

Balmer Lawrie & Co. Ltd.

(A Government of India Enterprise)
Engineering & Projects
21, Netaji Subhas Road
Kolkata - 700 001

Design, Manufacture, Supply & Erection of Pallet Racking System for Temperature Controlled Warehouse at IDCO Industrial Estate, Chhattabar, Dist-Khorda, Odisha

Tender No. EP/TCW/BHU/RACK/09

Tender Date: 08.01.2020

Due Date: 28.01.2020, 16:00 Hrs

UNPRICED PART (PART-I)

TENDERER'S CHECKLIST POINTS

Tenderer shall require filling in the table below appropriately:

SI No.	Submission of Document	Bidder's Confirmation/Submission (Yes / No)
1	Earnest Money Deposit	
2	120 days validity of the offer	
3	Audited Annual Reports (for past three years ending March 2019)	
4	Copy of Work Order and Completion Certificates	
	for similar job as per Pre-qualification Criteria	
5	Power of Attorney of the Signatory	
6	PAN, Valid Authorisation letter from manufacturer (applicable for dealers)	
7	Provident Fund Registration	
8	GSTIN Registration	
9	Valid MSE or NSIC certificate as per tender if applicable	
10	Compliance of HSE Requirements	
11	Price Schedule in Un-priced Bid duly blanked out and signed	
12	Tender Document (along with addendum if any) duly signed and stamped on all pages	
13	Price quoted strictly as per Tender price schedule	
14	Payment Terms in compliance to tender requirement	
15	Completion Period in compliance to tender requirement	
16	LD clause in compliance to tender requirement	
17	Warranties and Guarantee in compliance to tender requirement	
18	All others Technical & Commercial Terms & Conditions shall remain unaltered as per Tender document	

<u>Hard copies of the above confirmatory documents must be sent before due date of submission of online tenders</u>

Bidder's Information

SI no.	Description	Details to be filled up by Bidder
1	Name1 (max. 35 char.)	
2	Name2 (max. 40 char.)	
3	Street/House No. (max. 50 char.)	
4	Street1 (max. 40 char.)	
5	Street2 (max. 40 char.)	
6	PIN Code (Postal Index No. e.g. "700001")	
0	(max. 6 char.)	
7	City/Place (e.g. "Kolkata" or "Dehradun")	
,	(max. 40 char.) or as the name of the city	
8	Country ("India" or "England" or as the name	
8	of country be)	
9	State (Name the state from where the office	
9	of Bidder operates)	
10	First Tel. No. (With STD Code): (e.g. 033-	
10	22225280 or 022-66552814) (max. 30 char.)	
11	First Fax No. (with STD Code)	
12	Contact Person	
13	First Mobile No.	
14	E-mail Address) (max. 40 char.)	
15	PAN No.:	
16	GSTIN Registration No. :	
17	GSP Name (GST Suvidha Provider)	
18	Bank Name (max. 60 char.)	
19	Street (max. 35 char.)	
20	City (max. 35 char.)	
21	Branch (max. 40 char.)	
22	IFSC Code	
23	MICR Code	
24	Account No.	
25	Type of Account (Current, Savings, etc.)	

Engineering & Projects SBU-LI

LIST OF CONTENT:

UN-PRICED PART (PART I)

- 1. NOTICE INVITING TENDER
- 2. CONDITIONS OF CONTRACT
- 3. TECHNICAL SPECIFICATION
- 4. TENDER DRAWING

PRICED PART (PART II)

1. SCHEDULE OF WORK

NOTICE INVITING TENDER Tender No. EP / TCW / BHU / RACK / 09

1.0 Balmer Lawrie & Co. Ltd. (BL) invite <u>ONLINE BIDS</u> from experienced, competent and resourceful suppliers (Manufacturer or their authorised dealers only) with sound technical and financial capabilities for Supply & Erection of Racking System at Temperature Controlled Warehouse being set up at IDCO Industrial Estate, Chhattabar, Dist-Khorda, Odisha.

2.0 **SCOPE OF WORK**

The scope of work under this tender covers design, material procurement, fabrication, painting, loading, transportation, covering the materials under transit insurance, unloading at site, storage under covered shed, site shifting as required, erection & commissioning of pallet racking system with accessories including supply of labour, tools tackles, consumables at Temperature Controlled Warehouse being set up at IDCO Industrial Estate, Chhattabar, Dist-Khorda, Odisha as mentioned in unpriced BOQ/Schedule of Work, Technical Specification and drawing.

Bidders shall note that in the event of non-readiness of cold chambers/anteroom/docking area during delivery of racking materials, the materials shall be unloaded and stored at a suitable place shown by us with proper rain-proof covering (with tarpaulin). Later, upon readiness of cold chambers, the materials shall be lifted from that designated storage place, transported and entered inside the cold chamber by the Supplier. All costs related to handling, covered storage, transportation within site etc. shall be borne by the successful bidder.

3.0 **COMPLETION PERIOD**

Time is the essence of the contract. The time schedule for completion of total work shall be **4** (Four) months from the date of placement of order or **2** (Two) months from the date of handing over of finished warehouse concrete floor for starting of erection, whichever is later.

Approval must be obtained from us before starting the production/manufacturing of the racking components which will be accorded based upon readiness of site.

4.0 **EARNEST MONEY DEPOSIT**

Unpriced Part of the Bid should be accompanied by a Demand Draft or Bank Guarantee of **Rs 34,000.00** (Rupees Thirty Four Thousand Only) towards Earnest Money Deposit (EMD) executed by any scheduled bank drawn in favour of M/s Balmer Lawrie & Co. Ltd. payable at Kolkata as per format enclosed. EMD submitted by way of Bank Guarantee should be valid for a minimum period of 120 days after the due date of tender submission.

Earnest Money deposit (EMD) is exempted for agencies registered under NSIC or coming under the definition of Micro and Small Industries and holding valid registration certificates covering the tendered items/services. Declaration of Udyog Aadhar Memorandum (UAM) by the MSE parties on Central Public Procurement Portal (CPPP) shall be mandatory. However,

attested/Notarized copy of valid NSIC certificate or "Micro and Small" industry certificate must be submitted in this regard.

- 4.1 For the successful bidder, the EMD will be refunded only after completion of the work. No interest shall be payable towards EMD amount.
- 4.2 For the unsuccessful bidders, the EMD will be refunded only after the successful bidder has accepted the work order and the acknowledgment of the same has been received by the owner.
- 4.3 EMD is liable to forfeiture in the event of:
 - a) Withdrawal of offers during validity period of the offer
 - b) Non acceptance of orders by the bidder within the stipulated time after placement of order.
 - c) Any unilateral revision made by the bidder during the validity period of the offer.
 - d) Non-performance of the bidder during the tenure of work.
 - e) Bidders submitting false/fabricated/bogus documents in support of their credentials

5.0 **PRE-QUALIFICATION CRITERIA**

- 5.1 Average annual turnover of the tenderer shall be minimum of **Rs 60 Lakhs** during last three financial years ending 31st March, 2019.
- 5.2 The tenderer should have successfully executed **Racking System for cold storage application** during past seven years ending last day of month previous to the one in which tenders are invited:
 - a. 3 jobs each of value not less than **Rs 27 lakhs** or
 - b. 2 jobs each of value not less than Rs 34 lakhs or
 - c. 1 job of value not less than **Rs 54 lakhs**

Copy of work orders and completion certificates / commissioning report from the owner/ consultant should be enclosed as supportive documents. Order copy issued by the owner to the consultant shall also be furnished if the completion certificate is issued by the consultant on behalf of the owner.

- 5.3 Tenderer should have Valid Authorization Letter from Manufacturer (in case of dealers), PAN, GSTIN registration, PF registration. Copy of the same shall be submitted along with techno commercial offer.
- 5.4 The Power of Attorney or authorization, or any other document consisting of adequate proof of the ability of the signatory to bind the bidder is to be submitted as specified in detail in 'Conditions of Contract' later.

6.0 **TENDER DOCUMENTS**

Tender Documents comprises two parts viz. Part-I (Un-priced) and Part-II (Priced). The Un-

priced Part consists of Notice Inviting Tender, Condition of Contract, Technical Specification and Drawings. The Priced Part consists of Priced Schedule. Bidders are requested to download the tender document and read all the terms and conditions mentioned in the tender document and seek clarification if any, from Sk Abu Jafor, Manager. Any clause defining offline bid submission in the tender document shall not be considered.

7.0 TENDER SUBMISSION

The intending tenderers shall be deemed to have visited the site and familiarise themselves thoroughly with the prevailing site conditions before submission of the tender. Non familiarity with the site conditions will not be considered reason either for extra claim or for not carrying out the work in strict conformity with the drawing, specification and time schedule.

The tenderer is required to register on the e-procurement site https://balmerlawrie.eproc.in and submit their bids online.

For registration and online bid submission tenderer may contact the following officials at the HELP DESK of M/s C1 India on browsing to the website https://balmerlawrie.eproc.in during business hours (10:00 a.m. to 06:30 p.m.) from Monday to Friday (Excluding holidays of the Company):

Dedicated Helpdesk for Balmer Lawrie Contact Person E-Mail ID Tel. No. Days								
<u> </u>	<u> </u>	10110.		<u> </u>				
1. Mr. Tirtha Das	tirtha.das@c1india.com	+91-9163	254290	MON - FRI				
(Kolkata)								
2. Mr. CH. Mani Sankar	chikkavarapu.manisankar@c1	+91-6374	241783	MON - SAT				
(Chennai)	india.com							
3. Ms. Ujwala Shimpi	ujwala.shimpi@c1india.com	+91-22-66	5865608	MON - FRI				
(Mumbai)								
4. Helpdesk Support	k Support blsupport@c1india.com +91-8017272644		272644	MON - SAT				
(Kolkata)								
Escalation Level 1								
Mr. Tuhin Ghosh tuhin.ghosh@c1india.com				+91-8981165071				
Escalation Level 2								
Mr. Sandeep Bhandari sandeep.bhandari@c1india.com +91-8826814007								
Escalation Level 3								
Mr. Achal Garg achal.garg@c1india.com								

In case, you are unable to get in touch with any of the Technical Support Associates, kindly drop a mail at blsupport@c1india.com mentioning your Name and Mobile No. One of C1 India's associates will get back shortly.

The tenderer shall authenticate the bid with his Digital Certificate for submitting the bid electronically on e-procurement platform and the bids not authenticated by digital certificate of the tenderer will not be accepted on the e-procurement platform.

