



**SMODI INFRASTEEL PVT.LIMITED**

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**Pre-Engineered Steel Building System & Steel Structure Systems**

**----INTEGRITY FIRST**



## ABOUT SMODI INFRASTEEL

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## ■ SMODI INFRASTEEL : COMPANY

SMODI INFRASTEEL PVT.LIMITED., is instituted by an individual professional over 25 years of experience and a team of similar minds having reach experience in Pre-Engineered steel building system and Heavy steel structure used for Infrastructure projects, industrial, warehousing and various other applications .

Objective behind this establishment is to provide end to end solution to the customer by proper education, training & guidance so that customer should opt for right and professional vendor at optimal price rather than economical vendor with the poor quality product at the end.

Company offer wide range of solution such as Project physibale study, concept suggestion, Architectural solution & suggestion, Project Management service, design & engineering, supply & installation of Pre-Engineered steel building system & heavy steel structure as an efficient systems then just a product.

Our moto is to deliver a satisfactory services at all the time rather then just a project delivery.

## A REGISTERED COMPANY WITH GOVT.OF INDIA



GOVERNMENT OF INDIA  
MINISTRY OF CORPORATE AFFAIRS

Registrar of Companies, Delhi  
4th Floor , IFCI Tower , 81 , Nehru Place

### Certificate of Incorporation

[Pursuant to sub-section (2) of section 7 of the Companies Act, 2013 and rule 8 of the Companies (Incorporation) Rules, 2014]

I hereby certify that SMODI INFRASTEEL PRIVATE LIMITED is incorporated on this Twenty Ninth day of October Two Thousand Fourteen under the Companies Act, 2013 and that the company is limited by shares.

The CIN of the company is U74900DL2014PTC272734.

Given under my hand at Delhi this Twenty Ninth day of October Two Thousand Fourteen.



Rajneesh Kumar Singh  
Assistant Registrar of Companies  
Delhi

Mailing Address as per record available in Registrar of Companies office:

SMODI INFRASTEEL PRIVATE LIMITED  
D-25, 2nd Floor, Pushpanjali Enclave,, Pitam Pura,  
New Delhi - 110034,  
Delhi, INDIA



**SMODI infraSteel**  
— INTEGRITY FIRST —

## OBJECTIVE

- Single window for Concept Development, Engineering, Planning & implementation.
- Turnkey Steel structure & Steel building Construction Company.
- Single objective- Quality, Safety and Timely Execution of Projects
- On time completion of project.
- Belief in HSE & Quality.
- Strong engineering expertise in steel construction.
- Undertake work for Architectural solution, concept selling, Project Management service, Design, Engineering, supply & Installation of Steel Construction .
- All time service commitment



### OUR STRENGTH



- Understanding of the requirement and thorough research capabilities to take up the assignment.
- Multiple option analysis for best use of the steel & optimum solution offer.
- Open minded thought process before offering project.
- Large pool of qualified vendors with highest quality of product delivery.
- Carefully design & engineering in strict system control.
- Competent Project management System.
- Choice of erectors to meet satisfaction level on workmanship,safety and Easy to handle during erection at site.
- Quality check at each stage of execution to ensure excellent end product with high durability.
- Commitment to service the customer then product delivery.



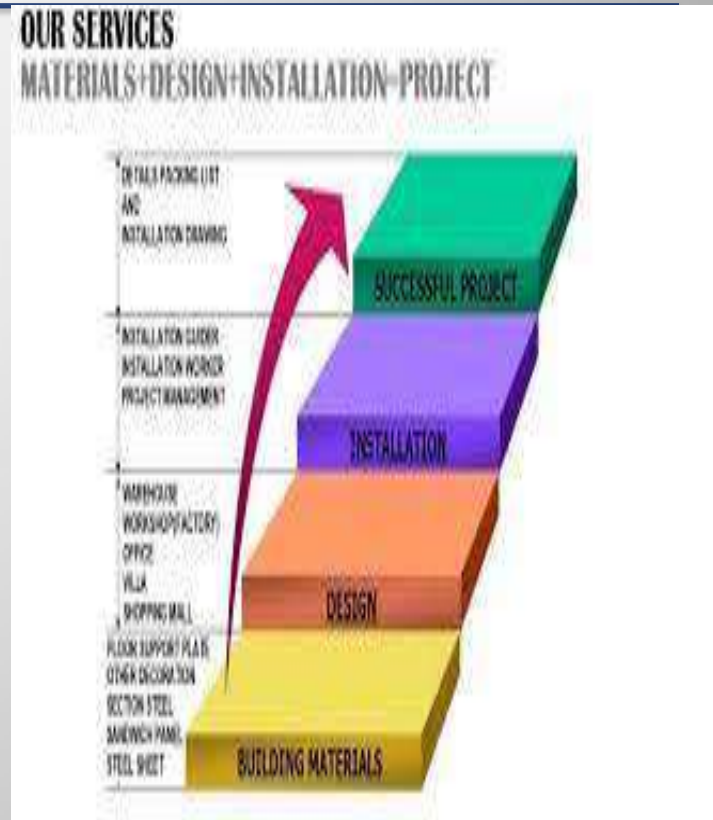
## WE OFFER

- Pre-Engineered Steel Building System for Factory, Ware-house, Workshop, Logistic Center, Retail, Process Building, shelters, parking system etc.
- Multi storey Steel Framing System for Commercial Spaces such as Offices, Multiplexes, Hotels & Resorts, Hospitals, Schools etc.
- Multi storey Steel Framing System for multi-level car parking system.
- Airport Structure & Aircraft hangers.
- Stadium grand Stand & Roof canopy
- Road over /Rail over Bridge(FOB/ROB)



## WE PROVIDE :END TO END

- Feasible study & report making for the project
- Offering concept & Architectural solution
- Design & Engineering work including Foundation design (optional).
- Project Management consultancy (PMC) services.
- Supply & installation of steel building and related work.
- Interior work and finishing
- Overall responsibility and interface





## WHY STEEL

Globally, use of steel is most preferred material of construction compared to any other construction material including concrete due to its versatile & unique features & advantages :

- Provides greater flexibility.
- Occupies less space.
- Less volume to mass ratio.
- Easy to construct being lighter in weight.
- Faster construction material compared to all other construction material available worldwide.



A combination of steel structure with concrete is also treated as best and fastest construction material worldwide. In India, where we need very fast development of infrastructure such as factories, warehousing, housings, roads, railway, airports, ports, hospitals, power plants any many other infrastructure needs which is very necessary for the economic growth of the country and steel is only the option for faster growth in construction.

### ADVANTAGES OF USING STEEL

- Optimal use of section design and manufacturing Produced using automated manufacturing line.
- Better quality control as manufacturing takes place under strict controlled quality system in plant.
- Minimum wastage by way of using material management software
- Flexibility in selection of member section or can be made from built up/plate fabrication.
- Quality check at every stage of manufacturing starting from raw material purchase to final product
- Mass Production resulting in cost control and highest degree of quality and finishes Excellent accuracy of product dimension within close tolerance as per code requirement.



## PRE-ENGINEERED STEEL BUILDING SYSTEM

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# ■ SMODI INFRASTEEL : PRE-ENGINEERED BUILDING

## INTRODUCTION

Pre-Engineered Steel Building concept is to Pre-designed, Pre-manufactured at factory and brought to the project site in CKD form and installed with the help of a small work force using very simple ordinary tools and tackles gives immense product value, architecturally versatile and very fast construction in steel construction. This concept gives a very fast construction and an excellent accuracy in design & manufacturing and world class building product with virtually zero wastage. We can use this technique for any type of application for building construction what we can imagine in concrete construction with more flexibility compared to concrete. PEB has very wide scope in terms of flexibility to use and provision to offer any type of shape and capacity.





# ■ SMODI INFRASTEEL : APPLICATIONS

## APPLICATION

- Factory
- Warehouses
- Work shops
- Defense Shelters
- Labour Camp & Low cost housing
- Aircraft Hangers
- Retails
- Showrooms
- Logistic & Distribution centre
- Parking roof
- Petrol Canopies & Gas Stations

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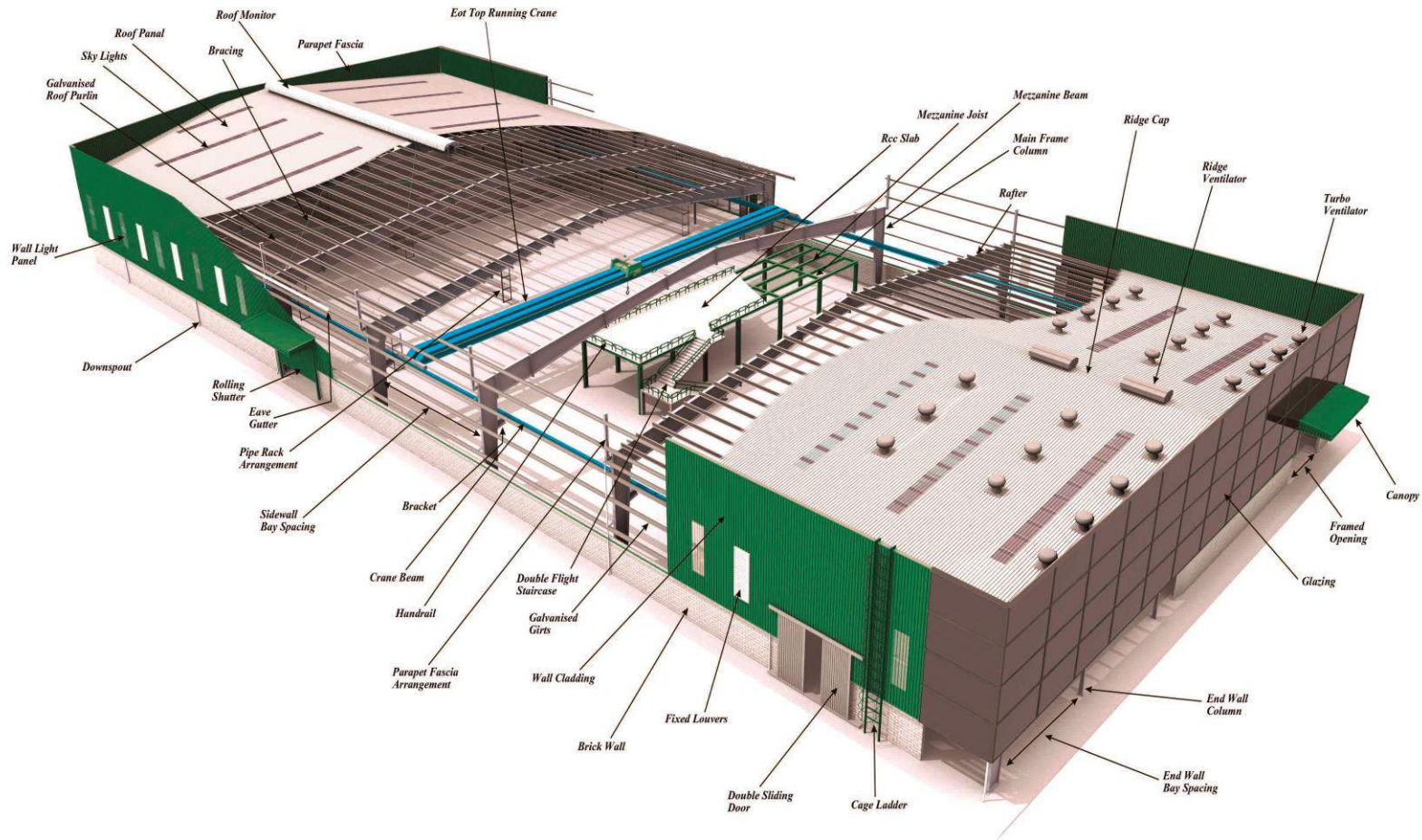
## **ADVANTAGES OF PRE-ENGINEERED STEEL BUILDING & STRUCTURE**

- Speed of construction (shop fabrication/light construction tolerances / minimum site wastage)
- Lower project cost (compared to all construction material)
- Aesthetic appeal ( can be shaped in any form)
- Design flexibility ( design creativity)
- High strength to weight.
- Ease of design (most desirable material)
- Sustainable (most recyclable material)
- Innovative
- Expandable.
- Efficient (space efficiency/longer spacing)
- Reliable & predictable (manufactured under close tolerance in plant)
- Readily available everywhere.

