

TENDER DOCUMENT

REPAIRS AND RENOVATIONS

AT

SHYAMA PRASAD MUKHERJI COLLEGE

FOR

SHYAMA PRASAD MUKHERJI COLLEGE (For women)

PUNJABI BAGH (WEST)

NEW DELHI – 110026

Employer

SHYAMA PRASAD MUKHERJI COLLEGE (For women)

PUNJABI BAGH (WEST)

NEW DELHI – 110026

Architect :

M/s SHIRIESH MALPANI AND ASSOCIATES

B – 10, MAHARANI BAGH

NEW DELHI - 110065

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PRELIMINARIES

1. **Name of Work.** : REPAIRS AND RENOVATIONS AT SHYAMA PRASAD MUKHERJI COLLEGE
2. **Name of Employer** : SHYAMA PRASAD MUKHERJI COLLEGE (for Women) PUNJABI BAGH (WEST), NEW DELHI – 110026.
3. **Site of Work** : SHYAMA PRASAD MUKHERJI COLLEGE (for Women) PUNJABI BAGH (WEST), NEW DELHI – 110026.
4. **Scope of work** : CIVIL ARCHITECTURAL & ACOUSTICAL REPAIR & RENOVATION WORKS
5. **Architects** : M/s SHIRIESH MALPANI AND ASSOCIATES
B – 10, MAHARANI BAGH, NEW DELHI – 110065
6. **Estimated cost of works** : Rs. 40,47,447.00 (Forty Lakhs Forty Seven Thousand Four Hundred Forty Seven Only)
7. **Time of Completion** : 3 MONTHS
8. **Cost of Tender documents** : Rs. 1000.00 (One Thousand only)
To be submitted alongwith the tender in the form of Bank Draft drawn in favour of “Principal,Shyama Prasad Mukherji College for women “ Payable at New Delhi
9. **Place of issue of Tender** : College website- <http://sPMC.du.ac.in>
10. **Date of start of Issuing of Tender** : 30th March 2017
11. **Date & Time of receipt of Tender** : 20th April 2017 upto 3.00 PM
12. **Place of receipt of Tender** : Adm. office of Shyama Prasad Mukherji College, Punjabi Bagh, New Delhi – 110026
13. **Performance Security Deposit** : **Five Percent** of the initial Contract Price to be submitted as Per fiscal aspect
14. **Retention Money** : **Five Percent** of the value of interim bills subject to **Maximum of five percent** of the Contract Price. As per Fiscal aspect.
15. **Defects Liability per** : **12 months** from the date of issue of the Virtual Completion Certificate
16. **Penalty for Delay** : As mentioned in Appendix I
17. **Varied Items** : Refer clause 51.1
18. **Earnest Money Deposit (EMD)** : **Rs. 2,00,000.00 (Two Lakhs only)**
(To be submitted in the form of Bank Draft drawn in favour of “Principal, Shyama Prasad Mukherji College for women” payable at New Delhi)

NOTICE INVITING TENDER

- 1.1 Sealed item rate tenders are invited on behalf of the Employer from recognised, experienced and enlisted contractors of CPWD, MES, P&T, MCD, NDMC and working contractors of the Delhi University contractors with adequate financial and technical manpower resources and tools, plant and machinery for the work as follows: Repairs and Renovations at Shyama Prasad Mukherji College.
- 1.2 Tender document (which shall include specifications and schedule of quantities, NIT and General and Special conditions of contract with appendices, etc) can be obtained from the place as mentioned in the preliminaries sheet given above.
- 2.1 **SCOPE OF WORK :** ' Scope of Work' is broadly detailed in preliminaries at Page No 2
- 2.2 Only those Contractor who have adequate financial and technical manpower resources, and requisite tolls, plant and machinery and have acquired a proven track record consistent over the last 5 years to produce quality work and have requisite experience in construction similar works within the stipulated time period should submit tenders. The tenderers, must submit along with tender document as complete schedule of tolls, plant and machinery they propose to employ on the work: inclusive of the names, qualification and experience of project manager & senior personnel/ Engineers / supervisors proposed for the project.
- 2.3 The Tenderers are advised to inspect the site, examine the location and type of works to be carried out and make investigations regarding the extent of works, its scope and conditions under which the work is to be executed. No claim for any extra payments, of any kind, in this respect shall be entertained: all such bidder clarifications, if any, are to be obtained prior to bid submission.
- 2.4 The bid document, is to be returned duly signed by a authorised signatory of the Tenderer. If the contractor does not intend to tender, he shall return the blank document and there shall be no refund on this account. No alteration of any kind shall be made in the bid documents; however if the Tenderer deems it essential to explain any aspect, which has not been brought out at the per-bid meeting, he may do so through a separate document.
- 2.5 Rate shall be quoted, both in figures and words. Any erasures and alterations must be attested by authorised initials. In the case of conflict between figures and words, then words shall prevail. If it is found that arithmetical corrections are required in the bid, the revised final price shall be binding on the bidder.
- 2.6 The Tenderer is required to produce documents regarding partnership and/or the Company (Memorandum & Articles OF Association) along with tender document.
- 2.7 On the written acceptance of the tender bid by the Employer vide issuance of 'Letter of Acceptance (LOA) the Tenderer shall be required to enter into formal agreement to commence the work within 7 days of receipt of LOA. Failure on the part of the contractor to do so shall result in automatic termination of the Letter of Acceptance and the Employer entrusting the work to any other agency. No claim shall be entertained whatsoever on such grounds of cancellation.
- 2.8 Earnest money deposited by the Contractor shall be forfeited in case of termination of Letter of Acceptance under clause 2.7 above.

- 2.9 The Employer reserves the right to reject any or all of the tender bids, without assigning any reason for so doing and the tenderer shall have no claims, if the same happens.
- 2.10 Earnest money deposit of the unsuccessful Tenderers shall be refunded within 30 (thirty) days of issuance of the LOA. This deposit shall not bear any interest.
- 2.11 Any bid with condition deviating from those referred to herein will be liable to be rejected.
- 2.12 Tenders issued to M/s.....
On

ITEM RATE TENDER & CONTRACT FOR WORKS

GENERAL RULES & DIRECTIONS

RULES:

1. The 'Preliminaries' enclosed with this tender identify the work to be carried out as well as the date for submitting and opening tenders and the time allowed for carrying out the work: also the percentage at which the Performance security and Security Deposit shall be deducted from the bills etc. of the successful tenderer. Copies of the specifications, designs and drawings and the schedule of quantities of the various broad descriptions of work and any other documents required in connection with the work signed for the purpose of identification by the Engineer-in-Charge shall be open for inspection by the Tenderer at the office of the Engineer-in-Charge as mentioned in the preliminaries at Page No 1.
2. In the event of the tender being submitted by firm, it must be signed separately by each partner thereof, or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney, authorizing him to do so, such power of attorney to be produced with the tender and it must disclose the firm is duly registered under the Indian Partnership Act.
3. Receipts for payments made on account of a work, when executed by a firm must also be signed by the several partners, except where the Contractor are described in their tender as firm, in which case the receipts must be signed in the name of the firm by one of the partners or by some other person having the authority to give effectual receipts for the firm.
4. Any person who submits a tender shall quote item wise rates stating at what rate he is willing to undertake each item of work. Tenders who propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other condition of any sort will be liable to negotiations. Tenders shall have the name of the work to which they refer written outside the envelopes.
5. The rate(s) and/or amount(s) must be quoted in decimal coinage in Rupees clearly, along with rates in figures.
6. The Employer inviting tenders shall have the right of rejecting all or any of the tenders and shall not be bound to accept the lowest tender.
7. The tenders shall maintain secrecy of tender documents, drawings or any other record connected with the work given to them. The tenderers shall return all drawings given to them along with the bids.
8. In case of discrepancy between the rates quoted and the amount calculated of the respective item, the rate quoted by contractor in the item shall be considered and not the amount stated therein. The rate quoted in words will be correct basis and not the rate shown in figures in case of discrepancy between them.
9. If it is found that the tender is not submitted in a proper manner or contains too many corrections or absurd rates or amount the Employer may reject the same.

10. The contractor shall execute all the works referred in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered.
11. The tenders should carefully examine all drawing/documents and in case of any doubt, must obtain the clarifications which will affect his tender as no allowance, whatsoever, will be made for any alleged ignorance thereof.
12. The quantities given in the schedule of quantities are provisional and are meant to indicate the intent or the work and provide a uniform basis for tendering. Contractor shall be paid for the actual quantity or work executed by him in accordance with the contract documents at the contractor rate. Therein no limit to variation for individual items. The Employer reserves the right to increase or decreases any of the quantities or to totally omit any items of work and the contractor shall not claim any extra or damages on the grounds subject to the condition that the "Contract Value" is not varied by more than 50% (Fifty percent) of the contact price. Any error in description or in quantity or omission of item in the schedule of quantities shall not vitiate this contract but shall be deemed to be a variation required by the Engineer-in-Charge.
 - 12.1.1 The rate for each item of work included in the schedule of quantities (irrespective of the description of the item) shall unless expressly stated otherwise be the full cost in place and if full working condition and include cost of:
 - a) All materials, fixing materials, accessories, operations appliances tools, plant equipment, transport, labour and incidentals, required in preparation for in the full and entire execution and completion of the works called for in item and as per specification and drawings completely. The absence of the terms "providing" "supplying" and such in the nomenclature of the items shall not vitiate this intent.
 - b) Waste on materials and labour.
 - c) Loading, transporting, unloading, handling/double handling hoisting to all levels, setting, fitting and fixing in position protecting, disposal of debris and all other labour necessary in and for the full and entire executions and to fully complete in job in accordance with the contract documents, good practice and recognised principles. This also includes materials, appliance, equipment and accessories not specifically mentioned here in or noted in the drawing/documents as being furnished or installed but which are necessary and customary to make complete installation as described herein properly converted in efficient working etc.
 - d) Liabilities, obligations and risks rising out conditions of contract.
 - e) All requirements of specifications, whether such requirements are mentioned in the item or not. The specifications and drawings where available are to be read as complimentary to and part of the schedule of quantities and any work called for in one shall be taken as required for all.
 - f) All taxes and duties including sales tax, excise, octroi, royalty, toll tax, seigniorage charges. Contributions under labour laws such as ESI contributions are included in the rates. Further, the rates and sums quoted by the contractor shall include service tax if any
 - g) The contractor shall meet al compliances as required under building and other construction workers (Regulation of Employment and conditions of service) Act 1996.

- 11.1.2 The contractor shall be paid for the actual quantity of works executed by him in accordance with the drawings at the contract rates.
- 11.1.3 This schedule shall be full priced and the extension and totals duly checked. The rates for all items shall be filled in INK. The entries under amount column shall be rounded off to nearest Rupees.
- 11.1.4 No alteration whatsoever is to be made to the text or quantities of this scheduled of quantities unless such alteration is authorized in writing by the Engineer-in-charge. Any such alterations, notes or additions shall, unless authorised in writing be disregarded when tender documents are considered.
- 11.1.5 In the event of an error occurring in the amount column of the schedules as a result of wrong extension of unit rate and quantity, the unit rate quote by the tenderer shall be regarded as firm and the extensions shall be amended on the basis of the unit rats. The tenderers shall be provided a soft copy of the tender schedule of quantities. The tenderer should fill the rates and submit the soft copy along with the bid also along with the hard copy.
- 11.1.6 Unless otherwise stated all measurements shall be taken in accordance with the procedure laid down by Central Public Works Department and Indian Standard Method of Measurement of building and Civil engineering IS 1200, in that order.
- 11.1.7 Any error(s) in description or in quantity of omission of items from the contract schedule by the Employer shall not vitiate this contract but shall be corrected and deemed to be variation required by the Engineer-in-Charge.
- 11.1.8 The clause in the PREAMBLES to the various chapters and sections of the schedule shall be equally and fully applicable to similar items included under different chapters and sections, unless specified otherwise in the nomenclature of the item.
- 11.1.9 Rates have been called for a number of items of works, as alternatives, which for the present do not form part of the total value of tender. The rate for these items shall be quoted, with due care so that in the event of choice of an alternative item of work the said rate shall form part of the contract and shall not vitiate the contract in any way.
- 11.1.10 The contractor shall start procurement and bringing of Materials/Equipment to the site on the basis of Schedule of Quantities. However, the final quantities of the material/equipment to be procured and mobilized shall be based on drawings approved of construction and as per actual measurement at site.
- 11.1.11 THE term “approved equivalent” shall mean equivalents as approved in writing by the Engineer-in-Charge.
- 11.1.12 All works below foundation level marked in section shall be taken to be work upto plinth floor. The super structure work generally stats at the plinth level and includes work upto the top most roof level.
- 11.1.13 The rates quoted by the contractor for the various items in the schedule shall cover all leads, lifts, locations, etc. as called for the Drawings and nothing extra shall be paid for additional lifts, leads for locations, (unless specifically provided otherwise) irrespective of the description/nomenclature of the items.

11.1.14 If two or more items of work with same nomenclature appearing in the same of different sections of the schedule of quantities have different unit rates, then the lower unit rate shall be payable.

11.1.15 The quoted rates of the Contractor are deemed to include the cost of fulfilling the obligations defined in the General, Special Conditions of Contract, Specifications and elsewhere in the Contract.

Submission of Tender

To,
Shyama Prasad Mukherji College (for women)

Sub: Maintenance, Repairs and Renovations works in Auditorium, B – ED lecture halls at Shyama Prasad Mukherji College (for women) Punjabi Bagh (west), New Delhi – 110026.

Dear Sir,

I/We tender for execution works of above said building as per Tender documents (which shall include Notice Inviting Tender, General and Special Conditions of Contract, Schedule of Quantities, Specification for materials and workmanship as mentioned in CPWD Specification (latest editions), Drawings, Time schedule of completion of job, and other documents and papers referred to in any of the foregoing or relating thereto) at the Schedule of Rates quoted by me/us for the whole work.

2. I/We shall deposit Performance Security deposit in the form of Demand Draft as mentioned in the Preliminaries at Page 1 and we accept making of deduction from our Running Deposit Bill towards security deposit, as mentioned in the preliminaries at Page No 1.

3. Should further undertake to keep my/our tender offer open for a period of ninety days from the schedule date of opening of tender.

Dated the Day of 201.....

Witness:

Name in Block Letters:

Address:

Yours faithfully,
Signature of Tenderer(s) with the seal of the firm.

Named and Designation of authorised person.
Signing the Tender on behalf of the Tenderer(s)

AGREEMENT

This agreement made on day of Between M/s..... (hereinafter referred to as "...Employer...." which term of expression unless it be repugnant to the subject or context thereof, shall include its successors and assigns) of One Part.

And

M/s (hereinafter called "Contractor" which expression unless it be repugnant to the subject or context thereof, shall include its successors and permitted assigns) of the other part. The Employer and the Contractor are individually hereinafter called as party and collectively as Parties.

WHEREAS the Contractor had submitted its Bid with and has accepted, vide Letter No dated the Bid submitted by the Contractor for the execution and completion of **WORKS** and the remedying of any defects therein (hereinafter referred to as the "**Works**") for the

WHEREAS all the terms and conditions contained in Section I & II of the Tender Documents i,c "General Conditions of Contract & Special Conditions of Contract" shall also be applicable for the purpose of the present Contract.

AND WHEREAS the Contractor has gone through the terms and conditions contained in the Conditions of Contract and on relying upon the same the Contractor has agreed to execute the Contract.

Now in consideration of the mutual promises set forth below, the parties agree as follows:

1. In the Contract words and expression shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinabove referred to, and they shall be deemed to form and be read and construed as part of the Contract.
2. In Consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants to execute and complete the works and remedy any defect therein in conformity in all aspects with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein the Contract Price or such other sum as may become payable under the provisions of the Contract at the time and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be read and construed as part of the agreement (this agreement together with the following documents shall collectively constitute the "**Contract**")
 - i. Letter of Acceptance;
 - ii. Notice to Proceed with the works;
 - iii. Contractor's Bid;
 - iv. All Amendments to contract;

- v. Contract Data;
- vi. Conditions of Contract (including Special Conditions of Contract);
- vii. Forms of Securities (including Bank Guarantee, Performance Bank Guarantee, Bank Guarantee for Advance Payment)
- viii. Specifications as mentioned in CPWD Specifications (latest edition);
- ix. Bill of Quantities;
- x. Preambles
- xi. Any other document listed in the Contract Data as forming part of the contract.
- xii. All correspondence carried out between the Contractor and in connection with this agreement

5. The Contract shall become effective on the date of execution of the Contract.
6. Price: As agreed between the Parties the initial Contract Price is Rs.....
Only).
7. Taxes: The Contract Price is inclusive of all Taxes, as may be applicable from time to time,
8. Assignment: The Contractor shall not assign in the Contract or any right, benefit, obligation, or interest therein or thereunder without the prior written consent of the Employer. The Employer, however, shall have the right to assign, transfer, its rights and/or obligation under the Contract (including under an securities, guarantees etc, provided by the Contractor pursuant to the Contract) to any of its affiliates, associated, group companies, lenders and/or any other entity, from time to time, without the prior approval of or any prior intimation to the Contractor.
9. The Contract may be executed by facsimile and in any number of counterparts, each of which will be deemed and original, but all of which will constitute one and the same instrument.

In witness whereof the Parties thereto have caused the Contract to be executed on the date written above.

Signed for and on behalf of:

Name:
Designation

Signed for and on behalf of:

Name:
Designation

Witness:

Witness:

Name:

Name:

Address:

Address:

SECTION I

GENERAL CONDITIONS OF CONTRACT

PART I - GENERAL CONDITIONS

1 DEFINITIONS AND INTERPRETATION

Definitions

1.1. In the Contract (as hereinafter defined) the following words and expressions shall have the meanings hereby assigned to them, except unless otherwise defined or where the context otherwise requires:

- (a) (i) "Employer" shall have the meaning ascribed thereto in the recitals to the Contract.
- (ii) "Contractor" shall have the meaning ascribed thereto in the recitals to the Contract.
- (iii) "Subcontractor" means any person to whom a part of the Works, including supply of any equipment or materials or provision of any service, is subcontracted directly or indirectly by the Contractor, and includes its legal successors or permitted assigns.
- (iv) "Architect" means the architect engaged by the Employer from time to time and notified to the Contractor. (Name and address of the person presently engaged as Architect given in preliminaries of this document at page 1).
- (v) "Project Manager's Representative" shall have the meaning ascribed thereto in Sub-Clause 2.2.
- (b) (i) "Contract" means the agreement executed between the Employer and the Contractor on the _____ day of _____, for the execution of the Works as described herein and includes the schedules and appendices attached hereto, as the same may be amended or modified from time to time.
- (ii) "Specifications" means the specifications of the Works, in Schedule to the Contract, as may be modified or amended in accordance with Clause 50.
- (iii) "Drawings" means all drawings, calculations and technical information of a like nature provided by the Engineer-in-Charge / Architect to the Contractor under the Contract and all drawings, calculations, samples, patterns, models, operation and maintenance manuals and other technical information of a like nature submitted by the Contractor and approved by the Engineer-in-Charge in accordance with the Contract.
- (iv) "Schedule of Quantities" means the priced and completed schedule of quantities forming part of the Contract.
- (v) "Tender" means the Contractor's priced offer to the Employer for the execution and completion of the Works and the remedying of any defects therein in accordance with the provisions of the Contract.
- (vi) "Letter of Acceptance" means the formal acceptance by the Employer of the Tender.
- (c) (i) "Commencement Date" means the date upon which the Contractor receives notice to commence issued by the Employer/ Engineer-in-Charge pursuant to Clause 40.
- (ii) "Time for Completion" shall have the meaning ascribed thereto in **Sub-Clause 42.1**.

- (d)
 - (i) "Tests on Completion" means the Tests specified in the Contract or otherwise agreed by the Engineer-in-Charge and Contractor which are to be performed by the Contractor prior to the Virtual Completion of the Works.
 - (ii) "Virtual Completion Certificate" means the certificate issued pursuant to Clause 47.
 - (iii) "Defects Liability Certificate" means the certificate issued under Sub-Clause 61.1 upon the expiry of the Defects Liability Period and the rectification of all defects notified during the said period.
- (e)
 - (i) "Contract Price" shall have the meaning ascribed thereto in Sub-Clause 59.1 of the Contract. The initial Contract Price shall be the sum stated in the Letter of Acceptance.
 - (ii) "Retention Money" means the aggregate of all moneys retained by the Employer pursuant to Sub-Clause 59.2(b).
- (f)
 - (i) "Works" means the Permanent Works and the Temporary Works and all such other works, services and equipment that the Contractor is required to provide pursuant to the Contract and is necessary or appropriate for the completion of the Works in accordance with the Contract, including (i) procurement, transport, inspection and storage of all construction and other materials (ii) provision of labour and supervision, all as described in accordance with the Contract and including any work which is the subject of a Variation; (iii) services for the construction, installation and incorporation of materials and all other services and the provision of personnel for such services necessary, appropriate or required for the successful completion of the Works and issuance of the Virtual Completion Certificate and the performance of the Contractor's obligations during the Defects Liability Period.
 - (ii) "Permanent Works" means the Permanent Works to be executed (including Plant) in accordance with the Contract.
 - (iii) "Temporary Works" means all Temporary Works of every kind (other than Contractor's Equipment) required in or about the execution and completion of the Works and the remedying of any defects therein.
 - (iv) "Plant" means machinery, apparatus and the like intended to form or forming part of the Permanent works.
 - (v) "Contractor's Equipment" means all appliances and things of whatsoever nature (other than Temporary Works) required for the execution and completion of the Works and the remedying of any defects therein, but does not include Plant, materials or other things intended to form or forming part of the Permanent Works.
 - (vi) "Section" means a part of the Works specifically identified in the Contract as such.
 - (vii) "Site" means the location designated by the Employer where the Works are to be executed.
- (g)
 - (i) "cost" means all expenditure properly incurred or to be incurred, whether on or off the site, including overhead and other charges properly allocable thereto but does not include any allowance for profit.

- (h) (i) "Working Day" means any day from Monday to Saturday (both days inclusive), excluding all National Holidays as notified by the Central / State Government. The work may be permitted to be carried out on any other days only with the prior permission of the Employer / Engineer-in-Charge.
- (ii) "Normal Working Hours" means eight hours per working day. The specific timing would vary depending upon the season.
- (i) (i) "**Applicable Law**" means all applicable laws, including rules, directions, guidelines, regulations and notifications made thereunder and having the force of law, including policies and administrative and departmental regulations and guidelines of governmental authorities, and judgments, decrees, injunctions, writs and orders of any court applicable to the Contract and the exercise, performance and discharge of the respective rights and obligations of the Parties hereunder, as may be in force and effect during the subsistence of the Contract.
- (ii) "**Contractor's Representative**" shall have the meaning ascribed thereto in Sub-Clause 15.1.
- (iii) "**Running Account Bills**" shall have the meaning ascribed thereto in Sub-Clause 59.1.
- (iv) "**Master Construction Schedule**" shall have the meaning ascribed thereto in Sub-Clause 14.1.
- (v) "**Mobilization Advance**" shall have the meaning ascribed thereto in Sub-Clause 59.12.
- (vi) "**Mobilization Advance Guarantee**" shall have the meaning ascribed thereto in Sub-Clause 59.12.
- (vii) "**Nominated Subcontractors**" shall have the meaning ascribed thereto in Sub-Clause 58.1.
- (viii) "**Project**" shall mean the Repairs and Renovations at Shyama Prasad Mukherji College Campus, Punjabi Bagh (west), New Delhi – 110026.
- (ix) "**Taxes**" means any and all taxes, duties, cess, imposts, surcharges, including taxes on gross receipts, sales, turn-over, value added, use, manufacture, consumption, property, income, franchise, capital, occupational, license, excise and documentary stamps taxes, octroi, customs and other duties, assessments, or fees, however imposed, withheld, levied, or assessed by any country or government subdivision thereof or any other taxing authority, including all sales tax, value added tax, works contract tax, import or customs duty, excise duty, municipal taxes and other taxes and contributions imposed or measured by any taxing authority upon the sale, purchase or use of materials, supplies, equipment, services or labour furnished as well as taxes payable by a Subcontractor or any of their employees.
- (x) "**Variations**" shall have the meaning ascribed thereto in Sub-Clause 50.1.
- (xi) "**Virtual Completion**" shall have the meaning ascribed thereto in Sub-Clause 47.1.

2 PROJECT MANAGER AND PROJECT MANAGER'S REPRESENTATIVE

2.1 Authority

- (a) The Employer/ Engineer-in-Charge shall be responsible for the overall monitoring of the Project including but not limited to performance of the Contractor's obligations under the Contract and coordinating between the Contractor and the Employer, the Architect, and other consultants who may be appointed by the Employer in relation to the Project. The Engineer-in-Charge shall have authority specified in the Contract and shall carry out and cause to be carried out such duties in issuing certificates, decisions, instructions and orders as are specified in the Contract to be carried out by the Employer. Except to the extent otherwise stated in the Contract (including the Special Conditions of Contract) or notified to the Contractor by the Employer from time to time, the Engineer-in-Charge shall have full authority to act on behalf of the Employer for all purposes in connection with the Contract.
- (b) In respect of the matters set out in the Special Conditions of the Contract, the Engineer-in-Charge shall be required to obtain the specific approval of the Employer before exercising any authority.
- (c) Except as expressly stated in the Contract, the Engineer-in-Charge shall have no authority to:
 - (i) Relieve the Contractor of any of his obligations under the Contract; or
 - (ii) Amend, alter, modify or waive any provision or term of the Contract;
 - (iii) Waive any failure on the part of the Contractor.

3 ASSIGNMENT AND SUBCONTRACTING

3.1 Assignment of Contract

The Contractor shall not, without the prior written consent of the Employer, assign the Contract or any part thereof, or any benefit or interest therein or thereunder, otherwise than by a charge in favour of the Contractor's bankers of any moneys due or to become due under the Contract.

Provided that such assignment shall not relieve the Contractor from the full and final responsibility and liability under the Contract or Works or from active superintendence of the Works.

4.1 Subcontracting

The Contractor shall not subcontract the whole or any part of the Works without the prior consent of the Employer. Any such consent shall not relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any Subcontractor, his agents, personnel, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor.

Provided that the Contractor shall not be required to take such consent for:

- (a) Provision of labour;
- (b) Purchase of materials which are in accordance with the standards specified in the Contract;
or
- (c) Subcontracting any part of the works to a Nominated Subcontractor.

In respect of all Subcontractors, the Contractor shall settle all the bills/payments due to the Subcontractor/s in a timely manner to ensure uninterrupted progress of the Works and the

Employer shall not be liable for making any such payments to such Subcontractor/s; provided that if the responsibility of any such payments (including but not limited to any payments to be made to Nominated Subcontractors) is transferred to the Employer by operation of law, the Employer shall have the right to recover all such payments (with any additional costs incurred by the Employer in respect thereof) from the Contractor under the Contract.

