



Mantell-Hecathorn Builders

Falls Creek Residence | Durango, CO | M-HBuilders.com



Photos courtesy of Mantell-Hecathorn

"[This] home will cost a tiny fraction of what our [previous] house cost to operate." Homeowner



PROJECT DATA

- **Layout:** 3 bdrm, 2 bath, 2 fl + bsmt, 4,113 ft²
- **Climate:** IECC 5B, cold
- **Completed:** July 2023
- **Category:** Custom

MODELED PERFORMANCE DATA

- **ERI:** without PV 43; with PV -2
- **Annual Energy Costs:** without PV \$2,050; with PV \$150
- **Annual Energy Cost Savings:** (versus typical new homes) without PV \$2,400; with PV \$4,400
- **Annual Energy Savings:** without PV 19,760 kWh; with PV 34,020 kWh
- **Savings in the First 30 Years:** without PV \$99,900; with PV \$185,100

CONTACT

Hunter Mantell-Hecathorn
970-259-5130
hunter@m-hbuilders.com

KEY FEATURES

- **Walls:** Double wall, R-44 total: 2x4 and 2x6 24" o.c. In wall cavity: 2" closed-cell spray foam + 7.5" blown fiberglass; taped coated OSB; furring rainscreen, wood siding.
- **Roof:** Gable truss roof and vaulted rafter roof: 5/8" OSB, fully adhered asphalt membrane, standing seam metal roof.
- **Attic:** Vented attic: 20" R-70 blown fiberglass. Unvented vaulted ceilings: 7" closed-cell spray foam and 5" fiberglass batt. 18" raised-heel trusses.
- **Foundation:** Insulated basement, unvented crawlspace: 8" poured concrete stem walls, 2" XPS on interior and exterior of crawlspace walls, 2" XPS on exterior of basement walls plus 2x4 interior wall with 3" closed-cell foam.
- **Windows:** Triple-pane windows, U=0.19, SHGC=0.50. Extended eaves on south windows.
- **Air Sealing:** 2.3 ACH50; coated OSB sheathing, seams taped. Wall cavities sealed with cc spray foam. Caulked sill plate to stem walls. All ceiling penetrations and top plates sealed with foam.
- **Ventilation:** HRV, distributed system.
- **HVAC:** Central air-source heat pump, 8.5 HSPF, 18 SEER.
- **Hot Water:** Heat pump water heater, 80-gal, 2.0 EF. Combined domestic hot water and space heating. Demand recirculation.
- **Lighting and Appliances:** ENERGY STAR appliances. Induction cooktop.
- **Solar:** 8.8 kW, no battery.
- **Energy Management System:** Home automation system provides control of lighting, electronic window coverings, plumbing leak detection.
- **Other:** All-electric home.

