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FAST TRACK TECHNOLOGY in construction
By
New Age Plastech Formwork Panels & Accessories

Presented By
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Polymer /Plastic Formwork

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https://youtu.be/lc6Bzta4sWw

Salient Features-

- Easy to Use – Short learning Curve
- Easy to Maintain – Water Jet Cleaning
- Makes Construction Faster – Three time lighter than steel
- Superior Finish – No Plastering Required
- Repetitions- Can be repeated over 200 Times
- It's Versatile- Panels used in different projects
- Meets Green Initiatives- 100% recyclable and reduces cutting of trees
- Strength – Resists high impact force and able to withstand concrete pressure up to 60 kN/M2

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Types of Polymer/Plastech Formwork

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Material of Construction - Engineered Polypropylene(PP)Material

Physical Properties-

- **Elongation at Yield = 10%**
- **Softening Temperature = ≥150°C**
- **Rockwell Hardness = 82 R Scale**
- **Water Absorption = 0.02%**
- **Allowable Bending = .45kNm/m**
- **Allowable Shear = 13.6 kN/m**
- **Flexible Rigidity = 2.10 kNm^2/m**
- **Allowable Bearing Load on panel = $60kN/m^2$**
- **Allowable Shear in Pin = 0.68kN**
- **Factor of Safety = 2.5 Times**

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Comparison with Conventional Formwork & Others

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Plastech Form Work Panels & Accessories	Conventional Plywood Shuttering
Various sizes of Panels and accessories to meet the various sies and shapes of structure with ready to fix panels which are adoptable for any types and makes of supporting system available in market /or in inventory	Need making on site with wastages with labor cost which makes uneconomical
With proper handling and care these panels can last up to 200 Times of repetition makes more economical	Maximum of 10 Repetition with generation of huge debris on site which will be challenge to dispose
With Buy back you can salvage the material	No Salvage Value
Recyclable	Non Recyclable
It is easy to change the floor plan /column sizes and other dimension of the structure/ easy for any modification	In other system it is not possible to modify the structure midway till you achieve the desired repetition

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Comparison with Conventional Formwork & Other

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Plastech Form Work Panels & Accessories	Conventional Plywood Shuttering
Hence change order in structure is possible	May be possible in plywood shuttering and may be difficult in others
Suitable for designing the structure with load bearing shear wall and flat slab system	With Convention it will be difficult
The Joints are leak proof	Need joint fillers
It will provide smooth finish and can avoid plastering	Plastering is mandatory which is additional cost of construction
As the panels are lighter the cycles time can be drastically reduced	Times consuming
Cost of Panels- Rs 5000/Sqm landed cost (Based on todays fuel index)	NA

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Case studies on fast track constructions

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What is Fast Track Construction?

- Fast Track Construction, intended as design while you build by adopting and implementing recent technologies.

- The main purpose is to shorten the completion time & Cost of the project.

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Why Fast Track Construction?

- The conventional method of construction is very slow and labour oriented.

- With increasing cost of land and cost of construction materials, it is the need of the hour to go for fast track construction to save overrun of the time and cost.

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How to implement Fast Track Construction?

- The buildings are designed to be modular and a simple structure is designed to reduce shuttering time.

- Use of mechanised systems such as **system formwork**, concrete pumps and cranes.

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About Koehpa Formwork System

- Koehpa formwork is a modular system which is manufactured using engineered polypropylene using virgin raw material.

- Unlike other formworks, the same panels can be used from footing till slab and beam hence making it the most flexible formwork in the market.

- Even after 100 times, it will give you form finish hence plastering can be completely avoided.

- Apart from our standard supports, any supports can be used with our panels (conventional, Peri, Doka etc.)

