



We Design For Future...

Consulting Engineer & Valuer

Innovation  
Engineering  
Excellence  
Implementing  
Challenges

## OUR SERVICES

- ◆ STRUCTURAL DESIGN
- ◆ DRAWING WORK
- ◆ ARCHITECTURAL WORK
- ◆ VALUATION
- ◆ ESTIMATION
- ◆ PLANNING
- ◆ SURVEY WORK



## SECTORS WE WORK

- ◆ REFINERY / PETROCHEMICAL / POWER & PROCESS INDUSTRY
- ◆ INDUSTRIAL SHEDS AND SHELTERS/ MECHANICAL INDUSTRIES
- ◆ EQUIPMENT DESIGN
- ◆ MATERIAL HANDLING
- ◆ OIL & GAS INDUSTRY
- ◆ RESIDENTIAL & COMMERCIAL
- ◆ MACHINE FOUNDATION
- ◆ SUBSTATION, CONTROL ROOM & SWITCH YARD
- ◆ INSTITUTIONAL PROJECTS
- ◆ HEAVY INFRASTRUCTURE PROJECTS
- ◆ SPECIAL STRUCTURES



# CIVIL & STRUCTURAL DESIGN ENGINEERING SERVICES:

## HIGHRISE COMMERCIAL STRUCTURES

Using industry-standard design and finite element tools, we conduct design and analysis for all types of residential and commercial buildings.



Type Of Structures We Cover Include :

- RCC & Steel
- Composite structures
- Prefabricated building systems

## INDUSTRIAL STRUCTURES

Industrial structures are complex and require thorough understanding to ensure both static and dynamic loading. These structures differ from the general buildings, because their form and function are integral. Because of this, gaining a thorough understanding of the performance of industrial structures requires a multi-disciplinary, holistic approach that incorporates the expertise of structural scientists.



Typical industry segments include:

- Material Handling Power Plants
- Chemical Plants
- Oil & gas industry structures

## BULK MATERIAL HANDLING POWER PLANT STRUCTURES



Every project comes with unique and often multifaceted challenges. Ensuring that the project is on time and budget is a challenge that project sponsors usually handle with internal resources. Most notable in such power plants are the large transfer towers, crusher houses, conveyors which however are later enclosed by the bunker house.

To meet the needs and requirements of the clients, we are offering an extensive assortment of Power Plant Structure

### Range of Services offered:

- Design and engineering of civil works and foundations for industrial buildings and structures.
  - Design, engineering and detailing of steel structures including storages, buildings, conveyor galleries,
  - junction -houses, steel structural fabrication drawings etc.
- Design and engineering for material handling systems including conveyors and related equipment for all bulk handling systems for various raw materials like coal, lignite, iron ore etc.–
- Preparation of optimum layouts for the plant and plant engineering services. Design of gas piping systems, water supply, compressed air lines, etc.
  - Design and engineering of raw water reservoirs, ash ponds, pump houses, and allied structures.
  - Detailed project reports, bankable techno economic feasibility studies, site selection reports etc.
  - Ventilation, air conditioning & dust and fume extraction systems.

## RESIDENTIAL& TOWN PLANNING STRUCTURES

Orbit offers consistent, innovation and the highest level of engineering drawing support for home developers, builders, and architects. With new levels of safety standards and building regulations making it crucial for home developers to meet all specifications at the concept and drawing stage. Every project is given well-deserved attention to detail, and Orbit understands the unique requirements of each project to provide finest detailing right from the conceptualization to the drawing stage.



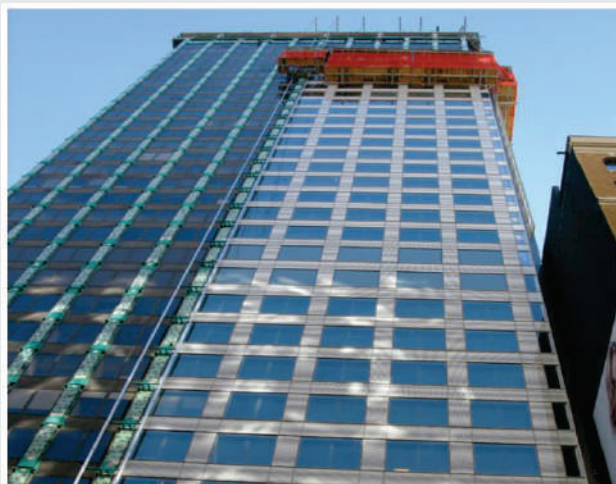
### Our wide range of services include:

- Construction Documentation
- Sketch Up Modeling
- Interior Design
- 3D Architectural Walkthrough
- Landscape Design & Drafting
- Building Information Modeling (BIM)

## RETROFITTING/REHABILITATION OF EXISTING STRUCTURES

Buildings represent an incredible investment opportunity, but only if you preserve them. Without upkeep and repairs, the value of your property will fall. Whether your building is residential, commercial, or industrial we can provide complete consulting and repair/rehabilitation services.

