

PRE-ENGINEERED BUILDINGS SOLUTIONS

“Core Infra” is one of India’s fastest growing building solutions company, It has endlessly introduced novel and contemporary building products with a promise of vigor, alacrity and safety.



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OVERVIEW

About Us

"We create optimized structural systems having a foreseeable performance."

■ "Core Infra" is an engineering consulting firm located in Gurgaon, India. We offer engineering services for projects of warehouses, industrial plants, commercial complexes, high-rise building, Telecom shelters, Railways, Metro Rail projects, aircraft hangers, foot over bridges, cold Stores, LGFS (Light Gauge framing systems) & Industrial structures. In addition to the basic structural design, we render our expertise in earthquake engineering, wind engineering, value engineering, and performance-based and seismic investigation studies.

OUR

Vision

■ To become leading construction firm, while delivering projects that consistently exceed international standards and provide exceptional customer satisfaction.

OUR

Mission

■ To provide quality workmanship and customer service and maintain highest level professionalism, honesty & fairness in our relationship with our customers, employee & vendors

OUR

Core Values



Discipline

We maintain a focused discipline for our responsibilities and projects.



Safety

We are firmly committed to maintaining a safe and healthy environment at all our sites and on each of our projects.



Quality

We are committed to providing high-quality services and products. We meet the mutually agreed requirements the first time and strive for continuous improvement of our work processes.



Integrity

We uphold our reputation for integrity in the marketplace and provide an ethical work environment for all.



Innovation

Through inventive processes and unique solutions, we provide unmatched value to our clients.



