code or complete exceptions. Please refer to the ORSC and OPSC (Oregon Plumbing Specialty Code) for the complete code and/or contact inspector for clarification, if needed. The OSRC and OPSC may be found online at the Oregon Building Codes Division website at Oregon.gov/bcd.

BUILDING PLANNING

1. **R106.3.1** Construction documents shall be approved in writing or by stamp, as "Reviewed for Code Compliance". Approved plans, calculations, and other paperwork shall be kept on the job site at all times. Provide property address identification **R309.1.**

2. **R109.1.6** A final inspection shall be requested by permit holder after all work required by the building permit is completed - prior to use or occupancy **R110.1**

3. **R105.1** Electrical & plumbing permits/ inspections shall be obtained through Lincoln County (541) 265-4192. Electrical & plumbing inspections must be approved prior to requesting framing and final inspections.

4. **DOC-PS-20** All framing lumber is assumed #2 grade Douglas Fir or equivalent unless otherwise noted (except studs and plates). All siding and other manufactured wood products shall comply with the manufacturer's installation requirements and must be used only according to their listing. Inspector must be provided with installation instructions at time of framing and final inspection.

5. **R303.1** All habitable rooms shall have an aggregate glazing area of not less than 8% of the floor area of such room. **Exception:** The glazed areas need not be installed in rooms where artificial light is provided that produces an average of 6 foot-candles 30 inches above the floor.

6. **R303.3.2** Toilet rooms and similar rooms without bathing facilities shall have minimum glazed area of 3 square feet, half of which shall be openable to outside or an exhaust fan with minimum 50 cfm **Table M1505.5**. **R303.3.2** Those with bathing facilities shall have exhaust fan with minimum 80 cfm, Table M1505.5, controlled by a dehumidistat or timer or approved automatic control **M1505.6**. Duct sizing shall be according to **Table M1504.2**, vented to the outside **M1505.2**. The maximum sound rating for intermittent fans is 3 scones **M1505.5.1.2.** Bathroom exhaust fans to be Energy Star certified **N1105.6.**

7. **R304** Minimum room areas: Habitable rooms, except kitchens, shall have a gross floor area of at least 70 sq. ft. and a horizontal dimension of at least 7'. Hallways shall be not less than 3' wide **R311.6.**

8. **R305** Habitable spaces, hallways, and basements shall have a ceiling height of not less than 7'. Bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6'-8".

9. **Figure R307.1** Bathroom fixtures clearances: **Water Closet** - 21" in front and 30" wide with a minimum 15" from center of water closet to sidewall or tub; **Lavatory** - 4" clear at side and 21" at front; **Showers** shall be a minimum of 30" x 30" with 24" minimum clearance in front; **Tubs** - minimum 21" clear at open side.

10. Window glazing and fall protection: **R308 and Figure R308.4.7** Provide safety, tempered, or shatterproof glazing in specified hazardous locations:

R308.4.2 Glazing Adjacent to doors: Where the bottom exposed edge of the glazing is less than 60" above the floor or walking surface: **1)** Glazing within 24" either side of door in the plane of the door in a closed position.**2)** Glazing is on wall perpendicular to the door in a closed position and within 24" of the hinge side of an in-swing door. See **Figure R308.4.2**
R308.4.3 Glazing in Windows general: 1) The exposed area of an individual pane is larger than 9 square feet. **2)**The bottom edge of the glazing is lower than18" above floor. **3)** Top edge of the glazing is 36" above floor **4)** One or more walking surfaces are within 36" measured horizontally and in a straight line of the glazing.
R308.4.5 Glazing and wet surfaces: bottom of exposed edges less than 60" measured vertically above any standing or walking surface. Glazing that is measured less than 60" measured horizontally from the water's edge requires safety glazing.
R308.4.6 Glazing adjacent to stairs & ramps: glazing where the bottom edge of the glazing is less than 36" above the plane adjacent walking surface of stairways, landings between flights of stairs, and ramps.
R308.4.7 Glazing adjacent to the bottom of stair landing: glazing adjacent to the landing at the bottom of a stairway where the glazing in less than 36" above the landing, and within a 60" horizontal arc less than 180 degrees from the bottom tread nosing. - (Consult inspector)
R312.2 Window Fall Protection is needed when the top of sill of an operable window is located less than 24" above the floor and 72" above the finished grade or a flat surface of not less that 36" wide below the exterior of the building **R312.2.1.**
The window falls protection devices, when in operation, shall not allow a 4" sphere pass through the widest point **R312.2.1.**
When the window fall protection device is released, it must meet the minimum opening area for an egress window in **R301.2.1** (Number 14 on this handout), **R312.2.2.**

11. **R302.5.1** Openings from a garage directly into a room used for sleeping purposes shall not be permitted.