4.2 Assignment of Subcontractor's Obligations

In the event of a Subcontractor having undertaken towards the Contractor in respect of the Works executed, or goods, materials, Plant or services supplied, by such Subcontractor, any continuing obligation (including any warranty obligation) extending for a period exceeding that of the Defects Liability Period under the Contract, the Contractor shall after the expiration of such Defects Liability Period or upon the earlier termination of the Contract assign to the Employer, the benefit of such obligation for the unexpired duration thereof.

5 CONTRACT DOCUMENTS

5.1 Priority of Contract Documents

The several documents forming the Contract are to be taken as mutually explanatory of one another, but in cases of ambiguities or discrepancies the same shall be explained and adjusted by the Project Manager who shall thereupon issue to the Contractor instructions thereon. Unless otherwise provided in the Contract, the priority of the documents forming the Contract shall be as follows:

- (a) larger scale drawings in preference to smaller scale drawings, and figured dimensions in preference to scale; and
- (b) Special Conditions of Contract in preference to the General Conditions of Contract.
In the case of a discrepancy between the Schedule of Quantities, the Specifications and the Drawings, the following order of preference shall be observed:
 - (1) The description of Schedule of Quantities;
 - (2) The Drawings;
 - (3) The Specifications mentioned in the Contract;
 - (4) The specifications of the Central Public Works Department (latest);
 - (5) The Indian Standard Specification of the Bureau of Indian Standards (B.I.S.);
 - (6) Sound engineering practice.

6.1 Custody and Supply of Drawings, Specifications and other Documents

The Employer shall have sole right, title and interest in Drawings, Specifications and other documents provided to the Contractor by or on behalf of the Employer. One copy of the said documents shall be furnished to the Contractor for his own use free of charge. The Drawings, Specifications and other documents provided by the Employer constitute proprietary and confidential information and unless it is strictly necessary for the purpose of the Contract, and subject to **Clause 70**, the said documents provided by the Employer shall not, without the consent of the Employer, be communicated to a third party by the Contractor. Upon issue of the Defects Liability Certificate, the Contractor shall return to the Employer all of the said documents provided under the Contract.

6.2 One Copy of Drawings to be kept on Site

One copy of the Drawings provided to, or supplied by, the Contractor in accordance with Clause 6.1, shall be kept by the Contractor on the Site and the same shall at all reasonable times be available for inspection and use by the Employer/the Engineer-in-Charge and by any other person authorised by the foregoing in writing.

6.3 Disruption of Progress

Based on the requirements of the Programme of Works, as mentioned in Clause 14.1, the Contractor shall give not less than 28 days advance notice to the Engineer-in-Charge, with a copy to the Employer, whenever planning or execution of the Works is likely to be delayed or disrupted unless any further drawing or instruction is issued by the Engineer-in-Charge within a reasonable time. The notice shall include details of the drawing or instruction required and why and by when it is required and of any delay or disruption likely to be suffered if it is late and such notice shall be a condition precedent to the Contractor's entitlement to claim any extension of time under Clause 6.4.

6.4 Delay of Drawings

If, by reason of any failure or inability of the Engineer-in-Charge to issue, within a time reasonable in all the circumstances, any drawing or instruction for which notice has been given by the Contractor in accordance with Clause 6.3, the Contractor suffers delay then the Engineer-in-Charge shall, on receipt of written request by the Contractor and after due consultation with the Employer and Contractor, determine any extension of time to which the Contractor may be entitled under Clause 43 and shall notify the Contractor accordingly, with a copy to the Employer.

6.5 Failure by Contractor to Submit Drawings

If the failure or inability of the Engineer-in-Charge to issue any drawings or instructions is caused in whole or part by the failure of the Contractor to submit any drawings, specifications or other documents which he is required to submit under this Contract, the Engineer-in-Charge shall take such failure by the Contractor into account when making his determination pursuant to sub-clause 6.4; provided that in case such delay by the Engineer-in-Charge is on account of reasons solely attributable to the Contractor, the Employer/the Engineer-in-Charge shall be entitled to decline any extension in time for performance of the Works by the Contractor.

6.6 Errors and Inconsistencies in Drawings

The Contractor shall, before proceeding with the Works or any parts thereof based on any Drawings provided by or on behalf of the Employer, examine the Drawings. Errors or inconsistencies discovered in the Drawings shall be promptly brought to the attention of the Engineer-in-Charge by the Contractor, for interpretation or correction. The Contractor shall not be entitled to claim any losses or extension of time on account of losses/delays alleged to have been caused to the Contractor by such errors or inconsistencies, as a result of the Contractor proceeding with the any portion of the Works that may be affected before interpretation by the Engineer-in-Charge. Modifications and changes to be made in the Drawings due to site and local market conditions shall likewise be brought to the attention of the Engineer-in-Charge within 5 days of the issue of such Drawings giving details of the modification or change required and of why and by when it is required, and of any delay or disruption likely to be suffered if it is late. If the

Contractor fails to intimate the Engineer-in-Charge of any errors or discrepancies in the Drawings, it shall be deemed to constitute an acceptance by the Contractor of such Drawings as being fit and proper for the implementation of the Works.

7.1 Supplementary Drawings and Instructions

The Engineer-in-Charge shall have authority to issue to the Contractor from time to time, such supplementary Drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and completion of the Works and the remedying of any defects therein. The Contractor shall carry out and be bound by the same. The Contractor agrees and acknowledges that the Works and Drawings may be subject to further detailing by the Engineer-in-Charge the Architect/the Employer, from time to time (including through the issuance of supplementary Drawings), and the Contractor shall not be entitled to any additional compensation or extension of time for the same to the extent such detailing does not constitute a Variation.

7.2 Permanent Works Designed by the Contractor

Where this Contract expressly provides that part of the Permanent Works shall be designed by the Contractor, he shall submit to the Engineer-in-Charge for approval:

- (a) Such Drawings, Specifications, calculations and other information as shall be necessary to satisfy the Engineer-in-Charge as to the suitability and adequacy of that design, and
- (b) Operation and maintenance manuals together with drawings of the Permanent Works as completed, in sufficient detail to enable the Employer to operate, maintain, dismantle and reassemble and adjust the Permanent Works incorporating that design.

The Works shall not be considered to achieve Virtual Completion in accordance with Clause 47 until such operation and maintenance manuals, together with drawings on completion, have been submitted to and approved by the Engineer-in-Charge.

7.3 Responsibility Unaffected by Approval

Notwithstanding anything to the contrary in the Contract, the submission of any Drawings and operation and maintenance manuals by the Contractor, any approval or failure to approve by the Engineer-in-Charge, in accordance with Sub-Clause 7.2, or the review, raising of queries on, making of objections to, making of comments, suggestions or recommendations or failure to approve or convey its observations on any Drawings or the operation and maintenance manuals shall not relieve the Contractor in any manner whatsoever of any of his responsibilities under the Contract.

GENERAL OBLIGATIONS

8.1 Contractor's General Responsibilities

The Contractor shall, with due care and diligence, design (to the extent provided for by the Contract), execute and complete the Works and remedy any defects therein in accordance with the provisions of the Contract. The intent of the Contract is to include within the Contractor's scope of Works the obligation to perform and provide all labour, supervision, materials and supplies, insurance, tools, equipment, applicable permits, applicable Taxes, transportation, testing, field surveying, coordination and other services and items as are necessary to satisfactorily complete the Works in accordance with the Contract and the directions of the Project Manager/the Architect/the

Employer. Any matters not expressly included in the Contract but which are reasonably inferable therefrom as being necessary to execute the Works in accordance with the Contract shall be deemed to be included as part of the scope of Works. The Contractor shall provide any items of work necessary for the completion of the Works, such that upon completion, the Works are fit for the intended purpose as described in the Contract, and shall not be relieved in its responsibility even in case such items of work may not have been expressly described in the Contract.

8.2 Site Operations and Methods of Construction

The Contractor shall take full responsibility for the adequacy, safety and stability of all site operations and methods of construction. Provided that, subject to Clause 6.6, the Contractor shall not be responsible (except as stated hereunder or as may be otherwise agreed) for the design or Specifications of Permanent Works or Temporary Works not prepared by the Contractor. Where the Contract expressly provides that part of the Permanent Works shall be designed by the Contractor, he shall be fully responsible for that part of such works, notwithstanding any review, approval or failure to approve by the Engineer-in-Charge.

9.1 Contract Agreement

The Contractor shall, if called upon to do so, enter into and execute the Contract, to be prepared and completed at the cost of the Employer, in the form and incorporating the documents annexed to these Conditions, with such modifications as may be mutually agreed between the Parties, within 7 days of the date of the issue of the Letter of Acceptance, failing which his tender may be rejected and the Earnest Money Deposit provided by him forfeited.

10.1 Performance Security

Performance Security shall be in the nature of a bank guarantee for an amount stated in the Schedule of Fiscal Aspects, substantially in an approved form as stated in the Appendix to Tender, or such other form as may be agreed between the Employer and the Contractor. The Performance Security shall be submitted within the time mentioned in the Schedule of Fiscal Aspects, and in any event prior to the release of the Mobilization Advance to the Contractor. The bank/institution providing such Performance Security shall be subject to the prior approval of the Employer. The cost of complying with the requirements of this Clause shall be borne by the Contractor.

10.2 Validity of Performance Security

The Performance Security shall be valid until the expiry of the Defects Liability Period and the rectification of any defects notified during the Defects Liability Period in accordance with the Contract. Such security shall be returned to the Contractor within 28 days of the issue of the Defect Liability Certificate.

10.3 Claims under Performance Security

The Employer shall have the right to claim under the Performance Security, the Mobilization Advance Guarantee, or any other bank guarantee or security provided by the contractor and appropriate the proceeds upon occurrence of any of the following:

- (i) Any default by the Contractor;

- (ii) Failure by the Contractor to fulfill any of its obligations under the Contract, or any material breach of the terms hereof; and/or Maintenance repair and renovation works in SPM college.
- (iv) Without prejudice to paragraph (ii) above, if the Contractor fails to increase and/or extend the period of validity of any such bank guarantee or provide any replacement/amended bank guarantee in accordance with the Contract.

11.1 Inspection of Site

The Contractor shall be deemed to have inspected the Site and its surroundings and checked information available in connection therewith and to have satisfied himself before submitting his Tender, as to:

- (a) The form and nature thereof, including the subsurface conditions;
- (b) The hydrological climatic and soil conditions;
- (c) The extent and nature of work and materials necessary for the execution and completion of the Works and the remedying of any defects therein, and
- (d) The means of access and communication to the Site and the accommodation he may require (including for any labour colonies); and in general shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect his Tender. The Contractor shall be deemed to have based his Tender on the data made available by the Employer and on his own inquiry as aforementioned and having regard to the provisions of Sub-Clause 12.1; provided that the Contractor has satisfied itself of all matters relevant to its obligations under the Contract and has not relied upon any representations made by or on behalf of the Employer. The Contractor shall not be excused from the performance of any of its obligations under the Contract or be entitled to any additional payment or extension of time as a result of, any incorrect or insufficient information given to the Contractor by any person on or behalf of the Employer, or any fault or omission on its part to note, judge or analyze any fact, or estimate any cost or time.

11.2 Access to Data

Data made available by the Employer in accordance with **Sub-Clause 11.1** shall be deemed to include data listed elsewhere in the Contract as open for inspection at the Engineer-in-Charge address.

12.1 Sufficiency of Tender

The Contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the Tender and of the rates and prices stated in the Schedule of Quantities, all of which shall, except insofar as it is otherwise provided in the Contract, cover all his obligations under the Contract (including those in respect of the supply of goods, materials, Plant or services or of contingencies for which there is a Provisional Sum) and all matters and things necessary for the proper execution and completion of the Works and the remedying of any defects therein. The Contractor represents and warrants to the Employer that it is acquainted with the scope of Works as set out in the Contract. The Contractor shall be deemed to have read and understood the engineering nature and behaviour of all designs, Drawings, Specifications and other technical details and documentation provided by or on behalf of the Employer, from time to time, and any interim details issued in respect of a Variation and any other corrections or clarifications issued to the Contractor.

12.2 Adverse Physical Obstructions or Conditions

During the execution of the Works if the Contractor encounters physical obstructions or physical conditions, other than climatic conditions on the Site, which were in his opinion, not reasonably foreseeable by an experienced contractor engaged in projects similar to the Works hereunder, the Contractor shall forthwith give notice thereof to the Engineer-in-Charge with a copy to the Employer. On receipt of such notice, the Engineer-in-Charge shall, if in his opinion such physical obstructions or physical conditions could not have been reasonably foreseen by an experienced contractor, after due consultation with the Employer and Contractor, determine any extension of time to which the Contractor may be entitled under Clause 43 and shall notify the Contractor accordingly, with a copy to the Employer. Such determination shall take into account any instruction which the Engineer-in-Charge may issue to the Contractor in connection therewith and any proper and reasonable measures acceptable to the Engineer-in-Charge which the Contractor may take in the absence of specific instructions from the Engineer-in-Charge.

13.1 Work in Accordance with Contract

The Contractor shall comply with and adhere strictly to the Engineer-in-Charge instructions on any matter related to the Contract or concerning the Works. The Contractor shall take instructions only from the Project Manager or subject to the provisions of Clause 2, from the Engineer-in-Charge Representative.

14.1 Project Control System

The Contractor shall provide an integrated control system (including a Programme of Work) pursuant to his responsibilities under Sub-Clause 30.3, by preparing co-ordinated sequence and time programmes incorporating work package activities of other agencies and its Subcontractors which shall include the sequence and timing of all works and services and have the capability to highlight selected activities by time period and type of activity (“**Master Construction Schedule**”); provided that the contractor for civil works shall incorporate the relevant construction, installation, erection and commissioning schedules furnished by the other contractors engaged by the Employer for their respective scope of works. A suggested Project Control System forms part of the Appendix to Tender. The Contractor shall examine the said system and within seven days after the issuance of the Letter of Acceptance, submit to the Engineer-in-Charge for his approval a modified system in such form and detail as the Engineer-in-Charge shall reasonably prescribe. This system shall after approval be deemed to constitute the Master Construction Schedule and shall form part of the Contract. The Master Construction Schedule shall be treated as a baseline, to monitor, determine delays in the individual activities, work milestones or the overall duration of the Works. In the event of the Contractor not submitting any modified system within the prescribed time period, the suggested project control system shall be deemed to have been accepted by the Contractor and shall remain binding on him as the Master Construction Schedule.

14.2 Programme to be Submitted

The Master Construction Schedule to be provided by the Contractor pursuant to Sub-Clause 14.1 shall include a schedule showing all work packages and construction milestones along with Detailed Construction Schedules with activities of shop drawings, samples, approvals, procurement, site execution, testing, commissioning and acceptance. Along with the construction programme, the Contractor shall also submit the following schedules:

- a) Schedule of Shop drawings;
- b) Schedule of preparation of Samples and Mock-ups i/c date by which approval required;
- c) Material Order and Procurement Schedule;
- d) Schedule for Mobilisation of Plant and Equipment; and
- e) Manpower Deployment Schedule.

The Master Construction schedule should be within the agreed completion time frame
The Contractor shall, within a period of **7 days (seven days)** from the date of issuance of the Letter of Acceptance, submit a proposed Master Construction Schedule to the Engineer-in-Charge /Employer, which shall *inter alia* specify the schedule for performance of the Works such that the Virtual Completion of the Works as a whole is achieved within the Time for Completion. The Contractor and the Employer/ Engineer-in-Charge shall discuss and mutually agree upon the schedule for completion of the Works within a period of [**7 days (seven days)**] from the date of issuance of the Letter of Acceptance and such mutually agreed schedule for the completion of Works shall constitute the Master Construction Schedule and shall be an integral part of the Contract.

14.3 Revised Programme

The Contractor shall plan and execute the Works in accordance with the Master Construction Schedule and the Contractor shall ensure adherence to the target/programmes by deploying adequate manpower and resources for the Works. If at any time it should appear to the Engineer-in-Charge that the actual progress of the works does not conform to the programme approved under Sub-Clause 14.1, the Contractor shall produce, within a period of seven (7) days from the date of request therefor from the Engineer-in-Charge, a revised programme showing the modifications to such programme necessary to ensure completion of the Works within the Time for Completion. The revised programme shall include a written explanation on activities exceeding the estimated time, and subject to approval by the Engineer-in-Charge /the Employer shall be deemed to form part of the Master Construction Schedule.

14.4 Cash flow Estimate to be Submitted

The Contractor shall, pursuant to Sub-Clause 14.1, provide to the Engineer-in-Charge for his information a detailed cashflow estimate, at monthly intervals, of all payments to which the Contractor shall be entitled under the Contract. Such cashflow estimates shall be in accordance with the estimates of the quantities of materials to be supplied, items of Works proposed to be completed, and the milestones to be achieved in accordance with the Master Construction Schedule. This monthly cash flow estimate shall be given in advance for the period till end of the project and shall be updated and provided every month, before the seventh day of the calendar month, giving actual spent till previous month.

14.5 Contractor not Relieved of Duties or Responsibilities

The submission to and review or approval or failure to approve or any objections, suggestions, or recommendations by the Engineer-in-Charge in relation to such programmes or cash flow estimates shall not relieve the Contractor of any of his duties or responsibilities under the Contract.

14.6 Daily Site Reports:

The Contractor shall submit Daily Site Reports to the Engineer-in-Charge in the format as approved by the Engineer-in-Charge. The reports shall be submitted before 10AM on the

following day describing the required information of the previous day. The report shall also contain information of activities planned for the next day. The reports will include, but not be limited to:

- a. Record of the Site Progress & planning for the next day.
- b. Number of Employees on the Site
- c. Number of Men employed on individual trades
- d. Plant and Machinery at site (including an indication as to whether the plant is working or standing)
- e. Notification of accidents
- f. Events influencing the progress of the Work
- g. Materials received & consumed at site.
- h. Details of staff deputed at site.

14.7 Site Register

The Contractor shall maintain a site register that records the name and time of arrival and departure at site of any visitors. Further, the Contractor shall maintain and shall ensure that Subcontractors maintain proper wage books and time sheets as per statutory requirements showing the wages paid to and the time worked by all personnel engaged by the Contractor and the Subcontractors (as the case may be) for the performance of the Works and shall furnish such information relating to the wages and conditions of employment of personnel as the Engineer-in-Charge/ the Employer may from time to time require. The registers and records to be maintained by the Contractor shall include copies of relevant licenses, wage register, muster rolls, overtime registers, payment registers etc.

14.8 Progress Reports

At the end of each month, the Contractor shall submit a monthly progress report in a format agreed with the Engineer-in-Charge. The reports shall include two sets of progress photographs (approx. 36 no. of post card size) taken from pre-determined locations using a digital camera, which illustrate the progression of the Work.

15.1 Contractor's Superintendence

The Contractor shall provide all necessary superintendence during the execution of the Works and during the Defects Liability Period as the Engineer-in-Charge may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. The Contractor, or a competent and authorised representative of the Contractor who has experience in handling the requirements of projects similar to the Works, approved of by the Engineer-in-Charge /the Employer (which approval may be withdrawn at any time), shall give his whole time to the superintendence of the Works and shall act on behalf of the Contractor, on a day-to-day basis during the term of the Contract (“**Contractor’s Representative**”). The Contractor’s Representative shall receive, on behalf of the Contractor, instructions from the Project Manager or, subject to the provisions of Clause 2, the Project Manager's Representative.

If approval of the representative is withdrawn by the Engineer-in-Charge /the Employer, the Contractor shall, as soon as it is practicable, having regard to the requirement of replacing him as hereinafter mentioned, after receiving notice of such withdrawal, remove the representative from

the Works and shall not thereafter employ him again on the Works in any capacity and replace him by another representative approved by the Engineer-in-Charge.

16.1 Contractor's Employees

The Contractor shall provide on the site in connection with the execution and completion of the Works and the remedying of any defects therein:

- (a) Only such technical assistants as are skilled and experienced in their respective callings and such foremen and leading hands as are competent to give proper superintendence of the Works; and
- (b) Such skilled, semi-skilled and unskilled labour, and in such numbers, as is necessary for the proper and timely fulfilling of Contractor's obligations under the Contract.

16.2 Employer and Project Manager at Liberty to Object

The Employer and Engineer-in-Charge shall be at liberty to object to and require the Contractor to remove forthwith from the Works any person provided by the Contractor who, in their opinion, misconducts himself or is incompetent or negligent in the performance of his duties or whose presence on Site is otherwise considered by the Engineer-in-Charge as undesirable. Such person shall be removed as soon as possible and replaced forthwith.

17.1 Setting Out

The Contractor shall be responsible for:

- (a) The accurate setting out of the Works in relation to original points, lines and levels of reference given by the Engineer-in-Charge in writing,
- (b) The correctness, subject as above mentioned, of the position, levels, dimensions and alignment of all parts of the Works, and,
- (c) The provision of all necessary instruments, appliances and labour in connection with the foregoing responsibilities. Brick pillars in cement mortar with centre line markings of each RCC frame shall be constructed and retained throughout. The Contractor shall get the setting out of works, levels etc. checked by the Engineer-in-Charge or his authorized representative. Such layout and levels shall be checked at every mid floor and floor level or as deemed necessary by the Engineer-in-Charge. If at any time during the execution of the Works, any error appears in the setting out, position, levels, dimensions or alignment of any part of the Works, the Contractor on being required so to do by the Engineer-in-Charge shall, at his own cost, rectify such error to the satisfaction of the Engineer-in-Charge, unless, subsequent to the Contractor having fulfilled his obligations pursuant to Sub-Clause 6.6, such error is based on an incorrect instruction issued by the Engineer-in-Charge, in which case the Project Manager shall determine the addition in Contract Price in accordance with Clause 51 and shall notify the Contractor accordingly, with a copy to the Employer. It is hereby clarified that if the Contractor has failed to notify the Engineer-in-Charge in accordance with Clause 6.6, the costs of any rectification shall be solely borne by the Contractor and it shall not be entitled to any extension of time on account of the same.

The checking of any setting out of any line or level by the Engineer-in-Charge shall not in any way relieve the Contractor of his responsibility of the accuracy thereof and the Contractor shall carefully protect and preserve all bench marks, sight rails, pegs and other things used in the setting out of the Works.

18.1 Boreholes and Exploratory Excavation

If at any time during the execution of the Works, the Engineer-in-Charge requires the Contractor to make boreholes or to carry out exploratory excavation, such requirement shall be the subject of an instruction in accordance with Clause 50, unless such boreholes or exploratory excavation forms part of the scope of Works or an item or a provisional sum in respect of such work is included in the Schedule of Quantities.

19.1 Safety and Security

The Contractor shall throughout the execution and completion of the Works and the remedying of any of the defects therein:

- (a) Have full regard for the safety of all persons in the Site and keep the Site and the Works in an orderly state appropriate to the avoidance of danger to such persons;
- (b) Provide and maintain at his own cost all temporary lockable doors for rooms where valuable equipment or fittings are installed, lights, guards, fencing, warning signs and watching, when and where necessary or required by the Engineer-in-Charge or any duly constituted authority, for the protection of the Works or the safety and convenience of the public and others;
- (c) Take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others arising as a consequence of his methods of operation; and
- (d) Not demolish, remove or alter any of the existing structures or cause interference with existing amenities, whether natural or man-made, unless otherwise instructed by the Engineer-in-Charge.

Further, the Contractor shall in connection with the works provide and maintain at his own cost all lights, guards, fencing and watching when and where necessary or required by the Engineer-in-Charge or Engineer-in-Charge representative or by any duly constituted authority, for the protection of works, or for the safety and convenience of the public or others.

19.2 Employer's Responsibilities

If under Clause 30 the Employer shall carry out work on the site with his own workmen he shall in respect of such work:

- (a) Have full regard to the safety of all persons entitled to be upon the Site, and
 - (b) Keep the Site in an orderly state proper to the avoidance of danger to such persons.
- If under Clause 30 the Employer shall employ other contractors on the Site, it shall require them to have the same regard for safety and avoidance of danger.

20.1 Care of Works

The Contractor shall take full responsibility for the care of the Works and materials and Plant for incorporation therein from the Commencement Date until the date of issue of the Virtual Completion Certificate for the whole of the Works, when the responsibility of the said care shall pass to the Employer. Provided that

- (a) The Contractor shall take full responsibility for the care of any outstanding Works and materials and Plant for incorporation therein and any works that the Contractor is required to execute to rectify defects during the Defects Liability Period until such outstanding works have been completed pursuant to Clause 48.
- (b) In case of any earlier termination of the Contract, the Contractor shall be responsible for the care, custody and control of the materials, Plant and the Works or any part thereof, until the expiry of the period of the notice of termination in accordance with the provisions of the Contract.

20.2 Responsibility to Rectify Loss or Damage

If any loss or damage occurs to the Works or any part thereof or materials or Plant for incorporation therein, during the period for which the Contractor is responsible for the care thereof, from any cause whatsoever, the Contractor shall at his own cost rectify such damage so that the Works conform in every respect with the provisions of the Contract to the satisfaction of the Engineer-in-Charge. The Contractor shall also be liable for any loss or damage to the Works or any damage to the works of other contractors engaged by the Employer & contractors themselves for the Project occasioned by him in the course of any operations carried out by him for the purpose of complying with his obligations hereunder. Any such damage or loss shall be rectified by the Contractor at its own risk and cost, or the Employer may, at its discretion, recover the cost of any such repairs from the Contractor.

20.3 Force Majeure Risks

The term “Force Majeure” shall mean any act, event or circumstances, or combination of acts, events or circumstances, which materially and adversely affects any Party’s performance of its obligations under the Contract, but only if and to the extent that such acts, events or circumstances are not within the affected Party’s reasonable control, were not the fault of the affected Party, were not reasonably foreseeable and could not have been prevented or overcome by the affected Party through the exercise of reasonable skill or care.

Events of Force Majeure shall include the following acts, events and circumstances to the extent that such or their consequences satisfy the above requirements:

- (a) War, hostilities (whether declared or not), invasion, act of foreign enemies;
- (b) Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war, riot, industry wide strikes and labour disturbances having a nationwide impact or industry wide strikes and labour disturbances caused in whole or part by another event of Force Majeure (excluding any strikes or lockouts which are attributable to the Contractor or any Subcontractors or any person for whom the foregoing are responsible);
- (c) Munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the use of any explosives by the Contractor or any Subcontractor or any person for whom the Contractor is responsible;
- (d) Acts of God, including lightning, drought, fire and explosion (to the extent originating from a source external to the Site), earthquake, volcanic eruption, landslide, floods, cyclone, typhoon, tornado or exceptionally adverse weather conditions which are in excess of the statistical measures for the last hundred (100) years; or

- (f) Expropriation or compulsory acquisition by any governmental instrumentality of any material assets or rights of the Contractor/the Employer;
- (g) Any other unlawful, unreasonable or discriminatory action on the part of a government instrumentality which is directed against the affected Party, (excluding actions that constitute remedies or sanctions lawfully exercised as a result of breach by the affected Party of any Applicable Law which is neither expropriatory nor discriminatory in nature);
- (h) Any direction /decision of the government authority or stay order obtained by any third party thereby affecting the performance of the affected party; but shall not include any unavailability or any late delivery (except and to the extent caused by any event of Force Majeure) of materials, equipments or tools, or changes in cost of the plant, machinery, equipment or materials for the Works or the Project or any insufficiency or lack of funds or any economic hardship.

