



**BEML LIMITED**

**TENDER DOCUMENT**

**For**

**CONSTRUCTION OF PRE-ENGINEERED BUILDING (PEB) AND CIVILWORKS  
FOR HMV OVERHAULING HANGAR WITH CONNECTED OFFICE BUILDING  
AND PAINTING SHED**

**AT BEML LIMITED, PALAKKAD COMPLEX, KERALA**

**TENDER CONDITIONS  
SCOPE OF WORK  
&  
BILL OF QUANTITY (BOQ)**

**SRM Bid No: 6300038725**

**LAST DATE FOR SUBMISSION ONLINE: 06/03/2024 – 17.00 Hours**

**ISSUED BY**

**The General Manager,  
Material Management  
BEML Limited  
Palakkad Complex**

**BEML LIMITED**

(A Government of India Mini Ratna Company under Ministry of Defence)  
Kinfra Wise Park, Kanjikode, Palakkad – 678621, Telephone: 0491-2568178

**Bid invitation No: 6300038725****Closing Date: 06/03/2024**

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## 02. QUALIFICATION CRITERIA

A. Tender Description	As indicated in TENDER NOTICE			
B. Contract period	SEVEN (07) Months			
C. Tender No.	6300038725			
D. Tender closing date / time	06/03/2024 – 17.00 Hrs			
Security Deposit	10% of P.O value to be submitted			
E. Labour License under contract labour (R & A) ACT 1970 and Central Rules made there under	Successful bidder has to submit a valid Labour licence / Proof of applying for the same within a period of one month from the date of awarding work order.			
F. PF / ESI	Firm should have PF/ESI Code Nos OR on award of contract the successful bidder (Firm) shall apply for PF/ESI codes to the respective authorities. In case the firms have registration in other states (other than Kerala) they have to agree to obtain separate sub code for the local area.			
The scanned copies of following qualifying documents are to be uploaded along with the Technical bid.				
Sl. no	Description	Requirement		Remarks
		Detail	Value Rs. in Lakhs	
1	Tender Document	To be uploaded in SRM	-	Signed & sealed Tender document to be uploaded in SRM along with other Technical documents.
2	NIT Acceptance Letter	NIT Acceptance letter to be uploaded in SRM	-	Signed & sealed NIT Acceptance letter to be uploaded in SRM along with other Technical documents.
3	Corrigendum if any	All pages of corrigendum need to be signed & sealed.	-	Corrigendum to be submitted along with other technical documents.
4	Average Minimum Annual Financial Turn over in last 3 years ending 31 <sup>st</sup> March 2023	Certified by practicing CA	304.80	CA certificate to be submitted along with other technical documents.

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5	Experience in executing similar type of works/ civil works completed during last 7 years ending December 2023 value greater than or equal to the said requirement. <b>Note:</b> Similar works means Civil Works / PEB works carried out in public sector/Private organizations & Govt. organizations.	3 Similar works each of Minimum value	<b>406.40</b>	(a) The experience certificate shall be considered only for the works completed in full & complete. (b) Select any applicable one and upload scanned copy of similar work completion certificates issued by client. (c) If the works /contracts were carried out in other than Government or PSUs, the bidders have to submit TDS Certificates along with experience Certificate.
		2 Similar works each of Minimum value	<b>508.00</b>	
		1 Similar work of Minimum value	<b>812.80</b>	
6	Solvency certificate	Enclose Copy	<b>406.40</b>	Nationalized / Scheduled Bank in Favor of the bidder and the certificate shall be within a period of 12 months from the date of submission of the tender.
7	Earnest Money Deposit (EMD)	To be remitted before tender closing date	<b>20.32</b>	Proof of remittance to be submitted in SRM (RTGS / DD / Cheque)
8	Integrity Pact	Enclose Copy	-	To be submitted with seal and signature on SRM
9	PF & ESI Registration Certificate	Enclose copy	-	Copy to be submitted
10	PAN No. & GST No	Enclose copy	-	Copy to be submitted
11	Latest 3 Financial Years IT returns Filing	Enclose copy	-	Copy to be submitted
12	Labour License under contract labour (R & A) ACT 1970 and Central Rules made there under	Enclose copy	-	If labour license already available copy to be scanned uploaded.

**SIGNATURE OF CONTRACTOR (S) WITH SEAL**

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**Subject: Construction of Pre-engineered building (PEB) and civil works for HMV overhauling hangar with connected office building and painting shed at BEML Limited, Palakkad complex, Kanjikode, Palakkad, Kerala**

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**INTRODUCTION:**

BEML intends to Construct HMV overhauling hangar with connected office building and painting shed at BEML Limited, Palakkad complex, Kanjikode, Palakkad, Kerala.

The detailed specification, work, etc., are mentioned in BOQ

Further to the above cited tender notice we would like to appraise the bidders with the following details: BEML Limited is a Government of India undertaking, under the Ministry of Defence Production, having manufacturing units at KGF, Bengaluru, Mysore, & Palakkad. Tenders in prescribed form is invited for the subject work, interested bidders can download the tender document released along with this notification and quote in two bid system as mentioned below:

**BEML LIMITED invites tender in two bid system (Submission of EMD and Technical Bid & Commercial Bid through SRM from eligible reputed firms / contractors for subject tender.**

Please submit your Quotations through e-mode on BEML SRM platform, as per tender for the subject works at Palakkad complex, BEML LIMITED, Palakkad, as stated in the scope of work.

**This Tender consisting of two parts:**

Part A – Submission of EMD and Technical Bid i.e. Submission of Technical Bid (Through SRM)

Part B – Commercial Bid i.e. Submission of Price Bid (Through SRM)

Instructions for submission of the bids:

Both Technical Bid (incl of payment of EMD /EMD Exemption certificates) and Commercial bid are to be submitted through electronic mode only in the SRM system.

**Part A: Technical Bid: (Online mode)**

- a) Please upload all the technical bid documents in the SRM system and ensure that no price details are mentioned in any of the documents uploaded as part of the Technical Bid.
- b) Corrigendum regarding the tender if any will be published in SRM website only before the tender closing date. Bidders to make note of the above and check the website before tender closing date / time to have the latest communication / update. The same to be signed with company seal and scanned copy to be uploaded with the technical bid documents.

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- c) Documents as indicated in the Mandatory qualifications of the contractor for eligibility are to be uploaded on SRM Platform. (Commercial bids of the bidder will be opened only if all the technical requirements are fulfilled and qualified through technical evaluation. Hence the bidders are advised to upload all the required documents carefully.)
- d) The tender documents will be considered at the sole discretion of M/s BEML Ltd, whose decision in the matter will be Final & Binding. Failure to do so will result in rejection of the bid.

**Part B: Submission of Commercial Bid: (e-mode)**

- a) Price bid to be submitted in SRM system only against the respective line items provided therein before tender closing date and time specified.
- b) In case Bidder is not quoting for all the activities in price bid, then their offer will be rejected.
- c) Quotations sent by Fax / Email / Quotations on letter heads will not be entertained. The offers should be only on SRM platform.

Technical Bid will be opened first on the specified date and time. Commercial Bid (Bill of quantities) will be opened only, if the firm qualifies in the Technical Bid. Incomplete details of the Technical Bid will be rejected summarily. BEML have its right to reject any bid without assigning any reason what so ever.

Incomplete / Invalid Tenders and tenderers submitting without payment of EMD / uploading EMD Exemption (as per SRM) will be rejected and no correspondence will be entertained in case of rejection.

**General Instructions with regard to EMD:**

- a) Quotation submitted online without submission of EMD/EMD Exemption Certificate 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 **Rs.20,32,000/-** (Rupees Twenty Lakh Thirty-Two Thousand Only) will not be accepted and the quotation is liable to be rejected.
- d) EMD of technical disqualified bidders will be returned.
- e) EMD does not carry any interest on return.
- f) Pre-qualification and technical bids shall be opened **on closing date i.e. 06/03/2024**
- g) No responsibility will be taken for postal delay or non-delivery/non-receipt of EMD/firms claiming EMD exemption.

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Offers without EMD or EMD in the form other than the one specified or EMD with lesser amount shall not be considered and tenders will be rejected. No Interest would be paid on the Earnest Money Deposit.

**Completion Period:** The period allowed for execution of the work is till completion of project in all respects and details (Scope, time and payment schedule) of Terms and Conditions from the date to be mentioned in the work order to be placed on the successful bidder.

**Communication:** Any queries/clarification / information / details regarding tender enquiry to be communicated only through email Id: [dhinesh.a@bemltd.in](mailto:dhinesh.a@bemltd.in) and [narasimhaprasadtk@bemltd.in](mailto:narasimhaprasadtk@bemltd.in) and queries/clarification/ information/details will be accepted up to two days prior to the closing date of the tender.

**Other Terms related to Tender:**

- 1) The company does not bind itself to accept the lowest or any other tender.
- 2) The tender shall remain open for acceptance for a period of **90 days** from the date of opening of tenders.
- 3) The intended bidders may visit the site and acquaint themselves with the conditions of the site prior to submission of tenders and no claims will be entertained later on the grounds of ignorance.
- 4) The successful bidder is required to sign the work order prepared based on the quoted rates placed on him by the Accepting Officer.
- 5) The Accepting Officer reserves the right to place order as a whole or part of any item only as deemed fit.
- 6) In case, the Successful consultant/firm after quoting withdraw from the tender or refuse / delay in commencing the work or stop the work abruptly, their EMD will be forfeited.
- 7) Bidders exempted from Earnest Money Deposit (EMD) shall submit exemption certificate from Competent Authority.

**Conditional tenders are liable to be rejected.**

Thanking you

Yours faithfully,

for BEML Limited

-Sd/-

**The General Manager,**  
Material Management  
BEML Limited  
Palakkad Complex

**Bid invitation No: 6300038725****Closing Date: 06/03/2024****04. GENERAL CONDITIONS:**

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

**1. INTERPRETATION CLAUSE:**

In these General Conditions and the Specifications attached, the word 'COMPANY' shall be held to mean 'BEML LIMITED', the work '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.

**2. SUFFICIENCY OF PRICED BILL OF QUANTITIES AND TENDER:**

On the acceptance of this tender, the contractor shall forthwith satisfy himself as to the correctness and sufficiency of his tender for the works as well as all prices 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 contract which shall be construed and taken as an acknowledgement on his part of his complete satisfaction and acquiescence in the sufficiency of the prices. The amount of the tender shall be the sum at which the contractor engages to execute whole of the works set-forth in the Bill of Quantities, the contractor shall submit to the company, with his tender both Schedule of Prices and Bill of Quantities upon which the tender has been based fully and completely priced. Items left unpriced in the bill of Quantities shall be held to be included in the prices for other items of the work.

**3. CONTRACTOR TO EXECUTE CONTRACT WITH THE COMPANY:**

The successful contractor shall within SEVEN DAYS of the acceptance of his tender enter into and execute a formal indenture of contract to be prepared by the Company's Solicitor. The contractor shall not be entitled to make any charges for perusal of the contract.

**4. 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



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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.

**5. 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.

6. 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.

7. 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.

**8. 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.

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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.

**10. 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.

**11. NIGHT WORKS:**

The works shall be carried 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.

**12. 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 and assist the public traffic. The contractor shall also at his own cost erect temporary fences on the site of works where required by the Engineer-in-charge.

**13. 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

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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.

**14. 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.

**15. 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

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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. All such instruction given by the Engineer in charge, shall be in the following form or as near there to as may be:

ORDER No:

CONTRACT No.

In pursuance of Clause-15 of the General Conditions of contract and subject as there in mentioned, we request you to perform the under mentioned at the under mentioned price, namely:

SUCH WORK BEING IN	ADDITIONAL TO SUBSTITUTION FOR	WORK INCLUDED IN THE
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tender, and we request you to omit the under mentioned work at the under mentioned prices, viz.

DATE:

SIGNATURE OF THE  
ENGINEER-IN-CHARGE.

