PRE-CAST HOUSE CONSTRUCTION

BY

BANGALORE DEVELOPMENT AUTHORITY
✧ BDA is a Planning and Development Authority
✧ Jurisdictional Area is 1370 sq.km.
✧ Developed 64 Layouts
✧ Distributed 1,40,000 of sites
✧ Developed Infrastructure Works like Ring Roads & Grade Separators.
✧ BDA is also responsible for approval of Development Plans and Layout Plans of private agencies
✧ BDA has now taken up Construction of Affordable Housing Projects.
✧ Over 13000 Housing Units are under Constructions.
✧ 5000 units have been completed.
✧ To encourage latest available fast track methods of construction, flexible tender conditions adopted.
FOUR DIFFERENT CONSTRUCTION TECHNIQUES ARE BEING USED AT PRESENT
1) CONVENTIONAL METHOD
2) A MANOLITHIC CAST-IN-SITU SHEAR WALL CONSTRUCTION
3) PRE CASTING OF ELEMENTS OF FRAMED STRUCTURE
4) PRECAST PRE-ENGINEERED METHOD OF CONSTRUCTION
TWO TYPES OF PRE CASTING CONSTRUCTION
PRE CASTING OF ELEMENTS OF FRAMED STRUCTURE - Elements of framed structure including slabs are precast and will be assembled at site
PRECAST PRE-ENGINEERED METHOD OF CONSTRUCTION

- Load bearing wall elements are precast which will be assembled into cubicles at the factory. All finishing's will be done at the factory. The finished cubicles will then be transported and erected at site.
DODDABANHALLI AFFORDABLE HOUSING PROJECT AT SY. NO. 03 USING PRE CASTING OF ELEMENTS OF FRAMED STRUCTURE
SALIENT FEATURES

- Total cost of the project: 133.41 Crores
- Total Number of Buildings: 7 (3BHK-2, 2BHK-5)
- Type of structure: Pre Cast Framed Structure
- Total Carpet area: 4,36,482 Sft
- Total Built-up area: 7,11,000 Sft
- Total number of housing units: 704 Nos
- Total number of floors: B+S+18 Floor
- Total Numbers of lifts: 14
- Total Numbers of OHT: 7
THE ISOLATED FOOTING FOUNDATION IS DONE WITH IN-SITU CONCRETE.
THE RCC COLUMNS AND RETAINING WALL OF BASEMENT FLOOR IS DONE WITH IN-SITU CONCRETE.
VIEW OF THE RCC COLUMNS AND GRADE SLAB OF BASEMENT FLOOR
THE BASEMENT SLAB (PODIUM) IS DONE WITH IN-SITU CONCRETE.

VIEW OF THE SHUTTERING WORKS
BATCHING PLANT
FABRICATION OF LATTICE GIRDER AT SITE..
COLUMN CASTING IN PC YARD...
VIEW OF PRE-CAST COLUMNS
VIEW OF SHIFTING OF PRE-CAST COMPONENTS
CURING OF PRE-CAST COMPONENTS
STACKING YARD
COLUMN ERECTION...
VIEW OF ERECTED COMPONENTS
VIEW OF ERECTED COMPONENTS
AFTER COMPLETION OF SLAB ERECTION.....
PROP SUPPORTS FOR PRE-CAST SLABS
VIEW OF ROOFS READY FOR SCEEDING
VIEW OF EXTERNAL PLASTERING IN PROGRESS.
VIEW OF EXTERNAL PLASTERING GROOVE MAKING IN PROGRESS..
SAMPLE TENEMENTS
ALUR HOUSING PROJECT
USING PRECAST PRE-ENGINEERED METHOD OF CONSTRUCTION
# SALIENT FEATURES

<table>
<thead>
<tr>
<th>Name of the Project</th>
<th>AFFORDABLE HOUSING FOR ECONOMICALLY WEAKER SECTION AT SY.NO. 113 OF ALUR VILLAGE, DASANAPURA HOBLI, BANGALORE NORTH TALUK (PHASE – 1).</th>
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<tbody>
<tr>
<td>Name of the client</td>
<td>BANGALORE DEVELOPMENT AUTHORITY</td>
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<tr>
<td>Name of the Agency</td>
<td>Sri. C.P. Umesha</td>
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<tr>
<td>Technology</td>
<td>Pre-Cast Technology.</td>
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<tr>
<td>No. Of Units</td>
<td>1520 (1 BHK)</td>
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<tr>
<td>Cost as per accepted tender</td>
<td>Rs. 110.23 Crores</td>
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<td>Date of execution of Agreement</td>
<td>29-03-2013</td>
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<td>Date of Commencement of Work</td>
<td>29-03-2012</td>
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<tr>
<td>Date of Completion</td>
<td>31-08-2015</td>
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View of Completed Structures
Steel Fabrication Work
Vertical Mould System Shuttering
VMS
shuttering
Vertical Mould Section
Hardened Concrete Panels
Welding of Panels with Angle plates and Steel Column
Welding of Panels with Angle plates and Steel Column
Assembling of Panels with Angle plates and Steel column
Assembled Units
Bathroom: Dadooing
Excavation & PCC
Plinth Beam at Casting Yard
Footing Concreting
Transporting the Housing Unit
Transporting the Housing Unit
Placing of Housing Units
Placing of Housing Units
Stairs
ADVANTAGES OF PRE CAST CONSTRUCTION TECHNIQUES

- Optimum use of Construction Materials: Fly Ash and GGBS are used to maximum possible extent.
- Very Less Wastage of Construction Materials.
- Better Quality Control: As the components are manufactured in control factory environment: Rigid and uniform quality control is possible.
- Recycling of Material is ensured: Usage of River sand and Water reduced substantially.
- Clean and Healthy built / construction environment.
- Environmental Friendly, Energy Efficient, Green Building Construction is possible.
- Construction time is reduced substantially.
THANK YOU