

Summary of Features of New Home
3560 Wm B Travis Lane
Brenham, Texas 77833

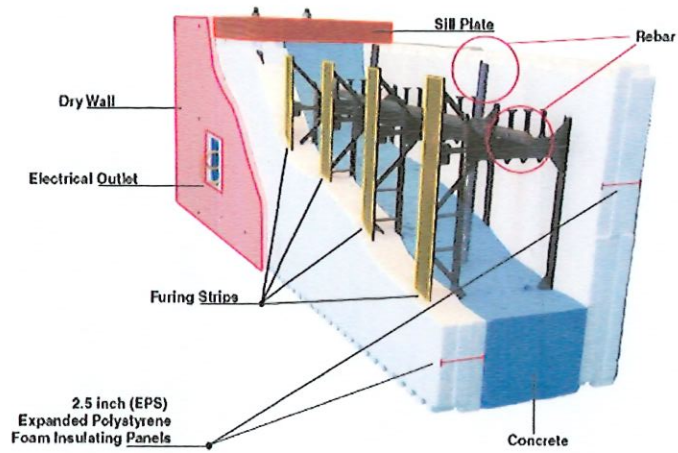
1. Method of Construction.

- a. Insulated Concrete Shell: The main structure of the home is insulated, steel reinforced concrete. The exterior walls through most of the home were constructed by building a form from hollow blocks of insulation that are approximately 12 inches thick with a void of about 8 inches. Rebar is placed in the void (both vertically and horizontally) and then the void is filled with a continuous pour of concrete. (See attached photos) The result is a wall that is approximately a foot thick including 3" of insulation on both the inside and outside surface. Exceptions are the garage portion of the structure and the south side of the structure which has a series of windows and doors. These portions are standard wood frame construction. The exterior of the shell is finished in stucco and stone. The result is a structure that has excellent insulation characteristics for both energy and noise and which is extremely resistant to high winds, attack by pests or deterioration due to moisture.
 - b. Metal Roof: The roof is a standing seam steel roof that provides long life and additional resistance to heat and cold.
 - c. The resulting combination creates a home that is energy efficient, resistant to fire, wind and pests, and is relatively low maintenance.
2. Rainwater collection capability: The gutters and downspouts are tied by underground piping to discharge at a point just to the southeast of the structure. Installation of a collection tank and appurtenances is all that is required to have a fully functional rainwater collection system.
 3. Blackwater/Graywater separation: Toilets and any contaminated discharge points are piped to a standard septic tank and septic field. Other water discharge points are piped separately to a collection tank with an overflow to a surface discharge point located at the west of the home. This allows for future use of the gray water for lawn watering by installation of a pump in the gray water separation tank.
 4. Solar Tubes: A solar tube is a type of skylight that "pipes" sunshine into locations in the home not necessarily adjacent to the roof. A lens installed in the roof collects the sunshine and directs it into a highly polished pipe that reflects the light to a lens mounted in the ceiling of the room inside the home, providing light (but not much of the heat) into the area. (See attached illustration). Three solar tubes are installed: One is over the entrance way into the home, one is in the master bathroom, and one is in the upstairs lobby area.
 5. Solar Power System/Carport: The home a solar power array installed at the northwest corner of the home. The installation is built at an elevation that allows it to also be used as a carport. The system is grid connected, meaning that when its production is less than what the home requires, the additional power needed is automatically supplied from the grid. At times when the power from the solar system is greater than the home requires, the excess power is fed back to the utility, further reducing the electric bill. Note that if a similar carport were constructed, it would be subject to property tax, but as a solar system, the structure is exempt from property taxation.
 6. Water wells and pumps: There are three water wells on the property. One well is associated with the small house on the property. A second well was constructed to serve the newer large house on the property. That well is equipped with a 2 horsepower pump which delivers excellent water pressure and flow. The third well was installed as a back-up well, and is equipped with a special AC/DC capable pump and can be powered by a portable generator or could be connected (in the future) to the existing or a separate solar system to provide water supply in the event of any sustained grid outage.
 7. Solid Doors: All doors throughout the house are solid construction.
 8. Closet Lights: Most of the closet doors (including the pantry) are equipped with automatic switches to turn on the light when the door is opened, eliminating the need to search for and turn on the switch.

9. Wheelchair Accessibility: The downstairs area is laid out to allow for wheelchair access. Wide doors are provided into both downstairs bedrooms and bathrooms, and the second downstairs shower has low barrier entrance to allow easy access.
10. Murphy Bed (pull down bed): The second downstairs bedroom is equipped with a Murphy bed, allowing the room to be used as an auxiliary room (with the bed up) or as a bedroom. (Photos)
11. Patio Propane Supply: Propane is piped from the main supply system to a connection point on the patio to allow a gas grill to be used without having to continually by portable propane tanks.
12. Easy Access to HVAC equipment: The furnace and a/c evaporator equipment are located on the second level of the home in the room over the garage, allowing easy walk in access for routine maintenance and service (as opposed to climbing up into the attic).
13. PEX piping system: The water supply system in the house uses and PEX system where water supply to each use point can be turned on/off at a single panel located in the garage. (Photo) Additionally, the PEX piping is very resistant to freeze damage compared to PVC or copper. The PEX piping is capable of experiencing a freeze/thaw without failure (although it can happen) (Note one exception—hot water faucets in the master bedroom are all controlled from one point on the PEX panel).
14. Master Bath Hot Water Booster: Because the Master Bath is located at the opposite end of the house from the main water heater, a booster water heater is installed in the attic above the Master Bath. (Photo) This heater is supplied from the main water heater. This minimizes the wait time to get hot water at the tap in the Master Bath. (This is the reason that the Master Bath hot water taps are controlled from one point on the PEX panel).
15. Indirect Lighting in Great Room and Second Downstairs Bedroom: Indirect light is available in the Great Room and the second downstairs bedroom via rope lighting installed behind the molding in these rooms.

INSULATED CONCRETE FORM

ILLUSTRATIONS





SOLAR TUBE ILLUSTRATION