AND every claim shall be made in the following form:

CLAIM No: \_\_\_\_\_ CONTRACT No. \_\_\_\_\_

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Contractors claim under and subject to Clause-18 of the General Conditions of Contract for the week ended Saturday the \_\_\_\_\_ day of \_\_\_\_\_ in respect of other than contract work.

Work Claimed For		Number Of Engineer's Order	Price of Similar Work in Bill of Quantity of Schedule.		Where no Similar Work in Bill of Quantity of Schedule.	Amount claimed Rs.
Qty in Mtrs.	Des-crip-tion.		Number/ Number of items	Value of Item.	Schedule Price of Labour.	

DATE:

SIGNATURE OF THE CONTRACTOR 'S

The claim shall be delivered to the Engineer-in-charge , for his examination before being transmitted by him to the Chief Engineer and shall be subject in all respect to the consideration, ratification and correction of the Chief Engineer who shall be at liberty to decide whether any such claim entitle the Contractor to any, and if so, what extra charges, according to the true meaning and intention of the specifications, and whether any and what allowance shall be made to the company in respect of any work or obligation to be performed under the contract and from the performance of which the contractor may be or become directly or consequently relived by reasons of any such additional or substituted works.

**16. 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.

**17. 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

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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.

**18. 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.

**19. 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



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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 right 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.

**20. EMERGENCY POWERS:**

In the event of any accident or failure occurring in or on the works, which, in the opinion of the Chief Engineer requires immediate attention either during construction or during the period of maintenance the company may by their own or other workmen make necessary repairs at the expenses of the contractor.

**21. OPENING TO BE MADE FOR EXAMINATION OF WORKS:**

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

**22. 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.

**23. 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

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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 likewise, 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.

**24. 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.

**25. ROYALTIES:**

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

**26. 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.

**27. 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.



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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.

**29. 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.

- 30.** 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.

**31. 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.

**32. LABOUR ACTS:**

- a) 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

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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 Payment of Wages Act 1936, Minimum Wages Act 1948, Employers liability Act 1938, Workmen's Compensation Act 1923, ESI Act 1948, or any other Acts or enactments relating thereto and rules framed there under from time to time. In the event, the contractor fails or neglects to pay any amount due by him under the workman's compensation Act, ESI Act 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.

- b) In the event of contract, the contractor shall be responsible for implementing the provision of the contractor Labour Act in to and also responsible for any repercussions arising there from for non-compliance thereof.
- c) 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.
- d) 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.
- e) 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.
- f) 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.
- g) 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.
- h) 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.

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- i) 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.
- j) THE contractor shall disperse the wages to the workmen in the presence of the authorized representative of the company.
- k) CONTRACT Labour (Regulation and Abolition) Act 1970 under section 12 and Rule 21 prescribes that every contractor who employs labour for executing contract works should obtain license from Labour Authorities to carry out any works contract, so that the labourers employed by the contractor are not deprived of the facilities provided under the Act. Such license shall be produced to BEML Authority before commencement of the work.

**33. TRAINING APPRENTICES:**

The CONTRACTOR shall comply with the provision of the Apprentices Act 1961 and the rules and order issued there under from time to time. If he fails to do so his failure will be a breach of contract and the Accepting Officer may in his discretion cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provision of the Act.

**34. FAIR WAGES:**

The Contractor shall not pay less than fair wage to labourers, 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.

**35. DISPUTE RESOLUTION AND JURISDICTION:**

All disputes or differences whatsoever arising between the parties out of or relating to the construction, meaning and operation or effect of the contract or the breach thereof arising during the progress of work or after completion or abandonment thereof shall be mutually discussed and settled amicably by conciliation Committees/ Councils comprising of independent subject experts constituted by BEML, failing which, the dispute shall be settled by arbitration consisting of sole arbitrator appointed by the Company in accordance with the provisions of Arbitration and Conciliation Act 1996 and the arbitration proceedings shall be conducted at Bengaluru.

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The court at Bengaluru only shall have jurisdiction to entertain any dispute/matter relating to the contract

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. The Arbitration and Conciliation Act, 1996 and amendment thereof shall not be applicable to this clause. Any party aggrieved by such award, shall make further reference to the Ministry of Law and Justice, Government of India.

In case BEML challenges the Arbitral Award passed against it, 75% of the award may be paid to the contractor / concessionaire against Bank Guarantee without prejudice to the final order of the Court in the matter under challenge. The payment may be made into a designated Escrow Account with the stipulation that the amount so released will be used, first, for payment of lenders' dues, second, for completion of the project and then for completion of other projects of BEML, as mutually agreed / decided. Any balance remaining in the Escrow Account subsequent to settlement of lenders' dues and completion of projects of BEML, may be allowed to be used by the contractor / concessionaire with the prior approval of the lead banker and BEML.

In case the subsequent court order required refund of the money paid by BEML to the contractor / concessionaire against Bank Guarantee, the amount shall be refunded by the contractor / concessionaire along with appropriate interest. The rate of interest on such refund amount shall be decided by BEML keeping in view the cost of capital to BEML or the rate of interest provided for in the Contract Agreement or the rate of interest awarded under the Arbitral Award under challenge

General conditions stated under Clause 1 to 35 are fully read and are acceptable to me/us.:

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DATE:

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SIGNATURE OF THE CONTRACTOR 'S

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1. The tender shall remain open for acceptance for a period of 90 days from the date on which the tenders are due to be submitted.
2. The contractor shall visit the site to acquaint himself with site conditions and study the drawings and specifications in detail prior to tendering, and no claims will be entertained later on the ground of ignorance or otherwise of the conditions under which the work shall have to be executed.
3. The contractor shall either himself supervise the execution of the contract or shall appoint competent and experienced engineers on his own for supervision of the work. Where the contractor is not a qualified engineer or even if he is so qualified but in the opinion of the accepting authority, cannot give full attention to the works, the contractor shall at his own expense employ adequate Engineers, as indicated in manpower deployment schedule, to supervise the work and to receive instructions from the Engineer-in-charge. The employment of engineers as aforesaid shall be with the approval of the Engineer-in-charge who may verify the qualifications/experience required for timely completion of work.

The proposed minimum engineers shall be under:

Project manager- 1 no	Civil engineering Degree holder with over 10-15 years of practical experience for works of similar nature.
For Structural work -1 no	Civil / Mechanical engineering Degree holder with over 3-5 years of practical experience for works of similar nature.
For Quality control work-1 no	Civil engineering Degree holder with over 3-5 years of practical experience for works of similar nature.

They shall be further supported by a team of Junior engineers and supervisors as per requirements at site as directed by Engineer-in-charge.

Penalty for non-compliance of required manpower is as follows:-

Project manager -Rs 40,000/- per month

Structural Engineer & Quality control Engineer - Rs 30,000/- per month

4. The setting 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 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.
5. 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

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on the drawing shall be got inspected, approved and certificated by the Engineer-in-charge of works before laying concrete.

6. 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.
7. 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.
8. 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.
9. **WATER:**  
Contractor shall make his own arrangements for water supply & storage facility for the work. Digging borewells inside the BEML premises is prohibited as per company policy. Water used whether in the process of making materials or in the execution of the work or for cleaning, etc. shall be clean and fresh, and free from deleterious matter.
10. **POWER SUPPLY TO THE CONTRACTORS:**  
Contractor shall use Power supply from nearest place of availability. The Contractor shall make his own arrangement for drawing the power supply with suitable safety precaution for the work. Contractor shall not waste the power and shall use judiciously. In the event of non-availability of power during any exigency, contractor shall make his own arrangements for power supply for work. Non availability of power will not be a reason for delay in work.
11. **Submittals and Cost of Tests:**  
On commencement of the Project, the Contractor shall submit the following to the Engineer in Charge: -  
Detailed Baseline Programme stating the various activities along and the time for completion of each activity. Results of any tests, as and when conducted and as required by the Engineer in Charge. All tests shall be carried out at the contractor's cost.
12. **MATERIAL AND WORK MANSHIP: GENERAL**
  - a) This Materials and Workmanship Specification for Track work shall be read in conjunction with all the documents forming part of the Contract.
  - b) No Permanent Works shall be carried out until all methods and materials have been approved by the Engineer in charge.
  - c) Unless noted otherwise in the Contract, all components and materials shall be handled, transported and stored, in accordance with the manufacturer's recommendations with prior approval of Engineer.
  - d) The test results of each test to be carried out as per Employer's requirement shall

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be recorded and submitted in a format approved by the Engineer and shall include graphical presentation of results as well as numerical base data wherever required.

e) All drawings, records, reports, documents, Performa etc. shall be submitted in both hard copy and electronic copy.

f) Work and Workmanship Guarantee Compliance of entire Provisions is obligatory to Contactor

**13. SURVEY INSTRUMENTS**

a) Survey instruments like Total station, Dumpy level etc used and the methodology adopted shall be appropriate to the intended measurement task and accuracy specifications. Test measurements and instrument calibration shall be carried under local field conditions.

b) It is essential that before starting any initial surveys and at frequent intervals all measuring equipment should be tested for their accuracy.

c) All instruments deployed in the Contract shall be in good condition and properly calibrated.

d) Calibration certificates and/or statements of services by local authorized instrument agents of not more than six months shall be the proof that the instruments are in good service conditions.

e) Notwithstanding the above, instruments shall again be checked to ensure good condition before the Contractor proceeds to carry out a critical survey task. Any error causing superfluous work will have to be rectified by the contractor at his own cost.

**14. SPECIAL INSTRUCTION.**

All construction materials used in the contract shall be get approved from concerned engineer in charge.

**15. TAXES:**

WHATEVER Taxes and duties, as applicable, chargeable in respect of this contract whether by the Central or State Government shall be borne by the contractor(s) and the price quoted shall be inclusive of such taxes, cess or any other statutory duties or taxes payable by them and price quoted shall be firm and shall be inclusive of such duties and taxes. WHEREVER Taxes are deductible at source, the company will recover the amount as per the statutory requirement.

16. 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.

17. 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.



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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 and 40% in respect of any individual item, indicated in Schedule A-BOQ
- 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:

- a) 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.
- b) 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.
- c) The rates for NT items shall be based on the MES 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.
- d) 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.
- e) 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.

**19. 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



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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.

20. 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.

21. **EXTENSION OF TIME:**

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.

Where the delay is due to default of the contractor, and if there is a financial loss due to such delay, the extension of time requires the approval of Competent Authority. In the absence of Competent Authority approval, Liquidated Damages for delay in completion of the work shall become enforceable.

Where the delay is not due to default of the contractor, for example: - a) not providing clear work front to the contractor by the Company, b) Company's delay in decision making for changes relating to original work., etc necessary extension of time shall be granted with the approval of Competent Authority, as per DoP without sanctioning escalation claimed by the contractor except statutory levies.

Extension of time when granted with the approval of the Competent Authority as per Company's Delegation of Powers shall have the effect of rendering the clause Liquidated Damages for delay in completion work' inoperative upto the period of extension of time so granted unless otherwise specifically stated.

22. **LIQUIDATED DAMAGES FOR DELAY IN COMPLETION OF WORKS**

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.

Liquidated Damages shall be applicable in the following cases:

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- a) where the contractor fails to complete the work within the stipulated time;
- b) where the extension of time is granted with levy of LD;
- c) Where extension of time is granted without levy of LD but the contractor has failed to complete the work within the extended period.

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.

In case where the contract is subjected to levy of LD, the Chief Engineer shall be the authorized person to issue 'Work Completion Certificate', which shall be final and binding the Company as well as the Contractor concerned.