12. **Section R302 Fire-Resistant Construction:**
R302.6 The garage shall be separated from the residence and its attic area by not less than ½-inch gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from such rooms above by not less than 5/8-inch Type X gypsum board or equivalent**.** Where the separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by not less than ½ inch gypsum board or equivalent **Table R302.6.** Door between garage & residence shall be solid wood or honeycomb steel 1 3/8" thick or 20-min. fire-rated **R302.5.1.1.**

R302.7 Under-stair Protection: Enclosed accessible space under stairs shall have walls, under-stair surface and any soffits protected on the enclosed side with ½-inch gypsum board: **Exception:** Protection not required when both the dwelling unit and the under-stair area are protected by an automatic fire sprinkler system installed in accordance with Appendix T of this code, NFPA 13D or other approved sprinkler system.

R302.13 Fire protection of floors: Floor assemblies that are not required elsewhere in this code to be fire-resistance rated, shall be provided with a ½-inch (12.7 mm) gypsum wall-board membrane, 5/8-inch (16 mm) wood structural panel membrane, or equivalent on the underside of the floor framing member. Penetrations or openings for ducts, vents, electrical outlets, piping and similar openings or penetrations shall be permitted. **Exceptions: 1)** Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with Appendix T, NFPA 13D, or other approved sprinkler system, **2)** Floor assemblies located directly over a crawl space not intended for storage or fuel-fired appliances. **3)** Portions of floor assemblies shall be permitted to be unprotected where complying with the following: **3.1** The aggregate area of the unprotected portions does not exceed 80 sf (7.4m.sq.) per story; **3.2** Fire-blocking in accordance with Section R302.11.1 is installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly. **4)** Wood floor assemblies using lumber or structural composite lumber equal to or greater than 2-inch by 10-inch nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.

13. **R309.2** Carports shall be open on at least two sides, otherwise it shall be considered a garage.

14. **R310** Sleeping rooms and basements with habitable space shall have at least one openable emergency escape and rescue opening. Egress windows shall have a maximum sill height of 44" above the floor; have a minimum net clear opening of 5.7 sq. ft. (5 sq. ft. at grade level); a minimum clear height of 24" and a minimum clear width of 20". - (Consult inspector for window well and below grade/basement situations.) **Section R310**.

15. **R311.7.6 Landings for stairways:** There shall be a floor or landing at the top and bottom of each stairway. The width perpendicular to the direction of travel shall not be less than the width of the flight served. Landings of shapes other than square or rectangular shall be permitted provided that the depth of the walk line and the total area is not less than a quarter circle with a radius equal to the required landing width. Where the stairway has a straight run, the depth in the direction of travel shall not be less than 36". **EXCEPTION:** A floor or landing is not required at the top of an interior flight of stairs, including stairs in an

enclosed garage, provided that the door does not swing over the stairs.
R311.3 Floors and landings at exterior doors: There shall be a landing or floor on each side of each exterior door. The width of each landing shall not be less than the door served and 36 inches in the direction of travel. Slope shall not exceed ¼ units vertical x 12 units horizontal (2%). **(See exception for balconies.)**
R311.3.1 Landings at required Egress doors: Landings or finished floors at required egress door shall be not more than 1-1/2" lower than top of the threshold: Exception: the landing or floor on the exterior side shall not be more than 8" below the top of the threshold provided the door does not swing over the landing or floor.

16. **R311.7** Stairways shall be a minimum of 36" in clear width all points above the handrail and have a clear width of 31½" at and below the handrail **R311.7.1**. Handrails shall not project more than 4½" into the required width; headroom shall not be less than 6'-8" **R311.7.2.** Maximum riser height is 8" **R311.7.5.1.** And the minimum tread depth is 9" **R311.7.5.2.1**; the greatest riser height or tread depth shall not exceed the smallest by more than 3/8"; the greatest nosing projection shall not exceed the smallest by more than 3/8" including floors and landings **R311.7.5.3.**

17. **R311.7.10** Winders, spirals and circular stairs have very specific requirements. - (Consult Inspector.)
.
18. **R311.7.8.** Handrails shall be mounted between 30" and 38" above the nosing of the treads on at least one side of all stairways with four or more risers. Circular handrails shall have a grip size cross section not less than 1¼" or more than 2" **R311.7.8.5,** and shall be continuous the full length of stairways from a point directly above the top riser to a point directly above the lowest riser. Handrail ends shall be returned or shall terminate in newel posts or safety terminals **R311.7.8.4.** Handrails to have not less than 1 ½" between wall and handrail **R311.7.8.3.** (For other acceptable handrail grip sizes, see **R311.7.8.5**)