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ONE SIDED SHEAR WALL WITH FLAT SLAB FOR APARTMENTS

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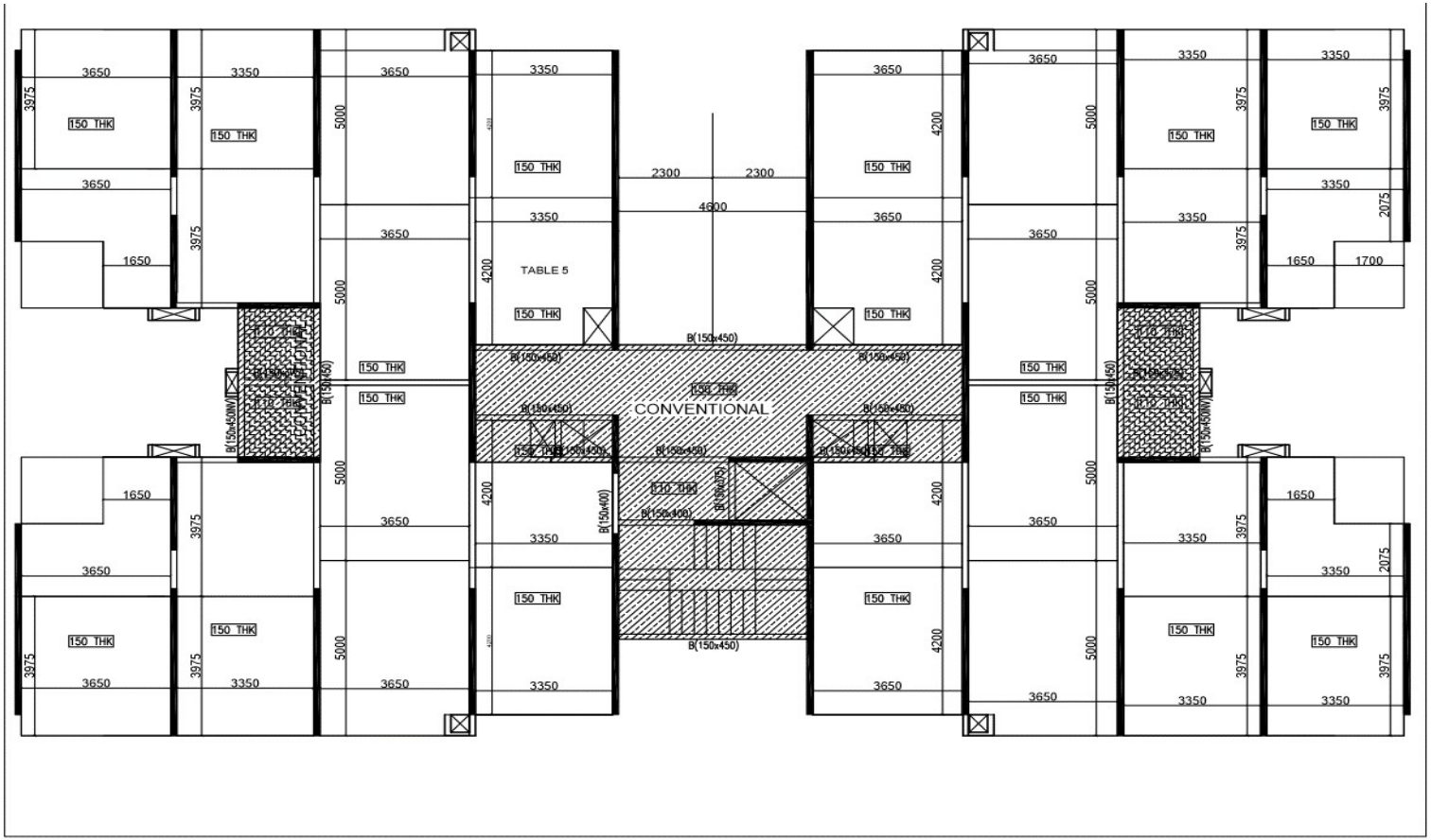

- Here the wall is designed along one direction and slab is designed as flat slab.
- Wall and Slab casted separately.
- Fully mechanised shuttering with Gang Formwork for wall and Table Formwork for slab.
- One side Blockwork and plastering.