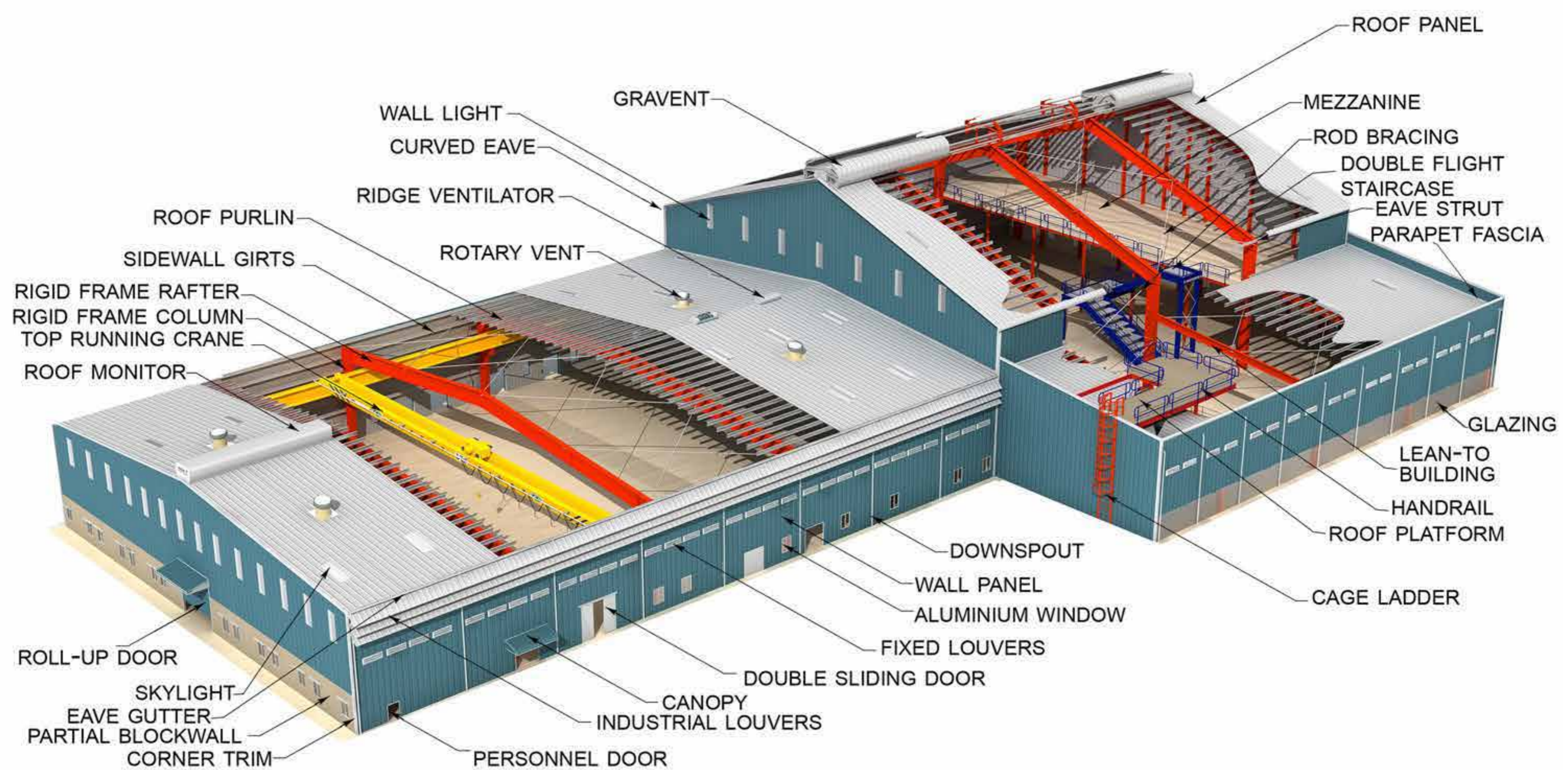
Sustainability

In all that we do, we are conscious of the meter per second that our work has on the environment. We help our customers do the same by providing clean, efficient, healthy, and effective solutions for all of our projects.



PRE-ENGINEERED

Building Nomenclature



Core Infra pre-engineered buildings are custom designed to meet your detailed requirements

The basic parameters that define a pre-engineered building are:



Building Width

Building width is defined as the distance between the outer sides of an eave strut of one sidewall to the outer side of an eave strut of the opposite sidewall.



Building Length

This is defined as the distance between the outside flanges of end wall columns in the opposite end walls and is a combination of several bay lengths.



Bay Spacing Length

Bay spacing length is the distance from the outer side of the outer flange of end wall columns to the centerline of the first interior frame column.



Interior Bay Length

This is the distance between the centerline of two adjacent interior mainframe columns. The most common bay spacings are 6 mts, 7.5 mts, and 9 mts. The bay lengths can go up to 15 mts.



Building Height

Building height is the eave height, which is usually the distance from the bottom of the mainframe column base plate to the top outer point of the eave strut. When columns are recessed or elevated from the finished floor, eave height is the distance from the finished floor



Roof Slope (x/10)

This is the angle of the roof with respect to the horizontal base. The most common roof slope is 1/10. However, any practical roof slope is possible.