All the tenderers who do not have digital certificates need to obtain Digital Certificate (with both Signing and Encryption Components). They may contact help desk of M/s C1 India.

The tenderer shall furnish the original Demand Draft /BG for EMD to the tender inviting authority so as to reach on or before the due date and time of the Tender either personally or through courier or by post and the receipt of the same within the stipulated time shall be the responsibility of tenderer. The Company shall not take any responsibility for any delay or non-receipt. If any of the documents furnished by the tenderer is found to be false/fabricated/bogus, the tenderer is liable for blacklisting, forfeiture of the EMD, cancellation of work and criminal prosecution. The tenderer is requested to get a confirmed acknowledgement from the Tender Inviting Authority as a proof of Hardcopies submission to avoid any discrepancy.

The bidders found defaulting in submission of hard copies of original Demand Draft / BG for EMD and other documents to the Tender Inviting Authority on or before the stipulated time in the Tender will not be permitted to participate in the Tender.

The bidder is requested to read all the terms and conditions mentioned in the tender Document and seek clarification if any from if in doubt.

The bidder should keep track of any Addendum / Corrigendum / Amendment issued by the Tender Inviting Authority on time-to-time basis in Company's website (www. Balmerlawrie.com) and e-procurement site (https://balmerlawrie.eproc.in). No separate newspaper advertisement shall be published for such Addendum / Corrigendum / Amendment etc. The Company calling for tenders shall not be responsible for any claims/problems arising out of this.

The tenderer should complete all the processes and steps required for bid submission. The successful bid submission can be ascertained once acknowledgement is given by the system through bid submission number after completing all the process and steps. M/s C1 India is not responsible for incomplete bid submission by users. Tenderers may also note that the incomplete bids will not be saved by the system and are not available for the Tender Inviting Authority for processing.

Neither the Company (Balmer Lawrie & Co. Ltd.) nor the service provider (M/s C1 India) is responsible for any failure or non-submission of bids due to failure of internet or other connectivity problems or reasons thereof.

The hardcopies of the Bid Documents as explained above and also defined in clause no. 2.0 of Conditions of Contract under sealed envelope should reach the office of Head (Engg. & Projects), Balmer Lawrie & Co Ltd, Engineering & Projects Department, 21 Netaji Subhas Road, Kolkata 700001, on or before the due date of submission of tender. The Bidders who are submitting the Bids in person are requested to drop the same in our tender box located at the entrance of 2nd floor at the above address.

8.0 **SUPPLY OF MATERIAL**

All materials required for the work shall be supplied by the Tenderer.

9.0 TAXES & DUTIES

All materials required for the work shall be supplied by the Tenderer.

10.0 **PAYMENT TERMS**

- a) **70% of Basic Order** value along with **100% of all taxes & duties** against receipt of materials of Racking System at site in good condition.
- b) **20% of Basic Order** value against assembly, erection and commissioning of the racking system.
- c) 10% of Basic Order Value shall be retained as Retention money for the defect liability period which can be paid after completion of successful erection and commissioning of racking system against submission of Performance Bank Guarantee of equivalent amount. Validity of BG shall be till completion of defect liability /warranty period. Security Deposit submitted by the Supplier will be returned after completion of work.

11.0 NON-CONFORMANCE

Tenders not conforming to the above mentioned requirements are liable to be rejected.

12.0 **VALIDITY OF OFFER**

Tendered shall keep their offer valid for a period of **120 days** from the date of opening of Unpriced bid.

13.0 **QUANTITY VARIATION & FIRM PRICE**

This is an item rate contract. Accordingly, quantity of the item i.e. nos of pallet positions may vary. Racking System inside Chamber no 8 (for 264 Pallet Positions) may not be executed. However, in all such cases, the price should remain firm and irrevocable and not subject to any change till the completion of Scope of Work.

14.0 RATES AND OTHER ENTRIES

- (a) The tenderer should quote for all items in the Schedule of Rates. If there is any discrepancy between unit rate and total amount, the unit rate will prevail.
- (b) The rates should be quoted in the same units as mentioned in the tender schedule of quantities.
- (c) All entries in the tender documents should be in ink / type. Corrections if any should be attested by full signature of the tenderer.

(d) Every page of the tender document including annexure / enclosures shall be stamped and signed by the tenderer or his authorized representative thereby indicating that each and every page has been read and the points noted.

15.0 RIGHT TO ACCEPT OR REJECT TENDER

- 15.1 M/s Balmer Lawrie & Co Ltd reserves the right to accept or reject any or every tender without assigning any reason whatsoever / or to negotiate with the tenderer (s) in the manner it considers suitable. In the event of receipt of lowest price from more than one (1) bidders, fresh price bids shall be invited from the lowest bidders only to determine final lowest bidder for placement of order.
- 15.2 Bids of any tenderer may be rejected if a conflict of interest between the bidder and Company (Balmer Lawrie) is detected at any stage.
- 15.3 All the bids will be evaluated based on Pre-qualification and other criteria as mentioned in this NIT. Tenders of those bidders who are not meeting the pre-qualification criteria will not be considered for commercial evaluation.
- 15.4 Tender if submitted through e-mail or fax shall be summarily rejected.
- 15.5 Hard copy of Price Bid should not be submitted in the envelope containing Un-priced documents failing which the bid will be summarily rejected.
- 15.6 Clarifications / exceptions / deviations to the tender terms & conditions and specifications:

 Balmer Lawrie & Co. Ltd. expects Tenderers to confirm compliance to tender terms & conditions and specifications, failing which the Tenderers are liable to be rejected. Hence all Tenderers in their own interest are advised to submit their bids in all respects confirming to all terms & conditions of the bid document.

Bids shall be evaluated based on the information / documents available in the bid. Hence Tenderers are advised to ensure that they submit appropriate and relevant supporting documentation alongwith their proposal in the first instance itself. Bids not complying the requirements of bid documents will be rejected without any further opportunity.

For any Technical clarifications / queries Tenderers are requested to contact from Sk Abu Jafor, Manager, Mob:7893422855 (from 10.00AM to 05.00PM, Monday - Friday).

for Balmer Lawrie & Co. Ltd.

(G C Saha) Head (Engineering & Projects)

CONDITIONS OF CONTRACT

1.0 DEFINITIONS

The following expressions hereunder and elsewhere in the contract documents used shall have the following meanings respectively assigned to them namely,

- 1.1 The "Owner/Client" shall mean **M/s Balmer Lawrie & Co. Ltd**; a company incorporated in India and having its Registered Office at 21, Netaji Subhas Road, Kolkata 700 001, and shall include its successors and assigns.
- 1.2 The "Project" shall mean "Supply & Erection of Racking System" for proposed Temperature Controlled Warehouse at IDCO Industrial Estate, Chhattabar, Dist-Khorda, Odisha.
- 1.3 The 'Engineer-In-Charge'/'Engineer' shall mean the Engineer /Officer authorised by the 'Owner' for the purpose of the contract for overall Supervision and Co-ordination of site activity and certification of billing.

2.0 DETAILS OF HARD COPIES TO BE SUBMITTED ALONG WITH THE TENDER

The tender, as submitted, shall consist of the following:

- (i) Hard copy of Un-priced Tender Document duly filled in, stamped and signed by the Tenderer as prescribed in different clauses of Tender documents. No hard copy of priced bid shall be submitted. Priced bid shall only be submitted online. The price bid file in pdf format shall be downloaded from the website, bidder to fill in their itemwise rates & amounts on hard copy, stamp, sign, scan and upload the same. Total Contract Price with GST shall be entered as 'Project Contract Total' while uploading price bid. Hard copy of price bid shall not be submitted. Submission of Price Bid in hardcopy by any bidder will lead to cancellation of their bid.
- (ii) Earnest money amounting to and in the manner specified along with the Un-priced bid.
- (iii) The Power of Attorney or authorisation, or any other document consisting of adequate proof of the ability of the signatory to bind the bidder, in original, when the power of attorney is a special "Power of Attorney" relating to the specific tender of Balmer Lawrie & Co Ltd only. A notarized true copy of the "Power of Attorney" shall also be accepted in lieu of the original, if the power of attorney is a general "Power of Attorney". However, photocopy of such notarized true copy shall not be accepted.
- (iv) Similar work done in past Seven years by the tenderer with copy of work orders and completion/commissioning certificate from the client/ consultant appointed by the client.
- (v) Audited annual reports for last three financial years.

- (vi) PAN / GSTIN / PF registration.
- (vii) Any other documents required in terms of this tender.

3.0 SECURITY DEPOSIT

- (i) On acceptance of the Bid, Bidder shall within fifteen (15) days, deposit with Owner an Initial Security Deposit of **5% of the Basic Contract value** and the same shall be in any of the following form:
- a) Bank draft drawn on a <u>Kolkata</u> Branch of any Scheduled Bank in favour of Balmer Lawrie & Co Ltd.
- b) Bank Guarantee executed by any Scheduled Bank as per proforma enclosed and shall be valid at least sixty days after the completion of work.
- (ii) If the Bidder fails to provide the Security Deposit within the period specified, such failure will constitute a breach of the Contract and Owner shall be entitled to award the Work elsewhere at his risk and cost. The EMD of the bidder to whom Contract was awarded, shall be forfeited
- (iii) No interest shall be payable against Security Deposit.
- (iv) Security Deposit will be returned to successful bidder after completion of job.

4.0 TESTING & INSPECTION

- (i) The material, design and workmanship shall satisfy the relevant Indian & international Standards, the job specifications contained herein and codes referred to. Where the job specifications stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied. In the absence of any standards/specifications / code(s) of practice for any part of the work covered in this tender, the instructions/directions of Engineer-in-Charge will be binding on the Supplier.
- (ii) The owner reserve the right to inspect the Equipment at Tenderer's works by them or through a third party nominated by the Owner. Tenderer will provide all assistance to Owner's inspector in carrying out such inspection at Tenderer's works free of any charges.

5.0 PERFORMANCE GUARANTEE:

5.1 Performance Guarantee:

a) The Supplier shall guarantee that the equipment and workmanship of work done and any fittings designed / manufactured / supplied by him are as specified in the tender schedule

and wherever there is nothing specifically mentioned shall correspond to the best available grade and quality as required for the application.