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WALL FORMWORK

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TABLE FORMWORK

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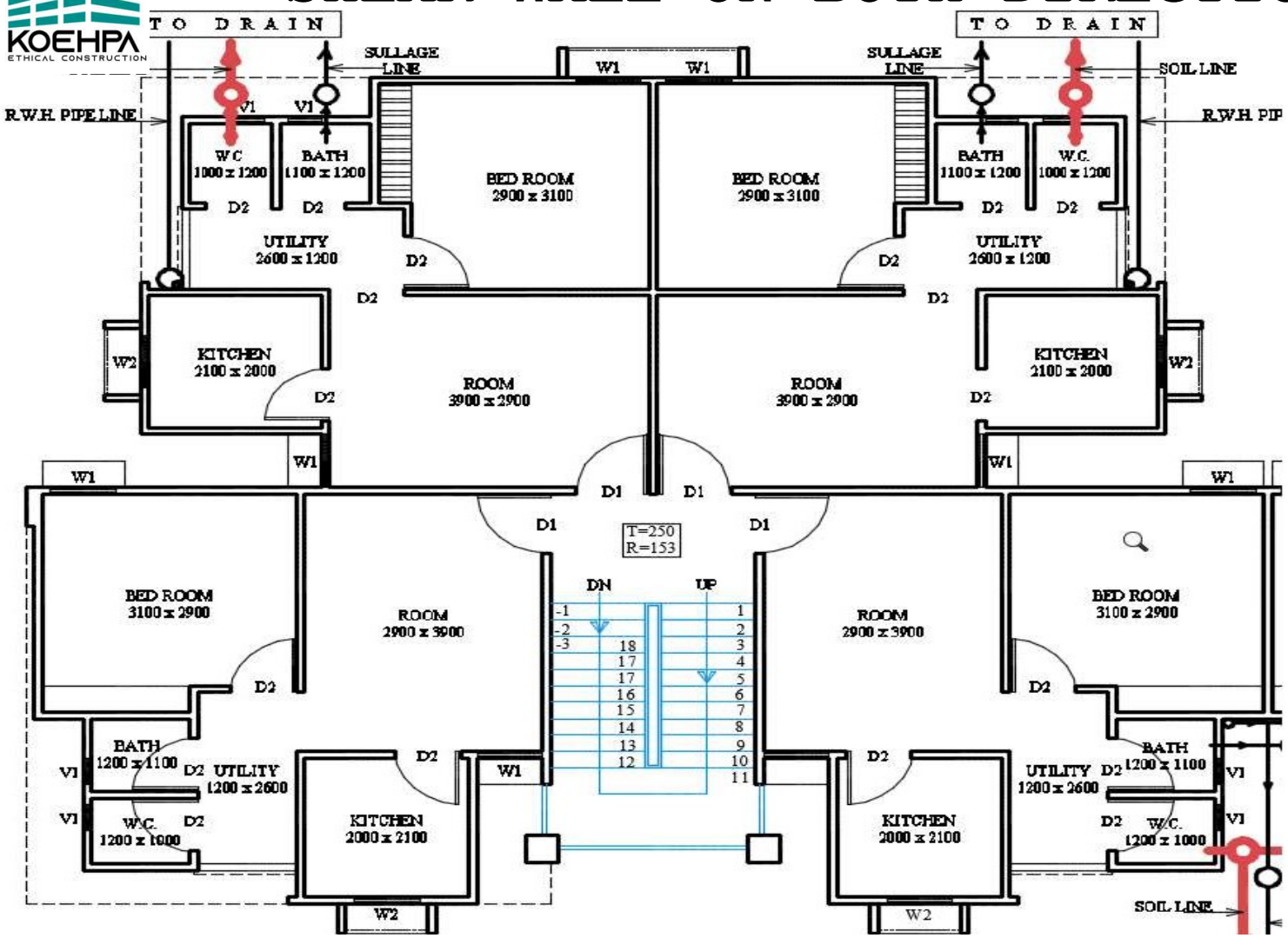
SHEAR WALL ON BOTH DIRECTIONS



- Here all the wall are designed to be Shear Walls.
- Wall is cast on a single pour first and then slab work.
- No Blockwork or Plastering.

