



(A Govt. of India Mini Ratna Company under Ministry of Defence)

TENDER DOCUMENT

Tender Notice No. 6300040573

Dated: 25.05.2026

Engineering, Procurement & Construction pertaining to establishment of Rail coach factory including Civil Construction of manufacturing block, testing bay, other utility buildings (Non factory buildings), Railway Track sidings, water supply and distribution System, Roads, Drainage and sewerage systems, General Electric works including regular and emergency power supply and distribution system, related installations & services (Fire, Gas, Compressed air, IT, BMS, etc.), MFA (Miscellaneous fixed assets) and other Land & Site development works including grading, levelling works in connection with setting up of a Rail Coach Factory hereinafter referred as BEML RAIL HUB FOR ADVANCE MANUFACTURING (BRAHMA) near Umaria village, Obaidullaganj, District- Raisen, Madhya Pradesh (India) PIN code 464993 on EPC Mode.

Issued by

(Atul Thombre)

Sr. Manager

**BRAHMA Rail Plant, BEML Ltd., Chittod Complex, Zone-1 MP Nagar,
Bhopal, Pin-462011**

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2.0 NOTICE INVITING TENDER (NIT)

This "Notice Inviting Tender" hereinafter referred to as the 'NIT' is designated as the tender for ***“Engineering, Procurement & Construction pertaining to establishment of Rail coach factory including Civil Construction of ANUFACTURING BLOCK, testing bay, other utility buildings (Non factory buildings), Railway Track sidings, water supply and distribution System, Roads, Drainage and sewerage systems, General Electric works including regular and emergency power supply and distribution system, related installations & services (Fire, Gas, Compressed air, IT, BMS, etc.), MFA (Miscellaneous fixed assets) and other Land & Site development works including grading, levelling works in connection with setting up of a Rail Coach Factory hereinafter referred as “BEML RAIL HUB FOR ADVANCE MANUFACTURING (BRAHMA)”near Umaria village, Obaidullaganj, District- Raisen, Madhya Pradesh (India) PIN code 464993 on EPC Mode.”.***

Tender Notice No.	6300040573 Date: 25.05.2026
EMD (Earnest Money Deposit)	Rs. 6.00 Crore In Words - Six crore rupees only.
Completion Period	18 Months
Pre bid Meeting at BEML, Bhopal	06.06.2026 at 10.30 Hrs
Due Date & Time for Submission of Tenders	09.07.2026 at 13.00 Hrs
Date & Time of Opening of Technical Bid	09.07.2026 at 13.30 Hrs
Defect liability Period	One year from the date of final handing over completed project.
Date of Bidders presentation	Presentation, as part of QCBS evaluation, to be made by the bidders team within 3 working days from the date of communication from BEML

Address for Communication - Interested eligible Bidders may obtain further information from the following address -

Sh. Atul Thombre, Sr. Manager, BEML Ltd,

BRAHMA Rail Plant Bhopal, Chittod Complex, Zone-1, MP Nagar, Bhopal, Pin-462011

E-Mail - atulthombre@bemltd.in, Mobile: 9632270759

Sh. Nagendra Mishra, Sr. Manager, BEML Ltd,

BRAHMA Rail Plant Bhopal, Chittod Complex, Zone-1, MP Nagar, Bhopal, Pin-462011

E-mail - nagendra.mishra@bemltd.in, Mobile: 8318667229

Sh. Vinodh Kumar K R, Sr. Manager, BEML Ltd,

BRAHMA Rail Plant Bhopal, Chittod Complex, Zone-1, MP Nagar, Bhopal, Pin-462011

E-mail - vinodhkumar.kr@bemltd.in, Mobile: 8285252187

Quotations are invited from capable & eligible EPC contractors for the tendered work as above.

Quotations should be submitted online (E-mode) in SRM Portal of BEML, Ltd in 02-Bid system as below:

- **Technical Bid (Part-A, A1) – through e-mode (BEML SRM portal)**
- **Financial Bid (Part-B - through e-mode (BEML SRM portal)**

Note:

- 1) The selection of suitable bidder shall be through Quality & Cost Based Selection (QCBS) process. Financial bids of only technically acceptable firms with score more than 75 out of 100 marks against stipulated criteria will only be opened and considered for further evaluation by BEML.
- 2) No Financial terms to be indicated in the technical bid else the offers of such bidders will be summarily rejected and not considered for further evaluation.
- 3) The intending bidders should only submit their Bid if they consider themselves meeting the eligibility and qualification criteria.

TYPE OF TENDER

The tender consists of two parts: -

Sl. No.	Nature of Bid	Mode of Submission	of RFP
1	Technical Bid	E-mode (BEML SRM Plat form)	Technical Bid Submission
2	Financial Bid	E-mode (BEML SRM platform)	Financial Bid Submission

BEML to receive Bids comprising of Technical Bid and Financial Bid through e-mode SRM portal from prospective Bidders desiring to be selected as Contractor for construction of manufacturing blocks, testing bay, other utility buildings (Non factory buildings), Railway Track sidings, water supply and distribution System, Roads, Drainage and sewerage systems, General Electric works including regular and emergency power supply and distribution system, related installations & services (Fire, Gas, Compressed air, IT, BMS, etc.), MFA (Miscellaneous fixed assets) and other Land & Site development works including grading, levelling works in connection with setting up of a Rail Coach Factory near Umaria village, Obaidullaganj, District- Raisen,

Madhya Pradesh (India).PIN code : 464993

C. General Instructions to Bidders

The Bidders are advised to carefully go through, read and understand this tender documents completely including terms and conditions, Annexures and Appendices etc. before submitting bids.

- a. This NIT is not transferable under any circumstance.
- b. All entries in the NIT shall be in English either typed or written legibly. Erasing, over-writings and use of correction fluids are not permitted. All cancellations and insertions should be duly signed / attested by bidder concerned.
- c. All the corresponding documents shall be attached along with the quotation/offer at the first instance at the time of submission of the bid.
- d. Late and/or incomplete bid shall not be considered.
- e. Canvassing in any manner including unsolicited letters and request for post tender corrections shall render offers of such parties liable for rejection.
- f. Bidder shall ensure that all the information & documents submitted by them are true & correct.
- g. In case, it comes to the knowledge of BEML that the bidder has submitted false information before awarding of contract then the offer would be rejected.
- h. In the event, it comes to the knowledge of BEML Ltd. that the successful bidder has submitted false information, subsequent to the award of contract, the contract shall be cancelled/short closed by the company and shall invoke "Risk purchase clause" with liabilities on such bidder for the entire contract quantity. The PBG shall also be encashed as a result of consequence of breach of contract at the discretion of BEML Ltd.
- i. In case any person/persons, Company, firm, Associations having any litigation, arbitration cases between themselves and BEML Ltd, pending before any court of law/ Arbitrator shall not be eligible to participate in this tender and a list of pending/ongoing litigation where bidder has been black listed or which may result in black listing or debarment of the bidder in future may be intimated at the time of the submission of the bid
- j. Non-compliance with any of the tender conditions, incomplete offers, conditional and ambiguous offers are not acceptable and liable for rejection.
- k. The bidder shall fill in all the required particulars in the blank space provided for the purpose in the tender document.
- l. All the documents shall be uploaded in SRM Portal.
- m. Fax/email quotations are not acceptable.
- n. BEML reserves the right to accept or reject all tenders or any tender in part or full without assigning any reasons thereto, which is final & binding on the Bidder.

This tender document is available on BEML SRM e-portal (i.e. <https://bemlepci.bemlindia.in:50001/irj/portal> BEML website (www.bemlindia.in) & CPPP portal for downloading and study of documents. **However potential bidders have to submit their bids in BEML SRM e-portal only.** Bidders willing to participate in the tender may contact through e-mail: admin.srm@beml.co.in to obtain the user name & password for submitting the bids.

In case of any queries relating to bid submission, you may send the same by e-mail to admin.srm@beml.co.in & anithak@bemltd.in you may contact BEML SRM Team on phone no. 080- 22963269/141 on working days from Monday to Friday (9 AM to 5 PM) or atulthombre@bemltd.in

Note: To participate in this e-tender bidder should have a valid Class III Organization Digital Signature with Signing and Encryption issued by authorized Certifying Authority.

2.3 Clarifications

A bidder requiring any technical / document clarification may obtain clarification during pre-bid meeting or may email to nagendra.mishra@bemltd.in & atulthombre@bemltd.in & vinodhkumar.kr@bemltd.in 10 days before tender closing date.

2.4 Site visit for the subject tender is mandatory-

The tenderers shall visit the site and acquaint themselves of the prevailing local conditions, soil conditions, geography of the area etc., before submitting their bid. The bidder may visit the site at their own responsibility and cost to understand the scope of work and acquaint themselves of the prevailing local conditions before submitting their bid. Bidders shall not have any claim against BEML on these accounts at any time with regard to their site visit. Bidder have to enclose a certificate issued by the authorized officer of BEML Bhopal at site for having visited the site or else the offer may be liable for rejection.

For visiting the Site, the bidder shall contact the following officer.
Project Manager, BEML Bhopal, Mr. Nagendra Mishra. (8318667229)

2.5 Requisite of Bidders:

Subject to provisions in the Tender Document, participation in this Tender Process is open to all bidders who fulfil the 'Eligibility' and 'Qualification criteria'. Bidder should meet the following requirements.

- a. The Bidder shall be any Private, Public, Quasi Govt, PSU, Govt Organisation and must be a registered company/entity with valid GSTIN, PAN, ESI, PF & CIN etc.,
- b. Bidder must fulfil qualification criteria of tender.

- c. Must not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of aforesaid reasons.
- d. Bidder must not be stand declared ineligible/ blacklisted/ banned/ debarred by the Procuring Organization or its Ministry/ Department from participation in its Tendering Processes. **(Annexure-13 A)**
- e. Bidder must not be convicted (within Five years preceding the last date of bid submission) or stand declared ineligible/ suspended/ blacklisted/ banned/ debarred by appropriate agencies of public sector undertaking/Government of India from participation in Tender Processes of all of its entities, for: **(Annexure 13)**
 - i. offences involving moral turpitude in business dealings under the Prevention of Corruption Act, 1988 or any other law; and/or
 - ii. offences under the Indian Penal Code or any other law for causing any loss of life/ limbs/ property or endangering Public Health during the execution of a public procurement contract and/ or
 - iii. suspected to be or of doubtful loyalty to the Country or a National Security risk as determined by appropriate agencies of the Government of India.
- f. Bidder must not have changed its name or created a new "Allied Firm", consequent to having declared ineligible/ suspended/ blacklisted/ banned/ debarred as above.
- g. Bidder must not have an association (as a bidder/ partner/ director/ employee in any capacity) of any retired personnel (of Gazetted Rank) or any retired Gazetted Officer of the Central or State Government or its Public Sector Undertakings if such a retired person has not completed the cooling- off period of one year after his retirement. However, this shall not apply if such managers/ officers have obtained a waiver of the cooling- off period from their erstwhile organization.
- h. Bidder must not have an association of the near relations of executives of BEML Ltd involved in this Tender Process.
- i. Bidder must not have a conflict of interest, which substantially affects fair competition. The prices quoted should be competitive and without adopting any unfair/unethical/anti-competitive means. No attempt should be made to induce any other bidder to submit or not to submit an offer for restricting competition.
- j. This NIT, Purchase Order or any agreement hereinafter, shall not create an employer or employee relationship between the parties, its employees, agents, sub- contractors or alike, of any nature whatsoever.
- k. The successful bidder shall hold BEML indemnified and harmless against any or such acts or omissions of its employees, agents, sub-contractors or alike, of any nature whatsoever.
- l. Bidder must not have any litigation or arbitration, with respect to breach of contract, pending against BEML Ltd. (**Annexure- 14**)

- m. Bidder shall comply with restrictions of public procurement as per conditions laid down in GFR Rule 144(xi) of General Financial Regulations (GFR) 2017 or bidder from countries sharing a land border with India (or their subsidiaries/ controlled entities) must be registered with the DPIIT to be eligible. Sub-contracting to such entities is prohibited without registration. A land sharing declaration is mandatory, and false declaration will lead to cancellation of bid or cancelation of the contract whichever is earlier.

3. SUBMISSION OF BIDS IN SRM PORTAL AND ELIGIBILITY & QUALIFICATION CRITERIA

A. Submission of Bids:

Tender is in Two-BID system (Technical & Financial Bid).

(Technical & Financial Bid) Bids should be submitted e-mode (SRM Portal) only as follows:

B. Pre-Bid Meeting:

The bidder or his authorized representative with the authorization letter of the firm is invited to attend the PRE-BID MEETING which will take place at BEML Ltd., Ground Floor, Chittod complex, Zone-1 MP Nagar, Bhopal Pin-462011 on date & time as stated in the Tender.

The purpose of the Pre-Bid meeting is to clarify issues related to the tender and to address queries on any matter that may be raised at that stage.

C. Submission of Technical Bid (Through e-mode on BEML SRM system)

The technical bids shall be uploaded in SRM e-portal only.

Please upload the following scanned documents in the Collaboration Folder in the SRM-portal, in C-folder (Part- A & Part- A1 of technical bid for eligibility & qualification criteria as part of Technical Bid. Bidders will be technically qualified based on providing documentary proof for each of the eligibility & qualification criteria clause. If bidder is not complying for these clauses or not uploaded required documents, their bid will be liable for rejection.

Final technical acceptance of the bid will be based on the documentary evidence and if a bidder fails to upload/provide documentary evidences, in such cases bid will be rejected.

Bidders will be technically qualified based on providing documentary proof for each of the below mentioned documents in Technical Bid.

This is an E-mode of Tendering through SRM and evaluation shall be done on QCBS Method and Complete Process as explained here under the heading **Evaluation & qualification criteria**. Any manual or technical errors committed before uploading or during the process of uploading the Document shall bound to be duly accepted by the Bidders. The Bidders shall not have claim whatsoever in this regard.

The Experience and requisite Documents should be in the name of Bidder only and prior experience as any other business entity and / or requisite documents in the name of any other business entity shall not be considered.

D. EVALUATION AND QUALIFICATION CRITERIA

Bidders has to upload all supporting documents duly self- attested with seal along with the Tender for the following criteria failing which offer is liable for rejection

Technical Bid (PART – A) - Pre-Qualification

SN	PARTICULARS	BEML'S REQUIREMENT (To be submitted)	Remarks
ENVELOPE – A - Pre-Qualification			
1	Check List	Annexure-1	To be submitted Thru SRM portal
2	Earnest Money Deposit (EMD)		
3	Bid form	Annexure-2	
4	General Declaration Certificate	Annexure-3	
5	Financial Capacity of Bidders	Annexure-4	
6	Power of Attorney	Annexure-5	
7	Solvency Certificate	Annexure-17	
8	Integrity Pact Agreement	Annexure-6 Annexure-J1	
9	Bid Guarantee format (for submission of EMD other than online payment/DD/Bankers Cheque)	Annexure-7	
9	Compulsory site visit certificate issued by BEML	Annexure-8	

Technical Bid Part-A (Pre-Qualification) bid should have following documents, The bidders shall mandatorily meet all of the following criteria to be eligible to participate in further evaluation.

- 1) Earnest Money Deposit (EMD)
- 2) Information in the prescribed format as in (Annexure-2 to Annexure-4- i.e Bid form, General declaration form, Financial capacity of the bidders) and supporting documents.
- 3) Power of Attorney for Signing of Bid in Annexure-5.
- 4) Integrity Pact Agreement – Annexure-6 & J1
- 5) Bid Guarantee format (for submission of EMD other than online payment/DD/Bankers Cheque) -Annexure-7

6) Annexure- 8 & Annexure- 17

The bidder should have at least an average annual turnover in India of INR 162.00 Cr. during the last three years, 2023-24, 2024-25 & 2025-2026 Documents to be submitted: Audited Balance Sheet and Profit & Loss Account indicating annual turnover duly certified by the authorized signatory and Certificate from statutory auditors indicating the annual turnover of the bidders. Information to be submitted as per Annexure-4. (In the event of non-availability of audited balance sheet, profit and loss statement pertaining to FY- 2025-26, provisional document duly signed and certified by statutory auditor can be submitted.)

Note:

- (i) The Bidders must ensure that the documentary proofs to substantiate clauses above are given, without which their bid will not be considered.
- (ii) Relevant documents are to be meticulously uploaded by the bidder as part of the technical bid.
- (iii) Please ensure that no price details are mentioned in the technical bid. Offers with price details in Technical Bid will not be considered & liable for rejection.
- (iv) Incomplete/invalid tenders will be rejected and no correspondence will be entertained in case of rejection.

E. Technical Bid – Part-A1 (Quality and cost-based selection)

Sl. no.	Eligibility Criteria	Supporting Documents
1	Bidder has to upload the compliance of Scope of work as indicated in Annexure – 9	Upload compliance for scope of work as per Annexure-9
2	Bidder has to upload the compliance of Bill of Quantity (BOQ) As indicated in Appendix – C	Upload compliance for BOQ as per Appendix – C (Signed scope to be uploaded as token of compliance)

Sl. no.	Eligibility Criteria	Supporting Documents
3	Must be Indian Registered Company under Companies Act 1956/ Public or corporation, registered with the appropriate government authority as / Limited company/ Private limited company/ and shall be in the Construction business for at least last 5 years (LLP, Proprietorship or Partnerships and Joint ventures are not allowed)	Copy of the incorporation / registration certificate clearly indicating the nature of business.
4	<p>The bidder should have valid Class I contractor enlistment with Central / State Government department for civil works.</p> <p>And</p> <p>The agency themselves should have a valid Electrical contractor licence of appropriate voltage issued by any state Govt. Under clause 45 of Indian Electricity Rules 1956 or as amended from time to time.</p> <p>Or</p> <p>Should engage an Electrical Contractor for execution of Electrical Work, who has the above mentioned Licence and requisite experience. In such case, the main agency shall give an Undertaking in the Technical Bid that he would engage an Electrical Contractor who possesses a valid Electrical contractor licence of appropriate voltage issued by any state Govt. Under Clause 45 of Indian Electricity Rules 1956 or as amended from time to time. The clause shall be incorporated in the tender documents.</p>	(Please submit the proof of the same.)
5	Original Authorization Letter to sign the Tender/Power of Attorney to sign the Tender	Annexure-5
6	Letter of Transmittal on bidder letter Head to submit Technical Bid	(Annexure-11)
7	Must possess a valid CIN GST, PAN, ESIC, EPFO number	Copies CIN, GST, PAN, ESIC, EPFO, ESI / PF details to be enclosed
8	Name, Address, details of the Organization, Name(s) of the Owner/Partners/Promoters and Directors of the firm/company.	(Annexure-12)

Sl. no.	Eligibility Criteria	Supporting Documents
9	Bidder must not be stand declared ineligible/ blacklisted/ banned/ debarred by the Procuring Organization or its Ministry/ Department from participation in its Tendering Processes.	(Annexure-13 & Annexure- 13A)
10	Letter of understanding the project site on bidder letter Head (Site Visit certificate)	ANNEXURE-8
11	Contact details of the bidder	(Annexure-12)
12	NIT ACCEPTENCE LETTER: Letter has to be uploaded by the bidders stating that they have read, understood and agreeing to all tender terms and conditions of the tender.	(Annexure-15)
13	Average annual financial turnover should be at least Rs. 162 Crores during the immediate last three consecutive financial years ending 2025-26. The turnover, profit, net worth certificates must be certified by Statutory Auditor of the firm/company.	Annexure-4
14	The Contractor should not have incurred any loss in more than 2 years in last five financial years. This should be duly audited by Chartered Accountant. Any such certificate must carry UDIN (Unique Document Identification Number).	Annexure-16
15	The bidder should have a solvency of an amount of Rs. 216 Crores. The solvency certificate should be from a Nationalized /Scheduled bank and must have been issued after the date of publication of NIT & be addressed to the tendering authority quoting the name of the work. The solvency certificate should not be dated beyond the last date of submission of the bids. The certificate should carry the name, designation & power of attorney number of the bank official.	Annexure-17

Sl. no.	Eligibility Criteria	Supporting Documents
16	<p>The contractor should have satisfactorily completed works of similar nature during last 07 years ending last day of the month previous the one in which the tenders are invited.</p> <p>One similar* completed works of value each not less than Rs. 431 Crore</p> <p>Or</p> <p>Two similar* completed works of value each not less than Rs. 269 Crore</p> <p>Or</p> <p>Three similar* completed works of value each not less than Rs. 216 Crore.</p>	Annexure-18
17	<p>The Bidder should have successfully completed an Industrial/infra structure/ commercial project during last 07 years on design and build basis with total construction area (Built up area) of structural Shed and/or RCC Buildings combined together should not be less than 43,500 Sqm.</p>	Annexure-18A
18	<p>The Bidder should have executed steel fabrication work to the tune of minimum 9,000 MT in a single contract. Performance certificate clearly specifying the details of project and Tonnage of structural fabrication work satisfactorily completed, to be enclosed by bidder.</p>	Annexure-18B
19	<p>The bidder should have executed RCC Work to the tune of minimum 28,700 CuM in a single contract.</p>	Annexure-18C
20	<p>The bidder should have the credential of having executed civil constriction works of similar nature or any work pertaining to Industrial/infra structure/ commercial Project (Involving Fabrication and /or RCC) of minimum value of Rs.20 Crore per month on an average in a completed contract. (This should be the billing amount against works and not the advance received, if any)</p> <p>Substantial documentary evidence to be provided in support of above</p>	Annexure-18D

Sl. no.	Eligibility Criteria	Supporting Documents
21.	<p>The Bidder should have in-house engineering Capability and/or should associate with a capable design firm necessarily in the field of Civil & Structure and MEP out of the following disciplines</p> <ul style="list-style-type: none"> i. Civil & Structure ii. MEP iii. IT & Data Communication <p>For IT & Data Communication the bidder is required to submit an undertaking that in case they become successful bidder, they will engage an expert agency with the approval of BEML to execute the works pertaining to this field.</p> <p>Bidder is required to submit Organogram of engineering setup available with them. And they should have successfully executed. minimum 02 projects pertaining to Railway workshops/ Industrial/commercial/Institutional Project involving all above disciplines during last 07 years with In-House Capability in at least Civil & Structure and MEP discipline.</p> <p>In case of association with design firm, the credential of design firm(s) should be submitted along with the bid.</p>	Annexure-18E
<p>Similar* work shall mean Railway workshops, Industrial project (Manufacturing industries, Process Industries, Power Plants, and Metro depots), Airport terminals.</p> <p>Point no. 16 to 21 & (Annexure- 18A-18E), - Works experience will be considered of last 7 years ending last day of month previous to the one in which tenders are invited</p> <p>The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion to the last date of receipt of applications for tenders.</p> <p>Note:</p> <ol style="list-style-type: none"> 1. Work Orders, Agreement, Completion Certificates to be submitted 2. TDS (26 AS) downloaded from the web matching with the experience certificate should be attached. <p>Experience certificate issued by the same management/sister concern/ joint ventures to its partner(s) / as a sub-contractor etc. are not acceptable. However, in the event of work executed in partnership/association, the certificate issued by the customer to individual partner(s) for the extent of work executed may be considered.</p>		

Sl. no.	Eligibility Criteria	Supporting Documents
22	Equipment & Machinery required for construction of factory Bidder should have following construction equipment and machinery of specified number/quantity in full working order, in their own name or should have assured access to these through hire, lease, purchase agreement or other Financial/commercial means. Self-certification in this regard from bidder is mandated. BEML reserves the right to ask for copy of the registration and fitness certificate.	Bidder shall submit a self- certified certificate on their company Letter head confirming the listed equipment as per Annexure-19 is either owned or the bidder has assured access through hire, lease, purchase agreement, other commercial/Financial means, in full working order.

Sl. no.	Eligibility Criteria			Supporting Documents
	SL A	Concreting Machineries	Nos	
	1	Batching Plant 30 cum incl Silo (CP30)	1	
	2	Transit Mixer	8	
	3	Boom Pump	2	
	4	Backhoe Loader	1	
	5	JCB	1	
	6	Concrete Pump	2	
	B	Common Machineries	Nos	
	1	Trailer	2	
	2	Farana	2	
	3	JCB	1	
	4	Tractor with trolley	2	
	5	Mini Truck	1	
	6	Water Tanker 12KL	1	
	7	Gas cutting equipment	200	
	8	Welding equipment	200	
	C	Reinforcement Steel	Nos	
	1	Bar bending machine	10	
	2	Bar Shearing machine	10	
	D	On-site fabrication/PEB Works Machineries	Nos.	
	1	Crawler Crane 150MT	2	
	2	Crawler Crane 75/90/100MT	4	
	3	Tyre mounted 50 MT Crane	2	
	4	Manlift 120 Ft	6	
	5	Hydra (New Generation 23 MT)	2	
	6	Hydra (New Generation 15 MT)	3	
	7	Tailor (40T)	2	
	8	Goliath Crane	1	
	E	Earthwork Equipment	Nos	
	1	20–22T Excavator	4	
	2	30–35T Excavator	8	
	3	Rock Breakers (attachments)	3	
	4	Wheel Loader	2	
	5	Vibratory Roller	1	
	6	Tippers (16–20T)	30	
	7	Water Tankers (04 KL/05 KL)	2	
	Firm to arrange to supply all required tools & tackles, required equipment for construction of the plant.			

Sl. no.	Eligibility Criteria	Supporting Documents																																																																								
23	Key personnel's and their minimum qualification Form-Annexure-20 & Annexure-21 to be certified on the company letter head by the HR Head or Head of the company that the same are available on the Payroll of the company																																																																									
	<table><tr><th>S. No.</th><th>Position</th><th>Qualification</th><th>No's of persons</th></tr><tr><td>1</td><td>Project Manager</td><td>Bachelor degree in Civil Engineering</td><td>1</td></tr><tr><td>2</td><td>Construction Manager</td><td>Bachelor degree in Civil Engineering</td><td>1</td></tr><tr><td>3</td><td>Planning Manager</td><td>Bachelor degree in Civil Engineering</td><td>1</td></tr><tr><td>4</td><td>Planning Engineer</td><td>Bachelor degree in Civil Engineering</td><td>1</td></tr><tr><td>5</td><td>Design Manager</td><td>Bachelor Degree in Architecture or Civil Engineering</td><td>1</td></tr><tr><td>6</td><td>Lead Architect</td><td>Bachelor Degree in Architecture or Civil Engineering</td><td>1</td></tr><tr><td>7</td><td>Lead Structural Engineer</td><td>Masters in Structural Engineering</td><td>1</td></tr><tr><td>8</td><td>Sustainability Manager</td><td>Bachelor Degree in Environment/sustainability Engg.</td><td>1</td></tr><tr><td>9</td><td>Structural Engineer</td><td>Masters in Structural Engineering</td><td>1</td></tr><tr><td>10</td><td>Lead Mechanical Engineer</td><td>Bachelor degree in Mechanical Engineering</td><td>1</td></tr><tr><td>11</td><td>Mechanical Engineer</td><td>Bachelor degree in Mechanical Engineering</td><td>1</td></tr><tr><td>12</td><td>Lead Electrical Engineer</td><td>Bachelor degree in Electrical Engineering</td><td>1</td></tr><tr><td>13</td><td>Electrical Engineer</td><td>Bachelor degree in Electrical Engineering</td><td>1</td></tr><tr><td>14</td><td>Construction Engineer</td><td>Bachelor degree in Civil Engineering</td><td>2</td></tr><tr><td>15</td><td>HSE Engineer</td><td>Bachelor degree in Civil/ Mechanical Engineering</td><td>1</td></tr><tr><td>16</td><td>QA/ QC Engineer</td><td>Bachelor degree in Civil/ Mechanical Engineering</td><td>1</td></tr><tr><td>17</td><td>Quantity Surveyor</td><td>Bachelor degree in Civil Engineering</td><td>1</td></tr></table>	S. No.	Position	Qualification	No's of persons	1	Project Manager	Bachelor degree in Civil Engineering	1	2	Construction Manager	Bachelor degree in Civil Engineering	1	3	Planning Manager	Bachelor degree in Civil Engineering	1	4	Planning Engineer	Bachelor degree in Civil Engineering	1	5	Design Manager	Bachelor Degree in Architecture or Civil Engineering	1	6	Lead Architect	Bachelor Degree in Architecture or Civil Engineering	1	7	Lead Structural Engineer	Masters in Structural Engineering	1	8	Sustainability Manager	Bachelor Degree in Environment/sustainability Engg.	1	9	Structural Engineer	Masters in Structural Engineering	1	10	Lead Mechanical Engineer	Bachelor degree in Mechanical Engineering	1	11	Mechanical Engineer	Bachelor degree in Mechanical Engineering	1	12	Lead Electrical Engineer	Bachelor degree in Electrical Engineering	1	13	Electrical Engineer	Bachelor degree in Electrical Engineering	1	14	Construction Engineer	Bachelor degree in Civil Engineering	2	15	HSE Engineer	Bachelor degree in Civil/ Mechanical Engineering	1	16	QA/ QC Engineer	Bachelor degree in Civil/ Mechanical Engineering	1	17	Quantity Surveyor	Bachelor degree in Civil Engineering	1	
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F. SCORING CRITERIA

The bidder meeting the eligibility criteria will be evaluated by scoring method on the basis of details furnished by them

- a. Financial strength -Maximum 20 Marks (Last Three years)
- b. Experience in similar nature of work - Maximum 40 Marks (Past 07 years)
- c. Plant and Equipment- 07 Marks
- d. Key personnel -Maximum – 15 Marks
- e. Presentation - Maximum 18 Marks

Gross Marks Total 100 Marks

Sr N	Attributes	Maximum	Evaluation
FINANCIAL STRENGTH			
1	<p>Annual turnover for Last 03 (Three) years</p> <p>(Turnover: Average Annual financial turnover during the last Three (3) years, ending 31st March of the previous financial year ending 2026, should be Rs. 162 CR.</p> <p>(Audited copies of Profit & Loss account balance sheet for previous three financial years duly certified by CA shall be uploaded in the c- folder.)</p>	20 Marks	<p>i) 60% Marks for minimum eligibility.</p> <p>ii) 100% Marks for twice the eligibility criteria or more</p> <p>iii.) In between and - On pro-data basis</p>
EXPERIENCE IN SIMILAR NATURE OF WORK			
	Experience in similar nature of work	40 Marks	
2	<p>Note: In case of experience certificate obtained from other than Government organizations/Public Sectors, the same shall be supported with TDS certificate by the contractor.</p> <p>(Documentary proof i.e., Completion certificates clearly indicating the value of the order, final bill value, date of completion etc., shall be uploaded in the c- folder.)</p>		
	Particulars		i) 60% Marks

A.	<p>Similar work experience during last 7 years' Experience: Experience of having successfully completed similar Civil works during last 7 years ending last day of month previous to the one in which tenders are invited should have at least be either of the following.</p> <p>One similar* completed works of value each not less than Rs. 431 Crore value mentioned against work in the tender notice</p> <p>Or</p> <p>Two similar* completed works of value each not less than Rs. 269 Crore value mentioned against work in the tender notice</p> <p>Or</p> <p>Three similar* completed works of value each not less than Rs. 216 Crore value mentioned against work in the tender notice</p> <p>-10 Marks</p>	<p>for minimum eligibility</p> <p>ii) 100% Marks for twice the eligibility criteria or more</p> <p>In between (i) and (ii) - On prorata basis</p>
B.	<p>The Bidder should have successfully completed an Industrial/infra structure/ commercial project during last 07 Executed on design and build basis with total construction area (Built up area) of Industrial Shed and RCC Buildings combined together should not be less than 43,500.00 Sqm (Design and Build)- 6 Marks</p>	
C.	<p>The bidder should have the credential of having executed civil constriction works of similar nature or any work pertaining to Industrial/infra structure/ commercial Project (Involving Fabrication and /or RCC) of minimum value of Rs.20 Crore per month on an average in a completed contract. (This should be the billing amount against works and not the advance received, if any) Substantial documentary evidence to be provided in support of above- 6 Marks</p>	
D.	<p>The Bidder should have executed steel fabrication work to the tune of minimum 9,000 MT in a single contract. Performance certificate clearly specifying the details of project and Tonnage of structural fabrication work satisfactorily completed, to be enclosed by bidder. - 6 Marks</p>	

E.	The bidder should have executed RCC Work to the tune of minimum 28,700 CuM in a single contract. - 6 Marks		
F.	<p>The Bidder should have in-house engineering Capability and/or should associate with a capable design firm necessarily in the field of Civil & Structure and MEP out of the following disciplines</p> <ul style="list-style-type: none"> i. Civil & Structure ii. MEP iii. IT & Data Communication <p>For IT & Data Communication the bidder is required to submit an undertaking that in case they become successful bidder, they will engage an expert agency with the approval of BEML to execute the works pertaining to this field.</p> <p>Bidder is required to submit Organogram of engineering setup available with them.</p> <p>The Bidder should have successfully executed Minimum 02 projects pertaining to railway/workshops/industrial/commercial/Institutional Project on EPC mode each valuing not less than Rs. 216 Crore during last 07 years with In-House Capability in at least Civil & Structure and MEP discipline.</p> <p>In case of association with design firm, the credential of design firm(s) should be submitted along with the bid.</p> <p>- 6 Marks</p>		

3 PLANT AND EQUIPMENT

Plant and Machinery required for construction of factory

07
Marks

SL A	Concreting Machineries	Nos	Marks
1	Batching Plant 30 cum incl Silo (CP30)	1	1
2	Transit Mixer	8	
3	Boom Pump	2	
4	Backhoe Loader	1	
5	JCB	1	
6	Concrete Pump	2	

B	Common Machineries	Nos	Marks
1	Trailer	2	1
2	Farana	2	
3	JCB	1	
4	Tractor with trolley	2	
5	Mini Truck	1	
6	Water Tanker 12KL	1	
7	Gas cutting equipment	200	
8	Welding equipment	200	

C	Reinforcement Steel	Nos	Marks
1	Bar bending machine	10	1
2	Bar Shearing machine	10	

D	On-site fabrication/PEB Works Machineries	Nos.	Marks
1	Crawler Crane 150MT	2	2
2	Crawler Crane 75/90/100MT	4	
3	Tyre mounted 50 MT Crane	2	
4	Manlift 120 Ft	6	
5	Hydra (New Generation 23 MT)	2	
6	Hydra (New Generation 15 MT)	3	
7	Tailor (40T)	2	
8	Goliath Crane	1	

E	Earthwork Equipment's	Nos	Marks
1	20-22T Excavator	4	2
2	30-35T Excavator	8	
3	Rock Breakers (attachments)	3	
4	Wheel Loader	2	
5	Vibratory Roller	1	
6	Tippers (16-20T)	30	
7	Water Tankers (04 KL/05 KL)	2	

PRESENTATION

To be submitted in ppt form in Technical Proposal and shall be called for presentation during evaluation process (Annexure-10)

4	Understanding the Scope of project	18 Marks	3Marks
	Design Concept		6Marks
	Construction Methodology & Techniques to be adopted for Completing the project as per given timeline, logistics plan, site establishment (including porta cabin), Manpower deployment schedule		6Marks
	Work Plan, QAP including proposed team structure		3 Marks
5. KEY PERSONNEL- Marks – 15 Marks			
Table is as below ((At least 30% of key personnel should be WOMEN)			

S. No.	Position	No's of persons	Qualification	Marks based on qualification (A)	Experience	Marks based on Experience (B)	Total Marks (C= A+B)
1	Project Manager	1	Master's degree in Civil Engineering	25% of Total Marks	Total experience of over 20 years with relevant experience of 10 years	75% of Total Marks	1.5
2	Construction Manager	1	Master's degree in Civil Engineering	25% of Total Marks	Total experience of over 15 years with relevant experience of 5 years	75% of Total Marks	1.5
3	Planning Manager	1	Masters degree in Civil Engineering	25% of Total Marks	Total experience of over 10 years with relevant experience of 5 years	75% of Total Marks	1.5
4	Railway Engineer	1	Bachelor degree in Civil Engineering	25% of Total Marks	Total experience of over 10 years with relevant experience of 5 years	75% of Total Marks	0.5
5	Design Manager	1	Masters Degree in Architecture	25% of Total Marks	Total experience of over 15	75% of Total Marks	1.5

S. No.	Position	No's of persons	Qualification	Marks based on qualification (A)	Experience	Marks based on Experience (B)	Total Marks (C= A+B)
			or Civil Engineering		years with relevant experience of 5 years in design		
6	Lead Architect	1	Masters Degree in Architecture or Civil Engineering	25% of Total Marks	Total experience of over 5 years	75% of Total Marks	1
7	Lead Structural Engineer	1	Masters in Structural Engineering	25% of Total Marks	Total experience of over 15 years with relevant experience of 10 years	75% of Total Marks	1
8	Sustainability Manager	1	Bachelor Degree in Environment/ sustainability Engg.	25% of Total Marks	Total experience of over 5 years	75% of Total Marks	0.5
9	Structural Engineer	1	Masters in Structural Engineering	25% of Total Marks	Total experience of over 5 years	75% of Total Marks	0.5
10	Lead Mechanical Engineer	1	Master's degree in Mechanical Engineering	25% of Total Marks	Total experience of over 15 years with relevant experience of 10 years	75% of Total Marks	1
11	Mechanical Engineer	1	Bachelor degree in Mechanical Engineering	25% of Total Marks	Total experience of over 5 years	75% of Total Marks	0.5
12	Lead Electrical Engineer	1	Master's degree in Electrical Engineering	25% of Total Marks	Total experience of over 15 years with relevant experience of 10 years	75% of Total Marks	1

S. No.	Position	No's of persons	Qualification	Marks based on qualification (A)	Experience	Marks based on Experience (B)	Total Marks (C= A+B)
13	Electrical Engineer	1	Bachelor degree in Electrical Engineering	25% of Total Marks	Total experience of over 5 years	75% of Total Marks	0.5
14	Construction Engineer/ Road Engineer	2	Master's degree in Civil Engineering	25% of Total Marks	Total experience of over 5 years	75% of Total Marks	1
15	HSE Engineer	1	Bachelor degree in Civil/ Mechanical Engineering	25% of Total Marks	Total experience of over 10 years with relevant experience of 5 years	75% of Total Marks	0.5
16	QA/ QC Engineer	1	Bachelor degree in Civil/ Mechanical Engineering	25% of Total Marks	Total experience of over 10 years with relevant experience of 5 years	75% of Total Marks	0.5
17	Quantity Surveyor	1	Bachelor degree in Civil Engineering	25% of Total Marks	Total experience of over 5 years	75% of Total Marks	0.5

Formulation of pro-rata basis – for scoring

Criteria is value based- Turnover criteria.

For Example, Bidder A – Average Annual Turnover – Rs. 200 Cr.

(i) For meeting minimum eligibility of Average Annual Turnover (INR 162 Cr.) – 12 Marks

(ii) Pro-rata marks for the turnover value above the minimum eligibility criteria – $(8/162) * (200-162) = 1.88$

Total Marks (i)+(ii) = 12+1.88 = 13.88

- **Number based criteria for - Experience in similar nature of work**

For Example, Similar work value eligibility, 3 similar works of each more than Rs.162 Cr. which will fetch 6 marks. Additionally,

Marks for 04 Contracts	1.3
Marks for 05 Contracts	2.7
Marks for 06 Contracts	4

Same formulation shall apply for Rs. 269 Crore & 431 Crore of bid estimated value of similar work also.

Score formulation of Machinery is as below:

READ				
SL A	Concreting Machineries	Nos.		Markings per machine per Number
1	Batching Plant 30 cum incl Silo (CP30)	1	1	0.167
2	Transit Mixer	8		0.021
3	Boom Pump	2		0.083
4	Backhoe Loader	1		0.167
5	JCB	1		0.167
6	Concrete Pump	2		0.083
B	Common Machineries	Nos	Marks	Marks per Machine per No.
1	Trailer	2	1	0.0625
2	Farana	2		0.0625
3	JCB	1		0.125
4	Tractor with trolley	2		0.0625
5	Mini Truck	1		0.125
6	Water Tanker 12KL	1		0.125
7	Gas cutting equipment	200		0.000625
8	Welding equipment	200		0.000625
	Sub-Total			
C	Reinforcement Steel	Nos	Marks	Marks per Machine per No.
1	Bar bending machine	10	1	0.05
2	Bar Shearing machine	10		0.05
D	On-site fabrication/PEB Works Machineries	Nos	Marks	Marks per Machine per

				No.
1	Crawler Crane 150MT	2	2	0.125
2	Crawler Crane 75/90/100MT	4		0.0625
3	Tyre mounted 50 MT Crane	2		0.125
4	Manlift 120 Ft	6		0.041666667
5	Hydra (New Generation 23 MT)	2		0.125
6	Hydra (New Generation 15 MT)	3		0.083333333
7	Tailor (40T)	2		0.125
8	Goliath Crane	1		0.25
E	Earthwork Equipment's	Nos	Marks	Marks per Machine per No.
1	20–22T Excavator	4	2	0.071
2	30–35T Excavator	8		0.036
3	Rock Breakers (attachments)	3		0.095
4	Wheel Loader	2		0.143
5	Vibratory Roller	1		0.286
6	Tippers (16–20T)	30		0.010
7	Water Tankers (04 KL/05 KL)	2		0.143

G. SUBMISSION of FINANCIAL BID – (Through e-mode on BEML SRM system)

Bidders shall bid prices using price condition tab/as prompted in SRM portal. Bidders to quote by entering Lump Sum price and with applicable IGST or CGST & SGST or UGST in SRM portal.

The bidder should be very careful and check quoted prices carefully.

Duly filled Bill of Quantities with PRICE as per BILL OF QUANTITIES should be uploaded in SRM portal at 'Notes and price Attachments only, No Price document to be as part of technical bid under "C-folder technical attachments" otherwise bid will be rejected.

- a) Price details sent through Manual Mode/Fax/E-mail will lead to rejection of the Bid.

Price bid of only those firms shall be considered for opening who secure score more than 75 marks out of 100 against SCORING CRITERIA as mentioned above, which accounts for 70% of total evaluation.

a. Submission of Financial bid:

- Price Bid to be submitted through e-mode in SRM portal.
- Price details in specified field on SRM Portal to be submitted.

