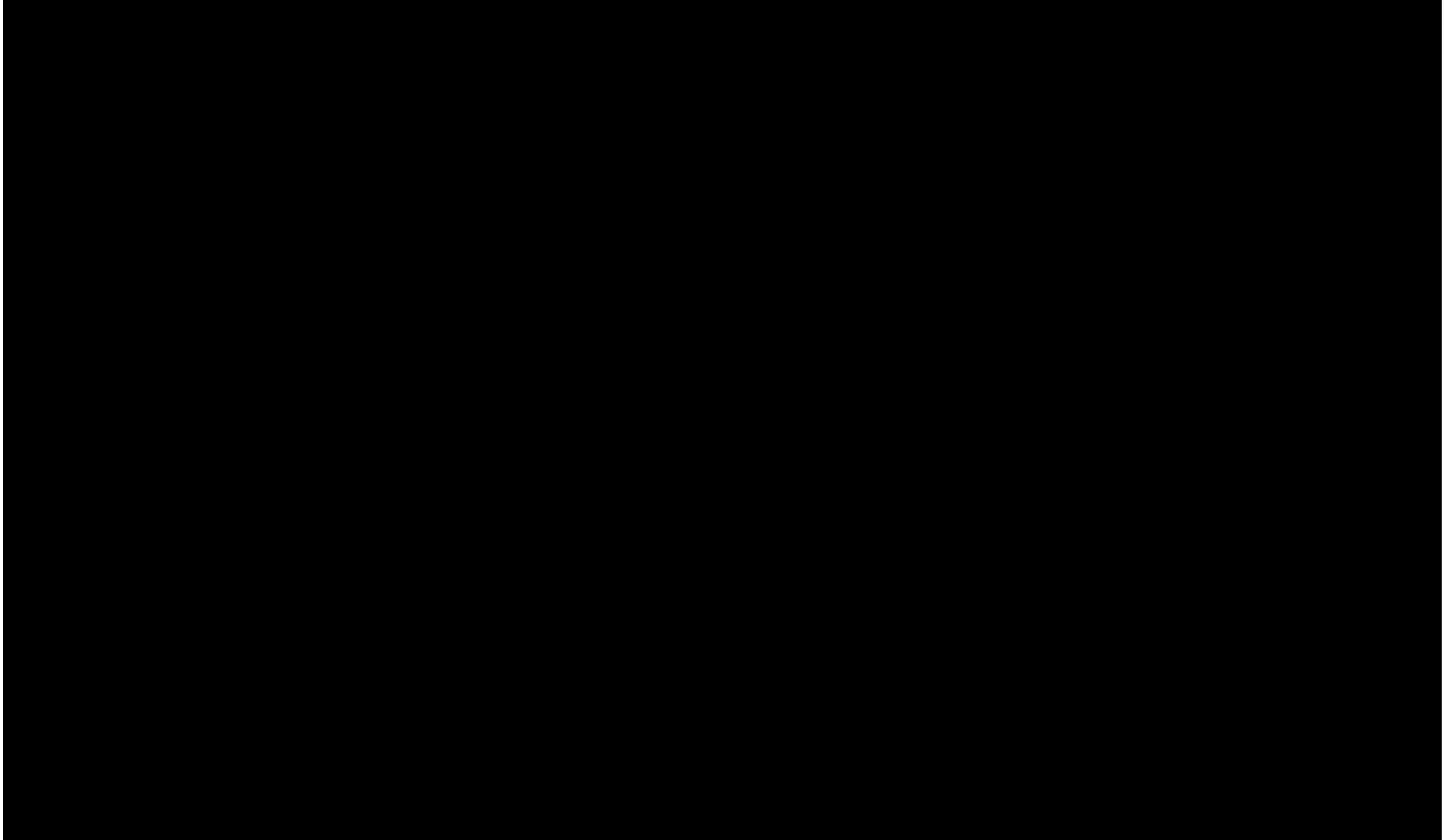




PRESENTATION ON MONOLITHIC FORMWORK TECHNOLOGY



REQUIREMENT OF MONOLITHIC FORMWORK TECHNOLOGY





FORMWORK SYSTEMS LLP.

ASSEMBLY OF MFS ALUMINIUM FORMWORK SYSTEM



ADVANTAGES OF USING MFS ALUMINIUM FORMWORK TECHNOLOGY

INDIA AND THE DEVELOPING WORLD IS FACING HUGE SHORTFALL IN HOUSING UNITS. TO CATER THIS TECHNOLOGIES LIKE “MFS ALUMINIUM FORMWORK SYSTEM” , PLAY A CRITICAL ROLE.

THE MOST IMPORTANT ASPECT OF SUCCESSFUL & TIMELY CONSTRUCTION IS THE RIGHT FORMWORK ASSOCIATE.

“MFS ALUMINIUM FORMWORK SYSTEM” OFFERS MOST TRUSTED, SAFE, EFFICIENT AND CUTTING EDGE FORMWORK SYSTEM TECHNOLOGY AVAILABLE IN THE MARKET GLOBALLY WITH FOLLOWING ADVANTAGES :

- ❖ SHORTENS CONSTRUCTION PERIOD (ENABLING SEVEN DAYS CYCLE).
- ❖ REDUCES COST.
- ❖ SAVINGS ON OVERHEAD EXPENSES DUE TO SPEEDY CONSTRUCTION.
- ❖ GREATER STRENGTH AND DURABILITY OF STRUCTURE.
- ❖ MONOLITHIC CRACK FREE STRUCTURES.
- ❖ SEISMIC EARTHQUAKE RESISTANT STRUCTURE.
- ❖ USABLE IN EXTREME WEATHER AND TEMPERATURE CONDITIONS.
- ❖ CIVILIZED METHOD OF CONSTRUCTION.
- ❖ ENVIRONMENT FRIENDLY.



Speedy Construction / **Time Saving**

Approximately 35-40% construction Time is saved by using MFS Aluminium Formwork System which ensures timely completion of project. Due to fast construction, cost of overheads is reduced resulting in overall cost of project.



SAVES OVERALL PROJECT COST

MFS Aluminum Formwork System is Durable and can be reused for multiple construction cycles, reducing the need for constant material replenishment. This helps in minimizing wastage and overall Cost of Project.

Although Initial Cost of Aluminum Formwork may be higher but due to high Repetitions it becomes Viable.

As Plastering is not required due to Form Finish it adds to further Savings in Time & Cost.

CardensDesign.com

ERECTION PROCESS OF MFS ALUMINIUM FORMWORK SYSTEM





MFS

SEVEN DAYS CYCLE



DAY - 1

1. **Setting out and Grid Formation.**
2. **Striking / De Shuttering of Wall Formwork of Previous Pour.**
3. **Steel Binding of Walls / Columns Post Lay Out.**
4. **Electrical Conducting and Services Sleeves.**
5. **External Bracket Fixing.**

PLANNING OF MFS ALUMINIUM FORMWORK SYSTEM



DAY-2

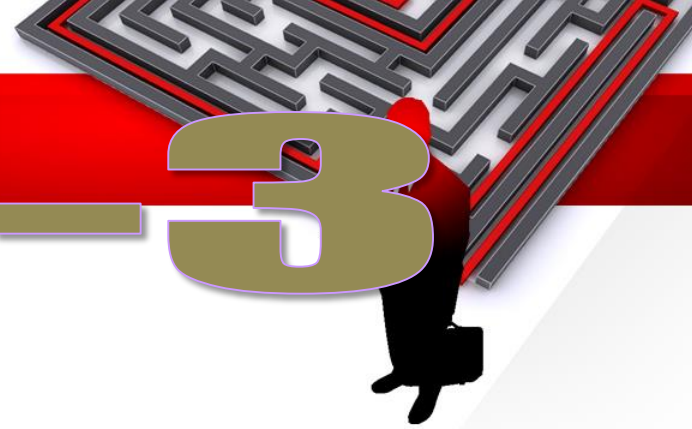


1. **Steel Binding of Wall & Column Complete.**
2. **Electrical Conduiting & Services Sleeves.**
3. **Starting of Wall /Column Formwork.**
4. **De Shuttering of Beam & Deck Soffit in Previous Slab.**

PLANNING OF MFS ALUMINIUM FORMWORK SYSTEM



DAY-3



1. Starting of Beam / Deck Formwork.
2. Checking of Wall Verticality.

PLANNING OF MFS ALUMINIUM FORMWORK SYSTEM



DAY-4

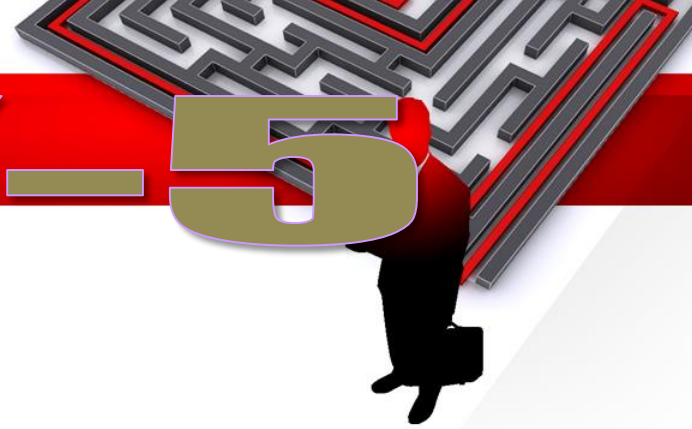


1. **Checking of Deck Formwork Levels.**
2. **Reinforcement Binding of Deck.**

PLANNING OF MFS ALUMINIUM FORMWORK SYSTEM



DAY-5



1. Deck Reinforcement Binding Complete.
2. Hanging Formwork & Kicker Fixing.
3. Electrical Conduiting & Services Sleeves in Slab / Beam.

PLANNING OF **MFS** ALUMINIUM FORMWORK SYSTEM



DAY-6



1. **Completion of Electrical Conduiting & Other Sleeve Work in Slab.**
2. **Fixing of External Formwork & External Soldier Fixing.**
3. **All Internal & External Supporting Work.**
4. **Mortar Packing at Bottom of Vertical Formwork to Arrest Bleeding.**
5. **Checking Complete.**

PLANNING OF MFS ALUMINIUM FORMWORK SYSTEM



DAY-7



1. **Removal of Extra Material From Slab (If Any).**
2. **Concreting Arrangement.**
3. **Start of Concreting.**

PLANNING OF MFS ALUMINIUM FORMWORK SYSTEM

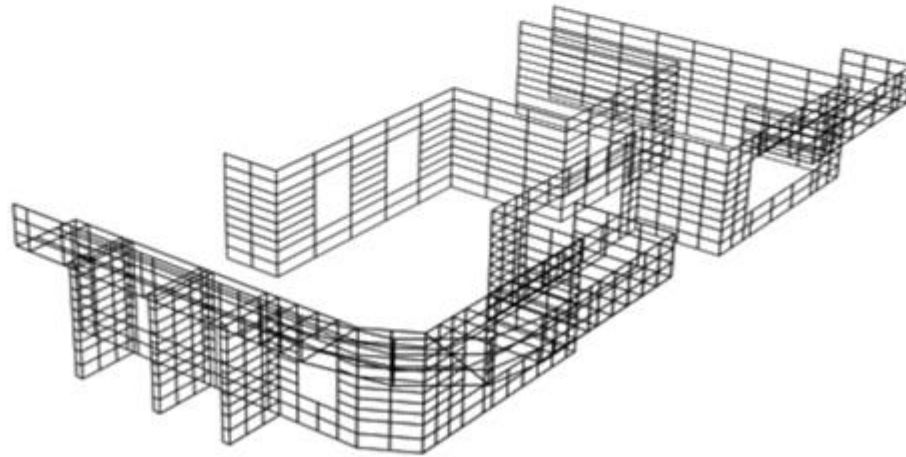




**GRAPHICAL
REPRESENTATION OF
SEQUENCE OF ACTIVITIES
WHILE USING MFS
ALUMINUM FORMWORK
SYSTEM**

ENTIRE STRUCTURE IS DIVIDED IN TWO SEGMENTS

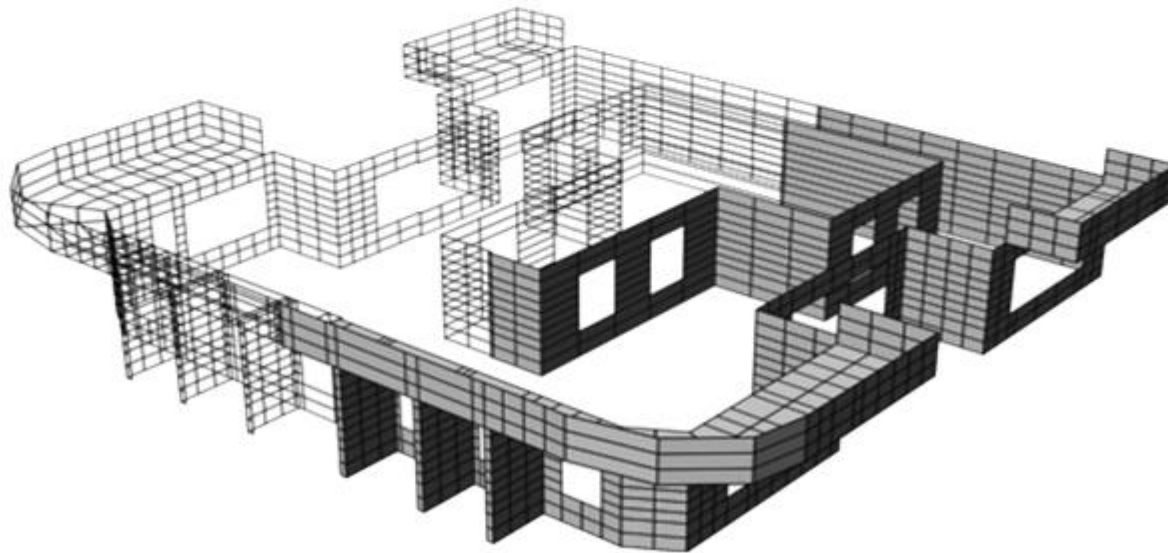
IN FIRST SEGMENT VERTICAL REINFORCEMENT IS DONE



