



MGU INNOVATION FOUNDATION

Mahatma Gandhi University Campus Kottayam, Kerala.686560

Phone: 8078010009, Email: mguif@mgu.ac.in, purchase@mguif.com



Calling for Expression of Interest (EOI)

For

**Providing Architectural, Structural Design Consultancy with 3D printing
construction of MGUIF Industrial Fab LAB Building**

EOI No: MGUIF/EOI/CIVIL/001/2023-24, Dated: 28/12/2023

1.Executive Summary

MGU Innovation Foundation, invites Expression of Interest (EOI) from firms, henceforth referred to as Applicants, for shortlisting in respect of Providing Architectural, Structural Design Consultancy with 3D printing construction of MGUIF Industrial Fab LAB Building at Mahatma Gandhi University. The following indicative activities will need to be undertaken by the selected applicant.

Overall planning and design of the project which shall include Architectural, Structural Design Consultancy with 3D printing construction of MGUIF Industrial Fab LAB Building for all stages of the project including obtaining approvals from local statutory authorities preparation of tender documents and periodic supervision of design implementation during construction phase of the project.

1. The built up area of the project is expected to be about **7000 sq. ft.**
2. Short listed applicants will be given the Design Brief of the project for submission of the irrespective Concept designs and Financial proposed for selection of the project

1.	EOI No	MGUIF/EOI/CIVIL/001/2023-24
2.	Cost of Bid Document	Nil
3.	Earnest Money Deposit (EMD)	Nil at EOI bid Submission. Later, EMD should be submitted at the stage of award of contract as per MGUIF policy.
4.	Tender publishing date	27-12-2023
5.	Last Date of Receipt of the Tender	15-01-2024 up to 5:30 PM
6.	Date of Opening Technical Bid	17-01-2024 at 10:30 AM
7.	Mode of Submission of Bid	The EOI details and documents can be viewed & downloaded by login into https://etenders.kerala.gov.in .
8.	Address	The Chairman, MG Innovation Foundation, Mahatma Gandhi University, Kottayam, Kerala-686560.

9.	Contact Person	Contact Mob: 9778429535(CTO, MGUIF), 8078010009 (Purchase, MGUIF).
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2. INFORMATION AND INSTRUCTIONS FOR APPLICANTS

GENERAL:

1. All information called for in the enclosed forms should be furnished against the relevant columns in the forms.
2. Any information furnished by the applicant found to be incorrect either immediately or at a later date, would render the applicant liable to be debarred from taking up the project.
3. The EOI document in prescribed form duly completed and signed should be submitted (hardcopy) original and one photocopy in a sealed cover. The sealed cover super scribed “**Expression of Interest for Providing Architectural, Structural Design Consultancy with 3D printing construction of MGUIF Industrial Fab LAB Building at Mahatma Gandhi University**”, shall be received in the office of The Chairman, MGU Innovation Foundation, Mahatma Gandhi University Campus, P.D. Hills Kottayam- 686560.
4. The discretion and decision of The Chairman, MGU Innovation Foundation, Mahatma Gandhi University Campus, P.D. Hills Kottayam in respect of the ‘EOI’ shall be final and shall not be open to be challenged in any Court of Law.

FINAL DECISION-MAKING AUTHORITY:

The Chairman, MGU Innovation Foundation, Mahatma Gandhi University, Kottayam, reserves the right to accept or reject any application and/or to annul the selection process and reject all applications at any time without assigning any reason or incurring any liability to the applicants.

3. Eligibility Criteria

- The firm with 3D Printing building construction experience with minimum 3 years. And must executed single work order in similar nature of value not less than 1 Crore Indian rupees
- The applicant must have experience in the preparation of concept plan, Structural drawing, 3 D printing construction material additive manufacturing/customization and testing, and cost estimation based on current Schedule of Rates (SOR) of CPWD and Non-Schedule items if required based on market rate analysis.
- The applicant may engage the services of well qualified 3d printing in building construction specialists or consultants pertaining to MGU Innovation Foundation (MGUIF).

1	Bidder should be, a Company registered in India and sub contract is not allowed	Copy of valid Registration certificates / Copy of Certificates of incorporation
2	Cumulative Turnover in the last 3 financial years must be not less than 4 Crores	Attested Balance sheet proof to be attached.
3	Should not have been blacklisted by any of the Government entities under state / central Govt.	Self-Certificate
4	The bidder should have a registration number of 1. GST where his business is located 2. Income tax / PAN number	Copies of relevant certificates of registration
5	The bidder should be Category A/B Type Civil Contract License	Copies of relevant documents
6	The bidder should have work orders from Government Institutes. And executed single work order in similar nature of value not less than 1 Crore Indian rupees	Copy of work order
7	Used Raw Materials should be branded with acceptable qualifications only considered.	Official Acceptance Letter to be attached for time-to-time conduction of Raw Material Lab Test Result proof from Govt. authorized lab centers will be produced at before Construction and course of construction with each stage of completion.

4.SCOPE OF WORK

- a) To prepare sketch designs/presentation drawings/ Structural/Electrical drawing making revisions as per requirements of MGUIF till sketch designs are finally approved by the competent authority and making preliminary estimates of cost.
- b) To prepare architectural/ Structural/Electrical working drawings including services drawings- electrical, plumbing, sanitary, firefighting, air-conditioning and all other drawings for various trades, infrastructural facilities required for completion of the particular project.
- c) To execute 3D Printing building construction with approved plan by the competent authority in timely manner.

- d) To analyze, evaluate and submit the required test results to the competent authority during the course of the project.
- e) To submit detailed list of building materials with quality standard report

REQUIREMENTS

- i. To design space for Four FAB labs, office space, Breakout Space and Four Coworking Production LAB with Toilets (Gents & Ladies) and Washing Area
 - ii. To design space for rooms for Technical Officer (4 Nos.) and Lab Assistants (8 Nos.)
 - iii. To design space for storage room and material stock room one for each lab.
 - iv. To design hazardous chemical storage room and equipment with tool room commonly for each lab.
- The prospective applicant should visit the work site to understand the nature and scope of work with prior intimation.
 - The application must be accompanied with tentative cost estimates of the proposed work.

5. GENERAL CONDITIONS OF CONTRACT

1. Definitions

1.1. Employer means Chairman MGUIF on whose behalf the Work is taken up for execution. Employer will carry out its functions and obligations through officers who have been delegated powers.

1.2. Accepting Authority/Agreement Authority means the officer who has invited and received bids for the Work and has executed agreement for execution on behalf of the Employer.

1.3. Technical Sanction Authority means the competent Departmental Officer who has issued the technical sanction for the Work.

1.4. Engineer means all Engineers in charge of the Work from Chief Engineer to Assistant Engineer.

1.5. Field Engineer means Engineers at Section and Sub Division level who are directly in charge of execution of the Work.

1.6. Engineer-in-Charge means the Executive Engineer, who is responsible for the execution of the Work.

1.7. Engineer's Representative means Overseer or other subordinate staff posted to assist the

Engineer, supervise execution and to maintain documents.

1.8. Contract is the agreement between the Agreement Authority and the selected Bidder to execute, complete and maintain the Work.

1.9. Contractor means person or persons or firms who have entered into contract for the execution of the work subject to the eligibility conditions of the NIT.

1.10. Contract Price is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provision of the contract.

1.11. Contract Data defines the documents and other information which comprise the contract.

1.12. Bid or Tender means the Contractor's priced offer to the Employer for the execution and completion of the Work and the remedying of any defects therein in accordance with the provisions of Contract.

1.13. Bill of Quantities means the priced and completed Bill of Quantities forming part of the bid.

1.14. Specification means the instructions, provisions, conditions and detailed requirements contained in the tender documents which form part of the contract and any modification or addition made or approved by the Accepting Authority.

1.15. Drawings means all drawings, calculations and technical information related to the Work provided by the Engineer from time to time to the Contractor under the Contract.

1.16. Letter of Acceptance or selection notice means intimation issued by the Accepting Authority as formal acceptance of Bid by the Employer.

1.17. Date of commencement means the date of handing over the site to the Contractor.

1.18. Time of completion means the period allowed for completing all works related to the Work including carrying out and passing the required quality control tests prescribed by the Quality Manual published by the Department.

1.19. Date of completion shall be the date of issue of virtual completion certificate. The virtual completion certificate shall be issued by the Engineer-in charge within 15 days of the final measurement and shall specify the work has been completed satisfactorily by the contractor and taken over by the Department. In case of defects liability period the works shall be finally taken over after completion of defects liability period.

1.20. Quality control tests means all relevant tests prescribed by the PWD Quality Control Manual applicable to the Work which are to be made and passed before each part bill is presented for payment.

1.21. A Defect is any part of the work not completed in accordance with the contract.

1.22. Defects Liability Period is the period named in the contract data and calculated from the date of completion.

1.23. Plant is any integral part of the works which is to have a mechanical, electrical, electronic or biological function.

1.24. Equipment means contractor's machinery and vehicles brought temporarily to site for execution of the Work.

1.25. Site means the places provided by the Employer where the Work is to be executed. It may also include any other place or places as forming part of the site, mentioned in the Contract.

1.26. Materials means all supplies, including consumables used by the contractor for incorporation in the works

1.27. Works are what the Contract requires the contractor to construct, install and run over to the Employer as defined in Contract Data.

1.28. Days are calendar days, month's calendar months.

1.29. "Codes" shall mean the following, including the latest amendments, and/or replacements, if any:

a. Bureau of Indian Standards/Indian Roads Congress relevant to the works under the Contract and their specifications. If Indian Standards are not available British Standards or AASHTO Standards are to be followed.

b. Other Internationally approved Standards and/or rules and regulations touching the subject matter of the Contract.

c. Any other laws, rules, regulations and Acts applicable in India with respect to labour, safety, compensation, insurance etc.

1.30. Words importing singular only shall also include the plural and vice-versa where the context so requires.

1.31. Words importing "Person" shall include firms, companies, corporations, and associations or bodies of individuals, whether incorporated or not.

1.32. Terms and expressions, not defined herein, shall have the same meaning as are assigned to them in the Indian Contract Act, and failing that in the General Clauses Act.

1.33. "Government Approvals" shall mean all permits, licenses, authorisations, consents, clearances, decrees, waivers, privileges, approvals from and filing with government instrumentalities necessary for the development, construction and operation of the Work.

1.34. Measurement Books: The "measurement books" shall be defined as the books with serially numbered and maintained during the currency of the Work to record all measurements qualifying for payment.

of PWD Manual and is the original record of actual measurements. Except for quantities of work paid on level basis, all measurements shall be recorded in the measurement book. For measurements

taken on level basis, the levels shall be entered in properly numbered field books as in Appendix-2100E2 of PWD Manual. All measurement books and Field Books shall be certified by the Engineer-in-Charge before entering measurements.

2. Scope, extent, intent etc.

2.1. Scope: The general character and the scope of the Work shall be as illustrated and defined in the Drawings, Specifications, Schedule of Rates and other Contract Documents.

2.2. Extent: The Contractor shall carry out and complete the Work under the Contract in every respect, and his work shall include the supply of all labour, equipment, materials, plant and machinery, tools, transportation, form work, scaffolding and everything else necessary for the proper execution and completion of the Work in accordance with the Contract Documents and to the satisfaction of the Engineer-in charge. The Contractor shall be fully responsible and liable for everything and all matters in connection with or arising out of or being a result or consequence of his carrying out or omitting to carry out any part of the Work. Where any parts of the Work may be executed by Sub- Contractors, such responsibility and liability of the Contractor shall cover and extend to the work of all such Sub-Contractors.

2.3. Intent: The Contract Documents are complementary and what is called for by any one shall be binding as if called for by all. Wherever it is mentioned in the Contract Documents that the Contractor shall perform certain work or provide certain facilities, it is understood that the Contractor shall do so at his own cost. Materials or work described in words which so applied have a well-known technical or trade meaning shall be held to refer to such recognised standards as are applicable.

3. SITE

3.1. Contractor to satisfy himself about site conditions: The Contractor ensures that before submitting bids for the Work the Contractor has visited the Site and satisfied himself about the Site conditions for construction and for logistics and smooth flow of workmen and materials as well as permission from Authorities for this purpose. The Contractor has examined the Site and taken note of character of the soil and of the excavations, the correct dimensions of the Work, and facilities for obtaining any special articles called for in the Contract Documents. The Contractor has also made its own assessment and obtained all information on the Site constraints and on all matters that will affect the

execution, continuation and progress, and completion of the Works. Any extra claims or extension of time made in consequence of any misunderstanding, incorrect information on any of these points or on the grounds of insufficient description or information shall not be entertained or allowed at any stage.

3.2. It will be the responsibility of the contractor to obtain necessary land for stacking the materials

and establishing plants and equipment for carrying out the work, if the specified site of work is of less extents.

3.3. Land required for the work may not be available in full. Further land will be handed over as and when it is received from the Land Acquisition Authority. The contractor shall not be eligible for any extra or enhance claims or for compensation due to the non-availability of entire land. He shall also not be eligible for any claims or compensative for the non- completion of the work within the agreed time and for continuing the work in the agreed extended period of completion due to the above reasons.

3.4. In the case of any delay in shifting the utility services like Telephone posts, Electric posts, Electric over head line and underground cables, water lines etc. by the utility Department, the Employer shall not in any way be liable to pay damages on account of this delay, instead a proportionate extension of time for completion of work will be granted in deserving cases on application by the Contractor.

3.5. Access to site by the contractor: The access to the Site will be shown immediately on award of the Contract to the Contractor and the Site shall be shared with other Contractors and Sub-Contractors as applicable. The Contractor shall upon being given such access commence the Work and diligently proceed with the execution of the Work in accordance with the Contract Documents. Access to the Site by the Contractor shall be merely a licence for carrying out the construction of the Work under the Contract, and the Contractor shall not by his being allowed such entry on the Site, acquire any right, lien or interest either in the Work carried out by him under the Contract or anything appurtenant or attached thereto or to any part of the Site, and his claim will only be in the nature of money found due and payable to him in accordance with the certificates issued by the Engineer-in-charge under the provisions contained herein. The Work shall be free from all liens, charges or claims of whatsoever nature from any party other than the Engineer. The Engineer shall have a lien over all work performed by the Contractor, Sub-Contractors and Vendors and also for the materials and equipment brought on Site by them.

3.6. The Department does not undertake to construct or make available any approach road or other means of approach to the proposed work site and the contractor shall get acquainted with the available means of approaches to the proposed site and quote for the various items. The Department shall not be liable for any claim raised later on the plea of non-availability or non-access to the site

3.7. Treasures, Antiquities found are property of Employer: All fossils, antiquities and other objects of interest or value, which may be found on the Site at the commencement or during the progress of the Work, shall be the property of the Employer. The Contractor shall carefully take out and preserve all such fossils, antiquities and objects and shall immediately deliver the same in their discovered state into the possession of the Employer.

4. Nature of contract

4.1. The Contract shall be an item rate Contract wherein the item rates are for the finished work as per the Contract Documents. The estimated cost is tentative based on the estimated quantities and is liable to change during execution as per the actual quantities executed and approved by the Engineer-in charge. The Contractor understands and agrees that the amount payable is assessed on a re-measurable basis in accordance with the BOQ rates. The Contract Price shall include payment for the supply of all labour (including payment to his Sub- Contractors), equipment, materials, plant and machinery, tools, transportation, formwork, scaffolding, works under this contract and all applicable taxes including the Work Contract Tax (WCT), Value added tax(VAT), duties, octroi, levies, royalties, fees, insurance premiums, contributions towards employees benefits including Employee State Insurance and Provident Funds, arrangement of power and water and all services and activities constituting the Scope of Work defined in the General Conditions of Contract. The Contract Price shall also include expenses for the Contractor's site establishment, infrastructure, overheads & profits, establishing site laboratories(for works costing more than Rs. 3 Crores), first tier quality control tests, expenses for all rectifications including that necessitated as a result of bad quality and all other charges required by the Contract to be borne by the Contractor and necessary for the proper execution and completion of the Work under the Contract, in conformity with the Contract Documents and according to the best engineering and construction practices and to the satisfaction of the Engineer-in-charge. Service tax, wherever legally applicable, shall be paid by the contractor to the concerned department on demand and it will be reimbursed to him by the Employer on production of receipts/vouchers and after satisfying that it has been actually and genuinely paid by the contractor.

4.2. No adjustment of the prices shall be allowed during the period of the contract for works which have a period of completion up to

18(eighteen) months for any reasons whatsoever and the prices quoted by the Contractor shall be deemed to be fixed for the entire contract period.

5. Notices, Fees, Byelaws, Regulations, etc

5.1. The Contractor shall comply with all applicable laws and Government Acts including the Byelaws or regulations of Central and / or Local Authorities relating to the Work in so far as labour, construction, fabrication and installation activities are concerned, and he shall obtain from the Central and / or Local Authorities all permissions and approvals required for the plying of trucks, construction machinery etc., and also for construction of temporary offices, labour camps, batching plant, hot mix plant, base camp, stores and other temporary structures in connection with the Work,

and the Contractor shall give all notices and pay all fees and charges that are and that can be demanded by law there under. In the Contract Price for the Work, the Contractor shall allow for such compliance and work, and for the giving of all such notices, and shall include the payment of all such fees and charges.

5.2. The contractor is bound to follow relevant Kerala State Government orders, circulars, Kerala PWD Manuals etc prevailing at the time of contract connected to the execution of the work under the contract even though specific reference to these are not provided elsewhere in the contract conditions.

6. Licenses and permits

6.1. The Contractor shall directly obtain all licences and permits for the materials under Government control, and those required to be obtained by the Contractor for the execution of the Work. The Contract Price shall include all transportation charges and the other expenses that may be incurred in this connection.