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CASTING WALL IN BOTH DIRECTIONS

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SHEAR WALL IN BOTH DIRECTIONS

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ADVANTAGES OF FAST TRACK DESIGN OVER CONVENTIONAL (BLOCKWORK & PLASTERING)

- Faster rate of construction.
- Reduced labour force up to 50% – Manpower for Blockwork & Plastering are ruled out.
- Best quality finish because of absence or minimal beams.
- 100% savings in slab plastering with direct putty and painting works.
- 50% savings in internal wall plastering.
- Reduced overheads because of faster construction.
- Reduction in the consumption of structural steel since the structure becomes composite with minimum distribution of steel.
- Since plastering is not done, shrinkage cracks can be avoided.
- Since all walls are load bearing, they are more resistant to earthquakes.

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Highlights

Fast Track Construction with Plastech Formwork,

- Saves approximately 10% of the total cost of the project.
- Saves 25% of the project duration.
- Best quality finishes.
- Reduced work complexity.

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FOOTING

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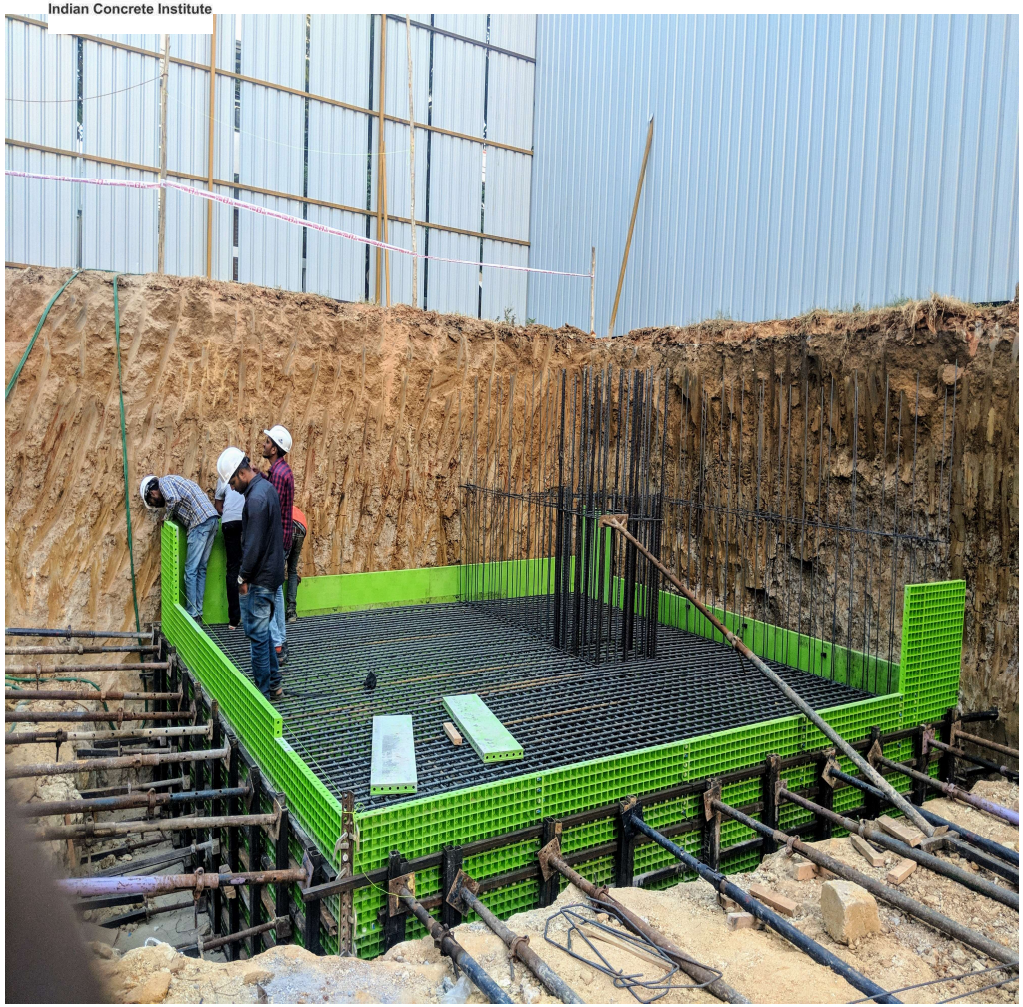