23. **FORE-CLOSURE OF CONTRACT:**

It shall be noted that at any time after acceptance of the tender, the Company can decide to abandon or reduce the scope of work for any reason whatsoever, the Chief Engineer shall give notice in writing to that effect to the contractor. The compensation, if any, payable for such foreclosure of work shall be discussed mutually between the Company and the contractor and settled after taking into consideration the loss suffered by the contractor on account of foreclosure of the contract. The contractor shall have no claim for any compensation whatsoever on account of any profit or advantage which he might have derived consequent to foreclosure of the whole or part of the works. The Company shall have the option to take over the contractor's materials or any part thereof, either brought to the site. The amount of compensation payable to the contractor due to foreclosure shall be decided by the authority one level above the level of the authority competent to award the contract, or by the CMD.

24. BEML revised General Conditions together with BEML specifications will form part of the contract. Should there be any discrepancy between the provision in the Bill of quantities and drawings, the former shall be deemed to take precedence there over.

25. No modification or change of specifications in the bill of quantities shall normally be accepted and such changes are to be rejected. Acceptance of such deviations shall be at the discretion of the Engineer-in-charge.

26. **EARNEST MONEY DEPOSIT:**

TENDERES should submit their tender accompanied by EMD of value indicated in the tender. It should be paid in online mode and proof submitted in SRM. Tender without Earnest money deposit will be rejected. On finalization of the tender, Earnest money deposit will be refunded to unsuccessful tenderers under proper acknowledgement. MSME firms are exempted from EMD and documentary proof to be submitted.

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In case, the contractor/firm after quoting, withdraws from the tender or refuse/delay in commencing the work or stop the work abruptly, their EMD/ SD, as the case may be, will be forfeited. No interest amount is payable on EMD.

27. **SECURITY DEPOSIT:**

The successful tenderer shall be required to furnish security deposit for the fulfillment of contract and amount shall be 10% of the value of the contract exclusive of Taxes, 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.

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

- a) 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.
- b) Bank guarantee from any commercial bank equivalent to the amount of security deposit valid for a period required by BEML shall also be accepted.
- c) 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.

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 thereafter make good these deductions.

**27.1 REFUND OF SECURITY DEPOSIT**

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.

The balance 50% of the security deposit shall be refunded to the contractor on written demand from the contractor after the expiry of the DEFECT LIABILITY PERIOD or on payment

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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.

If the Security Deposit is in the form of Bank Guarantee, on completion of the contract, the BG already with BEML will be returned to the contractor. The contractor has to then submit a fresh Bank Guarantee for 50% of the security deposit value valid for a period of 1 year from the actual date of completion of the entire contract shall be deposited by the contractor.

Any refund of security deposit shall be made only with the recommendation of the Chief Engineer.

**28. RUNNING ACCOUNT REMITTANCE: (RAR)**

During the progress of work, contractor shall submit the claims giving complete details of work done, rate and value to the Engineer-in-charge, nominated by Chief Engineer who shall certify the rate and quantity as per the MB and prepare a statement showing the description and quantity for which he recommends payment. These claims are called RAR bills and RAR payments are made once in a calendar month or more depending upon the periodicity of contract/progress of work.

Where the RAR payment is based on the measurements recorded in the MB, the recommendation for payment shall be stage-wise co-related with the bill of quantities.

Due to technical reasons, where pro-rata payments on stage-wise progress of work is considered necessary though not specified in the contract, the Chief Engineer with the approval of competent authority, shall decide the number/type of stages correlating with the bill of quantities and submit a statement showing the stage-wise break-up of the contract value indicating work progress details including percentage of completion, cost, and remarks, if any, of the Engineer-in-charge with a copy to Accounts in the respective Division for regulating the quantity and payment. This shall form the basis for the Engineer-in-charge to prepare a bill for actual progress of work. The basis as decided above shall uniformly be adopted for regulating all RAR payments till the final bill is submitted.

However, in respect of hidden works, recording of measurements in MB shall invariably be made then and there and the MB produced to Accounts at the time of RAR payment.

Accounts shall arrange payment for RAR bills within a fortnight's time from the date of receipt based on the certification of the Engineer-in-charge and after necessary check/verification.

As per Expenditure Management Commission, Government of India, in large projects above Rs.10.0 Crore, 50% of running bill amount shall be released within 7 days of submission without a detailed check on the claim. The balance shall be released after the claim is scrutinized as per procedure in order to get more competitive bids and for speedy execution as cash flow is a critical requirement in a project.

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The contractor shall also be paid 'Material Advance' for the material brought to site for incorporation in the work duly certified by the Engineer-in-charge. For such materials brought inside by the contractor, the contractor has to produce necessary test certificates from reputed Testing Laboratories for steel and hypothecation deed duly executed by the contractor in favour of the Company on a non-judicial stamp paper of requisite value.

Payment of 'Material Advance' shall be recommended by the Engineer-in-charge for materials required to be used in the works as per the planned progress of work. However, payment of material advance against materials brought to site by the contractor ahead of scheduled progress of work shall be considered not exceeding 75% of the value of such material in exceptional cases with the approval of Competent Authority, with justification recorded in writing.

RAR payments shall be regulated to the extent of the value of work done, with due adjustments for recoveries and other payments (including material advance/adhoc payments made if any) effected so far against the contract.

29. **PRE FINAL RARs**

Pre-final RAR is raised only when the work is completed and the complete measurement is recorded in the MBs by the Engineer-in-charge designated by Chief Engineer duly accepted by the contractor.

Pre-final RAR shall be sent to the Accounts Department by the Engineer-in-charge Only after Technical check of the measurements and endorsement in the MBs by the Chief Engineer.

The Engineer-in-charge, shall recommend for payment not exceeding 90% of the value of work completed with due adjustments for recoveries and RAR payments (including Material advance if any) effected so far against the contract.

Such bills shall be paid within 2 weeks from the date of their receipt in the Finance Department after scrutiny and check for the correctness of the bill duly linking up with the MBs.

The recommendation of Pre-final RAR is based on the discretion of the Chief Engineer on case-to-case basis.

30. **ADHOC PAYMENTS:**

If payment for final bill could not be arranged within 5 months from the date of the completion of the contract for genuine reasons other than undue delay in submitting the final bill by the contractor, an Adhoc payment not exceeding 90% of the value of the work done after making all necessary deductions for statutory dues, RAR payments, Material advances if any paid, shall be recommended by the Chief Engineer with the approval of

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respective Complex chief/ respective Business Group Director. Such Adhoc payment can be recommended only if the contractor is having concurrent running contracts in the Complex.

The following guide-lines shall be adopted while making such adhoc payment;

- a) Such payment shall not exceed 90% of the final bill value.
- b) All conditions of contract and recoveries to be effected shall be taken care before effecting Adhoc payment.
- c) If a contractor has no other contract concurrently running in the Complex, adhoc payment need not be made. Instead, final bill shall be expedited and paid atleast within six months from the date of completion of the contract.

**31. COMPLETION CERTIFICATE:**

As soon as the Contractor completes the work assigned to him the same shall be inspected and if found satisfactory shall be taken over by the Chief Engineer. A "Completion Certificate" shall be issued to the contractor within 30 days from the date the contractor has given request for the same. If there are minor defects which can be rectified even after the building has been taken over, the defects shall be listed out and the contractor shall be asked to rectify the same before the final bill is submitted. The final bill along with the completion certificate duly certified by the Engineer in charge, shall be submitted to Finance Department for payment. The completion certificate shall have the following details:

- a) Particulars of the work and Contract Number,
- b) The date of work order to commence the work,
- c) Date of completion as per original contract agreement,
- d) Actual work done value.
- e) Extension of time if any, granted,
- f) Date on which contractor was required to complete the work,
- g) Actual date of completion and taking over by BEML.

**32. FINAL BILL:**

On completion of the work and the recording of measurements in the MBs, a final bill shall be submitted by the contractor. On receipt of the final bill duly signed by the contractor, the same shall be scrutinized by the Engineer-in-charge to see that the claim is in order.

The final bill prepared by the Department and accepted by the contractor, shall be accompanied with the following documents:

- Original Completion certificate
- No claim certificate duly signed by the contractor
- Original Contractor's All Risk Insurance Policy covering up to the actual date of completion of work.
- Contract Agreement

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- Revised estimate as duly approved by Competent Authority.
- ESI & PF statement duly co-ordinated by Welfare Section.
- Measurement books duly technically checked by Engineer in charge.
- Any other documents which are specified by the Management from time to time.

The Engineer-in-charge has to certify in the work Completion certificate as well as in the Measurement Book, that the work is executed in conformity with the contract specification, drawings and other conditions. The final bill duly checked and co-ordinated by the Engineer-in-charge shall be sent to the Finance Department through Chief Engineer along with the documents stated above.

33. **DEFECT LIABILITY PERIOD:**

The period of maintenance for the subject work shall be **ONE YEAR**. 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.

34. **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



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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.

35. 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.
36. The measurement for payment of said works as per the contract will be paid as per the standards mentioned in IS 1200. For theoretical consumption of materials like cement, aggregates, etc., IS 10067-1982, Specification of materials constants and building works shall be followed.

THE various provisions in this special condition shall be deemed to take precedence over those in General conditions/specifications to the extent applicable.

Special Condition as stated in Clause 1 to 36 are fully read and are acceptable to me/us.

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DATE:

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SIGNATURE OF THE CONTRACTOR 'S



**Bid invitation No: 6300038725****Closing Date: 06/03/2024****06. SAFETY CONDITIONS****1. 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.

**2. 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 1/4 to 1 (1/4 horizontal and 1 vertical).

**3. 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.

**4. 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.

**5. 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 upto 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.

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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 energized, 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, authorized person before use.

**7. 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 or 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.

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d. All blasting materials shall be stored and handled as per guidelines of relevant authorities.

**8. Barricades:**

i. 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.

ii. Contractor's employees and those of his sub-Contractors shall become acquainted with BEML / Engineer's barricading practice and shall respect the provisions thereof.

**9. Net & Protective Platform:**

The Contractor shall provide and maintain a closely knitted PVC net all-round tall buildings throughout the construction period. This shall be strictly followed and work shall be permitted only when complied to 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.

**10. 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 and fire buckets, painted red, should be provided at all fire hazardous locations. Extinguishers should be inspected, serviced and maintained in accordance with manufacturer's instructions. The inspections should be evidenced by the notations on the tag attached to the extinguisher.

Handling of Hazardous materials shall be as per statutory regulation.

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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.

**12. Protective equipment / Gears:**

All necessary personal protective equipment as considered adequate by 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 and 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 welder's protective eye-shields.

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, sterilized, 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.

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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.

**14. 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.

**15. 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.

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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.

**17. 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.

**18. Work permits:**

Contractor shall take work permits from concerned departments of BEML as per requirements before commencement of the work everyday.

The contractor shall at his own cost and responsibilities follow all the safety rules and regulations and safety codes such as:

<b>IS codes (Latest Revisions)</b>	<b>As applicable to the relevant work</b>
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-(part 2) - 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

Safety Conditions as stated in Clause 1 to 18 are fully read and are acceptable to me/us.

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DATE:

SIGNATURE OF THE CONTRACTOR 'S

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The following are scope of work.

1. The Contractor shall carry out the subject work as per the Drawing, QAP, Specification & quantities mentioned in the BOQ and Tender. The contractor shall use materials as per the List of approved materials. Drawings & QAP-PEB enclosed in SRM collaboration folder.
2. Initial inspection of the site, setting out the proposed building and to get approval from the concerned authorities before starting the works.
3. Execution of all civil, structural works / PEB as per the Execution drawing.
4. Drawings attached with this tender are tentative and Drawings for execution will be released by the Consultant on finalization of the contract.
5. The project site shall be properly protected from the other working area by providing barricade/ netting for suitable height as directed by Engineer in charge, for protecting from dust & debris. Construction work shall not affect the regular production activities of BEML.
6. Submission of Handing over documents like Test Certificates, As Built Layout / Drawing (3 hard copies of original size + Soft copy).
7. Measurement records for the work carried out will be prepared jointly by the Contractor & Engineer in Charge and payment will be made only for the actual quantity of work executed as per the measurement record. The measurement record shall be concurred by the Consultant.
8. The contractor has to work in close co-ordination with BEML, Consultants, Other contractors like EOT crane, MEP, Interior for carrying out the work without affecting the security of BEML.
9. Specifications of Materials used shall be as per BOQ, relevant specification in MES SSR part 1 /latest relevant IS standards. The Works shall be carried out as described in BOQ and relevant IS standard as a guide for standard practice.

