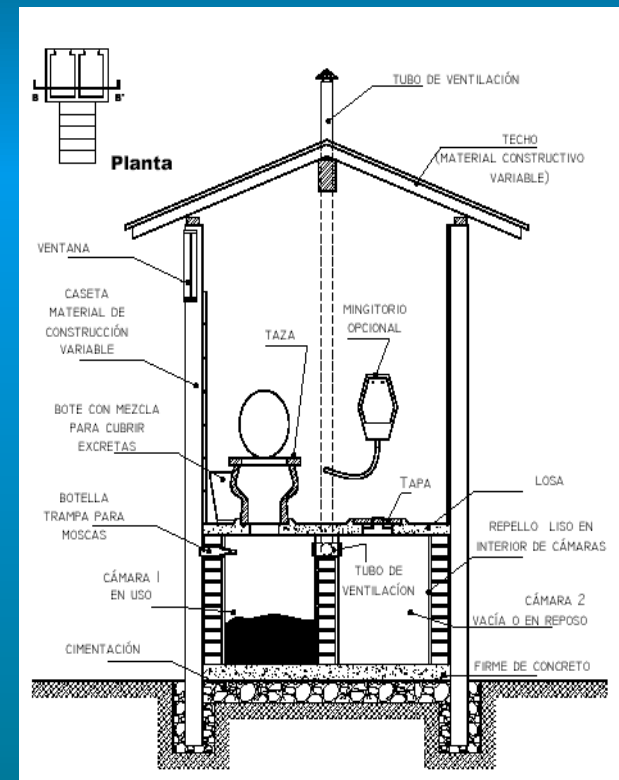


# DRY BATHROOM

## ADVANTAGES

- *It can be easily built with local materials*
- *No water is required*
- *It uses a dehydration process to treat excrement*
- *Temperatures reach over 20 °C*
- *A dry and alkaline mix is added to excrement*
- *It permits the utilization of the urine as a natural fertilizer by its composition of N P K*
- *It produces a restoration of the earth*
- *It prevents the contamination of the soil, the water, and the air*
- *It prevents infectious diseases associated with the incorrect treatment of the human excrement, and promotes public health*



Fuente. Manual del sanitario ecológico seco. Castillo Lourdes

# DRY BATHROOM

*Two compartments where feces are stored.  
These compartments are used alternately:  
while one box is in use and gradually fills,  
the other is at rest.*



*Wall System :  
“Chorizo”*



*A third compartment that holds  
plastic bins was added for the  
temporary storage of urine*





# NATURAL PLASTERS

<i>Earthen Plasters</i>	<i>three courses of earthen plasters</i>	<i>clay, sand, straw, flour paste, cow manure</i>
<i>Lime Plaster</i>	<i>exterior finish plaster</i>	<i>hydrated lime</i>
<i>Gypsum Plaster</i>	<i>interior finish plaster</i>	<i>25 minute gypsum</i>













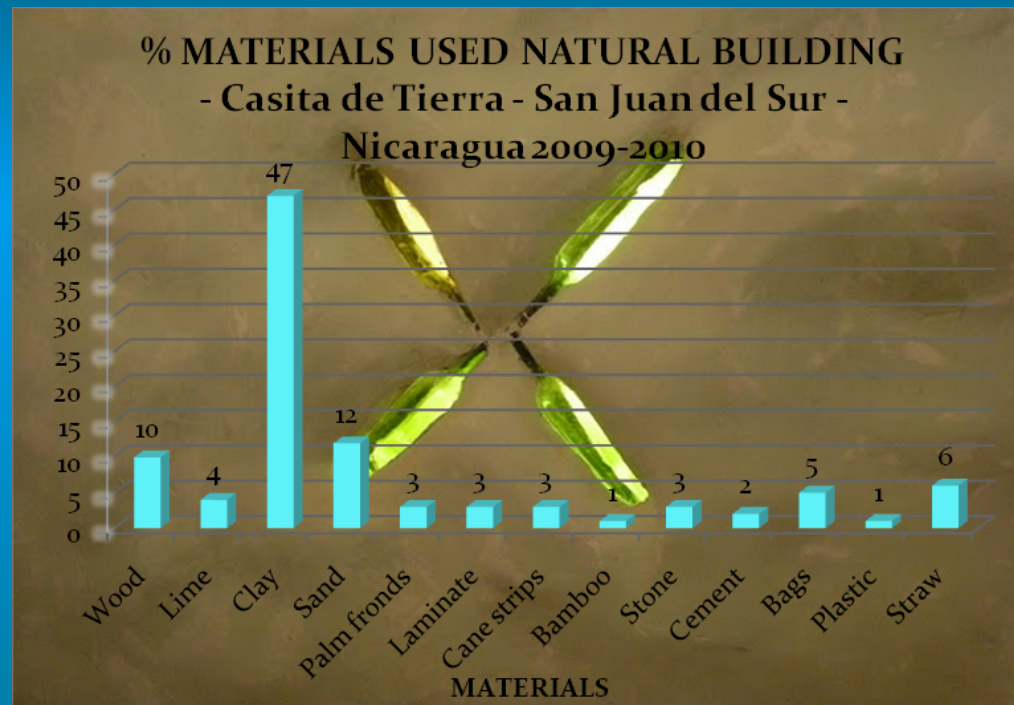


Oficial Page: <http://picasaweb.google.com/austindrill/CasitaDeTierra02?feat=email>



# CONCLUSION

- The result of our earth bag building demonstrates that natural buildings can be comfortable, attractive, durable, and harmonious.



- Our current estimate to build is \$33 PSF, and with the going-rate for conventional construction in Nicaragua at \$70 PSF and rising, economics is another reason to go green!

- *It took us roughly six months to complete this house, but depending on what the next project entails (size, retaining walls, etc.), we think that the execution time should be four months.*
- *The introduction of a dry bathroom permitted us to take advantage of all the benefits of this natural system and elevated our final product.*
- *It is important to consider the geographic terrain of your building site. Earth bag building can be modified to suit many different environments.*

*The natural plasters have shown favorable behavior since applied. They provide a firm barrier against the elements, while also offering beautiful finishes and healthier indoor air quality.*

**Table 1: Average temperature (°C) % inside house and outside house**

<b>Average Temperature (°C)</b>	<b>Winter</b>	<b>Summer</b>
Inside house	18	25
outside house	20	32



*The utilization of natural materials in building techniques is proven successful from an economic, structural, social and civic-minded view point. It is proven to be less expensive, strong, secure and attractive, it can encourage community interaction, and it is the environmentally responsible way to build.*

*Many applications of ecologically-friendly processes are being reintroduced and accepted, and it is so important to continue to develop these alternative methods and incorporate them on a large scale in urban and suburban areas, in developed and developing countries. These methods will contribute to the health of our future, improve our quality of life, and motivate public leaders to encourage policies concerned with the adaptability and the appropriation of these processes.*

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# CURRENT PROJECTS

FUNDACION TIERRA in association with  
NICACAN and Austin Drill  
San Juan del Sur - Nicaragua



**School for the Children in the  
Community of Las Brisas#2**



[http://picasaweb.google.com/nicaconstruct/FundacionTierra?  
authkey=Gv1sRgCIqvp4uP\\_LmacQ&feat=email#5482285647602837842](http://picasaweb.google.com/nicaconstruct/FundacionTierra?authkey=Gv1sRgCIqvp4uP_LmacQ&feat=email#5482285647602837842)

Hospital Vista Hermosa I Nivel E.S.E – Public Health  
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