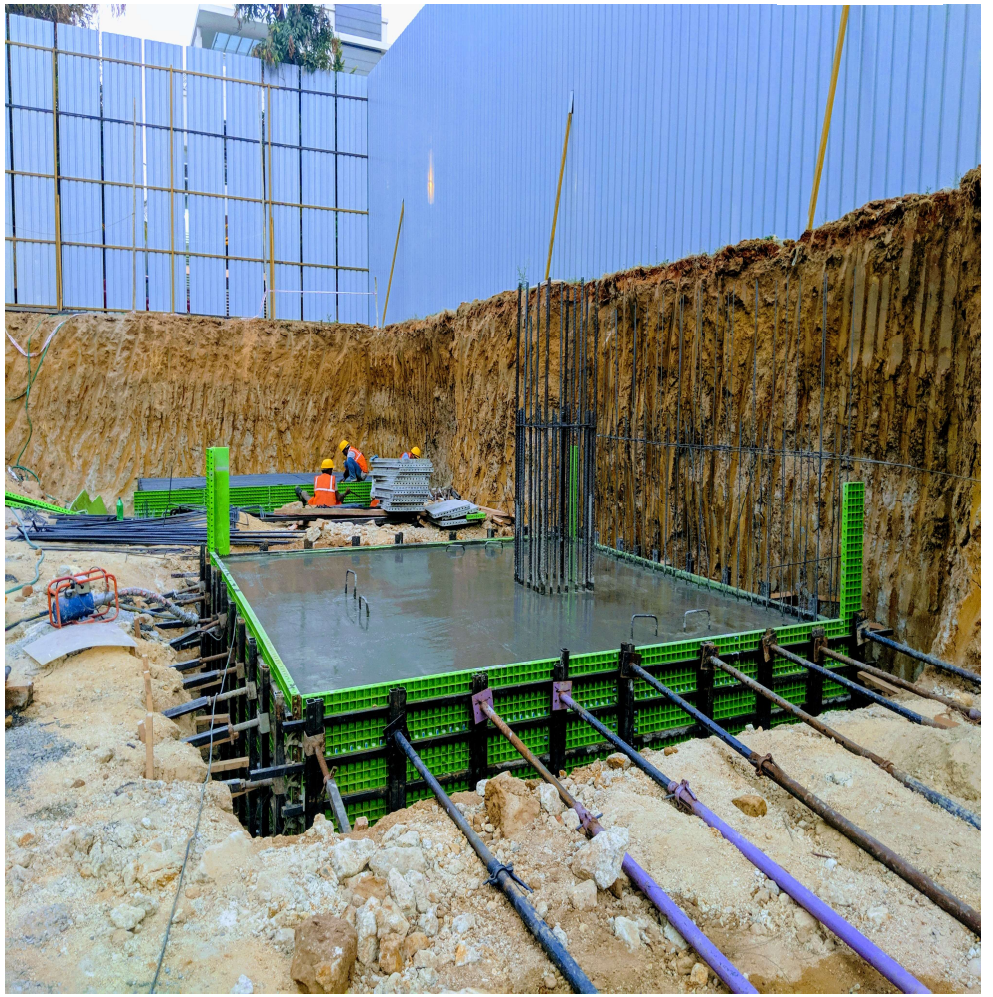

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BASEMENT RETAINING WALL (3 m height in the picture below) for the required height can be cast in single pour up to the slab bottom level