**08. OTHER TERMS AND CONDITIONS:**

1. The Contractor shall not throw/ dump any waste materials after work. The same shall be only stored in specific areas as instructed by Engineer in Charge.
2. The firm shall carry out the work to the entire satisfaction of BEML.
3. Contractor shall follow general, rules, regulations and disciplinary instructions of BEML.
4. The employees of the firm shall obtain necessary pass from Maintenance/ Security department by following BEML rules before commencement of work.
5. The firm / Contractor has to bring necessary Tools/ Consumables/Plant & Machinery equipment, etc., required for the work. The contractor will also arrange for getting permission (for their use) if required from local or other concerned authorities so also for their transportation to site. All expenditure incurred in this connection will have to be borne by the Firm / Contractor. The firm shall also maintain sufficient measuring instrument with valid calibration certificate at site for quality control requirement.



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6. All the items supplied/ brought by the firm shall be entered in BEML main security gate by producing proper delivery challans/ documents as per the rules of BEML. The items shall be kept inside the factory in a place identified by BEML only during the course of work. The firm shall make his own arrangement for safe custody of his items and the firm will be the custodian of items brought by him. BEML is not responsible for any loss/ damage to firm's items.
7. The loading/ unloading of the materials for the work at site is under the scope of the firm and shall carry out without affecting the man and material movement of BEML.
8. From commencement to completion of the work the firm shall take full responsibility, taking precautions to prevent loss or damage to BEML property at related work site. The firm shall be liable for any damage or loss that may occur during the progress of work. It is the responsibility of the firm to make correction/ rectification/ providing new one of damaged property etc whichever is required as per the site condition, failing which the BEML will withheld the equivalent amount incurred for correction/ rectification/ providing new one from the bill of firm.
9. The firm shall adhere all the statutory requirements related to deployment of labour for the work as per the prevailing rules & regulations.
10. The firm shall make its own arrangement for boarding & lodging for their employees.
11. The employees of the firm can avail the canteen facility if required during the working hours on actual chargeable basis as per the BEML rules subjected to availability and prior intimation.
12. The firm's employees shall be ready to work on Sundays / Holidays if required as per the site conditions.
13. The firm has to provide all the Personal Protective Equipment's (PPEs) related to safety to their employees. The firm shall be sole responsible for any type of accident occurs while executing the work. BEML shall not hold any responsibility for such accidents.
14. The firm has to carry out the work in concurrence with BEML and complete the work to the satisfaction of BEML. Work has to be carried out without disturbing the working atmosphere. No inconvenience should be caused to BEML in all respect



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09. LIST OF APPROVED MAKES		
a) FOR CIVIL WORKS		
S. NO.	Name of Material	Make
1	Cement (PPC/OPC)	ACC/ Ultra Tech/ RAMCO / Dalmia cements/ Chettinad Cements
2	Reinforcement Steel	TATA/ SAIL/VIZAG/ JINDAL/ JSW
3	White Cement/ Wall putty	Birla wall care/JK White/ Berge/, Asian Paints
4	Ceramic Glazed Tile	Kajaria/Johnson/ Nitco/ Somany (all first quality).
5	Vitrified Floor Tile	Kajaria/Johnson/ Nitco/ Somany (all first quality).
6	PVC drain Pipe	Supreme/Prince/ Finolex (Min 6.0 kgf pressure)
7	CPVC water supply pipe	Finolex/ Astral/ Supreme/ Prince/ Ashirvad (wall pressure Min500 psi)
8	G.I. Pipes	Jindal (Hissar)/ Tata /Apollo
9	C.I. pipe & fitting	SKF/NECO/ Kapilansh/ RPMF
10	Aluminium frame	Jindal/Hindalco
11	Float glass	Modi Guard/ Saint Gobain / HNGIL/ AIS
12	Toughened Glass	Modi Guard/ Saint Gobain / HNGIL// AIS
13	Frameless Glass fitting	Ozone / Dorma
14	Pre-laminated board	Greenlam/ Merino /Kitply/Century
15	POP punning	Sakarni/ Shri Ram/ JK/ Birla
16	Primer / Emulsion / Enamel paint	Asian/ ICI (Dulux)/ Nerolac/ Berger
17	Stainless Steel	Jindal/ SAIL/ Indian Stainless Steel
18	Steel windows	Jangid Engineering/ AGFUV/ SEN HARVIC/NAVAIR Delhi/ SUKRITI Delhi / NCL
19	CI Manhole	NECO/ Kapilansh /SKF/RPMF
20	G.I. Fittings	UNIK/ ZOLOTO/ NVR
21	Structural Steel	TATA/ SAIL/ Jindal/ Vizag/ APL Apollo
22	Structural Steel- MS pipes only	TATA/ SAIL/ Jindal/ Vizag/ APL Apollo
23	Hardware's	Hettich/ Everite/Dorma/ Godrej/Iron mongery

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24	Stainless Steel Bolts/ Washers & Nuts	Kundan/ Puja/ Atul
25	Chequered Precast Concrete Tile	Hindustan Tiles/ Ultra/ Swastik Tiles
26	PVC casing pipe	Kissan (Agro)/ Appollo/Supreme
27	Ply board & Ply	Archid/Greenply/Century/Kitply
28	Laminate	Greenlam/Merino/ Century/ Action TESA / Sunmica
29	uPVC Windows	Fenesta/ Prominance/ Rehau/ Torfenster/ Alupast / Ncl Veka ltd
30	Paints	Asian paints/ Dulux/Nerolac/Berger
31	Epoxy Paints	Asian/ Nerolac/ Berger/ ICI
32	Flush Door shutters	Duro/ Kitply industries (Swastik)/ Century/ Durian/ Greenply/ Merino/ Green Panel/ A1 teak
33	Fire rated door	Signum Fire Protection/ Shakti Metdoor/ NAVAIR/ Sukri/ Promat International
34	Door Locks	Godrej/Europa/Ozone/Dorset
35	Water proofing chemical	DrFixit /SIKA/ ARDEX/BERGER /FOSROC
36	Rolling Shutter Motor	CAME/AUTOZON/ GEAPL
37	Floor spring & Door closure	Godrej/ Dorma/Dorset/ Kich

### b) FOR PEB / STRUCTURAL WORKS

S NO	Name of Material	MAKE
1	HR plates for <b>Built-Up Sections</b>	VIZAG/ SAIL/ ESSAR/ TATA/ JSW/JINDAL
2	Hot Rolled Steel: <b>Beams /Channels / Angles/ Rods / Plates</b>	VIZAG/ SAIL/ ESSAR/ TATA/ JSW/JINDAL
3	Hot Rolled Steel: <b>Circular/Square/Rectangular Tube Sections</b>	VIZAG/ SAIL/ ESSAR/ TATA/ JSW/ APPOLLO/JINDAL
4	Pre Galvanised <b>Cold Rolled Coils:- Purlins /Girts</b>	SAIL/ ESSAR/ JSW/TATA/ JINDAL

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5	Galvalume Roof Sheeting / Galvalume Wall Cladding/ Flashing/ Gutter/ and Downspout	TATA BLUE SCOPE/ JSW/ META COLOUR/ LLOYD INSULATIONS/ INTERARCH
6	Tube sections	VIZAG/ SAIL/ ESSAR/ TATA/ JSW/ JINDAL
7	High Strength Bolts	Deepak/ Atul/ Panchsheel/ TVS &Pooja
8	Secondary Connections	Deepak/ Atul/ Panchsheel/ TVS /Pooja
9	Sheeting/cladding Fasteners	Fisher/ Hilti/ Corroshield
10	Paint Materials	Asian/ Berger/Dulux/Dupont
11	Welding Rods	Advani Orikon / ESAB INDIA/ EWAC ALLOYS/ HONAWAR ELECTRODES/ D & H Welding Electrodes
12	Life Line System at Roof	3M India Ltd/ Sure safety (Ind) Ltd/ M/s Eklavya Safety LLP.
13	Skylight	VELUX or equivalent
14	Polycarbonate sheet	LLOYD INSULATIONS/ TUFLITE / GE PLASTIC/ LEXAN/BAYERS
15	Self drilling/ tapping Zinc plated screws size 5.5x55mm for Galvalume sheets	TATA/JINDAL/JSW/ HILTI
16	Polynum - Air bubble insulation layer with double side aluminium foil	Green Insu / Aerolam / Supreme

Note :

1. Before bulk purchase of quantities of materials, it is the responsibility of the Contractor to get the samples of materials approved from Engineer
2. If the above approved brands are not available, prior approval shall be obtained from consultant and Engineer-in- charge for using equivalent make.

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## **10.QUALITY ASSURANCE PLAN**

Quality Assurance plan consists of all planned and systematic actions to be under taken by the contractor involved in execution and acceptance of the works involved in the contract. The plan shall define the operations to be performed, the systematic and sequential progression of operations, the persons responsible for each activity and the measures employed to assure the specific quality. Thus, it is imperative to ensure that product and services are inspected, checked and approved at all stages from commencement of work including receipt of material to its completion in so far as utilization.

### **1. QUALITY CONTROL**

The contractor shall setup quality control process at the site for carrying out the following activities: -

- a) Establishing site Laboratory.
- b) Preparation of Quality Plan /Approved Material List/Sample approval
- c) Trial Mix design
- d) Testing of Incoming Material
- e) Regular Material/Test/Identify non-conforming materials:
- f) Calibration of laboratory equipment

### **2. LABORATORY EQUIPMENTS REQUIRED**

The equipment's required for testing of the following materials shall be maintained in the site.

1. Cement
2. Coarse Aggregate and Fine Aggregate
3. Steel
4. Fresh and hardened concrete

Apart from the above, any other required testing shall be carried out in any NABL accredited lab or Reputed institutions with prior approval from BEML / PMC.

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**3. INSPECTION PLAN**

Sl. no	Activity Description	Code of Conformance	Performer /Checker	Approver	Surveillance Check
1	Co- ordinates Levels of Bench Mark	Drawings	Surveyor	BEML/PMC	Witness
2	Calibration of Total station	As per Relevant IS codes	Surveyor	BEML/PMC	Witness
3	Site Marking	Drawing	Surveyor	BEML/PMC	Witness
4	Excavation	Drawings	Site Engineer & Surveyor	BEML/PMC	Witness
5	Anti-termite Works	BOQ	Site Engineer	BEML/PMC	Witness
6	Adopting mix designs for various grade	IS456	Site Engineer	BEML/PMC	Witness
7	Preparatory works for steel/plywood	As per standard	Site Engineer	BEML/PMC	Random
8	Fixing and positioning in location for shuttering works and support etc	Drawings	Site Engineer	BEML/PMC	Random
9	Checking of alignment vertical dimension, coordination etc in line with construction drawing	Drawings	Site Engineer	BEML/PMC	Random
10	Preparation submission and approved of BBS in line with construction drawing	Drawings	Site Engineer	BEML/PMC	Random
11	Straightening, cutting, bending and binding in position of rebar Work as per drawing	Drawings	Site Engineer	BEML/PMC	Random
12	Checking & fixing metal inserts/bolts as per drawing in location	Drawings	Site Engineer	BEML/PMC	Random
13	Preparation & check of temporary arrangement of staging, chute, walkway, Machineries etc.	As per standard	Site Engineer	BEML/PMC	Random
14	Mixing, pouring and placement of fresh concrete including admixture	Mix Design	Site Engineer	BEML/PMC	Random