19. **R312.1.1** Porches, balconies, ramps, or raised floors more than 30" above the floor or grade below shall have "guards" not less than 36" high. Open sides of stairs shall have a guard of not less than 34" high **R312.1.2.** Any ornamental pattern of guards shall not allow a sphere greater than 4" to pass - except on stairways, which may pass an object not greater than 5" **R312.1.3.** Guards and handrails shall withstand a 200-pound load in any direction at any point per **Table 301.5.**

20. **R314.3 Smoke alarms** shall be installed; in each sleeping room; within 21' feet from the door of each sleeping "area"; and on each floor, or basement. Multiple alarms shall be interconnected within individual units **R314.4.** Required smoke alarms shall not be installed in garage, kitchen, or area below 40° F. Ionization type alarms shall not be horizontally closer than 3' to a bathroom door containing a tub or shower, or less than 20' (10' with alarm silence feature) horizontally from a permanently installed cooking appliance. - (Consult inspector regarding alterations, repairs, and additions.) Bedrooms on separate floor levels in a structure consisting of two or more stories shall have separate carbon monoxide alarms serving each story.
R315 Carbon Monoxide Alarms shall be installed in each bedroom or within 15 feet of each bedroom door. Bedrooms on separate floor levels in a structure consisting of two or more stories shall have separate carbon monoxide alarms serving each story. **R315.3**

21. **R302.3** Two-family dwelling units shall be completely separated by wall/floor assemblies of 1-hour fire-resistive construction including supporting construction. Fire-walls shall extend from the top of the lowest floor sheathing to the underside of roof sheathing, and tight against the exterior walls.
Sound transmission control: Airborne sound minimum rating of 45 STC (sound transmission class) for walls separating dwelling units and a structucture-bourne sound rating of 45 IIC (impacted insulation class) for walls and floor/ceilings. See **Appendix K**

22. **R302.2** "Townhouses" shall be considered separate buildings and shall be separated by **two** 1-hour fire-rated wall assemblies extending from the foundation to the underside of the roof sheathing. A common 2-hour fire-rated wall is permitted if it does not contain plumbing or mechanical equipment, ducts, or vents **R302.2.1.** Consult inspector for other options and requirements. See **section R302.**
Sound transmission control: Airborne sound minimum rating of 45 STC (sound transmission class) for walls separating dwelling units and a minimum sound rating of 45 IIC (impacted insulation class) for walls and floor/ceilings. See **Appendix K**

23. **R302.4.2 Membrane** penetrations of maximum 2-hour fire-walls shall be protected by an approved fire stop system. Steel electrical boxes not exceeding 16 sq. inches or 100 sq. inches in any 100 sq. ft. of wall shall be separated by a horizontal distance of not less than 24"; a distance not less than the depth of the wall cavity when filled with insulation; or molded fire blocking. 2-hour rated electrical boxes shall be installed per listing. **See R302.4**

24. **R317.1** Protection against decay shall be as follows: **(A)** Ensure minimum 18" and 12" to bottom of wood joists and girders respectfully; **(B)** Wood framing members and sill plates in contact with concrete or masonry foundation walls. **(C)** Sills and sleepers on concrete or masonry slabs in direct contact with the ground shall be pressure treated unless separate from slab by an approved impervious moisture barrier such as 6mil polyethylene sheeting; **(D)** Ensure a minimum of ½" airspace at tops, sides, and ends of girders entering concrete or masonry walls; **(E)** Maintain a minimum of 6" clearance to grade for untreated siding, sheathing, or wall framing, or less than 2" measured vertically from concrete steps.; **(F)** Wood structural members supporting concrete garage slabs shall be pressure treated unless separated with an impervious membrane. **(G)** 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.
R317.1.1 Field treatment: Field-cut ends, notches and drilled holes of preservative-treated wood shall be treated in the field with a preservative that complies with the American Wood Protection Association (AWPA) Standard M4, the "Standard for the Care of Preservative Treated Wood Products".

25. **317.1.2** Posts and columns embedded in concrete or in contact with the ground shall be pressure treated and labeled for ground contact. Structural building supports, balconies, decks, and porches not adequately protected from the weather shall be pressure treated or wood naturally resistant to decay **R317.1.4** and **R317.1.5.**

26. **R317.3.1** All fasteners into pressure preservative and fire-retardant-treated wood shall be of hot-dipped galvanized steel, stainless steel, silicon bronze or copper and comply with ASTM A-153. Exception: One-half inch diameter or greater steel bolts.

