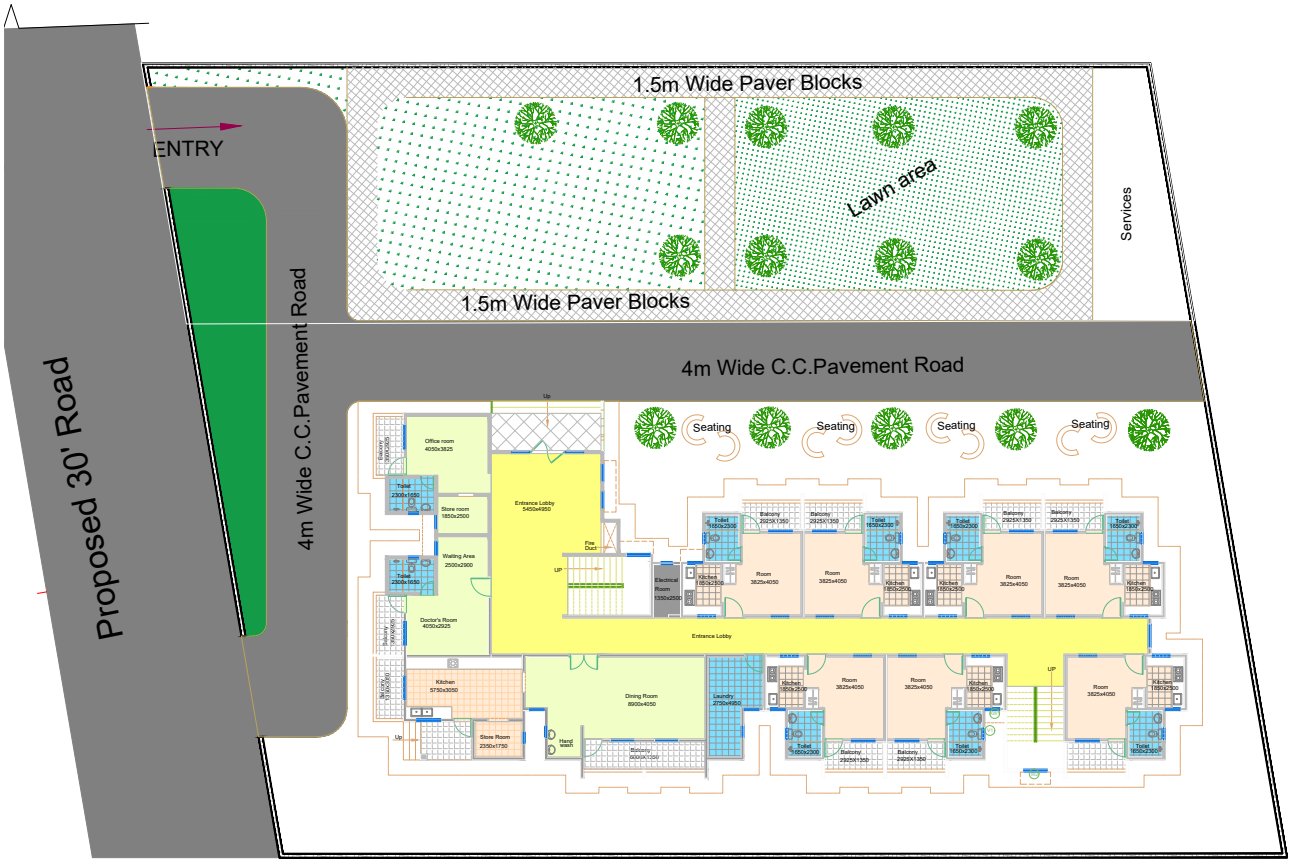
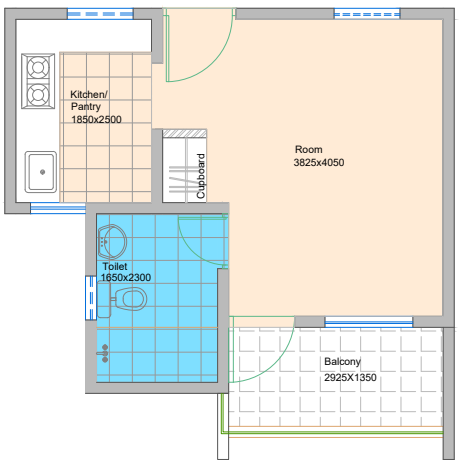
DHP AT TIRUPPUR, TAMIL NADU

