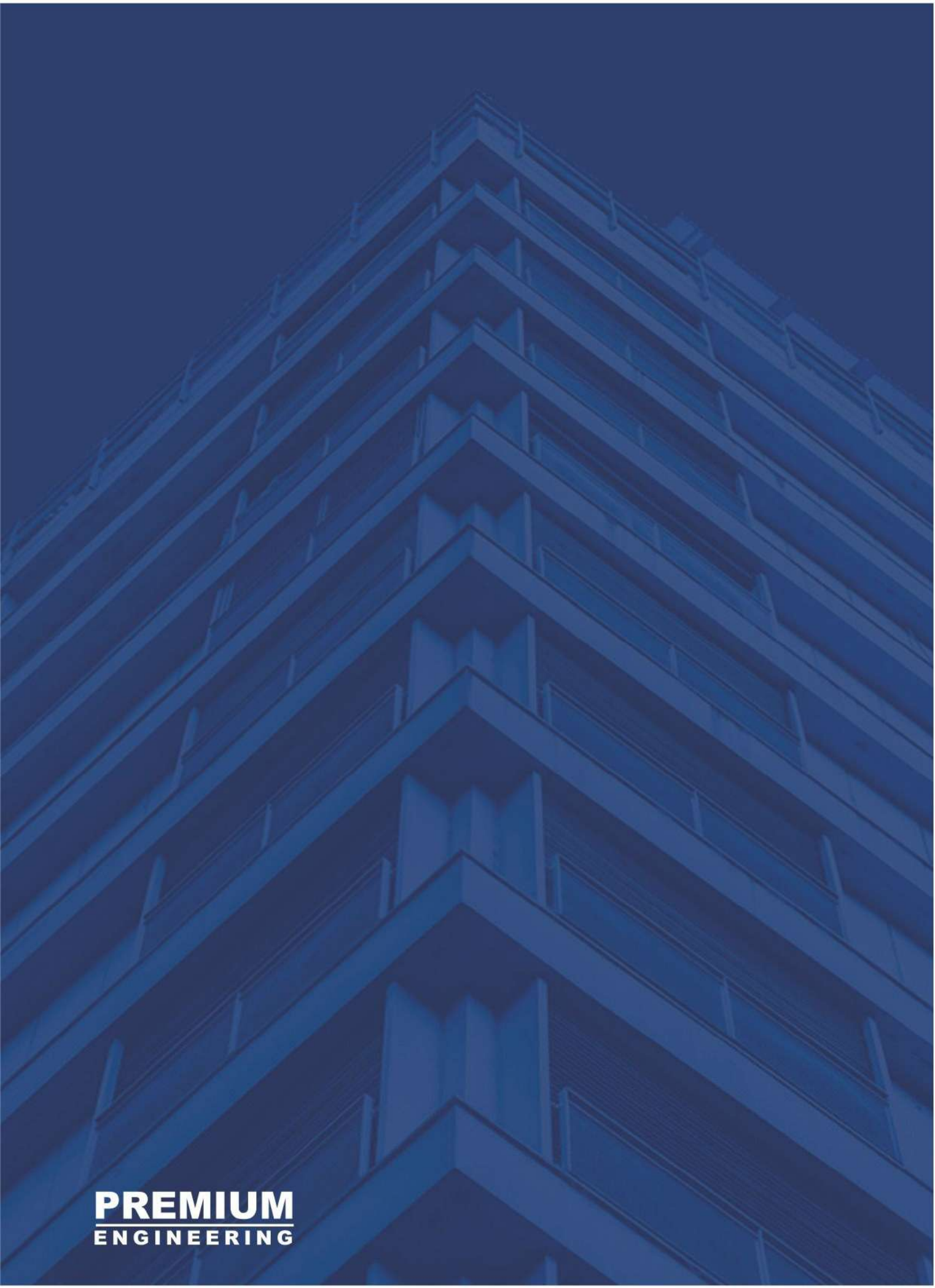
PREMIUM
ENGINEERING

Changing the Skyline Of Pakis


PREMIUM
ENGINEERING

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Introduction

Premium Engineering Pvt. Ltd is a continuation of “premium Construction” which was established in 2010 in response to the increasing demand of steel structures in the region.
Premium Engineering Pvt. Ltd was established in 2017 as steel building manufacture to provide a quality metal and structural steel building.

It has aggressively pursued the complex engineering projects and has taken an aggressive role in converting complex building designs with conventional structural steel into simpler and more economical Pre-engineered steel buildings without compromising the utility and function of these buildings.

We are manufacturing the steel buildings at our state of the art facility at Sheikhupura opposite to Quaid e Azam Business Park, our aim from day one is to manufacture a steel building of highest standard. To achieve that aim we did not spare any expense and equipped our company, however is our team and teamwork. Each member of our team is a professional dedicated to provide our customer with the best of services. We all know and believe that our future depends on sustained customer satisfaction.

Our Activity Fields Mainly Encompass the Followings

- Pre-Engineered Steel Buildings
- Structural Steel
- Light Gauge Framing
- Partition Wall Systems

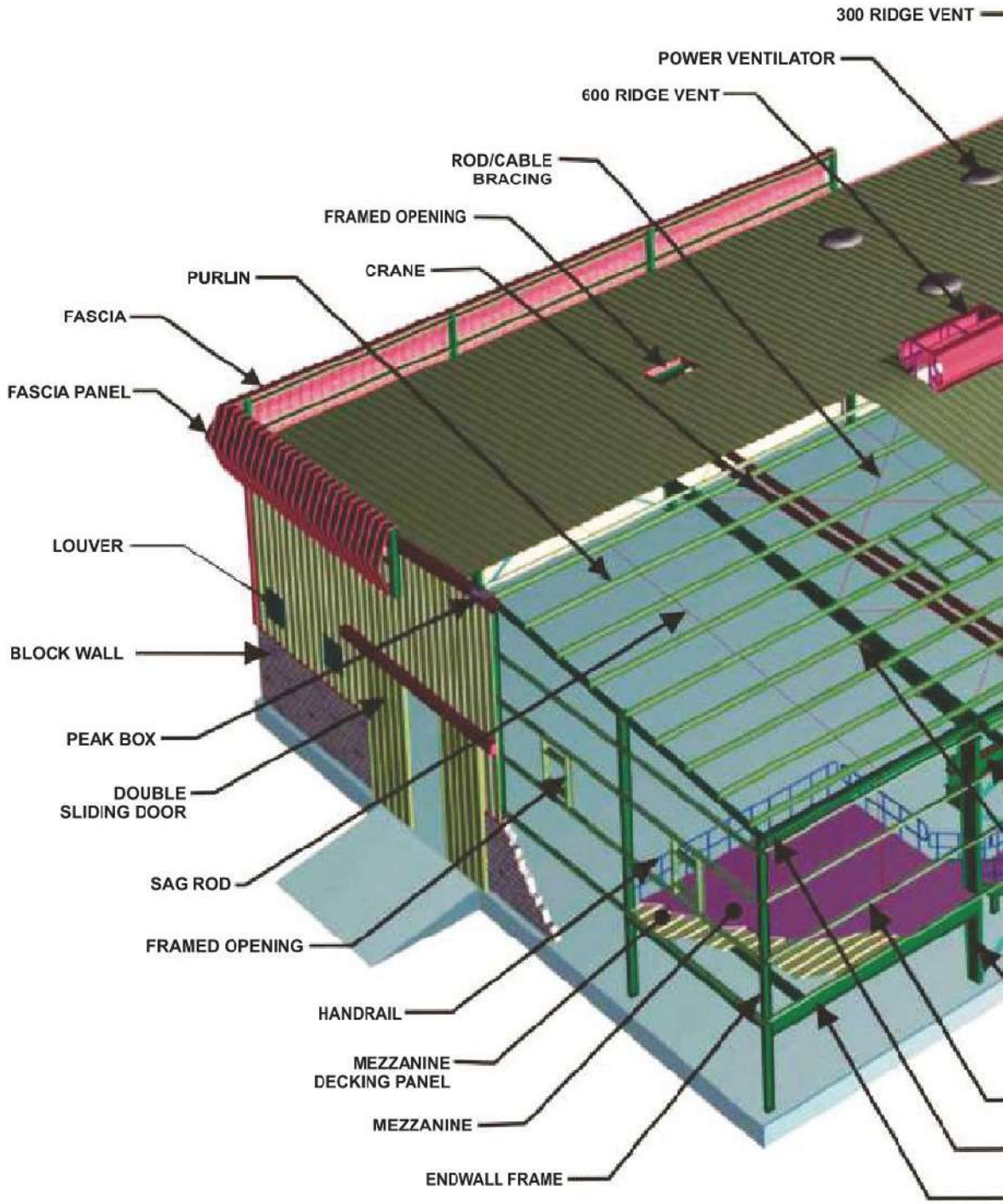
VISION

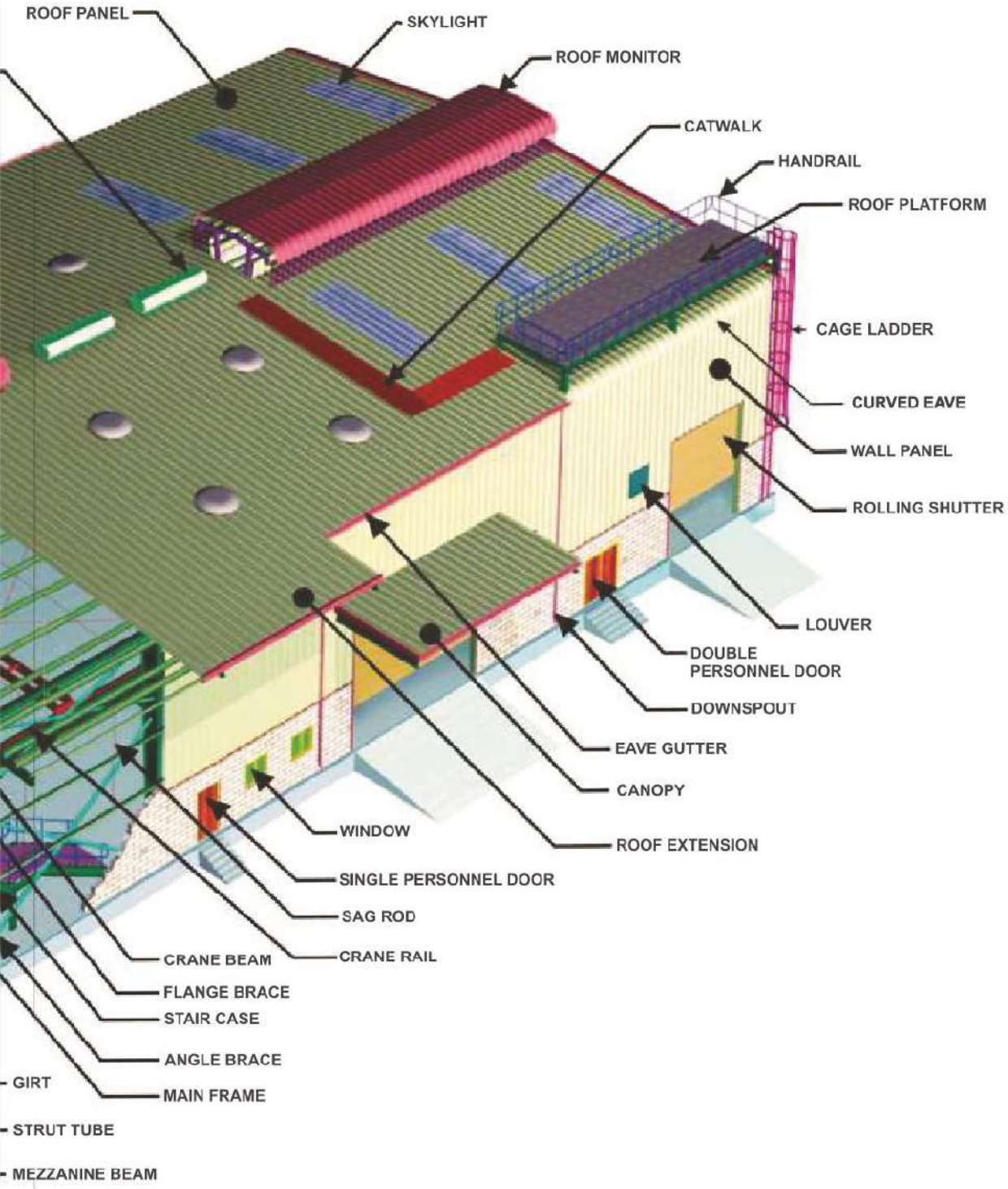
The mission of Premium Engineering Pvt. Ltd is to be and then remain the most innovative and reliable manufacture & comprehensive solution provider in the construction industry.

MISSION

Our mission is to provide best possible services to our customers with true professional dedication, bring the technology into practice where it is needed, help build a better life through industrialization, supply high quality steel products with related services while utilizing innovative technologies, focused on continuous improvement, highest business standards and ethics.

Modular Features of Steel Building Components




ROOF PANEL
SKYLIGHT
ROOF MONITOR
CATWALK
HANDRAIL
ROOF PLATFORM
CAGE LADDER
CURVED EAVE
WALL PANEL
ROLLING SHUTTER
LOUVER
DOUBLE
PERSONNEL DOOR
DOWNSPOUT
EAVE GUTTER
CANOPY
ROOF EXTENSION
WINDOW
SINGLE PERSONNEL DOOR
SAG ROD
CRANE RAIL
CRANE BEAM
FLANGE BRACE
STAIR CASE
ANGLE BRACE
GIRT
MAIN FRAME
STRUT TUBE
MEZZANINE BEAM

Advantage of Pre Engineered Building

Most metal buildings are purchased by the private sector, which seems to appreciate the advantages of proprietary pre-engineered buildings more readily than the public entities.

Faster occupancy. Anyone who has ever tried to assemble a piece of furniture can remember the frustration and the amount of time it took to comprehend the various components and the methodology of assembly. The second time around, the process goes much faster. A similar situation occurs at a construction site when a stick-built structure is being erected. The first time it takes a little longer. But there is no second time to take advantage of the learning curve. With standard pre-engineered components, however, an experienced erector is always on familiar ground and is very efficient.

Cost Efficiency. In a true systems approach, well-fitting pre-engineered components are assembled by one or only a few construction trades; faster erection means less expensive field labour. In addition, each structural member is designed for near-total efficiency, minimizing waste of material. Less labour and less material translate into lower cost. The estimates of this cost efficiency vary, but it is commonly assumed that pre-engineered buildings are 10 to 20 percent less expensive than conventional ones. However, some carefully designed stick-built structures can successfully compete with metal building systems.

Low initial cost. The use of tapered built-up primary structural members such as columns and rafters usually results in up to a 40% weight advantage for the main rigid frames when compared to the use of conventional hot rolled sections as primary members. The use of “Z” shaped secondary structural members (roof purlins and wall girts), particularly the overlapping of the “Z” shaped purlins at the frames, results in up to 30% weight saving for the secondary members when compared to the use of hot rolled channels as purlins and girts. The manufacturing scrap from the production processes of built-up plate members and cold formed “Z” sections is typically 75% less than the scrap costs generated from the fabrication of hot rolled members. The foundation requirements of Metal vbuildings are fewer and lighter. This is due to wider clear span capability of main frames, longer economic bay lengths and lower weight of the overall structure. The cost of initial engineering of the structure, as well as later design revision, is substantially reduced due to the inclusion of the engineering costs within the supply price of the metal building.

Advantage of Pre Engineered Building

Flexibility of expansion. Metal buildings are relatively easy to expand by lengthening, which involves disassembling bolted connections in the endwall, removing the wall, and installing an additional clear-spanning frame in its place. The removed endwall framing can often be reused in the new then added to complete the expanded building envelope.

- Clear Spans up to 90 m.
- Bay lengths up to 12 m. (Use of Jack
- beams allows bay lengths up t0 20m)
- Eave heights up to 30 m.
- Buildings are easily expandable on all
- sides (allowing for future expansion).
- Building shell is designed to accept stocked (custom manufactured) standard accessories (personnel doors, windows, skylights, etc.)
- Building design can incorporate additional standard structural subsystems such as mezzanines, cranes, roof platforms, etc.

Single-source responsibility. The fact that a single party is responsible for the entire building envelope is among the main benefits of metal building systems. At least in theory, everything is compatible and thought through. The building owner or the construction manager does not have to keep track of many different suppliers or worry about one of them failing in the middle of construction. Busy small building owners especially appreciate the convenience of dealing with one entity if anything goes wrong during the occupancy. This convenience is a major selling point of the systems.