# ■ SMODI INFRASTEEL : TYPICAL PEB

## PEB COMPONENTS

### *Typical Details*



# ■ SMODI INFRASTEEL : COMPONENTS

## **PRIMARY MAIN FRAMES**

**Moment free or Moments resisting frames provide lateral stability and transfer the roof and wall loads to the foundation through anchor bolts.**

## **SECONDARY FRAMING**

**Purlins and girts provide lateral bracing to the building columns and rafters preventing lateral buckling of the compression flanges.**

## **WIND BRACING**

**Roof and wall x-bracing provides longitudinal stability to the building.**

## **ANCHORAGE**

**Transfers the wind load, Live load, application load & dead load acting on building to the foundation through anchor bolt grouted with concrete foundation and connected with structure frame/columns.**

## **EXTERIOR ROOFING & CLADDING**

**Provides weather tight envelops and transfers structural loads like wind and live loads to the supporting secondary framing.**

## **DRAINAGE SYSTEM**

**Such as rain water collecting system (Gutter) from roof and discharge system (Down take pipe) from gutter to the ground.**

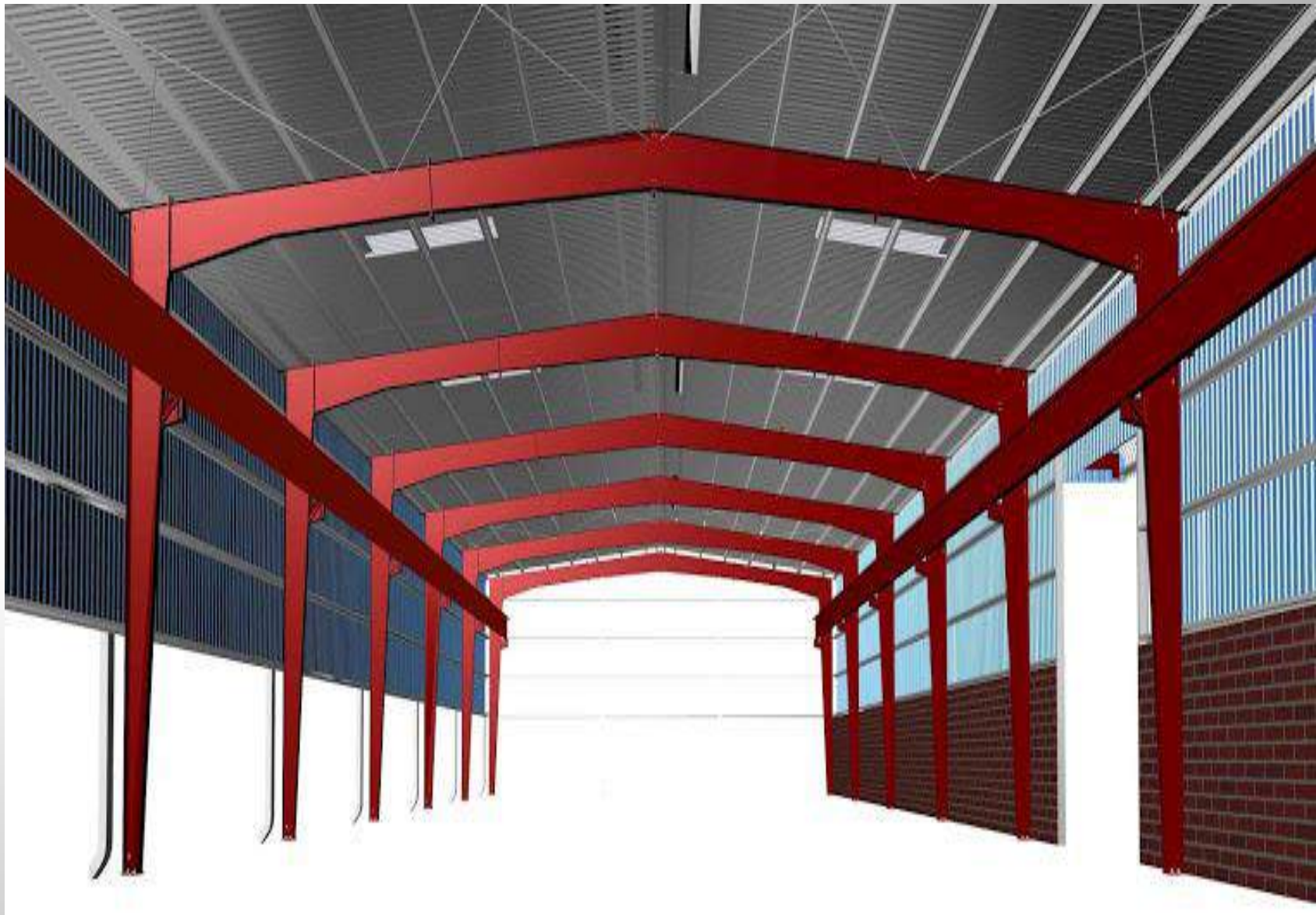
## **ACCESSORIES**

**Various flashing, trims, ridge cover, apron, eave trim etc. to make the building weather tight and aesthetically beautiful..**



# ■ SMODI INFRASTEEL : TYPICAL FRAMING

## PEB FRAMING



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# ■ SMODI INFRASTEEL : STANDARD STRUCTURE FOR PEB

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## TYPICAL PEB FRAMING



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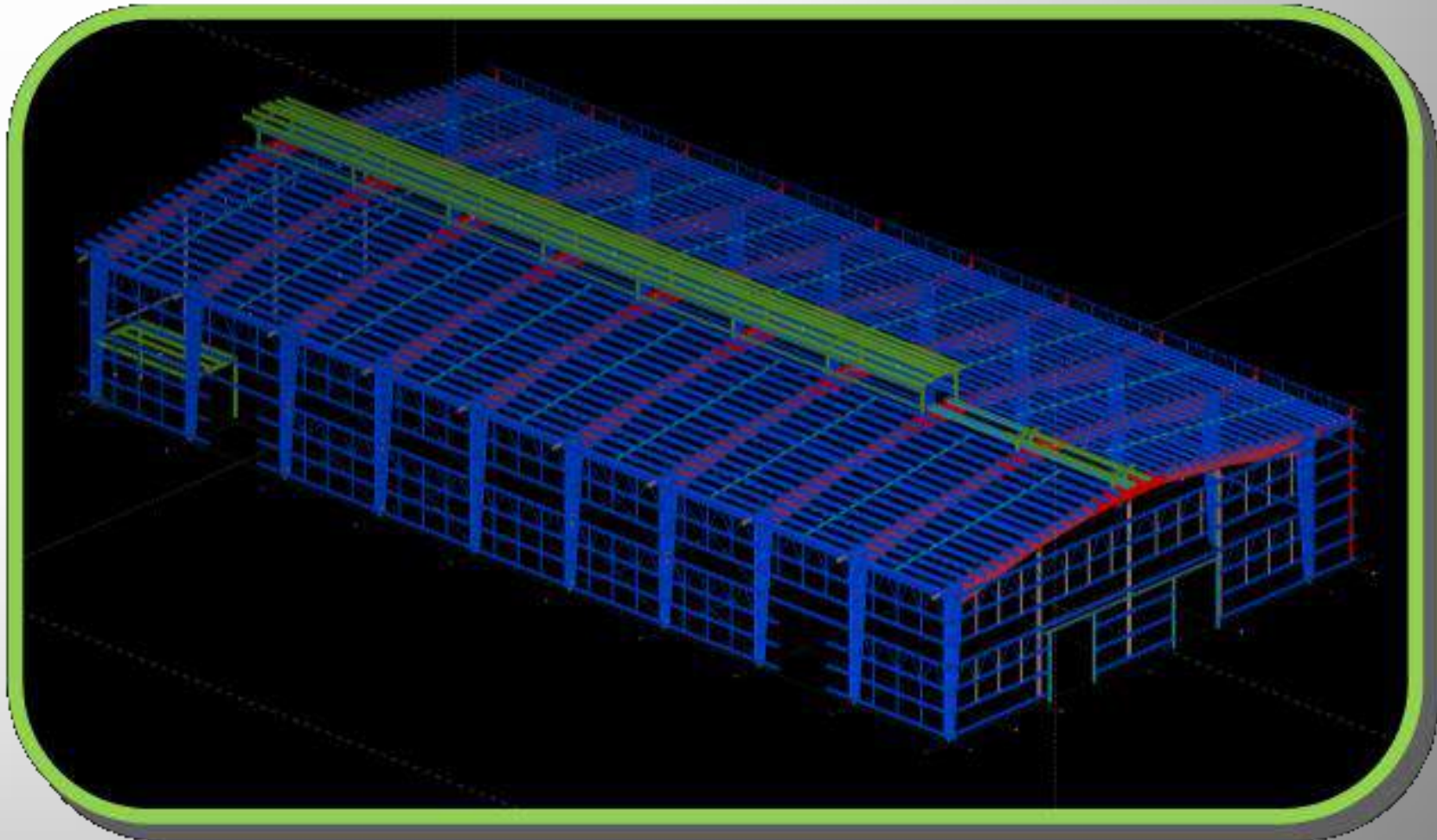
Following design codes are used as applicable to the project:

|             |  |
|-------------|--|
| <b>AISC</b> | <b>: American Institute of Steel Construction Manual.</b>                                |
| <b>AISI</b> | <b>: American Iron and Steel Institute</b>   |
| <b>MBMA</b> | <b>: Metal Building Manufacturer's Association<br/>Low Rise Building Systems Manual.</b> |
| <b>ANSI</b> | <b>: American National Standards Institute</b>   |
| <b>ASCE</b> | <b>: American Society of Civil Engineers</b>   |
| <b>UBC</b>  | <b>: Uniform Building Code</b>   |
| <b>IS</b>   | <b>: Indian Standards.</b>   |
| <b>NBC</b>  | <b>: National Building Code</b>  |

**Other codes as specified in the company contract.**

## ■ SMODI INFRASTEEL : DESIGN SOFTWARE

We offer to use STAADPRO for design & analysis for steel framing for our use in 2D/3D modeling.