- b) The Supplier shall also guarantee that the work done and any fittings designed, manufactured, supplied, erected shall be as per prevailing relevant standard, codes and statutory practices / stipulations.
- c) The Supplier shall **guarantee** the work done and any fittings designed, manufactured, supplied, erected and tested by him against defective materials, poor workmanship, improper design, operation inadequacies & problems and failure from normal usage, for a period of **12 (twelve) calendar months** after final acceptance of the work by the Owner. Performance Bank Guarantee shall be issued by any Nationalized / Scheduled Bank on basic value of material supplied and shall remain valid for above guarantee period.

5.2 **Warranty:**

The Supplier will repair and/or replace all defective parts, components / fittings, accessories etc. which shall be notified to them in writing within the Defect Liability Period Promptly at free of cost. The Supplier will provide similar warranty on the parts, components, fittings, accessories etc. repaired and/ or replaced.

6.0 SITE PARTICULARS

The intending tenderers shall be deemed to have visited the site and familiarised themselves thoroughly with the site conditions before submitting the tender. Non-familiarity with the site conditions will not be considered reason either for extra claims or for not carrying out the work in strict conformity with the drawings and specifications.

The work will be carried out at following address:

Temperature Controlled Warehouse Balmer Lawrie & Co. Ltd. Chhatabar, Dist-Khorda, Odisha, India

Contact Person for Site Visit: Mr Purnendu Das, Manager (Mob 62890 90838/98368 09371)

Project site is located at plot nos. 5 & 13(P) of combined area 1.5 acres at Chhatabar, District—Khorda, Odisha inside the premises of IDCO Industrial Estate. It is approximately 1.5 KM from Khorda- Chandraka road.

7.0 SUPPLY OF MATERIAL

7.01 All materials required for the work shall be supplied by the Supplier. In addition, all materials required for temporary and enabling work shall be arranged and provided by the Supplier. All incidental expenses, loading, unloading, transportation, handling etc. shall be the responsibility of the Supplier and cost towards such expenses should be included in the finished item rates.

7.02 All other materials, as required to complete the works in all respects according to the contract rates shall be inclusive of all freights, GST and other taxes, duties, loading, unloading, transporting, handling and storage charges etc.

8.0 LIQUIDATED DAMAGE (LD)

- (i) If the Supplier is unable to complete the delivery within the period specified in NIT, it may request owner for extension of the time with unconditionally agreeing for payment of LD. Upon receipt of such a request, owner may at its discretion extend the period of delivery and shall recover from the Supplier's running account bill, as an ascertained and agreed Liquidated Damages, a sum equivalent to **0.5% of basic contract value** for each week of delay or part thereof. The LD shall be limited to **5% of the basic contract value.**
- (ii) The parties agree that the sum specified above is not a penalty but a genuine preestimate of the loss/ damage which will be suffered by the owner on account of delay/ breach on the part of the SUPPLIER and the said amount will be payable to the Owner without proof of actual loss or damage caused by such delay/breach by the Owner.
- (iii) Notwithstanding what is stated in Clause above, the Owner shall have the right to employ any other agency to get the remaining equipment at the risk and cost of the Supplier, in the event of his failing to complete the Supply within the stipulated time or in the even progress of Supplier's work is behind schedule, as judged by the Engineer-in-Charge.
- (iv) Then the Engineer-in-Charge upon receiving necessary approval from competent Authority may in writing make a fair and reasonable extension of delivery time for completion of the Supplies as per provision provided further that the Supplier shall constantly use his best endeavour to the satisfaction of the Engineer-in-Charge to proceed with the Supplies. Nothing herein shall prejudice the rights of the Supplier under clause herein above.
- (v) The Supplier may seek time extension for delay or anticipated delay for reasons not attributable to them and in such case time extension may be given without imposition of LD.

9.0 ARBITRATION

Any dispute or difference arising under this Contract shall be referred under jurisdiction of Kolkata to a sole arbitrator to be appointed by the Chairman & Managing Director, Balmer Lawrie & Co. Limited and the provisions of Arbitration & Conciliation Act, 1996 including any statutory modifications or enactment thereof shall apply to the Arbitration proceedings. The fees of the arbitrator, if any, shall be shared equally by both the parties. The award shall be a speaking award stating reason therefor and is final & binding on the parties. The proceeding

shall be conducted in English language and courts at Kolkata will have exclusive jurisdiction to settle any dispute arising out of this contract.

10.0 FORCE MAJEURE

Any delay in or failure of the performance of either party hereto shall not constitute default hereunder or give rise to any claims for damages, if any, to the extent such delays failure of performance is caused by occurrences such as Acts of God or the public enemy expropriation or confiscation of facilities by Government Authorities, compliance with any order or request of any Governmental Authorities, was fires, floods, riots or illegal strikes.

11.0 REVISION / CHANGES / QUANTITY VARIATION

- (i) Owner may make in writing any revisions or changes in the purchase order, including additions or deletions from the quantities ordered in the specifications or drawings. The Supplier shall carry out such revision / changes and be bound by the same terms and conditions to the extent applicable, though the said revisions/ changes were not incorporated in the initial order.
- (ii) Owner reserves the right to increase or decrease the tendered quantity to any extent or replace specification, drawing, design of any or every item or delete them out at any stage of the work. The Supplier's claim for compensation or damages on account of this shall not be entertained. Such deviation shall be adjusted at the rates contained in the order/ contract or by issuing variation order(s) at the prevailing market rates, if the rates are not available in the order/ contract.

12.0 SUB-LETTING OF WORK

The Supplier shall not sublet or assign this order/ contract or any part thereof without the written permission of the Owner. In the event of the Supplier's sub-letting or assigning this order/ contract or any part thereof without such permission the Owner shall be entitled to cancel the order/ contract and to purchase the equipment / material elsewhere on the Supplier's account and risk and the Supplier shall be liable for any loss or damage which the Owner may sustain in consequence of or arising out of such purchase.

13.0 EXTRA ITEMS OF WORK

During the course of execution of the work, should the Supplier come across items of work which are not covered under the Schedule of Rate or not included therein, the Supplier shall draw the attention of the Owner / Engineer-in-Charge to the same and such items of work shall be treated as extra only with the prior approval of Engineer-in-Charge in writing. Supplier shall submit a quotation along with the rate analysis for such accepted extra items before he commences work or purchases the materials in connection with such items.

For extra items, rates shall be derived from similar item rates included in the schedule of work. Where there is no such similar item available in the schedule, rate shall be analysed as follows:

Rate for extra item = Cost of material including transportation till site (a) + cost of labour inclusive of all necessary tools, tackles, equipment, machinery and consumable (b) required to carry out the work + 15% of (a+b) towards profit and overhead + taxes, duties etc.

14.0 RIGHT OF OWNER TO TERMINATE THE CONTRACT

(i) If the Supplier being an individual or a firm commits any 'Act of Insolvency' or shall be adjudged as insolvent or being an Incorporated Company shall have an order for compulsory winding up made against it, or pass an effective resolution for winding up voluntarily or subject to the supervision of the Court or shall be unable to carry out and fulfil the contract and to give security therefore, is so required by the Engineer-In-Charge.

Or if the Supplier (whether an individual, firm or incorporated company) shall suffer execution to be issued.

Or shall suffer any payment under this Contract to be attached by or on behalf of any of the creditors of the Supplier.

Or shall assign or charge, encumber or sublet this contract without the consent in writing of the Engineer-In-Charge first obtained.

Or shall charge or encumber this contract or any payments due or which may become due to the Supplier thereunder.

Or if the Engineer-In-Charge shall certify in writing to the Owner that the Supplier -

- a) has abandoned the Contract or
- b) has failed to commence the works, or has without any lawful excuse under these conditions, suspended the progress of the works for 14 days after receiving from the Engineer-In-Charge written notice to proceed or
- c) has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon or
- d) has used sub-standard or inferior material or materials not conforming to the specifications or has employed inferior workmanship in carrying out the works or part thereof or has not exercised due diligence in execution of the said work, or

- e) has neglected or failed persistently to observe and perform all or any of the acts, deeds, matters or things by this Contract to be observed and performed by the Supplier requiring the Supplier to observe or perform the same, or
- f) has to the detriment of good workmanship or in defiance of the Engineer-In-Charge's instructions to the contrary, sub-let or sub-contracted any part of the contract, or
- g) has failed to comply with the Engineer-In-Charge's instructions, or
- h) has in the opinion of the Engineer-In-Charge committed any breach of this Contract, then and in any of the said cases the Owner with the written consent of the Engineer-In-Charge may notwithstanding any previous waiver, after giving seven days' notice in writing to the Supplier terminate the Contract, but without hereby affecting the right of the Owner of the powers of the Engineer-In-Charge or the obligations and liabilities of the Supplier in respect of work, the contract shall continue enforce as fully as if the contract has not been so determined and the obligations of the Supplier in respect of work subsequently executed shall continue as if the works subsequently executed has been executed by or on behalf of the Supplier. And further, the Owner by its agents or servants shall been titled forthwith to enter upon and take possession of the works and all plants, tools, scaffoldings, sheds, machinery, steam and other power implements, machinery equipment and materials lying upon the site or the adjoining lands or roads and use the same as its own property and to employ the same by means of its own servants and workmen in carrying on and completing the work or by employing any other Supplier and the Supplier shall not in any way interrupt or do any act, matter or things to prevent, intimidate or hinder such other Supplier or other person or persons employed for completing and finishing or using the materials and plant for the work. When the works shall be completed or as soon thereafter as convenient, the Engineer-In-Charge shall give a notice in writing to the Supplier to remove his surplus materials and plant and should the Supplier fail to do so within the period of 14 days after receipt thereof by him, the Owner shall sell the same either by public auction or a private sale and shall be given credit to the Supplier for the amount realized. The Engineer-In-Charge shall thereafter ascertain and certify in writing under this hand what (if anything) shall be due or payable to or by the owner, the expense or loss which the owner shall have been put to in procuring the works to be completed and the amount, if any, owing to the Supplier and the amount which shall be so certified, shall thereupon be paid by the owner to the Supplier or by the Supplier to the Owner, as the case may be and the Certificate of the Engineer-In-Charge shall be final and conclusive and binding on the parties hereto. In the event of termination under this Clause, the Owner shall not be bound by any provision

of this Contract to make any further payment to the Supplier until the said works are completed.

