General Conditions of Contract
For
CIVIL / STRUCTURE WORKS
At
UNIVERSITY OF KASHMIR

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Section 01: GENERAL CONDITIONS OF CONTRACT

DEFINITIONS AND INTERPRETATIONS

1. Definitions

In the Contract following words and expressions shall have meanings hereby assigned to them, except where the context otherwise requires

1.1 The Contract documents consist of the notice inviting tenders, the Agreement between the Owner/Client and the Contractor, the General Conditions of Contract, Specifications, the Drawings, Schedule of Quantities and relevant correspondence including all modifications thereof incorporated in the documents before their execution.

1.2 "Owner/Client/Employer" means UNIVERSITY OF KASHMIR on whose behalf tenders are invited and includes its successors, assigns and legal and authorized representatives.

1.3 "Contractor" means the person, firm or company whether incorporated or not, employed as Contractor by the Employer for undertaking the works and shall include the Contractor's legal and authorized representatives, successors and permitted assigns.

1.4 "Sub-Contractor" means the person, firm or company to whom any part of the Contract has been sublet by the Contractor with the written consent of the Owner/Client / Site Engineer and includes the Sub-Contractor's legal and authorized representatives, successors and permitted assigns.

1.5 "Nominated Sub-contractor" refers to those specialists, tradesmen and others, nominated by the Architect or the Owner/Client/ Executive Engineer for executing special works or supplying special equipment or materials, for which provisional sums are included in the Contracts. Such agencies shall be deemed to have been employed by the Contractor.

1.6 "Architect" means the Architect named in the tender or in the event of his ceasing to be the Architect for the purpose of this Contract, for whatever reasons, such other person, firm or Company as the Owner/Client may nominate for the purpose.

1.7 "Executive Engineer" shall mean to include any person, agency or assigns who are appointed by UNIVERSITY OF KASHMIR To work on their behalf to execute the subject work or in the event of their ceasing to be the Executive Engineers for the purpose of this Contract, for whatever reasons, such other person, firm or Company as the Owner/Client may nominate for the purpose. "Owner/Clients Representative" means any person authorized by the Owner/Client to act on his behalf.

1.8 Site Engineer is the designated representative of the Executive Engineers.

1.9 "Contract Sum" means

In the case of item rate contracts (as in this contract), the total cost of the works arrived at after extension of the quantities shown in the Bills of Quantities by the rates quoted by the bidders for the responsive items.

1.10 "Work" means the work to be executed in accordance with the Contract.

1.11 "Constructional Plant" means all plant, tools, tackles, appliances or equipment, implements, scaffolding of whatever nature required for the execution of the works but does not include materials, equipment or other things intended to form part of the works.

1.12 "Temporary Works" means all temporary works of every kind required for the execution of the works by the Contractor.

1.13 "Specifications" means the specifications annexed to or issued with the tender and any modifications thereof or additions there to as may from time to time be furnished or approved in writing by the Site Engineer.
1.14  “Drawings” means the drawings referred to in the specifications and any modifications of such drawings or such other drawings as may be from time to time be furnished or approved in writing by the Owner/Client/Executive Engineer.

1.15  “Site” means the lands and other places on, under, in or through which the works are to be executed or carried out and any other lands or places provided by the Owner/Client or used for the purpose of the Contract.

1.16  “Approved” means approved in writing including subsequent written confirmation of previous verbal approval.

1.17  “Un-expected Risks” are risks due to riots (otherwise than among Contractor’s employees) and civil commotion (in so far as both these are uninsurable), war (whether declared or not), invasion, act of foreign enemies, hostilities, civil war, rebellion, insurrection, military or usurped power, an act of Government, an act of God, such as lightening, unprecedented floods, tornado, and damage from aircraft.

1.18  “Writing” means any manuscripts, typewritten or printed statement under or over signature and/or seal as the case may be.

1.19  “Written Notice” shall be deemed to have been duly served if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at and a written delivery receipt obtained or sent by registered mail to the last business known to him, who gives the notice.

1.20  “Month” means English Calendar month. “Day” shall mean a calendar day of 24 hours each.

1.21  “Working Day” shall mean any day from Monday to Saturday (both days inclusive) excluding all Public Holidays as notified by the University of Kashmir.

1.22  “Completion” shall mean that the works have been completed in every respect in conformity with the Contract Documents and are ready and fit for occupation/commissioning.

1.23  “Approved Equal” shall mean an alternative product/service approved by the Architect/Executive Engineer as equivalent to that specified in the Contract Documents.

1.24  Completion Date means the scheduled date for completion of the Works as set forth in the Agreement between the Owner/Client and Contractor, as the same may be extended pursuant to the provisions under General Conditions of contract.

2.0  Singular and Plural

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

3.0  Headings and Marginal Notes

The headings and marginal notes in these conditions are for the purpose of facilitating reference and shall not be deemed to be part thereof or taken into consideration in the interpretation or construction thereof or of the Contract.

4.0  Language

4.1  All documentation and correspondence in respect of this Contract shall be in the English language.

5.0  Scope and Intent

5.1  The general character and the scope of work is illustrated and defined by the signed Contract Documents herewith attached.
5.2 The Contractor shall carry out and complete the said work in every respect in accordance with the Contract, and with the directions of and to the satisfaction of the Owner/Client/Executive Engineer.

5.3 The Contract documents are complimentary and cumulative, and what is called for by and one shall be binding as if called for by all. The intention of the documents is to include all labor and materials, equipment and transportation necessary for the proper execution of the work (excepting those materials and equipment listed separately which are supplied by the Owner/Client). Materials of Work described in words which so applied have well known technical or trade meaning shall be held to refer to such recognized standards as applicable.

5.4 The Owner/Client/Executive Engineer may, from time to time and through the appointed Architect, issue further supplementary drawings and/or written instructions, details and directions and explanations, which are collectively referred to as Executive Engineer's Instructions. The Contractor shall forthwith comply with and duly execute works comprised in such Owner/Client/Executive Engineer’s instructions provided always that verbal instruction, directions and explanations given to the Contractor or his work’s representative by the Owner/Client/Executive Engineer shall, if involving a variation, be confirmed in writing.

5.5 The Owner/Client reserves the right to increase the scope of work on any or all items or change the nature of work involved in any or all items of the contract. The Contractor shall have no claim for loss of anticipated profits or for any other reason whatsoever on account of these variations.

6.0 Site Engineer

The Site Engineer who will be responsible for the day-to-day supervision of the Contract shall represent the Owner/Client / Executive Engineer at the site. He shall act under the instructions of the Executive Engineer. The Contractor shall provide all necessary facilities for the performance of his duties.

7.0 Duties of Site Engineer

7.1 The Site Engineer shall carry out such duties in issuing decisions, certificates and orders as are specified in the Contract and such additional functions as are delegated to him by the Executive Engineer or the Owner/Client from time to time. The Site Engineer shall coordinate, watch and supervise the works and examine and approve materials to be used or workmanship employed in connection with the Works.

7.2 Provided always that

i) Failure of the Site Engineer or his representative to disapprove any work or materials shall not prejudice the power of the Executive Engineer, thereafter to disapprove such work or materials.

ii) Except as otherwise provided in these documents, if the Contractor shall be dissatisfied by reason of any decision of the Site Engineer, he shall be entitled to refer the matter to the Executive Engineer within 7 days of the receipt of such decision, who shall thereupon confirm, reverse or vary such decision.

7.3 Subject as otherwise provided in this Contract, all notices to be given on behalf of the Executive Engineer, and the Owner/Client and all other actions to be taken on their behalf may be given or taken by the Site Engineer or any person for the time being entrusted with the functions duties and powers of the Owner/Client’s Representative.

8.0 Site Visit by contractor

Before tendering, the Contractor shall visit the site and satisfy himself about the site conditions. He will examine the site and take note of existing conditions, the constraints of
working within the premises, mode of transport and other means of communication, the correct dimensions of the work and facilities for obtaining the special articles called for in the contract documents and shall obtain his own information on all matters affecting the continuation and progress of the works. No extra claim made in consequence of any misunderstanding or incorrect information for any of these points or on the grounds of insufficient description will be allowed. Should the Contractor, after visiting the site, find any discrepancies, omissions, ambiguities or conflicts in or among the contract documents or to be in doubt as to their meaning he shall bring the question to the Executive Engineer’s attention, before the opening date of the tender.

9.0 Assignment

The Contractor shall not assign the Contract or any part thereof, or any benefit or invest or there under otherwise than by a charge in favor of Contractor's bankers of any monies due or to become due under this Contract, without prior written consent of the Owner/Client/Architect/Executive Engineer.

10.0 Sub-letting

The Contractor shall not sublet any part of the works without the prior written consent of the Owner/Client/Executive Engineer, except as provided for in these conditions, which shall not be unreasonably, withheld. Such consent if given 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 Sub-Contractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen. Provision of labour on a piecework basis shall not be deemed to be sub-letting under this Clause.

11.0 Sub-Contractors

As soon as practicable and before awarding any sub-contract, the Contractor shall notify the Executive Engineer in writing the names of the sub-contractors proposed for the principal parts of the work as the Executive Engineer may direct for his approval. The Contractor shall not employ any sub-contractor to whom the Architect/Executive Engineer may object. In particular, subcontractors for waterproofing, pest control, doors and windows, insulation and other specialist items should be got approved well in advance.

12.0 Specialist Agencies

The Contractor may entrust specialist items of work to the agencies specialized in the specified trade. The Contractor shall give the names and details of such firms whom he is going to employ for approval off the Employer. These details shall include the expertise, financial status, technical manpower, equipment, resources, and list of works executed and on hand of the specialist agency.

13.0 Contractor’s General Responsibilities

13.1 The Contractor shall execute and maintain the works with due care and diligence and shall provide all materials, labour including supervision thereof, constructional plant, temporary works, transport and all other things, whether of temporary or permanent nature, required for the proper execution and maintenance of the works.

13.2 The Contractor shall execute the whole and every part of the Works in the most substantial and workmanlike manner, both as regards materials and labour and otherwise in every respect in strict accordance with the specifications. The Contractor shall conform exactly, fully and faithfully to the designs, drawings and instructions relating to the work, in writing.

13.3 Before commencing any item of work, the Contractor shall co-relate all relevant drawings and information and satisfy himself that the information available thereof is complete, unambiguous and without any discrepancies. The Contractor shall be responsible for any errors in the execution of the works and/or damage caused due to any discrepancy in the Contract documents which was overlooked by the Contractor and/or his Sub-Contractor, and is not brought to the notice of the Executive Engineer / Owner/Client.
13.4 Levels, dimensions and other information shown on the drawings are believed to be correct. The Contractor shall, however, verify them for him and no claim or allowance whatsoever shall be entertained on account of any errors or omissions in the levels, dimensions, etc. from those shown in the drawings.

DOCUMENTS

14.0 Documents Mutually Explanatory

The Contract documents are complimentary and cumulative and what is called for by any one shall be binding as if called for by all. The intention of the documents is to include all labour and materials, equipment and transportation (including reaching the material to site on the 5th floor) necessary for proper execution of the work (exempting those materials and equipment listed separately which are to be supplied by the Owner/Client). Materials of work described in words which so applied have a well known technical or trade meaning shall be held to refer to such recognized standards as applicable.

15.0 Discrepancies and Adjustments of Errors

15.1 In the case of discrepancies between bill of quantities, specifications and/or drawings, the following order of precedence shall be followed -

a. Drawings.
b. Particular Specifications.
c. General specifications - specifications given in CPWD Specifications.
d. Description in the Bills of Quantities.

15.2 In the event of ambiguities, discrepancies, and contradictions between the Bill of Quantities, the drawings and/or specifications, the Site Engineer shall explain the same and shall in his sole discretion, determine which of the requirements govern and/or clarify any such ambiguity or discrepancy and the Contractor shall comply with such determination.

15.3 If there are discrepancies in the rates quoted by the Contractor in figures and in words, the rates quoted in words shall prevail. All errors in extensions or computing the amounts and totaling shall be corrected.

15.4 The Contractor shall not be entitled to any extension of time or any compensation due to such determination.

16.0 Drawings

16.1 The drawings shall remain in the sole custody of the Employer. Two (2) copies of the Drawings shall be furnished to the Contractor, free of charge.

16.2 One copy of the Contract Documents including drawings furnished to the Contractor shall be kept at the site and the same shall, at all reasonable times, be available for inspection.

16.3 The Contractor shall give written notice to the Site Engineer and inform the Owner/Client/Architect/Executive Engineer, whenever planning or progress of the work is likely to be delayed or disrupted, unless the required drawings or order including a direction, instruction or approval is issued within reasonable time.

16.4 The Site Engineer shall have full power and authority to supply to the Contractor, from time to time; during progress of the works such further drawings and instructions as shall be necessary for proper and adequate execution of the works.

17.0 Type of Contract
The Contract shall be an Item Rate Amount contract. The Contractor shall be paid at the
Contract Amount for the actual work carried by him as agreed, in accordance with the
Contract documents.

18.0 Schedule of Quantities

The quantities given in the Schedule of Quantities are provisional and are meant to indicate
the intent and provide a uniform basis for tendering. The Contractor shall be paid for the
work executed by him in accordance with the contract documents at the Contract Item Rate
Amount. The Owner/Client reserves the right to increase or decrease any of the scope of work
or to totally omit any items of work and the Contractor shall not claim any extra or damages
on these grounds, subject to the condition that the contract amount is not varied by more
than +/- 25% of a particular Item. 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 Owner/Client/Executive Engineer.

19.0 Licenses and Permits

License and permits for all materials under Government control shall be obtained by the
Contractor directly. The Owner/Client may assist the Contractor in this respect to the extent
possible. The Contractor shall include in his tender all transport charges and other expenses
that may be incurred in this connection

20.0 Royalties and Patent Rights

All royalties or other sums payable in respect of the supply and use in carrying out the works
as described by or referred to in the Contract drawings, the Contract Specifications and the
Contract Schedule of Quantities of any patented articles, processes or inventions shall be
deemed to have been included in the Contract sum, and the Contractor shall indemnify the
Owner/Client against all claims, proceedings, damages, costs and expenses which may be
brought or made against the Owner/Client or to which he may be put by reason of the
Contractor infringing or being held to have infringed any patent rights to any such articles,
processes and inventions. Provided that where, in compliance with Executive Engineer 's
instructions the Contractor shall supply and use, carrying out the works any patented
articles, processes or inventions, the Contractor shall not be liable in respect of any
infringement or alleged infringement of any patented rights in relation to such articles,
processes or inventions and all royalties, damages or other moneys which the Contractor may
be liable to pay to the persons entitled to such patent rights shall be added to the Contract
Sum.

21.0 Separate Contracts

21.1 The Owner/Client reserve the right to award other contracts in connection with the work. The
Contractor shall afford other contractors reasonable opportunity for the introduction and
storage of their materials and the execution of their work, and shall properly connect and
coordinate his work and theirs. If any part of the Contractor's work depends for proper
execution or results upon the work of any other contractor, the Contractor shall inspect and
promptly report to the Architect/ Executive Engineer for any defects in such work that render
it unsuitable for such proper execution and results. His failure to so inspect and report shall
constitute an acceptance of the other contractor's work as fit and proper for the reception of
his work, except as to the defects which may develop in the other contractor's work after
execution of the work.

22.0 Contractor's Designs & Manufacturer's Catalogues – (DELETED)

22.1 DELETED

22.2 DELETED.
23.0 Contractor to prepare ‘As Built’ Drawings

DELETED

24.0 Interest

No interest shall be payable on any money due to the Contractor against earnest money, security deposit, interim or final bills or any other payments due under this contract.

25.0 Works to Satisfaction of Owner/Client/Architect/Executive Engineer

The Contractor shall execute and maintain the works in strict accordance with the Contract to the satisfaction of the Architect/Executive Engineer and shall comply with and adhere strictly to the Architect/Executive Engineer’s instructions and directions on any matter whether mentioned in the Contract and not, touching or concerning the works. The Employer’s decision relating to the use and quality of materials and visual and aesthetic effect shall be final and binding.

26.0 Program Evaluation and Review

26.1 Network based integrated time schedule shall be submitted by the Contractor. The time schedule shall include details of mobilization of resources, materials, equipment and labour along with the milestones for completion of different activities. After award of Contract, the Site Engineer may require the Contractor to expand the information given in the program until it is suitable for the effective review of progress during the execution of the works. The critical path shall be determined. It is the Contractor’s obligation to ensure that such a program, duly approved by the Executive Engineer is available prior to the commencement of work at site.

26.2 The Contractor shall, every fortnight, review and update this program and furnish for the information of the Site Engineer, in writing, details of the Contractor’s arrangements for executing the works, materials procured, erected, balance at Site, and expected deliveries during the next fortnight; skilled/unskilled labour, foremen, supervisors working at Site and steps proposed for speeding up progress of work.

26.3 If at anytime it should appear to the Owner/Client/Executive Engineer or the Site Engineer that the progress of the works does not conform to the approved program, the Contractor shall furnish a revised program and take such steps at his cost, as are necessary to expedite progress and ensure completion of the works within the completion period or extended date of completion.

26.4 Approval by the Executive Engineer of such programs or the furnishing of such particulars shall not relieve the Contractor of any of his duties or responsibilities under the Contract.

26.5 The Contractor shall be called upon to attend co-ordination meetings with the Architect, Site Engineer, Owner/Client/Executive Engineer and his Consultants and other Contractors and shall fully cooperate with such persons and agencies involved in these discussions. The Contractor shall take notes of the discussions during the meeting and shall strictly adhere to the decisions of the Architect/Executive Engineer/Owner/Client in performing the works

27 Period of Completion:

The entire Works covered in this Contract shall be completed by the Contractor within the completion period set out in the tender documents.