7. Contract documents

7.1. The following documents shall constitute the Contract documents:

a. Articles of Agreement, b. Notice Inviting Tender

c. Letter of Acceptance of Tender indicating deviations, if any, from the conditions of Contract incorporated in the Tender document issued to the bidder and/or the Bid submitted by the bidder,

d. Conditions of Contract, including general terms and conditions, instructions to bidders, additional terms and conditions, technical terms and conditions, erection terms and conditions, special conditions, if any etc. forming part of the Agreement,

e. Specifications, where it is part of Tender Documents,

f. Scope of works/Bills of quantities/schedule of works/quantities and

g. Contract Drawings and finalised work programme.

7.2. After acceptance of Tender the Contractor shall be deemed to have carefully examined all Contract Documents to his satisfaction. If he shall have any doubt as to the meaning of any portion of the Contract Documents, he shall before signing the Contract, set forth the particulars thereof, and submit them to the Agreement Authority in writing in order that such doubt may be removed. The Agreement Authority will provide such clarifications as may be necessary in writing to the Contractor. Any information otherwise obtained from the Employer or the Engineer shall not in any way relieve the Contractor of his responsibility to fulfil his obligations under the Contract.

7.3. The Contractor shall enter into a Contract Agreement with the Agreement Authority within 14 (fourteen) working days from the date of

'Acceptance of Tender' or within such extended time as may be granted by the Agreement Authority. The date of despatch of Letter of Acceptance by registered post shall be the date of Acceptance of Tender. The performance Guarantee for the proper fulfilment of the Contract shall be furnished by the contractor in the prescribed form within fourteen (14) days of 'Acceptance of Tender'. The performance Guarantee shall be as per terms prescribed in the clause 7 of "Instructions to Bidders" of this Tender.

7.4. The agreement, unless otherwise agreed to, shall be signed within 14(fourteen) working days from the date of Acceptance of Tender, at the office of the Agreement Authority on a date and time to be mutually agreed. The Contractor shall provide required details for signing of the contract like, performance guarantee in copies as required, appropriate power of attorney and other requisite materials. In case it is agreed mutually that the contract is to be signed beyond the stipulated time as specified in clause 6.6.3 of section Instructions to Bidders, the Bid

Security or EMD submitted with the tender will have to be extended accordingly.

7.5. After the signing of the agreement with the Agreement Authority and the Contractor, two certified copies of the agreement are to be made. Original shall be kept with the Agreement authority and the Contractor shall be provided with one certified copy and the other certified copy shall be kept with the Engineer-in Charge. None of these documents shall be used for any purpose other than this Contract and the Contractor shall ensure that all persons employed for this Contract strictly adhere to this.

7.6. The laws applicable to this Contract shall be the laws in force in India.

8. Assignment and subletting of contract

8.1. The Contractor shall not assign this Contract. The Contractor shall not sub-let the Contract or any part thereof other than for supply of raw materials, for minor works or any special type of works for which makes are identified in the Contract or as approved by the Engineer-in charge . Suppliers of the equipment not identified in the Contract or any change in the identified supplier shall be subject to approval by the Engineer. The experience list of such equipment vendors under consideration by the Contractor for this Contract shall be furnished to the Engineer for approval prior to procurement of all such items/equipments. Such assignment /sub-letting shall not relieve the Contractor from any obligation, duty or responsibility under the Contract. Any assignment as above without prior written approval of Engineer-in Charge shall be void.

9. Patent rights and royalties

9.1. Royalties and fees for patent covering materials, articles, apparatus, devices, equipment or

processes used in the works shall be deemed to have been included in the Contract Price. The Contractor shall satisfy all demands that may be made at any time for such royalties or fees and he alone shall be liable for any damages or claims for patent infringements and shall keep the Employer indemnified in that regard. The Contractor shall, at his own cost and expense, defend all suits or proceedings that may be instituted for alleged infringement of any patent involved in the works, and, in case of an award of damages, the Contractor shall pay for such award. In the event of any suit or other proceedings instituted against the Employer, the same shall be defended at the cost and expense of the Contractor who shall also satisfy/comply any decree, order or award made against the Employer. But it shall be understood that no such machine, plant, work, material or thing for any purpose or

any manner other than that for which they have been furnished and installed by the Contractor and specified under these specifications. Final payment to the Contractor by the Employer will not be made while any such suit or claim remains unsettled. In the event any apparatus or equipment, or any matter thereof furnished by the Contractor, is in such suit or proceedings held to constitute infringement, and its use is enjoined, the Contractor shall, at his option and at his own expense, either procure for the Employer, the right to continue use of said apparatus, equipment or part thereof, replace it with non-infringing apparatus or equipment or modify it, so it becomes non-infringing.

10. Variation in quantity

10.1. The Employer/Engineer-in charge reserves the right to vary the quantities of items or groups of items to be ordered as specified in the Bill of quantities, as may be necessary, during the execution of the Contract. The Contractor is bound to execute such varied quantities of work at his quoted price up to an extent of 25% in excess of the agreed quantity or quantities. In case of variation over 25% in excess of the agreed quantity, the department reserves the right to arrange such works through a separate contract. Negotiation shall be made with original contractor to revise the rate for the additional quantity in excess of 25% of the agreed quantity and in no case the revised rate shall be more than the market rate at the time of initiating the proposal for revision of rate as recommended by the Engineer-in charge. No increase shall be permitted within the original contract period and the rate in excess of market rate shall not be given under any circumstances. Upon rate revision shall be considered only in exceptional cases which shall be approved by the Employer for the enhanced rates based on the recommendation of the Engineer.

10.2. The Contractor is bound to carry out sinking of wells increase up to 10 meter (ten meter) extra depth beyond the estimated design depth and rate for which shall be paid as per schedule of rate and extra item conditions in case such items are included in the contract. In case of pile foundation,

precast or cast in site, the same conditions as above shall apply.

11. Deductions from contract price

11.1. All costs, damages or expenses, which the Employer may have paid, for which under the Contract the Contractor is liable, will be claimed by the Employer. The Engineer-in charge shall deduct the amount, from any moneys due or becoming due by him to the

Contractor under the Contract or may be recovered by actions of law or otherwise, if the Contractor fails to satisfy the Employer of such claims.

12. Insurance

12.1. The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance covers in two parts, i.e. (a) from the start date to the completion date, and (b) for the Defect Liability period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor's risks:

- a. loss of or damage to the Works, Plants and Materials;
- b. loss of or damage to Equipment;
- c. loss of or damage of property (except the Works, Plant, Materials and Equipment) in connection with the Contract;
- d. Workman compensation policy to cover personal injury or death.

12.2. Policies and Certificates for insurance shall be delivered by the Contractor to the Engineer's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

12.3. If the Contractor does not provide any of the policies and certificates required, the Engineer-in charge may effect the insurance which the Contractor should have provided and recover any such premiums which the Employer has paid from the payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

12.4. Alterations to the terms of insurance shall not be made without the approval of the Employer.

12.5. Both parties shall comply with any conditions of the insurance policies.

12.6. Premium for all insurance policies shall be paid and borne by the Contractor and shall not be reimbursable. The Contractor shall provide to the Engineer-in-Charge all policies of insurance in original. These policies shall be fully executed and shall state that the policies cannot be cancelled until completion of the Contract or completion of defects liability period and any extensions thereof. The Contractor shall obtain similar policies from all Sub-Contractors and thereby assume responsibility for any claims or losses to the Employer and Engineer-in- charge resulting from failure of any of the Sub-Contractors to obtain adequate insurance protection in connection with their work

and shall indemnify and keep indemnified the Employer and Engineer-in-charge

including their employees, officers, servants, agents and any other person moving in the premises, accordingly.

12.7. Unlimited liability: In addition to the liability imposed by law upon the Contractor for injury (including death) to persons or damage to property by reason of the negligence of the Contractor or his agents, which liability is not impaired or otherwise affected hereby, the Contractor hereby assumes liability for and agrees to save the Employer and Engineer-in-Charge including their employees, officers, servants, agents and any other person moving in the premises harmless and indemnifies them from every expense, liability or payment by reason of any injury (including death) to persons or damage to property suffered through any act or omission of the Contractor, his employees, agents, servants, workmen, suppliers or any of his Sub-Contractors, or any person directly or indirectly employed by any of them or from the conditions of the Site or any part of the Site which is in the control of the Contractor or his employees or any of his Sub-Contractors, or any one directly or indirectly employed by either of them or arising in any way from the Work.

12.8. All insurance claims, payable by the insurers, shall be paid to the Employer which shall be released to the Contractor in instalments as may be certified by the Engineer-in-charge for the purpose of rebuilding or replacement or repair of the works and/or goods destroyed or damaged for which payment was received from the insurers.

13. Liability for accidents and damages

13.1. Under the Contract, the Contractor shall be responsible for any loss or damage to the works under this contract until the works are completed and taken over in accordance with the Contract.

14. Time of Completion

14.1. Time is the essence of the contract. The time allowed for carrying out the Work as entered in the tender shall be strictly observed by the Contractor and shall be deemed to be of the essence of the Contract and shall be reckoned from the date of handing over the site to the Contractor. The Work shall proceed with due diligence until Final Completion. The Contractor shall prepare a Construction Programme with time schedule keeping in view the completion period stipulated for specific portions of the Work and also the overall completion time and submit the same for the approval of the Tendering authority after the receipt of letter of acceptance or selection notice. The approved work programme shall be made as part of the Contract agreement. The Contractor shall comply with this time schedule. In the event of the Contractor failing to comply with the overall and individual milestones

contained in the time schedules, he shall be liable to pay liquidated damages as provided for in this Contract.

14.2. Completion Period: The Date of commencement will be the date of site handover or the 10th day after agreement whichever is earlier. The Milestone dates shall be those specified in the Contract Data or as mutually discussed and agreed. In case the Contractor fails to meet the above stipulated completion period, Contractor shall be liable to pay to the Employer, liquidated damages as specified in Clause 15 of General Conditions of Contract. In addition to his own work in the overall time period, the Contractor shall provide for the works of other Sub- contractors and Vendors, including those employed directly by the Employer / Engineer-in-Charge.

14.3. The contractor has to take over charge of the site by signing the acknowledgement form and commence the work within 10 days from the date of execution of agreement.

14.4. If the site is not taken over by the contractor by signing the acknowledgement form, Engineer will forward the filled up form by registered/speed post, recording the date of taking over as the tenth day from the date of execution of agreement unless otherwise decided.

14.5. The contractor has to resubmit the acknowledgement form duly signed within three days of receipt and commence the works.

14.6. It shall be deemed that the contractor has taken over charge of the site on the tenth day from the date of agreement irrespective of whether he has received the acknowledgement by post or has resubmitted it with his signature. The work will be terminated at his risk and cost if the contractor does not resubmit the acknowledgement form and commence the work as required under 14.3.

14.7. Recovery towards risk and cost will be made from the performance guarantee, if the contractor does not turn up to take charge of the site within the time prescribed under 14.3, he shall be demoted to a lower category as per the rules for registration of contractors.

14.8. The works shall be carried out in accordance with the programme submitted by the contractor and agreed to by the Agreement Authority at the time of executing agreement and updated subsequently with the approval of the Agreement Authority.

15. Liquidated damages (LD)

15.1. If the Contractor fails to maintain the required progress in terms of the agreed time and progress chart or to complete the work and clear the site on or before the date of completion of Contract or extended date of completion, he shall without prejudice to any other right or remedy available under the law to the Employer on account of such breach, pay as compensation, Liquidated damages @ 1(one) percent of the contract price per week of delay or part thereof. The aggregate of such compensation / compensations shall not exceed 10 (ten) percent of the contract value. This will also apply to items or group of items for which separate period of completion has been specified. The

amount of compensation may be adjusted or set off against any sum payable to the contractor under this or any other contract with the Employer.

15.2. The Agreement Authority, if satisfied, that the work can be completed by the Contractor within a reasonable time after the specified time of completion, may allow further extension of time at its discretion as per clause-19. In the event of extension granted being with Liquidated Damages, the Employer will be entitled without prejudice to any other right or remedy available in that behalf, to recover from the Contractor as agreed damages equivalent to @ 1(one) percent of the contract price per week of delay or part thereof.

15.3. If the contractor achieves balance milestones, even though he has failed to achieve initial milestones, and the work has been completed in the specified/original time of completion, the Employer may release the already levied liquidated damages at his sole discretion.

15.4. The Agreement Authority, if not satisfied that the works can be completed by the Contractor and in the event of failure on the part of the Contractor to complete work within further extension of time allowed as aforesaid, shall be entitled, without prejudice to any other right, or remedy available in that behalf, to terminate the contract.

15.5. The Agreement Authority, if not satisfied with the progress of the contract and in the event of failure of the Contractor to recoup the delays in the mutually agreed time frame, shall be entitled to terminate the contract.

15.6. In the event of such termination of the contract as described in clauses 15.4 and 15.5 or both, the Employer, shall be entitled to recover Liquidated Damages up to ten percent (10%) of the contract value and forfeit the Performance Guarantee and Security Deposit made by the Contractor besides getting the work completed by other means at the risk and cost of the Contractor.

15.7. The Employer may waive the payment of compensation in the case of contracts where milestones are fixed, depending upon merit of the case, on request received from the Contractor if the entire work is completed within the date as specified in the Contract or as validly extended without stipulating any penalty.

16. Bonus for timely Completion

16.1. Bonus will be paid to the bidder at the rate of 1% of the estimated PAC of the work subject to a maximum of Rs.4 lakhs (four lakhs) for completion of work within the original time of completion in case of works which exceed TS power of Superintending Engineer. The amount of bonus, if payable, shall be paid along with final bill after completion of Work.

17. Contractor's default

17.1. If the Contractor shall neglect to execute the works with the diligence and expedition or shall

refuse or neglect to comply with any reasonable orders given to him, in writing by the Engineer in connection with the works or shall contravene the provisions of the Contract, the Agreement Authority may give notice in writing to the Contractor to make good the failure, neglect or contravention complained of. Should the Contractor fail to comply with the notice within thirty (30) days from the date of service thereof, then and in such case the Agreement Authority shall be at liberty to employ other workmen and forthwith execute such part of the works as the Contractor may have neglected to do or if the Agreement Authority shall think fit, it shall be lawful for him, without prejudice to any other right he may have under the Contract, to take the works wholly or in part thereof and in that event the Agreement Authority shall have free use of all Contractor's equipment that may have been at the time on the site in connection with the works without being responsible to the Contractor for fair wear and tear thereof and to the exclusion of any right of the Contractor over the same, and the Agreement Authority shall be entitled to retain and apply any balance which may otherwise be due on the Contract by him to the Contractor, or such part thereof as may be necessary, the payment of the cost of executing the said part of the works or of completing the works as the case may be plus a fine of 20 percent of the value of work so carried out. If the cost of completing the works or executing a part thereof as aforesaid plus a fine of 20 percent of the value of work so carried out shall exceed the balance due to the Contractor, the Contractor shall pay such excess. Such payment of excess amount shall be independent of the liquidated damages for delay, which the Contractor shall have to pay if the completion of works is delayed. In addition, such action by the Agreement Authority as aforesaid shall not relieve the Contractor of his liability to pay liquidated damages for delay in completion of works as defined in clause 15. The termination of the Contract under this clause shall not entitle the Contractor to reduce the value of the performance bank guarantee nor the time thereof. The performance guarantee shall be valid for the full value and for the full period of the Contract including Defects Liability Period.

17.2. If the Contractor fails to complete the work and the agreement is cancelled, the amount due to him on account of work executed by him

If payable, shall be paid to him only after due recoveries as per the provisions of the Contract and that too after alternative arrangements to complete the work has been made.

18. Delays by Employer or his authorised agent

18.1. In case the Contractor's performance is delayed due to any act of omission on the part of the Employer or his authorized agents, then the Contractor shall be given due extension of time for the completion of the works, to the extent such omission on the part of the Employer has caused delay in the Contractor's performance of his work. Regarding reasonableness or otherwise of the extension of time, the decision of the Engineer shall be final. The reasons for such delays shall be recorded in

the hindrance register as per clause 19.2 and shall be certified by the Field Engineers in charge of the work.

18.2. Any delay in finalisation of mutual agreement in regard to any of the Contractor's claim against any act of omission on the part of the Employer or his authorised agents should not result in any work stoppage /further delay on the part of the Contractor.

19. Extension of time of completion

19.1. On happening of any events causing delay as stated hereinafter, the Contractor shall intimate immediately in writing to the Engineer-in- charge:

- a. due to any reasons defined as Force Majeure.
- b. non-availability of stores which are the responsibility of the Employer to supply.
- c. non-availability or breakdown of tools and plant to be made available by the Employer.
- d. Inclement weather conditions
- e. delay on the part of the Contractors or tradesmen engaged by the Employer not forming part of the Contract, holding up further progress of the work.
- f. non-availability of design or detailed drawings or specifications time, which are to be made available by the Employer during progress of the work.

g. any other causes which, at the sole discretion of the Employer is beyond the control of the Contractor.

19.2. A "Hindrance Register" shall be maintained by the Departmental Officer(not below the rank of AE) at site to record the various hindrances, as mentioned under item 19.1 above, encountered during the course of execution. The entries made in hindrance register are to be approved by the Engineer in charge. Contractor is permitted to sign the register and record his remarks.

19.3. The Contractor may request the Agreement Authority in writing for extension of time within 14(fourteen) days of happening of such event causing delay stating also, if practicable, the period for which extension is desired. The Agreement Authority may, considering the eligibility of the request, give a fair and reasonable extension of time for completion of the work. Such extension shall be communicated to the Contractor in writing by the Agreement Authority through the Engineer- in-charge within one month of the date of receipt of such request. The Contractor shall however use his best efforts to prevent or make good the delay by putting his endeavours constantly as may be reasonably required of him to the satisfaction of the Engineer-in-charge. Related entries in the hindrance register shall also to be submitted along with the request for extension.