- (ii) Owner shall, at any time, be entitled to determine and terminate the Contract, if in the opinion of the Owner the cessation of the Work becomes necessary owing to paucity of funds or for any other cause whatsoever, in which case the cost of approved materials at the Site at current market rates as verified and approved by Engineer-In-Charge and of the value of the Work done to date by the Supplier shall be paid for in full at the specified in the Contract. A notice in writing from the Owner to the Supplier of such determination and termination and the reason therefore shall be the conclusive proof of the fact that the Contract has been so determined and terminated by the Owner.
- (i) Should the Contract be determined under sub-clause of this clause and the Supplier claims payment to compensate expenditure incurred by him in the expectation of completing the Work, the Owner shall consider and admit such claim as are deemed fair and reasonable and are supported by the vouchers to the satisfaction of the Engineer-In-charge. The Owner's decision on the necessity and propriety of such expenditure shall be final and conclusive and binding on the Supplier.

15.0 WATER & POWER

Supplier shall arrange for water and construction power at his own cost. However, if power is available during execution same may be provided to the Supplier on chargeable basis.

16.0 LABOUR LAWS

- (i) No Labour below the age of eighteen (18) years shall be employed on Work. In case female workers are engaged, requisite provisions shall be made as per the statute.
- (ii) Supplier shall not pay less than what is provided under law to labourers engaged by him on Work.
- (iii) Supplier shall at his expense comply with all labour laws and keep Owner indemnified in respect thereof.
- (iv) In addition to above, rules and regulations as contained in Contract Labour (Regulation and Abolition) Act, 1970 will also be applicable for this contract. For the purpose of registration as per the above Act, Supplier may contact Owner for further details.
- (v) Supplier shall secure full safety of the workers / employees engaged by him in the Site premises and shall take at his own cost, insurances and such other safety regulations for the said purpose.

17.0 INSURANCE

Supplier shall at his own expense carry out and maintain insurance with reputable companies to the satisfaction of the Owner as follows:

Employee's Compensation and Liability Insurance:

Supplier shall obtain Workmen Compensation policy in his name in respect of Supplier's employees to be engaged for the work towards compensations as admissible under the Employee's Compensation Act, 1923 and Rules framed thereunder upon death/ disablement and also medical treatment of a worker and the same has to be produced to the Engineer-in-Charge before start of the work. Owner should be mentioned as the Beneficiary.

If any of the work is sublet, after necessary approval by the Owner, the Supplier shall require the Sub-Supplier to provide Employee's Compensation and Liability Insurance for the Sub-Supplier's employees, if such employees are not covered under the Supplier's Insurance.

18.0 HSE REQUIREMENTS BY SUPPLIERS

Housekeeping

Suppliers shall ensure that their work area is kept clean tidy and free from debris. The work areas must be cleaned on a daily basis. Any disposal of waste shall be done by the Supplier.

All equipment, materials and vehicles shall be stored in an orderly manner. Access to emergency equipment, exits, telephones, safety showers, eye washes, fire extinguishers, pull boxes, fire hoses, etc. shall not be blocked or disturbed.

Confined Space

Before commencing Work in a confined space the Supplier must obtain from Owner a Permit to Work, the Permit to Work will define the requirements to be followed.

As minimum Suppliers must ensure the following:

- a) Confined spaces are kept identified and marked by a sign near the entrance(s).
- b) Adequate ventilation is provided
- c) Adequate emergency provisions are in place
- d) Appropriate air monitoring is performed to ensure oxygen is above 20%.
- e) Persons are provided with Confined Space training.
- f) All necessary equipment and support personnel required to enter a Confined space is provided.

Tools, Equipment and Machinery

The Supplier must ensure that all tools & equipment provided for use during the Work is:

- a) suitable for its intended use;
- b) safe for use, maintained in a safe condition and where necessary inspected to ensure this remains the case (any inspection must be carried out by a competent person and records shall be available);
- c) Used only by people who have received adequate information, instruction and training to use the tool or equipment.
- d) Provided with Earth leakage circuit breaker (ELCBs) at all times when using electric power cords. Use of electrical tape for temporary repairs is prohibited.

Working at Height

Any Work undertaken where there is a risk of fall and injury is considered to be working at height.

For any Supplier Personnel working at height, Suppliers shall provide fall prevention whenever possible and fall protection only when fall prevention is not practicable. Before commencing Work in a height the Supplier must obtain from Owner a Permit to Work, the Permit to Work will define the requirements to be followed. Supervisor must be present at all point of time, to ensure no deviation occur during the course of work.

Fall Prevention System

Fall prevention systems (e.g. fixed guardrails, scaffolds, elevated work platforms) must provide protection for areas with open sides, including exposed floor openings.

<u>Fall Protection Systems</u>

Where fall protection systems are used then the Supplier must ensure the following is applied:

- i) Only approved full body harness and two shock-absorbing lanyards are used,
- ii) Prior establishment of a rescue plan for the immediate rescue of an employee in the event they experience a fall while using the system,
- iii) Anchorage points must be at waist level or higher; and capable of supporting at least the attached weight,
- iv) Lifeline systems must be approved by Owner before use.
- v) Use of ISI marked industrial helmet at all point of time.

Scaffolding

All scaffolds shall subject to a documented inspection by a competent person and clearly marked prior to use. The footings or anchorage for scaffolds shall be sound, rigid and capable of carrying the maximum intended load without settling or displacement. All scaffolding materials should be of MS tubular type.

Guardrails and toe-boards shall be installed on all open sides and ends of scaffold platforms. Scaffolds shall be provided with an access ladder or equivalent safe access. Supplier Personnel shall not climb or work from scaffold handrails, mid-rails or brace members.

Stairways and Ladders

Ladders should only be used for light duty, short-term work or access in line with the below and the Site Requirements.

- i) Fabricated ladders are prohibited.
- ii) Ladders will be secured to keep them from shifting, slipping, being knocked or blown over.
- iii) Ladders will never be tied to facility services piping, conduits, or ventilation ducting.
- iv) Ladders will be lowered and securely stored at the end of each workday.
- v) Ladders shall be maintained free of oil, grease and other slipping hazards
- vi) Ladders will be visually inspected by a competent person and approved for use before being put into service. Each user shall inspect ladders visually before using.
- vii) Ladders with structural defects shall be tagged "Do Not Use," immediately taken out of service, and removed from the Site by the end of the day.

Lifting Operations

Cranes and Hoisting Equipment

Suppliers shall operate and maintain cranes and hoisting equipment in accordance with manufacturer's specifications and legal requirements.

Only Supplier Personnel trained in the use of cranes and hoists are permitted to use them.

Lifting Equipment and Accessories

All lifting equipment / accessories e.g., slings, chains, webbing, chain blocks, winches, jacks etc shall be indicated with their safe working load have an identification number visible on the unit and be inspected and tested in accordance with legal requirements.

Damaged equipment / accessories and equipment shall be tagged "out of use" and immediately removed from Site.

Lockout Tag out ("LOTO")

Prior to performing work on machines or equipment, the Supplier shall ensure that it is familiar with LOTO and Permit to Work procedures and that all of its affected Supplier Personnel receive the necessary training.

Barricades

Floor openings, stairwells, platforms and walkways, and trenching where a person can fall any distance shall be adequately barricaded and where necessary, well lit. Where there is a risk of injury from a fall then rigid barriers must be used.

Barricades must also be used to prevent personnel entering an area where risk of injury is high e.g., during overhead work activity or electrical testing etc. Such barricading must provide clear visual warning.

Compressed Gas Cylinders

Gas cylinder shall be securely stored and transported, and identified and used in line with the local requirements. Hose lines shall be inspected and tested for leaks in line with local requirements. Flash Back arrestor to be used to prevent any explosion due to back fire.

Electrical Safety

Prior to undertaking any work on live electrical equipment the Supplier must obtain a Permit to Work from Owner. Where ever possible live work should be avoided. Any control measures highlighted shall be implemented prior to work commencing.

The below measures will be taken:

- a) Work practices must protect against direct or indirect body contact by means of tools or materials and be suitable for work conditions and the exposed voltage level.
- b) Energized panels will be closed after normal working hours and whenever they are unattended. Temporary wiring will be de-energized when not in use.
- c) Only qualified electrical Supplier Personnel may enter substations and/or transformer and only after being specifically authorized by Owner.

Hot Works

A Permit to Work must be obtained from Owner prior to any hot works (welding, grinding, open flame work). Suitable fire extinguishing equipment shall be immediately available. Objects to be welded, cut or heated shall be moved to a designated safe location, or, if they

cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place. Personnel working around or below the hot works shall be protected from falling or flying objects.

Prior to the use of temporary propane or resistance heating devices approval must be obtained from Owner.

Trenching, Excavating, Drilling and Concreting

A Permit to Work must be obtained from Owner and all underground lines, equipment and electrical cables shall be identified and located prior to beginning the work. The Supplier shall assign a competent Supplier Personnel to all trenching and excavation work.

Safe means of access and egress shall be located in trench excavations. Daily inspections shall be conducted by a competent Supplier Personnel for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems or other hazardous conditions.

Physical barriers shall be placed around or over trenches and excavations. Flashing light barriers shall be provided at night.

Environmental Requirements

Waste Management

The Supplier is responsible to remove any waste generated by the work being done on the Site. The Supplier must dispose of the waste in line with the relevant local legislative requirements. The waste disposal route shall be documented and made available for Owner to review at any time and may be subject to Owner's prior approval.

Wastes (includes rinse from washing of equipment, PPE, tools, etc) are not to be poured into sinks, drains, toilets, or storm sewers, or onto the ground. Solid or liquid wastes that are hazardous or regulated in any way are not to be disposed of in general site waste receptacles.

Spills

The Supplier is responsible for the provision of adequate spill kits/protection and the clean-up and disposal costs arising from such spills.

Emissions

The Supplier shall identify and quantify any emission sources associated with the Works. The control measures associated with these emission shall be subject to the approval of Owner's Emissions include but are not limited to noise, dust, fumes, vapours.

