

[bundle] design studio

Felicity | Bellingham, WA | BundleDesignStudio.com



"I have a lot of allergies..., and this year I haven't had to take a single pill." Homeowner



PROJECT DATA

- Layout: 3 bdrm, 2.5 bath, 2 fls, 1,741 ft²
- Climate: IECC 4C, marine
- Completed: January 2021
- Category: Attached Housing

KEY FEATURES

- Walls: 2x6, 24" o.c., R-26 total: advanced framed; dense-packed cellulose in cavity, 1/2" CDX plywood with all nails, joints, and holes taped. 2" cork, weather resistant barrier, 1x vertical + 1x horizontal battens, 1.25" Juniper open-joint cladding.
- **Roof:** Gable roof: 16" parallel cord trusses dense-packed with cellulose, topped with taped membrane, 2x battens for air gap, 1/2" plywood sheathing, self-adhered membrane,

MODELED PERFORMANCE DATA

- HERS Index: without PV 35; with PV 0
- **Annual Energy Costs:** without PV \$500; with PV \$100
- Annual Energy Cost Savings: (vs typical new homes) without PV \$600; with PV \$1,000
- **Annual Energy Savings:** without PV 7,300 kWh; with PV 12,800 kWh
- Savings in the First 30 Years: without PV \$23,700; with PV \$41,500

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Energy Efficiency & Renewable Energy

standing seam metal roof. Flat roof: 2x10 rafters dense-packed with cellulose, $\frac{1}{2}''$ plywood sheathing taped, R-12 tapered polyisocyanurate foam board, TPO membrane.

- Attic: No attic, cathedral ceilings, hot roof.
- Foundation: Vented crawl space. Floor joists have 16" R-43 dense-packed cellulose.
- Windows: Triple-pane, argon-filled, low-e2, fiberglass frame; U=0.15, SHGC=0.43.
- Air Sealing: 0.88 ACH50, roof membrane taped to wall sheathing; all seams taped.
- Ventilation: HRV, ERV in ADU, MERV 13 filters, boost switches in bathrooms.
- HVAC: Central heat pump, 12.2 HSPF, 17.7 SEER, AC variable-speed compressor.
- Hot Water: Heat pump, 2.90 EF, 80-gal, compact plumbing design, recirculation pump.
- Lighting: 100% LED.
- Appliances: ENERGY STAR refrigerators, dishwashers, clothes washers, ventless HP dryers.
- Solar: 6.38-kW rooftop panels.
- Water Conservation: Low-flow fixtures, PEX piping, compact plumbing.
- Energy Management System: N/A
- **Other:** Accessible ramp, kitchen, shower. Low-VOC flooring, cabinetry, paint.



For more information on the **DOE Zero Energy Ready Home** program, go to http://energy.gov/eere/buildings/zero-energy-ready-home or scan the QR code.



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