Note:

- a. Bids must be uploaded till the last date/extended date for submission

mentioned in Tender Notice/amendment.

- b. No manual Bids shall be made available or accepted for submission (except for originals of scanned copies as per sub-clause).
- c. Bidder must comply with the conditions of the e Procurement portal, including registration, compatible Digital Signature Certificate (DSC) etc. In the case of downloaded documents, Bidder must not make any changes to the contents of the documents while uploading, except for filling in the required information.
- d. BEML at its sole discretion reserves the right to seek the hard copies of the documents which are already been uploaded in SRM, through Courier / post pertaining to technical bid of this tender enquiry at a later date, if required.

In such cases, only the documents uploaded in SRM platform in original has to be couriered at the request of BEML. Any irrelevant documents furnished through courier will not be considered.

H. Bid Opening

Bids received shall be opened online at the specified date and time given in NIT or extended date and time. If the office is closed on the specified date of opening of the bids, the opening shall be done on the next working day.

I. Disclaimers and Rights of Procuring Entity

The issue of the Tender Document does not imply that the Procuring Entity is bound to select bid(s), and it reserves the right without assigning any reason to:

- a. Reject any or all of the Bids, or
- b. Cancel the tender process; or
- c. Abandon the procurement of the Services; or
- d. Issue another tender for identical or similar Services

J. Evaluation of Bidders:

The bidders meeting the qualification criteria shall be evaluated as per the Quality Cost Based System (QCBS) which will include 70% weighted score for quality (Technical bid) and 30% weighted score for the price (price bid).

Evaluation of technical proposal will be as follows:

BEML will constitute a Technical Committee to evaluate the responses of the Bidders in QCBS Method.

The Technical Committee constituted by BEML shall evaluate the responses to

the RFQ and all supporting documents/ documentary evidence. Inability to submit/upload requisite supporting documents / documentary evidence, may lead to rejection.

The decision of the Technical Committee in the evaluation of responses to the RFQ shall be final. No correspondence will be entertained outside the process of negotiation/ discussion with the Committee.

The Technical Committee may right to seek clarifications from the bidder/s for the documents already uploaded by the bidder/s at any point of time during the technical evaluation if required.

The Technical Committee reserves the right to reject any or all proposals on the basis of any deviations. Quality Cum Cost Based Selection (QCBS) Evaluation Criteria

The broad criteria for evaluation of the bids would be a Quality cum Cost Based System (QCBS) as follows:

Sl. No.	Particulars	Item	Percentage (Weightage)
1	Level-I	Technical Bid Evaluation	70%
2	Level-II	Financial Bid Evaluation	30%
3	Level-III	Combined Evaluation of Technical & Financial Bid	
		Total	100%

The score of the bidder, as per the documents submitted, shall be allotted by Evaluation committee constituted by BEML and its decision will be final.

After opening and evaluating the financial proposals of technically qualified bidders, a Relative Technical Score (RTS) & Relative Financial Score (RFS) shall be arrived based on the formulas.

i. Level-I : Technical Bid Score : The Relative Technical Score(RTS) of the Bidder shall be derived as under :

a) $RTS = (TS / HS) * 100$ where, RTS = Relative

Technical Score.

TS = Technical Score obtained by concerned Bidder.

HS = Highest Technical Score obtained among all the Technically Qualified Bidders.

ii. Level-II : Evaluation of Financial Bids: The Financial Bids of the Bidder, who are Technically Qualified shall be considered to determine Relative Financial Score (RFS) and shall be derived as under:

- a) $RFS = (LFB / QFB) * 100$ where,
RFS = Relative Financial Score.
LFB = Lowest total quoted Financial Bid per year among all the Technically Qualified Bidders
QFB = Total Quoted Financial Bid per year by concerned Bidder

viii. Level-III : Combined Evaluation of Technical & Financial Bid : A Final Composite score shall be arrived as per the following formula based on the weightage mentioned in technical scoring criteria

$$\text{Final Score} = (RTS \times 70\%) + (RFS \times 30\%)$$

The proposal with the Highest Final Score (quality and cost) as per the predefined formula shall be declared as the "Selected Bidder".

In the event that there are 2 or more bidders having the same weighted composite score after technical and financial evaluation, the bidder securing the Highest Relative Technical Score (RTS) will be declared as "selected Bidder" for award of the Contract.

For example:

Bid der	Technical Score	Weighted Technical Score (0.70)	Weighted Technical Score (0.70)	Financial Score	Weighted Financial Score (0.30)	Combined Score	Ranking
A	80	88.88	62.2	100	30	92.2	H2
B	90	100	70	90	27	97	H1

The Bidder obtaining the highest combined score shall be recommended for award of contract by the evaluation committee.

K. Submission of EMD (Earnest Money Deposit):

EMD: The bidders shall submit EMD along with their bids. The EMD/bid security shall be accepted in the form of Account Payee Demand Draft, Banker's Cheque or Bank Guarantee from any of the commercial banks or online payment in an acceptable form. No Benefits of EMD ex emption and price preference shall be ex tended to MSE Firms, as the subject tender falls under works category

The scanned image of earnest money deposit to be uploaded online in

technical bid and original one to be submitted to the address mentioned below so as to reach Latest by last date of submission superscribing the tender No & work description on envelope.

The EMD amount can be submitted in any one of following mode as detailed below:

- i. Earnest Money Deposit as specified to be furnished in the form of Demand Draft / Bankers cheque / Pay Order drawn in favour of "BEML Limited" payable at Bhopal, from a Nationalized Bank / Scheduled Bank.
- ii. Online Payment of EMD amount can be made as mentioned below:
 - Open the link to <https://www.onlinesbi.com/sbicollect/icollecthome.htm> pay EMD through SBI Collect.
 - Read the Disclaimer Clause and click on "check box" to proceed for payment against EMD and Click "Proceed".
 - In 'Select State' dropdown Option, Select "All India"
 - In 'Type of Corporate / Institution, select "PSU-Public Sector undertaking" and Click on the "Go" button.
 - In PSU-Public Sector undertaking- Name dropdown, select "BEML Limited Bangalore Complex" and Click "Submit" Button.
 - In 'Select Payment Category', dropdown option, select "EMD Tender Fee BEML Bhopal complex"
 - Enter details of payment, details of Bank Account for refund and click on Submit to make the online payment of the required EMD amount.

Please ensure that online payment of EMD amount is made well ahead of the Tender Closing Date & Time mentioned in the Tender. Bidder may do the NEFT/RTGS payment to the following bank details

Account Number: 00000010918220589
Name: BHARAT EARTH MOVERS LIMITED BRANCH: HAL (01114)
IFSC CODE: SBIN0001114

- iii. Payment of EMD amount through Bank Guarantee:

An irrevocable Bank Guarantee from a Scheduled Commercial Bank authorized by RBI to issue a Bank Guarantee in favour of the Purchaser as per format in Annexure-III having a validity period of bid validity + 45 days from the date of opening of Tender.

II. No Benefits of EMD exemption and price preference shall be extended to MSE Firms, as the subject tender falls under works category General Instructions with regard to EMD:

- a) Bid submitted online without submission of EMD in-time will not be considered.
- b) EMD submitted in any other form will not be accepted and the offer is liable to be rejected.
- c) EMD lesser than mentioned in tender will not be accepted and the quotation is liable to be rejected.
- d) EMD of technical disqualified bidder's will be returned.
- e) EMD of unsuccessful bidders will be returned after finalization of the contract and the EMD of successful bidder will be released after submission of Performance Bank Guarantee / Security Deposit.
- f) EMD does not carry any interest on return.

L. Forfeiture of Earnest Money Deposit (EMD):

- a) Any bidder who withdraws offer / modifies within the bid validity period or before finalization of the tender.
- b) If the successful bidder withdraws the offer after the tender is submitted/ acceptance of the tender.
- c) if any firm withdraws the tender submitted or refuses to execute the order for reasons whatsoever
- d) If there is any breach of terms and conditions of the contract on part of the successful bidder after award of contract and before submission of Performance Bank Guarantee.
- e) If H-1 backs out for any reason, the EMD Amount will be forfeited by BEML Ltd. Please do note that, failure of the successful Bidder to perform the work satisfactorily in any respect after award of Contract will entail for forfeiture of SECURITY DEPOSIT and en- cashing of Performance Bank Guarantee.

The Bidder is advised to carefully go through the terms & conditions of tender before submitting the tender.

Details of EMD online payment acknowledgements & Integrity pact have to be uploaded in the technical BID and Original DD/Banker's cheque and integrity pact has to be submitted to below mentioned address on or before tender closing date and time.

(Atul Thombre)

The Sr. Manager

BEML LIMITED.,

Rail plant, Bhopal

Chittod complex, Zone-1 , MP Nagar, Bhopal-462011

Note: Demand Draft / Bankers cheque / Pay Order /bank guarantee/exemption certificate should reach the above-mentioned address

before 13.00 Hrs on the last/extended date of submission for tender, failing which tender will not be considered. Any postal delay or any other reasons what so ever may be will not be considered. The tender will be liable for rejection.

M. Mobilization advance

PAYMENT AND RECOVERY OF MOBILISATION ADVANCE

- 1.1 Interest bearing recoverable Mobilisation Advance shall be paid to the Supplier(if requested by him) up to 10% of Contract Value after the following conditions have been fulfilled:
- 1.2 The formal contract has been signed between the owner and the contractor.
- 1.3 Submission of Initial Contract cum Performance Bank Guarantee as per NIT Terms & Conditions.
- 1.4 Mobilisation Advance shall be paid in two equal instalments. Second instalments shall be paid after submission of utilization certificate by the contractor for the previous instalments paid for execution of this contract only and satisfactory site mobilisation by the contractor duly certified by the Engineer-In-Charge. If it is found that, the said advance has been utilized by the contractor in whole or part for any other purpose; the owner may at its discretion forthwith recall the entire advance and without prejudice to any other right or remedy available to the owner, recover the same by recourse to the Bank Guarantee(s).
- 1.5 The Supplier shall submit Bank Guarantee(s) for an amount equivalent to 110% of the advance amount valid up to the completion period plus one-month from any bank as per list provided in the Tender/NIT document and in the format attached in the NIT/Tender document.
- 1.6 The Supplier shall at the request of the owner suitably extend the validity of the Bank Guarantee(s) for such period as may be required.
- 1.7 The supplier may submit multiple BGs for facilitating release of BG amount equivalent to advance realized from RA bills.
- 1.8 The Rate of Interest shall be variable during tenure of contract. The Rate of Interest applicable on balance amount of Mobilisation Advance, applicable for the financial year shall be fixed to MCLR (1-year-tenor) of SBI declared in the month of April of that financial year plus 1%.
- 1.9 Recovery of Mobilisation Advance paid shall start when 15% of the work is executed or 1st Running Account (RA) bill whichever is later.
- 1.10 The Mobilisation Advance paid shall be recovered as stipulated above from each RA bill @ 12.5% of gross amount of RA bill in such a manner that the total advance is recovered when 80% of the contract value gets paid.

1.11 A schedule of mobilisation shall be drawn after due discussion with vendor. In the event of undue delay in mobilisation, the EIC may initiate necessary action for recovery through encashment of BG.

N. Secured Advance on Materials Mobilization advance

(i) The contractor, on signing an agreement, shall be entitled to be paid during the progress of the execution of the work up to 75% of the assessed value of Cement and steel (Reinforcement Steel & structural steel)only, which are in the opinion of the Engineer-in-charge non-perishable, non-fragile and non-combustible and are in accordance with the contract and which have been brought on the site in connection therewith and are adequately stored and/or protected against damage by weather or other causes but which have not at the time of advance been incorporated in the works.

When materials on account of which an advance has been made under this sub-clause are incorporated in the work, the amount of such advance shall be recovered/deducted from the next payment made under any of the clause or clauses of this contract.

Such secured advance shall also be payable on other items of perishable nature, fragile and combustible with the approval of the Engineer-in-charge provided the contractor provides a comprehensive insurance cover for the full cost of such materials. The decision of the Engineer-in-charge shall be final and binding on the contractor in this matter. No secured advance, shall however, be paid on high-risk materials such as ordinary glass, sand, petrol, diesel.

Test certificate along with copy of invoice to be submitted by the firm for claiming advance payment against material brought to the site. Material brought to the site, shall be of approved make and specifications & the quantity should be aligned to the agreed work schedule.

Material against which advance payment has been made, to be consumed within 60 days from the date of receipt. Utilization certificate of material to be submitted by the contractor.

Note- Minor Penalty shall be levied for the period exceeding 60 days for consuming the material in works @ 2% of SBI PLR rate applicable at that point of time.

Safety & insurance of the material supplied (preservation of the material supplied at site till it is utilized/used in works will be the sole responsibility of the EPC contractor.

O. Price variation clause applicable for Cement & steel (Reinforcement bars TMT Fe500 D & structural steel) only

If the prices of materials required for execution of the work increase, the contractor shall be compensated for such increase as per provisions detailed below and the amount of the contract shall accordingly be varied, subject to the condition that such compensation for escalation/de-escalation shall be adjusted in prices during the stipulated period of the contract including the justified period extended under the provisions of clause 5 of the contract without any action under clause

1. Such compensation for escalation in the prices of materials, when due, shall be worked out based on the following provisions:

$$V = P \times Q \times (CI - Clo) / Clo$$

where, V = Variation in material cost i.e. increase or decrease in the amount in rupees to be paid or recovered.

P = Base Price of material as issued under the authority of DG(W), CPWD or concerned Zonal Chief Engineer as mentioned above, valid at the time of the last stipulated date of receipt of tender including extensions, if any, Q = Quantity of material brought at site for bonafide use in the works since previous bill.

Clo = Price index for cement, Reinforcement bars TMT Fe500 D and structural steel as issued by the DG(W), CPWD as valid on the last stipulated date of receipt of tenders including extensions, if any. All India Wholesale Price Index for the material as published by the Economic Advisor to Government of India, Ministry of Industry and Commerce as valid on the last stipulated date of receipt of tenders including extensions, if any.

CI = Price index for cement, Reinforcement bars TMT Fe500 D and structural steel as issued under the authority of DG(W), CPWD for period under consideration. For other items, All India Wholesale Price Index for the material for period under consideration as published by Economic Advisor to Government of India, Ministry of Industry and Commerce.

- P. Submission of Integrity pact:** Bidders shall submit filled, signed & sealed Integrity Pact with the BEML as per 'Format: Integrity Pact'. Bids without filled, signed & sealed Integrity Pact shall be liable for rejection. (Integrity Pact is applicable if the Estimated value is more than Rs. 1.00 Crore) Integrity pact have to be uploaded in the technical BID. The bidder / contractor should upload duly signed & stamped **Integrity Pact** (if the tender value is more than or equal to Rs.1.00 crore) as per prescribed format (**Annexure-6 & Annexure-J1**) on plain paper as part of technical bid.

The bidder should put their authorized signature in the Integrity pact as a Contractor / bidder with their company seal along with witness's signature, name & address. The agreement shall be in full as per format enclosed on

a **plain A4 size paper duly signed & stamped on all pages.**

The Integrity Pact envisages an agreement between the prospective Bidders and the buyer committing the persons/officials of both the parties not to exercise any corrupt influence on any aspect of the contract.

For the successful bidder, the integrity pact will remain valid up to 12 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded.

The Central Vigilance Commission (CVC) has appointed Shri Kasividyasagar & Shri Lt. Gen. Abhay Krishna as Independent External Monitor (IEM) to oversee the implementation of the Integrity Pact.

Address of IEM is as below: -

Shri Kasividyasagar, IAS (Retd.)

House no. 55, Dream valley gated community,
Manikonda, Hyderabad – 500089. Mobile no. +91 9771407778
Email: kasividyasagar@gmail.com

Shri Lt. Gen. Abhay Krishna , (Retd.)

4A-902, Gurjinder Vihar, AWHO Township, Sector CHI-1 Greater Noida, UP - 201310 Mobile no: +91 9871234353
Email: abhayabk@gmail.com

The Earnest Money Deposit / Bid Guarantee shall remain deposited with the Purchaser for the period of bid validity (180 days)+ 45 days from the date of opening of Tenders. If the validity of the offer is extended, the Earnest Money Deposit / Bank Guarantee duly extended shall also be furnished failing which the offer after the expiry of the aforesaid period shall not be considered by the Purchaser.

Q. General Terms:

Contractors / agencies are subject to be disqualified, even though they meet the qualifying criteria, if they make misleading or false representations in the request, statements and attachments submitted in proof of qualification requirements including holding information and / or have record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures, requesting for claims not admissible under the contract conditions, etc.

R. CLARIFICATION ON TECHNICAL BID EVALUATION.

a. During evaluation and comparison of bids, BEML may, at its discretion,

ask the bidder for clarifications on the bid. The request for clarification shall be given in writing through registered/speed post/email within the specified date. If the Bidders does not comply or respond by the specified date, his tender will be liable to be rejected. No change in prices or substance of the bid including specifications, shall be offered or permitted. No post-bid clarification at the initiative of the bidder shall be entertained.

- b. BEML also reserves right to seek confirmation/clarification from the issuer agency, on the supporting documents submitted by the bidder.

S. TAX CLAUSE

- a. Any tax and/or duty, which may hereafter be imposed outside India, shall be on Supplier's account. On the other hand, any tax and/or duty, which may hereafter be imposed in India, shall be on BEML's account. Notwithstanding the foregoing, tax on supervising fee and/or other training fees shall be on Supplier's account, however, it shall be withheld and paid by BEML in India on behalf of Supplier according to provisions of the corporation tax law, the local inhabitant tax law and convention between Republic of India and the respective suppliers country, for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income.
- b. Where the government of the supplier's country exempts goods in export from any or all of such taxes, levies, duties on imports, the supplier shall charge the purchase price, which are exclusive of and free from such taxes, levies, and duties on imports.

Note:

1. Corrigendum / addendum / amendments / clarification, etc., with respect to works, if any, shall be hosted in BEML e-portal. Bidders are advised to visit BEML e-portal regularly as no separate information/advertisement shall be published in the newspaper or no other communication in this regard including any postponement of tender closing date.

U. EMD.

- EMD in the form of online payment is to be made before the bid closing date and time. EMD in the form of DD / Banker's Cheque / EMD exemption certificate / BID Guarantee Form to be submitted through Courier / Post in a sealed cover, super-scribing the bid number and closing date, address etc. before the bid Closing Date & Time. Failure to do so will result in rejection of the bid.

EMD submitted in any other form will not be accepted and the offer is liable to be rejected.

EMD lesser than Rs Six Crore (Rs. 6.00 Crore) will not be accepted and

the quotation is liable to be rejected.

EMD of technical disqualified bidder's will be returned.

EMD of unsuccessful bidders will be returned after finalization of the contract and the EMD of successful bidder will be released after submission of Performance Bank Guarantee / Security Deposit.

EMD does not carry any interest on return.

EMD will be forfeited if any firm withdraws the tender submitted or refuses to execute the order for reasons whatsoever .

The Earnest Money / Bid Guarantee deposited is also liable to be forfeited (encashed in case of BG if the tenderer withdraws or amends impairs or derogates from the tender in any respect within the period of validity of his offer.

No responsibility will be taken for postal or non-delivery/non-receipt of EMD/firms claiming EMD exemption.

No interest will be payable by the Purchaser on the EMD / Bid Guarantee.

Cheque and other mode of payment will not be accepted.

The Demand Draft must be sent through courier in a sealed cover & should reach BEML Bhopal before the closing date & time of e- bid, failing which, the tender will be rejected.

The Earnest Money Deposit through RTGS will be returned.

For successful bidder/(s) who enters into contract with BEML, the EMD will be returned after receipt of performance bank guarantee for 10% of the Contract value after award of Contract.

Likewise, if the tender is cancelled for what so ever reason, then EMD will be refunded to all the bidders, without any interest.

The Earnest Money Deposit will be Forfeited under the following circumstances: If the bidder withdraw/modifies the offer during the Validity Period of the tender.

If the successful bidder withdraws the offer after acceptance of the contract.

If the successful bidder fails to furnish a Performance Bank Guarantee (PBG) as specified in bank guarantee format against this tender within the specified period for satisfactory execution of contract.

V. Refund of EMD:

Bid securities of the unsuccessful bidders shall be returned to them at the earliest after expiry of the final bid validity period and latest by the 30th day after the award of the contract. Bid security shall be refunded to the successful bidder on receipt of a performance security. However, in case of two packet or two stage bidding, Bid securities of unsuccessful bidders during first stage i.e. technical evaluation etc. shall be returned within 30 days of declaration of result of first stage, i.e technical evaluation.

Bid security shall be refunded to the successful bidder on receipt of a performance security. Else, Bid security of successful bidder shall be converted as part of security deposits and the balance amount of security deposits will be met by the bidder as the part of contract/agreement conditions.

Please attach the details duly filled-up for refund of EMD amount in the following format along with the DD / Banker's Cheque for EMD:

Sno	Particulars	To be filled & submitted along with DD/Banker's Cheque
1	BANK NAME	
2	BRANCH NAME	
3	CITY	
4	IFSC CODE	
5	ACCOUNT NO	
6	BENEFICIARY NAME	

- IMPORTANT NOTE to submit EMD, Integrity Pact & other specified documents.
- Bidders to ensure submission of EMD, Integrity Pact & other specified documents in tender.

4.0 SCOPE OF WORK (Annexure - 9)

1.0 INTRODUCTION

1.1 Background

BEML Limited is a leading multi-technology Schedule-A company under the Ministry of Defence, playing a pivotal role in serving India's core sectors like Defence & Aerospace, Rail & Metro and Mining & Construction through its world-class product portfolio. The company operates four state-of-the-art manufacturing facilities located at Bangalore, Kolar Gold Fields (KGF), Mysore and Palakkad, supported by a strong R&D infrastructure and a nationwide sales and service network. All manufacturing divisions are accredited with ISO 9001:2015 and ISO 14001:2015 certifications.

The Rail & Metro Division of BEML Limited at the Bangalore Complex is one of India's leading integrated manufacturing facilities for rail and metro rolling stock. The division is engaged in the design, manufacturing, assembly, testing, and commissioning of metro cars, electric multiple units (EMUs), passenger coaches, and other rail transportation systems for domestic and international markets. The Bangalore Complex has contributed significantly to prestigious metro projects across India, including supply of rolling stock for various urban mass transit systems.

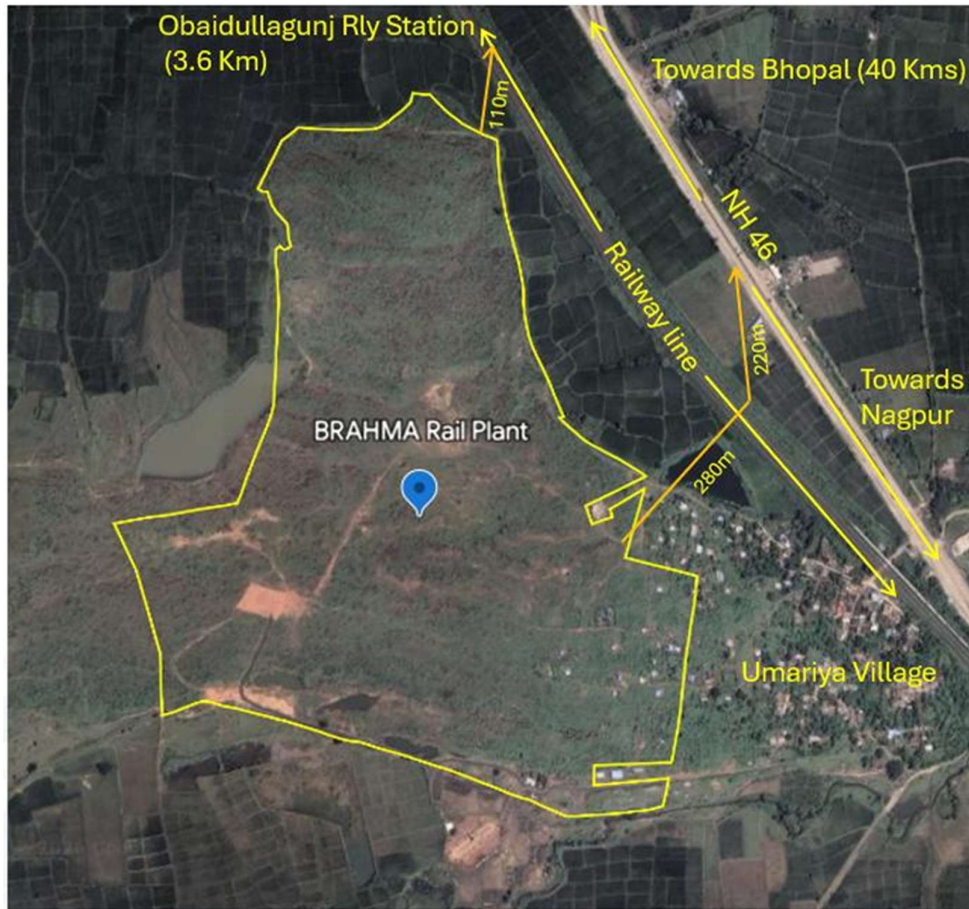
Market demand for the Modern Rolling Stocks including Metro Rail coaches for domestic and overseas markets are increasing at ~ 7% to 8% CAGR. Almost 70% of the total order book of BEML is dominated by the Rail & Metro Business Segment which is expected to increase further in future. BEML, Bangalore Complex has limited space and capacity constraints to produce Railway and Metro coaches to meet these future upcoming orders.

In order to cater to this growing market demand, a state-of-the-art, Green Field Rolling stock manufacturing hub named **BRAHMA (BEML Rail Hub for Advanced Manufacturing)** has been planned to be set up at Bhopal. Accordingly, BEML intends to engage a reputed contractor on EPC (Engineering, Procurement & Construction) mode for the Construction of BRAHMA rail manufacturing and testing facility including their associated works at Obedullaganj, Bhopal.

1.2 Project Site Location

The proposed plant is strategically located at Bhopal to cater the demand of Rail Coaches at Central, Western, Eastern and Northern Parts of India for Indian Railways/ Metros Corporations and Export orders. The above proposed large-scale rail coach manufacturing hub shall be developed over an area of 60 hectares (approximately 148 acres) near Umariya Village, Obedullaganj which is approximately 35 km south-east of Bhopal City, in Raisen District, Madhya Pradesh. Nearest railway station is Obaidullaganj. Its distance from the site approx. 3.15 km. Nearest airport is Raja Bhoj Airport, Bhopal. Its distance is 53

km from the
site.



BEML BRAHMA Project Site

1.3 Objective

To carryout field survey and investigations, earthwork involving excavation, cutting, filling, levelling, grading, compaction, structural design & drawings, construction & commissioning of manufacturing units, testing blocks, associated utilities and service buildings & structures for required related services, MEP works, supply, installation, testing and commissioning of miscellaneous fixed assets and liaisoning work to facilitate BEML for getting all local body clearances viz., obtaining commencement certificate, completion/occupancy certificate in accordance with the approved layout plan and architectural/structural drawings for the proposed BRAHMA Rail Plant, Bhopal.

1.4 SCOPE OF WORK

- I. The scope of work relates to **“Setting up of a Rail Coach Factory hereinafter referred as BEML RAIL HUB FOR ADVANCE MANUFACTURING (BRAHMA) near Umariya village, Obaidullaganj, Bhopal”**. The successful bidder shall be responsible to provide a complete, end to end “Turnkey facility”. The

work is to be executed on Engineering, Procurement & Construction (EPC) basis and provide services up to the expiry of the defect liability period after completion of work.

- II. The bidder shall be provided with a Concept Plans of the proposed facilities, technical specifications and other details forming the part of bid documents. The Bidders shall prepare their detailed designs based on these drawings and documents and in conformity with the local Bye-laws. Any modification in the concept plan, required to meet the conformance to the local bye laws, shall be done with the approval of BEML LIMITED.
- III. The work is to be executed on Engineering, Procurement & Construction (EPC) basis and up to the expiry of the defect liability period which shall include all activities for designing, supply, execution, testing & commissioning and obtaining all required statutory approvals during different stages/ phases with respect to all the buildings, services and utilities complete as per requirements and directions of Engineer-In Charge (EIC). It shall include but not limited to the following:
 - a. Conducting site surveys and soil investigations as per requirements.
 - b. Carrying out site development works involving excavation, cutting, filling, levelling and compaction for achieving required soil strength and formation level.
 - c. Preparation of Architectural & Structural Designs of various technological blocks, non-technological buildings, Entries to blocks, rail tracks, traversers hard standing, substation, Electrical maintenance, water supply and Fire water sump with all connected pipelines for supply of water, sanitary lines connecting to Sewage treatment plant, storm water drains connected to rain water harvesting pond, Electrical works, mechanical works, plumbing works, Fire & safety works, Detailed Designs of Services, roads and pavements, landscaping, horticulture, signage's etc. complete as per requirements in line with Master Plan available in the bid document. It shall also include modifications, if any, required in the master plan and concept plans to meet the conformance to the local bye laws and the same, shall be done with the approval of BEML LTD.
 - d. Design of all Mechanical, Electrical, Plumbing-MEP services, other Services their integration and installation and commissioning.
 - e. Obtaining approvals/ certifications from local bodies/ statutory authorities/ certifying agencies as specified in the tender document.
 - f. Obtaining vetting of structural designs from premier institutes i.e. IITs /IISC.
 - g. Execution of work with construction of buildings and services. This shall include supply of all required materials, construction, installation, testing and commissioning for operationalization of the building and services. This shall also include clearance of jungle, cutting of all existing trees as required, services and utilities including removal of debris and foundations of the existing structures including steel structure, concrete platforms, rail tracks, filling up to required

- levels and site formation with retaining structures if required, etc., complete in all aspects.
- h. Supervision of works with required quality assurance
- i. Obtaining all required statutory approvals during different stages/ phases and after completion of the project.
- j. Obtaining Green Building Rating compliance (Minimum of GRIHA 3-star rating)
- k. Services after completion and handing over in phases and up to the expiry of the defect liability period.
- l. Any other services and utilities as per requirements and direction of Engineer-In-Charge for completion of the project.
- m. All safety norms as per requirement to be ensured by the contractor at site.

1.4.1 Statutory Approvals:

Statutory approvals and handing over the site on “turn key basis” shall be the responsibility of successful bidder Following statutory approvals / permissions will be required at different stages of project:-

1. Before physical commencement of project construction work (BEML's Responsibility)

- (i) EC & CTE
- (ii) Building permission
- (iii) Building plan & site layout approval
- (iv) Fire NOC
- (v) Registration on Shram Suvidha Portal/ Madhya Pradesh Shram Seva Portal

2. During Construction: (EPC Contractor's Responsibility)

- (i) License for storage handling and usage of explosives.
- (ii) Labour license.
- (iii) Registration with BOCW.
- (iv) Ground water withdrawal permission from CGWA/MPIDC
- (v) Other permissions required during execution

3. Post Construction:

- (i) Factory License from DIHS - (BEML's Responsibility with support of EPC contractor)
- (ii) Structural Safety Certifications - EPC Contractor's Responsibility
- (iii) CTO - EPC Contractor's Responsibility
- (iv) Fire NOC - EPC Contractor's Responsibility
- (v) Electrical Safety Certification - EPC Contractor's Responsibility
- (vi) Emergency Management plan approval - EPC Contractor's Responsibility
- (vii) Registration under shops and establishment act - (BEML's Responsibility with support of EPC contractor)
- (viii) Hazardous waste authorization from MPPCB - (BEML's Responsibility with support of EPC contractor)

Note: Wherever responsibility is assigned to EPC contractor necessary documentation required from BEML's end will be provided.

Any other approval required from the appropriate Statutory Authorities/ Local Bodies etc shall be responsibility of the successful bidder. Compliance as per GRIHA norms and obtaining approval and certification for minimum 3 Star, Green Building Rating for specific buildings/blocks from GRIHA Council, etc. are under the scope of EPC contractor. The applicable statutory fee for the same shall be reimbursed by BEML upon submission of fee receipt. BEML, may at the written request of the Contractor, assist him in obtaining the approvals from relevant authorities. However, any such request by the Contractor shall not bind the BEML in any manner. The original documents of approval shall be submitted to BEML.

Failing to provide required statutory approvals within the stipulated time will result in imposition of penalty @ Rs 120 per day from the date of default or first notice of compliance given by BEML Ltd which ever is earlier.

1.4.2 Special care for existing services:

The scope of work includes dismantling, if any, of the required services and utilities falling in the project area and supporting/shifting & making functional existing services/sewerage and water supply lines etc. The contractor shall properly take care & safe guard all the existing services/ buildings/ structures in the area affected by the construction of proposed in the campus.

1.5 Detailed Scope of Work:

The EPC contractor shall provide end to end services of engineering, procurement, construction, testing commissioning and handing over including but not limited to

1. Detailed engineering (Civil, Structural, Architectural, MEP, BIMS, IT & Telecommunication services, Other Utility & Services, Landscaping/Horticulture and other Infrastructure etc.)
2. Procurement of all materials, equipment, Tools & Tackles, consumables excluding production related plants & Machinery
3. Complete construction including civil, structural (PEB/conventional), MEP works, BIMS, IT & Telecommunication services, other utility services, external development.
4. Testing commissioning statutory approvals and certification (As required).
5. Preparation of as-built drawing, providing O & M Manuals and product Guarantee/Warranty certificates from OEM (in case it is for a longer period than the defect liability period), training of BEML personnel (as required)
6. Handing over of the facility to BEML ensuring, completeness in all respect as per scope.

1.5.1 Detailed engineering scope

The EPC contractor shall perform

a. Surveys and investigations

Topographical survey (Topographical survey report carried out at the time of DPR preparation available with BEML has been annexed with this tender (Report)). However, verification/ validation of the same with respect to the MSL of Obaidullaganj Railway Station shall be the sole responsibility of EPC contractor as it is very critical for railway siding work and Land & Site Development Work as dispatch railway track is to be connected to the broad-gauge line passing by the side of project site with slope as permitted by the Indian railways.

Soil investigation and geotechnical report available with BEML is also enclosed with this tender (Report) which is a preliminary investigation carried out for DPR preparation. It is mandated that fresh soil investigation be carried out for the assessment of soil bearing capacity and decision regarding type of foundation.

b. Hydrological and drainage study

c. Design Engineering

d. Architectural Planning and building layout

e. Structural analysis and Design of factory sheds, various utility/ service buildings, machine/equipment foundation, civil infrastructure related to MEP and external developmental works

f. Preparation of civil construction drawings with BOM.

g. Design & engineering of MEP systems & services including preparation of PFD, P & ID Drawings, Preparation of BOM and specifications.

h. Design & engineering of sewage treatment plant, including that of related civil infrastructure.

i. Design & engineering of BIMS, IT & Telecommunication services & other utility services.

Note:

- Coordination of all disciplines while designing and preparation of a drawing taking care of all aspects/related disciplines is the sole responsibility of the EPC contractor. **All structural design and drawings are to be duly vetted by premier institution like IIT/IISC before final submission to BEML for its acceptance and release for construction.** Design calculation sheets, drawings in the Original/ RAW file format i.e. .std, .dwg, .xls or whichever applicable software format used for this purpose are to be provided by the EPC contractor for review of acceptance of the same. Minimum five sets of drawings and design documents to be submitted on appropriate size of drawing sheets along with soft copies of the same.
- Master Layout of the proposed manufacturing facility is enclosed with

this tender. Though, the master layout is going to remain unchanged, minor change in facilities location /orientation may not be ruled out. Plan & elevation of all major are also enclosed in this tender.

1.5.2 Procurement Scope

EPC contractor shall supply:

1. All construction materials, plants/ machinery/ equipment & accessories pertaining to MEP and other utility packages.
2. Supply of EOT and other material handling equipment, as specified.
3. All supplies are to be made as per approved make and shall conform to mentioned specifications and code (IS/CPWD/MoRTH/ MoEFCC & any other codes/specifications specified).

1.5.3 Construction scope

1. Land and site development works
2. Site clearing, grubbing, dismantling & demolition (if any)
3. Disposal of unusable material
4. Grading, levelling works and compaction

Civil & Structural works pertaining

1. Manufacturing block
2. Inspection & testing block
3. Traverser foundation
4. All Utility and Service building
5. Civil infrastructures pertaining to MEP (Mechanical, Electrical & Plumbing)
6. Foundation for machine & equipment
7. Other facility and infrastructure
8. External development works viz railway siding, hard stand for dispatch area, roads, culverts, storm water drainage, sewerage system, service trenches Landscaping & horticulture, Footpaths & Kerb stones, Signages etc.

1.5.4 MEP and Other Services

Supply, Installation, testing and commissioning of followings:

1. Electrical supply and distribution system
2. Compressed air System
3. Industrial gases- storage & distribution System
4. RO Water and distribution system
5. Firefighting system
6. Fire detection and alarm system
7. Water supply and distribution system
8. Sewage treatment plant & effluent distribution.
9. AC and ventilation system.
10. IT and communication

11. IBMS
12. EOT and other specified material handling equipment.
13. Other miscellaneous fixed assets as specified.
14. Landscaping and horticulture

EXCLUSION

- Production machineries, process equipment & product test equipment.

1.5.5 Testing and commissioning

EPC contractor shall perform:

1. Load testing of structural elements
2. Testing of material and equipment's
3. Crane testing and alignment
4. Electrical test (IR, HV rely coordination etc.)
5. Pressure testing of pipelines
6. Testing and commissioning of STP, fire pumps, utilities etc.
7. Demonstration of performance parameters

1.5.6 Documentation and handover

EPC contractor shall submit

1. As built drawings - 4-sets
2. Structural stability certificates
3. Test certificates and reports
4. O&M manuals of all supplied equipment's
5. Warranty cards/ documents
6. Training records of BEML team
7. Statutory approval documents from relevant authorities

1.5.6 Local Body Approval

The contractor shall liaise with the concerned statutory Authority/ local body to facilitate BEML obtain all mandatory approval and No Objection Certificate/ Consent for Establishment/Commencement certificate from local body/Statutory authorities, Industrial inspectorate, Fire department, Forest department, etc. as specified in this tender, if any as applicable and as required for the project. The contractor shall also liaise and facilitate BEML obtain Occupancy/ completion certificate on completion of project. The statutory payments or fees made to Statutory Authority/ local bodies shall be reimbursed by BEML on production of proof of such payments. The contractor has to prepare all the documents as required and submit directly to the local statutory bodies under intimation to BEML.

- 1.5.7 The contractor shall at his own risk and cost collect field samples and carry out all necessary tests required for submission of necessary applications. The contractor has to comply and, if necessary, resubmit applications as required

by the local bodies. If required the contractor has to appoint at his own cost consultants for obtaining local body approval. The documents prepared shall be submitted to BEML for record. All the documents created out of the assignment will become the sole property of the BEML.

- 1.5.8 Complete cleaning and removal of rank vegetation including levelling /dozing, if required from the proposed site and disposal/carting away the debris/plants/rank vegetation within or outside the premises (as instructed by EIC) to a far-off place not objected by any civic authorities. For maintaining different levels in different areas of the facility, suitable earth retaining structures may be required to be constructed, this may not be explicitly mentioned under any line item of the scope enumerated in the NIT. However, this shall deemed to be integral part of the scope of work and cost of the same to be considered in other line items of the scope as no separate payment shall be admissible against the same.
- 1.5.9 The work shall be executed on EPC Mode (Design & Build) basis including soil testing, survey, levelling & filling, structural design & drawings, constructions & commissioning of buildings & services and liasoning for obtaining completion / occupancy certificate in accordance with layout plan and architectural/structural drawings & submission of detailed BOQ. The work is to be executed according to those drawings. Scope of work contained in the paras mentioned below is only indicative and not exhaustive. In addition, the contractor shall be responsible for executing all items required for completing the structures/ building/ development activities in all respects to make it habitable and ready for occupation complete, as per architectural drawings and direction of Engineer-in-charge.
- 1.5.10 Planning, preparing drawing for internal services and execution of the same i.e. internal sanitary work, water supply work, drainage system etc. complete for the building including all pipes, its fittings, testing etc. complete as per approval.
- 1.5.11 **Water supply:** Water supply lines shall be laid as per scheme prepared, submitted by the contractor and approved by Engineer-in-charge. Planning, designing and construction/ installation of Sump for water supply, for firefighting as well as Domestic water tank including installing of pumps, stand by pumps, as per approval. Planning and providing Water supply network around and inside the building from the source of water supply. Connection charges/fees, if any to be paid to the local bodies or any other agency shall be borne by the BEML on production of receipts.
- 1.5.12 Storm water catch drains with covers for proper drainage of rain water to the rain water harvesting system.
- 1.5.13 Any structural design required shall be carried by the tenderer at his own cost. Nothing extra shall be payable in this regard.
- 1.5.14 Complete levelling and dressing as per Building and landscape plan including filling of earth, its supply, disposal of surplus earth as the case maybe, including

providing retaining wall wherever necessary is to be completed as directed by the Engineer-in charge.

- 1.5.15 The site has to be kept clean of all debris, rubbish and dirt & surplus/waste material all the time. Cleaning and de-silting will be done before handing over the completed structures/ buildings to BEML. All machines, equipment's and labour for this purpose will be arranged by the contractor.
- 1.5.16 Successful bidder shall ensure compliance of all the Labour Laws and All labour employed shall have ESI and EPF for which monthly compliance report shall be submitted to the Project Manager/ officer -in -Change appointed by BEML Ltd.
- 1.5.17 The finished ground level / stilt level / plinth level will be decided soon after actual start of work at site. However, the plinth level of the building shall be generally 600-750 mm above the crown of finished road. Contour plan with levels/survey, if required shall be carried out by the contractor at his own cost.
- 1.5.18 Planning, designing and providing required electrical installations for the proposed building shall be as per the norms.
- 1.5.19 Rain water harvesting, surface run off harvesting and ground water recharge system as per approved norms. Planning designing and execution of the roof top rain water harvesting system for storage, reuse and recharge of the sub soil water including laying of pipe lines and construction of substructure/ super structures is included in the scope of work.
- 1.5.20 Planning designing and providing required firefighting system for proposed building as per the norms.
- 1.5.21 The above scope of work includes cost of all materials, manpower, equipment's, T&P (Tools & Plants), fixtures, accessories, watch & ward and all other essential elements for completion and maintenance of works as aforesaid whatsoever.

