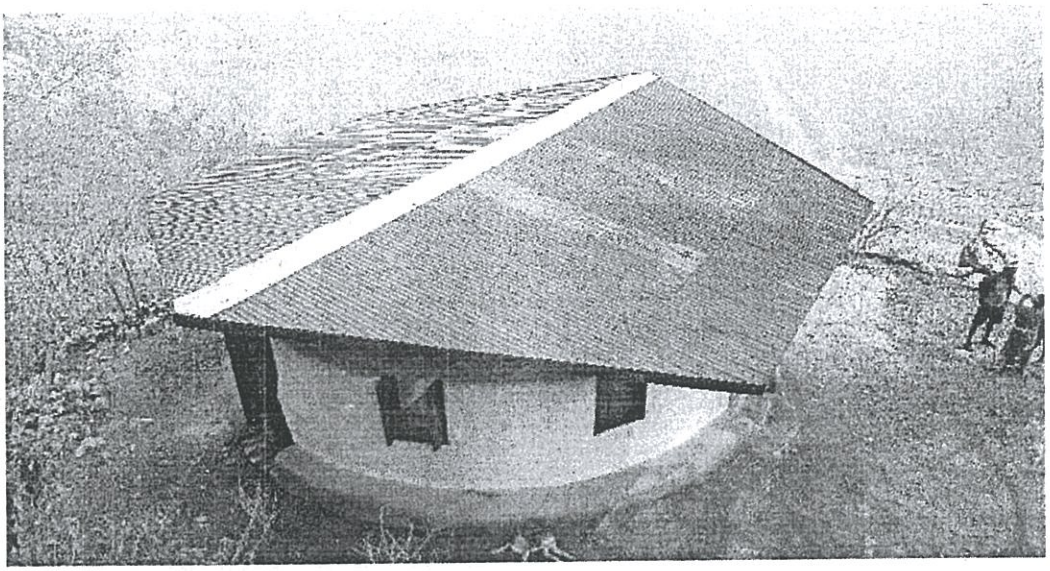

Schools made from earthbags for post-earthquake Nepal

This projects were executed as a response to heavy devastation done by the earthquakes in 2015. After assessment in several regions of Nepal I've made a research to find the best-suit tech for permanent and semi-permanent structures for Nepal earthquake victims. How to make the cheap, easy to build and eco-friendly school building which will resist the earthquake ? The answer was Superadobe - the modern technology emerging from military structures, developed in early 80' primary for lunar and martian habitation, and post-disaster relief.

Timelaps

After presentation of the results to donors and organisations, and establishing the team of volunteers*, the round school building made from earthbags was initiated. First project took place in Topka village, Sindhupalchowk district, Nepal, between Jan 2016 and April 2016. Blueprints were consulted with specialist form Kathmandu university, department of architecture, Mahesh Maharian who works directly with organisation founded by inventor of superadobe technology - Nader Khalili.

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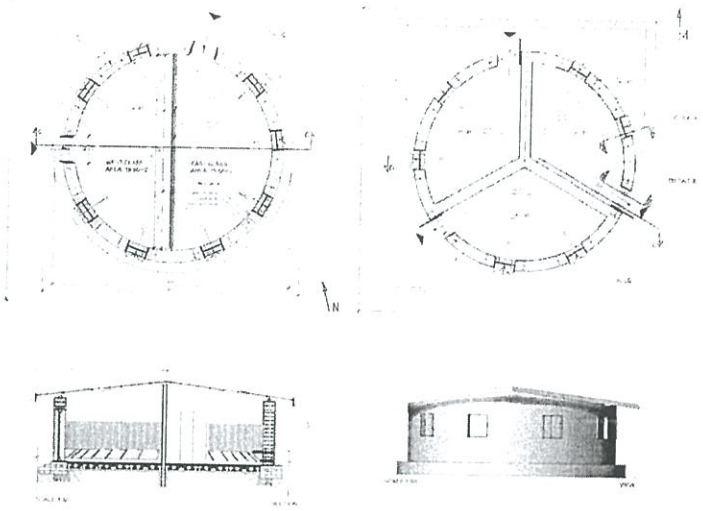
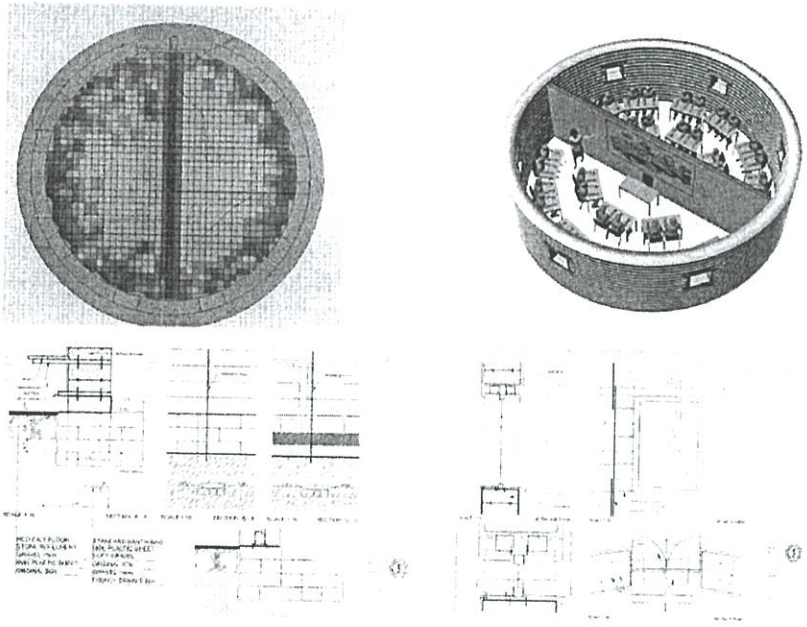


