

## **PERMANENT HOUSING CONCEPTS AND SAMPLE DESIGNS FOR TSUNAMI DISASTER RECOVERY.**

Revision 08.03.05.

The government has decided to provide a house of three bedrooms to every individual home owner whose property was damaged beyond repair during the Maldives Tsunami disaster. Following are the requirements of a house that would be built under the post-tsunami disaster reconstruction programme.

- Plot area for the houses will be of two sizes depending on individual islands. The sizes are ;
  - 185.4 sq. m(2000 sq. ft) and
  - 278.1 sq. m (3000 sq. ft).
- Space requirement of the three bedroom house shall be as follows;
  - Total floor area 86 sq. m
  - Three sleeping areas or bedrooms
  - Cooking and dining spaces
  - Sitting area
  - Two toilet with an extended “gifili” attached to at east one toilet.
- The buildings must be single storey with a minimum floor to ceiling height of 3.0m.
- Foundation should be made of concrete and at a depth of minimum 600 mm.
- Floor level must be a minimum of 200 mm. above the nearest road level and finished with ceramic tiles.
- Walls and building fabric could be conventional cement blocks and reinforced concrete frames or an alternative building system. Alternative construction or prefabricated systems will be judged on there durability, suitability to the local environment and flexibility for future modifications.
- Roofing must constructed to drain rain water quickly. It should have large overhangs and be made with a material where rain water is easily collected with gutters. Roof level ventilation or insulation must be provided to reduce the radiated heat from the roof.
- The toilet should be simple with sitting type WC, wash basin, showers and taps. At least the floor and the walls of the shower area must be finished with ceramic tiles.
- An artesian well, pressure pump and pvc septic tank must be provided.
- Plumbing works would be done to MEC standard technical specifications.
- Electrical fittings must be provided in such a way that each house is metered separately. There should be one light fitting and a socket in each room. Provision should be made for a ceiling fan in the bedrooms and sitting room.
- Doors and windows should be made with well seasoned timber or aluminum sections finished to a high standard. Alternate material could be accepted.
- Painting and finishing should be appropriate and to international standards.
- Boundary would be marked by four corner columns of 1.2m
- It also should be noted that the design should cater for opportunity to improve if the individual owner requires.

Design and built construction proposals are preferred in such situations because of the variety of suitable technology available for housing. The most importantly reason is to