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15	Check of slump, W/C ratio	Mix Design	Site Engineer	BEML/PMC	Witness
16	Sampling and testing of Cubes	Mix Design IS 456	Site Engineer	BEML/PMC	Witness
17	De-shuttering with adequate precautions	IS456/as per specification	Site Engineer	BEML/PMC	Random
18	Curing of Concrete	IS456/as per specification	Site Engineer	BEML/PMC	Random
19	Check of visual inspection of concrete surface and rectification of unsatisfactory Performance, if any	As per standard	Site Engineer	BEML/PMC	Random
20	Selection of approved welders.	IS Code	Site Engineer	BEML/PMC	Witness
21	Fabrication Fit up	Drawings	Site Engineer	BEML/PMC	Witness
22	Welding	As per approved procedure	Site Engineer	BEML/PMC	Random
23	Final inspection Fab	Drawings/ Specifications	Site Engineer	BEML/PMC	Witness
24	Sand Blasting	IS Code	Site Engineer	BEML/PMC	Random
25	Primer and Painting	Manufacturer Specification	Site Engineer	BEML/PMC	Random
26	SS Hand rail works	As per BOQ Specification	Site Engineer	BEML/PMC	Joint
27	Plumbing works	As per BOQ Specification	Site Engineer	BEML/PMC	Random
28	Masonry Work- Block work & Plastering Work	As per BOQ specification & manufacture spec	Site Engineer	BEML/PMC	Random
29	Waterproofing Work	Manufacturer & installer specification	Site Engineer	BEML/PMC	Joint
30	Roofing Sheet works with lifeline works	Manufacturer & installer specification	Site Engineer	BEML/PMC	Random
31	Tile Works	Manufacturer, installer & BOQ Specification	Site Engineer	BEML/PMC	Random

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32	Doors, Windows & Ventilators works	BOQ Specification & Manufacturer Specification	Site Engineer	BEML/PMC	Joint
33	Stone & Paver Works	BOQ Specification	Site Engineer	BEML/PMC	Random
34	Painting Works	Manufacturer & BOQ Specification	Site Engineer	BEML/PMC	Joint
35	Miscellaneous Works any	As per BOQ Specification	Site Engineer	BEML/PMC	Joint

## 4. RAW MATERIALS QUALITY CHECKS

The raw materials shall be inspected for the followings defects / parameters before using in the construction process. If any Non-Conformities observed, the respective raw materials shall be shifted away from the site and not to be used for the construction.

Sl. no	Raw Materials	Inspection Parameters
1	<b>Fine Sand</b>	Excess clay contents. Natural color pigments reducing Cohesion is more Containing more pebbles.
2	<b>Coarse sand</b>	Excess clay contents. Natural color pigments reducing Cohesion is more Containing more pebbles.
3	<b>12mm metal</b>	Mixing of down grade sizes-12mm,6mm&chips Natural color pigments reducing (Whitish) Mixing of quarry dust more Mixing of Flake metal more (Pathai) Over size than correct size.
4	<b>20mm metal</b>	Mixing of down grade sizes-12mm,6mm&chips Natural color pigments reducing (Whitish) Mixing of quarry dust more Mixing of Flake metal more (Pathai) Over size than correct size.
5	<b>40mm metal</b>	Mixing of down grade sizes-12mm,6mm&chips Natural color pigments reducing (Whitish) Mixing of quarry dust more



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		Mixing of Flake metal more (Pathai) Over size than correct size.
6	<b>Water</b>	Colour of water is bad. Smell of water is not good
7	<b>Plywood</b>	Bend in surface, Reused plywood, quality is not good Un even thickness in plywood Diagonals are in proper
8	<b>Reinforcement Steel</b>	Uniform length is not obtained. Uniform thickness is not appeared Corrosion in steel appeared Brand name not mentioned Straight line not available. MTC's not produced.
9	<b>Cement</b>	Batch no. Mfg date not mentioned in bag. Fineness is not good when handling physically.
10	<b>Shuttering Oil</b>	Shuttering oil is large area covering by adding water. Shuttering (Chemical) oil is not exceeded to expired date. Shuttering oil is mixed with water any chemical reactions is occurred. Oil is mixed with old oil for cont. applications.
11	<b>Welding rods</b>	Manufacturing & Expired date not mentioned. MTC's not produced. Size and thickness are meeting the requirement. Damages are occurred.
12	<b>Electrical goods</b>	As per IS specification—not noted in packing. As per IS standard brands are not used No. of ply's as per cable size not available. Packing condition of cables are not good Panelboards/MCB's are in crack position and damaged.
13	<b>Tiles</b>	As per Manufacturer standards & Grades Tile Bent, Physical damages at corners, shade not matching
14	<b>Paint materials</b>	Stock validity, voc content to check. Color degradation to Check.
15	<b>Structural Steel</b>	Physically to check the gauge, rust and sheet deformation if any and for physical damages any.
16	<b>Plumbing material</b>	Check for make, size, any physical damage and flexibility.

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17	<b>Roofing Sheet</b>	Check for material size, color, damage if any as per approval.
18	<b>Waterproofing material</b>	Check for physical damage, expiry date, make & spec of material
19	<b>Joineries</b>	Check for the material damage if any, make of material, glass damage if any, make of glass, hardware's availability, defects in the rubber beadings, nuts bolts, screws as per requisite dia& size and gauge with standard make.
20	<b>Stainless Steel</b>	Check for the gauge, material finish, physical damage and on the bends.

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**5. TEST REQUIREMENTS FREQUENCY AND LIMIT**

INSPECTION&TEST PLAN			
ITEM NO	TEST	FREQUENCY	REFERENCECODES
<b>1</b>	<b>COARSE AGGREGATES</b>		
	Sieve Analysis	Once for every source approval, once in a week	IS:2386(Part1)-1963, IS:383- 2016
	Flakiness Index and Elongation Index	One test in every 15days	IS:2386(Part111)-1963, IS:383 - 2016
	Specific Gravity and Density	Once for every source approval, once in a month	IS:383-2016, IS2386(PART 1V)
	Impact value	Once for every source approval, One test in a week	IS:2386(PART1V)-1963
	Water Absorption	Once for every source approval & once in a every month	IS:383-2016,2386 (PART 111) -1963
	Soundness	Once for every source approval or Required when W/A more than 3%	IS:383-2016, IS2386 (PART V) - 1963
<b>2</b>	<b>FINEAGGREGATES</b>		
	Particle Sizes/Sieve Analysis	Once for every source approval & once in every week	IS:383-2016, IS2386 (PART1) -1963
	Silt Content	Once for every source approval & once in a week	IS:383-2016
	Specific gravity	Once for every source approval and once in 3 months	IS:383-2016
	Density	Once for every source approval and once in 3 months	IS:2386(PART11)- 1963
	Water Absorption	Once for every source approval & once in every month	IS:383-2016, 2386 (PART 111)-1963
	Fineness modulus	Once for every source approval	IS:383-2016,2386 (PART1)- 1963
<b>3</b>	<b>WATER</b>		

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	<b>1.Chemicalanalysis</b>		
	(a)Ph value	Once for every source approval & once in 6 months from third party lab	IS456:2000/IS3025
	(b)Chlorides (as Cl)		
	(c)Sulphates (as SO3)		
	(d)Neutralization with NaOH (with phenolphthalein as indicator)		
	(e)Neutralization with H2SO4(with mixed indicator)		
	<b>2.Physicalanalysis</b>		
	(a)Suspended matter	Once for every source approval & once in 6 months	IS:3025(Part17)
	(b)Organic matter		IS:3025(Part 18)
	(c)Inorganic matter		IS:3025(Part 18)
<b>4</b>	<b>REINFORCEMENT BARS Fe500D / Fe550D</b>		
	<b>1.ChemicalTests</b>	Once for every source approval, all consignment MTC	IS:1786-2008
	(a) Carbon		
	(b)Sulphur		
	(c)Phosphorus		
	(d)Sulphur+Phosphorus		
	<b>2.PhysicalTests</b>		
	(a)Ultimate Tensile Strength	One sample for every source approval. One sample for every 50 MT & all consignment MTC	IS:1786-2008
	(b)0.2%ProofStress		
	(c)%Elongation		
	(d)Bend Test		
	(e) Rebend Test		
	(f)Mass per meter run (kg)		
<b>5</b>	<b>(A)CEMENT (OPC/ PPC)</b>		
	<b>1.ChemicalTests</b>	Once for every source approval & all consignment MTC	IS:12269-1987
	(a)Chlorides (as Cl)		
	(b)Ratio of Alumina to that of Iron Oxide		
	(c)Magnesium (MgO)		

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	(d)Total Sulphur Content (SO3)			
	(e)Insoluble Residue			
	(f)Lime Saturation Factor			
	<b>2.PhysicalTests</b>	One sample for every source approval Once in every 2000 MT at site lab & MTC for all weeks		IS:4031(PART5)-1988, IS 3535- 1986,
	I. Setting Time			
	(a) Initial			
	(b)Final			
	II.Compressive Strength			IS:4031(PART6)-1988, IS 3535-1986
	(a)At72 ±1hr			
	(b) At168±2hrs			
	( c)At672±4 hrs			
	(b)Ash Content			
	(c)Relative Density			
<b>7</b>	<b>MIX DESIGN INCLUDING TRIAL MIX AND ACCEPTANCE CRITERIA</b>			
	Target Mean Strength	For every design mix		IS:456-2000
	<b>RCC Work</b>			
	(a)Workability	Each truck		IS:516/456, DIN:1048&TECHNICAL SPECIFICATION
	(b)Compressive Strength			
	7days & 28days strength	Qty of concrete (m³)	No. of samples	
		1-5	1 (3 cubes)	
		6-15	2 (6 cubes)	
		16-30	3 (9 cubes)	
		31-50	4 (12 cubes)	
		51 and above	one sample for each 50m³ (3cubes per 50cum)	
<b>12</b>	<b>GRANULAR SUB BASE-GSB</b>			MORTH Specification
	Gradation			
	Aggregate Impact value			
	Liquid Limit			

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	Plasticity Index		
	MDD & OMC		
	CBR at 98% dry density		
<b>14</b>	<b>Pile Testing</b>	IS 2911 part 4 - 2013	
	Dynamic load test		
	Pile integrity test		
<b>15</b>	In general, all materials manufacturer test certificate needed like tiles, upvc doors & windows, plumbing materials, roofing sheet, waterproofing materials		

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**11. BILL OF QUANTITIES (BOQ)**

Sl. No	DESCRIPTION	QUANTITY	UNIT
<b>PRE-ENGINEERED BUILDING (PEB) AND CIVILWORKS FOR HMV OVERHAULING HANGAR WITH CONNECTED OFFICE BUILDING AND PAINTING SHED</b>			
<b>I</b>	<b>EARTH WORK EXCAVATION</b>		
<b>1</b>	<b>Earth work in excavation by mechanical means</b> (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge. Excavation in all kind of soil upto 1.5m	<b>1646</b>	<b>Cum</b>
<b>2</b>	<b>Boring for Bored cast in situ piles</b> 7 metres in soil/hard rock and getting out and disposal of soil to a distance 50 metres using DMC method (Direct mud circulation)- <b>450mm dia pile.</b>	<b>757</b>	<b>Rm</b>
<b>3</b>	<b>Boring for Bored cast in situ piles</b> 7 metres in soil/hard rock and getting out and disposal of soil to a distance 50 metres using DMC method (Direct mud circulation)- <b>600mm dia pile.</b>	<b>227</b>	<b>Rm</b>
<b>4</b>	<b>Providing &amp; injecting Anti-termite treatment</b> by a specialized approved agency as per IS specifications, using preferably 1% by weight of chlorpyrifos or approved chemical with a guarantee for ten years etc., complete (only plinth area shall be measured & paid for). Chemical to be bought in sealed containers. Chemicals with ISI mark shall only be used. The chemical shall be chlorpyriphos emulsifiable concentrates confirming to IS 8944.	<b>2900</b>	<b>Sqm</b>
<b>5</b>	<b>Back filling with available earth</b> free from boulders and rubbish in trenches, plinth beam, foundation under floor etc, wherever required in layers not exceeding 30cm depth and consolidating in each layer by ramming and watering after use 1 ton roller to rolled for compaction (If the roller is not accessible, proper ramming shall be ensured with earth rammer) etc, complete as per the direction of Engineer- in-charge.	<b>925</b>	<b>Cum</b>
<b>6</b>	<b>Filling with approved earth brought from outside free from boulders</b> and rubbish in trenches, plinth beam, foundation under floor etc, wherever required in layers not exceeding 30cm depth and consolidating in each layer by ramming and watering after use 1 ton roller to rolled for compaction (If the roller is not accessible, proper ramming shall be ensured with earth rammer) etc, complete as per the direction of Engineer- in-charge.	<b>617</b>	<b>Cum</b>
<b>II</b>	<b>PLAIN CEMENT CONCRETE</b>		



