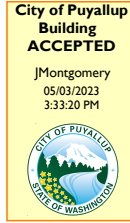




**PACIFIC  
HOME  
SOURCE**  
LLC



THE APPROVED CONSTRUCTION PLANS, DOCUMENTS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

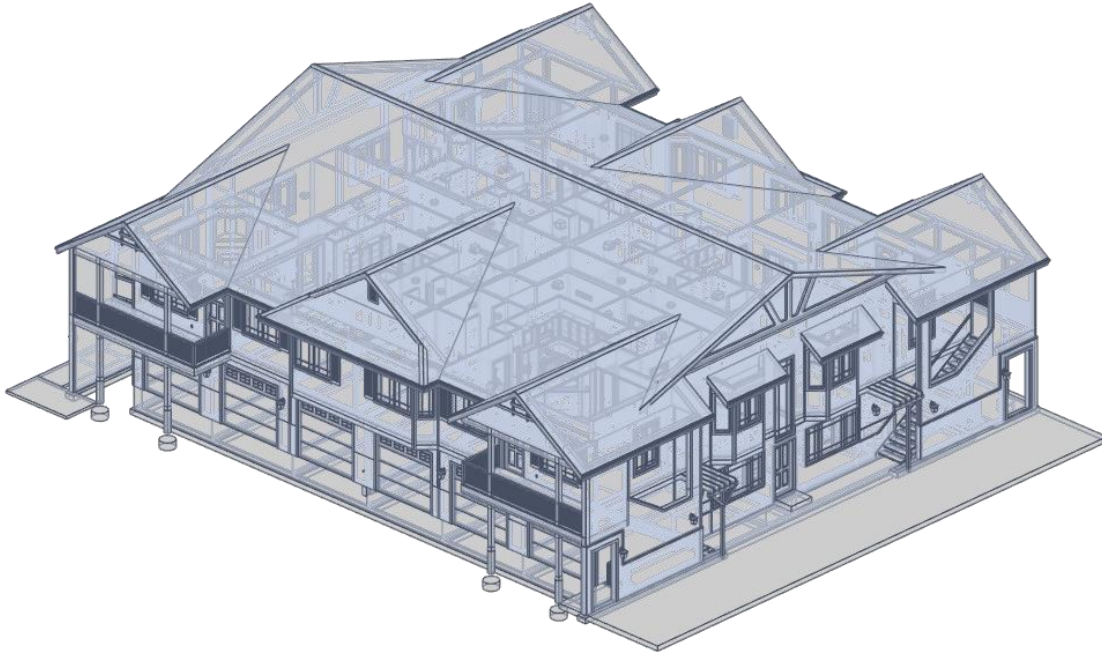
FULL SIZED LEDGIBLE COLOR PLANS ARE REQUIRED TO BE PROVIDED BY THE PERMITEE ON SITE FOR INSPECTION

|  |              |
|--|--------------|
| City of Puyallup<br>Development & Permitting Services<br>ISSUED PERMIT |              |
| Building   | Planning     |
| Engineering  | Public Works |
| Fire   | Traffic      |

## 2018 WSEC WORKSHEET – CLIMATE ZONE 4, 5&6

DATE: 10-10-2022  
PROJECT#: PHS21.136  
PLAN: Copperberry Condominiums

SITE ADDRESS:  
4002 10<sup>th</sup> St Se  
Puyallup, WA 98374



John Gabriel Spruell CGP  
Pacific Home Source LLC

253-312-5523  
4001 72<sup>nd</sup> Street East

[gabe@pacifichomesource.com](mailto:gabe@pacifichomesource.com)  
Tacoma, WA 98443

**PRMU20221555**

**2018 Washington State Energy Code – Residential  
Prescriptive Energy Code Compliance for All Climate Zones in Washington  
Multifamily (effective February 1, 2021)**

Version 1.1

**These requirements apply to Group R-2 buildings three stories or less in height above grade plane.  
Other Group R-2 buildings must comply with the commercial energy code.**

| Project Information      | Contact Information        |
|--------------------------|----------------------------|
| Bill Riley Communities   | Pacific Home Source LLC    |
| Copperberry Condominiums | gabe@pacifichomesource.com |

**Instructions:** This multifamily project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. Based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant.