27. **R322** Comply with all flood resistant construction requirements. (Consult Inspector, FEMA & City or County Planner.)

FOUNDATIONS

28. **R401.3** Slope grade away from the foundation a minimum of 6" within the first 10' and for impervious surfaces (concrete/asphalt/etc.) slope grade away for foundation a minimum of 2 ½" within the first 10' (2% slope) or other approved methods.

29. **R401.4** Areas likely to have expansive, compressible, shifting, or other questionable soil characteristics may require a soils test by an approved agency. Recording and documenting shall be per ORS 455.440.

30. **R403** Footings, and stem walls with a soil bearing value of 1500 psf for, conventional light-frame construction, shall be as follows: 1-story = 12" wide 6" thick (6" thick foundation wall); 2-story = 15" wide 7" thick; 3-story = 23" wide 8" thick. **Table R403.1** for width **and R403.1.1** for thickness. The top surface of the footing shall be level and if the slope is over 1:10 (10%) under the footing the footing needs to be stepped **R403.1.5**. The base of all continuous and isolated pad footings located outside the foundation wall shall be at or below the frost line, frost protection **R403.1.4.1. See 403.1.9** for footing on or adjacent to slopes.

31. **R403.1.8** Grounding electrode system: Provide an uncoated #4 reinforcing bar not less than 3" from the bottom of footing and not less than 20' in length encased with a minimum of 2" of concrete and at least 12" above the floor plate line **(UFER Ground).** The UFER ground must be tightly attached to the reinforcing bar located in the footing.

32. **R403.1.6** Install ½" diameter anchor bolts embedded a minimum of 7" into concrete or masonry at 6' on center maximum including interior braced wall lines. Two bolts are required for each plate and must be located between 3½"-12" from ends. 3" x 3" sq. x .229" thick plate washers are required **R602.11.1.**
Anchor bolt spacing for 2-story structures in C, D0, D1, or D2 seismic categories shall be at maximum 4' on center **R403.1.6.1.**

33. **R405** Drains shall be provided around concrete or masonry foundations retaining earth and enclosing habitable or useable space.

34. **R406** Foundations enclosing habitable or useable space shall be damp proofed in an approved manner. Areas with a high-water table or severe soil-water conditions shall be water-proofed.

35. **R408** Provide underfloor ventilation at 1 sq. ft./ 150 sq. ft. of underfloor space. Minimum openings shall be within 3' of each corner and shall provide cross ventilation.
R408.2 Openings shall be covered for their height and width providing openings not exceeding ¼ inch**.**

36. **R408.4** Access to all underfloor spaces shall be provided by either a minimum 18" x 24" unobstructed access opening through the floor or 16" x 24" unobstructed perimeter foundation wall opening.

FLOORS

37. **R502.4** Joists parallel and under bearing partitions shall be doubled - or provide a beam/girder of adequate size.

38. **R502.6** Ends of joists, beams and girders shall have not less than 1½" bearing on wood or 3" bearing on concrete/masonry. Joists meeting over a bearing support shall lap 3" min. and be nailed together with three 10d nails **R502.8.2.**

39. **R502.8** Cutting, drilling and notching of joists and beams shall not exceed code specifications. If questions arise, contact inspector. Engineered products shall not exceed manufacturer's limitations **R502.8.2.**

40. **R506** Concrete slab-on-grade floors in **conditioned areas** shall be a min of 3½" thick over 6 mil polyethylene or approved vapor retarder, lapped 12" at joints (or an approved equal), placed on a min. 4" base course of sand or gravel. Slab-on-grade floors shall be provided with rigid R-15 insulation down to a minimum of 24" or to bottom of slab then horizontally 24" under slab **N1104.7** Consult inspector for exceptions.

WALL CONSTRUCTION

41. **R602.3.2** Double top plates shall be offset at splices a minimum of 24" and nailed with eight 16d nails (4 per side). See **Fastening Schedule Table 602.3 (1)** for framing members.