Advantage of Pre Engineered Building

Superior Quality. Design quality is consistent and is based on the latest USA codes applicable to the design of metal buildings. Welding is performed by AWS certified welders and conforms to the latest version of the Structural Welding Code for Steel published by the American Welding Society. Raw materials are ordered to ASTM (American Society of Testing Materials) standards, or equivalent, and are inventoried at the factory adequate with mill certificate traceability. Strict adherence to code-ensures that safety and designintegrity are not sacrificed. A published standard quality plan, with stringent in-house quality control, ensures that manufacturing complies with the acceptance criteria of applicable codes. An executive level Quality Assurance Department ensures that quality control checking procedures are adhered to throughout the order processing cycle.

Fast Construction. Anchor bolt setting plans and anchor bolts can be delivered earlier that the building supply to enable the construction of foundations prior to delivery of the steel buildings. Standard building (s) delivery is only 8 weeks (including engineering time) and may be reduced to as low as 6 weeks for special “fast track” projects is fast Erection of the steel building(s) because all structural members are field bolted using clear user-friendly erection drawings. (The typical erection time per erection crew is 1.0 man-hour per square meter).

Architectural Flexibility. Aesthetic features such as fascias, parapets and curved eaves greatly enhance the architectural appearance of the building and empower designers to create unique buildings. Standard and special trims and flashing are available in a wide range of shapes, sizes and colors. A wide range of wall panel profiles and colors provides divers architectural accents. Readily available interface details between steel and other façade materials (such as glazing, block wall, curtain wall, etc.) allow for wider applications.

Low Maintenance. Building design can incorporate additional sub structural items such as mezzanines, cranes and roof platforms etc. Virtually no maintenance required for wall panels. Roof panels require only periodic cleaning. Annual washing of eave gutters is recommended to clean off any clogging in downspouts. Watertight roofs. Does not allows any seepage.

Usage of PEB in Different Sectors

The many advantages of metal building systems clearly outweigh a few short comings, a fact that helps explain the system's popularity.

Applications of Metal Buildings range from small car parking sheds to 90 m (+), wide clear span aircraft hangars to low-rise multi-storey buildings. Almost every conceivable building use has been achieved using the Metal building approach.

The most common applications of Metal buildings are:

Industrial

- Factories
- Workshops
- Warehouses
- Cold stores
- Car parking sheds
- Slaughter houses
- Bulk products storage

Commercial

- Commercial
- Showrooms
- Distribution centers
- Supermarkets
- Fast food restaurants
- Offices
- Labour Camps
- Service Stations
- Shopping centers

Commercial

- Institutional
- Schools
- Exhibition halls
- Hospitals
- Theaters/auditoriums
- Sports halls

Recreational

- Gymnasiums
- Swimming pool enclosures
- Indoor tennis court

Aviation & Military

- Aircraft hangars
- Administration buildings
- Residential barracks
- Support Facilities

Aviation & Military

- Poultry buildings
- Dairy farms
- Greenhouses
- Grain storage
- Animal confinement

Primary Framing System — Single Slope (SS)

Single Slope (SS) buildings are economical structural systems for spans less than 12 meters. The most common conditions for using Single Slope buildings are:

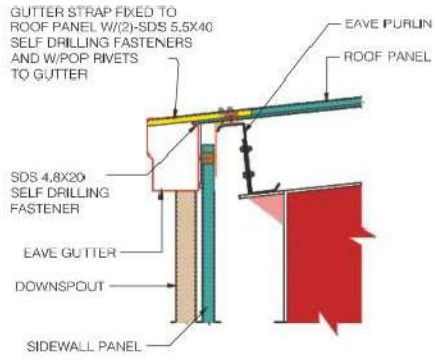
- For buildings where drainage of rain water is restricted along one side wall only. This may be due to site restriction on any other requirements.
- When a single slope building is used as an extension of existing building the designer should try to avoid the imposition of additional loads on the column of the existing building.

If the buildings width is more than 12 m, it is usual to specify a gable roof (Double slope roof) from economical as well as architectural considerations.

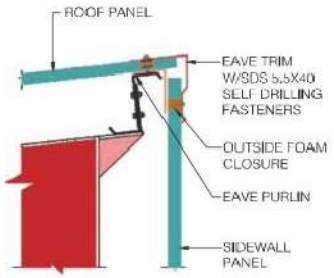
Single Slop buildings may be either Clear Spans or Multi-Spans. A common application of Single Slope buildings are demountable such as those used for site offices or camp at the lower side.

Primary Framing System

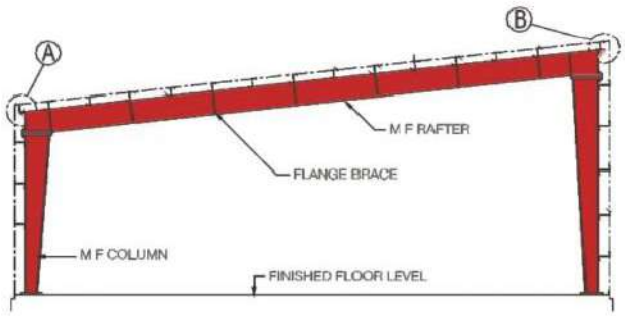
Single Slope (SS)



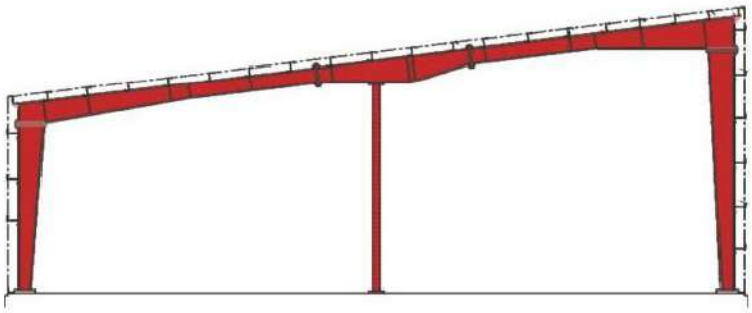
DETAIL-A



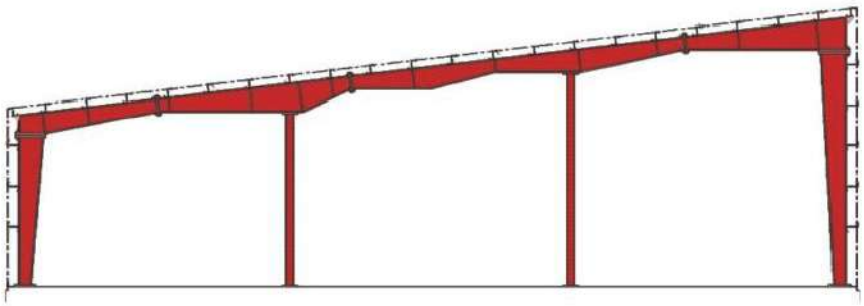
DETAIL-B



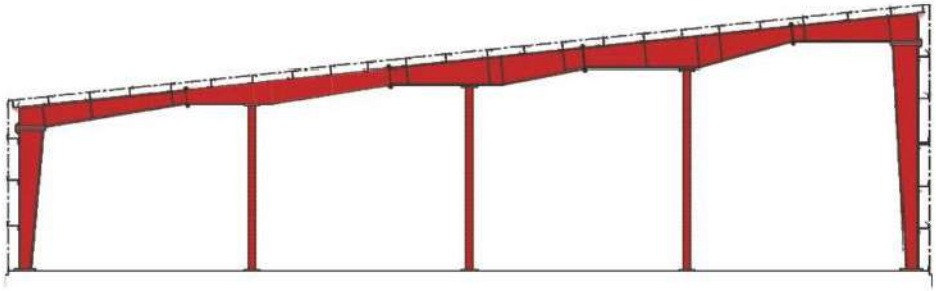
CLEAR SPAN SINGLE SLOPE



MULTI-SPAN SINGLE SLOPE WITH TWO SPANS



MULTI-SPAN SINGLE SLOPE WITH THREE SPANS



MULTI-SPAN SINGLE SLOPE WITH FOUR SPANS

Primary Framing System

Multi-Gable System

Multi-Gable (MG) buildings consist of two or more gable buildings sharing one common interior sidewall column.

Aesthetically Multi-Gable buildings are better looking and are commonly used in many regions of the world; Premium Engineering recommends the use of Multi-Span buildings in lieu of Multi-Gable buildings because of the following practical reasons:

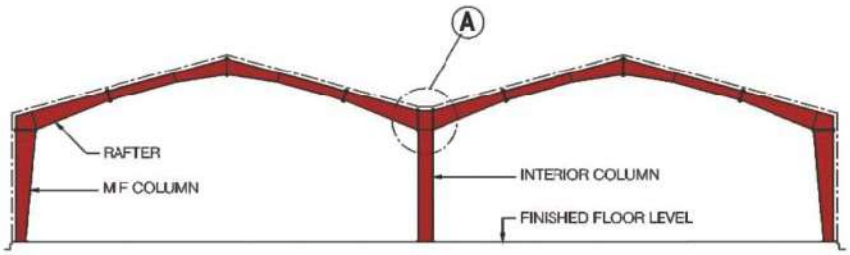
- The valley between gables requires frequent maintenance and cleaning due to larger roof drainage area, to prevent accumulation of residue such as sand, vegetation, etc. that must be removed frequently.
- Access to valley gutters for cleaning is much difficult and cumbersome that accessing eave gutters. This access requires maintenance traffic on the roof, risking sheeting damage of accident.
- There is a high risk of overflow of rainwater at valley during periods of unexpected extremely heavy rain (especially when the valley gutter between the buildings has not been maintained periodically).
- For long Multi-Gable buildings, interior downspouts need to be provided inside the buildings with horizontal drain pipes or concrete channels embedded in the concrete along the length of the buildings, under each valley gutter, to carry the water from the roof to an exterior location. The construction of such a water draining building.
- Wind bracing design for Multi-Gable buildings requires the provision of wind bracing members between the interior columns of the buildings. This bracing arrangement restricts interior movement and ease of access across the building.

Nevertheless, Multi-Gable buildings have the advantages of reducing height of the building ridge (peak) for very wide buildings.

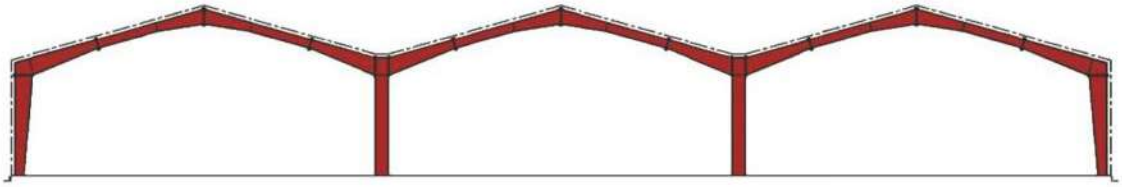
Multi-Gable buildings may be either Clear Spans or Multi-Spans.

Primary Framing System

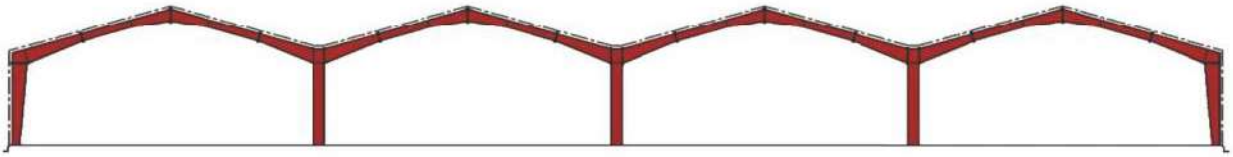
Multi-Gable System



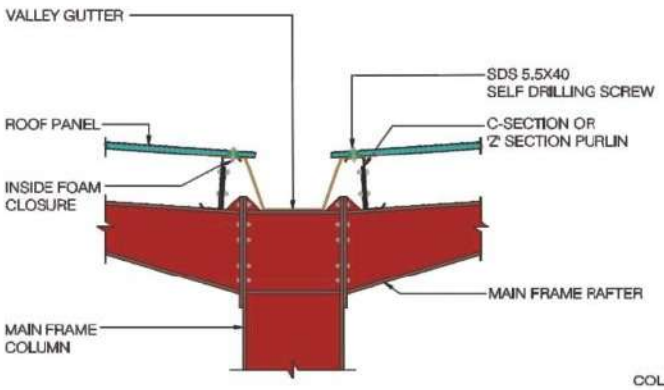
MULTI-GABLE BUILDING WITH TWO CLEAR SPANS



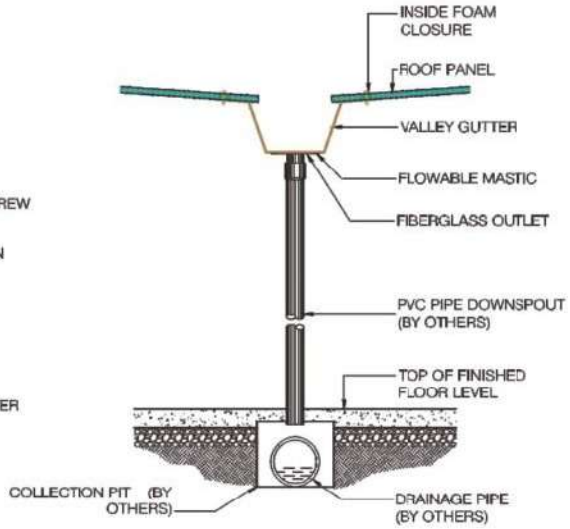
MULTI-GABLE BUILDING WITH THREE CLEAR SPANS



MULTI-GABLE BUILDING WITH FOUR CLEAR SPANS



DETAIL-A: TYPICAL VALLEY DETAILS



RECOMMENDED INTERIOR DRAINAGE ARRANGEMENT

Primary Framing System

Typical Roof System

A Typical Roof System consists of roof rafters, purlins and sheeting specifically designed to install onto a new or an existing substructure. The substructure is mostly made of concrete or masonry.

When Premium Engineering building Supplies a Roof System, it assumes that the supporting substructure was designed by a professional engineer and can withstand the load reactions resulting from the Premium Engineering System. The customer's engineer must also ensure that his substructure is able to physically accommodate the required Mammut Building Systems anchor bolts and that the substructure is designed for the proper transfer of loads from the Roof System to the foundation.

Sometimes during construction problems can also arise from not having square and accurate concrete dimensions (at rafter connection elevations) during the construction process. The tolerances required for proper anchor bolts setting (±5 mm) demand extreme care.

Close attention must be given to the interface between the concrete structure and the steel sheeting surface. Irregularities and height variations with the concrete may contribute to building leakage problems later.

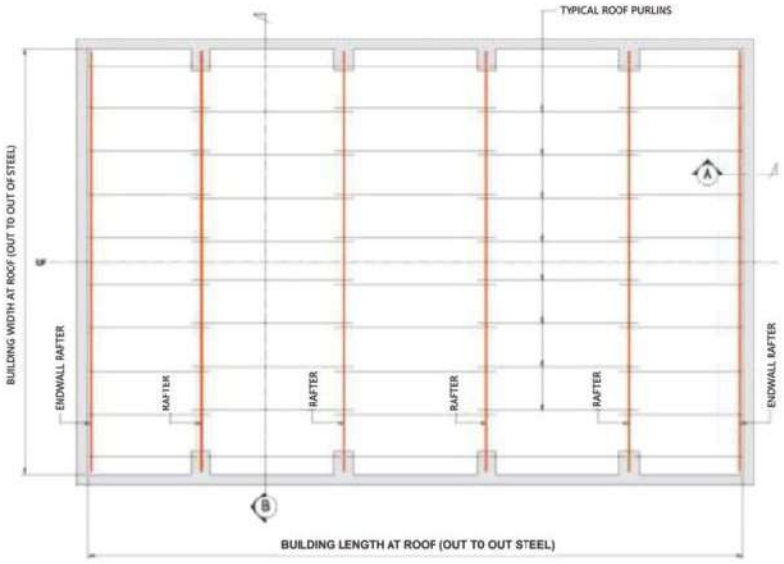
A Roof System is generally not economical when compared to a complete pre-engineered building especially for intermediate and large spans. This is due to the fact that the rigid frame action of a metal building distributes stresses optimally throughout the frame resulting in a lighter and more economical structure as compare to the case where the structure is simply supported on the concrete columns. In a Roof System, stresses are concentrated at the mid span of the roof rafter requiring heavier rafters.