1.6 Buildings and Facilities

The building/structure/facilities/infrastructure covered under the scope are as follows:

Sl. No.	Item	Project Inclusions
A. Land & Site Development		
1	Earthwork in formation	
1A	Cutting & Filling	With the limiting condition of dispatch track at 452m MSL at Railway Siding gate, the EPC contractor has to decide
2	RCC Road	
3	Storm water drainage system	
4	Sewerage system excluding STP	

Sl. No.	Item	Project Inclusions
5	RCC service trench	floor level as well as formation level and assess the quantity accordingly and quote. For dimensions, configurations master layout (in .dwg format) may be followed.
6	Greenbelt Development (Landscaping and Horticulture)	37 acres
B. Other External Development works		
7	Main Gate Complex (G+1)	1-lot
8	Railway Gate Complex (G+3)	1-lot
9	Laying of Stabling and dispatch Railway Track	With the limiting condition of dispatch track at 452m MSL at Railway Siding gate to be connected to proposed BG line of Indian Railways coming to project site from Obaidullaganj Railway Station, the EPC contractor has to decide floor level as well as formation level and assess the quantity accordingly and quote. For dimensions, configurations master layout (in .dwg format) may be followed.
C. Civil & Structural Works		
C.1. Civil Works		
1	Car Body manufacturing cum storage Bay with annex building units and fire stair cases including lifts	1-lot
2	Car body inspection and testing line facility	1-lot
3	Raw material storage yard (covered)	1-lot
4	Water supply & Fire water pump house & sump	1-lot
5	MRSS (Main receiving sub-station)	1-lot
6	EPSS (Emergency power supply system)	1-lot
7	Compressed Air Station	1-lot
8	Gas Bank	1-lot
9	RO Plant	1-lot
10	Fire Station	1-lot
11	Traverser/ AGV – Hardstand	1-lot

Sl. No.	Item	Project Inclusions
12	Rain Water Harvesting	1-lot
13	Canteen Building	1-lot
14	Occupational Health Center	1-lot
D. Material Handling Equipment		
1	DG EOT Crane -25/5T	4-Nos.
2	DG EOT Crane -10/2T	4-Nos.
3	Single girder under Slung 02 Ton Crane for Water Pump House	1-Nos.
E. MFA (Miscellaneous fixed Assets)		
1	Plant Electrics	1-lot
2	Instrumentation & Process Control System	1-lot
3	Air cooled VRF type 40T (main gate complex with security office & Canteen building)	(1+3) Nos.
4	Split air conditioner for office units annexed to manufacturing block – 1.5-ton capacity, 5-star rating	50 Nos
5	Compressed Air system	1-lot
6	Fire Fighting system	1-lot
7	Furniture (as per list attached)	1-lot
8	IT & Communication	1-lot
9	Water Supply System	1-lot
10	RO Facility	1-lot
11	STP	1-lot
12	DG Set	2-Nos.
13	Gas Bank	1-lot
14	Weigh Bridge (including associated civil infrastructure)	1-lot

Codes:

The following codes are to be followed in the design of the buildings

1. National Building Code 2016
2. Relevant IS Codes
3. Local Bye – laws
4. Aviation Department Rules
5. Fire Departments Standards / Regulations
6. The Code on Wage 2019
7. Industrial Relations Code 2020
8. The occupational safety, health and working condition code 2019
9. The code on social security 2020
10. POSH (Sexual harassment of women at workplace) Act 2013

Non-Technological Buildings:

1. Canteen Building
2. Occupational Health Centre
3. Fire Station
4. Main Gate Complex with security Office
5. Gate complex for Railway Siding

Technological And Utility Buildings / Facilities:

1. Car Body Fabrication & Assembly Line Facility with Annex Building
2. Car Body inspection and testing Bay
3. Water Supply and Fire water pump house
4. Electrical Substation (MRSS)+ EPSS
5. Gas Bank
6. Compressed Air Station
7. Road Weigh bridge and office
8. STP
9. RO Plant
10. Raw Material Storage Yard (Covered)
11. Traverser Foundation

List of Facilities

The list of proposed buildings/ facilities, their dimensions, no. of floors and type of structure are provided in the following table.

SL. No.	Facilities / Utilities / Buildings	Dimension	No. of Floors and Type of Structure
1	Car body Fabrication Block	400m x 72 m	(G+1)- Steel Structure (Conventional) / (Hybrid-combination of conventional & PEB)
2	Car body Inspection & testing Bay	400m x 24 m	(G) - Steel Structure (PEB)
3	Canteen building	64.8mx56.4m	(G) - RCC
4	Occupational Health Centre	28.8mx10.8m	(G) - RCC
5	100 ft road Weight bridge & office	70 Ton	(G) – Weigh Bridge Cabin & Hard stand
6	Main Gate complex with Security office	59.1mx14.4m	(G+1) - RCC
7	Gate complex at railway siding main gate complex with security office	8mx4.8m	(G+3) - RCC
8	Fire station	32.4mx10.8m	(G) - RCC
9	Water supply pump house & Sump	28m x 11m	(G) – Industrial shed

SL. No.	Facilities / Utilities / Buildings	Dimension	No. of Floors and Type of Structure
10	Fire water pump house & sump		
11	Sewage Treatment Plant (STP)	15mx13.5m	(G) - Industrial shed
12	Main Receiving Sub Sta (MRSS)	40mx12.5m	RCC
13	Emergency Power Supply System (EPSS)	30mx30m	RCC Raised Platform
14	Compressed air Facility	20mx12m	Industrial Shed
15	Gas bank	40mx16m	Industrial Shed
16	RO plant (Container based)	15mx10m	RCC Hardstand
17	Traversers Foundation	240m x 32m	RCC
18	Traversers Foundation	200mx32m	RCC
19	Raw material storage yard (Covered)	50mx40m	Industrial Shed

1.6.1 Manufacturing Facility with annexe building

This manufacturing line consists of 2-layer production facility. The 1st floor is designated for the fabrication and Assembly line facility for Car body. The proposed Workshop Building is to be designed as a functional, efficient, and flexible space that supports hands-on activities, fabrication processes, and training needs while ensuring safety, durability, and user comfort. The architecture emphasizes clarity of circulation, unobstructed work zones, and seamless integration of services, creating an environment that enhances productivity and operational workflow.

The overall built form adopts a simple, rectilinear geometry to maximize usable floor space. The structural grid is optimized to create large column-free spans, supporting overhead movement of materials and machinery. The building envelope consists of durable, low-maintenance materials—such as insulated metal panels, structural steel framing, and high-performance glazing—selected to withstand industrial use and provide long-term resilience.

Natural lighting and ventilation are key design drivers. Continuous clerestory windows and high-level translucent sheets (5% of the total wall cladding) & louvers / windows ensure diffused daylight across the workshop floor while reducing dependence on artificial lighting.

Mechanical ventilation systems (Heavy duty industrial and exhaust fans) supplement natural airflow to maintain indoor air quality and temperature control in zones with heat generating equipment. The EPC contractor to design and assess the number of such exhaust fans with their capacity and location of installation. For the comfort of work men working on the shop floor and warehouse, heavy duty industrial BLDC man cooler fans (man coolers) of 30" inch sweep with 6-blades of approved make shall be provided on every

alternate column of the respective bays.

The internal planning separates noisy, heavy-duty work areas from cleaner, precision-based tasks. Service cores containing electrical rooms, tool storage, washrooms, and utility shafts are placed along the rear edge, allowing the main hall to remain unobstructed. Safe circulation is maintained through clearly defined pedestrian pathways, dedicated equipment movement aisles, and emergency exits positioned as per NBC guidelines.

Sustainable design principles are incorporated through energy-efficient lighting, rainwater harvesting provisions, solar-ready roofing, and the use of recyclable materials. Exterior landscaping and permeable paving help manage storm-water runoff and reduce heat island effects. Overall, the workshop building is conceived as a robust and adaptable facility that prioritizes user safety, operational efficiency, and long-term performance, while maintaining a clean, contemporary architectural character. The workshop is designed as 3-bay structure with each bay of width 24m c/c & a length of 400 m c/c. The workshop is further a two storied workshop having functional relations in both the floors. The structure is designed to take heavy loads considering the functionality. Each workshop is attached with office spaces on one side lengthwise along with the fire escape staircases integrated to it.

Inspection Pit: Two (2) Nos. of Combination track (both Broad gauge & standard gauge) of length of 50 m has been earmarked at Northern end of Furnishing Bay for the buffer storage and to transport the Car body to inspection & testing bay via Traverser. A pit of 1.5 m(D) x 3.5m(W) has been envisaged under each track. This has been earmarked for the Car body underframe fittings installation & inspection. The rails used for combination track would be resting on suitable size structural pedestals provided throughout the length of pit at suitable regular distance. These structural pedestals shall be firmly secured to the pit floor by anchoring the base plate to the pit floor by suitable fasteners or welding the base plate to the inserts provided on the pit floor. Suitable concrete encasing to be done for the durability of pedestal base in contact with pit floor. Ramp / step shall be provided in the pit at one end for getting Entry / Exit into the pit, safety railing with intermediate gates along the length to be provided with zebra marking as per the norm.

The following major activities has been envisaged in 1st floor:

1st floor Bay 1:

This is one of the crucial functional bays for the Car body manufacturing facility. Major highlights of this bay are:

1. This bay is having configuration of 400m X 24 m (center to center)
2. This bay is envisaged with 10T/2T DG EOT crane with a clear height of lift as 12m.
3. An opening of 27m X 6m has been made in one of the bays ends for the

lowering of the Car body shell to ground floor post assembly at first floor. A hydraulic lift has been envisaged for lifting and lowering of the car body shell.

4. This bay has been provided with compressed air facility at regular interval between the column so that tapping can be made at any point to meet the compressed air requirement.
5. This bay has been provided with gas line facility at regular interval between the column so that tapping can be made at any point to meet the gas requirement.

The major functional area of this bay is as follows:

A. Under frame fabrication facility

1. Major functional areas under this segment are Underframe welding facility, Buffer storage for underframe, underframe skin welding facility, Underframe Assembly facility, underframe welding fixture facility, Underframe sub assembly storage facility.
2. Major functional equipment envisaged are standby idle jig, manual MIG/TIG welding, Wire feeder, seam welding machine, C-gun, welding controller with software, cooling unit, Robot gantry system, Jig fixture, grinding tools, Mechanic reverse table.

B. Roof fabrication facility

1. Major functional areas under this segment are Roof keystone seam welding facility, Roof Skeleton Composition (Dome+ Flat+ Cantrail) MIG Welding Cant Rail Sub Assembly, Roof Cantrail Sub Assembly Fixture Tack Welding, Roof Cantrail Skeleton Adjustment Stage, Roof Cantrail Spot Welding (skin+ skeleton, Flat Roof Skeleton, Flat Roof Adjustment, Flat Roof Spot Welding, Robot Gantry Spot Welding, Roof Assembly Spot Welding etc.
2. Major functional equipment envisaged are Seam welding, MIG welding, Tack welding, Roof preparation area, Spot welding etc.

C. Car body assembly welding facility

1. An area of 70m X 10m has been earmarked for the Car body assembly welding facility. There shall 2 arrangement station, out of which one will be at the welding position for the preparation of Car body shell and the other stations will be at preparatory position for welding. EOT cranes will be utilised for the lifting and lowering of the car body shell. Piped gas line and compressed air facility has been planned at columns and can be drawn to the consumer points.

D. Paint shop facility

1. An area of 30 mX6 m has been earmarked for the Paint shop facility

along with Car body shell movement area of 27mX4m. This paint shop is semi-automatic containerized paint shop.

2. A winch system shall be embedded with the Paint shop for the movement of car body shell inside the paint shop.

E. Water leakage testing/inspection facility

1. An area of 30mX6m has been earmarked for the Water leakage testing/inspection facility along with Car body shell movement area of 27mX4m. This facility is closed loop water supply system with RO water will be used for the water leakage testing. A winch system shall be embedded with this testing facility for the movement of car body shell inside the Water leakage testing/inspection facility.

1st floor Bay 2:

This bay is exclusive for warehouse facility specifically to store all the items pertaining to the Fabrication Bay. Major highlights of this bay are:

- (i) This bay is having configuration of 400m X 24 m
- (ii) This bay has been compartmentalized broadly in 2 stage i.e. the heavy equipment will be stored on floor and the smaller equipment below 1 ton shall be stored in racks of various type such as heavy storage rack, medium storage rack and light weight storage rack.
- (iii) The racking shall be both in the form of Pallet as well as in bin capability to store long items with length upto 6m.
- (iv) No EOT crane has been envisaged in this bay. However, the material will be stacked by means of Articulating forklift.
- (v) An opening of 27m X 6m has been made in one of the bay end (between column axis No. 1 & 3) for the lifting/lowering of the equipment to the first floor for storage.
- (vi) This bay has been provided with different type of racking system for the storage of all the inventory required for the Fabrication activities.

1st floor Bay 3:

This is also one of the crucial functional bay for the Coach/Car manufacturing facility.

Major highlights of this bay are:

- (i) This bay is having configuration of 400m X 24 m
- (ii) This bay is envisaged with 10T/2T DG EOT crane with a clear height of lift as 12m.
- (iii) An opening of 27m X 6m has been made in one of the bay end (between column axis No. 1 & 3) for the lowering/lifting of the equipment to first floor by means of hydraulic lift.

- (iv) This bay has been provided with compressed air facility at regular interval between the column so that tapping can be made at any point to meet the compressed air requirement.
- (v) This bay has been provided with gas line facility at regular interval between the column so that tapping can be made at any point to meet the gas requirement.
- (vi) The major functional area of this bay are as follows:
 - Side wall fabrication facility
 - (a) Major functional areas under this segment are side wall skeleton welding fixture, side wall skeleton heat adjustment fixture, Side wall tack welding, Side wall spot welding, Side wall inspection, pass/fail status area,
 - (b) Major functional equipment envisaged are side wall skeleton welding fixture etc.
 - End wall fabrication facility
 - (a) Major functional areas under this segment are side End wall skeleton weld, skin welding & inspection, End wall spot welding,
 - (b) Major functional equipment envisaged are skeleton welding, skin welding & inspection & spot welding.
 - Cabin fabrication facility
 - (a) Major functional areas under this segment are Cabins structure welding, Cabin inspection, cabin overall welding
 - (b) Major functional equipment envisaged are Cabin structure welding & cabin overall welding.

The Ground floor is designated for the Furnishing line facility for Coach/Car. The following major activities has been envisaged in **Ground floor:**

Ground floor Bay 1:

This is one of the crucial functional bay for the Coach/Car manufacturing facility. This bay is exclusive designated for Coach/Car furnishing.

Major highlights of this bay are:

- (i) This bay is having configuration of 400m X 24 m
- (ii) This bay is envisaged with 25T/5T DG EOT crane with a clear height of lift as 12m.
- (iii) An area of 27m X 6m has been earmarked between column axis No. 1 & 3 for the positioning of Hydraulic lift required for lowering of the Coach/Car shell to ground floor post fabrication & assembly at first floor.
- (iv) This bay has been provided with compressed air facility at regular interval between the column so that tapping can be made at any point to meet the compressed air requirement.
- (v) A high pressure compressor (pressure 12 bar FAD 100 cfm) has also been proposed for the pipe pressure testing & for the braking system.
- (vi) 2 in No. Combination track (both Broad gauge & standard gauge) of length of 50 m has been earmarked at the other end of Furnishing bay for the buffer storage and to transport the Coach/Car to inspection &

testing bay via Traverser/AGV. A pit of 1.5 m clear height has been envisaged within the track bay. This has been earmarked for the Coach/Car underframe fittings installation & inspection.

(vii) The major functional area of this bay are as follows:

- Under frame furnishing facility
 - (a) Major functional areas under this segment are Anti-drumming facility, Glass wool installation, Floor board installation, Cable cutting & Harnessing, Floor covering, Air duct installation, Window glass installation, Roof cable duct installation, Internal Electrics, Upholstery, Under gear equipment assembly, Bogie trucking & Roof equipment installation
 - (b) Major functional equipment envisaged are Anti-drumming facility for underframe painting, cable harnessing equipment, Car Internal Electrics equipment, HVAC equipment, Upholstery equipment, Under gear assembly equipment etc.

Ground floor Bay 2:

This bay is exclusive for warehouse facility specifically to store all the items pertaining to the Furnishing Bay. Major highlights of this bay are:

- (i) This bay is having configuration of 400m X 24 m
- (ii) This bay has been compartmentalized broadly in 2 stage i.e. the heavy equipment will be stored on floor and the smaller equipment below 1 ton shall be stored in racks of various type such as heavy storage rack, medium storage rack and light weight storage rack.
- (iii) The racking shall be both in the form of Pallet as well as in bin capability to store long items with length upto 6m.
- (iv) No EOT crane has been envisaged in this bay. However, the material will be stacked by means of Articulating forklift.
- (v) An area of 27m X 6m has been made in between column axis No. 1 & 3 for the lifting/lowering of the equipment to the first floor for storage by means of Hydraulic lift.
- (vi) This bay has been provided with different type of racking system for the storage of all the inventory required for the Furnishing activities.

Ground floor Bay 3:

The functionality of this bay is same as Ground floor Bay 1.

Annexe Building:

Manufacturing block shall have 6 Nos. Annexe office buildings, 3 nos. on either side (East & West). Each office building which is annexed to manufacturing bay on the outer side of bays along their length shall have G+5 floors with only Ground floor and Top floor opening into the shop floors with approach via Lift (2m X 1.8m of hoist way) (10 Pax Capacity) as well as staircase till 5th floor where the office has opening into shop floor at First Floor of the manufacturing bay. The total built-up area of each Annexe Building is estimated to be 696m².

The ground floor of the Annexe building shall have adequate space for seating arrangement for shop floor workers. The Ground floor area is meant for 25-30 workers. Out of 3 Nos. of Annexe buildings annexed to either side of manufacturing block ground floor of one Annexe building shall be exclusively reserved for female employees. This space shall have access from the shop floor and the common passage of adequate width will connect to washroom as well as landing area of staircase and lift well.

The first floor of the Annexe Building shall have provision for accommodating 1 No. of General Manager's (GM) Cabin of adequate area, waiting area for guest and seating arrangement for GM's personal secretary. The GM cabin shall have all the required furniture (as mentioned in the Furniture details) and his personal toilet. A common Men's toilets for the use of Guest with adequate capacity shall also be provided.

The second floor of the Annexe Building shall have provision for a meeting/conference hall of capacity for accommodating 15-20 people and a pantry room. The 3rd floor of the Annexe Building shall have provision for seating arrangement of 2 Nos. of (Deputy General Manager) DGM workstation of adequate space and furniture as specified in the Furniture schedule and toilet facility for both men and women. Likewise, 4th floor of the Annexe Building shall have provision for seating arrangement of 4 Nos. of AGM workstation of adequate space and furniture as specified in the Furniture schedule and toilet facility for both men and women.

The 5th floor of the Annexe Building shall have opening to the Shop floor (first floor) of the Manufacturing Bay and shall have provision for seating arrangement of 8 Nos. of Senior Manager (SM) workstation of adequate space and furniture as specified in the Furniture schedule and toilet facility for both men and women. The detailed seating plan and internal configuration can be discussed and finalized at the time of detailed design stage. The annexe building is proposed to be provided with Split Air conditioner.

Along the Eastern and Western side of the manufacturing bays 2 Nos. and 3 Nos. of Fire staircases (G+5 floors) enclosures respectively shall also be provided along the length of the manufacturing bay in compliance to the fire safety norms as shown in the layout. These fire staircase enclosures shall only have opening into the shop floors located at ground and First floor of manufacturing block i.e. 5th floor of (G+5 floor fire staircase). The total built-up area of each fire stair case enclosures shall be 174m². Alongside two (one on each side) of these fire staircases, hoist ways in full width of landing & balance length up to the next column, for installation of service lift of 1 Ton capacity are to be created. Exact dimension of hoist way shall be 2.4m X 2.6m.

In annexe buildings, suitable provision in the washrooms be made for the convenient use by physically handicapped personnel in line with National Building Code (NBC) 2016.

The façade of outer face of annexe buildings as well as fire staircase

enclosures and service lift hoist way shall be identical as that of manufacturing block, so that it merges with the side facia of the block. For construction of partition wall, gypsum dry wall partitions as provisioned in office complex shall be used. However, the frame of the annexe building is to be made up of structural steel. Deck sheet form work can be used for floor casting in the quest of doing the work expeditiously. Supplying, installation, Testing & commissioning of Passenger lifts and Service lifts as mentioned in the above description of annexe building is also the responsibility of EPC contractor.

Solar panels are also planned on the roof so as to generate renewable energy. Though supply of panels is not forming part of the scope of EPC contractor, he shall make suitable provision while doing roofing for ease of mounting of solar panels at a later date. The contractor has to discuss this aspect with BEML and finalise the provision before proceeding with roofing work design/construction.

During design and construction, the EPC contractor shall make a provision in manufacturing block for easy, safe and convenient access / approach to roof top with weather resistant safety railings around the facility.

Permanent lifeline system shall be provided along the designated movement paths on the roof to ensure safe working at height during solar panel installation and maintenance.

The system shall allow attachment of safety harnesses for multiple users simultaneously. The lifeline system shall consist of:

- The lifeline should have a safe working load of 15KN, with adequate factor of safety.
- End anchors and intermediate supports, Stainless steel wire rope (minimum 8 mm dia), Energy absorbers / shock absorbers, Turnbuckles and tensioning devices, Anchor fasteners and base plates, Compatible full-body harness connection points.
- All components shall be corrosion-resistant and suitable for outdoor industrial use.
- System shall comply with relevant IS / EN / OSHA standards for fall protection.
- Fixing to roof structure shall not compromise the structural integrity or watertightness of the shed.
- All penetrations through roof sheets shall be minimized, wherever fixing is required, EPDM washers, sealants and flashing shall be provided to prevent leakage.

Structural supports shall be fixed to primary or secondary structural members only, not directly on thin roof sheeting. While designing and constructing the manufacturing block, the contractor shall ensure that adequate and safe access / approach is provided to the roof top for maintenance purpose. Safety railing (corrosion resistance) around the edges of the roof shall be designed and installed. Any damaged roof sheets during execution shall be repaired or replaced at contractor's cost. All steel components shall be hot-dip galvanized (minimum 80 microns coating). Fasteners shall be stainless steel

or galvanized high-tensile bolts. Touch-up painting shall be done at all cut edges and welded joints.

NOTE: The life line facility is to be provided in all structural industrial sheds whose height exceeds 7m.

1.6.2 Coach/Car Inspection & Testing facility:

This inspection cum testing bay is a ground floor structural building with Centre-to-Centre dimension as 400m(L)x 24m(W) with a clear height of 10 m (Eave height). The entire inspection & testing bay is embedded with 2 nos. Combination track (i.e., combination of broad gauge and standard gauge) in the entire length of the bay for the movement of Metro car and other non-Metro car from Fabrication & Assembly line facility to the Car body inspection & testing line facility and from Car body inspection & testing line facility to the dispatch bay. Personnel entry to the inspection bay is provisioned with Access control system through Rolling shutters/Sliding gate integrated with man entry gate (pedestrian access), No EOT crane has been envisaged in this building.

The Inspection Pit: Inspection pit of size 1.5 m(D) x 3.5m(W) below each of the combination tracks (Broad gauge & Standard gauge) of inspection & Testing Bay shall be provided in a length of 200m of Rail track length measured from the Northern side of the bay with an offset of 50m from the end. The rails used for combination track would be resting on suitable size structural pedestals provided throughout the length of pit at suitable regular distance. These structural pedestals shall be firmly secured to the pit floor by anchoring the base plate to the pit floor by suitable fasteners or welding the base plate to the inserts provided on the pit floor. Suitable concrete encasing to be done for the durability of pedestal base in contact with pit floor. Ramp / step shall be provided in the pit at one end for getting Entry / Exit into the pit, safety railing with intermediate gates along the length to be provided with zebra marking as per the norm.

This bay will comprise of the following functional area of operation:

STINGER BOX

A 750 V DC power supply Stinger box has been envisaged inside the Car body inspection bay for a distance of 400 m for the testing facility for Metro car. This area has been isolated by means of access control system which will allow only authorised personnel to access this area. This area has been designated along the column axis No. A.

25KV TESTING TRACK

A 25 kV AC power supply has been envisaged inside the Car body inspection bay for a distance of 400m for the testing facility for Commuter rails. This area has been isolated by means of access control system which will allow only authorised personnel to access this area. This area has been designated along the column axis No. B.

INSULATION AND DIELECTRIC TEST

In order to check the Insulation resistance and high voltage withstanding capacity of the Insulation part of Cables. The said equipment checks the insulation resistance via insulation tester and pass the various high voltage for various class of cables as per the IEC standard for 60 Sec and the leakage current value to be within the range.

EARTH AND RETURN CONNECTION TEST

To ensure the Earthing system of all the sub systems and Individual car earthing and return path are as per standard.

VEHICLE CONTROL CIRCUIT TEST

This test is performed to check the following parameters:

1. The vehicle Control and Safety interlocks of train are as per the design via various Simulations.
2. Interlocks with Brake system, Converter Inverter, Horn, lighting system, Speed Control (Static), Pantograph, Static Inverter System, Door System, Signalling System, Shore Supply, Failure of APS via Simulation, Battery system, PAPIS systems, Coupler system, Rescue Operations etc.

HVAC TEST

This test is performed to check the following parameters:

1. To ensure the functionality of various modes of operation of HVAC viz Cool1, cool2, Emergency mode, External and Internal Smoke detection etc.
2. To check the quality of return air viz return air temperature, Humidity and airflow distribution in Saloon area.
3. To check the functionality of Dampers.
4. To check and record the Software Versions etc.

WHEEL FLANGE LUBRICATION TEST

The following parameter are checked under WHEEL FLANGE LUBRICATION TEST:

1. Oil Level in the tank.
2. Functionality of Wheel Flange and Top of Rail Lubricator System.
3. Spray time in Various Modes.
4. Alignment of Nozzles with the wheel flange and top the Rail.

BOGIE LOAD TESTING

A 40 Tons capacity Bogie Load testing facility used to measure various Bogie Design parameters under loaded condition.

CAR WEIGHING & KINEMATIC ENVELOP CLEARANCE TEST:

This test is performed considering the car Weighing System with 8 Load cells (One for each wheel of 2 Bogies) and 80 Ton capacity measures the total weight of the finished car with 10 Kg accuracy.

Exterior clearances of the car body is ensured in a Kinematic Envelope gauge installed on the track.

WATER TIGHTNESS TEST

Car body stage & fully furnished car stage Two Water Tightness Test Gantries with 240 water spraying nozzles to spray water at 2 bar pressure at discharge rate of 7.4 ltr/min/nozzle as per IEC 61133 standard are available conduct Rain test and ensure cars are leak proof. RO water will be used to conduct this water tightness test. The water used to perform this test will be used again by means of closed loop recycle mode. Make up feed arrangement has been envisaged for the top up of RO water losses due to evaporation and other losses during operation.

DOOR SYSTEM TEST

In order to check the functioning of the Door system, the following operations of Door system is checked:

1. Smooth opening and closing of doors.
2. Critical Door dimensions.
3. Closing and opening time.
4. Emergency egress and access.
5. Operation of Door Indicator lamps.
6. Opening and closing Time.
7. Pull Force Exerted on Door leaves while closing and opening.
8. Obstacle detection while door closing operation.
9. To check and record the Software versions etc.

PASSENGER ALARM AND PUBLIC INFORMATION TEST

This activity is performed using the following operation:

1. Public Announcement to Passengers.
2. Emergency Communication between passengers and Drivers.
3. To Check Various Displays Viz Dynamic Root map, Public Information Displays, Train Number Indicators, Destination indicator displays etc.
4. To Check the communication between Master Cab and Driver cab.
5. To check and record the Software Versions etc.

CCTV TEST

This activity is performed using the following operation:

1. Camera Displays on CCTV POE Screen.
2. Orientation of Cameras.
3. All Cameras Functioning viz Saloon Camera, Roof Camera, Side Exterior Cameras, Obstacle detection camera, Front Camera, Track Camera etc.
4. To check the Data Recording System and retrieve the recorded video and Audio file.

5. Data Password protection in Data retrieving System.
6. To check and record the Software Versions Etc.

CONVERTOR INVERTER TEST

This activity is performed using the following operation:

1. To Check The fitness of the various internal Functional Cards of CI.
2. To Check the Input Supply and the required Output Supply with respect to various modes of operation.
3. Powering and Braking Commands available at Input and Output of CI.
4. To check the Load weight, signal available to CI.
5. To Check the output Signals with respect to PWM or Equivalent Signals.
6. Functioning of Protection System of CI.
7. To check and record the Software Versions Etc.

STATIC INVERTER TEST / APS TEST

This activity is performed using the following operation:

1. To Check the fitness of the various Internal Functional Cards of SIV.
2. To Check the Input Supply from Main Transformer and the required Output Supply to the corresponding various Circuits viz Three Phase AC, Single Phase AC, 110 V DC etc.
3. To check the Functionality of Battery charger.
4. Functioning of Protection System of Convertor Invertor.
5. To check and record the Software Versions Etc.

TRAIN CONTROL AND MONITORING SYSTEM (PCMS TEST)

This activity is performed using the following operation:

1. Input power Supply of various TCMS System viz RIO, Event Recorder, Control and Diagnostic Unit, POE Switches etc.
2. Software version checks of Various Sub Systems of TCMS.
3. Ethernet Communication within TCMS and Other Sub systems (viz. Propulsion, Door, brake etc.) of the Train.
4. Digital Inputs and Digital Outputs of TCMS System.

FIRE DETECTION TEST

This activity is performed using the following operation:

1. Fire and Smoke Sensor Functionality Via Simulation.
2. Functionality of Passive Linear Heat Detector Device.
3. Interlock with HVAC.
4. Availability of Smoke and Fire warning to TCMS system.
5. Addressing of the sensors Located at Various locations in the Train.

6. To check and record the Software Versions Etc.

WHEEL FLANGE LUBRICATOR TEST

This activity is performed using the following operation:

1. Oil Level in the tank.
2. Functionality of Wheel Flange and Top of Rail Lubricator System.
3. Spray time in Various Modes.
4. Alignment of Nozzles with the wheel flange and top the Rail

BRAKE PNEUMATIC TEST

This activity is performed using the following operation:

1. Brake Piping and Valve Installations.
2. Compressor Operations.
3. Operation of Various Valves.
4. Operation of Safety Valves.
5. Operation of Pressure governors.
6. Operation of Anti-Skid Valves.
7. Pressure Values of Various Sub systems of brake system.
8. Application of Various Brakes Viz Service Brake, Emergency Brake, Parking Brake Etc.
9. Communication With TCMS System, BECU and Converter Inverter etc.

BRAKE ELECTRONICS TEST

This activity is performed using the following operation:

1. Communication within BECU systems
2. Communication with CI and Various Sub systems.
3. Pressure Values Viz MR pressure, BC Pressure, Load Pressure (T Pressure), CV pressure etc.
4. Various Braking Commands (Service Brake, Emergency brake, Dynamic Braking) Depending on the mode of Operation
5. BECU Major and Minor faults.
6. Dump Valve Operation.
7. BECU Bus communications.
8. Resistance Check of the Shields of Communication and Shield wirings etc.
9. Communication with TCMS systems.
10. Software Versions check. etc.

RUN TEST

This activity is performed using the following operation:

1. Smooth rotation of wheels.
2. Direction of rotation of wheels
3. Current values of the traction motor, if available.
4. Hustler mode operation, If available.

5. Direction of operation (FWD & Rev).
6. Various Door, obstacles detection, SCS switch, operation of Emergency Switches etc.
7. Application of various Brakes during Dynamic operation of the train.

1.6.3 Inter Bay Traversers

2-Nos. of Surface type Traversers has been envisaged under this project.

- 1-No. 75-Ton capacity Traverser has been planned at Southern side of the Car body manufacturing & Assembly line facility. The traverser will have area of 240mX32 m.
- 1 No. 75-Ton capacity Traverser will have area of 200m X 32m has been planned at Northern side of the Car body manufacturing & Assembly line facility for the inter-bay transfer of car/coaches and to Inspection facility.

The Vande Bharat & LHB coaches will be dispatched from the Southern side of the inspection & testing bay by means of railway track and Roads. The Metro & High-speed AI coaches will be dispatch from the eastern side of the manufacturing bay by means of surface transport. Combination track (both BG and SG) of length 50m has been proposed for this purpose.

Note:

The supply and installation of Traverser shall not be the scope of the EPC Contactor. Only the civil works required for installation and operation of traverser shall be the scope of EPC Contractor.

1.6.4 Associated Building/ Facilities Description

Building Design Concept

Occupant comfort in buildings is crucial for a positive living or working experience. Biophilic architecture has become a key design strategy in improving occupant comfort. The core idea behind biophilic design is to integrate natural elements into architectural spaces to create a stronger connection between people and the natural. This connection is known to enhance well-being, reduce stress, and improve productivity.

It is hence proposed to provide building designs with "BIOPHILIC ARCHITECTURE". The need for Green Buildings arises from the requirement to create a sustainable built environment that minimizes environmental impact while enhancing human well-being.

Hence, all non-technological buildings shall be planned and constructed as a GRIHA rate/ certified building with minimum GRIHA 3-star rating. The Designs are to be complied with all the standards such as orientation of building, building materials, energy usage etc. shall be as per GRIHA Manual. Facilities' dimensions mentioned below are out to out except Manufacturing and Testing facility where the dimension is center to center.

1.6.4.1 Occupational Health Centre

This facility shall be RCC Framed single storeyed structure. The infill material used shall be AAC blocks. The Overall size of the building shall be 29m x 10.8m (out to out) approximately. The approximate plinth area shall be 300 Sqm. The Overall floor height shall be 3900 mm (Soffit of slab to FFL)

The building shall have the following minimum facilities.

- Lobby
- Waiting Area
- Consultation Room -2 Nos
- Clinical Test Room
- Treatment Rooms
- Recovery rooms
- Toilets
- Utility Rooms

1.6.4.2 Canteen Building

Canteen Building has been proposed in strategic locations for the breakfast, lunch, evening snacks & dinner for the personnel / workers working inside the plant premises. This facility shall be RCC Framed single storeyed structure. The size of the building shall be 65m x 56 m. The approximate plinth area shall be 3015 Sqm. The plan of the facility enclosed with the NIT is for a dining capacity of 800 personnel. Now, this facility is to be made suitable for only 450 personnel. Accordingly, dining area and associated infrastructure to be reduced and replanned without compromising the comfort, convenience and maintainability. For bidding purpose, the plinth area of the facility may be considered as 2450 Sqm.

The canteen building is proposed to be designed with cooking area, separate preparation area, cooking area, storage for grains, washing area, hand wash area with toilets etc. adequate cooking equipment's is to be planned / procured. Kitchen Equipment's is a specialized subject, hence the cost of the same is not considered in this document. This building shall be planned with adequate number of toilets and Shower as per NBC Guidelines.

1.6.4.3 Fire Station

This facility shall be RCC Framed single storeyed structure. The infill material used shall be AAC blocks. The Overall size of the building shall be 27m x 12m approximately. The building shall be planned for accommodating 2 no of fire tender with one bay for inspection. The Overall height of Building for Main fire station part shall be 3900 mm (10.8x12m) and for Fire Brigade area (Parking and inspection area) the same shall be 6000mm (16.2x12m).

The building shall have the following minimum facilities.

- Foyer
- Main Fire Station
- Fire Tender Parking Bay – 2 No
- Inspection Bay – 1 No
- Crew Rest Room
- Toilet

1.6.4.4 Main Gate Complex with Security Office

There are two entry and exit control points for the plant site, one is the main entry for man and material movement, whereas the other is only for the material movement. The main entry shall also be used for the movement of VIP.

The Main gate complex building is integrated with Security office. This is RCC structure building. This is Ground +1 building structure. Total Built up area is 863 Sq. m This building has a provision for entry / exit for all employees with access control system. This Gate will provide access to main security building from employee entry. The main gate complex is an RCC structure of G+1 floor with gate pass, scanning and security monitoring area.

The building shall have the following facilities:

- Reception and waiting area
- Scanning area
- Staff room
- Monitoring room
- Chief security room

Being the main entrance to the factory, the facia and facade of the gate complex have to be aesthetically beautiful, facade is to be aesthetically appealing and combination of different treatment such as dry-stone cladding, ACP (aluminium composite panel), Rustic textured paint, Exterior grade acrylic emulsion paint. Etc., should be planned in consultation with BEML before execution. The area of parking at entrance gate should be provided with heavy duty paver blocks of approved colour combination and shade.

1.6.4.5 Gate Complex at Railway Siding Main Gate Complex with Security Office

This gate complex building is integrated with Security office. This is a Ground+3 building structure. This is RCC structure building. Total Built up area is 89 Sqm. This Gate shall be used exclusively for the LHB/Vande Bharat coach's entry/exit.

1.6.4.6 Water Supply and Fire Water Pump House

The Water Supply and Fire Water Pump House are designed to accommodate raw water and fire-fighting water systems within a compact yet accessible layout. The building adopts a single-storey industrial form with adequate internal clear heights for pump installation, maintenance, and overhead piping. This combined pump house is a RCC structure with a height of 6m & pump house of height 8m. Water reservoir is RCC type above ground structure, Pump house is RCC column with brick wall type structure.

The building is RCC structure building with total Built up area is 850 Sq. m.

Ventilation is ensured through louvered openings and mechanical exhaust fans to dissipate heat generated by motors. The pump floor is planned to allow clear access for alignment, routine maintenance, and equipment replacement, with large service doors provided for loading/unloading. The structure is designed as a durable steel framed enclosure with anti-vibration flooring and corrosion-resistant finishes suited for high moisture environments.

Fire pump rooms comply with NBC and NFPA norms, incorporating dedicated

separation walls, minimum clearances, and protected cable routing. Provisions for underground tanks, yard hydrants, and control panels are integrated with the external fire water network. A combined Drinking water & Fire water pump house has been proposed for this Project.

Requirement of Water

The fresh water requirement of the plant is estimated at 310 cum per day. Recirculation systems have been envisaged only in cooling towers & car testing facility & remaining major water consumption in the plant is once through type. The RCC sump is to be designed for the storage capacity stated as under taking due care of free board and dead storage. The drawings enclosed in the tender is not as per the freshly estimated requirement however the same can be referred for visualization of general arrangement of facility.

Break-up of Water Requirement

Sl. no.	Description	Water Requirement (cum) per day
1	Water consumption (make-up) for car body leakage testing	12
2	RO reject water @ 30% of feed water	5.14
3	Water requirement washroom and drinking @ 45 l/pax No. of People around 1600 (1455+10%)	72
4	Water requirement canteen @ 70 ltr/pax	112
	Total Water Requirement per day	201.14
	Total Water Requirement per day - Say	210 Cum
(A)	Total water storage required considering a reserve of 2-days	420
(B)	Firefighting water reserve	513
	Total A+B	933
	Total Water Storage Requirement - Say	950 Cum

Source of water

The source of water for the proposed plant will be from the municipal fresh water supply pipeline (i.e. drinking water pipeline from Dahod Dam to Mandideep Industrial Area and nearby colonies, Bhopal city) passing near the plant site, from where fresh water will be supplied. The plant storage reservoir of 950 Cum will cater to 2 days reserve for production requirement and a reserve of 513 Cum for Firefighting. Water shall be made available to the site at 1 point inside the plot area by municipal corporation from where it is to be taken to the proposed reservoir by the EPC contractor.

1.6.4.7 Sewage Treatment Plant (STP)

The EPC contractor shall assess, design the capacity of STP based on the total consumption of water envisaged for the proposed plant (as specified above). Design, engineering, construction, supply, installation, testing and commissioning of required capacity STP, based on MBR technology complete with electro-mechanical works necessary equipment, interconnecting piping network etc. shall be the scope of EPC contractor.

The tank capacities indicated in the STP plant drawing are for reference only. The EPC

contractor has to carry out the design and work out required capacities of various segments/ compartments of the facility for establishing it. The bidder has to take this aspect into consideration and quote accordingly.

1.6.4.7 Main Receiving Substation (MRSS):

The MRSS is strategically positioned to ensure safe power distribution while maintaining required statutory distances from occupied buildings. The architecture emphasizes safety zoning, with segregation of HT switchgear, LT switchgear, transformer bays, and control rooms.

The building typically adopts a partially RCC / partially steel structure with fire-rated partitions, spill containment pits for transformers, and adequate ventilation through natural louvres and forced-air systems. Cable trenches are laid out for ease of maintenance and minimize crossing of power circuits.

Service areas such as battery rooms, control rooms, and metering rooms are acoustically treated where required and provided with climate control for equipment integrity. The MRSS façade employs simple industrial finishes such as metal cladding or textured paint for long-term durability and low maintenance.

MRSS is a RCC structure building with total Built up area is 300 Sq. m. A Separate 33/11kV transformer area of size 12m X 6 m has been considered. A Satellite office building is also integrated with this MRSS building. A dedicated 33 kV HT cable will reach to Project site by MP State Electricity Board under deposit basis work. The 33 kV HT line will be terminated at the metering cubicle inside the project area. 33 kV Cable from metering cubicle to the MRSS shall be laid through suitable cable routing by the EPC.

1.6.4.8 Emergency Power Supply System (EPSS):

Emergency power supply for all other units & Pump Houses are planned from Centralized DG system near to MRSS building. 2Nos. 1000 kVA, DG sets has been considered and the same is located near to MRSS. Containerised type DG set has been considered with a provision for Day tank to feed the DG set. A Hard stand structure of around 70 Sq. m has been considered for the facility.