28.0 Extension of Time:

28.1 If the Works are delayed by Force Majeure (as defined elsewhere), suspension of work by the Owner/Client, serious loss or damage by fire, ordering of altered additional or substituted work or other special circumstances other than through the default of the Contractor, as would fairly entitle the Contractor to an extension of time and which in the discretion of the Executive Engineer is beyond the control of the Contractor, then upon the happening of any such event causing delay, the Contractor shall within 7 days of the happening of event give notice thereof in writing to the Executive Engineer, stating the cause and the anticipated
period of delay, in any such event the Owner/Client on the recommendations of the Executive Engineer may give fair and reasonable extension of time for the completion of work.

28.2 Such extension shall be communicated to the Contractor by the Executive Engineer in writing. The Contractor shall not be entitled to claim any compensation or over-run charges whatsoever for any extension granted.

29.0 Delays:

If, in the opinion of the Executive Engineer, the Contractor shall be delayed or impeded in the execution of the Works for reason of:

(a) Force Majeure: or
(b) By the works or delays of other contractors or tradesmen engaged or nominated by the Owner/Client and not referred to in the Contract Documents: or
(c) The non-delivery or delay in delivery to the Contractor, of any materials and equipment which under the Contract Documents the Owner/Client is to supply: or
(d) Any cause, whatever, arising out of the acts or defaults of the Owner/Client or the Architect: or
(e) Any accident happening to the works during their progress not arising from neglect, default or willful act of the Contractor or his workmen or Sub-Contractors: or
(f) Extras or variations being ordered by the Architect / Executive Engineer or
(g) Any other cause which the Executive Engineer certifies as beyond the control of the Contractor, the Contractor may from time to time, within 10 working days of the happening of any of the aforesaid, apply in writing to the Owner/Client/Executive Engineer for an extension of time on account thereof, setting forth the cause of such delays, and the Executive Engineer may, with the prior written approval of the Owner/Client, make a fair and reasonable extension of time for completion of the Works.

30.0 Liquidated Damages for delay in completion:

30.1 If the contractor fails to fulfill his obligations under the contract as specified in the scope of work in the defined and specified scheduled time period due to reasons attributable wholly and solely to the contractor, he shall pay to the Owner/Client as liquidated damages, a sum of Rs 5000 per day.

30.2.1 The total amount of liquidated damages for delay under the contract will be subject to maximum of Five percent (5%) of the contract price.

30.2.2 The Owner/Client may without prejudice to any other method of recovery deduct the amount of such damages from the moneys in his hands due to the contractor or which may become due to the contractor. The payment or deduction of such damages shall not relieve the contractor from his obligation to complete the supplies/works and demonstrate the performance or from any of his other obligations and liabilities under the contract.

30.3 In addition, such action by the Owner/Client as aforesaid shall not relieve the contractor of his liability to pay the supply and performance guarantee liquidated damages for delay in completion as defined in clause 27.0 of this section.

31.0 Contractor's Site Organization and Equipment

Site Engineer in Charge: The Contractor shall ensure continued effective supervision with the help of a qualified, experienced Site Engineer assisted by adequate staff as ascertained by the Architect, for the entire duration of the Works. The Site Engineer-in-charge will be responsible for carrying out the work to the true meaning of the Drawings, conditions of contract, Specifications, schedule of quantities and Architect's Instructions and directions given to him in writing shall be held to have been given to the Contractor officially. Attention is called to the importance of requesting written instruction from the Architect before undertaking any work where Architect's directions or instructions are required. Any such work done in advance of such instructions will be liable to be
removed at the Contractor’s cost. No staff from the Site Engineer and technical supervisory staff shall be transferred from the work without the written prior permission from the Architect.

31.1 Equipment: The Contractor shall provide and install all necessary hoists, ladders, scaffolding, tools, plants and all transport for labour, materials and plant necessary for the proper execution and completion of the Works to the satisfaction of the Architect.

31.2 Security: The Contractor shall provide adequate number of watchmen to guard the site premises, materials and equipment at all times at his expense.

31.3 Telephone: The Contractor shall provide, install and maintain at his expense a separate telephone for the Site. He shall pay all charges in connection with the same till the completion of the Works.

31.4 Work Sheds: The Contractor shall provide, erect and maintain at the Site at his expense proper waterproof shed for the storage and protection of construction materials, carpentry and joinery workshop, equipment, both his own as well as those supplied by the Owner/Client, if any from time to time.

31.5 Sanitary Convenience: The Contractor shall at his expense provide and erect at the Site all necessary sanitary conveniences for the Site staff and the workmen, and shall maintain them in a clean orderly condition and clean and de-odorize the ground after their removal.

31.6 Scaffolding, Staging, Guard Rails: The Contractor shall provide at his expense at the Site scaffolding, staging, guard rails, temporary stairs and temporary measures required during construction. The supports for scaffolding, staging, guard rails and temporary stairs shall be strong, adequate for the particular situations, tied together with horizontal pieces and braced properly. The temporary access to the various parts of the building under construction shall be rigid and strong enough to avoid any chance of mishaps. The entire scaffolding arrangements proposed shall be subject to the approval of the Architect but such approval will not relieve the Contractor of his obligations under this clause.

31.7 Water and electricity charges should be included on the scope of work.

32.0 Contractor’s Supervision

32.1 The Contractor shall provide all necessary supervision during the execution of the works and guarantee period for the proper fulfilling of the Contractor’s obligations under the Contract. The Contractor or a competent and authorized agent approved in writing by the Site Engineer, which approval may at any time be withdrawn; is to be constantly on the works and shall give his whole time to supervise the works. Such an authorized agent shall receive on behalf of the Contractor, directions and instructions from the Site Engineer or the Owner/Client/Executive Engineer.

32.2 The Contractor shall employ for the execution of the Works a. Such technical persons as are qualified and experienced and such representatives, foremen and supervisory staff as are competent to give supervision to the work, and b. Such skilled, semi-skilled and unskilled labour as is necessary for the proper and timely execution and maintenance of the works.

33.0 Setting Out

The Contractor shall be responsible for the true and proper setting out of the works at his expense in relation to reference points, lines, levels given in the drawing or furnished by the Site Engineer in writing and for the correctness of the positions, levels, dimensions and alignment of every part of the works. If any error in setting out is noticed at any stage, the Contractor shall, at his own cost, rectify such errors to the satisfaction of the Site Engineer.

34.0 Nuisance

The Contractor shall not at any time do, cause or permit any nuisance on the site or do anything which shall cause unnecessary disturbance or inconvenience to the others working on or near the site and to the public generally.

35.0 Watching and Lighting
The Contractor shall provide and maintain at his cost all lights, guards, fencing and watchmen, when and where necessary or as directed by the Site Engineer, for the protection of works, materials, plant, equipment etc.

36.0 Care of Works:
From the commencement of the Works until the date the Works are completed (as set forth in the Completion Certificate) and handed over to the Owner/Client, the Contractor shall take full responsibility for the care thereof. In case of any damage, loss or injury to the Works executed by him or by other contractors or to any part thereof from any cause whatsoever, the Contractor, shall at his own cost, repair and make good the same so that on completion, the Works shall be in good condition and in conformity in every respect with the requirements of the Contract Documents. The Contractor shall also be liable for any damage to the Works occasioned by him in the course of any operations carried out by him for the purpose of completing any outstanding work or rectification of defects during the Guarantee Period.

37.0 Co-operation with other Contractors
37.1 The Contractor shall co-operate with other Contractors and Consulting Site Engineers and freely exchange with them such technical information as necessary for the proper execution of the works.

37.2 The Contractor shall, in accordance with the directions of the Site Engineer, afford all reasonable opportunities to other Contractors and their workmen and to the workmen of the Owner/Client who may be employed in the execution of the works not included in the Contract, for carrying out their work.

37.3 All operations necessary for the execution of works shall be carried out so as not to interfere unnecessarily or improperly with the execution of works by other Contractors. Execution of works under this Contract shall be co-ordinated with the work of other contractors where it would interfere with their work or working. The Site Engineer and the concerned contractor shall be informed well in time for effective coordination and proper execution of Works.

38.0 Contractor to Keep Site Clear
During the progress of the Works, the Contractor shall keep the site reasonably free from all necessary obstructions and shall store or dispose of any Constructional plant and surplus materials, wreckage, rubbish or Temporary Works no longer required.

39.0 Coordination of Work
39.1 At the commencement of work, and from time to time, the Contractor shall confer with other contractors, sub-contractors, and persons engaged on separate contracts in connection with the work, and with the Architect, Executive Engineer, and Owner/Client for the purpose of coordination and execution of the various phases of work. The Contractor shall ascertain from the other contractors, sub-contractors and persons engaged in separate contracts, in connection with the works, the extent of all chasing, cutting and forming of all opening, holes, grooves etc. as may be required to accommodate the various services.

39.2 The Contractor shall ascertain the routes of all services and the position of all floor and wall outlets, traps etc. in connection with the installation of plant, services and arrange for the construction of work accordingly. The breaking and cutting of the completed work must not be done unless specifically authorized in writing by the Owner/Client/ Architect/ Executive Engineer. Generally, all breaking shall be by the Contractor and no work shall be done over broken or patched work without first ascertaining that the broken surface is adequately prepared and reinforced to receive and hold further work.

40.0 Clearance of Site on Completion
Before the Site Engineer issues the Completion Certificate, the Contractor shall clear away and remove from the Site all constructional plant, surplus materials, rubbish and temporary works of every kind and leave the whole of the Site and Works clean and in workman like condition to the satisfaction of the Site Engineer.

41.0 Patent Rights
The Contractor shall fully indemnify the Owner/Client against any action, claim or proceeding relating to any infringement of the use of any patent or design or any alleged patent or design rights and shall pay royalties which may be payable in respect of any article or part thereof included in the Contract.
42.0 Fire Fighting Facilities:
The Contractor shall provide and maintain adequate fire fighting facilities on the Site to the approval of the Site Engineer and local Fire Authorities.

INSURANCE AND INDEMNITIES

43.0 Insurance of Works:
43.1 The Contractor shall ensure that his insurance covers entire project upto Rs. 60 Lacs of value of work and beyond 60 Lacs the insurance includes for all liabilities which should cover material and building damage, workmen’s compensation, third party liabilities etc. The insurance shall initially be kept valid up to 60 days beyond the scheduled completion date and may be extended, based on a written request from the Owner/Client / Executive Engineer. The Contractor should produce evidence of insurance coverage for all above before submitting invoices for payment.

43.2 Such insurance shall be affected with an insurer and in the terms approved by the Owner/Client, which approval shall not be unreasonably withheld.

43.3 Project Insurance is to be done by Client.

43.4 If the Contractor has a blanket insurance policy for all his works and the policy covers all the items to be insured under this Contract, the Contractor may assign such policy/policies in favour of the Owner/Client, in lieu of taking out fresh policies in the joint names of the Contractor and the Owner/Client.

44.0 Insurance against accident or injury to Workers:

44.1 The Owner/Client shall not be liable for or in respect of any damage or compensation payable at law in respect or in consequence of any accident or injury to any workmen or other person in the employment of the Contractor or any Sub-Contractor. The Contractor shall indemnify and keep indemnified the Owner/Client against all such damages and compensation, and against all liability, claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

44.2 The Contractor shall insure against such liability with an insurer approved by the Owner/Client and shall continue such insurance during the whole of the time that any persons are employed by him or the Sub-Contractors on the Works.

45.0 Third Party Insurance:
Before commencing the execution of the Works, the Contractor shall insure against his liability for any materials or physical damage, loss or injury which may occur to any property including that of the Owner/Client, and to any person including any employee of the Owner/Client, Executive Engineer and the Architect, by or arising out of the execution of the Works or in carrying out of the Contract.

46.0 Insurance Generally:

46.1 The terms of the insurance policies shall include a provision whereby, in the event of any claim in respect of which the Contractor would be entitled to receive, indemnify under the policy being brought or made against the Owner/Client, the insurer will indemnify the Owner/Client against such claims and any costs, charges and expenses in respect thereof.

46.2 The Insurance policies shall provide that they shall not be cancelled until the Owner/Client has agreed to their cancellation.

46.3 The Contractor shall provide the Owner/Client and the Executive Engineer with a copy of each of the Insurance policies and documents taken out by him in pursuance of the Contract immediately after such insurance coverage is affected.

46.4 If the Contractor shall fail to effect and keep in force insurance, as per the terms of Contract, the Owner/Client may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the Owner/Client as aforesaid from any monies due or which may become due to the Contractor, or recover the same as a debit due from the Contractor.
46.5 The Contractor shall be responsible for preparing of all claims and from the commencement of the Works until the date the Works are completed (as set forth in the Completion Certificate) and handed over to the Owner/Client, the Contractor shall be responsible for any damage or loss from any cause whatsoever to the Works or to materials delivered to the Site but not yet incorporated into the Works. The Owner/Client's taking of possession of the Works shall not in any way relieve the Contractor of his responsibilities during the period of the Contract including during the Guarantee Period.

46.6 The Contractor shall comply in all respects with the insurance requirements set forth on Schedule 1 attached hereto, the provisions of which are incorporated herein. In the event of any inconsistency between the provisions of this Clause and those set forth in Schedule 1, the provisions of Schedule 1 shall prevail.

LABOUR

47.0 Engagement of Labour:

47.1 The Contractor shall make his own arrangements for the engagement of labour, local or otherwise, and for their transport, housing and payment. All labour engaged by the Contractor shall be and remain the employees of the Contractor and no claim shall lie against the Owner/Client by them or Contractor and any person claiming on their behalf against the Owner/Client in respect of any right or benefit due to them in their employment.

47.2 The Contractor shall obtain a valid license under the Contract Labour (Regulation and Abolition) Act 1970, before the commencement of the work and continue to have a valid license until the completion of work or expiry of guarantee period, if applicable.

47.3 The Contractor shall pay the labour employed by him directly or through Sub-Contractors, wages not less than the minimum wages notified under the Minimum Wages Act.

47.4 The Contractor shall in respect of all labour employed by him either directly or through Sub-Contractors comply with or cause to be complied with the provisions of the payment of Wages Act, 1936, Minimum Wages Act 1948, Employers Liability Act, 1938, Workman’s Compensation Act 1923, Contract Labour (Regulations and Abolition) Act 1970, Employee’s Provident Fund Act, and any other Act, Rules or Regulations for the labour as may be enacted by the Government or any modification thereof or any other law relating thereto and rules made thereunder from time to time.

47.5 The Employer shall, on a report from the competent authority have the power to deduct from the monies due to the Contractor any sum notified under the provisions of the relevant Act.

47.6 The Contractor shall indemnify the Owner/Client and the Employer against all or any payments to be made under and for the observance of any Act, Rules and Regulations aforesaid without prejudice to his right to claim indemnity from his Sub-Contractors.

48.0 Model Rules

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

49.0 Safety Code:

The Contractor at his own cost arrange for the safety provisions stipulated by Government or local authorities or as required by the Executive Engineer in respect of all labour directly or indirectly employed for performance of the works and shall provide all facilities in connection therewith. In case the Contractor fails to make arrangements and provide necessary facilities as aforesaid, the Owner/Client shall be entitled to do so and recover the costs thereof from the Contractor.

50.0 Child Labour:
The Contractor shall not employ any labor less than 18 years of age on the job. This stipulation is not negotiable and will attract penal action under the most stringent process of civil and criminal procedure.

51.0 Returns of Labour
The Contractor shall furnish to the Executive Engineer a return every week in such detail and form as the Executive Engineer may prescribe showing the supervisory staff and the number of labour employed by the Contractor and Sub-Contractors on the Site separately for each category of labour indicating their working hours.

52.0 ESI and PF Obligations
The Contractor shall include in his rates all expenses towards meeting obligations under the Employees State Insurance Act and the Provident Fund Act. He shall follow all rules and regulations required under the Act as may be in force from time to time. The Contractor shall cover all his workmen working at the site, under the ESI scheme and PF Scheme, and directly deposit the required amounts with the concerned authorities.

MATERIALS AND WORKMANSHIP

53.0 Quality of Materials and Workmanship:
53.1 All Materials and workmanship shall be the best of the respective kinds described in the Contract and in accordance with the instructions and directions of the Architect/Executive Engineer and shall be subjected from time to time, to such tests as the Architect / Executive Engineer may direct at the place of manufacture or fabrication or on the Site or at such other places as may be directed by the Site Engineer. The Contractor shall execute the whole and every part of the work in the most substantial and workman-like manner, both as regards to materials and workmanship and in every respect in strict accordance with the specifications etc. The Contractor shall also conform exactly and faithfully to the designs, drawings and instructions in writing of the Architect / Executive Engineer.

54.0 Storage of Materials:
All materials and equipment brought on to the Site shall be stored by the Contractor only at places approved by the Site Engineer. Storage and safe custody of materials and equipment shall be the responsibility of the Contractor.

55.0 Approval of Materials:
55.1 The Contractor shall supply samples of all materials including those specified by brand names for approval of the Site Engineer. The Site Engineer will approve the samples in writing before the Contractor arranges bulk supplies. The cost of arranging/making of test samples cost of their packing and forwarding and testing charges shall be borne by the Contractor.

55.2 The Owner/Client/Architect/Executive Engineer and the Site Engineer may at any time during the execution of work call upon the Contractor to submit samples of any materials used or to be used in the works for checking compliance with the Contract specifications or approved samples. Should these samples fail to comply with the Contract specifications or not conform to approved samples, then the materials from which the said samples were taken shall be removed from the Site immediately and all work executed with such materials shall be replaced and made good to the satisfaction of the Site Engineer, at the expense of the Contractor.