20.4 Any Party claiming relief on account of an event of Force Majeure shall, as a condition precedent to any entitlement to such relief, notify in writing the other Party (along with all relevant details) of the existence of such a Force Majeure event within three (3) day of the occurrence of such event of Force Majeure and shall use all reasonable endeavours (including through expenditure of reasonable sums of money) to minimize any such delay. Upon cessation of the event of Force Majeure giving rise to the delay, the Parties shall, in so far as may be practicable under the circumstances, complete performance of their respective obligations hereunder notwithstanding the foregoing. The Contractor shall be entitled to such reasonable extension of time as may be granted by the Employer, in accordance with **Clause 43**, taking into account all surrounding circumstances. Any extension of time granted by the Employer under this **Clause 20.4** shall neither entitle the Contractor to claim any increase in the Item Rates or any additional costs nor shall it release the Contractor from performing any of the obligations under the Contract.

21.1 Insurance of Works and Contractor's Equipment

The Contractor shall, at his own cost and expense without prejudice to his liability to indemnify the Employer and without limiting his or the Employer's obligations under Clause 19, insure through **Contractor's All Risk Insurance Policy(CAR policy & Third Party Insurance Policy)**:

- (a) The Works together with materials and Plant for incorporation therein to the full replacement cost;
- (b) An additional sum of 15 per cent of such replacement cost, or as may be specified in the Special Conditions, to cover any additional costs of and incidental to the rectification of loss and damage including professional fees and the cost of demolishing and removing any part of the Works and of removing debris of whatsoever nature;
- (c) Earthquake risk coverage; and
- (d) Insurance necessary to cover the liability of Contractor in the event of death, injury caused to the persons employed by the Employer, visitors to the Site, sub-contractors, labourers, agents or any other person engaged by the Contractor for the execution of the Works as detailed in subsequent clauses.

Further, the Contractor shall be entirely responsible for the safety ,security and maintenance of plant and machinery at site and claims shall be made to the employer for any loss due to theft ,damage etc .It is advisable that contractor should effect and maintain a Contractor's plant, machinery . and equipment policy ("**CPM**") policy.

- (a) The Employer and the Contractor against all loss or damage from whatsoever cause arising from the start of work at the Site until the date of issue of the relevant Virtual Completion Certificate in respect of the Works or any Section or part thereof as the case may be, and
- (b) The Contractor for its liability:
 - (i) During the Defects Liability Period for loss or damage arising from a cause occurring prior to the commencement of the Defects Liability Period, and
 - (ii) For the loss or damage occasioned by the Contractor in the course of any operations carried out by him for the purpose of complying with its obligations under Clauses 48 and 49.

21.2 Responsibilities for Amounts not Recovered

Any amounts not insured or not recovered from the insurers shall be borne by the Contractor. Notwithstanding anything contained to the contrary in the Contract, delay in settlement or non-settlement or partial settlement of any insurance claim by the insurance company, shall not be a cause or reason, nor it shall entitle the Contractor to any extension of time or adjustment in the Contract Price or any Item Rates.

22.1 Damage to Persons and Property

The Contractor shall indemnify the Employer against all losses and claims in respect of:

- (a) Death of or injury to any person, or
- (b) Loss of or damage to any property

Which may arise out of or in consequence of the execution and completion of the Works and the remedying of any defects therein, and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

22.2 Cooperation with the Employer

The Contractor acknowledges that the Employer may engage an insurance broker/consultant in relation to the procurement and maintenance of insurance for the Project. The Contractor shall cooperate with the Employer and provide the Employer/the Engineer-in-Charge and/or any insurance broker/consultant engaged by the Employer with such assistance and information as may be reasonably required by the Employer.

23.1 Third Party Insurance

The Contractor shall without limiting his responsibilities under Clauses 22 & 24 insure against liabilities for loss of life or loss of damage to any property arising out of or in relation to the performance of the Contract.

23.2 Minimum Amount of Insurance

Such insurance shall be for at least the amount stated in the Appendix to Tender.

23.3 Cross Liabilities; Waiver of Subrogation

The insurance policy shall include a cross liability clause such that the insurance shall apply to the Contractor and Employer as separate insureds. All insurance policies required to be procured and

maintained by the Contractor shall include a waiver of all rights of subrogation against the Employer, its assigns and its personnel.

24.1 Accident or Injury to Workmen

The Employer shall not be liable for or in respect of any damages or compensation payable to any workman or other person engaged by the Contractor or any Subcontractor, other than death or injury resulting solely from default on part of the Employer. The Contractor shall indemnify and keep indemnified the Employer against all such damages and compensation, other than any death or bodily injury for which the Employer is solely responsible as aforesaid, and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

24.2 Insurance Against Accident to Workmen (Workmen's Compensation Policy)

The Contractor shall insure and shall ensure that all Subcontractors procure insurance against such liability for death of or bodily injury to personnel of the Contractor and any Subcontractor and shall continue such insurance during the whole of the time that any persons are engaged by the Contractor or any Subcontractor in relation to the Works. In respect of any persons employed by any Subcontractor, the Contractor's obligations to procure insurance in respect of such personnel shall be satisfied if the Subcontractor has insured against such liability and the Employer is indemnified against any claims in this regard, provided that the Contractor shall require such Subcontractor to produce to the Employer when required, such policy of insurance and the receipt for the payment of the current premium.

25.1 Evidence and Terms of Insurance's

The Contractor shall provide evidence to the Employer prior to the start of work at the Site that the insurances required under the Contract have been effected, and shall in any event within fourteen (14) days of the Commencement Date, provide copies of the insurance policies to the Employer. When providing such evidence and such policies to the Employer, the Contractor shall notify the Engineer-in-Charge of so doing. Such insurance policies shall be consistent with the general terms agreed prior to the issue of the letter of acceptance. The Contractor shall effect all insurances for which he is responsible with insurers and in terms approved by the Employer.

25.2 Adequacy of Insurances

The Contractor shall notify the insurers of changes in the nature, extent or programme for the execution of the Works and insure the adequacy of the insurances at all times in accordance with the terms of the Contract and shall, when required produce to the Employer the insurance policies in force and the receipts for the payment of the current premiums.

25.3 Contractor's Failure to Insure

If the Contractor fails to effect and keep in force any of the insurances required under the Contract, or fails to provide the policies to the Employer within the period required by the Sub-Clause 25.1, then, and in any such case the Employer may effect and keep in force any such insurances and pay any premium as may be necessary for that purpose and from time to time deduct the amount so paid from any moneys due or to become due to the Contractor, or recover the same as a debt due from the Contractor.

25.4 Compliance with Policy Conditions

The Contractor shall comply and ensure that the Subcontractors of any tier comply with the terms and conditions of all insurance policies procured by the Contractor and the requirements of insurers in connection with the settlements of claims, the recovery of losses and prevention of accidents. The Employer may, at its sole discretion, procure insurance coverage in relation to the Project. The Contractor acknowledges that insurance, if any, procured by the Employer shall be excess and not contributory with insurance required to be procured and maintained by the Contractor and any such insurance procured by the Employer shall not in any manner relieve or absolve the Contractor of its obligations hereunder. The Contractor shall not and shall ensure that its Subcontractor do not in any manner prejudice any insurance obtained by the Employer.

26.1 Compliance with Statutes, Regulations

The Contractor shall conform in all respects, including by the giving of all notices and the paying of all fees, with the provisions of:

- (a) Any Applicable Laws, the terms of any consents, permits, approvals etc. in relation to the execution and completion of the Works and the remedying of any defects therein, and
- (b) The rules and regulations of all public bodies, whose property or rights are affected or may be affected in any way by the Works, and the Contractor shall keep the Employer indemnified against all penalties and liability of every kind for breach of any such Applicable Laws, permits or regulations. The Employer shall be responsible for obtaining any planning, zoning or other similar permission required for the Works to proceed and any other permits required for the execution of the Works or in connection with the performance of the Contractor's obligations under the Contract; except for the planning, zoning or other similar consents for the Works which are required to be obtained by the Employer, shall be procured and maintained by the Contractor, at its own cost. The Contractor shall bring to the notice and attention of Employer and Engineer-in-Charge all notices required by any Applicable Laws to be submitted to any governmental authorities, including municipalities, and pay such authorized fees, charges etc. that may be chargeable in respect of the Works and lodge the receipts for payment of such sums with the Employer.

27.1 Fossils

All fossils, coins, articles of value or antiquity and structures and other remains of things of geological or archaeological interest discovered on the Site shall, as between the Employer and the Contractor, be deemed to be the absolute property of the Employer. The Contractor shall prevent his workmen, Subcontractors or any other persons engaged by the Contractor or any Subcontractor from damaging or removing any such article or thing and shall, immediately upon discovery thereof and before removal, acquaint the Engineer-in-Charge with such discovery and carry out the Engineer-in-Charge instructions for dealing with the same. If, by reason of such instructions, the Contractor suffers delay and/or incurs costs then the Engineer-in-Charge shall after due consultation with the Employer and the Contractor, determine:

- (a) Any extension of time to which the Contractor is entitled under Clause 43, and

- (b) The amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer.

28.1 Patent Rights

The Contractor shall, at its own cost, ensure that it has all necessary rights (including licences) in and to the intellectual property subsisting in all matters, things or processes (including documentation and software) used or to be used by or on behalf of the Contractor in connection with the Works and/or the Contract. The Item Rates and Provisional Sums include all royalties, license fees or other sums payable by the Contractor in respect of the supply and use of any articles, processes or inventions protected under Applicable Laws pertaining to intellectual property and required for the carrying out of the Works. The Contractor shall save harmless and indemnify the Employer from and against all proceedings for or on account of infringement of any patent rights, design, trademark or name or other intellectual property rights in respect of any of Contractor's Equipment, materials or Plant used for or in connection with or for incorporation in the Works and from and against all damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto, except where such infringement results solely from compliance with the design or Specifications provided by the Engineer-in-Charge. The Contractor shall grant to the Employer an irrevocable, royalty-free, non-exclusive licence (including the right to grant sub-licences) to use, reproduce, modify and adapt all intellectual property rights subsisting in or in relation to any documentation, materials and the Works for the purposes of the Project only, such licence to survive expiry or termination of the Contract without limitation as to duration.

28.2 Royalties and Taxes

Except where otherwise stated, the Contractor shall pay all tonnage and other royalties, rent and other payments or compensation, if any, for getting stone, sand, gravel, clay or other materials required in the Works.

The Item Rates and Provisional Sums stipulated in the Contract shall be deemed to include all Taxes including sales tax, octroi, duties, works contract tax and any other taxes or levies legally payable on materials and equipment forming part of the Works.

29.1 Interference with Traffic and Adjoining Properties

All operations necessary for the execution and completion of the Works and the remedying of any defects therein shall 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 and private roads and footpaths to or of properties in the possession of the Employer or of any other person.

The Contractor shall promptly repair any damage to any roads, highways or footpaths which result from the carrying out of the Works or during transportation of any materials, equipment etc. to the Site. The Contractor shall at all times keep the roads, highways and footpaths clean and free from debris caused by the Contractor or any Subcontractor. The Contractor shall save harmless and indemnify the Employer in respect of all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of or in relation to any breach of the foregoing obligations.

30.1 Opportunities for other Contractors

The Contractor at his own cost shall, in accordance with the requirements of the Engineer-in-Charge, afford all reasonable opportunities for carrying out their work to:

- (a) Any other contractors employed by the Employer and their personnel,
- (b) Any personnel engaged by the Employer, and
- (c) The personnel of any governmental authorities who may be employed in the execution of any works on or near the Site.

The Contractor acknowledges that certain other persons including the Employer and other contractors engaged by the Employer shall, during the carrying out of the Works by the Contractor, require access to and use of parts of the Site to carry out works in connection with the Project and the Contractor shall make no objection to such access, use and works and shall, in accordance with the requirements of the Employer/the Engineer-in-Charge, afford all reasonable opportunities to such persons for carrying out their work and shall provide all necessary access and assistance to the Employer/the Engineer-in-Charge for inspecting any such work.

If any part of the Works being executed by the Contractor depends for its proper execution or results upon the work of any other contractor, the Contractor shall inspect and promptly report in writing to the Employer/the Engineer-in-Charge, any defects or deficiencies in such work that render it unsuitable for such proper execution and results of the Works. The Contractor's failure to so inspect and/or report any such defects or deficiencies shall constitute an acceptance of the other contractor's work as fit and proper for receiving the Works of the Contractor and any measures that the Contractor shall thereafter be required to undertake to ensure compliance of the Works with the requirements under the Contract shall be at the Contractor's own risk and cost.

The Contractor shall coordinate and co-operate with the other contractors engaged by the Employer for the Project and with the Engineer-in-Charge for the purpose of coordinating the execution of the Project. The Contractor shall, if directed by the Engineer-in-Charge, clear its tools, materials, equipments from the specified areas of the Site within the period stipulated by the Employer/the Engineer-in-Charge in order to facilitate the commencement of works by other persons in such locations. In order to ensure proper coordination between the Contractor and other contractors engaged by the Employer at the Site, the Contractor shall attend meetings with such other contractors, as may be scheduled by the Employer/the Engineer-in-Charge.

30.2 Facilities for other Contractors

The Contractor at his cost shall pursuant to Sub-Clause 30.1 on the written request of the Engineer-in-Charge:

- (a) Make available to any such contractor or authority, or to the Employer any roads or ways for the maintenance of which the Contractor is responsible, or
- (b) Permit the use by any such contractor or authority or the Employer of the Contractor's Equipment or Temporary Works on the Site.

30.3 Contractor for civil works responsible for co-ordination with other Contractors [Deleted]

~~The contractor for civil works shall be considered as the main and co-ordinating contractor on the Project. The contractor for civil works, shall at its own cost, be fully responsible, in all respects, for co-ordination with specialist contractors, services contractors, other contractors engaged by the~~

~~Employer in respect of the Project and nominated sub-contractors for inter-dependent activities of all the engineering services work packages with his work package.~~

31.1 Contractor to keep Site Clear

During the execution of the Works the Contractor shall keep the Site reasonably free from all unnecessary obstruction and shall store or dispose of any Contractor's Equipment or surplus materials and clear away and remove from the Site any wreckage, debris, rubbish or Temporary Works no longer required.

32.1 Clearance of Site on Completion

As a pre-condition to the issuance of the Virtual Completion Certificate, the Contractor shall clear away and remove from the Site all Contractor's Equipment, surplus material, debris, rubbish and Temporary Works of any kind, and leave the Works and Site clean and in a workmanlike condition to the satisfaction of the Engineer-in-Charge. Provided that, subject to the approval of the Employer/the Engineer-in-Charge, the Contractor shall be entitled to retain on Site, until the end of the Defects Liability Period, such materials, Contractor's Equipment and Temporary Works as are required by him for the purpose of fulfilling his obligations during the Defects Liability Period.

LABOUR

33.1 Engagement of Staff and Labour

The Contractor shall make his own engagements for all staff, other personnel and labour, local or other, and for their payment, housing, feeding and transport.

33.2 Compliance with Applicable Laws

The Contractor shall be responsible for full compliance with the provisions under all Applicable Laws, including labour laws and regulations such as Payment of Wages Act (1936), Minimum Wages Act (1948), Employer's Liability Act(1938), Employee's Compensation Act (1923) (earlier the Workmen's Compensation Act), Industrial Disputes Act (1947), Maternity Benefit Act (1961), Contract Labour (Regulation and Abolition) Act (1970), Contract Labour (Regulation and Abolition) Central Rules (1971), Factories Act (1948), Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act (1979), Child Labour (Prohibition and Regulation) Act (1986), Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act 1996 and the rules and regulations thereunder framed by governmental authorities from time to time. The submission of Form V by the Employer shall not absolve the Contractor in any manner whatsoever of its liabilities and responsibility regarding Contract Labour Regulation and Abolition Act and the rules and regulations thereunder. The Contractor shall assume responsibility for and indemnify the Employer against every expense, claim, liability or payment by reason of the application of any labour laws, rules or regulations existing or which may be introduced at a future date during the term of the Contract.

33.3 Safety Code

In respect of all labour directly or indirectly employed by the Contractor on the Works, the Contractor shall at his own expense arrange for strict observance of all the safety provisions as listed in the Appendix to Tender, Safety Code of the C.P.W.D. and B.I.S., the Electricity Act (to

the extent applicable)and orders made there under and other Applicable Laws. The measures prescribed under Applicable Laws shall be the minimum standards required to be maintained by the Contractor and shall not preclude the Contractor taking additional safety precautions as may be warranted for the particular type of work or situation. Observance of such precautions shall not absolve the Contractor of his liability in case of loss or damage to property or injury to or death of any person on or arising out of the Works. If in the opinion of the Project Manager, the Contractor fails to provide adequate safety measures on the Works, the Employer shall be entitled to do so and recover the costs thereof from any moneys due or to become due to the Contractor and the Project Manager shall notify the Contractor accordingly with a copy to the Employer.

33.4 Scheme for Safety

The Contractor shall submit to the Engineer-in-Charge a detailed proposal covering the safety measures he proposes to adopt at the Site; provided that any such approval shall not relieve the Contractor in any manner whatsoever of its obligations under the Contract. After approval, he shall ensure the safety measures are implemented accordingly with instructions to all concerned that the same shall be adhered to strictly.

33.5 Housing for Labour [Deleted]

~~Save insofar as the Contract otherwise provides, the Contractor shall provide and maintain such accommodation and amenities as he may consider necessary for all his staff and labour, employed for the purposes of, or in connection with, the Contract including fencing, water, electricity, furniture and other such requirements. Notwithstanding anything to the contrary contained in this contract, such accommodation and amenities shall be provided by the Contractor at a location specifically demarcated by the Employer. On completion of the Contract, such accommodation shall be removed and the site cleared pursuant to the requirements of Sub clause 32.1. The Employer shall not charge, while providing land for housing as per conditions stipulated in the agreement.~~

33.6 Accident Officer

The Contractor shall have on his staff at the Site an officer concerned solely with the safety and protection against accidents of all staff and labour. This officer shall be qualified for this job and have prior experience in projects of a similar nature and shall have the authority to issue instructions and take protective measures to prevent accidents.

33.7 Measures against Snake, Insect and Pest Nuisance

The Contractor shall take precautions to protect all staff, personnel and labour (including any personnel of Subcontractors) on the Site against snakes, insects, rats and other pests and reduce the nuisance occasioned by the same. The Contractor shall provide his staff, personnel and labour with suitable prophylactics for the prevention of malaria. He shall comply and shall ensure that all Subcontractors comply with all the regulations of the local health authorities in these respects and shall, in particular, arrange to spray thoroughly with approved insecticide all buildings erected on the Site. Such treatment shall be carried out at least once a year or as instructed by the Engineer-in-Charge.

33.8 Epidemic

In the event of an outbreak of illness of epidemic nature, the Contractor shall comply with and carry out such regulations or orders as may be made by governmental authorities, including the local medical or sanitary authorities, for the purpose of dealing with and overcoming the same.

33.9 Supply of Water

The Contractor shall, so far as is reasonably practicable, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of his staff and labour and personnel of all Subcontractors.

33.10 Child Labour

The Contractor shall not employ on the Works any person under 18 years of age. If female workers are engaged, the Contractor shall make at his own expense, all necessary provisions for safeguarding and care of children and keeping them away from the Works.

33.11 Creches

At every work place, at which women workers are ordinarily employed, there shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One room shall be used as a play room for the children and the other as their bedroom.

The rooms shall be built in consultation with the Engineer-in-Charge to reasonably good specifications and be of appropriate sizes conducive to comfort of the children. The rooms shall be provided with sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean. The Contractor shall supply adequate number of toys and games in the playroom and sufficient number of cots and bedding in the bedroom. Unless a higher standard is prescribed under Applicable Laws, the Contractor shall provide one maid to look after the children in the crèche when the number of women workers does not exceed 50 and two maids when the number of women workers exceeds 50. The use of the rooms earmarked as crèche shall be restricted to children, their attendants and mothers of the children.

33.12 E.S.I and P.F. Obligations

The Item Rates and the Provisional Sums shall be deemed to include all expenses towards meeting obligations under the Employees State Insurance Act, the Provident Fund Act and for making contributions towards other employee benefit funds or building workers welfare funds, in compliance with any Applicable Laws. The Contractor shall provide the Employer with its provident fund and employee state insurance registration numbers at the time of execution of the Contract. The Contractor shall open and maintain all records pertaining to provident fund and employee state insurance and submit proof of deposits of contributions on a monthly basis. The Contractor shall follow and shall ensure that all Subcontractors follow all Applicable Laws as may be in force from time to time. All personnel engaged for the Works shall be covered under the relevant schemes and the required amounts deposited by him directly with the concerned authorities. All records in connection with the above shall be properly maintained by the Contractor and produced for scrutiny by the Engineer-in-Charge whenever called for.

34.1 Records to be supplied by the Contractor

The Contractor shall maintain at the site all labour records, like wage slips, employment cards, registers of payment and fines, as required under applicable labour laws and shall indemnify the Employer against any civil or penal action as a result of failure to do so. The Contractor shall, if

required by the Engineer-in-Charge, deliver to the Engineer-in-Charge a return in detail, in such form and at such intervals as the Engineer-in-Charge may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the site and such information regarding Contractor's Equipment as the Engineer-in-Charge may require. Further, the copies of challans evidencing due payment of provident fund and employee state insurance contributions (including challans provided by the Subcontractors) shall be provided to the Employer/the Engineer-in-Charge by the Contractor from time to time and while applying for issuance of the Virtual Completion Certificate for the Works.

34.2 Reporting of Accidents

The Contractor shall report to the Engineer-in-Charge details of any accident as soon as possible, and in any event not later than one(1) hour from the occurrence of such accident. In case of fatality or serious injury, the Contractor shall in addition notify the Employer/ Engineer-in-Charge immediately by the quickest available means.

MATERIALS, PLANT AND WORKMANSHIP

35.1 Quality of Materials, Plant and Workmanship

All materials, Plant and workmanship shall be

- (a) Of the respective kinds described in the Contract and in accordance with the Engineer-in-Charge instructions, and
- (b) Subjected, from time to time, to such tests as the Engineer-in-Charge may require at the place of manufacture, fabrication or preparation, or on the Site or at such other place or places as may be specified in the Contract or at all or any of such places.

The Contractor shall provide such assistance, labour, electricity, fuel, stores, apparatus, instruments and field laboratory as are normally required for examining, testing and measuring any materials or Plant and shall supply samples of materials, before incorporation in the Works, for testing as may be selected and required by the Engineer-in-Charge.

35.2 Materials to be New

All materials and Plant to be incorporated in the Works shall be new, unused, not reconditioned and of utility-grade quality and in full conformity with the Specifications and the other requirements of the Contract and shall be of suitable quality and fit for the purpose for which they are intended and be free from defects and defective workmanship. The Contractor shall not use any materials for incorporation into the Works which are generally recognised as being deleterious or to be avoided in any case for the purpose for which they are to be applied.

35.3 Special Makes or Brands

Wherever special makes or brands are specified, these shall be deemed to be standards that the Contractor is required to adhere to. No deviation from such make or brand shall be permitted unless a written confirmation of non-availability from the manufacturer is submitted by the Contractor to the Engineer-in-Charge within 7 days of issue of the related drawing or instruction, and any such substituted materials are approved by the Project Manager. Subject to approval by

the Engineer-in-Charge, the Contractor shall be permitted by the Engineer-in-Charge to use alternate approved brand of equivalent or superior quality. The Contractor shall submit to the Engineer-in-Charge a final list of all accepted materials and Plant.

35.4 Material Samples and Mock-ups

The Contractor shall furnish material samples and mock-ups for the approval of the Engineer-in-Charge as provided for in the Contract within 14 days of the issue of Letter of acceptance, so as to permit tests and examinations thereof. The Contractor should ascertain and inspect sources of material, their quantity and availability before providing the samples for approvals. All materials used in the Works must strictly comply with the Specifications and shall be strictly as per the approved samples and of the approved make. The Contractor shall make mock-ups strictly in accordance with the Specifications and to the desired standard of workmanship.

35.5 Cost of Samples and Mock-ups

All samples and mock-ups shall be supplied by the Contractor at his own cost in accordance with the Contract.

35.6 Cost of Tests

The cost of making any test shall be borne by the Contractor if such test is

- (a) Intended by, or provided for in, the Contract, or as required as per CPWD / IS Codes; or
- (b) Particularised in the Contract (in case only of a test under load or to ascertain whether the design of any finished or partially finished work is appropriate for the purposes it was intended to fulfil) in sufficient detail to enable the Contractor to price or provide for the same in his Tender.

35.7 Cost of Tests not Provided for

If any test required by the Engineer-in-Charge is

- (a) not provided for, or
- (b) (In the cases above mentioned) not particularised, or
- (c) (though so intended or provided for) is required by the Engineer-in-Charge to be carried out at any place other than the Site or the place of manufacture, fabrication or preparation of the materials or Plant, then Sub-Clause 35.8 shall apply;
provided that if any test required by the Engineer-in-Charge (including in the circumstances listed above) shows that the workmanship or materials tested or any previously executed Works are not in accordance with the Contract or are defective, then the cost of any such test shall be borne by the Contractor.

35.8 Engineer-in-Charge Determination where Test not Provided for

Where, pursuant to Sub-Clause 35.7, this Sub-Clause applies the Engineer-in-Charge shall, after due consultation with the Employer and Contractor, determine any additional cost to which the Contractor is entitled, and shall notify the Contractor accordingly, with a copy to the Employer.

36.1 Inspection of Operations

The Engineer-in-Charge, and any person authorised by him, shall at all reasonable times have access to the Site and to all workshops and places where materials and plants are being manufactured, fabricated or prepared for the Works and the Contractor shall afford every facility for and every assistance in obtaining the right to such access.

36.2 Inspection and Testing

The Engineer-in-Charge shall be entitled, during manufacture, fabrication or preparation, to inspect and test the materials and Plant to be supplied under the Contract. If the materials or Plant are being manufactured, fabricated or prepared in workshops or places other than those of the Contractor, the Contractor shall obtain permission for the Engineer-in-Charge to carry out such inspection and testing in those workshops and places. Any inspection, testing consent, approval or similar act by the Engineer-in-Charge (including failure to approve or disapproval) shall not release the Contractor from any obligation under the Contract, including responsibility and liability for any errors, omissions, discrepancies, and non-compliance with any provision of the Contract.