19.4. When the period fixed for the completion of the Contract is about to expire, the question of

extension of the Contract may be considered at the instance of the Contractor or the Employer or the both. The extension will have to be by both party's agreement, expressed or implied.

19.5. In case the Contractor does not apply for grant of extension of time within 07 (Seven) days of hindrance occurring in execution of the work and the Employer wants to continue with the work beyond the stipulated date of completion for reason of the work having been hindered, the Engineer-in charge at his sole discretion can grant provisional extension of time even in the absence of application from the Contractor. Such extension of time granted by the Engineer-in-charge is valid provided the Contractor accepts the same either expressly or implied by his actions before and subsequent to the date of completion. Such extension of time shall be without prejudice to Employer's right to levy compensation under the relevant clause of Contract.

20. Termination, suspension, cancellation & foreclosure of contract.

20.1. The Agreement Authority shall, in addition to other remedial steps to be taken as provided in the conditions of Contract, be entitled to cancel the Contract in full or in part, if the Contractor

a. makes default in proceeding with the works with due diligence and continues to do so even after a notice in writing from the Engineer-in charge, then on the expiry of the period as specified in the notice, or

b. commits default/breach in complying with any of the terms and conditions of the Contract and does not remedy it or fails to take effective steps for the remedy to the satisfaction of the Engineer-in charge, then on the expiry of the period as may be specified by the Engineer-in-charge in a notice in writing, or

c. fails to complete the work or items of work with individual dates of completion, on or before the date/dates of completion or as extended by the Agreement Authority, then on the expiry of the period as may be specified by the Engineer-in-charge in a notice in writing, or

d. shall offer or give or agree to give any person in the service of the Employer or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for act/acts of favour in relation to the obtaining or execution of this or any other Contract for the Employer, or

e. shall try to obtain a Contract from the Employer by way of ring Tendering or other non-bonafide method of competitive Tendering, or

f. transfers, sublets, assigns the entire work or any portion thereof without the prior approval in writing from the Agreement Authority. The Agreement Authority may by giving a written notice, cancel such transfers or sublets or assignment.

20.2. The Agreement Authority shall in such an event give fifteen (15) days notice in writing to the Contractor informing his decision to do so.

20.3. The Contractor upon receipt of such notice shall discontinue the work on the date and to the extent specified in the notice, make all reasonable efforts to obtain cancellation of all orders and Contracts to the extent they are related to the work terminated and terms satisfactory to the Employer, stop all further sub-Contracting or purchasing activity related to the work terminated, and assist the Employer in maintenance.

protection, and disposition of the works acquired under the Contract by the Employer.

20.4. The Contract shall stand terminated under the following circumstances unless the Employer is satisfied that the legal representatives of the individual Contractor or of the proprietor of the proprietary concern and in the case of partnership the surviving partners, are capable of carrying out and completing the Contract and the Employer shall in any way not be liable to payment of any compensation to the estate of deceased Contractor and/or to the surviving partners of the Contractor's firm on account of the termination of the Contract.:

a. If the Contractor being an individual in the case of proprietary concern or in the case of a partnership firm any of its partners is declared insolvent under the provisions of insolvency act for the time being in force, or makes any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors amounting to proceedings for liquidation or composition under any insolvency act.

b. In the case of the Contractor being a employer, its affairs are under liquidation either by a resolution passed by the employer or by an order of court, not being a voluntary liquidation proceedings for the purpose of amalgamation or re- organisation, or a receiver or manager is appointed by the court on the application by the debenture holders of the Employer, if any.

c. If the Contractor shall suffer an execution being levied on his/their goods, estates and allow it to be continued for a period of
21(twenty-one) days.

d. On the death of the Contractor being a proprietary concern or of any of the partners in the case of a partnership concern and the Employer is not satisfied that the legal representative of the deceased proprietor or the other surviving partners of the partnership concern are capable of carrying out and completing the Contract. The decision of the Agreement Authority in this respect shall be final and binding which is to be intimated in writing to the legal representative or to the partnership concern.

e. If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies and if the Contractor is a partnership concern and one of the partners dies, then unless the

Employer is satisfied that the legal representatives of the individual Contractor or of the proprietor

of the proprietary concern and in the case of partnership the surviving partners, are capable of carrying out and completing the Contract the Agreement Authority shall be entitled to cancel the Contract as to its incomplete part without being in any way liable to payment of any compensation to the estate of deceased Contractor and/or to the surviving partners of the Contractor's firm on account of the cancellation of the Contract. The decision of the Agreement Authority that the legal representatives of the deceased Contractor or surviving partners of the Contractor's firm cannot carry out and complete the Contract shall be final and binding on the parties. In the event of such cancellation the Employer shall not hold the estate of the deceased Contractor and/or the surviving partners of the estate of the deceased Contractor and/or the surviving partners of the Contractor's firm liable to damages for not completing the Contract.

20.5. On cancellation or on termination of the Contract, the Engineer-in-charge shall have powers

- a. to take possession of the site and any materials, constructional plant, implements, stores, etc. thereon.
- b. to carry out the incomplete work by any means at the risk of the defaulted Contractor.
- c. to determine the amount to be recovered from the Contractor for completing the remaining work or in the event the remaining work is not to be completed the loss/damage suffered, if any, by the Employer after giving credit for the value of the work executed by the Contractor up to the time of termination/cancellation less on account payments made till date and value of Contractor's materials, plant, equipment, etc., taken possession of after termination/cancellation.
- d. to recover the amount determined as above, if any, from any moneys due to the Contractor or any account or under any other Contract and in the event of any shortfall, the Contractor shall be called upon to pay the same on demand. The need for determination of the amount of recovery of any extra cost/expenditure or of any loss/damage suffered by the Employer

shall not however arise in the case of termination of the Contract for death/demise of the Contractor as stated in clause.20.4 (d).

- e. The inventory of up to date work and balance stores at site, plant/machineries, equipment and any other property of contractor utilised for the work shall be taken on charge by the Department after combined survey with the Contractor or his authorised representative. If Contractor or his authorised representative is not appearing for combined survey after one week of giving notice, inventory shall be prepared by the Department in his absence and the Contractor is bound to accept the same.
- f. During the currency of execution of work, contractor shall not remove his resources without prior permission of Engineer-in charge.
- g. Additionally, the Employer will reserve the right to debar such defaulting Contractor from

participating in future Tenders for a minimum period of one year.

20.6. Suspension of work - The Employer shall have power to suspend the progress of the work or any part thereof and the Engineer-in-charge may direct the Contractor in writing to suspend the work, for such period and in such manner as may be specified therein, on account of any default on the part of the Contractor, or for proper execution of the work for reasons other than any default on the part of the Contractor, or on ground of safety of the work or part thereof. In the event of suspension for reason other than any default on the part of the Contractor, extension of time shall be allowed by the Agreement Authority equal to the period of such suspension plus an additional time period of 25% of the suspension period or 30 days whichever is less. Any necessary and demonstrable costs incurred by the Contractor as a result of such suspension of the works will be paid by the Employer, provided such costs are substantiated to the satisfaction of the Engineer. The Employer shall not be responsible for any liabilities if suspension or delay is due to some default on the part of the Contractor or his sub-Contractor. The work shall, throughout the stipulated period of contract, be carried out with all due diligence on the part of the contractor. In the event of termination or suspension of the contract, on account of default on the part of the contractor, as narrated hereinbefore, the Performance Security Deposit and other dues of this work or any other work done under this Employer shall be forfeited and brought under the absolute disposal of the Employer provided, that the amount so forfeited shall not exceed 10% of the contract value.

20.7. Foreclosure of Contract in full or in part - If at any time after acceptance of the Bid, the Employer decides to abandon or reduce the scope of the work for any reason whatsoever the Employer, through its Engineer-in-charge, shall give notice in writing to that effect to the Contractor. In the event of abandonment/reduction in the scope of work,

a. The Contractor shall, if required by the Engineer-in-charge, furnish to him books of accounts, papers, relevant documents as may be necessary to enable the Engineer-in-charge to assess the amount payable in terms of the contract, the Contractor shall not have any claim for compensation whatsoever either for abandonment or for reduction in the scope of work, other than those as specified above.

b. If the progress of the work or of any portion of the work is unsatisfactory, the Engineer-in-Charge, after giving the contractor

15(fifteen) days' notice in writing, without cancelling or terminating the contract, shall be entitled to employ another agency for executing the job or to carry out the work departmentally or contractually through tendering process, either wholly or partly, debiting the contractor with cost involved in engaging another agency or with the cost of labour and the prices of materials, as the case may be.

The certificate to be issued by the Engineer-in-Charge for the cost of the work so done shall be final and conclusive and the extra cost, if any, shall be borne by the contractor. However, when this clause is invoked, penalty will not be applicable.

21. No waiver of rights

21.1. Neither the inspection by the Employer or the Engineer or Engineer's Representatives or any of their officials, employees or agents nor any order by the Employer or the Engineer for payment of money or any payment for or acceptance of, the whole or any part of the works by the Employer or the Engineer, nor any extension of time, nor any possession taken by the Engineer, inspection by Chief Technical Examiner or his authorised representatives and mandatory waiting period for inspection by CTE wing etc. shall operate as a waiver of any provision of the Contract, or of any power herein reserved to the Employer, or any right to damages herein provided, nor shall any waiver of any breach in the Contract be held to be a waiver of any other or subsequent breach.

22. Certificate not to affect right of Employer and liability of contractor

22.1. No interim payment certificate of the Engineer, nor any sum paid on account, by the Employer, nor any extension of time for execution of the works granted by the Engineer shall affect or prejudice the rights of the Employer against the Contractor or relieve the Contractor of his obligations for the due performance of the Contract, or be interpreted as approval of the works done or of the equipment furnished and no certificate shall create liability for the Employer to pay for alterations, amendments, variations or additional works not ordered, in writing, by the Engineer or discharge the liability of the Contractor for the payment of damages whether due, ascertained, or certified or not, or any sum against the payment of which he is bound to indemnify the Employer, nor shall any such certificate nor the acceptance by him of any sum paid on account or otherwise affect or prejudice the rights of the Contractor against the Employer.

23. Gifts and commissions etc.

23.1. Any gift, commission, gift or advantage given, promised or offered by or on behalf of the Contractor or his partner, agent, officers, director, employee or servant or any one of his or their behalf in relation to the obtaining or to the execution of this or any other Contract with the Employer, shall, in addition to any criminal liability which it may incur, subject the Contractor to the cancellation of this and all other Contracts and also to payment of any loss or damage to the Employer resulting from any cancellation. The Employer/Engineer-in charge shall then be entitled to deduct the amount so payable from any moneys otherwise due to the Contractor under the Contract.

24. Language and measures

24.1. All documents pertaining to the Contract including specifications, schedules, notices,

correspondence, operating and maintenance instructions, drawings or any other writing shall be written in English language. The metric system of measurement shall be used exclusively in the Contract. Measurements, quantities, prices or rates and amounts shall have two digit precision.

25. Release of information

25.1. The Contractor shall not communicate or use in advertising, publicity, sales releases or in any other medium photographs or other reproduction of the works under this Contract, or descriptions of the site, dimensions, quantity, quality or other information, concerning the works unless prior written permission has been obtained from the Employer.

26. Completion of contract

26.1. Unless otherwise terminated under the provisions of any other relevant clause, this Contract shall be deemed to have been completed at the expiration of the Defects Liability Period as provided for under the clause 46.

27. Enforcement of terms

27.1. The failure of either party to enforce at any time of the provisions of this Contract or any rights in respect thereto or to exercise any option herein provided, shall in no way be construed to be a waiver of such provisions, rights or options or in any way to affect the validity of the Contract. The exercise by either party of any of its rights herein shall not preclude or prejudice either party from exercising the same or any other right it may have hereunder.

28. Engineer's decision

28.1. In respect of all matters which are left to the decision of the Engineer including the granting or with holding of the certificates, the Engineer shall, if required to do so by the Contractor, give in writing a decision thereon.

28.2. If in the opinion of the Contractor, a decision made by the Engineer is not in accordance with the meaning and intent of the Contract, the Contractor may file with the Engineer within 15(fifteen) days after receipt of the decision, a written objection to the decision. Failure to file an objection within the allotted time will be considered as acceptance of the Engineer's decision and the decision shall become final and binding.

28.3. The Engineer's decision and the filing of the written objection thereto shall be a condition precedent to the right to any legal proceedings. It is the intent of the agreement that there shall be no delay in the execution of the works and the decision of the Engineer as rendered shall be promptly observed.

29. Co-operation with other Contractors, Consultants & Engineers

29.1. The Contractor shall co-operate with the Employer's other Contractors Consultants and

consulting Engineers, if employed in the site, and freely exchange with them such technical information as is necessary for the satisfactory execution of works.

30. Variations or additions

30.1. No alterations, amendments, omissions, suspensions or variations of the works (hereinafter referred to as "Variation") under the Contract as detailed in the Contract documents, shall be made by the Contractor

except as directed in writing by the Engineer, but the Engineer shall have full power subject to the provision hereinafter contained from time to time during the execution of the Contract, by notice in writing, to instruct the Contractor to make such variation without prejudice to the Contract. The Contractor shall carry out such variation and be bound by the same conditions as far as applicable as though the said variation occurred in the Contract documents. If any suggested variation would, in the opinion of the Contractor, if carried out, prevent him from fulfilling any of his obligations or guarantees under the Contract, he shall notify the Engineer thereof in writing and the Engineer shall decide forthwith, whether or not the same shall be carried out and if the Engineer confirms his instructions, Contractor's obligations and guarantees shall be modified to such an extent as may be mutually agreed. Any agreed difference in cost occasioned by any such variation shall be added to or deducted from the Contract price as the case may be.

30.2. In the event of the Engineer requiring any variation, such reasonable and proper notice shall be given to the Contractor to enable him to work his arrangements accordingly, and in cases where goods or materials are already prepared or any design, drawings or pattern made or work done requires to be altered, a reasonable and agreed sum in respect thereof shall be paid to the Contractor.

30.3. In any case in which the Contractor has received instructions from the Engineer as to the requirement of carrying out the altered or additional substituted work which either then or later on, will in the opinion of the Contractor, involve a claim for additional payments, the Contractor shall immediately and in no case later than ten (10) days, after receipt of the instructions aforesaid and before carrying out the instructions, advise the Engineer to that effect. But the Engineer shall not become liable for the payment of any charges in respect of any such variations, unless the specifications of the same shall be confirmed in writing by the Engineer.

30.4. If any variation in the works, results in reduction of Contract price, the parties shall, agree, in writing, so to the extent of any change in the price, before the Contractor proceeds with the change.

30.5. In all the above cases, in the event of a disagreement as to the reasonableness of the said sum, the decision of the Engineer shall prevail.

30.6. Notwithstanding anything stated above in this clause, the Engineer shall have the full power to

instruct the Contractor, in writing, during the execution of the Contract, to vary the quantities of the items or groups of items. The Contractor shall carry out such variations and be bound by the same conditions, as though the said variations

occurred in the Contract documents. However, the Contract price shall be adjusted at the rates and the prices provided for the original quantities in the Contract.

31. Replacement of defective parts and materials

31.1. If during the progress of the works the Engineer shall decide and inform in writing to the Contractor, that any part of work or materials used therein is unsound or imperfect or has furnished any work is inferior than the quality specified, the Contractor on receiving details of such defects or deficiencies shall at his own expense within seven (7) days of his receiving the notice, or otherwise, within such time as may be reasonably necessary for making it good, proceed to alter, re-construct or remove such work and furnish fresh materials up to the standards of the specifications.

31.2. In case the Contractor fails to do so, the Engineer may on giving the Contractor seven (7) days' notice in writing of his intentions to do so, proceed to remove the portion of the works or materials so complained of and, at the cost of the Contractor, perform all such work or furnish all such equipment provided that nothing in this clause shall be deemed to deprive the Employer of or affect any rights under the Contract which the Employer may otherwise have in respect of such defects and deficiencies.

31.3. The Contractor's full and extreme liability under this clause shall be satisfied by the payments to the Employer of the extra cost, of such replacement procured, including erection, as provided for in the Contract, such extra cost being the ascertained difference between the price paid by the Employer for such replacements and the Contract price portion for such defective work and repayments of any sum paid by the Employer to the Contractor in respect of such defective work. Should the Employer not so replace the defective work or materials, the Contractor's extreme liability under this clause shall be limited to repayment of all sums paid by the Employer under the Contract for such defective works or works using the defective materials.

32. Defence of suits

32.1. If any action in court is brought against the Employer or Engineer or an officer or agent of the Employer for the failure or neglect on the part of the Contractor to perform any acts, matters, covenants or things under the Contract, or for damage or injury caused by the alleged omission or negligence on the part of the Contractor, his agents, representatives or his sub-Contractors, workmen, suppliers or employees, the Contractor shall in all such cases indemnify and keep the Employer, and the Engineer and/or his representative, harmless from all losses, damages, expenses or decrees arising out of such action.

33. Limitations of liabilities

33.1. The final payment by the Employer in pursuance of the Contract shall mean the release of the Contractor from all his liabilities under the Contract. Such final payment shall be made only at the end of the Defect liability period as detailed in clause 46 and till such time as the Contractual liabilities and responsibilities of the Contractor, shall prevail. All other payments made under the Contract shall be treated as on account payments.

34. Taxes, Permits & Licenses

34.1. The Contractor shall be liable and pay all taxes, duties, levies, royalties etc lawfully assessed against the Contractor in pursuance of the Contract. In addition the Contractor shall be responsible for payment of all Indian duties, levies and taxes lawfully assessed against the Contractor for his personal income and property. This clause shall be read in conjunction with clause 3.3.6 of section Instruction to Bidders.