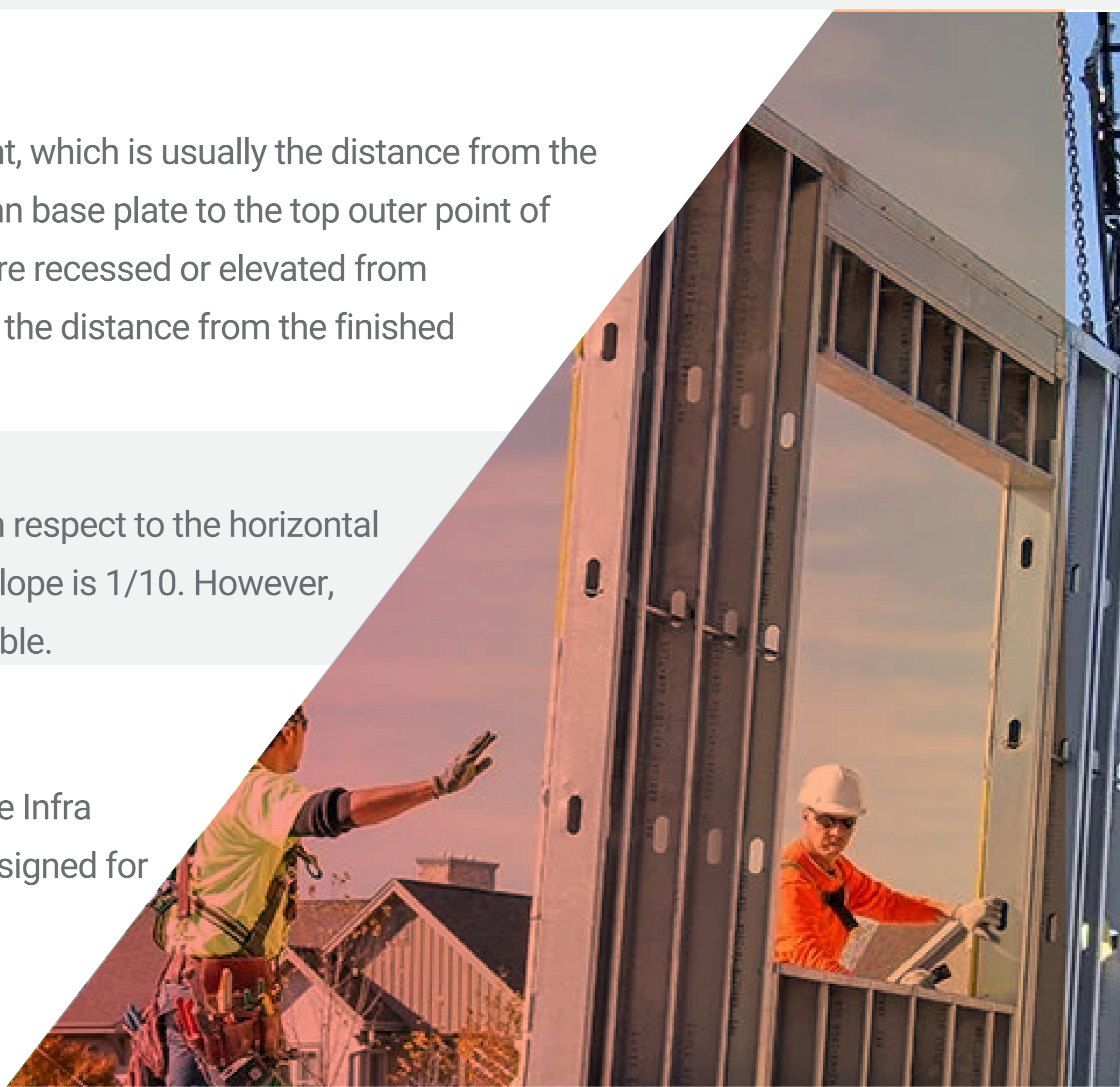


Design Loads

Unless otherwise specified, Core Infra pre-engineered buildings are designed for the following minimum loads:

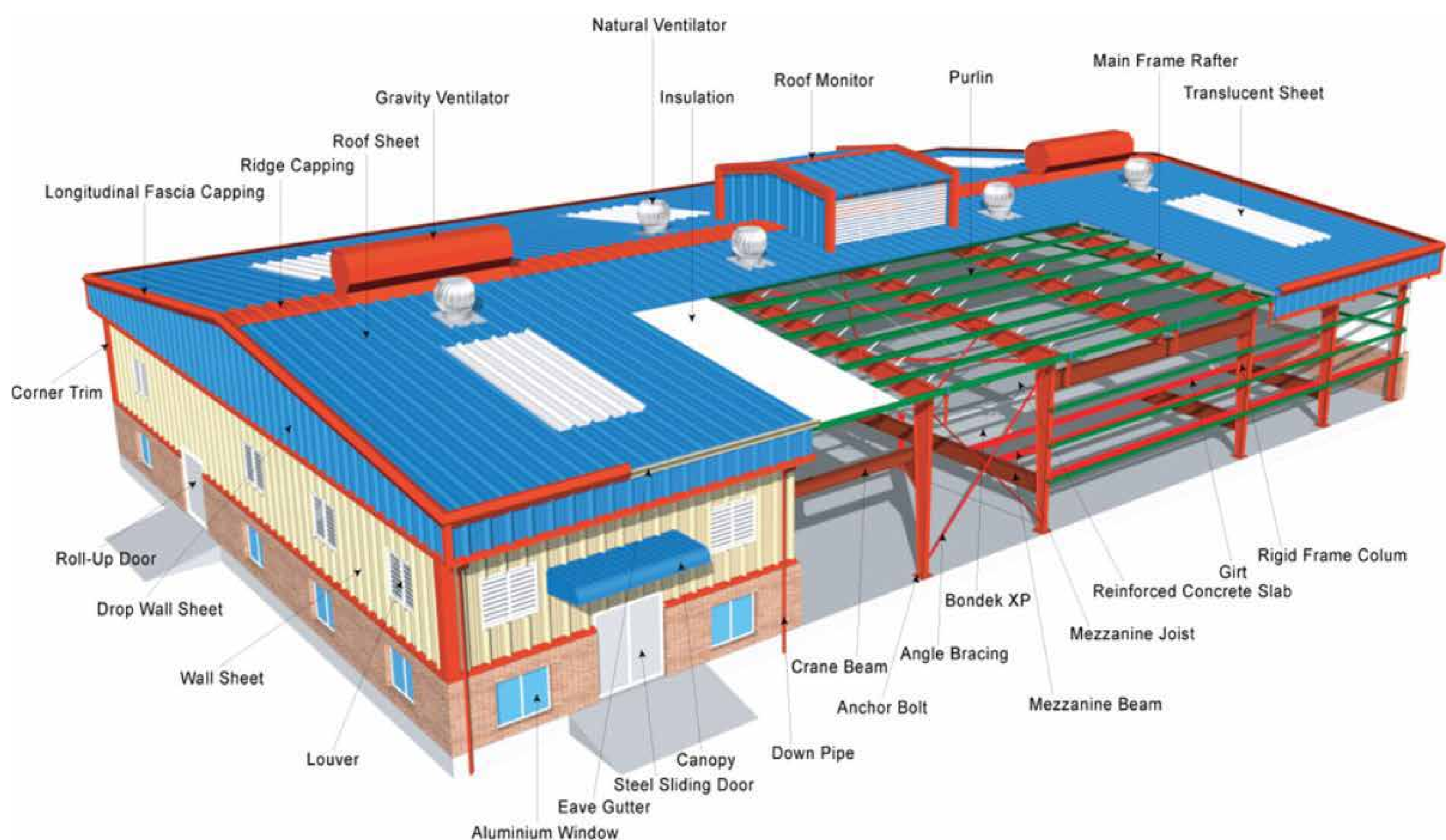
Roof Live Load: 0.75 kN/m²

As per IS and American



Design Wind Speed: As per IS:875 for location. Design for seismic loads, collateral loads, or any other local conditions must be specified at the time of quotation.

Loads are applied as per the latest American Codes and Standards applicable to pre-engineered buildings unless otherwise requested at the time of quotation.



Comparison PEB VS CONVENTIONAL BUILDINGS

Pre-Engineered buildings are being preferred over conventional buildings for industrial construction due to its fast construction.