# ■ SMODI INFRASTEEL : TYPICAL FRAME TYPES

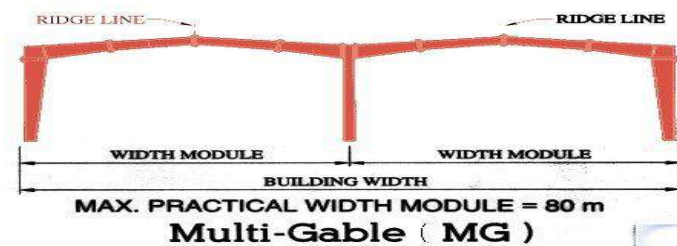
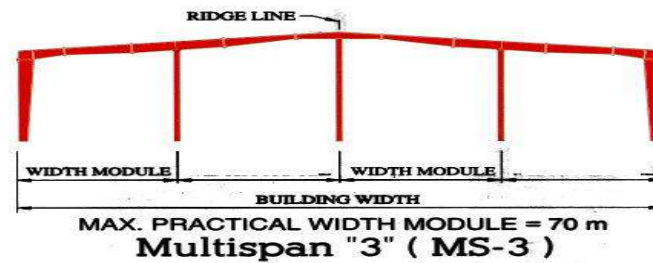
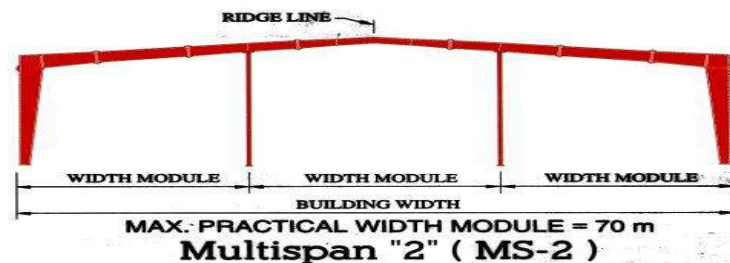
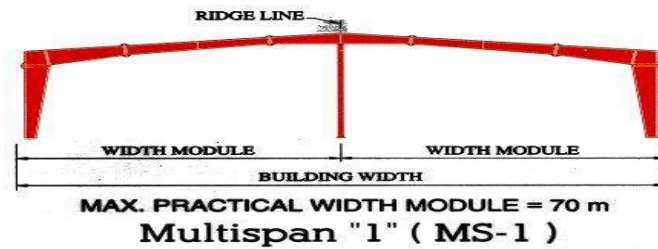
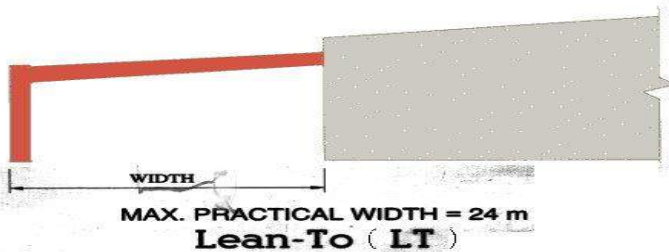
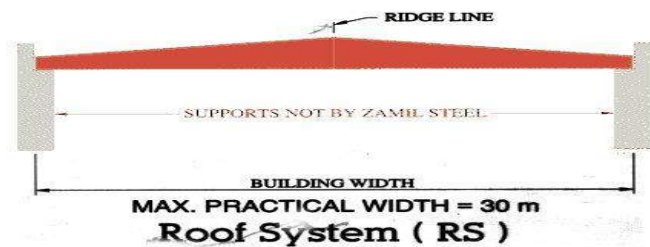
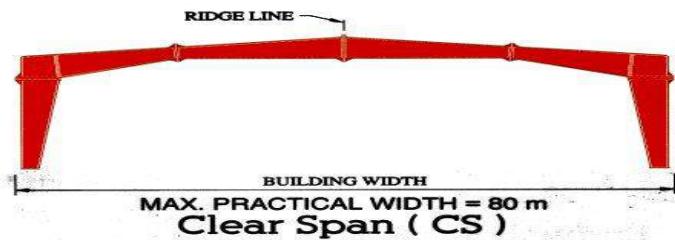
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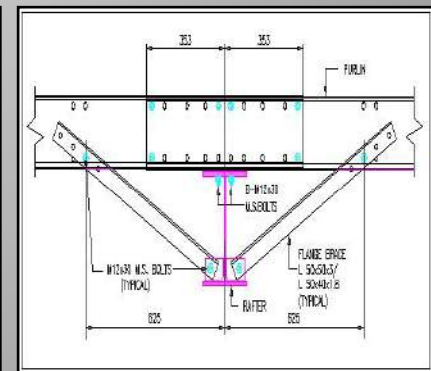
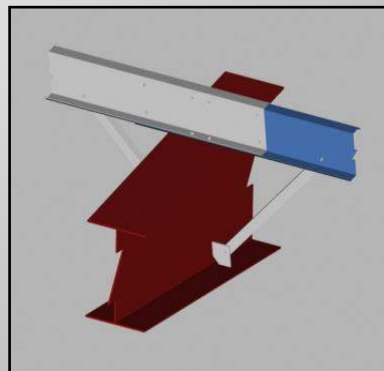
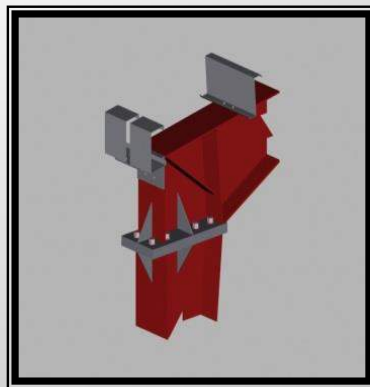
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# ■ SMODI INFRASTEEL : TYPICAL FRAME TYPES



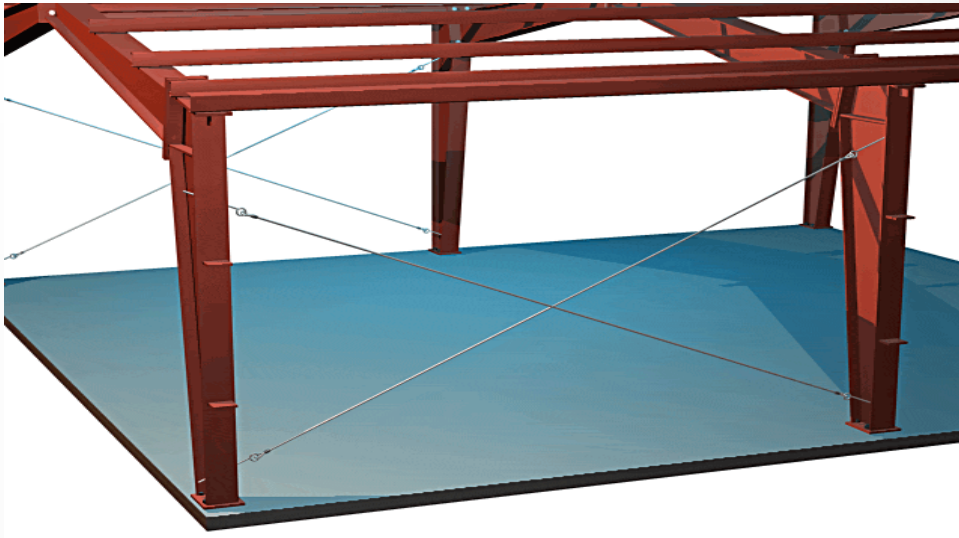
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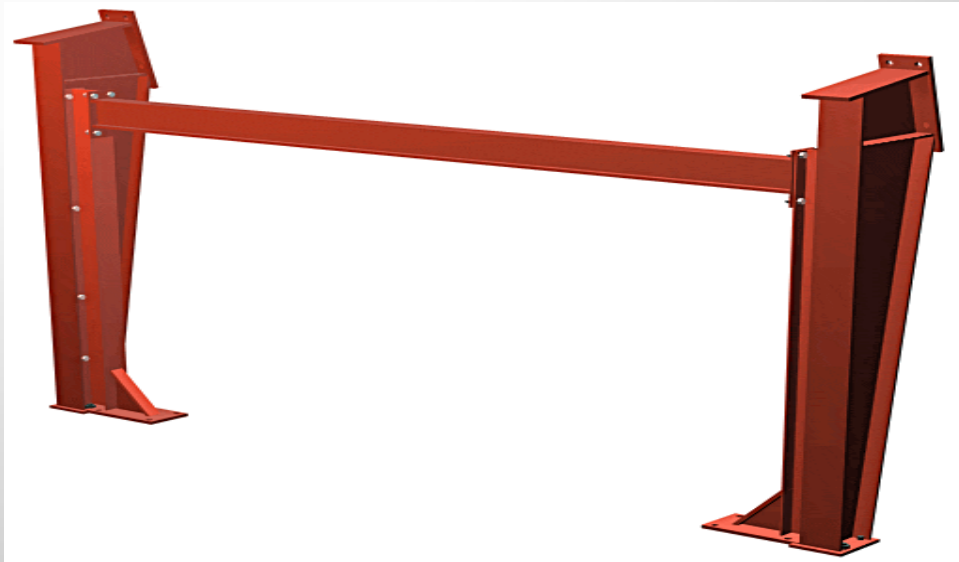
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## ■ SMODI INFRASTEEL : BRACING SYSTEM



