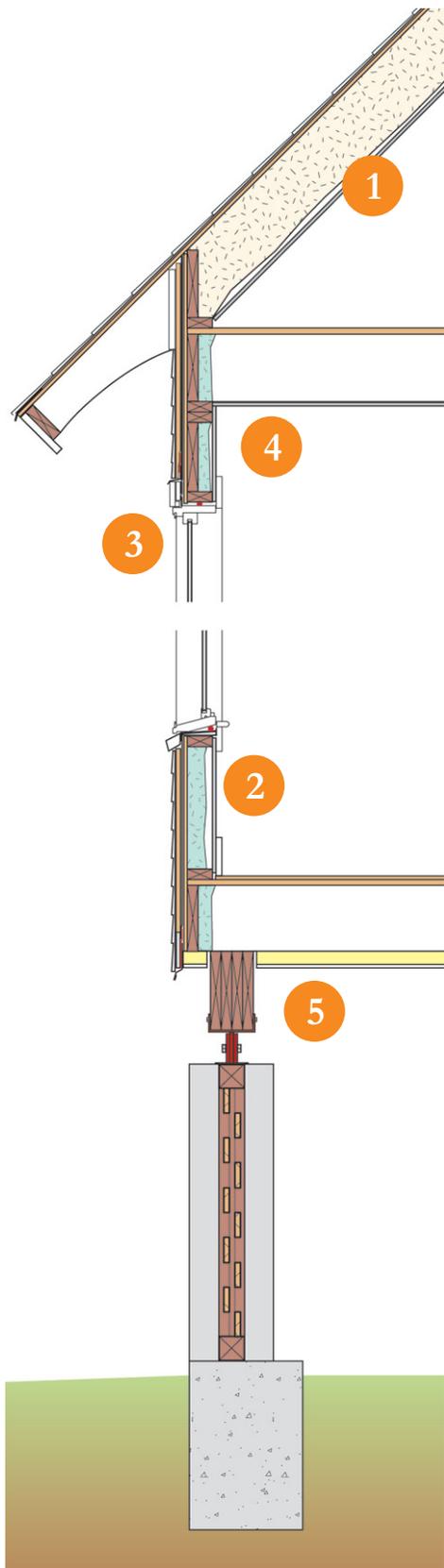


Hot-Humid Wash-N-Wear House

Green Dream 1: HERS 64



ENCLOSURE DESIGN

1 Roof Assembly: Rafter-framed unvented attic with R-33 roof insulation: 9.25" low-density spray foam in rafter bay, 1/2" treated plywood, fully-adhered membrane, high wind-rated asphalt shingles installed over the rafters, 1/2" paperless drywall installed below rafters.

2 Wall Assembly: 2x4 walls at 16" o.c. with R-16 wall insulation: 2.5" high-density spray foam in stud bay, 1/2" treated plywood, draining housewrap, 3/4" treated furring strips, fiber cement siding installed on outside face of studs, 1/2" paperless drywall installed on inside face of studs.

3 Window Specifications: General Aluminum single-hung double pane vinyl spectrally selective Low-E: U=0.37, SHGC=0.33.

4 Air Sealing: Maximum 2.5 in² leakage area per 100 ft² of enclosure area. Critical seal air sealing approach with primary air barrier maintained at interior drywall of both walls and ceiling. Secondary air barrier maintained at spray foam in both walls and roof. Adhesives and sealants used between framing members, around windows and doors, and at all mechanical and electrical penetrations through the enclosure.

5 Foundation and Floor Assembly: Concrete grade beam and adjustable pier foundation, joist-framed floor on sill beam with R-13 floor insulation: 2" foil-faced polyisocyanurate insulating sheathing installed below floor joists (all joints taped to maintain air barrier), 1/2" fiber cement protection board installed below insulating sheathing.

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MECHANICAL DESIGN

1 Heating, Cooling and Dehumidification: 9.6 HSPF/16.3 SEER air source heat pump with integrated dehumidification (AAON ACDM—air conditioner/heat pump with dehumidification mode). Interior unit installed in conditioned space with MERV 12 filter.

Ventilation: Central fan-integrated with supply only ventilation system controlled with Aprilaire controller. Outside air intake ducted to the return side of the air handler with both motorized and manual dampers.

2 Local Exhaust Ventilation: Intermittent spot exhaust provided in bathrooms and kitchen.

Space Conditioning Distribution: Air handler with **3 4** insulated sheet metal trunk and R-4.2 flex duct run-outs installed in conditioned space. **5** Ducted return from first floor with transfer grilles above bedroom doors.

6 Thermostat: RobertShaw temperature and humidification/dehumidification control.

DHW: 0.94 EF electric tank water heater.