56.0 Quality Control:
56.1 The Contractor shall submit to the Site Engineer a comprehensive quality approval plan for all materials, equipment and things to be provided under the Contract. No material or equipment shall be dispatched by the manufacturer or vendor or brought to Site by the Contractor until the quality of the material or equipment has been established through inspection and tests or through test certificates furnished by the manufacturer. In case the Site Engineer accepts such tests certificates as sufficient proof that the material or equipment conforms to the Contract Specifications, he shall accord his approval for the dispatch of material or equipment

56.2 The Contractor shall set up a quality control laboratory at the Site of work for conducting field tests on certain materials such as cement, aggregates, bricks, cement concrete or other materials as may be directed by the Site Engineer or the Owner/Client/Architect/Executive Engineer . The Contractor shall deploy a qualified Site Engineer to conduct the tests. If the
setting up of such laboratory is not feasible on site, the necessary testing shall be
carried out by an accredited laboratory for all work samples and the reports shall be
submitted to the Owner/Site Engineer.

56.3 The owner/Site Engineer shall have access to all works and shall have the power to inspect
covered work by ordering its opening/exposure even after such works have been completed to
inspect quality and to satisfy themselves about the adherence to quality and workmanship.
The contractor shall have no claim in this regard.

57.0 **Standard of Workmanship:**
To determine the acceptable standard of workmanship, the
Owner/Client/Architect/Executive Engineer may require the Contractor to execute certain
proportions of works and services such as walls, flooring, joinery, finishes, sanitary
installation etc. under his close supervision. On approval such samples of work shall be
termed as guiding samples. Work shall be executed to conform to the standard of
workmanship of these samples.

For standards, the reference shall be:

CPWD

ISI/BIS

The contractor shall obtain at his own cost and provide on site copies of all relevant
standards.

58.0 **Inspection of Works:**
58.1 The Owner/Client/Executive Engineer, the Architect and any person authorized by them
shall at all times have access to the Works and to all workshops and places where work is
being prepared or from where materials, or equipment are being obtained for the Works and
the Contractor shall afford every facility and assistance in obtaining the right to access.

58.2 All work embracing more than one process shall be subject to examination and approval at
each stage thereof and the Contractor shall give due notice to the Architect / Executive
Engineer when each stage is ready.

58.3 **Examination of Works:**
No work shall be covered up or put out of view without the approval of the
Architect/Executive Engineer. The Contractor shall give due notice to the Site Engineer and
afford him full opportunity to examine any work, which is about to be covered up or put out
of view. The Contractor shall open any part or parts of the works as the
Owner/Client/Executive Engineer or the Architect may from time to time direct and shall
reinstate and make good such part or parts to the satisfaction of the Architect/Executive
Engineer.

59.0 **Removal of Improper Work & Materials:**
59.1 The Owner/Client/Architect/Executive Engineer shall have full powers to order in writing:

   a. The removal from the Site, within such time as may be specified in the order, of any
      materials which, in the opinion of the Architect/Executive Engineer are not in
      accordance with the Contract,

   b. The substitution of proper and suitable materials, and

   c. The removal and proper re-execution notwithstanding any previous test thereof or
      interim payment thereof, or any work which, in respect of materials or workmanship
      is not in the opinion of the Executive Engineer or the Architect, in accordance with
      the Contract.

59.2 In case the Contractor defaults in carrying out such order, the Owner/Client shall be entitled
to employ and pay other persons to carry out the same and all expenses consequent thereon
or incidental thereto shall be recoverable from the Contractor by the Owner/Client, or may be
deducted by the Owner/Client from any monies due or which may become due to the
Contractor.
CONSTRUCTIONAL PLANT, MACHINERY & TEMPORARY WORKS

60.0 Contractor to supply all Plant, Machinery, Scaffolding etc.
No plant, machinery, scaffolding and tools and tackles will be arranged or issued by the Owner/Client.

61.0 Materials, Plants, etc. Exclusive Use for the Works:
61.1 All Constructional Plant, Temporary Works and materials when brought on to the Site shall be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove the same or any part thereof, without the consent, in writing, of the Executive Engineer, which shall not be unreasonably withheld.

61.2 Upon completion of the Works, the Contractor shall remove from the Site all the said Constructional Plant and Temporary Works remaining thereon and any unused materials provided by the Contractor.

61.3 The Owner/Client shall not at any time be liable for the loss of or damage to any of the said Constructional Plant, Temporary Works or materials. The storage and safe custody of all materials, equipment, Constructional Plant and the Temporary Works executed shall be the responsibility of the Contractor.

62.0 Urgent Repairs:
If, by any reason of any accident, or failure, or other event occurring, either during the execution of the works or during the Guarantee Period, any remedial or other work or repair shall, in the opinion of the Executive Engineer, be urgently necessary for the safety of the Works and the Contractor is unable or unwilling to do such work or repair, the Owner/Client may employ and pay other persons to carry out such work or repair as the Executive Engineer may consider necessary. If the work or repair is so done by the Owner/Client, is work which, in the opinion of the Executive Engineer, the Contractor is liable to do at his own expense under the Contract, all expenses properly incurred by the Owner/Client in so doing shall be recoverable from the Contractor by the Owner/Client, or may be deducted from any monies due or which may become due to the Contractor. The Executive Engineer shall, as soon after the occurrence of any such emergency as may be reasonably practicable, notify the Contractor thereof in writing.

63.0 Working at all heights:
Item rates quoted by the Contractor in the bills of quantities shall include allowance for executing work at all heights above and at all depths below the ground level, except where specific provision has been made to measure work separately at different heights. Method of measurements given in the CPWD Specification 2012 and in the Indian Standard Method of Measurement with latest amendments shall be deemed to be modified accordingly.

DEVIATIONS/ VARIATIONS

64.0 Extras and Variations
64.1 The Owner/Client shall have the power to make and order any variation of the form, quality of the Works that may appear to him to be necessary during the progress of the Works with the consent of the Architect/Executive Engineer and the Architect or any variation that the Owner/Client may desire and the Contractor shall carry out the Works as directed.

64.2 Variations shall not in any way vitiate or invalidate the Contract.

64.3 No variations shall be made by the Contractor without an order in writing of the Architect or Executive Engineer, provided always that no order in writing shall be required for any increase or decrease in the quantities of any work if there is no change in the extent of work ordered from that included in the Contract.

64.4 No verbal orders by the Architect/Executive Engineer /Owner/Client shall constitute an authority for the Contractor to undertake any variations from the Contract, specifications. If the Contractor, for any reason, has been given verbal orders it shall be his responsibility to ask confirmation of the orders and shall proceed accordingly only after the orders are confirmed in writing.

64.5 All altered, additional or substantiated items of work shall be priced as under
a. An item of work included in the bills of quantities at the applicable rate in the respective bill of quantities.

b. An item of work similar in character to the item included in the bill of quantities at the prorated rate derived from the rate for a similar class of work in the bill of quantities.

c. If the rate for an item of work cannot be determined in the manner at (a) and (b) above, the rate shall be decided by the Architect on the basis of the cost to the Contractor at Site i.e. cost of materials including taxes, duties, Octroi, packing and forwarding charges, handling and insurance and cost of labour, both on actual: plus 15% (Fifteen Percent) to cover Contractor’s profit and overheads, except on the cost of any material or service supplied/provided by the Owner/Client.

d. It shall be the responsibility of the Contractor to inform the Architect, under advice to the Owner/Client/Executive Engineer the rate which he proposes to claim for such item of work, supported by analysis of the rate claimed. The Architect / Architect’s Site Engineer shall, within two weeks thereafter, after verification of the market rates and giving due consideration to the rate claimed by the Contractor fix the rate on the basis of the market rates. In case it is not practical for the Contractor to furnish vouchers in support of the cost of materials or such evidence as the Site Engineer may ask, the Site Engineer shall fix only a provisional rate for the purpose of interim payments. The Contractor shall have no right to suspend the work on the plea of no settlement of the rates.

64.6 In the event of the Contractor’s disagreement as to the reasonableness of the rates fixed by the Site Engineer the decision of the Executive Engineer shall be final.

65.0 Deviation Limit:

As a result of variations ordered, the quantities of any individual items of work done, omitted, altered and substituted could vary to any extent, without any price adjustment. However, overall contract sum shall not be varied by more than plus or minus 25% (twenty five percent) for that particular Item. In case the total amount of variations ordered exceeds 25% (Twenty Five Percent) of the Contract sum, the work ordered in excess of the maximum deviation limit shall be priced at mutually agreed rates having regard to the prevailing market rates and other relevant factors.

66.0 Claims

66.1 The Contractor shall send to the Employer every month, an account giving full particulars, as full and detailed as possible of all claims for any additional payments to which the Contractor may consider himself entitled and of all extra work ordered in writing and which he has executed during the preceding month.

66.2 No claim for payment for any extra work or expense will be considered which has not been included in such particulars. The Owner/Client may consider payment for any such work or expenses where admissible under the terms of the Contract, if the Contractor has at the earliest practicable opportunity notified the Employer in writing that he intends to make a claim for such work and expense and it is certified by the Employer’s Representative that such payment was due.

66.3 Any claim which is not notified in two consecutive monthly statements for two consecutive months shall be deemed to have been waived and extinguished.

CERTIFICATES AND PAYMENTS

67.0 Quantities:

The quantities set out in the Bill of Quantities are to be estimated quantities of the work; they are not to be taken as the actual or correct quantities of the Works to be executed by the Contractor in fulfillment of his obligations under the Contract.

68.0 Valuation:

The Site Engineer shall except where otherwise stated, ascertain and determine the value of work done by measurement in accordance with the Contract.
69.0 Works to be measured:

69.1 The measurement of work done by the Contractor shall be recorded in the measurement books/works register by the Site Engineer, from time to time, jointly with the Contractor. Measurements of altered, additional or substituted items of work ordered shall be recorded as and when these are executed even if the rates for these items have not been settled and shall be kept available at site for necessary check for Executive Engineer.

69.2 The Architect or Executive Engineer shall, when he requires any part of the works to be measured, give a reasonable notice to the Contractor who shall attend or send his representative to assist the Architect/Executive Engineer or his representative in making such measurements, and shall furnish all particulars required by him.

69.3 Measurements recorded on works register shall be signed and dated by both parties on the completion of each set of measurements. If the Contractor objects to any of the measurements recorded by the Architect/Site Engineer, the Contractors or their authorized representative shall record a note to this effect in the Measurement Book against items objected to and such a note shall be signed and dated by both the Contractor and the Site Engineer or their Representatives.

69.4 If the Contractor fails to attend or neglects or omits to send his authorized representative, then the measurements made by the Architect/Site Engineer or approved by him shall be taken to be correct measurement of the work. If after examination of such record of measurements, the Contractor does not agree with the same or does not sign the same as agreed, these shall nevertheless be taken as correct, unless the Contractor shall have within 14 days of such examination, notifies the Architect/Executive Engineer in writing in which respect the measurements recorded are claimed by him to be incorrect.

70.0 Method of Measurement:
The Works shall be measured net, notwithstanding any general or local custom, as per the method of measurement set out in the CPWD Specifications - 2012 Volume I & II and items not covered by the CPWD Specifications, shall be measured as per IS:1200 - Method of Measurement of Building Works (respective part).

71.0 Interim Bills:

71.1 The Contractor shall, at monthly intervals, on the dates agreed between the Site Engineer and the Contractor, submit interim bills in 4 copies showing the value of the work executed in accordance with the Contract based on the measurements recorded in the measurement books.

71.2 The Executive Engineer / Owner/Client shall approve the quality of materials, equipment and workmanship and adherence to the details as per drawings, specifications and the Architect’s instructions and render certificates accordingly before the Executive Engineer certifies to the Owner/Client the interim bill for payment to the Contractor.

71.3 The Architect/Site Engineer shall check interim bills and the Contractor shall provide necessary information and details which the Executive Engineer may request for proper verification of the same. In the event of any discrepancy the Executive Engineer shall adjust the value shown in the interim bills.

71.4 Payment for items of work, which is partly completed, shall be allowed at part rates derived from the Contract rates. Payment for altered, additional or substituted items of work ordered shall be allowed at provisional rates as may be fixed by the Executive Engineer till the rates are finally fixed.

71.5 The contractor shall be paid for unfixed imperishable materials, that have been brought to site and stored for incorporation in the work, to the extent of a fixed % (specified elsewhere in the tender) of the cost of such materials as certified by the Site Engineer and recommended by the Executive Engineer, provided claims for such payments are supported by all relevant vouchers, measurement books, receipts and other documents as called for by the Architect / Site Engineer. Only such materials as are brought to site in reasonable time for incorporation in the work shall be recommended for payment under this sub-clause. The amount thus paid shall be treated as advance and adjustable against progress payment covered under the clause above. Such materials when paid for, become the exclusive property of the Owner/Client and shall not be hypothecated to any party or removed from the site regardless
of whether accepted or not. The quantities of materials to be brought to site shall be properly worked out from approved construction drawings in consultation with the Owner/Client/Executive Engineer. The said materials shall remain in the custody of the Contractor until the work is completed and delivered to the Owner/Client, and any loss or damage shall be the sole responsibility of the Contractor.

71.6 All interim payments shall be treated as payments by way of advances against final payment and not as payments for the work done or be considered as an admission of the due performance of the Contract.

71.7 Inclusion of any supplies made or works executed in an interim bill and payment of such interim bills shall not be deemed to constitute approval by the Owner/Client or the Executive Engineer of any such supplies or works nor shall it in any way affect the rights of the Owner/Client under the Contract.

71.8 From the amount of the interim bill certified, the Owner/Client shall deduct 10% of the value of the work executed towards Security Deposit subject to a maximum amount specified in the Schedule of Fiscal Aspects.

71.9 The Executive Engineer may by any certificate correct or modify any previous certificate and shall have the power to withhold any certificate if, the Works or any part thereof have not been carried out to his, Owner/Client/Executive Engineer’s satisfaction.

72.0 Final Bill
Not later than 45 days after the Architect / Executive Engineer issues Completion Certificate, the Contractor shall submit to the Owner/Client / Executive Engineer 4 (four) copies of final bill with supporting documents showing in detail the value of work done in accordance with the Contract, the payments received by him and other recoveries/ deductions to be effected from the Contractor. Within two weeks of the receipt of final bill and all information reasonably required for verification of the final bill, the Architect / Executive Engineer shall approve and render a certificate to the Owner/Client that he has satisfied himself that the work executed is as per Contract specifications and to his satisfaction.

73.0 Withholding of Payments
The Architect / Executive Engineer may withhold or on account of subsequently discovered evidence, nullify the whole or a part of any certificate to such extent as may be necessary to protect the Owner/Client from loss on account of:

a) Defective work not remedied
b) Failure of the Contractor to make payments properly to subcontractors for materials or labour or equipment
c) Damage to works of another contractor or sub-contractor
d) A reasonable doubt that the Contract can be completed for the balance unpaid amount
e) A reasonable doubt that the Contractor intends to leave work items incomplete.

74.0 Materials & Workmanship:

74.1 All materials and equipment to be incorporated in the works shall be new materials and equipment and workmanship are to be of the best quality of the specified type and to his entire satisfaction of the Owner/Client/Architect/Executive Engineer. The Contractor shall immediately remove from the premises any materials, equipment and/or workmanship which in the opinion of the Owner/Client/Architect/Executive Engineer, are defective or unsuitable and shall substitute proper materials, equipment and/or workmanship at his own cost. The term ‘approval’ used in connection with this Contract shall mean the approval of the Owner/Client/Architect/Executive Engineer. The Contractor shall, if required, submit satisfactory evidence as to the kind and quality of materials and equipment.

74.2 Where special makes or brands are called for, they are mentioned as a standard. Others of equivalent quality may be used, provided that the Architect/Executive Engineer considers the substituted materials as equivalent to the brand specified and approval is first obtained in
writing from the Owner/Client/Architect/Executive Engineer. Unless the substitutions are approved by the Executive Engineer, no deviation from the specifications will be permitted. The Contractor shall indicate and submit written evidence of those materials or equipment called for in the specifications that are not obtainable for installation in the building within the time limit of the Contract. Failure to indicate the above within 3 months after signing of the Contract will be deemed sufficient cause for denial of request for the extension of the Contract time because of the same.

74.3 All materials and equipment shall be delivered so as to ensure a speedy and uninterrupted progress of the work. The same shall be stored so as to prevent overloading of any portion of the structure and the Contractor shall be entirely responsible for damage or loss to the materials, by weather or other causes.

74.4 Within the Contract, the Contractor shall submit for approval of a complete list of all materials and equipment he and his sub-contractors propose to use in the work, or definite brand or make, which differ in any respect from those specified; also the particular brand of any article where more than one is specified as a standard. He shall also list items not specifically mentioned in the specifications but which are reasonably inferred and are necessary for the completion of the work.

74.5 The Contractor shall employ the right kind of workmen, jigs, tools and equipment to fabricate all materials and equipment, whether locally purchased or imported and whether provided by the Owner/Client himself. They shall be fabricated and installed without any damage and in accordance with the manufacturer's instructions and manuals. Unless specifically shown otherwise, all items such as doors/window frames suspended and other ceilings, equipment etc. shall be securely fixed to their supports through expansion machine bolts or other approved means. Securing any item through wooden plugs shall not be permitted.

74.6 All materials, equipment and workmanship shall be subject to inspection, examination and test by the Owner/Client/Architect/Executive Engineer at any and all items during manufacture and/or construction. The Owner/Client/Architect/Executive Engineer shall have the right to reject defective material, equipment and workmanship or require its correction. Rejected workmanship shall be satisfactorily corrected and rejected materials and equipment shall be satisfactorily replaced with proper material and equipment without charge therefore, and the Contractor shall promptly segregate and remove the rejected materials and equipment from the premises. No schedule extension shall be given for such rejection / replacement of defective material, equipment and workmanship that requires correction. If the Contractor fails to proceed at once with the replacement of rejected materials and/or the correction of defective workmanship, the Owner/Client may contract or otherwise, replace such materials and equipment and/or correct such workmanship and charge the cost thereof to the Contractor or may terminate the right of the Contractor to proceed further with the work. The Contractor shall furnish promptly, without additional charge all reasonable facilities, labour, materials and equipment necessary for the safe and convenient inspection and test that may be required by the Owner/Client/Architect/Executive Engineer.