42 **R602.6** Notching of exterior or bearing walls shall not exceed 25% of its width and drilled or bored holes shall not exceed 40% of its width; non-bearing walls may be notched a maximum of 40% and drilled or bored holes shall not be more than 60% of its width. The hole shall not be closer than 5/8" to edges. **See Fig R602.6(1)**

43. **R602.6.1** Notching of top plates in exterior or bearing walls greater than 50% requires a minimum 1½" wide 16-gauge steel splice across notch opening with eight 10d nails, minimum 1½" long, on each side of notch, steel strap must extend 6" past opening. See **Fig R602.6.1**

44. **R602.8** Provide fire blocking as required. Materials may be 2" nominal solid wood; ¾" sheathing with joints backed with ¾" material or two thicknesses of 1" lumber with broken lap joints; 1/2" sheetrock; ¼" cement-based millboard; or unfaced, securely packed insulation extending 8" above and below obstruction **R302.11.1.**

45. **R602.9** Foundation cripple walls shall be framed of studs not smaller than the studding above. Cripple walls greater than 4' high shall have studs sized to support the additional story. Cripple walls less than 14" at exterior walls or interior braced wall lines shall be sheathed on one side from top plate to bottom plate.

46. **R602.10** Buildings shall be braced in accordance with **Sec R602.10** or when applicable **R602.12**. When a building or portion thereof does not meet the requirements of these sections those portions shall be designed and constructed in accordance with section **R301.1**

WALL COVERING

47. **R703.1** Exterior walls shall provide the building with a weather-resistant exterior wall envelope and a means of draining water that enters the assembly to the exterior. Protection against condensation in the exterior wall assembly shall be in accordance with **Chapter 11** of this code.
Approved vapor retarders shall be installed on the warm side of the insulation **N1104.9.**
R703.1.1 The exterior wall envelope shall be installed in a manner that water that enters the assembly can drain to the exterior. The envelope shall consist of an exterior veneer, a water-resistive barrier **R703.2,** a minimum 1/8-inch (3 mm) space between the water- resistive barrier and the exterior veneer, and integrated flashings **R703.4**. The required space shall be formed using any non-corrodible furring strip, drainage mat or drainage board. The envelope shall provide proper integration of flashings with the water-resistive barrier, the space provided and the exterior veneer. These components, in conjunction, shall provide a means of draining water that enters the assembly to the exterior. (See exceptions for additional options.)

48. **R703.8.4 R703.8.4.1.1** wire Masonry veneer ties, if strand wire, shall be not less in thickness than #9-gauge and shall have a hook embedded in the mortar joint, or if sheet metal, shall be not less than No. 22 U.S. gage by 7/8" corrugated. Ties shall be spaced at maximum 32" on center horizontally and 24" on center vertically. Additional ties shall be provided around openings

greater than 16" in either dimension and be spaced not more than 3' on center and placed within 12" of the wall opening **R703.8.4.1.1**. See exception including stricter requirements for specific seismic category and wind category. Inspections are required for installations over 4' in height.

49. **R703.4 Provide flashing** above window & door openings, at horizontal to vertical intersections, and in compliance with manufacturer installation instructions.

ROOF-CEILING CONSTRUCTION

50. **R802.10** Wood trusses shall be designed, manufactured, and installed, to comply with approved standards. Truss design drawings shall include the information required by **R802.10.1** and be supplied to the building official and approved prior to installation. Complete truss specifications shall be provided at time of delivery and remain on the job-site with the approved plan until final inspection. Trusses shall be braced according to **R802.10.3**. Approved truss tie-down devices shall be installed as required in Section **R802.11**.

51. **R806.2** Enclosed attics, to include rafter spaces at vaulted ceilings, shall have cross ventilation of a minimum of 1 sq. ft./150 sq. ft. of attic area. 1 sq. ft./300 sq. ft. is permitted if certain conditions are met, consult with your building inspector. See **R806.5** for unvented attic and unvented enclosed rafter assembly requirements.

52. **R807** For attic spaces more than 30 sq ft and 30" in height provide a minimum 22" x 30" attic access opening in a readily accessible location such as hallway. A minimum of 30" headroom is required at access opening.

53. **R905.2** Install asphalt shingles in accordance with manufacturer's instructions and this section. ASTM D3462

54. **R905.3** Install clay, concrete, or listed roofing products per manufacturer's instructions and this section.
R905.10 Install metal panels per manufacturer's installation instructions.

55. **R905.7** and **905.8** Wood shingles/shakes shall be installed according to these sections. #1 grade shakes are required except when taper sawn.

CHIMNEY/FIREPLACE

56. The owner/general contractor shall coordinate a pre-construction planning meeting with the mason and building inspector for the construction of new masonry fireplaces - see attached details and code references, **Chapter 10** of the ORSC.

57. **R1003.11** Existing masonry fireplaces fitted with a listed/approved fuel-burning insert shall have the masonry chimney relined with materials compatible with the type of fuel utilized per manufacturer's instructions.