Because of the application specific requirements for this type of construction, it is difficult to create true "standards" for Roof Systems. The details on the following pages illustrate only the most common conditions.

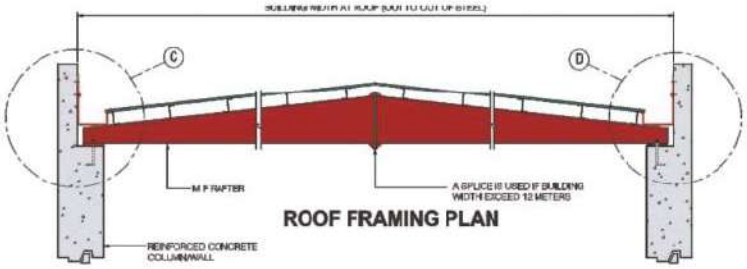
It is to be noted that wherever "building width" or "building length" is used, it refers to the structural system supplied by Premium Engineering Systems and not to the substructure. This is for the fact that the outline of the concrete columns may or may not be in the same line as that of the steel.

Primary Framing System

Typical Roof System

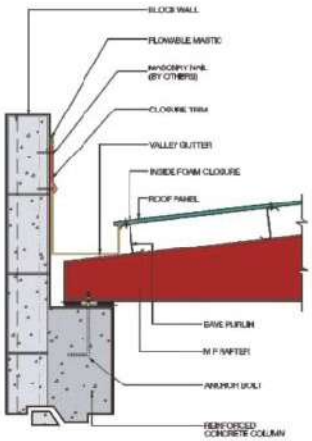


ROOF FRAMING PLAN

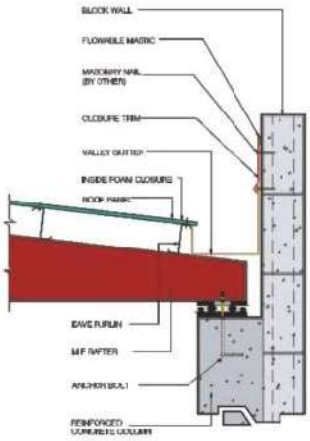


ROOF FRAMING PLAN

SECTION-B: ROOF SYSTEM FRAME CROSS SECTION



SECTION-C: TYPICAL PINNED ARRANGEMENT



SECTION-D: TYPICAL ROLLER ARRANGEMENT

Primary Framing System

Flat Roof System

Flat Roof System provides the convenience of roof accessibility and is usually specified when access to roof is required or support of heavy unit loads, such as HVAC equipment, is a requirement.

Flat Roofs, particularly popular in low rise buildings, comprise of horizontal main frame rafters (beams) supporting joists (built-up or open web) and a structural steel deck. The steel deck commonly supports a finished floor types of roof.

Reinforced Concrete Slab

This is the traditional method of finishing flat roofs; it is similar to a mezzanine finished floor. The roof slab thickness (measured from the bottom of the steel deck to the top of finished concrete) is normally 100 mm thick. Water leakage is prevented by installing a waterproof membrane directly over the concrete slab and placing light weight fill material (sloped for drainage towards the centerline of the roof at 1/100) directly on top of the membrane. This is then with plain concrete tiles whose joints are filled with sealant. This form of construction has a dead weight that ranges from 3.0 to 4.5 kN/m 2 and a live load carrying capacity of approximately 5.0 kN/m 2.

Light-Weight Foam Concrete Slab

This finish approach uses slabs of light-weight foam concrete, cast on the steel deck, typically 100 mm thick at the perimeter of the roof and sloping (at 1/100) towards the centerline of the roof. A waterproofing membrane is installed directly over the foam concrete. Plain concrete tiles are then laid over the waterproofing membrane to provide the final finish surface. No sealant is required between the tiles.

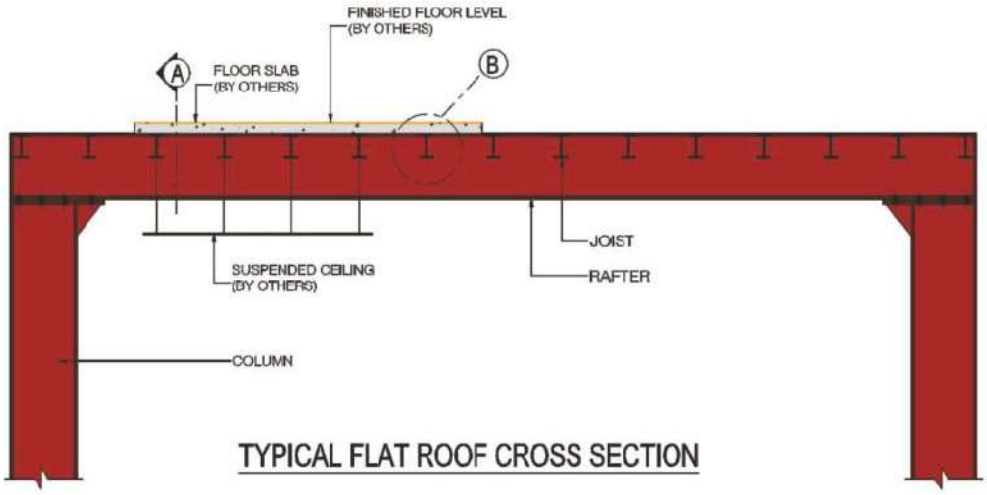
This form of construction has a dead weight that ranges from 1.5 to 2.5 kN/m 2. And a live load carrying capacity between 1.0 and kN/m 2.

Care should be taken to determine whether heavy equipment is to be placed on the roof. Heavy equipment should be supported on elevated roof platforms and not directly on the foam concrete slab. Drainage for such building should be planned.

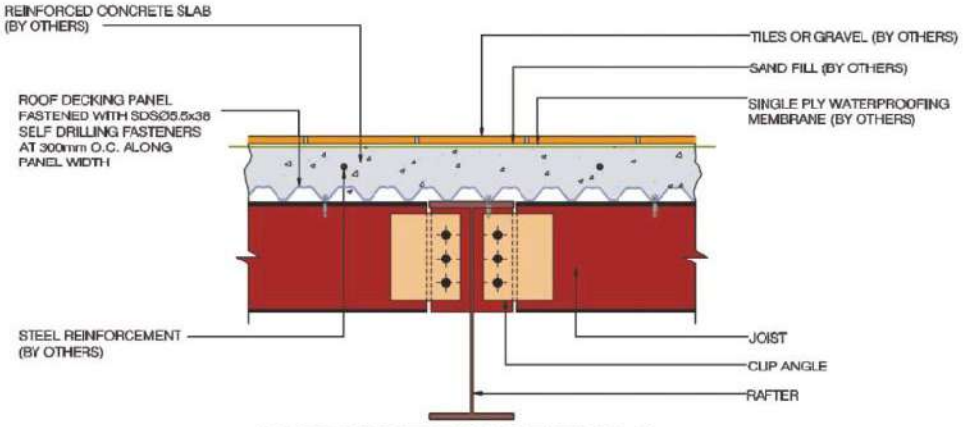
The details on the following pages apply to flat roofs that utilize a reinforced concrete slab.

Primary Framing System

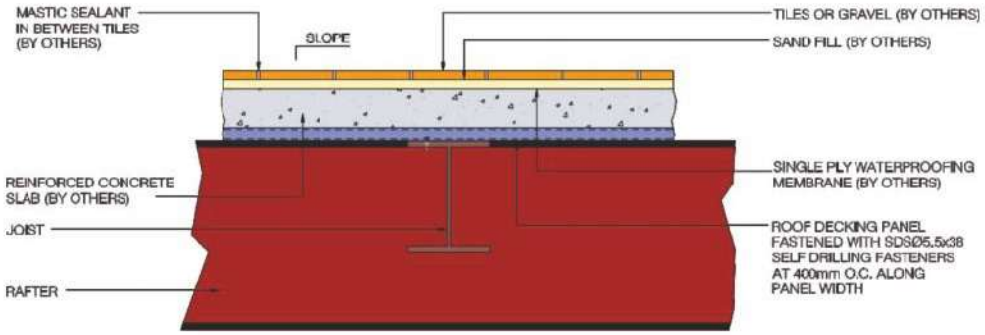
Flat Roof System



TYPICAL FLAT ROOF CROSS SECTION



JOIST CONNECTION (SECTION-A)



DETAIL- B

Primary Framing System

Low Rise Buildings

Low-Rise Buildings are ideal for offices and other commercial uses. Low-rise buildings, utilizing the metal building approach, are not only more economical than traditional methods of construction but are often constructed in half the “normal” time especially when complemented with the following subsystems (not all included within Premium Engineering Scope of Supply):

- Interior gypsum board liner
- Interior gypsum board partitions
- Central air conditioning ducting
- Suspended ceiling

In Addition to speed of construction and the economy of supply, metal buildings can be neat and elegant in appearance when accessories such as parapet walls and accented with contrasting trim colors.

The most common (and most economical) example of a low rise steel building is a building with a **ground floor + two intermediate floors + roof.**

The roof of a low-rise building may be flat or sloped.

Intermediate floors of low-rise buildings are made of mezzanine system.

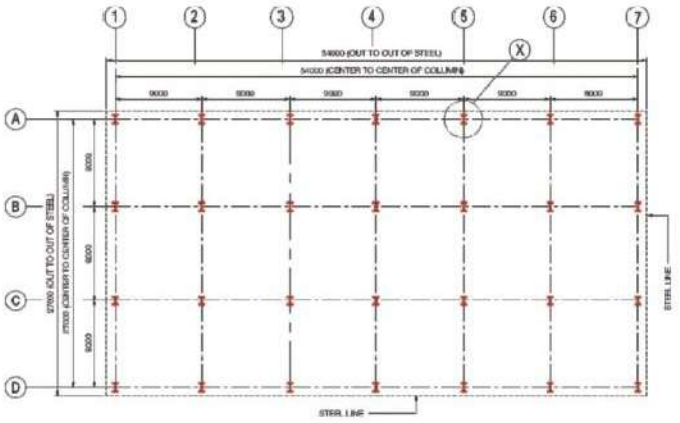
Premium Engineering low-rise buildings may be supplied without exterior cladding to enable architects to interface their own special exterior designs utilizing block walls, marble, curtain walls, or pre-cast panels.

Exterior and interior columns spacing of premium Engineering building rise buildings range from 6 m to 9 m, with 9 m being the most economical and practical. Built-up columns and rafters for low rise buildings are typically of constant depth to simplify interior clearance calculations.

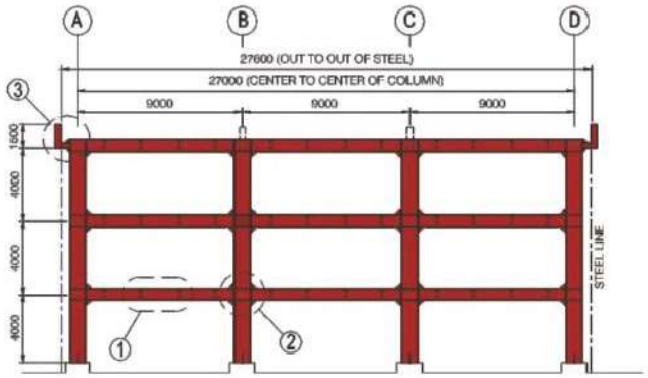
Premium Engineering building works closely with Consultants and Architects to preserve their general architectural requirements while incorporating their functional features within the overall Premium Engineering buildings design.