36.3 Dates for Inspection and Testing

The Contractor shall agree with the Engineer-in-Charge on the time and place for the inspection or testing of any materials or Plant as provided in the Contract. The Engineer-in-Charge shall give the Contractor not less than 24 hours notice of his intention to carry out the inspection or to attend the tests. If the Engineer-in-Charge, or his duly authorised representative, does not attend on the date agreed, the Contractor shall, unless otherwise instructed by the Engineer-in-Charge, in consultation with the Engineer-in-Charge reschedule the tests to a date and time convenient to the Engineer-in-Charge. It is agreed and understood that the Engineer-in-Charge shall be entitled to defer or re-schedule any tests to be conducted under the Contract and any such deferment or re-scheduling of the tests shall not, in any manner, affect, waive or discharge the Contractor's obligations under the Contract, or may be claimed as a ground for any additional cost or extension of time. If the Engineer-in-Charge fails to attend any test which has been re-scheduled, the Contractor may unless proceed with the tests. The Contractor shall forthwith forward to the Engineer-in-Charge duly certified copies of the test readings.

36.4 Rejection

If at the time and place agreed in accordance with Sub-Clause 36.3, the materials or Plant are not ready for the inspection or testing, or if as a result of the inspection or testing referred to in the said clause, the Engineer-in-Charge determines that the materials or Plant are defective or otherwise not in accordance with the Contract, he may reject the materials or Plant and shall notify the Contractor thereof immediately. The notice shall state Engineer-in-Charge objections with reasons. The Contractor shall then promptly make good the defect or otherwise ensure that rejected materials or Plant comply with the Contract. If the Engineer-in-Charge so requests, any such materials or Plant which have been replaced/rectified shall be tested under the same terms and conditions. All costs incurred by the Employer on account of repetition of the tests or on account of any Plant or materials not being ready for inspection or testing shall, after due consultation with the Employer and the Contractor, be determined by the Engineer-in-Charge and shall be recoverable from the Contractor by the Employer and may be deducted from any moneys due or to become due to the Contractor and the Engineer-in-Charge shall notify the Contractor accordingly, with a copy to the Employer.

36.5 Independent Inspection

The Engineer-in-Charge may engage an independent inspector for inspection and testing of materials or Plant. Any such delegation shall be effected in accordance with Sub-Clause 2.2 and for this purpose such independent inspector shall be considered as a Engineer-in-Charge Representative. Notice of such appointment (not being less than 3 days) shall be given by the Engineer-in-Charge to the Contractor.

36.6 Reconciliation of Materials

For all those materials in case of which fixed prices are mentioned in the Contract, Material Reconciliation Statements shall be submitted by the Contractor along with each measured bill based on standards published by the and CPWD Analysis of Rates 1972 and Bureau of Indian Standards (B.I.S.), unless otherwise specified. Final adjustments shall be made in the final bill in accordance with the final reconciliation statement. While accounting all materials used in the Works, wastage shall be considered upto the extent specified in the Special Conditions of the Contract.

37.1 Examination of Work before Covering up.

No part of the Works shall be covered up or put out of view without the approval of the Engineer-in-Charge and the Contractor shall afford full opportunity to the Engineer-in-Charge to examine and measure any such part of the Works which is about to be covered up or put out of view and to examine foundations before any part of the Works is placed thereon. The Contractor shall give atleast one (1) days notice to the Engineer-in-Charge whenever any such part of the foundations or Works is or are ready for examination and the Engineer-in-Charge shall, without unreasonable delay, unless he considers it unnecessary and advises the Contractor accordingly, attend for the purpose of examining and measuring such part of the Works or of examining such foundations. If any such part has been covered up or put out of view before compliance with the requirement of this **Clause 37.1**, the Employer/the Engineer-in-Charge may instruct re-opening or uncovering of such part.

37.2 Uncovering and Making Openings.

The Contractor shall uncover any part of the Works or make openings in or through the same as the Engineer-in-Charge may from time to time instruct and shall reinstate and make good such part. If any such part has been covered up or put out of view after compliance with the requirement of Sub-Clause 37.1 and is found to be executed in accordance with the Contract, the Engineer-in-Charge shall, after due consultation with the Employer and Contractor, determine the amount of the Contractor's costs in respect of such of uncovering, making openings in or through, reinstating and making good the same, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer. In any other case, all costs attributable to such uncovering, repairs and reinstatement shall be borne by the Contractor.

38.1 Removal of Improper Work, Materials or Plant

The Engineer-in-Charge shall have authority to issue instructions from time to time for:

- (a) The removal from the Site within such time or times as may be specified in the instruction, of any materials or Plant which, in the opinion of the Engineer-in-Charge are not in accordance with the Contract,
- (b) The substitution of proper and suitable materials or Plant, at the cost of Contractor and
- (c) The removal and proper re-execution, notwithstanding any previous test thereof or interim payment therefor, of any work which, in respect of
 - (i) Materials, Plant or workmanship, or
 - (ii) Design by the Contractor or for which he is responsible, is not, in the opinion of the Project Manager, in accordance with the Contract; at the cost of the Contractor.

38.2 Default of the Contractor in Compliance

In case of a default on part of the Contractor in carrying out any instruction from the Engineer-in-Charge /the Employer within the time specified therein or, if no time has been specified, within a reasonable time, the Employer shall be entitled to engage other persons to carry out the same and all costs consequent thereon or incidental thereto (including sums payable to such persons) shall, after consultation with the Employer, be determined by the Engineer-in-Charge and shall be recoverable from the Contractor by the Employer, and may be deducted from any moneys due or to become due to the Contractor and the Engineer-in-Charge shall notify the Contractor accordingly, with a copy to the Employer. All material, equipment, tools and like placed at the Site shall not be removed therefrom (except for the purpose of being used for the works) without the written consent of the Employer.

SUSPENSION

39.1 Suspension of Work

The Contractor shall, on the instructions of the Engineer-in-Charge at any time or from time to time, suspend the progress of the Works or any part thereof. Unless such suspension is

- (a) Otherwise provided for in the Contract, or
- (b) Necessary by reason of some default of or breach of contract by the Contractor or Subcontractor or any personnel of the foregoing or for reasons attributable to the Contractor, or
- (c) Necessary by reason of any event of Force Majeure, or
- (d) Necessary for the proper execution of the Works or for the safety of the Works or any part thereof (save to the extent that such necessity arises from any act or default by the Contractor or Subcontractor or any personnel of the foregoing or for reasons attributable to the Contractor),

Sub-Clause 39.2 shall apply in case of such suspension. The Parties agree and acknowledge that the Contractor shall not be entitled to any extension of time or additional cost to the extent that any suspension instructed by the Employer/the Engineer-in-Charge is necessary by reason of any default or any breach on the part of the Contractor or any Subcontractor or any person for whom the Contractor is responsible.

39.2 Engineer-in-Charge's Determination Following Suspension

Where, pursuant to Sub-Clause 39.1, this Sub-Clause applies the Engineer-in-Charge shall after due consultation with the Employer and Contractor determine any extension of time to which the

Contractor is entitled under Clause 43, and shall notify the Contractor accordingly, with a copy to the Employer.

39.3 Suspension lasting more than 28 Days

If the progress of the Works or any part thereof is suspended on the written instructions of the Engineer-in-Charge and if permission to resume work is not given by the Engineer-in-Charge within a period of twenty-eight (28) days or such further time as the Engineer-in-Charge may specify from the date of suspension then, unless such suspension is within paragraph (a), (b), (c), or (d) of Sub-Clause 39.1, the Contractor may give notice to the Engineer-in-Charge requiring permission within seven (7) days of the receipt thereof, to proceed with the Works or that part thereof in regard to which progress is suspended. If within the said time, such permission is not granted, the Contractor may, but is not bound to, elect to treat the suspension, where it affects part only of the Works, as an omission of such part of the Works pursuant to a Variation under Clause 50 by giving a further notice to the Engineer-in-Charge to that effect, or, where it affects the whole of the Works, treat the suspension as an event of default by the Employer and terminate the Contract in accordance with the provisions of Sub-Clause 68.1, whereupon the provisions of Sub-Clauses 68.2 and 68.3 shall apply.

- 39.4 During any suspension of the Works or part thereof, the Contractor shall properly protect and secure the Works or such part thereof; provided that the Contractor shall continue to perform its obligations in respect of such part of the Works that has not been affected by such order for suspension. A suspension of Works or part therein shall not amount to termination or expiry of the Contract or any of the obligations or liabilities of the Parties. The Employer/ Engineer-in-Charge may, at any time, direct resumption of the suspended part of the Works by notifying the Contractor of the part of the suspended Works to be resumed and the effective date of withdrawal of suspension and the Works or such part thereof shall be promptly resumed by the Contractor after receipt of such notice. The Contractor shall only be entitled to an extension of time under the circumstances specified in Clause 39.1 and the Employer shall not be liable for any other losses, costs, damages, consequent thereon or incidental thereto.

COMMENCEMENT AND DELAYS

40.1 Commencement of Works

The Contractor shall commence the Works immediately on receipt by him of the Notice to Proceed, and in any event within a period of fifteen (15) days from the date of issuance of the Notice to Proceed. Thereafter, the Contractor shall proceed with the Works with due expedition and without delay.

41.1 Access to Site

The Employer shall, grant or procure to have granted to the Contractor the right to use the Site or any part thereof on a non-exclusive basis for carrying out the Works and the right of continuous access to, and egress from, the Site or any part thereof (on a non-exclusive basis). Except to the extent required pursuant to this **Clause 41.1**, the Employer is not obliged to provide any facilities to the Contractor or do any other thing to enable the Contractor to obtain adequate physical access to the Site to carry out the Works. Any such rights of access granted to the Contractor shall be solely for the purposes of execution of the Works and such access shall in no event, be construed

to grant any right, lien or interest in the Site or in the Works or anything appurtenant or attached thereto to the Contractor. Other contractors or other persons engaged by the Employer shall also have rights of access to the Site and the Works and the Contractor shall coordinate with and extend its full cooperation to such persons.

41.2 Delay in Providing Access

The Contractor acknowledges that it shall be granted non-exclusive access to portions of the Site in a phase-wise manner, depending on the Master Construction Schedule and other schedules under the Master Construction Schedule. If the Contractor suffers delay from failure on the part of the Employer to give access to any part of the Site in accordance with the terms of **Clause 41.1**, the Engineer-in-Charge shall after due consultation with the Employer and Contractor determine any extension of time to which the Contractor is entitled under **Clause 43**, and shall notify the Contractor accordingly, with a copy to the Employer.

41.3 Wayleaves and Facilities

The Contractor shall bear all costs and charges for special or temporary wayleaves required by him in connection with access to the Site. The Contractor shall also provide at his own cost any additional facilities outside the Site required by him for the purposes of the Works.

42.1 Time for Completion

The whole of the Works shall be completed within the time specified in the Schedule of Fiscal Aspects, calculated from the Commencement Date, or such extended time as may be allowed under Clause 43 ("**Time for Completion**") and any items of work for which milestone dates have been specified in the Appendix to Tender shall be completed within the relevant milestone dates therefor. The time for completion of the Works as stipulated hereunder shall be deemed to be the essence of the Contract.

43.1 Extension of Time for Completion

If the achievement of any milestone specified in the Appendix to Tender will be, or has been, delayed beyond the date specified therefor or the successful completion of the Works will be, or have been delayed, beyond the Time of Completion on account of:

- (a) Any Variation, or
- (b) Events of Force Majeure affecting the Contractor, or
- (d) Any delay attributable solely to the Employer, or
- (e) Any other reasons expressly provided in the Contract for which the Contractor is entitled to an extension of the Time for Completion of the Works, or any part thereof, the Engineer-in-Charge shall, after due consultation with the Employer and Contractor determine the amount of such extension of time and shall notify the Contractor accordingly, with a copy to the Employer.

The Contractor shall not be entitled to any extension of time:

- (a) Unless the Contractor has notified the Engineer-in-Charge and provided relevant details in accordance with **Clause 43.2**;

- (b) Unless the Contractor shall have used and continues to use reasonable endeavours to prevent, avoid, overcome and minimise any such delay and to proceed with the Works; and
- (c) In respect of any delay to the extent that such delay is attributable to any act, omission, negligence, default or breach of the Contractor or any Subcontractors or to any matters or events which are within the control of the Contractor or any Subcontractor.

43.2 Contractor to Provide Notification and Detailed Particulars

The Contractor shall not be entitled to an extension of time under **Clause 43.1** unless it has:

- (a) Within fourteen (14) days after such event has first arisen notified the Engineer-in-Charge with a copy to the Employer, and
- (b) Within fourteen (14) days or such other reasonable time as may be agreed by the Engineer-in-Charge after such notification, submitted to the Engineer-in-Charge detailed particulars of extension of time to which he may consider himself entitled in order that such submission may be investigated at the time.

43.3 Interim Determination of Extension

Where an event that would entitle the Contractor to an extension of time has a continuing effect but it is not practicable for the Contractor to submit detailed particulars within the period of fourteen (14) days referred to in Sub-Clause 43.2(b), he shall nevertheless be entitled to an extension of time provided that he has submitted to the Engineer-in-Charge interim particulars at intervals of not more than fourteen (14) days and final particulars within fourteen (14) days of the end of the effects resulting from the event. On receipt of such interim particulars, the Engineer-in-Charge shall, without undue delay, make an interim determination of extension of time, and, on receipt of the final particulars, shall review all the circumstances and determine an overall extension of time in regard to the event. In both such cases the Engineer-in-Charge shall make his determination after due consultation with the Employer and the Contractor and shall notify the Contractor of the determination, with a copy to the Employer. No final review shall result in a decrease of any extension of time already determined by the Engineer-in-Charge.

44.1 Restriction on Working Hours

Subject to any provision to the contrary contained in the Contract, none of the Works shall, save as hereinafter provided, be carried on during the night or on locally recognised days of rest without the consent of the Engineer-in-Charge, except when work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the Works, in which case the Contractor shall immediately advise Engineer-in-Charge. Provided that the provisions of this Clause shall not be applicable in the case of any work which it is necessary or customary to carry out by multiple shifts.

45.1 Rate of Progress

If for any reason which does not entitle the Contractor to any extension of time, the rate of progress of the Works or any part thereof is at any time, in the opinion of the Engineer-in-Charge falls behind or may fall behind the Master Construction Schedule or other agreed schedule for the progress of the Works or if the rate of progress is too slow to comply with the Time of Completion, the Engineer-in-Charge shall so notify the Contractor who shall thereupon take such

steps as are necessary, subject to the consent of the Engineer-in-Charge, to expedite progress so as to comply with the Time for Completion and the schedules under the Master Construction Schedule. The Contractor shall not be entitled to any additional payment for taking such steps. If, as a result of any notice given by the Engineer-in-Charge under this Clause, the Contractor considers it necessary to do any work at night or on locally recognised days of rest, he may seek the consent of the Engineer-in-Charge to do so and shall ensure that the works are carried out in accordance with Applicable Laws. Provided that if any steps taken by the Contractor in meeting his obligations under this Clause, result in the Employer incurring any additional supervision costs, such costs shall, after due consultation with the Employer, be determined by the Engineer-in-Charge and may be deducted by the Employer from any moneys due or to become due to the Contractor and the Engineer-in-Charge shall notify the Contractor accordingly with a copy to the Employer.

45.2 Progress Review Meetings

Progress review meetings shall be held at the time and venue notified by the Engineer-in-Charge. The progress of Works and other matters needing clarifications /decisions will be discussed during these meetings. The Engineer-in-Charge will record minutes of these meetings, which shall be accepted and signed by authorised representatives of Contractor.

46.1 Liquidated Damages for Delay

If the Contractor fails to achieve Virtual Completion of the Works within the Time for Completion in accordance with the Contract or, if applicable, any part of the Works, within the relevant milestone date prescribed under the Contract, then the Contractor shall pay to the Employer the relevant sum stated in the Schedule of Fiscal Aspects, as liquidated damages and not as penalty, for such delay for every day or part of a day which shall elapse between the relevant Time for Completion and the date stated in the Virtual Completion Certificate, or in case of any part of the Works, between the milestone date and the date of completion of such works. The terms, conditions and amounts fixed pursuant to this **Clause 46.1** and **Schedule of Fiscal Aspects** for liquidated damages are a reasonable and genuine pre- estimate as of the date hereof of damages likely to be incurred by the Employer and shall be applicable regardless of the costs actually incurred by the Employer. The Employer may, without prejudice to any other method of recovery, deduct the amount of such liquidated damages from any moneys due or to become due to the Contractor. The payment or deduction of such liquidated damages shall not:

- (i) Relieve the Contractor from his obligation to complete the Works, or from any other of his obligations and liabilities under the Contract; or
- (ii) Affect or prejudice in any manner the Employer's rights and remedies under the Contract or under Applicable Law, including its right to terminate the Contract, nor shall any termination of the Contract prejudice the Employer's right to recover any accrued liquidated damages for delay or release the Contractor from any obligation for payment thereof.

47.1 Virtual Completion Certificate

The Works shall be deemed to be virtually complete when execution of the Works is complete in the opinion of the Engineer-in-Charge in full compliance with all requirements of the Contract, so that the Employer can occupy and/or fully utilize the Works for the purpose for which such Works was intended and the Contractor has performed all of its obligations under the Contract in

order for the occupancy certificate and completion certificate to be issued by the relevant governmental authorities (“Virtual Completion”). When the whole of the Works have been completed and have satisfactorily passed any Tests on Completion prescribed by the Contract, the Contractor may give a notice to that effect to the Engineer-in-Charge, with a copy to the Employer. Such notice and undertaking shall be deemed to be a request by the Contractor for the Engineer-in-Charge to issue a Virtual Completion Certificate in respect of the Works. The Engineer-in-Charge shall, within 21 days of the date of delivery of such notice, either issue to the Contractor with a copy to the Employer, a Virtual Completion Certificate stating the date on which, in his opinion, the Works were completed in accordance with the Contract in all respects, or give instructions in writing to the Contractor specifying all the work which, in the Engineer-in-Charge opinion, is required to be done by the Contractor before the issue of such Virtual Completion Certificate. The Engineer-in-Charge and the Employer shall conduct an extensive inspection of the Works upon receipt of the notice from the Contractor. The Engineer-in-Charge shall prepare a list of all materials, equipment and works which are defective or damaged or of substandard quality or improperly executed or are not in conformity with the requirements stipulated in the Contract. The Contractor shall promptly replace, repair, rectify and remedy all such defects and deficiencies, in conformity with the Contract. All costs and expenses for such remedial works and consequent thereon and incidental thereto, including the cost for any remedial works required to be executed on the works of other contractors which have been damaged in course of such repair and rectification by the Contractor shall be borne wholly by the Contractor. The Engineer-in-Charge shall also notify the Contractor of any defects in the Works affecting substantial completion that may appear after such instructions and before completion of the works specified therein. The Contractor shall be entitled to receive such Virtual Completion Certificate within twenty-one (21) days of completion of all works notified by the Engineer-in-Charge and remedying any defects so notified, to the satisfaction of the Engineer-in-Charge. The Works shall not be considered to have achieved Virtual Completion until all the Temporary Works, if any, constructed by the Contractor for storage or any other purpose are removed and the Site is cleared to the satisfaction of the Employer/the Engineer-in-Charge. The Parties agree and acknowledge that the Employer or any contractors or agencies designated by the Employer may require temporary access to or use of the Works or any part thereof. However such temporary access or use the Works shall not constitute acceptance of the Works by the Employer and the Works shall not be deemed to have achieved Virtual Completion until and unless the certificate of Virtual Completion is issued to the Contractor in accordance with the terms hereof.

47.2 Temporary usage of Sections or Parts

Prior to the Virtual Completion of the Works, the Employer or any persons designated by the Employer including, but not limited to, other contractors, may occupy or use any completed or partially completed Section or portion of the Works at any stage. Any such use or occupancy by the Employer or any persons designated by the Employer shall not:

- (a) Constitute acceptance by the Employer of any element of the Works or of any systems, materials or equipment incorporated in the Works;
- (b) Be construed as a waiver of any right or claim by the Employer in connection with any portion of the Works; or
- (c) Affect the obligations of the Contractor for any works which is not in accordance with the Contract.

The Contractor shall continue performance of the Works in a manner which shall not unreasonably interfere with said use, occupancy and operation by the Employer or any persons designated by the

Employer. The Contractor shall cooperate with the Employer and any designated occupants to facilitate early occupancy of the Works.

DEFECTS LIABILITY

48.1 Defects Liability Period

The expression "Defects Liability Period" shall mean the period referred to as the Defects Liability Period in the Appendix to Tender, calculated from the date of Virtual Completion of the Works, as stated in the Virtual Completion Certificate issued by the Engineer-in-Charge in accordance with Clause 47.

48.2 Contractor's Warranties

The Contractor acknowledges and agrees that the Employer shall rely on the skill of the Contractor for executing the Works and remedying any defects therein. The Contractor warrants (in addition to its warranties pursuant to other provisions of the Contract) with respect to the Works that:

- (a) The Works shall be performed in a timely manner, in strict accordance with the Contract, and consistent with the standards of professional care, skill, diligence and competence generally expected of an experienced and competent professional contractor engaged in undertakings similar to the Works hereunder;
- (b) The Works shall be structurally sound, durable and easy to maintain;
- (c) All Works shall be free from defects, deficiencies and defective workmanship, errors or omissions and will be capable of operating in the manner intended and contemplated in the Contract;

provided that the warranty obligations of the Contractor shall not extend to any repairs, adjustments or alterations of materials that are required as a result of normal wear and tear in the operation of the Works. The Contractor agrees and acknowledges that all warranties shall survive inspection, acceptance and payment.

48.3 Warranty Obligations

The Works performed under the Contract shall be warranted, for a period continuing upto the expiry of the Defects Liability Period, against any defects in the Works arising from:

- (a) Any breach of the warranties set forth in **Clause 48.2**;
- (b) Any act, omission or breach by the Contractor or any Subcontractor and any damage caused by carrying out of the Works on the Site; or
- (c) Any defects arising out of any defective instructions or information in the operation and maintenance manuals provided by the Contractor, together with any defects, deficiencies caused by or during such correction, repair, replacement or dismantling.

The Defects Liability Period for any items comprising the Works for which extended warranty periods have been specified in the Contract, including the Specifications, shall be such extended periods.

48.4 Rectification/repair Obligations of the Contractor

In the event any such defects or deficiencies are discovered in the Works or any part thereof, during the Defects Liability Period, such defects or deficiencies shall be remedied by the Contractor as soon as possible but in any event within fourteen (14) days from the receipt of notice thereof from the Employer/the Engineer-in-Charge, at its own risk and cost. The Contractor shall consult with the Engineer-in-Charge and use its best efforts to perform remedial actions in such a manner and at such times so as to minimize disruption at the Site. If the Contractor fails to remedy any defect within the aforesaid period of fourteen(14) days from the receipt of notice thereof from Employer/the Engineer-in-Charge or a period of fourteen (14) days from the expiry of the Defects Liability Period , the Employer may, at its option, carry out the work by engaging other contractors, at the Contractor's cost and risk, and the Employer shall be entitled to recover the costs incurred in remedying the defect or damage (including any costs incidental thereto or consequent thereon) from the Contractor.

49.1 Contractor to Search

If any defect, shrinkage or other fault appears in the Works at any time prior to the end of the Defects Liability Period, the Engineer-in-Charge may instruct the Contractor, with a copy to the Employer, to search under the directions of the Engineer-in-Charge for the cause thereof. Unless such defect, shrinkage or other fault is one for which the Contractor is liable under the Contract, the Engineer-in-Charge shall after due consultation with the Employer and the Contractor, determine the amount in respect of the costs of such search incurred by the Contractor, which shall be added to the Contract Price and shall notify the Contractor accordingly with a copy to the Employer. If such defect, shrinkage or other fault is one for which the Contractor is liable under the Contract, the cost of the work carried out in searching as aforesaid shall be borne by the Contractor and he shall in such case remedy such defect, shrinkage or other fault at his own cost in accordance with the provisions of Clause 48.

ALTERATIONS, ADDITIONS AND OMISSIONS

50.1 Variations

The Employer/the Engineer-in-Charge may make changes, additions, alterations, substitutions to the Works or any variation in the form, quality or quantity of the Works or any part thereof that may, in their opinion, be necessary or appropriate (“**Variations**”) and for that purpose, the Engineer-in-Charge shall have the authority to instruct the Contractor to do and the Contractor shall do any of the following:

- (a) Increase or decrease the quantity of any work included in the Contract,
- (b) Omit any such work,
- (c) Change the character or quality or kind of any such work,
- (d) Change the levels, lines, position and dimensions of any part of the Works,
- (e) Execute additional work of any kind necessary for the completion of the Works.

No such Variation shall in any way vitiate or invalidate the Contract, but the effect if any, of all such Variations shall be valued in accordance with Clause 51. The Contractor shall carry out such changes in the Works as stated in the Variation order and shall be bound by the same conditions as far as applicable as though such changes in the Works are an integral part of this Contract.

The Contractor agrees and acknowledges that the following, *inter alia*, shall not constitute Variations in the Works:

- (a) Change in any of the specified sequence or timing of construction of any part of the Works;
- (b) Any minor change or detailing of the Works;
- (c) all minor construction details which may not have been specifically shown on Drawings or stipulated in the Specifications but which are essential for the execution of the Works in a workman like manner, in compliance with applicable safety standards, consents, applicable Laws, and/or good industry practices;
- (d) Any changes, additions, alterations, substitutions to the Works or any quantity thereof that is necessitated by any default of or breach by the Contractor or for which he is responsible. No Variation order shall be issued and no adjustment of the Contract Price or Item Rates or any period specified in the Master Construction Schedule shall be made in connection with the correction of any defects in the Works or in respect of execution of any works necessary to achieve the performance and quality requirements under the Contract.

50.2 Instructions for Variations

The Contractor shall not make any variation to the Works without an instruction of the Engineer-in-Charge. Subject to Clause 51.3, any increase or decrease in the quantity of the items specified in the Schedule of Quantities, shall not give rise to a Variation or entitle the Contractor to a change in the Item Rates or the Provisional Sums.

50.3 No Escalation

The Contractor shall not be entitled to claim for loss of anticipated profits, or any indirect or consequential losses or damages, or any costs for mobilization of additional resources or demobilization of any resources, or for any additional payments or extension of time for completion of the Works, except to the extent otherwise provided in the Contract. The Contractor shall not be entitled to any escalation in the Item Rates or the Provisional Sums or to any additional costs on account of increase in prices of materials, labour, transport, hire charges of plant and machineries, fuels, or any other causes, except otherwise expressly provided in the Contract.

51.1 Valuation of Variations

All variations referred to in Clause 50 and any additions to the Contract Price which are required to be determined in accordance with this Clause (for the purposes of this Clause referred to as "varied work"), shall be valued at the rates and prices calculated as follows:

- (a) If the rates for the additional, altered or substituted work are specified in the Contract, the Contractor shall carry out the work at the same rates.
- (b) If the rates for the additional, altered, or substituted work are not specified in the Contract, then such rates shall be derived from the rates specified in a Contract for a similar kind of work.
- (c) If the rates for the additional, altered, or substituted work cannot be derived from similar kind of work, then the same shall be computed on the basis of the Analysis of Rates as provided in the latest SCHEDULE OF RATES published by the local public works department and the CPWD ANALYSIS OF RATES 2014. Water and electricity charges, even if provided in the N.B.O. Analysis of Rates, shall not be allowed since the same are

deemed to be included in the per cent to be added towards direct and indirect establishment, overheads, water and electricity charges and Contractor's profit.