Provide all information from the following tables as building permit drawings: Table R402.1 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and 406.3 - Energy Credits.

|  |                        |
|--|------------------------|
| <b>Authorized Representative</b>  | <b>Date</b> 03/01/2023 |
|--|------------------------|

| All Climate Zones (Table R402.1.1)      |                      |                       |
|---|----------------------|-----------------------|
|   | R-Value <sup>a</sup> | U-Factor <sup>a</sup> |
| Fenestration U-Factor <sup>b</sup>      | n/a                  | 0.30                  |
| Skylight U-Factor <sup>b</sup>          | n/a                  | 0.50                  |
| Glazed Fenestration SHGC <sup>b,e</sup> | n/a                  | n/a                   |
| Ceiling <sup>e</sup>                    | 49                   | 0.026                 |
| Wood Frame Wall <sup>g,h</sup>          | 21 int               | 0.056                 |
| Floor                                   | 30                   | 0.029                 |
| Below Grade Wall <sup>ch</sup>          | 10/15/21 int + TB    | 0.042                 |
| Slab <sup>d,f</sup> R-Value & Depth     | 10, 2 ft             | n/a                   |

- <sup>a</sup> R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed R-value of the insulation from Appendix Table A101.4 shall not be less than the R-value specified in the table.
- <sup>b</sup> The fenestration U-factor column excludes skylights.
- <sup>c</sup> "10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" 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. "5TB" means R-5 thermal break between floor slab and basement wall.
- <sup>d</sup> R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.
- <sup>e</sup> For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.
- <sup>f</sup> R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.
- <sup>g</sup> For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for climate zone 5 of ICC 400.
- <sup>h</sup> Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

|                                    |
|------------------------------------|
| <b>For Building Officials Only</b> |
|                                    |



**2018 Washington State Energy Code – Residential  
Prescriptive Energy Code Compliance for All Climate Zones in Washington  
Multifamily (effective February 1, 2021)**

Each dwelling unit *in a residential building* shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) so as to achieve the following minimum number of credits:

- **Multifamily R2 Dwelling Unit: 4.5 credits**

Before selecting your credits on this Summary table, review the details in Table 406.3 (Multifamily), on page 3.