Primary Framing System

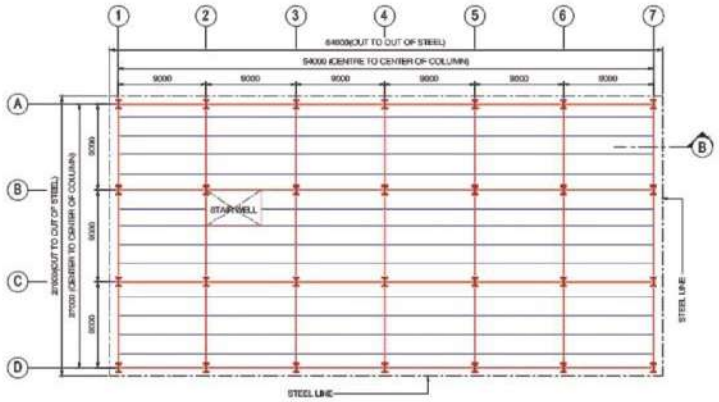
Low Rise Buildings



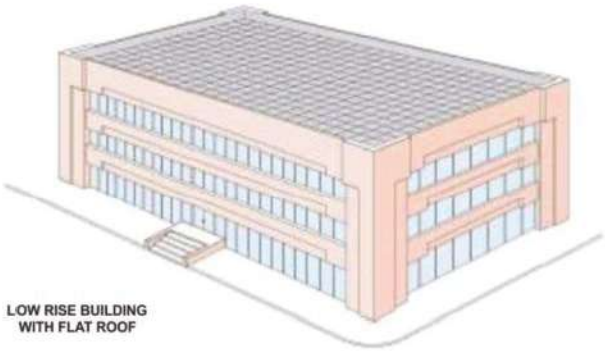
GROUND FLOOR COLUMN LAYOUT



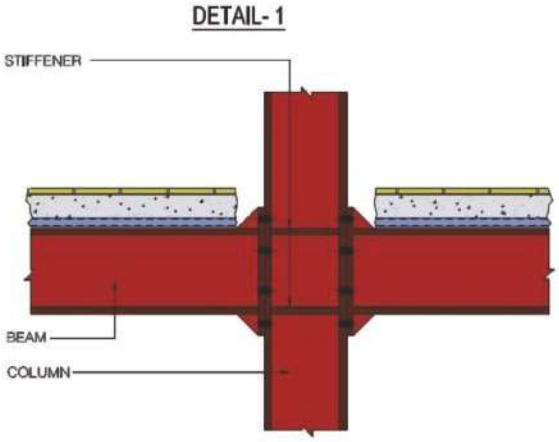
LOW RISE BUILDING FRAMES



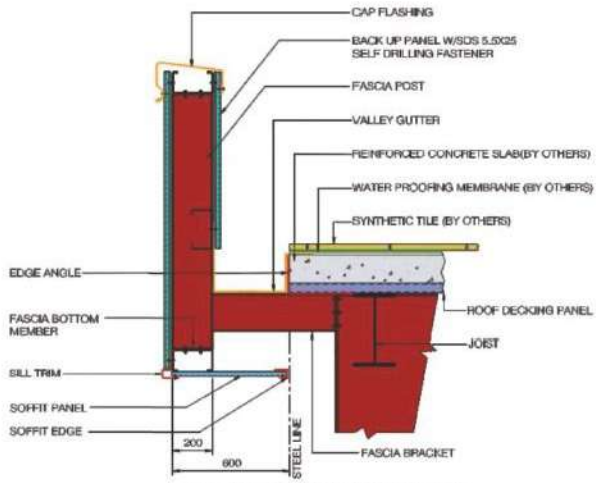
FIRST & SECOND FLOOR FRAMING



LOW RISE MULTI-STOREY BUILDING

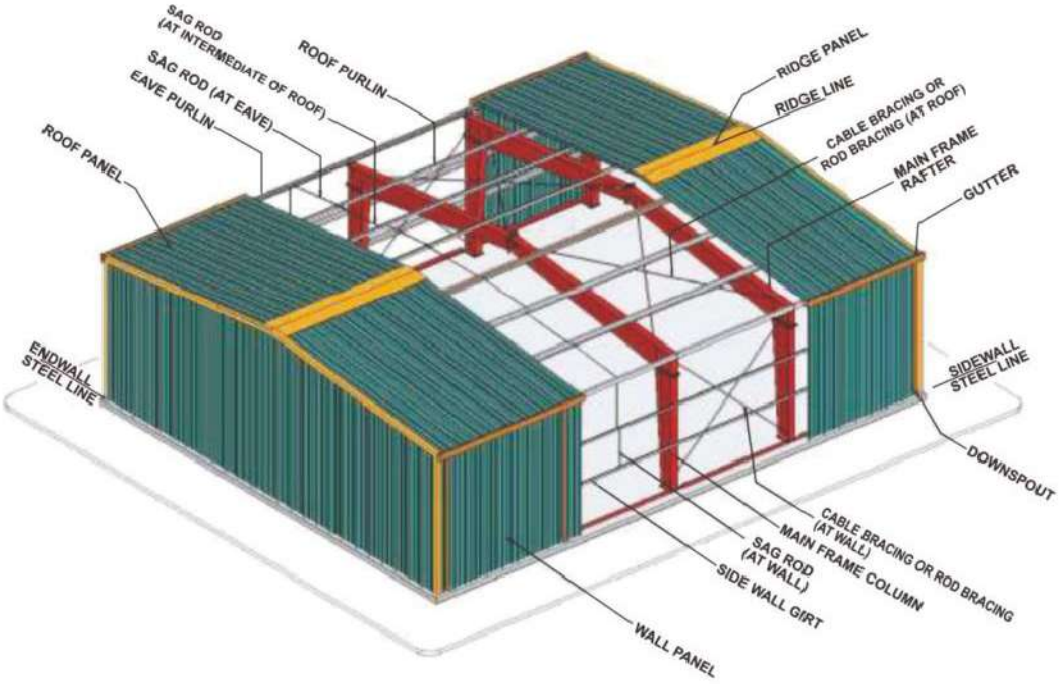


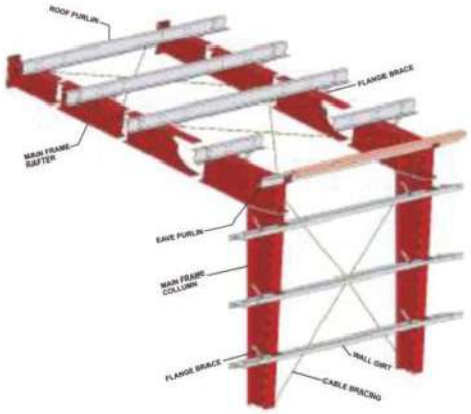
DETAIL-2



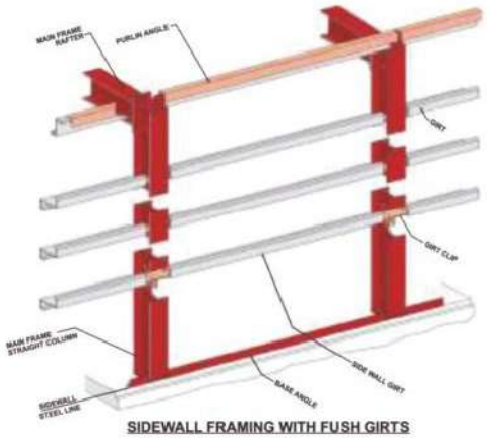
DETAIL-3: CONSTRUCTION AT FASCIA

Secondary Framing System

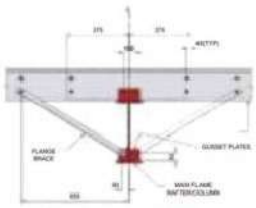




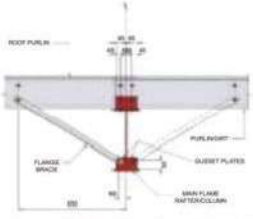
ROOF AND SIDEWALL FRAMING DETAILS WITH STANDARD PURLIN, GIRT & EAVE PURLIN CONNECTION



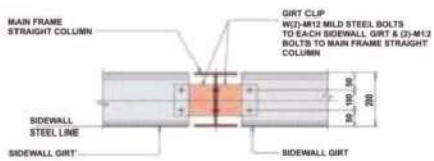
SIDEWALL FRAMING WITH FUSH GIRTS



PURLIN / GIRT WITH CONTINUOUS LAP

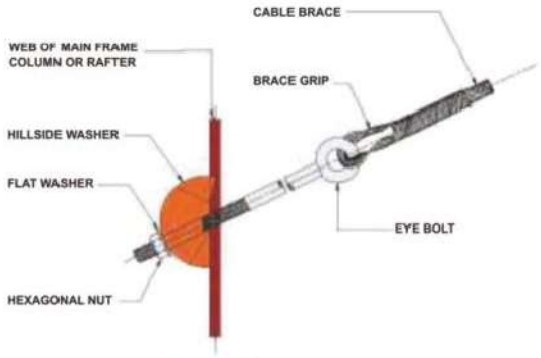


PURLIN / GIRT WITH SHORT LAP

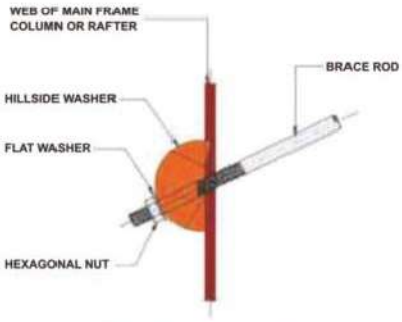


FLUSH SIDEWALL GIRTS AT MAIN FRAME STRAIGHT COLUMN

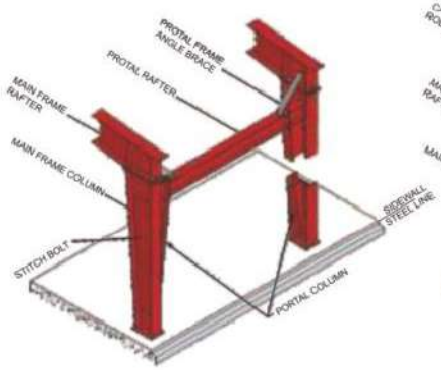
All Type of Bracings Details



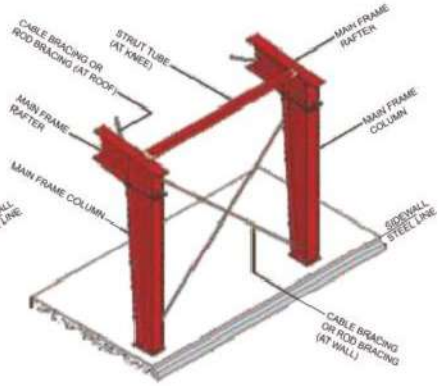
CABLE BRACING DETAIL



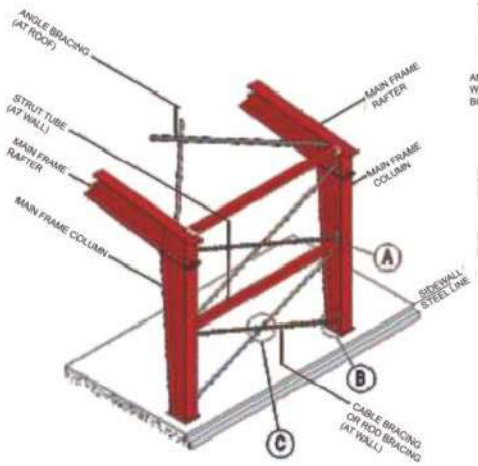
ROD BRACING DETAIL

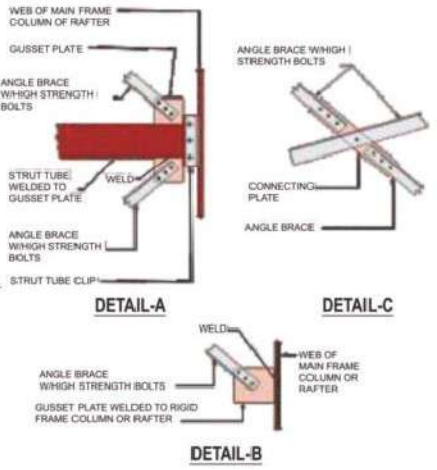


PORTAL FRAME



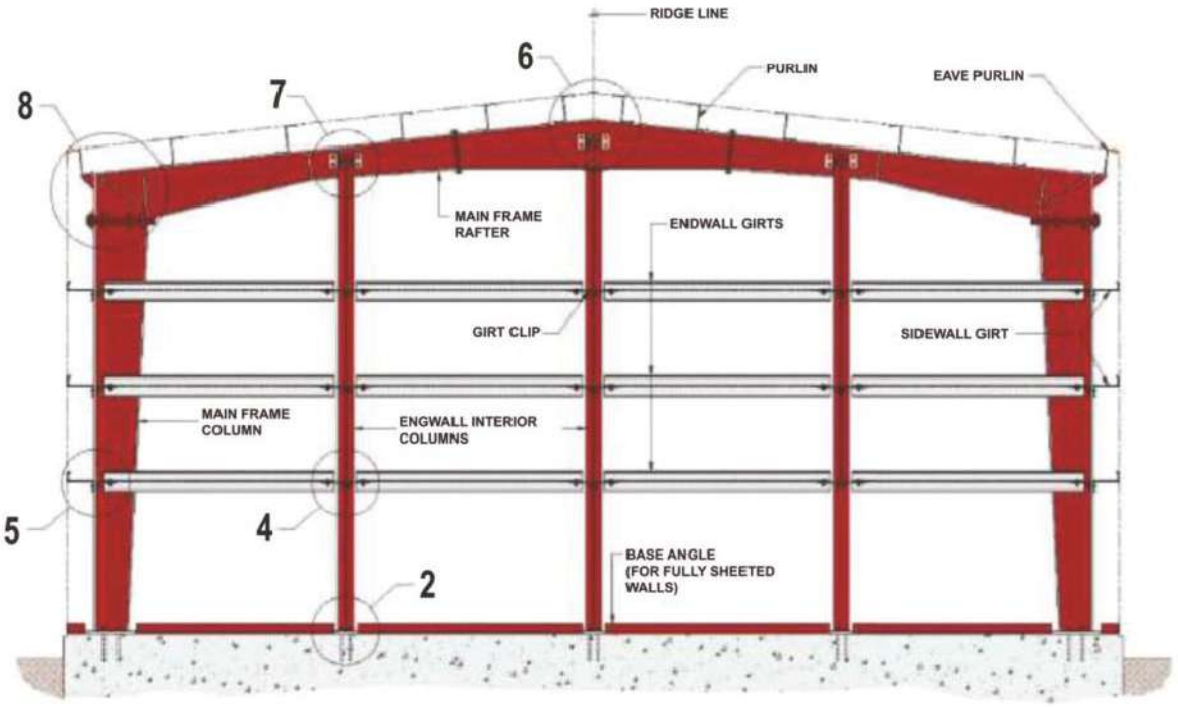
CABLE OR ROD BRACING WITH STRUT TUBE



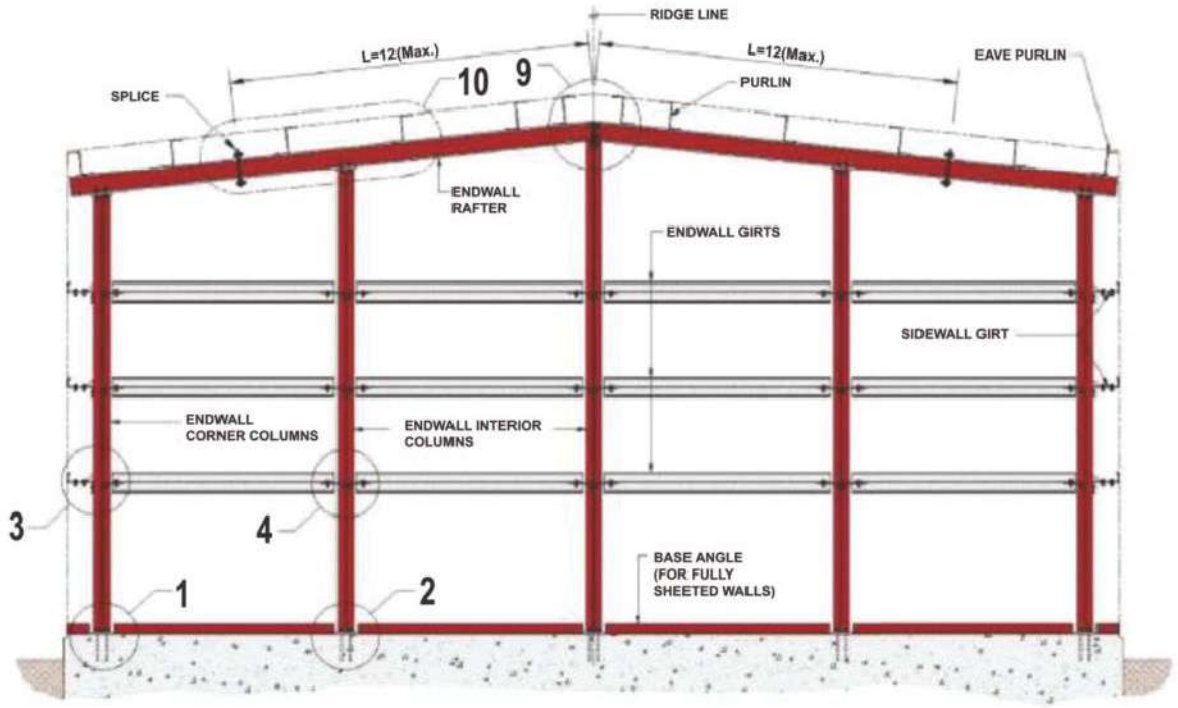


ANGLE BRACE WITH STRUT TUBE

Endwalls Framing Details



MAIN FRAME AT ENDWALL



BEARING FRAME AT ENDWALL

Expansion Joint Details

The maximum building length allowed before an expansion joint is needed to resist **longitudinal expansion** can be calculated from the following formula:

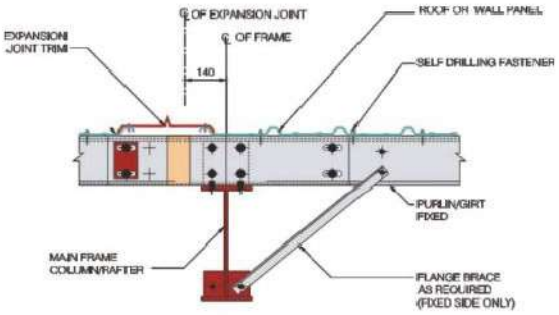
$$L = \frac{24 \times N}{[(0.0921 \times K \times T) - 1]}$$

L = Maximum building length, meters.
N = Number of Bays
T = Temperature variation, °C (Temperature Variation is the change in temperature between summer and winter.)
K = 1.00
= 0.70
(For buildings with air-conditioning)
= 0.55
(For buildings with heating and air-conditioning)

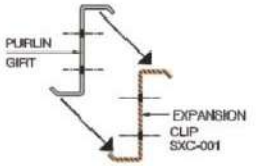
The above formula is based on a maximum allowable stress of 2.5 kN/cm² on the purlins due to thermal expansion.

However, it is recommended to provide an expansion joint whenever the building length exceeds 120 m even if the above formula results with a longer allowable length.

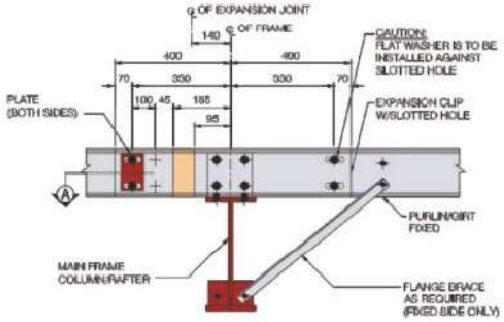
Lateral expansion for buildings due to thermal loads is normally considered in the design of a frame only when the frame width exceeds 100m.



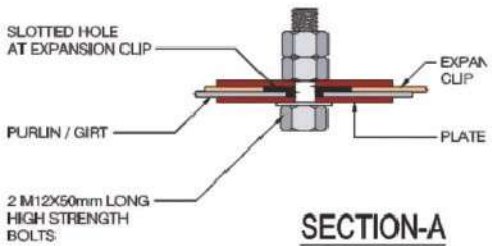
PANEL CONNECTION AT EXPANSION JOINT



IMPORTANT:
PURLIN SHOULD REST OVER EXPANSION CLIP AS SHOWN



PURLIN / GIRT CONNECTION AT EXPANSION JOINT

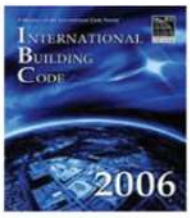


SECTION-A

Inhouse Design Facility

Premium Engineering Pvt. Ltd has an experience team of design engineers, draftsmen and detailers to provide continuous services to our esteamed customers.

Design Codes We Follow



IBC 2006:
IBC "International Building Code", 2006 Edition

UBC 97:
UBC "Uniform Building Code", Volume 2.

MBMA 2006:
Metal Buildings Manufacturers Association
"Metal Building Systems Manual, 2006 Edition

ASCE 7-05:
ASCE "American Society of Civil Engineers",
Minimum Design Loads for Buildings and
Other Structures

AISC 360-05:
AISC "American Institute of Steel Construction" Manual of Steel Construction - Allowable Stress Design, 2005-13th Edition.