(d) If the rates for the additional, altered or substituted work cannot be determined in the manner specified in the paragraphs (a), (b) or (c) above, then the rates for such work shall be worked out on the basis of actual consumption of materials, labour and equipment used as detailed below:

- (i) Cost of materials delivered at Site at prevailing market rates including VAT
- (ii) Direct cost of labour and equipment at market rates prevailing at the time of provision thereof;
- (iii) Contractor's overhead and profit calculated at 15% (fifteen percent) of the cost of materials and labour (i) and (ii) which shall include direct and indirect establishment, sundries and contingencies, overheads, ESI, insurance, T&P, water & electricity and the Contractor's profit;

(v) VAT will be paid post DVAT as applicable.

The final rate payable to the Contractor shall be the sum of costs vide paragraphs (i), (ii) (iii) and In the event of disagreement the Engineer-in-Charge shall fix such rates as are in his opinion appropriate and shall notify the Contractor accordingly, with a copy to the Employer. Until such time as rates are agreed or fixed, the Engineer-in-Charge shall determine provisional rates to enable on-account payments to be included in certificates issued in accordance with Clause 59.

S. NO	Description of item	Unit	Qty	Rate	Amount
	Detail analysis for..... (Unit of Item)				
1	Cost of Material = A				
	Wastage on A = B				
	Cartages on A + B = C				
	Taxes on A + B = D				
	Sub Total of Material Cost delivered at site A+B+C+D at prevailing market rates				M
	All purchase document is to be submitted for A if vendor rate is applicable then at least three vendor rates are submitted prior to execution				
2	Labour Cost				
	Skilled Labour				
	Unskilled Labour				
	Sub Total of Direct cost of Labour and equipments at prevailing market rates at the time of provision there of				L
	Actual Muster Roll paid rates are only applicable in vendor rate in applicable then at least three vendor rates are submitted prior to execution. Day work detail will be supplied by the contractor to PMC for wetting labour deployment on extra items on daily basis				
3	Total 1 +2				M + L
	Contractor Overhead & Profit				
4	Contractor overhead & profit will be paid @15% calculated on 3 (Total 1+2) which shall include profit , direct & indirect establishment, sundries, contingencies, overheads, T & P (scaffolding will treated as T				(M + L) *1.15

	& P), water & electricity	
5	DVAT as applicable already paid	
6	VAT as applicable	
7	Service Tax if applicable	
	Nothing will be payable for loading & unloading, lifting, shifting, labour shifting, labour license, night works, idling of labour, extra wastage form permissible limit, PF, ESI & machinery break down	

51.2 Power of Engineer-in-Charge to Fix Rates

Provided that if the nature or amount of any varied work relative to the nature or amount of the whole of the Works or any part thereof, is such that, in the opinion of the Engineer-in-Charge, the rate contained in the Contract for any item of the Works is, by reason of such varied work, rendered inappropriate or inapplicable, then after due consultation by the Engineer-in-Charge with the Employer and the Contractor, a suitable rate shall be agreed upon between the Engineer-in-Charge and the Contractor with the approval of the employer in writing. In the event of disagreement the Engineer-in-Charge shall fix such rate on interim basis as, in his opinion, is appropriate and shall notify the Contractor accordingly, with a copy to the Employer. Until such time as rate is finally agreed or fixed, the Engineer-in-Charge shall determine provisional rate to enable on-account payments on interim rates to be included in certificates issued in accordance with Clause 59. In case no rate is agreed between the parties, the same shall be determined in Arbitration.

Provided also that no varied work shall be valued under Sub-Clause 51.1 or under this Sub-Clause unless, within 7 days of the date of such instruction, modification and amendment to the Drawings and/or Specifications and other than in the case of omitted work, before the commencement of the varied work, notice shall have been given either:

- (a) By the Contractor to the Engineer-in-Charge of his intention to claim extra payment or a varied rate; or
 - (b) By the Engineer-in-Charge to the Contractor of his intention to vary a rate.
- Provided always that the execution of the Varied work by the Contractor shall constitute conclusive evidence of the Contractor's agreement to the change in Works including the Contract, Contract Price and the Time for completion by the Contractor. The Contractor by executing the Variation order waives and forfeits any claims whatsoever against the Employer for any additional time or compensation.

51.3 Variations

If, on the issue of the Virtual Completion Certificate for the whole of the Works, it is found that as a result of:

- (a) All varied work valued under Sub-Clauses 51.1 and 51.2, and
- (b) All adjustments upon measurement of the estimated quantities set out in the Schedule of Quantities,

Excluding adjustments of price made under Clause 69, but not from any other cause, there have been additions to or deductions from the Contract Price which taken together are in excess of fifty percent (50%) of the initial Contract Price then and in such event (subject to any action already taken under any other Sub-Clause of this Clause), after due consultation by the Engineer-in-

Charge with the Employer and the Contractor, there shall be added to or deducted from the Contract Price such further sum as may be agreed between the Engineer-in-Charge and the Contractor or, failing agreement, determined by the Engineer-in-Charge having regard to the circumstances of the case. The Engineer-in-Charge shall notify the Contractor of any determination made under this Sub-Clause, with a copy to the Employer

51.4 Daywork

The Engineer-in-Charge may, if in his opinion it is necessary or desirable, issue an instruction that any varied work shall be executed on a daywork basis. The Contractor shall then be paid for such varied work under the terms set out in the daywork schedule included in the Contract and at the rates affixed thereto by him in the Tender.

The Contractor shall furnish to the Engineer-in-Charge such receipts or other vouchers as may be necessary to prove the amounts paid and, before ordering materials, shall submit to the Engineer-in-Charge quotations for the same for his approval.

In respect of such of the Works executed on a daywork basis, the Contractor shall, during the continuance of such work, deliver each day to the Engineer-in-Charge an exact list, in duplicate, of the names, occupation and time of all workmen employed in such work and a statement, also in duplicate, showing the description and quantity of all materials and Contractor's Equipment used thereon or therefor other than Contractor's Equipment which is included in such daywork schedule. One copy of each list and statement will, if correct, or when agreed, be signed by the Engineer-in-Charge and returned to the Contractor.

At the end of each month the Contractor shall deliver to the Engineer-in-Charge a priced statement of the labour, materials and Contractor's Equipment, except as aforesaid, used, and the Contractor shall not be entitled to any payment unless such statements and lists have been fully and punctually rendered. Provided always that if the Engineer-in-Charge considers that for any reason the sending of such lists or statements by the Contractor was impracticable he shall nevertheless be entitled to authorise payment for such work, either as daywork or at such value therefor as shall be in his opinion fair and reasonable.

51.5 The determination as per clause 51.3 shall be done in the following manner:

- a. The Contractor shall be required to bring within fourteen (14) days to the notice of the Engineer-in-Charge any occurrence of variation in Contract Price beyond the limits stated therein. The Contractor shall submit the Bill of quantities determined based on the drawings issued and/or works executed till that stage.
- b. No price variation shall be determined and/or payable for the quantities executed till that stage.
- c. The determination of price shall be considered for only those quantities and items of work, which are performed after the variation of fifty (50) percent from the initial Contract Price.

PROCEDURE FOR CLAIMS

52.1 Notice of Claims

Notwithstanding any other provision of the Contract, if the Contractor intends to claim any additional payment pursuant to any Clause of the Contract, he shall give notice of his intention to the Engineer-in-Charge, with a copy to the Employer, within fourteen (14) days after the event giving rise to the claim has first arisen. The Contractor shall continue the execution/ performance of his obligations as per the Contract regardless of the submission of notice regarding claim/s by the Contractor.

52.2 Contemporary Records

Upon the happening of the event referred to in Sub-Clause 52.1, the Contractor shall keep such contemporary records as may reasonably be necessary to support any claim he may subsequently wish to make. The Engineer-in-Charge shall on receipt of a notice under Sub-Clause 52.1, inspect such contemporary records and may instruct the Contractor to keep any further contemporary records as may be material to the claim; provided that the foregoing shall not in any event be construed as an admission of the Employer's liability or an acceptance of the Contractor's claim. The Contractor shall permit the Engineer-in-Charge to inspect all such records and supply him with copies thereof as and when the Engineer-in-Charge so instructs.

52.3 Substantiation of Claims

Within 14 days, or such other reasonable time as may be agreed by the Engineer-in-Charge, of giving notice under Sub-Clause 52.1, the Contractor shall send to the Engineer-in-Charge an account giving detailed particulars of the amount claimed and the grounds upon which the claim is based. Where the event giving rise to the claim has a continuing effect, such account shall be considered to be an interim account and the Contractor shall, at such intervals as the Engineer-in-Charge may require, send further interim accounts.

52.4 Failure to Comply

If the Contractor fails to comply with any of the provisions of this Clause 52 in respect of any claim which he seeks to make, his entitlement to payment in respect thereof shall not exceed such amount as the Engineer-in-Charge considers to be verified by contemporary records (whether or not such records were brought to the Engineer-in-Charge notice as required under Sub-Clauses 52.2 and 52.3).

52.5 Payment of Claims

Any interim payment certificate issued by the Engineer-in-Charge pursuant to Clause 59 shall include such amount in respect of any claim as the Engineer-in-Charge, after due consultation with the Employer and the Contractor, may consider due to the Contractor provided that the Contractor has supplied sufficient particulars to enable the Engineer-in-Charge to determine the amount due. If such particulars are insufficient to substantiate the whole of the claim, the Contractor shall be entitled to payment in respect of such part of the claim as such particulars may substantiate to the satisfaction of the Engineer-in-Charge. The Engineer-in-Charge shall notify the Contractor of any determination made under this Sub-Clause, with a copy to the Employer.

CONTRACTOR'S EQUIPMENT, TEMPORARY WORKS AND MATERIALS

53.1 Exclusive Use for the Works

All Contractor's Equipment, Temporary Works and materials provided by the Contractor shall, when brought on to the Site, be deemed to be exclusively intended for the execution of the Works and the Contractor shall not, without the consent of the Engineer-in-Charge, remove the same or any part thereof, except for the purpose of moving it from one part of the Site to another. Provided that such consent shall not be required for vehicles engaged in transporting any staff, labour, Contractor's Equipment, Temporary Works, Plant or materials to or from the Site.

53.2 Employer not Liable for Damage

The Employer shall not at any time be liable, for the loss of or damage to any of the said Contractor's Equipment, Temporary Works, or materials due to any reason whatsoever.

53.3 Conditions of Hire of Contractor's Equipment

With a view to securing, in the event of termination under Clause 62, the continued availability, for the purpose of executing the Works, of any hired Contractor's Equipment the Contractor in his contract with such hirer shall include a provision that the hirer shall, on request in writing made by the Employer within 7 days after the date on which such termination has become effective, and on the Employer undertaking to pay all hire charges in respect thereof from such date of termination, hire such Contractor's Equipment to the Employer on the same terms in all respects as the same was hired to the Contractor. The Employer shall be entitled to permit the use of such equipment by any other contractor employed by him for the purpose of executing and completing the Works and remedying any defects therein.

53.3.1 Costs for the Purpose of Clause 62

In the event of the Employer entering into any agreement for the hire of Contractor's Equipment pursuant to Sub-Clause 53.3, all sums properly paid by the Employer under the provisions of any such agreement and all costs incurred by him (including stamp duties) in entering into such agreement shall be deemed, for the purpose of Clause 62, to be part of the cost of executing and completing the Works and remedying any defects therein.

53.4 Incorporation of Clause in Subcontracts

The Contractor shall, when entering into any subcontract for the execution of any part of the Works, incorporate in such subcontract (by reference or otherwise) the provisions of this Clause 53 in relation to Contractor's Equipment, Temporary Works or materials brought on to the Site by the Subcontractor.

53.5 Approval of Materials or equipment not Implied

Nothing contained in this **Clause 53** shall be deemed to imply any approval or acceptance by the Engineer-in-Charge /the Employer of the materials or equipment, systems or any other matters referred to herein nor shall it prevent the rejection of any such materials or equipment at any time by the Engineer-in-Charge.

53.6 Office Accommodation [Deleted]

~~The Contractor shall provide, erect and maintain at his own expense, simple, water-tight office accommodation for the Engineer in charge as per the drawings given at the time of tender. The~~

~~accommodation shall be well lit and ventilated and provided with lockable doors and windows, fans, air conditioners, heat convectors during winters. The office of the Engineer in charge shall be sufficiently large to accommodate the Engineer in charge and his assistants, and shall be suitably furnished with desks, chairs, storage cabinets, board/s for drawing, tackboards on walls for displaying drawings and other office furniture etc. as per the instructions of the Engineer in charge. The accommodation shall not be demolished till so directed by the Engineer in charge. The structures shall be relocated, if required for the Works, and removed on completion of the Works at the Contractor's own cost. All dismantled materials shall belong to the Contractor. Contractor shall provide water & electricity to the office accommodation at his own expense during the contract period.~~

53.7 Telephones

The Contractor shall provide, install and maintain at his expense one telephone for the Works. He shall pay all charges in connection with the same till the completion of the Works. An extension of the above telephone shall be provided to the Engineer-in-Charge at his office at the Site.

53.8 Worksheds [Deleted]

~~The Contractor shall provide, maintain and erect at his own expense proper waterproof sheds for the storage and protection of construction materials, carpentry and joinery, shop equipment, both his own as well as any Free Issue Materials supplied by or on behalf of the Employer, at the locations approved by the Engineer in Charge.~~

53.9 Sanitary Conveniences [Deleted]

~~The Contractor shall at his expense provide and erect all necessary sanitary conveniences for the site staff including the Project Manager and his assistants, maintain them in a clean, orderly condition and clean and deodorise the ground after their removal. The Contractor shall submit a typical drawing of the sanitary convenience arrangements for approval of the Project Manager.~~

53.10 Infrastructure [Deleted]

~~The Contractor shall provide at his expense all temporary access roads, hardstandings and other Site infrastructure stipulated in the Special Conditions of Contract that are required for the proper execution of the Works.~~

MEASUREMENT

54.1 Quantities

The quantities set out in the Schedule of Quantities are the estimated quantities for the Works, and are not to be taken as the actual and correct quantities of the Works to be executed by the Contractor in fulfilment of his obligations under the Contract.

55.1 Works to be Measured

The Engineer-in-Charge shall, except as otherwise stated, ascertain and determine by measurement the value of the Works in accordance with the Contract and the Contractor shall be paid that value

in accordance with Clause 59. The Engineer-in-Charge shall, when he requires any part of the Works to be measured, give reasonable notice to the Contractor's authorised agent, who shall:

- (a) Forthwith attend or send a qualified representative to assist the Engineer-in-Charge in checking and scrutinising such measurement, and
- (b) Supply all particulars including measurements duly recorded in measurement books in accordance with the mode of measurements specified in the contract and as required by the Engineer-in-Charge.

Should the Contractor fail to attend, or neglect or omit to send such representative or submit the measurements, then the measurement made by the Engineer-in-Charge or approved by him shall be taken to be the correct measurement of such part of the Works and deemed to be accepted by the Contractor. For the purpose of measuring such Permanent Works or a part thereof, as are to be measured by records and Drawings, the Engineer-in-Charge shall scrutinise measurement records and Drawings as the work proceeds, and the Contractor, as and when called upon to do so in writing, shall within 7 days, attend to examine and agree such records and Drawings with the Engineer-in-Charge and shall sign the same when so agreed. If the Contractor does not attend to examine and agree such records and Drawings, they shall be taken to be correct and deemed to be accepted by the Contractor. If after examination of such records and Drawings, the Contractor does not agree with the same or does not sign the same as agreed, they shall nevertheless be taken to be correct, unless the Contractor, within 7 days of such examination, lodges with the Engineer-in-Charge, notice of such records and drawings are claimed by him to be incorrect and stating the reasons on the basis of which the measurements are asserted to be inaccurate. In the absence of such written notice being received by the Engineer-in-Charge within the stipulated time, the measurements shall be deemed to be accurate. On receipt of such notice, the Engineer-in-Charge shall review the records and drawings and after considering the objections raised in the notice given by the Contractor, either confirm or vary the measurements, and such measurements determined by the Engineer-in-Charge shall be final and binding on the Contractor. Upon recording of such measurements, the Contractor shall compute the quantities and prepare the invoices for interim payments thereon.

56.1 Method of Measurement

The Works shall be measured net, in accordance with the procedure laid down by the Central Public Works Department – Specifications (latest, as on [the date of execution of the Contract]). Where the mode of measurement is not available in the CPWD specifications, the same shall be measured as provided in IS: 1200 unless otherwise specifically indicated in the Contract.

PROVISIONAL SUMS

57.1 Definition of Provisional Sum

"Provisional Sum" means a sum included in the Contract and so designated in the Schedule of Quantities for the execution of any part of the Works or for the supply of goods, materials, Plant or services, or for contingencies, which sum may be used in whole or part, or not at all, on the instructions of the Engineer-in-Charge. The Contractor shall be entitled to only such amounts in respect of the work, supply or contingencies to which such provisional sums relate as the Engineer-in-Charge shall determine in accordance with this Clause. The Engineer-in-Charge shall notify the Contractor of any determination made under this Sub-Clause, with a copy to the Employer.

57.2 Use of Provisional Sums

In respect of every Provisional Sum the Engineer-in-Charge shall have authority to issue instructions for the execution of work or for the supply of goods, materials, Plant or services by:

- (a) The Contractor, in which case the Contractor, shall be entitled to an amount equal to the value thereof determined in accordance with Clause 51,
- (b) A nominated Subcontractor, as hereinafter defined, in which case the sum to be paid to the Contractor therefor shall be determined and paid in accordance with Sub-Clause 58.4.

57.3 Production of Vouchers

The Contractor shall produce to the Engineer-in-Charge all quotations, invoices, vouchers and accounts or receipts in connection with expenditure in respect of provisional sums, except where the sum is valued in accordance with rates set out in the Tender.

NOMINATED SUBCONTRACTORS

58.1 Definition of "Nominated Subcontractors"

All specialists, merchants, tradesmen and others executing any work or supplying any goods, materials, Plant or services for which provisional sums are included in the Contract, who may have been or are nominated or selected or approved by the Employer and the Engineer-in-Charge, and all persons to whom by virtue of the provisions of the Contract the Contractor is required to subcontract shall, in the execution of such work or the supply of such goods, materials, Plant or services, be deemed to be Subcontractors to the Contractor, and are referred to in this Contract as "Nominated Subcontractors". If, during the execution of the Works, the performance of any Nominated Subcontractor is found to be unsatisfactory, the Employer /the Engineer-in-Charge shall have the right to require termination of such subcontract and direct the Contractor to enter into a subcontract with an alternate person nominated by the Employer/the Engineer-in-Charge. Such alternate contractor shall also be considered a Nominated Subcontractor for the purposes of the Contract.

58.2 Design Requirements to be Expressly Stated

If in connection with any items of works the cost of which is proposed to be paid out of the Provisional Sums, the services to be provided include any design or specification of any part of the Permanent Works or of any part to be incorporated therein, such requirement shall be expressly stated in the Contract and the Contractor shall ensure that such design or specification is included in any agreement with the relevant Nominated Subcontractor.

58.3 Payments to Nominated Subcontractors

For all work executed or goods, materials, Plant or services supplied by any Nominated Subcontractor in relation to the Works, the Contractor shall be entitled to :

- (a) The actual price paid or due to be paid by the Contractor, on the instructions of the Engineer-in-Charge, and in accordance with the subcontract;
- (b) In respect of labour supplied by the Contractor, the sum, if any referred in the Schedule of Quantities or, if instructed by the Engineer-in-Charge pursuant to paragraph (a) of Sub-Clause 57.2, as may be determined in accordance with Clause 51;

- (c) In respect of all other charges and profit, a sum being a percentage rate of the actual price paid or due to be paid calculated, where provision has been made in the Schedule of Quantities for a rate to be set against the relevant component of the Provisional Sum, at the rate inserted by the Contractor against that item.

58.4 Certification of Payments to Nominated Subcontractors

Before issuing, under Clause 59, any certificate, which includes any payment in respect of work done or goods, materials, plants or services supplied by any Nominated Subcontractor, Engineer-in-Charge shall be entitled to demand from the Contractor reasonable proof that all payments, less retention, if any in accordance with the terms of the relevant subcontract, included in previous interim payment certificates in respect of the work done or goods, materials, plants or services supplied by the Nominated Subcontractor, have been paid or discharged by the Contractor. If the Contractor fails to supply such proof, then unless the Contractor

- (a) Satisfies the Engineer-in-Charge in writing that he has reasonable cause for withholding or refusing to make such payments and
- (b) Produces to the Engineer-in-Charge reasonable proof that he has so informed such Nominated Subcontractor in writing,

The Employer shall be entitled to directly pay to such Nominated Subcontractor, upon the certificate of the Engineer-in-Charge, all payments less retention, if any, as provided for in the relevant subcontract, which the Contractor has failed to make to such Nominated Subcontractor and to recover the amount so paid by the Employer from any sums due or to become due from the Employer to the Contractor. The Parties agree and acknowledge that any such payment by the Employer to a Nominated Subcontractor shall not relieve or absolve the Contractor of its obligations under the Contract in any manner whatsoever.

Provided that, where the Engineer-in-Charge has certified and the Employer has paid direct as aforesaid, the Engineer-in-Charge shall, in issuing any further certificate in favour of the Contractor, deduct from the amount thereof the amount so paid, direct as aforesaid, but shall not withhold or delay the issue of the certificate itself when due to be issued under the terms of the Contract.

CERTIFICATES AND PAYMENT

59.1 Contract Price; Periodic Statements

The Contract shall be entered into as an item rate contract. The Contract Price for the Works consists of the following components:

- (a) The cost required for the execution of the items specified in the Schedule of Quantities, for which Item Rates have been specified;
- (b) The Provisional Sum, to the extent such sum is used, in whole or in part, in accordance with the instructions of the Engineer-in-Charge.

The Contractor agrees and acknowledges that the Item Rates and Provisional Sum specified in the Contract include without limitation, the following:

- (i) The cost of the entire scope of Works (subject to any change in the Contract Price in the circumstances specified in the Contract), in accordance with the Contract;

- (ii) All costs in relation to power (including back-up power) and water required for execution of the Works;
- (iii) All costs of labour including any expenses for working in shifts or permitted overtime working, incentives, allowances, condition monies, wage orders, night shift differentials, incentives, emoluments etc. and all costs associated with the transport of labour required for the completion of the Works in accordance with the Contract;
- (iv) All expenses necessary to meet the Contractor's obligations for making contributions towards employee benefit funds (including but not limited to employees state insurance, provident fund, old age pension, if any, or any other benefits/compensation payable by the Contractor), in accordance with all Applicable Laws;
- (vi) All costs of providing transportation services;
- (vi) The cost of providing insurance in accordance with the Contract;
- (vii) All Taxes, including without limitation, sales tax, excise, octroi, royalty, toll tax, service and
- (vii) Costs for the Contractor's establishment, infrastructure, overheads and all other charges, and all costs and expenses required for all items, services or things required for the proper execution and successful completion of the Works under the Contract, in conformity with sound engineering and construction practices and to the satisfaction of the Engineer-in-Charge and the Employer.

The Contractor shall submit to the Engineer-in-Charge interim invoices/bills once a month, within the period specified by the Engineer-in-Charge, in three copies, each signed by the Contractor's Representative, in such form as the Engineer-in-Charge may, from time to time prescribe, showing the amounts to which the Contractor considers himself to be entitled up to the end of the month ("**Running Account Bills**") in respect of

- (a) The value of the Permanent Works executed. In the event of items of work, which are in progress or not completed in all respects in accordance with the specifications, the Engineer-in-Charge shall make interim payments by applying part rates.
- (b) Any other sum to which the Contractor may be entitled to under the Contract.

The Contractor shall not be entitled to any payment against a Running Account Bill unless the Running Account Bill submitted by the Contractor is in full compliance with the requirements specified in the Contract.

59.2 Periodic Payments

The Engineer-in-Charge shall, within the time period specified in the Schedule of Fiscal Aspects from the date of receiving a Running Account Bill, certify to the Employer the amount of payment payable to the Contractor, subject to the deductions:

- (a) For the recovery of the Mobilisation Advance paid to the Contractor;
- (b) In respect of Retention Money until the amount so retained reaches the maximum limit of Retention Money stated in the Schedule of Fiscal Aspects;
- (c) For adjusting any materials advance paid to the Contractor under Sub-Clause 59.11 of the General Conditions of Contract; and
- (d) Any other deductions/withholding in accordance with the Contract (including but not limited to deduction for the recovery of any sums due from the Contractor to the Employer under the Contract.

All payments to the Contractor shall also be subject to deductions for taxes in accordance with Applicable Laws, including and tax deductions at source under the Income Tax Act. The Contractor shall not be entitled to claim any increase in the Item Rates or any additional costs on account of such deduction of tax. The Employer shall provide to the Contractor all the certificates in respect of such deductions. Provided that the Engineer-in-Charge shall not be bound to issue any certificate for payment under this Sub-Clause 59.2 and the Contractor shall not be entitled to any payment in respect of a Running Account Bill if the net amount thereof, after all deductions in accordance with this Sub-Clause 59.2, would be less than the minimum amount in respect of interim certificates as stated in the Schedule of Fiscal Aspects. Such sums due to the Contractor shall be included in the next Running Account Bill raised by the Contractor.

Notwithstanding anything to the contrary in the Contract no amount will be certified by the Engineer-in-Charge for payment and the Contractor shall not be entitled to any payment until the Performance Security has been provided by the Contractor to the Employer. The Contractor agrees and acknowledges that the release of any payment by the Employer in favour of the Contractor, whether on account, against the Running Account Bills, or otherwise shall not affect or prejudice the rights of the Employer against the Contractor or relieve the Contractor of any of its obligations under the Contract nor shall the same be interpreted as approval of the Works done or of the materials and equipment furnished by the Contractor.

59.3 Payment of Retention Money

- (a) Upon the issue of the Virtual Completion Certificate with respect to the whole of the Works, one half of the Retention Money shall be certified by the Engineer-in-Charge for releasing to the Contractor.
- (b) Upon the expiry of the Defects Liability Period for the Works, the balance Retention Money shall be certified by the Engineer-in-Charge for payment to the Contractor. Provided that the balance Retention Money shall not be released to the Contractor or discharged as the case may be, till such time that any work required to be executed by the Contractor pursuant to Clauses 48 and 49 is completed and the Defects Liability Certificate is issued to the Contractor.

59.4 Withholding and Deductions

The Employer shall have no obligation to make, and may, in consultation with the Engineer-in-Charge, withhold, any payment to the Contractor at any time when the Contractor is in breach of any term or provision of the Contract. On the next payment date succeeding the date on which all such breaches of the Contractor have been remedied, the Employer shall make all payments withheld during the continuation of any such breach, less any amounts paid by or on behalf of the Employer in an effort to remedy any such breach or the costs incurred as a result thereof.