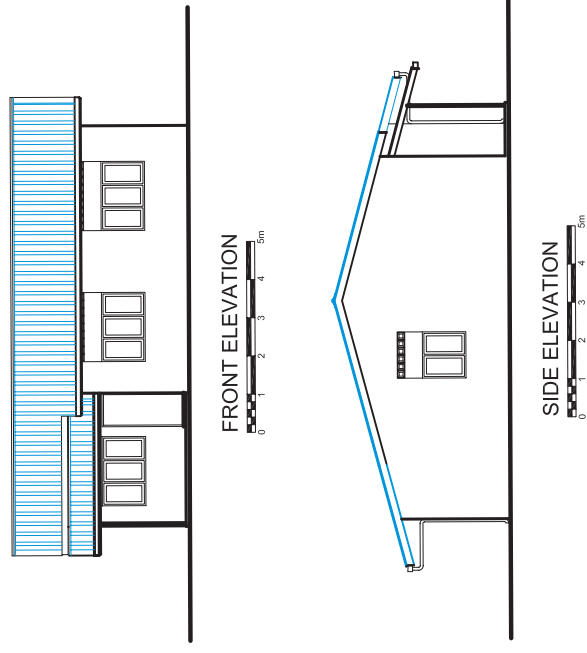
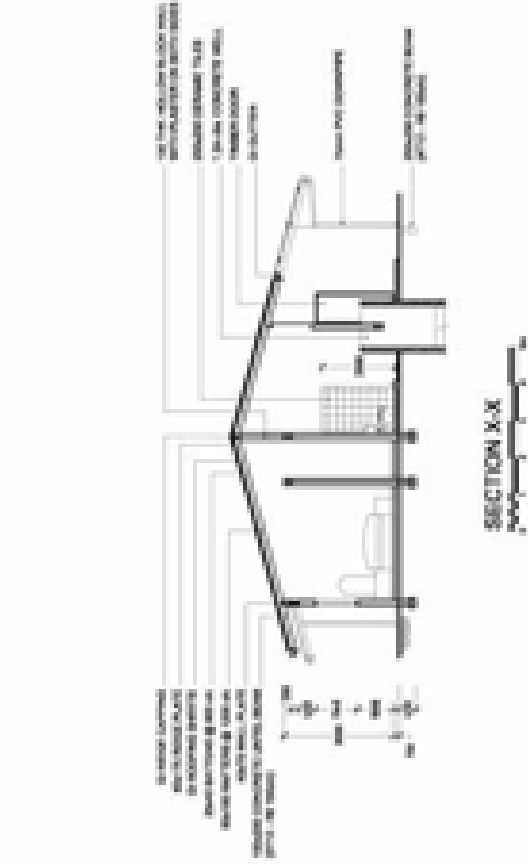
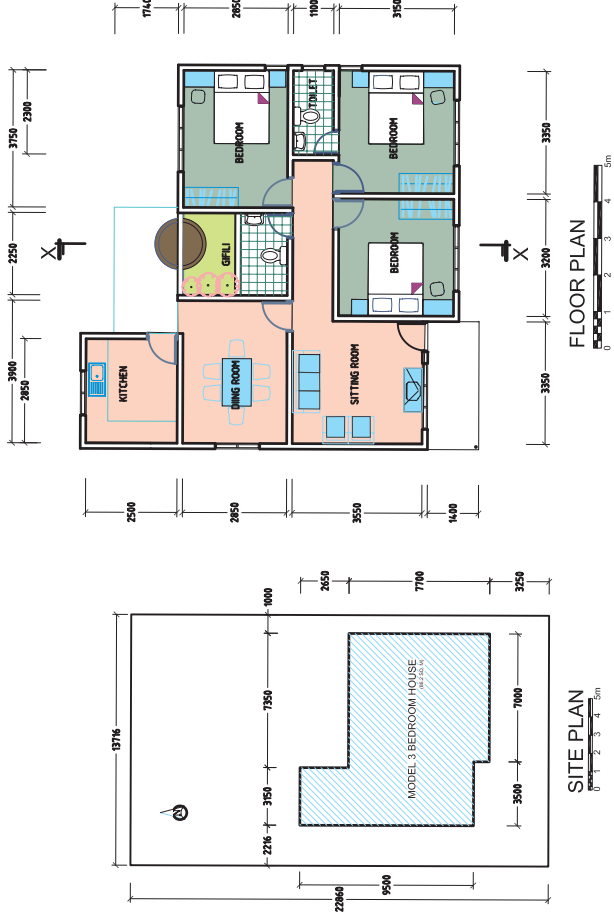
allow contractors and manufacturers to introduce alternate technology that are less dependent on large foreign labor forces and difficult transportation logistics. And finally deliver good quality buildings that are faster to construct and cheaper in costs.

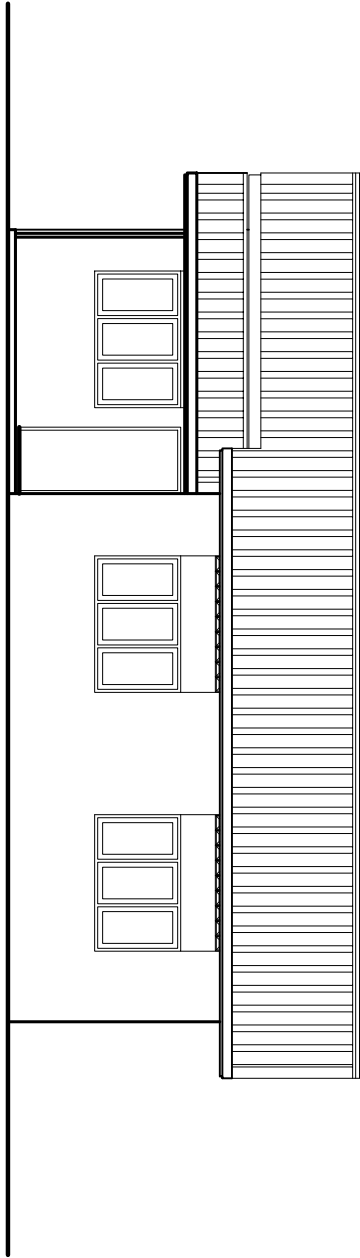
All construction must be permanent and made with materials that would last long. It must be constructed in a way that is simple to extend in the future. The construction should be done with simple technology and encourage transfer of technology and skills to local communities. The remoteness of the sites and the constraints due transportation and the islands roads needs to be considered.