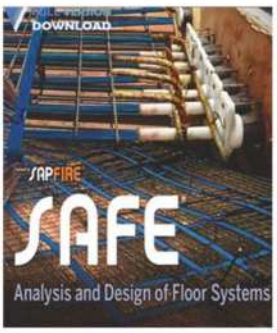
AISI 2001:
NAS North American Specification
for the Design of Cold-Formed
Steel Structural Members 2001 Edition.

AWS D1.1:
AWS D1.1/D1.1M:2004 "American Welding Society" Structural Welding Code - Steel Manual, 2004 Edition.

Softwares We Use to Design & Model

AUTODESK AUTOCAD

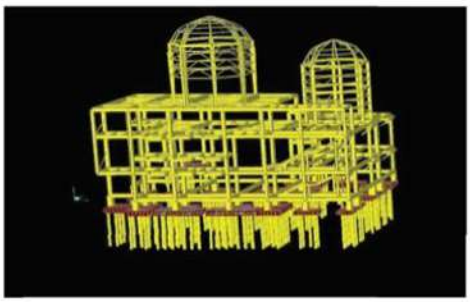
SAP 2000

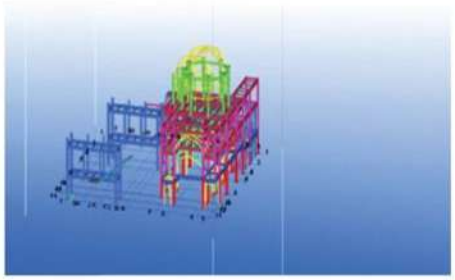


Tekla Structures

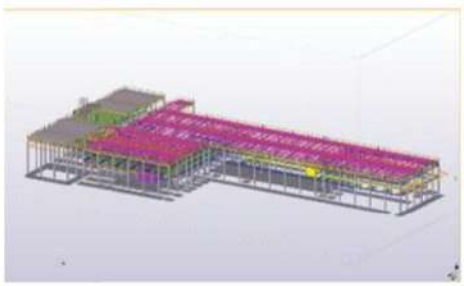
Tekla Detailing Structural Models

Bibi Pak Daman

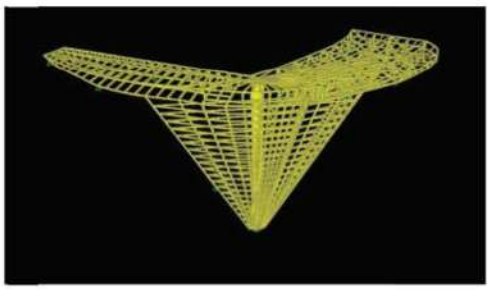


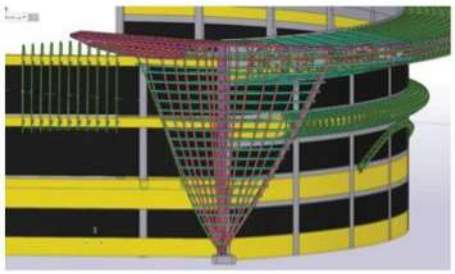


Nishat Dairy

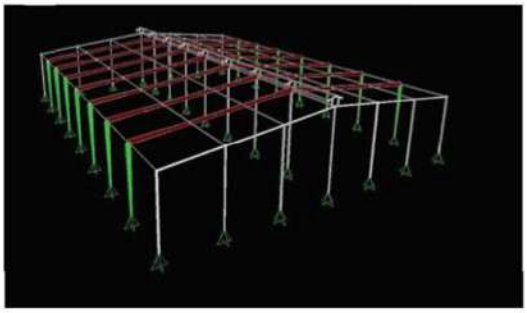


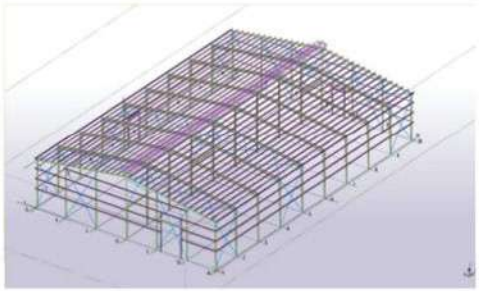
Rumanza DHA Multan



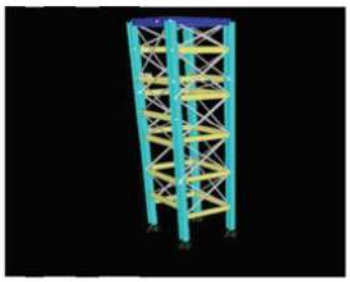


Sardar Packages

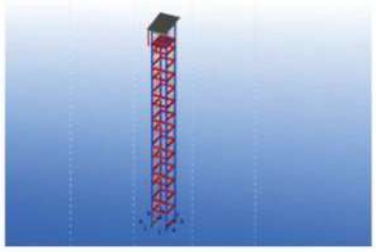




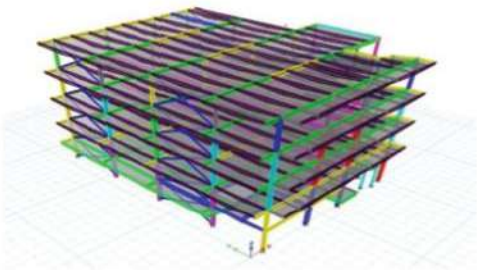
Tekla Detailing Structural Models

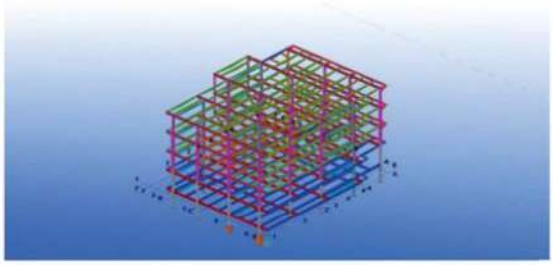


UOL Lift Structure

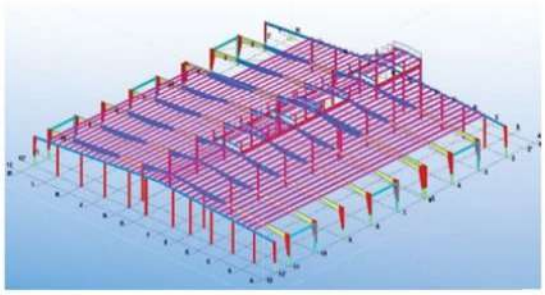


Multi Story Amphitheatre

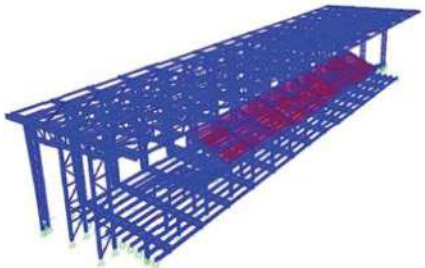


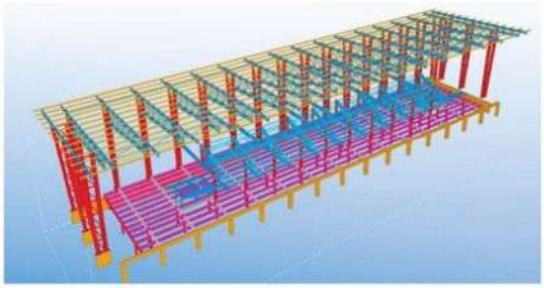


UOL E2



Pavilion





Fabrication Facilities

Strategic Location Map

Fabrication Facilities

Plant Layout Plan

Fabrication Facilities

Sharing Machine

Fabrication Facilities

Shearing Machine

Fabrication Facilities

Submerged Arc Welding Machine

Fabrication Facilities

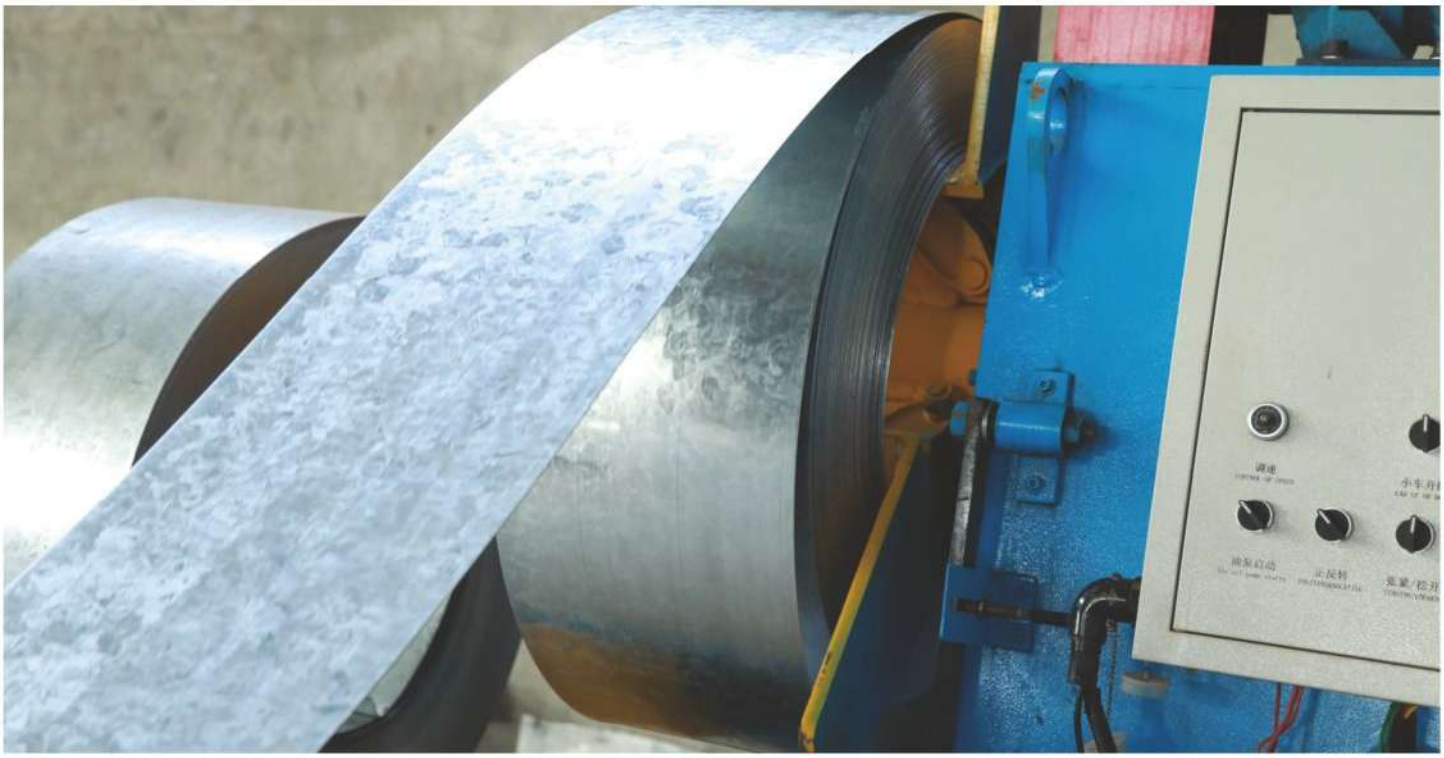
General Welding

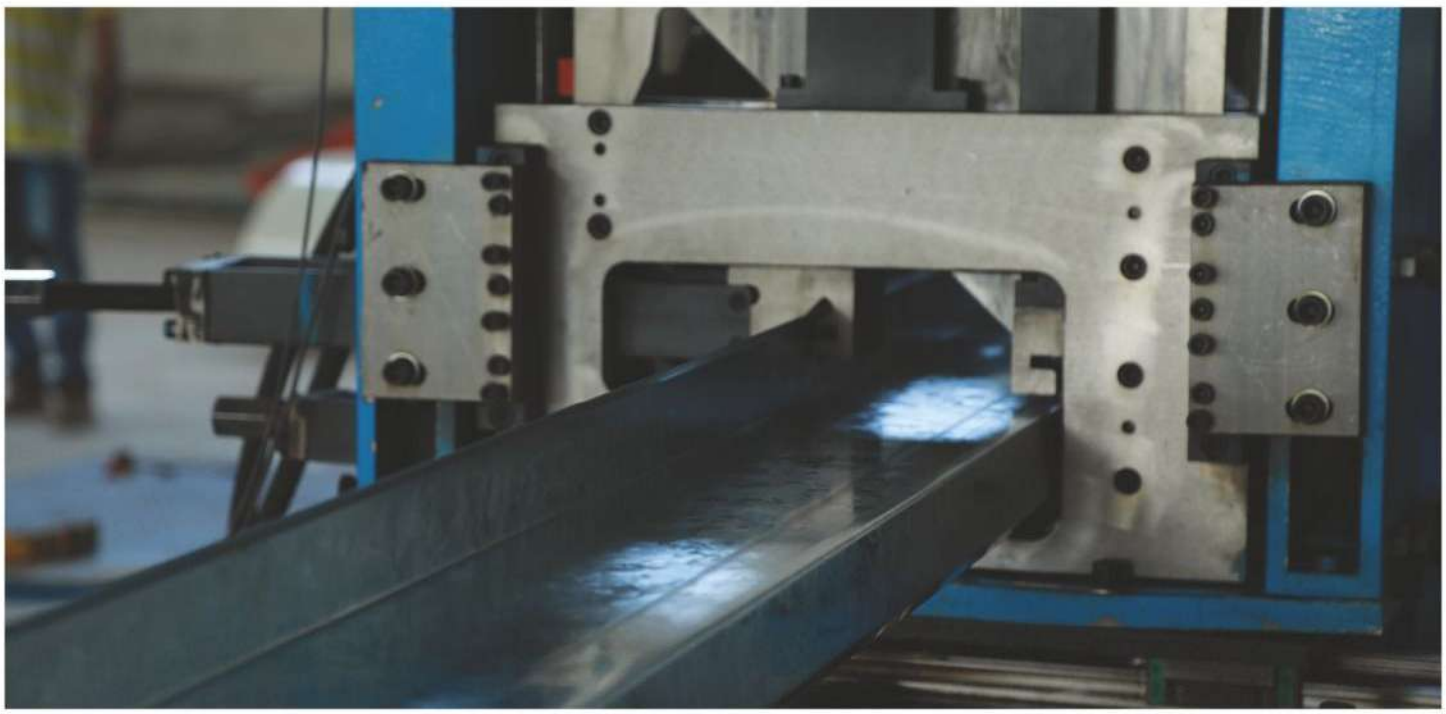
Fabrication Facilities

Beam Flange Straightening Machine

Fabrication Facilities

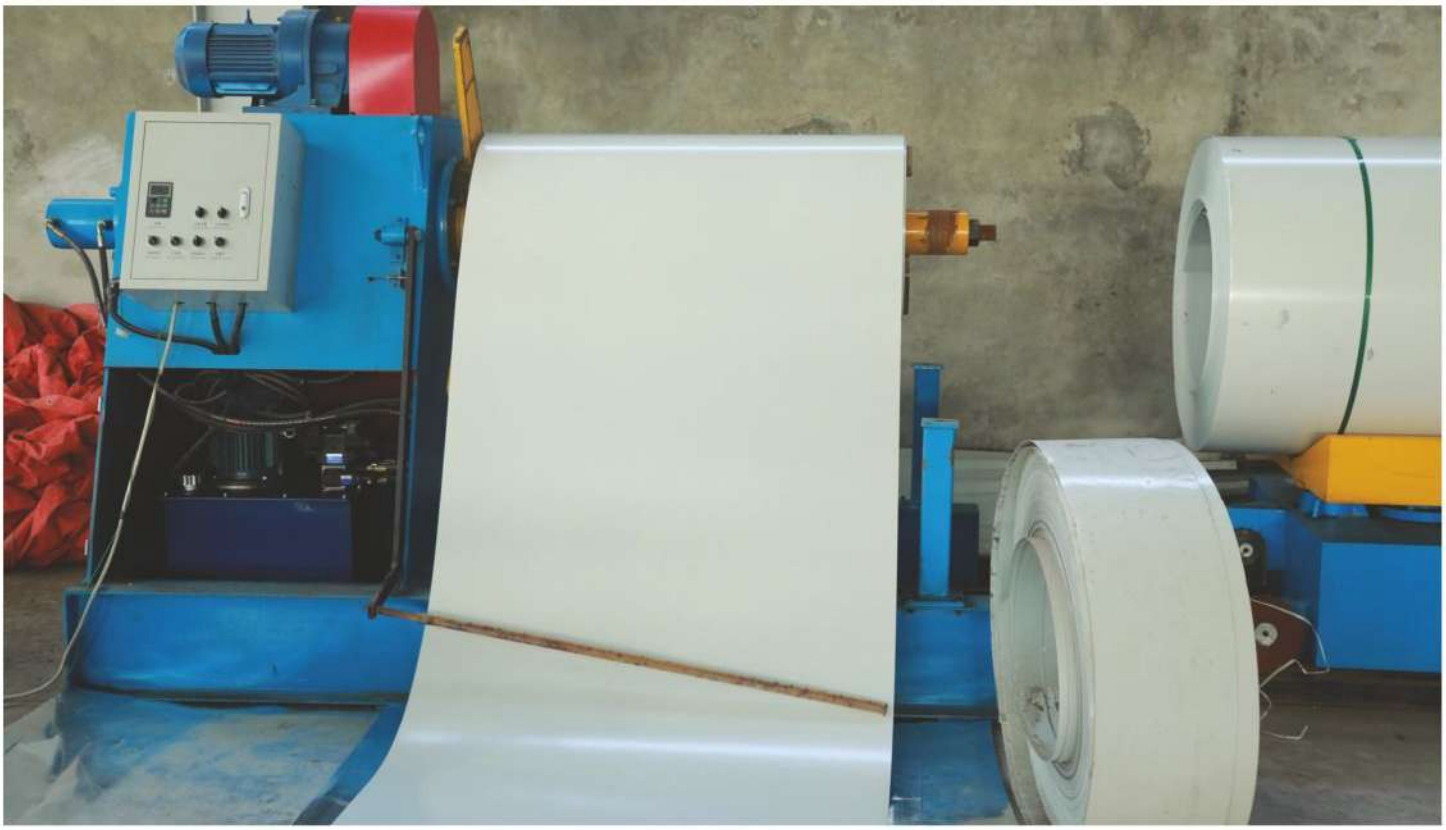
Purlin Profiling Machine





Fabrication Facilities

Sheet Profiling Machine



Fabrication Facilities

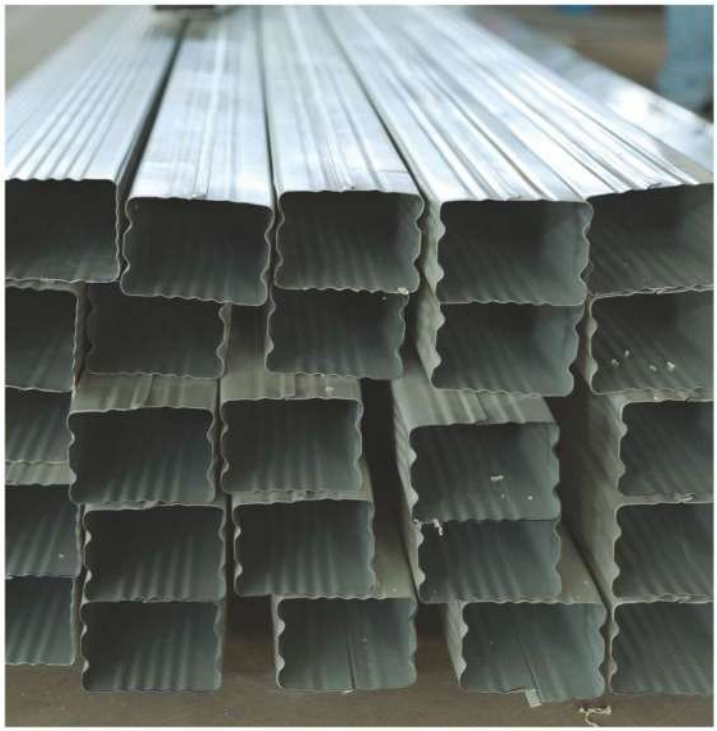
Crimp Curve Machine

Fabrication Facilities

Trims Bending Machine

Fabrication Facilities

Down Spout Profiling Machine



Lock-Seam Roofing System

Following are some of the major destinations we have right now from the rest of the industry of Pre-Engineered Buildings in Pakistan.

Lock-Seam Roofing System

Building Accessories

Insulation

Louver

Manual Roll up Door

Motorized Roll Up Door

Personal Door

Power Ventilator

Ridge Ventilator

Roof Curb

Sliding Door

Wind Ventilation

Windows

Sundry Items:

Anchor Bolts

Bead Mastic

Connection Bolts

Foam Closures

Hill Side Washer

Sealant

Self Drilling Screws

Light Gauge Steel Frame

Partition Wall | Dry Wall Systems | Interior & Exterior Systems

CHANGING THE SKYLINE OF PAKISTAN

42

Light Gauge Steel Frame Solutions

Premium Engineering Private Limited is one of the leading manufacturers in this state of the art building system. PE's Design team can customize virtually unlimited types of small to medium sized buildings with this technology. These easy to transport buildings can be readily assembled at the site with simple tools and can be finished in range of options from economical to high end buildings.

Features

Design and Manufacturing

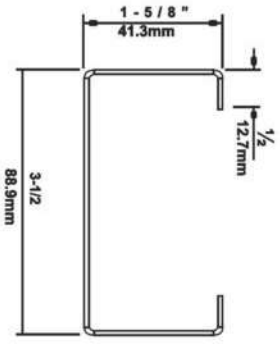
- Proprietary design software – customized designs. Structural analysis software–ensures that the building meets wind, snow and seismic resistance specification.
- For Example, buildings can be designed to with stand 160 km/h winds, high snow loads and high seismic activity.
- Computer controlled manufacturing process.
- Competitively priced, higher quality buildings.

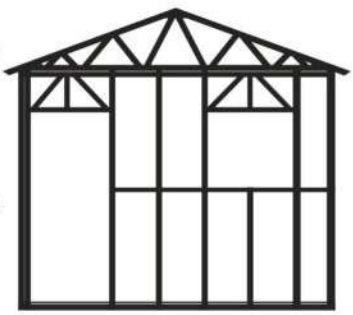
Functionality and Performance

- Light weight structure – ease of transportation and installation, even in rugged and remote areas.
- Premium, imported structural steel sheet coated with 55% aluminum/zinc alloy are used for roofs and cladding.
- Dry construction – no water or concrete required for building structure – (concrete slab or foundation is required).
- Short building time – early project completion.
- Environmentally friendly, energy efficient and recyclable.
- Safe and comfortable buildings properly insulate for all climates and region.
- Light weight partitioning for high rise buildings.
- Roofing over traditional structures.

Light Gauge Steel Frame System

Material: Hot dip galvanized steel conforming to ASTM A653
Strength: 350-550Mpa
Shape: Lipped C Channel 89x41x12mm
Wind Speed: Up to 200kph
Internal and External Pressure Coefficient: ASCE 7-05 wind loads for housing
Load Combination for Design: ASCE 7-05 domestic metal framing
Snow Load Combination: ASCE 7-05 structure design action-general principals
Structure Design of Steel Members: AISI S100-07: cold foamed steel structure
Steel Used: ASTM A653 steel sheet and strip coated product
Earthquake Design Based on: ASCE 7-05/UBC 97 earthquake loads





Light Gauge Steel Frame System

Dimple

The dimple holes are punched in the center of the flange. They allow location of the studs and are recessed so that the head of the screw does not protrude.

Swage

The swage crimps the section allowing it to fit inside a plate or nog, while keeping the overall external sizes the same for both plates and studs. It also for better end bearing between the studs and plates.

Cutoff

The cutoff ensures that the ends of the studs remain square.

Service Hole

The service hole is available in one of several sizes. Which can be selected when placing an order. A service hole can be punched into the studs and plates wherever cabling or plumbing is required.

Web Notch

The web is notched out to allow one stud passes through another. It can be used by itself or in conjunction with the lip notch.

Lip Notch

These lips are notched out to allow the stud to pass through it can be used by itself or in conjunction with the web notch.

Printer

These print the stud identification onto the stud, including part numbers and operator information.

Steel Stud Interior / Exterior Framed Systems \ LGS Partition Alls

Premium offers a wide range of non-load and load bearing lightweight partition systems. These partition systems can be implemented in the design of many types of buildings including residential housing, flats and apartments, commercial and industrial properties.