**ROOF & WALL X-BRACING**

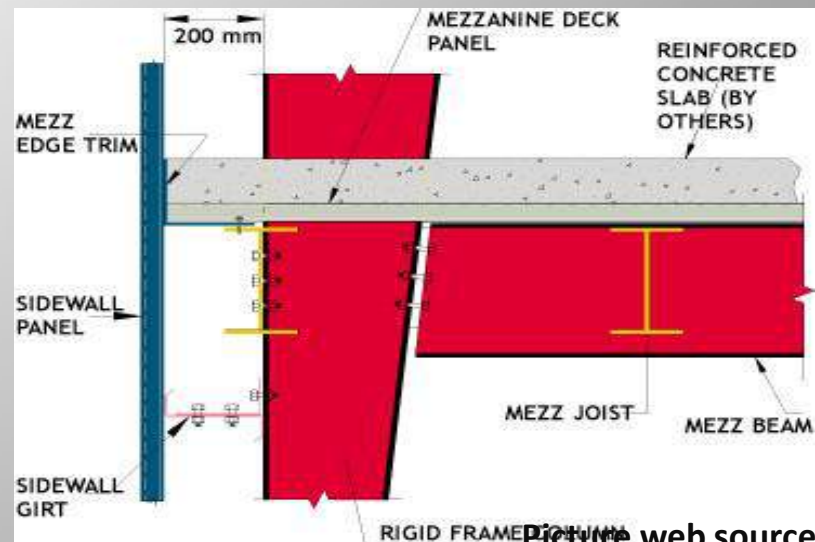
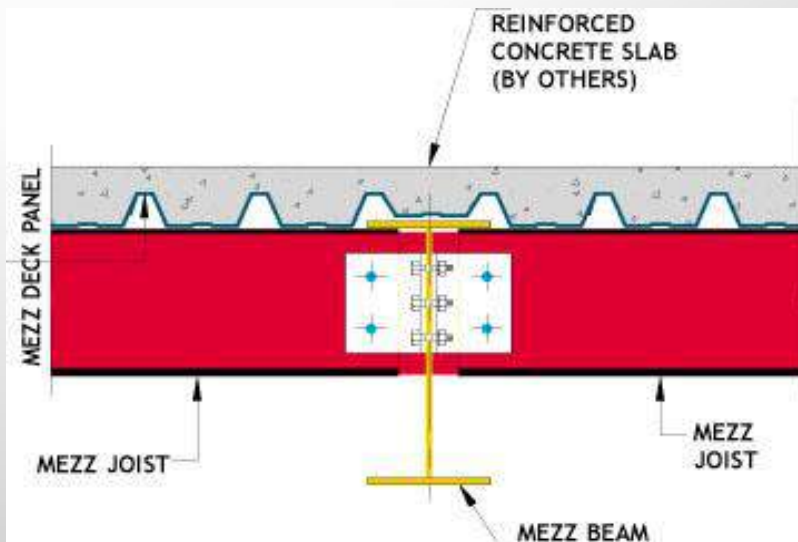
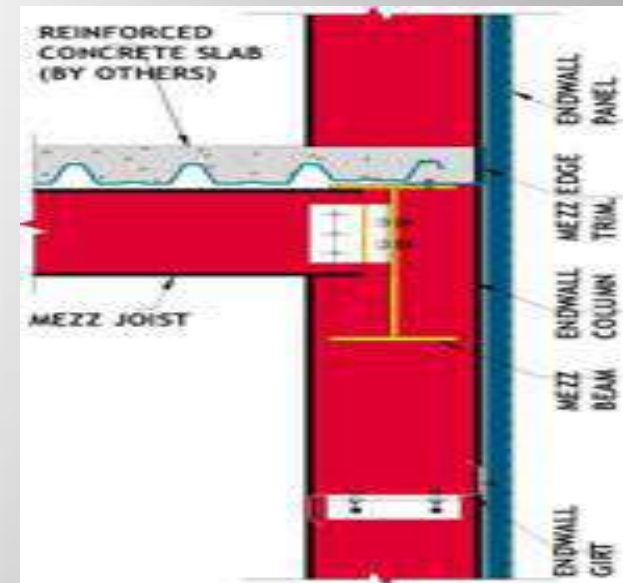
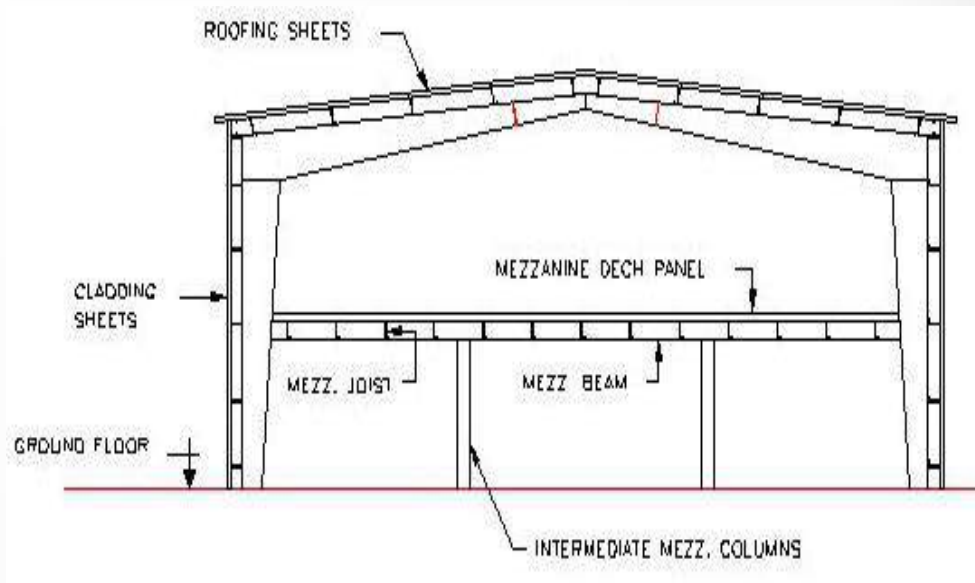


**WALL PORTAL BRACING**

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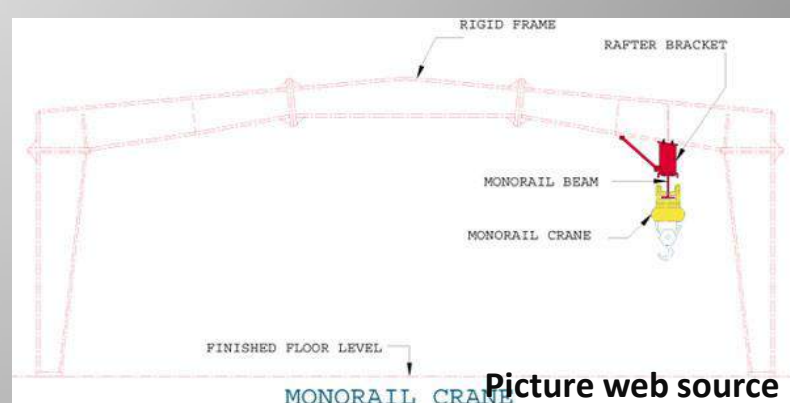
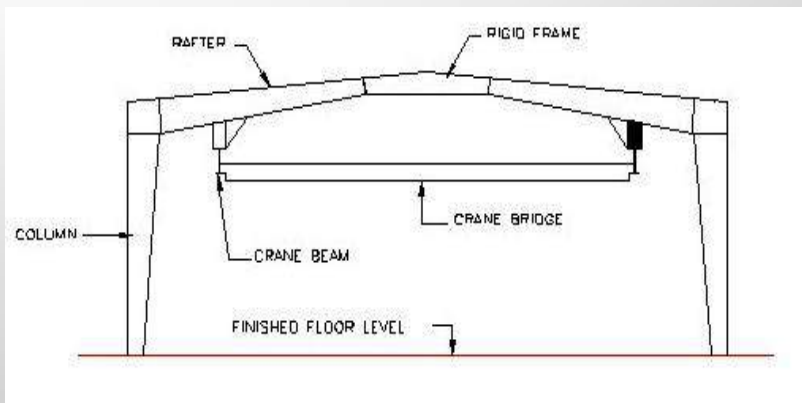
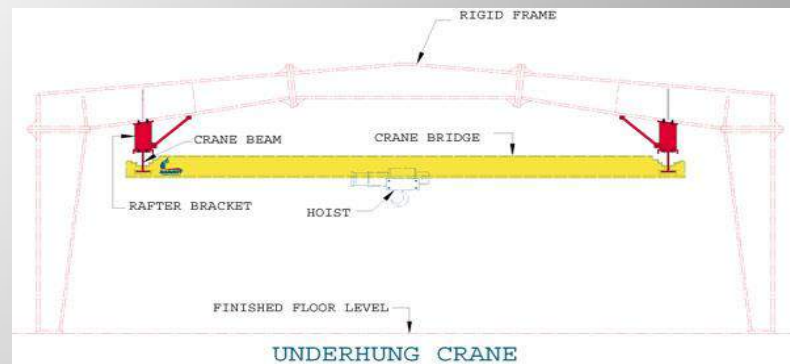
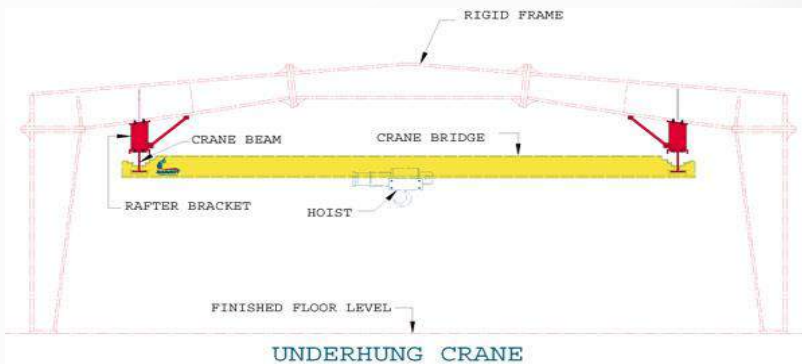
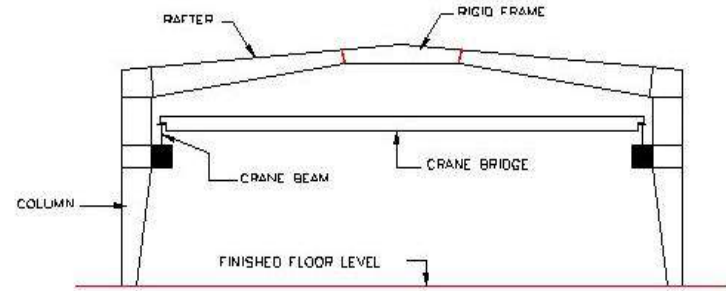
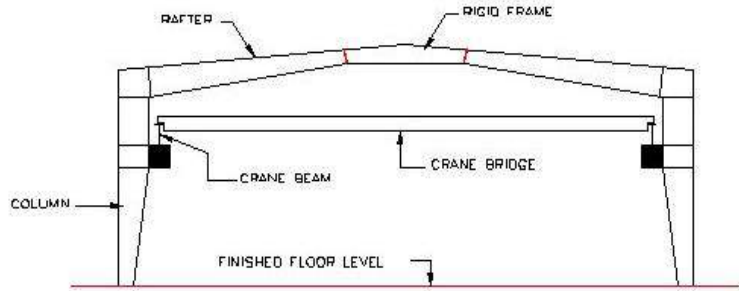
# ■ SMODI INFRASTEEL : MEZZANINES