BANK GUARANTEE VERIFICATION CHECK LIST

	CHECK LIST	<u>YES</u>	<u>NO</u>
I	Does bank guarantee compare verbatim with standard Balmer Lawrie & Co Ltd proforma for BG		
II. a.	Has the executing officer of the BG indicated his name, designation and power of attorney No./ Signing Power No. etc. on BG		
b.	Is each page of BG duly signed/initialed by the executant and last page is signed with full particulars as required in the Balmer Lawrie's standard proforma of BG and under the seal of the Bank.		
C.	Does the last page of the BG carry the signature of two witnesses along side the signature of the executing Bank Manager		
III. a.	Does the nonjudicial stamp paper for BG purchase in the name of BG issuing Bank		
b.	Is the BG on non-judicial Stamp paper of value Rs. 100/- (Rupees One Hundred only)		
C.	Is the date of sale of non-judicial stamp paper shown on the BG and the stamp paper is issued not more than six months prior to date of execution of BG		
IV. a.	Are the factual details such as bid specifications No., LOI No., Contract price etc. correct		
b.	Whether over-writing/ cutting, if any on the BG authenticated under signature and seal of executant		
V. a.	Is the amount of BG in line with contract provisions / agreement /tender		
b.	Is the validly of BG in line with contract provisions / agreement /tender		
VI. VII.	Covering letter from bank enclosed with the BG BG shall be from a Nationalised/ Scheduled Bank only		

PROFORMA OF THE GUARANTEE BID BOND/ EARNEST MONEY DEPOSIT

	Lawrie 1- 700 0	& Co. Ltd. 01
for the		
forms t	herein	s of Tender provide that the Bidder shall pay a sum of Rs (Rupees only) (hereinafter called "the said amount") as full Earnest Money Deposit in the mentioned. The forms of payment of Earnest Money Deposit include guarantee to be Scheduled Bank.
and in	consid	(name and address of the Bidder) have approached us and at their request eration of the premises we,(Name of the Bank) having our office at(address of the Bank) have agreed to give such guarantee as herein after
Bank) BALME	having R LAWI (F	by these presents, we,(name of the Bank) of(address of the our office, inter alia, at
THE CC	NDITIC	NS of this obligation are :
1.	If the E bid for	sidder withdraws its Bid during the period of bid validity specified by the Bidder on the m; or
2.		Bidder, having been notified of the acceptance of its bid by the Purchaser during the of bid validity;
	a)	fails or refuses to execute the Contract Form if required; or
	b)	fails or refuses to furnish the Performance Security, in accordance with the instructions to Bidders.
		Contd2/-

[2]

We undertake to pay the Purchaser up to the said amount upon receipt of its first written demand, without the Purchaser having to substantiate their demand, provided that in their demand the Purchaser shall mention that the amount claimed by them is due owing to the occurrence of one or both of the two conditions.

This guarantee will remain in force upto (date of expiry) including the days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

Notwithstanding anything contained herein:

- i) Our liability under the Bank Guarantee shall not exceed Rs. (Rupees only)
- ii) This Bank Guarantee shall be valid upto
- iii) We are liable to pay the guaranteed amount or pay part thereof under this Bank Guarantee only if you serve upon us a written claim or demand on or before (last date of validity)

We, (name of the Bank) undertake not to revoke this guarantee during its currency except with your previous consent in writing.

Your faithfully,

(Specimen Signature)

BANK GUARANTEE (PERFORMANCE)

Letter of Guarantee No. Dated: the day of THE GUARANTEE is executed at Kolkata on the day of(set out full name and address of the Bank) (hereinafter referred to as "the Bank" which expression shall unless expressly executed or repugnant to the context or meaning thereof mean and include its successors and assigns). WHEREAS Balmer Lawrie & Co. Ltd. (local address), an existing company within the meaning of the Companies Act, 1956 and having its Registered Office at 21, Netaji Subhas Road, Kolkata – 700 001 (hereinafter referred to as "the Company") issued a Tender being No. (hereinafter referred to as "the said Tender") for (set out purpose of the job) and pursuant thereto Messrs/ Mr.(set out full name and address of the Supplier) (hereinafter referred to as "the Supplier" which term or expression wherever the context requires shall mean and include the partner or partners Supplier for the time being/his/its heirs, executors, administrators, successors and assigns) (delete which are not applicable) has accepted the said Tender and field its quotation. AND WHEREAS the quotation of the Supplier had been accepted by the Company and in pursuance thereof an Order being No...... dated (hereinafter referred to as "the said Order") has been placed by the Company on the Supplier for (set out purpose of the job). AND WHEREAS under the terms of the said Order the Supplier is required to furnish the Company at their/his/its own costs and expenses a Bank Guarantee for Rs.....(Rupees only) as performance guarantee for the fulfilment of the terms and conditions of the said Tender and to do execute and perform the obligations of the Supplier under the Agreement dated the day of (hereinafter referred to as "the Agreement") entered into by and between the Company of the one part and the Supplier of the other part, the terms of the said Tender and the terms contained in the said Order which expression shall include all amendments and/or modifications/or variation thereto. AND WHEREAS the Supplier had agreed to provide to the Company a Bank Guarantee as security for the due performance of their/his/its obligations truly and faithfully as hereinbefore mentioned.

[2]

NOW THIS GUARANTEE WITNESSETH as follows:

1.	In consideration of the aforesaid premises at the request of the Supplier, we (set out the full name of the Bank) the Bankers of the Supplier shall perform
	fully and faithfully their/his/its contractual obligations under the Agreement dated the day of entered into by and between the Company of the one part and the Supplier of the other part, the terms and conditions of the said Tender and the said Order.
2.	We,
3.	The Guarantee is issued as security against due performance of the obligations of the Supplier or under the Agreement aforesaid and the said Tender and the said Order hereinbefore mentioned and subject to the conditions that our liabilities under this Guarantee is limited to a maximum sum of Rs (Rupees
4.	We, (set out full name of the Bank) further agree that the undertaking herein contained shall remain in full force for a period of months from the date of the satisfactory execution of the Contract.
5.	This Guarantee shall not be affected by any amendment or change in the Agreement or change in the constitution of the Bank and/or the Company and/or the Supplier.
6.	We (set out full name of the Bank) undertake not to revoke this Agreement during its currency except with the previous consent of the Company in writing.
7.	All claim under this Guarantee must be presented to us within the time stipulated after which date the Company's claim/right under this Guarantee shall be forfeited and we,(set out full name of the Bank) shall be released and discharged from
	all liabilities hereunder. Contd3/-

[3]

8.	This instrument shall be returned upon its expiry or settlement of claim(s) if any, thereunder.
9.	Notwithstanding anything contained hereinbefore our total liabilities under this Guarantee shall not exceed a sum of Rs
10.	We have power to issue this guarantee in your favour under our Memorandum and Articles of Association and the undersigned has full power to execute this Guarantee under Power of Attorney dated the
Place	:
Date	:

PROFORMA OF THE GUARANTEE (SECURITY DEPOSIT)

Balmer Lawrie & Co. Ltd. Kolkata- 700 001

Dear Sir,

(hereir Tende	Messrs/Mr(set out full name and address and constitution of the Supplier) nafter referred to as "the Supplier") filed their/his/its quotation against your Tender being No dated (hereinafter referred as "the said Tender") for the work (set out the purpose of the job) and in pursuance thereto an
	being No dated (hereinafter to as "the Order") was issued by you to the
Rs the fo	onditions of the said Tender, inter alia, requires that the Supplier shall pay a sum of only) as full security deposit (hereinafter referred to as "the security deposit") in therein mentioned. The form of payment of security deposit includes a guarantee to be ed by a Scheduled Bank.
at thei of the	id Messrs/Mr (set out full name of the Supplier) have/has approached us and r/his/its request and in consideration of the premises We
3	We,
2.	We,
	Contd2/-

[2]

3.	us in the manner aforesaid will not be affe	(Rupeesonly) from cted or suspended by reason of the fact that any any Officer, tribunal, court or any other authority
4.	up, dissolution or change of constitu	e determined or affected by liquidation or winding ation or insolvency of the said Messrs/Mr. of the Supplier), but shall in all respect, and for all ayment of all the money due to you in respect of
5.	Our liability under this guarantee is restrict only).	ed to Rs (Rupees
5.	and unless a claim or demand in writing is expiry of six months from the aforesaid da period), the said Guarantee all your rights	ffect until (set out the date of expiry) made against us under this guarantee before the i.e (set out last date of Claim under this guarantee shall be forfeited and we, a Bank) shall be relieved and discharged from all
	liabilities thereunder.	
7.	We , (set out full na Guarantee during its currency except with	ame of the Bank) undertake not to revoke this your previous consent in writing.
3.	Guarantee in your favour under our Me	II name of the Bank) have power to issue this morandum and Articles of Association and the this Guarantee under the Power of the Attorney and Twenty granted by the Bank.
ours	faithfully,	
Dated	:(Place)	
••••••	(Date)	(Signature of Officer on behalf of) (Set out name of the Bank)

TECHNICAL SPECIFICATION

1.0 DESIGN GUIDELINES

Following standards are to be followed, as applicable for design of Racking system

- a) IS 801:1975 Code of practise for use of cold formed light gauge steel structural members in general building conditions.
- b) IS 800:1984/2007 Code of practise for general construction of steel.
- c) BS: 5950 (V): 1988 Building design using cold formed steel sections.
- d) FEM 10.2.02 Code of practise for design of steel pallet racking.
- e) FEM 10.3.01 Adjustable beam pallet racking, tolerances, deformations and clearances.
- f) EN: 15512: 2009 Steel static storage system Adjustable pallet racking systems Principle for structural design.
- g) SEMA Code of practise for the design of static racking.

2.0 RAW MATERIAL

Load Bearing Members of the system are made out of high strength HR steel having properties equivalent to grades specified by IS 5986: 2002 and IS 2062: 2006. The material also has the necessary impact strength for cold room applications up to -30 degree C.

Steel Type	Minimum guaranteed yield strength	Equivalent international standard
IS:5986 - Fe 510 / Equivalent or IS 2062 - E350 / Equivalent	355 Mpa	JIS 3101: SS 490 EN 10025 : S 355 JR DIN 17100 : St 52
IS:5986 - Fe 410 / Equivalent or		
IS:2062 - E250 / Equivalent	255Mpa	JIS 3101: SS 400 EN 10025 : S 235 JR
IS:3601-2006 / Equivalent IS:4923 - 1997 / Equivalent	210 Mpa	DIN 17100 : St 42

Feature such as raw material traceability should be available at vendor's plant.

The raw materials shall be sourced only from Tata Steel/Tata Bhushan/Essar/JSW/SAIL.

2.1 Upright

a. Usage: Vertical load bearing multi bend (min 10) profile designed to offer maximum load carrying strength with optimum surface utilisation, ensuring high standards of stability and safety. It transfers the load to the ground via grouted base plates.