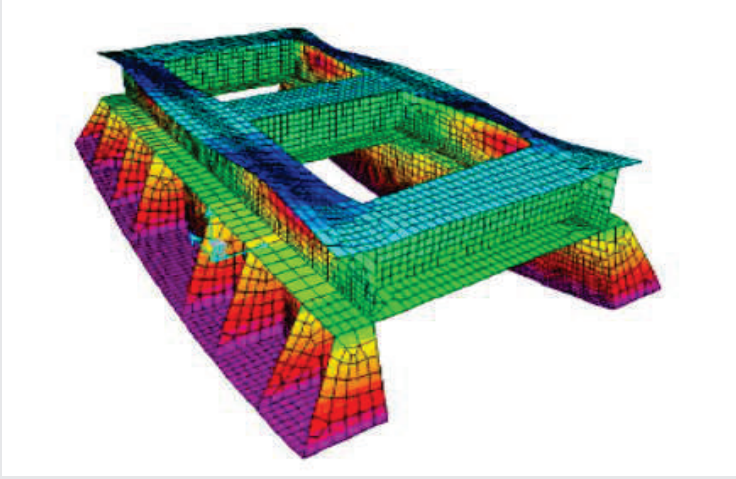
Dedicated to precise and accurate service provisioning, our services cover the entire spectrum of structural engineering requirements.



### Our services for rehabilitation:

- Aging Buildings
- Fighting Natural Disasters
- Fixing Design Defects
- Ensuring no Damage to the Structural Aspects
- Improving Construction Standard
- Using Function Changes
- Increasing Load
- Enabling Seismic Strengthening

## FINITE ELEMENT ANALYSIS (FEA) SERVICES



Our concept looks great on paper, but will it stand the varying strength and stability conditions in reality? You are sure that the design you have in mind will withstand the structural and performance breakdown? Finite element analysis is the keystone used extensively to verify, validate the design concept and optimize the performance of any product during its life cycle.

## STRUCTURAL FABRICATION DRAWING SERVICES

Orbit is a professionally-run and experienced structural fabrication drawing services provider that has serviced many clients both in India and abroad.

### Structural Fabrication Services We Offer:

- Connection Details for Steel Trusses
- Summary for Field and Shop Bolt
- Schematic Drawings
- Sketch Drawings
- Installation Drawings
- Steel Member Detail Drawings for Bracings, Beams, Connecting Members, Columns

## SPECIAL STRUCTURES

### ◆ PIPE CONVEYOR



Belt conveyors cannot provide suitable solutions in all situations. When we encounter difficulties and limitations due to site conditions like topography, space availability, restrictions due to environmental requirements/ regulations, material properties etc., we need to find an alternative to belt conveyors which are open troughed. The above conditions can be handled early with pipe conveying technology. The pipe conveyors have advantages of steeper inclination and greater curves than troughed belt conveyors and have great advantages as they completely stop spillage, Completely bar pilferage & avoid transfer stations.

### ◆ TUNNEL STRUCTURES

In urban centers and airports, the underground builds of transit systems must be planned to minimize surface disruption throughout the construction process. We provide the geotechnical, structural, and tunneling skills you need, and complement them with track design, signaling, communications, traction power, ventilation and emergency egress, rail activation, and systems commissioning.



- Feasibility and other technical studies
- Conceptual and preliminary design
- Final design and bid support services
- Conceptual and detailed cost estimates
- Risk Management
- Value Engineering
- Design-build Design Services
- Construction Support Services
- Waterproofing Design
- Tunnel ventilation and emergency evacuation design

## MOBILE EQUIPMENTS – STACKER RECLAIMER



Design, fabrication and manufacturing of premium quality stackers/Reclaimers are an extremely important part of the Material Handling product. Every bulk handling unit, from those using generic designs and ranging to those with specifically customized fixtures and load capacities, are thoroughly load-tested with multiple load capacities to ensure absolutely uncompromised efficiency during real world deployment.

We can provide a comprehensive structural design that is capable of exceeding requirements of International standards.

### A brief sample of our design capabilities

- Replacement drawings of critical components; slew bearing, bucket wheel, luff cylinder, bogies, winches, drives, etc– Structural design & drawings of whole stacker, stacker reclaimer components
- Specifications and design auditing
- Revised control and monitoring systems– Finite Element Modelling
- Fixed and mobile structures can have widely varying design influences and critical factors which must be identified and considered for successful design.