#### ESTIMATED COSTS.

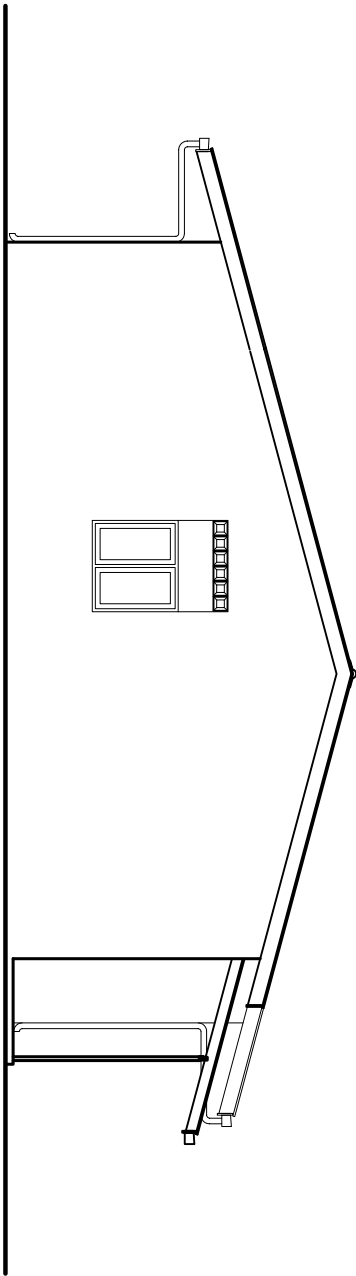
- Budgeted cost of the above mentioned three bedroom house is 300,000.00 rf.