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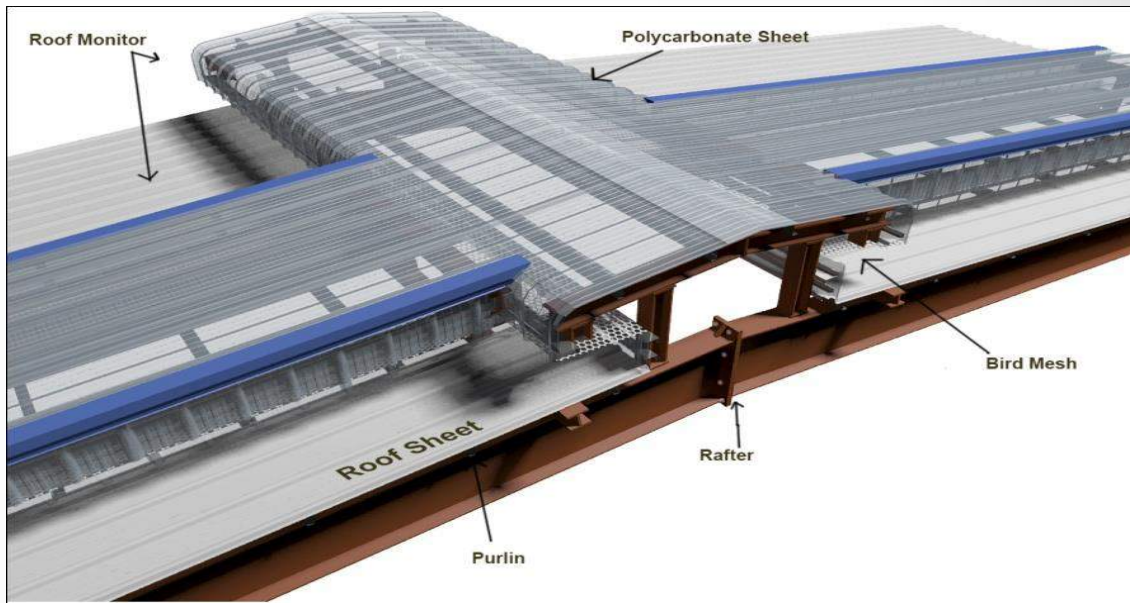
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# ■ SMODI INFRASTEEL : CRANES PROVISION

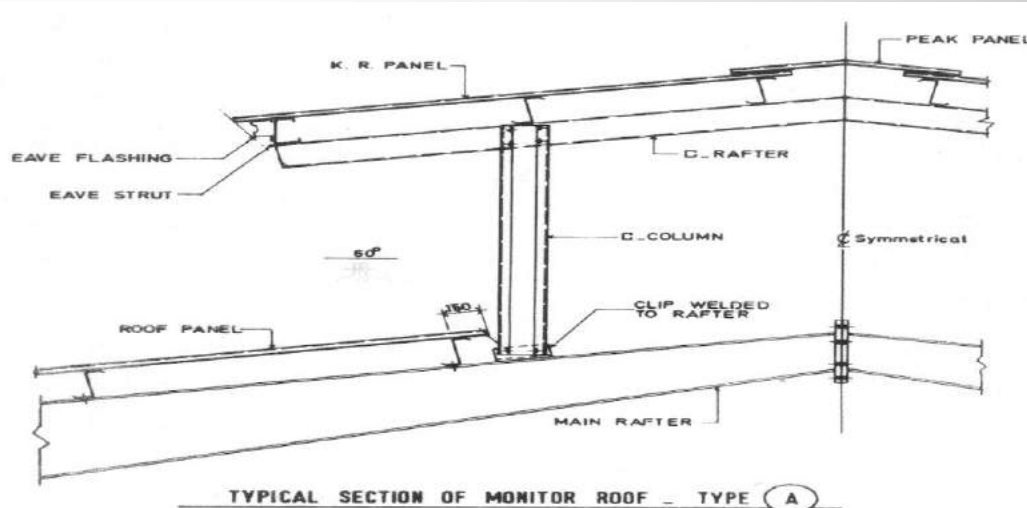


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# ■ SMODI INFRASTEEL : SHEETING & ACCESSORIES



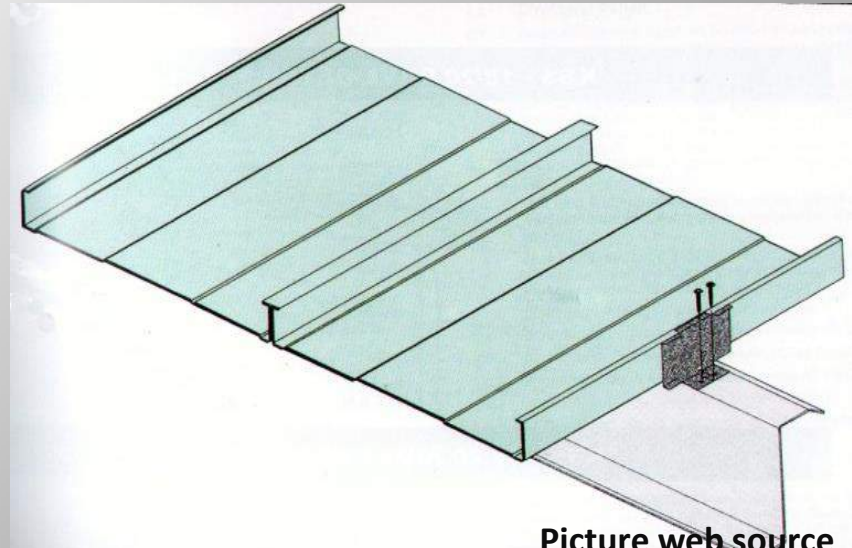
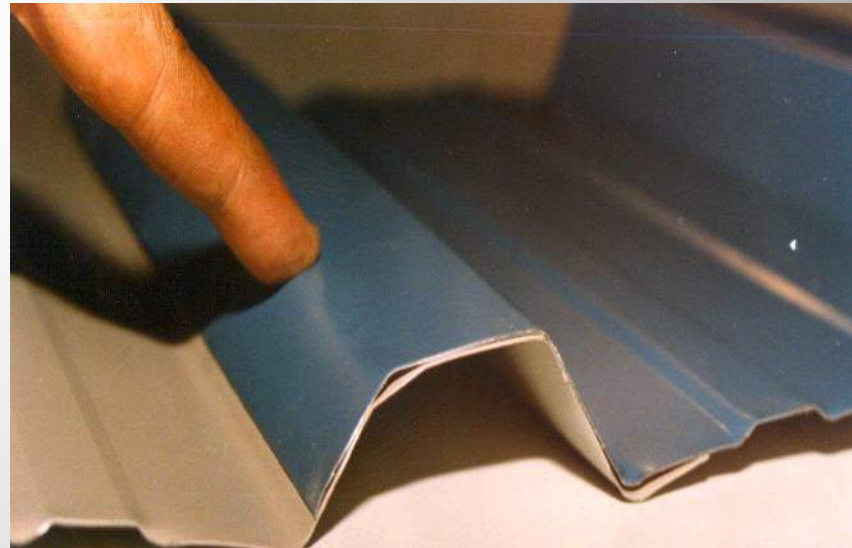
## ROOF MONITOR



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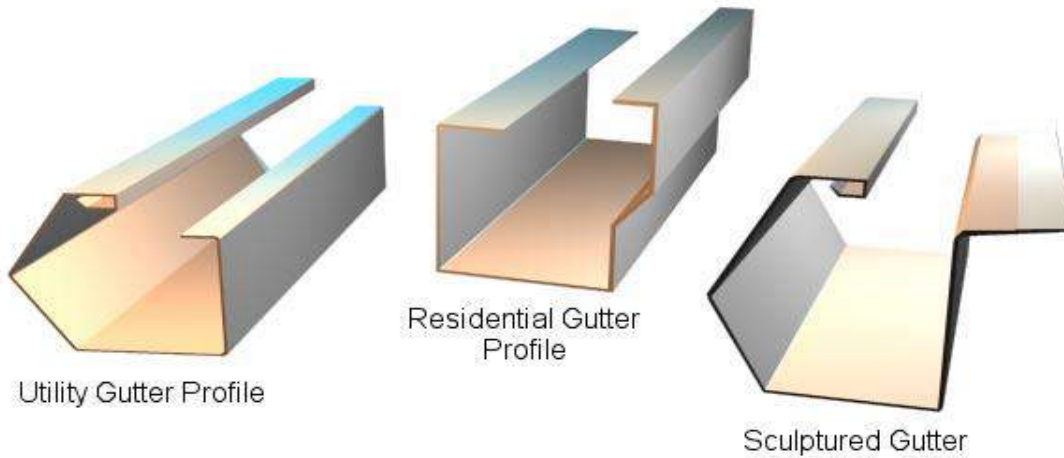
## ■ SMODI INFRASTEEL : ROOFING SYSTEM



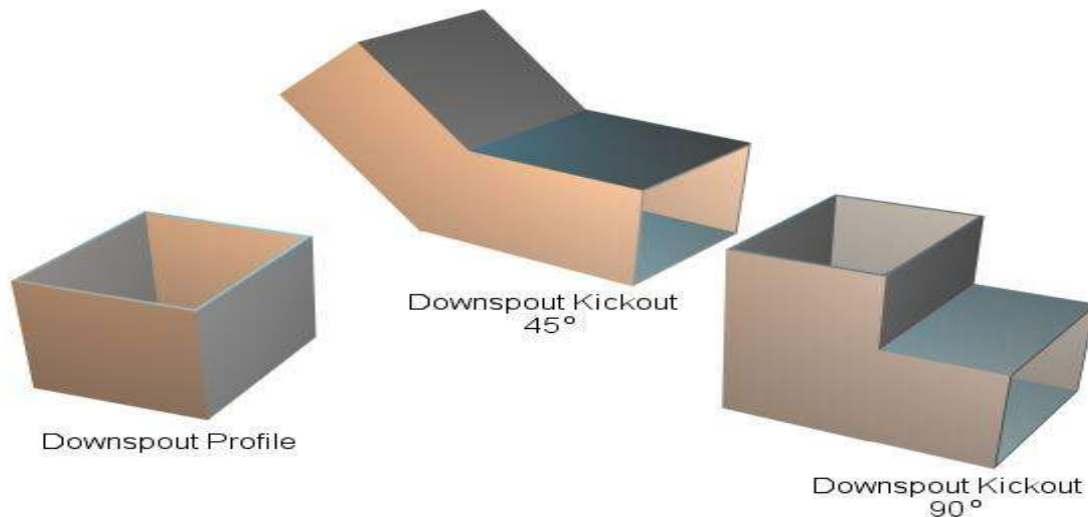
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## ■ SMODI INFRASTEEL : GUTTER & DOWN PIPES



### PROFILED RAIN WATER GUTTERS



### PROFILED RAIN WATER DOWN PIPES

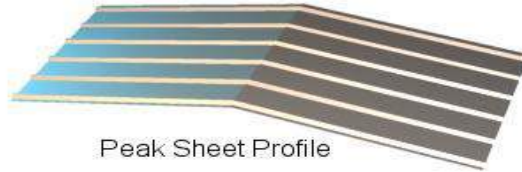
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# ■ SMODI INFRASTEEL : RIDGE COVERS & FLASHINGS

