Works Contract for substructure and superstructure of a PEB structure

BUILDING PARAMETERS:			
1	**Type of Frame**		Sub Structure: RCC Works - As per design Super Structure: Rigid Multi story Mezzanine frame
2	**No. of Interior Column**		As per proposal drawings
3	**Width Module**		As per proposal drawings
4	**Roof Slope**		1:05 on top floor or as per architectural drawings
5	**Width**		As per architectural drawings
6	**Length**		As per architectural drawings
7	**Exterior Columns Base Condition**		Fixed
8	**Interior Columns Base Condition**		Fixed
9	**Building Area**		Multi story mezzanine floor, Area will be declared after GA drawing preparation
10	**Eave Height from FFL**		As per architectural drawings
11	**Bay Spacing**		As per architectural drawings
12	**End Wall Spacing**	**One end**	As per architectural drawings
		Another end	As per architectural drawings
13	**Bracing Type**	**In Exterior Side Walls**	Pipe bracings/Angle bracings/portal bracings
		IN Rafters/Beam	Pipe bracings/Angle bracings/Portal bracings
14	**End Wall Frame at one end**		Non-EXPANDABLE
15	**End Wall Frame at one end**		Non-EXPANDABLE
16	**Exterior Rigid Frame Columns**		Non-EXPANDABLE
17	**Fillet Weld of Built-up sections**		Double Side in column and single side in mezzanine beam and joist
18	**Jack Beam**		NA
19	**Crane**		NA
20	**Mezzanine**		Multi story mezzanine floors
21	**Canopy**		Will provide if required as per architectural drawings final GA drawings
22	**Brick work**		partition walls- In client scope
23	**Frame Openings**		In brick work
24	**Sliding doors**		NA
25	**Cage Ladders**		NA
26	**Roof Monitor**		NA

DESIGN CONSIDERATIONS-

- **Design Code: - NBC Norms and Design code: AISC-ASD-2016**
- **Wind 47m/s as per IS-875(Part-III) 2015 latest**
- **Seismic loading: Zone IV**
- **Building Loading: -**
  DL= 0.15 KN/M2
  LL= 0.57 KN/M2
  CL= 0.15 KN/M2 for solar panel
- **Roof slope = 1: 05**
- **Wind Speed= 47 M/s**
- **Deflection limits for main frames:-(As per AISC)**
- **Horizontal deflection: - H/150 for both side wall**
- **Roof Vertical deflection: - L/180**
- **Deflection limits for purlin and girts :-(As per AISC)**
- **For (Dead+Live) load: - L/150 For**
- **For (Dead+WIND) load: - L/150**
- **Opening condition- Enclosed**

Mezzanine Floors loads considerations

- **Dead load-150 mm thick RCC**
- **Live load-500 kg/m2**
- **height-as per drawing**
- **02 nos staircase considered**
- **PEB columns are considered for lift area**

MATERIAL & PAINT SPECIFICATIONS

The specification of each component of is listed below:

S. No.	Structural Components		Specifications	Yield Strength (KN/cm2)
1	Built - up Sections		E350 – Make Tata /Sail/JSW	FY = 34.5
2	Hollow Sections (Square, Rectangular)		IS 4923-2017- Make- Apollo/Jindal/Tata	FY = 31
3	Hot Rolled Sections	I-Sections	E250 Make- Apollo/Jindal/Tata	FY = 25
		Channels	E250 Make- Apollo/Jindal/Tata	FY = 25
4	Cold formed secondary members		GALVANISED 120 GSM Make – Apollo/Tata/Jindal/AMNS	FY = 34.5
5	Sheeting Panels	Aluzinc Coated Steel	ASTM A792 M Grade 345 class 1 Coating AZ70/150 (G550) Make – Tata/Jindal	FY = 34.5