74.7 All tests on material, equipment and workmanship shall be carried out through an organization selected by the Executive Engineer/Owner/Client/Architect. The Contractor shall arrange for such tests and also bear all expenses in connection therewith.

75.0 Deductions for Uncorrected Work
If the Owner/Client/Executive Engineer deems it inexpedient to correct, work damaged or not done in accordance with the contract, an equitable deduction from the Contract Price shall be made therefore and the Owner/Client/Executive Engineer's decision in this respect shall be final.

76.0 Correction of Work before Completion of Work
The Architect/Owner/Client/Executive Engineer shall conduct a final inspection just before the completion of the work and prepare a list of materials, equipment, and items of work, which fail to conform to the Contract's Specifications. The Contractor shall promptly replace and re-execute such items in accordance with the Contract and shall bear all expenses of making good all work and cost of all work of other contractors destroyed or damaged by such replacement or removal. If the Contractor fails to remove and replace above rejected materials, equipment and/or workmanship within a reasonable time, fixed by written notice, the Owner/Client may employ and pay other persons to amend and make good such defects at the expense of the Contractor. All expenses incurred by the Owner/Client in rectifying the
defects including all damages, loss and expense consequent to the defects shall be recoverable from any amount due or that may become due to the Contractor.

**77.0 Completion**

77.1 The work shall be considered as completed only upon fulfillment of procedure laid down in clause above and when the Architect / Executive Engineer has certified in writing that the work has been completed. The defect liability period shall commence from the date of such certificate.

77.2 Should the Owner/Client decide to occupy any portion of the building or use any part of any equipment, before the Contract is completed, same shall not constitute an acceptance of any part of the work unless so stated in writing by the Executive Engineer.

**GUARANTEES, MAINTENANCE & DEFECTS**

**78.0 Maintenance**

The Contractor shall maintain the Works for a period of one year reckoned from the certified date of completion of the Works, termed as Defect Liability Period or Guarantee; and in the event of more than one certificate of completion, from the respective dates so certified by the Site Engineer.

**79.0 Defects**

79.1 The Contractor shall make good, at his own cost, and to the satisfaction of the Architect/Executive Engineer, all defects, shrinkage, settlement or other faults, arising in the opinion of the Architect/Executive Engineer from work or materials not being in accordance with the Drawings or Specifications or Schedule of Quantities or the instructions of the Architect/Executive Engineer, which may appear within one year after completion of work, excepting specialist items such as waterproofing, anti-termite treatment etc. which shall call for longer guarantee periods.

79.2 Such defects, shrinkage, settlement and other faults shall, upon directions in writing of the Architect/Executive Engineer and within such reasonable time as shall be specified therein, be amended and made good by the Contractor at his own cost, and in case of default the Owner/Client may employ and pay other persons to amend and make good such defects, shrinkage, settlements or other faults and all costs, damages, loss and expenses consequent thereon or incidental thereto shall be made good and borne by the Contractor and such cost, damage, loss or expense shall be recoverable from him by the Owner/Client or may be deducted by the Owner/Client upon the Executive Engineer’s Certificate in writing from any amount due to the Contractor, or the Contractor deduct from any moneys due to the Contractor, a sum to be determined by the Executive Engineer equivalent to the cost of amending such work and in the event of the retention amount being insufficient to recover the balance from the Contractor, together with any expenses the Owner/Client may have incurred in connection therewith.

79.3 The Contractor may not maintain staff and labour at site throughout the defects liability period. However, if any major defects are noted requiring his urgent attention, he shall attend to the same immediately. Other defects, if any, may be attended to just before the expiry of the defects liability period.

**80.0 Rectification of Defects/Repairs**

80.1 Should the Executive Engineer/Architect consider, at any time during the construction or reconstruction or prior to the expiration of the Guarantee Period, that any work has been executed with unsound or imperfect materials or unskilled workmanship or is of a quality inferior to the constructed for or not otherwise in accordance with the Contract, in respect whereof of the decision of the Employer’s Representative shall be final, the Contractor shall, on demand in writing from the Executive Engineer, specifying the fault, not withstanding that the same may have been inadvertently passed, certified and paid for, rectify forth or remove and reconstruct the defective work so specified, in whole or in part, as the case may require, at his own expense: and in the event of his failing to do so within the period specified by the Executive Engineer in his demand/direction, the Employer may carry out the work by other means at the risk and expense, in all respects, of the Contractor.
80.2 If it becomes necessary for the Contractor to replace or renew any defective portions of the plant or installation under this clause, the provisions of this clause shall apply to the portions of the plant/installation so replaced or renewed until the expiration of 12 months from the date of such replacements or renewals.

81.0 Guarantee:
81.1 Besides guarantees required elsewhere, the Contractor shall guarantee the work in general for one year as noted in the General Conditions.
81.2 All required guarantees shall be submitted to the Owner/Client/Executive Engineer /Architect by the Contractor when requesting Certification of accounts for payment by the Owner/Client.
81.3 All required guarantees shall be submitted to the Owner/Client/Executive Engineer in the forms given as a pre-requisite to acceptance and payment.

82.0 Setting Out:
82.1 The Contractor shall establish, maintain and assume responsibility for the grades, lines, levels and bench marks. He shall report any errors or inconsistencies regarding grades, lines, levels and dimensions to the Architect/Executive Engineer before commencing work. Commencement of work will be regarded as the Contractor’s acceptance of such grades, lines, levels and dimensions and no claim will be entertained at a later date for any errors found. If at any time, any error in such respect shall appear during the progress of the work, the Contractor shall, at his own expense rectify such error if so required to the satisfaction of the Architect/Executive Engineer.
82.2 Such surveys shall be carried out by a qualified Surveyor or all bench marks to be erected by the Contractor in connection with the work shall be co-related to the permanent bench marks established at the site.

83.0 Drawings, Specifications etc:
83.1 After the Contract is signed, the Contractor will be furnished with two copies of the drawings and two copies each of the Conditions of Contract, Specifications and Schedule of Quantities without cost to him for his use until the completion of the Contract. Additional copies of drawings and other documents will be supplied on payment to the Architect at actual cost.
83.2 In general, the drawings shall indicate dimensions, positions and type of construction; the specifications shall indicate the qualities and the methods; and the Schedule of Quantities shall indicate the quantity and rate for each item of work. However, the above documents being complementary, what is called for by any one shall be as binding as if called for by all. In case of any discrepancies in or among the documents, the most stringent of all shall apply.
83.3 Any work indicated on the drawings and not mentioned in the Schedule of Quantities or Specifications or vice versa, shall be deemed as though fully set forth in each. Work not specifically detailed, called for, marked or specified, shall be the same as similar parts that are detailed, marked or specified.
83.4 No deviations from the Drawings, Specifications and Schedule of Quantities shall be made. The Owner/Client/Executive Engineer’s interpretation of these documents shall be final and without appeal.
83.5 Errors or inconsistencies discovered in the Plans and Specifications shall be promptly called to the attention of the Architect/Executive Engineer through the Site Engineer for interpretation or correction. Local conditions which may affect the work shall likewise be brought to the Owner/Client/Executive Engineer’s attention at once. If, at any time, it is discovered that work being done which is not in accordance with the approved plans and Specifications, the Contractor shall correct the work immediately. Correction of defective work shall not be a basis for any claims for extension of time. The Contractor shall not carry on the work except with the knowledge of the Site Engineer.
83.6 Figured dimensions on the scale drawings and large-scale details shall govern. Large scale details take precedence over scale drawings. Any work done before receipt of such details if
not in accordance with the same, shall be removed and replaced or adjusted as directed, without expense to the Owner/Client.

83.7 All Drawings, Specifications and Schedule of Quantities and copies thereof furnished by the Owner/Client/Executive Engineer are his property. They shall not be used on any other work and shall be returned to him at his request or at the completion of the Contract.

84.0 Samples & Shop Drawings:
After the award of the Contract, the Contractor shall furnish for the approval of the Architect/Owner/Client/Executive Engineer, samples and shop drawings. Samples shall be delivered as directed by the Owner/Client/Executive Engineer. No extra payment is due to the Contractor for preparation of any samples. A schedule giving dates for the submission of samples shall be included in the time schedule. Unless specifically authorized, all samples must be submitted for approval at least ten days prior to commencement of work at site.

85.0 Guarantee Certificate
85.1 The Contract shall not be considered as completed until Guarantee period shall have expired. The Guarantee Certificate stating that the works have been completed and maintained to owner satisfaction and that all the defects notified had been rectified, shall be given by the Executive Engineer within one month of the expiry of the Guarantee period, and if different Guarantee periods shall become applicable to different parts of the works, the expiry of the last such period; or as soon thereafter as any work ordered to be rectified during such period shall have been completed to the satisfaction of the Executive Engineer.

85.2 Provided that in the case of fraud, concealment or fraudulent concealment relating to the works or materials or to any matter dealt within any certificate, the Guarantee certificate shall not be conclusive evidence as to its sufficiency.

86.0 Safety Procedures
86.1 The Contractor shall incorporate in his operation the requirements of all the “Safety Codes” issued by the Bureau of Indian Standards, National Building Code 2002 and regulations of local Authorities. Where the requirements of BIS Codes, National Building Code and regulations are duplicated by local Authorities, the more stringent regulations shall be deemed to apply. If the Contractor fails to take safety measures and provide facilities at the Site of work to ensure safety of Works and injuries to workmen, the Owner/Client/Executive Engineer shall have the powers to do so and recover the cost thereof from the Contractor.

86.2 The Contractor shall provide safe means of access to all working places.

86.3 The Contractor shall properly design scaffolding, temporary access, ladders, ramps and hoisting arrangements, cranes etc. as applicable, to ensure safety of workmen as well as Works. All scaffolds, ladders and other safety devices shall be maintained in safe conditions.

86.4 All necessary personal safety equipment shall be kept available for the use of the persons employed on the Site and maintained in a condition for immediate use. The Contractor shall take adequate steps to ensure proper use of equipment by those concerned.

86.5 Adequate precautions shall be taken to prevent danger from electrical equipment.

86.6 No materials on the site of works shall be so stacked or placed as to cause danger or inconvenience to any persons.

86.7 All consequences, damages or losses arising by reasons of any violation of the safety requirement shall be met by the Contractor. The Contractor shall be bound to pay compensation to the persons for the injuries sustained or death owing to neglect of the safety precautions, should any claim proceedings be filed against the Owner/Client/Employer. The Contractor hereby agrees to indemnify the Owner/Client and Employer against the same.

FORE-CLOSURE AND TERMINATION OF CONTRACT

87.0 Foreclosure of Contract
87.1 If at any time after the commencement of work, the Owner/Client shall, for any reason whatsoever, not require the whole or part of the works specified, the Owner/Client shall give
notice in writing of that to the Contractor who shall have no claim to any payment of
compensation whatsoever on account of any profit or advantage which he might have derived
from the execution of work in full but which he did not derive in consequence of the full
amount of work not having been carried out. The Contractor shall be paid at Contract rates
full amounts for the works executed at site and in addition a reasonable amount as certified
by the Architect/Executive Engineer for the following which could not be utilized on the work
to the full extent because of the foreclosure

a. The amount payable in respect of any preliminary items so far as the work or service
   comprised therein has been carried out and a proper proportion, as certified by the
   Site Engineer, of any such items, the work or service comprised, which has been
   partially carried out or performed.

b. Cost of materials reasonably ordered for the works which shall have been delivered to
   the Contractor or which the Contractor is legally liable to accept delivery. Such
   material shall then become the property of the Owner.

c. A sum to be certified by the Architect being the amount of any expenditure
   reasonably incurred by the Contractor in the expectation of completing the whole of
   the works in so far as such expenditure shall not have been covered by the payments
   made to the Contractor.

87.2 Provided that against any payments due from the Owner/Client under the clause, the
Owner/Client shall be entitled to be credited with any outstanding balances due from the
Contractor for any advances in respect of materials and otherwise and any other sum which
on the date of foreclosing was recoverable by the Owner/Client from the Contractor under the
terms of Contract.

88.0 Cancellation of Contract on Default of Contractor

88.1 If the Contractor shall become bankrupt, or being a corporation, shall go into liquidation
(other than a voluntary liquidation for the purpose of amalgamation or reconstruction), or if
the Contractor shall assign the Contract without the consent in writing of the Employer first
obtained, or shall have an execution levied on his goods or if the Executive Engineer shall
certify in writing to the Employer that in his opinion the Contractor

a. has abandoned the Contract, or

b. without reasonable excuse has suspended the progress of the Works for 2 weeks after
   receiving from the Executive Engineer written notice to proceed, or

c. despite previous warnings by the Executive Engineer, in writing, is not executing the
   Works in accordance with the Contract, or is persistently or flagrantly neglecting to
   carry out his obligation under the Contract, or

d. has in defiance of the Owner/Client’s instructions to the contrary, sublet any part of
   the Contract,

Then the Owner/Client may, after giving fourteen days notice in writing to the Contractor,
determine the Contract, and enter upon the Site and Works without releasing the Contractor
from any of his obligation or liabilities under the Contract, or affecting the rights and powers
conferred on the Owner/Client by the Contract and may either himself complete the Works or
may employ any other Contractor, to complete the Works. the Owner/Client may use for such
completion so much of the said Constructional Plant Temporary Works and materials, which
may have been deemed to be reserved exclusively for the execution of the Works under the
provisions of the Contract, as the Employer may think proper; and the Employer may at any
time sell any of the Construction Plant, Temporary Works and unused materials and apply
the proceeds of sale in or towards the satisfaction of any sums due or which may become due
to the Owner/Client from the Contractor under the Contract.

88.2 The Architect/Executive Engineer shall, as soon as may be practicable after any such
determination by the Owner/Client, fix and determine ex-part by or after reference to the
Contractor and shall certify what amount, if any, had at the time of such determination
reasonably accrued to the Contractor and the value of any of the said unused or partially
used materials, any Constructional Plant and any Temporary works.
88.3 If Owner/Client determines the Contract under this clause, he shall not be liable to pay the Contractor any money on account of the Contract until the expiration of the Guarantee period and thereafter until the cost of execution and maintenance, rectification of defects, damages for delay in completion, and all other expenses incurred by the Owner/Client have been ascertained and the amount thereof certified by the Architect / Executive Engineer. The Contractor shall then be entitled to receive only such sum or sums, if any, as the Architect / Executive Engineer may certify would have been payable to him upon due completion by him after deducting the said amounts. The Contractor shall be paid accordingly.

89.0 Changes in Constitution
If, there is a change in the constitution of the Contractor firm, after or prior to the award of the Contract and if prior approval is not obtained, the Contractor shall have been deemed to have been assigned and the Owner/Client reserves the right to determine the Contract and the same consequence shall follow as if the Contract was determined on the Contractor's default.

90.0 Taxes and Duties
90.1 The Contract Sum/Rates shall be deemed to include all taxes applicable in State of JAMMU AND KASHMIR by State /Central Govt.i.e. Excise duty, sales tax, octroi/entry tax, and all other taxes, duties, levies and sales tax /Service Tax , cess tax on Works Contract. The Owner/Client shall not entertain any claim whatsoever on this account. Owner shall make necessary tax deductions from Contractor's invoices as may be required by Law / Regulations / Statutory Authorities from time to time.

90.2 Sales Tax on Works Contract:
If Sales Tax on Works Contract is levied by the Government in the State of JAMMU AND KASHMIR, then any Sales Tax in this regard will be deducted by the Owner/Client, from the contractor's bills.

91.0 Details of Construction Not Specifically Mentioned & Minor Changes
Rates quoted shall be deemed to allow for all constructional details which may not have been specifically described in the Bill of Quantities, shown on the drawings or given in the specifications and minor extras that are essential for the execution of the work and services in a workman like manner, details of constructions not specifically shown in drawings/specified shall be furnished to the Contractor or by the contractor during the execution of the work. In case of any difference of opinion between the Contractor and the Owner/Client/Executive Engineer shall determine as to whether or not the item involved constituted a constructional detail or minor extra and his decision shall be final and binding.

92.0 Use of Completed Portions
The Owner/Client shall have the right to take possession of and use any completed or partially completed portion of the Work, notwithstanding that the time for completing the entire work may not have expired. Taking such possession and use shall not be deemed acceptance of any work completed in accordance with the terms of this Contract.

93.0 Force Majeure
If, at any time, during the continuance of this contract, the performance in whole or in the part by either party of any obligation under this contract, shall be prevented or delayed by reason of any war, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions or other acts of God, strikes and lockouts (hereinafter referred to as ‘eventualities’) then provided notice of happening of any such eventuality is given by the either party to the other within fifteen (15) days from the date of occurrence thereof, neither party shall by reason of such eventuality be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such nonperformance or delay in performance and work under this contract shall be resumed as soon as practicable after such eventuality has come to an end or ceased to exist, and the decision of the Owner/Client as to whether the work has been so resumed shall be final and conclusive. The time of completion shall then be extended by a period equal to the period during which the eventuality was prevailing.

94.0 Personal Liability
Neither the Owner/Client nor the Executive Engineer nor the Architect nor their Representatives shall be personally bound or liable for the acts or obligations or default or omission in the observance of any of the acts, matters or things which are herein contained.