35. Payments

35.1. The payment to the Contractor for the performance of the works under the Contract will be made by the Employer as per the guidelines and conditions specified herein. All payment made during the Contract shall be on account payments only. The final payment will be made on completion of all the works and on fulfilment by the Contractor of all his liabilities under this contract and also after issue of Completion Certificate by the Agreement Authority.

35.2. All payments under the Contract shall be in Indian Rupees only.

35.3. All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer-in-Charge relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer-in-Charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.

35.4. Pending consideration of extension of date of completion, interim payments shall continue to be made as herein provided without

prejudice to the right of the department to take action under the terms of this contract for delay in

the completion of work, if the extension of date of completion is not granted by the competent authority.

35.5. The bill for a work shall be submitted only with the first tier quality control certificates and Test Result sheets for all items in the Bill as required by the relevant provisions of the PWD Quality Control Manual or as listed in the Contract Data. Assistant Engineer shall obtain certificates and Test Result Sheets of the second tier quality control tests from the Quality Control wing and attach the same to the bill along with the Test Results of first tier Q.C. Disbursing officers shall effect payment only after ensuring the QC test results furnished for the items covered in the bill confirm to standards prescribed which are detailed in the PWD Quality Control Manual.

35.6. The Contractor will be required to produce income-tax and sales tax clearance certificates before the final payment and release of Performance Security Deposits.

36. Method of measurement and Bill Preparation:

36.1. All Works shall be measured for making payments to the Contractor. To evaluate Work under this Contract and instructed as per work order/change orders issued by the Engineer-in-Charge, the standard method of measurement in accordance with the Standards laid down by CPWD Specifications Vol-I and II or Bureau of Indian Standards (IS: 1200) shall be followed. However if definite methods of measurements are stipulated in the Schedule of Rates or Specifications, then the same shall supersede BIS methods and shall be followed. In the event of any dispute with regard to the method of measurement of any work, the decision of the Engineer-in-Charge shall be final and binding and no extra claims shall be entertained or allowed at any stage in this regard.

36.2. The bills shall be prepared by the Departmental officers as per the procedure laid down in revised PWD Manual and amendments thereof if any.

37. Covering up:

37.1. The Contractor shall give at least 24 hours clear notice in writing to the Engineer-in-Charge before covering up any of the Work in foundations or any other such areas in order that inspection of the Work may be carried out for maintaining proper quality control. In the event of the Contractor failing to provide such notice he shall, at his own

expense, uncover such Work as required to allow the inspection to be taken and thereafter shall reinstate the Work to the satisfaction of the Engineer-in-Charge. Each stage of all hidden works shall be approved by the Engineer-in charge before executing the next stage.

38. Rectification of improper work noticed:

38.1. If it shall appear to the Engineer-in-Charge during the progress of the Work that any work has been executed with unsound, imperfect or unskilful workmanship or with materials of any inferior

description or that any materials or articles provided by the Contractor for the execution of the Work are unsound or of a quality inferior to that contracted for or otherwise not in accordance with the Contract, the Contractor shall, on demand in writing from the Engineer-in-Charge specifying the work, materials or articles complained of, notwithstanding that the same may have been passed and certified, forthwith rectify or remove and reconstruct the work so specified in whole, or in part as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own proper charge and cost and in the event of his failing to do so within a period so specified by the Engineer-in-Charge in his demand aforesaid, the Engineer-in-Charge may rectify or remove and re-execute the work or remove and replace with others, the materials or articles complained of as the case may be at the risk and expense in all respects of the Contractor, and deduct the expenses from the Performance Security Deposit any sums that may be due at any time thereafter to the Contractor or from his performance guarantee.

39. Change orders (Approval for Variations)

39.1. Employer reserves the right to alter the Scope of Work (See Clause 10 and 30) and consequently the Contract Price shall be suitably adjusted for such changes by applying the approved rates. All change orders shall be issued by the Engineer-in-Charge and the onus shall be on the Contractor to obtain such prior written consent of the Engineer-in-Charge.

39.2. There shall be an order in writing to execute the extra item of work duly signed by the Agreement Authority before its commencement.

39.3. If the contractor finds, after examining the specifications and plans that extras are involved, he should give notice to the Engineer-in charge to this effect and shall proceed with the execution of the extra item only after receiving instructions in writing from Engineer-in charge and Agreement Authority.

39.4. Extra items may be classified as new, additional, substituted or altered items, depending, on their relation or otherwise to the original item or items of work.

39.5. The rates for extra items shall be worked out as below

39.5.1. In the case of extra items whether additional, altered or substituted, for which similar items exists in the contract, the rates shall be derived from the original item by appropriate adjustment of cost of affected components. The percentage excess or deduction of the contract rate of the original item with reference to the departmental estimated rate shall be applied in deriving the rates for such items. The Engineer's interpretation as to what is a similar class of work shall be final and binding on the Contractor.

39.5.2. In the case of extra items whether additional, altered or substituted and for which similar items do not exist in the contract and rates exists in the prevailing departmental data rate, the rates

shall be arrived at on the basis of the departmental data rate current at on the time of ordering the extra item, after applying the tender deduction except on cost of departmental material. Tender excess, if any, will not be applied.

39.5.3. In the case of extra items whether additional, altered or substituted, for which the rates cannot be derived from similar items in the contract, and only partly from the departmental schedule of rates the rates for such part or parts of items which are not covered in the schedule of rates shall be determined by the Engineer-in charge on the basis of the prevailing market rates(if available in the LMR published by the Department the same shall be taken) giving due consideration to the analysis of the rate furnished by the contractor with supporting documents, including contractor's profit, overheads and other allowed charges if any. This shall be added on to the departmental rate (including contractor's profit, overheads and allowed other allowed charges if any) current at the time of ordering or executing the extra item, whichever is earlier for the other part the item for which rates can be derived from the schedule of rates, after applying the tender deduction except on cost of departmental material and market rate items. Tender excess, if any, will not be applied.

39.5.4. In the case of extra item whether altered or substituted, for with the rates cannot be derived either from- similar item of work in the contract or from the departmental schedule of rates, the contractor shall within 14 days of the receipt of the order to carry out the said extra item of work communicate to the Engineer-in charge the rate which he proposes to claim for the item, supported by analysis of the rate claimed and the department shall within one month thereafter determine the rate on the basis of the market rate(if available in the LMR published by the Department the same shall be taken) giving consideration to the rate claimed by the contractor, after applying the tender deduction except on cost of departmental material and market rate items. Tender excess, if any, will not be applied.

39.5.5. In all the above cases, the approved rates for extra, additional, altered or substituted items shall not exceed the rate which is arrived on the basis of the prevailing local market rates of the Department(published as per Government guidelines) at the time of ordering or executing the extra item whichever is earlier.

39.5.6. Wherever the term "Departmental data rate" appears, it shall mean the rate derived from the prevailing Departmental schedule of rate and data and shall include conveyance charges and contractor's profit.

39.5.7. Wherever, the term "tender excess or tender deduction" appears, it shall mean the overall percentage variation of estimated PAC and agreed PAC of the original contract.

39.6. In cases in which the contractor has executed extra items not contemplated in the agreement but the rates of which require sanctioning of higher authorities the Division Officer may in such case,

sanction advance up to an amount not exceeding 75 per cent of the amount for the items at the rate worked out and certified by the Engineer in charge. The Assistant Engineer shall in all such cases promptly record all authorised extra items executed by the contractor including detailed measurements and quantities thereof in the Measurement Book. He shall neither enter any rate for the same in the Measurement Book nor include such extra items in the body of the bill. When the bill is received in the Sub Division, the sub Division Officer shall prepare a separate statement for those extra items showing the items executed, quantity of each items rate for each item worked out by him based on agreement, conditions and amount for each item on the basis of the rate worked out by him, He shall also furnish a certificate to the effect that he has personally examined all the extra items and they are bonafide the amount payable for these items will not be less than Rs (amount to be specified) and that there is no objection in

Paying 75 per cent of this amount as a secured advance On receipt of the bill with the above statement and certificate the Division Officer may make payment not exceeding the amount recommended by the sub Division Officer as a lump sum secured for extra items of works done but not billed for.

40. Price Adjustment

No adjustment of the prices shall be allowed during the period of the contract for works which have a period of completion up to 18 (eighteen) months for any reasons whatsoever and the prices quoted by the Contractor shall be deemed to be fixed for the entire contract period. Rates one fixed shall be final and will be binding on the contractor.

41. Deductions for uncorrected work:

41.1. If the Engineer-in-Charge deems it inexpedient to get corrected or rectified any work of the Contractor which is defective or damaged or of substandard quality or is generally not in accordance with the Contract Documents, then an equitable and appropriate deduction shall be made thereof from the Contract Price, and the Engineer-in-Charge's decision in this respect shall be final and binding on the Contractor.

41.2. Furthermore if, by reason of any accident, or failure, or other event occurring to, in or in connection with the Work, or any part thereof, either during the execution of the Work or during the Defects Liability Period, any remedial or other work or repair shall, in the opinion of the Engineer-in-Charge, be urgently necessary for the safety of the Work, or any part thereof, and the Contractor is unable or unwilling to immediately and at once do such work or repair, the Engineer-in-Charge may employ and pay other persons or agencies to carry out such work or repair as the Engineer-in-Charge may consider necessary. If the work or repair so done by other persons or agencies work which, in the opinion of the Engineer-in-Charge, the Contractor was liable to do at his own expense under the Contract, then all expenses incurred by the Employer / Engineer-in-Charge in connection with such

work or repair shall be recovered from the Contractor and shall be deducted by the Employer / Engineer-in-Charge from any money that may be payable or that may become payable to the Contractor or from the Contractor's performance Guarantee/Security Deposit.

41.3. The defective or uncorrected work of the Contractor at any stage (during or after completion of work) may adversely affect or damage the work of other Vendors. Contractor shall at his own cost immediately rectify, correct or replace both his defective work as well as the work of the other Vendors so damaged, within the time period stipulated by the Engineer-in-Charge, so as not to effect the progress and quality of other Vendor's work. In case the Contractor fails to do the necessary corrections to the satisfaction of Engineer-in-Charge or unduly delays the correction work, then the Engineer-in-Charge shall be at liberty to get the correction work done and if the correction work is not possible, then any extra work necessary to cover the defect or damage, done through same / any other Vendor at Contractor's cost.

41.4. Actual costs including any incidentals thereof incurred by the Engineer-in-Charge on such corrections / extra works shall be recovered from the payments or any amounts due to the Contractor. 42. Virtual completion of works:

42.1. The Contractor shall complete the Works by the intended date of completion. In case Extension of Time has been granted, the extended date of completion shall be considered. The Works shall be considered as Virtually Complete only upon satisfactory correction of all defects notified by the Engineer, and only after the Work has been completed in every respect in conformity with the Contract Documents and after all the systems and services have been tested and commissioned, and after the Site has been cleared and the Work cleaned in accordance with Clause 78 and when the Agreement Authority on a report by the Engineer-in-Charge have certified in writing that the Work is Virtually Complete. The virtual completion certificate shall be issued by the Engineer-in charge within 15 days of final measurement. The Defects Liability Period shall commence from the date of Virtual Completion in the virtual completion certificate issued by the Agreement Authority.

42.2. Should, before Virtual Completion, the Employer / Engineer-in- Charge decide to occupy any portion of the Work or use any part of any equipment, the same shall not constitute an acceptance of any part of the Work or of any equipment, unless so stated in writing by the Engineer-in-Charge.

42.3. Prior to the issue of the Virtual Completion Certificate, the Contractor shall submit and hand-over to the Engineer-in-Charge the keys to all locks, all operation and maintenance manuals for systems and services, material reconciliation statements, warranties, as built drawings, any spares called for in the Contract, and everything else

necessary for the proper use and maintenance of the Work complete with all systems and services.

42.4. It is clarified that all materials whether Employer supplied or not shall be procured by the contractor at his own cost for carrying out correction work. No charges shall be paid on this account.

43. Programme chart / milestones:

43.1. The Contractor should strictly adhere to the agreed milestones, if any for the work. If the milestones are not achieved by the Contractor, the Contractor shall pay the Employer liquidated damages as per clause

15 of GCC. However, release of interim Liquidated Damages can be considered in case the very next Milestone is achieved on time. Extension of time for any milestone if allowed has to be obtained in writing from the Agreement authority well in advance of completion dates.

44. Penalty / fine for non-compliance of safety codes & labour laws:

44.1. If the Engineer-in-Charge notifies the Contractor of non-compliance with safety codes as in Clause no. 67 and 68 and the labour laws etc. Contractor shall immediately if so directed or in any event not more than 10(ten) hours after receipt of such notice, make all reasonable effort to correct such non-compliance and to ensure that there is no reoccurrence of such non-compliance.

44.2. If the Contractor fails to do so, the Engineer-in-Charge shall levy fine of Rs.500 (Rupees five hundred only) per head per day of the total number of labourers employed on that particular day at site for not complying with safety codes & labour laws etc.

45. Guarantees:

45.1. The Contractor understands and agrees that the Engineer-in-Charge is expressly relying and will continue to rely on the skill and judgment of the Contractor in executing the Work and remedying any defects in the Work. The Contract represents and warrants that:-

a. The Contractor shall perform the Work in a timely manner, in strict accordance with the Contract Documents, and consistent with generally accepted professional, construction and construction-supervision practices and standards provided by an experienced and competent professional contractor and construction supervisor rendered under the same or similar circumstances.

b. The Contractor is and will be responsible to the Engineer-in-Charge for the acts and omissions of his Sub-Contractors and their respective employees, agents and invitees and all the persons performing any of the Work on behalf of the Contractor.

c. Besides the guarantees required and specified elsewhere in the Contract Documents, the Contractor shall in general guarantee all work executed by the Contractor and his Sub-Contractors for Defects Liability Period from the date of issue of the Virtual Completion Certificate. Those parts of the Work or equipment or installations, for which extended guarantee periods are stipulated elsewhere in the Contract Documents, shall be guaranteed for such periods that are so stipulated. The

duration of the Defects Liability Period, unless specified otherwise, shall be the extent of length of such guarantee periods.

45.2. The Contractor represents, warrants and guarantees to Engineer, inter alia that:

- a. The execution of the Work shall be approved and capable of use, operation, performance and maintenance for accomplishing the purpose for which it has been built and acquired.
- b. The Work shall comply with the Specifications, Drawings, and other Contract Documents and that quality standards as per the PWD Quality Control Manual shall be maintained.
- c. The Work shall, for Defect Liability Period from the date of issue of the Virtual Completion Certificate, be free from all defects and the Work shall be of structural soundness, durability, ease of maintenance, weather tightness etc.
- d. The materials, workmanship, fabrication and construction shall be of the specified and agreed quality and all materials shall be new.
- e. The Work performed for the Engineer-in-Charge shall be free from all liens, charges, and claims of whatsoever nature from any party other than the Engineer-in-Charge.

45.3. Where, during such guarantee periods as mentioned above, any material or equipment or workmanship or generally any item of work fails to comply or perform in conformity with the requirements stipulated in the Contract Documents or in accordance with the criteria and provisions of the guarantee, the Contractor shall be responsible for

and shall bear and pay all costs and expenses for replacing and/or rectifying and making good such materials, equipment, workmanship, and items of work and, in addition, the Contractor shall be also responsible for and shall bear and pay all costs and expenses in connection with any damages and/or losses suffered as a consequence of such failure.

45.4. All guarantees required under the Contract shall be in the format approved by the Engineer-in-Charge and submitted to the Engineer-in-Charge by the Contractor when requesting certification of the final bill.

46. Defects liability:

46.1. The Defect Liability Period shall be as mentioned in the contract data.

46.2. Maintenance by contractor during defects liability period: All defective items of work and defects noticed and brought to the attention of the Contractor by the Engineer in writing during the Defects Liability Period shall be promptly and expeditiously attended to and replaced and/or rectified and made good by the Contractor at his own cost, to the complete satisfaction of the Engineer-in-Charge.

46.3. Replacement and/or rectification and making good by contractors of all defective materials,

equipment and/or workmanship during defects liability period: The Contractor shall replace and/or rectify and make good, at his own cost, and to the satisfaction of the Engineer-in-Charge, all defective items of work and defects arising, in the opinion of the Engineer-in-Charge, from materials, equipment, and/or workmanship not performing or being not in accordance with the Drawings or Specifications or the instructions of the Engineer-in-Charge or other Contract Documents or the best engineering and construction practices, and which may appear or come to notice within Defects Liability Period after Virtual Completion of the Work. Any item, material or matter repaired or replaced shall receive a new Defects Liability Period of like duration beginning upon the date the repaired or replaced item, material or matter is returned for use to the Engineer-in-Charge, provided that the aggregate guarantee period shall not exceed 24 months. The Contractor shall be also liable for all costs associated with damages and/or losses which are a consequence of such defective items of work and defects, and such costs shall be recouped by Engineer-in-Charge /Agreement Authority from the Contractor and shall be recovered from the Performance Security Deposit held and/or from the Contractor's final bill (if the final bill has not been certified and paid for at the time), or the same would otherwise be recovered from the Contractor. Should the Performance Security Deposit held (and the amount in respect of the final bill if it has not been certified and paid for at the time) be insufficient to meet such costs, damages, losses and expenses

as determined by the Engineer-in-Charge, then the Contractor shall be legally bound to pay the balance amount due under the claim to the Engineer-in-Charge within one month of receiving notification to that effect from the Engineer-in-Charge. In the event of failure on the part of the Contractor to pay the balance amount due within one month as stated above, the Engineer-in-Charge shall be entitled to invoke the performance bond and the Contractor shall raise no objection in this regard. In respect of those parts of the Work for which longer guarantee periods are stipulated elsewhere in the Contract Documents, the Defects Liability Period for such parts of the Works shall be until the end of the respective guarantee period that is stipulated for each such part. No payment shall be made to the contractor on this account.