58. Factory built chimneys **R1004.1** and fireplaces **R1005.1** shall be listed/approved and installed per manufactures instructions. Installation instructions shall be on job site.
G2427.5.10 Insulation shield: Provide at least a 26-gage steel insulation shield to provide clearance between the chimney and the insulation material, the clearance shall be no less than the clearance to combustibles specified in the manufacture's instructions. Where the chimney passes through the attic space, the shield shall extend not less than 2" above the insulation material and shall be secured in place. If the insulation shield is part of a *listed* chimney system it shall be installed in accordance to the manufactures instructions.

59. **R1006** Provide sufficient exterior air supply to ensure proper fuel combustion.

ENERGY

60. **N1104** Exterior envelopes shall comply with Table N1101.1 (1) or use Table N1104.1(1) for the thermal performance calculation. **N1101.1** All conditioned space within the residential building shall comply with **Table N1101.1 (1) and one additional measure from Table N1101.1(2).**

61. **N1104.2.5** Provide/install insulation baffles at eaves, to maintain min. 1" clearance to vents and roof sheathing **R806.3.** Thermal insulation shall not be installed in a manner that it would obstruct opening required for attic ventilation **N1104.2.5**.

62. **N1104.2.7** Recessed light fixtures installed in cavities within the building envelope shall be IC rated. The trim piece shall be sealed to prevent air leakage. The fixture shall also be rated "for no more than two cubic feet air movement per minute" or be installed within an airtight box.

63. **N1104.7** Slab-on-grade floors shall be provided with rigid R-15 insulation down to a minimum of 24" or to bottom of slab then horizontally 24" under slab.

64. **N1104.8.2** Seal all joints and penetrations in the exterior envelope in a manner approved by the building official. **See table N1104.8** for air barrier and installation and air sealing requirements. Acontinuous air barrier shall be installed in alignment with the building thermal envelope. Sealing required or required to pass a blower door text with not less than 4.0 ACH. Exterior joints: window and door frames, walls to foundations, walls to roofs, penetrations, recessed lighting, shower/units on exterior walls, electrical boxes, HVAC register boots, tape overlapping crawl space vapor retarder…etc. Please see **Table N1104.8.**

65. **N1104.9** Approved vapor retarders shall be installed on the warm side of insulation as required.

66. **N1104.9.2 & R408.1** Provide 6 mil black polyethylene ground cover lapped 12" at joints and extending 12" up foundation wall. Conditioned slabs shall have the same or equal. Tape overlapping crawl space vapor retarder to comply with the energy requirements in Table **N1104.8.**

67. **N1105.3 All new duct systems and air handling equipment and appliances shall be located fully within the building thermal envelope.**
Exceptions: **1.** Ventilation intake ductwork and exhaust ductwork.
2. Up to 5 percent of the length of an HVAC system ductwork shall be permitted to be located outside of the thermal envelope.
3. Ducts deeply buried in insulation in accordance all of the following:
3.1. Insulation shall be installed to fill gaps and voids between the duct and the ceiling, and a minimum of R-19 insulation shall be installed above the duct between the duct and unconditioned attic.
3.2. Insulation depth marker flags shall be installed on the ducts every 10 feet (3048 mm) or as approved by the building official.
N1105.6 New furnaces must have electrically commutated motors with a fan efficiency rating meeting **Title 10 CFR 430.32.(y)**
N1105.2 All new duct systems or new portions of duct systems exposed to unconditioned spaces, and buried ductwork within insulation that meets the exception to Section N1105.3, shall be insulated to minimum R-8.
Exceptions: 1. The replacement or addition of a furnace, air conditioner or heat pump shall not require existing ducts to be insulated to current code. **2.** Exhaust and intake ductwork.
N1105.2 Heating ducts outside of the bldg. envelope, including HVAC register boots, shall have min. R-8 insulation**. All ducts shall be sealed with a UL listed 181 sealants (tapes and mastics) as required for type of material M1601.4.1.** (Number 75 on this handout)

MECHANICAL

68. **M1305.1,** Appliances shall be accessible for inspection, service, and replacement without altering permanent construction. A 30" x 30" working space shall be provided at all sides of the equipment that require service. Attic or crawlspace installations shall be within 20' of access opening. Said opening shall be 22" x 30" or large enough to allow removal of the largest appliance component. A 24" wide passageway shall be provided to the appliance as needed **M1305.1.3**

69. **M1305.1.2.1** A light and electrical outlet shall be provided at each appliance with switch located at access opening.

70. **M1307.1** Appliances shall be listed/labeled and installed per manufacturer's instructions, which shall remain attached to the appliance.

71. **M1307.3** Appliances located in garages having an ignition source shall have all sources of ignition located not less than 18" above the floor.