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RETAINING WALL 4.5 m HEIGHT

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COLUMNS

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SLAB

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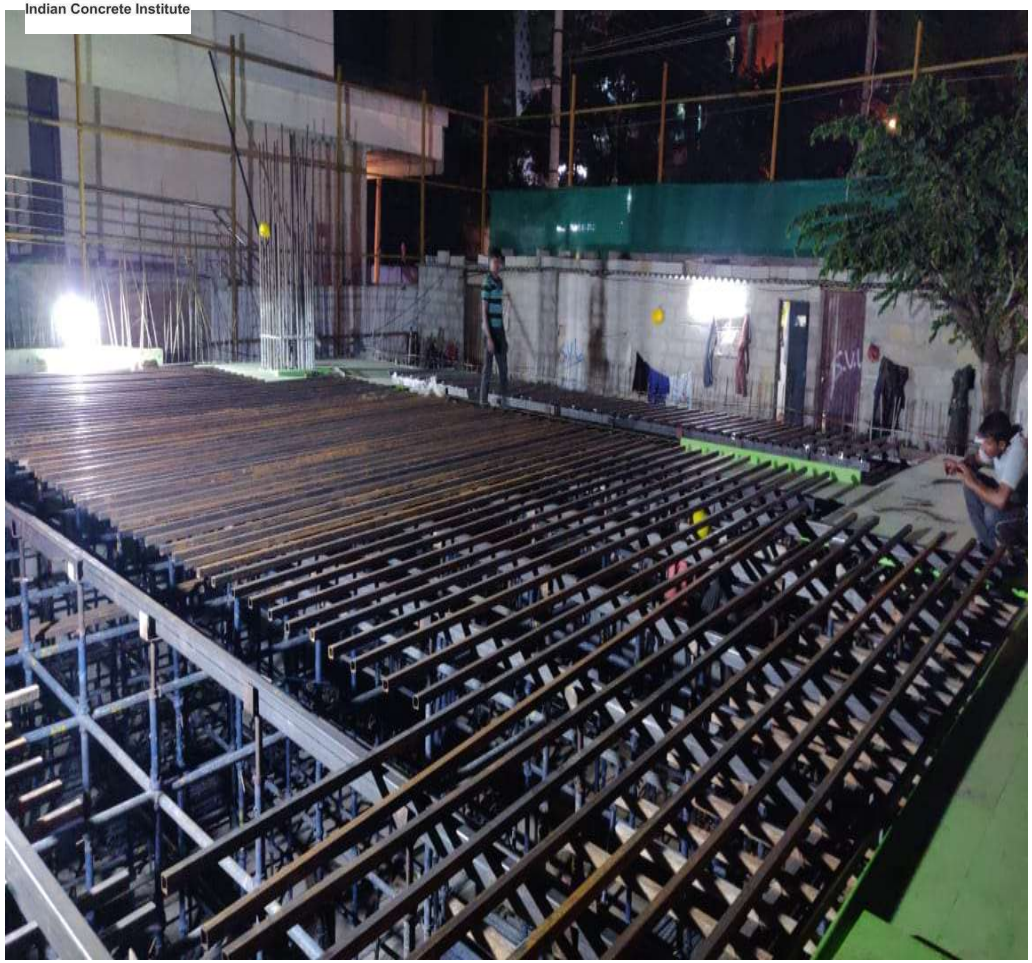

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UG SUMP – 3 m height with no joints

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18m x 5m x 3.5m Height
Single Pour Casting

LIFT WALL – 4.2 m height

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ONGOING PROJECTS –
Commercial Building at HRBR, Bangalore

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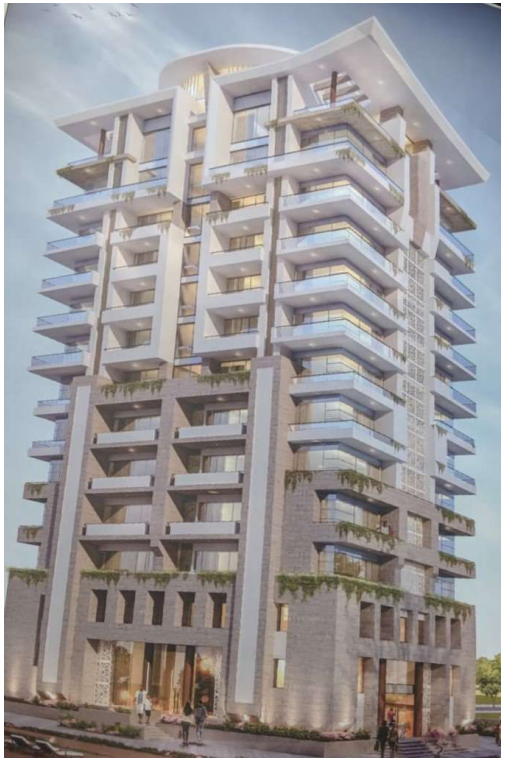
Residential High Rise Apartment, @Rachenahalli, Bangalore



Institutional Hostel Building, DSU, Bangalore Rural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Thanking You

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