
"We embarked on our home-building journey with a firm focus on maximizing efficiency, comfort, and durability." Homeowners


## PROJECT DATA

- Layout: 4 bdrm, 3 bath, 2 fls, 2,775 ft²
- Climate: 3A, mixed-humid
- Completed: April 2022
- Category: Custom Spec

MODELED PERFORMANCE DATA

- HERS Index: without PV 50; with PV 26
- Annual Energy Costs: without PV \$1,700; with PV \$950
- Annual Energy Cost Savings: (vs typical new homes) without PV \$1,550; with PV \$2,300
- Annual Energy Savings: without PV 14,550 kWh; with PV 7,150 kWh


## - Savings in the First 30 Years:

 without PV $\$ 64,200$; with PV $\$ 95,400$
## CONTACT

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## KEY FEATURES

- Walls: $2 \times 416$ " o.c. $+1^{\prime \prime}$ XPS, R-18 total: advanced framed, $\mathrm{R}-13$ unfaced fiberglass batt in cavity, OSB, 1" XPS with taped seams. Composite board-and-batten siding.
- Roof: Gable \& truss shed roof: IBHS Fortified Roof, 7/16" OSB radiant barrier roof sheathing with joints taped, synthetic felt. Solar PV shingles or architectural shingles.
- Attic: Vented attic, 15" R-44 blown fiberglass on flat ceilings, 11" R-38 batt fiberglass in vaulted ceilings, $5.5^{\prime \prime}$ R-19 batt +1" XPS on kneewalls; joist bays under kneewalls blocked.
- Foundation: Unvented crawlspace. 8" CMU with top course grouted solid. Interior: 2" rigid polyiso; Exterior: liquid waterproofing, dimpled plastic drain board. 15-mil vapor barrier.
- Windows: Triple-pane, argon-filled, 2 low-e layers, vinyl frame, U=0.26, SHGC=0.22. Motorized blinds. Operable skylights with sensor-controlled motorized cellular blinds.
- Air Sealing: 1.95 ACH 50, drywall gasket at top plate, taped XPS, taped foundation-wall seam, foam at door and window rough openings.
- Ventilation: Exhaust fans, ventilating dehumidifier, PV-powered ventilating skylights.
- HVAC: Central air souce heat pump, 9.6 HSPF and 20 SEER, compact duct design, variable speed compressor, variable refrigerant flow. MERV 16 carbon filter.
- Hot Water: Heat pump water heater, 80 gallon, 4.7 UEF. Smart recirculation pump.
- Lighting and Appliances: LED lighting, ENERGY STAR appliances. Two skylights in great room. Two sun tunnels with solar-powered nightlights.
- Solar: 5.24 kW solar PV shingles, no battery.
- Energy Management System: Sensor-controlled smart thermostats.
- Other: 2 EV charging stations. Permanent roof anchors for worker fall protection.