6	Mezzanine Deck Panels		120- Make – Tata/ AMNS	FY = 34.5
7	Diagonal 'X' Bracing	Pipes	IS 2062- Make – Jindal/Vishal pipes	FY = 25
		Rods	IS 2062	FY = 25
		HR Angles	IS 2062	FU= 40.2
8	Anchor Bolts		MS BOLTS	FY = 25
9	High Strength Bolts		ASTM A 325 M = Bolts ASTM A 563 M = Nuts ASTM F 436 M = Washer Make – Morning Star /Sovnier and other reputed brands	FU = 30.3
10	Sag Rods for Walls & Sag Pipe for Roof		Hot rolled bar per IS 2062	FY = 25.0
➢ FY= Yield Strength ➢ FU = Ultimate Tensile Strength				
Trims & Flashings will be made of the Same Sheeting Material Make – Tata/Jindal				

Paint Specification-

Painting

1. **One coat of zinchromate primer with 30-micron DFT.- Make Nerolac /Asian/Berger**
2. **Two coats of Synthetic enamel paint each 30-micron DFT.- Make Nerolac /Asian/Berger**

Scope of Work

SL No	Description	Qty (approx)	UOM	Price per UOM	Total Price	REMARK
1	EPC works for substructure	As per design and BOQ				
2	Supply of prefabricated structure	1045	MT			Including deck sheets
3	Hardware 8.8 grade High Tensile	18	MT			Galvanized
4	Shear Stud	42000	NOS			Size 19x75 mm with ferule
5	Erection of pre-fabrication structure	1045	MT			Tower crane, Farana and hydra will be in client scope

6	Fixing of shear stud	42000	NOS			
7	Freight	1070	MT			Tonnage may vary.
	Total					

- The above rates shall also be inclusive of structural design including that of the RCC Sub Structure. (All architectural design shall be provided by the client)
- All rates to be quoted is for FOR Site situated at Ranka, Gangtok, Sikkim – 737135.
- It shall also be inclusive of deputation of one site engineer for overseeing of all works under your scope till completion, with a tentative completion period of maximum 10 months
- Weight tolerance: ± 3 %
- Payment shall be done as per actual weight including packing material and paint weight received at site within the tolerance limit.
- The final weight of building shall be as per client requirement and final design.
- In case any changes in tax structure then actual tax shall be applicable at the time of construction
- Weight will be as per actual supply of material at site.
- Billing will be done as per Actual weight of weighment slip.
- Weight tolerance of ±100 kgs per shipment shall be considered.
- No allowance is to be provided, apart from the design, detail, coordinate, manage or build any architectural features or art works other that what is shown.
- All civil, mechanical, and electrical works are in the scope of client.
- Non-shrink epoxy grouting under steel columns is not in scope of work.

MANDATORY INCLUSIONS		
SL NO	**Scope of work**	**Remark**
1	Design and detailing with complete drawings of PEB Structure including	Civil Design is considered up to the level of foundation bolts as per site requirement, and architecture part will be in client's scope. All PEB design is as per Contractors scope.
2	Vetting of all Design Reports related, done by contractor from any IIT or NIT	Actual bill generated by Institutions (IIT/NIT) including tax shall be paid by Client

CLIENT'S SCOPE

1. **Site clearance for erection activities in client scope.**
2. **Water and electricity will be in client scope.**
3. **Labour hutment at site in client scope.**
4. **All statutory forms and documents shall be provided by client.**
5. **Scaffolding if required at site shall be provided by client.**
6. **All heavy machineries like hoists and tower cranes shall be provided by the client.**

DELIVERY PERIOD

Delivery Schedule and Completion Period:

SL NO	DESCRIPTION	TIMELINE
1	Completion of Sub Structure	45 days from date of work order.
2	Vetting of PEB drawings	4 to 5 weeks after submitting documents to IIT/NIT and after getting the advance payment
3	Submission of General Arrangement (GA) Drawings of PEB	15 to 20 days from the date of PO and complete advance received
4	Supply Time Frame of PEB material	5 to 6 months from the date of approval of GA drawings in all respect or subjected to site clearance and space availability
5	Erection Time Frame of PEB material	8 to 9 months thereafter from the date of handing over of the site cleared with proper anchor bolt casting and GSB bed in all respect.
	Total Completion Time	**10 months**

CONTACT:

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