GRAPHICAL REPRESENTATION



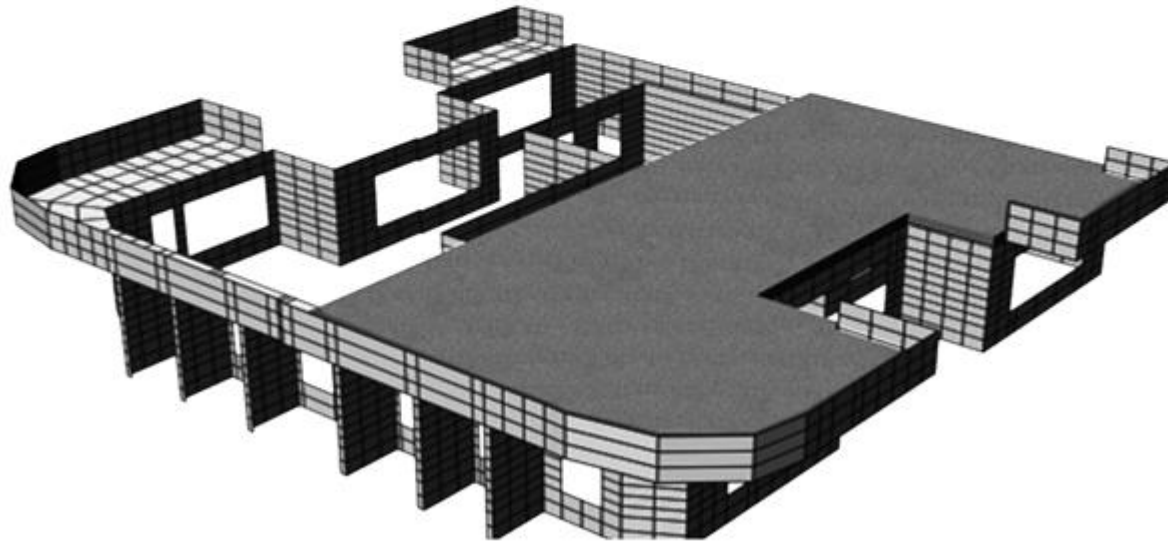
FOLLOWED BY VERTICAL FORMWORK PLACEMENT IN FIRST SEGMENT & VERTICAL REINFORCEMENT IN SECOND SEGMENT



GRAPHICAL REPRESENTATION



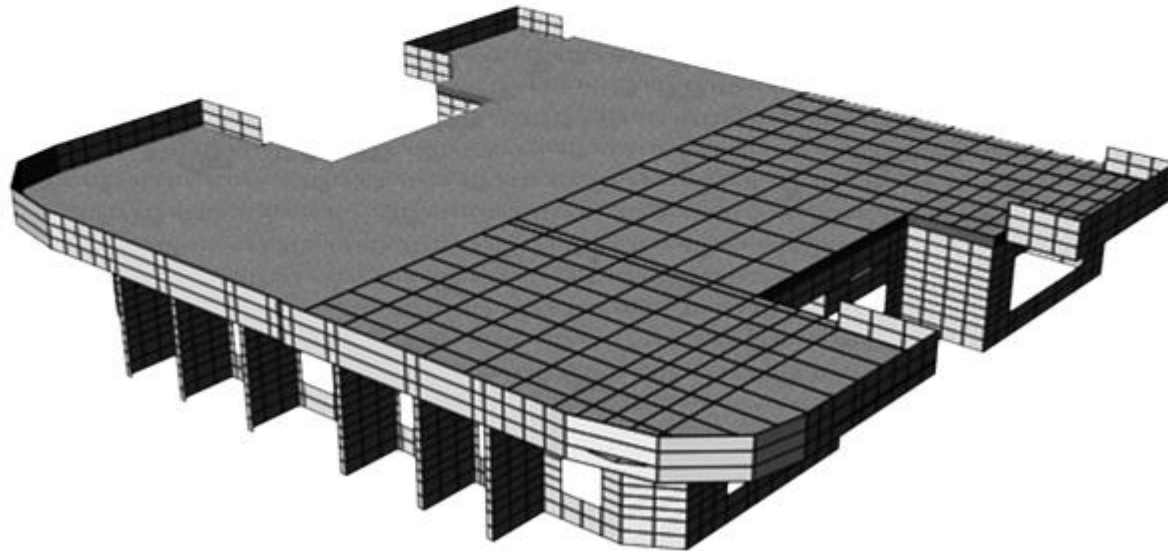
FORMWORK FOR SLAB IS DONE IN FIRST SEGMENT AND VERTICAL FORMWORK IN SECOND SEGMENT



GRAPHICAL REPRESENTATION

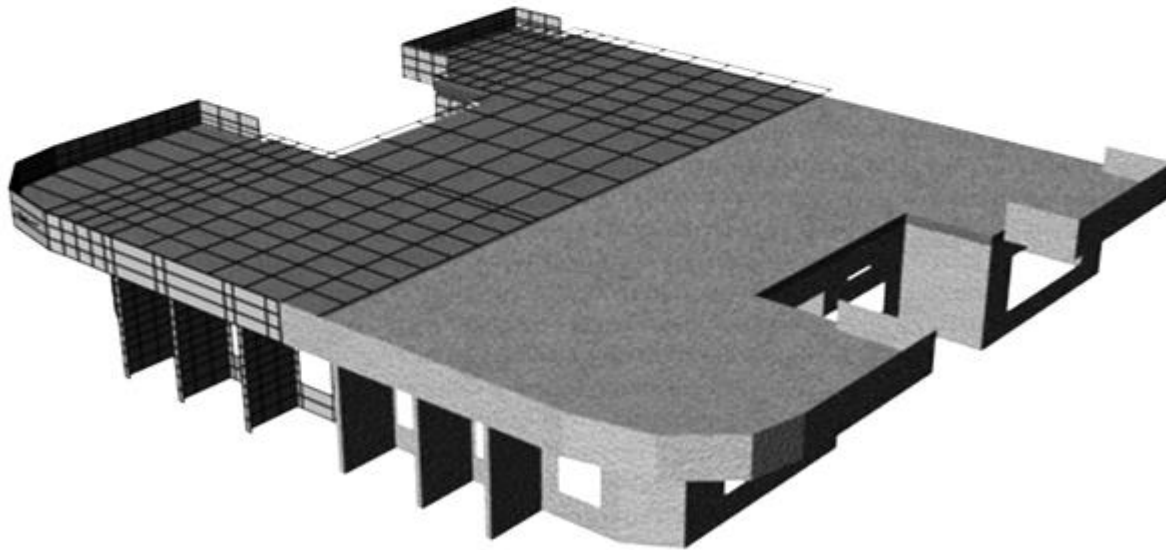


THIS IS FOLLOWED BY REINFORCEMENT OF SLAB IN FIRST SEGMENT &
FORMWORK FOR SLAB IN SECOND SEGMENT



GRAPHICAL REPRESENTATION

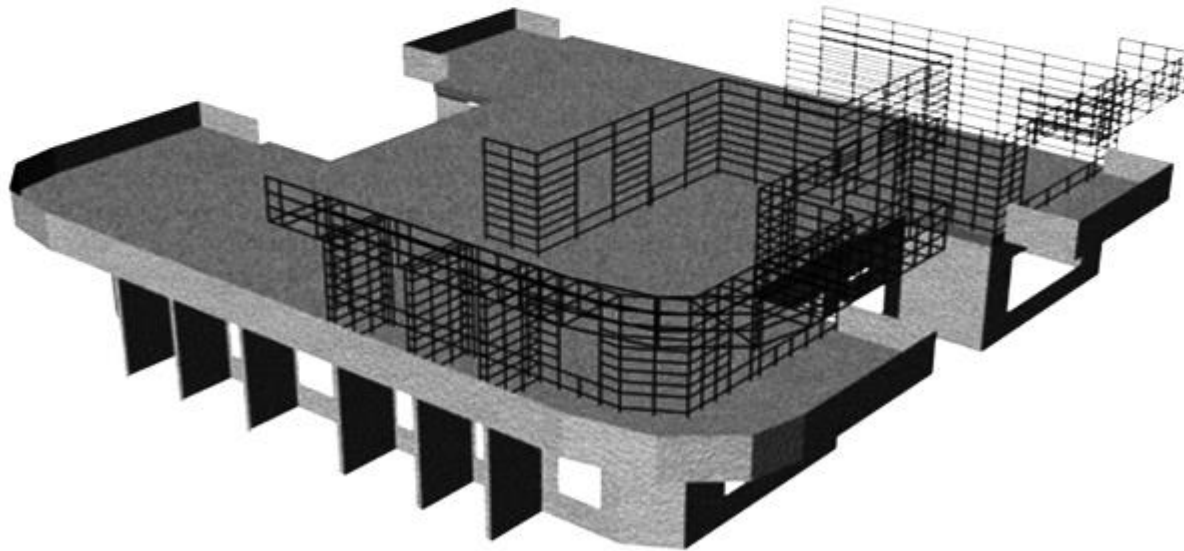
CONCRETE IS POURED IN FIRST SEGMENT AFTER CONDUITING & SLEEVE PLACEMENTS. REINFORCEMENT OF SLAB IS DONE IN SECOND SEGMENT



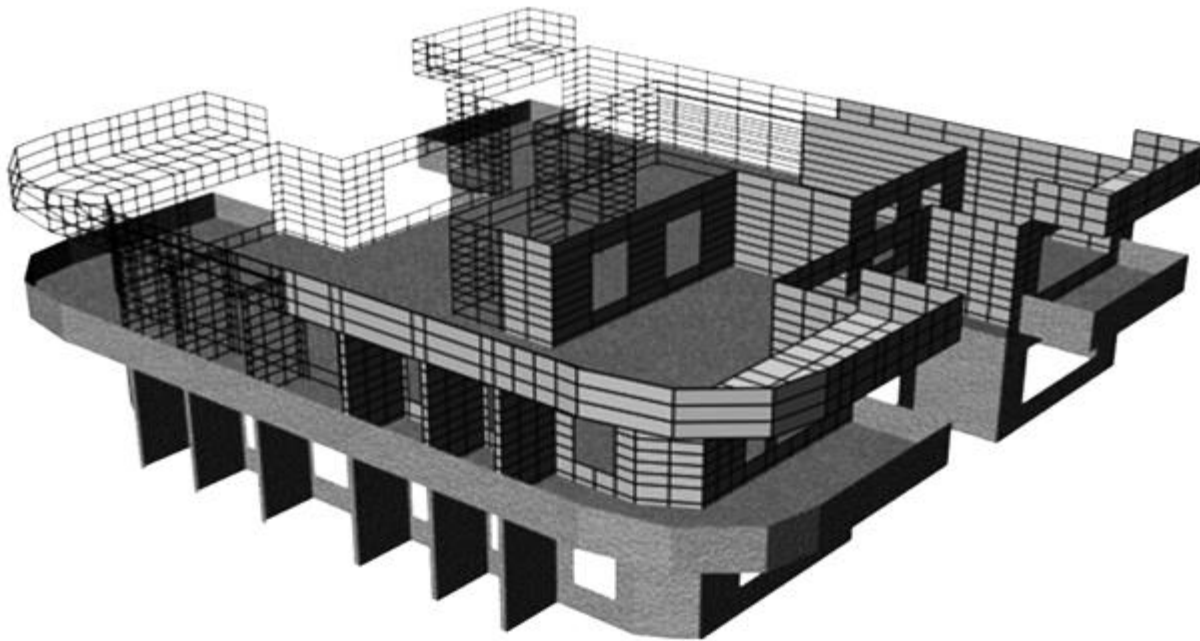
GRAPHICAL REPRESENTATION



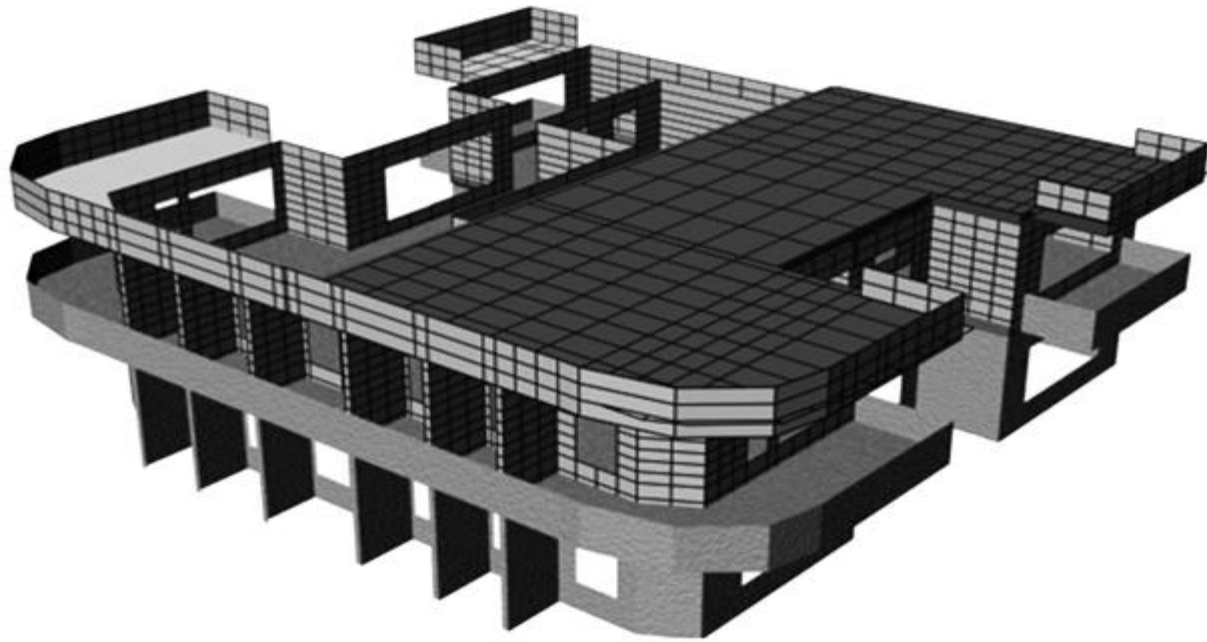
FOLLOWED BY CONCRETING IN SECOND SEGMENT.



