



Morning Glory Meadows

8345 North Morning Glory Road Paradise Valley, Arizona



DEVELOPER/ BUILDER/ DESIGNER
MRA Custom Homes, LLC

Michael Abatemarco, Principal
Dominick Abatemarco, Principal
Chris Watts, Principal

480-451-9899
dominick@m_homes.com
www.mrahomes.com

PROJECT BACKGROUND

MRA's desire to create unique custom homes with uncompromising quality, timeless beauty, and lasting value has established them as one of the valley's premier luxury home builders. For over 30 years they have been creating living environments second to none in design, build quality, and style firmly rooted in old world tradition.

MRA has been proud to incorporate sustainability throughout their practices since their company's inception. It is through their acute attention to detail MRA has developed Morning Glory Meadows Lot 2. This home showcases many sustainable attributes, while delivering the old world charm they are known for. For a detailed explanation of this homes sustainable attributes please see the following pages.

MRA Custom Homes is committed to providing sustainability through world class luxury homes built with your lifestyle in mind.

www.mrahomes.com

ENERGY COST SAVINGS

This home achieves major improvements over Energy Star for Homes performance standards in energy cost savings.

CO2 reduction: The actual savings by design from the Solar Photovoltaic system can be estimated at

7,250 kWh output a year OR 9,932 pounds of CO2*

Which is equivalent to:
Saving 1.65 acres of trees. So...

683 large trees were saved by the photovoltaic system energy savings!

*according to the EPA calculator for equivalencies



Green Ideas™

Below is a sample of Certification Systems taken into account during design & construction:



SUSTAINABLE INTERIORS

Strategies & Products

Benefits & Results

Carbon Monoxide detectors

Protect occupants from toxic CO2 levels.

Zero use of CFC-based refrigerants in HVAC&R systems

Limits the use of chlor-flouro carbons and the contribution of greenhouse gases to global warming.

Flooring Systems

Flooring systems include natural stone, 100% wool carpet, and wood flooring comprised of 3/4" plywood subfloor with solid 3/4" hand finished planks.

Local and regional material building materials utilized

Supports local industry and contributes to the use of vernacular building materials. It also minimizes the impact of transport thus reducing the carbon footprint.

High performance Energy Star rated appliances

Reduces energy consumption thus reducing energy bills.

Trane/ Venmar Air Exchanger

Air Purification System filters indoor air 24 hours a day. Most effectively filters airborne particles, such as pet dander, lint, dust and mold spores.

Low VOC emitting materials on the interior, including all adhesives, sealants, paints, and coatings

Used to prevent indoor environmental air quality contamination.



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BUILDING ENVELOPE

Strategies & Products

Energy efficient building envelope

A high performance exterior block stucco finish includes 8" masonry walls, with 1" continuous rigid insulation, combines to form a 14" thick exterior wall system

Tech Shield Radiant Barrier

High performance glazing

Mud Set Natural clay roof tiles

Benefits & Results

Reduces heat loss and air leaks saving energy and reducing the size of HVAC systems. Glazing is used efficiently to minimize the effect on energy consumption. The façade design uses optimal overhangs to keep heat gain low in the summer but allow daylight into the building during the winter months.

Creates an R-Value of 27. R-19 batt insulation was used on all interior walls. The wall system combines optimal energy savings, acoustical privacy, & a superior R-value to make a significant contribution to building energy efficiency.

This roofing product is certified as an Energy Star Partner and used to reflect solar radiation thus reducing energy consumption to cool/ heat the home.

Eagle windows and doors block radiant heat with minimum visible light transmittal loss by using low E4 glass. Thermal bridging is prevented by using high performance window sealants and spacers separating two panes of glass. Low-E4 glass is up to 57% more energy efficient in summer and up to 42% more energy efficient in winter.

Used to last over the lifetime of the home.



Green Ideas™

WATER EFFICIENCY

Strategies & Products

Sonoran Desert native vegetation carefully composed and selected for water efficient landscaping, the use of native grasses, flowers, shrubs, and trees

Low-flow water closets, lavatories, and fixtures

Roof mounted solar thermal water heaters with recirculation pumps

On-site well

Water Filtration System

Benefits & Results

Reduces the total potable (drinking) water used for irrigation.

Maximizes savings from flow rates & flush rates for fittings & fixtures. Savings in indoor domestic water use reduction from baseline EPA 1992 Standards, EPA 2005, UPC 2006, and IPC 2006.

Uses the power of the sun instead of purchased energy to create hot water.

Natural potable well water available on-site

Potassium softener water filtration/ purification to ensure optimal water quality.

ENERGY CONSERVATION

Strategies & Products

Solar photovoltaic system – 4.2 kW system

Efficient use of daylight

Vantage home lighting control system

Occupancy Sensors

High-performance Heating, Ventilation, and Air Conditioning (HVAC) – Units are 17.5-19.00 Seasonal Energy Efficiency Ratio (SEER) – 2 speed and variable speed units, zoning system

Benefits & Results

\$30,326 savings estimate over 20 years due to the 7,250 kWh output.

Reduces need for artificial light in order to minimize effect on energy efficiency.

Minimizes lighting impact on energy consumption by responding to the amount of daylight entering a space thereby reducing energy consumption.

Light fixtures will turn off automatically in most areas when unoccupied saving energy throughout the home.

Significant performance improvement over baseline standards with a Trane variable speed units, Trane zoning and dampening system, 3 fresh air ventilation systems, and exhaust systems included in all garages.





**M.R.A. Custom Homes L.L.C.
10559 N. 119th Place
Scottsdale, AZ 85259**

**(480) 451-9899 office
(480) 614-1104 fax
www.mrahomes.com**

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