- b. Design Criteria: BS 5950 Part (V) and SEMA Guidelines.
- c. Configuration: Common upright systems have been proposed as shown in the drawing.
- d. Manufacturing: Roll formed construction made in single piece without welding. Process of punching and forming in one flow and in a synchronized operation, hence providing dimensional accuracy and uniform and consistent contour.
- e. Flexibility: Slots at every 50 mm enabling warehouse user utilise height optimally, face hole dia 11mm, to adapt to ever changing SKU sizes.
- f. Fixity: Bolted with base plates to transfer the load to the ground.
- g. Profile: Omega profile.
- h. Material Quality: Minimum yield strength 355 MPa.
- i. Finish: Lead Free Epoxy Polyester powder coated.
- j. Colour: Oxford Blue.
- k. For Chamber 1 & Chamber 5, Cross tie members as shown in the plan drawing shall be provided for stability. These cross tie members shall have flexibility in adjusting length as per site condition.

2.2 Splice (For Joining Uprights)

- a. Utility: Used to join two uprights. Front splice piece shall hold the upright in the face while the rear splice piece will be fitted along the depth.
- b. Manufacturing: Splices are press formed sections.
- c. No. of bends: 2 nos.
- d. Fixity: Bolted
- e. Surface Finish: Lead Free Epoxy Polyester powder coating.

2.3 Base Plates

- a. Utility: Used to anchor upright to the ground
- b. Manufacturing Process: Welding and Press formed.
- c. Section: Min 180mm x 110 mm x 5 (t)mm but can exceed as per the design.
- d. Fixity: Grouted with 2 nos M12x100 torque type mechanical anchor expansion bolts (HILTI of FISHER Make only) and bolted to upright by four M10x25 of fasteners. Floor level adjustments done through shims.
- e. Grouting fasteners are zinc plated.
- f. Finish: Lead free Epoxy Polyester powder coated.
- g. Colour: Orange.
- h. Instead of Powder coated, base plate galvanised may also be provided that minimum size shall be maintained.

2.4 Bracings

a. Utility: Essential members- Diagonal & horizontal bracings are connected to upright to make frames so as to impart stability to the structure.

- b. Configuration: Requisite amount of diagonal and horizontal bracings are provided as per load capacity and application as shown in the side view of elevation in the drawing. The horizontal bracings are connected to the topmost and bottommost diagonal bracings for frame stability. Length of bracings depend on the depth of the units.
- c. Profile: Lipped Channel, 30mmx 30x6mm x 1.6mm thickness.
- d. No. of bends: 4
- e. Manufacturing Process: Bracing channels manufactured through roll forming technology.
- f. Alignment: Spacers align the diagonal bracings.
- g. Surface Finish: Galvanised.

2.5 Beams

- a. Utility: The horizontal load carrying members that support the pallets.
- b. Manufacturing: Roll formed. It is formed through single sheet through continuous gradual roll forming in single flow. This ensures tensional strength of the beams and distinguishes us from others, unlike open profiles which tend to buckle for heavy loads or for longer beam lengths. No welding is allowed to form box section.
- c. Material Specification: Material used is hot rolled steel with minimum yield strength of 255MPa.
- d. Profile: Box section.
- e. Design Criteria: The beams shall withstand for the specified load under the following deflection criteria of Span / Deflection should be less than 200, under SEMA guidelines.
- f. Fixity: The box beams are welded to 4 lip connectors (at works, and not at site) which will be hooked on to uprights.
- g. Locking Mechanism. Beam locks by locking pins ensure that beams are engaged with uprights precisely and prevent any accidental beam dislodgement due to handling equipment. Diameter is 6mm for locking pin.
- h. Surface Finish: Lead Free Epoxy Polyester powder coated
- i. Colour: Orange.

2.6 Row Connector

- a. Utility: Used to connect back to back frames. This is used for double faced rows. They impart stability to the system.
- b. Profile: Lipped channel with rectangular plates at end.
- c. Manufacturing: Roll forming and welded
- d. Surface Finish: Epoxy Polyester powder coated

2.7 Column Guards

Stamp & Signature of the Tenderer

- a. Utility: Safety member to protect uprights being accidentally hit by Material Handling Equipment (MHE) while turning.
- b. Location: For first upright of every row facing cross aisles.

- c. Section: Smooth C profile, as shown in design
- d. Fixity: Grouted to the ground by 4 nos. M12x100.
- e. Surface Finish: Epoxy Polyester powder coated

2.8 Aisle Placard

- a. MS Sheet cards indicates aisles / row nos. and helps as guide to the operator.
- b. Placed on frames.

2.9 Signages

- a. They are safety sign boards / instructions for operators.
- b. It displays the dos and don'ts for safe operation.
- c. Quality: Photo finish.

2.10 Fasteners

Fasteners used are of 8.8 grade minimum with galvanised finish to suit industrial atmosphere.

2.11 Pallet Stoppers (at 2-nos -refer drawing)

a. Type of Profile : Rectangular box b. Size : 60 mm x 40 mm

c. Length : To be adjusted as per the space

d. Connectivity : with Clamp and U- Bolt

e. Overhang Permitting : 100mm

f. Mfg. Process : Standard Process g. Surface Finish : Powder Coated

h. Colour : Yellow

2.12 Row Guards

- a) Utility: Safety member to prevent racks being hit by Material Handling Equipment while turning. They protect the end frames.
- b) Location: At the end of rows where working and cross aisles meet. Protects the two cross aisle facing uprights and frame.
- c) Guards shall be provided at the end (opposite to doors) of cold chambers, with the anteroom in between sliding doors and also in Docking area as shown in drawing. Guards shall also be provided in sorting areas (Ground floor & 1st floor) of potato storage chambers as marked in the tender drawings:
- d) Section: Rigid tubular section, 400mm height, 60 x 60 mm,
- e) Energy absorption of 300Nm.
- f) Fixing: Grouted to the ground by 4 nos. M12x100.
- g) Surface Finish: Epoxy Polyester powder coated

3.0 PRE-TREATMENT AND SURFACE FINISH

3.1 Pre-Treatment

All components of the system are supplied duly finished with **Epoxy-Polyester powder coating** after doing the surface treatment of all the items by using pre-treatment method as mentioned below.

- a) Pre-treatment: All components are subjected to a Five Zone 8-stage special pre-treatment. The pre-treatment process consists of degreasing, phosphating and final rinse with demineralised water. All of the above mentioned processes are interspersed with rinsing with water of appropriate temperature.
- b) Degreasing: Degreasing is carried out with the help of a two steps chemical process within controlled temperatures.
- c) The degreasing conform to the requirements of IS: 3194 / 6005 1980.
- d) Phosphating: Phosphating is carried as per IS: 6005 and IS: 3618 Class D.
- e) After phosphating, cold water rinse is done using two different tanks and one final rinse is done with de-mineralised water to remove all traces of retained chemicals.
- f) Dry off oven treatment: The material will be dried up using drying oven at an air temperature of 125 deg C.

3.2 Final Finish

- a) Uprights, beams and other items have Epoxy Polyester powder coating (lead free) of the colour and shade is applied to all components with an average dry film thickness not less than 35 microns. Bracings are galvanised.
- b) The material components are oven baked within a controlled temperature as specified by Powder Manufacturer for a flawless finish.
- c) The finish is as strong so as to withstand a 2H pencil hardness test.
- d) Testing of paint for various physical and chemical properties done as per IS 101:1964

4.0 PALLET DETAILS

- a) Pallet Weight: 1000 Kgs
- b) Loaded Pallet Size: 1200 mm x 1100mm x 1750 mm (including pallet height)
- c) Empty pallet Size 1200 mm x 1000 mm x 155 mm +/-5 mm
- d) Spacing above the pallet As per Layout
- e) Rack to Rack Spacing (vertical)- 1st high 2200mm subsequently 1950 mm (refer dwg)
- f) Aisle Width- 3300-3400 mm (Pallet to Pallet) as per layout.

Notes:

- 1) The materials will be inspected by us or by its authorised representative as per the approved QAP before despatch from vendor's factory.
- 2) The Supplier shall safeguard the materials supplied at site (especially small items like nut, bolts, anchor fasteners, shims, connector pins etc) till handing over erected racking system to Owner/BL. BL will be not responsible for damage/loss of any materials at site till handing over of the system to us.
- 3) The vendor shall clean the site (which includes removing packaging materials, plastic etc.) after completion of the work. The erected structure shall be thoroughly cleaned with moist cloth after completion of work as directed by Engineer-in-Charge. The floor shall be deep cleaned (sweeped and mopped) removing all the dust generated due to drilling/anchoring of base plates.

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TENDER DRAWING

List of Drawings

SI.No.	Title	Drawing No.	Rev	Date	Sheet No
1	LAYOUT OF RACKING SYSTEM	DRG.NO.	0	03-01-2020	Sheet 1 of
		EP/TCW/BHU/RACK/12	0		2
2	LAYOUT OF RACKING SYSTEM	DRG.NO.	0	02 01 2020	Sheet 1 of
		EP/TCW/BHU/RACK/12	0	03-01-2020	2

Engineering & Projects SBU-LI



Balmer Lawrie & Co. Ltd.

(A Government of India Enterprise)
Engineering & Projects
21, Netaji Subhas Road
Kolkata - 700 001

Design, Manufacture, Supply & Erection of Pallet Racking System for Temperature Controlled Warehouse at IDCO Industrial Estate, Chhattabar, Dist-Khorda, Odisha

Tender No. EP/TCW/BHU/RACK/09

PRICED PART (PART-II)

NOTES:

- 1.0 Details of the items under this Schedule shall be read in conjunction with the corresponding Specifications, Drawings and other Tender Documents.
- 2.0 The work shall be carried out as per approved drawings, Specifications and the description of the items in this Schedule and/or Engineer's instructions. Drawings enclosed with these documents are only for providing some preliminary of the work involved.
- 3.0 Items of work provided in this Schedule but not covered in the Specifications shall be executed strictly as per instructions of the Engineer-In-Charge.
- 4.0 Unless specifically mentioned otherwise in the Contract, the Tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, Constructional Plant, Temporary Work, labour, materials, levies, taxes, transport, layout, re-pairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, services, temporary roads, revenue expenses, contingencies, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the contract.
- 5.0 The Quantities of the various items mentioned in the Schedule of Items are approximate and may vary or may be deleted altogether. The Supplier, in his own interest, should get an indication of the probable extent of the work to be executed under any particular item in this Schedule before undertaking any preliminary and enabling work or purchasing bought out components related to the work.
- 6.0 Rates shall be quoted both in figures and in words in clear legible writing. No over writing is allowed. All scoring and cancellations should be countersigned by the Tenderer. In case of illegibility, the rates written in word will be considered final. All entries shall be in English language.
- 7.0 Engineer's decision shall be final and binding on the Supplier regarding clarification of items in this Schedule with respect to the other sections of the Contract.
- 8.0 For extra items, rates shall be derived from similar item rates included in the schedule of work. Where there is no such similar item available in the schedule, rate shall be analyzed as follows:

 Rate for extra item = Cost of material including transportation for delivery upto site (a) + cost of labour inclusive of all necessary tools, tackles, equipment, machinery and consumable (b) required to carry out the work + 15% of (a+b) towards profit and overhead + taxes, duties etc. as applicable.
- 9.0 Quantity of the item i.e. nos of pallet positions may vary while issuing the work order. Racking System inside Dry Chamber no 8 (for 264 Pallet Positions) may not be executed. In that case total quantity will get reduced from 2250 to 1986 nos. However, in all such cases, the price should remain firm and irrevocable and not subject to any change till the completion of Scope of Work.