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7	Providing and laying PCC <b>M 7.5 Grade using 40/20mm down size aggregates</b> below flooring in foundations, Footing base concrete, flooring foundations, Plinth beam sides, walls or retaining walls, Demolition floor areas, any thickness, size or shape etc, including Centering, base preparation, proper compaction, vibration, curing, tools and tackles, necessary dewatering, etc compaction etc., complete at all levels.	672	Cum
III	<b>REINFORCED CEMENT CONCRETE</b>		
	<b>Providing &amp; Placing controlled R.C.C. confirming to grades</b> as specified (IS 456-2000) as per specifications using <b>20mm down size aggregates</b> at any depth or heights excluding the cost of steel reinforcement. Brand of cement shall be <b>(OPC/PPC)- ACC/ Ultra Tech/ RAMCO / Dalmia cements/ Chettinadu Cements.</b>  NOTE: a) For the purpose of concrete, RMC of approved agencies can be used. b) The contractor has to cast the cubes periodically as per the IS Standard and to conduct test for both 7 days & 28 days and to submit test report. Frequency of test shall be as per the IS Standard and the quoted rates shall deem to include for the cost of testing. c) Reinforcement will be measured and paid separately.		
	<b>Providing and Laying of RCC M-25 grade concrete</b> The rate shall including lintel, sunshade, column, roof slabs and the above basement to the required shape, compaction, levelling, vibrating, curing, <b>excluding Steel reinforcement and centering, etc.,</b> complete.		
8	<b>GROUND FLOOR</b>	410	Cum
9	<b>FIRST FLOOR AND HEADROOM</b>	224	Cum
10	<b>Providing and Laying Design mix of RCC M-30 grade concrete</b> The rate shall including Flooring, Pile cap, Plinth beam, tie beam, ramp and up to basement to the required shape, compaction, levelling, vibrating, curing, <b>excluding Steel reinforcement and centering, etc.,</b> complete. All works upto basement level.	305	Cum
11	Providing and Laying Design mix of <b>RCC M-30 grade of BORED 600mm and 450mm Pile. The rate shall include the cost of testing of piles as per IS 2911-Part4 -2013</b> (Minimum 2 nos of dynamic pile load test and 10 nos for pile integrity test shall be carried out)	264	Cum

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12	<b>Flooring Concrete –</b> <b>Providing and laying (M30 grade) FM 3 VDF Flooring 200 mm</b> thick (As per BS TR 34 specifications, 04 th edition) of the building including sub-base and LDPE Sheet layers for the floors; RC concrete flooring of mix as per design/steel fibre, necessary groove cutting and filling as per MoRTH; isolation pad, armour joints, diamond dowels, PU sealants, main and auxiliary reinforcement, structural steel, laser screed flooring all <b>as per the structural drawing</b> including conducting sub base test as well as finished level test report from third party. Floor Hardener should be applied in two coats using 5Kg/Sqm a dry shake method of uniformly broadcasting the product on to the surface of the freshly placed concrete. Broadcast 2/3 of the Floor Hardener onto the fresh concrete surface. Float the broadcasted material into the surface with a mechanical or manual float after the hardener achieves a uniform moistened appearance. Do not steel trowel. When the water sheen has again disappeared, broadcast the remaining 1/3 of the Floor Hardener onto the surface. Float the concrete surface in the same way as before. After the surface has achieved proper firmness, proceed with normal finishing procedures. Do not over trowel. Final finishing of the floor using the blades of a power float can be carried out when the floor has stiffened sufficiently so that no damage over the floor.	770	Cum
IV	<b>REINFORCEMENT STEEL WORKS</b>		
13	Supplying and Fixing of Steel reinforcement R.C.C. work for TMT bars conforming to IS: 1786(Latest) and the yield strength of 0.2% proof stress shall not to be less than 500N/Sqmm (Fe500/550 D Grade of steel) <b>TATA/ SAIL/VIZAG/ JINDAL/ JSW</b> Rates include for Straightening, cutting, bending, placing at any level, binding in position high yield strength steel reinforcements including cost of reinforcement and binding wire, labour etc. complete all as per specifications & drawings.  Note: a) The TMT bars required shall be procured from the reputed manufacturers confirming to relevant IS specification. b) The contractor shall arrange for testing of TMT bars for physical properties from an authorized agency as per the relevant IS code. The test reports shall be submitted for our records. c) The quoted rate shall deem to include for the cost of testing.	157000	Kg
V	<b>MASONRY WORKS-FLYASH BRICK</b>		

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<b>14</b>	Providing and constructing <b>230mm thick Flyash Brick</b> work in cement mortar 1:6 using approved quality brick and average compressive strength including raking out joints, scaffolding, curing etc. complete as directed at all levels.	<b>586</b>	<b>CUM</b>
<b>15</b>	Providing and constructing <b>115mm thick Flyash brick</b> work in cement mortar 1:4 using approved quality bricks, average compressive strength including providing openings supplying and placing of hoop iron at every 3 course with necessary scaffolding, staging, curing, raking out joints etc complete as directed at all levels.	<b>350</b>	<b>Sqm</b>
<b>VI</b>	<b>PLASTERING WORKS</b>		
<b>16</b>	Prepare surface and plaster <b>ceiling/soffits of roof slab/beams, beam sides, Loft and sunshades etc., with 6mm - 10mm thick cement mortar (1:3)</b> including hacking, scaffolding, curing, making grooves, patties etc., complete as directed at all levels.	<b>1887</b>	<b>Sqm</b>
<b>17</b>	Prepare surface and provide plaster <b>drip course/ groove in plastered surface</b> or moulding to R.C.C. projections of 20mm thick cement mortar (1:3) including hacking, scaffolding, curing, making grooves, patties etc., complete as directed at all levels.	<b>488</b>	<b>Rm</b>
<b>18</b>	Prepare surface and plaster <b>internal walls / columns/ brick masonry / block masonry/intermediate concrete members etc. with 12mm tk in cement mortar (1:4)</b> . The rate shall include the making grooves, patties, scaffolding and curing, etc., complete at all levels. All the RCC element and wall junction shall be provided with GI mesh for about 150mm wide properly nailed at concrete and wall before plastering.	<b>3690</b>	<b>Sqm</b>
<b>19</b>	Prepare surface & sponge plaster to <b>external walls / columns/ brick masonry / block masonry /intermediate concrete members etc. with 20mm tk in cement mortar (1:4)</b> . The rate shall include the making grooves, patties, scaffolding and curing, etc., complete at all levels. All the RCC element and wall junction shall be provided with GI mesh for about 150mm wide properly nailed at concrete and wall before plastering.	<b>3572</b>	<b>Sqm</b>
<b>VII</b>	<b>FLOORING &amp; DADOING WORK</b>		

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	<b>Notes:</b> 1. Refer respective flooring drawings before quoting the rates. 2. The rates quoted shall include cutting and laying the tiles near the floor traps, sanitary outlets, acid washing, curing etc. 3. Contractor shall do dry laying of tiles on M Sand bed & get it approved before final laying. 4. Contractor shall protect all the flooring works including staircase with 12mm thick POP covering over polythene sheet/floor guard sheet till handing over the building, including removing and disposing off the debris outside the 'Project Site'. Quoted rate shall include the same. 5. Unless otherwise specified all the rates are inclusive of all necessary leads, lifts, scaffolding, staging, curing etc., complete at all levels. 6. For dadoing, contractor shall prepare tile grid marking and get approval before actual laying of tiles. 7. All tiles both floor and wall in toilets/pantry shall be provided with spacers of 2-3mm at joints and to be filled with epoxy sealant.		
<b>20</b>	Providing and laying <b>Pre polished 18 mm thk Anti-Skid Leather Finish Granite Stone</b> (Tan brown granite) of required size, approved colour, quality, shade and required pattern for Staircase Flooring borders, stairs in Landing, treads, risers and skirting as per detailed drawings. The steps nosing should be pencil rounded or as required by the Architect and the steps should have 50mm wide flamed finish for anti-skidding with necessary groove cutting for making flaming. The rate to be inclusive of bed mortar of CM 1:4, minimum 20mm thick to maintain the finished floor level. All the joints to be grouted with bal endura grout matching colour to flooring materials, necessary grouting arrangement to hold the balustrade of hand rail, leading & lifting of all materials, required scaffolding, barrier, wastage of materials and required polishing and cleaning after laid etc, complete all as per Architectural drawing and as directed by the Engineer in charge. (Basic Cost of Granite Rs.150-sq.ft - Excluding GST).	<b>128</b>	<b>Sqm</b>
<b>21</b>	Providing and Laying <b>Full body Vitrified Wood finish Tiles (600 x 600 mm or approved size as directed by EIC) for VIP Lounge, VIP Lounge corridor</b> at first floor of approved make, size and colour, laid over cement mortar 1:6 of average 25mm thick, over which cement slurry will be poured, including tile spacers of 2 to 3 mm & grouting with Bal endura, washed with Diluted HCl complete. complete all as per Architectural drawing and as directed by the Engineer in charge (Basic Cost of Full body Vitrified Wood finish	<b>118</b>	<b>Sqm</b>

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	Tiles - Rs.90/sq.ft - Excluding GST).		
22	Providing and Laying <b>Full body Vitrified Wood finish Tiles (600 x 600 mm or approved size as directed by EIC) for VIP Room</b> at first floor of approved make, size and colour, laid over cement mortar 1:6 of average 25mm thick, over which cement slurry will be poured, including tile spacers of 2 to 3 mm & grouting with Bal endura, washed with Diluted HCl.,complete. complete all as per Architectural drawing and as directed by the Engineer in charge (Basic Cost of Full body Vitrified Wood finish Tiles - Rs.90/sq.ft - Excluding GST).	21	Sqm
23	Providing and Laying <b>Full body Vitrified Wood finish Tiles (600 x 600 mm or approved size as directed by EIC) for Conference hall at first floor of approved make, size and colour, laid over cement mortar 1:6 of average 25mm thick</b> , over which cement slurry will be poured, including tile spacers of 2 to 3 mm & grouting with Bal endura, washed with Diluted HCl.,complete. complete all as per Architectural drawing and as directed by the Engineer in charge (Basic Cost of Full body Vitrified Wood finish Tiles - Rs.90/sq.ft - Excluding GST).	87	Sqm
24	Providing and Laying <b>Full body Vitrified Floor Tiles (Satin/Gloss finish) (600 x 600mm or approved size as directed by EIC) for Employee Amenity room at ground floor and Corridor, Library, Discussion room, Senior Executive rooms, Open offices at first floor of approved make, size and colour, laid over cement mortar 1:6 of average 25mm thick</b> , over which cement slurry will be poured, including tile spacers of 2 to 3 mm & grouting with Bal endura, washed with Diluted HCl complete. complete all as per Architectural drawing and as directed by the Engineer in charge (Basic Cost of Full body Vitrified tiles - Rs.90/sq.ft - Excluding GST)	366	Sqm
25	Providing and Laying <b>Anti-skid Vitrified Floor Tiles (600 x 600 mm or approved size as directed by EIC) for Toilets and Pantry of approved make, size and colour, laid over cement mortar 1:6 of average 25mm thick</b> , over which cement slurry will be poured, including tile spacers of 2 to 3 mm & grouting with Bal endura, washed with Diluted HCl complete all as per Architectural drawing and as directed by the Engineer in charge (Basic Cost of Anti-skid Vitrified tiles - Rs.90/sq.ft - Excluding GST).	89	Sqm