Plans, section and site view

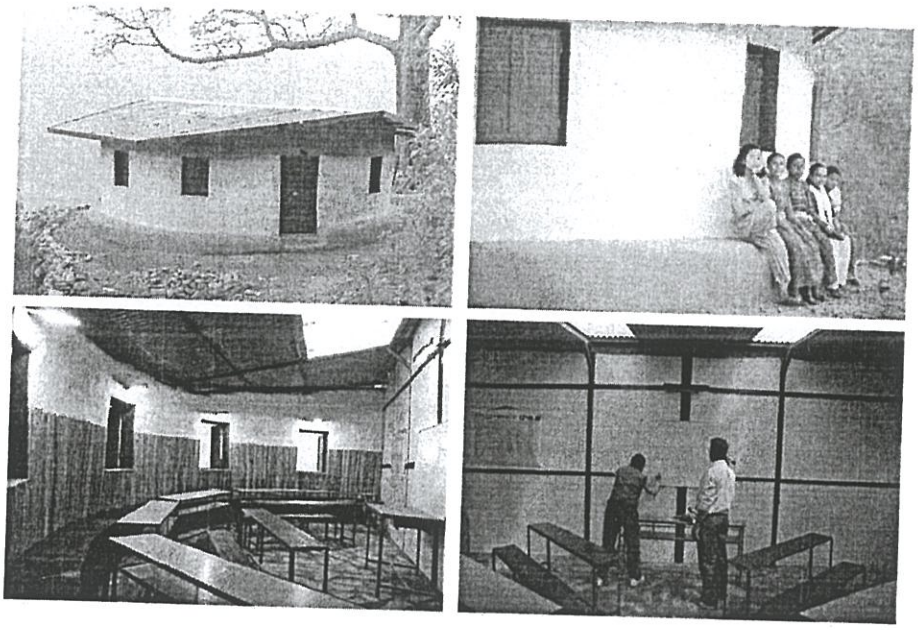
Circular shape is much more stable compared with orthogonal. Flexible foundation with drainage ensure that building will absorb vibrations from the earthquake. 45 cm high stone platform, wrapped with DIY metal wire-cage constitutes the second shock absorbing layer and prevents the earthen walls from capillary migration of water. Walls are made with well tamped earthbags filled with red clay rich soil.



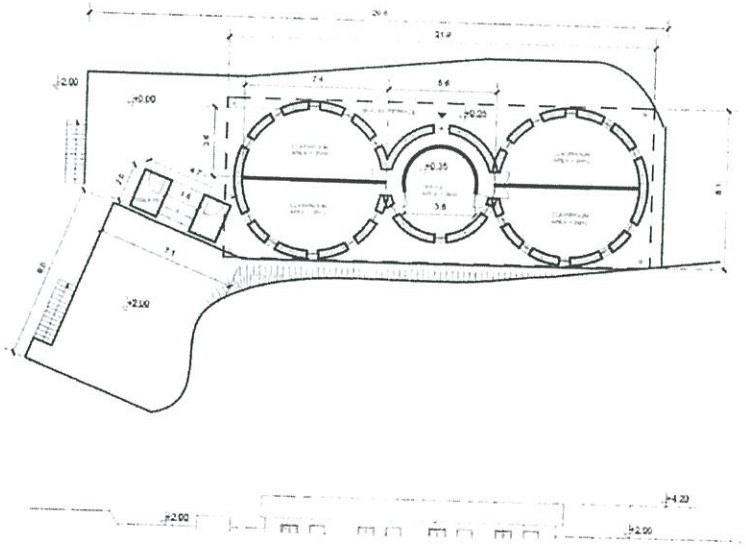
Sun study layout and details

The structure uses zero cement. Several methods are used to stabilize the building within the walls. Two classrooms embedded in 54 m2, circular shape were covered with double-pitch hexagonal metal sheet roof. Walls are covered with natural plaster. 4 windows and 2

encompassed in the adobe-like walls together with ventilation provides comfortable environment inside the building



Second building of similar geometry has 3 classrooms. Both projects are the base for planned in future - multi-circular school facility projects. Depending on experience, It takes only 2 to 3 months to accomplish one building of this scale. Schools are made with natural or recyclable materials (except from minimal amounts of 6mil plastic isolation and earthbags) and might serve for several decades**.



Multi-circular school

Building cost is around 3000 US dollars. That includes materials, transportation and some tools. It is purely charity project aiming to promote cheap, sustainable and earthquake resilient architecture in the developing countries like Nepal. Construction sites use to serve as learning polygon for more then 150 foreign volunteers and few dozens of local inhabitants who gain experience about alternative building methods.

* Special thanks goes to Kali Kirkendall, Michael Robb, D'Jo Sermond and all dozens of good people who help with money, time, ideas, muscles and positive attitude in 15'/16' projects in Nepal.

** The oldest known buildings made with superadobe technology were made in early 80' of XX century and they are still in the good condition.