95.0 Non Waiver of Defaults
Failure of the Owner/Client/Executive Engineer to insist upon strict performance of any terms and conditions of the Contract or condonation by them of any breach by the Contractor or any Sub-Contractor of any stipulations and conditions of the Contract shall in no way prejudice or affect or be construed as a waiver of any rights and remedies that the Owner/Client may have and will not be deemed a waiver of any subsequent default under the terms and conditions of the Contract.

96.0 Trial Operations, Handing Over, Completion Certificate
96.1 On completion of the installation and before its start up, each item of the equipment shall be inspected by the Contractor and Architect / Consultants/ Executive Engineer jointly for the correctness and completeness of the installation. Thereafter Contractor’s commissioning/start-up Site Engineer shall carry out all pre-commissioning tests as specified in the relevant Indian Standards. Results of pre-commissioning tests shall be signed jointly by the Contractor’s Representative and the Consultants.

96.2 On conclusion of satisfactory pre-commissioning tests the installation shall be put on trial operation during which period all necessary adjustments shall be made while operating over the full load-range. The trial operation shall be considered successful if the installation is in operation continuously on full load for a period mutually agreed, with all vital safety operations maintained. The status of the installation during its trial operation shall be recorded in the logbook, which shall be signed daily by the Representatives of the Architect and the Contractor.

96.3 Should the continuous operation of the installation during the trial operation be interrupted due to either difficulty with the installation, or otherwise then the trial operation shall run again for the period agreed.

96.4 The readiness of the installation shall then be notified in writing, to the Local Authority concerned, for their inspection and certification that the installation meets all the statutory requirements and authorization for its commissioning and use. The Contractor shall obtain all necessary approvals and/or certificates from the concerned local authorities before the completion certificate is issued by the Architect /Executive Engineer.

96.5 The Contractor shall ensure that all technical requirements of installation inclusive of all sub-systems are compiled well before performance tests are carried out.

97.0 Performance Tests
97.1 Performance tests shall be then conducted at Site, by the Architect /Site Engineer to determine compliance of every equipment with the specified performance. The Contractor’s commissioning and start-up Site Engineers shall make the unit ready for such tests and assist the Architect /Site Engineer in conducting the tests.

97.2 The guaranteed performance rating of each equipment shall be proved by the Contractor during the performance tests. Should the results of these tests show any decrease/increase from the guaranteed values, the Contractor shall modify the equipments as required to meet the guarantees. In such cases, performance test shall be repeated within fifteen days from the date the equipment is ready for re-test and all cost of modifications including labour, materials and the cost of re-testing to prove that the equipment meets the guarantees, shall be borne by the Contractor.

98.0 Final Acceptance/ Completion Certificate
98.1 Only after the demonstration of the integrated operation, trial run and approval by the Local Authority, satisfactory performance tests and necessary documentation and information furnished as per the Contract, shall the Architect /Executive Engineer issue the completion certificate to the Contractor.
98.2 Minor defects, which do not affect the safe operation of the equipment at the rated capacity, if accepted by the Architect /Executive Engineer, shall not be considered as reason for the installation being not ready for handing over. These defects will be notified to the Contractor and will be rectified by the Contractor in a mutually agreed schedule.

98.3 All equipment, tools and tackles and any special instruments required, for conducting pre-commissioning and performance tests shall be provided by the Contractor at his cost.

99.0 Use Before Completion Certificate

99.1 If by reason of any default on the part of the Contractor, a completion certificate has not been issued in respect of every portion of the Works as mentioned within one month after the time for completion or extended time as the case may be, the Owner/Client shall be at liberty to use the Works or any portion thereof in respect, of which a completion certificate has not been issued, provided that works or the portion so used as aforesaid shall be reasonably capable of being used and that the Contractor shall be afforded the earliest opportunity of taking such steps as may be necessary to permit the issue of the certificate of completion.

99.2 The Owner/Client shall be at liberty from time to time or at any time before the completion of the Works to take possession of and use any part of the Site or uncompleted Works and in such case the Contractor shall completely finish the said incomplete parts or a part of the works as and when the Executive Engineer shall direct whether before or after the respective prescribed time or extended time or times (if any) for the completion of the Works and if required by the Executive Engineer while the Owner/Client is in possession of the said part or parts of the Site or Works.

100.0 Price Escalation

Escalation as admissible will be allowed, calculated as per Indian standard Formula with respect to WPI but to the maximum of ten percentage of the total work done cost after two year.

101.0 Price Adjustments

The rates quoted by the Contractor and accepted by the Owner/Client shall hold good till the completion of the work and no additional claim will be admissible on account of statutory increase in prices, fluctuation of market rates, except payment/ recovery shall be made as price variation as per clause.

102.0 Performance & Guarantee Test

102.1 The final test, as the performance and guarantee test, shall be conducted at Site, by the Owner/Client. The Contractor’s commissioning and start-up Site Engineers shall make the unit ready for such test and assist the Owner/Client in conducting such tests. Such test will be commenced within a period mutually agreed upon after the successful completion of trial operations.

102.2 These tests shall be binding on both the parties of the Contract to determine compliance of equipment with the performance guarantee.

102.3 All the special instruments which will require proper calibration before conducting such performance and guarantee tests shall be provided by the Contractor and the same shall be taken back after completion of these tests, with prior written approval of the Executive Engineer.

102.4 Any special equipment, tools and tackles including special instruments required for the successful performance and guarantee tests shall be provided by the Contractor, free of cost.

102.5 The guarantee performance figures of the equipment shall be proved by the Contractor during these performances and guarantee test. Should the results of these tests show any decrease for the guaranteed value the Contractor shall modify the equipments as required to enable it to meet the guarantees. In such cases, performance and guarantee test shall be repeated
within one month, from the date the equipment is ready for re-test and all costs for modifications including labour, materials and the cost of additional testing to prove that the equipment meets the guarantee, shall be borne by the Contractor.

103.0 Approval from Authorities
The Contractor shall assist the Owner/Client in obtaining the approvals/ certificates from the various Local Authorities i.e. the Electrical Inspector, Lift Inspector, Fire Department etc. before the works can be put in commercial use by the Owner/Client.

104.0 Settlement of Disputes
All disputes and differences of any kind whatever arising out of or in connection with the Contract or the carrying out of the works (whether during the progresses of the works or after their completion, and whether before or after the determination, abandonment or breach of the Contract) shall be referred to and settled by the Executive Engineer after hearing the disputing parties. The Executive Engineer shall state his decisions with reasons therefore. Such decisions may be in the form of a final Certificate or otherwise. The decision of the Executive Engineer with respect to any or all of the following matters shall be final subject to the Arbitration and Conciliation Act.

a) the variation or modifications of the design.
b) the quality or quantity of works or the addition or omission or substitution of any work.
c) Any discrepancy in the Drawings and/or Specifications and Schedule of Quantities.
d) the removal and/or re-execution of any works executed by the Contractor.
e) the dismissal from the Works of any persons deployed thereupon.
f) The opening up for inspection of any works covered up.
g) The amending and making good of any defects under defects liability period.
h) Acceptability of materials, equipment and workmanship.
i) Materials, labor, tools, equipment and workmanship necessary for the proper execution of work.
j) Assignment and sub-letting
k) Delay and extension of work
l) Termination of Contract by the Owner/Client.

105.0 Jurisdiction:
All matters arising out of or in any way connected with this Agreement shall be deemed to have arisen in J&K State and only the Courts in SRINAGAR shall have Jurisdiction to determine the same.

106.0 Arbitrator
All disputes and differences of any kind whatever arising out of or in connection with the Contract or the carrying out of the Works (whether during the progress of the Works or after their completion and whether before or after the determination, abandonment or breach of the Contract) shall be referred to and settled by the Executive Engineer who shall state his decision in writing. Such decision may be in the form of a Final Certificate or otherwise. If either the Contractor or the Owner/Client be dissatisfied with the decision of the Executive Engineer on any matter, question or dispute of any kind (except any of the excepted matters) or as to the withholding by the Executive Engineer of any certificate to which the Contractor may claim to be entitled then and in any such case either party (the Owner/Client or the Contractor) may within 28 days after receiving notice of such decision give a written notice to the other party through the Owner/Client/Executive Engineer requiring that such matters in dispute be Arbitrated upon. Such written notice shall specify the matters which are in dispute or difference of which such written notice given and no other shall be and is hereby referred to the Arbitration and final decision of a Single Arbitrator of a technical background to be agreed upon and appointed by both the parties or in case of disagreement as to the appointment of a single Arbitrator to the Arbitration, of two Arbitrators of technical background one to be appointed by each party and the Arbitrators shall, before taking upon themselves the burden of reference, appoint an Umpire. The provision of the Arbitration and Conciliation act 1996 for the time being enforced shall apply. The jurisdiction for all disputes/disagreements arising out of this contract shall be vested with the courts of New Delhi.

107.0 Protection and Cleaning:

107.1 Protection of Site
The Contractor shall protect and preserve the Works from all damage or accident by providing temporary roofs, windows and door coverings, boxing or other construction as required by the Executive Engineer. This protection shall be provided for all property adjacent to the site as well as on the site.

107.2 Cleaning of Site

The Contractor shall properly clean the Work as it progresses and shall remove all rubbish and debris from the site from time to time as is necessary and as directed. On completion, the Contractor shall ensure that the premises and/or site are cleaned, surplus materials, debris, sheds etc removed, areas under floor cleared of rubbish, gutters, drains cleared, doors and sashes eased, locks and fastenings oiled, keys clearly labeled and handed over to the Site Manager so that the whole is left fit for immediate occupation or use and to the satisfaction of the Executive Engineer.

108.0 Covering Up

The Contractor must give at least three working days clear notice to the Executive Engineer and the Site Engineer before covering up any of the work in foundation and drains in order that proper measurement may be taken of the work as executed and in the event of the Contractor failing to provide such notice, he is, at his own expense, to uncover as required to allow the measurements to be taken and afterwards to reinstate the work satisfactorily.

109.0 Methods of Measurement

For measuring all work, the standard method of measurement in accordance with the standards laid down by the Bureau of Indian Standards shall be adopted unless otherwise specified. In the Event of any dispute with regard to the mode of measurement of the work executed, the decision of the Executive Engineer shall be final and binding.

110.0 Tolerance

The Contractor shall exercise every care to ensure that all structural members are sufficiently plumb and true to dimensions called for on the drawings to receive prefabricated finishing elements such as doors, windows, cabinet work, ceramic work, concrete, tiles etc. Any variations may require rectification in the structural members or may involve remaking or replacing the finishing elements, fabricated to fit into the openings or spaces, as called for on the Drawings. In case of separate Contract, the Contractor whose work does not conform to dimensions called for, shall be liable for all the expenses which have been incurred for rectification or replacement as may be required by the Architect / Executive Engineer for the proper installation of the finishing elements. The Executive Engineer's decision in this respect shall be final and binding on the parties concerned.

111.0 Indemnity

The Contractor shall indemnify the Owner/Client against all actions, suits, claims and demands brought or made against the Owner/Client in respect of any matter or thing done or omitted to be done by the Contractor in the execution of or in connection with the work of this Contract and against any loss or damage to the Owner/Client in consequences of any action of suit being brought against the Contractor for anything done or omitted to be done in the execution of the work in this contract.

Schedule 1

INSURANCE AND INDEMNITY REQUIREMENTS

To the fullest extent permitted by law, Contractor shall indemnify, defend and hold Owner/Client, and its officers, directors, agents, contractors and employees, harmless from and against any and all claims, demands, liabilities, obligations, penalties, fines, actions, causes of action, judgments, damages, losses, costs or expenses (including reasonable attorneys’ fees) with respect to, or directly or indirectly arising out of, resulting from or related to (in whole or in part) the performance of the work (including, without limitation, all property damage, bodily injury, death and personal injury arising therefrom). Contractor further acknowledges and agrees that the foregoing obligations of Contractor shall extend to any claims, demands, liabilities, obligations, penalties, fines, actions, causes of action, judgments, damages, losses, costs or expenses (including attorneys’ fees) related to any defects in or nonconformance of the work or caused by any employee or Sub-Contractor of Contractor. The obligations of Contractor under this Schedule 1 shall survive the expiration or earlier termination of the Contract.
Contractor shall purchase and maintain, at its sole cost and expense, for the benefit of Owner/Client and Contractor, the following admitted insurance coverages during the performance of the work and until completion thereof:

(a) Workmen’s compensation insurance. Contractor shall, at its expense, carry during the term of this agreement Workmen’s compensation insurance as required under the Workmen’s Compensation Act, 1923.

(b) All Risk Policy inclusive of Third party liability Immediately on signing of the contract, the Contractor shall, at his own cost, shall carry during the term of this agreement, All Risk Policy inclusive of Third party liability insurance against loss or damage by fire and/or earthquake with any nationalized insurance company in the joint names of the Owner//Client and the Contractor for the total contract value. The Contractor shall in the joint names of the Owner//Client and Contractor insure against loss and damage by fire, storm, lightning, flood, earthquake, aerial objects, riot, civil commotion or malicious acts for the full value of all the work executed and all unfixed materials and goods intended for, delivered to, and placed on or adjacent to the works, but excluding temporary buildings, plant tools and equipment owned or hired by the contractor or any sub-contractor, and shall keep such works, materials and goods so insured until virtual completion of the project; and Third party liability insurance on an ‘occurrence’ basis, providing coverage for bodily injury, death, property damage, advertising injury and personal injury, including coverages for premises and operations (including elevators, escalators and cranes, if applicable), independent contractors, completed operations (for two (2) years after the date of acceptance of the work by Owner//Client) and blanket contractual liability specifically covering the indemnification provisions set forth above, of at least Rs 2,00,000 in primary coverage per occurrence and location. If Contractor is required to perform any excavation, trenching or other underground work in connection with the work, the foregoing insurance shall also provide coverage for explosion, collapse and underground hazards with such coverage limits as may be requested by Owner//Client. Any deductible amounts shall be subject to the prior approval of Owner//Client. The Contractor shall deposit the policy and receipts for the premium with the Owner//Client within one month of the date of commencement. The aforesaid insurance policies shall not be cancelled till the architect has agreed to their cancellation. The Contractor shall submit proof to the architect from time to time that he has taken out all the insurance policies as stated above and has paid the necessary premium for keeping the policies alive till the expiry of the guarantee period.

(c) Motor vehicle liability insurance Contractor shall, at its expense, carry during the term of this agreement Motor vehicle liability insurance as required by Indian law.

Contractor shall cause each subcontractor to obtain and maintain, at no expense to Owner//Client, the insurance coverages described above and shall be responsible for any claims or losses to the Owner/Client resulting from their failure to obtain adequate insurance protection in connection thereof.

The insurance shall initially be kept valid up to 60 days beyond the scheduled completion date and may be extended, based on a written request from the Owner/Client / Executive Engineer.

All such insurance coverages shall be admitted coverages purchased from an insurance company permitted to do business in India. All policies shall be written in English. Contractor shall cause each insurance company providing such insurance coverages to name Owner/Client and its directors, employees, officers, agents and contractors, as named or additional insured’s thereunder, as applicable, or provide such documentation as may be acceptable to Owner/Client and Executive Engineer confirming that such coverages have been obtained for the benefit of Owner/Client and Contractor in accordance with this Schedule 1. Such insurance policies shall be endorsed to stipulate that the insurance afforded such additional insured’s shall apply as primary insurance and that any other insurance carried by Owner/Client, its directors, employees, officers, agents and contractors, shall be excess only and shall not contribute with the insurance required to be maintained by Contractor hereunder. The foregoing limits of liability shall not in any manner affect or limit the extent of Contractor’s liability to Owner/Client under this Contract or at law. As evidence of the insurance coverages described above, Contractor shall deliver to Owner/Client certificates of insurance or such other documentation acceptable to Owner/Client and Executive Engineer confirming that such coverages have been obtained in accordance with this Schedule 1. Each carrier shall agree to furnish at least 30 days prior written notice of cancellation or material change in coverage.
Contractor hereby releases, and shall cause its subcontractors to release, Owner/Client and its officers, directors, agents, employees and affiliates, from and against any and all claims or causes of action whatsoever which Contractor or any subcontractor may otherwise have or possess in connection with any loss covered or which should have been covered by the insurance required to be maintained by Contractor or any subcontractor as provided herein. Contractor shall cause its insurance companies to consent to the foregoing waiver and waive all subrogation rights against Owner/Client regarding any such claims.

In the event of Contractor's failure to maintain any of the insurance coverages provided hereinabove, Owner/Client may obtain such policies and deduct the cost thereof from any moneys due or which may become due to Contractor.

In the event of any damage to the work, whether or not subject to the insurance coverages described hereinabove, Contractor shall, at its sole cost and expense, proceed with due diligence to rebuild and repair the work so damaged. If such damage was caused by casualty or other reason beyond the fault or reasonable control of Contractor, then Contractor shall be entitled to an extension of time for completion of the work as determined by Executive Engineer; provided, however, that in no event shall Contractor be entitled to any additional compensation or moneys in connection therewith, including, without limitation, any shortfall or deficiency in amounts finally paid by any insurer.
Section 02:

SAFETY PROCEDURES

The contractor shall have a safety meeting every Monday morning to be attended by all workers of the contractors. The person holding the meeting shall have a report stating the names of all persons attending, and topics discussed. These reports would be submitted to the Site Engineer every Monday evening.

1. General Safety Practices

1.1. Each Contractor shall appoint a safety monitor to monitor their work. The Contractor safety monitors shall have a scheduled weekly meeting with Site Engineer /Owner's safety Manager.

1.2. Contractors and Sub-Contractors shall submit a weekly report which shall include the report from the sub-contractors also stating all accidents.

1.3. The Contractors must develop an emergency treatment and medical evaluation procedure. He will set up a working arrangement with local medical doctor to handle injury cases, and provide for treatment by a specialist or local hospital. Site Engineer and owner must be notified immediately of all work injuries.