46.4. All the material whether Employer supplied or not shall be supplied by the Contractor at his own cost for undertaking any correction/rectification/replacement of defective/damaged or uncorrected works.

47. Final completion of the work:

47.1. The Work shall be considered as finally complete at the end of the Defects Liability Period subject to the Contractor having replaced and/or rectified and made good all the defective items of work and defects and hand over the Work in accordance with clause above, to the satisfaction of the Engineer-in-Charge, and provided that the Contractor has performed all his obligations and fulfilled

all his liabilities under the Contract, and when the Agreement Authority has certified in writing that the Work are finally complete. Such Final Completion in respect of those parts of the Work, for which extended guarantee periods are stipulated elsewhere in the Contract Documents, shall be achieved at the end of such stipulated guarantee periods.

48. Taking over of the works

48.1. The Contractor shall be responsible to maintain all his works till completion of the Defects Liability Period and to handover the work to the Assistant Engineer. In this regards the works would be jointly inspected by a team comprising of representatives of Contractor and the Engineer-in-Charge, for noting any discrepancy, defect, shortcomings. Within the time period specified by the Engineer-in-Charge the Contractor shall rectify, correct or replace the defective works so noted during the joint inspection, at his own cost to the satisfaction of the Engineer-in-Charge. On acceptance of the Contractor's work, the contractor shall prepare the inventory of his works, and hand over the Work & the inventory to the Assistant Engineer.

48.2. During carrying out the rectification, correction or replacement works as mentioned above the Contractor shall take all necessary precautions to safeguard the existing finishing and works of other Vendors against any damage. In case the works of other Vendors are damaged by the Contractor while undertaking the rectification / replacement work, the Contractor shall rectify / replace the works so damaged at his own cost to the satisfaction of the Engineer-in-Charge.

48.3. On failure of the contractor to rectify, correct or replace the defective works or on undue delay on part of the contractor for the same, the Engineer-in-Charge shall be at liberty to undertake the correction works by itself or through any Vendor at the Contractor's cost. All such costs including any incidentals thereof incurred by the Engineer-in-Charge shall be recovered from the Contractor's payments or from any amounts due to the Contractor.

48.4. Subject to clause 42 of this section, upon the issue of virtual completion certificate, the Engineer may take over the completed work for intended use. Such taking over of the works prior to completion of the Defects Liability Period by the Engineer shall not discharge the contractor of his responsibilities for the balance Defects Liability Period and the Defects Liability Period shall remain in force till completion of Defects Liability Period.

48.5. On removal of all the defects and handing over to the Assistant Engineer upon successful completion of the Defects Liability Period by the Contractor, the Engineer-in-Charge shall issue the Final Completion Certificate to the contractor and the Defects Liability Period shall deemed to be complete.

49. Force majeure

49.1. Force Majeure is herein defined as any cause which is beyond the control of the Contractor or the Employer as the case may be which they could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affect the performance of the Contract, such as:

- a. Natural phenomena, including but not limited to floods, draughts, earthquakes and epidemics:
- b. Acts of any government, including but not limited to war, declared or undeclared, priorities, quarantines, embargoes,

49.2. Provided either party shall within fifteen (15) days from the occurrence of such a cause notify the other in writing of such causes.

- a. The contractor will advise, in the event of his having resort to this clause by a registered letter duly certified by the local chamber of

commerce or statutory authorities, the beginning and end of the clause of delay, within fifteen days of the occurrence and cessation of such force majeure condition.

- b. For delays arising out of Force Majeure, the contractor will not claim extension in completion date for a period exceeding the period of delay attributable to causes of Force Majeure and neither Employer nor the Contractor shall be liable to pay extra costs (like increase in rates, remobilization advance, idle charges for labour and machinery etc.) provided it is mutually established that the Force Majeure conditions did actually exist.

- c. If any of the Force Majeure conditions exists in the place of operation of the bidder even at the time of submission of the bid he will categorically specify them in the bid and state whether they have been taken into consideration in their bids.

49.3. The Contractor or the Employer shall not be liable for delays in performing his obligations resulting from any force Majeure cause as referred to and/or defined above. The date of completion will, subject to hereinafter provided, be extended by a reasonable time even though such cause may occur after Contractor's performance of his obligations has been delayed for other causes.

50. Intellectual property rights:

50.1. All communications, whether written or oral, including but not limited to this Contract, its Annexure, Drawings, data sheets, Specifications, bills of material, sketches, calculations, designs and all other materials shall be treated as confidential and shall be the exclusive property of the Employer unless otherwise agreed in writing and must be given to the Employer upon request, but in any event all such materials shall be delivered to the Engineer-in-Charge upon termination/expiry of this Contract.

50.2. The Contractor agrees that it and its employees, agents, Sub- Contractors and consultants shall

not (without the prior written consent of the Employer) during the term of this Contract or thereafter, disclose, make commercial or other use of, give or sell to any person, firm or corporation, any information received directly or indirectly from the Engineer-in-Charge or acquired or developed in the course of the Work or this Contract, including by way of example only, ideas, inventions, methods, designs, formulae, systems, improvements, prices, discounts, business affairs, trade secrets, products, product specifications, manufacturing processes, data and know-how and technical information of any kind whatsoever unless such information has been publicly

disclosed by authorised officials of the Employer. The Contractor agrees that prior to assigning any employee or agent or hiring any Sub

-Contractor or consultant to work on this Work, such employee, agent, Sub-Contractor or consultant shall be required to execute a document containing in substance and form, a confidentiality provision similar to this provision.

50.3. The Contractor shall not, without the Engineer-in-Charge's prior consent:

- a. Take any photographs or videos of the Work (or any part thereof) for use otherwise than in connection with carrying out and completion of the Work;
- b. Write for publication, or cause, information or comment or pictures about the Work;
- c. Supply to any third person such as actual and prospective clients, contractors, publishers, other interested parties and the like, the designs and any articles or information relating to the Work; and
- d. Give interviews to the press including television, radio print and the like regarding the Work or the Contractor's involvement in the Work.

50.4. Notwithstanding the foregoing, this provision shall not limit the obligation of the Contractor to take photographs and/or videos on a regular basis for the purpose of providing the progress reports and other communications to the Engineer/Employer.

50.5. The Contractor, Sub-Contractors and their respective employees, representatives, agents, servants, workmen and suppliers shall not, during or after the termination/expiry of this Contract, disclose any information pertaining to this Contract or the Work to any person without the prior written consent of the Engineer-in-Charge except when called upon to do so by a valid and lawful direction or order of a statutory or Government authority or an order of a court of law or where any of the parties require production of this document and related information for establishing their respective legal rights.

51. Governing law:

51.1. The governing Law of the Contract shall be Indian law.

52. Standards of conduct:

52.1. The Contractor, in performing its obligations under this Contract, shall establish and maintain appropriate business standards

Procedures and control, including those necessary to avoid any real or apparent impropriety or adverse impact on the interests of the Employer

/ Engineer-in-Charge. The Employer / Engineer-in-Charge will in no event reimburse the Contractor for any costs incurred for purposes inconsistent with such policies.

52.2. Compliance with Laws, Rules and Regulations: Contractor represents, warrants, certificates and covenants that in connection with performance under this contract that:

a. It shall, and the Work to be provided hereunder shall, comply with all applicable Local, National, and Central Laws, rules and regulations, including but not limited to those governing building/road constructions, environmental, safety of persons and property, Employee State Insurance, workmen compensation, Provident Fund and applicable industrial/labour laws, and land development laws, rules and regulations.

b. No services provided hereunder will be produced using forced, indentured or convict labour or using the labour of persons in violation of the minimum working age law in the country where the Work are rendered;

c. It shall comply with all laws regarding improper or illegal payments, gifts or gratuities; and Contractor agrees not to pay, promise to pay or authorize the payment of any money or anything of value, directly or indirectly, to any person or entity for the purpose of illegally or improperly inducing a decision or obtaining or retaining business or any advantage in connection with this Contract;

d. It has not paid or provided and shall not pay, any gratuity for the benefit of any agent, representative or employee of the Employer other than in accordance with the Employer's applicable policies; and

e. It has not, and shall not, engage in any sharing or exchange of prices, costs or other competitive information or take any other collusive conduct with any third party supplier or bidder in connection with the preparation or submission of any bid or proposal to the Engineer-in-Charge or the negotiation of this Contract.

f. It will also comply with all rules and regulations of the Employer which may be in effect at the Facility site regarding employment, passes, badges, smoking, fire prevention, safety and conduct or property. On behalf of the Engineer-in-Charge, Contractor shall request and monitor that such is observed by any Contractor, subcontractors, vendors and each of their employees.

52.3. Salient Features of Some Major Labour Laws (Applicable to the establishments engaged in

construction work)

52.3.1. Workmen Compensation Act 1923: The Act provides for compensation in case of injury by accident arising out of and during the course of employment.

52.3.2. Payment of Gratuity Act 1972: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years' service or more or on death the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments employing 10 or more employees.

52.3.3. Employees P.F. and Miscellaneous Provision Act 1952: The Act Provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are:

- i. Pension or family pension on retirement or death, as the case may be.
- ii. Deposit linked insurance on the death in harness of the worker.
- iii. Payment of P.F. accumulation on retirement/death etc.

52.3.4. Maternity Benefit Act 1951: The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.

52.3.5. Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Employer by Law. The Contractor is required to take license from the designated Officer. The Act is applicable to the establishments of the Contractor for the Employer if they employ 20 or more contract labour.

52.3.6. Minimum Wages Act 1948: The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of Buildings, Roads, Bridges, and Runways etc. are scheduled employments.

52.3.7. Payment of Wages Act 1936: It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.

52.3.8. Equal Remuneration Act 1979: The Act provides for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.

52.3.9. Payment of Bonus: Minimum bonus shall be paid as per the State Government rules prevailing during the time of work.

52.3.10. Industrial Disputes Act 1947: The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the

requirements for laying off or retrenching the employees or closing down the establishment.

52.3.11. Industrial Employment (Standing Orders) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.

52.3.12. Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.

52.3.13. Child Labour (Prohibition & Regulation) Act 1986: The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes. Employment of Child Labour is prohibited in Building and Construction Industry.

52.3.14. Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979: The Act is applicable to an establishment which employs 5 or more interstate migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home upto the establishment and back, etc.

52.3.15. The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 1% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

52.3.16. Factories Act 1948: The Act lays down the procedure for approval at plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

53. Warranty as to documents submitted to Employer audit:

53.1. The Contractor represents that all documents, including invoice, vouchers, financials to settlements, billings and other reports submitted or to be submitted by the Contractor to the Engineer-in-Charge in support of an application payment are true, correct, complete and accurate in all respects. Upon request of the Engineer-in-Charge, the Contractor agrees to cooperate fully with the Engineer-in-Charge and the field Engineers in the conduct of a Technical Audit for the Work by an independent agency entrusted by the Agreement Authority. The Contractor accepts that the contract / work shall be subject to the technical audit by an independent technical auditor appointed by the Agreement Authority to audit the quality and quantities of the works done by the contractor, and agrees to render all necessary assistance to such agencies / professionals, whose reports / assessments shall be final and binding. Contractor shall fulfil the requirements as per the auditors assessments at his own cost within the time stipulated by the Engineer-in-Charge.

54. Changes in Contractor's constitution:

54.1. Where the contractor is a Partnership, prior approval in writing shall be obtained from the Engineer-in-Charge before any change is made in the Constitution of the partnership.

54.2. Where the Contractor is an individual or a Hindu Undivided Family business, such written approval from the Agreement authority shall likewise be obtained before Contractor enters into any partnership agreement in which the partnership would have the right to carry out the work previously to be undertaken by the Contractor.

54.3. If such written prior approval is not obtained by the Contractor, appropriate action shall be taken by the Agreement authority as per the contract terms and conditions.

55. Grounds for withholding payments:

55.1. The Engineer-in-Charge may withhold the whole or part of any compensation due to the Contractor to the extent necessary to protect the Employer from any loss on account of any breach of Contractor's obligations under the Contract. When the cause for withholding is rectified, such amounts then due and owing shall be paid or credited to the Contractor.

CONTRACTOR'S SITE ORGANIZATION AND RESOURCES

56. Contractor's representative and supervisory staff

56.1. The Contractor shall at his cost provide and ensure continued effective supervision of the Work with the help of the Contractor's Representative, assisted by team of qualified, experienced and competent engineers, supervisors and adequate staff, to the satisfaction of the Engineer-in-Charge for the entire duration of the Work. The Contractor shall submit his proposed site organization chart for the approval of the Engineer-in-Charge. The Contractor's Representative shall be on the Site at all times as the Work and the Work progresses and shall be responsible for carrying out the Work to the true meaning of the Drawings, Specifications, Conditions of Contract, Schedule of Rates, the other

Contract Documents, and instructions and directions of the Field Engineers. The instructions and directions given in writing to the Contractor's Representative or to any of his assistants at the Site by the Engineer-in-Charge shall be deemed to have been given to the Contractor officially. Attention is called to the importance of the Contractor requesting written instruction from the Engineer-in-Charge before undertaking any Work where the Engineer-in-Charge's and/or Employer's direction or instructions are required. Any such Work done in advance of such instructions will be liable to be removed at the Contractor's expense and will not be paid for unless specifically approved in writing by the Engineer-in-Charge, as the case may be. All key staff employed at the Site by the Contractor shall be considered essential to the performance of the Work and the Work Co-ordination Services, and all key staff shall be subject to the approval of the Engineer-in-Charge. However such approval shall not relieve the Contractor of any of his Contractual obligations. No staff including the resident engineer and other technical supervisory staff shall be removed or transferred from the Work without the prior written permission of the Engineer-in-Charge. The Engineer-in-Charge shall, however, have the authority to order the removal from Site of any undesirable personnel. If key staff becomes unavailable for assignment to the Work or the Work Co-ordination Services for reasons beyond the Contractor's control, the Contractor shall immediately notify the Engineer-in-Charge to evaluate the impact on the Work. Prior to substitution or addition of any key staff, the Contractor shall obtain the Engineer-in-Charge's written consent as to the acceptability of replacements or additions to such personnel. The Contractor shall at all times be fully responsible for the acts, omissions, defaults and neglect of all of his representatives, agents, servants, workmen and suppliers and those of his Sub-Contractors.

57. Man-power and plant and machinery

57.1. The Contractor shall at his own cost provide and install all equipment, materials, plant/machines. Provision of Passenger Lift, Batching Plant, Concrete Pumps, Cranes, and Material Hoists each of adequate capacity, will be required in case of bulk concreting and fast construction. Other equipment like concrete mixers (weigh batchers in case of design mixes), ladders, and scaffolding etc., necessary for the execution of the Work in conformity with the Contract Documents and to the satisfaction of the Engineer-in-Charge will also be provided by the contractor at his own cost in adequate quantity. All machines, tools, trucks, formwork material, man-power and everything else necessary for the proper and satisfactory execution and completion of the Work in accordance with the Contract Documents shall be provided by the Contractor at his own cost. The pre-qualification approval of the list of equipment however shall not relieve the Contractor of any of his responsibilities, obligations and liabilities under the Contract. The Contractor shall augment his manpower, plant and machinery without extra cost to the Employer whenever required or so

directed by the Engineer-in-Charge in order to conform to the approved construction programme for the achievement of milestones and Virtual Completion. The batching plant, hot mix plant, WMM plant and Concrete batch mix plant shall be computerised (Microprocessor based) with printing facility so as to keep the printed out-put for each batch of concrete mix and for each component (stone aggregates, sand, cement, fly ash, water, plasticiser & any other concrete admixture) for each batch of design mix concrete for record purpose. The plants shall also be equipped with antipollution device and mechanisms.

58. Contractor store, site offices and other facilities

58.1. It is agreed that the Contractor has inspected the site and has made his own assessment towards the availability of space at site for his stores, yards, offices, placement of batching plant, steel & shuttering yards, cranes, material hoists and other facilities. A mutually determined area within the constraints of the Site will be allowed to the Contractor free of cost for the purpose of storing his tools, plant, materials, Site office, cement godown, canteen, plant & machinery etc. In case contractor is not able to accommodate his facilities within the site, or in the opinion of the Engineer-in-Charge contractor's facilities are to be removed or relocated in the interest of the progress of work (contractors and / or any other agencies / vendors) the contractor shall make his own arrangements elsewhere outside the site at his own cost for the same. Water tank for the purpose of construction, Site offices, toilets, workshops and storage sheds etc. shall be built by the Contractor at the Contractor's cost. Water tank/s constructed for the purpose of construction should be of such dimensions as to provide storage for at least two days consumption. Site offices shall be of such dimensions to accommodate the Contractor's own office. A separate sanitary facility shall be provided and maintained for, Engineers and workers. The same shall be cleared or removed after construction period. The Contractor shall remove all the temporary construction constructed by him at the Site for the purpose of completing the Work after the Work is completed. Costs of all such facilities including construction & removal shall be borne by the Contractor. Construction of labour hutments will not be allowed inside the Site. The Contractor shall at his own cost make all arrangements for space, lodging, transportation etc. for the labour.

59. Security

59.1. The Contractor shall at his cost provide at all times adequate number of watchmen to guard the Site, materials and equipment, to the satisfaction of the Engineer-in-Charge. The Contractor shall at all times be fully responsible for the security of all materials and equipment on the Site, whether owned by the Employer, Contractor's own or those of any Sub-Contractor. Employer / Engineer shall not be responsible for any loss due to theft, fire, accident or any other reasons, whatsoever.