1.6.4.9 Compressed Air System

Compressed air system shall be distributed type. Each manufacturing bay will be equipped with **1-no. oil free screw type compressor of 100CFM rating with delivery pressure of 12-bar. Inspection & testing bay shall also be having 1-no identical compressor. 2 stand by compressors of identical specification shall also be supplied.**

SL. No.	Equipment Description	No. of units
1.	Oil free screw compressor of capacity 100 CFM with delivery pressure of 12 kg/cm ² (g). mounted on 500 liters horizontal air receiver.	7-Nos. (5W+2S)
2.	Refrigerant air dryer of matching capacity	7-Nos. (5W+2S)

The pipelines will be routed overhead along the building columns / walls. Isolating valves condensate drains and compensators, Pressure gauges & pressure reducing valves will be provided in pipeline network as per the process requirements. Platforms, access ladders, etc. will be provided for operation and maintenance of valves, instruments & controls and gauges provided in the compressed air pipeline network. Piping layout will follow good engineering practices. Distribution pipeline & fittings will be MS / CS, Valves shall be CS with SS internals. At every alternate column of the manufacturing bay tap point for compressed air shall be provided. The tap point shall have automatic quick couples.

During detail design stage positioning of these compressors within manufacturing block / Inspection Bay, pipeline routing along with technical requirements & BOM will be finalised. Pressure drop throughout the distribution network should not be more than 0.5 bar.

1.6.4.10 Gas Bank

The Gas Bank is designed in accordance with applicable gas safety codes, PESO guidelines, and fire safety regulations. The architecture adheres to an open or semi-open shed typology with natural ventilation as the principal safety feature. Cylinder storage areas are segregated by gas type and arranged with safe clearances, bollards, and explosion-relief openings. The floor is finished with anti-spark material, and piping manifolds are mounted for clear visibility and maintenance.

Safety features include gas detection, earthing pits, fire extinguishers, and emergency access routes. The gas bank site layout provides unhindered circulation for cylinder loading/unloading and emergency response, maintaining adequate separation from other buildings. Various Industrial gases like Oxygen, Argon, AOM gas & ACM gas are required in the plant. In view of this, a gas bank has been proposed for fulfilling the requirement.

1.6.4.11 Raw Material Storage Yard (Covered)

A raw material storage yard of size 50mX40m has been proposed for storage of raw material including free issue material & Custom material. It shall be a Pre-engineered building provided with a clear height of 4.5m and with slopy roof both sides. Roofing shall be of colour coated Galvalume sheets with valley gutters and RWDC pipes of suitable size. Flooring shall be of RCC with hardenite topping.

The shed shall be provided with motorised rolling shutters of suitable size. The shed shall be provided with adequate numbers of Aluminium sliding windows and exhaust fans for proper ventilation however, for safety purpose MS grills would be provided with all windows. Inside the store, an aluminium partition cabin of size 3mx3m for office is to be provided along with a separate washroom equipped with 1 no. WC, 2 Urinals and 1 no. counter basin.

1.6.4.12 RO Plant (Container Based):

A containerised based RO plant of capacity 1 MLD has been proposed for feeding the RO water to the water leak test area for testing of car body shell & the completed car body. A hard stand of 150 Sq. m area has been considered to install the RO plant. Water from the water pump house shall be fed to the RO plant for the RO water generation.

The RO water will be supplied via piped network to designated leakage test areas in Car body fabrication & Assembly line facility. For storage of RO water of 250 KL capacity an RCC tank with tiling from inside is also envisaged. The incoming fresh water quality (Report Annexed) is potable and does not require any treatment. However, requirement of chlorination is not ruled out and the EPC contractor may have to provide hypo dosing (sodium hypo chloride) to ensure minimum residual chlorine as per IS 10500.

1.6.4.12 Common Driveways / Landscaping around the Facilities

Adequate drains shall be planned around the building and is to be connected to main drain. Edge Kerb shall be of pre cast / cast in site of approved design and shall be minimum 100 mm above the drive way. The level of landscaping shall be 100 mm above driveway level with edge kerb all around.

Landscaping with Shrubs / trees / lawns / ground covers shall be planned around building as per approval. Decorative water fountains in external area (location to be decided while planning landscaping) shall be provided (2-Nos) with waterproofing treatment, designed for low maintenance and safe operation which is suitable for industrial outdoor conditions in accordance with the BEML.

For landscaping/ Green belt development suitable provision to be made for watering/ Irrigation of green belt development, its maintenance and also installation of "BEML" Logo/signage of appropriate size at the entrance of the plant and other various locations inside the plant and offices.

Development of Green Belt and Landscaping (37 Acres)

The design shall follow guidelines recommended by the Central Pollution Control Board for industrial green belts. The green belt/ landscaping shall be developed to:

- Act as a buffer zone between industrial activities and surroundings
- Reduce dust, noise and gaseous pollution
- Improve microclimate and aesthetics
- Promote groundwater recharge and biodiversity

Total green belt/ landscaping area: 37 acres (approx. 149734 Sq.m)
Distribution shall generally include:

Location	Recommended Coverage
Plant boundary zone	Dense plantation belt
Internal roads	Avenue plantation

Open spaces	Lawn and ornamental landscape
Water bodies / fountains	Landscaping zone

Minimum 40% of total plant area shall be maintained as green cover where feasible. Green belt / landscaping shall be developed using a 3-tier vegetation structure:

- **Upper Canopy:** Tall Trees shall be planted for a Spacing of 4m × 4m with typical species of Neem, Karanj, Arjun, Banyan, Peepal, Kadamba, Mahua. Which helps in Dust interception, Noise attenuation, Wind barrier.
- **Middle Layer:** Medium Trees / Shrubs shall be planted for a Spacing of 3m×3m with typical species of Ashoka, Cassia, Gulmohar, Bottlebrush, Champa. Which helps in Strengthens pollution barrier, Enhances visual aesthetics.
- **Lower Layer:** Shrubs and Ground Cover shall be planted for a Spacing of 1m × 1m with typical species of Bougainvillea, Durante, hibiscus, ixora, croton. Which helps in Soil stabilization, Dust trapping, Enhances visual aesthetics.

Plantation Density

Recommended density for industrial green belts:

Type	Plants per hectare
Trees	300 – 500
Shrubs	500 – 800

Total Number of Trees to be planted is 6000 and shrubs to be planted is 9000.

Soil Preparation (Rocky Terrain)

Since the project site is rocky and uneven, the following measures shall be adopted:

Excavation of Plantation Pit size: 1 m × 1 m × 1 m

Where rock is encountered pits are made through Mechanical excavation and filling the pits with fertile soil mixture. Each pit shall be filled with soil mixture of Garden soil– 50%, Sand– 20%, Farm Yard Manure– 30%, In subsequently add: Neem cake, Organic compost.

Lawn Development

Lush lawns of grass species like Doob grass, Bermuda grass, Mexican grass or by laying grass sod for turfing etc. shall be prepared by removal of stones and debris then spreading of fertile top soil to the thickness of 150-200mm by levelling & compacting the soil course in selected areas such as:

- Non-technological buildings
- Essential open spaces

- Recreational zones
- Area under future development
- Surroundings of the facilities

Irrigation System

Efficient irrigation system shall be installed.

Components

- HDPE / PVC pipelines
- Drip irrigation for trees
- Sprinkler system for lawns
- Control valves and filters.

Treated water from MBR-technology based STP may be used for irrigation after disinfection. Provision to be made for use of treated effluent, RO reject and fresh water as and when needed.

Landscaping Features

2 Nos. Decorative Fountains at prominent locations (to be decided in consultation with BEML during detail design stage) are to be provided with following specification:

Providing, constructing, supplying, installing, testing and commissioning of a decorative recirculating water fountain system complete in all respects, comprising construction of circular RCC fountain tank of suitable diameter (approx. 5–6 m) and about 0.6–0.75 m water depth with RCC M25 base slab and side walls including reinforcement, waterproofing treatment, internal cement plaster with waterproof compound and finishing with approved quality ceramic/vitrified tiles including epoxy grouting.

The work shall also include supply and installation of circular pipe ring of 4–5 m diameter made of SS-304/GI pipe (approx. 40–50 mm Dia) mounted on suitable supports, fitted with evenly spaced adjustable brass/SS fountain nozzles oriented inward and inclined upward at about 30°–45° to produce decorative water jets, along with one central geyser fountain nozzle capable of producing a vertical jet of approximately 3–5 m height.

The item shall further include construction of RCC recirculation sump/pit of suitable size with grating cover, installation of suitable capacity centrifugal pump set with motor, suction and delivery piping, valves, strainers, NRV, electrical control panel, cabling, earthing, interconnections, fittings and accessories required for proper operation of the fountain. Water shall be recirculated to minimize consumption.

Walkways and Pathways

Develop pedestrian walkways using:

- Paver blocks
- Natural stone
- Concrete pathways.

Typical width:

- **1.5 m – 2.0 m**

Seating and Street Furniture

Provide:

- Precast RCC / concrete benches
- Dust bins
- Garden lighting
- Directional signage.

Altogether 50 Number of Benches shall be installed along the pathways at suitable intervals.

Maintenance

The development of green belt to be done immediately before the monsoon to ensure good survival rate the contractor shall maintain the plantation for minimum 12 months, including:

- Watering
- Weeding
- Fertilization
- Pest control
- Replacement of dead plants.

Monitoring

Periodic monitoring shall be done for:

- Plant survival rate
- Growth rate
- Soil moisture condition.

Records shall be maintained for inspection by environmental authorities.

- 1.7 The above scope of work is not exhaustive and any/all incidental works associated with the tendered work shall deemed to be integral part of scope without any cost implication.**

5. Contract Key Dates:

Tentative scheduling of major works:

Key Dates	Date	Description of Stages
Key Date #1	DOC (Date of commencement)	DOC - Maximum within 07 days from the date of award, Submission of construction programme, mobilization of survey and soil investigation team.
Key Date #2	1.5 months from DOC	Submission of Soil investigation report, Design Basis (PDR Report), GADs & architectural drawings with material specification for manufacturing block, inspection block and other non-factory/utility buildings and facilities. Mobilization of resources for site development/ formation works. Site development activity to start for Grading/Levelling/formation works
Key Date #3	3.5 months from DOC	Submission of detailed structural design & drawings including foundation details for civil works pertaining to manufacturing and inspection blocks. (PFDR- pre final design review).
Key Date #4	4 months from DOC	Submission of structural design & drawings including foundation details for non-factory/utility buildings and other civil infrastructure. (PFDR)
Key Date #5	6 months from DOC	Submission of final design document (FDD) Start of foundation for other non-factory/utility buildings and other facilities
Key Date #6	6 months from DOC	Completion of earthwork/formation and area development as well as commencement of foundation work for car body manufacturing unit and inspection facility.
Key Date #7	9 months from DOC	Final completion of 100% foundation work for car body manufacturing unit and inspection facility, also start of structural steel fabrication work for manufacturing block
Key Date #8	11 months from DOC	Final Completion of foundation for other non-factory/utility buildings and all other facilities
Key Date #9	13 months from DOC	Completion of non-factory buildings including entry exit gates, stabling and testing rail tracks
Key Date #10	14 months from DOC	Final Completion of structural steel fabrication & erection work of manufacturing block and inspection block

Key Date #11	15 months from DOC	Final Completion of complete sheeting work of manufacturing block and inspection block. including construction of side walls.
Key Date #12	17 months from DOC	Completion of all works of manufacturing block and inspection block, including Ground floor and First floor slab
Key Date #13	17 months from DOC	Completion of stabling track, dispatch track, run test track, pavements, foot paths, hard stands, drainage, Roads, Green Belt, Land scaping & horticulture works, street & area lighting etc. Completion of MEP works of all buildings & Facilities
Key Date #14	18 months from DOC	Readiness of manufacturing block & Inspection Bay including MEP systems including cleaning of site
Key Date #15	18 months from DOC	Final Commissioning and hand over of manufacturing block including all MEP's passenger/service lifts, Rain water harvesting, addressing punch points & handing over.

The works are required to be completed as per the key dates and time of completion for different milestones as decided mutually between EPC Contractor and BEML, meeting the overall project timelines, specified in the tender.

Tentatively, key dates for different mile stones are tabulated hereunder which may undergo change after mutual discussion, meeting the project requirement and timelines. These key dates shall be crucial and form the basis for project progress monitoring.

6. PAYMENT SCHEDULE (Annexure-25)

Payment against a building/facility/ infrastructure shall be made as per the percentage of total price of the facility against completion of milestone as mentioned below, it should not exceed the % weightage indicated in table-

A.1 Car body manufacturing Block

CAR BODY MANUFACTURING cum WAREHOUSE BLOCK		
Sl	Activity	Payment (%)
1	Submission of Soil Investigation report	1%
2	Submission of design basis report, GAD's & Architectural drawings	1%
3	Detailed Design & Engineering and submission of Drawings	5%
4	Sub structure works up to Plinth including back filling & compaction	12%
5	Structural steel supply and Fabrication	27%
6	Structural steel Erection	10%
7	Masonry and plaster	2%
8	Composite floor	6%
9	Roofing	10%
10	Wall cladding and Openings	8%
11	Industrial flooring	6%
12	MEP Fire and other Services	5%
13	Finishes & External Development including Rain water harvesting	4%
14	Completion and structural stability certificate inclusive of complete furniture & Signages	3%
	Total	100%

A.2 Offices annexed to Car body manufacturing Block (Each Unit)		
Sl No.	Activity	Payment (%)
1	Submission of Soil Investigation report	1%
2	Submission of design basis report, GAD's & Architectural drawings	1%
3	Detailed Design & Engineering and submission of Drawings	3%
4	Sub structure works up to Plinth including back filling & compaction	12%
5	Structural steel supply and Fabrication	20%
6	Structural steel Erection	5%
7	RCC in Flooring & Roofing	
8	Casting of Ground floor slab	3%
9	Casting of 1 st floor slab	3%
10	Casting of 2 nd floor slab	3%
11	Casting of 3 rd floor slab	3%
12	Casting of 4 th floor slab	3%

13	Casting of 5 th floor slab	3%
14	Casting of Roof Slab	3%
15	Wall cladding and Partitioning	12%
16	Flooring, Finishing including fixing of Doors & Windows and waterproofing	13%
17	Plumbing, Fire and other MEP services including Supply, Installation, Testing & commissioning of lift.	8%
18	Completion and stability certificate inclusive of complete furniture & Signages & Rain water harvesting	4%
	Total	100%

B. Inspection & Testing Block

INSPECTION & TESTING LINE		
SI No.	Activity	Payment (%)
1	Submission of Soil Investigation report	1%
2	Submission of design basis report, GAD's & Architectural drawings	1%
3	Detailed Design & Engineering and submission of Drawings	3%
4	Sub structure works up to Plinth including back filling & compaction	15%
5	Structural steel supply and Fabrication	27%
6	Structural steel Erection	10%
7	Roofing and cladding	15%
8	Industrial flooring, Masonry and Plaster	15%
9	MEP Fire and other Services	5%
10	Finishes & External Development including Rain water harvesting	5%
11	Completion and structural stability certificate inclusive of complete furniture & Signages	3%
	Total	100%

• Details of facility with their no. of floors

	Single Storey (G)	Two Storied (G+1)	Four Storied (G+3)
RCC Building	Main Receiving Sub Station – MRSS	Main Gate Complex with security office	Gate Complex for railway siding
	Occupational Health centre		
	Fire station		

C. Payment terms of RCC building

RCC BUILDINGS				
Sl No.	Milestone	G	G+1	G+3
1	Submission of Soil Investigation report	1%	1%	1%
2	Submission of design basis report, GAD's & Architectural drawings	1%	1%	1%
3	Detailed Design & Engineering and submission of Drawings	3%	3%	3%
4	Sub structure works up to Plinth including back filling & compaction	20%	15%	15%
5	RCC upto ground floor Slab	25%	15%	8%
6	RCC upto 1 st floor slab	-	15%	8%
7	RCC upto 2 nd floor slab	-	-	8%
8	RCC upto 3 rd floor slab	-	-	8%
9	Masonry and Plaster	15%	15%	15%
10	MEP Fire and other services*	10%	10%	10%
11	Floor Finishes including water proofing	13%	13%	13%
12	Finishes & External Development including Rain water harvesting	5%	5%	3%
13	Completion and stability Certificate inclusive of furniture & Signages	7%	7%	7%

MEP services* also includes IT & data communication infrastructure in all facilities falling under the scope (wherever applicable).

D. STP

STP		
SL	Activity	Payment (%)
1	Submission of Soil Investigation report	1%
2	Submission of design basis report, GAD's & Architectural drawings	1%
3	Detailed Design & Engineering and submission of Drawings	3%
4	Sub structure including equipment foundation	30%
4	Super structure including industrial flooring	30%
6	Waterproofing and finishing works	5%
7	Pipe supports, trenches and chambers	5%
8	Utility Services/MEP	10%

9	Road drains, Finishes & External Development including Rain water harvesting	5%
10	Installation of equipment including dry rolling & water tightness test of water retaining structures	6%
11	Completion and stability certificate inclusive of complete furniture & Signages	4%
	Total	100%

E. For Services like road work, Trenches, Drains, Sewers, Railway lines, payment shall be regulated as per percentage completion (RAR basis) in terms of a running meter whichever is applicable

	ROADS, DRAINAGE, SEWARAGE, TRENCHES, RAILWAY SIDING, Laying & linking of railway track WITH/WITHOUT OHE, COMBINATION TRACK	
Sl	Activity	Payment (%)
1	Submission of Soil Investigation report	1%
2	Submission of design basis report, GAD's & Architectural drawings	1%
3	Detailed Design & Engineering and submission of Drawings	3%
4	Earthwork and Construction	80%
5	Completion including Dressing & Finishing, Signages & Finishing of Culverts(pipe/Box), Painting of all structures above ground	15%
	Total	100%

	F. HARD STANDS, EPSS (excl. HSD shed***),	
Sl	Activity	Payment (%)
1	Submission of Soil Investigation report	1%
2	Submission of design basis report, GAD's & Architectural drawings	1%
3	Detailed Design & Engineering and submission of Drawings	3%
4	Earthwork and Construction	90%
5	Completion including Finishing, Signages & Finishing of Culverts (pipe/Box).	5%
	Total	100%

G. Green belt Development & Landscaping		
Sl No.	Activity	Payment (%)
1	Submission of Architectural plan of Greenbelt development & landscaping including design of decorative fountain	3%
2	Excavation & preparation of pits including plantation of trees	30%
3	Soil bed preparation, Grassing & development of Lawn	30%
4	Decorative water fountains including waterproofing & other services	15%
5	completion including finishes, Irrigation system works, walkway & pathways, sitting & street furnitures, lighting & signages	10%
6	Maintenance & Preservation for one year & Handing Over	12%
	Total	100%

H. EARTHWORK (Cutting & Filling)		
Sl	Activity	Payment (%)
1	Submission of Soil Investigation report	1%
2	Submission of design basis report & drawings	1%
3	Detail Design with methodology	3%
4	Cutting and Filling upto the formation level	90%
5	Overall Completion including earth retaining structures and formation slope	5%
	Total	100%

I. TRAVERSER FOUNDATION		
Sl	Activity	Payment (%)
1	Submission of Soil Investigation report	1%
2	Submission of design basis report, GAD's & Architectural drawings	1%
3	Detailed Design & Engineering and submission of Drawings	3%
4	Earthwork and Construction	90%
5	Completion Upon installation & commissioning of traverser including Finishing, Signages	5%
	Total	100%

J. SWITCHYARD		
Sl	Activity	Payment (%)
1	Submission of Soil Investigation report	1%
2	Submission of design basis report, GAD's & Architectural drawings	1%
3	Detailed Design & Engineering and submission of Drawings	3%
4	Main Transformer foundations including firewall	10%

5	Other equipment foundations including Distribution Transformers	60%
6	Trenches & MEP services	7%
7	Gravel Filling & Fencing	10%
8	External work, Finishing & Completion	3%
9	After Erection of switchyard equipment	5%
	Total	100%

K. MEP EQUIPMENT/SYSTEM		
Sl	Activity	Payment (%)
1	Supply as per BOM	75%
2	Erection/installation	15%
3	Testing & Commissioning	5%
4	Final Handing over	5%
	Total	100%

For - Gas bank area & Main gate complex (Note- For associated security wall payment shall be made as per security wall payment schedule

L. SECURITY WALL/PARTITION WALL		
Sl	Item Description	Percentage
1	Submission of Soil Investigation report	1%
2	Submission of design basis report, GAD's & Architectural drawings	1%
3	Detailed Design & Engineering and submission of Drawings	3%
4	Foundation	18%
5	RCC column up to Plinth top	10%
6	RCC column up to cap beam bottom	10%
7	Masonry wall	18%
8	RCC Cap Beam	4%
9	Supply & Erection of MS Grill	15%
10	Providing & fixing of Gate	2%
11	External Plastering	5%
12	Internal Plastering	5%
13	Painting & finishing including site cleaning & Handover	8%
	Total	100%

For associated boundary wall at Main gate complex, payment shall be made as per security wall payment schedule

M. SUMP/ RESERVOIR/ TANK		
Sl	Item Description	Percentage
1	Submission of Soil Investigation report	1%

2	Submission of design basis report, GAD's & Architectural drawings	1%
3	Detailed Design & Engineering and submission of Drawings	3%
4	Excavation PCC bed & casting of base slab	25%
5	Construction of RCC walls, supporting columns including compartments up to half height	12%
6	Construction of RCC walls, supporting columns including compartments up to full height	13%
7	Slab casting	23%
8	Internal plastering/ rendering, floor finishing including fillets	4%
9	External plastering/rendering, pipe connection (inlet/outlet/overflow/scour), valves & chamber	4%
10	Water proofing treatment & water tightness testing	7%
11	Finishing works (manholes, ladders, railings, vent pipes, painting) commissioning & handover	7%
	Total	100%

Facilities with industrial shed

Other Industrial Shed	Raw material storage yard, (covered), Water
	Water supply & fire water pump house
	Gas bank

N. STRUCTURAL INDUSTRIAL SHED#		
Sl	Item Description	Percentage
1	Submission of Soil Investigation report	1%
2	Submission of design basis report, GAD's & Architectural drawings	1%
3	Detailed Design & Engineering and submission of Drawings	3%
4	Sub structure works up to Plinth including back filling & compaction	15%
5	Structural steel fabrication	25%
6	Erection up to Roof bottom level	5%
7	Erection of Trusses, Purlins and structural Alignment	5%
8	PUF insulated roofing industry ridge/flashing/gutters	10%
9	Masonry up to 3.0m including plastering	10%
10	Galvalume sheeting	5%
11	Foundations for plant & equipment and flooring	13%
12	Ramp, rolling shutter, window fixing, painting & finishing, external development & Handover	7%
	Total	100%

Water supply and Fire water pump house facility, Gas bank

O. CANTEEN BUILDING		
Sl	Item Description	Percentage
1	Submission of Soil Investigation report	1%
2	Submission of design basis report, GAD's & Architectural drawings	1%
3	Detailed Design & Engineering and submission of Drawings	3%
4	Foundations & Substructure	15%
5	RCC up to Roof Level	10%
6	Structural steel fabrication for roofing	7%
7	Casting of Roof	7%
8	Erection of roof trusses & purlins	5%
9	Roof sheeting	5%
10	Masonry Work including plastering	13%
11	False ceiling & MEP services	12%
12	Finishing* including water proofing	13%
13	External development works	2%
14	Completion, Handover** & stability certificate including furniture	6%
	Total	100%

* - Finishing also includes flooring.

** - ** - This will also include supply and installation of elevator / lift of specified capacity handing
 over milestone shall also include supply and installation of elevator / lift of specified capacity, wherever required

P. Rain water harvesting- Payment against this line item shall be done upon completion of complete works.

Note:

1. Progressive payment shall be admissible based on the progress of work as per the rate derived from (price furnished by successful bidder in price break-up and quantity of line item) the bidder for the executed quantity at site
2. In case of foundation works, no part/ progressive payments are admissible.
3. The break-up of price against following line items are to be provided under mentioned Sub-heads:

Facility	Part 1	Part 2	Part 3
MRSS	Building	Switchyard	
Water and Fire PUMP House	Building	Tank	
STP	Building	Tank	
EPSS	Hardstand		
Gas Bank	Covered Shed with raised platform and ramp	Security wall	
Main Gate	Building	Security wall	
Ro Plant	Equipment cost	Hardstand	Tank
Weigh Bridge	Equipment cost	Civil cost	

4. The change in a built-up area of facility And/ or quantity provided against an item shall be governed by relevant tender clauses

Weightage of total works (Firm to quote prices in following %) (Annexure-26)

Sl No.	Particulars	Item Particulars	% Weightage (Firm to quote not more than % mentioned below out of total 100 %	Payment schedule clause (Annexure-25)
Sl. No.		Item Particulars	% Weightage	
1	Land & Site development	Roads, Storm drainage, Sewerage	28	E
		RCC Service Trench (Both Sides)		E
		Main Gate Complex with security office		C,L
		Gate Complex for railway siding		C
		Earth work - Cutting & Filling		H
		Greenbelt Development		G
		Laying and linking Railway Track		E
2	Manufacturing block	Car Body manufacturing cum storage Bay	49	A1
		Offices annexe carbody manufacturing block		A2
3	Inspection & testing block	Car body inspection and testing line facility	8	B
4	Utility & other service building	Raw material storage yard	5	N
		Water supply & fire water pump house & sump		N,M
		MRSS		C,J
		EPSS- Hard Stand		F
		Compressed Air Station		N
		Gas Bank		N,L
		RO Plant		F,M

		Fire Station		C
		Traverser/ AGV – Hardstand		I, F
		Rain Water Harvesting		P
		Canteen Building		O
		Occupational Health Centre		C
5	MFA	Material Handling	10	K
		Plant Electrics		K
		Instrumentation		K
		AC & Ventilation		K
		Compressed Air Facility		K
		Fire Fighting System		K
		Furniture		K
		IT Equipment		K
		Water Supply Facilities		K
		RO Facility		K
		STP		D, K, M
		DG Set		K
		Gas Bank		K
		Weigh Bridge		K, B
		Freight and Transport Charges to site (MFA Equipment)		K

- Completion schedule**

18 Months from the date of commencement.

The contractor is required to commence the work within 07 days from the date of award of works. The Contractor is expected to deploy adequate no. of manpower plants, machinery and all required resources commensurate with the required number / quantity for expeditious execution of works. The contractor may require to ensure working in all three shifts including Sundays and holidays (Non Deployment of a requisite number of skilled personnel as specified hereunder shall attract penalty as specified.

7. DEPLOYMENT OF TECHNICAL STAFF AND EMPLOYEES

Contractors Superintendence, Supervision, Technical staff & Employees

A. The contractor shall provide all necessary training, superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract.

The Contractor shall immediately after receiving letter of acceptance of the tender and before physical commencement of the work, intimate in writing to the Engineer-in-Charge, the name (s), qualifications experience, age, address (s) and other particulars along with certificates, of the principal technical representative to be charge of the work and other technical representative (s) who will be supervising the work. Minimum requirement of such technical representative (s) and their qualifications and experience shall not be lower as specified hereinunder. The Engineer-in-Charge shall within 3 days of receipt of such communication intimate in writing his approval or otherwise of such a representative (s) to the contractor. Any such approval may at any time be withdrawn and in case of such withdrawal, the contractor shall appoint another such representative (s) according to the provisions of this clause. Decision of the Engineer-In-Charge shall be final and binding on the contractor in this respect. Such a principal technical representative and other technical representative (s) shall be appointed by the contractor soon after receipt of the approval from Engineer-in-charge and shall be available at site before start of work.

All the provisions applicable to the principal technical representative under the clause will also be applicable to other technical representative(s). The principal technical representative and other technical representative (s) shall be present at the site of work for supervision at all times when any construction activity is in progress and also present himself/themselves, as required to the Engineer-in-Charge and / or his designated representative to take instructions. Instructions given to the principal technical representative or other technical representative (s) shall be deemed to have the same force as if these have been given to the contractor. The Principal Technical Representative and other technical representatives shall be actually available at site fully during all stages of execution work, during recording / checking/ test checking of measurements of works whenever so required by the Engineer- in-Charge and shall also note down instructions conveyed by the Engineer-in-Charge or his designated representative (s) in the site order book and shall affix his/their signature in token of noting down the instructions and in token of acceptance of measurements / checked measurements/ test checked measurements. The representative (s) shall not look after any other work. Substitutes, duly approved by engineer - in-Charge of the work in similar manner as aforesaid shall be provided in event of absence of any of the

representative (s) by more than two days. If the Engineer-in-Charge, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative (s) is/are effectively appointed or is/are effectively attending or fulfilling the provision of this clause, a recovery (non-refundable) shall be effected from the contractor as specified hereinunder and the decision of the Engineer-in-Charge as recorded in the site order book and measurement recorded checked/test checked in Measurement Books shall be final and binding on the contractor.

Further if the contractor fails to appoint suitable technical Principal technical representative and / or other technical representative (s) and if such appointed persons are not effectively present or are absent by more than seven days without duly approved substitute or do not discharge their responsibility satisfactorily, the Engineer-in-Charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative (s) is/ are appointed and the contractor shall be held responsible for the delay so caused to the work.

The contractor shall submit a certificate of employment of the technical representative (s) (in the form of copy of **Form- 16 or CPF deduction** issued to the Engineer employed by him) along with every running account bill / final bill and shall produce evidence if at any times so required by the Engineer- in-Charge.

The contractor shall provide and employ on the site only such technical assistants as are skilled, and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work. The contractor shall provide and employ skilled, semi-skilled and unskilled labour as is necessary for proper and timely execution of the work. The Engineer-in-Charge shall be at liberty to object to and require the contractor to remove from the works any person who in his opinion misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Engineer-in Charge to be undesirable. Such person shall not be employed again at works site without the written permission of the Engineer-in-Charge and the persons so removed shall be replaced as soon as possible by competent substitutes.

The contractor shall not change his engineer/supervisory staff deployed at site. If Contractor wants to replace any of his staff due to unavoidable circumstances, he will seek permission of Engineer-In-Charge indicating reasons for such change, qualification and experience of the alternative employee suggested by him. The qualification and experience of the alternative staff shall not be inferior to the person employed earlier.

B. Requirement of Technical Representative(s) and recovery rate

Sl. No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical representative)	Rate at which recovery shall be made per month from the contractor in the event of not fulfilling aforesaid provisions. (Monthly Deduction shall also be on pro-rate basis)	
				Figures Rs.	Words
1	Master's degree in Civil Engineering	Civil	Project Manager	2,00,000	Two Lacs
2	Bachelor degree in Civil Engineering	Civil	Construction Manager	1,50,000	One lac fifty thousand
3	Bachelor degree in Civil Engineering	Civil	Planning Manager	1,50,000	One lac fifty thousand
4	Bachelor degree in Civil Engineering	Civil	Railway Engineer	1,50,000	One lac fifty thousand
5	Bachelor Degree in Architecture or Civil Engineering	Civil	Design Manager	1,50,000	One lac fifty thousand
6	Bachelor Degree in Architecture	Architecture	Lead Architect	1,50,000	One lac fifty thousand
7	Masters in Structural Engineering	Structural	Lead Structural Engineer	1,50,000	One lac fifty thousand
8	Bachelor Degree in Environment/sustainability Engg.	Environment/sustainability	Sustainability Manager	1,50,000	One lac fifty thousand

9	Masters in Structural Engineering	Structural	Structural Engineer	1,00,000	One Lac
10	Bachelor degree in Mechanical Engineering	Mechanical	Lead Mechanical Engineer	1,00,000	One Lac
11	Bachelor degree in Mechanical Engineering	Mechanical	Mechanical Engineer	1,00,000	One Lac
12	Bachelor degree in Electrical Engineering	Electrical	Lead Electrical Engineer	1,00,000	One Lac
13	Bachelor degree in Electrical Engineering	Electrical/Mechanical	Electrical Engineer	1,00,000	One Lac
14	Bachelor degree in Civil Engineering	Civil	Construction Engineer/Road Engineer	1,00,000	One Lac
15	Bachelor degree in Civil/Mechanical Engineering	Civil Engg.	HSE Engineer	1,00,000	One Lac
16	Bachelor degree in Civil/Mechanical Engineering	Civil Engg. / Architecture	QA/QC Engineer	75,000	Seventy Five thousand
17	Bachelor degree in Civil Engineering	Civil Engg.	Quantity Surveyor	75,000	Seventy Five thousand

- a. Technical representative at Sr. No 1 TO 16 shall be deployed during the complete project duration (construction work). Deployment of other technical representative shall be based on work program as approved by Engineer-In-Charge.

C. Equipment

The Bidder shall deploy, as per the mutually agreed programme.

The capacity of equipment plant and machinery of various MEP systems have been envisaged in the tendered work as per

preliminary assessment and design basis report. Upon award, during planning, the requirement need to be re-assessed and finalized in consultation with BEML and system may be designed accordingly.

As per the design of system BOM to be finalized and supply may be done accordingly in line with project schedule and requirement.

Note:

Numbers of plant, machinery/equipment indicated in the list is tentative and is not final. This has been worked out based on preliminary assessment. Which shall be used for the purpose of evaluation of bidders capability in line with QCBS parameter, Final numbers shall be arrived after mutual discussion upon award of work for deployment at site as per requirement . Failure to deploy the above equipment as per mutually agreed programme shall attract penalty @ Rs. 5,000/- per day of delay in deployment for each equipment .

8. INSTRUCTIONS TO BIDDERS

1. Bid Validity: The tender shall be valid for 180 days from the last date of submission of the tender. In case the day upto which the bids are to remain valid falls on/ subsequently declared a holiday or closed day for the Procuring Entity, the bid validity shall automatically be deemed to be extended upto the next working day. In exceptional circumstances, before the expiry of the original time limit, the Procuring Entity may request the bidders to extend the validity period for a specified additional period. The request and the bidders' responses shall be made in writing or electronically. A bidder may agree to or reject the request. A bidder who has agreed to the Procuring Entity's request for extension of bid validity, in no case, he shall be permitted to modify his bid.
2. BEML Limited shall not be bound to accept the lowest tender and reserves the right to reject any or all the Tenders without assigning any reason.
3. Late tenders and conditional tenders are liable to be rejected. The Company does not bind itself to accept the lowest or any tender or give any reasons for not doing so.
4. The Bidders shall not be at liberty to withdraw or modify his tender or any terms and conditions thereof before the expiry of said period. Bidders are expected to clarify only such points as asked for specifically by the Purchasing Officer in writing. Any withdrawal or modification made within the said period constitutes breach of contract and the Bidder shall be liable for damages to the Company in consequence thereof. He shall, in addition, forfeit to the Company the EMD.
5. Supplier' means a person having been included in a contract as a Contractor and also means a firm or company with whom the order for supply/execution of work is placed and shall be deemed to include the supplier's successors, (approved by BEML Ltd.,) representatives, heirs, executors and administrators. The supplier may also be referred to as the supplier, Contractor or vendor.
6. Any tender which proposes any alterations to any of the conditions laid down or proposes any other conditions of any description whatsoever is liable to be rejected.
7. The following requirements shall be strictly complied with
 - a) The tender should be accompanied by a certified true copy of the power of attorney of the signatory of the documents to be uploaded online.
 - b) The drawing should be returned along with the tender documents if any.
 - c) Bidders shall ensure that their tender is up loaded well in advance before the time and date stipulated in the tender notification/documents.

8. The submission of a tender by a Bidder implies that he has read all the terms and condition of tender and has made himself aware of the scope and specifications of the work to be done and local conditions and other factor bearing on the execution of the work.
9. This instruction shall be deemed to form an integral part of the contract to be entered for this work.
10. Should a Bidder find discrepancies of omissions in the drawings or any of the tender documents or should be in doubt as to their meanings he should at once address the authority inviting the tender for clarification. Every endeavour is made to avoid any error which can materially affect the basis of the tender but the successful Bidder shall take upon himself to provide for the risk of any error which may be subsequently discovered and shall make no subsequent claim on account thereof.
11. The Contractors responsibility for this contract shall commence from the date of commencement mentioned in the work order which will be issued by the Engineer in- Charge after acceptance of work.
12. If the Bidder deliberately gives wrong information in his tender or creates conditions favourable for acceptance of his tender, the Accepting Officer reserves the right to reject such tender at any stage, forfeit the EMD, and take Administrative Action against the Bidder like non-issue of tenders etc., as deemed fit by the Accepting Officer.
13. The Bidder shall not increase their quoted rates in case the Accepting Officer negotiates for reduction in rates, such negotiations shall not amount to cancellation or withdrawal of the original offer and the rates originally quoted shall be binding on the Bidder. (Price variation shall be applicable few items, refer Clause no.
14. In the event of a tender being submitted by a Partnership Firm, it is necessary to upload the Partnership Deed along with name of the authorized signatory to deal on this contract through a Power of Attorney by the other partners. The copy of the power of attorney along with the tender shall be uploaded.
15. All concrete shall generally conform to I.S. 456. Any concrete that does not conform to required strength shall be redone at the cost of contractors. Concrete cubes will be prepared by the contractors and same to be tested as per code of practice at the cost of contractor as directed by Engineer- In-Charge.
16. Plank/Steel shuttering shall only be used as ordered by the Engineer-in-charge. The concrete shall be consolidated by Mechanical Vibrator, as directed by Engineer-incharge.
17. Bailing out of rain water, if required during excavation, shall be the responsibility of the contractor and no extra payment shall be allowed for

bailing out of sub soilwater.

18. Works shall be executed with the materials of Indian standards specifications of approved quality and manufacture and best workmanship.
19. Manufactured Sand can be used in Civil Works including plastering works and subjected to every load should accompany with a NABL Test Report/trip shall be accompanied with MTC.
20. After Complete QSBS evaluation, the highest resulted value (Technical and Financial in the ratio of 70:30) tender has to submit the original documents for verification and for award of work if requested by BEML. If the document submitted is found fake PEMD/EMD shall be forfeited and agency is liable for rejection and debarring minimum two years from quoting to BEML.
21. In case of any increase/decrease in new taxes or introduction of new taxes by enactment of law by the State or Central Govt after the submission of the tender or during the tenure of contract, such increase/decrease in tax will be reimbursed to the extent applicable to that contract on production of proof of remittance.
22. The Contractor may use Ready Mixed Concrete (R.M.C) without claiming for any extra cost subjected to satisfying the following conditions. The agency which supplies R.M.C to be got approved by BEML. The R.M.C shall comply with the requirements of approved design mix and the quality plan for the same shall include the Supplier's certificate along with inspection of materials in the bins at the site of mixing by BEML at the cost of Contractor.
23. Works comprising of concreting work exceeding 6 cum per day involving casting of flooring, roofing, columns Retaining wall and other RCC members may compulsorily be undertaken with ready mix concrete or as directed by Engineer-in-Charge.

Procuring Entity - Rights and Disclaimers

a) The Procuring Entity

Bids are to be addressed to the BEML. The Tender Inviting Authority (TIA) is the designated officer for uploading and clarifying this Tender Document. The contract may designate, as required, counterpart Contract Manager/ Civil Engineer-In-charge (or Contract Management Team); interim/ ultimate Beneficiaries of Services and Paying authority who shall discharge designated function during contract execution.

b) Right to Intellectual Property and confidentiality:

- I. The Tender Document and associated correspondence are subject to copyright laws and shall always remain the property of the Procuring Entity and must not be shared with third parties or reproduced, whether in whole or part, without the Procuring

Entity's prior written consent.

- II. However, Bidders may share these to prepare and submit its bid with its employees, subcontractor(s), or holding Company. Bidders shall obtain from them an undertaking of confidentiality similar to that imposed on Bidder under this clause.
- III. This condition shall also apply to bidders who do not submit a bid after downloading it or who are not awarded a contract in the process.
- IV. The obligation of the Bidders under sub-clauses above, however, shall not apply to information that:
 - a. now or hereafter is or enters the public domain through no fault of Bidder;
 - b. is legally possessed by Bidder at the relevant time and was not previously obtained, directly or indirectly, from the Procuring Entity;
 - c. Otherwise lawfully becomes available to Bidder from a third party that has no obligation of confidentiality.
- V. The provisions of this clause shall survive completion or termination for whatever reason of the Tender Process or the contract.

c) Right to Reject any or all Bids

The Procuring Entity reserves its exclusive right to accept or reject any or all Bids, abandon/ cancel the Tender process, and issue another tender for the same or similar Goods at any time before the award of the contract. It would have no liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for such action(s).

d) Regarding Documents/ guidelines

The Tender Document, ensuing communications, and Contracts shall determine the legal and commercial relationship between the bidders/ contractors and the Procuring Entity. No other Government or Procuring Entity's document/ guidelines/ Manuals including its Procurement Manual (for internal and official use of its officers), not withstanding any mention thereof in the Tender Document, shall have any locus-standii in such a relationship. Therefore, such documents/ guidelines/ Manuals shall not be admissible in any legal or dispute resolution or grievance redressal proceedings.

e) Regarding Information Provided

Information contained in the Tender Document or subsequently provided to the Bidder(s) is on the terms and conditions set out in the Tender Document or subject to which that was provided. Similar terms apply to information provided verbally or in documentary or any other form, directly or indirectly, by the Procuring Entity or any of its employees or associated agencies.

f) Regarding Tender Document:

- I. The Tender Document does not purport to contain all the information Bidder(s) may require. It may not address the needs of all Bidders. They should conduct due diligence, investigation, and analysis, check the information's accuracy, reliability, and completeness, and obtain independent advice from appropriate sources. Information provided in the Tender Document to the Bidder(s) is on a wide range of matters, some of which may depend upon interpreting the law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Procuring Entity, its employees and other associated agencies accept no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.
- II. The Procuring Entity, its employees and other associated agencies make no representation or warranty for the accuracy, adequacy, correctness, completeness or reliability, assessment, assumption, statement, or information in the Tender Document. They have no legal liability, whether resulting from negligence or otherwise, for any loss, damages, cost, or expense that may arise from/ incurred/ suffered howsoever caused to any person, including any Bidder, on such account.

g) Facilities to be Provided by the Procuring Entity

- I. Unless otherwise stipulated in the Tender Document, no Facilities (including Reference Documents, Medical facilities, Rooms, Furniture, Transport, Access to IT Services etc.) shall be provided by the Procuring Entity to Contractor at Site.
- II. Unless otherwise stipulated in the Tender Document, The Procuring Entity may supply without any obligation to do so, to the contractor part or whole of the quantity of the water and electricity required for the delivery of Services from the Procuring Entity's existing water/ electricity supply system at or near the site of Services on specified terms and conditions and on chargeable basis (unless specified otherwise), provided that the contractor shall arrange, at his own expense, to effect the connections and lay additional pipe/ power lines and accessories on the site. Nevertheless, it shall be the responsibility of the contractor to install adequate alternative arrangements to tide over outages in utilities or failure in supply by the Procuring Entity, and that the contractor shall not be entitled to any compensation– nor shall this be a reason for the delay in delivery of Services.
- III. If so, stipulated in the Tender Document, The Procuring Entity may hire to the contractor non-key Equipment owned and sparable by Procuring Entity for use during execution of the Services on terms and conditions and on a chargeable basis as may be stipulated in the contract or a separate agreement for Hire of such equipment.

