

# SACRED GEOMETRY AND ARCHITECTURE



Written, edited and illustrated by  
Carlos Arturo Alvarez Ponce De León

Illustrations and photos of projects and studies by  
Carlos Arturo Alvarez Ponce De León  
Ninón Fregoso Fregoso  
Michael Rice  
Jenniffer Hassey  
John Stuart Reid  
Dan Winter  
Juan Schlosser

# 5

## BIOFRACTAL ANALYSIS OF PROJECTS CARRIED OUT BY ARQKA

### *5.6- Structural plans*

The natural materials used were superadobe, adobe, stone and wood. A study of soil mechanics showed that the conditions of the land needed the use of concrete in minimum quantity as a foundation template since the effort of the construction is not supported by the land since it is this land of cultivation and to be able to undergo differential settlements.

A foundation plant with counter-beams that coincide in the buttresses and in the greatest efforts solved this challenge. The wooden mezzanine is recharged in the center on the column and on the periphery on a concrete compression belt that fulfills the function of counteracting the compression efforts of the superadobe. Recall that the superadobe works excellent to compression but poorly to tension. For this, the barbed wire is used and in all the openings it is reinforced with steel rods.