60. Telephone / Communication/Other services

60.1. The contractor shall make his own arrangement for the telephones and communication at site with information to the Engineer-in-Charge.

61. Sanitary Convenience:

61.1. The Contractor shall at his expense provide and erect with prior permission and details to the Engineer-in-Charge all necessary sanitary conveniences including septic tank and soak pits at the Site for the staff and all workmen of his own, his Sub-Contractors, the Engineer and Engineer's Representatives. The sanitary conveniences shall be strategically located around the Site to provide ready access to all site operatives and employees. The Contractor shall maintain such convenience in a clean, hygienic, orderly condition and shall clean, disinfect and deodorize the ground after their removal, and meet all statutory requirements.

62. Scaffolding, staging, guard rails, barricades:

The Contractor shall at his cost provide steel scaffolding, staging, guard rails, barricades and safety barriers around all excavations, openings and at all edges, temporary stairs and other temporary measures required during construction. The supports for the scaffolding, staging guard rails, barricades and safety barriers and temporary stairs shall be strong, adequate for the particular situations, tied together with horizontal pieces and braced properly. The temporary access to the various parts of the building under construction shall be rigid and strong enough to avoid any chance of mishaps. The entire scaffolding arrangement together with the staging, guard rails, barricades and safety barriers, and temporary stairs shall be to the approval of the Engineer-in-Charge which approval however shall not relieve the Contractor of any of his responsibilities, obligations and liabilities for safety and for timely completion of the Work. The use of wooden scaffolding on the Site is strictly forbidden.

63. Temporary Roads:

The Contractor shall at his cost construct and maintain temporary roads/access ways to suit Site requirements at locations mutually agreed with the Engineer. Such roads/access ways will also be used by other Contractors/vendors/Officials working at the Site.

64. Safety Equipment & Personnel:

64.1. The Contractor shall provide sufficient helmets, safety boots/shoes, nets and protective clothing for use by the Work Management Team, Engineer, Engineer's Representative, contractor's own staff and staff of his sub-contractors. The Contractor shall make available at all times when work is being undertaken, a vehicle suitable for the emergency evacuation of personnel from the site to a hospital staffed and equipped to receive injured personnel.

65. Temporary Lighting

65.1. The Contractor shall make his own arrangement in respect of the provision of adequate lighting at all places where adequate visibility is not there or at night works and also provide general lighting of site as a whole in a proper safe and satisfactory manner.

66. Protection of Environment:

66.1. The Contractor understands that the Site is free from pollutants at the time of access to the Site and commencement of the Work. The Contractor shall comply with all applicable environmental laws and regulations and shall ensure that the Site is and remains free from pollutants at the end of the Work. The Contractor shall ensure inter- alia, that neither the soil nor the ground water is polluted or contaminated by fuels or lubricants emitted by machinery operated on the Site or by other dangerous or poisonous substances which are or are deemed to be hazardous to the environment. Notwithstanding the above, the Contractor shall comply with all the directions and decisions of the Engineer in this regard.

67. First Aid Facilities:

67.1. The Contractor shall provide adequate first aid facilities at site.

68. Labour regulations:

68.1. The Contractor shall be wholly and solely responsible for full compliance with the provisions under all labour laws and /or regulations such as Payment of Wages Act 1948, Employees Liability Act

1938, Workmen's Compensation Act-1923, Employees State Insurance

Act-1948, Employees Provident Fund Act-1952, Industrial Disputes Act-

1947, the Maternity Benefit Act-1961, the Contract Labour (Regulation and Abolition) Act-1970 and

the Factories Act-1948 or any modifications thereof or any other law relating thereto and rules there

under introduced from time to time. The Contractor shall assume liability and shall indemnify the

Employer and Engineer-in-Charge from every expense, liability or payment by reason of the

application of any labour law, act, rules or regulations existing or to be introduced at a future date

during the term of the Contract. Insurance cover towards the above shall be effected by the

Contractor as called for in Clause 12. In general, in respect of all labour directly or indirectly employed

in the Work for the performance of Contractor's part of the Contract, the Contractor shall comply

with all the rules framed by the Government authorities concerned from time to time for protection

of the health and welfare of the workers. The Contractor shall at his own cost obtain a valid licence

for himself and the Employer under the Contract Labour (R & A) Act

1970 and the Contract labour (Regulation and Abolition) Central Rules

1971 and under any other applicable rules before the commencement of the Work and continue to

have a valid licences until the completion of the Work.

68.2. Payment of wages: The Contractor shall pay to labour employed by him either directly or through Sub-Contractors wages not less than fair wages as defined in the relevant Central / Local Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act 1970 and the Contract Labour Regulation and Abolition of Central Rules 1971, wherever applicable. He shall also abide by the minimum wages and other regulations applicable to the labour engaged in the Work, as laid down by the concerned Central / local authorities (State, District or other local Authorities). In case the contractor fails to pay fair wages as required by the authorities then the Employer/ Engineer-in- Charge shall be entitled to do so and receives such amounts including associated cost incurred by them in doing so from the contractor.

68.3. Model Rules: The Contractor shall at his own expense comply with or cause to be complied with, Model Rules for labour welfare framed by Government or other local bodies from time to time for the protection of health and for making sanitary arrangements, Malaria control, etc. for workers employed directly or indirectly on the Work and in the workers hutment area. In case the Contractor fails to make arrangements as aforesaid, the Employer shall be entitled to do so and recover the cost thereof from the Contractor.

68.4. Safety Codes: In respect of all labour, directly or indirectly employed on the Work for the performance and execution of the Contractor's Work under the Contract, the Contractor shall at his own expense arrange for all the safety provisions as listed in (i) Safety codes of Central Public Works Department and Bureau of Indian Standards, (ii) The Electricity Act, (iii) The Mines Act, and Regulations, (iv) Regulations of employment & conditions of service Act 1996, Rules and Orders made there under and such other acts as applicable. Precautions as stated in the safety clauses are of minimum necessity and shall not preclude the Contractor taking additional safety precautions as may be warranted for the particular type of work or situations. Also mere observance of these precautions shall not absolve the Contractor of his liability in case of loss or damage to property or injury to any person including but not limited to the Contractor's labour, the Employer's Consultants, Employer's Representatives and Engineer-in-Charge's representatives or any member of the public or resulting in the death of any of these. Protective gear such as safety helmets, boots, belts, gloves, spectacles, nets, fire extinguishers etc. shall be provided by the Contractor at his own cost to all his manpower at the Site. The Contractor shall impose such requirements on all Sub-Contractors and Vendors also. It shall be the responsibility of the Contractor to ensure that such protective gear is worn at all times by all personnel working at the Site during the term of the Work. The Employer, Engineer, and Engineer's Representative shall each have the right to stop any person not wearing such protective gear from working on the Site.

68.5. In case the Contractor fails to make arrangements and provide necessary facilities as aforesaid,

the Engineer-in-Charge shall be entitled (but not obliged) to do so and recover the costs thereof from the Contractor. The decision of the Engineer-in-Charge in this regard shall be final and binding on the Contractor.

69. Safety/Site Conditions:

69.1. The Contractor shall take full responsibility for the adequacy, stability and safety of all Site operations and ensure that the methods of carrying out the Work and the Work by the Contractor including his workmen, employees, Sub-Contractors and Vendors meet all the necessary safety standards and requirements. In order to fulfil this obligation the Contractor shall appoint a permanent, full time and suitably qualified safety officer for the Site, who shall be responsible for incorporation, implementation and enforcement of all safety measures and requirements for maintaining safe working conditions, safety of manpower and equipment, general safety and security of Site as per the various safety codes and stipulations mentioned in contract documents. The Contractor shall provide Id-Cards (Identity Cards) to each of his worker with designated number & colour only of the card as directed by the Engineer-in-Charge.

69.2. The Contractor has full responsibility for maintaining the Site in good and clean condition and removing all trash and debris on a daily basis to the satisfaction of the Engineer. The Contractor is responsible for providing adequate sanitary facilities and maintaining them in a clean and healthy condition. If the Contractor fails to comply with the above the Engineer-in-Charge will have the authority to get the same cleaned by an external agency and debit the expenses incurred on the same to the Contractor's account; but without being under any legal obligation to do so.

69.3. If, by reason of any accident, or failure, or other event occurring to, in, or in connection with the Work, or any part thereof, either during the execution of the Work, or during the Defects Liability Period, any remedial or other work is, in the opinion of Employers Representative or the Engineer-in-Charge urgently necessary for the implementation of the safety programme of the Work by the Contractor and the Contractor is unable or unwilling at once to do such work, the Engineer-in-Charge shall be entitled to employ and pay other persons to carry out such work as the Engineer-in-Charge may consider necessary. If the work or repair so done by the Engineer-in-Charge is work which, in the opinion of the Engineer-in-Charge, the Contractor is liable to do at its own cost, then all costs consequent thereon or incidental thereto shall be recoverable from the Contractor and may be deducted by the Engineer-in-Charge from any of the Performance Security Deposit and any moneys due or to become due to the Contractor and the Engineer-in-Charge shall notify the Contractor accordingly, provided that the Engineer-in-Charge shall, as soon after the occurrence of any such emergency as may be reasonably practicable, notify the Contractor thereof. The Contractor shall ensure that all operations by the Contractor, his workmen, employees, Sub-Contractors to complete

the Work and the remedying of any defects therein shall, so far as compliance with the requirements of this Agreement permit, be carried on so as not to interfere unnecessarily or improperly with:

- a) The convenience of the public, or
- b) The access to, use and occupation of public or private roads, railways and footpaths to or of properties whether in the possession of Employer/Engineer-in-Charge or of any other person.
- c) The Employers /Engineer-in-Charge's operation and utilization of the facility at the Site; and
- d) The Work of Vendors/other contractors.

69.4. If any hazardous or obnoxious materials (as defined by Indian law) are specified for use or are being used by Sub-Contractors or Vendors, the Contractor shall take necessary clearances from concerned departments and keep record of such material and forthwith give written notice to the Engineer-in-Charge and shall ensure that the Sub- Contractors and Vendors, as applicable, use, store and dispose of such hazardous or obnoxious materials strictly in accordance with all applicable laws.

69.5. Additional Safety Regulations: The Contractor shall continuously maintain adequate protection for the Work against fire and other hazards and shall protect the Employers /Engineer's property from damage or loss during the performance of this Contract. The Contractor also shall adequately protect property adjacent to the Work. The Contractor shall take all necessary precautions for the safety of its employees, Subcontractors and the Vendors performing the Work and later phases of the Work and shall comply with all applicable safety laws and regulations to prevent accidents or injury to persons on, about, or adjacent to the Site. The Contractor shall be responsible for co- ordinating a safe working programme with the Field Engineers. Such a programme shall include, and the Contractor shall be responsible for maintaining, the following safe working conditions and practices:

- a) All combustible material, food matter, garbage, scrap, and other debris generated during the performance of the Work shall be collected and removed from the Site on daily basis. Arrangements for scrap disposal should be discussed with Field Engineers.
- b) An adequate number and type of fire extinguishers and sand buckets shall be provided at the Site for fire control and shall be kept/maintained in satisfactory and effective working condition, at all times.
- c) The Contractor and its employees, labourers and subcontractors shall strictly obey all "No Smoking" restrictions.
- d) The Contractor shall not operate or use or manipulate utilities already established at the Site without the Engineer- in-Charge's prior written approval.

69.6. Safety with regard to site and housekeeping:- The contractor shall depute a dedicated team of adequate number of worker under the responsibility of the Safety In-charge for carrying out the safety and housekeeping work at site on daily basis. Following shall be ensured by the Contractor and

his safety & housekeeping team:

a) The use of intoxicants or unlawful drugs at the Site, in any degree, shall be strictly prohibited. The Contractor shall rigorously enforce this regulation.

b) When overhead work is in progress in or around an occupied area, signs to denote such work prominently displaying "Overhead Work" shall be used and a barricade shall protect the area. Safety nets and appropriate catchments provisions shall be provided at suitable levels so as not to allow any material to fall on the ground.

c) Dusty work, such as concrete breaking or demolition, in or near occupied areas, shall proceed only after wetting down the area and taking steps necessary to prevent dust from penetrating occupied areas and creating a nuisance.

d) Care shall be taken not to block any door, passageway, and safety exit, fire fighting equipment, or safety equipment with materials or equipment.

e) Materials must be piled, stacked, or stored in a neat and orderly manner. All stacking in the site, whether inside or outside a building, shall be parallel to or at right angles to the building line or fence. The stacking of materials shall be organised on daily basis.

f) When noisy operations of a prolonged nature are necessary in or near an occupied area, arrangements must be made with the Engineer-in-Charge for scheduling to minimize any nuisance in the occupied area.

g) All critical and dangerous locations / areas at site shall be marked with caution signs, indications and directions in the form of well-designed and uniform signage, the design of signage shall be approved by the Engineer-in-Charge.

69.7. If the Field Engineer notifies the Contractor of non-compliance with all or any of the foregoing regulations, the Contractor shall immediately, if so directed, or in any event not more than eighteen (18) hours after receipt of such notice, make all reasonable efforts to correct such non-compliance. If the Contractor fails to do so, the Engineer-in- Charge may suspend all or any part of the Work. When the Contractor has undertaken satisfactory corrective action, Engineer-in-Charge shall lift the suspension of the Work. The Contractor shall not claim any extension of time to complete the Work or additional fees due to any such work suspension.

69.8. Notwithstanding anything herein before contained, the Contractor shall be liable to ensure and implement all safety measures, whether or not statutorily prescribed, to safeguard, preserve and protect the life, health and welfare of every workman employed/deployed/engaged directly or indirectly by the Contractor on the Site and in relation to or connected with the Work and all Vendors employed in later phases of the Work in addition to installing, providing every prescribed safety and

protective equipment, clothing etc., and the mere absence of any reference to or specification of a particular statute or rule or regulation in this Contract shall not absolve the Contractor of an obligation to comply with every such law, rule or regulation. The obligations stipulated shall not in any manner be deemed to limit or restrict any obligation or duty that any law, rule or regulation may otherwise impose upon the Contractor. The Contractor shall be liable for all consequences/liabilities arising out of his violating any of the aforesaid provisions, including fines, penalties, compensations, damages, prosecutions, proceedings, medical expenditure and costs, rehabilitation costs and all other expenses connected therewith.

70. Child Labour:

70.1. The Contractor shall not employ any labour less than 18(eighteen) years of age on the job. If female labour is engaged, the Contractor shall make necessary provisions at his own expense for safeguarding and care of their children and keeping them clear of the Site. No children shall be permitted at the Site. 71. Contribution towards workers/employee benefits, funds etc.

71.1. The Contractor shall include in the Contract Price all expenses necessary to meet his obligations for making contributions toward employee benefits funds (Such as provident fund, Employees State Insurance benefits, ESI, old age pension and/or any other benefits/compensation legally payable) in compliance with all the statutory regulations and requirements. All records in this connection shall be properly maintained by the Contractor and produced for scrutiny by the concerned authorities and the Engineer-in-Charge and the Employer whenever called for.

71.2. Employees State Insurance Scheme (ESI): The Contractor shall be liable to pay his contribution and Employees contribution to the State Insurance Scheme in respect of all labour employed by him or for the execution of the contract in accordance with the provision of "The Employees State Insurance Act, 1948" as amended from time to time.

71.3. Employees Provident Fund (EPF): The Contractor shall obtain prescribed recommendations from the Regional Provident Funds Commissioner under the Employees' Provident Fund and Miscellaneous Provisions Act, 1952 and shall cause provident fund contribution from all eligible employees and Contractor's contribution to be deposited regularly with the prescribed authority and in token of which shall submit every month necessary receipts/ documentary evidence as may be required by the Engineer-in-Charge. The contractor shall also provide its Provident Fund registration number/ certificate to Engineer-in- Charge. In case the contractor fails to comply with above provisions as required by the authorities then the Engineer-in-Charge shall be entitled to do so and recover such amounts including the associated costs incurred by them in doing so, from the contractor. The Contractor must fully satisfy himself as to these points and allow coverage for the same in the rates while giving his tender. Nothing extra shall be paid on these accounts.

72. Setting out and site surveys

72.1. The Contractor shall establish, maintain and assume responsibility for all bench marks and grid lines, and all other levels, lines, dimensions and grades that are necessary for the execution of the Work, in conformity with the Contract Documents. The Contractor shall establish his relation to the permanent benchmarks and boundary lines established at the Site. The Contractor shall verify and co-relate all the survey data available at the Site before commencing the Work and shall immediately report in writing any errors or inconsistencies to the Field Engineer. Commencement of Work by the Contractor shall be regarded as his acceptance of the correctness of all survey and setting out data available at the Site and no claims shall be entertained or allowed in respect of any errors or discrepancies found at a later date. If at any time error in this regard appears during his progress of the Work, the Contractor shall at his own expense rectify such error to the satisfaction of the Engineer. The approval by the Engineer of the setting out by the Contractor shall not relieve the Contractor from any of his responsibilities, obligations, and liabilities under the Contract.

72.2. The Contractor shall be entirely and exclusively responsible for the horizontal, vertical and other alignment for all levels and dimensions and for the correctness of every part of the Work, and he shall rectify effectively any errors or imperfections therein. All such rectifications shall be carried out by the Contractor at his own cost and to the instructions and satisfaction of the Engineer-in-Charge.

72.3. The Contractor shall employ qualified surveyors to carry out all the surveys and setting out works.

73. Drawings, specifications, interpretations etc

73.1. The drawings included/available with the tender are to be used for general guidance only. These drawings are broadly indicative of the work to be carried out. These drawings are not the "Construction Drawings" and details indicated there in are for guidance only and are liable to be modified by the Engineer-in-Charge during course of actual construction. No claim whatsoever shall be admissible on account of changes that may be introduced later by the Engineer-in-Charge.