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PRICED PART (PART-II)

Tender No. EP / TCW/ BHU /RACK / 09

Item no.	Brief Item Description	Unit	Quantity	Unit Rate (Rs)	Amount (Rs)
1	Design, Manufacturing, Supply (loading, transportation, transit insurance, unloading at site), Safe storage at site, Assembly, Erection and Commissioning of Double Deep Steel Racking System for accommodating 2250 Pallets of 1.2M x 1.0M, Size: approx. 2810mm Clear Width, rack to rack height 2.2/1.95M (as per drawing), 1000mm depth, upright height as per drawing, 6 High elevation, i.e. 6 loading levels including ground, 2 pallets per unit, loading per pallet is 1000kg. Racking shall withstand (-) 25 Deg C Temperature of frozen chamber as well as ambient temperature with all accessories, safety devices, painting, foundation bolt etc. strictly as per the drawing and technical specification complete in all respects i.e. with all accessories as mentioned such as guards, signages, stoppers etc.	Nos.	2250		TO BE ED HERE
2	Add for GST	%			
3	TOTAL CONTRACT PRICE WITH GST				

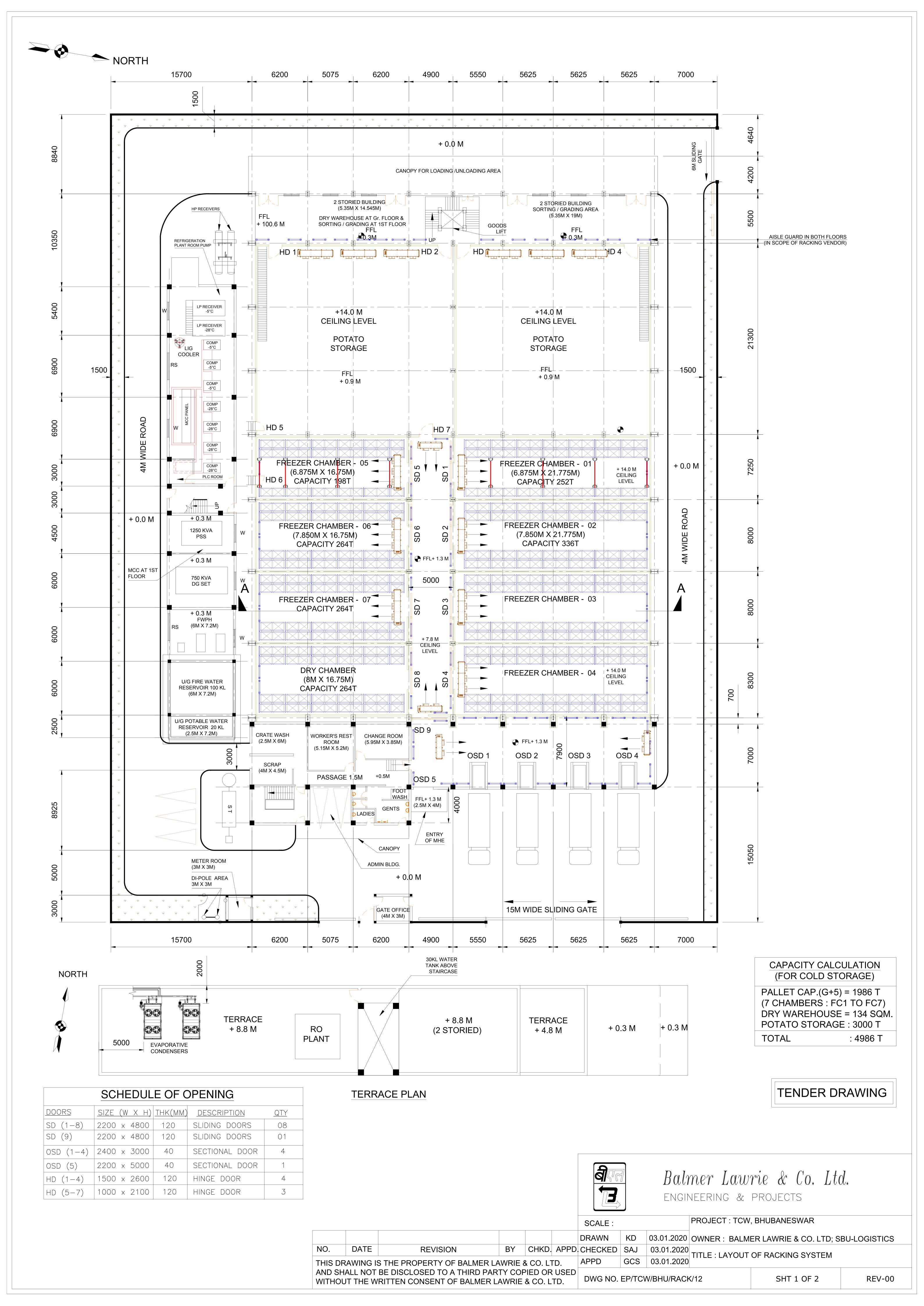
Note:

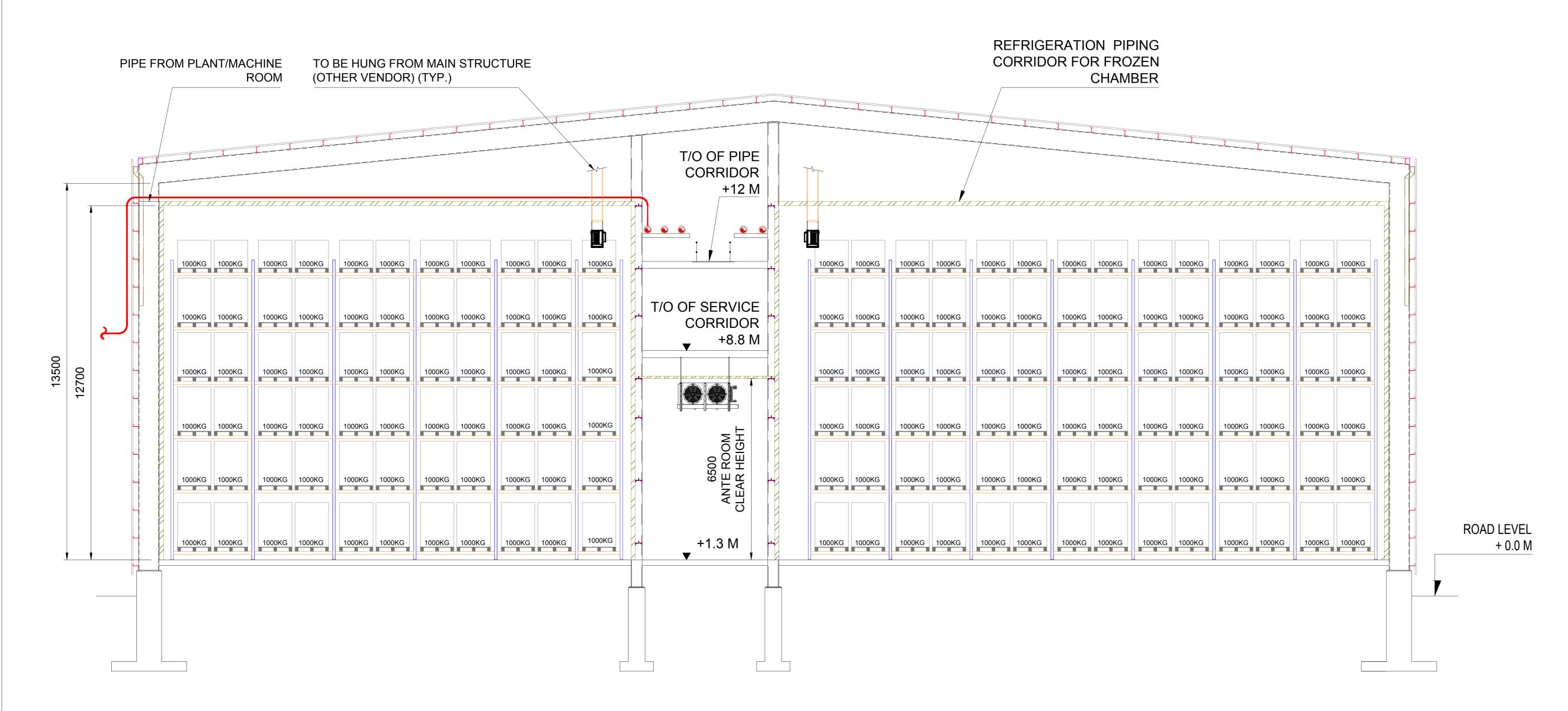
- 1) Unit No/Qty. refers to Pallet Positions.
- 2) Please fill up, sign, stamp, scan and upload the abovementioned Price Bid in 'Bid Common Form' in e-procurement portal of Balmer Lawrie.
- 3) Bidders shall not modify the unit or quantity of this price schedule which may lead to disqualification of bid.