1.4. Visits are not allowed on the site of Work without a visitor’s badge, which the Contractor must obtain, for security.

1.5. Site Engineer and or security are authorized to inspect all vehicles and personal lunch boxes, packages and bundles entering or leaving the project.

1.6. Site Engineer shall have authority to shut a portion of the work in progress or all work of the project whether they deem that the work is being carried out in an unsafe manner, safety equipment is not being used and safety procedures are not followed.

1.7. Person working above 1.5 meter height shall wear full body safety belt and hooked the lanyard to a higher lever point all the time. Full body harness is recommended even if a person is working from a scaffold platform.

1.8. The contractor shall take prior approval before introducing any chemical to the site. Contractor shall submit MSDS of such chemicals for review.

1.9. Naked flame policy: Open flame for any heating purpose shall not be carried out at site. Oxy-Fuel gas cutting set is exempted. This set shall be used only for gas cutting work.

1.10. The contractor shall provide at his expense one room of reasonable dimensions plus toilet facilities for the use of their workers as rest room. The room & toilet shall be well-lit and well-ventilated.

1.11. If female labour is engaged, the contractor shall make necessary provisions at his own expenses for safeguarding and care of their children and keeping them in crèche, which will also maintained by the contractor.

1.12. The contractor shall provide at his expense safe drinking water provisions for all their workers.

1.13. The contractor to provide adequate number of pedestal fans for proper ventilation to create conducive working environment for labour engaged.

1.14. Provision for sufficient and workable fire extinguisher to be made in each zone of the site as per directions of the Site Engineer.

1.15. Maintain and active list of all hazardous substance and be in possession of material safety data sheets.

1.16. No kids/ children would be permitted within the project site.
1.17. No minors (below the age of Eighteen years) would be permitted to work on the Project Site.

1.18. Every opening in the floor/wall of a building or in a working platform be provided with suitable means to prevent the full of persons or material by providing suitable fencing or rating whose minimum height shall be 1.0 meter.

1.19. Safe means of access shall be provided to all working platform and other working places.

1.20. Contractor shall enforce fire protection methods and adherence to local fire regulations and provisions approximately located approved fire extinguishers and other fire fighting services and equipments.

1.21. Contactor shall provide temporary barricades and for fencing including working sights, signals, notices and lights as appropriate to the particular situation and of sufficiency and strength suitable for said situation same shall be maintained continuously until the particular hazard is needed.

1.22. The safety provisions should be brought to the notice of all concerned by displaying on a notice board at a prominent place at work spot. The person responsible for compliance of the safety codes shall be named therein by the Contractor.

1.23. Ensure the effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the Contractor shall be open to inspection by the Labour Officer, Engineer-in-Charge of the department or their representatives.

1.24. Any instruction / requirement of the Site Engineer / Architect with regards to safety shall not relieve Contractor of his absolute responsibility under this or any other relevant contract conditions or any act/rule in force in the Republic of India.

1.25. Contractor is deemed to have allowed for all direct or associated cost arising there from when tendering for the works.

1.26. All Engineers, Foremen, Supervisors and other employees of Contractor shall observe and every rule regulation and order as necessary for the safe conduct of work.

1.27. All workmen shall know how to do the job and shall be able to determine what the hazards might be. They shall not take any chances or use unsafe methods tools or equipment. If they do not know how to do the job safety they shall be engaged on the job after proper guidance.

1.28. Senior Engineers shall take interest in their co-workers. They shall explain or show them the safe methods of doing the work and caution them about dangerous or unsafe acts.

1.29. Any workmen known to be under the influence of any intoxicating substance shall not be allowed on the job. Drugs, pills, tranquilizers etc. are not be taken on the job unless written permission is obtained from a doctor.

1.30. No workmen shall knowingly be permitted or required to work while his ability or alertness is so impaired by fatigue, illness or other causes that might, unnecessarily expose him or others to injury.

1.31. Fighting, quarrelling, being abusive etc. are forbidden on the job.

1.32. Firearms and ammunition are not to be brought to the job site at any time.

1.33. No materials or equipment shall be thrown of scaffolding. Some one who may be walking or working below may be injured.

1.34. “Tool Box” safety meetings shall be conducted by officer of Contractor on a regular basis. All workers on site shall be instructed on accident prevention.
1.35. No one is to operate equipment or use tools which have been tagged “DO NOT OPERATE” or “OUT OF ORDER” until required repairs have been made and sand tag has been removed by an authorized person.

1.36. The Safety Officer of the Contractor shall regulate use and storage of chemicals.

1.37. Adequate precaution shall be taken by the Contractor to ensure no materials are stacked at a place which may cause danger or inconvenience to any person or the Public. The Contractor shall provide all necessary fencing and lights to protect public from accidents and shall be bound to bear expenses of defence of every suite, action, other proceedings of law that may be brought by any person for injury sustained owing to neglect of the above precautions to pay any damages and costs which may be awarded in any such suit action or proceedings to any such person of which may with the consent of the Contractor be paid to compromise any claim by any such person.

2. Personal Protective Equipment

2.1. Whenever there is a possibility of exposure to hazardous material or operations, personal protective equipment or devise shall be worn or used. These include (but are not limited to) hard hats, safety shoes, safety glasses and goggles, gloves, face masks, protective suits, hoods, respiratory equipment and proper hearing protection.

2.2. Hard Hats: All personnel working in areas where there is a danger of head injury from impact or from falling objects shall be protected by protective helmets. This will be interpreted as all areas within the site boundary except inside permanent or temporary structures not under construction.

2.3. Helmets shall meet the specifications contained in the National Standards.

2.4. Employees of Contractors, who are found working on the construction site and are not in possession of an approved hard hat, will be asked to leave the site and remain at security gate until arrangements can be made by their supervisor to obtain an approved hard hat.

2.5. Eye Protection: Required when doing work that may cause possible injures to eyes from flying particles, grinding, splashes or welding cutting dismantling stone breaking operations.

2.6. Safety Shoes: To be worn by all worker.

2.7. Clothing: To be suitable for the type of work in which engaged.

2.8. Gearing Protection: Shall be worn in any posted area and when operating Pneumatic equipment.

2.9. Respirators: Whenever and wherever necessary to protect from dust, gases, hazardous chemical and vapours.

2.10. Safety Belts: Required when working from high places.

2.11. Protective Gloves: To be worn as work activity may require.

2.12. Safety belts: Required when working at high places with a potential risk of falling.

2.13. Welding works wherever carried out should be undertaken using complete protection equipment like, but not limited to glass cover for eye protection and should always be accompanied by a fire extinguisher. Such works should only be undertaken by trained technicians and should always be done in the presence of an extra person.

2.14. Welding machine shall be provided with a local isolator.

3. Housekeeping

3.1. Job Site must be kept free from scrap wood, Paper, Plastics garbage, loose and broken materials. House keeping will be enforced and each contractor shall be responsible for their
own work area. A housekeeping program shall be established and waste disposal will conform to local legislation. **Removal of debris and waste shall be carried out without fail on a daily basis.** The contractor would be required to depute a certain number of workers (which would be communicated by the Site Engineer) to the general site housekeeping team, which would comprise of workers of the various Contractors working at site.

3.2. The Contractor shall ensure that all his workmen

3.2.1. Place debris, rubbish and waste in proper containers installed by the Contractor.

3.2.2. Place and store material and equipment in designated storage areas.

3.2.3. Working areas, passageways, stairs and exists are kept free from all debris, equipments, tolls, nails and other sharp objects.

3.2.4. Avoid spilling liquids and wipe off spills (if any) immediately.

3.2.5. Use safety cans to store flammable liquids.

3.2.6. Store oily/paint soaked rags in approved containers and empty on a daily basis.

3.2.7. Nails or other sharps objects protruding from timber from panels etc. are pulled or bent over immediately.

3.2.8. Debris and combustible scarp shall be disposed off on a regular basis and not allowed to accumulate. Special attention should be given to second floors and higher where adequate means shall be provided to expedite removal of such material.

4. **Ladders**

4.1. The Contractor shall follow the direction as given below for selection and use of ladders.

4.2. All ladders will be factory or shop built. They shall be tied off and extended 1.0m above the landing. Painted ladders are not allowed. Ladders of aluminum alloy would be permitted at Site with adequate rubber bases. Wooden ladders would not be allowed.

4.3. Select the right ladders for the job. Do not use a too long or too short ladder. Do not splice two ladders together. Do not use lightweight or household ladders in a heavy construction job. Do not use metal ladders near electrical circuits, fixtures or power lines.

4.4. Check condition of ladder for cracked or split side rails: for missing or broken steps, cleats, rungs, treads or U-shapes; for sharp edges or splinters; for general weakened condition. If any of the above conditions exist, withdraw the ladder from use and fix it at once, if possible; if it cannot be fixed, destroy it. Every ladder should have identification tags, records of maintenance and inspection must be maintained.

4.5. Use ladder safety. Place it with care; do not lean it against a movable object. Make sure it is not placed on a loose object or uneven footing. Do not place it too close to a wall. The horizontal distance from wall to the foot of the ladder should never be less than 1.4 times the length and it should extend at least 0.90 meters above the upper horizontal edge. The ladder with rope or were if wire issued be careful to protect users from injury.

4.6. Only one person at a time shall be permitted on a ladder.

4.7. Always face the ladder and grasp the side rails or rungs with both hands when ascending or descending.

4.8. Do not carry tools or material when going up or down ladders. Use a bucket or canvas bag on a rope to haul or lower then.

4.9. Be sure the soles of your shoes are free from dirt, oil and mud before using ladder.

4.10. Never work above the second rung from the top of the ladder.
4.11. Stepladders should not be over 3 meter long. Do not use a stepladder as a straight ladder.

5. **Scaffolding**

All scaffolding erected at site shall meet the following requirements:

5.1. Scaffold should be tubular and designed for the loads it will carry. Bamboo shall not be used as scaffold. Inspect the scaffold before use.

5.2. Scaffold planks must be tested carefully created and made secure to prevent slipping by using cleats or tying.

5.3. Scaffold to be braced/tied to the permanent structure at suitable intervals to prevent overturning.

5.4. All scaffolds shall have handrails and loc boards (minimum 4 inches height)

5.5. There is no such thing as a temporary scaffold.

5.6. Ladders should be attached for ascent and decent on scaffolds.

5.7. Any defects, loose knots or cracks in a scaffold plank will make that plank useless and shall not be used.

5.8. Guard rails shall be two by four inches (50x100mm) or the equivalent, approximately 1.2 meters high with a midrail. Supports shall be at intervals not to exceed 2.5 meters.

5.9. Any scaffold including accessories such as braces, brackets, trusses, screw legs, ladders etc. weakened from any cause shall be immediately repaired or replaced.

6. **Machinery and Vehicles**

The Contractor shall ensure that:

6.1. Equipment is build for safe, economical and long-life operation but is only as safe as the operator or mechanic who is handling or manipulating, therefore the Contractor must ensure that:

6.2. Only experienced and authorized persons shall operate power equipment. Before being allowed to operate a particular piece of equipment, the employee must prove by actual demonstration to the supervisor that he understands the operation.

6.3. Operators shall make careful inspection of their equipment at the start of each shift, before operating required repairs shall be completed.

6.4. Cleaning, oiling, fuelling or repairing is not to be done on equipment while it is in operation.

6.5. The operator is to take only standard industry hands signals from only one designated person.

6.6. Cranes or other equipments shall not lift loads in excess of the manufacturer’s maximum load permissible on the equipment. Lifting equipment must be tested by a competent authority and records of the same maintained.

6.7. Air hoses should not be disconnected at compressors until air pressure in the house line has been released.

6.8. Electrical installations must conform to IE (Indian Electricity Rules) and BIS (Bureau of Indian Standards).

6.9. Do not operate equipment with 3 meter of high voltage lines. For lines over 50000 volts, increase operating clearance 0.4” for each additional 1,000 volts.
6.10. Where it is difficult for the operator to see overhead high voltage lines or obstacles, a person shall be designated to observe and give him warning required to maintain safe clearance.

6.11. Do not work under vehicles supported by jacks or chain hoists without protective blocking that will prevent injury if jacks or hoists should fail.

6.12. Examine excavation before backfilling to ensure that no one is in the pit.

6.13. Before operating excavating equipment near tops of cuts, banks and cliffs be sure no one is below.

6.14. Tractors, bulldozers and carryalls should be operated with care where there is possibility of overturning on dangerous area, such as edges of deep fills, cut banks and steep slopes.

6.15. No passengers are allowed to ride on or in equipment that does not have a designated seat for each rider.

6.16. Vehicular and pedestrian paths and parking spaces should be clear of overhead operating equipment.

6.17. All moving equipments protective guards shall be in place all the time. The guard shall cover the rotating part completely to protect people. Where the manufacturer provided Guard not meeting our requirement, same shall be modified by contractor.

6.18. All gas bottles shall be stored upright secured by chain and separated by type. Empty bottles shall be stored in the same manner. Valve assembly caps shall be provided for all bottles.

6.19. No gas bottles shall be rolled or dragged on the ground or concrete. They must be kept upright and moved on a cart and carried.

6.20. No hoses shall be connected to the oxygen or acetylene bottles without a proper working gauges and flashback arrestor.

7. **Electrical Installation for construction purposes:**

7.1. All extension cords or electrical cable shall be free of cuts and scuffs. All cords shall be either male or female 3-point sockets. Bare wire stuff into a receptacle will not be allowed. All sliced wire shall be done with a splice kit, not just turned and taped. All portable electrical equipment shall be inspected by a competent person. Only double insulated cables shall be used. While laying the power cord at most care shall be exercised to lay over head or attached to the wall. Laying cable on the floor shall be avoided.

7.2. Protective devices like ELCB & MCB, Earthing shall be in place at the source of supply. No one is authorized to work on energized line. Only after proper isolation and lockout, electrician shall perform work.

7.3. Portable equipments power cord shall be fitted with proper rated plugs. Under no circumstances equipments shall be connected to a socket without plug.

7.4. All electrical equipment will be grounded.

7.5. All electrical hook ups and connections to power panels, step down transformers and distribution boxes shall be done by a certified electrician.

8. **Material Handling of Overhead Operating Equipment**

For safe material handling, the Contractor must ensure that:

8.1. The contractor shall make job plan for heavy lifts and the same shall be submitted to the Site Engineer for review and approval. No workman shall walk under a load being lifted. Contractor shall produce test certificates for the lifting device like Chain pulleys blocks, Slings and D-Shackles prior to use.
8.2. Maximum load carrying capacity of cranes, hoisting machines, blocks or chains must be displayed along with the last date tested and the next due date for testing.

8.3. Do not overload cranes, ropes, blocks or chains. If any such equipment has been damaged or is found to be defective immediate action for repair is taken.

8.4. No one shall ride loads, concrete buckets or hooks.

8.5. Use a guide of “Tag Line” on loads

8.6. Stand clear of taut cables or hoists.

8.7. Keep hands and fingers away from blocks sheaves or winches.

8.8. Do not stand under overhead loads.

8.9. Stack materials neatly and safely as per established guidelines.

8.10. Keep all material 45 cm away from sprinkler heads.

8.11. All material handling equipment must be periodically checked by a competent authority and maintained properly records of the same must also be maintained.
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Description of Work</th>
<th>Unit</th>
<th>Quantity</th>
<th>Rate to be quoted by the contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>EARTHWORK</td>
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<tr>
<td></td>
<td>Earthwork excavation in all type of soil, murrum, after clearing of vegetation and debris (to be segregated and kept separate from the reusable earth) including loading, carting away from the site, unloading and dozing at disposal yard etc. complete as directed by EIC. FOR FGL to 2M depth. Rate shall include for excavation and disposal of earth within the campus as and where required and as directed by EIC either by manual or by mechanical means, including loading &amp; unloading, necessary equipments, tools &amp; plants, dressing to proper level and grade as required, dumping the soil within the campus on the ground, taking necessary precautions to prevent any spillages or spoiling of the campus roads during removal &amp; transporting the soil, all consumables including removal of soil excavated extra by the contractor for providing shoring &amp; strutting, extra working space as required for any kind of works etc complete, as directed. (LEAD UP TO 1 KM)</td>
<td>CUM</td>
<td>3,293.51</td>
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<td>Rate shall includes To prevent sliding of sides of foundation, the contractor shall provide effective and sufficient protection such as but not limited to shoring or any other method. The rate shall includes providing Staging, timbering, strutting etc.</td>
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<tr>
<td>2</td>
<td>Backfilling with available Earth</td>
<td>CUM</td>
<td>2,299.19</td>
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<td></td>
<td>Backfilling in plinth, in embankments, around footings, pits, trenches, foundations etc in layers not exceeding 200mm thickness, including watering, compacting by ramming/rolling/hand ramming, leveling to specified slopes, dressing and consolidation etc at optimum moisture content with mechanical rollers/rammers etc. (compacted to 90% modified proctor density) complete as per specification and as directed (payment shall be made based on certified excavation quantity less volume occupied by structures and theoretical completed qty. As measured from drawings. backfilling with available earth in and around excavated area</td>
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### B CEMENT CONCRETE WORKS