73.2. In general, the Drawings shall indicate the dimensions, positions and type of construction, the Specifications shall stipulate the quality and the methods and performance criteria, and the Schedule of Rates shall indicate the rates for each item of work for evaluating change orders. However, the above Contract Documents being complementary, what is called for by any one shall be binding as if called for by all. Wherever there is a discrepancy between drawings and specifications, the drawings shall be followed. In interpreting the specifications, the following order of decreasing importance shall be followed:

a.i. Bill of Quantities

a.ii. Technical Specifications a.iii. Drawing

a.iv. CPWD /MoRTH/IRC Specifications a.v. Indian Standard Specification of BIS78 78

73.3. Matters not contained in the specifications and in case of any ambiguities in written specifications of the contract, the works shall be executed as per relevant Bureau of Indian Standards codes, Central Public Works Department specifications, MoRTH specifications and IRC specifications in the above order of preference. If such codes have not been framed, the decision of the Engineer-in-charge shall be final. Any work indicated on the Drawings and not mentioned in the Specifications or vice versa, shall be deemed as though fully set forth in each. Work not specifically detailed, called for, marked or specified shall be the same as similar parts that are detailed, marked or specified. From time to time during the progress of the Work, the Contractor will be issued with revisions of Drawings and written instructions by the Engineer-in- Charge in connection with and necessary for the proper execution and completion of the Work. All such revisions of Drawings and written instructions shall be part of the Contract Documents and the Contractor shall be bound to carry out the work that is shown and detailed on all such Drawings and shall be bound to follow and comply with all such instructions.

73.4. It shall be the responsibility of the Contractor to ascertain and ensure that all the Work is carried out in accordance with the latest revisions of the Drawings issued to him. Should the Contractor fail to do this, all the rectifications and remedial work that may be required to conform to the latest revisions of the Drawings shall be at the Contractor's expense.

73.5. Wherever it is mentioned in the Conditions of Contract, Specifications, and other Contract Documents that the Contractor shall perform certain work or provide certain facilities, it is understood that the Contractor shall do so at his own cost, unless otherwise provided in the Documents.

73.6. No deviations shall be made by the Contractor, in the execution of the Work from the Drawings, Specifications, and other Contract Documents. Only the Engineer-in-Charge shall issue interpretations and clarifications.

73.7. The Contractor shall immediately in writing bring any errors or inconsistencies in the Drawings and Specifications to the attention of the Field Engineer for interpretation or correction before proceeding with the affected portion of the Work, and no claims or losses alleged to have been caused by such discrepancies shall be entertained or allowed at any stage. Local conditions, which may affect the Work, shall likewise be brought to the Field Engineer's attention at once. If at any time it is discovered that work, which has been done or is being done is not in accordance with the approved Drawings and Specifications, the Contractor shall correct the work immediately. Correction of such

work shall be at the expense of the Contractor and shall not form a basis for any claims for payment or extension of time. The Contractor shall carry out all the rectification work only after obtaining approval for the same from the Engineer-in-Charge.

73.8. No scaling of any Drawing shall be done to obtain the dimensions.

Figured dimensions on the Drawings shall be used for carrying out the Work. Drawings with large-scale details shall take precedence over small scale Drawings. Where any Drawings and details have not been provided but are necessary for the execution of the Work, it shall be the responsibility of the Contractor to seek these drawings and details in writing from the Engineer-in-Charge at least four weeks prior to the latest date by which the Contractor needs these drawings and details to suit the programmed execution of the Work. No extension of time shall be allowed for any delays caused due to the Contractor's failure to seek such details.

73.9. Drawings, Schedule of Rates, Specifications, and other Contract Documents, and all copies thereof furnished by the Engineer-in-Charge shall become the Employer's property. They shall not be used on any other work and shall be returned to the Employer at his request or at the completion of the Contract.

74. Overtime work

74.1. If it is necessary for the Contractor or any Sub-Contractor to work on other than working days or outside the normal working hours in order to keep up to the time schedule and meet the Construction Programme, the Contractor shall obtain the prior approval of the Engineer-in-Charge in writing, which approval shall not be unreasonably withheld. The additional cost of wages and any other costs incurred as a result of overtime or any shift work (except supervision expenses incurred by the Employer) shall be borne by the Contractor.

74.2. Where work is being carried out in or around an operating plant / office or occupied building / premises and is liable to cause disturbance or interruption in working of the Plant / Office or inconvenience to the occupants of the premises, the Contractor shall work only at specified places and times as mutually arranged between the Contractor and the Field Engineer so as not to cause any disturbance. Due to this the Contractor may be required to work during off-hours, Sundays and holidays. The Contractor shall not be entitled for any extra payment for doing work in the manner described above.

75. Materials, workmanship, storage, inspections etc.

75.1. Employer Supplied Material

a) The Employer will not supply any material unless otherwise specified in the contract. Sole responsibility rests with the contractor for procurement of all other materials required for completion of work within the stipulated time.

b) Materials specified as to be issued by the Employer, if any, will be supplied to the Contractor by the Employer from his stores or the dealer or the dealer's warehouse or railway siding or from any other specified place.

c) It shall be the responsibility of the contractor to take delivery of the materials and arrange for its loading, transport and unloading at the site of work and to keep the materials under safe custody at the site at his own cost. The materials shall be issued during working hours only.

d) The Contractor shall bear all incidental charges for the storage and safe custody of materials as directed by the Engineer-in-Charge, at site after these have been issued to him.

e) The materials shall be issued in standard sizes as obtained from the manufacturers.

f) It shall be the duty of the contractor to inspect the materials supplied to him at the time of taking delivery and satisfy himself that they are in good condition. After the materials have been delivered, it shall be the responsibility of the Contractor to keep them in good condition and if the materials are damaged or lost, at any time, they shall be repaired and/or replaced by the contractor at his own cost, according to the directions of the Engineer-in-Charge.

g) The Employer shall not be liable for delay in supply or non- supply of any materials, if any, which he has undertaken to supply where such failure or delay is due to natural calamities, transport and procurement difficulties and any circumstances beyond the control of the Employer. In no case, shall the Contractor be entitled to claim any compensation or loss suffered by him on this account.

h) It shall be the responsibility of the Contractor to arrange in time all the materials required for the works. If, however, in the opinion of the Engineer-in-Charge / Employer, the execution of the work is likely to be delayed due to the Contractor's inability to make arrangements for supply of materials which normally he has to arrange for, the Engineer-in-Charge / Employer shall have the right, at his own discretion to arrange for issue of such materials from

the market or elsewhere and the Contractor will be bound to take such materials at the rate decided by the Employer. This however, does not in any way absolve the Contractor from responsibility of making arrangements for the supply of such material in part or full, should such a situation occur nor shall this constitute a reason for the delay in the execution of the work.

i) The Contractor shall, if desired by the Engineer-in-Charge / Employer, be required to execute an indemnity bond in the prescribed form for safe custody and accounting of all materials issued by the Employer.

j) A day to day account of the materials issued by the Employer shall be maintained by the Contractor, indicating the daily receipt, consumption and balance in hand, in a manner prescribed by the Engineer-in-Charge.

k) The Contractor shall see that only the required quantities of materials are issued. The contractor shall not be entitled to cartage and incidental charges for returning the surplus materials, if any, to a place as directed by the Engineer in charge.

l) Materials supplied by the Employer, if any, shall not be used for any other purpose or work other than that issued for.

75.2. Contractor Supplied material

a) All the materials including reinforcement steel, cement, bitumen, aggregate etc shall be procured by the contractor. Quoted rate to include labour, basic cost of material, cost of accessories, taxes, payment to suppliers, transportation, handling, storage, safety, wastage, accounting and reconciliation and to provide Form -C & 38 and any other documents/formalities for purchase of materials, cost of electricity, water, WCT, VAT and Contractor's overheads and profits etc.

b) In case the Contractor fails / refuses to procure and provide any material, the Engineer-in-Charge in the interest of the work may resort to procure and provide such materials at the risk and cost of the Contractor. Under such circumstances an extra procurement charge @ 15% of the respective item rates shall be imposed on the Contractor and recovered from his bills / any outstanding payments.

c) The materials shall be fully accounted for by the Contractor as required hereinafter. In accounting for the materials with allowances to cover all wastages and losses that may have been incurred in the process of handling, storing, cutting, fabrication, fixing and installing. The contractor shall submit statement of account and reconciliation of material lying in Contractor's stores along with each Running Account Bill and consolidated statement of reconciliation along with Final Bill.

d) The Contractor shall, at all times when requested, satisfy the Engineer-in-Charge by the production of records or books or submissions of returns that the materials are being used for the purpose for which they are procured and the Contractor shall at all times keep the records updated to enable the Engineer-in-Charge to apply such checks as he may desire to impose. The Contractor shall, at all times, permit the Engineer-in-Charge to inspect his godown. The Contractor shall not, without prior written permission of the Engineer- in-Charge, utilise or dispose of the materials for any purpose other than intended in the Contract.

75.3. Materials and workmanship:

a) The Contractor shall be responsible for the establishment of a full and comprehensive quality control system for the Work. The system shall include, but not be limited to, the means of controlling the testing and receipt of materials, the inspection of the Work, the filing and ordering of drawings and correspondence and the duties and responsibilities of staff members.

b) All materials and equipment to be incorporated in the Work shall be new unless there is specific

provision in the contract for reusing old good quality material. The materials, equipment, and workmanship shall be of the best quality of the specified type, in conformity with Contract Documents and the best engineering and construction practices, and to the complete satisfaction of the Engineer-in-Charge. This requirement shall be strictly enforced at all times and stages of the Work and no request for change whatsoever shall be entertained on the grounds of anything to the contrary being the prevailing practice. The Contractor shall immediately remove from the Work any materials, equipment and/or workmanship which, in the opinion of the Engineer-in- Charge, are defective or unsuitable or not in conformity with the Contract Documents and best engineering and construction practices, and the Contractor shall replace such

rejected materials, equipment and/or workmanship with proper, specified, required and approved materials, equipment and/or workmanship, all at his own cost within a period of seven (7) days from the date of issuance of such notice.

c) The Contractor shall, whenever required to do so by the Engineer-in-Charge, immediately submit satisfactory evidence and necessary test results as to the kind and quality of the materials and equipment.

75.4. Special makes or brands:

a) Where special makes or brands are called for, they are mentioned as a standard. Others of equivalent quality may be used provided that Engineer-in-Charge considers the substituted materials as being equivalent to the brand specified, and prior approval for the use of such substituted materials is obtained in writing from the Engineer-in-Charge.

b) Unless substitutions are approved by the Engineer-in-Charge in writing in advance, no deviations from the Specifications and other Contract Documents shall be permitted, the Contractor shall indicate and submit written evidence of those materials or equipment called for in the Specifications and other Contract Documents that are not obtainable for incorporation in the Work within the time limit of the Contract. Failure to indicate this in writing will be deemed sufficient cause for denial of any request for an extension of time and /or additional cost because of such circumstances.

c) Alternative equivalent brands if suggested by the Contractor during construction may be considered if approved brand is not available in market, provided the suggested brand fully meets the requirements and is acceptable to the Engineer-in- Charge.

75.5. Contractor shall be responsible for providing, at his own cost, proper and adequate security for all the materials and equipment stored at the Site so as to prevent any theft, pilferage etc., and the Contractor shall be responsible and liable for all the matters in connection with such security or the lack thereof. Where, after permission has been sought and obtained from the Engineer-in-Charge, any

material or equipment is kept on any portion of the structure, this shall be done in such a manner as to prevent any overloading whatsoever of the structure, to the complete satisfaction of the Engineer-in-Charge. The cost associated with any damage to any portion of the structure in this respect shall be to the account of the Contractor and shall be borne by

him. Should delays be caused on account of removal and replacement of any materials or equipment or on account of any lack of security, the Contractor shall not be entitled to any extension of time or increase in the Contract Price. Wherever applicable the storage of materials shall be in accordance with the relevant Indian Standard Specifications. Reinforcement bars shall be stored diameter-wise over raised sleepers and protected from rain in suitable manner as approved by the Engineer-in-Charge. Similarly, structural steel sections shall also be stored in the yard in a proper orderly manner.

75.6. Certificates: The Contractor shall furnish, at his own cost, test certificates, calibration certificates for the various materials and equipment as called for by the Engineer-in-Charge. Such test certificates should be for the particular consignment/lot/piece as decided by the Engineer-in-Charge. The details in respect of the test and calibration certificates shall be as decided by the Engineer-in-Charge for the relevant items.

76. Construction programme and Site order book

76.1. Construction Programme:

76.1.1. The contractor should furnish an overall construction programme for the approval of the Engineer-in charge before the start of the works. The construction programme shall clearly show all the sequential activities of work required to be carried out from the commencement of the Work up to the Virtual Completion.

76.1.2. The construction programme shall be based on the mutually agreed milestones.

76.1.3. Every month, or sooner if required by the Engineer-in- Charge, the approved programme charts shall be reviewed in relation to the actual progress of the Work, and shall be updated as necessary. If at any time it appears to the Engineer-in-Charge that the actual progress of the Work does not conform to the approved programme, the Contractor shall produce, at its expense and without reimbursement therefore, a revised programme showing the modifications to the approved programme and the additional input of resources by the Contractor necessary to ensure completion of the Work within the time stipulated for completion.

76.1.4. The submission to and approval by the Engineer-in-Charge of such programmes or the furnishing of such particulars shall not relieve the Contractor of any of his responsibilities, obligations and liabilities under the Contract

76.2. Site Order Book/Work spot Order Book –shall be maintained at the

Site as per the provisions contained in the Revised Kerala PWD Manual- 2012.

76.3. Site Register:

76.3.1. The Contractor shall maintain a site register that records the name and time of arrival and departure, at Site, of any visitors.

77. Protections of works:

77.1. The Contractor shall take full responsibility for the proper care and protection of the Work from commencement of work until completion and handing over of the Work to the Assistant Engineer at no additional cost. The Contractor shall protect and preserve the Work in every way from any damage, fire or accident, including by providing temporary roofs, boxing or other construction as required by the Engineer. This protection shall be provided for all property on the Site as well as adjacent to the Site. The Contractor shall adequately protect, to the satisfaction of the Engineer-in-Charge, all the items of finishing work to prevent any chipping, cracking, breaking of edges or any damage of any kind whatsoever and to prevent such work from getting marked or stained or dirty. Should the Contractor fail to protect the Work or any part thereof and should any damage be caused to the same, the Contractor shall be responsible for all replacement and rectification, as directed by the Engineer, and all costs and expenses in connection with such replacement and rectification shall be to the account of the Contractor and shall be borne by him.

77.2. The Contractor shall in connection with the Work provide and maintain at his own cost all lights, security guards, fencing and anything else necessary for the protection of the Work and for the safety of the public and everyone associated with the Work, all to the approval and satisfaction of the Engineer-in-Charge.

77.3. All operations necessary for the execution of the Work shall be carried out so as not to interfere with the convenience of the public, or with the traffic, or the access to, use and occupation of public or private roads and footpaths or of properties whether in the possession of the Employer or of any other person. The Contractor shall save harmless and indemnify the Employer & Engineer in respect of all claims, proceedings, damages, costs, charges, and expenses whatsoever arising out of or in relation to any such matters.

78. Cleaning of works and clearing of site:

78.1. The Contractor shall maintain the Site, adjoining areas within 20 meters all around site and all Work thereon in neat, clean and tidy- conditions at all times. The Contractor shall remove all rubbish and debris from the Site and adjoining areas on daily basis and as directed by the Field Engineer. Suitable steel skips shall be provided at strategic locations around the Site to receive waste and

packaging materials.

78.2. Just prior to the Virtual Completion of the Work, or whenever so directed by the Engineer, the Contractor shall carry out all the work necessary to ensure that the Site & 20 meter area all around site is clear and the Work are clean in every respect, the surplus materials, debris, sheds and all other temporary structures are removed from the Site, all plant and machinery of the Contractor are removed from site, the areas under floors are cleared of rubbish, the gutters and drains are cleared, the doors and sashes are eased, the locks and fastenings are oiled, all electrical, plumbing and other services are tested and commissioned, the keys are clearly labelled and handed to the Assistant Engineer, so that at the time of Virtual Completion the whole Site and the Work are left fit for immediate occupation and use, to the approval and satisfaction of the Engineer-in-Charge.

78.3. Should the Contractor fail to comply with the cleaning requirements, whether progressively or before completion, or fail to clear the Site and 20 meter area all around site as directed and required, then the Engineer-in-Charge, after giving due notice in writing to the Contractor, shall have the right to employ other persons or agencies to carry out the cleaning and/or clearing work and all costs incurred on such work shall be recovered from the Contractor and shall be deducted by the Employer / Engineer-in-Charge from any money that may be payable or that may become payable to the Contractor.

79. Settlement of disputes

79.1. Arbitration shall not be a means of settlement of any dispute or claim out of this contract. All disputes and differences arising out of the contract may be resolved through discussions between the Employer and the Contractor within the purview of the contract agreement. If such discussions are not fruitful, the disputes shall be settled only by the Civil Court in whose jurisdiction the work covered by the contract is situated, or in whose jurisdiction the contract was entered into in case the work extended to the jurisdiction of more than one court.

8. SPECIAL CONDITIONS OF CONTRACT

1. General

1.1. The Special Conditions of Contract are an extension of and are to be read in conjunction with the General Conditions of Contract. Should there be any contradictory requirements in the two, the requirement as per the Special Conditions of Contract shall prevail.

