



# Red Tree Builders

Cane Creek | Fairview, NC | RedTreeBuilders.com



Photos courtesy of Red Tree Builders

"[Red Tree Builder's] depth of knowledge of green building...made this house incredibly energy efficient." Homeowners



## PROJECT DATA

- **Layout:** 3 bdrm, 2 bath, 2 fl, 2,019 ft<sup>2</sup>
- **Climate:** IECC 4A, mixed-humid
- **Completed:** November 2021
- **Category:** Custom for Buyer

### MODELED PERFORMANCE DATA

- **HERS Index:** without PV 54; with PV 9
- **Annual Energy Costs:** without PV \$1,250; with PV \$350
- **Annual Energy Cost Savings:** (vs typical new homes) without PV \$1,500; with PV \$2,400
- **Annual Energy Savings:** without PV 9,300 kWh; with PV 18,800 kWh
- **Savings in the First 30 Years:** without PV \$60,700; with PV \$97,350

## CONTACT

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## KEY FEATURES

- **Walls:** 2X6, 24" o.c., R-19 total: R-19 fiberglass, 7/16" coated OSB, fiber cement siding.
- **Roof:** Rafter gable roof: plywood deck, architectural shingles and metal cladding.
- **Attic:** Unvented, 7" R-28 open-cell spray foam on underside of roof deck and gable ends.
- **Foundation:** Slab on grade, CMU stem walls; 2" R-10 XPS on interior of stem wall and under slab; 6-mil vapor barrier.
- **Windows:** Double-pane, argon-filled, low-e, aluminum-clad wood, U=0.29, SHGC=0.2.
- **Air Sealing:** 1.84 ACH50, liquid flashing at stem wall to sheathing joint and holes in exterior wall; sill plates caulked; open-cell spray foam at plumbing.
- **Ventilation:** ERV, 52.5 CFM/32 watts, SRE 60, ASRE 61, integrated with HVAC. MERV 11 filter at air handler; bath fans on timer and motion sensor.
- **HVAC:** Ductless mini-split heat pumps and ducted ceiling unit, 4 air handlers, 2 outside compressors; 9 HSPF, 15 SEER, passive solar heating.
- **Hot Water:** Heat pump water heater, 50-gal, 3.45 UEF.
- **Lighting:** 100% LED, motion sensors, one solar tube.
- **Appliances:** ENERGY STAR refrigerator, dishwasher, 3 exhaust fans.
- **Solar:** 7.14-kW rooftop panels.
- **Water Conservation:** EPA WaterSense fixtures. Central manifold, PEX piping.
- **Energy Management System:** Smart thermostat with humidity sensor. Timer and motion-sensored bath fans. Occupancy sensors to control HVAC.
- **Other:** Low-emission finishes; recycled-plastic deck. Wired for EV charger.