Name of the Bidder : Signature :

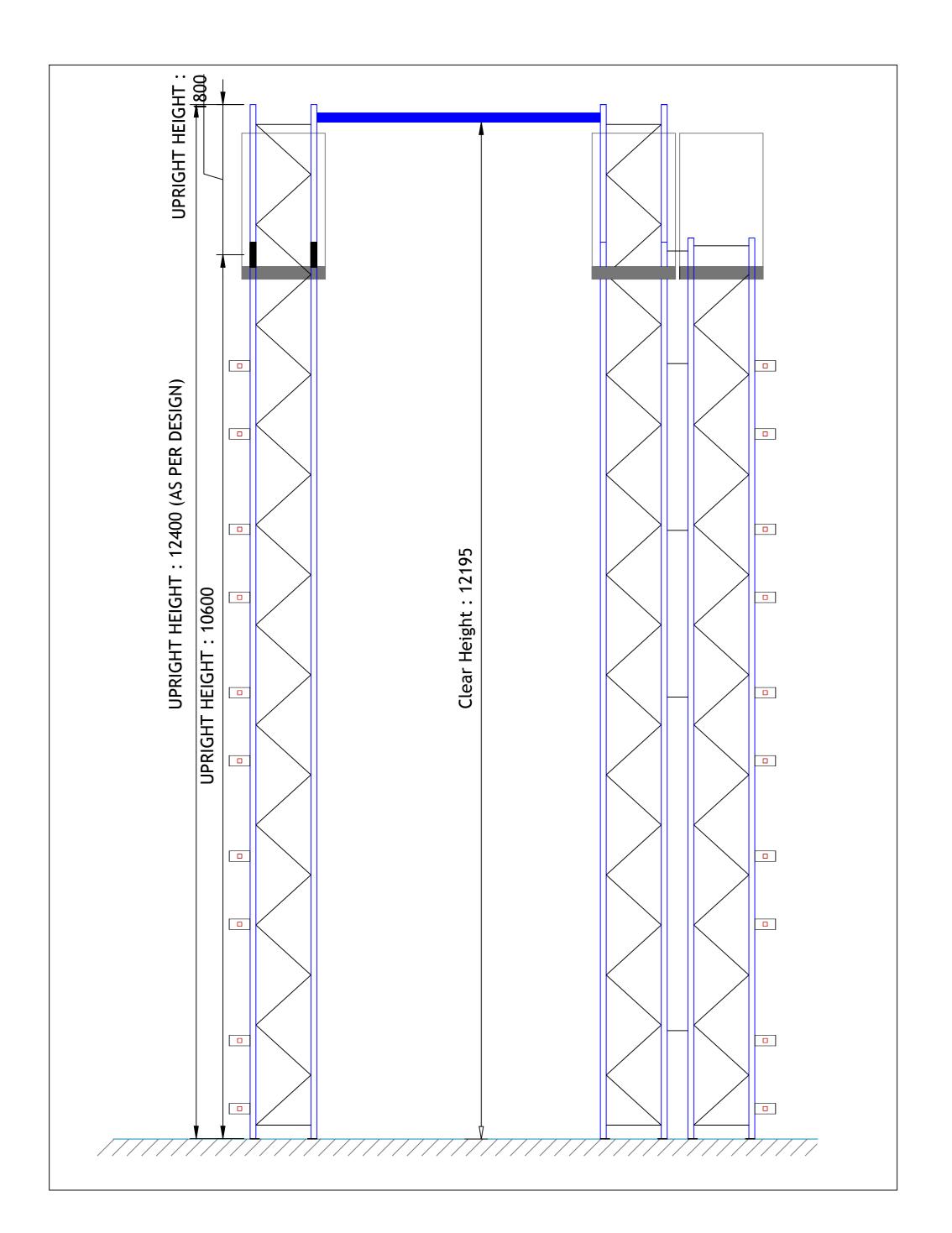
Seal of the

Company : Date :

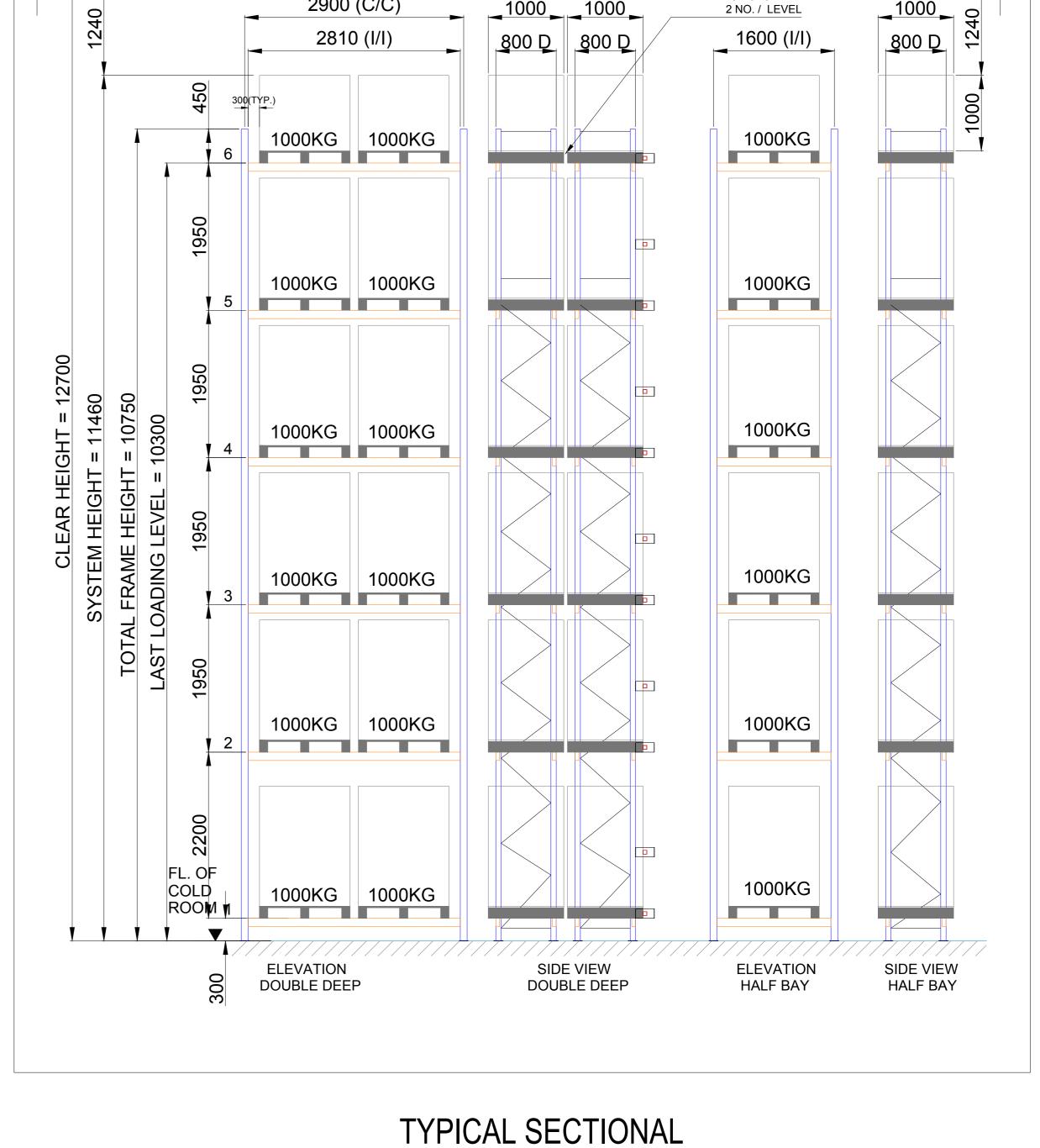




SECTION VIEW OF "A-A"



FOR CHAMBER 1 & 5 (SEE PLAN)

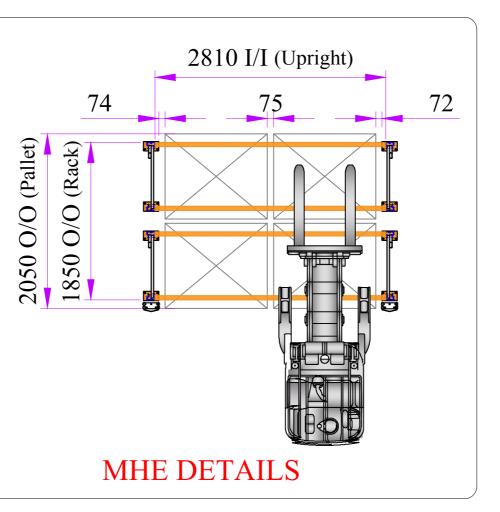


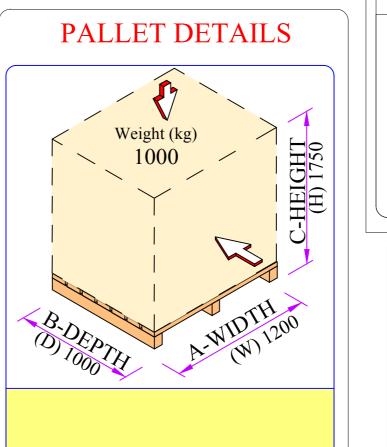
PALLET BACK STOPPER

ELEVATION OF RACKING

MHE DETAILS

DOUBLE DEEP REACH TRUCK CAPACITY - 1.4 - 2MT LAST LOADING LEVEL: 10.3 M CLOSE MAST HEIGHT: MAX 4.6 M LIFT HEIGHT: MIN 10.7 M AISLE SPACE: 3.3 M





Achieved Pallet Capacity 7 Cold Chambers - 1986 1 Dry Chamber - 264 Total Capacity - 2250

ACCESSORIES

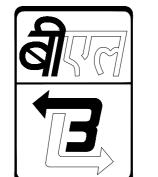
- Row Guards- at end of Chamber, Ante room, Docking area.
- 2. Upright Guards-in front of every uprights in picking aisle.
- Pallet Stopper -in every loading level.

TENDER DRAWING

IN SCOPE OF

RACKING

VENDOR



Balmer Laurie & Co. Ltd.

ENGINEERING & PROJECTS PROJECT: TCW, BHUBANESWAR SCALE:

DATE REVISION THIS DRAWING IS THE PROPERTY OF BALMER LAWRIE & CO. LTD. AND SHALL NOT BE DISCLOSED TO A THIRD PARTY COPIED OR USED

WITHOUT THE WRITTEN CONSENT OF BALMER LAWRIE & CO. LTD.

GCS 03.01.2020

03.01.2020 OWNER: BALMER LAWRIE & CO. LTD; SBU-LOGISTICS

BY CHKD. APPD. CHECKED SAJ 03.01.2020 TITLE : SECTIONAL DETAILS OF RACKING SYSTEM

DWG NO. EP/TCW/BHU/RACK/12

SHT 2 OF 2

REV-00