2. Reference drawings

2.1. The Contractor shall maintain on site one set of all Drawings issued to him for reference.

3. Completion drawings (As Built) & Measurement books

3.1. On completion of the Work, the Contractor shall submit three (3) complete sets of drawings and

marked up prints of "AS BUILT" drawings verified and approved by the Engineer-in-Charge. These drawings shall include and show all the changes / deviations made from the working drawings during the course of construction and also the other details as called for by the Engineer-in-Charge. During the execution of the Works a set of drawings prepared initially shall be retained in the Contractors Site Offices for the exclusive purpose of recording changes made to the Work as the construction proceeds. The drawings shall be prepared on computer through CAD Software and provided to the Engineer-in- Charge as hard and soft copy.

4. Testing of installations:

4.1. All water retaining structures and the basement shall be tested as specified for the waterproof qualities, in the presence of the Engineer-in- Charge or his authorised representative. The Contractor shall also perform all such tests as may be necessary and required by the Engineer-in-Charge to ensure quality of the executed works. The Contractor shall provide all labour, equipment, and materials etc., required for the performance of the tests.

5. Quality assurance and Quality Control

5.1. The Contractor shall establish an effective quality control system at the Site and implement the same through an independent team consisting of qualified and experienced Engineers and technical personnel to enforce quality control on all items of the Work at all stages. Generally the following are to be noted regarding the quality control of the works in this contract

5.2. Quality control of various items in this Work shall be governed by the provisions of Kerala PWD Quality Control (QC)Manual approved vide GO(Rt) No-1339/2015/PWD dated 10-9-2015 and Kerala PWD Quality Control laboratory Manual approved vide GO(Rt) No-1346/2015/PWD dated 11-9-2015 and subsequent modifications if any.

5.3. The intending bidders are expected to familiarize with the contents of QC manual before participating in the bid.

5.4. Technical audit as envisaged in clause 2406 of the revised PWD Manual-2012 shall be carried out for this Work. The contractor shall extend full cooperation to the agency entrusted with the technical audit.

5.5. The contractor shall extend full cooperation to the departmental officers of quality control wing for taking samples, curing and keeping them in safe custody whenever required. The contractor shall issue proper acknowledgement for samples so kept in his safe custody.

5.6. The contractor is to mobilise technical personnel who are well versed with quality control tests and other guidelines stipulated in the QC manual.

5.7. For Works or works costing more than Rs.200 lakhs, the selected Contractor shall establish site

laboratories with required facilities as specified in PWD Laboratory Manual.

5.8. The contractor is responsible for ensuring quality of each item of work in this contract.

5.9. Being the agency entrusted with execution of the Contract, the primary responsibility for ensuring quality of each item of work in this Contract is vested with the Contractor. Engineer or his Representative shall issue guidelines as and when required for ensuring Quality Control, which the Contractor has to follow.

5.10. The Engineer and his Representative shall have the right to direct Contractor to remove materials supplied which do not conform to standards specified.

5.11. For works costing more than Rs.200 lakhs, the contractor shall conduct first tier quality control tests for all items of work at the site laboratory as per the procedure stipulated in the PWD Quality Control Manual at his own expense.

5.12. The Contractor is bound to carry out rectification works at his own cost, if results obtained during quality control tests either in the first- tier or second-tier do not comply with the standards. He shall also carry out rectification works, if any pointed out during technical audit done after completion of work.

5.13. The decision of the Engineer-in-charge regarding compliance of test results and rectification works to be done shall be final and binding on the contractor.

5.14. Payment for works which are to be re-done or rectified will be made only after the Engineer-in charge, after inspection, certifies in writing that the rectifications have been done satisfactorily and the results of the tests conducted after the rectification comply with the specified values.

5.15. Third party testing shall be done in an independent approved laboratory, if there is dispute due to difference in the test results of first- tier and second-tier testing or if any manipulated results are suspected. In case, certain specific tests cannot be carried out with the facilities available in the Contractor's site laboratory or the Department laboratories, third party testing shall be resorted to.

5.16. Engineer in charge shall decide whether third party testing is required to settle a dispute. His decision will be final and binding on the Contractor.

5.17. Third party tests, if approved by the Engineer-in charge shall be arranged by the Contractor in an approved laboratory as directed by the Engineer-in-charge. It is desirable that the test shall be done in the presence of the representatives of the Engineer-in charge and the Contractor to eliminate any further disputes. The expenses shall be met by the Contractor. The result obtained in the test shall be final and binding on both the Contractor and the Employer.

5.18. Wherever specified, the contractor shall also obtain manufacture's test certificate from the manufacturer/dealer and submit the same before executing the items listed in such certificates.

Contractor shall be responsible for the genuineness of the Manufacturer's Test Certificate obtained and submitted by him. He shall record a statement in the Manufacturer's Certificate that "This Certificate for supply of..... (Name of material with item no in BoQ) has been obtained by me from(Name and address of Manufacturer/Dealer) on (date of receipt of certificate) for the actual materials supplied at site.

5.19. The rate quoted by the bidder shall include all expenses for carrying out the first tier quality control tests. Expenses for third party tests as detailed in clause 7.4 of the introduction to QC Manual, if required, shall also be borne by the Contractor.

6. Drilling, cutting etc.

6.1. All cutting and drilling of walls or other elements of the building or structure for the proper entry/installation of inserts, boxes, equipment, etc. shall be carried out using electrically operated tools only. Manual drilling, cutting, chiselling, etc. shall be permitted with the written approval of Agreement authority. No structural member shall be cut or chased without the written permission of the Engineer-in-Charge. Cutting and drilling of structural members shall be carried out using vibration free diamond wire sawing and diamond drilling only with prior permission from the Engineer-in-Charge. The costs for procurement and using such equipment are deemed to be included in the Contract and no extra costs will be paid.

6.2. Horizontal cutting of walls or other supporting structural elements for laying pipe conduits, water supply lines etc., shall be avoided as far as possible. Conduits shall be laid through lintels or slabs or similar elements without affecting the structural safety. The conduits shall be connected to the required locations though vertical cuts in the walls or the supporting elements.

7. Approval by statutory bodies:

7.1. The Employer shall obtain Building Permit and Occupation Certificate after completion of work from the concerned Local self Government Institution, if applicable under this Contract. The Contractor shall be responsible for providing required notices to authorities and to obtain and retain with him at his own cost all other approvals from the statutory bodies pertaining to works under this tender and temporary structures to be constructed at site or equipments to be erected, labour, Employee Insurance, Provident Funds, Tax Departments. etc and any other approval required to facilitate performance of Contractor's work under the Contract till completion. Refusal by statutory authorities to issue any certificate or any other approvals due to the Contractor's failure to observe the relevant rules and regulations in connection with the construction in accordance with the sanctioned plans and/or specifications shall render the Contractor liable for damages and in addition, render him liable to obtain such certificates at his cost.

8. Name board and publicity

8.1. The contractor is not entitled to do any publicity on account of the Work. Contractor shall not put any hoarding, publish any advertisement, put any banner or circulate any pamphlet or adopt any other publicity methods except with prior written approval of the Engineer-in-Charge. A name board may be made and displayed by the Contractor at his own cost at the Site at some approved place. The drawing of the Name Board shall be got approved from the Engineer-in- Charge. The contents of the board shall be as follows

i. Name of the Work.

ii. Name of the Employer.

iii. Name of Agreement Authority with address

iv. Engineer-in-Charge and Field Engineers with contact details. v. Contracting Agency with contact details.

vi. Contract Price, Date of Start and Expected date of Completion

9. Water and Electricity

9.1. Contractor shall make his own arrangement for electricity and water for construction purposes. The water used for construction purpose shall be potable and tested once in every 6 (six) months. The source of water shall be approved by the Engineer-in-charge.

9.2. The contractor shall arrange the water good for construction and personal use at his own cost and shall be responsible for all further connections, pumps, pipes, storage facilities and all other things necessary to distribute and use services from this distribution point.

9.3. The electricity required for Construction Work shall be arranged by the Contractor from the authorities and/ or generators provided at site at his own cost. Contractor shall be responsible for all distribution points as may be required for the Work. The Contractor shall also make arrangement for alternative standby services at his own cost in the form of additional Generators of adequate capacity (day and night) so that there is no delay in progress of Work as per construction schedule submitted by him and approved by the Engineer-in-Charge. Contractor shall ensure adequate capacity of generators to support such load sharing with other vendors.

9.4. The Contractor shall prepare schematic distribution diagrams of distribution of electricity and water for construction purposes incorporating all safeties and get them approved by the Engineer-in- Charge, the distribution at site shall be in accordance to the approved schematic. The contractor shall ensure incorporation and strict implementation of all safety parameters, equipments, instruments and directions given by the Engineer from time to time in this regard.

9.5. The contractor shall install the temporary distribution lines for water and electricity ensuring

that work of other agencies / vendors is not interrupted or hampered. In case during the course of construction these lines foul or interrupt or hamper the work of other agencies / vendors, the contractor shall remove and relocate the service lines and relocate the same at his own cost within the time stipulated by the Engineer-in-Charge.

9.6. All statutory Fees, & miscellaneous expenses and costs for electric power and Water connection for construction purposes shall be borne by the Contractor.

10. Price Adjustment

No adjustment of the prices shall be allowed during the period of the contract for works which have a period of completion up to 18 (eighteen) months for any reasons whatsoever and the prices quoted by the Contractor shall be deemed to be fixed for the entire contract period. Rates once fixed shall be final and will be binding on the contractor.

11. Protection / preservation of trees:

11.1. Contractor shall take all measures necessary to ensure the protection and preservation of existing trees within / outside the boundary of the site. Contractor shall be responsible of any damage / casualty to the trees happening as a result of his working at site and for any action, claim, penalty or expenses imposed by the forest / any other department. No claim / payment shall be payable to the contractor on this account.

12. Sub-Contracting

12.1. No subcontracting shall be done without prior written approval of Agreement Authority. Maximum value of works to be sub-contracted is limited to 25% of Contract value. The value of a sub-contract and Provisional Sums items as and when awarded, should be intimated by the Contractor to the Engineer-in charge and it should also be certified that the cumulative value of the sub-contracts awarded so far is within the aforesaid limit of 25%. A copy of the contract between the Contractor and Sub-Contractor shall be given to the Engineer within 15 days of signing and in any case 7 days before the Sub Contractor starts the Work and thereafter the Contractor shall not carry any modification without the consent in writing of the Engineer. The terms and conditions of sub-contracts and the payments that have to be made to the sub- contractors shall be the sole responsibility of the Contractor. Payments to be made to such sub-contractors will be deemed to have been included in the Contract price. However, for major sub-contracts (each costing over Rs 50 lakhs), it will be obligatory on the part of the Contractor to obtain consent of the Engineer. The Engineer will give his consent after assessing and satisfying himself of the capability, experience and equipment resources of the sub-contractor. In case the Employer intends to withhold his consent, he should inform the Contractor within 15 days to enable him to make alternative arrangements to fulfil

his programme.

12.2. The Contractor shall provide sufficient superintendence, whether on the site or elsewhere, to ensure that the work to be carried out by a sub-contractor complies with the requirements of the Contract.

12.3. The proposed sub-contract terms and conditions shall impose on the sub-contractor such terms of the Contract as are applicable and appropriate to the part of the Works to be sub-contracted, to enable the Contractor to comply with his obligations under the Contract.

12.4. Notwithstanding any consent to sub-contract given by the Engineer, if in his opinion it is considered necessary, the Engineer-in-charge shall have full authority to order the removal of any sub-contractor from the Site or off-Site place of manufacture or storage.

13. Specialised Works to be carried out by licensed persons/firms:

13.1. Technically competent persons or firms holding valid licenses obtained from competent local authority/ proven experience record shall

only carry out any special works and service installations included in the scope of the Work. The list of such special works are available in the Government order No-GO(Ms) No-65/2015//PWD dated 24-7-2015.

14. Contractor's temporary works design

14.1. The Contractor shall, prior to commencing the construction of any temporary Works like earth protection works for deep excavations, temporary platforms/formworks for heavy concreting etc. , submit a certificate to the Engineer signed by him certifying that the temporary Works have been properly and safely designed and checked to carry the intended load without failure and that the Contractor has checked the effect of the Temporary Works on the Permanent Works and has found this to be satisfactory. The Employer and the Engineer shall not be responsible for any failure of such temporary structures and the Contractor is bound to take care of all expenses related to such failures, its rectification and subsequent remedial measures if any at no extra cost.

15. Deduction towards the cost of Bitumen if supplied by the Employer

15.1. The cost of bitumen will be recovered at the rate specified in contract data which is excluding cost of empty drum and empty drum of bitumen used on the work should be returned in good condition. If empty drum is not returned in good condition, the value of empty tar drum will be recovered at the rates specified in contract data as per rules. Also the rate for recovery of excess Bitumen used if any shall be double the issue rate or market rate whichever is more.

16. Contractors Technical Personnel at site

16.1. The contractor shall employ engineering personnel in addition to other supporting staff as detailed below for tenure of the contract for works supervision depending upon the cost of work.

a) a diploma holder (Civil Engineering) with sufficient practical experience for the proper execution and supervision of works costing from Rs. 5 lakhs to 75 lakhs

b) one Engineering Graduate(Civil Engineering) and one diploma holder (Civil Engineering) for works costing Rs.75 lakhs up to 150 lakhs and

c) For works from Rs.150 lakhs to Rs.250 lakhs-

i. Works Manager- 1no(Civil Engineering Graduate with minimum 3 yrs experience)95 95

ii. Site Engineers- 2 nos(one Civil Engineering graduate and one civil diploma holder with minimum 1 year experience)

d) For works from Rs.250 lakhs to Rs.500 lakhs-

i. Works Manager- 1no(Civil Engineering Graduate with minimum 5 yrs experience)

ii. Site Engineers- 3 nos (one Civil Engineering graduate and two civil diploma holder with minimum 2 year experience)

16.2. If the Contractor fails to employ the required engineering personnel at site as per the above, the Engineer-in charge shall impose a penalty for non-engaging the required personnel at site at the appropriate daily wages rates published by the Government (Finance Department - Enhancement of remuneration of daily wage personnel and persons on contract appointment) prevailing at the time of such non engagement on a per day basis. This amount shall be deducted from any moneys due to the contractor by way of this contract.

17. Contractors Equipments at site

17.1. The contractor shall own/hire/deploy the required tools and plants as specified in the Contract data for the satisfactory execution of the work.

18. Special Conditions for KVAT as per the Kerala Finance Act 2008

18.1. In case of Civil works awarded by Government of Kerala deduction towards KVAT at the prevailing rates(as provided in the Contract Data) will be done on the gross amount of bill payable for the bidders every time. The VAT amount will be retained by the Engineer-in charge when the bill for the work is passed for payment and the amount so retained shall be credited to the sales Tax Department. Necessary certificates in this regard shall be issued to the Contractor in due course.

19. Special condition towards contribution of Kerala Construction Workers

Welfare Fund Board.

19.1. Deduction towards the Kerala Construction Workers Welfare Fund Board contribution will be made at the prevailing rate(as provided in the Contract Data) from any bill amount which includes cost of departmental materials and hire charges of departmental tools and plants . This amount shall be remitted to K.C.W.W.F. by the Engineer-in charge within 15 days of the payment to the Bidder.

Necessary

certificates in this regard shall be issued to the Contractor in due course.

20. ADVANCE PAYMENTS

20.1. Mobilisation Advance

20.1.1. This clause shall be applicable only when so provided in 'Contract Data'.

20.1.2. Mobilization advance, shall not exceed 10% of the Contract Price may be given, if applicable and requested by the contractor in writing within one month of the order to commence the work. Such advance shall be in two or more instalments as provided in the contract data. The first instalment of such advance shall be released by the Engineer-in-charge to the contractor on a request made by the contractor to the Engineer in- Charge in this behalf. The second and subsequent instalments shall be released by the Engineer- in- Charge only after the contractor furnishes a proof of the satisfactory utilization of the earlier instalment to the entire satisfaction of the Engineer-in-Charge.

20.1.3. Before any instalment of advance is released, the contractor shall produce an unconditional Bank Guarantee from a Nationalised or Scheduled Bank for the amount equal to the amount of advance and valid for the contract period. This Bank Guarantee shall be kept renewed from time to time to cover the balance amount and likely period of complete recovery.

20.1.4. Mobilisation advance, if paid, shall be deducted from the next immediate interim payment at the rate of 25% of the amounts of all Interim Payment Certificates until such time as the advance has been repaid, always provided that the advance shall be completely repaid before 80% completion of work.

20.2. Secured Advance for non-perishable materials

20.2.1. This clause shall be applicable only for the items so provided in 'Contract Data'.

20.2.2. The contractor, on signing an indenture in the form to be specified by the Engineer-in- Charge, shall be entitled to be paid during the progress of the execution of the work up to 75% of the assessed value of any materials which are in the opinion of the Engineer-in- Charge non-perishable, non-fragile and non-combustible and are in accordance with the contract conditions and which have been brought on the site in connection therewith and are adequately stored and/or protected against damage by weather or other causes.

6. DISCLAIMER

- i. It does not constitute an invitation to offer or an offer in relation to the transaction.
- ii. This document does not constitute any contract or agreement of any kind whatsoever.
- iii. Neither the information in this document nor any other written or oral information in relation to the requirement or otherwise is intended to form the basis of or the inducement for any investment activity or any decision to enter into any contract or arrangement in relation to the transaction and should not be relied on as such. Neither MGUIF, Kottayam nor their employees or advisors shall be liable to any interested party or any Entity under any law including the law of contract, tort, the principles of restitution or unjust enrichment or otherwise for any loss, expenses or damage which may arise, or be incurred, or suffered, in connection with this document, or any matter that may be deemed to form part of this document, or any other information supplied by or on behalf of MGUIF, Kottayam or their employees or advisors or otherwise arising in any way from the selection process mentioned herein.
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Chairman& Managing Director, MGUIF