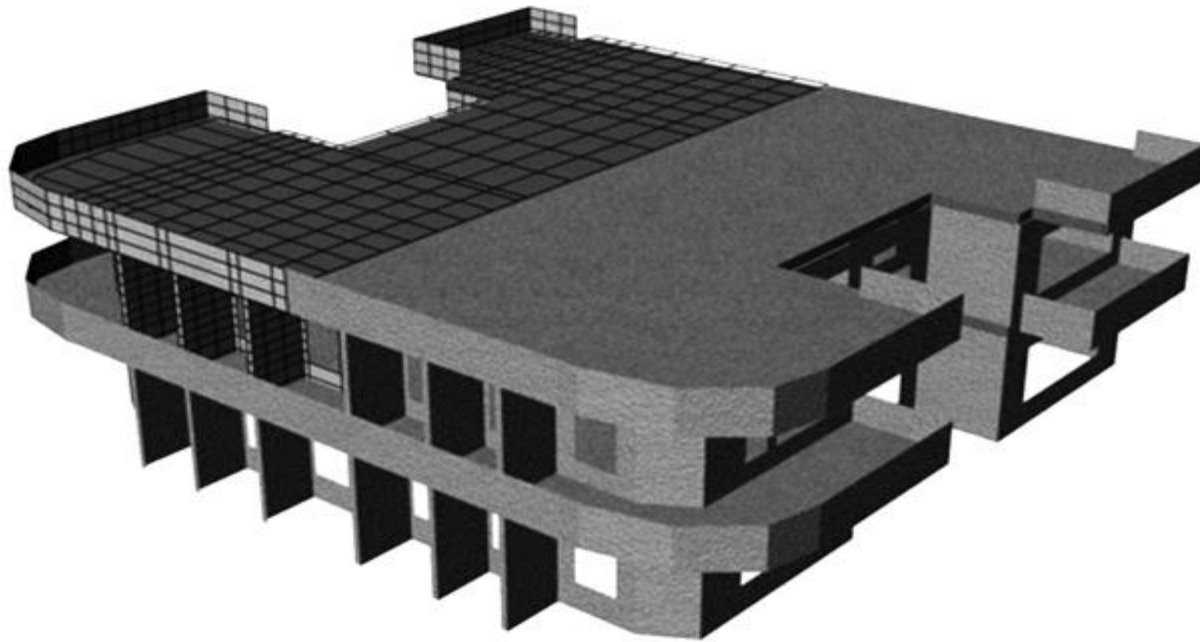
GRAPHICAL REPRESENTATION



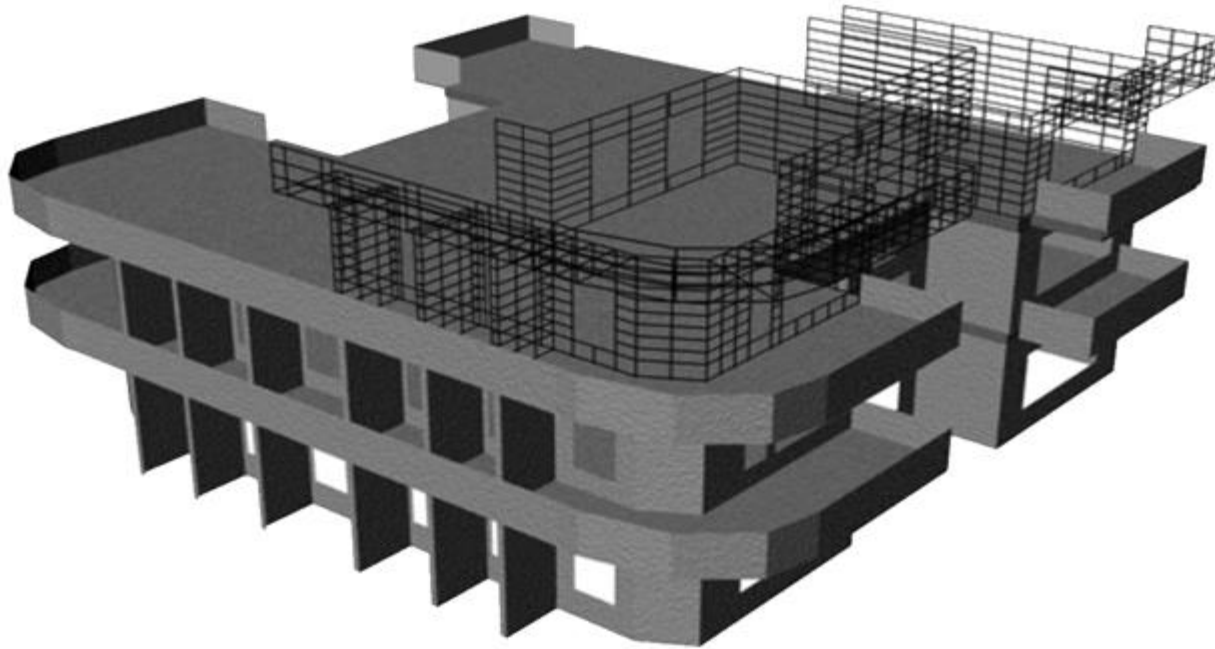
GRAPHICAL REPRESENTATION



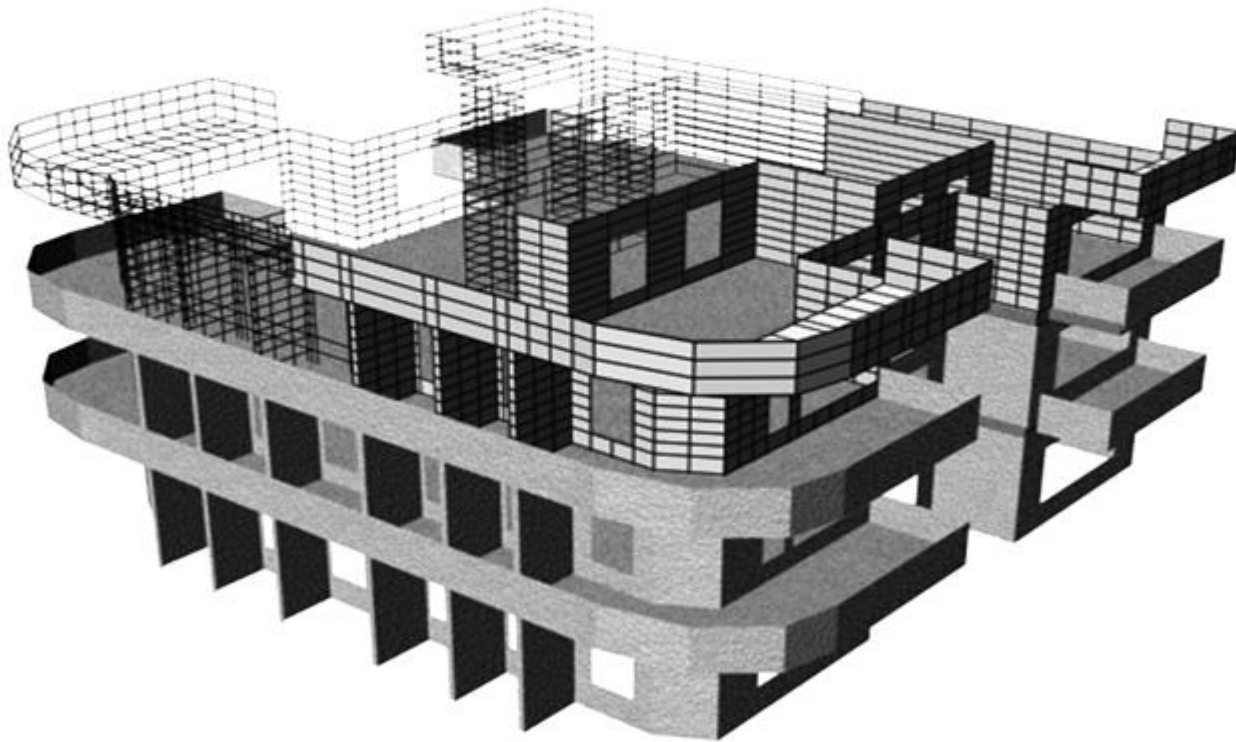
GRAPHICAL REPRESENTATION



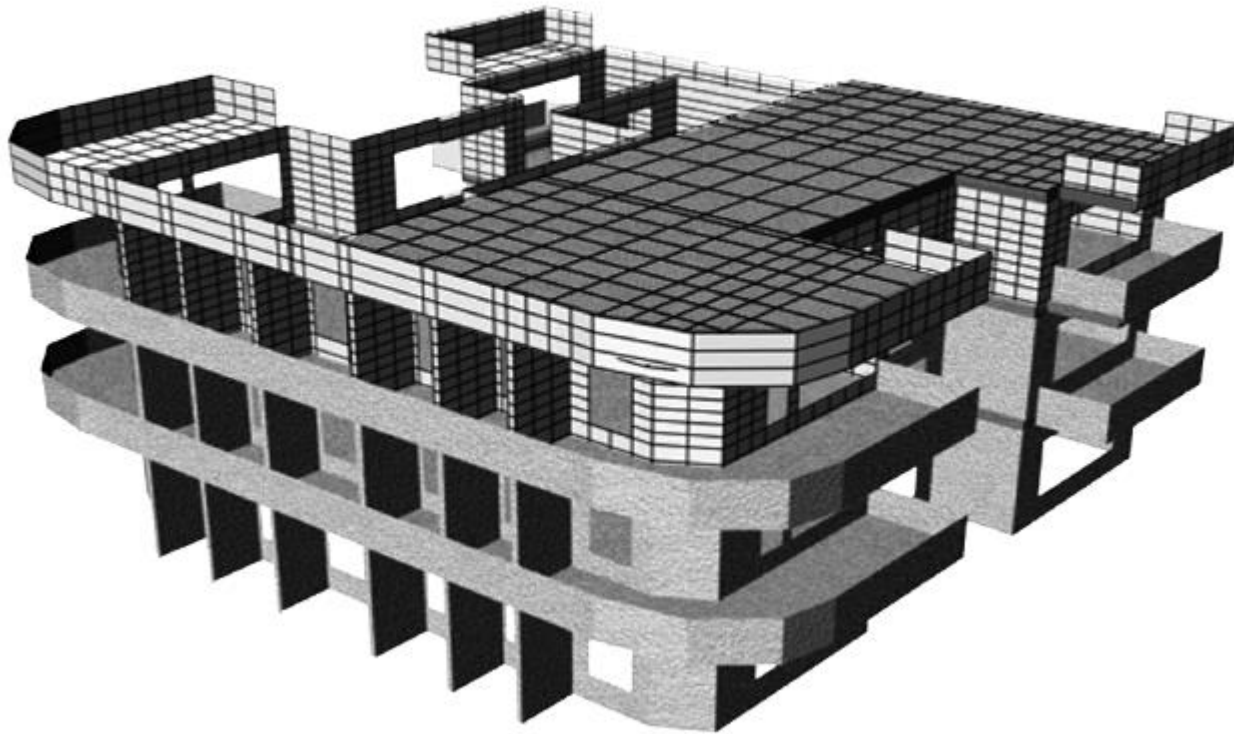
GRAPHICAL REPRESENTATION



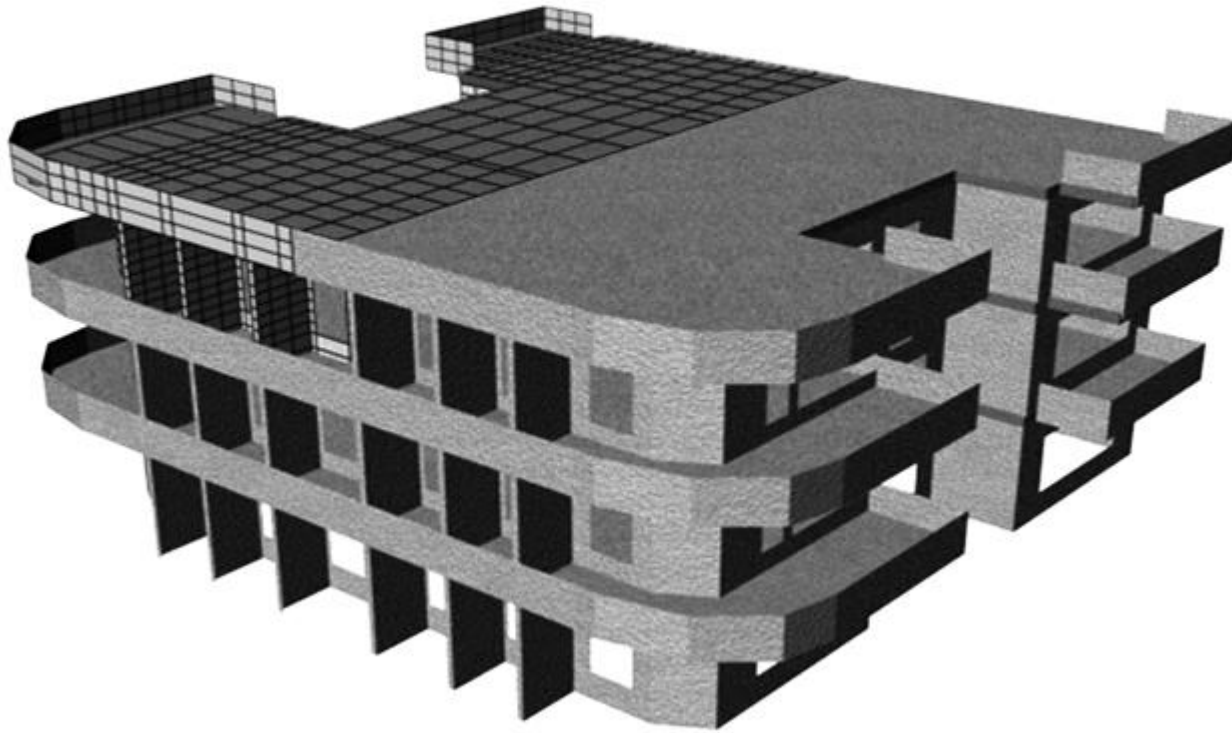