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26	Providing and Laying <b>Full body Vitrified Wood finish Tiles Skirting (100 mm height) for VIP Lounge, VIP Room, VIP Lounge corridor, Conference Hall at first floor of approved design, colour and shade on 12mm thick cement mortar bedding 1:3, including tile spacers of 2 to 3 mm &amp; grouting with Bal Endura etc., complete for Cut to sizes. (Basic cost of Full body Vitrified Wood finish Tiles - Rs.90/sq.ft - Excluding GST)</b>	9	Sqm
27	Providing and Laying <b>Full body Vitrified Tiles Skirting (Satin/Gloss finish) (100 mm height) for Employee Amenity room, Toll room at ground floor and Corridor, Library, Discussion room, Senior Executive rooms, Open offices at first floor of approved design, colour and shade on 12mm thick cement mortar bedding 1:3, including tile spacers of 2 to 3 mm &amp; grouting with Bal Endura etc., complete for Cut to sizes. (Basic cost of Full body Vitrified Tiles - Rs.90/sq.ft - Excluding GST).</b>	22	Sqm
28	Providing and Laying <b>Vitrified Wall tiles ( 600 x 300 mm or approved size as directed by EIC) upto 2400mm for all toilets and pantry of approved make and colour laid overtile necessary Approved Adhesive of 6mm, including supplying &amp;fixing of tile spacers of 2 to 3 mm and grouting with Balendura, washed with Diluted HCL, including 500 mm Micron polythene sheet covering and removing, cutting of tiles as required etc., complete as per Standard Specifications and as Directed by the Engineer in Charge. (Basic Cost of Vitrified tiles - Rs.70/sq.ft - Excluding GST).</b>	333	Sqm
29	Providing and Laying <b>Epoxy coating</b> of 3mm thick of approved colour over VDF- (Vacuum dewatering flooring) power float finish floor for Electrical panel room.	67	Sqm
VIII	<b>JOINERIES DETAILS</b>		
	<b>Notes:</b> <b>1. The contractor should refer respective door/window detailed drawings before quoting the rates. No claims will be accepted after the tender is finalized.</b> <b>2. All the door &amp; window frames should be protected suitably till handing over, failing which the damage/replace of same material and workmanship at contractors risk and cost.</b> <b>3.The rate shall be inclusive of necessary hardwares.</b>		



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<b>30</b>	<b>Providing Supply of Wooden door frame with Flush door (BWP Plywood) 32 to 35mm thick</b> as per approved drawings: Frame - 100 X 45 MM Melamine wrapped LVL, Architrave - 55 X 10mm outside and 20 X 10mm inside Shutter - 35 Mm Thick, Flush Door with both side approved 1mm Fero laminate finish on both side. (Solid particle board infill) With CNC Machine Cutting for The Necessary Hardware as per drawing and as directed by the Engineer -in-charge etc., complete. <b>(Providing door accessories like, but hinges, tower bolt, mortice lock, handle, Door Stopper etc.,)</b>	<b>91</b>	<b>Sqm</b>
<b>31</b>	<b>Providing Supply of Water Proof Flush door(BWP Plywood) 30mm thick for Toilets</b> as per approved drawings: Frame - 100 X 45 MM Melamine wrapped LVL, Architrave - 55 X 10mm outside and 20 X 10mm inside Shutter - 35 Mm Thick, Flush Door with both side approved 1mm Fero laminate finish on both side.(Solid particle board infill)With CNC Machine Cutting for The Necessary Hardware as per drawing and as directed by the Engineer -in-charge etc., complete. <b>(Providing door accessories like, but hinges, tower bolt, mortice lock, handle, Door Stopper etc.,)</b>	<b>22</b>	<b>Sqm</b>
<b>32</b>	Providing and fixing <b>Fire rated Door</b> as per approved drawings, below specifications DOOR LEAVES: 22 SWG (OR) 0.7mm THICK SKIN PASS GALVANIZED IRON SHEET WITH HONEYCOMB KRAFT PAPER INFILL DOOR FRAME: 18 SWG THICK SKIN PASS GALVANISED IRON SHEET FORMED TO SINGLE REBATE PROFILE OF SIZE and directions made to design and fixed in the masonry with screws as per standard procedure with 6mm thick toughened Glass Shutters with UPVC Sheet including providing and fixing the patched fittings, etc., complete.	<b>13</b>	<b>Sqm</b>
<b>33</b>	<b>Providing Supply of Water Proof Sliding Flush door (BWP Plywood) 30mm thick</b> for differently abled Toilet as per approved drawings: 20 X 10mm inside Shutter - 35 Mm Thick, Flush Door with both side approved 1mm Fero laminate finish on both side. (Solid particle board infill)With CNC Machine Cutting for The Necessary Hardware as per drawing and as directed by the Engineer -in-charge etc., complete. <b>(Providing door accessories like, but hinges, tower bolt, mortice lock, handle, Door Stopper etc.,)</b>	<b>2</b>	<b>Sqm</b>



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<b>34</b>	Supplying and fixing Steel <b>windows</b> with using approved Z sections with 5mm plain glass <b>including providing grill with 12mm square bar @100mm c/c</b> , painting with two coats of red oxide primer and two coats of synthetic enamel paint, handle, stay arrangement etc. and as directed by Engineer-in-charge.	<b>63</b>	<b>Sqm</b>
<b>35</b>	Providing and fixing <b>factory made uPVC white colour windows with sliding doors and fly mesh</b> cum fixed glaze where ever required as per drawing comprising of uPVC multi-chambered frame, sash and mullion (where ever required) extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), uPVC extruded glazing beads of appropriate dimension, EPDM gasket, stainless steel (SS 304 grade) friction hinges, zinc alloy (white powder coated) casement handles, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame & sash shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in Charge. Variation in profile dimension in higher side shall be accepted but no extra payment on this account shall be made. The glass provided shall be of 6mm thick plain/pinheaded as directed by the engineer in charge.	<b>267</b>	<b>Sqm</b>
<b>36</b>	Providing and fixing <b>factory made UPVC Ventilators with provision for exhaust fan</b> as per approved drawings, specifications and directions, where ever required as per architectural drawing comprising of uPVC multi-chambered frame, sash and mullion (where ever required) extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), uPVC extruded glazing beads of appropriate dimension, EPDM gasket, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame & sash shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved	<b>8</b>	<b>Sqm</b>

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	drawing & direction of Engineer-in Charge. Variation in profile dimension in higher side shall be accepted but no extra payment on this account shall be made. The glass provided shall be of Pinned Glass Shutters of 4mm thick.		
<b>37</b>	Providing and fixing <b>factory made UPVC Ventilators</b> as per approved drawings, specifications and directions, where ever required as per architectural drawing comprising of uPVC multi-chambered frame, sash and mullion (where ever required) extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), uPVC extruded glazing beads of appropriate dimension, EPDM gasket, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame & sash shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in Charge. Variation in profile dimension in higher side shall be accepted but no extra payment on this account shall be made. The glass provided shall be of Pinned Glass Shutters of 4mm thick	<b>49</b>	<b>Sqm</b>
<b>38</b>	Providing and fixing <b>Window Grill</b> Supply and fixing <b>M.S Grill Mild steel (Grade 250)</b> for window openings with necessary fixtures.- Grilles using 12mm unpolished square rods. The process of welding adopted may be flash butt welding or any other suitable method which gives the desired requirements, All the steel surfaces shall be thoroughly cleaned free of rust, dirt, oil, etc (Max weight 2.5 kg - sft)	<b>12812</b>	<b>Kg</b>
<b>39</b>	Supplying & Installation of <b>Structural Glazing with 6mm glass</b> , Supply and fixing of Structural Double-Glazing System using 63mm x 37mm Aluminium Plain Section, 71mm x 57mm Structural Glazing Sections of or equivalent make - duly color anodized with 6 mm Toughened Glass ST 167 3 mm Tape, Silicone Sealant and other accessories to complete. ie side tape, Silicon and Accessories Complete as per Standard Specifications and as Directed by the Engineer in Charge.	<b>56</b>	<b>Sqm</b>

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40	Providing and fixing geared - <b>manually and motorized Rolling shutter</b> of approved make and type fabricated with 18 gauge section M.S Flats with galvanized pressed steel side guides of one piece construction including providing the grill in the middle of rolling shutter of 1.50m high of approved design and shape pressed steel bottom rail with interlocking arrangement for steel laths, brackets extra strong door suspension pipe shaft with high tension coil type spring made out of spring steel wire, locking arrangement, holdfast, handles, MS cover hood on top necessary accessories and fixing etc. Inclusive of Safety lever locks mild steel with 4 levers and Ball Bearing provide. complete in all respect. Prior approval from EIC and consultant required on design of rolling shutter and capacity of motors used.	432	Sqm
IX	<b>PAINTING WORKS</b>		
41	Providing and applying of <b>One coats of white wash (Internal and External surface)</b> to plastered and concrete surfaces including providing necessary scaffolding, surface preparation, mixing DDL binder, blue etc. complete as per IS: 712- Latest Edition. If additional coats are required to obtain uniform and smooth finish, the same shall be carried out at no extra cost.	9358	Sqm
42	Providing and applying <b>two coats of putty over plastered surface to prepare the surface</b> even and smooth. including after thoroughly brushing the surface free from mortar dropping and other foreign matter and also including preparing the surface even and sand papered smooth etc., all material and labour complete. (Internal Surfaces)	3658	Sqm
43	Providing and applying painting for <b>one coat of primer and two coats of Acrylic Emulsion paint</b> of approved Asian or Equivalent and shade on all <b>internal surfaces</b> heights to give an even shade including after thoroughly brushing the surface free from mortar dropping and other foreign matter and also including preparing the surface even and sand papered smooth etc., all material and labour complete. If additional coats are required to obtain uniform finish, the same shall be carried out at no extra cost as directed by Engineer In Charge. (Internal Surfaces)	5225	Sqm
44	Providing and applying Painting for <b>one coats of exterior primer and two coats</b> of Premium Acrylic antifungal cement paint of approved Asian Apex or Equivalent and shade to all the exterior surfaces as per manufacturer's specifications including providing necessary scaffolding, curing , etc. complete. If additional coats are required to obtain uniform finish, the same shall be carried out at no extra cost as directed by Engineer In Charge. (External Surfaces)	3342	Sqm

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45	Providing two coats of <b>Synthetic Enamel Paint of approved make &amp; shade over one coat</b> of zinc primer for MS doors, windows, gates, railings, grills & structural steel work at all levels to give a uniform finish as approved including scaffolding, staging, etc.	502	Sqm
X	<b>FORM WORKS</b>		
	<b>Supplying and erecting CENTERING for sides and soffits including supports and Shuttering in all floors with all cross bracings using marine plywoods or Equivalent mild steel sheets and supported by steel props and bracing etc., complete and as directed.</b>		
46	Steel Form work for footings, Column up to basement and Column basement to Lintel level, plinth beams/ tie beams as per specification at all levels.	2692	Sqm
47	Formwork for platforms/Slab/ lintel/ sunshade/ loft/ fins/ sills etc., with steel/plywood shuttering as per specification at all levels.	1840	Sqm
XI	<b>WATER PROOFING</b>		
48	<b>Providing chemical water proofing for terrace area by supplying and applying Acrylic polymer modified elastomeric water proofing membrane coating</b> for concrete and masonry with two component cementitious acrylic high build coating with <b>Dr Fixit PDIFIN 2K/ or equivalent in SIKA/ ARDEX/BERGER/FOSROC</b> . The system includes base preparation of cleaning, brushing and removal of flaky materials, grouting the porous area with cementitious grout, applying in two coats@ 1lit/4 to 5 sq.m/coat. Coating shall be done on the entire horizontal surface and has to be continued 150mm upto the wall level as per the manufacturer's methodology and specifications. The specification and methodology should be approved by the Engineer-in-charge before execution of work.	670	Sqm
	<b>Providing and laying screed concrete</b>		
49	<b>Supplying and applying slope making and protection to the water proofing treatment</b> with 75mm average thickness screed concrete mixed with Conplast WL or equivalent material. Laying at all junction of vertical and Horizontal junctions/ offsets with <b>CM 1:4 and admixed with Nitobond SBR or equivalent in SIKA/ ARDEX/BERGER</b> at a dosage of 1L/cement bag or as per the manufacturer's methodology and specifications. The specification and methodology should be approved by the Engineer-in-charge before execution of work.	670	Sqm
XII	<b>SS HAND RAILS</b>		