| Summary (Table R406.2 and 406.3) |  |  |  |
|----------------------------------|--|--|--|
| Heating Options                  | Fuel Normalization Descriptions  | Credits - select ONE heating option                                | User Notes   |
| 1                                | Combustion heating minimum NAECA <sup>b</sup>                          | 0.0 <input type="checkbox"/>                                       |  |
| 2                                | Heat pump <sup>c</sup>   | 1.0 <input checked="" type="checkbox"/>                            |  |
| 3                                | Electric resistance heat only - furnace or zonal                       | -1.0 <input type="checkbox"/>                                      |  |
| 4                                | DHP with zonal electric resistance per option 3.4                      | na <input type="checkbox"/>  |  |
| 5                                | All other heating systems  | -0.5 <input type="checkbox"/>                                      |  |
| Energy Options                   | Energy Credit Option Descriptions                                      | Credits - select ONE energy option from each category <sup>d</sup> |  |
| 1.1                              | Efficient Building Envelope  | 0.5 <input type="checkbox"/>                                       |  |
| 1.2                              | Efficient Building Envelope  | 1.0 <input type="checkbox"/>                                       |  |
| 1.4                              | Efficient Building Envelope  | 1.0 <input type="checkbox"/>                                       |  |
| 1.5                              | Efficient Building Envelope  | 1.5 <input type="checkbox"/>                                       |  |
| 1.6                              | Efficient Building Envelope  | 2.0 <input type="checkbox"/>                                       |  |
| 1.7                              | Efficient Building Envelope <input type="checkbox"/>                   | 0.5 <input type="checkbox"/>                                       |  |
| 2.1                              | Air Leakage Control and Efficient Ventilation                          | 1.0 <input type="checkbox"/>                                       |  |
| 2.2                              | Air Leakage Control and Efficient Ventilation                          | 1.5 <input type="checkbox"/>                                       |  |
| 2.3                              | Air Leakage Control and Efficient Ventilation                          | 2.0 <input type="checkbox"/>                                       |  |
| 2.4                              | Air Leakage Control and Efficient Ventilation <input type="checkbox"/> | 2.5 <input type="checkbox"/>                                       |  |
| 3.1 <sup>a</sup>                 | High Efficiency HVAC   | 1.0 <input type="checkbox"/>                                       |  |
| 3.3 <sup>a</sup>                 | High Efficiency HVAC   | 1.0 <input type="checkbox"/>                                       |  |
| 3.4                              | High Efficiency HVAC   | 2.0 <input type="checkbox"/>                                       |  |
| 3.6 <sup>a</sup>                 | High Efficiency HVAC <input type="checkbox"/>                          | 3.0 <input checked="" type="checkbox"/>                            |  |
| 4.1                              | High Efficiency HVAC Distribution System                               | 0.5 <input type="checkbox"/>                                       |  |
| 5.1 <sup>d</sup>                 | Efficient Water Heating  | 0.5 <input type="checkbox"/>                                       |  |
| 5.2                              | Efficient Water Heating  | 0.5 <input checked="" type="checkbox"/>                            |  |
| 5.3                              | Efficient Water Heating  | 1.0 <input type="checkbox"/>                                       |  |
| 5.4                              | Efficient Water Heating  | 2.0 <input type="checkbox"/>                                       |  |
| 5.5                              | Efficient Water Heating  | 2.5 <input type="checkbox"/>                                       |  |
| 5.6                              | Efficient Water Heating <input type="checkbox"/>                       | 3.0 <input type="checkbox"/>                                       |  |
| 6.1 <sup>e</sup>                 | Renewable Electric Energy (3 credits max)                              | 1.0 <input type="checkbox"/>                                       |  |
| 7.1                              | Appliance Package  | 1.5 <input type="checkbox"/>                                       |  |
| <b>Total Credits</b>             |  |  | <input type="button" value="Calculate Total"/> <input type="button" value="Clear Form"/> |

- a. An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
- b. Equipment listed in Table C403.3.2(4) or C403.3.2(5)
- c. Equipment listed in Table C403.3.2(1) or C403.3.2(2)
- d. **You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.**
- e. 1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max. See Table R406.2 for full requirements and complete option descriptions.
- f. Use the single radiobutton in the upper right of the second column to deselect radiobuttons in that group.

**Please print only pages 1 and 2 of this worksheet for submission to your building official.**

### Window, Skylight and Door Schedule

*Project Information*

|              |
|--------------|
| Copperberry  |
| BRC Family   |
| Puyallup, WA |

*Contact Information*

|                            |
|----------------------------|
| Pacific Home Source        |
| 253.312.5523               |
| gabe@pacifichomesource.com |

|  | Ref. | U-factor | Width |      | Height |      | Area | UA   |
|--|------|----------|-------|------|--------|------|------|------|
|  |      |          | Qt.   | Feet | Inch   | Feet |      |      |
| Exempt Swinging Door (24 sq. ft. max.)       |      |          |       |      |        |      | 0.0  | 0.00 |
| Exempt Glazed Fenestration (15 sq. ft. max.) |      |          |       |      |        |      | 0.0  | 0.00 |