These lightweight partition systems are designed to offer high performance to meet the most demanding fire resistance, sound insulation and height requirements.

Offering quick and simple speed of installation constructed from high quality components, our partitions are guaranteed to perform.

Premium Partitions provide satisfaction and reassurance in knowing that these components have been comprehensive tested together to ensure their performance, and that our support extends from concept to site.

They are light weight, quick to install, and the components are easy to deliver on site. These systems are composed of gypsum boards and metal framing, joint compounds and other materials such as joint tapes, sealants, screws and insulation.

The products alone do not provide performance; the performance is given by the complete assembled system.

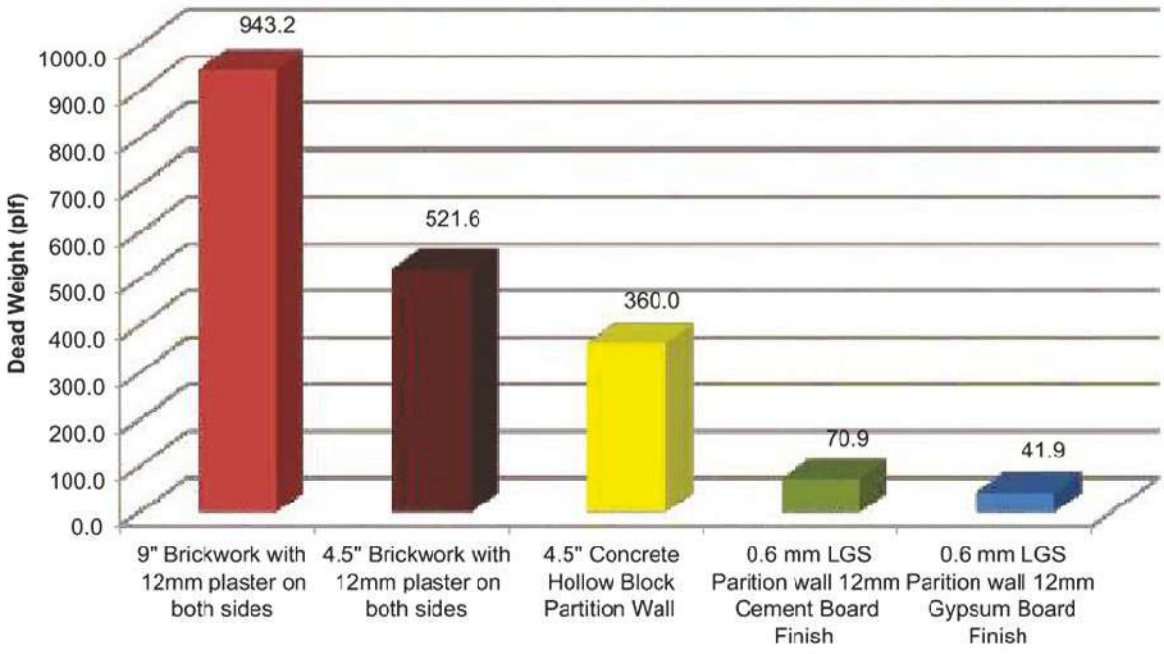
System performance is achieved on following the correct installation details such as stud spacing and fixing centers, as well as using the nominated components such as gypsum boards, compounds, studs and insulation.

Suitable For

- Non-load bearing partition walls, load bearing walls by design
- Steel stud ceiling systems and bulkheads
- Fire-rated systems and curved wall applications
- Seismic and acoustic wall systems by design
- External walls systems
- Vented and non-vented external walls and insulation in walls cavity
- Load bearing walls by design, window and door jambs
- Fire-rated systems
- Dual exterior cladding and interior linings support and access for services within outer walls
- Acoustic control provisions
- Acoustic walls systems
- Fire-rated systems
- Inter-tenancy walls

Weight Comparison Table

Weight companion between steel stud framing interior exterior system without locally used products.



Weight Comparison table for 10ft high wall

Interior Walls Steel Stud & Tack Wall Framing System

Premium Engineering Stud Drywall Framing System provides a durable, practical & lightweight structure for internal plasterboard walls, curved tracks and special cleats ensure Premium Stud and Track wall systems are available to suit almost all situations.

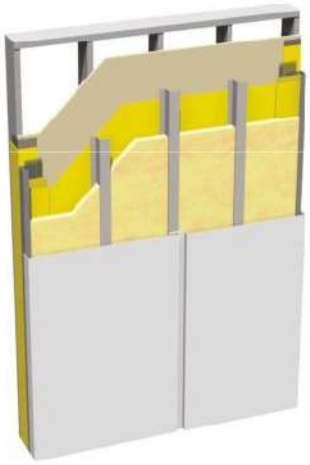
The vertical rib in the stud face allows the wall lining to be placed centrally, ensuring easier and faster fixing, while the deeper knurling provides better screw location and retention.

What's more, our studs lock perfectly into each other, creating the best boxed stud profile in the Rondo Steel Stud Drywall Framing Systems comply with all relevant ASTM/EN-BS Building Codes for fire-rated, acoustic, seismic and load bearing requirements.

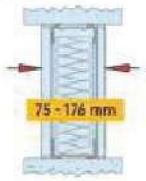
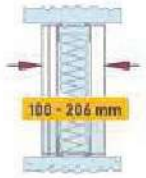
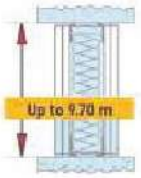
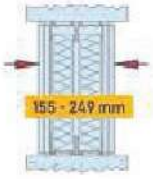
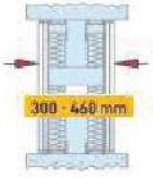
Premium 0.50mm bmt to 1.2mm bmt Wall Studs have service holes.

Inner Partition Systems

Single Stud



Double Stud

Systems	Performance	Fire Resistance	Sound Reduction (RW)	Partition Width	Height
	• Economical Solution • Fast Space Division				
	• Optimum Solution • Meets Most Design Criteria • Small Footprint • High Fire Resistance				
	• High Acoustic Performances • High Fire Resistance • Optimum for Separation Walls				
	• Very Good Acoustic Performance • Accomodates Large Service Runs • Adjustable Footprint				

STANDARD LGS WALL SYSTEM

Steel Stud External Wall Framing System

The Premium Engineering External Wall Framing System is a lightweight steel framing system for external wall construction. The system has been expertly engineered to offer builders a more efficient, versatile and cost-effective design option than traditional external wall framing construction methods.

It incorporates standard Steel Studs as the main framing and includes a Jamb Stud as well as complementary cleats to provide a simple, yet solid structure.

System provides a simple, solid structure that not only outperforms typical boxed stud configuration, but also reduces the required number of noggin tracks, saving the construction companies both time and money.

Features & Benefits

- Can support and carry a greater load than regular wall studs removing need for boxed or back to back stud configurations.
- More efficient, versatile and cost effective design option than traditional external wall framing construction methods.
- Ability to support a variety of external facades as well as internal linings.
- Made from a high tensile steel 1. And manufactured with a minimum coating of Z180-Z275.
- Custom lengths available

Case Study

Hepatitis Prevention & Treatment Program was launched by Government of Punjab.

The project was launched by Specialized Healthcare & Medical Education department along with **PKLI (Pakistan Kidney and Liver Institute).**

The requirement was to setup filter clinic in all THQ, and DHQ, The clinics were needed by end of 2017 (PKLI was to be inaugurated on 25th December).

The requirement was to deliver 12 Units of over 3200 SFT on EPC basis in 100 days.
The building were spread out over whole Punjab.

Premium Engineering Private Limited won the project in competitive Bidding from IDAP. PE delivered the project in 100 days by using Hybrid system of steel construction with hot rolled and cold formed structural members.

The project was pioneer in public sector now over 100 more clinics are planned.

Hepatitis Prevention and Treatment

Partition Wall Systems

Light gauge steel construction is very similar to wood framed construction in principle – the wooden framing members are replaced with thin steel section.

The steel sections used here are called cold formed sections, meaning that the sections are formed, or given shape at room temperature.

For reason of energy efficiency, fast track, cost effective and superior behavior during earth-quake. Light gauge steel is an alternative to con-ventional building materials used in residential, light commercial and mid-rise construction.