<table>
<thead>
<tr>
<th>Task Description</th>
<th>CUM</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Providing and laying plain cement concrete <strong>M7.5 (1:4:8)</strong> at plinth level &amp; up to 5m below plinth level in foundations, drains, fillings, non-suspended floors, pavements, ramps, etc including shuttering, tamping, ramming, vibrating, curing, shuttering, etc all as specified in any shape, position, thickness and finishing the top surface rough or smooth or as specified and directed with 40mm and down size graded crushed stone aggregates with minimum cement content and maximum water cement ratio as per IS:456-latest revision.</td>
<td>CUM</td>
<td>285.73</td>
</tr>
<tr>
<td>2 Providing and laying in position ready mix concrete <strong>M-25 (1:1.5:3)</strong> in RCC for all types of structures including proper vibration and curing including broom finish if required but excluding cost of formwork and reinforcement etc all complete as per drawing, specification and direction of EIC. With contractor’s RMC plant (including transit mixers, concrete pump / crane) for concreting <strong>below FGL</strong> (including cost on account of cube tests and quality control)</td>
<td>CUM</td>
<td>460.52</td>
</tr>
<tr>
<td>3 Providing and laying in position ready mix concrete <strong>M-25 (1:1.5:3)</strong> in RCC including proper vibration and curing including broom finish if required but excluding cost of formwork and reinforcement etc all complete as per drawing, specification and direction of EIC. With contractor’s RMC plant (including transit mixers, concrete pump / crane). For concreting <strong>above FGL up to Desired height</strong> (including cost on account of cube tests and quality control)</td>
<td>CUM</td>
<td>877.78</td>
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<td></td>
<td>Description</td>
<td>Unit</td>
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<td>4</td>
<td>Providing and laying in position ready mix concrete M-30 in RCC for all types of structures including proper vibration and curing but excluding cost of formwork and reinforcement etc all complete as per drawing, specification and direction of EIC. With contractor's common Batching/RMC plant. For concreting below FGL (including cost on account of cube tests and quality control)</td>
<td>CUM</td>
</tr>
<tr>
<td>5</td>
<td>Providing and laying in position ready mix concrete M-30 in RCC for all types of structures including proper vibration and curing required but excluding cost of formwork and reinforcement etc all complete as per drawing, specification and direction of EIC. With contractor's common Batching/RMC plant. For concreting above FGL upto desired height.</td>
<td>CUM</td>
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<tr>
<td>C</td>
<td>FORMWORK</td>
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<tr>
<td>1</td>
<td>Providing and fixing to correct level, line plumb, vertical, plain formwork with contractor's own material in all shapes made of plywood/ms sheets for RCC/PCC works including necessary strutting, scaffolding, bracing etc. Leaving necessary recesses, opening chamfers etc. Keeping the same in position during concreting and removing after the specified period, all complete as per specification and direction of EIC. for work below FGL.</td>
<td>SQM</td>
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<tr>
<td>2</td>
<td>Same as item No-1 but for work above FGL</td>
<td>SQM</td>
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<tr>
<td>3</td>
<td>Providing and fixing to correct level, line plumb, vertical, plain formwork for Retaining walls, return walls, walls (any thickness) including attached pilasters, buttresses, plinth and string courses fillets etc with contractor's own material in all shapes made of plywood/ms sheets for RCC/PCC works including necessary strutting, scaffolding, bracing etc. Leaving necessary recesses, opening chamfers etc. Keeping the same in position during concreting and removing after the specified period, all complete as per specification and direction of EIC. for work at all levels./desired height.</td>
<td>SQM</td>
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<tr>
<td>D</td>
<td>REINFORCEMENT</td>
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</table>
Supplying, cutting, bending to shape, fabricating, fixing and tying in position **TMT Reinforcement Steel of Fe 500 grade** at all levels and location as shown in the structural drawing.

* The reinforcement shall be of an approved brand viz TATA / SAIL / VIZAG or equivalent and the rate shall include cost of supply & tying reinforcement with 18 gauge GI binding wire in the reinforcement rate. The unit rate shall also include cost of all related operations viz inputs of labour, materials, tools and tackle, equipment, machinery etc complete.

* For measurement purpose actual quantity for reinforcement bars provided and authentic laps OR couplers provided shall be considered.

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<tr>
<td>1</td>
<td>MT</td>
<td>188.00</td>
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**E  MASONRY WORK**

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<tr>
<td>1</td>
<td>CUM</td>
<td>320.99</td>
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</table>

**Brick work** of thickness 230 mm and above using selected quality burnt clay FPS bricks of class designation 75 (Crushing strength not less than 75 kg/sqcm) in **Super structure** laid in cement mortar 1:6 (1 cement :6 coarse sand) mix, joints finished, flush raked to 6mm depth including jointing with concrete where required and as per specification and drawing or as directed by EIC. up to desired height.

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<tr>
<td>2</td>
<td>SQM</td>
<td>248.96</td>
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</table>

**Half Brick work** of thickness 115 mm and above using selected quality burnt clay FPS bricks of class designation 75 (Crushing strength not less than 75 kg/sqcm) in **Super structure** laid in cement mortar 1:4 (1 cement :4 coarse sand) mix, joints finished, flush raked to 6mm depth including jointing with concrete where required and as per specification and drawing or as directed by EIC. up to desired height.
Providing and constructing **hollow block masonry** work (internal / external walls) at all levels, using approved quality blocks in cement mortar 1:4 in joints using standard size of 150 x 300 x 150 mm of hollow blocks of variable thickness as indicated herein below including providing RCC beam of 100 mm thickness spaced @ 1.20 m c/c with 2 nos. 8 mm dia. bars in cement concrete of Mix M15. The blocks shall have a minimum compressive strength of **3.0 N/Sqmm**. The dry density shall be @ 850 - 900 kg / Cum and water absorption not exceeding 3% at equilibrium. The scope shall include erection of necessary scaffolding, working platform, staging, curing etc. complete and as directed. The cost of R.C.C Patli beam (tied with column) including centering / shuttering and Reinforcement shall form part of this item and shall not be paid separately. The measurement shall be taken on the basis of actually constructed block work including the intermediate RCC beam. Any wastage shall be to contractors account.

**Note:** No construction of block work over RCC beam shall be allowed immediately.

For **hollow block 150 x 300 x 150 mm OR as required at site. Up to desired height.**

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<th>CUM</th>
<th>265.25</th>
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<tr>
<td>4</td>
<td>Same as above -------For <strong>hollow block 400 x 200 x 100 mm OR as required at site up to desired height.</strong></td>
<td>CUM</td>
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<tr>
<td>5</td>
<td>Providing and laying <strong>Coarse /Random Rubble Masonary</strong> /polygonal rubble masonry (uncoursed/ brought to courses) with hard stone of approved quality in foundation and plinth including leveling up with cement concrete 1:6:12 ( 1Cement : 6 Sand : 12 graded stone graded 20mm nominal size ) at plinth level in : Cement Mortar 1:6( 1Cement : 6 Sand)</td>
<td>CUM</td>
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<tr>
<td><strong>F</strong></td>
<td><strong>STEEL WORK</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td><strong>Structural Steel</strong> Providing, cutting, fabricating, drilling, erecting, riveted, bolted, welding connections, hoisting &amp; placing in position <strong>MS structural steel</strong> composed of channels, beams, tubular hollow sections, joists, angles, plates, braces, foundation bolt, anchor bolts for supporting system including cost of all materials, consumables, labour, applying one coat of red oxide primer, one coat of anti corrosive paint. Complete in all lead and lifts as per drawings and specifications and/or as directed by EIC. <strong>upto desired height in trusses, purlins, rafters, stair cases wherever required.details as per structural drawing for any span</strong></td>
<td>MT</td>
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<tr>
<td>2</td>
<td>Wooden Handrail</td>
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<tr>
<td></td>
<td>Providing and fixing in position wooden handrail as per architectural design, drawings includes 50mmx75mm approximate size OR as required at site grooved on both sides. <strong>First class Deodar wooden handrail fixed on railing finished with french spirit polish, including necessary fasteners, fittings and as per drawing with all lead and lift of all levels, loading and unloading, transportation, curing etc. and all other incidental charges etc. complete and as directed by Engineer-in-charge. (Only Handrail with Bracket support)</strong></td>
<td>CUM</td>
</tr>
<tr>
<td>3</td>
<td>MS Grills/Railing</td>
<td></td>
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<td></td>
<td>Providing and fixing MS Grills made out of flats, square solid bars, pipes inclusive of forming to required shapes, cutting, welding, grinding, fixing with necessary screws and holdfasts for windows/ventilators or any other openings, and sizes as per standard railing drawing and embedded in the floor adequately inclusive of holdfasts, concreting as required as per structural details/ornamental design and drawings inclusive of providing and applying one coat of anti-corrosive primer and two coats of approved quality enamel paint as directed.</td>
<td>MT</td>
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<tr>
<td>G</td>
<td>FLOORING/CLADDING WORKS</td>
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<tr>
<td>1</td>
<td>Vitrified Tiles</td>
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<td></td>
<td>Providing &amp; LAYING OF NON SKID VITRIFIED TILE (600x600)x5 mm thick WITH 3mm SPACERS Laying VitrifiedTiles for flooring over 20 mm thick cement mortar in approved pattern as per drawings or as directed by EIC, including cleaning and preparing the surface for bedding, spreading neat cement slurry by using minimum cement of about 2Kg/SQM prior to bedding and 4.5 Kg/SQM over bedding. Joints shall be well cleaned and grouted with matching colour approved quality ready made polymer (Bal Grout) based grout, including curing, cleaning, etc. complete. <strong>Base rate of tile Rs.70 per sft of Kajaria, Asian, Nitco or equivalent make.</strong></td>
<td>SQM</td>
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<td>Description</td>
<td>Unit</td>
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<td>2</td>
<td>Skirting Providing and fixing of 100mm high Vitrified Tile Skirting (Tiles same as flooring tiles), projecting not more than 8mm from the wallplaster line fixed in CM 1:3. The tiles shall be fully buttered with cement paste on the back. The work shall include cleaning of joints, curing, and as per detailed specification etc. complete. (Kajaria, Asian, Nitco or equivalent make).</td>
<td>RMT</td>
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<td>3</td>
<td>Ceramic Tile Dado (Base rate of tile Rs. 35 per Sft) Providing and fixing tiles in cladding / Dado of approved shade, size, and pattern on masonry walls including border fixed in pattern as approved by EIC and fixed with rich cement slurry over aback coat plaster of 12mm thick. Cement mortar 1:3 and grouted with app. shade grout (Dai Grout). Rate to include: Tile cutting, cleaning of joints, finishing junction of plaster, curing etc. complete and as per drawing. (Kajaria, Asian, Nitco or equivalent make).</td>
<td>SQM</td>
</tr>
<tr>
<td>4</td>
<td>Ceramic Tile Floor (Base rate of tile Rs. 45 per Sft) Providing and laying homogenous 300x300 mm ceramic tiles 5mm thick of approved make, colour and size 6mm to 8mm thick, including 20mm thick backing coat plaster in 1:6 cement mortar, fixed with neat cement paste including providing sealing the joints with approved quality white cement mixed with approved colour to match the tiles colour or approved grouting materials including scaffolding, curing, cleaning etc. complete as directed by EIC. (Kajaria, Asian, Nitco or equivalent make).</td>
<td>SQM</td>
</tr>
<tr>
<td>5</td>
<td>Precast Pte polished Concrete Tile Floor Providing and laying homogenous 22mm thick precast - pre polished cement concrete tiles of approved make, colour and size, including 25mm thick backing coat plaster in 1:6 cement mortar, fixed with neat cement paste including providing sealing the joints with approved quality white cement mixed with approved colour to match the tiles colour or approved grouting materials including scaffolding, curing, cleaning etc. complete as directed by EIC.</td>
<td>SQM</td>
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</tbody>
</table>