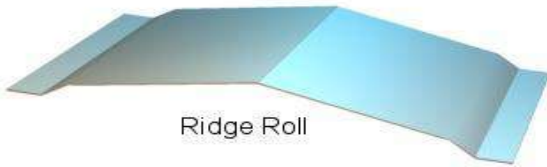
Ridge Roll Profile



Peak Sheet Profile



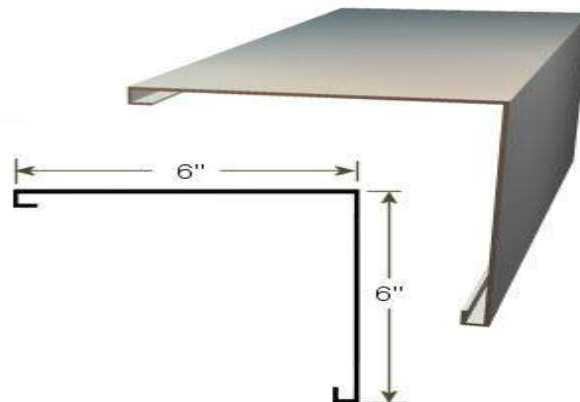
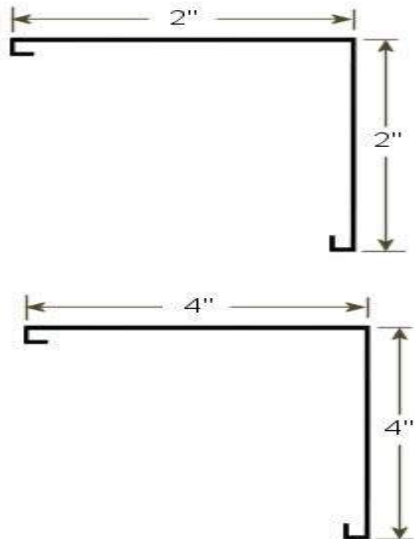
Ridge Roll



Ridge Roll Profile



## RIDGE COVER



## CORNER FLASHINGS

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## HEAVY STEEL STRUCTURE SYSTEMS

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## INTRODUCTION

Steel is considered as most preferred material for all infrastructure project including high rise construction, stadium, airports, multilevel car parking system, shopping complex, multiplexes, sports hall etc. due to its versatile quality and flexibility to shape. A combination of steel and concrete gives immense benefit to the design for its strength, durability and overall cost.

Use of steel for infrastructure construction has some unique advantages like:

- High strength to volume/mass ratio.
- Speed in construction and time saving in comparison to RCC, resulting in early ROI & cost saving.
- Steel frames are lighter in weight in comparison to RCC frame.
- Lighter foundations are required for steel buildings due less weight than RCC resulting cost advantage on civil.
- Occupies less space and can be designed for larger span/column free spaces, resulting greater coverage, this helps in large open office space and large auditorium and concerts hall.
- Less beam depth resulting in less wastage of head room
- Ease of interface for all type of material e.g. glass, ACP, Concrete, brick, gypsum board or any other clad material.
- Possibility of different paints to meet fire safety guidelines.
- All utilities can be passed through beams and joist.
- Possibility of expansion with least difficulties as compared to RCC & easy to modify if necessary.
- Steel frame construction is more suitable to withstand lateral loads caused by wind or seismic.
- In steel construction, steel x-bracing or sheer wall system can be provided for greater lateral rigidity in order to withstand wind stress.
- Steel is green in nature and can be recycled up to 95 %
- Quality of the end product is un-match as manufacturing takes place in plant under controlled environment with stringent quality check.



## APPLICATIONS

- Aircraft Hangers
- Airport Structure
- Multi-storied steel Buildings Office space
- Hotels
- Hospitals
- Multi- Level Car Parking
- School Buildings
- Shopping Malls & Multiplexes
- Commercial Space
- Foot over walkway/skywalks
- Metro Station Structure Monorails
- Stadium Structure

### TYPE OF BUSINESS MODEL

We at Smodi Infra-steel, work in various business model with the customer i.e.

- Design, Engineering, Supply & Installation of steel structure system & buildings.
- Detailing, Supply & Installation of steel structure system & buildings (Design by customer)
- End to end solution involving concept development, architectural and project management consultancy , design, engineering ,supply & installation complete project construction and commissioning.
- Project Management Consultancy

### DESIGN OPTIONS

STADD/STAADPRO is best suited engineering & analysis software used for optimal section design.

Steel structures are engineered as per IS, IBC and other international codes & guidelines

Flexibility to offer built-up, tubular, pipe, box-section, H-beam or other hot rolled section depending upon design need and customer requirement.

We offer steel structure in all grades of steel ranging from 245 MPA Ys to 550 MPA Ys in all available sizes and shapes

### MATERIAL STANDARDS

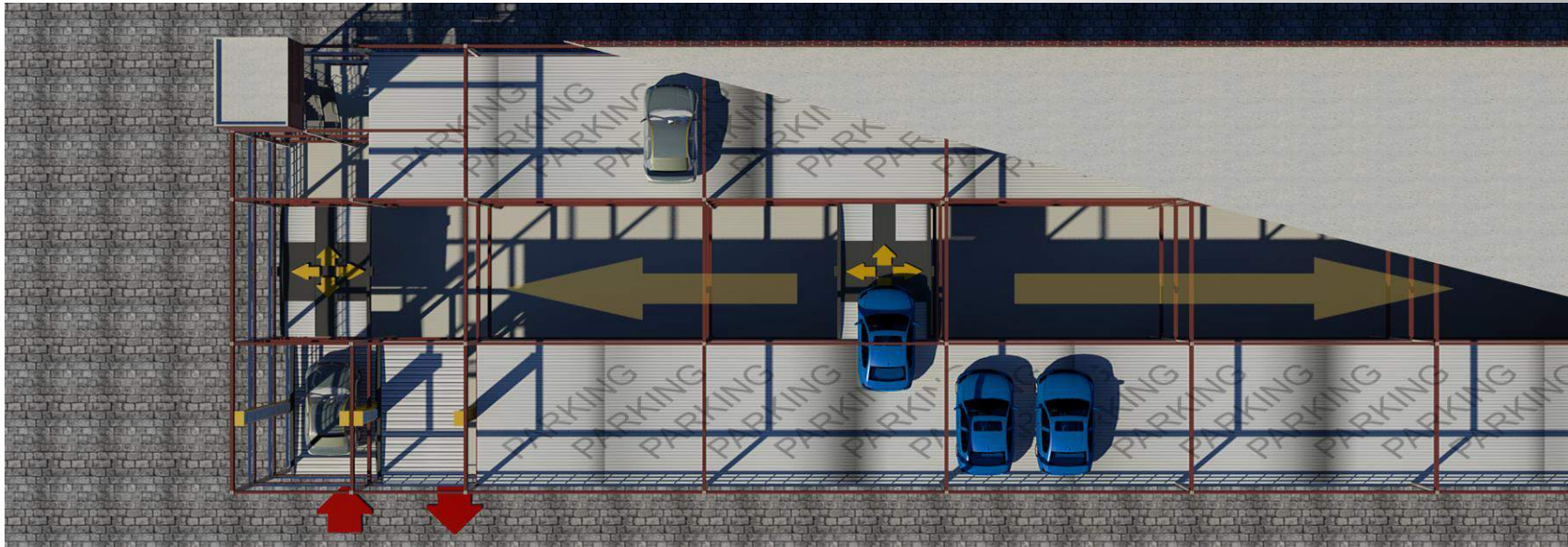
- Use of high strength steel of yield strength from 345 Mpa to 550 Mpa.
- Use of hot rolled steel sections from 245 Mpa to 550 Mpa YS of various section such as H, I, C, L, U etc. to achieve max. Steel optimization
- Cold form steel for light framing system
- Cold form metal decking system
- Shear stud to meeting concrete steel bonding need for composite construction
- Shot blasted steel framing to international grade of surface cleaning of steel
- Corrosion resistant priming on steel frames/members.
- Standard painting on steel of low VOC using Synthetic enamel paint or Epoxy paint
- Fire resistant painting to meet safety requirement as per governing law.(Optional)
- High strength bolts for primary and secondary framing system with minimum 8.8 grade steel.
- Use of green materials to achieve high LEED rating
- Provide complete interface solution for internal and external needs whether external glazing / ACP / Clad support / brick or internal MEP/ Ceiling / internal clad / partitions / water proofing / floor finishes or any other service needs



## ■ SMODI INFRASTEEL : MULTI-LEVEL CAR PARKING

Multi-level car parking system is most demanded system specially in metro city and important places where availability of space/land is very difficulty and is very expensive. In busy areas like shopping area, hotel, hospitals, railway station, bus terminal, airports, temples etc. are the places where there is acute shortage of space is there and even if small space is available that cannot accommodate enough car park. In view of these difficulties, it is necessary to have multi level car parking system which may be of various type. Since in busy area it is quite impossible to construct such multi level structure in concrete for many year of project gestation. It is mandatory to have off-site construction technique so that site work should be minimized to large extent. Steel is the best suited material for MLCP construction as entire consent formulation, design ,engineering & manufacturing can be done off-site and only foundation work and assembly of steel framing system can b done at site. This type of construction are commercially competitive as well great time saving.

## ■ SMODI INFRASTEEL : TYPICAL MLCP



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## ■ SMODI INFRASTEEL : TYPES OF MLCP

There are various type of multilevel car parking systems are available however for better economics following options are widely used worldwide.

- Puzzle Parkign System
- Tower Parkign System
- Steel Strcutre Framing Parking

These parkign systems can be designed with mechanical , hydraulic as well as automatic parking system. In case of free Steel strcutre Framing Parking, it can be made as semi-automatic as well fully automatic control retrival system.