24. Unless otherwise stipulated in the Tender Document, the currency of bid and payment shall be quoted by Bidder entirely in Indian Rupees. All

payments shall be made in Indian Rupees only.

25. Corrigenda/ Addenda to Tender Document

Before the deadline for submitting bids, the Procuring Entity may update, amend, modify, or supplement the information, assessment or assumptions contained in the Tender Document by issuing corrigenda and addenda. The corrigenda and addenda shall be published in the same manner as the original Tender Document. Without any liability or obligation, the Portal may send intimation of such corrigenda/ addenda to bidders who have downloaded the document under their login. However, the bidders' responsibility is to check the website(s) for any corrigenda/ addenda. Any corrigendum or addendum thus issued shall be considered a part of the Tender Document. To give reasonable time to the prospective bidders to take such corrigendum/ addendum into account in preparing their bids, the Procuring Entity may suitably extend the deadline for the bid submission, as necessary. After the procuring entity makes such modifications, any Bidder who has submitted his bid in response to the original invitation shall have the opportunity to either withdraw his bid or re-submit his bid superseding the original bid within the extended time of submission.

26. Clarification on the Tender Document

A Bidder may seek clarification of the Tender Document from Office/ Contact Person/Help Desk as mentioned in NIT, provided the clarifications are raised before the clarification end date mentioned in NIT (or if not mentioned, within 7 days before the deadline for the bid submission). The Procuring Entity shall respond within 5 working days of receipt of such a request for clarification. Any modification of the Tender Document that may become necessary due to the clarification shall be made by the Procuring Entity through an Addendum/ Corrigendum.

27. Preparation of Bids

a) The bid

I. Language of the bid

Unless otherwise stipulated in the Tender document, the bid submitted by Bidder and all subsequent correspondence and documents relating to the bid exchanged between Bidder and the Procuring Entity shall be written in English. However, the language of any printed literature furnished by Bidder in connection with its bid may be written in any other language provided a translation accompanies the same in the bid language. For purposes of interpretation of the bid, translation in the language of the bid shall prevail.

II. Acquaintance with Local Conditions and Factors

The Bidder, at his own cost, responsibility, and risk, is required to visit, examine, and familiarize himself with all the site/ local conditions and factors. The Bidder acknowledges that before the submission of the bid, he has, after a complete and careful examination, made an independent evaluation of the Site/local conditions, infrastructure, logistics, communications, the legal, environmental, and any other conditions or factors, which would have any effect on the performance of the contract. Bidders shall themselves be responsible for compliance with Rules, Regulations, Laws and Acts in force from time-to- time at relevant places. On such matters, the Procuring Entity shall have no responsibility and shall not entertain any request from the bidders in these regards.

III. Cost of Bidding

The Bidder(s) shall bear all direct or consequential costs, losses and expenditure associated with or relating to the preparation, submission, and subsequent processing of their Bids, including but not limited to preparation, copying, postage, delivery fees, expenses associated with any submission of samples, demonstrations, or presentations which the Procuring Entity may require, or any other costs incurred in connection with or relating to their Bids. All such costs, losses and expenses shall remain with the Bidder(s), and the Procuring Entity shall not be liable in any manner whatsoever for the same or any other costs, losses and expenses incurred by a Bidder(s) for participation in the Tender Process, regardless of the conduct or outcome of the Tender process.

IV. Interpretation of Provisions of the Tender Document

The provisions in the Tender Document must be interpreted in the context in which these appear. Any interpretation of these provisions far removed from such context or other contrived or between-the-lines interpretation is unacceptable.

V. Alternate Bids not allowed.

Unless otherwise stipulated in the NIT/ Tender document, conditional offers, alternative offers, multiple bids by a bidder shall not be considered. The Portal shall permit only one bid to be uploaded.

28. General:

- i. BEML reserves right to reject the tender due to unsatisfactory past performance in the execution of a contract at any of BEML projects / units.
- ii. Bidders participating in the tender should declare in their offer that whether they have been black-listed / kept on hold for a specified period / given Business holiday for a specified period by any public

sector undertaking or Government departments. The reasons for such action with details and the current status of such hold shall be furnished to BEML.

- iii. In case any person/persons, Company, firm, Associations having any litigations, arbitration cases between themselves and BEML Ltd, pending before the Court / Arbitrator or initiated litigations/arbitrations in connection with any contract / tender issued by BEML Ltd and any contractor has defaulted against the BEML's orders, they are not eligible to participate in this tender.
- iv. BEML may decide to scrap the tender/refloat the tender without assigning any reasons thereof before LOI/PO is committed. BEML reserves the right to accept, split, divide, negotiate, cancel or reject any tender or reject all tenders at any time prior to the award of the contract without incurring any liability to the affected Bidders or any obligation to inform affected Bidder, the grounds of such action.
- v. BEML reserves the right to verify, in its sole discretion, any information given by the bidders independently through any third-party agencies. During this process, if it is found that any of the information given by the bidder is false / misleading, offers of such bidders would be out rightly rejected.
- vi. BEML also reserves the right to independently assess the capability and capacity of the bidder for execution of the order/contract. BEML's decision on any matter regarding short listing of bidders shall be final.
- vii. The Tender / Notice Inviting Tender is not an offer or a contract.
- viii. Bidders will not be compensated or reimbursed for the costs incurred in preparing Proposals. Proposals shall become BEML property.
- ix. BEML's decision is final for Evaluation of the offers.
- x. Refer BEML Purchase Manual (can be accessed in BEML website www.bemlindia.in) for Important terms and conditions of tender and General Terms & conditions applicable to contracts & purchase orders refer General Terms & Conditions.

9. GENERAL CONDITIONS OF CONTRACT (GCC)

A. DEFINITIONS & CONDITIONS OF CONTRACT:

A.1 Contract: The contract means all the documents forming part of the tender and acceptance there of and the formal agreement executed between BEML and the Contractor, together with the entire contents of these documents viz.,

- 1.** Notice inviting Tender (NIT)/ Invitation to Bid (ITB).
- 2.** SRM- Supplier Relationship Management
- 3.** BOQ- Bill of Quantities
- 4.** GTC- General Terms and Conditions
- 5.** SG – Standard Gauge, BG – Broad gauge of rail tracks.
- 6.** Instructions to Bidders.
- 7.** Technical Specifications & Particulars of specifications, Bill of Quantities.
- 8.** Tender Drawings.
- 9.** Price Bid.
- 10.** Contract Agreement.
- 11.** General Conditions of Contract as per standard form.
- 12.** Special Conditions of Contract.
- 13.** Any Clarifications/Amendments/Addendum issued before submission of tender.
- 14.** Acceptance Letter by the Accepting Officer and Work Order by Officer-in-Charge and any correspondence that has taken place between the Contractor and BEML from the time the tender is submitted till the acceptance is communicated.
- 15.** Final Deviation Order signed by BEML & the Contractor.
- 16.** Mutually agreed amendment/s executed by Parties.

All the above documents taken together shall be deemed to form one contract and shall be complementary to one another.

A.2 In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them: -

I. The expression "Works" or "Work", shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the Works by or by virtue of the Contract contracted to be executed whether temporary or permanent and whether original, altered, substituted or additional.

- 1.** "WORKS SITE" and "SITE OF WORKS"/"SITE", shall mean the extent of land which the company places at the disposal of the Contractor or provides access to, from time to time for the purpose of executing the contract Works. In other words, the site shall mean the land, places on, into or where

Work is to be executed under the Contract or any adjacent land, path or street or where Work is to be executed under the Contract or any adjacent land, path or street which may be temporarily permitted to be used for the purpose of carrying out the Contract.

2. "CONTRACTOR", shall mean the individual, partnership firm or company undertaking the Works and shall include the legal / personal representative of such individual or the persons composing such firm or or company, or the successors / administrators of such firm or company and the permitted assignees of such individual, firm or company.
3. "BIDDER OR TENDERER", shall means the person, firm or company submitting a tender (bid) against the invitation to Tender(bid) and includes his/its/their staff, consultants, parent and associate and subsidiary companies, agents, sub-contractors and suppliers, heirs, executors, administrators, representatives, successors.
4. "CONTRACTOR'S REPRESENTATIVE", shall mean the person responsible for execution of the contract who shall be so declared by the Contractor and who shall be authorised under a duly executed power of attorney to comply with the instructions. He shall be capable of taking responsibility for proper execution of Works.
5. "SUB-CONTRACTOR", shall mean the individual, firm, LLP, Company, Corporation to whom any part of the Work has been sub-contracted by the Contractor and shall include his heirs, his executors, administrators, successors, legal representatives, as the case may be.
6. "ENGINEER", "ENGINEER-IN-CHARGE(EIC)", "OFFICER-IN-CHARGE (OIC)", "PROJECT IN
 - i. CHARGE(PIC)", shall mean the Engineer / Representatives of BEML who shall supervise and be in charge of the Work or as may be notified at the time of Tender or issuance of Letter of Acceptance.
7. "CONSULTANTS", "ARCHITECTS" and "CONSULTING ENGINEERS", means third party
 - i. consultants/professionals appointed by BEML for the specific project, including the consultant's representative.
8. "ACCEPTING OFFICER", Authorized officer who accept the contract and under whose authority acceptance letter is issued.
9. "COMPANY", "EMPLOYER", "BEML", "CLIENT", SHALL MEAN "BEML LIMITED".
10. "TENDERED VALUE" Shall mean the value of the entire Work as stipulated in NIT (Notice Inviting Tender) at estimated value.
11. "THE DATE OF COMMENCEMENT OF WORK", The date of commencement of Work shall be the date of start as specified in acceptance letter or the first date of handing over of the site, whichever is later, in accordance with the phasing if any, as indicated in the tender document.
12. "THE ACTUAL DATE OF COMPLETION OF WORK", shall mean the date mentioned in the Completion Certificate issued by BEML.
13. "GST", shall mean Goods and Service Tax - Central, State and Inter State.

14. "ORIGINAL CONTRACT VALUE/ Contract sum", shall mean the sum stated in the Letter of Acceptance/Contract Agreement.
15. "LETTER OF ACCEPTANCE (LOA)", shall mean the letter from the Accepting Authority to the Contractor, conveying acceptance of the Tender. Legally communication of acceptance of offer is considered complete as soon as it is submitted to Postal authorities
 - i. / Email.
16. "DRAWINGS", shall mean the plans, sections, elevations and details of Works annexed to tender document and such further drawings as the Engineer may issue from time to time, during the progress of Works and shall include tracings and photographic prints.
17. "SCHEDULE BANK", shall mean a bank included in the second Schedule to the Reserve Bank of India Act 1934, or modification there to
18. "TENDER OR BID", shall mean the offer (Technical and/or Financial) made by individual, firm, LLP, Company or corporation for the execution of the Works.
19. "BILL OF QUANTITIES(BOQ)", is a description showing items of work with detailed specification/s and their respective estimated quantities, based on which the Bidder is required to quote.
20. "SPECIAL NATURE OF WORK", shall mean any Work(s) or part thereof for which Defect Liability Period is more than One year as indicated in the BOQ.
21. "CONTRACT AGREEMENT/AGREEMENT", shall means the agreement between the parties as per the format provided.

A.3 Interpretations:

1. Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference made to masculine gender includes all genders, as the context may require.
2. Headings and Marginal notes to these General Conditions of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.

A.4 WORKS TO BE CARRIED OUT:

The Work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all laborers, materials, tools, plants, equipment, transport, etc. which may be required in preparation of and for and in the full and entire execution and completion of the Works. The descriptions given in the Bill of Quantities shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labor necessary in and for the full and entire execution and completion of the Work as aforesaid in accordance with good practice and recognized principles.

A.5 SUFFICIENCY OF TENDER:

- 1.** The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the Works and of the rates and prices quoted in the Bill of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the contract and all matters and things necessary for the proper completion and maintenance of the Works, including the Site conditions.
- 2.** Quoted rates shall also include the following:
 - a. Working hours as per factory timings.
 - b. Movement of men, material and stacking all as per conditions of contract and as directed by the OIC/EIC.
 - c. Removing of surplus materials and stacking all as per conditions of contract and as directed by the OIC/EIC.
 - d. Shall be for Work on all floors and heights unless otherwise specifically sought by BEML in tender documents.

A.6 DISCREPANCIES, ADJUSTMENT OF ERRORS AND ORDER OF PRECEDENCE:

The several documents forming the Contract are to be taken as mutually explanatory of one another; detailed drawings being followed in preference to small scale drawing and figured dimensions in preference to scale. If any contradictions are observed in different components of the tender, the following precedence shall be observed:

- i. Mutually agreed amendment/s executed by Parties.
- ii. Final Deviation Order signed by BEML & the Contractor
- iii. Any Clarifications/Amendments/Addendum issued before submission of tender.
- iv. Notice inviting Tender (NIT)/ Invitation to Bid (ITB)
- v. Special Conditions of Contract.
- vi. Contract Agreement.
- vii. Acceptance Letter by the Accepting Officer and Site handing over letter (workorder) by Officer-in-Charge.
- viii. Any written clarifications issued by OIC/EIC after submission of tender.
- ix. Instructions to Bidders.
- x. Price Bid / BOQ.
- xi. Technical Specifications & Particulars of specifications.
- xii. Tender Drawings.
- xiii. General Conditions of Contract, as per standard form.

Note:

1. If there are varying or conflicting provisions made in any one document forming part of the Contract, the PIC/OIC/EIC shall be sole deciding authority with regard to the intention of the document and his decision in this respect shall be final and binding on the Contractor.
2. In the event of any error in the description or in the quantity in Price bid or any omission there from shall not vitiate the Contractor or release the Contractor from the execution of whole or any part of contract comprised there in according to the drawings and specifications, or from any of his obligations under the contract.

A.7 SIGNING OF CONTRACT:

1. Contractor on receipt of Purchase order/Work order, shall submit the signed copy of same accepted in all respect within seven days from date of Purchase order/Work order to PIC/OIC/EIC. Further, Contractor, shall submit agreement on a non-judicial stamp paper of suitable value in a prescribed format provided in the tender within 30 days from the date of Acceptance Further, no payment for the Work done will be made unless contract is signed by the Contractor.
 - i. Contractor shall sign the contract consisting of:-
 - b. Formal contract agreement on a non-judicial stamp paper in a prescribed format provided in the tender.
 - c. The Notice inviting tender (NIT), all the documents including drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
 - d. All Standard forms mentioned in the tender document consisting of
 - i. Various standard clauses with corrections up to opening date of tender along with annexure thereto.
 - ii. Safety Code mentioned in the tender.
2. Any Agreement, Bank Guarantee, any Hypothecation deed etc. required to be executed under this Contract shall be submitted by the Contractor with proper stamp duty as per the Formats enclosed respectively. However, the Accepting Officer shall have the rights to alter, modify, delete any content in such formats as deemed fit by him.

A.7(A) TENDER OR AGREED RATE:

1. In the event of anything evidently necessary to the due and complete performance of the works being omitted to be shown on the drawings or described in the specification or being omitted from the Bill of Quantities through oversight or error, the contractor shall, notwithstanding, execute (in the most perfect manner) all such works the same as if they had been severally shown, described and included without being entitled to make any extra

claim or charge.

2. The contractor shall satisfy himself or shall be deemed to have satisfied himself as to the nature of the sub-soil, the three dimensions, levels, character and nature of all roads, existing drains, sewers, water, gas or other mains, electric cables and other things as regards any connection they may have with the works the subject of the contract, and he shall also inspect the site of the works and surroundings, the means of access there to and egress therefrom and shall generally obtain his own information on all matters and things which can in any manner influence his tender, No claims for extra works otherwise will be allowed in consequence of any misunderstandings, error or incorrect information on these points, or of any other in- accuracies in reference thereto, which may appear on the drawings, or in the specification, nor shall the contract be nullified in consequence of any such misunderstanding, error incorrect information or in-accuracies

A.8 LANGUAGE OF CONTRACT & MODE OF CORRESPONDENCE

a. Language of Contract:

The Contract document shall be drawn up in English. All certificates, notices, written orders or letters, to be given by the BEML or the PIC/OIC/EIC to the Contractor, shall be deemed to have been served, if the same are delivered to the Contractor or his Authorised Representative, or delivered or left at or posted by speed post /registered post to the given address of the Contractor or Contractor's registered office or principal place of business and essentially delivering the same by e-mail duly attached with scanned copy of such certificates, notices, written orders or letters and Proof of Dispatch (POD). Such documents shall be deemed to have been received on the day they are left or delivered, or in the case of postal transmission, on the day they would ordinarily have reached but not exceeding 7 days from the date of posting inclusive of day of posting, in any case.

b. Address for communication:

The Contractor shall furnish his postal address/ registered office address which shall also include e-mail address for communication.

c. Change of Address:

Either party may change the nominated address by prior written notice to the other party. However, either party shall not change their email address during currency of the contract without obtaining prior consent from the PIC/OIC/EIC.

A.9 LAWS GOVERNING THE CONTRACT:

The contract shall be governed by the laws in force in India, and the State of Madhya Pradesh, to the extent they may apply.

A.10 HANDING OVER OF SITE FOR COMMENCEMENT OF WORK:

The Contractor having signed the contract, the PIC/OIC/EIC will forthwith give him notice to commence the Work by issuing Work order mentioning handing over of Site and the Contractor shall upon receipt of such notice commence the works and carry them on at such point or points and in such portions as directed by PIC/OIC/EIC from time to time. Work shall start on priority basis as per BEML requirement/notification. However, if any portion of site is not made available by BEML for any reason whatsoever no claim on account of this towards compensation or otherwise will be entertained. The handing over of Site for carrying on the Works shall not confer any right over work site except temporary possession only for the purpose of the Works under the Contract.

B. SECURITY DEPOSIT

1. The successful Bidder shall be required to furnish security deposit for the fulfilment of contract and the amount shall be 10% of the value of the contract, to be paid by the contractor. No waiver can be allowed in this regard. Such security deposit shall not entail any interest payment on refund.

II. The contractor shall choose any one of the following options for payment of security deposit in writing as under:

1. The contractor shall within 30 days of acceptance of the contract deposit, the difference between Earnest Money and full Security Deposit by Demand Draft/Banker's cheque drawn on any of the commercial bank made in favour of Company. PEMD held with BEML cannot be considered for such adjustment in the Security Deposit payable by the contractor.

2. Security Deposit amount shall be deducted from the running bills of the contractor at the rate of 10% or higher of the gross value of each bill. However, the entire security deposit amount shall be deducted before completion of 90% of work.

3. Performance bank guarantee shall be submitted within 30 days of acceptance of the contract and Bank guarantee drawn on any of the commercial bank made as format enclosed in the NIT and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the contractor, including Defect Liability Period (DLP).

b) The above deposit shall be held by the Company as security for the satisfactory performance of the contract. All compensations or other sums or money payable by the contractor to the Company under the

terms and conditions of this contract shall be deducted from this security deposit or from any other sums that shall be due, or shall become due to the contractor by the Company on any account whatsoever and in the event of the security deposit being reduced by reasons of any such deductions the contractor shall within ten days there after make good these deductions.

B.1 Claims of performance guarantee/Security Deposit:

BEML shall have full rights whatsoever to encash any bank guarantee submitted under this Contract at any time during the validity of the guarantee and the Contractor shall have no right or claim whatsoever in the matter of encashment of the bank guarantee amount by BEML and any disputes/ claim whatsoever in this regard shall only be settled by means of Dispute Resolution as provided for in contract and the decision of BEML as to what amount is due to BEML from the said bank against the guarantee and as to Contractor has committed breach of contract or not, shall be final and binding on the guarantor-bank and the Contractor shall have no right to interfere with the same and the bank shall have full rights in terms of the guarantee to make immediate payments against the bank guarantee to BEML without the Contractors consent and without referring the matter to the Contractor.

Notwithstanding the above and in addition thereto,

BEML shall make a claim under the performance guarantee (notwithstanding and/or without prejudice to any other provisions in the Contract Agreement) in the event of:

- 1.** Failure by the Contractor to pay BEML any amount due, either as agreed by the Contractor or determined under any of the Clauses/Conditions of the agreement, within 30 days of the service of notice to this effect by OIC/EIC.
- 2.** BEML on expiry of the contract, shall retain such portion of the said bank guarantee as may be considered sufficient to cover any incorrect or excess payments made on the bills to the Contractor, until the final audit report on the account of Contractor's bill has been received and examined.
- 3.** In the event of the contract being determined or rescinded under provision of any of the Clause/Condition of the contract, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the BEML.

B.2 REFUND OF SECURITY DEPOSIT:

- 1.** The above deposit, as the name itself signifies, shall be held as Security for performance of the contract. One half of the Security Deposit i.e, 50% shall be refunded to the contractor on completion of the contract based on the recommendations of the Chief Engineer in writing that the work has

been physically completed in all respects.

2. The balance 50% of the security
3. deposit shall be refunded to the contractor on written demand from the contractor after the expiry of the DEFECT LIABILITY PERIOD or on payment of final bill whichever is later, with the recommendation of the Chief Engineer, provided the Chief Engineer is satisfied that there are no dues outstanding against the contractor.
 - i. If the Security Deposit is in the form of Bank Guarantee, on completion of the contract, the contractor can give a fresh Bank Guarantee for 50% of the total security value for a period required by BEML and the original Bank Guarantee shall be returned there after on written demand from the contractor and shall be released subject to rectifying all defects noticed during the defect liability period indicated by BEML. Any refund of security deposit shall be made only with the recommendation of the Chief Engineer.

C. LIQUIDATED DAMAGES FOR DELAY IN COMPLETION OF WORKS:

- a. In case the Contractor fails to complete the works and clear the site on or before the stipulated time mentioned in the Work order he shall without prejudice to any other right or remedy of the Company in this behalf pay, as agreed Liquidated Damages and not as penalty, pay sum equal to 0.5% of the Contract sum (excluding non-tendered/extra items, if any) for every week's delay subject to maximum of 10% of the total final bill value of the Contract.
- b. Liquidated Damages shall be applicable in the following cases:
 - i. Where the contractor fails to complete the work within the stipulated time;
 - ii. Where the extension of time is granted with levy of LD;
 - iii. Where extension of time is granted without levy of LD but the contractor has failed to complete the work within the extended period.
- c. The amount of Liquidated Damages shall be adjusted or set off against any sum payable to the contractor under this or any other contract/s awarded by the Company.
- d. In case where the contract is subjected to levy of LD, the Chief Engineer shall be the authorised person to issue 'Work Completion Certificate', which shall be final and binding the Company as well as the Contractor concerned.

D. EXTENSION OF TIME:

The time allowed for execution of the Works as specified in the tender document or the extended time in accordance with these conditions shall be the essence of the contract. The execution of the Work shall commence from such time period as mentioned in Tender/PO or from the date of handing over of the site, notified by the OIC/EIC, whichever is later. If the Contractor commits default in commencing the execution of the Work as aforesaid, the performance guarantee shall be forfeited by BEML and shall be absolutely at the disposal of the BEML without prejudice to any other right or remedy available in law

D.1 As soon as possible but within 7 (seven) Working days of award of Work and in consideration of

(a) Schedule of handing over of site as specified in Work order.

(b) Schedule of issue of designs/Drawings as specified in Work order.

- i. The Contractor shall submit a Time and Progress Chart for each mile stone. The OIC / EIC may within 7 (seven) Working days there after, if required modify, and communicate the program approved to the Contractor failing which the program submitted by the Contractor shall be deemed to be approved by the Officer -in Charge. The Work programme shall include all details of balance drawings and decisions required to complete the contract with specific dates by which these details are required by Contractor without causing any delay in execution of the Work. The chart shall be prepared in direct relation to the time stated in the contract documents for completion of items of the Works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the Work and may be amended as necessary by agreement between the OIC/EIC and the Contractor within the limitations of time imposed in the Contract documents
- ii. In case of non-submission of construction programme by the Contractor, the program approved by the OIC/EIC shall be deemed to be final and binding on the Contractor.
- iii. The approval by the OIC/EIC of such programme shall not relieve the Contractor of any of the obligations under the contract.
- iv. The Contractor shall submit the Time and Progress Chart, Labour code compliance report and progress report using the mutually agreed software or in other format decided by OIC/EIC for the Work done during previous month to the Officer-incharge on or before 5th day of each month. This shall also indicate the equipment & manpower schedule. Contractor shall maintain hindrance register at site wherein details of physical hindrances are recorded and it shall be attested by the Engineer-in-charge or his authorized representative at site, as and when the hindrances have occurred.

D.2 If the Work(s) be delayed by:

- i. Force majeure Clause as defined in NIT, or
- ii. Serious loss or damage caused by fire to the Works, or
- iii. Civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the Work (by reason not attributable to Contractor), or
- iv. Delay on the part of other Contractors or trades men engaged by BEML in executing Work not forming part of the contract, or
- v. Any other cause like above which, in the reasoned opinion of the BEML is beyond the Contractor's control then upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the OIC/EIC but shall nevertheless use constantly his best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the BEML to proceed with the Works. It is made clear that local commotion, strike or lock-out, etc. of personnel of Contractor or its Sub-contractor shall not entitle any relief to the Contractor.

The Contractor shall have no claim of damages for extension of time granted or rescheduling of milestone/s for events listed in D.2.

D.3 In case the Work is hindered by the BEML or for any reason / event, for which the BEML is responsible, BEML, if justified, give a fair and reasonable extension of time and reschedule the milestone/s for completion of Work. Such extension of time or rescheduling of milestone/s shall be without prejudice to any other right or remedy of the parties in contract or in law; provided further that for concurrent delays under this sub clause and sub clause (D.2) to the extent the delay is covered under sub clause (D.2) the Contractor shall be entitled to only extension of time and no damages

D.4 Request for rescheduling of Milestones or extension of time, to be eligible for consideration, shall be made by the Contractor in writing for seeking rescheduling of milestones or extension of time to the OIC/EIC, not later than 14 days of the Scheduled date of Completion. The Contractor shall indicate in such a request the period by which rescheduling of milestone/s or extension of time is desired. With every request for rescheduling of milestones, or if at any time the actual progress of Work falls behind the approved programme by more than 10% of the stipulated period of completion of contract, the Contractor shall produce a revised programme which shall include all details of pending drawings and decisions required to complete the contract and also the target dates by which these details should be available without causing any delay in execution of the Work.

D.4.1 In any such case the BEML may give a fair and reasonable extension of time for completion of Work or reschedule the

milestones. OIC/EIC shall finalize/ reschedule a particular milestone before taking an action against subsequent mile stone. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the OIC/EIC in writing, within 21 days of the date of receipt of such request from the Contractor in prescribed form. In event of non-application by the Contractor for extension of time OIC/ EIC after affording opportunity to the Contractor, may give, supported with a programme (as specified under D.4 above), a fair and reasonable extension within a reasonable period of occurrence of the event. Any or all such extension/s, if any, shall be deemed to have been granted under paragraph 3 of Section 55 of the Indian Contract Act, 1872 with right to claim LD, if intended. Contractor shall be required to continue the Works till the decision regarding extension of time is communicated by OIC/EIC.

D.5 In case the Work is delayed by any reasons, in the opinion of the OIC/EIC, by the Contractor for reasons beyond the events mentioned in Clause D.2 or Clause D.3 or Clause D.4 and beyond the justified extended date; without prejudice to right to take action, BEML may grant extension of time required for completion of Work without rescheduling of milestones. The Contractor shall be liable for levy of liquidated damages for delay for such extension of time.

For all contracts awarded, time is the essence of the contract. The contractor is bound to complete the work within the stipulated time. The Chief Engineer has to assess the delay arising out of default of the contractor. Where the delay is due to default of the contractor, and if there is no financial loss due to such delay, the Chief Engineer can recommend for grant of extension of time by the same authority who accepted the tender/awarded the contract, subject to recording the reasons for granting such extension of time.

E. MEASUREMENT BOOK(MB)

1. OIC/EIC shall, except as otherwise provided, ascertain and determine by measurement the value of Work done in accordance with the contract.
2. All measurements of all items having financial value shall be entered by the Contractor and compiled in the measurement Book as per the format so that a complete record is obtained of all the items of Works performed under the contract.
3. All such measurements and levels recorded by the Contractor or his authorized representative along with BEML authorized representative from time to time, during the progress of the Work, shall be got checked by the Contractor from the OIC/EIC as per interval or program fixed in consultation with Officer-in-Charge or his authorized representative. After the necessary corrections made by the OIC/EIC,

the measurement sheets shall be returned to the Contractor for incorporating the corrections and for resubmission to the OIC/EIC for the dated signatures by the OIC/EIC and the Contractor or their representatives in token of their acceptance.

4. Whenever bill is due for payment, the Contractor would initially submit draft measurement sheets after joint measurement and these measurements would be got checked/test checked from the OIC/EIC.
5. The Contractor shall, thereafter, incorporate such changes as may be done during these checks/test checks in his draft measurements, and submit to the BEML a measurement book, duly bound. The OIC/EIC and/or his authorized representative would thereafter check this MB, and record the necessary certificates for their checks/test checks.
6. The final, fair measurement book given by the Contractor, duly bound should be 100% correct, and no cutting or over-writing in the measurements would thereafter be allowed. If at all any error is noticed, the Contractor shall have to submit a fresh MB and bound, after getting the earlier MB cancelled by the OIC/EIC. The Contractor shall submit two spare copies of such MB's for the purpose of reference and record of BEML.
7. The Contractor shall also submit to the OIC/EIC separately his abstract of cost and the bill based on these measurements, duly bound along with two spare copies of the bill. Thereafter, this bill will be processed for payment.
8. The Contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for checking of measurements/levels by the OIC/EIC or his representative.
9. Except where any general or detailed description of the Work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant standard method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available then a mutually agreed method shall be followed.
10. The Contractor shall give not less than seven days' notice to the Officer-in Charge or his authorized representative in charge of the Work before covering up or otherwise placing beyond the reach of checking and/or test checking the measurement of any Work in order that the same may be checked and/or test checked and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of checking and/or test checking measurement and shall not cover up and place beyond reach of measurement any Work without consent in writing of the Officer-in-Charge or his authorized representative in charge of the Work who shall within the aforesaid period of seven days inspect the Work, and if any Work shall

be covered up or placed beyond the reach of checking and/or test checking measurements without such notice having been given or the Officer-in-Charge's consent being obtained in writing the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such Work or the materials with which the same was executed.

- 11.** The payments to Contractors for the Work done or other services rendered are made on the basis of measurement recorded in the measurement book.
- 12.** The measurement book is the basis of all accounts of quantities of Work done by Contractor. It should be so written that the transactions are readily traceable.
- 13.** OIC/EIC or his authorized representative may cause either themselves or through another officer of the department to check the measurements recorded by Contractor and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.
 - a. It is also a term of this contract that checking and/or test checking the measurements of any item of Work in the measurement book and/or its payment in the interim, on account of final bill shall not be considered as conclusive evidence as to the sufficiency of any Work or material to which it relates nor shall it relieve the Contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

F. RAR (RUNNING ACCOUNT REMITTANCE) BILLS PAYMENT

- 1.** RAR bills can be processed as and when Contractor submits the bill and subject to maximum of two bills in a month. Contractor shall claim RAR Bill indicating the quantities of Work done/executed and rates adopted. In case payment is regulated on the basis of milestone completion, the contractor shall submit the bill accordingly clearly indicating completed milestone against the facility/infrastructure . The quantities billed shall be as per the joint measurement taken at site along with the representative of OIC/EIC duly certified from OIC/EIC. Following documents shall be submitted by the Contractor along with each RAR Bill:
 - a. Delivery challan /Private property form (PP form) for the materials incorporated in the Work for which bill is submitted for payment.
 - b. Purchase cash memo / Proforma Invoice as applicable for major items incorporated in the Work.
 - c. Wage certificate for proper payment to the labourers as per labour laws.
 - d. Compliance of statutory payments as per law for the labours/ Workers engaged such as ESI, PF remittance challans etc.

- e. Test certificates for various materials wherever required as decided by EIC.
 - f. Laboratory Test certificates if carried out during the period of billing from NABL accredited laboratory to ensure the quality as per the contract specification / standards specified.
 - g. The theoretical consumption of cement, re-conciliation statement of reinforcement and Structural Steel statements, RMC statement must be enclosed along with each bill for civil Works.
 - h. RAR Bill shall not be considered having been submitted by the Contractor unless it is in the manner and accompanied by documents as set forth above.
2. On submission of RAR bills by Contractor to the OIC/EIC, 50% of the RAR Bill value shall be released within Ten (07) working days without detailed check on the claim. The balance shall be released after the claim is scrutinized in detail as per procedure by BEML within Twenty-Eight (28) working days.
 3. The payment timelines as stated above is on an ideal condition and in the even of any delay in payment, no claims whatsoever due to delays on payment including that of interest shall be payable to the Contractor.
 4. The payments towards the items ordered as deviation, either due to variation in quantity or due to inclusion of non-tendered item will be allowed in RAR Bill subject to approval of same by the BEML.
 5. The item of Work partially executed / being executed shall be admitted for payment in RAR Bill as per the certification of OIC/EIC. The statement showing rate analysis how part rates are derived is to be enclosed along with bill. A register shall be maintained for this purpose at site. The rate for such item as decided by OIC/EIC is final and binding on the Contractor.
 6. Any payment made by BEML against an RAR Bill shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled Work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the OIC/EIC relating to the Work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any Work or materials to which it relates is/are in accordance with the contract and specification. In case of any discrepancy, the OIC/EIC shall have the right to alter, modify, reduce or diminish the quantities or classification entered in the Measurement Books, any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the OIC/EIC under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract. In such cases, BEML shall have the right to recover any amount paid in an

earlier bill/bill from a subsequent bill/bill and should the amount to be recovered be more than the amount of the subsequent bills, the Contractor shall on demand from the OIC/EIC immediately refund the amount to the BEML within 7 days, failing which he shall have to pay interest 1% per month till the said extra amount is paid back by him.

7. Pending consideration of extension of date of completion, RAR Payments can continue to be made as herein provided without prejudice to the right of BEML to take action under the terms of this Contract for delay in the completion of Work, if the extension of date of completion is not granted by the competent authority.

G. PAYMENT OF BILLS AFTER SUBMISSION OF STATUTORY DOCUMENTS

No RAR Bill shall be paid for the Work till the applicable labour licenses, registration with EPFO, ESIC and BOCW (Building & other Construction Workers) Welfare Board, whatever applicable is submitted by the Contractor to the Engineer-in-Charge.

H. PAYMENT OF PRE - FINAL BILL

RAR Bill post the completion of Work can be admitted for payment and can be considered as Pre- Final Bill in the following cases:

1. Where the Final Deviation quantities including NTI are agreed without any protest / reservations by the Contractor, the Contractor has, in writing, accepted the final quantities as per the Pre-Final Bill and Final Deviation Order is pending approval of BEML.
2. Where the Contractor is not in a position to prepare and submit the Final Bill for various reasons which are attributable to Contractor and Contractor requests for payment of Pre- Final Bill with the valid reasons.
3. In case extension of time is not approved even after completion of the Work, the applicable LD amount shall be withheld and released only after approval of extension of time along with Final Bill.

I. COMPLETION CERTIFICATE AND COMPLETION PLANS

Within ten days of the completion of the Work, the Contractor shall give notice of such completion to the OIC/EIC and within thirty days of the receipt of such notice, the OIC/EIC shall inspect the Work and if there is no defect in the Work, shall furnish the Contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects:

- i. To be rectified by the Contractor and/or
- ii. For which payment will be made at reduced rates, shall be issued.

But no final certificate of completion shall be issued, nor shall the Work be considered to be complete until the Contractor shall have removed from the premises on which the Work was be executed

all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements required for his/their Work people on the site in connection with the execution of the Works as shall have been erected or constructed by the Contractor(s) and cleaned off the dirt from all wood Work, doors, windows, walls, floor or other parts of the building, in, upon, or about which the Work is to be executed or of which he may have had possession for the purpose of the execution; thereof, and not until the Work shall have been measured by the OIC/EIC. If the Contractor fails to comply with the requirements of this clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of Work, BEML may at the expense of the Contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he(OIC/EIC) thinks fit and clean off such dirt as aforesaid, and the Contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

J. PAYMENT OF FINAL BILL

On completion of the Work and recording of measurements of all the items executed including NTI's and deviations, a final deviation statement will be drawn duly representing the actual quantum of Work executed against each item in the BOQ, Non-tendered Items and deviations.

- 1.** On receipt of approved final deviation order from PIC/OIC/EIC, the Contractor shall submit the Final Bill in the prescribed format within three months. To enable the Contractor to do so, the OIC/EIC will furnish to him necessary statements showing recoveries to be made on account of stores issued, hire charges for tools and plant supplied, charges recoverable for electricity and water consumed etc., if any.
- 2.** Along with submission of the Final Bill, the Contractor shall sign a 'No Claim Certificate' against BEML stating that they do not have any claim or demand in respect of the Contract except for the payment of Final Bill and the Defect Liability Deposit or any other refundable deposits like, retention money, if any etc. If the Contractor does not sign the 'No Claim Certificate', the amount due will not be disbursed to the Contractor pending issue of such No-claim Certificate or settlement of disputes, if any. No interest shall be paid by BEML on any pending dues in case No-claim Certificate is not issued or any dispute is raised by the Contractor.
- 3.** No further or additional claims shall be made by the Contractor after submission of the final bill and any further or additional claims (if any) shall be deemed to have been unconditionally waived and extinguished. The Contractor shall not be entitled to make any claim whatsoever against BEML under or by virtue of or arising out of this Contract, nor shall BEML entertain or consider any such claim, if made by the Contractor, after he has signed a "No Claim Certificate in favour of BEML. The Contractor shall be debarred from disputing

the correctness of the item/s covered by "No Claim Certificate". The "No Claim Certificate" furnished by the Contractor shall be treated as the "Discharge Certificate" by the Contractor, which discharges the BEML from all liabilities under the Contract, except to the extent provided in sub-clause (ii) above.

4. Where the Contractor is not in a position to prepare the final bill, or not submitting the final bill due to whatsoever reasons even after three (3) months from approval of Final Deviation Order, the OIC/EIC may give due notice by registered post/speed post indicating a specific time limit for submission of final bill, which shall not exceed 45 days from the expiry of the said three- month period.
5. If the Contractor does not respond and submit the Final Bill, within the aforesaid period of 45 days, the Officer- in- charge / Engineer In Charge shall be entitled to prepare & process the Final Bill ex-parte and the same will be binding on Contractor, and no further claim or submission of any bill (final or otherwise) from the Contractor shall be accepted.
6. On receipt of the Final Bill duly signed by the Contractor, the same will be scrutinized by the Engineer-in-Charge to see that the claim is in order. He will also attach to the Final Bill, a statement showing the Stores issued for incorporation in Work along with recoveries, if any, a statement showing the theoretical requirement and actually incorporated by the Contractor in the Work, and whether there has been any over – issue / under– issue of stores to the Contractor.
7. Where either the Contractor has not fully utilized the Stores issued for incorporation in the Work or where the quantities used are less than those theoretically required resulting in Work being below specifications, BEML will examine the case to see what action should be taken against the Contractor.

K. PAYMENT OF CONTRACTOR'S BILLS TO BANKS & RECOVERY OF TAXES.

- i. All payments to the Contractor shall be made through Electronic Clearing System (ECS) or National Electronic fund transfer (NEFT) or Real time gross settlement (RTGS). The Contractor shall furnish his bank account details, as certified by his Bankers. All amounts payable to the Contractor shall be directly credited to his bank account.

In case, the Contractor is having his account with a bank not having Electronic Clearing System (ECS or NEFT, RTGS), the Contractor is required to open a bank account with the bank having this facility.

All payments to the Contractor shall be made by above means only.

ii. TAXES

a. PAYMENT OF GST:

- i. Contractor shall be entitled to reimbursement of GST paid, upon submission of GST Invoice and GST Challan for having paid the same to the Department.

b. PAYMENT OF WELFARE CESS:

- i. It shall be the sole responsibility of the Contractor as employer to ensure compliance of all the statutory obligations under the building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 (hereafter referred as "BOCW Act") and the building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder (hereafter referred as "Cess Act"). The Contractor undertakes that it shall apply and obtain registration certificate specifying the scope of work under the relevant provisions of the Construction Workers' Act from the appropriate Authorities prior to commencement of work under the Contract. If at any point of time during the contract period, non-compliance of the provisions of the Construction Workers' Act and the Cess Act, and the rules made thereunder is observed, BEML reserves the right to withhold a reasonable amount from the payables to discharge any obligations on behalf of Contractors. The Contractor shall declare to undertake any liability or claim arising out of employment of building workers and shall indemnify BEML from all consequences / liabilities / penalties in case of non-compliance
 - ii. of the provisions of the BOCW Act and the Cess Act.
- c. RECOVERY OF INCOME TAX:
- i. Recovery of Income Tax under Section 194(c) of Income Tax 1961 introduced by the Finance Act 1972 and further Amendments thereon will be made from the gross payments payable at source on all contract Works with value above Rs.10,000/-, at the prevailing rates.

In addition to above tax recoveries, any statutory recoveries introduced by the Central or State Governments can also be recovered and deposited as mandated by the respective Governments.

L. MATERIALS TO BE PROVIDED BY THE CONTRACTOR

1. The Contractor shall, at his own expense, provide all materials, required for the Works other than those which are stipulated to be supplied by the BEML as mandated in the tender document. The Contractor shall, at his own expense and without delay, supply to the Engineer-in-Charge samples of materials to be used on the Work and shall get these approved in advance. All such materials to be provided by the Contractor shall be in conformity with the specifications laid down or referred to in the contract. The Contractor shall, if requested by the OIC/ EIC furnish proof, to the satisfaction of the OIC/EIC that the materials so comply, including with appropriate laboratory test reports, if required. The OIC/EIC shall within thirty days of supply of samples or within such further period as he may require intimate to the Contractor in writing

whether samples are approved by him or not. If samples are not approved, the Contractor shall forthwith arrange to supply to the OIC/EIC for his approval, fresh samples complying with the specifications laid down in the contract. When materials are required to be tested in accordance with specifications, approval of the OIC/EIC shall be issued after the test results are received.