72. **M1307.3.1** Appliances shall not be installed in a location subject to vehicular damage unless protected by approved barriers. **See Fig. M1307.3.1** for bollard or optional curb like wheel barrier examples**.** An option is a 2" dia. concrete filled steel pipe embedded 12" through the slab.

73. **M1401.4** HVAC equipment installed outdoors shall be listed for exterior applications and installed on an approved platform that conforms to manufacturer's installation instructions. **(See OAR 340 Div. 262)**

74. **M1411.3** Condensate from all cooling coils or evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. Condensate shall not discharge into a street, alley or other areas to cause a nuisance.

75. **Mechanical ducts including dryer ducts:**
M1502 Clothes dryer ducts shall vent to the outdoors through min 4" rigid, smooth metal ducts with joints running in the direction of flow. Ducts shall be provided with a back-draft damper. **Maximum duct length shall be 35'**. **Note:** Subtract 2.5' for each 45° and 5' for each 90° elbow with 4" radius bend. Exhaust duct shall terminate not less than 3' in any direction from openings into building. Flex transition ducts shall not exceed 8'. Where the exhaust duct equivalent length exceeds 35 ft, the equiv. length of the exhaust duct shall be identified on a permanent label or tag, located within 6 ft of exhaust duct connection.
M1502.4.2 Where dryer ducts are enclosed in a wall or ceiling ducts shall not be deformed.

M1601.4.1 Duct system joints, seams and connections *Tapes and mastics used to seal fibrous glass ductwork* shall be listed and labeled in accordance with UL 181A and shall be marked "181 A-P" for pressure-sensitive tape, "181 A-M" for mastic or "181 A-H" for heat sensitive tape.
Tapes and mastics used to seal metallic and flexible air connectors shall comply with UL 181B and shall be marked "181 B-FX for pressure-sensitive tape or "181 BM" for mastic.
Mechanical fasteners for use w/ flexible nonmetallic air ducts shall comply with UL 181B and shall be marked "181 B-C".
Crimp joints for round metallic ducts shall have contact lap of not less than 1 inch and mechanically fastened by means of not less than 3 sheet-metal screws or rivets equally spaced around the joint.

76. **M1503.1 Range/exhaust hoods** shall vent to the outdoors through a single wall, airtight duct installed with a backdraft damper. Microwave/Hood combinations must also be vented to exterior. No exceptions to allow for re-circulating.
M1503.2 Domestic cooking exhaust must comply with **one** of the following:
1) The fan for overhead range hoods and downdrafts exhaust equipment not integral with the cooking appliance shall be listed and labeled UL507.
2) Overhead range hoods and downdraft exhaust equipment with integral fans shall comply with UL507.
3) Domestic cooking appliance with integral downdraft exhaust equipment shall be listed and labeled ANSI Z21.1 or UL858.
4) Microwave ovens with integral exhaust for installation over the cooking surface shall be listed and labeled UL923.

77. **Chapter 17** Provide adequate combustion air for fuel burning equipment while maintaining the building envelope.

PLUMBING

78. **OPSC Chapter 4:** The maximum water consumption used for new plumbing fixtures shall not exceed: Toilets - 1.6 gal./flush **OPSC 411.2**; Urinals – 0.5 gal./flush **OPSC 412.1**; Interior Faucets – 1.8 gal./min **OPSC 420.1**.; Showers - 2.0 gal./min @ 80 psi. **OPSC 408.2. EXCEPTION: Toilets in Water Closets in one- and two- family dwellings shall be EPA Water Sense labeled, with an** equivalent max flush of 1.28 gal/flush.

79. **OPSC 406.1 and 402.7** Ponds, Aquarium, Fountains**,** and similar construction with water or waste connections shall be submitted for approval prior to installation and protected from backflow.

80. **OPSC 402.2 Fixtures** in contact with walls or floors, shall have joint(s) made watertight.

81. **OPSC 408.6 and 408.7** Shower stalls of any shape shall have a minimum finished interior of 1024 sq. in. and shall also be capable of encompassing a 30-inch circle. Consult the building/plumbing inspector for requirements regarding site-built shower compartments.

82. **OPSC 409.6 Whirlpool** bathtubs shall have a removable panel to access the pump. The pump shall be located above the crown weir of the trap and the pump & circulation piping shall be self-draining. If located in crawl space; within 20' of access door, trap door or crawl hole.

83. **OPSC 408.3, 408.3.2 All** shower heads/control valves shall be equipped with a pressure balance or thermostatic mixing control valve set or adjusted per the manufacturer's instructions for a maximum mixed water setting of 120 degrees.