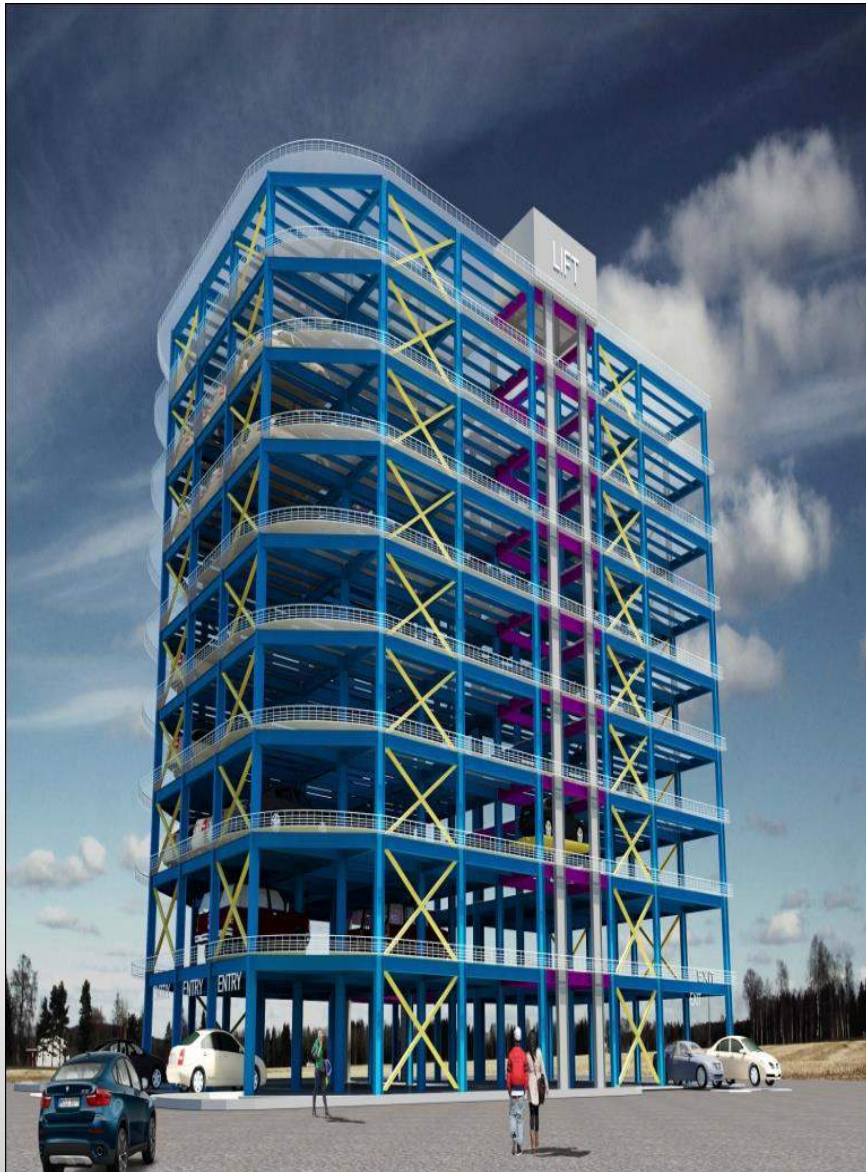


### ADVANTAGE OF USING STEEL IN MLCP

- Large column spacing offers wider clear area for parking
- Optimal use of spaces specially for metros and large cities
- Faster in construction so inconvenience for short time only
- No disturbance to locality or nearby areas as no fabrication takes place at site & very less storage space is required
- Very low operational and maintenance cost
- Secured and environment friendly
- Easy to SMODIfy/expand or relocate if required
- Simple in design and construction
- In case of power failure retrieval can be done through ramp
- Competitive construction cost in comparison to RCC
- Going vertically saves lot of space specially in busy areas occupancy early realization on investment.
- No peripheral cladding or covering system .Perihpery can be pre-planned for advertising panels for revenue generation which is additioanl source of revenue.



# ■ SMODI INFRASTEEL : MLCP BENEFITS



## ■ SMODI INFRASTEEL : COMMERCIAL BUILDINGS

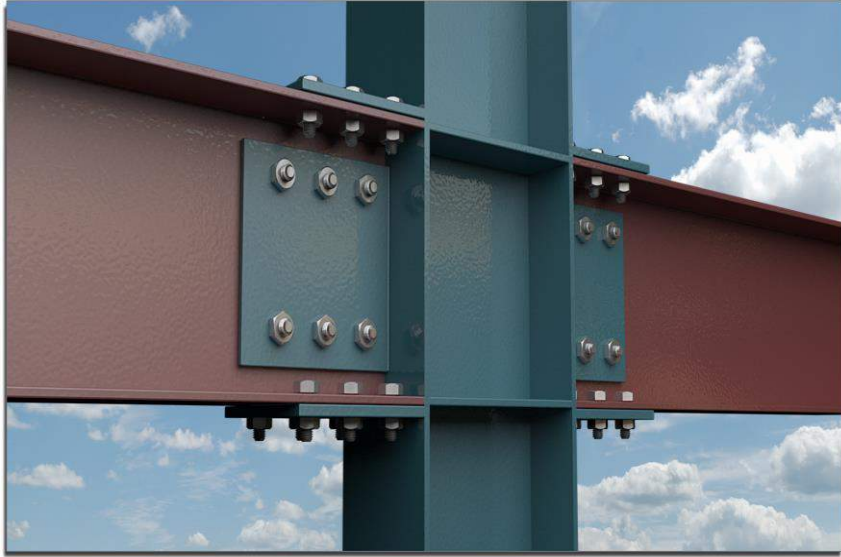
Worldwide multistorey construction are widely made using steel framing technology which gives very fast construction and offers ease of construction to complete the project before time unlike in RCC construction there is no certaining of construction period for various reasons.

Applications such as office space, commercial buildings, hotels, hospitals, shopping mall, multiplexes etc. are very easy to design, engineer, manufacture at factory level and get it installed at site on RCC foundations easily with a very small screw and tower cranes. This technique is similar to RCC construction however in place of RCC columns and beams, steel framing is used and with the help of deck slab flooring can be done for desired strength. Every MEP services such as electrical, plumbing, sanitation, lift, washin area (dry/wet), airconditioning is easily possible as we do in RCC construction. Rather strengthening in steel is much easier in future compared to RCC.

Various connection used in framing system is shown below.



# ■ SMODI INFRASTEEL : MULIT-STOREY DETAILS



**COLUMN BEAM CONNECTIONS**

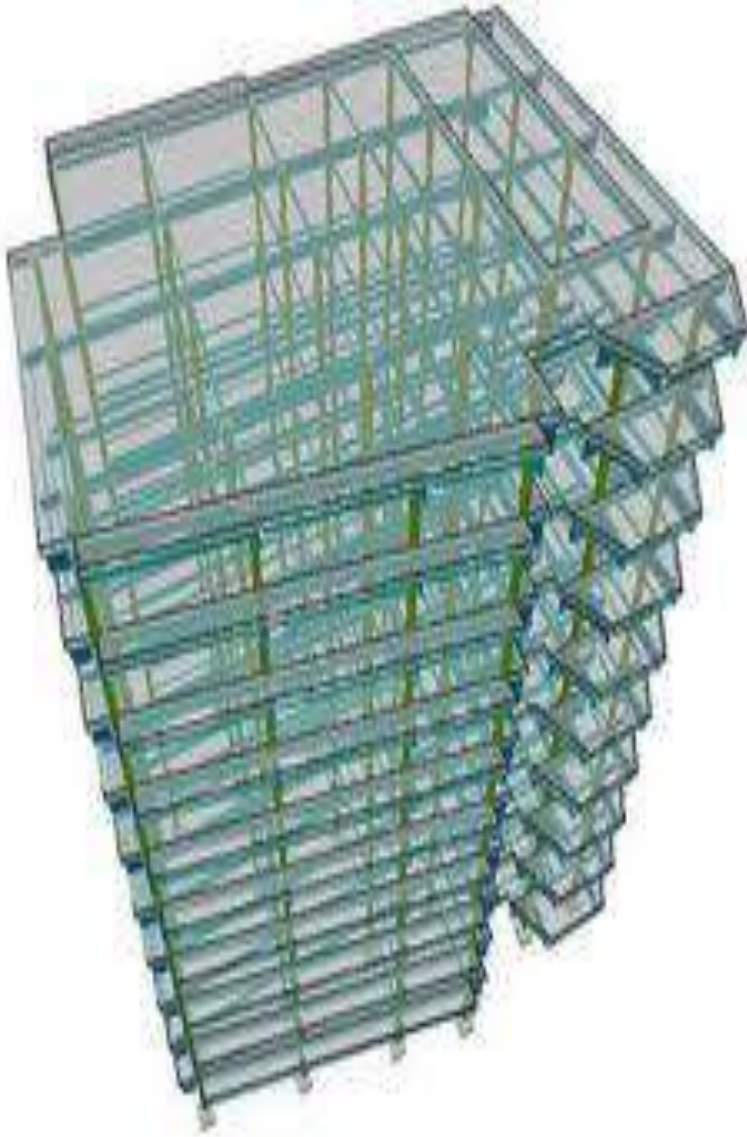


**BEAM-JOIST CONNECTIONS**

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# ■ SMODI INFRASTEEL : DESIGN PROFILE

## STADD MODEL FOR MULTI-STOREY STEEL FRAMING



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# ■ SMODI INFRASTEEL : HOTELS,SCHOOL & COLLEGES



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**OTHER APPLICATIONS WE OFFER :FOR HEAVY STEEL STRUCTURE SYSTEMS**

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## ■ SMODI INFRASTEEL : STADIUMS



**VILAS STRUCTURE**



**PROCESS  
STRUCTURE**

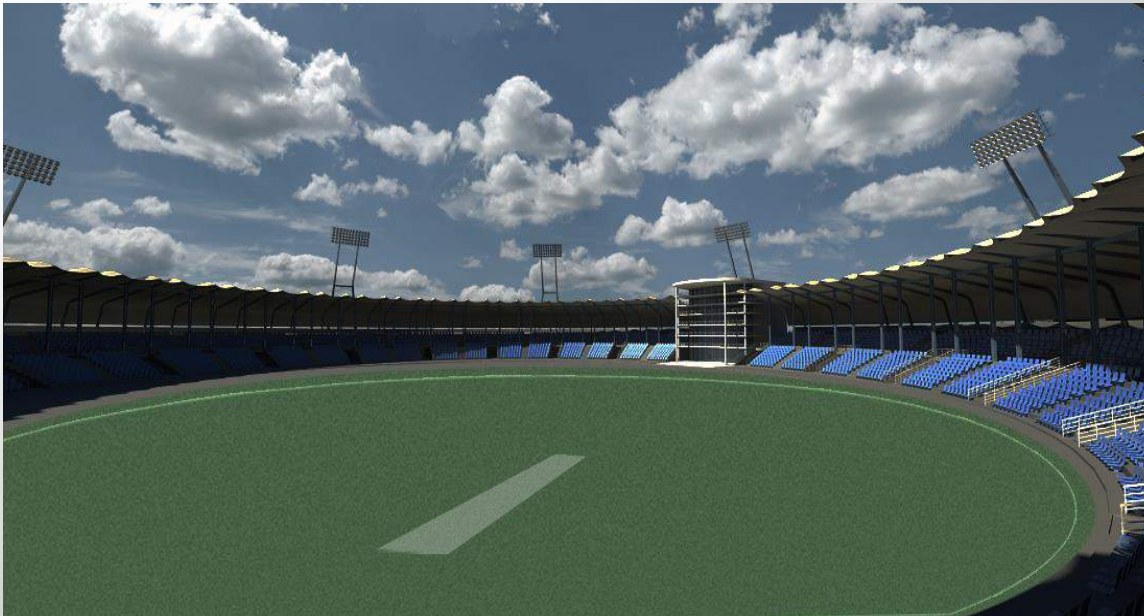
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## ■ SMODI INFRASTEEL : STADIUMS



**STADIA ROOF  
STRUCTURE**



**GRAND STAND IN  
STEEL**

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## ■ SMODI INFRASTEEL : ROB<sub>s</sub>