S.No	PRE ENGINEERED BUILDINGS (PEBs)	CONVENTIONAL STEEL BUILDINGS
1	Per frames are normally tapered and often have flanges and webs of variable thicknesses & depth along the individual members.	In conventional steel buildings mill- produced hot rolled sections (beams and columns) are used. The size of each member is selected on the basis of the maximum internal stress in the members.
2	Pebs are on an average about 30% lighter to efficient design and use of steel	Standard hot rolled "I" or "C" sections are used, which are in many segments much heavier than what is actually required as per design.
3	Fast, efficient designing and detailing due to well defined international codes and standard by using specialized software.	Each conventional structure is designed from scratch by the consultant with fewer design aids available.
4	Detailed structural drawings including erection and sheeting are provided free of cost, thereby considerably reducing erection & sheeting time	An extensive amount of consultant's time is devoted to designing, drafting & detailing of the structure.
5	All structures are manufactured in the factory under strict quality pre-engineered buildings (PEBS) & finish.	Structures are mostly site fabricated whereas, it is difficult to monitor & control quality parameters.
6	Easier sourcing & co-ordination due to single source responsibility as the entire building along with all the sheeting & accessories is designed, supplied & erected	Multiple sources for different items are involved, thereby causing considerable expenditure & delay.
7	Superior architectural features can be incorporated and excellent aesthetics can be achieved	Limited scope for architectural & aesthetic features.
8	Easier to incorporate future expansions due to modular nature of design	More difficult to incorporate expansions.
9	Single source of supply results in efficient time and cost management for a speedy construction	Multiple sources/ responsibilities can lead to many questions and lack of corporation
10	Faster completion time – as civil works can be completed at the same time.	Much slower completion time, exact date could not be given as it is dependent on various other concepts

ADVANTAGES OF PEB BUILDING



Cost effective:

- Material cost can be saved up to 30% by using tapered built up members & cold formed sections.
- Foundation cost optimized to the maximum.



Architectural Flexibility:

The appearance of the building is greatly enhanced by the Aesthetic Features such as: Fascia, Parapets, & Curved eaves; Flashings and trims to over multiple shapes & Colours



Faster Construction:

- Longer column spacing's that minimizes the number of foundations.
- While the foundation is cast, the structural materials will be ready wasting no time in the process.
- Bolted connections are employed for quick & stronger connections of the beams.
- Fabrications will not be done on-site; fabricated materials will be used for a quicker completion.



Functional Advantages:

- Larger, clear spans of up to 100 MTR facilitate that will keep all the operations under the same roof.
- Maximum column spacing of up to 12.5m allows easy work flow process & flexibility in machinery layout.
- Expanding in the future will never be an easy problem with the pre-engineered buildings.



Superior Quality:

- Design and connections stability is ensured by the latest softwares & codes.
- Welding, Surface Preparation & Painting is done in the closed environment to prevent external impurities, never compromise on quality to the customer.



Maintenance:

- Virtually no maintenance required for structures & panels.

OUR Products



**Pre-Engineered
Building's**

Showroom Building's
Warehousing & Godown's
Industrial Building's
Portable Storage
Building Cold Storage
Building Multi-Storage
Building | Power Plants
Agriculture & Dairy Farm Project's
Automobile & FMCG Project's

Galvalume Sheet

Flashing, Trim & Supporting Members

Steels Structure & Cold Foam

Turbo-Vent & Transparent Sheet (Poly & FRP)

Galvalume Louver & Ridge Vent



Roof & wall sheet

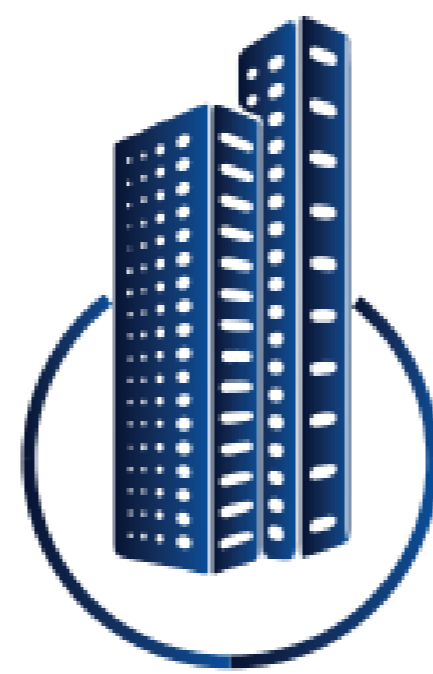


Porte-Cabin

Porte-Cabin & Site Office
Security Guard Cabin
Multi-Floor Prefab Building Testing
Unit Cabin
Portable Office Building Portable
Hospital Building



OUR BEST Services



High rise building



Warehouse



Industrial shed



Cold storage

Primary

Framing services

CIS are optimised to meet specific requirements of each client.