Light gauge steel framing is a term commonly used to refer to steel members with thicknesses ranging from 0.50 to 1.5mm that are formed by roll forming machines.

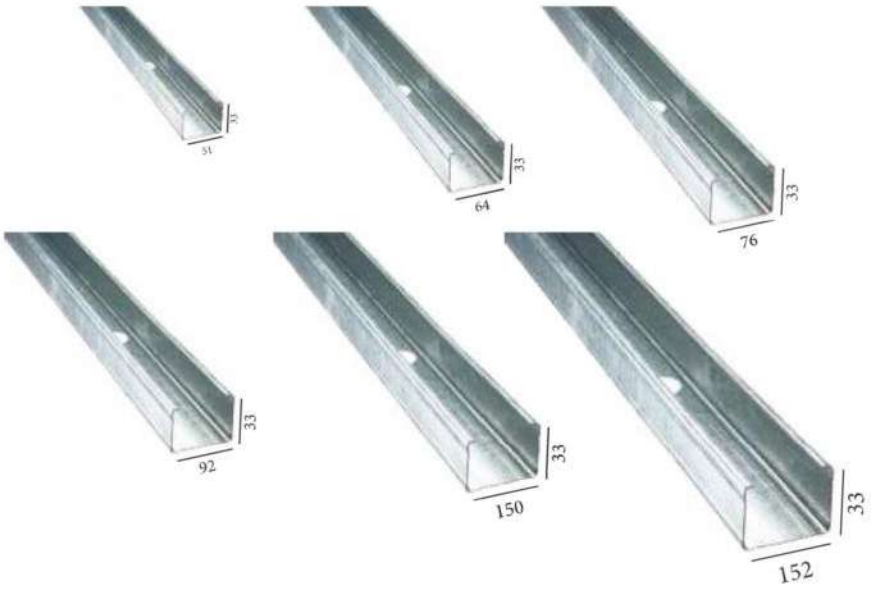
Table 1

Sr. No.	Profile	Size	Dimensions				Length (m)	Thickness (mm)
			A	B	C	D		
1	C-STUD	51	51	33	33	6.5	3.0 - 12.0	0.5 - 1.15
2	C-STUD	64	64	33	33	6.5	3.0 - 12.0	0.5 - 1.15
3	C-STUD	76	76	33	33	6.5	3.0 - 12.0	0.5 - 1.15
4	C-STUD	92	92	33	33	6.5	3.0 - 12.0	0.5 - 1.15
5	C-STUD	150	150	33	33	6.5	3.0 - 12.0	0.5 - 1.15
6	C-STUD	152	152	33	33	6.5	3.0 - 12.0	0.5 - 1.15

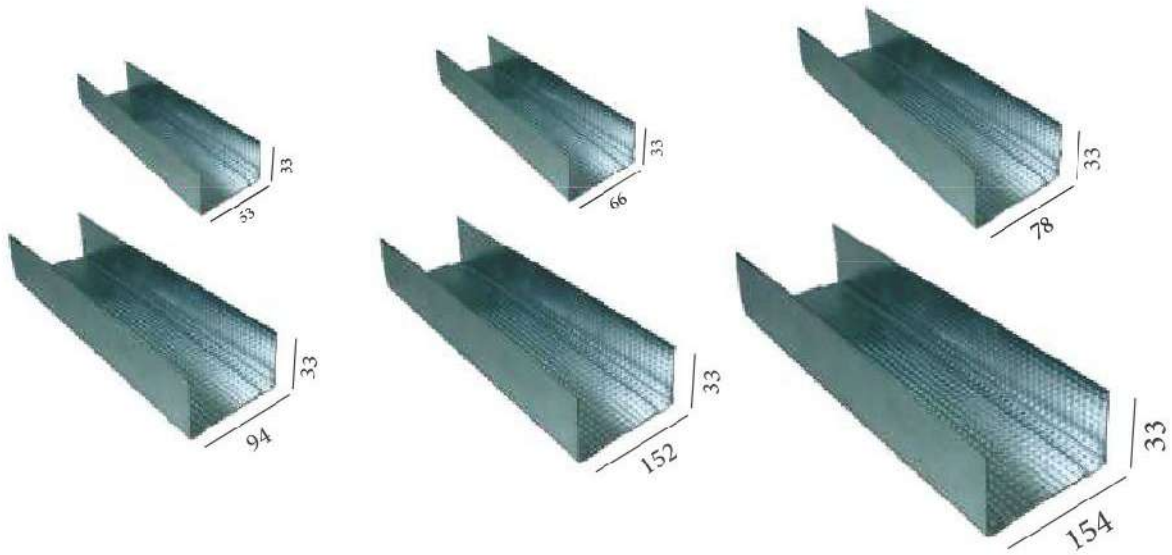
Table 2

Sr. No.	Profile	Size	Dimensions				Length (m)	Thickness (mm)
			A	B	C	D		
1	U-TRACK	53	53	33	33	6.5	3.0 - 12.0	0.5 - 1.15
2	U-TRACK	66	66	33	33	6.5	3.0 - 12.0	0.5 - 1.15
3	U-TRACK	73	73	33	33	6.5	3.0 - 12.0	0.5 - 1.15
4	U-TRACK	92	92	33	33	6.5	3.0 - 12.0	0.5 - 1.15
5	U-TRACK	152	152	33	33	6.5	3.0 - 12.0	0.5 - 1.15
6	U-TRACK	154	154	33	33	6.5	3.0 - 12.0	0.5 - 1.15

State of the Art



U Track Profiles



Available In Following Options

- Embossing for Better Grip and Acoustic Performance
- Web Ribbing for Better Strength
- H type and Round Service Holes

Partition Walls | Dry Walls | Interior Systems

HPTC

MAJOR PROJECT'S PICTURES

University Of Lahore

Amphitheatre

University Of Lahore

Sports Complex

University Of Lahore

Mosque Extension

University Of Lahore

Pavilion

University Of Lahore

Cargo Lift

University Of Lahore

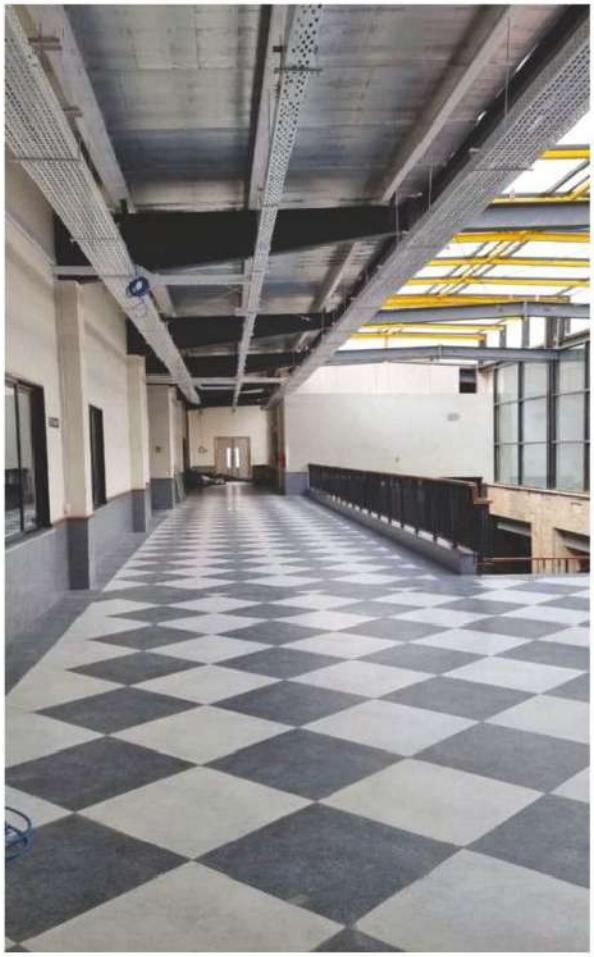
Lecture Hall

LGS Interior & Exterior Systems

University Of Lahore

University Of Lahore

E2 – Skylight



University Of Lahore

Computer Science (CS-1)

University Of Lahore

Computer Science Block (CS-2)

University Of Lahore

Lecture Hall

University Of Lahore

Operation Theater

Namal Educational Institute

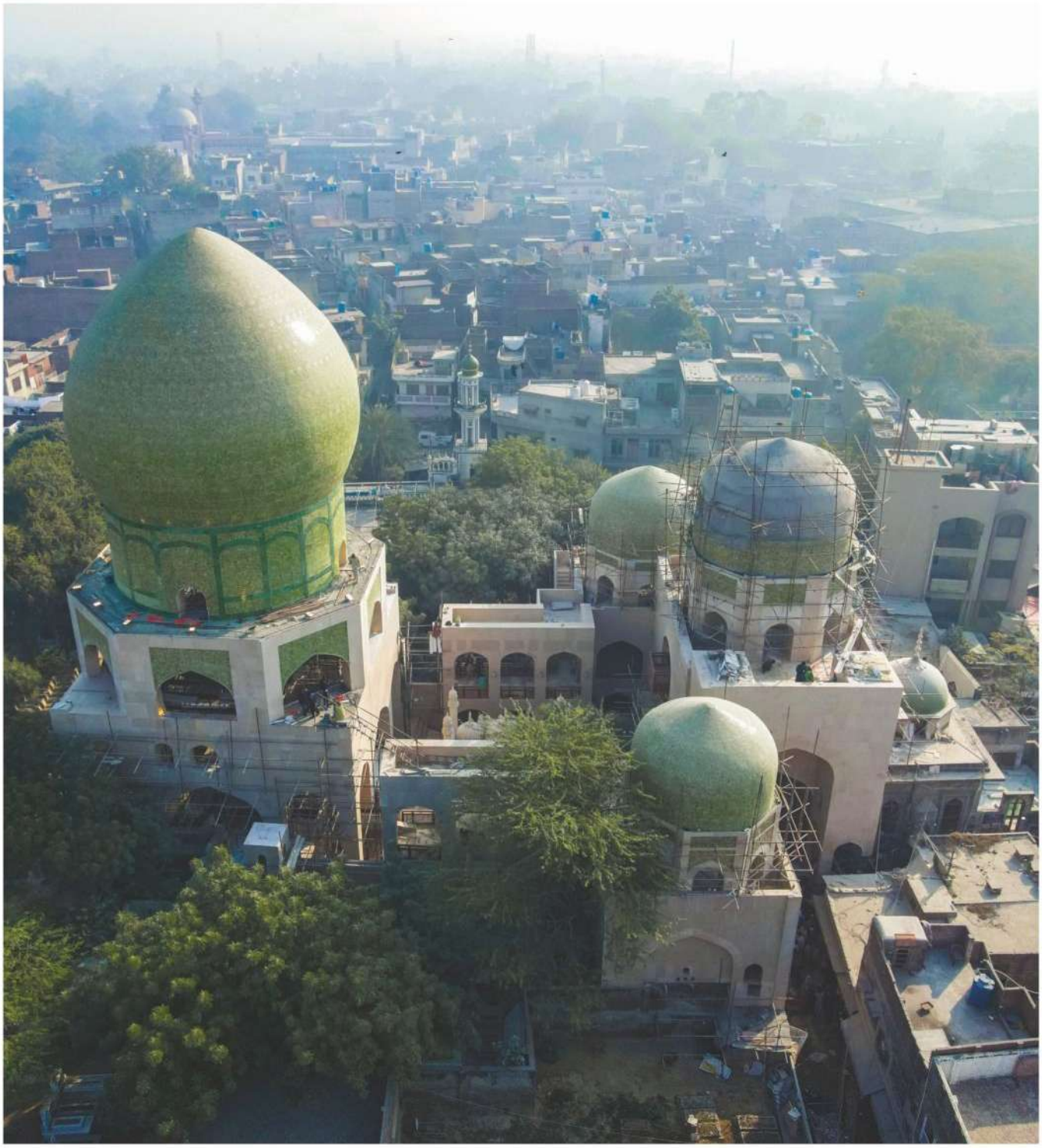
Hostel Building – Sandwich Panels

Namal Educational Institute

Hostel Building – Mud Block

Government of Punjab

Shrine Hazrat BiBi Pak Daman

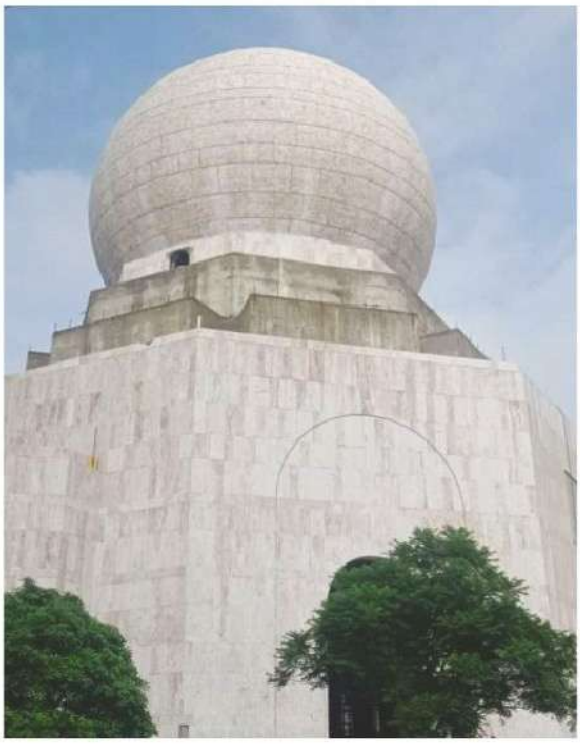


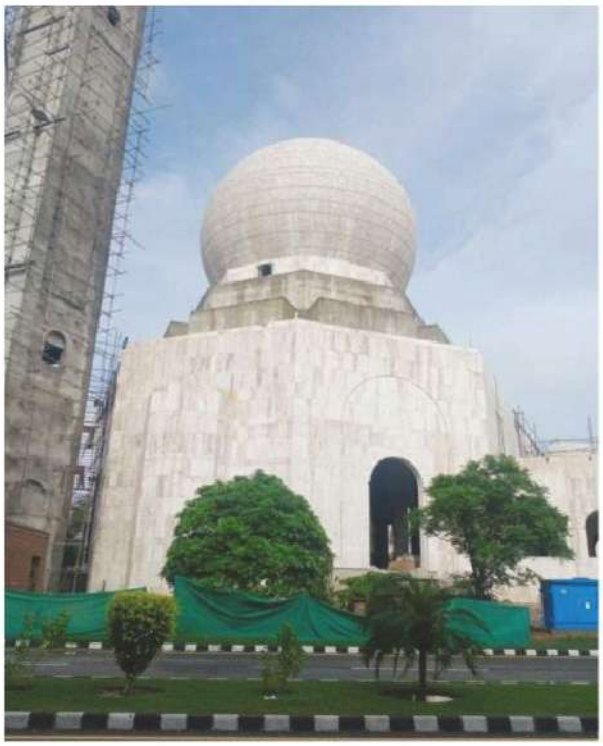
The Lake City Housing

Grand Mosque Dome Structure

The Lake City Housing

Grand Mosque Dome Structure





The Lake City Housing

Sky Zone (Play Area)

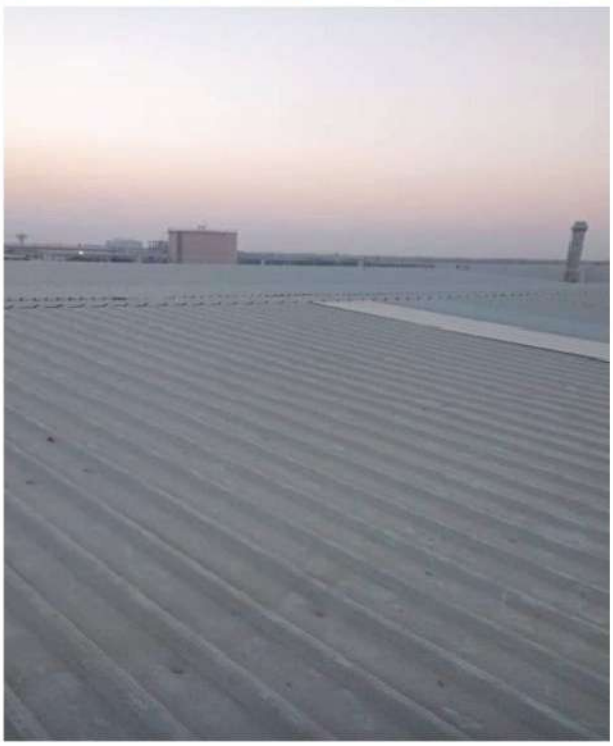
Infrastructure Development Authority Punjab