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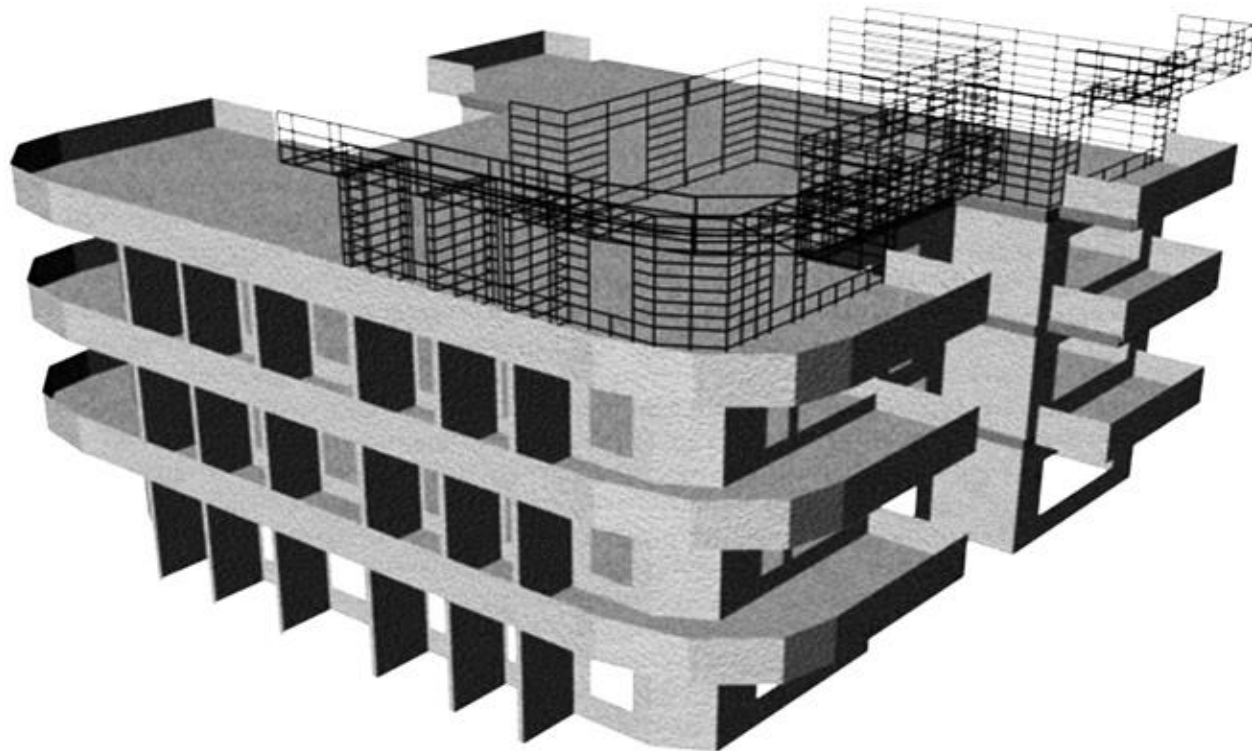
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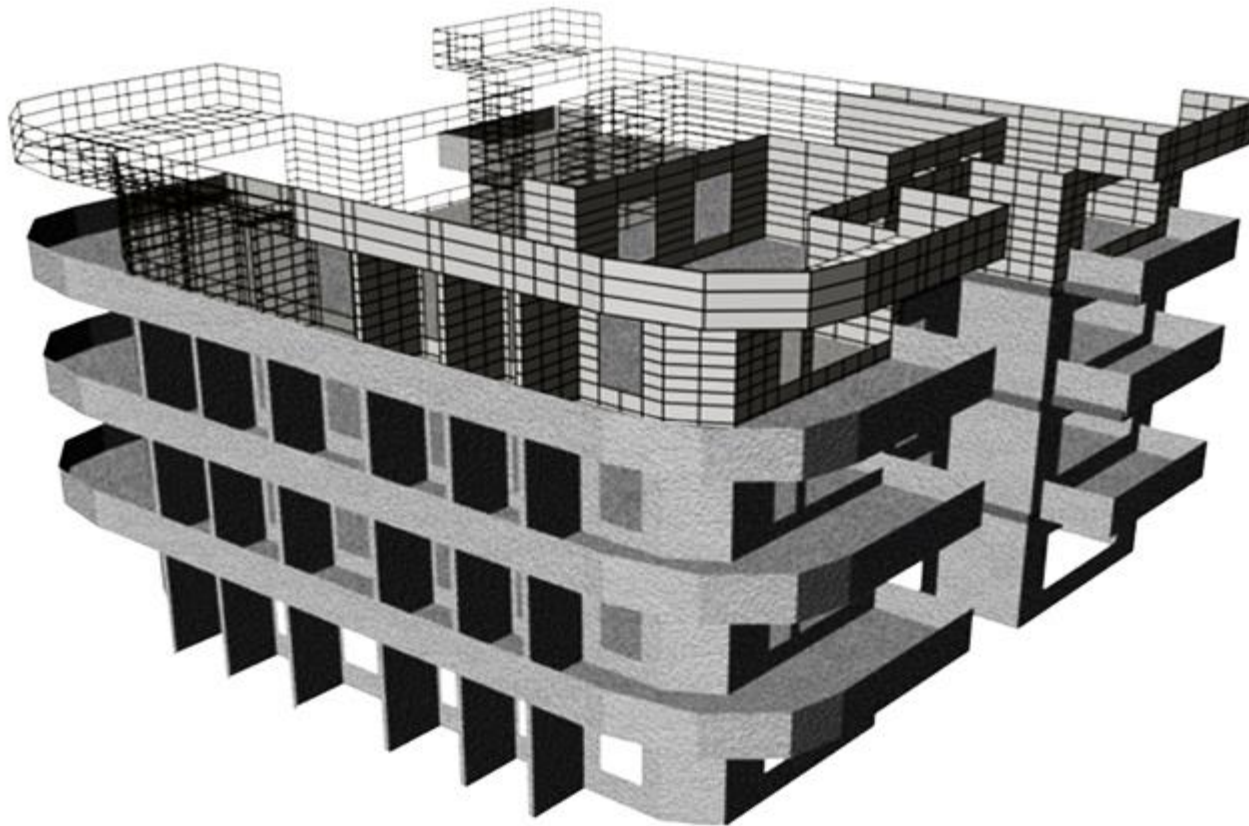
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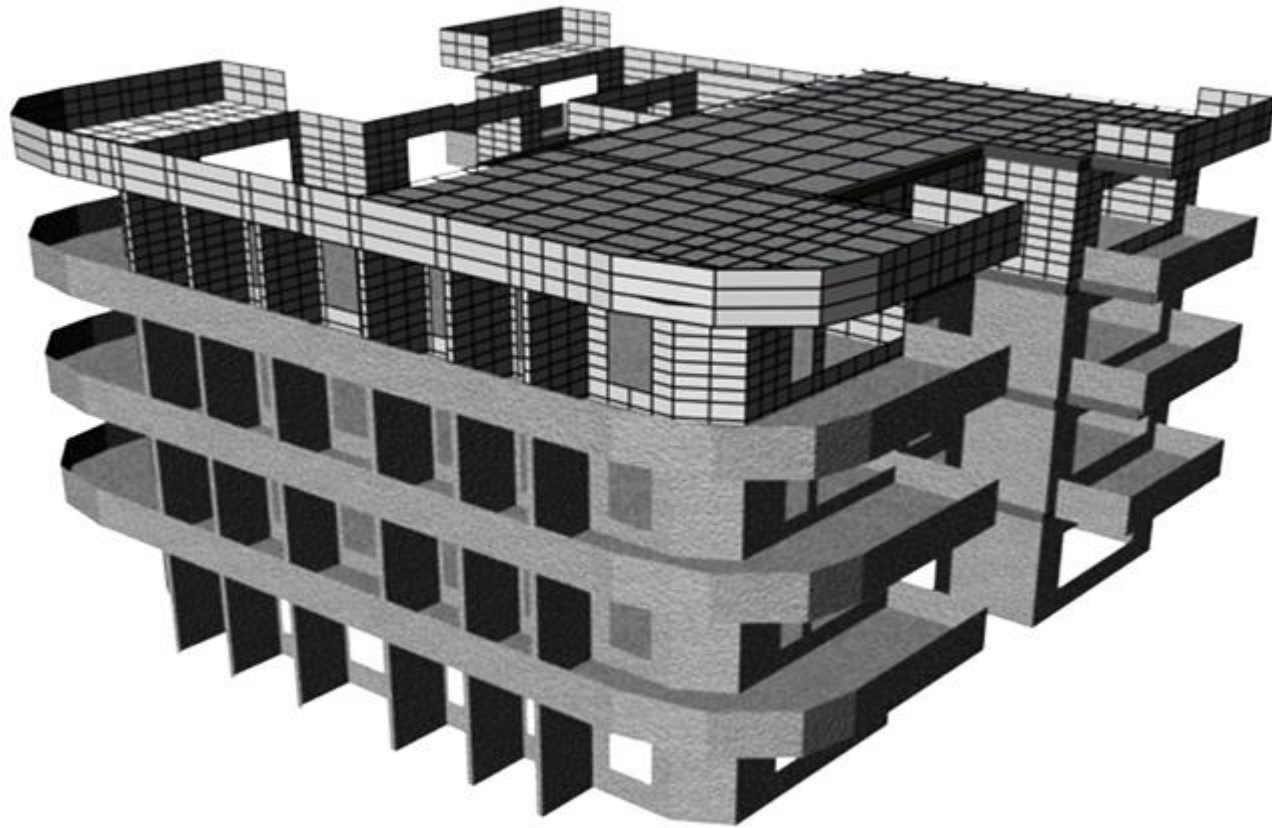
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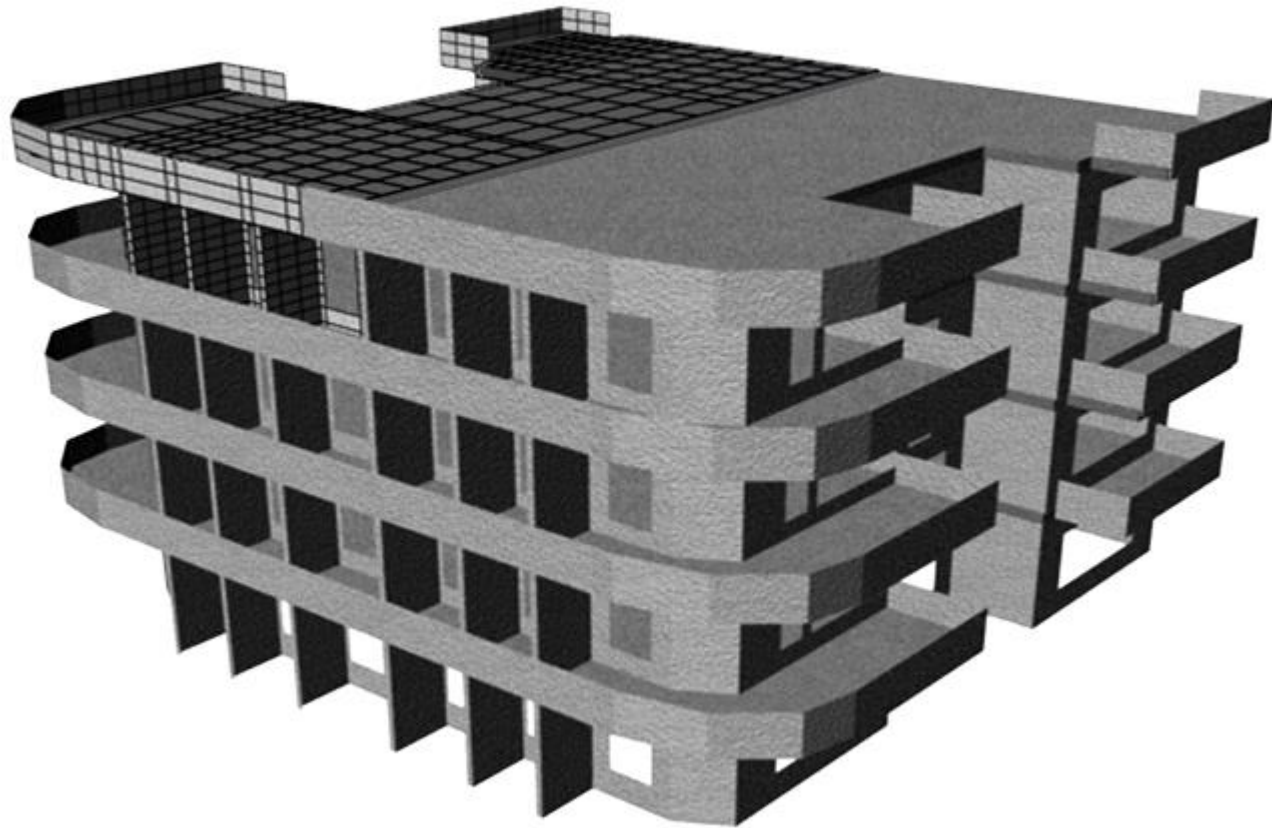
GRAPHICAL REPRESENTATION