# MODEL HOUSE - SUHAIL 3 BEDROOMS





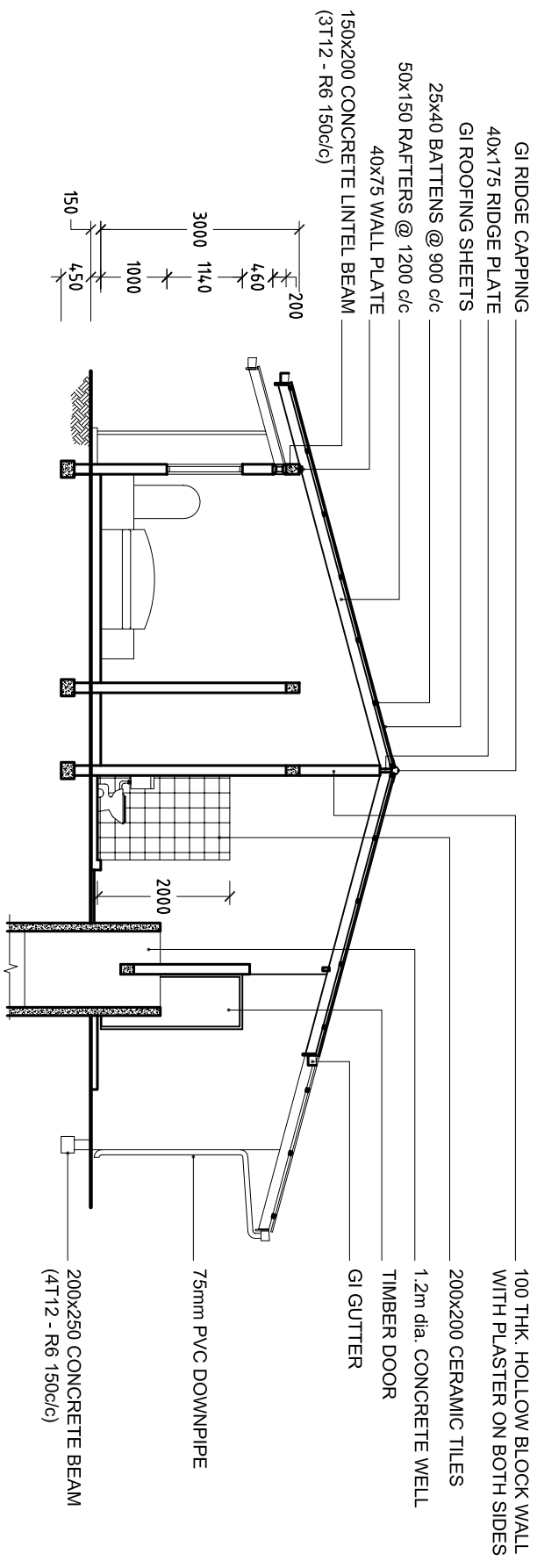
**FRONT ELEVATION**



**SIDE ELEVATION**



MODEL 3 BEDROOM HOUSE



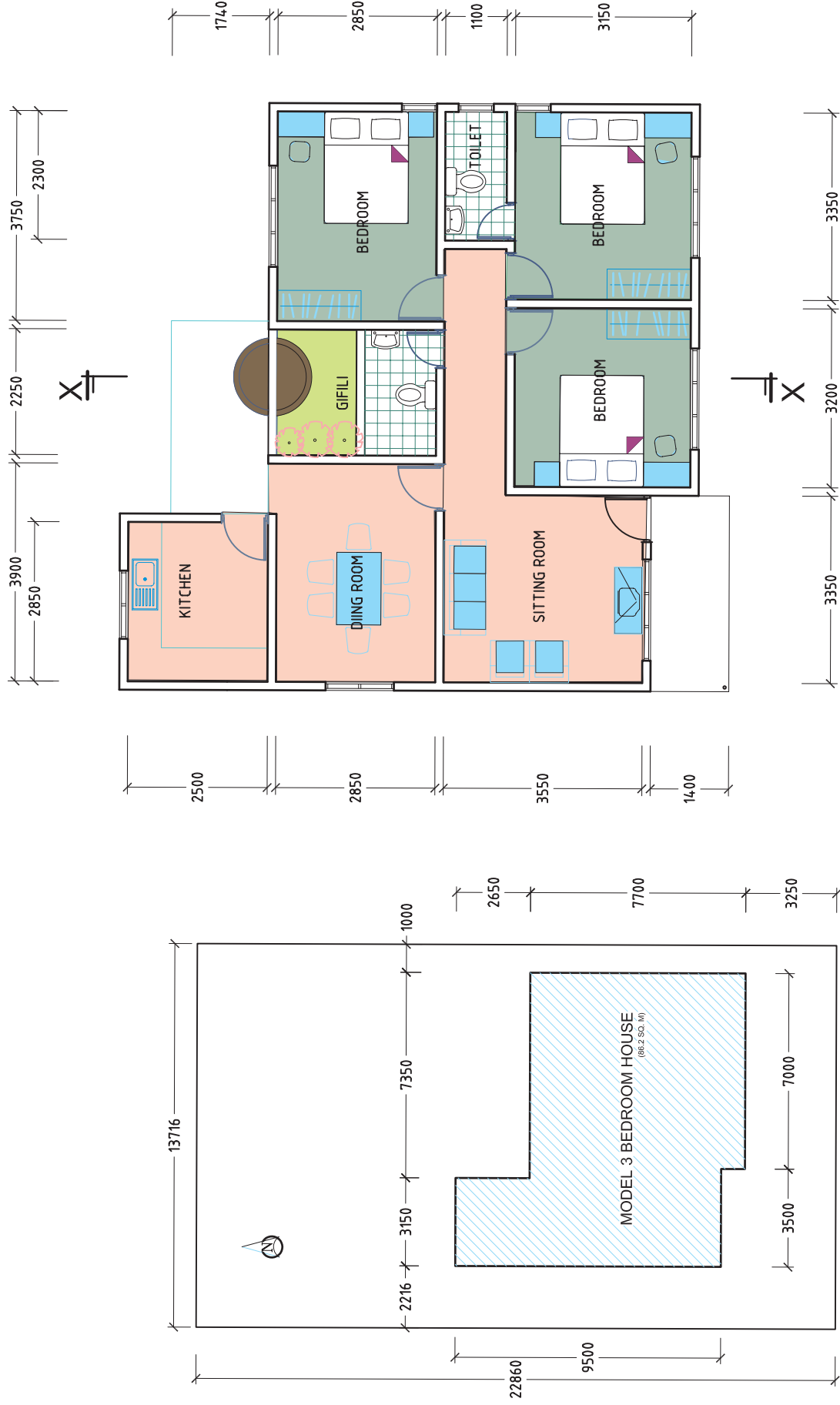
**SECTION X-X**



**MODEL 3 BEDROOM HOUSE**

# MODEL HOUSE - SUHAIL

## 3 BEDROOMS



**FLOOR PLAN**

**SITE PLAN**