Hepatitis Prevention Treatment Clinic – 8 Units

Nishat Sutas Dairy

Dairy Plant






Biotech Fortified Fertilizer

PEB Shed

CSD – Peshawar

PEB Shed

Guarantee Engineers

Nishat Mall

FF Steel

Manufacturing Facility

Kissan Engineering

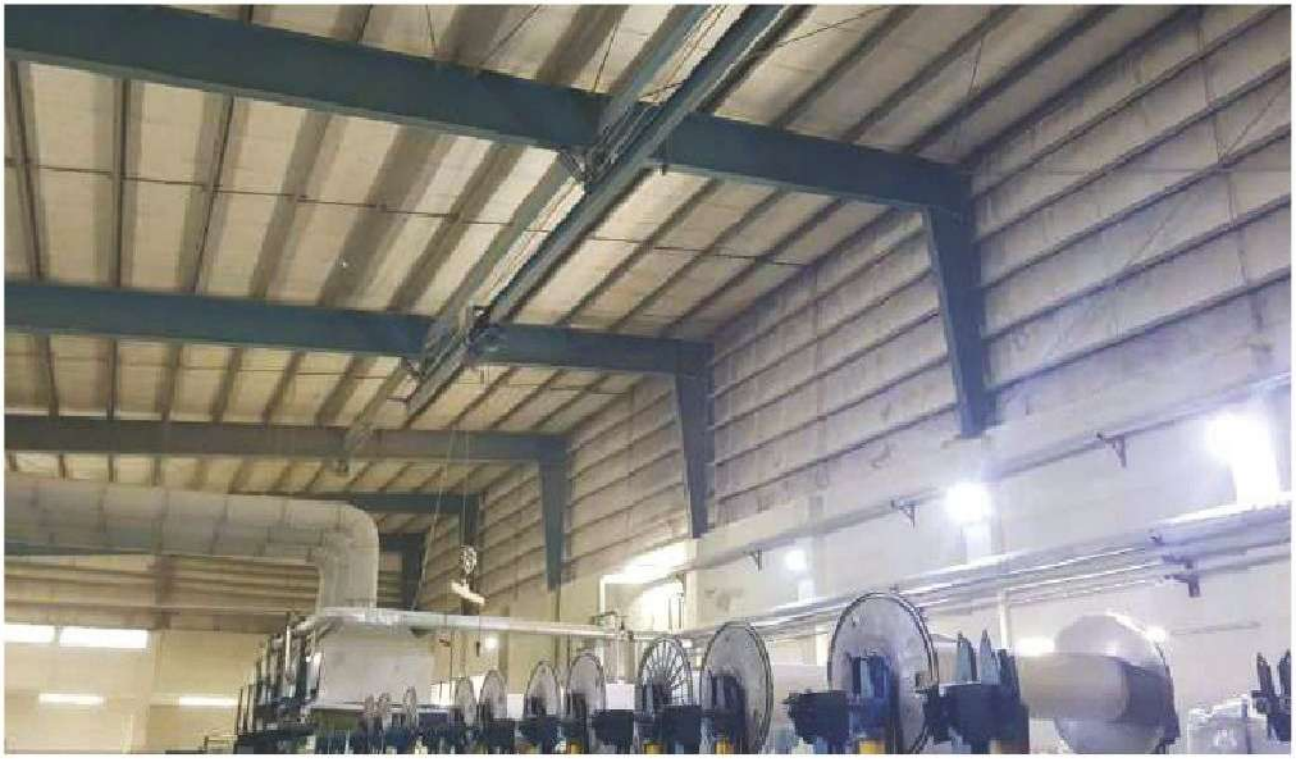
Fabrication Facility

Shafi Texcel (Pvt) Ltd.

Stitching Unit

Sarena Textiles (Pvt) Ltd.

Fabric Godown



WHO

EPI DRY STORE

WHO

EPI DRY STORE

University of Health & Sciences

Clinical Health Trial Centre

US & Dynamo

Fabric Godown

Mian Warehouse

Storage Shed

Sardar Family Packages

Manufacturing Facility

SR#	CUSTOMER NAME	COMPANY LOGO	PROJECT NAME	LOCATION
1	KISSAN ENGINEERING		FABRICATION FACILITY	KOT ABDUL MALIK
2	UNIVERSITY OF LAHORE		SPORTS COMPLEX	LAHORE
3	IDAP		HPTC	PUNJAB
4	THE LAKE CITY		SKY ZONE (PLAY AREA)	LAHORE
5	IDAP		HPTC	LAHORE
6	PAKISTAN BOBZ GUM		BOBZ CHEM INDUSTRY	LAHORE
7	RAMZAN SUGAR MILL		DISTILLERY PLANT	CHINIOT
8	GUARANTEE ENGINEERS		NISHAT MALL	LAHORE
9	SAMSONS GROUP		PC MALAM JABBA MULTI LEVEL STAIRCASE	MALAM JABBA
10	UNIVERSITY OF LAHORE		SCHOOL OF CREATIVE ARTS	LAHORE
11	UNIVERSITY OF LAHORE		OPERATION THEATER	LAHORE
12	UNIVERSITY OF LAHORE		CARGO LIFT	LAHORE

SR#	CUSTOMER NAME	COMPANY LOGO	PROJECT NAME	LOCATION
13	MOL PAKISTAN	MOLGROUP	DECANTING SHED	MUZFARGHAR
14	THE LAKE CITY	LAKE CITY LAHORE	GAZABO	LAHORE
15	HYPER STAR	Hyperstar (H)	MEZZANINE FLOOR	LAHORE
16	THRILL GALAXY	THRILL GALAXY	PLAY LAND	LAHORE
17	RAMAZAN SUGER MILLS	Ramzan Sugar Group	POWER PLANT	CHINIOT
18	AYESHA STEEL MILLS	AISHA STEEL MILLS LIMITED SHAPING THE ECONOMY	CRANE SHED	KARACHI
19	FAISAL SHED	FF STEEL	MANUFACTURING FACILITY	KALA SHAH KAKU
20	SAMSONS GROUP	SAMSONS	DUMMY COLUMMS	MALAM JABBA
21	UNIVERSITY OF LAHOROE	THE UNIVERSITY OF LAHORE	COMPUTER SCIENCE (CS-1)	LAHORE
22	AL GHURAIR GIGA PVT	AL GHURAIR GIGA	CARREFOUR ISLAMABAD	ISLAMABAD
23	UNIVERSITY OF LAHOROE	THE UNIVERSITY OF LAHORE	PAVILION	LAHORE
24	GOVT OF PUNJAB		SHRINE BIBI PAK DAMAN	LAHORE

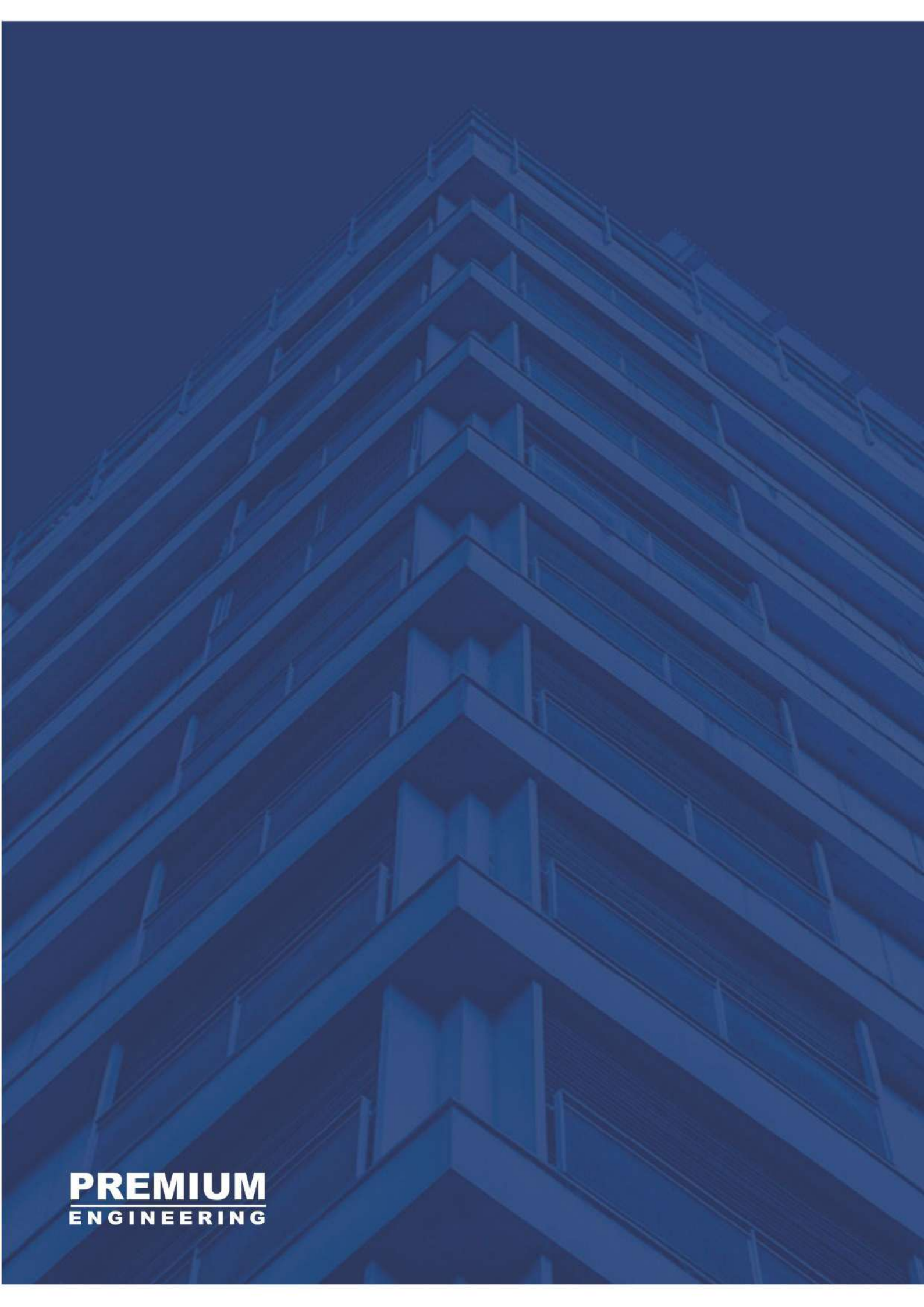
SR#	CUSTOMER NAME	COMPANY LOGO	PROJECT NAME	LOCATION
25	NAMAL EDUCATIONAL FOUNDATION		ACADEMIC BLOCK EXACTION	MIANWALI
26	UNIVERSITY OF LAHORE		COMPUTER SCIENCE BLOCK (CS-2)	LAHORE
27	SAMSONS GROUP		CHAIN LINK SECURITY FENCE	MALAM JABBA
28	SAMSONS GROUP		GATE HOUSE ROOFING	MALAM JABBA
29	US DENIM		CRU BUILDING	LAHORE
30	SHAFI TXCEL PVT LTD		BOILER EXTENSION	MANGA RAIWIND
31	SARINA TEXTILES PVT		FABRIC GODOWN	SHEIKHUPARA
32	US APPAREL PVT LTD		BOILER EXTENSION	LAHORE
33	THE LAKE CITY HOUSING		GRAND MOSQUE DOME STRUCTURE	LAHORE
34	CHASE UP		RO PLANT & GEMSET PLANT	GUJRANWALA
35	NAMAL EDUCATIONAL FOUNDATION		HOSTEL BUILDING SANDWICH PANELS	CHAKDA
36	NAMAL EDUCATIONAL FOUNDATION		HOSTEL BUILDING MUD BLOCK	CHAKDA

SR#	CUSTOMER NAME	COMPANY LOGO	PROJECT NAME	LOCATION
37	NLC - TRANSIT HUT	NLC National Logistics Cell	Multistory Resort	Shandor
38	KM FOOD PVT. LTD	GOFY®	Machine Hall	Lahore
39	US GROUP-LEEDS LOGISTICS	US DENIM	Warehouse	Khanewal
40	PAFDA	PAFDA	LGS Partition Walls	Lahore
41	NISHAT & SUTAS	sütaş Nishat Sutas Dairy Limited	Diary Plant	Faislabad
42	AGILITY LOGISTICS	Agility Logistics Parks	Mian Safdar Warehouse	Lahore
43	NAVEENA EXPORT LIMITED	NAVEENA GROUP	Machine Shed	Lahore
44	DHA MULTAN ROMANZA GOLF & COUNTRY CLUB	DHA Multan	Front Facade & Skylights	Multan
45	BIOTECH FERTILIZER		Warehouse & Processing Units	Rahim Yar Khan
46	CANTEEN STORES DEPARTMENT	CSD The Caring Store	CSD Deport	Peshawar
47	AMBITION APPAREL THE BLUES JEANS COMPANY	Ambition APPAREL	Unit Extension	Lahore
48	PRO HEALTH	Pro-Health Healthcare Facility Designers & Planners	Mezzanine - General Hopsital	Peshawar

SR#	CUSTOMER NAME	COMPANY LOGO	PROJECT NAME	LOCATION
49	BEACONHOUSE NATIONAL UNIVERSITY	BNU	Mezzanines Studio 205 & 208	Lahore
50	US & APPAREL PRIVATE LIMITED	USAPPAREL	RO Plant	Lahore
51	CHASE UP	CHASE UP	LV & Panel Room	Karachi
52	Z - TIGER CLOTHINGS		Warehouse	Lahore
53	WAMCO CHEMICALS PRIVATE LIMITED	WAMCO	Warehouse	Lahore
54	WHO	World Health Organization	EPI Dry Store	Islamabad
55	THE QUBE		Office Block	Lahore
56	SHAFI TEXCEL LTD	ShafiTexcel	Yarn Godown	Lahore
57	US & DYNAMO LTD		Warehouse, CRU & Loading area shed	Lahore
58	NISHAT MILLS LTD	NISHAT	Dyeing Unit Renovation	Lahore
59	NAVEENA DENIM LTD	NAVEENA GROUP	Machine Hall	Lahore
60	US APPAREL		Steam Boiler Extention & renovation	Lahore

SR#	CUSTOMER NAME	COMPANY LOGO	PROJECT NAME	LOCATION
61	ESCORT ADVANCE TEXTILE LTD		Power Plant Building	Lahore
62	US DENIM MILLS PVT.LTD		Caustic Recovery Unit	Lahore
63	GHQ		PEB Building - 01	Lahore
64	AGHA KHAN HOSPITAL		Child Care Center	Karachi
65	RAMZAN SUGER MILLS LTD.		Power Plant	Chiniot
66	DESCON ENGINEERING (PVT.) LTD		TSF Temporary Site Facility	Mianwali
67	KINGCRETE SERVICES		CMH - RWP	Islamabad
68	MERIDIAN INTERNATIONAL (PVT.) LTD		Daewoo Cargo Terminal	Islamabad
69	GUARANTEE ENGINEERS		Front Elevation framing - Emporium Mall	Lahore
70	TECHNICAL ASSOCIATES		Residential House	Lahore
71	AL-GHURAIR GIGA (PVT.) LTD		Hyperstar Departmental Store	Islamabad
72	ZIC PETROLEUM		Hi-Tech Building Plant	Lahore

SR#	CUSTOMER NAME	COMPANY LOGO	PROJECT NAME	LOCATION
73	CHASE UP		BOILER EXTENSION	FAISLABAD
74	UNIVERSITY OF LAHORE		LECTURE HALL	LAHORE
75	AGHA STEEL INDUSTRIES		MINE WAREHOUSE	KARACHI
76	SAMSONS GROUP		BOILER HOUSE LOUVERS & LOWERS	MALAM JABBA
77	PAFDA		DRY WALLS SYSTEM	LAHORE
78	AHMED IMPEX		WAREHOUSE ICON	FAISLABAD
79	UNIVERSITY OF LAHORE		E-II BUILDING	LAHORE
80	MIAN WAREHOUSE		STORAGE SHED	LAHORE
81	SARDAR FAMILY PACKAGES		MANUFACTURING FACILITY	MURIDKE
82	HAZRAT BIBI PAK DAMAN		UPGRADATION OF SHRINE	LAHORE
83	US APPAREL		STORAGE SHED	LAHORE
84	SERVICES HOSPITAL		UPGRADATION & RENOVATION	LAHORE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ENGINEERING

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