2. The Contractor shall at his risk and cost submit the samples of materials to be tested or analyzed and shall not make use of or incorporate in the Work any materials represented by the samples until the required tests or analysis have been made and materials finally accepted by the OIC/EIC. The Contractor shall not be eligible for any claim or compensation either arising out of any delay in the Work or due to any corrective measures required to be taken on account of and as a result of testing of materials.
3. The Contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the OIC/EIC may require for collecting, and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer-in Charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer -in- Charge or his authorized representative shall at all times have access to the Works and to all Workshops and places where Work is being prepared or from where materials, manufactured articles or machinery are being obtained for the Works and the Contractor shall afford every facility and every assistance in obtaining the right to such access.
4. All rejected material will at once be removed from the site by the Contractor; the cost of removal shall be borne by the Contractor. The Engineer-in-Charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default, the Engineer-in-Charge shall be at liberty to employ at the expense of the Contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer-in-Charge shall also have full powers to require other proper materials to be substituted thereof and in case of default, the Engineer-in-Charge may cause the same to be supplied and all costs which may attend such removal and substitution shall be borne by the Contractor.

M. QUALITY CONTROL DURING EXECUTION OF WORK

1. Quality Lab: For field testing of materials and Workmanship, quality lab shall be set-up by the Contractor at Works site. This shall be in conjunction to the approved quality plan.
2. Testing of materials: Testing of materials will be made as per Quality Plan provided in the Contract in the field laboratory established at the site. However, certain tests which cannot be done at site shall

be got done at NABL approved laboratory and expenditure on this account shall be borne by the Contractor and no extra claim whatsoever shall be entertained.

3. Regular mandatory test and any additional tests if required, shall be carried out in accordance with the procedure laid down in Indian Standards/ as directed by Engineer-in- Charge by the Contractor at his cost.
4. A list of mandatory tests to be conducted is indicated in the Quality plan it may be specifically noted that the tests to be conducted are not limited to the mandatory tests alone and additional test if required and directed by the Engineer-In-Charge on any material including the approved Works etc., shall be carried out by the Contractor at his cost.
5. In the case of non-availability of cube test results for any batch of concrete / structural member, the Engineer may resort to core test or any other destructive/ Semi destructive /non- destructive tests for ascertaining the strength of concrete. If the strength of the concrete is found to be lower than the strength specified, the remedial measures and penal recovery thereof will be regulated as per relevant IS code/ Standards.
6. The Contractor may specifically note that the testing shall be done in Govt. / Govt. (NABL) approved laboratory only.
7. Total station, Theodolite, levelling instruments, prismatic compass / chain, steel and metallic tapes and all other surveying and material testing instruments found necessary on the Works shall be provided by the Contractor at his expense for the due performance of this contract as instructed by the Engineer-in-Charge.

1. WORK TO BE EXECUTED IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, ORDERS ETC.

1. The Works, the subject of the contract, specified and provided for, or that may be necessary to be done to form and complete any part thereof, shall be executed and completed in the best and most substantial manner, with materials of the best and most approved quality of their respective kinds, agreeable to the particulars contained in or implied by the specification, or as referred to and represented by the drawings and memorandum thereon/or as referred to by any of the said further drawings, instructions and directions, and shall be to the full satisfaction of the OIC/EIC.
2. The Contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the Works and provide all labour and materials, tools and plants including for measurements and supervision of all Works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the contract. The Contractor shall take full responsibility for adequacy, suitability and

safety of all the Works and methods of construction.

3. The OIC/EIC shall have full liberty at all reasonable times to inspect and examine the Works, materials and Workmanship which to him, may appear defective, unfit or improper for the several purposes to which they are applied, or intended to be applied, or not in accordance with the specifications of the said drawings, memoranda instructions or directions respectively and every such time reject any or all of such Works, materials and Workmanship.

2. DEVIATIONS/ VARIATIONS EXTENT

BEML shall have power

- (i) to make alteration in, omissions from, additions to for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the Work, and
- (ii) to omit a part of the Works in case of non- availability of a portion of the site or for any other reasons and the Contractor shall be bound to carry out the Works in accordance with any instructions given to him in writing signed by the OIC/EIC and such alterations, omissions, additions shall form part of the contract as if originally provided therein and any altered, additional which the Contractor may be directed to do in the manner specified above as part of the Works, shall be carried out by the Contractor on the same conditions in all respects.

a) Every deviation shall be subject to the limits specified as under:

- i) The net value of all deviations including non-tendered items, of the value of work completed, shall not exceed 20% of the approved contract value.
- ii) Even in cases where, the net value of all deviations excluding non-tendered items is less than 20%, of the approved contract value, but more than 40% in respect of any individual item, indicated in BOQ,
- iii) In case of non-tendered items, the total value of such non tendered items shall not exceed 5% of the approved contract value. In case the deviations exceed 5% of the approved contract value.

Then shall be treated as amendment to contract. Any variation in above mentioned limit shall be mutually discussed with PIC/OIC/EIC and amendment to contract will issued.

b) The basis for ascertaining the non-tendered items shall be as follows:

- i) The value of all deviations shall be ascertained by measurements, on the basis of the rates or prices for similar work in the bill of quantities of the same contract in so far as such rates or prices apply.

ii) Where the rates or prices in Bill of Quantities do not apply, the value shall be based upon rates or prices deduced there from to the extent practicable to do so.

iii) The rates for Non-Tendered (NT) items shall be based on the SSR rates after proportionate adjustment in comparison with the tendered rates of like items in the contract. The basis to be adopted for working out the NT rate is the comparison of the NT item with similar trade item in the bill of Quantity for which the contractor has quoted.

iv) Wherever NT items cannot be deduced from the like items quoted in the tender or SSR rates, market rate shall be allowed based on vouchers/invoices as per the actuals including transportation, labour etc., plus 10% overheads and the labour rate shall be taken as per minimum wages in force, based on the recommendations of the Chief Engineer.

The deviations and NT items shall be technically checked and processed by the respective "Engineer-in-charge/Officer-in-charge".

All deviation orders will be signed by the Contractor for their acceptance.

3. FORECLOSURE OF CONTRACT DUE TO ABANDONMENT OR REDUCTION IN SCOPE OF WORK

If any time after acceptance of the tender BEML decides to abandon or reduce the scope of Work for any reason whatsoever and hence not require the whole or any part of the Works to be carried out, the Officer-in-Charge shall give notice in writing to that effect to the Contractor. The compensation, if any payable for such foreclosure of Work will be discussed mutually between BEML and the Contractor and settled after taking into consideration the actual financial loss, if any, suffered by the Contractor on account of foreclosure of the contract, which in no case shall exceed 2% of cost of incomplete work on the date of closure. The Contractor shall have no claim to any payment of compensation or otherwise whatsoever on account of any loss of profit or advantage which he might have derived, but for the foreclosure of the whole or part of the Works or reduction in Scope of work. BEML shall have the option to take over the Contractor's materials or any part thereof, either brought to the site or for which the Contractor is legally bound to accept the delivery from the suppliers.

4. DEFECT LIABILITY PERIOD:

The period of maintenance for the subject work shall be **ONE YEAR FROM THE DATE OF COMPLETION OF WORK**

During this period, the contractor shall be responsible to rectify all the defects noticed and attributable to the work done by him in respect of works executed by him. As soon as any defect in the work come to the notice, the Chief Engineer shall inform the contractor, in writing, to rectify the defect and inform him that in case he fails to do so within a reasonable time, the Company would rectify the defects at his risk and expense as per the conditions of the contract.

If the contractor does not attend to the rectifications in spite of repeated requests, the Company shall proceed at his risk and expense and get the work completed. The cost incurred by the Company shall be recovered from the defaulting contractor. The Company shall forfeit the balance 50% of the Security Deposit retained and adjust this amount against the expenses so incurred. The balance amount, if any, after recovering the expenses incurred shall be refunded to the contractor. In case the amount available is insufficient to cover the expenses in full, that portion of the expenditure still remaining unadjusted shall be recovered from any of the subsequent bills due for payment to the contractor against any other contract.

Even after such adjustments, the amount available is insufficient to cover the expenses in full, the Company reserves the right to take legal course of action to recover such unadjusted amount.

L. CONTRACTORS LIABILITY AND INSURANCE:

From commencement to completion of the works, the contractor shall take full responsibility taking precautions to prevent loss or damage. He shall be liable for any damage or loss that shall happen to the works or any part thereof.

In addition, the contractor shall indemnify and keep the Company indemnified against all losses and claims for injuries or damages to any person or any property whatsoever which shall arise out of or in consequence of the construction works. For this purpose, the contractor shall take an insurance policy-"Contractors All Risks Insurance"-to cover the risks, as per the Conditions of the Contract. The insurance policy has to be kept valid till the work is completed and the possession handed over to the

Company. The policy shall be taken at his cost showing the Company as the principal to simplify the work in the matter of raising claims and settlement thereof.

1. MATERIALS obtained from demolition/dismantling work shall remain with the Contractor at his own risk till such time the Contractor removes them to BEML stores or as directed within 10 days from the date of completion. If he fails to remove such dismantled materials to BEML stores or as directed within 10 days from the date of completion, the Engineer-in-charge will be entitled to remove them at the risk and cost of the Contractor.
2. THE various provisions in this special condition shall be deemed to take precedence over those in General conditions/specifications to the extent applicable.

M. LEANING DOWN:

The contractor shall clean all the floors, walls, glass panes, fittings and fixtures, etc., touch up all painter s works and carryout all other necessary items of work in connection therewith and leave the whole premises clean and tidy before handing over the buildings.

N. ATTENDANCE UPON BUILDING:

The contractor shall permit free access and generally afford facilities and usual convenience to other agencies and or departmental workmen to carryout works under separate arrangements.

Therefore, the rates quoted by the contractor shall be deemed to include for all such costs as consequence for having to work in the circumstances described above and no claim shall in any event be entertained on this account.

O. EXCAVATION AND EARTH WORK:

THE earthwork, excavation, filling etc., in ordinary/hard soil shall be carried out to the extent ordered/indicated in the drawings. Excavation inadvertently made deeper than what is ordered or indicated in the drawings shall be made good by the contractor with PCC 1:4:8 using not larger than 40mm graded granite aggregate with out extra cost to the company.

The earth obtained from excavation shall be filled, spread,

watered and well rammed in layers not exc. 20 cm thick around foundations, under floors and in other situations to make up levels / slopes as directed/shown in drawings. Use of vegetable soil, turf, peat and black cotton soil in filling shall not be permitted. No lead whatsoever shall be allowed extra for earth obtained from excavation and reused for filling around foundation and under floors. If on the actual excavation, hard rock or ordinary rock is met with the contractor shall intimate the Engineer-in-charge in writing for making necessary price adjustment. Excavation done in ordinary/hard rock will be priced as an authorized extra item

P. CARRYING OUT PART WORK AT RISK & COST OF CONTRACTOR

If Contractor:

1. At any time makes default during currency of Work or does not execute any part of the Work with due diligence and continues to do so even after a notice in writing of 7 Working days in this respect from the Officer-in-Charge; or
2. Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 Working days even after a notice in writing is given in that behalf by the OIC/EIC; or fails to complete the Work(s) or items of Work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the IC/EIC.
3. The Officer-in-Charge without invoking action under Clause-3 may, without prejudice to any other right or remedy against the Contractor which have either accrued or accrue thereafter to BEML, by a notice in writing to take the part Work / part incomplete Work of any item(s) out of his hands and shall have powers to:
 - a. Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or
 - b. Carry out the part Work / part incomplete Work of any item(s) by any means at the risk and cost of the Contractor.
4. BEML shall determine the amount, if any, recoverable from the Contractor for (a) non- completion of part of the Work or (b) for removal of any item(s) from the Contractor and got executed at the risk and cost of the Contractor, by third parties. BEML shall be entitled to recover such loss / damages from payments due to the Contractor. The liability of Contractor on account of loss or damage suffered by BEML because of action under this clause shall not exceed 10% of the tendered value of the Work.
5. The certificate of the Engineer-in-Charge as to the value of Work done shall be final and conclusive against the Contractor provided always that action under this clause shall only be taken after giving notice in

writing to the Contractor. Provided also that if the expenses incurred by the BEML are less than the amount payable to the Contractor at his agreement rates, the difference shall not be payable to the Contractor.

6. Any excess expenditure incurred or to be incurred by BEML in completing the part Work/ part incomplete Work of any item(s) or the excess loss of damages suffered or may be suffered by BEML as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to BEML in law or as per agreement be recovered from any money due to the Contractor on any account, and if such money is insufficient, the Contractor shall be called upon in writing and shall be liable to pay the same within 30 days.
7. If the Contractor fails to pay the required sum as per this clause within the aforesaid period of 30 days, the Engineer-in-Charge shall have the right to sell any or all of the Contractors' unused materials, constructional plant, implements, temporary building at site etc. and adjust the proceeds of sale thereof towards the dues recoverable from the Contractor under the contract and if thereafter there remains any balance outstanding, it shall be recovered in accordance with the provisions of the contract. In the event of this action being adopted by the Officer-in- Charge, the Contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advance on any account or with a view to the execution of the Work or the performance of the contract.

Q. ACTION IN CASE WORK NOT DONE AS PER SPECIFICATIONS

All Works under or in course of execution or executed in pursuance of the contract, shall at all times be open and accessible to the inspection and supervision of the Officer in – charge or his authorized subordinates in charge of the Work and all the superior officers, or any organization engaged by the BEML for Quality Assurance and of the Chief Technical Examiner's Office, and the Contractor shall, at all times, during the usual Working hours and at all other times at which reasonable notice of the visit of such officers has been given to the Contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the Contractor himself. If it shall appear to the Officer- in-charge or his authorized subordinates in charge of the Work or his subordinate officers or the officers of the organization engaged by the BEML for Quality Assurance or to the Chief Technical Examiner or his subordinate officers, that any Work has been executed with unsound, imperfect, or unskilful Workmanship, or with materials or articles provided by him for the execution of the Work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the

contract, the Contractor shall, on demand in writing which shall be made within twelve months of the completion of the Work from the Officer-in Charge specifying the Work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the Work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Officer-in- Charge in his demand aforesaid, then the Contractor shall be liable to pay compensation at the same rate as under LD Clause of the contract (for non-completion of the Work in time) for this default. In such case the Officer-in- Charge may not accept the item of Work at the rates applicable under the contract but may accept such items at reduced rates as the authority specified in price bid may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the Work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re executed at the risk and cost of the Contractor. Decision of the Officer-in Charge to be conveyed in writing in respect of the same will be final and binding on the Contractor.

R. CONTRACTOR LIABLE FOR DAMAGES, DEFECTS DURING DEFECT LIABILITY PERIOD

1. If the Contractor or his working people or servants break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the Work or any part is being executed, or if any damage happens to the Work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the Work within twelve months after a certificate final or otherwise of its completion shall have been given by the Officer in-Charge as aforesaid arising out of defect or improper materials or workmanship the Contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Officer-in Charge cause the same to be made good/ repaired/rectified by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the Contractor, or from his security deposit. The security deposit of the Contractor shall not be refunded before the expiry of twelve months from the actual date of completion indicated in the completion certificate or till the final bill has been prepared and passed whichever is later.
2. The materials as well as the workmanship and finish of the whole of the contract Works shall be best of their kind, and should any materials be

brought upon the Site or on the land or property of the Company or on the places where any operations are being carried out in connection with the Works, which are in the judgement of the Officer- in- charge /Engineer in charge of an inferior description and improper to be used in the Works, the said materials shall be removed. All inferior workmanship or finish shall be amended by and at the cost of Contractor forthwith, or within such period or periods as the Officer- in- charge / Engineer in charge direct, and the Contractor shall pull down, amend and reconstruct any Work he may have erected upon an insufficient foundation, or that he may have insufficient cured and protected against immediate and further injury whether arising or likely to arise in the future from weight pressure, action of water or otherwise, on being required to do so by the Officer- in- charge/ Engineer in charge.

T. SECURITY DEPOSIT AND DEFECT LIABILITY PERIOD (DLP)

- 1.** Except for special nature/ item of Work where separate defect liability period or specific performance is mentioned in the tender document, the defect liability period is One (1) year
- 2.** For all the Works from the date of completion as indicated in the completion certificate. During this period the Contractor will be responsible to rectify all the defects noticed and attributable to the Work done by Contractor.
- 3.** If any defects are noticed during this period by BEML, it will be informed to the Contractor in writing to inspect and rectify the defects noticed. In case Contractor fails to attend the defects within a reasonable time as indicated in the intimation letter, OIC/EIC shall proceed ahead with rectification of defects at the risk & cost of the Contractor.
- 4.** The cost incurred by BEML towards rectification shall be recovered from the defaulting Contractor from the Security Deposit. If this money to be recovered is higher than the Security Deposit, it will be recovered from any amount due to Contractor from any other contract in BEML or by any other means.
- 5. Prior to completion of DLP,** to assess the defects, if any, representative of the Contractor along with OIC/EIC has to carry out a final joint inspection of the completed Works on the previous month to the end of DLP. Findings have to be recorded and certified and necessary corrective action to be taken up by the Contractor for rectification of identified defects if any. OIC/EIC will recommend for release of Security Deposit amount at the end of defect liability period or after rectification of defects whichever is later.
- 6.** In addition to conditions as above, Security Deposit amount of the Work shall not be refunded till the Contractor produces a clearance certificate from the OIC/EIC. As soon as the Work is virtually complete, the Contractor shall apply for the clearance certificate to the OIC under intimation to the Engineer-in-Charge. The Engineer-

in-Charge, on receipt of the said communication, shall write to the OIC to intimate if any complaint is pending against the Contractor in respect of the Work. If no complaint is pending, on record till after month after completion of the Work and/or no communication is received from the OIC to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate and the security deposit amount will be released if otherwise due.

- 7.** In case of Works of routine maintenance/ services in nature, terms contract & AMC Works, the security deposit submitted by the Contractors shall be refunded within one month from the date of final payment or within one month from the date of completion of the maintenance contract whichever is earlier.
- 8.** Normally the period of maintenance for all the works shall be one year. However, for special cases, viz., waterproofing contracts etc., the Defect Liability Period shall be based on case-to- case basis at the discretion of the Chief Engineer.
- 9.** Similarly, there could be certain special works for which Defect Liability Period shall not be applicable. For example: survey of land etc.
- 10.** The applicability of Defect Liability Period or otherwise, has to be decided by the Chief Engineer with specific approval of respective Complex Chief
- 11.** During this period, the contractor shall be responsible to rectify all the defects noticed and attributable to the work done by him in respect of works executed by him. As soon as any defect in the work comes to the notice, the Chief Engineer shall inform the contractor, in writing, to rectify the defect and inform him that in case he fails to do so within a reasonable time, the Company would rectify the defects at his risk and expense as per the conditions of the contract.
- 12.** If the contractor does not attend to the rectifications inspite of repeated requests, the Company shall proceed at his risk and expense and get the work completed. The cost incurred by the Company shall be recovered from the defaulting contractor. The Company shall forfeit the balance 50% of the Security Deposit retained and adjust this amount against the expenses so incurred. The balance amount, if any, after recovering the expenses incurred shall be refunded to the contractor. In case the amount available is insufficient to cover the expenses in full, that portion of the expenditure still remaining unadjusted shall be recovered from any of the subsequent bills due for payment to the contractor against any other contract.
- 13.** Even after such adjustments, the amount available is insufficient to cover the expenses in full, the Company reserves the right to take legal course of action to recover such unadjusted amount.

U. LABOUR LAWS TO BE COMPLIED BY THE CONTRACTOR

The Contractor shall obtain a valid license under the Contract Labour (Regulation and Abolition) Act 1970, Contract Labour (Regulation and Abolition) Central Rules, 1971, or any license required under the relevant Labour Codes and other applicable laws/rules before the commencement of the Work from Competent Authority within thirty days of issue of acceptance letter and submit to the Officer-in Charge / Engineer-in-charge. Contractor shall continue to have a valid license until the completion of the Work. The cost of obtaining license i.e., licence fee etc., shall be borne by the Contractor. Contractor shall not commence the Work without obtaining valid labour license. The Contractor shall also submit an Indemnity Bond executed on a appropriate value stamp paper indemnifying BEML against all the statutory requirement of the Labour Department.

The Contractor shall also comply with provisions of the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 or under the relevant Labour Codes.

The Contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986.

The Contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers (BOCW) Welfare Cess Act, 1996 or under the relevant Labour Codes. Any failure to fulfil these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the Work.

Any other legal or statutory compliance which shall be applicable/ and contractor liable to comply from time to time under the extant local or state laws.

V. ENGAGEMENT OF LABOUR

The Contractor shall not employ any labour below the age of 18 years directly or through petty contractors or sub-contractors for execution of the Work.

The principal employer that is BEML Ltd shall not be responsible for any omission or commission of acts, negligence or non compliance with any statutory provision by the contractor/successful bidder at any given point intime.

The contractor/successful bidder at all point in time shall protect and defend harmless the interest of BEML Ltd from any or such claim which arise due to his default or non-compliance with any statutory obligation which otherwise he is liable to be comply

during the period of this contract/project.

SAFETY OF WORKERS & REPORTING OF ACCIDENT

The Contractor shall be responsible for safety of all employees/labour employed by him on Works, directly or through petty Contractors or sub- Contractors and shall report accidents, occurring on Works to the Engineer or the Engineer's representative, and shall make every arrangement to render all possible assistance and to provide prompt and proper medical attention.

In case of fatal accident, it will be Contractor's responsibility to report accident to police keeping the Engineer advised of the same. The compensation for affected Workers or their relatives shall be paid by the Contractor in such cases with utmost expedition in accordance with the Employees's Compensation Act

W. ACTION IN CASE OF CONTRACTOR NOT FOLLOWING LABOUR LAWS

Should it appear to the Engineer-in-Charge that the Contractor(s) is/are not properly observing and complying with the provisions of the Contract Labour (Regulation and Abolition) Act 1970, and the Contract Labour (R& A) Central Rules 1971, for the protection of health and sanitary arrangements for Work-people employed by the Contractor(s) (hereinafter referred as "the said Rules") the Office-in-Charge shall have power to give notice in writing to the Contractor(s) requiring that the said Rules be complied with and the amenities prescribed therein be provided to the Work-people within a reasonable time to be specified in the notice. If the Contractor(s) shall fail within the period specified in the notice to comply with and/ observe the said Rules and to provide the amenities to the Work-people as aforesaid, the Officer-in-Charge shall have the power to provide the amenities hereinbefore mentioned at the cost of the Contractor(s). The Contractor(s) shall erect, make and maintain at his/their own expense and as per approved standards all necessary huts and sanitary arrangements required for his/their Work-people on the site in connection with the execution of the Works, and if the same shall not have been erected or constructed, according to approved standards, the Engineer-in-Charge shall have power to give notice in writing to the Contractor(s) requiring that the said huts and sanitary arrangements be remodelled and/or reconstructed according to approved standards, and if the Contractor(s) shall fail to remodel or reconstruct such huts and sanitary arrangements according to approved standards within the period specified in the notice, the Engineer-in-Charge shall have the power to remodel or reconstruct such huts and sanitary arrangements according to approved standards at the cost of the Contractor(s).

X. EMPLOYMENT OF SKILLED/SEMI SKILLED WORKERS

The Contractor shall provide and employ on the Site only such personnel who are technically and otherwise sufficiently skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to supervise the Work, as per the Contract requirements. The Contractor shall provide and employ skilled, semiskilled and un-skilled labour as is necessary for proper and timely execution of the Work. (30% SHALL BE WOMEN)

Y. MINIMUM WAGES ACT TO BE COMPLIED WITH

The Contractor shall comply with all the provisions of the Minimum Wages Act, 1948; (Code on Wages, 2020), Industrial Relation Code 2020 Code on Social Security 2020 and Contract Labour (Regulation and Abolition) Act, 1970 (Occupational Safety, Health and Working conditions Code, 2019), as amended or substituted from time to time and rules framed there under and other central or local labour laws affecting contract labour that may be brought into force from time to time. Any change in the minimum wages shall be the sole responsibility of the Contractor.

Z. DISPUTE RESOLUTION AND JURISDICTION:

A. Conciliation between Parties to Dispute:

All disputes or differences whatsoever arising between the parties out of or relating interpretation or application of the terms and conditions of NIT, PO or agreement whatsoever, pertaining to construction, meaning and operation or effect of the contract or the breach thereof etc. arising during the progress of work or during or after completion or abandonment thereof shall be mutually discussed and settled amicably by a conciliation Committee comprising of an independent subject experts and one representative from each party to dispute to be constituted by BEML, within a period of 30 days from the date when the dispute has been intimated by either part to this contract.

The conciliation proceedings shall be completed within a period of 90 days, the minutes of the conciliation proceedings shall be recorded by the Conciliator.

B. Arbitration between Parties to Dispute

a). In event of failure of both the parties to contract to reach any amicable settlement or conciliation of the dispute within 90 days from the date of first notice of dispute and within 15 days of failure of conciliation proceedings, either party to contract shall refer the dispute for settlement by “**Arbitration**” consisting of a sole arbitrator to be appointed by the IIAC, New Delhi (Plot No 6, Vasant Kunj Institutional Area, New Delhi-110070), as per the Rules of IIAC New Delhi and in accordance with the Rules of IIAC.

The arbitration proceedings shall be conducted at New Delhi (Seat of Arbitration) or any other place mutually decided by and between BEML Ltd and the supplier/contractor.

All arbitration proceedings shall be conducted in English language.

d). The court at the place of awarding of contract only shall have exclusive jurisdiction to entertain any Dispute/ Appeal, Challenge to the Arbitration award etc. relating to the contract (i.e. Local court at Bhopal, Madhya Pradesh or High Court of Madhya Pradesh as the case may be)

In case of any dispute between the Company and any other Public Sector / Government department relating to the interpretation and application of the provisions of the contract, such disputes / differences shall be referred by either party to the arbitration of one of the arbitrators in the Department of Public Enterprises as per AMRCD Scheme of dispute resolution. The Arbitration and Conciliation Act, 1996 and amendment thereof shall not be applicable to this clause.

The award of the Sole Arbitrator shall be final and binding on all the parties.

DURING ARBITRATION

The contractor shall be liable to "works/service as per the terms and conditions under this NIT/ Agreement/Purchase Order, during the pendency of any dispute / Arbitration proceedings".

Failure to comply with the terms and conditions of the said NIT or Agreement whatsoever, during the pendency of any dispute shall incur additional penalty/liquidated damages etc. as per the terms of this contract.

AA. WATER FOR WORKS

Contractor should make their own arrangements for supply of water. Water if available only will be supplied by the BEML and the Contractor shall be charged for the quantity of water consumed by him at commercial tariff of the respective area or as indicated in the tender document. The Contractor shall make his own arrangements to tap and store water from the point indicated by the water supply section. The Contractor should also provide a meter. In case the meter is not provided or the meter goes out of order, the assessment of water consumption will be based on Rs.20/- per thousand rupees value of Work done priced only in respect of such items where the consumption of water is involved.

Further, Contractor may dig borewell with the prior written approval of BEML at his cost. In this case, no recovery shall be made for the water used. On completion of the Work, borewell may be handed

over to BEML along with accessories on as is where basis without any claim for the borewell expenses incurred by the Contractor. The Contractor shall obtain all statutory approvals and all statutory payments shall be borne by the Contractor. The quality of the water from the borewell shall be tested by the Contractor by bearing all the costs and water will be permitted to be utilized only after meeting the relevant standards and on approval of OIC/EIC.

BB. ELECTRICITY FOR WORKS

The LT power supply if available at the project site, shall have to be tapped off by the Contractor from the tap off point indicated to him by the BEML authorities at his own cost. The Contractor has to lay the cables, provide required joints and terminate to their power supply board which consists of suitable rating energy meter, safety devices like MCB / MCCB / ELCB etc., for control and distribution. The energy will be supplied on chargeable basis based on the prevailing norms set by Electric Supply Company /Board of the respective areas towards temporary power connection for construction purpose. The supply shall not be given unless the temporary electric installation is certified as safe by the EIC/OIC. However, no claim for extension of Work shall be entertained on account of non-availability of power by BEML. The Contractor thus shall have his own back-up arrangement for such circumstances. In case power supply is not available at the project site, the agency shall arrange the same without any extra claims on this account. In case the energy meter is not provided or the energy meter goes out of order, the assessment of electricity consumption will be based on prevailing tariff of the respective city/state.

CC. LEVY/TAXES PAYABLE BY CONTRACTOR

1. Unless specifically mentioned other-wise elsewhere in the Contract, all rates quoted in the Bill of Quantities;
 - (a) Shall be deemed to be inclusive of all types of taxes, duties levies, fees and charges etc., imposed by Central/State Govt. and local bodies Compensation Cess, Labour Cess, Custom Duty, royalties and other levies. It shall also include all other costs including loading, un-loading, insurance, transportation, testing and certification expenses except GST.
 - (b) GST at prevailing percentage is added in the BOQ at the end or as specified in the BOQ.
 - (c) Payment of GST on Works Contract is the entire responsibility of the Contractor. Contractor shall be entitled for reimbursement of GST paid, upon submission of GST Invoice and GST Challan for having paid the same to the Department
2. The following Acts to be referred hereunder and elsewhere in the tender document as "GST":

- (a) Central Goods & Services Tax Act 2017 (CGST),
 - (b) Integrated Goods & Services Tax Act, 2017 (IGST),
 - (c) Union Territories Goods and Services Tax Act, 2017 (UTGST),
 - (d) Goods and Services Tax (Compensation to States) Act, 2017 (Compensation Act),
 - (e) Karnataka Goods & Service Tax Act 2017 or applicable State's GST Acts,
 - (f) Any other statutory regulation passed by the Central / State Government/s on Goods & Service Tax.
 - (g) Any other tax levied by any statutory authority in addition to Goods and service tax and charged in the Tax Invoice raised by the Contractor.
3. Bidder warrants having valid registration under applicable GST. A copy of the registration certificate should be submitted along with the offer.
 4. Contractor's right to getting payment is subject to submission of a Valid Tax Invoice which would enable the Service Recipient (BEML) to claim Input Tax Credit in compliance with the provisions of the GST. Tax Invoice submitted by the Contractor shall mention the SAC/ HSN Code as applicable, Basic Price with applicable GST Rate and amount and all other essential information required to be mentioned as per the provisions of GST Rules, 2017.
 5. Contractor shall warrant the value that is attributable to GST and the corresponding rate of tax that is chargeable is included in the total price charged in the Tax Invoice. The total amount as per the Tax Invoice shall be considered as the final price inclusive of GST and no claim for payments, whether or not, for only taxes or a price inclusive of taxes, shall be admitted at a later stage on any ground whatsoever.
 6. Any tax in the nature of Goods & Service Tax (GST) would be payable, when the invoice submitted by the Contractor is compliant with the provisions of GST law and contains all particulars as per statute.
 7. In case there is an upward revision in the applicable rate of tax (GST) post submission of bid, the Contractor shall submit a copy of the relevant statute/notification evidencing change of applicable rates for claiming payment from BEML as per revised GST rates. Similarly, if there is downward revision of applicable tax rate post submission of bid, the benefit of lower tax liability shall be passed on to BEML.
 8. Contractor also warrants to duly comply all relevant provisions of the GST Laws including filing returns, paying taxes within the stipulated period so that no hindrance can be faced by BEML to claim Input Tax Credit as per provisions of the GST Law.
 9. Contractor shall fully indemnify to Service Recipient (BEML) on first

demand against any claims, liabilities, actions, demands, Loss, costs and expenses occurred/imposed to the Service Recipient (BEML) on account of his failure to fully/partially discharge the statutory levies in time, or his failure in adherence of the applicable laws in force. For any such non-compliance, BEML reserves the right to withhold the payment until appropriate action are taken in a mutually agreeable manner.

DD. TERMINATION OF CONTRACT

4. Termination for Contractor's Default

BEML shall, without prejudice to any other rights or remedies available under the Contract or in law, shall be entitled to terminate the Contract, in whole or in part, by issuing a written Notice of Termination to the Contractor, upon occurrence of any of the following events:

- a) Failure to commence the Work within the stipulated time after issuance of Letter of Acceptance / Work Order.
- b) Failure to achieve milestones or maintain progress of work as per the approved Project Schedule, and such failure continues for a period of 14 days after receipt of written notice from BEML.
- c) Persistent or repeated non-compliance with instructions of BEML Ltd
- d) Abandonment of the Work or substantial portion thereof.
- e) Failure to deploy adequate manpower, machinery, key personnel, or resources as committed in the Technical Bid.
- f) Sub-letting or assignment of the Contract or any part thereof without prior written approval of BEML.
- g) Submission of false information, forged documents, or misrepresentation at any stage of bidding or execution of the Contract.
- h) Breach of Integrity Pact, or involvement in corrupt, fraudulent, collusive, coercive or unethical practices.
- i) Insolvency, bankruptcy, winding up, receivership or appointment of liquidator over the Contractor.
- j) Failure to rectify defective work or non-conformity with specifications despite notice.
- k) Failure to obtain statutory approvals, clearances, or compliances required under the scope of EPC obligations.
- l) Any material breach of terms and conditions of the Contract.

Upon such termination:

- BEML shall be entitled to **encash the Performance Bank Guarantee (PBG)** and any other securities.
- BEML shall be entitled to execute the balance work through **Risk & Cost Purchase** at the risk and cost of the Contractor.
- The Contractor shall not be entitled to any compensation except for the value of work satisfactorily executed and certified by BEML up to the date of termination.
- Any extra expenditure incurred by BEML in completing the balance work shall be recoverable from the Contractor.

2. Termination for Convenience of BEML

BEML reserves the right to terminate the Contract, in whole or in part, at any time for its convenience, by giving **30 days' written notice** to the Contractor.

In such an event:

- The Contractor shall stop the work in an orderly manner.
- The Contractor shall be paid for the work executed satisfactorily up to the date of termination, as certified by BEML.
- No claim for loss of profit, overheads, idle charges, loss of opportunity, or any consequential damages etc. shall be payable.
- The Contractor shall hand over all drawings, designs, documents, and partially completed works to BEML.

3. Termination for Force Majeure

If a Force Majeure condition continues for a period exceeding **90 days**, either party may terminate the Contract by giving written notice.

In such case:

- Payment shall be made for the work executed up to the date of termination.
- No party shall be liable for any damages or compensation arising out of such termination.

4. Effect of Termination

Upon termination for any reason whatsoever:

a) The Contractor shall immediately vacate the site after handing over all works, materials, drawings, documents, designs, and equipment etc. belonging to BEML.

b) All designs, Intellectual Property, drawings, data, reports, and documents prepared by the Contractor under the EPC scope shall become the property of BEML.

c) BEML shall have the right to use all such Intellectual property documents for completion of the project without any restriction.

d) BEML shall take possession of all construction equipment, temporary works, and materials at site for the purpose of completing the balance work.

5. No Waiver

Termination shall not prejudice any accrued rights, claims, or remedies of BEML arising prior to the date of termination.

6. Blacklisting / Debarment

In case termination is on account of Contractor's default, misrepresentation, Integrity Pact violation, or corrupt practices, BEML reserves the right to initiate **blacklisting / debarment proceedings** against the Contractor as per prevailing Government of India guidelines.

7. Survival

Clauses relating to indemnity, intellectual property, confidentiality, risk purchase, damages, and dispute resolution shall survive termination of the Contract.

EE. RISK PURCHASE CLAUSE and FORCE MAJEURE CLAUSE:

The time and the date of delivery of the stores stipulated in the PO shall be deemed to be the essence of PO and delivery must be completed not later than the date specified therein. Shall the supplier fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, BEML shall be entitled at their option either;

1. To purchase elsewhere, without notice to the supplier on the account and at the risk and cost of the supplier the stores not delivered or other of a similar description (where stores exactly complying with the description and readily procurable) without cancelling the PO in respect of consignment not due for delivery

Or

2. To cancel the purchase order.

In the event of action being taken under clause (a) or (b) above, the supplier shall be liable for any loss, which BEML may sustain on that account but the supplier shall not be entitled to any gain or purchases made against default. As soon as it is apparent that the scheduled dates cannot be adhered to, an application shall be sent by the supplier to BEML, well before the expiry of the delivery period specified in the purchase order. Without prejudice to the foregoing rights, if such failure to deliver in proper time as aforesaid shall have arisen from any cause which BEML may admit as a reasonable ground for an extension of the time (and their decision

shall be final) they may allow such additional time as they may consider justified by circumstances of the case.

Delivery required to be made in lots shall be made in lots only and any extra deliveries involved either on account of repeated rejections or variance in supply of lots shall be liable for service charges of 5% of the purchase order value for each extra delivery.

3. Force Majeure clause.

Notwithstanding anything contained in the Contract, neither the Supplier nor the Purchaser shall be held responsible for total or partial non-execution of any of the contractual obligations, shall the obligation become unreasonably onerous or impossible due to occurrence of a Force Majeure conditions which directly affect the obligations to be performed by the Purchaser or the Supplier. Such events include war, military operations of any nature, blockages, revolutions, insurrections, riots, civil commotions, insurgency, sabotage, acts of public enemy, fires, explosion, epidemics, quarantine restrictions, floods, earthquake, or acts of God, restrictions by Govt. authorities over which the Supplier or the acts on which the Purchaser has no control.

The party claiming to be affected by Force Majeure clause shall notify the other party in writing without delay, within two weeks on the intervention and on the cessation of such circumstance. Extension of time sought by the supplier along with supporting evidence and so granted by the purchaser for the supply/work affected, if any, shall not be construed as waiver in respect of remaining deliveries.

Notwithstanding above provisions, Purchaser shall reserve the right to cancel the order

/Contract, Wholly or partly, in order to meet the overall delivery schedule and make alternative arrangements including arrangements with third party for completion of deliveries and other schedules. Purchase may takeover partly processed material at a mutually agreed price.

FF. QUOTED RATE TO REMAIN FIRM THROUGHOUT THE CONTRACT

- 1.** The rates as per the accepted Bill of Quantities shall be firm and hold good till the completion of the works, and no additional claim or amount shall be admissible on
 - a. account of fluctuations in market rates, increase in fees royalties unless specifically provided for in the Contract, under any circumstances. Hence, the Contractor shall agree not to petition or claim for revision of rates tendered by him under any circumstances or at any stage of the Work, either during execution or at the time when the Final Bills are settled.
- 2.** Price variation is allowed refer escalation clause 3.P, only if applicable, as per the Contract.

GG. UNDERSTANDING OF SITE CONDITION:

The Contractor shall fully satisfy himself or shall be deemed to have fully satisfied himself as to the nature of the Site, the soil, sub-soil, natural and man-made surroundings, existing structures (if any) at Site or in the vicinity, weather conditions, requirements, availability of resources, third party claimants or occupants (if any), the dimensions, levels, layout, character and nature of all roads, existing drains, sewers, electricity, water, gas or other mains, electric cables and other things as regards any connection they may have with the works of the subject of the Contract. The Contractor shall also inspect the site works and surroundings, the means of access thereto. Contractor shall generally obtain his own information on all matters concerning the Site and works to be executed thereon and of all matter and things which may in any way influence his Tender or the works. No claims for extra works, delay due to site conditions or otherwise will be allowed in consequence of any misunderstanding, error, incorrect information on these points, or if any other inaccuracies in reference thereto, which may appear on the drawings or in the specification nor shall the contract be nullified in consequence of any such misunderstanding, error, incorrect information or inaccuracies.

HH. CONTRACTOR'S LIABILITY AND INSURANCE:

1. From commencement to completion of the works, the contractor shall take full responsibility taking precautions to prevent loss or damage. He shall be liable for any damage or loss that shall happen to the works or any part thereof.
2. In addition, the contractor shall indemnify and keep the Company indemnified against all losses and claims for injuries or damages to any person or any property whatsoever which shall arise out of or in consequence of the construction works. For this purpose, the contractor shall take an insurance policy-"contractors all risks insurance"- to cover the risks, as per the Conditions of the Contract. The insurance policy has to be kept valid till the work is completed and the possession handed over to the Company. The policy shall be taken at his cost showing the Company as the 'principal' to simplify the work in the matter of raising claims and settlement thereof.

II. INDEMNIFICATION

Indemnity against all actions of Contractor, Agents, Employees::

The Contractor shall hold and save harmless and indemnify BEML and its employees, from all actions, suits, proceedings, loss, costs, damages, charges, claims and demands of every nature and description brought against or recovered from BEML and their employees by reason of any act, deed, omission or commission of the Contractor and/or his representative and/or his Employees and/or his sub-contractors in the execution of the works under the Contract. All the sums payable by BEML by way of compensation to any third

party/ies, under any of these conditions, shall be recovered from the dues of the Contractor, without reference to the actual loss or damage sustained, and whether or not any damage shall have been sustained.