Primary framing consists of all structural elements which transfer load to the foundation and comprises of:

Intermediate frames | Endwall frames | Wind bracings |

Crane brackets | Mezzanine beams and joists

Primary framing is manufactured such that only bolted connections are required.

01. Intermediate Frames

Intermediate frames consist of built-up welded members.

For multi-span frames, intermediate columns are either pipe sections, hot-rolled profiles or built-up welded profiles. Frames are complemented by flange bracing, connection bolts and anchor bolts. Column bases are usually pinned. Fixed connections, if required as per design, can also be provided.

02. Endwall Frames

Endwall frames consist of either built-up welded, hot-rolled or cold-rolled columns which support a cold-formed or hot-rolled rafter.

Frames are complemented by connection bolts, anchor bolts and wind bracing, if required.

03. Crane Brackets

Crane brackets support the crane beams and are fixed to the column flanges.



04. Wind Bracing

Wind bracing provides longitudinal stability for the building.

It consists of cross-bracing located in the roof and side walls in one or more bays depending on the quantity of load and the length of the building. When required, cross-bracings can be replaced by wind portal frames or by fixed base wind columns located adjacent and connected to the mainframe columns.



Secondary

Framing Services

Secondary framing consists of elements which support the roof and wall sheeting & transfer load to the primary framing. These include Roof Purlins, Wall Girts, Eave Struts, Clips etc

01. Roof Purlins

Roof purlins are cold-formed Z profiles, normally 200 to 250 mm deep out of 1.6 to 3.15 mm thick steel. These are fixed to the top flanges of the rafters by means of clips bolted to the rafters, and the purlin web bolted to the clips. Purlin ends overlap to act as continuous beams.

02. Wall Girts

Wall girts are cold-formed Z sections, normally 200 to 250 mm deep out of 1.6 to 3.15 mm thick steel. These are fixed to the outer flange of the side wall columns. There are two types of fixations:

- Fixed to the outer flange of the side wall columns by means of clips bolted to the column and girt web bolted to the clips. Overlap connections are provided for continuous beam action.
- Endwall girts and flush girts on side walls are normally flushed to the outer flange of the columns by means of clips which are bolted to the column web and girt web bolted to the clips.

03. Eave Struts

Eave struts are C profiles or double Z profiles, normally 200 to 250 mm deep out of 2 to 3.15 mm thick steel. These are fixed to the outer flange of the side wall columns by means of clips bolted to the column and eave strut bottom flange bolted to the clip. Roof purlins also act as wind struts and enable transfer of strut load to the side wall columns through adequate bracing.



Pre-Engineered Structural Steel Systems



Typical Primary and Secondary Framing Systems

PRE-ENGINEERED BUILDING SOLUTIONS

A portable, demountable or movable structure is a structure designed and developed to be movable rather than permanently located.

The smaller version of portable buildings is known as porta cabin. Portable cabins are custom-built prefabricated buildings manufactured for various applications such as security cabins, storage containers, portable toilets, site offices, etc. porta cabins are an economical alternative to traditional buildings, and also they provide a flexible solution where accommodation is needed for a few time periods



From formal office accommodation to open eating and relaxation zones, toilet and shower offices to site security units, portable cabins are quick to manufacture and simple to deliver.