## GENERAL CIVIL



- Earthwork & Site Grading
- Road Design
- Pavement Design
- Storm Water Drainage
- Contaminated Rainwater Sewer
- Sanitary & Plumbing Design

## ARCHITECTURAL & INTERIOR DESIGN



- Master Planning & development
- Architectural Planning and Design
- Architectural detailing of each Part
- Plant Buildings
- Non-Plant Buildings
- Institutional Projects
- Interior Design
- 3D Model & Walk Through
- BOQ Specifications and Tender

## PROJECT MANAGEMENT



- Overall Project Management
- Multi-Disciplinary Interface Management
- Liaising with vendors/Contractors
- Construction Management
- Project Planning / Scheduling
- Site Supervision

## SPECIAL SERVICES

- Precast RC Scheme
- Precast Erection Study
- Modularization Study
- Equipment Erection Study
- Constructability Study
- Tender Preparation
- Tender Specifications
- BOQ and Specifications

## VALUATION SERVICES

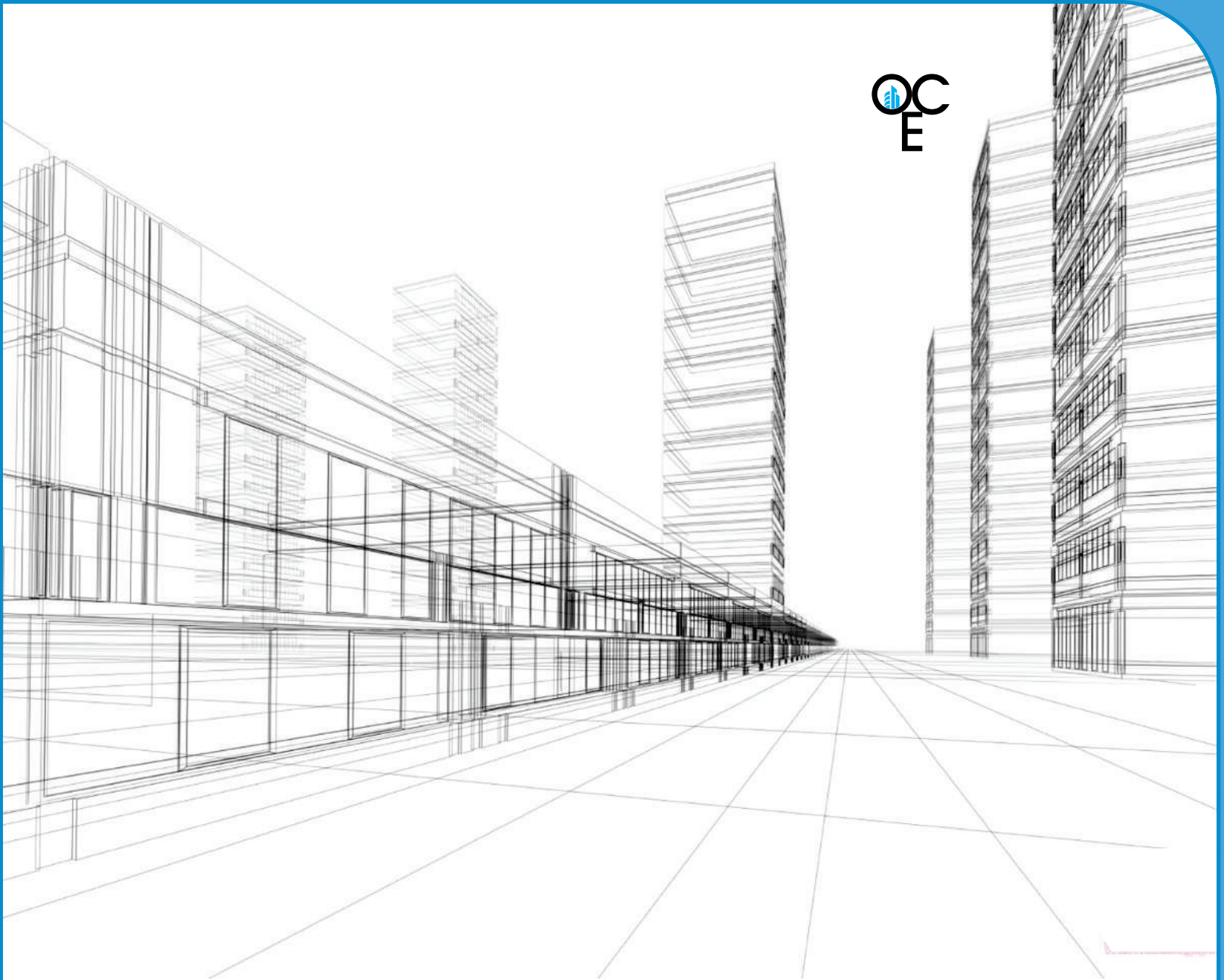
As rapidly increasing globalization and connectivity continue to reshape the market-place, clients need specialized and professional valuation services to evaluate the impact of real estate on financial decisions. Accurate and reliable real estate valuation is critical to the success of every property investment.

Our industry-leading, global platform enables us to consistently provide quality assurance on a wide range of services across many different property types including: commercial, residential, agricultural and hospitality assets.

We have a vast experience in Valuation of Real Estate assets such as:

- Residential and Commercial Properties
- Retail Spaces, Shopping Malls and Multiplexes
- Hotels, Resorts, Service Apartment and Hospitality Property
- Industrial Units





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 **Orbit**

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