Without prejudice to the generality of the foregoing, the Employer may, in consultation with the Project Manager, withhold payment or, on account of subsequently discovered information, cancel/nullify any payment certificate wholly or in part, to such extent as may be necessary to protect the Employer from losses, damages, costs, including on account of the following:

- (a) Any defective works, which the Contractor fails to remedy promptly;
- (b) Failure of the Contractor to make payments properly and regularly to any Subcontractors or personnel engaged by the Contractor for the Works and on account of such failure a claim is raised or can be raised against the Employer;
- (c) Damage by the Contractor to the works of other contractors on the Site;

- (d) Failure of the Contractor to execute the Works in conformity with the Contract; or
- (e) Any event or circumstances, in which the Contract provides for withholding of payment by the Employer.

59.5 Statement at Virtual Completion

Not later than forty-two (42) days after the issue of the Virtual Completion Certificate with respect to the whole of the Works, the Contractor shall submit to the Engineer-in-Charge a Statement at Virtual Completion with supporting documents showing in detail, in the form approved by the Engineer-in-Charge,

- (a) The final value of all work done in accordance with the Contract upto the date stated in such Virtual Completion Certificate;
- (b) Any further sum which the Contractor considers to be due; and
- (c) An estimate of the amounts which the Contractor considers will become due to him under the Contract.
- (d) Statement/ affidavit in a format furnished by Engineer-in-Charge stating that all Contractor's obligations to Subcontractors, labourers, equipment or material suppliers or other third party in connection with the works has been completed.
- (e) Releases or lien waivers and non-dues certificates from the Subcontractors effective under Applicable Law, in form and substance satisfactory to the Employer/ the Engineer-in-Charge;
- (f) All product warranties, operation and maintenance manuals etc. shall have to be submitted.

The estimated amounts shall be shown separately in such statement at completion. The Engineer-in-Charge shall certify payment in accordance with Sub-Clause 59.2.

59.6 Final Statement on completion of Defects Liability

Not later than twenty-eight (28) days after the issue of the Defects Liability Certificate pursuant to Sub-Clause 61.1, the Contractor shall submit to the Engineer-in-Charge for consideration a draft final statement with supporting documents showing in detail, in the form approved by the Engineer-in-Charge,

- (a) The value of all work done in accordance with the Contract; and
- (b) Any further sum which the Contractor considers to be due.
If the Employer/the Engineer-in-Charge disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Employer/the Engineer-in-Charge may require and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Engineer-in-Charge the final statement as agreed (for the purposes of these conditions referred to as the "**Final Statement**").

59.7 Discharge

Upon submission of the Final Statement, the Contractor shall give to the Employer, with a copy to the Engineer-in-Charge, a written discharge effective under Applicable Law in form and substance satisfactory to the Employer confirming that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor arising out of or in respect to the Contract. Provided that such discharge shall become effective only after payment due under the final

certificate issued pursuant to Sub-Clause 59.8 has been made and the Performance Security and the Retention Money (including the bank guarantee submitted under Clause 59.3) has been returned to the Contractor, subject to any claims by the Employer in accordance with the Contract.

59.8 Final Certificate

Within twenty-eight (28) days after receipt of the Final Statement, and the written discharge in accordance with Sub-Clause 59.7, the Engineer-in-Charge shall issue to the Employer (with a copy to the Contractor) a Final Certificate stating:

- (a) The total amount which in the opinion of the Engineer-in-Charge is due under the Contract to the Contractor; and
- (b) After giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled under the Contract, the balance if any, due from the Employer to the Contractor or from the Contractor to the Employer, as the case may be.

59.9 Cessation of Employer's Liability

The Employer shall not be liable to the Contractor for any matter or thing arising out of or in connection with the Contract, or execution of the Works, unless the Contractor shall have included a claim in respect thereof in his Final Statement and (except in respect of matters or things arising after the issue of the Virtual Completion Certificate with respect to the whole of the Works) in the Statement at Virtual Completion under **Sub-Clause 59.5**. The acceptance by the Contractor of the final payment shall, to the fullest extent permitted by Applicable Law, operate as a release by the Contractor of the Employer from all liability under or in connection with the Contract towards the Contractor, including to any Subcontractor, or any other person who performed the Works or caused the Works to be performed, directly or indirectly, on behalf of the Contractor, for any further payment for all things done or furnished in connection with the Works.

59.10 Time for Payment

The amount due to the Contractor under any interim certificate issued by the Engineer-in-Charge pursuant to this Clause, or to any other term of the Contract, shall be paid by the Employer to the Contractor within period specified in the Schedule of Fiscal Aspects after such interim certificate has been delivered to the Employer, or in the case of the Final Certificate referred to in Sub-Clause 59.8, within the period specified in the Schedule of Fiscal Aspects, after such Final Certificate has been delivered to the Employer.

59.11 Unfixed Materials

The Contractor shall be paid for unfixed, non-fragile, imperishable materials, as defined in the appendix to tender, that have been brought to Site and stored for incorporation in the Works, to the extent as specified in the appendix of materials as assessed and recommended by the Engineer-in-Charge provided that claims for such payments are supported by all relevant vouchers viz. Delivery challans, bills and other documents that the Engineer-in-Charge may call for. The value of such material shall be related to the material component of the tendered unit rate in the Schedule of Quantities and the lower between this value and the market rate shall be adopted. Only such materials as are brought to Site within reasonable time for incorporation in the Works shall be recommended for such payment. The amount thus paid shall be treated as advance and shall be

adjustable accordingly. Such materials, when paid for, shall become the exclusive property of the Employer and shall not be hypothecated to any party or removed from the Site. The said materials shall remain in the custody of the Contractor till the Works are complete and thereafter shall be delivered to the Employer. Any loss or damage shall be the sole responsibility of the Contractor.

59.12 Advance Payment Deleted

~~An advance payment of the amount stated in the Schedule of Fiscal Aspects in the Appendix to Tender (“**Mobilization Advance**”) shall, subject to submission by the Contractor to the Employer of Performance Security in accordance with Sub-Clause 10.1 and a bank guarantee in terms approved by the Employer of the full value of the Mobilization Advance, substantially in the format provided in the Appendix to Tender and from a scheduled commercial bank approved by the Employer (“**Mobilization Advance Guarantee**”), be certified by the Engineer in Charge for payment to the Contractor, in the manner and in instalments as indicated in the Schedule of Fiscal Aspects. The Mobilisation Advance shall be recovered by deductions of fifteen percent (15%) from the gross amount of each interim payment certificate (prior to any other deductions that the Employer is entitled to make under the Contract), after 10% (ten percent) of the initial Contract Price has been invoiced by the Contractor in Running Account Bills; provided that the Employer shall have the right to enhance the aforesaid percentage by such percentage as may be required at any point of time to ensure that the entire Mobilization Advance is completely recovered on or before Works representing eighty percent (80%) of the initial Contract Price has been completed by the Contractor. The Mobilization Advance Guarantee shall remain valid until the date of Virtual Completion of the Works, unless the entire Mobilization Advance has been recovered earlier in accordance with this **Clause 59.12**. The Mobilization Advance Guarantee shall be progressively reduced on a quarterly basis by the amount repaid by the Contractor as indicated in interim certificates issued by the Project Manager.~~

59.13 Mode of Payment

All payments due from the Employer to the Contractor shall be made directly to the Contractor by cheque or, if the Contractor so requires, to the Contractor’s designated bank account by wire transfer. All payments under the Contract shall be made in Indian rupees.

60.1 Title and Risk

Property and ownership in all materials and Works shall, as between the Contractor and the Employer, vest in the Employer in whole or in parts upon the earlier of the following times when:

- (i) At the Contractor’s or the Subcontractor’s premises, as applicable; or
- (ii) The Contractor becomes entitled to payment in respect of the Works or part thereof;
- (iii) Incorporation of such materials into the Works; or
- (iv) Termination of the Contract.

Transfer of title pursuant to this **Clause 60.1** shall in no way affect the Employer’s rights or remedies as set forth in any other provision of the Contract. The Parties agree and acknowledge that the passage of title shall not release or relieve the Contractor in any manner whatsoever from its obligations under the Contract, and risk of loss or damage to any such materials or Works shall lie on the Contractor until the care and custody passes on to the Employer in terms hereof.

60.2 Custody of the Works

The Contractor shall be responsible to the Employer:

- (i) For the care of the Works until the Virtual Completion of the Works;
- (ii) During the Defects Liability Period, for any damage to the Works which occurs during such period as a result of any defect for which the Contractor is responsible, and any goods or materials to be used in connection therewith, until such work is complete;
- (ii) in the event of termination of the Contract, either by the Employer or the Contractor, for the care of the Works until the expiry of the period of the notice of termination in accordance with the provisions of the Contract.

Upon the Virtual Completion of the Works, the Employer shall take over the care, custody and control of the Works from the Contractor.

61.1 Defects Liability Certificate

The Contract shall not be considered as completed until a Defects Liability Certificate signed by the Engineer-in-Charge shall have been delivered to the Employer, with a copy to the Contractor, stating the date on which the Contractor shall have completed the repairs/rectification of any defects notified during the Defects Liability Period to the Engineer-in-Charge satisfaction. The Defects Liability Certificate shall be given by the Engineer-in-Charge within 21 days after the expiration of the Defects Liability Period, , subject to completion by the Contractor of any works instructed pursuant to Clauses 48 and 49, to the satisfaction of the Engineer-in-Charge.

61.2 Unfulfilled Obligations

Notwithstanding the issue of the Defects Liability Certificate, the Contractor shall remain liable for the fulfilment of any obligation incurred under the provisions of the Contract prior to the issue of the Defects Liability Certificate which remains unperformed at the time such Defects Liability Certificate is issued, including but not limited to obligations in respect of guarantees for works done by specialist Subcontractors, and for the purposes of determining the nature and extent of any such obligation, the Contract shall be deemed to remain in force between the parties to the Contract.

TERMINATION OF CONTRACT BY THE EMPLOYER

62.1 Default of Contractor

62.1 The occurrence and continuation of any of the following events shall constitute an event of default of the Contractor (“**Contractor Event of Default**”) under the Contract:

- (a) Repudiation of the Contract or the abandonment by the Contractor of the Works;
- (b) If the Contractor assigns, mortgages, charges or creates any other security or purports to assign, mortgage, charge or create any other security on any of its rights or obligations in contravention of the provisions of the Contract or transfers, novates or assigns any of its rights or obligations under the Contract, without the prior written consent of the Employer;
- (c) The transfer, pursuant to Applicable Law, of either the rights and/or obligations of the Contractor under the Contract or all or a substantial portion of the assets or undertakings of the Contractor;

- (d) The merger, amalgamation, reorganization or reconstruction of the Contractor, to the extent that it affects the ability of the resulting entity to perform its obligations under the Contract;
- (e) Failure by the Contractor to commence the Works in accordance with Sub-Clause 40.1 or to proceed with the Works or any part thereof, within fourteen (14) days after receiving notice pursuant to Sub-Clause 45.1;
- (f) The Contractor having itself commenced bankruptcy, insolvency, reorganization, stay, moratorium or similar debtor-relief proceedings, or having become insolvent or unable to pay its debts as they become due, or admitting in writing its inability to pay its debts or making assignment for the benefit of its creditors;
- (g) If the Contractor is deemed by law unable to pay its debts as they fall due, or enters into a voluntary or involuntary bankruptcy, liquidation or dissolution (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), or becomes insolvent, or makes an arrangement with, or assignment in favour of, its creditors, or if a receiver, administrator, trustee or liquidator is appointed over any substantial part of its assets;
- (h) Any misrepresentation by the Contractor in any representation or warranty of the Contractor set forth in the Contract or in any representation or warranty given by the Contractor in its response to the tender, or the omission by the Contractor to state any fact which renders any such representation or warranty materially misleading, untrue or incorrect;
- (i) Failure on the part of the Contractor to remedy defects or commence remedial measures and pursue such measures diligently in accordance with the provisions of the Contract;
- (j) Failure by the Contractor to comply with a notice issued pursuant to Sub-Clause 38.1 within fourteen (14) days after having received it;
- (k) The Contractor fails to demonstrate that sufficient engineering and construction capability is employed in the execution of the Works to ensure compliance with the dates specified in the Master Construction Schedule;
- (l) Failure by the Contractor to comply with the terms of Applicable Laws, codes and consents (including any consents that have been obtained by the Employer);
- (m) Failure by the Contractor to achieve Virtual Completion of the Works within a period of 14 days [Fourteen days] days from the Time of Completion;
- (n) Failure to maintain or renew (as applicable) the Performance Security, the Mobilization Advance Guarantee or any other guarantee or security required under the Contract and such failure has not been cured within a period of seven (7) days; and/or
- (o) Any breach by the Contractor of any of its other obligations under the Contract (which is not expressly dealt with in the other provisions of this **Sub-Clause 62.1**), which, if capable of being remedied, is not remedied within seven (7) days from the date of such breach.

The Employer/the Engineer-in-Charge shall notify the Contractor that it is in default (setting out the nature of the default) giving the Contractor not less than seven (7) days to cure such Contractor Event of Default, provided that in case the default is of such a nature that the same cannot be remedied within a period of seven (7) days, the Employer shall be entitled to terminate the Contract forthwith. If the Contractor fails to cure such default within the specified cure period, the Employer may, without prejudice to any other right or remedy the Employer may have under the Contract or Applicable Law or at equity, terminate the Contract and expel the Contractor from the Site.

In the event of termination upon occurrence of a Contractor Event of Default, the Employer shall not be obliged to make any payments to the Contractor until the Works have been completed by alternative means. Further, the Employer may, by its agents or servants, enter upon and take possession of the Works and all materials lying upon the Site, and use the same as its own property

or may employ the same in carrying on and completing the Works by employing any other contractor to complete the Works. When the Works are completed or soon thereafter as convenient, the Employer/the Architect shall give a written notice to the Contractor to remove surplus materials, if any, from the Site, and should the Contractor fail to do so within a period of fourteen (14) days of receiving such notice, the Employer shall be entitled to sell the same by public auction and in the event of such sale shall give credit to the Contractor for the amount realized.

62.2 Valuation at Date of Termination

The Engineer-in-Charge shall, as soon as may be practicable after any such entry and termination by the Employer, fix and determine after such investigation or enquiries as he may think fit to make or institute, and shall certify :

- (a) What amount if any, had, at the time of such entry and termination, been reasonably earned by or would reasonably accrue to the Contractor in respect of work then actually done by him under the Contract, and
- (b) The value of any of the said unused or partially used materials, or on account of any of Contractor's Equipment and Temporary Works.

62.3 Payment after Termination

If the Employer terminates the Contract on account of a Contractor Event of Default, he shall not be liable to pay the Contractor any further amount (including any damages or costs) in respect of the Contract until the costs of execution, completion and remedying of any defects, damages for delay in completion and all other expenses incurred by the Employer in completing the Works through another Contractor have been ascertained and the amount thereof certified by the Engineer-in-Charge. The Contractor shall then be entitled to receive only such sum which would have been payable to the Contractor in respect of the Works properly executed by the Contractor prior to termination of the Contract, after deducting the said costs, damages and expenses. If these exceed the sum which would have been payable to the Contractor, then the Contractor shall upon demand, pay to the Employer the amount of such excess and it shall be deemed a debt due by the Contractor to the Employer and shall be recovered accordingly. If the sum payable to the Contractor in respect of the Works executed prior to termination exceeds such costs incurred by or on behalf of the Employer, the Engineer-in-Charge shall ascertain and certify in writing the sum payable by the Employer and shall thereupon be paid by the Employer to the Contractor.

62.4 Assignment of Benefit of Agreement

Unless prohibited by law, the Contractor shall, if so instructed by the Engineer-in-Charge within seven (7) days of such entry and termination referred to in Sub-Clause 62.1, assign to the Employer the benefit of any agreement for the supply of any goods, materials or services and/or for the execution of any work for the purposes of the Contract, which the Contractor may have entered into.

62.5 Termination for Convenience

The Employer reserves the right to terminate the Contract, without assigning any reason whatsoever, either in part or in full. The Employer shall in such an event give seven (7) days notice in writing to the Contractor of its intention to terminate the Contract, specifying the part of the Work to be terminated, if applicable, and the effective date of termination.

Upon receipt of notice to terminate from the Employer, the Contractor shall discontinue the Works or part thereof from that date specified in the notice and to the extent specified in the notice, commence demobilization and cancel all orders and contracts to the extent that they are related to the Works that have been terminated, on terms satisfactory to the Employer/the Engineer-in-Charge. The Contractor shall also stop all further subcontracting or purchasing activity related to the Works which have been terminated. In case of a partial termination or reduction in the scope of Works, the Contractor shall continue to execute that part of the Works not terminated or which forms part of the reduced scope of Works and the Employer will issue a Variation order under **Clause 50**. In the event of termination of the Contract under this **Sub-Clause 62.5**, the Employer shall pay the Contractor for the Works which are certified by the Engineer-in-Charge as duly completed in accordance with the Contract, prior to the date of termination and such sums as have been specified in paragraphs (i) to (iii) of **Sub-Clause 68.3**. The sole liability of the Employer and the sole remedy of the Contractor for any termination of this Contract pursuant to this **Sub-Clause 62.5** shall be payment of the amounts determined in accordance with this **Sub-Clause 62.5**.

62.6 Consequences of Termination

Notwithstanding anything to the contrary contained in the Contract, any termination pursuant to the provisions of the Contract shall be without prejudice to the accrued rights of either Party including its right to claim and recover damages, insurance proceeds, security deposits, and other rights and remedies, which it may have in law or under the Contract. All rights and obligations of either Party under the Contract, shall survive the termination to the extent such survival is necessary for giving effect to such rights and obligations

63.1 Urgent Remedial Work

If by reason of any accident or failure or other event occurring to, in, or in connection of the Works, or any part thereof, either during the execution of the Works or during the Defects Liability Period, any remedial or other work is, in the opinion of the Engineer-in-Charge, urgently necessary for the safety of life or of the Works or the Project or the adjoining property, the Engineer-in-Charge may instruct the Contractor to take urgent remedial action. If the Contractor is unable or unwilling at once to do such work, the Employer 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 Employer is work, which in the opinion of the Engineer-in-Charge, the Contractor was liable to do at his own cost under the Contract, then all costs consequent thereon or incidental thereto shall after due consultation with the Employer, be determined by the Project Engineer-in-Charge and may be deducted by the Employer from any moneys due or to become due to the Contractor and the Engineer-in-Charge shall notify the Contractor accordingly with a copy to the Employer. Provided that the Engineer-in-Charge shall, as soon after the occurrence of any emergency as may be reasonably practicable, notify the Contractor thereof.

EXTENDED FORCE MAJEURE

64.1 Termination upon Occurrence of a Force Majeure Event

If any event of Force Majeure occurs and subsists for a continuous period of eighty-four (84) days or for an aggregate period of 45 days (Fourty five days) days in 3 months (three months) months, the Employer and the Contractor shall discuss the matter and decide whether to terminate the Contract, subject to discharge of accrued liabilities until the date of termination, or to continue its execution on such terms as may be mutually agreed upon.

If the Contract is terminated as aforesaid, the Contractor shall be paid by the Employer, insofar as such amounts or items have not already been covered by on account payments made to the Contractor, for all work executed prior to the date of termination at the rates provided in the Contract and in addition :

- (a) The amounts payable in respect of items referred to in the Schedule of Quantities, so far as the work or service comprised therein has been carried out or performed, and a proper proportion of any such items which have been partially carried out or performed;
- (b) The cost of materials, Plant or goods reasonably ordered for the Works which have been delivered to the Contractor prior to the date of termination or of which the Contractor is legally liable to accept delivery, such materials, Plant or goods becoming the property of the Employer upon such payments being made by him, subject to the Contractor providing the Employer with satisfactory documentary evidence of the same.

Provided that against any payment due from the Employer under this Sub-Clause, the Employer shall be entitled to be credited with any outstanding balances due from the Contractor for advances in respect of Contractor's Equipment, materials and Plant and any other sums which, at the date of termination, were recoverable by the Employer from the Contractor under the terms of the Contract. Any sums payable under this Sub-Clause shall, after due consultation with the Employer and the Contractor, be determined by the Engineer-in-Charge who shall notify the Contractor accordingly, with a copy to the Employer.

64.2 Removal of Contractor's Equipment on Termination

If the Contract is terminated under the provisions of Sub-Clause 64.1, the Contractor shall, with all reasonable dispatch, remove from the site all Contractor's Equipment and shall have also his Subcontractors do so.

RELEASE FROM PERFORMANCE

65.1 Payment in Event of Release from Performance

If any circumstance of Force Majeure arises after the issue of the Letter of Acceptance the situation shall be dealt with in accordance with Clauses 64.1 and 64.2 hereinabove.

66. SETTLEMENT OF DISPUTES

66.1 Engineer-in-Charge Decision

If any disagreement, dispute, controversy or claim of any kind whatsoever arises between the Employer and the Contractor under, relating to, in connection with or arising out of the Contract or the execution of the Works, or the breach, interpretation, termination or validity thereof, whether during the execution of the Works or after their completion and whether before or after repudiation or other termination of the Contract, including any dispute as to any decision, opinion, consent, expression of satisfaction, approval, determination of value, action or instruction under the Contract (“**Dispute**”), the Dispute shall, in the first place, be initially referred in writing to the Engineer-in-Charge (who shall act as a sole expert mediator for resolution), with a copy to the other Party. Each Party hereby agrees to appoint the Engineer-in-Charge as the sole expert mediator, who has the relevant qualifications and experience and shall be authorized to make efforts to resolve the Dispute in accordance with the terms herein. The Engineer-in-Charge shall be acting as an expert mediator and not as an arbitrator and the decision of the sole expert resolution

on matters referred to him/her shall be recorded in a settlement agreement and such settlement shall not be subject to arbitration. Both Parties agree that they shall comply with and the signed the settlement agreement, if arrived at between the parties, which shall be final and binding on both the Parties.

During the pendency of any proceedings for the resolution of Disputes, the Contractor shall, in every case, continue to proceed with the Works with all due diligence and the Contractor and the Employer shall give forthwith effect to every such interim decision of the Engineer-in-Charge unless and until the same shall be revised, as provided herein, in an amicable settlement or an arbitral award.

The Parties agree to use their best efforts to attempt to resolve all Disputes promptly, equitably and in good faith, and further agree to provide in a timely manner each other with reasonable non-privileged records, information and data pertaining to any Dispute. If the Project Manager is unable to resolve any such Dispute within a period of twenty eight (28) days from the date of reference of such Dispute by a Party, either Party shall be entitled to refer the dispute to arbitration in accordance with Sub-Clause 66.2.

66.2 Arbitration

Any Dispute in respect of which the decision, opinion, consent, expression of satisfaction, approval, determination of value, action or instruction, if any, of the Engineer-in-Charge, has not become final and binding pursuant to Sub-Clause 66.1 shall be finally settled through arbitration in accordance with the provisions of the Arbitration and Conciliation Act, 1996 (“**Arbitration Act**”). The arbitral tribunal shall consist of three sole arbitrator. The Sole arbitrator shall be appointed in accordance with the Arbitration Act; one to be appointed by the Employer, the other to be appointed by the Contractor and the third to be jointly appointed by the two arbitrators and sole arbitrator shall be appointed by the Parties with mutual consent. In the event of the failure by either Parties to appoint an arbitrator mutually within [thirty (30)] days from the date of receipt of the demand for arbitration received from the other either Party and/or failure by the two arbitrators to appoint a third arbitrator within a period of [thirty (30)] days from the date of appointment of the second arbitrator, such then the sole arbitrator shall be appointed through court in accordance with the provisions of the Arbitration Act The arbitration shall be conducted in New Delhi, India and the language to be used in the arbitration shall be English, and any award shall be made in the English language. The arbitral tribunal shall, subject to Clause 66.1, have full power to open up, review and revise any decision, opinion, consent, expression of satisfaction, approval, determination of value, action or instruction of the Engineer-in-Charge related to the Dispute.

Neither Party shall be limited in the proceedings before the arbitrator to the evidence or arguments put before the Engineer-in-Charge pursuant to Sub-Clause 66.1 and shall be entitled to present positions and rely upon information supplemental to or different from those relied upon for purposes of any attempted dispute resolution as per Clause 66.1. Nothing contained herein shall disqualify the Engineer-in-Charge from being called as a witness and giving evidence before the arbitrator on any matter whatsoever relevant to the Dispute.

Arbitration may be commenced prior to or after completion of the Works, provided that the obligations of the Employer, the Engineer-in-Charge and the Contractor shall not be affected by reason of the arbitration being conducted during the progress of the Works.

66.3 Failure to Comply with Engineer-in-Charge Decision

Where neither the Employer nor the Contractor has given notice of intention to commence arbitration of a dispute within the period stated in Sub-Clause 66.1 and the related decision, if any, has become final and binding, either Party may, if the other Party fails to comply with such decision, and without prejudice to any other rights it may have, refer the failure to arbitration in

accordance with Sub-Clause 66.2. The provisions of Sub-Clauses 66.1 shall not apply to any such reference.

66.4 Governing law, Exclusive Jurisdiction

The Contract shall be governed by and construed in accordance with the laws of India. Subject to Sub-Clauses 66.1 to 66.3, the courts of New Delhi, India shall have exclusive jurisdiction in relation to all Disputes arising out of the Contract.

NOTICES

67.1 Notice to Contractor

All certificates, notices, instructions to be given to the Contractor by the Employer or the Engineer-in-Charge under the terms of the Contract shall be sent by speed post cable, telex or facsimile transmission to or left at the Contractor's principal place of business or such other address as the Contractor shall nominate for that purpose and by email at the email address so provided by the contractor

67.2 Notice to Employer and Engineer-in-Charge.

Any notice to be given to the Employer or to the Project Manager under the terms of the Contract shall be sent by speed post, cable, telex or facsimile transmission to or left at the respective addresses nominated for that purpose by the Employer/the Engineer-in-Charge and by email at the email address so provided by the Employer/ Engineer-in-Charge respectively.

68.1 Default of Employer

In the event of the Employer:

- (a) Failing to pay to The Contractor the amount due under any certificate of the Engineer-in-Charge within 28 days after the expiry of the time stated in Sub-Clause 59.10, subject to any deduction that the Employer is entitled to make under the Contract, or
- (b) Refusing any approval to the issue of any such certificate, or
- (c) Giving notice to the Contractor that for an unforeseen reasons it is impossible for him to continue to meet his contractual obligations, or
- (d) Becoming bankrupt or, being a company, going into liquidation, other than for the purpose of a scheme of reconstruction or amalgamation

The Contractor shall be entitled to terminate his employment under the Contract by giving notice to the Employer, with a copy to the Engineer-in-Charge. Such termination shall take effect 14 days after the giving of the notice.

