

Moore Family Farms Residence, South Valley, Albuquerque, NM

Hale & Sun Construction, Inc. is a small custom home builder working in the Albuquerque Metro area. Steve Hale, President of Hale & Sun Construction, Inc has been building and remodeling since 1981. All homes built are certified with Build Green NM, a certification program based on the ANSI National Green Building Standard.



The Moore Residence in Bernalillo County NM is in the final phase of certification and will be certified at the Gold Level. The projected HERS index (with out solar PV) should be HERS 48. With the installed Solar PV the home is to be HERS 29.

Green Features in the Moore Family Farms Residence

Site Work

- Selected Existing site on property of previous structure for location.
- Saved mature trees and almost all of existing alfalfa field.
- Removed expansive clay soils re-compacted with proper soils
- Kept construction traffic off of field and away from trees to avoid compaction of planting areas

Resource Efficiency

- 2' O.C. layout and framing allows for less waste and more insulation.
- Insulation and metal roof made with recycled content.
- Timbers, Flagstone, Cement Stucco are just some of the indigenous (locally manufactured) items.
- Covered porches at front and rear doors protect entries from the elements.

Energy Efficiency

- Workroom “mini split” HVAC system has a COP of 3.2 , Condensing Furnace and tankless water heater have an efficiencies in the mid 90%.
- All heating and cooling equipment is in the conditioned area of the home.
- Passive Solar Design with High Thermal Mass inside.
- Sierra Pacific windows with many glazing options and FSI certification were perfect for the many demands of a passive solar home and natural ventilation.
- 2.3 Kw solar PV systems will make this home inexpensive to operate.

- Enclosed attic is insulated with over 7” of open cell foam..
- Walls are 2x6 w/ blown in insulation plus 1 ½” rigid foam = R 30+
- Blower Door test is <2ACH50
- Strict adherence to “Thermal Bypass” features.
- Home Qualifies for both Solar and NM Sustainable Building Tax Credits
- CFL bulbs and Energy Star fixtures throughout the home.

Water Efficiency

- 1.28 HET dual flush toilets
- “Water Sense” faucets 1.5 gpm max
- 1.5 gpm Shower heads.
- Organic Farming has subsurface irrigation for water efficiency.

Indoor Air Quality

- Motion sensing ventilation meets ASHRAE 62.2 for proper air changes.
- Zero VOC paints, Water based sealers on wood ceiling and concrete floors.
- Hard surface flooring (no carpet)
- No ductwork in garage and continuous air barrier between garage and home.
- Exhaust fans vent to outside and are energy star possible.
- Water heater and furnace are sealed combustion.
- Fireplace is outside no possible contamination of indoors from back drafting.

What is behind and underneath what you see?



Prepping for the slab Radon Mitigation and insulation

After the foundation is poured we insulate the inside of the stem wall with 2" rigid Dow insulation (R-10) and then back fill, compact and lay 4" of gravel. On top of the gravel another 2" Dow insulation board is placed 4' around the perimeter of the foundation. 6 mil plastic is laid on top of this and venting is installed for passive radon mitigation. If this were to have radiant heat in the slab then the Dow Board would have been put under the entire slab.

Advanced Framing Structure and Room for Insulation

2' O.C. Framing, ladder framing at wall intersections, "California Corners" and more allow for the most insulation. After framing entire structure is sheathed in OSB. Water barrier is next before windows are installed. Final stage of framing is to add 1 1/2" Dow insulation for continuous insulation. The end product is a wall that is greater than R-30 (Net and blown fiberglass insulation of R 23+ and foam insulation of R 7.5). Picture to the right is of south porch area before Kiva fireplace was started.



Dealing with trash

Construction waste is a huge contributor to the landfills, but it doesn't have to be.

Framing lumber is sorted for later use and backing. The leftover scrap and OSB was taken to "Wood you Recycle" and recycled into pellets for pellet stoves. Cardboard, metal, plastics, concrete are recycled as well.

Styrofoam is one item that is no longer but should be recycled in NM. A real shame as there is a lot of that in the packaging for light and plumbing fixtures.



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Product/Service	Company	Contact	Phone	Website	Address
Cement-based & indigenous stucco products	El Rey Stucco / ParexUSA		505.873.1180	www.elrey.com	
Professional tree trimming	Shurcan Tree and Lawn Care	Robert Fraser, certified arborist	505.269.1241		
Windows	Sierra Pacific Windows	Andrea White	505.797.7880	www.sierrapacificwindows.com	8601 President Pl NE, Albuquerque, NM 87113
*Designer/Builder	Hale & Sun Construction	Steve Hale	505.688.5335	www.halesun.comHale_Sun.html	1418 Cornell Dr NE, Albuquerque NM 87106
Finger-jointed framing lumber	Hunter Building Materials	Jack Owens	505.281.4451		N Frontage Rd, Edgewood, NM
HVAC	Thompson Heating and Air Conditioning	Dan Thompson	505.884.2675		3418 Girard Blvd N E
Insulation	Miller's Insulation	Paul Schultz	505.924.2214	www.millersinsulation.com	424 Kinney Ave NE, Albuquerque, NM 87102
Low/no-VOC paints	Harmony by Sherwin Williams		505.822.0604	www.Sherwin-Williams.com	5901 Wyoming Blvd NE Ste Z, Albuquerque, NM 87109
Metal roofing	Alvarado Roofing		505.842.7663	www.alvaradoroofing.com	2315 Broadway SE, Albuquerque NM, 87102
Metal roofing	Metal Mart		505.243.1161	www.metalmarts.com	
Navien tankless water heater; low-flow faucets & shower heads	Doc Savage Supply	Dave: Heaters; Carla: Fixtures	505.884.2656		600 Candelaria Rd NE
Panasonic WhisperGreen fans	Ira Woods & Sons Inc.	Bought online	800.472.9923	www.irawoods.com	620 Salem Drive, Owensboro KY 42303
Soils engineering	Earthworks Engineering Group LLC		505.899.4886	www.earthworksengineeringgroup.com	314 El Pueblo NW, Albuquerque, NM 87114
Soils work	Valley Tractor	Victor Baca	505.877.3659		

This list is not meant to be an endorsement of any company, product or service. Accuracy of data is not guaranteed.