JJ. CAR POLICY

- 1.** The Contractor's All Risk (CAR) policy shall be taken for the risk to commence from the date of actual commencement of Work as per Work Order for the Contract Sum till actual completion of Work against fire, Lightning, explosion, impact, flood, inundation, storm, earthquake, subsidence, landslide, theft, burglary, riot and strike, civil war and terrorist damage. The policy compensates individual against death, loss of limbs, loss of eyesight, permanent total disablement, permanent partial disablement and temporary total disablement, solely and directly resulting from accidental injuries. Any item not covered under above policy shall be the responsibility of Contractor. The policies of the Contractor shall remain in force throughout the period of execution of the works except for any specific insurance covers necessary for a shorter period. Before commencing the Work, it shall be obligatory for the Contractor to obtain, at his own cost, insurance cover in the joint name of the Contractor and BEML under the following requirements.
- 2.** Liability for death or injury to any person or loss to any property (other than the Work) arisen out the performance of the Contract.
- 3.** Construction plant, Machinery and Equipment brought to site by the Contractor\ Any other insurance cover as may be required by the law of the land like Workmen Insurance etc. with Insurance Company approved by the PIC/OIC.
- 4.** iv In case of such loss or damage as aforesaid, the money payable under any such insurance shall be received by BEML. This will be subject to:-
 - (a) Risk covered.
 - (b) Claims on realization shall be passed to the Contractor according to value of the claims accepted by the insurance company for his damaged portion of Work after deducting 15% towards services rendered by the BEML for processing the claim(s). The amount so disbursed to the Contractor(s) shall be limited to the amount calculated on the basis of his accepted rates in the contract with the BEML.
 - (c) The Contractor shall also obtain any additional insurance cover as per the requirement of the contract in the event of his contract not having been previously cancelled under contract conditions.
 - (d) Such insurance shall be one in respect of all works, unless otherwise expressly specified in the tender conditions.
- 5.** If the Contractor fails to effect or keep in force or provide adequate cover as acceptance to the Engineer-in- Charge in the

insurance policies mentioned above, then in such cases, the Engineer-in-Charge may effect and keep in force any such insurance or further insurance on behalf of the Contractor. The recovery shall be made at the rate of 1.5 times the premium /premiums paid by the EIC in this regard from the payment due to the Contractor or from the Contractor's performance security. However, the Contractor shall not be absolved from his responsibility and / or liability in this regard.

KK. PROGRESS REVIEW MEETINGS

The Contractor/s shall agree to execute the Work progressively in co-ordination with the concerned OIC/ EIC. Further, Contractor is required to attend progress review meetings regularly. The purpose of a progress review meeting shall be to review the work done, to plan for remaining Work and to deal with the matters related to the Work. The OIC/EIC or his nominee shall record the minutes of the progress review meetings and minutes will be shared with all the attendees. The responsibilities of the parties for actions to be taken is to be decided by the OIC/EIC either at the progress review meeting or after the progress review meeting and stated in writing to all who attended the meeting.

LL. APPROVAL OF WORKS BY STAGES:

1. All Works consisting of more than one process shall be subject to examination and approval at each stage by the Officer-in-Charge/ Engineer-in-charge or his nominee thereof and the Contractor shall give due notice in writing to the Officer in-Charge/ Engineer-in charge when such stage is ready. Approval of works by stages shall be recorded in Work / Stage Passing Register. In default of such notice being received, the Officer-in-Charge/ Engineer-in-charge shall be entitled to disallow the Work or any part thereof at any time he may choose and in the event of any dispute, the decision of the Officer-in-Charge/ Engineer in- charge thereon shall be final and conclusive.
2. ii If any Work is so disallowed, the same shall be redone by the Contractor at his cost to the satisfaction of the Officer-in-charge/ Engineer-in-charge. Also, in the event of failure of the Contractor to give notice, he shall uncover any part of the works and/or make openings in or through the same as the Officer-in-charge/ Engineer-in-charge may direct for his verification and shall make good such part to the satisfaction of the Officer-in-charge at the Contractor's expense.

MM. SITE RELATED

5. NIGHT WORKS:

Night Works will be permitted depending on requirement/need basis subject to obtaining prior approval from BEML and other statutory authorities. However, no additional payment will be made for night

work. The Contractor shall make adequate lighting and safety arrangements for night working. He shall also be responsible for any claim on account of any injury to or loss of life, of anyone, arising out of inadequate lighting, safety arrangements or due to any other failure of the Contractor.

6. CONTROLLING OF CONTRACTOR LABOUR & POLICE VERIFICATION

- i. The Contractor is to keep all persons under his control and within the boundaries of the Site, and he will be held responsible for the care of the works until their completion and handover, including all works executed and materials deposited on the sites by himself or suppliers, together with all risks arising from weather, carelessness of apprentices, damage or loss by thefts or by any other cause and is to allow for all necessary watching and protective lighting.
- ii. The Contractor shall submit Police Verification Certificate to move inside BEML premises during execution of Work and shall submit as affidavit for conduct and credibility of the labour force engaged for the Work to the OIC/EIC.

NN.BRIBES AND GIFTS:

Any bribe, commission, gift or advantage given, promised or offered by or on behalf of the supplier or his partner, agent or servant or anyone on his or their behalf to any officer, servant, representative or agent of BEML or any person on his or their behalf in relation to the obtaining or to the execution of or any other contract with BEML shall in addition to any criminal liability which the supplier may incur, subject the supplier to the cancellation of the PO and all other contracts with B

EML and also to payment of any loss or damage resulting from any such cancellation to like extent as is provided in case of cancellation under **Clause-15** hereof. Any question or dispute as to the committing of any offence under the present clause shall be settled by BEML in such manner and on such evidence of information as they may think fit and sufficient and their decision shall be final and conclusive.

10. **ADDITIONAL CONDITIONS OF CONTRACT**

(UNDER WHICH THE WORKS HEREINAFTER DESCRIBED ARE TO BE PERFORMED)

A. INTERPRETATION CLAUSE: In these General Conditions and the Specifications attached, the word 'COMPANY' shall be held to mean 'BEML LIMITED', the word 'CONTRACTOR' shall be held to mean one or more contractor or contractors jointly or generally engaged in the works to which these General Conditions and the specifications relate, and shall include his/their heirs, executors and administrators. The word 'ENGINEER-IN-CHARGE, shall be held to mean a Member of the staff of the BEML to supervise the work. The expression 'SITE OF WORKS, shall be held to mean the extent of land which the Company places at the disposal of the Contractor from time to time for the purpose of executing the contract works. The word 'DRAWINGS' shall be held to mean 'THE PLANS, SECTIONS, ELEVATIONS AND DETAILS OF WORKS' annexed to the contract and such further drawings, as the Engineer in charge may issue from time to time during the progress of the works and shall be held to include tracings and photographic prints. The word SPECIFICATIONS shall be held to include the tender General Conditions, Specifications, Schedule of Prices and Bill of Quantities.

B. CONTRACT NOT TO BE ASSIGNED OR UNDERLET AND CONSEQUENCE OF GRATUITIES BEING GIVEN:

The contractor shall not assign or make over the contract to any other person, or underlet it, or make a sub-contract with any workmen or workman for the execution of any part of work(s), but shall employ his own workmen for the labour thereof, who shall be paid by him in wages by the day. And in case the Contractor assigns or makes over the contract, or underlet or make sub-contract, contrary to this clause or either himself or his agents give any gratuity to any employee of the Company, the company shall be at liberty to terminate the contract. Before out sourcing/sub-contracting part of total works to any specialised agency, the EPC contractor is required to obtain prior approval of M/s BEML. However, outsourcing of engineering works is not permitted except for IT & Tele-communication.

C. TENDER OR AGREED RATE: The contractor shall agree not to petition for revision of rates tendered for by him under any circumstances at any stage of the work, either during execution or when the final claims are settled.

D. In the event of anything evidently necessary to the due and complete performance of the works being omitted to be shown on the drawings or described in the specification or being omitted from the Bill of Quantities through oversight or error, the contractor shall, notwithstanding, execute (in the most perfect manner) all such works the same as if they had been severally shown, described and included

without being entitled to make any extra claim or charge.

- E.** The contractor shall satisfy himself or shall be deemed to have satisfied himself as to the nature of the sub-soil, the three dimensions, levels, character and nature of all roads, existing drains, sewers, water, gas or other mains, electric cables and other things as regards any connection they may have with the works the subject of the contract, and he shall also inspect the site of the works and surroundings, the means of access there to and egress there from and shall generally obtain his own information on all matters and things which can in any manner influence his tender, No claims for extra works otherwise will be allowed in consequence of any misunderstandings, error or incorrect information on these points, or of any other in-accuracies in reference thereto, which may appear on the drawings, or in the specification, nor shall the contract be nullified in consequence of any such misunderstanding, error incorrect information or in-accuracies.

F. ENGINEER IN CHARGE'S ORDERS TO COMMENCE WORKS AND AS TO NON-DELIVERY OF SITE: The Contractor having signed the contract, the Chief Engineer will forthwith give him notice to commence the works and the contractor shall upon receipt of such notice, commence the works and carry them on at such point and points and in such portions as the Engineer in charge may direct.

The Company shall, with the Engineer in charge written order to commence the works, give to the contractor, the use of so much of the site of works, as may in the opinion of the Chief Engineer be required in order to enable the contractor to commence and continue the construction of the works, and shall from time to time as works proceed give the contractor the use of such further portions of such site as the Engineer in charge may from time to time consider proper in that behalf, but the non-delivery in manner aforesaid of the use of such site or any portion thereof shall not vitiate or affect the contract, nor any provision contained in the specification nor entitle the contractor to any increased allowance in respect of money.

- G. SETTING OUT WORKS AND NOTICES:** The Contractor shall set out the whole of the works and be responsible for the correctness of the position, levels and dimensions of the several works, according to the drawings and written instructions of the Engineer in charge. If at any time during the progress of the works any error shall appear or arise in the position, levels or dimensions of the several works, the contractors on being required to do so by the Engineer in charge, shall at his own expense remove and amend the works to the satisfaction of the Engineer in charge, notwithstanding that he may have been assisted by Engineer-In-Charge in setting out the same. The contractor shall observe, perform and comply with the requirements of all statutes and byelaws and shall also serve notice on the authorities having control of the road surfaces before the same are broken up and he shall likewise serve notices on the owners of the sewers, drains, water, gas or other

mains, electric cables and other things which may be in any way affected by the execution of the contract work.

H. TIME OF WORKING (APPLIES ONLY FOR FACTORY AREA): As the entry and exit of the workmen into the factory area is controlled by the Security Authorities of the Factory, the contractor should strictly adhere to the timings of entry and exit, laid down by the authorities and the rates quoted are deemed to include for this provision.

I. NIGHT WORKS: The works shall be carried as per applicable labour laws on day and night continuously without extra charge. If bad or treacherous ground be met with or if there be any other causes whatsoever, which in the judgment of the Engineer-In-Charge, requires, it, but no work shall be carried on in the night without the knowledge and sanction of the Engineer-in-charge.

J. WATCHMEN, LIGHTS, ETC., TO BE PROVIDED BY THE CONTRACTOR: The Contractor, shall at his own cost provide night watchmen to all parts of the work where necessary required by the Engineer-in-charge. He shall also keep all open trenches, excavation or other dangerous places properly and sufficiently lighted between sunset and sunrise, and shall provide and fix proper fencings and boarding and temporary bridges to protect. The contractor shall also at his own cost erect temporary fences on the site of works where required by the Engineer-in-charge.

K. TEST MATERIALS: All the materials to be used in and on every part of the works shall be subjected from time to time to such tests as the Consultant and Engineer in charge may direct. Such tests shall be performed at the expense of the contractor but the Company shall refund to the Contractor the actual cost of testing any of the materials which are proved to conform with the conditions of the specifications but the samples shall be, in all cases, selected by the Engineer in charge, and supplied by the contractor as part of the contract. If, at any time, any materials so tested is not equal to the test for such materials, hereinafter specified, the same shall be removed from the site of works, and other materials substituted therefor, but in the absence of any specified test, the decision of the Engineer in charge, shall be final as to whether the said material or materials shall be used in the works, or forthwith removed and other materials substituted.

L. MATERIALS, TOOLS ETC., BROUGHT ON TO WORKS TO BECOME PROPERTY OF COMPANY DURING CONTINUANCE OF CONTRACT: All materials, tools, implements and other things brought by the Contractor upon Company's works shall there upon become and shall continue to be the absolute property of the Company and be considered in its possession, the Contractor having only the right of using the same for the purpose of the contract. After the works have been completed and all obligations under

the contract duly fulfilled, the Company shall return to the Contractor the tools, implements and surplus or waste materials then remaining upon the Company's works to be removed by him forth-with and cleared away. Nevertheless, the Company shall not at any time be liable for the loss of any of the said materials, tools, implements or other things but the whole of this liability shall fall upon the Contractor, the same as if they had remained in his possession.

M. POWER TO VARY WORKS: The Company shall have full power and authority from time to time, and at all times, to order works additional to the contract, and to make and issue such further drawings and to give such further instructions and direction as may appear necessary or proper for the guidance of the contractor and the good and sufficient execution of the contract, and the contractor shall receive, execute, obey and be bound by the said further drawings, instruction and directions, according to the true intent and meaning thereof and as fully and effectively as though they had accompanied, or had been mentioned or referred to in the original drawings and specifications. The company shall also have power to vary or alter the levels or position of any of the works, the subject of this contract, or may order any of the works contemplated thereby to be omitted with or without the substitution, of any other works in lieu thereof, or may order any work, or any portion of work executed or partly executed, to be removed, changed or altered, and if needed that other work shall be substituted in lieu thereof and the difference of expense occasioned by any such increase, diminution or alterations so ordered and directed shall be added to or deducted from the amount of the contract agreeable to the prices for similar works set forth in the Bill of Quantities, or failing which the Schedule of Prices attached hereto, and in the absence of any such similar work being scheduled, the Engineer in charge shall determine the amount to be paid for such additions or deductions. The company will in no case become liable to the payment of any charge in respect of any such conditions, alteration or deviations, unless the instructions for the performance of the same shall have been given in writing and signed by the Engineer in charge, nor unless such instructions distinctly states that the matter thereof is to be subject of an extra or varied charge, in the form of an order hereinafter set forth nor unless the claim thereof shall be made in writing, signed by the Contractor and in the form of claim herein as set forth and properly filled up nor unless such claim be made within the week in which the work is executed and materials used, and before the same shall have been placed out of view, or beyond check of measurement, nor unless the value of any altered or varied works, or any further works shall wherever practicable have been determined and settled before such altered, varied or further works shall have been commenced. Such value in case of dispute shall be ascertained by the Engineer in charge, who shall determine in all cases whether such previous determination and settlements were practicable or not, and in all the cases where he shall consider the same to have been practicable, the contractor shall not

be entitled to make any claim in respect of such altered, or varied or further works if it shall, in the opinion of the Engineer in charge, if any special instance become necessary to execute any additional or substituted work, either wholly or in part by the day the claim therefor, shall not be recognized unless the contractor shall have delivered to the Engineer-in-charge, within one working day, and so on from day to day a true and exact list of the name, occupations, time and wages of the several workmen engaged during the previous day on any and every such works in respect of when a charge 'BY THE DAY' is intended to be made in the next succeeding weekly claim of contractor. Nevertheless, no charge 'BY THE DAY' shall be made unless, in the opinion of the Engineer in charge, it is impracticable or unreasonable to determine the value of the amount of work in manner otherwise provided for in these general conditions.

N. SUSPENSION OF WORK: The Contractor(s) shall suspend the execution of work or any part or parts thereof whenever called upon in writing by the Chief Engineer to do so and shall not resume work thereon until so directed in writing by the Chief Engineer. The Contractor will be allowed by the Chief Engineer an Extension of time (not less than the period of suspension) for completion of the item or group of items of work for which a separate period of completion is given in the contract and of which the suspended work forms part but not other claims in this respect for completion or otherwise, however, shall be admitted. The contractors shall have no claim to any payment of compensation or otherwise, whatsoever on account of suspension of work.

O. WORKS TO BE EXECUTED IN APPROVED MANNER: The works, the subject of the contract, specified and provided for or that they may be necessary to be done to form and complete any part thereof, shall be executed and completed in the best substantial manner, with materials of the best and most approved quality of their respective kinds agreeable to the particulars contained in or implied by the specification or as referred to and represented by the drawings and memoranda thereon or as referred to by any of the said further drawings and memoranda thereon or as referred to by any of the said further drawings, instructions and directions and shall be to the full satisfaction of the Engineer in charge. The Engineer in charge, shall have full liberty at all reasonable time to inspect and examine the works, materials and workmanship, and may every such time reject any or all of such works, materials and workmanship which to him/them or either of them may appear defective, unfit or improper for the several purposes to which they are applied, or intended to be applied, or as not in accordance with the specification or the said drawings, memoranda, instruction or directions respectively.

P. WORK TO BE CARRIED ON WITH EXPEDITION FAILING WHICH THE

COMPANY MAY EMPLOY OTHER CONTRACTOR WITHOUT VITIATING

THE CONTRACT: The Contractor shall commence to carry on the works with due diligence, and as such expedition as the Engineer in charge, may reasonably expect, having regard to the specified time of completion of the whole of the works. In case the contractor fails to do so, or neglect to provide proper and sufficient materials, or to employ a sufficient number of workmen to execute the work, then the company shall have full power, without vitiating the contract, to take the works wholly or in part out the hands of the contractor to engage or employ any other person or workmen to procure all requisite materials and implements for the due execution and completion of the said works, and the cost and charges incurred by the company in so doing shall be ascertained by the Chief Engineer and be paid for or allowed to the company by the contractor and it shall be competent for the Company to deduct the amount of such costs and charges along with overheads out of any sum or sums due or to become due from the company to the contractor under this or any other contract.

- Q. INFERIOR MATERIALS OR WORKMANSHIP TO BE AMENDED:** The materials as well as the workmanship and finish of the whole of the contract works shall be best of their kind and should any materials be brought upon the site of works or on any land or property of the company or on the places where the operations are being carried out in connection with the works, which in the judgment of the Engineer in charge, is of an inferior description and improper to be used in works, the said materials shall be removed. All inferior workmanship or finish shall be amended by and at the cost of the contractor forthwith, or within such period or periods as the Engineer in charge, may direct, and the contractor shall pull down, amend and reconstruct any work he may have erected upon an insecure or insufficient foundation or that he may have insufficiently secured and protected against immediate and future injuries, whether arising or likely to arise in future from weight, pressure action of water or otherwise, on being required to do so by the Engineer in charge, . Incase the contractor neglects or refuses to remove such materials or comply with such directions it shall be lawful for the Chief Engineer, on behalf of the company and by its agents, servants and workmen to remove the materials and amend the workmanship and finish, so objected, to, or any part thereof, and to replace the same with such other materials, workmanship and finish as shall be satisfactory to the company and on the certificate of the Chief Engineer to deduct the expense thereby incurred, or to which the company may be put or be liable or which may be incidental thereto, from the amount of any sum or sums due to or become due to contractor, or to recover the same by action at law or otherwise from the contractor as the company may determine.

When it is apparent to the Chief Engineer that defects exists in the work, or that damage or accident has occurred to the works, or that the works are not upheld or maintained in good sound and water tight conditions, or repair or in working order, but the cause thereof is not apparent, a general requisition in writing by the Chief Engineer to the contractor to amend, make good or maintain the works in sound, perfect and water tight conditions shall be under no obligation to specify the work or repair, but such requisition shall be conclusive evidence against the contractor that he is not performing his obligations under the contract.

R. PRECAUTIONS AGAINST INJURY TO PROPERTY ADJACENT TO THE WORK IN PROGRESS: The contractor shall take special care, by the erection of temporary fences and by every other means which circumstances may render necessary, to prevent all injury and damage to or trespass upon the lands, roads, fences or property adjacent to the site of works and shall confine the passage of his workmen to existing public roads, foot paths. He shall likewise pay and satisfy all claims whatsoever and from whomsoever, for temporary occupation, way-leaves, damages, the trespass or otherwise, in reference to the said lands, roads, fences and property adjacent and bear the company harmless from any and all such claims. If any greater extent of land than the site of work be required by the contractor for his operations, he shall obtain and occupy the same at his own cost and charge.

S. PRECAUTIONS AGAINST ACCIDENTS OR INJURY: The Contractor shall, at his own expense, shore, sling, protect, support, alter, restore make good and maintain as may be necessary, all buildings, water and gas pipes, sewers, drains, electric cables and other things which may be disturbed, exposed or injured during the execution of works or in consequence of the execution of the works and shall also provide any extra timbering which may be temporarily required and all labour in fixing and removing the same and shall, at his own expenses provide for the continuous use of all buildings, pipes, sewers, drains electric cable, water sources and other things, the use of which may be liable to interruption during the progress of the work. The Contractor shall at his own expense restore all such buildings, water and gas pipes, sewers, drains, electric cables and other things to the satisfaction of the owners thereof and he shall like wise, at his own expense, construct and maintain such works as may be necessary for the due permanent support of all such buildings, pipe, sewers, drains, electric cables and other things met with in the construction of works, and shall indemnify, save, harmless and keep indemnified, the Company and its officers from and against all action, suits, claims, penalties, liabilities, cost, expenses and demands whatsoever, by reasons or on account of damage to such buildings, pipes, sewers, drains, electric cables and other things

whether caused by the execution of the contract works or in the insufficiency of the aforesaid permanent support. The Company may deduct the expenses thereby incurred or to which the Company or its Officers may thereby be put or be liable or which may be incidental thereto from, the amount of any sum or sums due or to become due to the contractor or may recover the same by action at law or otherwise from the contractor and the Company may compromise any such action suits or other proceedings, or such terms as it shall see fit and contractor shall thereupon forthwith pay the Company the sum or sums paid by the Company upon the occasion thereof, and shall in every case pay such sum or sums as shall fully indemnify the Company according to the present stipulation.

T. COVERING OF CONSTRUCTION SITE: The Contractor shall, at his own expense, make arrangements to cover/wrap the construction site in mesh material of green color to prevent the dust from the escaping into the adjoining Properties or premises and atmosphere and also to prevent accidental fall of debris onto the people. The contractor at his own expense should make arrangements to remove the cover after completion of the work.

U. ROYALTIES: The Contractor shall be liable to pay all royalties chargeable on Government or Company materials required for the work.

V. REJECTED MATERIALS: All rejected materials will at once be removed from site by the contractor to such distance as may be desired, failing which the company after giving three days notice in writing may do so and recover the cost of removal from the contractor.

W. COMPANY'S PLANT: No Company's plant, materials or Labour will ordinarily be lent or hired to the contractor. Exceptional cases must have the approval of the company in writing.

X. SCOPE OF COMPLETION: Completion includes completion of all work in accordance with the plans and specifications, removal of all yard mess accumulated during construction, levelling and cleaning up the site and generally cleaning the whole building or works.

Y. FINAL MEASUREMENTS TIME:

The final measurement must invariably be preceded by a thorough remeasurement of the whole of the work, performed which will be made by the company's authorized representative and at which the contractor or his accredited agent must be present. For this purpose, a written notice will

be sent to him at least THREE DAYS before the date fixed for the measurements, appointing the day, hour and place of meeting. Should he not attend to this the measurements will proceed without him, and he will be precluded from making any protest.

If a dispute arises between the company and contractor as to the quantity or quality of work, performed, involving sum larger than Rs.500.00, the contractor may appeal in writing to the company for remeasurement or reappraisal, as the case may be. If the company considers that Contractors claim is valid, they may appoint an officer, other than the Officer who made the final measurement and inspection vide Paragraph-28 above, and his report shall be considered as final and binding on the contractor. The Contractor shall have a representative present when the remeasurement or the appraisal is being made

Z. ATTENTION:

- a. Time will be the essence of the contract and the contractor is to complete the whole of the work in the time stated in the tender, subject to the schedule of conditions.
- b. The contractor is to provide at all times during the progress of work and the maintenance period proper means of access, with ladders, gangways, etc., and the necessary attendance to move and adopt as directed for the inspection of their representative (no separate rate will be allowed).
- c. The Contractor is to keep all persons under his control and within the boundaries of the site and he will be held responsible for the care of the works generally until their completion including all works executed and materials deposited in the sites by himself or suppliers, together with all risks arising from weather, carelessness of operatives, damages or loss by thefts or by any other cause, and is to allow for all necessary watching and protective lighting.

AA. LABOUR ACTS:

- i. The Contractors shall employ labour in sufficient number to achieve the required rates of progress and quality to ensure best workmanship of the degree required under various specifications and to the satisfaction of Engineer-in-charge. The contractors shall remain liable for the payment of all wages or other remunerations to his labourers or employees under the Code on Wages 2019, Code on Social Security, 2020, the Occupational Safety, Health and Working Conditions Code 2020. In the event, the contractor fails or neglects to pay any amount due by him under any of the labour Codes relating to Employees compensation Act, ESI , EPF or

other Labour Laws, the Company is entitled to withhold the same from any other amount payable by it to the contractor and remit the same to the authority concerned and such payment shall be binding on the contractor.

- ii. In the event of contract, the contractor shall be responsible for implementing the provision of the Labour Codes and also responsible for any repercussions arising there from for non-compliance thereof.
- iii. The intending tenderers should quote their organization registration/code numbers for the registration with ESI/PF Authorities. It may be noted that other things being equal, preference will be given in the acceptance of tender to firms having independent registration with ESI/PF Authorities.
- iv. BEML shall arrange to recover from the contractors bills requisite amounts of both Employer's and Employee's contribution for both ESI and PF calculated on the basis of 25% of the value being taken as the labour cost and recover such amounts from the respective bills and keep the same in suspense account. On production of requisite documentary evidence supporting payment of ESI/PF Authorities/supported by the acquaintance rills, the amount earlier recovered from contractor's bills shall be paid duly adjusting the shortfall in remittance, if any.
- v. In the event of any accident/injury/disablement, the contractor shall arrange to pay the requisite compensation legally payable to the concerned employee/dependents and also indemnify to BEML in case of any claim arising therefore later.
- vi. CONTRACTOR should employ only ESI Registered workmen on any item of work. If contractors have workman who have not yet been Registered under the ESI they should ensure that the workers have been duly registered before employing them in work.
- vii. CONTRACTORS should produce his MUSTER ROLL duly certified by Engineer-in-charge once in a month say before 5th of each month to the Pay roll section, so that the ESI amount can be ascertained and recovered/payment obtained irrespective of the fact whether work order is issued or not.
- viii. If there is any default on the part of the contractor, an estimated amount towards ESI liability including the would-be penalty/damage, will be recovered by the company from the bills of the contractors.
- ix. CONTRACTORS should maintain all registers and records required for ESI, PF Payment of wages, etc., under the statutes and produce them for verification as and when called for by company inspecting Authorities.

BB. FAIR WAGES: The Contractor shall not pay less than fair wage to labour, workmen engaged by him on the work. Fair wages means

wage for the various categories of labour, workmen, fixed from time to time by the labour authorities of the area. The contractor shall ascertain the minimum fair wages prevailing in the area before submitting his tender. The Contractor should also abide by labour regulations in regard to the payment of wages, wage period, fines and deductions from wages, maintenance of wage book, wage slip, publication of scales of wage and other terms of employment, inspection and submission of periodical returns and all other matter relating to labour rule in force.

CC. The contractor shall arrange qualified Engineers with experience in similar construction work to be at the work spot throughout the period of construction to ensure correct undertaking and execution of the work as per drawings and specifications.

DD. The setting of the building shall be done by the contractor himself. All measurements shall comply with the dimensions noted on the drawings if any. The contractor shall construct centre line pillars and Bench Marks wherever necessary at his own cost and the setting out shall be got checked, approved and certified by the Engineer-in-charge before execution of the work.

EE. Foundations shall generally conform to the dimension indicated on the drawings, unless the nature of soil after excavation examined by the Engineer-in-charge, of works necessitates modifications. The foundation trenches for RCC columns and walls after excavation indicated on the drawing shall be got inspected, approved and certificated by the Engineer-in-charge of works before laying concrete.

FF. Provision shall be made during the progress of work for embedding Electric conduits etc., wherever necessary as directed. Openings shall be left for service lines, machine foundations, as required and as per instructions of the Engineer-in-charge.

GG. Care shall be taken in execution of work not to damage service lines etc., coming in the way of construction. If any damage is caused in the lines, the cost of replacing or repairs shall be borne by the contractor.

HH. CONTRACTOR(S) shall provide himself/themselves with requisite number of welding sets, mixers with hoppers, vibrators builders hoist, Tools, meters and testing equipments, transport vehicles, etc., required for the complete satisfactory execution of work.

II. THE Contractor shall agree to execute the work progressively in co-

ordination with the concerned officers or shop supervisors and as directed by Engineer-in-charge.

JJ. THE specifications contained in the MES Schedule (referred to in the tender) in appropriate sections shall apply to this contract to the extent applicable, cement co- efficient shall also form part of MES Schedule.

KK. CONCRETE MATERIALS

- 8.1 **CEMENT:** Cement used in the work shall be ordinary PORTLAND/PUZZOLANA cement and shall be stored by the contractor in a dry place under proper cover and stack. Stacks shall not be more than 10 bags high.
- 8.2 **PPC 53 Grade / OPC 43 Grade mixed with fly ash** confirming to relevant IS codes mixed with fly ash in allowable percentage meeting the required properties in accordance with the relevant IS code to be used for green construction.
- 8.3 Re-enforcement: reinforcing bars for concrete will be TMT bars of grade of FE500D with strength requirements confirming to latest suitable IS codes.
- 8.4 **FINE AGGREGATE:** Fine aggregate (sand) for concrete shall be of approved quality natural sand. Fine aggregate shall be clean, free from any admixture of clay, loam, silt, organic matter and other impurities.
- 8.5 **COARSE AGGREGATE:** Coarse aggregate for concrete shall be of approved broken granite stone and shall conform to IS-383-1963.
- 8.6 **WATER:** Water used in concrete shall be clean, fresh and non-saline.

The various concrete surfaces shall be finished as under:

- a) All concrete surfaces occurring in conjunction with wall and the like: Immediately after the formwork is removed all irregularities shall be removed and air holes shall be stopped with CM 1:3 so that the surface is ready for application of plaster which is paid for separately.
- b) Soffits & edges of roofs, soffits & edges of chajjas, facias, soffits and sides of beams and columns, exposed surfaces of shelves, not occurring with conjunction of

walls: These shall be finished as described above to receive plastering which is paid for separately.

- c) Exposed surfaces of concrete members other than those specified above and tops and edges of chajjas and the like, independent columns and other concrete surfaces not specified to be plastered: These surfaces shall be finished fair and smooth. On account of any reason whatsoever, if fair and smooth surface cannot be achieved, the contractor is permitted to plaster these surfaces with CM 1:3, to obtain a fair, uniform and smooth finish. However, he shall ensure that the thickness of plaster is kept to a minimum. The contractor shall not be paid anything extra for the application of this CM 1:3 plaster.
- d) The rate quoted for pre-cast concrete shall include for cost involved in the cutting of grooves, etc., in walls, etc, and fixing as specified.

8.7 Mixing concrete:

All concrete shall be mixed in mechanical concrete mixers with hopper/RMC. The mixing drum shall be washed and cleaned on completion of work, every day and on every stoppage of work, if the stoppage exceeds 30 minutes

LL. Autoclaved Aerated Cement (AAC) BLOCKS:

AAC blocks masonry with Grade 1 AAC blocks as per IS 2185 (Part III) in superstructure above the plinth line in cement mortar 1:4 (1 cement:4 coarse sand) are to be used. AAC blocks shall be sound, free from cracks, broken edges, honey combing and other defects that would interfere with the proper placing of blocks or impair the strength or performance of construction. The water absorption should be less than 10% by mass.

MM. VALUATION OF DEVIATIONS:

Every deviation shall be subject to the limits specified as under:

- a. The net value of all deviations (additions and deductions) including non-tendered items, of the value of work completed, shall not exceed 20% of the approved contract value.
- b. In case of non-tendered items, the total value of such non-tendered items shall not exceed 5% of the approved contract

value.

The basis for ascertaining the non-tendered items shall be as follows:

- (i) The value of all deviations shall be ascertained by measurements, on the basis of the rates or prices for similar work in the bill of quantities of the same contract in so far as such rates or prices apply.
- (ii) Where the rates or prices in Bill of Quantities do not apply, the value shall be based upon rates or prices deduced there from to the extent practicable to do so.
- (iii) The rates for NT items shall be based on the SSR rates after proportionate adjustment in comparison with the tendered rates of like items in the contract. The basis to be adopted for working out the NT rate is the comparison of the NT item with similar trade item in the bill of Quantity for which the contractor has quoted.
- (iv) wherever NT items cannot be deduced from the like items quoted in the tender or SSR rates, market rate shall be allowed based on vouchers/invoices as per the actual including transportation, labour etc., plus 10% overheads and the labour rate shall be taken as per minimum wages inforce, based on the recommendations of the Chief Engineer.
- (v) As a last resort a tender shall be floated to ascertain the rate for NT items. All Deviations in contracts for works including non-tendered items shall be approved by the Competent Authority as per DoP within the limits prescribed in the contract. The deviations and NT items shall be technically checked and processed by the respective "Engineer-in-charge " in concurrence with Finance Department of the respective division.

NN.PROVISION OF FITTING/FIXTURES OF DIFFERENT MAKE: The contractor shall provide the same make of fittings/fixtures specified in the tender documents unless he has quoted for other equivalent for genuine reasons. In case due to exigency of the work and difficult market conditions, the contractor is not able to provide the same make, he shall be allowed to provide equivalent approved make subject to his obtaining the concurrence of the Chief Engineer for the price adjustment as between the quotation and the purchase price for the item involved. The base for reckoning shall be the date of purchase. The contractor shall produce purchase invoice as a proof of expenditure for the items other than those specified in the tender documents allowed for incorporation in the work. Construction Department in respective Divisions/Regional/District Offices shall ensure the reasonableness of the rate in the purchase bill produced by the contractor. The price adjustment shall be the difference between the two makes on the date of purchase.

The Company reserves the right to accept the tender in parts i.e. on the basis of lowest quotation in each part or as a whole, at its own

discretion and hence it is important that the tenders take sufficient care and quote reasonable rates in each part, so that if one part only is separated and entrusted to one Contractor he should be able to do it without difficulty. The rates quoted for similar items should be consistent. THE company also reserves the right to accept the lowest or any other tender at its discretion without assigning any reasons whatsoever.

LL. Scope Variation / Change Management

1. Definition of Scope Variation

Scope Variation shall mean any **addition, deletion, modification, substitution, or change** in the scope of work, specifications, drawings, standards, capacities, quantities, layout, sequencing, or methodology of execution, **instructed by the Employer/Engineer-in-Charge**, which is not expressly included in the original Scope of Work forming part of this EPC Contract.

2. Authority to Order Variations

The Employer or Engineer-in-Charge shall have the right, at any time during the Contract Period, to instruct the EPC Contractor in writing to carry out Scope Variations.

The Contractor shall comply with such instructions **provided they are issued in writing** and duly authorized.

3. Variations Related to Buildings and Civil Works

(a) For **buildings, manufacturing block, and civil works** where **built-up area and broad specifications** have been defined and payments are linked to **percentage completion against milestones**, variations shall be dealt with as follows:

- **Increase or decrease in built-up area** beyond the tendered area shall be measured on actual executed quantities.
- The **rates for additional or reduced area** shall be derived from the **accepted EPC price**, prorated based on the percentage of contract value quoted for the respective building/facility, unless otherwise agreed.
- Variations that **do not affect the built-up area** but involve changes in specifications, loadings, finishes, or construction methodology shall be evaluated based on **cost impact plus 15% overheads and profit**. Cost impact shall be assessed jointly on the basis of latest MPSR/DSR. In the absence of non-availability of references of the item/specification in MPSR/DSR, it shall be assessed based on prevailing market supported by documentary evidence. The decision of Engineer-in-Charge shall be final and binding on the contractor.

b) Milestone payments shall be **adjusted proportionately** to reflect the revised scope and value of work.

4. Variations Related to MEP, Utilities, and Services

a) For **MEP systems, utilities, and services** tendered on a **lump-sum (one-lot) basis**, the Contractor shall submit a **detailed system-wise and item-wise breakup** of quantities and costs.

b) Any Scope Variation in MEP and utility services for the changed project requirement as notified by Employer/Engineer-in-Charge shall be valued based on:

- Agreed item rates derived from the submitted cost breakup, or
- In the absence of agreed rates, on the basis of **actual cost plus 15% overheads and profit**, supported by documentary evidence.
- The specification of item/product to be supplied beyond scope will be specified by Engineer-in-Charge
 - The decision of Engineer-in-Charge regarding settlement shall be final & binding on the contractor.

c) Payments for MEP and utility works shall be **regulated in accordance with the approved breakup and revised scope**, and linked to system-wise completion or agreed milestones.

5. Valuation Principles

Unless otherwise specified, valuation of Scope Variations shall follow the principles below, in order of precedence:

1. Rates already quoted in the Contract
2. Derived rates from similar items in the Contract
3. Derived rate based on MPSR/DSR/Market-based rates with cost justification
4. Actual cost plus 15% overheads and profit

No variation shall entitle the Contractor to claim loss of profit on unexecuted work.

6. Time Impact

If a Scope Variation results in an increase or decrease in the time required for completion, the Contractor shall submit a **Time Impact Analysis**. Extension of Time, if any, shall be granted strictly to the extent attributable to the approved variation.

7. No Deemed Variation

Differences arising due to **coordination of drawings, minor adjustments during execution, compliance with statutory requirements, or EPC design obligations** shall not be considered Scope Variations unless they result in a demonstrable change to the defined scope, quantities, or capacities.

8. Continuity of Work

Pending agreement on valuation, the Contractor shall **proceed with the instructed variation** so as not to delay the Project, and the cost shall be settled subsequently as per this clause.

9. Bench marks:

The existing benchmark available at site are established by the contractor engaged by the employer at the time of DPR preparation. The contractor along with the Engineer should verify the details of these bench marks in the first instance, soon after taking possession of the site. The reduced level of these bench marks should be verified with respect to MSL (Mean Sea Level) of Obaidullaganj railway station. If any mistakes are detected/observed in the details of these bench marks, the same should be brought to the notice to employer. The mistakes detected should be corrected in consultation with the employer. These corrections should be got approved by BEML before starting of any other work.

The contractor shall then in presence of the employer engineer establish working bench marks at short intervals, adequately connecting them to the reference bench marks set up by the employer at project site. The working bench mark levels should be got approved from the Engineer. An up-to-date record of all bench marks including approved corrections if any, shall be maintained by the contractor and also the employer.

All levels taken for making out the longitudinal section and cross section should be related only to these working bench marks.

The contractor will be entirely responsible for accurate setting out of the works and safeguarding all survey monuments, bench marks, alignment references etc. The work of setting out shall be deemed to be a part of the general works preparatory to the execution of work and no separate payment shall be made for the same.

The above-mentioned points shall be applicable for all works envisaged under the scope.

10.0 INTERFACING AND INTEGRATION OF WORKS

Interfacing for the purpose of integration of works between different groups/agencies working simultaneously is of paramount importance so that the progress of work is not hampered. Coordination between all working agencies has to be ensured by EPC Contractor.

The commissioning of this tendered project requires close coordination among various agencies executing the works and Employer. The contractor shall therefore plan all his works requiring interfacing with other agencies, meticulously, in consultation and coordination with all concerned parties, in advance, for expeditious execution, without causing any delay either to his

works or those of others.

The contractor shall strictly adhere to the work plan made for works requiring interfacing. Any delay either on his part or on the part of other agencies and other bottlenecks that could affect the pace of works shall be informed to the Engineer in time so as to enable him to take corrective steps.

If, in the opinion of Engineer, any delay in execution of any part of the Project requiring interfacing is attributable to the Failures of the contractor to take adequate steps for smooth execution of such works, then the Engineer shall have the right to take necessary steps to organize and streamline such works, including excluding the requisite portion of work from the scope of the Contractor and getting the same executed by other agencies, at the risk and cost of the contractor.

Damages to property:

The contractor shall organize all his activities so as not to cause any damage, loss, breach to the property of BEML or that by any other agencies or any third party. Despite of taking all precautions, in the unfortunate event of any damage to the property, then the contractor shall not only indemnify the Employer of the claims made by the affected parties but also settle the matters with the affected parties as per law. If the nature of damage is one of that causing a safety hazard to the public, then the situation will be treated as an emergency and the Engineer reserves the right to take all necessary steps as deemed necessary to remove the hazardous situation or to mitigate the damage, at the risk and cost of the contractor.

Damage to Boundary wall of the factory site shall be made good by the EPC contractor.

11.0 SURVEY EQUIPMENT

All survey shall be done with Total Stations and high precision Auto levels. The contractor should provide the survey equipment and other accessories as per the instructions of Engineer as and when required. He should also provide all necessary help as required by the Engineer for checking the works, whenever required.

11. **SPECIAL CONDITIONS OF CONTRACT (SCC)**

(a) SUFFICIENCY OF PRICED BILL OF QUANTITIES AND TENDER:

On the acceptance of his tender, the Contractor shall forthwith satisfy himself as to the correctness and sufficiency of his tender for the works as well as prices percentage stated in the bill of quantities and the schedule of prices and within seven days of the acceptance of his tender he shall sign the acceptance, which shall be construed and taken as an acknowledgement on his part of his complete satisfaction and acquiescence in the sufficiency of the prices.

(b) CONTRACTOR TO EXECUTE CONTRACT WITH COMPANY:

The Contractor shall within thirty days of the issue of purchase order enter into and execute a formal agreement of contract. The Contractor shall not be entitled to make any charges for the perusal of the contract. The contractor shall within ONE month of the issue of acceptance letter submit the detailed work schedule in the form of master plan, monthly plan, weekly work execution plan clearly indicating the various activities. Work shall start on priority basis as per BEML requirement. However, if any portion of site not made available by BEML for any reason whatsoever no claim on account of this will be entertained.

(c) ENGINEERS ORDER TO COMMENCE WORKS AND AS TO NON-DELIVERY OF SITE:

The Contractor having signed the contract, the Accepting authority will forthwith give him notice to commence the works and the Contractor shall upon receipt of such notice commence the works and carry them on at such point or points and in such portions as the Engineer may direct. The company shall, with Engineer's written order to commence the works, give to the Contractor the use of so much of the site of works as may, in the opinion of the Accepting authority, be required in order to enable the Contractor to commence and continue to construction of the works, and shall from time to time consider proper in that behalf, but the non-delivery in manner aforesaid of the use of such site, or any portion thereof, shall not vitiate or effect the contract, nor any provision contained in the specification, not entitle the Contractors to any increased allowance in respect of the money.

D. SETTING OUT WORKS:

The Contractor shall set out the whole of the works & be responsible for the correctness of the position, levels & dimensions of several works, according to the drawings & written instructions of the Engineer. If at any time during the progress of the works any error shall appear or arise in the position, levels or dimensions of the several works, the Contractor, on being required to do by the Engineer, shall at his own expense remove & amend the work to the satisfaction of the Engineer, notwithstanding that he may have been assisted by the

Engineer in setting out the same.