68.2 Removal of Contractor's Equipment

Upon the expiry of the period of notice referred to in Sub-Clause 68.1, the Contractor shall, notwithstanding the provisions of Sub-Clause 53.1, with all reasonable dispatch, remove from the Site all Contractor's Equipment brought by him thereon.

68.3 Payment on Termination

In the event of such termination the Employer shall be under the same obligations to the Contractor in regard to payment as if the Contract had been terminated under the provisions of Clause 64, but, in addition to the payments specified in Sub-Clause 64.2, the Employer shall pay to the Contractor the amount of:

- (i) Any out-of-pocket expenses reasonably incurred by the Contractor directly as a result of such termination;
- (ii) The costs incurred by the Contractor in protecting the Works and leaving the Site in a safe condition;
- (iii) The costs incurred by the Contractor in the removal of any Plant from the Site.

The Contractor's right to payment of the amounts specified above is subject to the condition that all Subcontractors shall have been paid in full for all amounts owing to them through the date of termination, and the Contractor shall execute and deliver all such papers as the Employer reasonably requires for the purpose of assigning to and vesting in the Employer all rights, title and interests in and to all Subcontracts relating to the Works with respect to which payment has been made free of all liens, charges and encumbrances of any sort.

68.4 Contractor's Entitlement to Suspend Work

Without prejudice to the Contractor's entitlement to interest under Sub-Clause 59.10 and to terminate under Sub-Clause 68.1, the Contractor may, if the Employer fails to pay the Contractor an aggregate undisputed amount exceeding Rs 10000000/-(one crore only) within twenty-eight (28) days after the expiry of the time stated in Sub-Clause 59.10, after giving twenty-eight (28) days prior notice to the Employer, suspend or reduce the rate of progress of the Works.

If the Contractor suspends work or reduces the rate of Works in accordance with the provisions of this Sub-Clause, the Engineer-in-Charge shall, after due consultation with the Employer and the Contractor, determine:

- (a) Any extension of time to which the Contractor is entitled under Clause 43, and
- (b) Any reasonable costs incurred in properly protecting and securing the work and maintaining the staff and labour of the Contractor and its Subcontractors on or near the Site, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer.

68.5 Resumption of Work

Where the Contractor suspends work or reduces the rate of work, having given notice in accordance with Sub-Clause 68.4, and the Employer subsequently pays the amount due, including interest pursuant to Sub-Clause 59.10 and issues a notice to resume the Works, the Contractor's entitlement under Sub-Clause 68.1 shall, if notice of termination has not been given, lapse and the Contractor shall resume normal working as soon as is reasonably possible, and in any event within 7 days (Seven days) of the date on which the Employer issues a notice to resume the Works.

CHANGES IN COST AND LEGISLATION

69.1 Prices are firm and not subject to any variation

All Item Rates, Provisional Sums and other prices stated in the Contract shall be firm and fixed for the entire term of the Contract (including in the event any extension of time is granted to the Contractor or if there is any delay by the Contractor in executing the Works). Except as otherwise expressly provided in the Contract, no adjustment to the Item Rates or Provisional Sums shall be

made after the submission and/or acceptance of Tender due to any increase or decrease, in the market rates of materials, labour, plant, fuel or all and on account of any reason whatsoever, which may result in an increase or decrease of the cost in carrying out the Works.

69.2 Subsequent Legislation

If, after the latest date for submission of tenders for the Contract there occurs any statutory changes in the rates of Taxes or in case any change in Applicable Laws comes to the knowledge of the Contractor the Contractor shall forthwith submit to the Engineer-in-Charge detailed particulars. The Contractor and the Employer shall discuss and mutually agree on any time/cost implications of such change in Applicable Laws or any other adjustments that may be required. The Contractor acknowledges and agrees that change in Taxes shall not include and the provisions of this clause shall not be applicable to any changes in taxes, imposts or levies, which are payable on income or profession by the Contractor or its Subcontractors, their personnel or for which any of them is obliged to account. In the case of substitution of some existing Taxes with a new Tax, the net increase or decrease shall be taken into consideration for the purposes of the Contract.

70.1 Confidentiality and Intellectual Property Rights

The Contractor acknowledges that the drawings, specifications, documents, data, manuals, etc. whether as documents or in electronic media produced and or furnished by the Employer, and any documents, drawings or other information provided by the Contractor to the Employer in relation to the Contract shall be confidential and shall be deemed the proprietary information of the Employer.

The information furnished by the Employer to the Contractor is for the sole use for the execution of the Works in accordance with the Contract and shall be treated as strictly confidential by the Contractor, and shall always remain the property of the Employer. The Contractor thereby undertakes that the Information shall not be used or disclosed to any third party(s) for any purpose whatsoever other than the execution of the Works and the Project; and if provided to any other party, the conditions as set forth herein shall apply. The Contractor shall not, at any time, whether before or after the expiry or earlier termination of the Contract, without the prior written consent of the Employer, disclose or suffer or permit its officers, employees, agents or affiliates to disclose to any person (other than to any of its respective advisers, officers or employees who require the same to enable them properly to carry out their duties): (i) any of the contents of the Contract, (ii) any information relating to the negotiations concerning the same, (iii) any information provided by the Employer to the Contractor in course of performance of the Contract, (iv) any information which may come to the Contractor's knowledge in the course of such negotiations or otherwise concerning the operations, contracts, commercial or financial arrangements or affairs of the Employer, (v) any confidential information relating to the Employer or to the Project that may come to the knowledge of the Contractor, in any manner, at any time before, during or after the expiry or termination of the Contract. The provisions of this Sub-Clause 70.1 shall survive any expiry or termination of the Contract.

The Information in original, duplicate, Xerox or in any electronic form shall not be retained by the Contractor or any Subcontractor and the Contractor shall ensure that such data, documents etc. are either returned to the Employer immediately on expiry/termination of the Contract or if directed by the Engineer-in-Charge, destroyed under certificate to the Employer in such a manner that such information cannot be retrieved by any method whatsoever and in any form whatsoever subsequent to such destroying.

The stipulations contained herein shall survive for a period of 5 years after completion of the Project or the termination of the Contract, whichever is greater.

71.1 Materials and Workmanship

The Contractor undertakes to provide the highest quality of materials (as prescribed by the Specifications) and workmanship. The Employer attaches utmost importance to the overall excellent finish of the works and the Contractor undertakes to provide it.

72.1 Representations and Warranties of the Contractor

The Contractor represents and warrants to the Employer that:

- (i) It is a [company] duly organized, validly, existing and in good standing under the laws of India and has all legal power and authority to execute the Contract and carry out the terms, conditions and provisions hereof, and the execution, delivery and performance of the Contract have been duly authorized by all requisite corporate and other action and will not violate or contravene any material provision or requirements of any governmental authority or violate or contravene any provisions of its charter or by-laws or any indenture, agreement, document or instrument to which it is a party or by which it or its property may be bound or affected;
- (ii) It is not in violation of any Applicable Law that would adversely affect its ability to perform its obligations under the Contract;
- (iii) It has obtained, or has no reason to expect that it will not in due course and without undue delay obtain, all of the approvals, certificates, permits and licenses for which the Contractor is responsible hereunder with respect to any applicable authority, or any department or agency thereof, necessary, required or appropriate in connection with the performance of the Works;
- (iv) It has examined the Contract thoroughly and has had the opportunity to review it and become familiar with its terms;
- (v) By itself and through its Subcontractors, the Contractor possesses the full experience and proper qualifications to perform the Works, including, but not limited to, the requisite knowledge and experience with the relevant legal, regulatory and labour conditions in India (including, but not limited to, Applicable Laws);
- (vi) It has had the opportunity to visit and inspect the Site to ascertain the nature and location of the Project and the Works, the character and accessibility of the Site, the existence of known obstacles to the Project or any performance of Works, the availability of facilities and utilities for the performance of the Works; and
- (viii) It has, stated correct and sufficient Item Rates and Provisional Sums to cover all its obligations and to have allowed and allocated the necessary resources and time to enable it to complete the Works in compliance with the Contract.

73.1 Indemnity

The Contractor shall indemnify, save and hold harmless the Employer, its affiliates, successors, assigns, officers, directors, and personnel (“**Indemnified Party**”) from and against any and all liabilities, expenses, losses, damages, claims (including claims for workers compensation), fines, penalties and costs (including all reasonable attorneys fees) that the Indemnified Party may sustain or incur in respect of any acts or omissions for which Contractor is responsible, or any negligence or misconduct of the Contractor or any person for whom the Contractor is responsible, in connection with or arising out of or in relation to the Works or the Contract, including against any

loss or damages to the Employer in consequence of any actions or suits being instituted against the Employer by any third party and/or governmental authority in relation to:

- (a) Any injury or death of any of the Contractor's or Subcontractor's personnel or any third party or damage to any property;
- (b) Any failure of the Contractor to perform its obligations under the Contract; or
- (c) Any breach of any representation and warranties, obligations or covenants of the Contractor contained herein.

The provisions of this **Clause 73** shall survive expiry or earlier termination of the Contract.

MISCELLANEOUS

74.1 Entire Agreement; Amendment

The Contract (including the appendices thereto) embodies the entire agreement and understanding of the Parties with respect to its subject matter and supersedes all prior and contemporaneous negotiations, undertakings and agreements between the Parties. No modification or amendment to the Contract will be binding on the Employer and the Contractor unless it is in writing and signed by authorized representatives of the Employer and the Contractor.

74.2 Severability

The invalidity of any portion of the Contract shall not invalidate the remainder of the Contract and, except for such invalid portion, the Contract shall remain in full force and effect. If for any reason, any portion of the Contract becomes illegal or unenforceable, the Parties shall mutually agree upon a reasonable adjustment in such terms or provision of the Contract with a view toward effecting the purpose of such terms and provisions of the Contract and the enforceability and validity of the remaining terms and provisions, or portions or applications thereof, shall not be affected thereby.

74.3 Waiver

No failure or delay by either Party in enforcing any of its rights under the Contract shall be construed as a waiver of the right to subsequently enforce any of its rights, whether relating to the same or a subsequent matter.

74.4 Survival of Provisions

Clause 74, other provisions of the Contract which have been expressly stated to or by their nature should survive the termination of the Contract shall survive any termination or expiry of the Contract.

74.5 Independent Contractor

The Contractor shall be an independent contractor with respect to the Works hereunder, and none of the other contractors, any Subcontractor, nor the officers, directors, employees or agents of any thereof, shall be deemed to be agents, representatives, employees or servants of the Employer in the performance of the Works hereunder, or any part thereof, or in any manner dealt with herein. The Employer shall not have any actual, potential or other control over, the methods and means by which the Contractor or any of its agents, representatives, officers, directors, Subcontractors, the other contractors or employees conduct their independent business operations.

APPENDIX – 1
SCHEDULE OF FISCAL ASPECTS

S.No	Aspect	Clause	Description of aspect
1	Submission of Performance Security	GC: 10.1 & 10.2	7 days from the date of issue of the Notice to Proceed by the Engineer-in-Charge /the Employer. The Performance Security shall be equivalent to 5 percent of the initial Contract Price and shall be submitted in the form of bank guarantee substantially in the format provided in the Appendix to Tender.
2	Minimum amount of third party insurance	GC: 23.2	Rs. 5 lac per occurrence with number of occurrences =2
3	Notice to Proceed	GC:40.1	On issue of the relevant letter by the Employer
4	Date of Commencement	GC:40.1	Within 15 days on receipt of notice from Employer.
5	Access to designated portion of Site	GC:41.1	Immediately on receipt of notice from Employer.
6	Time of Completion	GC:42.1	3 Months
7	Liquidated Damages for Delay	GC:46.1 0	0.5 % per week upto a maximum of ten percent of the Contract value
8	Defects Liability Period	GC:48.1	12 months from the date of issue of Virtual Completion Certificate
9	Minimum interval between submission of interim bills	GC:59.1	One month measured bill
10	Minimum value of work for interim certificate	GC:59.2	5 percent of the Contract Price.
11	Retention money on interim bills	GC:59.2	Five percent of the value of interim bills subject to maximum of Five percent of the Contract Price. The Retention Money shall not be released against the lodgement of a Bank Guarantee of an equal amount.
12	Maximum Period of issue of certificate by Engineer-in-Charge for interim certificate.	GC:59.2	15 days from the date of submission of bill with all enclosures and measurement sheets.
13	Release of Retention Money	GC:59.3	Fifty percent of the total Retention Money upon issuance of the Virtual Completion Certificate. Balance after twelve months from the date of issuance of virtual completion certificate and after discharge of defects Liability Certificate.
14	Period of submission of Final Bill at Virtual	GC:59.5	[60] days from the date of Virtual Completion certificate

	completion		
15	Period of submitting Final Statement on completion of Defects Liability	GC:59.6	Within 30 days of issue of Defects Liability Certificate
16	Maximum period for payment of interim bills.	GC:59.10	15 days from the date of submission of Certificate of Payment by Engineer-in-charge. An adhoc-payment may be released upto 75 percent of the assessed value of work by Engineer-in-Charge within 10 days from the date of submission of Bill in approved format by the Contractor.
17	Rate of Interest for delayed payment by the Employer	GC:59.10	NO INTEREST shall be payable against security deposit, interim or final bills or any other payments due under this contract.
18	Secured Advance for materials	GC: 59.11	Not payable
19	Mobilisation advance	GC:59.12	Not payable
20	Increase or decrease in cost		Fixed price contract. No escalation is payable.
21	Release of mobilisation advance	GC:59.12	Not payable
a	Advance payment of 40%		Not payable
b	Balance payment of 60%		Not payable
22	Liquidated damages for not providing Shop drawings, As-built drawings, maintenance and handing over manuals		Nil.
23	Liquidated damages for not deploying Organization for Superintendence of the Project		Nil.
24	Validity of Item Rates		12 months from the date of issue of LOI

APPENDIX –II

Format of Performance Security

(On Non Judicial Stamp Paper to be stamped in accordance with Indian Stamp Act, the stamp paper to be in name of Executing Bank)

Guarantor	:	[Inset name of bank]
Guarantee Number	:	[-----]
Principal	:	[Insert name of Contactor], a [company incorporated under the companies Act, 1956] having its [registered] office at [Insert address] (hereinafter referred to as the “ Contractor ”)
Beneficiary	:	[Insert name of Employer], a [company incorporated under the companies Act, 1956] having its [registered] office at [Insert address] (hereinafter referred to as the “ Employer ”)
Agreement to which this Guarantee relates	:	Agreement for [---] Works date [----] between the Employer and the contractor (hereinafter referred to as the “ Agreement ”)
Agreement Maximum Amount : Of this Guarantee	:	Rupess [----]
Expiry Date	:	[Insert date which is 21 months from the Commencement Date]
Final Expiry Date	:	[Thirty (30) business days after the Expiry Date]

1. We the _____ Bank, having our registered office at [Insert address] being the Guarantor under this Guarantee for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, do hereby unconditionally and irrevocably undertake and agree to pay you, the Employer, on your written demand, any sum or sums up to the Aggregate Maximum Amount of this Guarantee as amended from time to time., without any demur, reservation, contest, recourse or protest and / or without any reference to the Contractor.
2. We, as Guarantor, will effect payment forthwith upon receipt of your written demand, without proof (including any proof that such demand is in accordance with the Agreement), conditions, grounds or reasons for such demand for the sum specified therein, notwithstanding any contestations, claims, demands or objections made by the Contractor or any other third party and without any right to set-off or counterclaim. Any payment made hereunder shall be made free and clear of, and without deduction for or on account of any present or future taxes, levies, imposts, duties, charges, fees, deductions or withholdings of any nature whatsoever and whomsoever imposed. We unconditionally acknowledge that any such demand by the Employer of the amounts payable by us to the Employer shall be final, binding and conclusive evidence in respect of the amounts payable by the Contractor to the Employer.
3. The Guarantor further undertakes that the Employer at its option shall be entitled to enforce this guarantee against the Guarantor as a principal debtor and not as surety, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor’s liabilities.

4. We agree that our obligations under this Guarantee are irrevocable, absolute and unconditional and shall remain in full force and effect till the Final Expiry Date without regard to, and shall not be released, suspended, discharged, terminated or otherwise affected by, any circumstance or occurrence whatsoever, including, without limitation: (i) the Employer varying any of the terms and conditions of the said Agreement, or (ii) any extension of time for performance or other indulgence granted by the Employer to the Contractor under the Agreement, or (iii) any invalidity, irregularity or unenforceability of all or part of the Agreement or any obligation of the Contractor under or pursuant thereto, (iv) any partial or complete performance of the Agreement, (v) any lack of or limitation on the status or power of the Contractor, (vi) any winding-up, dissolution, receivership, change in constitution or bankruptcy of the Guarantor, the Contractor or any other third party and any amalgamation, merger, reconstruction, reorganization, affecting the Guarantor, the Contractor, the Employer or any other third party, or (vii) any other act, omission, matter or thing whatsoever which would or may but for this provision, have the effect of releasing the Guarantor from its liability hereunder or otherwise prejudice, affect or discharge this Guarantee.
5. We, the Guarantor, undertake not to revoke this Guarantee during its currency except with the previous consent of the Employer in writing. We hereby waive notice of acceptance of this Guarantee and notice of any liability to which it may apply. Except with respect to the written demand for payment referred to above, we waive presentment, demand of payment, protest, notices of any kind and any right to require that resort be made to the Contractor or any other security.
6. We, the Guarantor, hereby acknowledge and declare, that all costs and charges in relation to the provision of this Guarantee by us shall be borne by the Contractor alone.
7. We hereby waive notice of acceptance of this Guarantee and notice of any liability to which it may apply. Except with respect to the written demand for payment referred to above, we waive presentment, demand of payment, protest, notices of any kind and any right to require that resort be made to the Contractor or any other security.
8. This Guarantee shall be a continuing security and accordingly: (i) it shall extend to cover all amounts due at any time from the Contractor to the Employer under the Agreement; and (ii) it shall not be discharged by an intermediate discharge or repayment by or for the account of the Contractor or any settlement of accounts between the Contractor and the Employer. This Guarantee shall remain in force and effect until the Final Expiry Date, provided that any claim or liability arising prior to the date thereof shall not be adversely affected in any way.
9. The benefit of this Guarantee may be assigned by you, without our consent, upon such terms as you may think fit to the lenders, which have agreed to extend credit facilities in connection with the Agreement or to any other entity as you may deem fit.
10. We, as Guarantor, undertake to pay to the Employer any money so demanded notwithstanding from any dispute or disputes have been raised by the said Contractor and/or that any dispute or disputes are pending before any authority, officer, tribunal or arbitrator (s) etc., our liability under this Guarantee being absolute and unequivocal.

11. Notwithstanding anything stated above, our liability under this Guarantee shall be restricted to Rs. _____/- (Rupees _____ only) and this Guarantee shall remain in force upto the Expiry Date (as may be extended by the Contractor) and we shall be liable to pay any amount under this Guarantee only if we receive a demand or claim in writing prior to the Final Expiry Date.
12. This Guarantee shall be governed by and construed in accordance with laws of India.
13. Terms defined in the Agreement are used in this Guarantee as so defined.
14. Upon the Final Expiry Date, this Guarantee shall become null and void, whether returned to the Guarantor for cancellation or not and any claim or statement received after the Final Expiry Date where applicable, shall be ineffective and not accepted.

Date : _____

Place : _____

Signature _____

(Printed Name) _____

Designation _____

Bank's common seal _____

Authorization No. _____

In presence of:
Witness:

1. _____

3. _____

A P P E N D I X –III

GUARANTEE PROFORMA

GUARANTEE FOR DAMP PROOFING AND WATERPROOFING

Whereas () a firm / company / corporation whose address is () hereinafter called the Specialist Contractor, has manufactured and sold and caused to have applied, pursuant to its specifications and inspection the necessary materials, labour and all incidentals to provide Damp- Proofing/Waterproofing treatment of Toilet floors and kitchen floors of approximately () square metres in the building described below:

EMPLOYER.....

BUILDING.....

LOCATION.....

DATE OF COMPLETION OF TREATMENT.....

BY (ADDRESS OF FIRM.....)

AND WHEREAS, Specialist Contractor represents and wished to guarantee, subject to limits stated herein, that its treatment is effectively watertight for a period of Ten(10) years despite normal wear and tear by the elements, as well as guaranteeing it against defects in workmanship or materials;

AND WHEREAS M/s.....located at(hereinafter known as Building Contractor) through whom the Specialist Firm has carried out the work as Sub-contractor, has agreed to be a co-guarantor under this Guarantee and will be equally responsible to ensure that the Specialist Firm shall carry out its obligations under this Guarantee.

NOW THEREFORE said Specialist Contractor guarantees to the said Employer that as set forth below, during a period of Ten years from the date of completion of said treatment described above, Specialist Contractor will at his own expense make or cause to be made any repairs that may be necessary, as a result of defects in workmanship or materials supplied by the Specialist Contractor or of normal wear and tear by the elements and will maintain said treatment in water tight condition free from all leaks arising from such causes.

For purposes of this Guarantee damage to the treatment caused by hurricanes, lightning or other unusual natural phenomena shall not be deemed to be "NOMINAL WEAR AND TEAR BY THE ELEMENTS".

INSPECTION AND REPAIRS.

Upon written notice by Employer to Specialist Contractor of need of repair of treatment, the Specialist Contractor shall, within three days, inspect the treatment. Following such inspection:

1. Specialist Contractor, at his own expense and regardless of cost, shall make such repairs as are required by the Guarantee.

2. In case Employer or his agent has notified Specialist Contractor and confirmed in writing that repairs are required and such repairs are not covered by the Guarantee (including repairs required by Employer's alteration, extension or addition to the treatment) Specialist Contractor, after having obtained Employer's consent there to, in writing, shall make or cause to be made, such repairs at Employer's expense in accordance with specifications and procedures as established by Specialist Contractor and approved by the Employer and this Guarantee shall thereupon remain in effect for the un-expired portion of its original term. If Employer fails to so consent or if repairs are made by one other than the Specialist Contractor or Specialist Contractor's designee, this Guarantee with respect to such area shall be automatically terminated.

3. In the event that (1) Employer notifies Specialist Contractor and has confirmed in writing the need of repair of treatment, and (2) specialist Contractor is unable to promptly inspect and repair same, and (3) an emergency condition exists which requires prompt repair in order to avoid substantial damage to Employer, then Employer may take such temporary repairs as may be essential and any such action shall not be a breach of the provisions of this Guarantee.
 If the Specialist firm fails to rectify the defects when called upon to do so within the stipulated period, then the Specialist contractor/ Building Contractor will indemnify the Employer and his successors against all loss, damage, cost expense or otherwise which may be incurred by him by reason of any default on the part of the Specialist Contractor in the performance and observance of this guarantee and the Employer will then be free to deduct the costs so incurred from any pending dues of the Specialist Contractor/ Building Contractor or in any other manner whatsoever available to him. As to the amount of loss and/or damage and/or cost incurred by the Employer, the decision of the Project Managers shall be final and binding on both the parties.

INSPECTION SERVICE

Specialist Contractor agrees to re-inspect the completed treatment not earlier than 24 months after completion of the treatment, and if it is determined that there are defects in the treatment, then Specialist Contractor shall make, or cause to be made at its own expense, such repairs as are necessary to remedy said defects within the scope of its responsibility under the terms of this Guarantee.

IN WITNESS WHEREOF

Specialist Contractor and the Building Contractor has caused this instrument to be signed and sealed by its duly authorised officer this..... day of..... 2017

Witness:

BY

TITLE:

NAME OF SPECIALIST CONTRACTOR:

SEAL:

DATE:

Countersigned in full for the acceptance of the above.

Witness:

BY

TITLE:

BUILDING CONTRACTOR:

SEAL:

DATE:

APPENDIX - IV

LIST OF APPROVED MAKES

- | | |
|---|---|
| 1. Chlorpyriphios | - DE-NOCIL, Cynamide |
| 2. Reinforcement | - Rathi Udyog/Kamdhenu or approved equivalent |
| 3. Cement (OPC) | - 43 grade - Ambuja, Birla, Ultratech, L & T, Lafarge |
| 3. Structural Sealant | - Wacker, Dow Corning, GE |
| 4. Structural Steel | - Rathi Udyog/Kamdhenu or approved equivalent |
| 5. M.S. Pipe, Tubes, Bar, Flats,
Angle, Tee Sections | - Rathi Udyog/Kamdhenu or approved equivalent |
| 6. Concrete admixture | - Fosroc/ Cico. |
| 7. Polysulphide sealant | - Pidilite, Chemetall-Rai |
| 8. Bitumen Impregnated Board | - Shalitek or approved equivalent |
| 9. Polyethylene back up rod | - Supreme Ind. Ltd. or approved equivalent |
| 10. PVC water stops | - Fixopan / Sintex |
| 11. White Cement | - Birla, J.K |
| 12. Water proofing compound | - CICO / Pidilite / Laticrete or approved equivalent |
| 13. White washing lime | - Dehradun (Source) |
| 14. Paints | - Asian Paints, ICI, Nerolac |
| 15. Water proof cement paint | - Snowcem India Ltd |
| 16. Fire Retardant paint | - Viper or approved equivalent |
| 17. Wax Polish | - Mansion or approved equivalent |
| 18. Epoxy | - Fosroc/ STP/ Cico. |
| 19. Glass | - Modi Guard, Asahi or approved equivalent |
| 20. Mirror | - Modi Guard or approved equivalent |
| 21. Waterproof Ply | - Duro, Century, Archid, Legend |
| 22. Commercial ply. | - Duro, Century, Archid, Legend |
| 23. Veneer | - Duro, Green, Donear, Century |
| 24. Laminate | - Donear, Merino, Century or approved equivalent |
| 25. Cement Bonded Board | - 'BISON' by NCL or approved equivalent |
| 26. Gypsum board. | - India Gypsum Ltd. |
| 27. False Ceiling Members | - Gyp. Steel of India Gypsum Ltd. |
| a) Perimeter | |

- b) Ceiling section
c) Intermediate
d) Angle
- | | |
|--|--|
| 28. APP Polymeric Polyethylene Felt | - 'BITUMAT' or approved equivalent |
| 29. Expanded Polystyrene (Thermocole) | - Beardshell or approved equivalent |
| 30. Extruded Polystyrene | - Iso board ND or approved equivalent |
| 31. Hessian Based Felt | - 'BITUMAT' or approved equivalent |
| 32. Flush Door Shutter | - Century, Archid, Duro or approved equivalent |
| 33. Door Hardwares | - Dorma, Dorset, Ozone |
| 34. Door Lock & Handle | - Dorma, Dorset, Ozone |
| 35. Door closer | - Dorma, Dorset, Ozone |
| 36. Chequered Precast Cement Concrete Tiles | - NITCO / Unitile or approved equivalent |
| 37. Commercial Quality White
Glazed Ceramic Tiles | - Orient or approved equivalent |
| 38. PVC strips | - Fixopan or approved equivalent |
| 39. Geotextile Fabric | - Netlon / Ca Polyteck Pvt. Ltd. or approved
equivalent |
| 40. UPVC Pipe | - Finolex Industries Ltd. or approved equivalent |
| 41. Steel Fire Door | - Shakti Met / Promat or approved equivalent |
| 42. Non Metallic Fire Door | - Navir / Promat or approved equivalent |
| 43. Particle Board | - Novopan, Merino, Bajaj Ecotec |
| 44. Screws, Nails etc. | - Nettlefold or approved equivalent. |
| 45. Pre-Laminated Board | - Merino / Green |
| 46. Welding rod | - ADVANI or approved equivalent |
| 47. MS black enameled/ galvanized ERW conduits | - AKG, BEC, Steelkraft |
| 49. MS Conduit accessories | - Sharma, Approved equivalent |
| 50. Fire Door Hardware | - Briton or approved equivalent |
| 51. Concrete Micro materials | - Alcofine or approved equivalent |

Note: In the List of recommended above, out of makes mentioned in the list, only 1st make shall be quoted for and used. However if due to non-availability or any other technical reasons, the alternative make is allowed, it shall be subject to price adjustment.