Smart building

LGFS

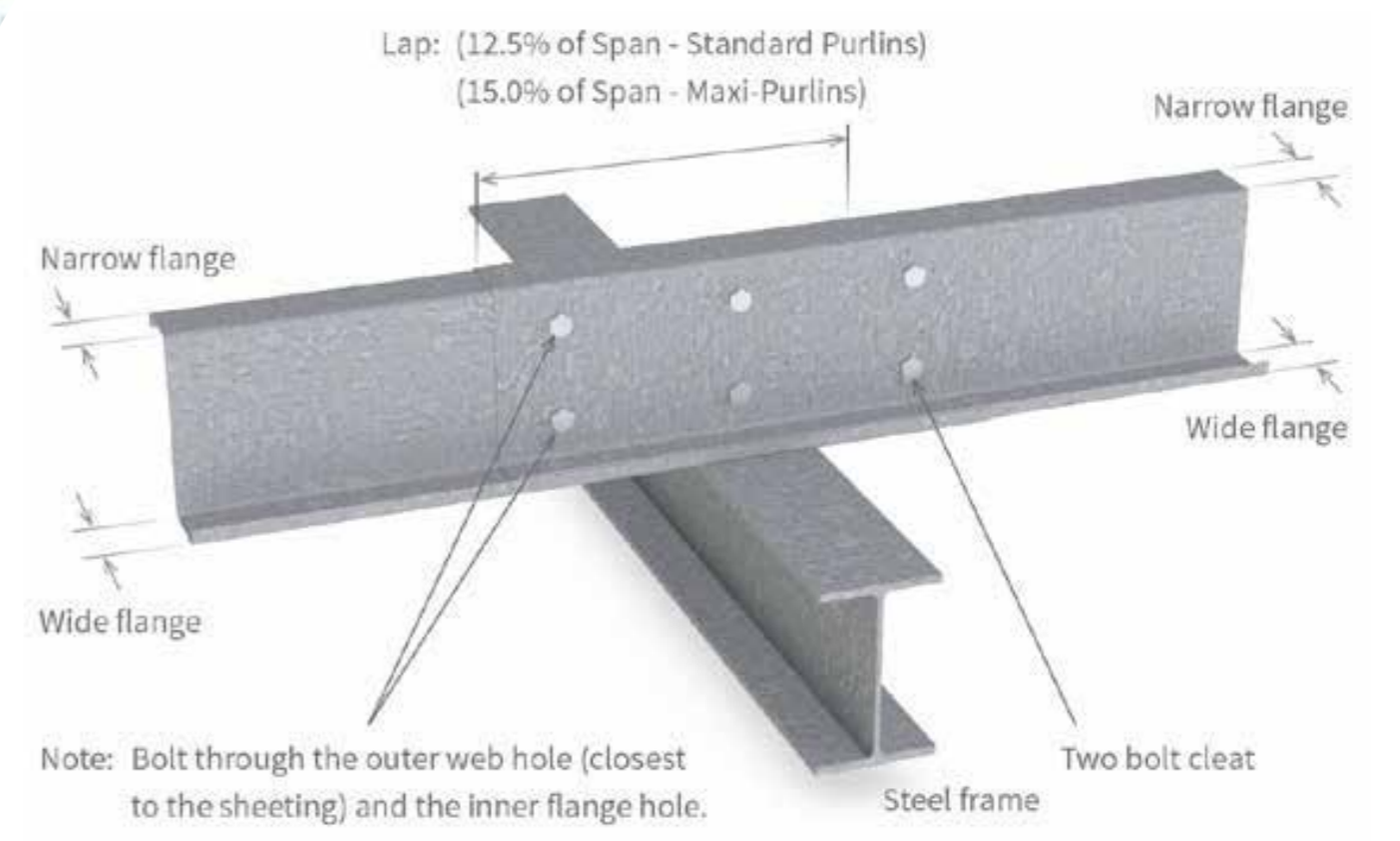
LGFS- Light Gauge Framing System buildings can be used as substitute of RCC/traditional buildings. It is used to create frames for external walls, floor, internal walls etc. These are used as the base on which suitable boards and materials are used to cover the framing. LGSF buildings look similar to traditional RCC buildings after completion.

The strength and flexibility of LGSF has led to increased spans, custom openings, curved wall, and different external facade treatments. These characteristics makes it versatile construction material. The elements of light gauge steel frame members need to be galvanized with zinc, aluminum or a combination thereof in order to provide long-term protection against corrosion.

OUR Projects











Offices

Core Infra Building Products offer turnkey operations with regional offices and project control centres for marketing, sales and coordination at all locations across India.

 **Corporate office:**
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