The setting out of the building shall be done by the Contractor himself. All measurements shall comply with the dimensions noted on the drawings. The Contractor shall construct center line pillars wherever necessary at his own cost and the setting out shall be got checked, approved and certified by the Engineer in-Charge before execution of work.

E. MATERIALS TOOLS ETC., BROUGHT ON TO WORKS BECOME THE PROPERTY OF THE COMPANY DURING CONTINUATION OF CONTRACT:

All materials, tools, implements and other things brought by the Contractor upon the Company's works shall thereupon become, and shall continue to be the absolute property

of the company and be considered in its possession, the Contractor having only the right of using the same for the purpose of the contract. After the works have been completed and all obligations under the contract duly fulfilled, the Company shall return to the Contractor the tools, implements and surplus or waste materials then remaining upon the company's works to be removed by him forthwith and cleared away. Nevertheless, the company shall not at any time be liable for the loss of any of the said materials, tools, implements or other things, but the whole of this liability shall fall upon the Contractor, the same as if they had remained in his possession.

W. WORKS TO BE CARRIED WITH AN EXPEDITION FAILING WHICH THE COMPANY MAY EMPLOY CONTRACTORS WITHOUT VITIATING THE CONTRACT:

The Contractor shall commence to carry on the works with due diligence, and as much expedition as the Officer- in- charge /Engineer in charge may reasonably expect, having regard to the specified time of completion of the whole of the works. In case the Contractor fail to do so or neglect to provide proper and sufficient materials or to employ a sufficient number of workmen to execute the works then the Company shall have full power, without vitiating contract, to take the works wholly or in part of the hand of the Contractor, to engage or employ any other person or workmen, and to procure all requisite materials and implements for the due execution and completion of the said works and the costs and charges incurred by the Company in so doing shall be ascertained by the Accepting Officer and be competent for the company to deduct the amount of such costs and charges along with overheads out of any sum or sums due or to become due from the Company to the contractor under this or any other contract.

X. EMERGENCY POWERS:

In the event of any accident or failure occurring in or on the works which in the opinion of the Engineer, requires immediate attention either during the construction or during the period of maintenance,

the company may, by their own or other workmen make necessary repairs at the expense of the Contractors.

Y. OPENINGS TO BE MADE FOR EXAMINATION OF WORKS:

Should the Engineer require it for his more perfect satisfaction, the Contractor, shall at any period during the continuance of the contract pull down any part of the works, and make such openings, and to such extent, through any part of the works as the Officer in charge / Engineer in charge may direct, and the Contractor shall make such works good again to his satisfaction. Should the works be found faulty in any respect the whole of the expenses thereby incurred shall be defrayed by the Contractor, but of otherwise, by the company.

Z. SCOPE OF COMPLETION:

Completion includes completion of all works in accordance with plans and specifications, removal of all yard mess accumulated during construction, leveling and cleaning up the site and generally cleaning the whole building or works.

AA. FINAL MEASUREMENT:

The final measurement can be through re-measurement of the whole of the work performed, as decided by OIC/EIC if required will be made by the Company's authorized representative at which the Contractor or his accredited agent must be present. For this purpose, a written notice will be sent to him at least three days before the date fixed for the measurement, appointing the day, hour and place of meeting. Should he not attend to this, the measurements will proceed without him, and he will be precluded from making any protest. If a dispute arises between the company and the Contractor as to the Quantity and Quality of work performed involving a sum of larger than Rs.500/- the Contractor may appeal in writing to the company for measurement or reappraisal, as the case may be. If the company considers the Contractor's claims is valid, they may appoint an Officer other than the Officer who made the final measurements and inspection and his report shall be considered as final and binding on the Contractor. The Contractor shall have a representative present when the re-measurement or reappraisal is being made.

BB. SIGN BOARD AND HOARDINGS:

The Contractor shall not affix to place any placards or advertisement of any description or permit the same to be affixed or place in or upon any hoarding, gantry, building/structure other than that approved by the OIC/EIC.

CC. FOUNDATIONS

Foundations shall generally conform to the dimensions indicated in the drawings, unless the nature of soils after excavation examined by the engineer-In -charge of works necessitates modifications. The

foundation trenches for RCC columns and walls after excavation indicated on the drawings shall be got inspected, approved and certified by the Engineer-In-charge of works before laying concrete.

DD. DAMAGE TO SERVICE LINE ETC., OF THE COMPANY:

Care shall be taken in execution of work so as not to damage service line etc., coming in the way of construction. If any damage is caused to the line, the cost of replacing or repairs shall be borne by the Contractor. The work schedule shall be submitted on the enclosed activity schedule along with the equipment & manpower mobilization schedule envisaged for timely completion of work within the stipulated time for completion of work.

EE. PROVISION OF MACHINES, TRANSPORT ETC.:

Contractor shall provide himself with requisite number of welding sets, hoisting equipment, transport vehicles etc., required for the complete satisfactory execution of work. The Contractor shall furnish list of specific equipment's to be mobilized by him, of acceptance of contract as agreed / directed by the Engineer-in-charge.

FF. MATERIALS SUPPLIED BY THE CONTRACTOR:

The Contractor shall furnish / produce purchase vouchers and manufacturer's test certificates of Structural Steel and steel from the reputed manufacturers / suppliers. In addition to the testing of materials, in accordance with technical specifications and quality plan enclosed with this tender. However, OIC/EIC shall decide the usage of the same while in-incorporating in the work based on the manufacturers test report and then test certificate obtained from the approved laboratory as per quality plan.

a. CEMENT

i. Cement required for the work when specified in the contract shall be Contractors own supply. The cement shall be of approved INDIAN MANUFACTURE Co., conforming in all respects with the latest Indian Standard specification for Cement including latest amendments as stated in technical conditions and shall be ISI marked.

ii. Prior to commencing the work, the Contractor shall inform the Engineer the brand of cement and the manufacturer's name he proposes to use and if required, shall produce certificates from the firm from whom he obtains the cement. The Engineer reserves the right of rejecting cement of any brand which has not established itself as a high-grade Portland cement and has not for three years or more given satisfactory result in use under climatic or other conditions of exposure similar to those of the works proposed.

a) Contractor binds to deliver the cement on the work so as to allow ample time for testing in order that if a brand or batch fails at the test there will be time to receive and test other cement before it is

required to be used. This is to ensure that there shall be no delay on the works consequent on the rejection of the cement, which does not satisfy in the test from Authorized laboratory. Failing this, the responsibility for such delay will rest on the Contractor.

- b) Immediately after the work order is signed, Contractor shall procure and store at the site of the works such stock of cement as the Engineer directs to do so for satisfactory completion of work. The Contractor shall give to the Engineer-in-Charge notice of the arrival of each consignment of cement on the work and shall give the Engineer sufficient time for testing the same before it is issued on the work. Only cement certified by the Engineer to conform to Indian Standard Specification shall be used on the works. The Contractors shall maintain a register at the work spot for the receipt and use of cement on the work and such entries shall be got attested daily by the Engineer-in-Charge or his authorized representative.

(a) Quantity of cement used on the works shall conform to cement co-efficient schedule. If in the event of being discovered that the quantity of cement used is less than the quantity ascertained as herein before provided, the cost of the quantity of cement not so used shall be recovered from the Contractor.

(b) All rejected cement not conforming to technical specifications shall be removed by the Contractor from the work spot immediately at his own RISK AND COST.

(c) The cement shall be stored in barrels or bags at the site on a wooden floor or a platform not less than 1' above the ground level staked in rows of 10 bags high 2' clear from the walls in a covered shed affording adequate protection against the weather and moisture from any source.

(d) After completion of work, the theoretical quantity of cement to be used on work shall be calculated on the basis of cement co-efficient schedule for various items of work involving the use of cement.

(e) Over the theoretical quantity of cement, a variation of 3% plus/minus shall be allowed.

(f) In the event of it being discovered that the quantity of cement used is less than the quantity ascertained as herein before provided (allowing variation on minus side as stipulated above). The cost of the cement not so used shall be recovered from the Contractor on twice the basis of Market Rate plus 10% to cover profit and overheads deemed to have been allowed in the tender rate

GG. STRUCTURAL STEEL / REINFORCEMENT STEEL

a) Mild steel / HYSD / TMT and Structural steel required for the work shall be Contractors own supply. The structural steel / reinforcement steel elements shall be of approved Indian Manufacture conforming in all respects with the appropriate Indian Standard Specification.

b) Prior to commencing the work, the Contractor shall inform the Engineer the brand of steel and the manufacturer's name he proposes to use and if required, shall produce certificates from the firm from whom he obtains the Structural Steel. The Engineer reserves the right of rejecting Structural Steel / reinforcement steel of any brand.

c) Contractor binds to deliver the Structural Steel / reinforcement steel on the work so as to allow ample time for testing in order that if a brand or batch fails at the test there will be time to receive and test other Structural Steel / reinforcement steel before it is required to be used. This is to ensure that there shall be no delay on the works

consequent on the rejection of the Structural Steel, which does not satisfy in the test. Failing this, the responsibility for such delay will rest on the Contractor.

d) Immediately after the work order is signed, Contractor shall procure and store at the site of the works such stock of Structural Steel / reinforcement steel as the Engineer directs to do so for satisfactory completion of work. The Contractor shall give to the Engineer-in-Charge notice of the arrival of each consignment of Structural Steel / reinforcement steel on the work and shall give the Engineer sufficient time for testing the same before it is issued on the work. Only Structural Steel / reinforcement steel certified by the Engineer to conform to Indian Standard Specification shall be used on the works. The Contractors shall maintain a register at the work spot for the receipt and use of Structural Steel / reinforcement steel on the work and such entries shall be got attested daily by the Engineer-in-Charge or his authorized representative.

e) All rejected steel not conforming to the appropriate Indian Standard Specifications shall be removed by the Contractor from the work spot immediately at his own risk and cost.

f) Rates for all items involving use of structural steel / reinforcement steel shall be based on the price of structural steel conforming to IS as mentioned in technical specifications.

g) Rates for all items involving use of Structural Steel / reinforcement steel conforming to IS as mentioned in technical conditions.

h) After the completion of work, the theoretical quantity of steel section to be used on works shall be taken as the quantity required as per design or as authorized by the Engineer-in-charge including authorized lappages plus 5% wastage due to cutting into pieces. Over this theoretical quantity plus 5% and minus 4% shall be allowed as variation due to wastage being more or less.

i) In the event of it being discovered that the quantity of steel used is less than the quantity ascertained as herein before provided (allowing variation on the minus side as stipulated above) the cost of the quantity of steel not so used shall be recovered from the Contractor at twice Market Rate plus 10% to cover profit and

cartage to site deemed to have been allowed in the tender rates.

j) The provisions made above are without prejudice to the right of the Company to take action against the Contractor under the condition of the contract for not doing the work according to the prescribed specifications

HH. FABRICATION OF STRUCTURAL STEEL BY THE BIDDER ON ACCEPTANCE OF WORK AND CUTTING & BENDING OF REINFORCEMENT STEEL.

a) The tender rate for steel work shall be deemed to include for all works with fabrication drawing. The work "Fabrication" does not however include any manufacturer's job. The shop drawing for Fabrication to be submitted for the approval of OIC/EIC. The Fabrication at site shall confirm to the approved shop Drawings.

b) The bar bending Schedule for reinforcement steel shall be submitted for the approval of Engineer-in-charge and the work thereafter shall be executed as per the approved drawing.

c) OTHER MATERIALS

All other materials required for the work shall also be supplied by the Contractor.

These shall conform to appropriate Indian Standard Specification and procured from approved manufacturer.

II. ACCEPTANCE OF TENDER:

The Company reserves the right to accept tender in parts (i.e. on the basis of the lowest quotation for each part) or as a whole at its own discretion and hence it is important that the Tenderers take sufficient care and quote reasonable rates in each part so that if one part is separated and entrusted to the Contractor he should be able to do it without difficulty. The rate quoted for similar item should be consistent.

JJ. RIGHT TO ACCEPT THE CONTRACT:

The Company also reserves the right to accept the lowest or any other tender at its own discretion without assigning any reason whatsoever.

KK. MODIFICATION OF SPECIFICATIONS:

No modifications or changes of specification in the Bill of Quantities will be accepted & such tenders are liable to be rejected.

LL. EARNEST MONEY DEPOSIT:

Earnest Money Deposit amount which a Contractor shall deposit along with the tender shall be equal to:

(a) For works, 1% (One Percent) of the estimated cost or as notified from time to time:

The EMD shall be deposited in the form of pay order / Demand Draft/ Banker's cheque/ Bank Guarantee in favour of BEML Limited, payable at Bhopal. EMD deposited by the Bidder shall not bear any interest to

the Contractor.

MM. MOVEMENT OF RCC DUE TO TEMPERATURE

To prevent movement of RCC due to temperature difference, the top of wall on which the slab rests should be plastered smooth and spread with a layer of sand before casting the slab. Lintels with chajja when cast monolithic should be provided with a lug in the centre so as to prevent the ingress of moisture on to the inner face of wall

NN. INTERPRETATION

If sectional completion is specified in the contract data, references in the conditions of contract to the works, the completion date, and the intended completion date apply to any section of the work (other than references to the completion date and intended completion date for the whole of the works).

OO. SHOW-CAUSE NOTICE

In case where the Competent Authority decides that action against the Contractor is called for, a show-cause notice shall be issued by the BEML, containing the imputation of misconduct. The Contractor should submit within 15 days a written statement in its defense.

PP. PERFORMANCE STANDARDS AND QUALITY ASSURANCE

1. TECHNICAL SPECIFICATIONS

The works in general shall be executed as per relevant specifications amended up to date, unless given otherwise in this tender document and as per direction of Engineer-in- Charge. In case of discrepancy among the specifications / conditions as mentioned above, the precedence given in general condition of contract shall be followed.

2. TESTS TO BE CONDUCTED BY CONTRACTOR AT HIS COST

The material before incorporation in the work shall be informed to BEML along with Manufacturers Test report on direction of OIC/EIC may permit such materials for the work subjected to Laboratory Testing. Any adverse Test results, such material shall be removed from the site immediately and the work carried out shall be demolished / dismantled / removed from the site as directed by OIC/EIC.

3. LIST OF APPROVED VENDORS / MANUFACTURER'S LIST OF APPROVED VENDORS /

SL. No.	Item	Make / Manufacture
1.	Cement 43/53 Grade (OPC/PPC)	Birla, Rajashree, ACC, J.K cement, RAASI, Coramandel, Ultratech, Ramco, Ambuja
2.	White Cement	Birla White, JK White
3.	Putty	Asian Paint, Berger, Nerolac, ICI, J.K., Birla.
4.	Reinforcement Steel (HYSD/TMT)	SAIL, TATA, Vizag Ispat [RINL], Jindal.
5.	Structural Steels for use in Structural Memebbers.	SAIL, TISCO, Vizag Ispat [RINL], Jindal.
6.	Structural Steels works Like Window grills, Handrails, cable trench covers	Any brand confirming to BIS standards.
7.	Ceramic Tiles	Kajaria, H&R Johnson, Nitco, RAK
8.	Vitrified Tiles.	Kajaria, H&R Johnson, Nitco, Euro, RAK,
9.	Aluminum Hardware Fittings.	ISI Mark/BIS Mark
10.	Aluminum Extruded Sections.	Jindal, Indal, Hindalco.
11.	Glass	Modi Float, Saint Gobian, Hindustan Pilkington, Triveni, Asahi & Atul.
12.	Plywood (BWR/BWP) /Particle Board / Block Board	Kitply, Kenwood, Greenply, Archid, century, Trojan, Anchor.
13.	Tile Adhesive	Lactcrete, Ardex Endure, Weber, Pidilite, Sika, Asian Paints, Fosroc, Tremco.
14.	Door Closer & Floor Springs	Everite, Godrej, hardwyn, Dorma, Ozone.
15.	Flush Door Shutter & Block Board.	Mysore Plywood, Kutty, Indian Plywood Manufacturing Co, Kenwood, Durian, Greenlam, National, Shakti, Archid, Nikki.
16.	Laminates/ Particle Board	Archid, Greenlam, Formica/Marino, Sandek, Euro
17.	M.S. Windows, Ventilators	Madhu Industries, Concorde Industries, Deccan Structural, Hercules, Shakti.

18.	Low VOC Paints (OBD / Interior/ Exterior Emulsion Paint, Synthetic Enamel)	Asian, Berger, Jenson & Nicholson, ICI, Nerolac
19.	Cement Paints.	Snowcem India Ltd, Jenson & Nicholson, Asian, Berger.
20.	SS Hardware for Wooden Doors:	GARG, Janata, Mukund, Jyothi Pag, Godrej, harrison, Laxmi, doorma, doorset.
21.	MS Pipes	SAIL, TATA Steel Limited, Jindal, Indian Hume Pipe co Ltd., Appolo
22.	Sanitary Fittings & Fixtures.	Parryware, Johnson, Jaguar, Hindware, Cera.
23.	Gun Metal Valves.	Kirloskar, VAG, AVK, any material confirming IS Make.
24.	G.I. Pipes (any Dia.)	Indian Tube Co, Zenith, TATA, Jindal, Suryaprakash.
25.	C.P. Fittings	Jaguar, ESS ESS, Hindware, Kohler, Parryware, Cera, Marc
26.	Construction Chemicals / Admixtures / water proofing compound.	Cico, Roff, Fosroc, Pidilite, Sika/BASF, Tikidan, STP, Asian paint, BASF and Tremco.
27.	GI Fittings.	IS Make
28.	Cast Iron Pipes & Fittings.	SKF/NECO/BENGAL IRON CO.
29.	D.I Pipes	KAPILANSH, Kesoram, Electrosteel, SriPipes, Jindal.
30.	Galvalume Sheet for Roofing, Cladding, Sandwich panel, etc.,	Lloyd, Indal, Jindal, Tata steel [Tatablue Scope], bhushan, JSW, Essar, Metecno
31.	ALUMIN COMPOSITE PANEL	Alcobond, Durabond, Eurobond, Alstrong.
32.	Modified APP membranes	Fosroc, Sika-Texa, STP, Pidilite Industries, Asian Paints, Tikidan, Tremco.
33.	UPVC / CPVC Pipes including Fittings	Flow guard (Astral), Ashirvad, Finolex, Kisan, Supreme, Prince.
34.	Epoxy/PU Flooring & other specialised floorings.	Fosroc, Pidilite, Sika, Dr.Beck, Ardex Endura, Asian, Tikidan, STP, Tremco.
35.	PVC Doors /FRP Doors	Rajashree, Fimen, Sintex
36.	Manufactured Sand confirming to IS 383	Thriveni, Neo Sand, Chaitanya Enterprises, TAVARA, Jyothi, Solutions India Pvt Ltd, Sand masters, AVS Tech building.

37.	RMC	Any supplier approved by Quality Council of India and using approved brand of Cement as stated at Sl.No.1
38.	Polycarbonate Sheet	Tufflite, danpalon, Gallina, Tatablue Scope.
39.	UPVC Partition/Doors/Windows	Fenesta, Saint Gobian, Encraft, Deccan Woodmate, LG, Madhu Industries
40.	M.S sliding Doors- Motorised/ Hangar doors/Boom Barriers./ .MS rolling Shutters-Motorised.	Areen, Gandhi Automations, Securetronix, SaiAutomation, Avians,
41.	Fire rated Doors.	Shakthi Horman, Indigatech, Ozone overseas Pvt Ltd. Sukhri
42.	PUF sandwich Panel using the materials as specified at S.No.30	Manufactured by AlFa, Karthik, Lloyd, Kirby, Metecno, TATA Bluescope,
43..	False Ceiling	Saint Gobin (Gyproc), Armstrong, Shera, Hunter Douglas, Metalium, USG Borel.
44.	S.S Pipes	Jindal, TATA, Apollo, Suryaprakash Pipes.
45.	Concrete Paver Blocks	Eurocon Tiles, Basant Beton, Sobha, Apco, Nitco (Rockard), Jyothi Group.
46.	Wooden Flooring	Armstrong Flooring, Mohawk Flooring, Greenply, Tarketsomer.

Note:

1. Contractor shall obtain prior approval of BEML before procurement of the Materials from the manufacturers listed above for the work. If any of the above Brands of Materials are not available, Engineer-in-charge shall allow use of other brand material duly approved by OIC/EIC provided they confirm to the requirement of IS as per Technical Specification/Quality Plan.

2. BEML reserves the right to reject or accept any of the make given above without assigning any reasons and contractor is bound to supply other brands in the list.

4. LIST OF TESTING LABORATORIES (NABL APPROVED)

- Govt. Labs or any other NABL accredited Laboratory with the approval of OIC/EIC.

5. GENERAL SAFETY CLAUSES

i. General:

The Contractor shall take all safety precautions / measures and ensure safety for the works, he has been contracted to execute. He shall follow all relevant safety codes of BEML/MES/CPWD and IS codes and safety manuals. The Contractor shall indemnify BEML from any consequences arising due to Contractor's failure in respect of safety measures. Some of the more important measures are listed below. The Contractor shall implement any further measures which may be required as per the safety codes of BEML/MES/CPWD/ IS codes etc. and the measures which the Engineer may call for during the execution of the work.

The Contractor shall engage labourers aged 18 years and above.

Suitable Technical devices shall be used as much as possible to avoid or limit the loads by manual transport.

The Contractor shall engage suitably qualified persons for training / instructing working techniques, methods of lifting, putting down, unloading and stacking of different types of loads; with a view to safeguarding health & preventing accidents.

The Maximum permissible weight which may be transported manually by a Male worker shall not be more than 50 Kgs.

As far as possible adult women workers should not be assigned to regular manual transport of loads. Women workers should not be assigned to manual transport of loads during pregnancy which has been medically determined.

Where adult women workers are engaged in the manual transport of loads the maximum weight of such loads should be substantially less than that permitted for adult Male workers.

The firm should use required PPE while executing the work viz., Safety Helmet, Safety Belt, fall restraint, Crawler board, Safety net etc.,

Before start of work a work permit has to be obtained by the firm which will be valid for one day.

The firm should inspect the work area before starting execution, prepare a risk assessment and get approved by Safety Engg. Department.

The workmen engaged by the firm shall be medically fit, they should undergo Vertigo test along with other tests and submit medical fitness certificate.

ii. Scaffolding:

Suitable scaffolds shall be provided for workmen for all work that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used an extra labourer shall be engaged for holding

the ladder and suitable footholds and handholds shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and 1 vertical).

iii. Guard Railing in Scaffolding / Staging / Platforms:

Scaffolding or staging more than 3.25 meters above the ground floor or floor swung or suspended from an overhead support or erected with stationary support, shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 meter high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be so fastened as to prevent it from swaying from the building or structures

iv. Working Platform / Gangway / Stairway:

Working platform, gangways and stairways shall be so constructed that they do not sag unduly or unequally, and if height of a platform or gangway or stairways is more than 3.25 meters above ground level or floor level, it shall be closely boarded, have adequate width and be suitably fenced provided with guard rail as described in 2 above.

v. Access to working platforms and other working places:

Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 5 meters in length. Width between side rails in a rung ladder shall in no case be less than 30 cm. for ladders up to and including 3 meters in length. For longer ladders this width shall be increased at least 6 mm. for each additional 30 cm. of length. Uniform step spacing shall not exceed 30 cm.

vi. Hoisting Machines:

Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following:
Those shall be of good mechanical construction, sound material and adequate strength and free from patent defects and shall be kept in good repair and in good working order.

Every rope used in hoisting or lowering materials or as a means or suspensions shall be of durable quality and adequate strength, and free from patent defects.

Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 shall be in charge of any hoisting machine including any scaffold winch or give signals to operator.

In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or lowering or as means of suspension, safe working load shall be ascertained by

adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with safe working load. In case of hoisting machine having a variable safe working load, each safe working load and the condition under which it is applicable shall be clearly displayed on the machine prominently. No part of any machine or of any gear referred to above in this paragraph shall be loaded beyond safe working load except for the purpose of the testing.

Motors gearing, transmission, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards; hoisting appliances shall be provided with such means as will reduce to the minimum, risk of accidental descent of load. Adequate precautions shall be taken to reduce to the minimum risk of any part of a suspended load becoming accidentally displaced.

When workers are employed on electrical installations which are already energised, insulating mats, working apparel such as gloves, sleeves and boots, as may be necessary shall be provided. Workers shall not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

Load tests: All cranes, hoisting machines etc. shall be load tested. Contractor shall submit test certificate from competent, authorised person before use.

vii. Demolition works: Before any demolition work is commenced and also during the process of the work:

- a. All roads and open areas adjacent to the work site shall either be closed or suitably protected.
- b. No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by Contractor shall remain electrically charged.
- c. All practical steps shall be taken to prevent danger to persons employed, from risk of fire or explosion, or flooding. No floor, roof, or other part of a building shall be so overloaded with debris or materials as to render it unsafe.
- d. All blasting materials shall be stored and handled as per guidelines of relevant authorities.

viii. Barricades:

Contractor shall erect and maintain barricades required in connection with his operation to guard or protect:

- a. Excavation / Hoisting / Lifting areas
- b. Slab Openings

- c. Areas adjudged hazardous by Contractor's or Engineer's Inspection.
- d. Existing property subject to damage by Contractor's operations.
- e. Contractor's employees and those of his sub-Contractors shall become acquainted with BEML / Engineer's barricading practice and shall respect the provisions thereof

ix. Net & Protective Platform:

The Contractor shall provide & maintain closely knitted PVC net all-round tall buildings throughout the construction period. He shall also provide all-round from external face about 1.5 M+ wide temporary platforms at every 6-7th floor covered with welded steel mesh. This shall be maintained & updated throughout the construction period to avoid any accident due to dropping of construction materials/debris. This shall be strictly followed and work shall be permitted only when complied with satisfaction of the Engineer. If the above are not fully taken care of the Engineer reserves the right to get the same carried out through other agency at the risk and cost of the Contractor.

x. Prevention of Fire and Protection:

All combustible waste materials, wood scaling, soiled rags, etc. should be removed daily and burned in suitable areas.

Fire, welding, and flame cutting should not be permitted in combustible areas. Fires and open flame devices should not be left unattended.

Smoking should be prohibited in all flammable material storages, viz. carpentry, paint shops, garages, service stations, etc. "No Smoking" signs should be posted on all such areas. Accumulation of flammable liquids on floor, walks, etc, should be prohibited. All spills of flammable liquids should be cleaned up immediately.

Flammable liquids, lubricants, etc. should be handled and transported in safety containers and drums which can be kept tightly capped. Petrol or other flammable liquids with a flash point below 100 Deg F should not be used for cleaning purposes.

Oxygen cylinders should not be stored with combustible materials.

All electric installations should be properly earthed. Repairs should not be made on electrical circuits until the circuit has been de-energized.

Fire extinguishers & fire buckets, painted red, should be provided at all fire hazardous locations. Extinguishers should be inspected, serviced &

maintained in accordance with manufacturer's instructions. The inspections should be evidenced by notations on the tag attached to the extinguisher. Handling of Hazardous materials shall be as per statutory regulation.

xi. Electrical Equipment:

All temporary and permanent electrical installations, power distribution and supply required for execution of Work shall be carried out conforming to existing industrial and domestic safety rules and regulations. Important specific points to be noted are as under:
Meter room and main switches should be freely accessible at all times and fully protected against all weathers.

Power distribution system shall be identifiable with display marking on switches.

All power distribution shall be carried out with coated, adequately insulated and of appropriate current / load rating cables. It shall be securely routed for this purpose. No loose, naked, hanging wires shall be permitted.

Over load protection devices shall be installed whenever and wherever heavy current / load consuming construction or plant machinery susceptible to hazard is in use and as directed by the Engineer.

Metallic plugs and sockets shall be used in field work. Switch board shall be in close proximity so as to have quick control over the supply.

Proper and adequate earthing connection to be provided for all installation, plant machinery and distribution system.

Hand lamps and inspection lamps shall be adequately insulated and guarded with wire mesh and will have proper plugs for use. Security and illuminatory light shall be secured firmly and protected to withstand all weather.

xii. Protective equipment / gears:

All necessary personal protective equipment as considered adequate by the BEML and the Engineer shall be available for use of the persons employed on the site and maintained in a condition suitable for immediate use; and the Contractor shall take adequate steps to ensure proper use of equipment by those concerned.

- Workers employed on mixing cement concrete shall be provided with protective footwear & protective goggles, hand gloves of polythene type.
- Those engaged in handling any material which is injurious to eyes shall be provided with protective goggles.

- Those engaged in welding works shall be provided with welders protective eye
- The following safety equipment should be provided to workers as required and their use enforced. Rubber boots; hard toe protective safety boots; hard hats & helmets, safety belts; goggles for stone/concrete cutters, gas welding aprons, respirator shields, manila ropes and slings for life lines, gloves, flash lights, battery lamps, safety nets, boatswains chairs, helmets, life and ring buoys.

Items of personal wear should be maintained in serviceable condition and should before being reissued to other employees or returned to stores to be cleaned, sterilised, inspected and repaired, if necessary.

Loose and frayed clothing, hand rings, loose watch chains, etc. should not be worn around moving machinery or other sources of entanglement.

xiii. Other Safety Measures:

Every receptacle used for raising or lowering stones, bricks, tiles, slates, or other subjects should be enclosed, constructed or designed so as to prevent the accidental fall of such objects.

All gears, tools, goods or loose material should be properly loaded into the bucket or receptacle in which they are being raised or lowered. If necessary, they should be properly secured or effective precautions should be taken to prevent their fall.

No timber or materials with projecting nails should be used in any work because they can be a source of danger to people.

Adequate precautions shall be taken to prevent danger from electrical equipment.

No materials on any of the sites shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The Contractor shall provide all necessary fencing and lights to protect public accidents and shall be bound to bear expenses of defence of every suit, action or other proceeding at law that may be brought by any person for injury sustained owing to neglects of the above precautions and to pay any damages and costs which may be awarded in any such suit, action or proceedings to any such person or which may with the consent of the Contractor be paid to compromise any claim by any such person.

xiv. First Aid and Industrial Injuries:

i. Contractor shall maintain first aid facilities for his workmen. First aid appliance including an adequate supply of sterilised dressings and sterilised cotton wool should be maintained in a readily accessible place. Appliances should be kept in good order and they should be placed under the charge of a responsible person who should be readily available during the working hours.

ii. Contractor shall make adequate arrangements for ambulance service and for treatment of injuries. Names of those providing these services shall be furnished to BEML prior to start of constructions and their telephone numbers shall be prominently posted in Contractor's field office.

iii. All critical industrial injuries shall be reported promptly to the ENGINEER – IN – CHARGE and a copy of Contractor's report covering each personnel injury requiring the attention of a physician shall be furnished to BEML

xv. Maintenance:

All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in a safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.

xvi. Enforcement:

To ensure effective enforcement of the rules and regulations relative to safety precautions, arrangements made by the Contractor shall be open to inspection by the Engineer or his representatives and the Inspecting Officers.

xvii. Displays:

These safety provisions shall be brought to the notice of all concerned by display on a notice board at prominent places at the work spot. Persons responsible for ensuring compliance with the Safety Code shall be named therein by the Contractor.

xviii. Work permits:

Contractor shall take work permits from concerned departments of BEML as per requirements before commencement of the work every day.

The contractor shall at his own expense arrange for the safety

provisions in respect of all labour directly or indirectly employed for performance of the works and shall provide all facilities in connection therewith.

IS codes	As applicable to the relevant work (Latest Revisions)
3696-1987	Safety code for scaffolds and ladders.
4014 (part 2) -1986	Safety regulations for steel tubular scaffolding
3764-1966	Safety code for excavation work
4081-1986	Safety code for blasting and related drilling operation.
4130-1976	Safety code of demolition of building.
4138-1977	Safety code for working in compressed air
4912-1978	Safety requirements for floor and wall openings, railings and toe board
7969-1975	Safety code for handling and storage of building materials
13415-1992	Safety code for protective barriers in and around the building
13416-(part2) – 1992	Recommendations for preventive measures against hazards at workplace-fall prevention
5916-1970	Safety code for construction involving use of hot bituminous material.
7293-1974	Safety code for working with construction machinery.
8989-1978	Safety code for erection of concrete framed structure
7205 – 1973	Safety code for Erection of Structural steel works

APPENDIX – A

COMPLIANCE REPORT OF GENERAL CONDITIONS OF CONTRACT (GCC)

(To be submitted along with Technical Bid)

Bid Invitation No :

Firm :

Sl. No.	Terms / Clause	Complied	Not Complied	Remarks
1.	DEFINITIONS & CONDITIONS OF CONTRACT			
2.	SECURITY DEPOSIT			
3.	LIQUIDATED DAMAGES FOR DELAY IN COMPLETION OF WORKS			
4.	EXTENSION OF TIME			
5.	MEASUREMENT BOOK(MB)			
6.	RAR (RUNNING ACCOUNT REMITTANCE) BILLS PAYMENT			
7.	COMPLETION CERTIFICATE AND COMPLETION PLANS			
8.	PAYMENT OF FINAL BILL			
9.	MATERIALS TO BE PROVIDED BY THE CONTRACTOR			
10.	WORK TO BE EXECUTED IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, ORDERS ETC			
11.	DEVIATIONS/ VARIATIONS EXTENT			
12.	FORECLOSURE OF CONTRACT DUE TO ABANDONMENT OR REDUCTION IN SCOPE OF WORK			
13.	CARRYING OUT PART WORK AT RISK & COST OF CONTRACTOR			
14.	ACTION IN CASE WORK NOT DONE AS PER SPECIFICATIONS			
15.	CONTRACTOR LIABLE FOR DAMAGES, DEFECTS DURING DEFECT LIABILITY PERIOD			
16.	LABOUR LAWS TO BE COMPLIED BY THE CONTRACTOR			

17.	CODE ON WAGES TO BE COMPLIED WITH			
18.	DISPUTE RESOLUTION AND JURISDICTION			
19.	ARBITRATION			
20.	WATER FOR WORKS			
21.	ELECTRICITY FOR WORKS			
22.	LEVY/TAXES PAYABLE BY CONTRACTOR			
23.	TERMINATION OF CONTRACT ON DEATH OF CONTRACTOR			
24.	RISK PURCHASE CLAUSE and FORCE MAJEURE CLAUSE			
25.	QUOTED RATE TO REMAIN FIRM THROUGHOUT THE CONTRACT (Refer Clause 3.P)			
26.	UNDERSTANDING OF SITE CONDITION			
27.	CONTRACTOR'S LIABILITY AND INSURANCE			
28.	INDEMNIFICATION			
29.	CAR POLICY			
30.	PROGRESS REVIEW MEETINGS			
31.	APPROVAL OF WORKS BY STAGES			
32.	SITE RELATED			
33.	BRIBES AND GIFTS			
34.	Banned / Blacklisted (Annexure- 13 & 13A)			
35.	NON - DISCLOSURE AGREEMENT (Annexure-22			

Authorized signatory with company seal / stamp

APPENDIX – B

CONTACT DETAILS OF THE SUPPLIER

(To be filled and submitted by supplier along with the technical bid)

1) Authorised Person details.

- (a) Name :
- (b) Designation :
- (c) Telephone :
- (d) Fax :
- (e) Mobile :
- (f) Email :

2) Head Office :

3) Complete address

including the website :

4) Details of the proposed plant from where item is to be supplied :

5) Complete address of the Plant

including Website :

6) Contact person details in plant

- (a) Name :
- (b) Designation :
- (c) Telephone :
- (d) Fax :
- (e) Mobile :
- (f) Email :

7) Bank Details:

- a) Name of the Bank :
- b) Full Address of the Bank :
- c) Suppliers Account Number and Type :
- d) IFSC/Swift Code :

Annexure-15

NIT ACCEPTENCE LETTER

To:
The Sr. Manager,
M/s. BEML LTD
Bhopal Rail plant – Bhopal

Dear Sir,

We bidder Have examined the tender documents of **Bid Invitation No. 6300040573 dated 25/05/2026**, the receipt of which is hereby duly acknowledged, we, the undersigned, hereby confirming that we read, understood and accepting all the terms & conditions available in the tender. Further, we indicate that upon selection, we will execute the assignment as per the tender terms and conditions.

Signature with date of Authorized

signatory Name: _____

Designation: _____

Appendix – C

Compliance to Bill of Quantity (BOQ)

Engineering, Procurement & Construction pertaining to establishment of Rail coach factory including Civil Construction of manufacturing block, testing bay, other utility buildings (Non factory buildings), Railway Track sidings, water supply and distribution System, Roads, Drainage and sewerage systems, General Electric works including regular and emergency power supply and distribution system, related installations & services (Fire, Gas, Compressed air, IT, BMS, etc.), MFA (Miscellaneous fixed assets) and other Land & Site development works including grading, levelling works in connection with setting up of a Rail Coach Factory near Umaria village, Obaidullaganj, District-Raisen, Madhya Pradesh (India) on EPC Mode.

Sl.No.	Name of the Work	Unit	Compliance to BOQ
1	<p>Preparation of Architectural, Structural Designs, proof check of design & drawings by IITs, Cutting, levelling/filling of land, field survey and soil investigation and Construction of Manufacturing Block with Annexe building, Inspection Block, various technological buildings, non-technological buildings, Canteen Building, Fire Station, Occupational Health Centre, rail tracks with and without OHE, traverser foundation, construction of MRSS, EPSS, compressed air station, gas bank, raw material storage yard (covered), Water supply & Fire water pump house & sump with all connected pipelines for supply of water, RO Plant, sanitary/ sewer lines connecting to Sewage treatment plant, storm water drains connected to rain water harvesting pond, Electrical works, mechanical works, plumbing works, Fire fighting system works, Miscellaneous fixed assets, Detailed Designs of Services, external development, RCC roads and pavements, landscaping, horticulture, signage's etc. complete as per requirements in line with the master layout enclosed and scope of work.</p> <p>Construction of following: A. Land & Site Development 1. RCC Road* 2. Storm water drainage system* 3. Sewerage system excluding STP* 4. RCC service trench* 5. Main Gate Complex (G+1) with security office - 1-lot 6. Railway Gate Complex (G+3) - 1-lot 7. Laying of Stabling and dispatch Railway Track *</p>	1 AU	

	<p>8. Earthwork in formation - Cutting & Filling*</p> <p>9. Greenbelt Development - 37 acres</p>		
	<p>B. Civil & Structural Works</p> <p>1. Car Body manufacturing cum storage Bay with annex building units and fire stair cases including lifts - 1-lot</p> <p>2. Car body inspection and testing line facility - 1-lot</p> <p>3. Raw material storage yard (covered) - 1-lot</p> <p>4. Water supply & Fire water pump house & sump - 1-lot</p> <p>5. MRSS (Main receiving sub-station) 1-lot</p> <p>6. EPSS (Emergency power supply system) hardstand - 1-lot</p> <p>7. Compressed Air Station - 1-lot</p> <p>8. Gas Bank - 1-lot</p> <p>9. RO Plant - 1-lot</p> <p>10. Fire Station - 1-lot</p> <p>11. Traverser/ AGV – Foundation/ Hardstand - 1-lot</p> <p>12. Rain Water Harvesting - 1-lot</p> <p>13. Canteen Building - 1-lot</p> <p>14. Occupational Health Center - 1-lot</p>		
	<p>C. MFA (Miscellaneous fixed Assets)</p> <p>C1 Material Handling Equipment</p> <p>1. DG EOT Crane -25/5T - 4-Nos.</p> <p>2. DG EOT Crane -10/2T - 4-Nos.</p> <p>3. Single girder under Slung 02 Ton Crane for Water Pump House - 1-Nos.</p> <p>C2 Other Miscellaneous fixed Assets</p> <p>1. Plant Electrics - 1-lot</p> <p>2. Instrumentation system - 1-lot</p> <p>3. AC & Ventilation System - Air cooled VRF type 40T (main gate complex with security office & Canteen building) - (1+3) Nos.</p> <p>4. AC & Ventilation System - Split air conditioner for office units annexed to manufacturing block – 1.5 ton capacity, 5 star rating - 50 Nos</p> <p>5. Compressed Air system - 1-lot</p> <p>6. Fire Fighting system - 1-lot</p> <p>7. Furniture (as per list attached)- 1-lot</p> <p>8. IT Equipment & ITES - 1-lot</p> <p>9. Water Supply System - 1-lot</p> <p>10. RO Facility - 1-lot</p> <p>11. STP - 1-lot</p> <p>12. DG Set - 2-Nos.</p> <p>13. Gas Bank - 1-lot</p> <p>14. Weigh Bridge (including associated civil infrastructure)- 1-lot</p>		

	All connected inside & outside electrical works, mechanical works, fire and safety works, plumbing, retaining walls, service trench, storm water, Rain water harvesting, laying of tracks both standard gauge and board gauge with and without OHE, hardstanding, RCC roads, site formation, cutting, filling of land, etc. complete project. Liasoning work, statutory approvals, etc in EPC mode (design and build basis) as per the scope of work mentioned in Technical Bid		
	Total Basic Price		
	Applicable GST in %		
	Total Price inclusive of all Taxes and Duties:		

Firm to submit breakup of the total value quoted as per BOQ (Applicable Only for successful bidder)

Note:

* With the limiting condition of dispatch track at 452m MSL, the EPC contractor has to decide the floor level of all the facilities including formation level and assess the quantity accordingly and quote. For dimensions/ configurations master layout (in .dwg format) may be followed. While fixing the formation and floor level necessary guideline as per latest NBC to be followed.

1. The bidder shall quote a lump-sum price for the total items/ works envisaged under the scope of NIT in this commercial bid.

2. The successful bidder shall submit the break-up of the total price quoted against all the line items of the price schedule.

3. For regulating the payment against a line item the price of a line item is to be further broken-up into relevant sections/ parts/ segments for which payment schedule is provided in the NIT.

4. In addition, the quantifiable line items in running meter such as Roads, Rail, Drain, Sewer, Service Trench, the successful bidder shall submit the final quantities of those items after the detailed design stage for payment regulation purpose.

5. Price break up against each line item should be given only by the successful bidder after the award of work in such a manner that the total of line items

of a particular group does not exceed the weightage assigned to the group, as per annexure-25.

6. Payment for line item shall be regulated as per payment schedule reference provided in Annexure-25. The payment schedules are provided in Annexure-26

Signature of Authorized signatory :

Name :

Designation :

Stamp/seal :

Authorized signatory with company seal / stamp