84. **OPSC 608.3 &608.5 Water heaters** shall be provided with a combination pressure/temperature relief valve. The discharge pipe shall not be smaller than the outlet, shall not be trapped or threaded, and shall terminate in an approved location.
N1106.2 The first 8' of pipe in and out of the water heater must be insulated.

85. **OPSC 507.2 & 505.1 Water heaters** installed in seismic design category C, D, E and F shall be strapped to resist horizontal displacement. Straps shall be at 1/3 points with the lower strap a minimum of 4" above the controls. Fuel burning water heaters shall be permitted in a closet in sleeping rooms, bathrooms, only if door is gasketed and with a listed self-closing device listed & labeled as direct vent appliances.

86. **OPSC 507.4 Water heaters** located in attics or other location where damage may result from a leak, shall have a corrosion-resistant watertight pan installed beneath it with a minimum ¾" drain to an approved location.

87. **OPSC 603.5.7** Hose bibs shall be protected with a listed non-removable frost-proof backflow preventer.

88. **OPSC 608.1** The minimum water pressure after allowing for friction and other pressure losses is 15 psi.
608.2 Excessive Water Pressure: Approved pressure regulators shall be installed, with strainers, when the water pressure could exceed 80 psi.

89. **OPSC 707 & 719** Cleanouts shall be installed as required. - (Consult inspector.)

90. **OPSC 908 Vertical** wet venting is allowed under certain circumstances. - (Consult inspector.)

91. (Statewide Alternative Method) **Air Admittance Valves: AAV's** need to be installed along with at least one roof vent. Each AAV may function as a vent for a maximum of 3 fixtures, all fixture groupings are located on a single level within the dwelling. AAV's shall not be located less than 4 inches above fixture drain being vented. Access shall be provided to all AAV's for inspection, maintenance and removal. Each plumbing system shall have at least one stack vent extending outdoors to open air. AAV's shall not be installed to serve sumps, chemical wastes, or in supply or return air plenums. https://www.oregon.gov/bcd/codes-stand/Documents/sam-07-01airadmittancevalves.pdf

92. **OPSC 1101.3 – 1101.6.2 Storm/rain drains** shall be ABS Schedule 40, Schedule 40 PVC DWV, or other approved materials. They shall not interconnect with subsurface sewage systems, foundation drains, or footing drains. If rain drains are interconnected with underfloor drainage pipe, an accessible backwater valve shall be installed. The connection shall be located at midpoint of driveway or other pre-approved location. Pipe shall be properly bedded or supported, sloped a minimum ¼" per foot, and be installed with a 14-gauge continuous tracer wire.

93. **OPSC 602.3 Backflow Prevention:** No plumbing fixture, device or construction shall be installed or maintained, or shall be connected to a domestic water supply, where such installation or connection provides a possibility of polluting such water supply or cross-connection between a distribution system of water for drinking and domestic purposes and water that becomes contaminated by such plumbing fixture, device or construction unless there is provided a backflow prevention device for the potential hazard.

94. **OPSC 608.3 Expansion Tanks, and Combination Temperature and Pressure-Relief Valves:** Water systems with a check-valve, backflow preventer or enclosed device that prevents dissipation of building pressure back into the water main, shall be provided with an adequately sized expansion tank or device similar function to control thermal expansion. Installed on the building side of the check valve, backflow preventer and sized according to the MII.

95. **N1107.4 Solar interconnection pathway**. A square metal junction box not less than 4 inches by 4 inches with a metal box cover shall be provided within 24 inches horizontally or vertically of the main electrical panel. A minimum ¾-inch rigid metal raceway shall extend from the junction box to a capped roof termination or to an accessible location in the attic with a vertical clearance of not less than 36 inches. Where the raceway terminates in the attic, the termination shall be located not less than 6 inches above the insulation. The end of the raceway shall be marked as "RESERVED FOR SOLAR." Exception: In lieu of ¾ inch rigid metal raceway, a minimum #10 copper 3-wire MC cable installed from the junction box to the termination point including 6 inches additional wire is permitted.

96. **R303.4** Each dwelling unit shall be provided with a whole-house mechanical ventilation system. Designed to provide *balanced ventilation* **M1505.4.1.** Provided with controls that enable manual override **M1505.4.2.** Ventilation system air flow requirement are based on floor area and number of bedrooms in **Table M1505.3(1)**, A common example is a dwelling unit that has a floor area between 1,501-3,000 square feet and has 2-3 bedrooms will need 60 CFM, with the same floor area and 4-5 bedrooms will need 75 CFM. The whole-house mechanical ventilation system shall provide outdoor air at a continuous rate as determined in **Table M1505.4.3** or **Equation 15-1**.