

7 Essential Steps To Straw Bale Success - Day 2

Design Criteria for Straw Bale



DESIGN STYLES

There are many styles of homes to choose from and many aspects of a home design which need to be considered before a final decision is made. For example, what are the weather conditions in your area? If you experience a lot of rain, either seasonally or throughout the year, a Pueblo style home like the one above would not be a good choice. If, however, you live in an area which receives little or no rain during the year, this may be an appropriate home design for you to consider. The style of home, and the details of how it is designed, play a large role in the efficiency of the home, so don't rush the process. Take a little extra time to ensure that your choices are the best match for your property.

SITE EVALUATION AND VISITS

An excellent way to decide what design is best for your land is to fully understand the property before you begin to design. If you are able to delay the design and construction of the home, it is a great practice to live on the land in a temporary structure and watch how the land interacts throughout the year with the cycles of nature. You may discover, for example, that the area you thought was so beautiful is actually a wind tunnel for most of the year or that the spot you had no interest in proves to have the best solar access and natural ventilation. Only experience can show you these truths.

WATER CONSIDERATIONS



Pay attention to how water flows on your property. Perhaps you do not have an obvious creek or other visible body of water, but when it rains, the water has to go somewhere. Watch where the water goes so you can know where to build and where not to build. Watch for puddles and other areas of stagnant water. In addition, look for clues that could indicate the presence of ground water. Unless you are on city facilities, you will most likely require a well. The closer you place the building site to the well, the less expensive it will be to bring the water to the house. That said, you will also need to consider where your leach field for the septic system or grey and black water treatment system will be situated. The well must be located a safe distance from this area, yet, the field also needs to be close

enough to the house to minimize costs. Whenever possible, it is best to keep the well uphill from the drain field so no waste can flow down into the drinking water supply. Therefore, part of watching the way

water interacts with your land should include an understanding of the topography and, to some extent, the geology of the property.

SOLAR TRACKING



The movement of the sun is vital to an efficient home. For example, it is possible to harness the power of the sun for both electricity and heating needs. Do you know where the sun travels across your land at different times of the year? Do you know how to watch the moon in order to understand the path of the sun 6 months in the future? These details can affect the size of the roof overhangs as an overhang too large may block the sun you want to enter the building in the winter while too short of an overhang may allow the summer sun in when you don't want it. Know the angle of the sun in your latitude by studying the angle of the moon.

Prevailing winds, tree locations, slope of the land: all these details must be fully investigated before the home design is started. Truly understand your land and the design of your home will undoubtedly be more appropriate.

DESIGN CONSIDERATIONS

Once you know your land intimately and you have decided where the house will go and which direction it will face, the time has come to design the home. As you have already learned, straw bale walls are ideal for sound proofing and for insulation. Use this information to design a home that balances the need for insulation with that of light and ventilation. Design a home balanced with sound protection and view sheds. Keep in mind that proper window placement can reduce heating and cooling costs while improper placement can raise them both. Just because a view is nice does not mean that a bank of windows is necessary to appreciate it. After all, how much is that view worth? Ask yourself that question because you may be paying for that view every month when you get your power and gas bill.



The less impact you have on the land when building, the more cost efficient the home will be. If you have to spend more money on excavation and retaining walls than on building your house, the site may not have been used to its best potential. The more you design *with* the land: its topography, water, wind, solar access and flora, the more the home will be a part of the landscape and thus be a part of the world in which you live. If your home is a part of the land rather than a structure stuck on top of it, you will work less to keep it functioning in efficient harmony with nature.

Tomorrow we'll look at the best way to select bales for your straw bale project.

Happy Baling,

Andrew Morrison
Professional Straw Bale Contractor

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