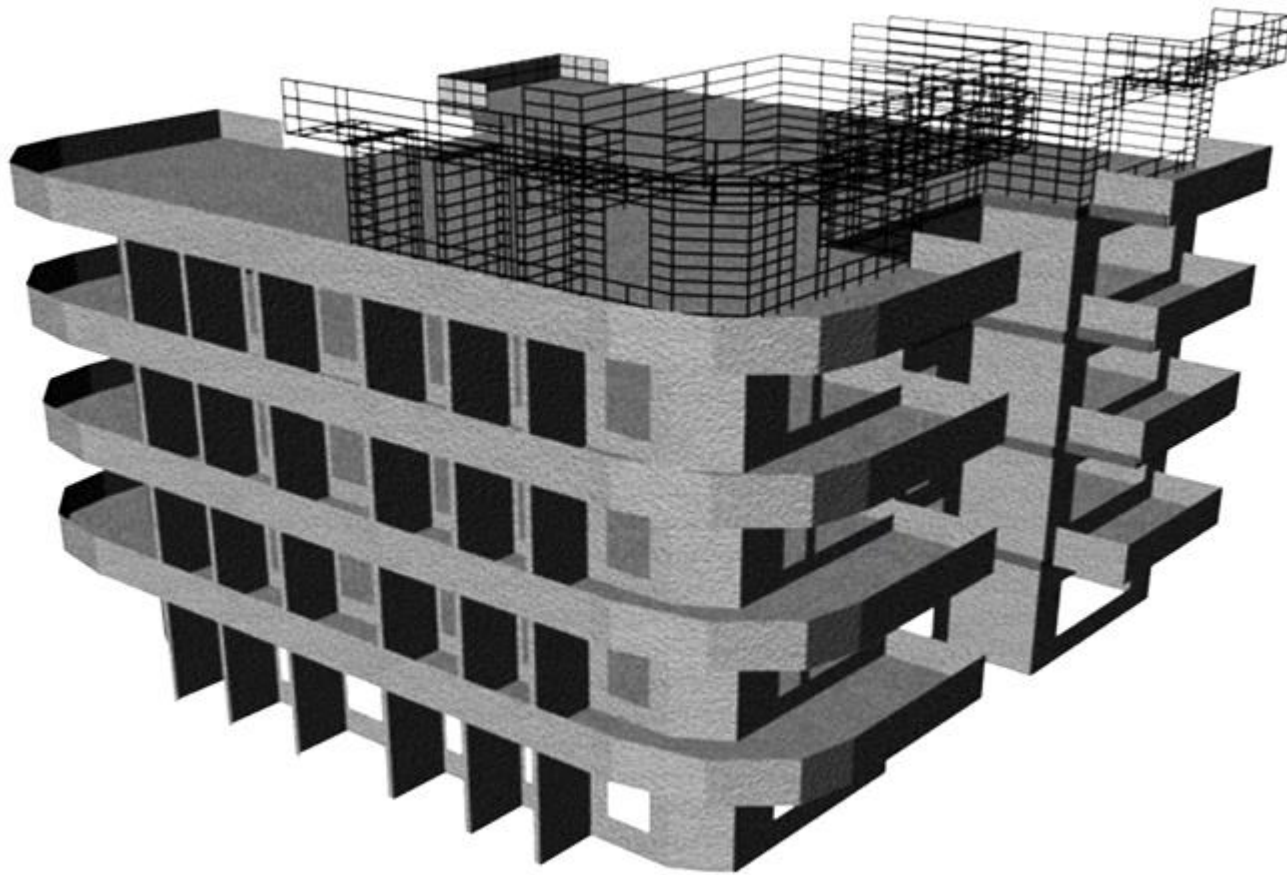
GRAPHICAL REPRESENTATION



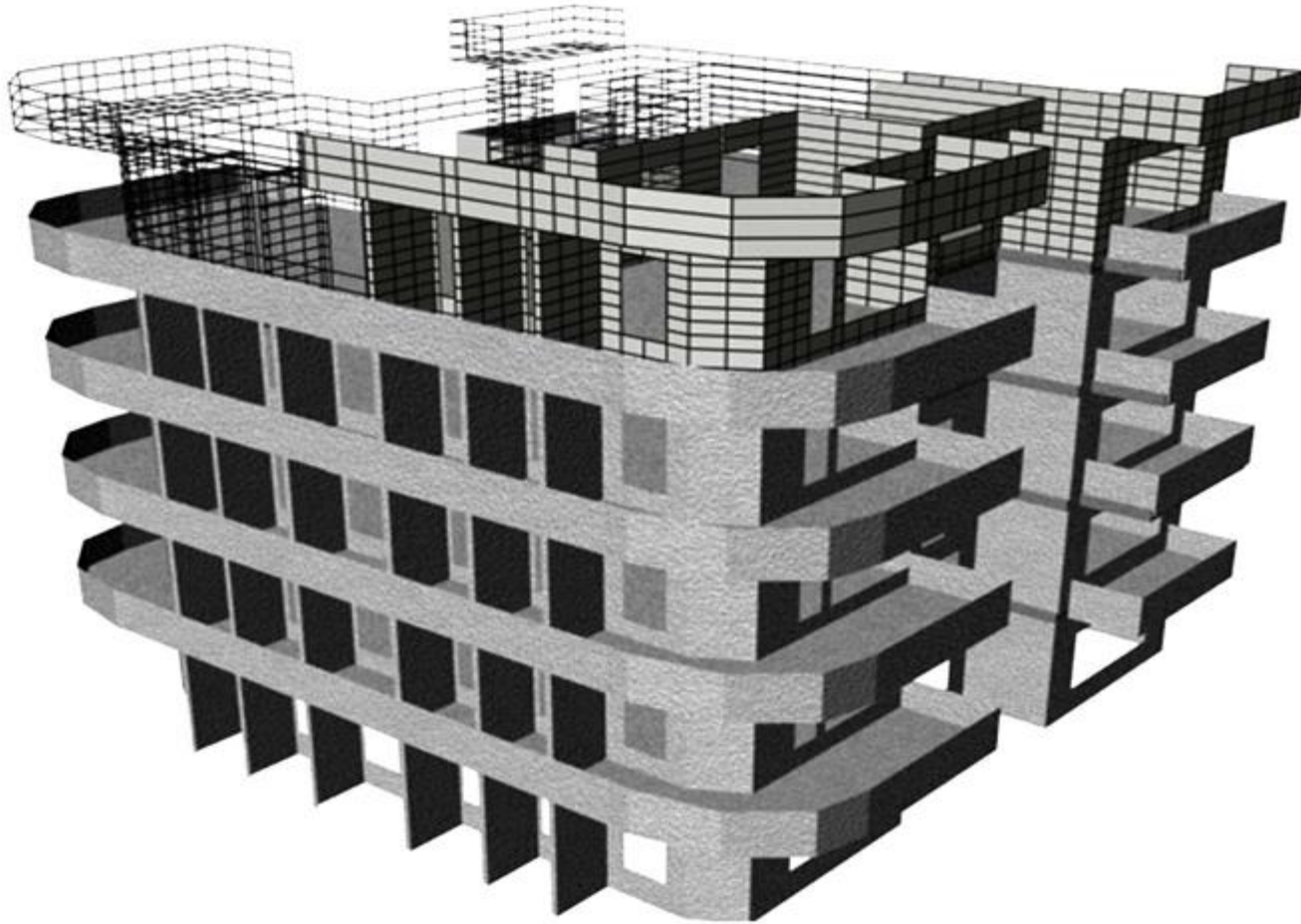
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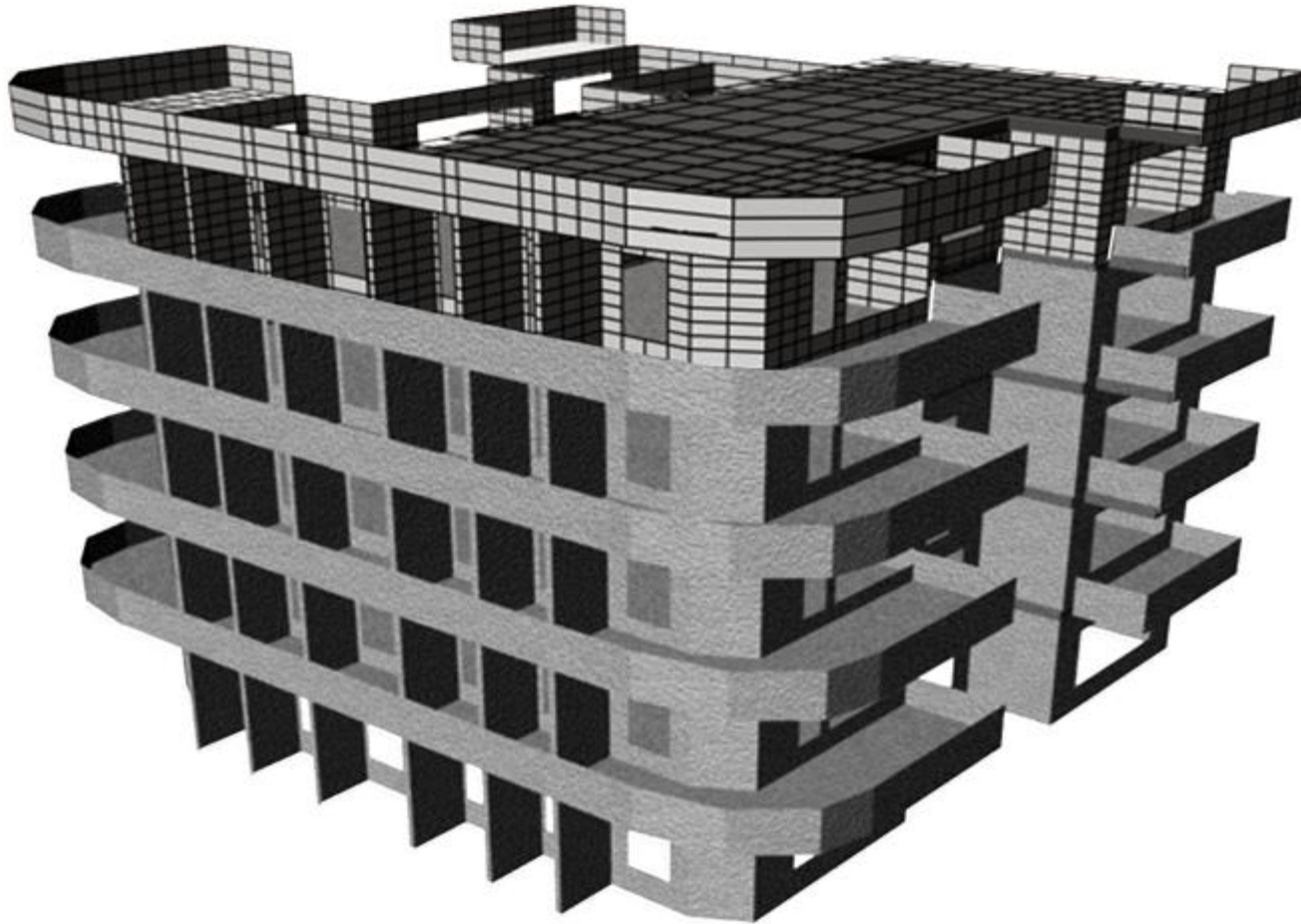
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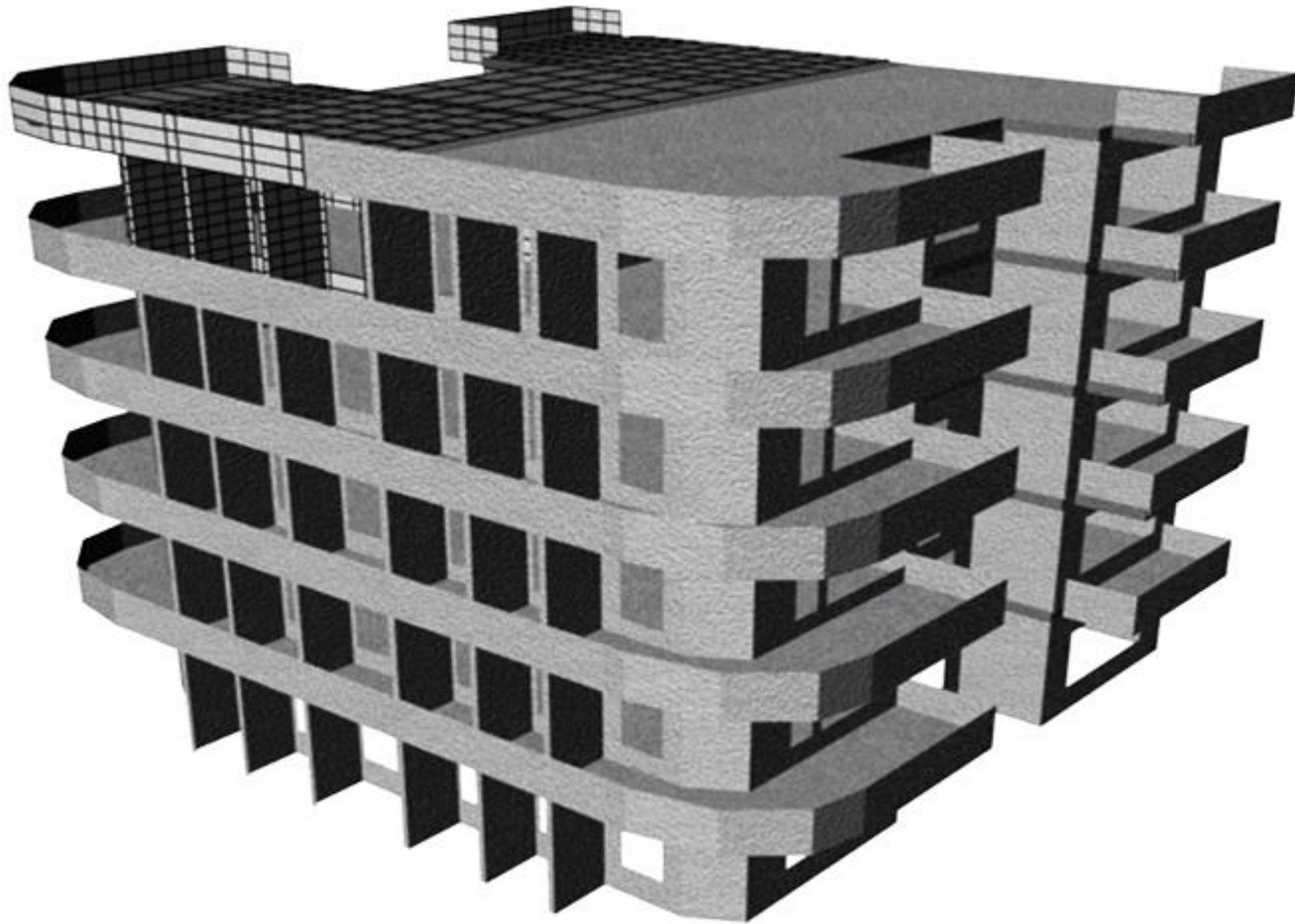
GRAPHICAL REPRESENTATION