PREAMBLE TO PRICING OF BILL OF QUANTITIES FOR REPAIRS AND RENOVATION WORKS

1.1. General

- a) This preamble has been prepared in order to assist the Tenderer in pricing the Bill of Quantities and shall guide to the measurement of quantities. The work shall be carried out as per latest CPWD specifications and/or Manufacturer's technical and installation specification for specialized works like waterproofing, woodenflooring, Acoustical false ceiling and wall cladding etc etc if not otherwise specified.
- b) The site or work is available. However the work shall be carried out in phases as directed by Owner/ Engineer-in-Charge.
- c) The said works are to be executed within a institutional campus and as such necessary safety precautions and Environmental protection interms of dust, noise control, air and waterquality needs to be taken as per required Environmental protection act of Govt. of India and or as directed by Engineer-in-Charge.

1.2. Application of Preamble to Additional Work

The clauses of this preamble will apply to any additional or varied work, which the tenderer may be required to execute under this contract except where specifically amended or supplemented by the instructions given to him by the Engineer-in-Charge to carry out such work.

1.3. Rates and sums to be for works complete

- a) Notwithstanding any limits in the wording of the individual items and or the explanations in this preamble, it is to be clearly understood by the tenderer that the rates and sums which he enters in the Bill of Quantities are to be for the work finished complete, in every respect, including wastage of material and labour on any account, tools, temporary work, carriage, all tests as specified or required etc and deemed to have taken full account of all requirements and obligations, whether expressed or implied, covered by all parts of this contract and to have priced the items herein accordingly. Rates should also include all taxes applicable such as octroi, works contract tax, VAT, service tax, labourcess, etc. Required percentage of VAT, labour cess and other taxes as required under the prevailing laws shall be deducted from the contractors bill and shall be deposited to the concerned authority by the client on behalf of the contractor.

1.4. Method of measurement

Unless otherwise mentioned in the description of the item or specification, the Bill of Quantities shall be applicable for work in any height, depth position or condition. All works upto +1.2 m level shall be treated as work in substructure and all works above (+) 1.2 m level shall be treated as work in superstructure.

CONCRETE WORK (PLAIN / REINFORCED / PRECAST)

This section covers concrete formwork, concrete reinforcement, cast in place concrete, pre-cast concrete.

2.1 The rates for poured concrete are to include for: -

- a) All costs incurred in determining the mixes to satisfy the Specification.
- b) Variations in cement contents of the concrete mixes from the guided quantities given in the Specifications.
- c) Supplying all materials, including approved admixtures including superplasticizer to the required dose and mixing in batching plant, washing coarse aggregate, scaffolding, gangways, transporting and placing by any approved means / pumping and compaction (by vibrator) of any sectional area or thickness, hoisting and lowering to any level.
- d) Protection from chipping off of edges of concrete surface by providing timber or aluminium corner pieces, dewatering when required etc.
- e) Forming all temporary construction joints, keys, slopes, falls, stunt ends, temporary stops and shuttering of other than permanently exposed faces.
- f) Curing the concrete and taking all measures to protect freshly poured concrete from direct sunlight, rain or any other incidence damaging to the concrete.
- g) Doing all rendering to the concrete after de-shuttering as advised by the Engineer –in- Charge to his entire satisfaction, rubbing down and making good the concrete surfaces.
- h) For cutting or forming all holes, opening, mortices and pockets not exceeding 0.125 cubic metre (which shall include those required for pipes, conduits, ductings, metal section and the like) and for all subsequent making good or grouting in cement mortar as shown and specified.
- i) For inserting pipes and other inserts accurately, and concreting while they are in position and also for protecting the same as the work proceeds.
- j) Centering and shuttering for all items for plain and reinforced cement concrete work including all variable heights and shapes in plan as implied or shown in the drawings. The contractor to study all drawings and quote his rate considering all additional staging required for variable heights shuttering, as also for curved beams and slabs in plan in all buildings. Nothing extra shall be allowed on this account.
- k) Working up or hacking of concrete surface for providing keys for further concrete work including applying cement slurry/ mortar as required/ directed by the Consultant.

2.1 Rate of Steel Reinforcement shall include

- i) Supplying, transporting, storing, all labours in working, distribution to the various parts or the Works, fixing in position and supporting by binding wire, welding where indicated.
- ii) Straightening, cutting to length, providing ties, hooked ends, cranking or bending (straight or spiral).

- iii) Providing chairs, spacers, dowels, pins etc. as directed by the Engineer-in-Charge only authorized laps, shall be measured and paid separately.
- iv) Cost of 18 gauge annealed binding wires.
- v) Removing rust, mill scales, oil grease, paint etc. from reinforcement bars.
- vi) Wastage due to cutting bars to required lengths.

3 MASONARY

This section covers brick masonry and glass blocks.
Brick work shall be measured net as fixed in its place.

3.1 Stages of Measurement

1. Brickwork of any description, below the (+) 1.2 M level shall be measured under the items in substructure.
2. Brickwork of any description above (+) 1.2 M level shall be measured as brick work in super-structure.

3.2 Rate of Brickwork shall include

- i) Scaffolding, platform, staging at any level or height of slabs or beams and curing as per technical specification.
- ii) Additional labours in kerbs, isolated and attached piers, all cutting, bonding at angles and intersections, building into or against adjacent work, wedging and pinning up to soffit including any special blocks at angles, intersections, joining to R.C.C. Columns or Shear Walls.
- iii) Providing whatever is necessary to prevent concrete cast on top of brick walls.
- iv) Raking out joints for plastering.
- v) Plumbing to angles.
- vi) Hacking of concrete, cutting or forming chases or grooves for slabs, partitions, staircases, cut outs for ventilation fans, etc.
- vii) Building in holdfasts and such other inserts.
- viii) Treatment and testing of surface for efflorescence.
- ix) Compliance with requirements of Technical Specification.
- x) Cost of cement mortar and other bonding materials.

4. METALS

This section covers structural steel, metal fabrication, expansion joints.
The rates quoted for Metal fabrication and railing shall include for:

- 5.1 Rigidly inserting and setting in lead or other specified material and fixing into concrete and / or building into brick work while the work proceeds and for all fixing, anchoring, plugging, screwing bolting etc. including non-shrink grout and sealants as may be required or directed.

- 5.2 One shop coat of primer and protection treatment as specified.
- 5.3 Cost of welding, rivets, bolts as required.
- 5.4 Weight of packing material such as lead, quantities of cement grout etc. shall not be measured.

THERMAL AND MOISTURE PROTECTION :

This Division covers all types of waterproofing and items related to waterproofing.

7.1 The rates quoted shall include for:

- a. Cost of all materials and accessories required, including overlaps.
- b. Executions of water proofing treatment through specialists in the field and under their direct supervision and strictly as per specification.
- c. Providing minimum 10 years guarantee.
- d. Testing of treated areas as directed.
- e. Treatment of down take pipes and other obstructions.
- f. All cutting, dressing, trimming and waste.
- g. Providing concrete fillets at the junction of horizontal and vertical surfaces as per drawings.
- h. Preparation of surface for water proofing work, insulation and other related treatments.
- i. Work at heights, levels, narrow widths, bands, strips and at all locations.
- j. Making necessary arrangement as indicated in the drawing for connection to the down take rain water pipes.

DOORS AND WINDOWS:

This section covers Pressed Steel Frames, Steel doors, Wooden frames and doors, Aluminium doors and windows, Fire doors, smoke check doors and rolling shutters.

The rates quoted will include the following :

8.3 Aluminium work and structural glazing

8.3.1 The rates quoted shall include the following:

- i) Working at all heights and levels.
- ii) Providing all hardware as required as per specifications.
- iii) Fixing of sub frame as required as per specifications.
- iv) Filling and finishing neat gaps around frames of doors, windows, glazing etc. with approved sealant.
- v) Providing glazing as specified.
- vi) Providing for insertion plugs for cleaning apparatus as specified.
- vii) Providing for openable shutter as specified.

FINISHES :

This section covers plastering, flooring, false ceiling, painting etc.

9.1.1 The rates quoted shall include for the following:

- i) Cost of materials and labours.
- ii) All temporary rules, screeds, templates, supports, double scaffolding, curing, protecting and cleaning of on completion.
- iii) Doing work in small quantities, narrow widths including the sides of columns, the sides and soffits of beams (plain or patterned), and for making good or cutting around, bolts, pipes, ducting, fittings etc. curing for ten days, wetting the surface before plastering.
- iv) Raking out joints, removing efflorescence, all preparatory work, dampening the surfaces before starting work, grouting with cement slurry and for all square and rounded angles, square and splayed fairedges and making good upto frames, skirting, extended plastering work for skirting or dado.
- v) Corner reinforcements (expanded metal) lathing as shown, end slopes, making grooves covering joints of block wall and R.C. columns with approved G.I. wire mesh of required width and required overlaps etc.
- vi) Providing corner / edge beads as required.
- vii) Working at all heights and levels and all plan surfaces.
- viii) For external plastering works cement plaster shall be mixed with waterproof compound of approved make and manufacture at the rate of 1 kg up compound to 50 kg of cement used.
- ix) Hacking on brick / RCC wall and providing chicken wire mesh of required width wherever required and as directed by the Engineer – in -Charge.

9.2 FLOORING, STONEMWORK, WALL CLADDING

9.2.1 The rates quoted shall include for the following:

- i) Raking, hacking, brushing, cleaning off, dampening base with water and cement slurry before laying all temporary rules, screeds, templates, supports, curing, protecting and cleaning off on completion.
- ii) Small quantities, narrow widths (i.e. sills, border etc.), mitred and returned ends, sinkings, arises, rounded angles, straight, raking or circular cutting, laying to required shape, size and patterns and for cutting, fixing and making good upto and around pipes, electrical, sanitary and other fittings and for laying to pattern in bays including formwork, if any, required for laying in bays.
- iii) For stone work the rates shall also include for all veneer and figure matching.
- iv) For stone cladding the rates shall include for dowels, S.S. Clamps and all fixtures, fasteners, etc. , fixing and grouting chemicals of makes Bal Endura / Roffe / equivalent and making V-groove, joints as instructed.
- v) All special blocks required for stone work at stills, copings, over sailing or receding course, splayed corner, arches, specials and the like.
- vi) Filling of resins where required.
- vii) Hacking of concrete surface for cladding work.
- viii) Submission of stone / tile samples in a display board properly identified.

- ix) For flamed granite, flaming to be as per sample approved by Engineer – in – Charge.
- x) Polishing of stone as specified by Engineer – in – Charge
- xi) providing minimum 10 years guarantee for external cladding with high pressure laminates (HPL)

9.3 FALSE CEILING :

9.3.1 Measurements

The works shall be measured as net as executed. Deduction shall be made for light fixtures/ / diffusers if the area is same as of the tiles. For trap doors. If paid separately. Deduction shall be made.

Unit of measurements shall be sqm.

9.3.2 The quoted rates shall include for the following.

- i. Cost of accessories.
- ii. Coordinate with other agencies for correctness/levels of opening.
- iii. Working at all heights/levels.
- iv. Providing all suspender at all heights fix to roof with fasteners.
- v. All installation shall be carried by authorized installers of the manufactures duly approved by the Engineer-in-Charge.
- vi. Providing extra/additional members required around the opening.
- vii. Making opening for light fixture, diffuser. AC grills, speakers, sprinklers etc all as shown in the R. C. P (reflected ceiling plan).

9.4. PAINTING

9.4.1 The rates shall include for the following:

- i) All materials, safe storage of materials, labour, tools, tackles, equipments, consumables, scaffolding, platform, safety devices, return of packaging etc. required for completion of the work.
- ii) Working at any height, protection and cleaning off on completion.
- iii) Using lime putty, pop or cement based base if required as per specifications.
- iv) Preparation of surface such as brushing, sand paper, scrapping, washing and rubbing etc. to receive finishing coats.
- v) Preparing samples as directed by the Engineer – in - Charge.
- vi) Work on cornices, narrow width, bands etc.

PROJECT:- MAINTENANCE REPAIR, AND RENOVATION WORKS IN EXISTING AUDITORIUM AND B. ED LECTURE HALLS OF SHYAMA PRASAD MUKHERJI COLLEGE CAMPUS, COLLEGE CAMPUS AT PUNJABI BAGH (WEST), DELHI - 110026.

BILL OF QUANTITIES :-					
S. No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1	(a) Dismantling of existing prelaminate High Density Fibre board flooring including foam underlay if any including stacking of serviceable materials and disposal of unserviceable material within 50 meters lead as per the direction of Engineer-in-Charge.				
	(b) Preparation and rectification of sub base floor including cleaning with wirebrush, cloth soaked in water/cleaner and cement based filler materials etc to make it leveled, even and smooth surface.				
	(c) Providing and laying 2mm thick polyolefin foam with polyethylene(PE) integrated insulation and vapour barrier with overlaps and laid on subbase with polymer based synthetic adhesives and/or self adhesive tapes etc.				
	(d) Providing and laying 70 X 18mm thick second class teak wood planks of length upto 750mm with Tongue and Groove joints over foam under layer with s. s screws, adhesive and end wall spacers as required in flooring, riser of steps and dado. Complete as per direction of Engineer-in-Charge.				
	(e) The wooden flooring to be finished smooth with orbital sanding with rollers and required coats of polyurethane laquer mat finish i/c primer of approved brand manufacture, shade and texture as per the direction and satisfaction of Engineer-in-Charge.				
	Complete works as fully described in (a) to (e) above	SQM	130.00		
2	Alternate item to item No 1				
	(a) Dismantling of existing prelaminate High Density Fibre board flooring including foam underlay if any including stacking of serviceable materials and disposal of unserviceable material within 50 meters lead as per the direction of Engineer-in-Charge.				
	(b)Preparation and rectification of sub base floor including cleaning with wirebrush, cloth soaked in water/cleaner and cement base filler materials etc to make it leveled, even and smooth surface.				
	(c) Providing and laying 2mm thick polyolefin foam with polyethylene(PE) integrated insulation and vapour barrier with overlaps and laid on subbase with polymer based synthetic adhesives and/or self adhesive tapes etc.				
	(d) Providing and laying laquer finished Engineered wood plank flooring of size 145 X 14mm thick and 1800mm length with tongue and groove joints over foam underlayer with s. s. screws, adhesive and end wall spacers as require of 'PERGO' or approved equivalent make in flooring, riser of steps and dado as per the direction and satisfaction of Engineer-in-Charge.				
	Complete works as fully described in (a) to (d) above	SQM	130.00		Quote rate only
3	Providing and fixing 70 X 18mm thick second class teak wood skirting and/or vertical dado with Tongue and Groove joints fixed with s. s screws, adhesive etc as required and finished smooth with orbital sanding with rollers and required coats of polyurethane laquer mat finish including primer of approved brand, manufacture, shade and texture as per the direction and satisfaction of Engineer-in-Charge	METER	46.00		
4	Alternate item to item no 3 :- Providing and fixing laquer finish Engineered wood plank skirting of size 80 X 14mm thick and 2400mm length fixed to base and wall with installation kit, s. s screws and adhesive as required of 'PERGO' or approved equivalent make. Installation at site shall be strictly as per installation manual and guidance of the manufacturer.	RMT	46.00		Quote rate only
5	(a) Dismantling of existing stage wall wood wool boardings/tiles in lining of walls and partitions including supporting wooden framework and infill insulation material including stacking of serviceable materials like boards/tiles and insulations materials for re-use and disposal of unserviceable material within 50 meters lead as per the directions of Engineer-in-Charge.				
	(b) Repairs to existing wall plaster with cement based wall putty of approved brand and manufacture and prepare the surface even and smooth complete as per the direction and satisfaction of Engineer-in-Charge.				

S. No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	(c) Providing and fixing in position framework for partitions/wall lining etc in a grid pattern with spacing @600mm centre to centre both ways (vertically and horizontally or at required spacing near opening, switch boards etc using concealed G. I section for wall paneling using existing boards/tiles of required thickness fixed on the 'W' profile (0.55 mm thick) having a knurled web of 51.55 mm and two flanges of 26mm each with lips of 10.55mm placed in vertical direction @ 600mm c/c in perimeter channel having one flange of 20mm and another flange of 30mm with thickness of 0.55mm and web length of 27mm and also placed in horizontal direction @600 mm c/c fixed to studs using metal flat head screws. Perimeter channel is fixed on the floor and the ceiling with nylon sleeves @600mm c/c with fully threaded self tapping dry wall screws. Existing wood wool boards shall be fixed to the 'W' profile with counter sunk ribbed head screws of required length @200mm c/c in both directions, complete as per the drawing and directions of Engineer-in-Charge.				
	(d) Laying and placing in position of existing insulation material in each hollow compartment of wall paneling frame work and securing it with 24 gauge G. I wire mesh and G. I wires all completed as per the direction of Engineer-in-Charge.				
	(e) Finishing the exposed surface of boards/tiles with Acrylic emulsion of paint of shade "Mat Black" and base primer of approved brand and manufacture complete as per the direction and satisfaction of Engineer-in-Charge.				
	Complete works as fully described in (a) to (e) above	SQM	507.00		
6	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound, jointing tapes, finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete including two or more coats of Acrylic emulsion paint and primer of approved shade, texture, brand and manufacture as per drawings, specification and direction of the Engineer in Charge				
6.1	12.5 mm thick tapered edge gypsum moisture resistant board	SQM	135.00		
7	Providing and fixing tiled false ceiling of approved materials of size 595 x 595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanized steel sections (galvanized@ 120 gms/sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24 x 38 mm made from 0.30mm thick (minimum) sheet, spaced at 1200mm center to center and cross "T" of size 24 x 25 mm made of 0.30mm thick (minimum) sheet 1200mm long spaced between main "T" at 600mm and size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200 x 600 mm panel to form grids of 600 x 600 mm and wall angle of size 24 x 24 x 0.30 mm laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detector etc, Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x 1.6 mm fixed to ceiling with 12.5mm dia and 50mm long dash fasteners, 4 mm GI adjustable rods with galvanized butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200mm center to center along main T, bottom exposed width of 24mm of all T sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge.				
7.1	12.5 mm thick square edge PVC Laminated Gypsum Tile of size 595x595 mm, made of Gypsum plasterboard, manufactured from natural gypsum as per IS 2095 part I and laminated with white 0.16mm thick fire retardant PVC film on the face side and 12micron metalized polyester on the back side with all edges sealed with the face side PVC film which goes around and wraps the edges and is bonded to the edges and the back side metalized polyester film so as to make the tile a completely sealed unit.	SQM	202.00		

S. No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
7.2	15 mm thick tegular edged, Textured white coloured, Micro perforated Acoustical Mineral Fiber tiles of size 595 X 595 X 15 mm thick having NRC Value of 0.60 (minimum), light reflection > 85% ceiling attenuation class range of 0.35 – 0.39, non-combustible as per B. S 476 (part VII, 100% humidity resistance similar to the existing tiles 'THERMATEX LEAGUNA' of AMF Germany make or approved equivalent make matching the existing tiles	SQM	106.00		
8	Repairing of existing stage false ceiling by removing existing tiles, stacking the tiles, within a lead of 50 meters, repairing of existing frame work with new members etc and relaying the tiles complete as per direction and satisfaction of Engineer-in-Charge.	SQM	37.00		
9	Dismantling and demolishing work in B. ED lecture halls :-				
9.1	Dismantling aluminum/Gypsum partitions, doors, window, fixed glazing's and false ceiling including disposal of unserviceable Surplus material and stacking of serviceable materials including recessed light fittings within 50 meters lead as directed by Engineer-in-Charge.	SQM	202.00		
9.2	Dismantling old and damaged plaster or skirting in patches including cutting the patches proper shape, raking our joints and clearing/preparing the surface for plaster including disposal of rubbish to the dumping ground within 50 meters lead as directed by Engineer-in-Charge	SQM	100.00		
9.3	Removing dry or oil bound distemper, water proof paint, acrylic emulsion and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc complete.	SQM	200.00		
9.4	Dismantling of damaged precoated galvanized iron corrugated sheet roofing including ridges, hips, valleys and gutters etc and stacking the material within 50 meters lead as per the direction of Engineer-in-Charge	SQM	150.00		
10	Finishing works in B. ED lecture halls :-				
10.1	Replastering the dismantled & damaged portion of plastered area with 12-20mm thick cement plaster of mix : 1:4 (1 cement : 4 coarse sand)	SQM	100.00		
10.2	Providing and applying white cement based putty of average thickness 1mm of approved brand and manufacture over the plastered wall surface to prepare the surface even and smooth complete as per the direction and satisfaction of Engineer-in-Charge.	SQM	200.00		
10.3	Painting with premium Acrylic emulsion paint of approved brand and manufacture, shade and texture to give an even shade:- Two or more coats over and including water thinable primer as per recommendations of the paint manufacture	SQM	200.00		
11.1	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as per existing parameters and as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineerin-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required	SQM	150.00		
11.2	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm (+ 0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws complete				
	a. Ridges plain (500 - 600mm)	SQM	10.00		
	b. Flashing/Aprons. (upto 600 mm)	SQM	10.00		

S. No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
12	<p>Water proofing treatment and existing corrugated sheet roofing of Auditorium & B. ED Block :-</p> <p>Providing and fixing APP (Atactic Polypropylene Polymer) modified prefabricated five layer 2 mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufacture of density at 25°C, 0.87 - 0.89 kg/ litre and viscosity 70 - 160 cps. Over the primer coat, the layer of membrane shall be laid using Butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under: Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/ 5 cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacture of membrane.</p> <p>The surface of roof and that part of the parapet and gutters, drain mouths etc over which the waterproofing treatment is to be applied shall be cleaned of all foreign matter, namely, fungus, moss and dust by wire brushing and dusting. Special water proofing treatment shall be provided at junctions of roof and parapet wall, at ridges & valleys and at Gutter junctions etc by providing additional layer as per recommendations of specialised agency (For payment the superficial area of roof coverings shall be measured on the flat without allowance for laps and corrugations)</p>	SQM	1,147.00		
13	(a) Dismantling and removal of existing entrance door shutter (Auditorium) for repair including removal and stacking of all hard wares and fittings.				
	(b) Removal of existing damaged top layer of wood veneer and refixing of new face veneer of approved brand, manufacture, shade & texture with approved adhesive on both side of door shutters after required preparation of the base surfaces of door shutters.				
	(c) Removal of existing hardwood lipping & rebate and providing and fixing of 2nd class teak wood lipping & rebate of approved shape and size as per Arch. Drawing and instructions of Engineer-in-Charge.				
	(d) Repair of existing door frames including filling with hardwood fillets in the existing hinge depressions and preparing the surface for repolishing including sandpapering etc complete				
	(e) Polishing with PU polish of approved brand, manufacture, shade and texture including coat of wood fillers and primer coat as required as per the recommendations of the manufacturer				
	(f) Fixing the door shutters in the existing door frame with heavy duty ss hinges with bearing of size 125 x 75 X 3mm with ss self tapping cross head screws complete.				
	(g) Refixing of existing hardwares with necessary screws etc complete				
	Complete works as fully described in (a) to (g) above	SQM	28.00		
14	Providing fixing of the following hardwares & fittings of approved make, colour and shade with necessary screws etc complete				
	(a) SS Tower Bolt of size 250 X 10mm	Nos	8		
	(b) SS Sliding Door Bolt of size 300 X 16mm with nuts and screws complete.	Nos	4		
	(c) AISI 316 grade SS door push handle of size 32mm dia X 400mm long	Nos	8		
	(d) IS 3564 marked Aluminium die cast body hydraulic door closers & suitable for heavy door shutters with necessary accessories and screws	Nos	16		
15	Dismantling the existing stage curtains, getting it drycleaned and Re-installation, testing and commissioning with all accessories including servicing of existing curtain track, rollers and pulleys etc complete	NOS.	2 NOS		
	AUDIO, VIDEO AND ELECTRICAL WORKS				
16	Installation testing and commissioning of existing dismantled recessed in false ceiling type light fixtures including cleaning & servicing of fittings etc complete with all connections, drop roads/hangers and accessories complete	NOS.	65 NOS		
17	Supply, Installation, Testing and commissioning of 30 watt Recessed LED Down light with ballast, lamp and all other accessories of make Philips/Wipro complete	NOS.	65 NOS		
18	Providing and Fixing cyclorama PVC synthetic fabric with necessary fixing arrangements including dismantling of existing damaged cyclorama screen, all complete as per the direction and satisfaction of Engineer-in-Charge.	1 JOB	1.00		
19	Supply, Installation, Testing and Commissioning of Stage Front Fill Speakers – High Quality 2 way Multipurpose Loud speaker system, LF-8, HF – 1, Max.SPL:121db/1m, RMS Power:300W continuous power, Nominal Impedance: 8 ohms, Nominal Dispersion : 90deg X 60deg, 7 Integrated flying points, wedge cut for Monitor use. all complete including making necessary recessed alcove/Niche with M.S/Block board box in the stage front masonry wall Make: Val audio/KV2 audio/Martin audio	NOS	3.00		
20	(a) Wiring for speakers with high grade, professional, low-noise, 2 core high conductivity. PVC insulated in PVC jacket, Shielded, copper cable with di-electric insulator in surface/recessed PVC conduits of required diameter complete including all accessories as required.	METER	300.00		
	(b) Wiring for stage Microphones with high grade, professional, low noise, 12 core PVC insulated and shielded snake/flexible cable on surface/recessed PVC conduits of required diameter complete including all accessories as required. Make ; Beldon, Kramer or approved equivalent	Meter	150.00		
21	Servicing and Repairing of existing sound system including replacement of non functional/damaged parts by authorized technicians and/or authorized service centre of the original manufacturer of the sound system including sound control panels	JOB	1.00		

S. No.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
22	Providing, Fixing, Testing and Commissioning of Motorized High, Gain Projection screen of size 16'-0" X 12'-0" including providing required electrical connections and fixing arrangement all complete with all accessories etc as required Make: Liberty/Grand view/Da-lite	NO	1 NO		
23	Disposal of building rubbish/malba/similar unserviceable dismantled or waste material by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-Charge beyond 50m initial lead, for all leads including all lifts invoked.	CUM	5.00		
	TOTAL				