Abstract

The Kasa Kawayan: A Proposed Socialized Bamboo Housing is an architectural study aiming to offer alternative rejoinder to the obviously ballooning housing problem in the Philippines. The Philippines, being a tropical country and endowed with natural resources is challenged to creatively and sustainably exploit the resources which include bamboo forests for infrastructure use.

This study aimed to design a model unit using bamboo as material and to provide structural, building enclosure and utility systems for such model unit. Likewise, it aimed to come up with spatial organization that would generically suit the needs of housing beneficiary. Furthermore, it aimed to determine a hypothetical site as a platform to possibly establish the different site development entities suited for this type of project.

Through Issue Rejoinder (I-R) Analysis, Modular Sizing Method and Occupant Behavior Analysis; a spatial program for the model housing unit was conceived and eventually translated into four housing prototypes- the single-detached, row house, row house with mezzanine and single- detached with mezzanines. Using direct characterization approach, a site was identified in Pampanga, where the number of housing is high and at the same time, where bamboo is factually abundant. The site was chosen using a defined character which was validated using SWOT and PESTEL Analysis. The site was subdivided into various disposable or saleable lots and provided with support amenities for the new conceived community in consonance with the housing law, building code and other relevant laws. A complete working drawings (architectural, civil or structural, electrical and sanitary) of model houses and a detailed estimate was done. The estimates, structural connections and other distinct housing model details were evaluated and eventually commended by construction professionals.

The model houses cost Php66,963.58 (row house); Php 78,080.11 (row house with mezzanine); Php64,670.98 (single detached); and Php 74, 376.98 (single detached with mezzanine).

It is being recommended that further study on the possibility of testing the pre-defined structural system, conducting feasibility and marketability check, treating to improve the quality of bamboo, as well as testing the architectural acceptability of the model houses among the possible beneficiaries be conducted as an eventual research study.