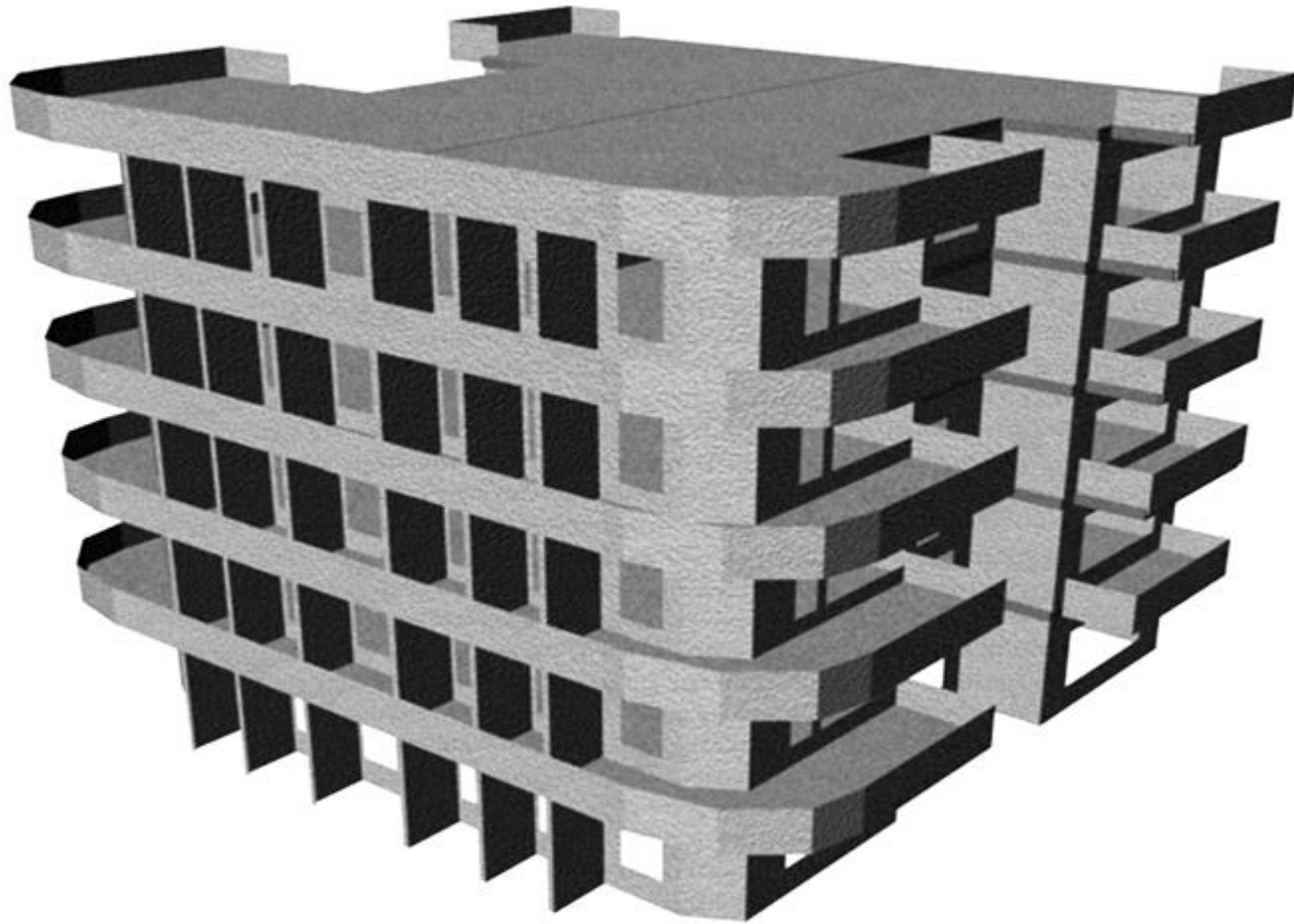
GRAPHICAL REPRESENTATION



GRAPHICAL REPRESENTATION



GRAPHICAL REPRESENTATION



GRAPHICAL REPRESENTATION



WITH THIS METHODOLOGY WE CAN UTILIZE THE WORK FORCE AND RESOURCES IN SYSTEMATIC MANNER WITH MAXIMUM UTILITY & ACHIEVE BEST OUTPUT.



Environment Friendly Technology

100% Recyclable

Seventy Five percent of Aluminium produced across the world since late 19th Century is still in use. One of the key properties of Aluminium is its nature of being recycled, recovered and reused. The recycling rate pertaining to the construction industry is around 92-95 percent. This property of Aluminium saves the energy and cost of producing the metal.

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Environment Friendly Technology

Reduce Carbon Foot Prints

Aluminium Does not burn and its Alloys have a melting point of 650°C, that too without any traces of harmful gases. As Aluminium can be recycled it uses only 5% of energy to make the product which helps in reducing carbon emissions. Owing to its recyclable properties, Aluminium is widely used in sustainable projects. Other properties of Aluminium like malleability, durability and strength make it more usable in construction projects. Green buildings have resources that minimize the burden on the planet leading to reduction in Carbon footprints.



Environment Friendly Technology

Corrosion Resistant

- Aluminum's longer life span can also be attributed to its property of being corrosion resistant. This reduces the need for regular maintenance and is being used successfully as Formwork Material. With further surface treatments, aluminum can minimize the harmful impacts of corrosion on people as well as the environment thereby making it a green material.

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Environment Friendly Technology

Strong & Durable

- Aluminum's strength makes it the first choice for structural frameworks. Being lightweight but strong and long-lasting is an added benefit of aluminium. Its high strength to weight ratio makes it a preferred metal in sustainable structures.

Reflective

- Aluminium's main role as a green material is to reduce the energy emission and make the building more energy-efficient. Aluminium is natural when it comes to saving energy.

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SITE IMAGES/PICS

Initial Setting – 10-01-2019



1st Casting – 30-01-2019



2nd Casting – 07-02-2019



4th Casting – 22-02-2019



12th Casting – 21-04-2019



19th Casting – 10-06-2019



25th Casting – 22-07-2019



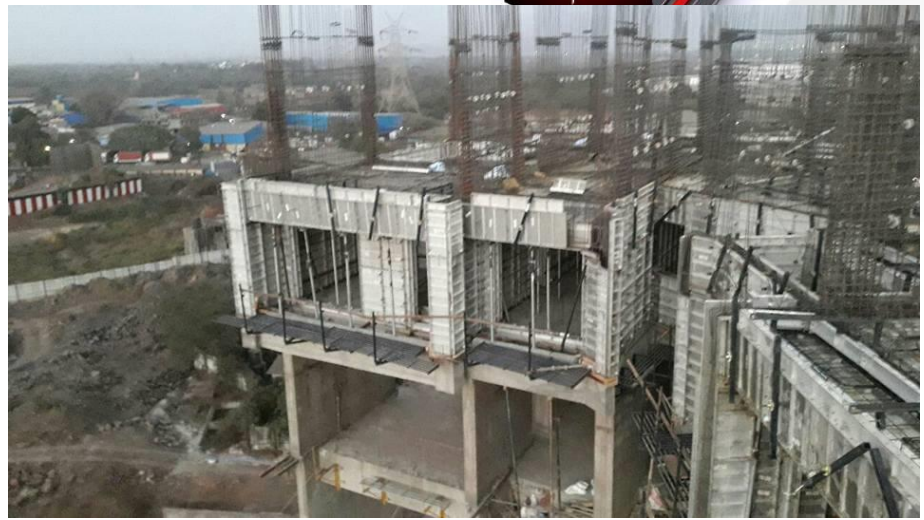
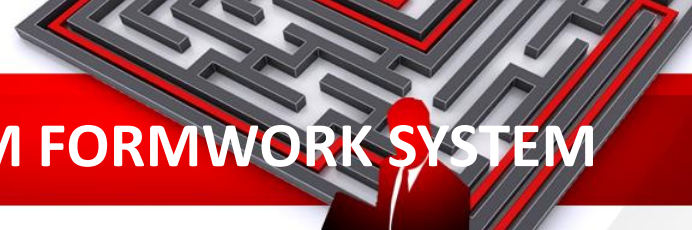
27th Casting – 08-08-2019



