



# EARTH USA 2011

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**Title:**

Mechanizing Earthen Construction --- The EarthCo Megablock process

**Abstract:**

The EarthCo Megablock process is a new next-generation regenerative construction system that represents a quantum leap in modernizing earthen construction by eliminating the main drawback of traditional earthen construction techniques, the high manual labor requirement. EarthCo's process eliminates up to 90% of the manual labor by utilizing a mechanical system to carry and place our giant blocks. EarthCo's process is based upon turning local earthen materials (free if located on-site and eliminates most shipping costs) into giant modular units called EarthCo Megablocks. EarthCo Megablocks can be 18" wide by 12" tall by any desired length (usually < 16 feet) and can weigh upwards of 1 ton each, which makes possible a simple stacking procedure that yields a rapid method of construction. An EarthCo Megablock wall system provides excellent protection from severe weather events, cannot burn rot or decay, naturally breathes for excellent indoor air quality, does not support mold and mildew growth, is highly rodent and insect resistant, is an excellent sound insulator, and provides excellent thermal mass for passive solar designs. EarthCo's process is also extremely environmentally friendly featuring a closed loop material cycle, low embodied energy costs and excellent life cycle assessment costs and should prove excellent for construction of affordable, zero energy carbon neutral housing.