### Vertical Fenestration (Windows and doors)

| Component Description | Ref. | U-factor | Width |      | Height |      | Area | UA   |       |
|-----------------------|------|----------|-------|------|--------|------|------|------|-------|
|                       |      |          | Qt.   | Feet | Inch   | Feet |      |      | Inch  |
| Entry Door            | A    | 0.30     | 1     | 3    | 0      | 6    | 8    | 20.0 | 6.00  |
| Dining                | A    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Mbed                  | A    | 0.30     | 1     | 2    | 0      | 5    | 0    | 10.0 | 3.00  |
| Mbed                  | A    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Bedroom 2             | A    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Living Room           | A    | 0.30     | 1     | 6    | 0      | 6    | 0    | 36.0 | 10.80 |
| Entry Door            | D    | 0.30     | 1     | 3    | 0      | 6    | 8    | 20.0 | 6.00  |
| Living Room           | D    | 0.30     | 1     | 6    | 0      | 6    | 0    | 36.0 | 10.80 |
| Bedroom 2             | D    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Mbed                  | D    | 0.30     | 1     | 2    | 0      | 5    | 0    | 10.0 | 3.00  |
| Mbed                  | D    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Entry Door            | B    | 0.30     | 1     | 3    | 0      | 6    | 8    | 20.0 | 6.00  |
| Den/Bedroom           | B    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Mbed                  | B    | 0.30     | 1     | 2    | 0      | 5    | 0    | 10.0 | 3.00  |
| Bbed                  | B    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Bedroom               | B    | 0.30     | 1     | 6    | 0      | 4    | 6    | 27.0 | 8.10  |
| Living Room           | B    | 0.30     | 1     | 4    | 0      | 6    | 0    | 24.0 | 7.20  |
| Living Room           | B    | 0.30     | 1     | 6    | 0      | 6    | 0    | 36.0 | 10.80 |
| Entry Door            | E    | 0.30     | 1     | 3    | 0      | 6    | 8    | 20.0 | 6.00  |
| Living Room           | E    | 0.30     | 1     | 6    | 0      | 6    | 0    | 36.0 | 10.80 |
| Living Room           | E    | 0.30     | 1     | 4    | 0      | 6    | 0    | 24.0 | 7.20  |
| Bedroom               | E    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Mbed                  | E    | 0.30     | 1     | 2    | 0      | 5    | 0    | 10.0 | 3.00  |
| Mbed                  | E    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Den/Bedroom           | E    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Entry Door            | F    | 0.30     | 1     | 3    | 0      | 6    | 8    | 20.0 | 6.00  |
| Dining                | F    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Mbed                  | F    | 0.30     | 1     | 2    | 0      | 5    | 0    | 10.0 | 3.00  |
| Mbed                  | F    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Bedroom 2             | F    | 0.30     | 1     | 6    | 0      | 5    | 0    | 30.0 | 9.00  |
| Entry Door            | C    | 0.30     | 1     | 3    | 0      | 6    | 8    | 20.0 | 6.00  |
| Living Room           | C    | 0.30     | 1     | 6    | 0      | 6    | 0    | 36.0 | 10.80 |
| Living Room           | C    | 0.30     | 1     | 5    | 0      | 4    | 6    | 22.5 | 6.75  |
| Bedroom               | C    | 0.30     | 1     | 6    | 0      | 4    | 6    | 27.0 | 8.10  |
| Mbed                  | C    | 0.30     | 1     | 2    | 0      | 5    | 0    | 10.0 | 3.00  |

|            |     |      |
|------------|-----|------|
| Mbed       | C   | 0.30 |
| Back doors | A-F | 0.30 |
|            |     |      |
|            |     |      |
|            |     |      |
|            |     |      |
|            |     |      |

|   |   |   |   |   |
|---|---|---|---|---|
| 1 | 6 | 0 | 5 | 0 |
| 6 | 3 | 0 | 6 | 8 |
|   |   |   |   |   |
|   |   |   |   |   |
|   |   |   |   |   |
|   |   |   |   |   |
|   |   |   |   |   |

|       |       |
|-------|-------|
| 30.0  | 9.00  |
| 120.0 | 36.00 |
| 0.0   | 0.00  |
| 0.0   | 0.00  |
| 0.0   | 0.00  |
| 0.0   | 0.00  |
| 0.0   | 0.00  |

Sum of Vertical Fenestration Area and UA  
Vertical Fenestration Area Weighted U = UA/Area

|        |        |
|--------|--------|
| 1024.5 | 307.35 |
|        | 0.30   |

**Overhead Glazing (Skylights)**

| Component Description | Ref. | U-factor |
|-----------------------|------|----------|
|                       |      |          |
|                       |      |          |
|                       |      |          |
|                       |      |          |
|                       |      |          |
|                       |      |          |

| Qt. | Width |      | Height |      |
|-----|-------|------|--------|------|
|     | Feet  | Inch | Feet   | Inch |
|     |       |      |        |      |
|     |       |      |        |      |
|     |       |      |        |      |
|     |       |      |        |      |
|     |       |      |        |      |
|     |       |      |        |      |

| Area | UA   |
|------|------|
| 0.0  | 0.00 |
| 0.0  | 0.00 |
| 0.0  | 0.00 |
| 0.0  | 0.00 |
| 0.0  | 0.00 |
| 0.0  | 0.00 |