MFS ALUMINIUM FORMWORK SYSTEM



ON GOING SITES OF **MFS** ALUMINIUM FORMWORK SYSTEM





PROVISION FOR ELECTRICAL ITEMS AT SITE



PROVISION FOR PLUMBING NICHES AT SITE



ON GOING SITES OF **MFS** ALUMINIUM FORMWORK SYSTEM





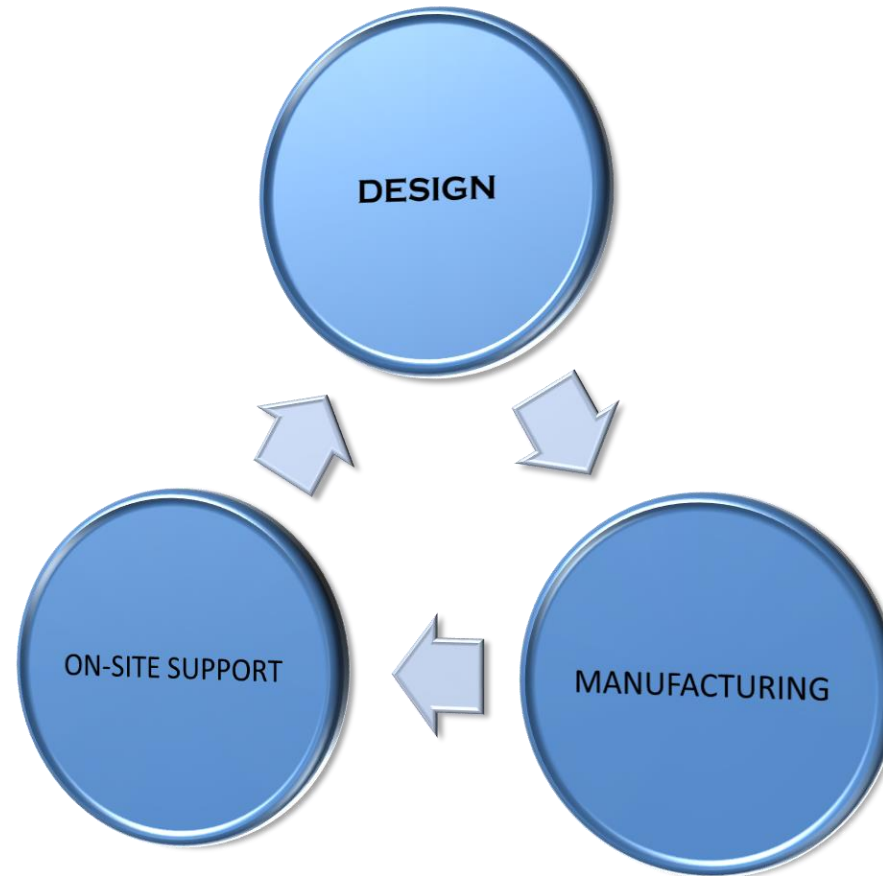
ON GOING SITES OF **MFS** ALUMINIUM FORMWORK SYSTEM





Scope of Aluminium Formwork Technology

COMPLETE SOLUTIONS



- EXPERT IN-HOUSE DESIGNING TEAM.
- PROVIDING END TO END SOLUTION.



DESIGNING WITH IN-HOUSE CUSTOMIZED SOFTWARE

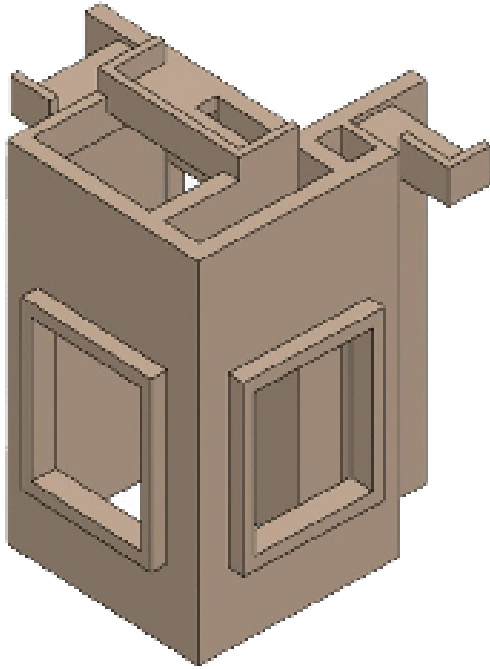


Figure -3 (3D images)

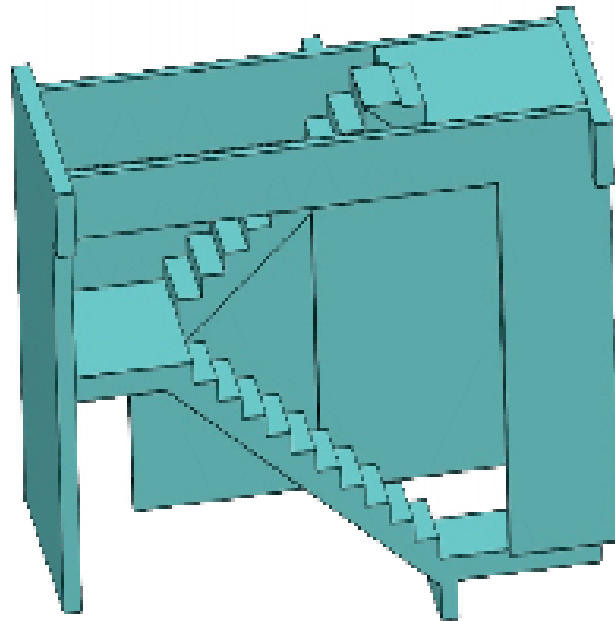


Figure -2 (3D images)

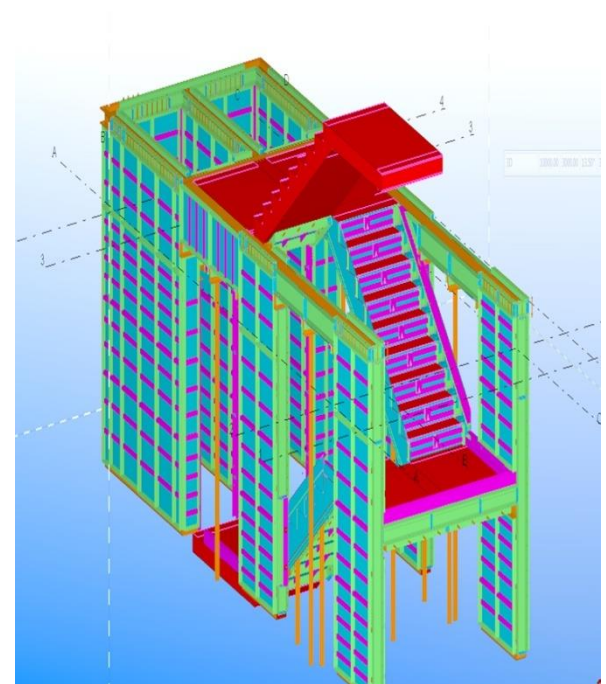


Figure -3 (3D images) fppt.com





FORMWORK SYSTEMS LLP.

Some Technical Features

- **Customized Design Software :**

This in house designed software provides a 3D platform for working & provides facility of soft mockup of entire project. This assures flawless manufacturing drawings along with final BOQ and site Operational Drawings based on which entire “**MFS Aluminum Formwork System**” is manufactured.

- **Technical Assistance :**

Besides, designing, manufacturing & supplying of Formwork for particular project, we also provide technical design assistance for optimum usage of “**MFS Aluminum Formwork System**” enabling customers to Re-use maximum number of components in their future projects.

- **Grade of Aluminum :**

Grade of Aluminum Extrusion shall be 6061 (T6).Sheets shall be used for Non Standard/ Special Panels along with Extrusion.





FORMWORK SYSTEMS LLP.

Some Technical Features

- **Welding process :**

Standard Wall & Deck Panels extrusions welded at center by using Friction stir welding & MIG Welding using Argon Gas with Robots.

- **Wall Panel :**

Our Wall Panels are designed for optimum hydrostatic pressure generated due to uncontrolled rate of pouring. Size 2100 X 600 mm & 2450 X 600mm (With RK Section).

- **Slab Panel :**

Our slab panels are designed for 200 mm slab thickness to counter uncontrolled flow of concrete through pumps which occasionally forms heap of concrete on slab panel creating extra weight & extra lateral pressure. Size 1100 X 600 mm.

- **Thickness:**

4 MM Thick at Concrete Face. Tolerance as per IS-2677



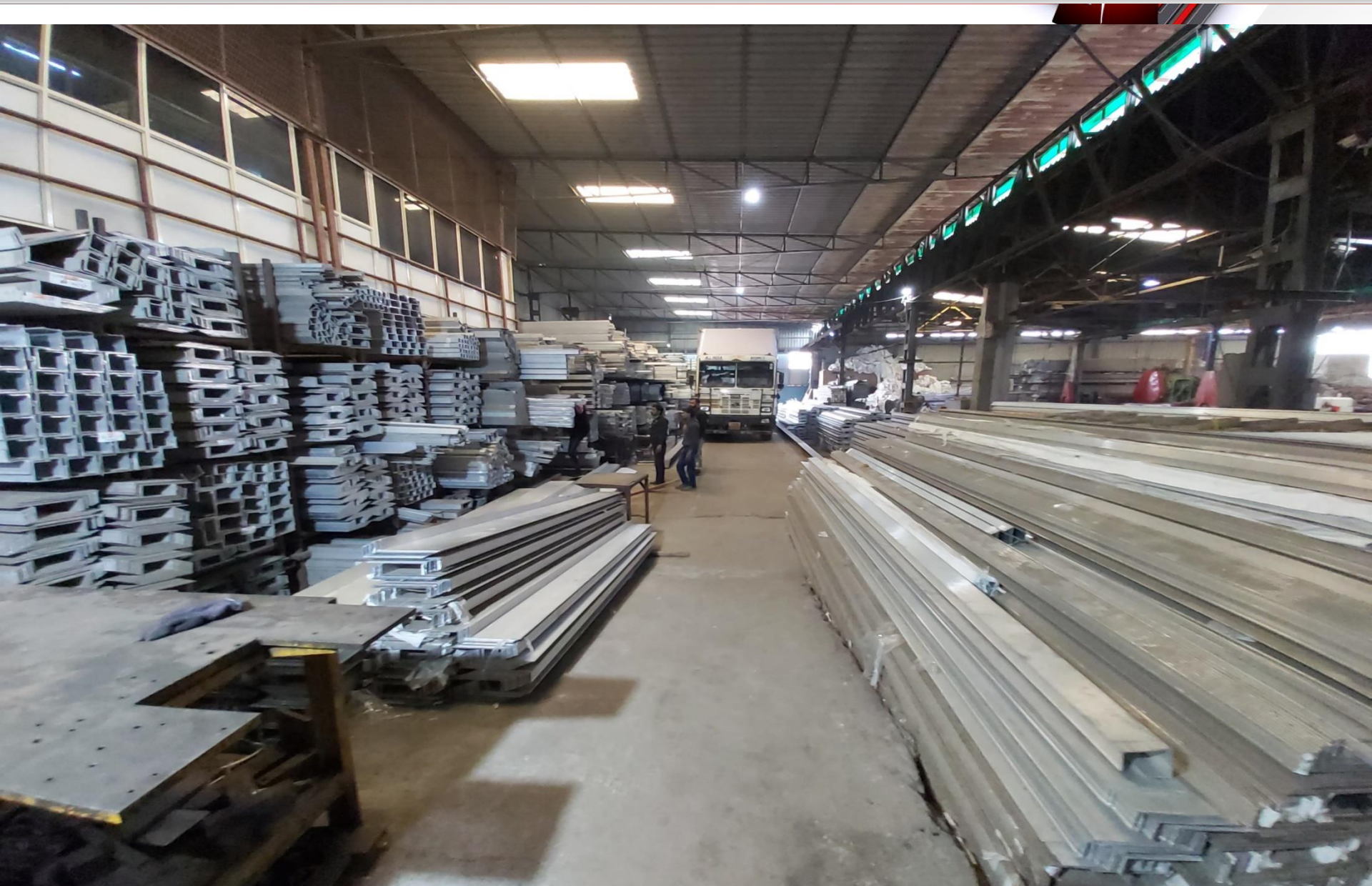
MODERN MACHINERY (ROBOTS/CNC/FRICTION)



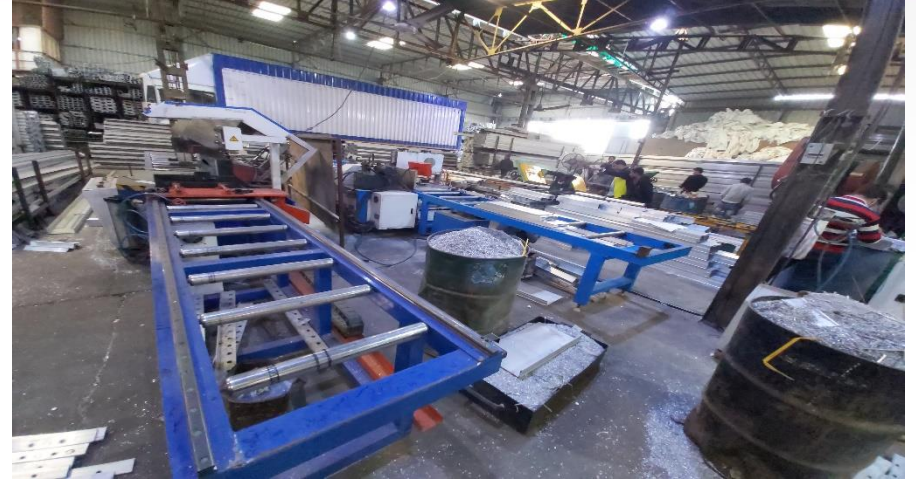
MFS Aluminium Formwork System consists of various components which requires high precision for perfect assembly. To achieve this even small error due to manual negligence need to be taken care right from cutting, punching, slot making, centre welding, fabrication and final coating. To achieve this, we have installed upgraded machineries like Robotic Welding, Friction Stir Machine, CNC Cutting Machines, CNC Punching Machines, CNC Slotting Machines, Profile Cutting Machines etc. which ensures perfect output free from any manual error.