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50	<b>Fabricating and fixing of SS Grill of 316 grade.</b> Balcony handrails, Staircase handrails square and circular pipe sections. All the joints and sections should be cut to length, welded and grinded wherever necessary etc., complete as per specifications & drawing.	77	Rm
XIII	<b>PLINTH PROTECTION</b>		
51	<b>KERB STONE SUPPLY AND LAYING</b> -Supply and fixing of kerb stone for the outer line of plinth protection. The kerb stone should be placed on the <b>PCC bed of M10 grade</b> of 1'0" wide 3" thick, with the gap of approximately 10mm between each stone. The stone should be levelled and secured in place with additional CM 1:4 inside as required, with required backfilling and compacting around kerbstone using gravel. Any gap between the kerb stones shall be again filled with CM of 1:4. Size of the kerb stone shall be 3"thick and a height of 1'6".	77	Rm
52	<b>PRECAST SLAB SUPPLY AND LAYING</b> -Supply and laying and laying of RCC <b>M20 grade</b> Precast Slab of size <b>1'6"X1'6"X3"</b> height for plinth protection. The slabs shall be laid over well compacted gravel bed at FGL with suitable pointing at the joints. The rate shall include required earth cutting, levelling, compaction of earth with earth Ramer all included as directed by the Engineer in charge.	61	Sqm
XIV	<b>PILE CHIPPING</b>		
53	<b>Breaking the pile and removing</b> the rubbish, within a lead of 1 km transportation, loading, unloading, etc. all complete works as directed by Engineer in charge.	41	Cum
XV	<b>DEMOLISHING THE EXISTING WALL &amp; RCC ITEM</b>		
54	<b>Dismantling/Demolition/Breaking of existing Block wall and RCC beams</b> removing the rubbish, within a lead of 1 km., transportation, loading, unloading, etc. all complete works as directed by Engineer in charge.	46	Cum
XVI	<b>MS GRATINGS</b>		
55	<b>Grill Supply and fixing M.S Grill Mild steel (Grade 250)</b> for Trench openings with necessary fixtures.- Grilles using unpolished square/flat rods. The process of welding adopted may be flash butt welding or any other suitable method which gives the desired requirements, All the steel surfaces shall be thoroughly cleaned free of rust, dirt, oil, etc	220	Kg
56	Supply and <b>fixing of 110mm dia PVC pipe of 6kg/cm2 - 2 Nos</b> for all sewer lines connecting the manholes upto the septic tank included joint elbow, tee and necessary materials as given in the external plumbing drawing.	120	Mts

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57	Supply and fixing of <b>CAST IRON MANOHOLE cover-2'6"X2'6"</b> , to support <b>10 ton wheel load</b> over the Inspection chambers. <b>minimum weight of manhole is 125 Kg.</b>	2500	Kg
	<b>STRUCTURAL STEEL WORKS</b>		
XVII	<b>Supply, Fabrication, Erection, alignment and levels as per approved shop drawing of structural steel work</b> in single or builtup section for Column, principal rafters, gantry girders and its stiffeners, walkway, staircase, ladder, main entry doors, lightening supports, pipe supports, cable tray and platform, rain water pipe protections and misc.clamps, cleats comprising of Grade <b>345 Mpa</b> plates of required thickness or single stanchions, built up of one beam or channel section with flange plates, caps, bases. splices, angle brackets, cleats (ISMB/ISMC/ISA) and other connections, etc., comprising of <b>Grade 310mPa / 250mpa</b> as per the drawing, conforming to IS:2062 and IS 226. Including Necessary permanent rivets, bolts, washers and nuts ( <b>HFSG 8.8 Gr OR EQUAL</b> ), handling, straightening, cutting, drilling holes, welding, shop assembly, transport to erection site, storing, leading to erection site and applying of coat of epoxy primer with two coats of <b>epoxy paint</b> (Total 130 microns thickness) prior to erection. (Payment to be made on the basis of standard section weights for net weight erected in position excluding the weight of permanent bolts, nuts, all types of washers and packing plates etc.) The rates quoted shall be including the cost of painting.		
58	<b>Supply, Fabrication and Erection of Column, Rafter, Crane Bracket, Cleat</b>	92604	Kg
59	<b>Supply, Fabrication and Erection of Gantry girder</b>	4885	Kg
60	<b>Supply, Fabrication and Erection of Ladder</b>	750	Kg
61	<b>Supply, Fabrication and Erection of Tie Runner</b>	2274	Kg
62	<b>Supply, Fabrication and Erection of Sag Rod</b>	1226	Kg
63	<b>Supply and Installing of Channel/square bar in floor/pit to act as rail, Including required number of Anchor fasteners of 12mm dia at 1.2m c/c distance of Fe250 grade material, as per the drawing.</b>	7558	Kg
	<b>Supply, Fabrication, Erection, alignment and levels as per approved shop drawing of cold rolled steel sections of grade 345MPA</b> from approved manufacturer of required thickness and shape, size for purlins, cladding, tie beams of built-up sections including necessary cleats, nuts, bolts, predrilled holes lapping all complete as per drawing. The rates quoted shall be including the cost of painting, if any		
64	<b>Supply, Fabrication and Erection of Purlins</b>	24399	Kg



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65	Supplying and fixing in position to alignments and levels of <b>foundation and anchor bolts (M 20)</b> with anchor plates, nuts, washers, etc of grade <b>HFSG 8.8 Grade (Or Equal)</b> in rcc columns / Pedestals, co-ordinating with general builder's work.	468	Kg
XVIII	<b>FALL PROTECTION CABLE SYSTEMS</b>		
	Supply, installation and commissioning of <b>roof top horizontal cable fall protection system</b> for rooftop maintenance including end anchors, intermediate cable supports, variable cable supports, traveller and corner cable supports as required, with maximum span of 50 feet (15 m) between anchors and provides continuous hands-free access for the user of the roof fall protection system. The system shall allow for multiple users, based on required system calculations with a maximum of simultaneous users up to 4 per sub span based on system design.		
66	All the fixtures such as cables (min. 8mm thick), end anchorages, connectors, dampeners etc., shall be of 316 stainless steel grade in compliance with the ANSI and OSHA standards.as per above specification-Total Roof Area.	2494	Sqm
XIX	<b>ROOFING SHEET</b>		
	Supply and Laying in roofing bare <b>GALVALUME profiled sheet</b> made out of <b>0.6mm and 0.5 mm TCT 550 Mpa</b> cold rolled sheet with hot dip metallic coating of aluminium zinc alloy 150gms/sqm having 975/1000mm cover width with 26mm high crest at 195/200mm c/c in lengths as approved by Architect also to suit to site requirements and fixed with necessary suitable imported galvanized carbon steel self-drilling & self-tapping screws of approved make confirming to ASTM 3566-1990 (class- III) of required diameter and length as approved all complete with EPDM sealing washers, foam fillers wherever necessary, butyl sealant at all laps, silicon sealant wherever necessary. Rate should include cost of plastic caps of approved colour of U.V resistance and button bolts all as per manufacturer's specification all complete as approved by the consultant and Engineer in charge excluding gutter and down take pipes (Only laid area without overlapping will be measured for payment.).The sheets shall be clean, bright, smooth and free from cracks and split ends, twist and surface flaws etc., The zinc aluminium alloy coating shall be non-injured and in perfect condition and upto any pitch in horizontal/vertical or curved surfaces excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required all compete as per particular specifications and direction of		



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	Engineer-in-charge. Necessary cyclone washers shall be provided for GI Self drilling / self-tapping screws.		
67	Supplying And Fixing of <b>Roof Sheet - Bare Galvalume 0.6 TK Sheet</b>	2904	Sqm
68	Supplying And Fixing of <b>Cladding Sheet, Top Profile Ridge, gable trim flashing, corner flashing, drip flashing- 0.5 TK Colour Coated</b> as per approved colour	3506	Sqm
69	<b>Providing and fixing 6mm thick superpolynum (FM/UL certified fire rated) or equivalent air bubble insulation layer with double side aluminium</b> foil (min.8 micron thick) confirming to fire class A and to underside of the sheeting all as per manufacturers specification. Tenderer to lay the insulation first over the purlin and fix the sheet over it. The polynum sheets so laid shall be stretched straight so that there is no major sagging between the purlin is noticed all complete as directed. GI mesh support shall be provided to prevent the sagging of polynum sheets.	2775	Sqm
70	Supply and fixing of <b>polycarbonate sheet of 2mm thick</b> (embossed) in cladding to suit the profile of the roof sheeting. (Only laid area without overlapping will be measured for payment.) all as per architectural drawings.	182	Sqm
71	<b>Design, Supplying &amp; installation of Dome type Sky Light</b> of suitable quantity & size made of polycarbonate dome fixed in roof sheet using Aluminum frame and water tight sealant as per the manufacturers recommended procedure. Quantity, Size & orientation of Skylight sheets shall be designed to achieve a lux level of 250 at a working level of 1m from the FFL. The area of the building to be lighted is around 2200sq.m and average height of the building is 14m. Installation includes, cutting of the existing galvalume sheet laid, providing suitable supports/frame with suitable sealant all as directed by the Engineer in charge and as per the skylight product standards. After installation, the supplier shall prove the lux level of 250 at working level from 10.00 am to 3.30 pm on normal sunny days. Skylight sheet shall be capable of providing diffused light without heat. Skylight shall be covered for minimum warranty period of 5 years.	1	JOB
72	<b>Supplying and fixing of Multi vent roof ventilators (Turbo Ventilator)</b> on the top of roof with high performance industrial Multi vent roof ventilator of minimum 530mm dia. Neck/throat of Aluminium alloy designed to a capacity of 1850 CFM at roof level as shown in the drawing, including polycarbonate stretched from 3.00 mm thick sheet ventury dome 1.5mm thick and all required accessories as per suppliers recommended installation procedure. Multi roof ventilators to be got approved from Engineer-in-charge before installation. The rate includes cutting/ making holes in the existing roofing sheets.	10	Nos

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<b>73</b>	Supplying and fixing <b>Color coated galvalume sheet material fixed S/Z type louvers</b> of 0.5mm Thickness shall be provided as per the locations shown in the drawing.	<b>137</b>	<b>Sqm</b>
<b>74</b>	Supplying and fixing <b>colour coated galvanised, mild steel sheeting</b> , in gutters (length and girth as fixed) with grade of zinc coating 275, 0.80mm thick. <b>(Eaves Gutter)</b>	<b>204</b>	<b>Rm</b>
<b>75</b>	Supplying and fixing <b>colour coated galvanised, mild steel sheeting</b> made to square in shape for <b>Rain Water Down Take Pipe</b> with grade of zinc coating 275, 1.00mm thick.	<b>430</b>	<b>Rm</b>

**NOTE: Bidders must quote lumpsum amount, calculated as total for all the activities and quantities indicated in the BOQ above; for the tender in SRM. L1 will be arrived based on lumpsum quote. Price Breakup as per BOQ to be submitted along with commercial bid on SRM.**

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