**RAIL OVER BRIDGE  
STRUCTURE**



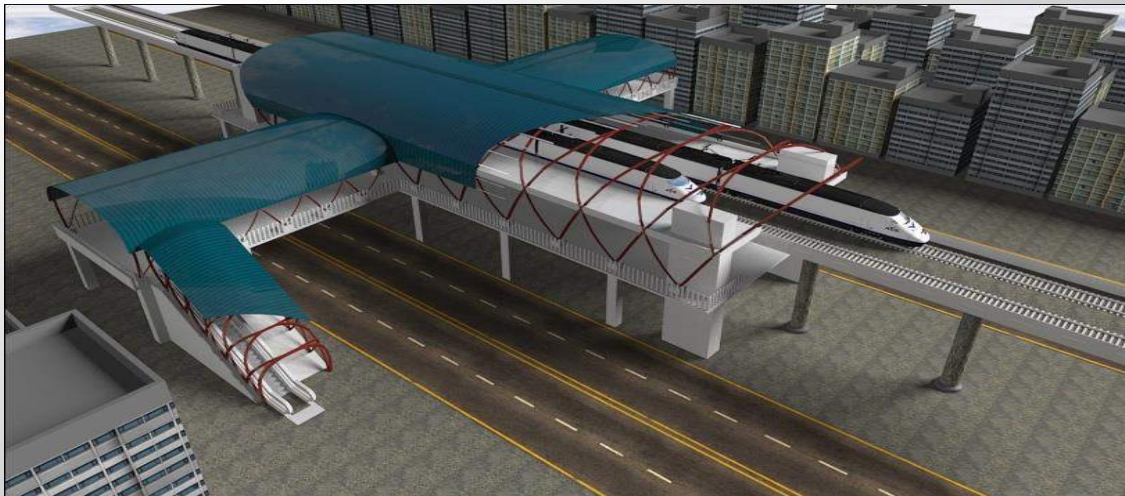
**FOOT OVER BRIDGE  
STRUCTURE**

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# ■ SMODI INFRASTEEL : TRANSPORT SYSTEM



**BUS TERMINAL**



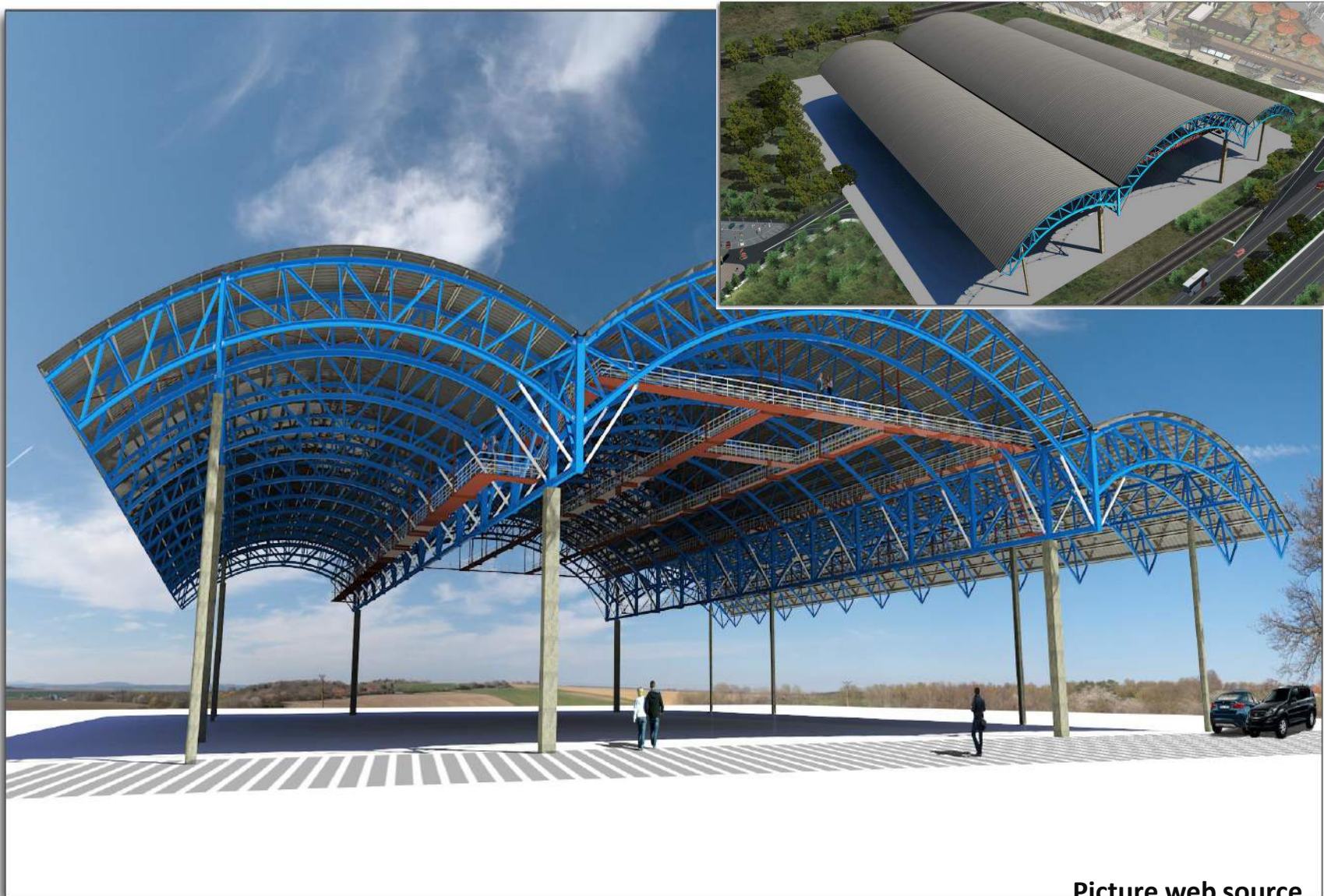
**METRO STATION  
STRUCTURE**

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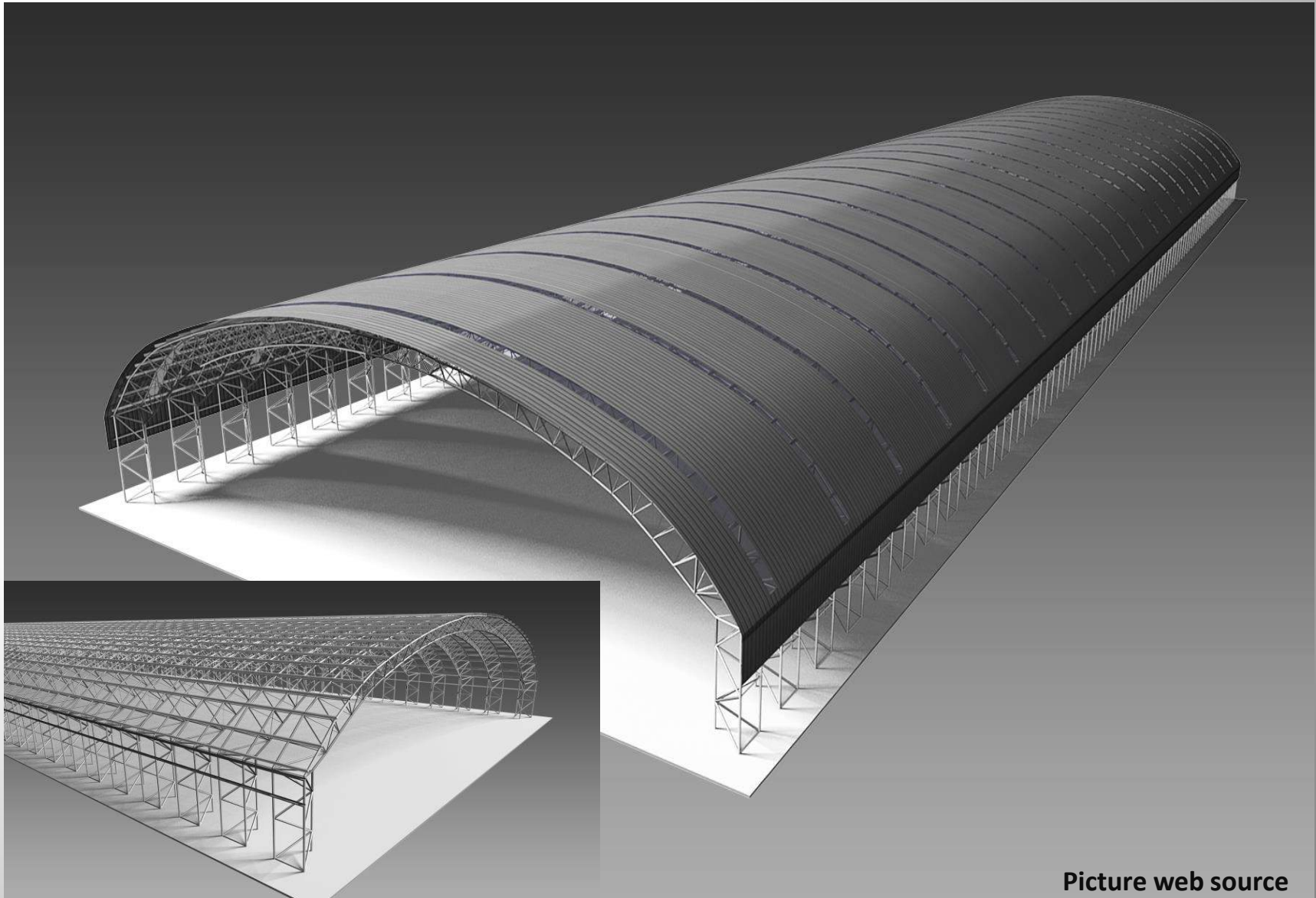
# ■ SMODI INFRASTEEL : COMPLEX EXHIBITION HALL

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# ■ SMODI INFRASTEEL : LARGE SPAN ROOF COVER



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## ■ SMODI INFRASTEEL : GREEN BUILDINGS

We, at SMODI INFRASTEEL, committed to offer green material for the building construction and infrastructure development & steel is recyclable up to 90% or more. Use of recyclable material allows minimum carbon footprint on the earth which helps in saving the natural resources and best use of it. Our construction helps in reducing the carbon footprint by reducing the solid waste and construction waste at project sites. This helps in energy conservation and protection of resources.





## **MISSION**

**SMODI INFRASTEEL MISSION IS TO EDUCATE, TRAIN & CREATE THE EXPERTISE IN CUSTOMER TO DEVELOP THE SKILL OF STEEL STRUCTURE USES FOR ALL INDUSTRIAL INFRASTRUCTURE DEVELOPMENT APPLICATIONS BY OFFERING OUR PRODUCT & SERVICES THROUGH OUR DESIGN, ENGINEERING, MANUFACTURING & EXECUTION SKILLS. WE WISH TO BECOME A KNOWLEDGE PROVIDER WITH OUR TECHNICAL COMPETENCIES AND TO SERVE THE NATION, SOCIETY, INVESTOR, AND EMPLOYEES & CUSTOMERS.**

## **VISION**

**Our VISION IS TO EXPLORE THE MAXIMUM USE OF STEEL STRUCTURE SYSTEM FOR DIVERSIFIED APPLICATION IN INDUSTRY & INFRASTRUCTURE SPACE THROUGH WORLD CLASS TECHNOLOGIES AND ENGINEERING SKILL. OUR INTENT IS TO DELIVER THE PROJECT WITH QUALITY AND ON TIME SERVICE WHICH SHOULD BE ENVIRONMENTAL FRIENDLY & BENEFICIAL TO THE SOCIETY.**



Thank You