RAW MATERIAL STOCK



CNC CUTTING MACHINES TO PREPARE MATERIAL FOR FABRICATION

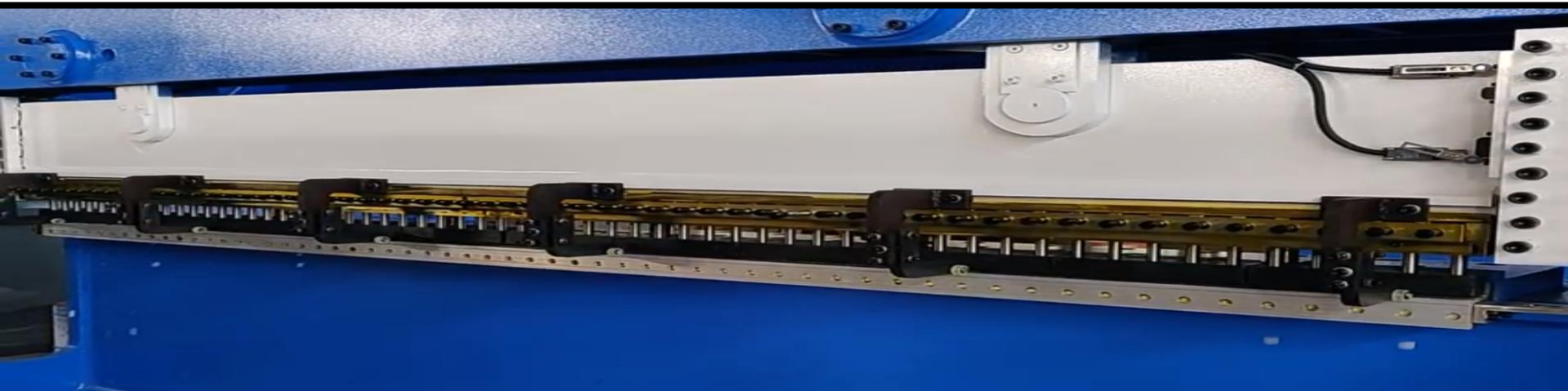




CNC CUTTING MACHINE FOR CRITICAL PROFILE

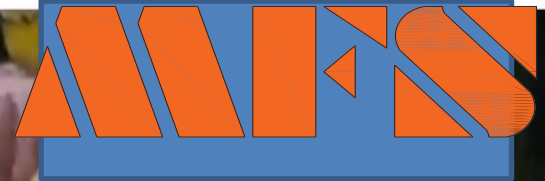


CNC PUNCHING MACHINES TO PREPARE MATERIAL FOR FABRICATION





CNC MILLING MACHINE FOR WALL TIE SLOTS



PROCESS OF FRICTION STIR WELDING





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Welding with Friction Stir



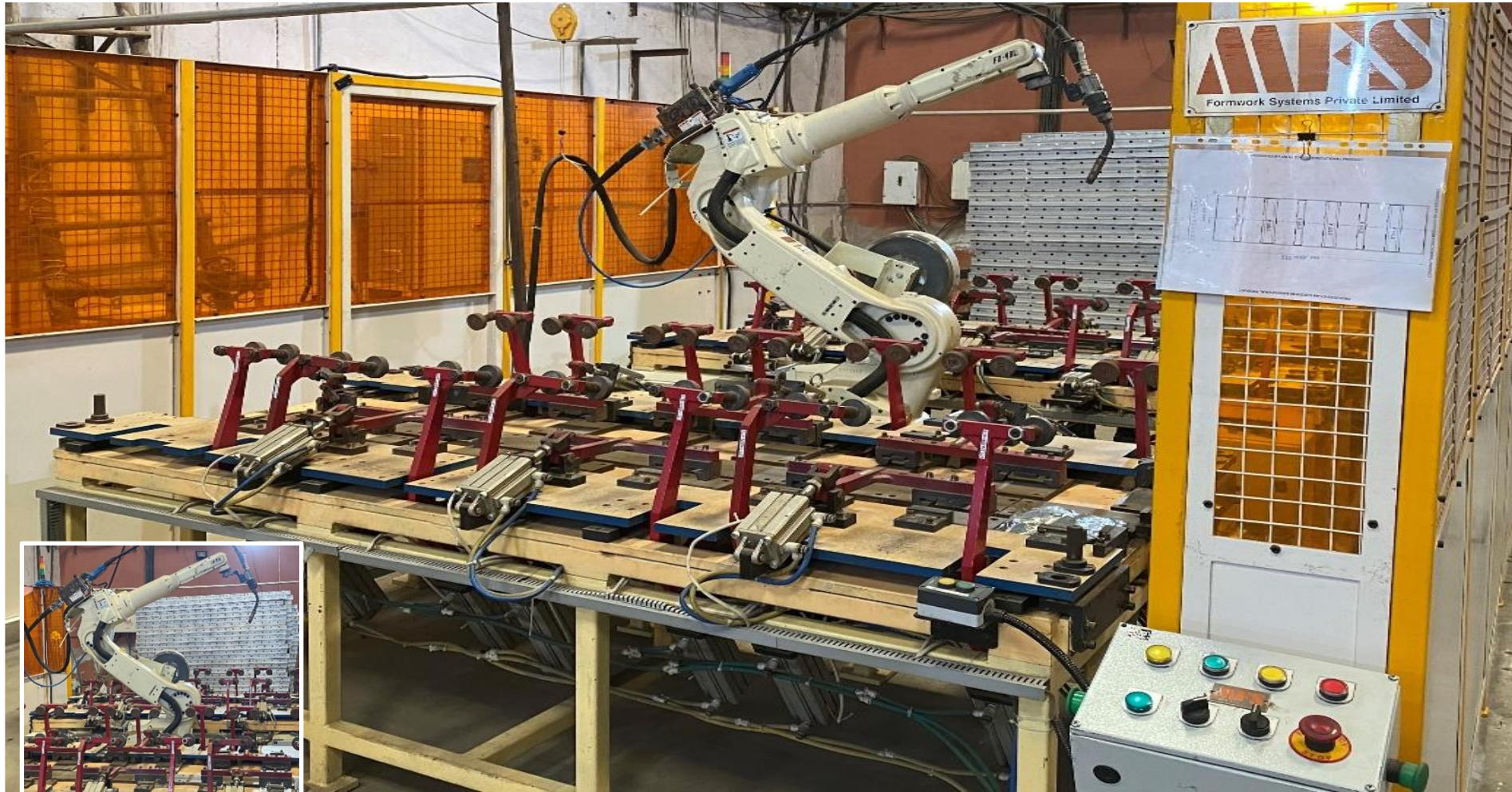
Friction Stir





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Welding facilities - Robotics & SPM

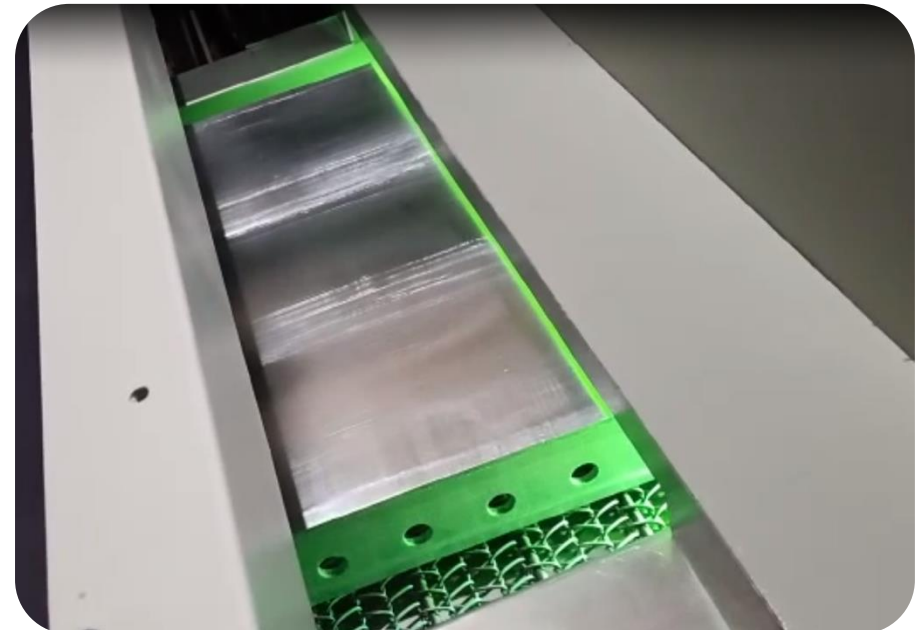




COMPLETE FABRICATION WITH ROBOTIC ARM.



Buffing & Lacquer Machine



14 September 2019 **Buffing**

Lacquer



Logistics





MFS FORMWORK SYSTEMS LLP



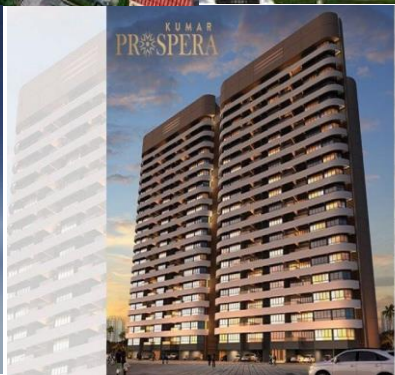


MFS FORMWORK SYSTEMS LLP.





MFS FORMWORK SYSTEMS LLP



Project Architects: AR. Vivek Singh Rao



FORMWORK SYSTEMS LLP.

List of prestigious customers

- Alcove Realty (Kolkata)
- DLF Group (Gurgaon)
- Runwal Group (Mumbai)
- Mahindra Lifespaces (Mumbai)
- Casagrande Builders (Chennai)
- Purvankara Group (Bangalore)
- Ashoka Builders (Hyderabad)
- Samraat Group (Nashik)
- Ayati Construction (Hyderabad)
- M3M Group (Gurgaon - NCR)
- Mani Group (Kolkata)
- CMK Projects P. Ltd. (Chennai)
- V Sathyamoorthy (Chennai)
- TATA Steel Ltd. (JUSCO)
- Sikka Group (Gurgaon)
- Signature Global (Gurgaon)
- Team4 Lifespaces (Hyderabad)
- Indiabulls Constructions Ltd. (Mumbai)
- NCCCL (Mumbai)
- Aparna Constructions (Hyderabad)
- Muppa Projects (Hyderabad)
- SVS Projects P. Ltd. (Hyderabad)
- Reliance Construction (Gujarat)
- ACE Group (Noida - NCR)
- Omkar Realtors Pvt. Ltd. (Mumbai)
- Cube Engineers (Gujarat)
- Pyramid Infratech. (Gurugram)
- Nilamber Group (Gurjarat)
- MRG Group (Gurgaon)
- Fusion Homes (Noida)
- ANP Corp (Pune)
- Kumar Properties (Pune)
- Sattva Group (Bangalore)
- Wave Infratech – Gaziabad.
- Simplex Infrastructures Ltd.
- Bharitya City (Bangalore)
- Supertech Ltd. (Noida)
- MVN Infrastructure Pvt. Ltd.
- Rizland Group – Chennai.
- Godrej Properties Ltd., Pune
- SLN Group (Hyderabad)
- and many more.....





FORMWORK SYSTEMS LLP.

List of Govt. Authorities

Central Public Work Department (CPWD)

National Building Construction Company (NBCC)

Delhi Development Authority (DDA)

Maharashtra Housing and Area Development Authority (MHADA)

Andhra Pradesh Township and Infrastructure Development Organization (APTIDCO)

Andhra Pradesh Capital Region Development Authority (APCRDA)

Raipur Development Authority (RDA)

Greater Hyderabad Municipal Corporation (GHMC)

Lucknow Development Authority (LDA)

Haryana Urban Development Authority (HUDA)

Nagpur Improvement Trust (NIT)

West Bengal Housing Department.

Tamil Nadu Slum Clearance Board

CONCLUSION



THE CONSTRUCTION INDUSTRY IN A GROWING ECONOMY LIKE INDIA HAS REACHED A STAGE WHERE MECHANIZATION IS IMMINENT FOR SURVIVAL. THE SHORTAGE OF SKILLED LABOUR AND SPIRALING COSTS OF LABOUR IS INDEED DISTURBING. CAPITAL IS IN SHORT SUPPLY AND HENCE EXPENSIVE. INTEREST RATES CHARGED FOR THE CONSTRUCTION INDUSTRY IS ONE OF THE HIGHEST IN THE WORLD AND THIS MEANS THE PERIOD THAT CAPITAL IS DEPLOYED IS ALSO CRITICAL. THEREFORE IT IS IMPERATIVE THAT OUR ESTEEMED CUSTOMERS CHOOSE THE RIGHT SERVICE PARTNER AND SYSTEMS WHICH WILL EVENTUALLY LEAD TO FINANCIAL AND BUSINESS VIABILITY.



FORMWORK SYSTEMS LLP.



Thank you ...