



Photos courtesy of Charis Homes

“Within a week, it [our son’s cough] started to clear up.” Homeowners



PROJECT DATA

- **Layout:** 3 bdrm, 3 bath, 2 fl, 2,546 ft²
- **Climate:** IECC 5A, cold
- **Completed:** October 2021
- **Category:** Custom Spec

MODELED PERFORMANCE DATA

- **HERS Index:** without PV 49
- **Annual Energy Costs:** without PV \$1,650
- **Annual Energy Cost Savings:** (vs typical new homes) without PV \$1,450
- **Annual Energy Savings:** without PV \$1,450 kWh
- **Savings in the First 30 Years:** without PV \$58,000

CONTACT

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KEY FEATURES

- **Walls:** ICF, R-22 total: 1st floor – ICF. 2nd floor – 2x4 advanced framed, fiberglass batt + 1" coated graphite EPS taped at seams, housewrap. Vinyl siding.
- **Roof:** Hip, gable truss roof: 7/16" OSB, synthetic underlayment, 36" self-adhered membrane at valleys and eaves; metal drip edge, ridge vent, 30-year architectural shingles.
- **Attic:** Vented attic, 14.8" R-50 cellulose. 3" R-51 cc spray foam or R-38 fiberglass at eaves.
- **Foundation:** Insulated basement, ICF stem walls. Dimpled plastic drainboard. Interior and exterior footing drains. Basement slab sits on gravel and thermal foil vapor barrier.
- **Windows:** Double-pane, argon, low-e, fiberglass, motorized blinds. U=0.17, SHGC=0.21.
- **Air Sealing:** 1.79 ACH50; caulk and canned spray foam at penetrations.
- **Ventilation:** ERV, connected to central air handler, ECM motor; multi-speed and boost functions. 16 MERV-filtered air purifier, dehumidifier, and humidifier added to HVAC.
- **HVAC:** Central heat pump SEER 15.0, EER 12.5; ducts sealed with aerosolized acrylic, in insulated chase. Ceiling-mounted minisplit for bonus room, SEER 19.5, EER 12.5.
- **Hot Water:** Gas tankless, 93.5% AFUE.
- **Lighting:** 100% LED, 2 ENERGY STAR solar-powered skylights.
- **Appliances:** ENERGY STAR dishwasher, refrigerator, range hood.
- **Solar:** PV ready. Trusses designed for future installation of solar panels.
- **Water Conservation:** EPA WaterSense-labeled low-flow showerheads, faucets, toilets; central manifold with PEX piping, hot water recirculation.
- **Energy Management System:** Indoor air quality sensors tied to ERV.
- **Other:** Low/no-VOC products. Recycled content insulation, concrete. EV charging.