The Tamil Nadu Urban Habitat Development Board, Chennai, Tamil Nadu allotted land measuring 2000 sqm. through District Collector, Tiruppur at Survey No.24/3, Village Sempiyanallur, Taluk Avinashi, Tiruppur District, Tamil Nadu for the Demonstration Housing Project to be used as Working Women Hostel & Widow Home. The layout plan, architectural plans, etc. is being approved by the District Town and Country Planning Office, Tiruppur. The DHP is in G+3 configuration with other provisions and being constructed using Precast Concrete Construction System –Precast Components Assembled At Site.



Layout Plan



Typical Unit Plan

3D View

Ground Floor Plan

Project Profile:

- Location: Survey No.24/3, Village Sempiyanallur, Taluk Avinashi, Tiruppur District, Tamil Nadu
- State Level Nodal Agency : Tamil Nadu Urban Habitat Development Board, Chennai
- Land Allotted by: District Collector, Tiruppur
- Usage : Working Women Hostel & Widow Home
- Plot area of project : 2000 sqm.
- No. of houses : 40 (G+3); Other provisions includes a Dining Hall with Kitchen and store, Common Room with toilet, General office, Medical Room with toilet, Care Taker Room, Activity Rooms and Laundry
- Carpet area of each unit : 26.66 sqm.
- Built up area of each unit : 31.51 sqm.
- Total built up area : 2044 sqm.
- Technology Used: Precast Concrete Construction System –Precast Components Assembled At Site
- Each unit consist of a room with attached toilet, kitchen and balcony
- Includes Earthquake Resistant Features.
- Infrastructure facilities : CC Road, pathways with concrete pavers, water supply work, septic tank, tube well, horticulture work, boundary wall, drainage & disposal and external electrification using solar panels, rain water harvesting, fire fighting system, etc.
- Status of project : Completed.

About the Technology

Precast construction technology is a system of casting concrete in a reusable mould or "form" which is then treated in a controlled environment, conveyed to the construction site and lifted to the place. Precast Construction Technology consists of various precast elements such as walls, beams, slabs, columns, staircase, landing and some customized elements that are standardized and designed for stability, durability and structural integrity of the building. Precast residential building construction involves design, strategic yard planning, lifting, handling and transportation of precast elements. This technology is suitable for construction of high rise buildings resisting seismic and wind induced lateral loads along with gravity loads. The building framing is planned in such a way that maximum number of repetitions of moulds is obtained. These elements are cast in a controlled factory condition. The factory is developed at or near the site which provides an economical solution in terms of storage and transportation.

In this project, the system has been used as load bearing wall panels. The total thickness of wall is 150mm and precast slab of 100mm.

Technologies/ Specifications being used:

Foundation

- Isolated RCC column footing with Plinth beam

Walling

- Precast Concrete wall Panels

Roofing

- Precast Concrete Slab

Joinery & Finishing

- Flush door shutters fitted in pressed steel door frames
- PVC door frames & shutter in toilets
- uPVC window frame with glazed panel and wire mesh shutter in rooms and toilet

Flooring

- Vitrified tile flooring in Rooms, Pantry & Balcony
- Marble stone on pantry/kitchen counter
- Anti-skid ceramic tiles in toilet
- Kota stone Flooring in common areas and staircase

Wall Finishes

- Weather proof paint on external walls
- Oil Bound distemper over Putty on internal walls.

Others:

- Electrical fixtures such as ceiling fans, LED tube lights, exhaust fan; wooden shutters in cupboard and under kitchen cabinet

The structural design of DHP has been vetted by NIT Tiruchirappalli and has also been approached for technical evaluation of the DHP.