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

|     |      |
|-----|------|
| 0.0 | 0.00 |
|     | 0.00 |

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

|        |        |
|--------|--------|
| 1024.5 | 307.35 |
|--------|--------|

### Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 Washington State Energy Code (WSEC) and ACCA Manuals J and S. This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 956-2042 for assistance.

#### Project Information

|                          |
|--------------------------|
| Copperberry Condominiums |
| BRC Family               |
| Puyallup, WA             |

#### Contact Information

|                            |
|----------------------------|
| Pacific Home Source        |
| 253.312.5523               |
| gabe@pacifichomesource.com |

**Heating System Type:**  All Other Systems  Heat Pump

To see detailed instructions for each section, place your cursor on the word "Instructions"

#### Design Temperature

[Instructions](#)

Design Temperature Difference ( $\Delta T$ ) 51  
 $\Delta T = \text{Indoor (70 degrees)} - \text{Outdoor Design Temp}$

#### Area of Building

##### Conditioned Floor Area

[Instructions](#) Conditioned Floor Area (sq ft)

##### Average Ceiling Height

[Instructions](#) Average Ceiling Height (ft)

Conditioned Volume 61,632

#### Glazing and Doors

[Instructions](#)

**U-Factor X Area = UA**  
 0.280  286.86

#### Skylights

[Instructions](#)

**U-Factor X Area = UA**  
 0.50  ---

#### Insulation

##### Attic

[Instructions](#)

**U-Factor X Area = UA**  
 0.026  143.44

##### Single Rafter or Joist Vaulted Ceilings

[Instructions](#)

**U-Factor X Area = UA**  
 ---  ---

##### Above Grade Walls (see Figure 1)

[Instructions](#)

**U-Factor X Area = UA**  
 0.056  276.19

##### Floors

[Instructions](#)

**U-Factor X Area = UA**  
 0.025  137.93

##### Below Grade Walls (see Figure 1)

[Instructions](#)

**U-Factor X Area = UA**  
 0.028  ---

##### Slab Below Grade (see Figure 1)

[Instructions](#)

**F-Factor X Length = UA**  
 0.303  ---

##### Slab on Grade (see Figure 1)

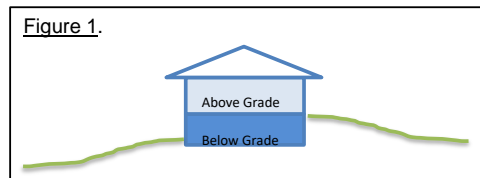
[Instructions](#)

**F-Factor X Length = UA**  
 ---  ---

#### Location of Ducts

[Instructions](#)

**Duct Leakage Coefficient**  
 1.00



|   |                   |
|---|-------------------|
| <b>Sum of UA</b>  | 844.42            |
| <b>Envelope Heat Load</b>   | 43,065 Btu / Hour |
| <i>Sum of UA x <math>\Delta T</math></i>                              |                   |
| <b>Air Leakage Heat Load</b>  | 33,947 Btu / Hour |
| <i>Volume x 0.6 x <math>\Delta T</math> x 0.018</i>                   |                   |
| <b>Building Design Heat Load</b>                                      | 77,012 Btu / Hour |
| <i>Air leakage + envelope heat loss</i>                               |                   |
| <b>Building and Duct Heat Load</b>                                    | 77,012 Btu / Hour |
| <i>Ducts in unconditioned space: sum of building heat loss x 1.10</i> |                   |
| <i>Ducts in conditioned space: sum of building heat loss x 1</i>      |                   |
| <b>Maximum Heat Equipment Output</b>                                  | 96,265 Btu / Hour |
| <i>Building and duct heat loss x 1.40 for forced air furnace</i>      |                   |
| <i>Building and duct heat loss x 1.25 for heat pump</i>               |                   |