Glazed ceramic tiles

**Head Draftsman**

**Executive Engineer**
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<thead>
<tr>
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<tbody>
<tr>
<td><strong>Treads</strong></td>
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<tr>
<td>Providing and fixing on <strong>Stair Case Treads</strong> of average width up to 300 mm using 22mm thick <strong>pre cast, pre polished concrete tiles</strong> including antiskid grooves 3 nos or inlay, providing of holes etc. complete, over cement mortar bedding 20 to 30 mm thick in 1:4 ratio with white cement slurry/paste spread on the top of mortar using white cement as per standard specification, cleaning joints of tiles and grouting them in neat white cement paste with pigmented additives to match shade of the stone. The sand to be used shall be coarse, well graded, clean &amp; free from dust &amp; dirt. <strong>(NOTE: MOULDING POLISHING, GROOVE MAKING SHALL BE INCLUDED)</strong></td>
<td>SQM</td>
<td>68.31</td>
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<td><strong>Risers</strong></td>
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<tr>
<td>Providing and fixing on <strong>Stair Case Riser</strong> of average height up to 150 mm using 12mm thick <strong>pre cast pre polished concrete tiles</strong> complete, over cement mortar bedding 15 to 18 mm thick in 1:4 ratio with cement slurry/paste spread on the top of mortar using cement as per standard specification, cleaning joints of tiles and grouting them in neat white cement paste with pigmented additives to match shade of the stone. The sand to be used shall be coarse, well graded, clean &amp; free from dust &amp; dirt.</td>
<td>SQM</td>
<td>35.64</td>
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<td><strong>Flamed/Shot Blasted Granite in flooring</strong> (Base rate of Granite Rs.210 per Sft) : Providing and Laying Flamed/Shot blasted Granite Stone For flooring, Landings of staircase, etc. using granite of minimum thickness 20 mm machine-cut slabs of approved quality, type &amp; colour as per the approved sample, including cutting to required sizes, shapes and pattern as per drawing, and laying to the required level / slope including all surface preparation, providing and laying cement mortar (1:4) bed of average thickness 25 mm with cement slurry/paste spread on the top of mortar using grey cement, filling and finishing the joints with neat cement slurry/white cement with matching colour pigment, curing, mirror polishing of joints if required, cleaning etc. complete at all floors and levels as per the instructions of the EIC. The Contractor shall arrange for storage of all related materials at site, handling, shifting and lifting at work location.</td>
<td>SQM</td>
<td>53.20</td>
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<td>Description</td>
<td>Rate (Sqm)</td>
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<td>9</td>
<td>Indian Marble Stone (Base rate of Stone Rs.75 per Sft)</td>
<td>11.00</td>
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<td></td>
<td>Providing, Cutting and Laying (machine cut), mirror polished 19mm thick</td>
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<td></td>
<td>Indian Marble stone of any colour in pattern and sizes as per drawing,</td>
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<td>bedded in cement sand mortar mix ratio 1:6 (1 cement : 6sand) including</td>
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<td>cleaning the surface for bedding, spreading neat cement slurry by using</td>
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<td>minimum cement about 2 kg/sqm prior to bedding and spreading cement paste</td>
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<td>using minimum cement about 4.5 kg/sqm over bedding, joints to be cleaned</td>
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<td>and grouted with matching colour approved readymade grout, curing, machine</td>
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<td>mirror polishing, cleaning, etc. to required line, level, etc. all</td>
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<td>complete at all heights and leads to the satisfaction of the EIC. Rate to</td>
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<td></td>
<td>include cost of mirror polishing.</td>
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<td>10</td>
<td>Granite Tile Flooring (Base rate of Granite Tile Rs.85 per Sft)</td>
<td>200.48</td>
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<td></td>
<td>Providing and laying flooring using 10mm thick Granite of approved size,</td>
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<td></td>
<td>pattern laid over 20mm thick bed CM 1:4 with tile grouting for flooring,</td>
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<td>using cement slurry below slabs for packing, as per architectural design,</td>
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<td>drawing and specifications, including joint filling with approved quality</td>
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<td>and colour cement to match the shade of Granite. The work shall include</td>
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<td>cost of materials, wastage, labour, all lead and lift at all levels, loading</td>
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<td>and unloading, transportation, cutting, curing, etc. and all other</td>
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<td>incidental charges etc. complete and as directed by EIC.</td>
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<td>11</td>
<td>Granite Tile skirting (Base rate of Granite Tile Rs.85 per Sft)</td>
<td>13.75</td>
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<td></td>
<td>Providing and laying skirting using 10mm thick Granite of 100mm high, laid</td>
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<td></td>
<td>over 20mm thick bed CM 1:4 with tile grouting for skirting, using cement</td>
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<td>slurry, as per architectural design, drawing and specifications, including</td>
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<td>joint filling with approved quality and colour cement to match the shade of</td>
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<td></td>
<td>Granite. The work shall include cost of materials, wastage, labour, all</td>
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<td></td>
<td>lead and lift at all levels, loading and unloading, transportation, cutting,</td>
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<td></td>
<td>curing, etc. and all other incidental charges etc. complete and as directed</td>
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<td></td>
<td>by EIC.</td>
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<td>12</td>
<td>Cement concrete flooring 1:2:4 (1Cement: 2 coarse sand: 4 graded stone</td>
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<td>aggregate) finished with a floating coat of neat cement including cement</td>
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<td>slurry but excluding cost of nosing of steps etc. complete.</td>
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<tr>
<td>a)</td>
<td>40 mm thick 20mm nominal size stone aggregate (crushed)</td>
<td>16.74</td>
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<tr>
<td>b)</td>
<td>50 mm thick 20mm nominal size stone aggregate (crushed)</td>
<td>10.00</td>
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<td></td>
<td>Description</td>
<td>Quantity</td>
<td>Rate</td>
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<td>13</td>
<td><strong>Chequered Tiles (Basic rate of tile Rs 50 per sft)</strong></td>
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<td></td>
<td>Providing &amp; laying minimum 20 mm thk. cement chequered tiles of approved make</td>
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<td>&amp; colour laid in approved pattern and to the required slope in cement/sand</td>
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<td>C M 1.3 bedding on floor, includingfilling joints with cement, compacting</td>
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<td>etc., complete as per specifications, drawings &amp; as directed by owner/consultant. contractor shall state the basic rate &amp; type of tile assumed at time of quoting</td>
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<td></td>
<td><strong>Brick Bat Cushioning</strong></td>
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<td></td>
<td>Providing and laying brick bat cushioning over existing RCC slab with average thickness of 75mm thick and a overlay of 25mm thick PCC with 10mm nominal size aggregate of M 7.5 grade</td>
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<td>H</td>
<td><strong>WATER PROOFING</strong></td>
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<tr>
<td>1</td>
<td><strong>Toilet Sunken Slab Water Proofing</strong></td>
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<td></td>
<td>Treatment to bottom and sides of toilet sunken slab covering the following</td>
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<td>sequence of operations:</td>
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<td></td>
<td>a) Providing, supplying, mixing, laying cement plaster 12 mm thick with cement</td>
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<td>sand mortar 1:3 mixed with approved water proofing compound like CICO No.1 or</td>
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<td>approved equivalent conforming to IS 2645 at the rate specified by the</td>
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<td>manufacturer over coated surface of operation [a] above including preparation</td>
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<td>of surface, dewatering, finishing, curing, etc. all complete as per manufacturer’s specifications and as directed.</td>
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<td>b) Providing, supplying, mixing, applying two coats of ready to use two</td>
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<td></td>
<td>component TAPECRETE - RTU Polymer Based Elastomeric Coating, flexible water</td>
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<td>proofing to a thickness of 2 mm over the surface of bottom and sides of</td>
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<td></td>
<td>toilet sunken slab including preparation of surface, finishing, curing etc.</td>
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<td></td>
<td>all complete at all levels as per manufacturer’s specifications and as directed.</td>
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<td></td>
<td>c) Final coat of plaster 15-20mm thick, CM 1:4 plaster admixed with Integral</td>
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<td></td>
<td>Waterproofing Compound of approved make as per manufacturer’s specification</td>
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<td>No.</td>
<td>Description</td>
<td>Area (SQM)</td>
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<td>2</td>
<td>Liftpit W.P (i) Cleaning the surface thoroughly, providing and applying Vandex BB 75 waterproofing system in two coats by trowelling as per manufacturer’s specifications. The 1st coat of BB 75 shall be applied to the prepared surface at coverage of 1.5 kg/sqmt. Whilst the 1st coat is still “green” a second coat comprising of Vandex BB75 at a coverage of 1.5 kg/Sqmt. The slurry coatings shall be applied with a stiff masonry brush or stiff broom and worked into every irregularity on the surface shall be done by means of trowelling or by spray only. Treatment to floor slabs shall be carried out by trowel application in 3.0 kg/Sqmt coverage of Vandex BB75 using a steel trowel into hardened concrete slab surface including curing, cleaning etc complete.</td>
<td>20.61</td>
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<td>3</td>
<td>Extra over above (i) for (ii) Flooring :- Providing and laying screeding appx. 50mm thick over the surface in CM 1:4 and with proper vata at junction with false squares, curing testing complete.</td>
<td>3.07</td>
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<td>4</td>
<td>Extra over above (i) for (iii) Walls :- Providing and laying avg. 15-20mm thick, CM1:4 plaster admixed with Integral Waterproofing Compound of approved make as per manufacturer’s specification.</td>
<td>13.67</td>
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<td>5</td>
<td>Terrace Water Proofing Providing and laying of 200mm avg. Thick brick bat coba water proofing treatment on the cleaned &amp; prepared RCC surface, a layer of 20mm avg. Thick cement sand mortar of ratio 1:4 (1 cement : 4 coarse sand) admixed with integral water proofing compound of Fosroc (Conplast X 421 IC)/ Sika / BASF/ Sunanda or equivalent (dosage 150 ml- 200 ml per50 kg of cement) shall laid over the cement slurry. A layer of broken brick / brick bat laid on afore mentioned mortar bed. After proper curing of 2 days. The joints including all voids varying from 15mm to 30mm thick shall be grouted with 1:4 cement mortar admixed with integral water proofing compound of Fosroc (Conplast X 421 IC)/ Sika / BASF / Sunanda or equivalent (dosage 150 ml per 50 kg of cement). The top surface shall then be finished smoothly with cement mortar (1:3) admixed with integral water proofing compound of Fosroc (Conplast X 421 IC)/ Sika / BASF / Sunanda or equivalent (dosage 150 ml per 50 kg of cement) &amp; such topping shall not be less than 20 mm thick and finishing coba with china mosaic tile pieces laid in to cm 1:4 and joints finished neat with cement.</td>
<td>10.00</td>
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<td></td>
<td>Plinth Protection</td>
<td>SQM</td>
<td>171.60</td>
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<tr>
<td>1</td>
<td>Providing &amp; Making plinth protection 100 mm thick of gravels, free from all type of dust and small graded stones, well rumbled and consolidated including finishing the top smooth as per drawings, specifications and as directed by EIC.</td>
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<td></td>
<td>Interlocking Paver</td>
<td>SQM</td>
<td>22.00</td>
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<tr>
<td>2</td>
<td>Providing &amp; laying 50 mm thick reflective type interlocking paver block of minimum compressive strength of 400 kg/sq.cm in unipaver shape of approved make to be laid in Herring bone pattern. The rates are inclusive of providing &amp; laying/spreading approved quality average 50mm thick sand bedding including compaction &amp; filling joints with sand at site. The edges are to be neatly trimmed to fit within kerbs along the periphery of the paved area all complete as per specification, drawing &amp; as per direction of Engineer-in-Charge.</td>
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<td></td>
<td>Grass Paver</td>
<td>SQM</td>
<td>5.00</td>
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<tr>
<td>3</td>
<td>Providing &amp; laying 80 mm thick reflective type open jointed (grass) paver block of minimum compressive strength of 400 kg/sq.cm in unipaver shape of approved make. The rates are inclusive of providing &amp; laying/spreading approved quality average 50mm thick sand bedding including compaction &amp; filling joints with sand at site. The edges are to be neatly trimmed to fit within kerbs along the periphery of the paved area all complete as per specification, drawing &amp; as per direction of Engineer-in-Charge.</td>
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<td></td>
<td>Sand Stone Paving</td>
<td>SQM</td>
<td>5.00</td>
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<td>4</td>
<td>Providing &amp; laying 25 mm thick Chisel dressed Sand Stone of machine-cut slabs of approved quality, type &amp; colour as per the approved sample, including cutting to required sizes, shapes and pattern as per drawing, and laying to the required level / slope including all surface preparation, providing and laying cement mortar (1:4) bed of average thickness 25 mm with cement slurry / pastespread on the top of mortar using grey cement, filling and finishing the joints with neat cement slurry / white cement with matching colour pigment, curing, mirror polishing of joints if required, cleaning etc. complete as per the instructions of the EIC. The Contractor shall arrange for storage of all related materials at site, handling, shifting and lifting at work location.</td>
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<td></td>
<td>Description</td>
<td>Rate</td>
<td>Amount</td>
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<td>5</td>
<td>Providing , Laying and testing RCC hume pipe. in position, alignment, jointing etc. RCC hume pipes 250mm dia of NP2 class for culverts, road crossing, including cutting, collars jointing etc all complete as per specifications, drawing and direction of EIC. Excavation, backfilling, PCC if any to be paid separately,</td>
<td>RNM</td>
<td>6.00</td>
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<tr>
<td>6</td>
<td>Providing , Laying and testing RCC hume pipe. in position, alignment, jointing etc. RCC hume pipes 300mm dia of NP2 class for culverts, road crossing, including cutting, collars jointing etc all complete as per specifications, drawing and direction of EIC. Excavation, backfilling, PCC if any to be paid separately,</td>
<td>RNM</td>
<td>6.00</td>
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<td>7</td>
<td>Rubble Soling Providing and laying rubble soling hand packed and interstices filled with stone metal/murrum including rolling leveling and compaction as per specifications &amp; as directed by EIC. Boulder size will be 150mm or below, measurement will be in cum after compaction.</td>
<td>CUM</td>
<td>507.10</td>
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<td>J</td>
<td>GLAZING / FACADE WORKS</td>
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<td>1</td>
<td><strong>uPVC Window</strong> Providing and Fixing factory made standard quality uPVC casement/sliding window, made of extruded profiles. Profiles of frames and sash will be mitred cut and fusion welded at all corners, including drilling of holes for fixing hardware and drainage of water etc., making arrangement for fixing of hardware, EPDM gasket, 1.2 ± 0.2 mm thick galvanised steel profile to be inserted in required profile, frame will be fixed to the wall with 8 mm x 100 mm long fasteners, all complete as per direction of Engineer-in-charge. (Glazing, hardware hinges and fitting etc. to be paid separately.)</td>
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<td><strong>A Fixed Window including:</strong></td>
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<td></td>
<td>Frame (50 mm x 50 mm)</td>
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<td></td>
<td>Glazing bead (12 mm x 18 mm)</td>
<td>SQM</td>
<td>275.15</td>
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<td></td>
<td><strong>B Casement Window (With friction hinge &amp; outward opening) including:</strong> Casement Frame (67 mm x 62 mm) Casement Window Sash / Mullion (67 mm x 75 mm) (style, rail and intermediate section) Casement Glazing bead (35 mm x 18 mm)</td>
<td>SQM</td>
<td>26.53</td>
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</table>
| C | Sliding Window (Two Track, 2/4 Shutters) including:  
   Two Track Sliding Frame (67 mm x 52 mm)  
   Sliding window Sash (60 mm x 44 mm)  
   Sliding Interlock for Window (one vertical length in each shutter) (45.5 mm x 28 mm)  
   Sliding Glazing bead (35 mm x 18 mm) | SQM | 153.35 |
|---|---|---|---|
| 2 | DGU  
Providing & fixing factory cut/processed mechanically sealed composite glass  
(configuration 6 mm thick outer glass + 12 mm thick air gap + 6 mm thick inner glass)  
with performance parameters of the composite that meet the given acceptable value ranges as follows: Visual Light transmission % (VLT) 15 - 50; External reflectance 5 - 25; Solar factor (SF) or Solar Heat Gain Coefficient (SHGC) 0.2 - 0.38; U value .5 - 1.5 W/sqm.K. R Value 2.86,  
Colour of glass to be clear/neutral/grey/blue as approved. Make Asahi/Saint Gobain or equivalent.  
(Vendor to specify the make and name of products considered for quotation. The price should include the cost of wastage, obtaining correct measurement, preparing the glass assembly including cutting, toughening, sealing, mastic, dessican treatment, etc.) | SQM | 306.70 |
| 3 | Providing and fixing anodised aluminium  
(anodised transparent or dyed to required shade according to IS: 1868. Minimum anodic coating of grade AC 15) frame work for windows and ventilators with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS: 1285, fixed with dash fastener of required dia and size (Dash fastener to be paid for separately). | KG | 100.00 |
| 4 | Providing and fixing float glass panes 8 mm (weight not less than 13.50 kg/sqm) thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured). | SQM | 10.00 |
| 5 | Providing and fixing float glass panes 5.5 mm (weight not less than 13.50 kg/sqm) thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured). | SQM | 148.34 |
| 6 | ACP Providing & Fixing Cladding with 4mm thick \((0.25+3.5+0.25)\) with LDPE core coloured, matt finish aluminium composite panels (total thickness of the panel shall be 4mm) of approved make inclusive of anodising the aluminium sections a minimum of 20 micron thickness fixed over non anodised aluminum section of average 25 x 50 or as may be required with joints appropriately placed as per approved shop drawing and covered with silicon sealant of approved colour as per detailed shop drawing. Shop drawing to be provided by vendor and approved by architect prior to work commencement on site cladding with 3 mm thick aluminium composite panel sheet fixed over non anodised aluminum section of average 25 x 50 or as may be required with joints appropriately placed as per approved shop drawing and covered with silicon sealant of approved colour as per detailed shop drawing. Shop drawing to be provided by vendor and approved by architect prior to work commencement on site cladding with 3 mm thick aluminium composite panel sheet fixed over non anodised aluminum section of average 25 x 50 or as may be required. | SQM | 15.00 |

| 1 | K INTERIOR ITEMS |  |

| 1 | Solid Bison Board Partition Providing, Fabricating and fixing of 75mm Thick Gypsteel stud full height Bison Board partitions. * To have cold rolled GI studs of size 48mm x 0.55mm thick, placed at 610mm centre to centre installed onto the boxing at the floor and ceiling channels. * One layer each of tapered edge 10mm thick Bison board Plain, screw fixed with drywall screws of 25mm at 300mm centres to both sides of 48mm Gypsteel studs (0.55mm thick having one flange of 34mm and another flange of 36mm made of GI Steel) * To be placed at 610mm centre to centre in 50mm Gypsteel floor and ceiling channel (0.55mm thick have equal flanges of 32mm made of GI steel) with joints staggered. * A fixing channel of 99mm width \((0.9mm\) thick having two flanges of 9.5mm each) has to be provided at the horizontal joints of the two boards and as directed by engineer in charge. * Finally square and tapered edges of the boards are to be jointed and finished so as to have a flush look. The floor channel is placed on a clean finished floor on which two line-beads of | SQM | 20.00 |
### GYPSUM FALSE CEILING:
Providing & fixing suspended false ceiling using 12.5mm thick Indian gypsum boards confirming to IS 2095-1982 and GI framework of Gyp steel or approved equivalent comprising of following:

1. GI perimeter channel of 0.55mm thick having one flange of 20mm, another of 30mm and web of 27mm fixed to brick wall partition along periphery of ceiling with the help of nylon sleeves and screws at 610mm c/c.  
2. GI intermediate channel (size, 45mm web, two flanges each of 15mm & thickness 0.9mm) suspended from the soffit / ceiling at 1200mm c/c spacing.  
3. GI ceiling sections of 0.55mm thick having knurled web of 51.5mm and two flanges each of 26mm with leaves of 10.5mm fixed to intermediate channel with the help of connecting clip at direction perpendicular to the intermediate channel at spacing of 600mm c/c.  
4. GI suspender angle of 25mm x 10mm and thk.0.55mm at spacing of 600mm c/c, fixed to the ceiling / soffit using GI cleat angle 25mm x 25mm, 0.55mm thk. Cleat angle to be fixed to the ceiling / soffit using 6mm dia anchor fastener.  
5. Gypsum board to be finished with Jointing.

| SQM | 750.75 |

### GRID CEILING:
Providing and fixing Mineral Fibre Board moduler Ceiling manufactured by USG / Armstrong / Saint Gobain India Ltd or equivalent make as approved by Architect in Tegular edge Mineral textured tiles with approved surface pattern of size 600mm X 600mm x 15 mm having Noise reduction Co-efficient 0.6 light reflection over 75%, Relative Humidity 95%, Suspension system of Silhouette reveal profile grid system with 15mm wide flanges incorporating a 3 or 6 mm central recess of colour all white or all black or white with black as directed, Silhouette main runners and cross tees to have mitred ends and "birdsawmouth" notches to provide mitred cruciform junction, fixed to the structural soffit by Butterfly clip hangers, suspension wires & anchor fasteners as per the manufacturer's specification, Suspension wires to be provided at every 600mm c/c with two nos of ties on each anchor fastener, Perimeter trim of Trulok wall angle in white colour secured to wall at 450mm maximum centres.  
The rate quoted shall include making cut outs for fixing light fittings, grills, diffusers, speakers, smoke detectors, sprinklers.

<p>| SQM | 10.00 |</p>
<table>
<thead>
<tr>
<th></th>
<th>Providing, Fabricating &amp; fixing of Storage/Cabinets in various lengths &amp; different heights, made of 19mm thk termite resistant block board for structure, doors &amp; shelves, 6mm water proof ply for the back. All the surfaces side and top to be finished with approved 1mm thick laminate on the exposed surfaces. Inside surfaces shall be enamel painted. Cut edges to be covered with 6mm thk matching wooden lipping. Storage shutter to have lamination with grooves as per design and shall be fixed with heavy duty hinges &amp; provided with all accessories like multipurpose locks, wooden handles, tower bolts, ball catchers etc. complete as per engineer in charge and drawings (The measurement of storage will be done as per the front area of storage in length and height only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>60cm deep.</td>
</tr>
<tr>
<td>b)</td>
<td>45cm deep.</td>
</tr>
<tr>
<td></td>
<td>Providing and fabrication of ward robes (ornamental) of approved quality 19mm Ply board in sides, shelves and wherever required including 6mm water proof ply wood on back and 25mm thick plywood shutter laminated with 1mm thick Dulmica or equivalent laminate of approved quality and color on exposed face and 0.8mm thick balancing white laminate on internal surface of shutter of approved design and drawings including wooden lipping on cut edges of the shutter, painting two or more coats of synthetic enamel paint of approved quality and color inside and cost of following aluminum fittings, locks of Godrej/Link make. 15mm dia. M.S. pipe chromium plated with necessary brackets of required length, including fixed with heavy duty hinges &amp; provided with all accessories like multipurpose locks, wooden handles, tower bolts, ball catchers etc.  (For payments front face to be measured).</td>
</tr>
<tr>
<td>a)</td>
<td>60cm deep.</td>
</tr>
<tr>
<td>b)</td>
<td>45cm deep.</td>
</tr>
</tbody>
</table>

**L SHUTTERS / DOORS**
<table>
<thead>
<tr>
<th></th>
<th>Perforated Rolling Shutters</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Providing and fixing <strong>Perforated Steel Rolling Shutter</strong> confirming to IS:6248 fabricated out of 18 gauge CRC Strips confirming to IS: 4030, with bottom rail, brackets, door suspension shaft incl. approved quality bearings, housing box fixed at top having manually operated push and pull type arrangement, 25mm x 65mm MS Guide Channels on both sides, handles, springs, sliding lock arrangement, cover hood top. The Rolling shutter and guide channels shall be painted with one coat of anti-corrosive primer and approved quality synthetic enamel paint as directed.</td>
<td>SQM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Grilled Rolling Shutters</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Providing and fixing <strong>rolling shutter</strong> with following specs: Rolling shutter: 2 / 3 area including top and bottom made of 20 gauge galvanised sheet. Rolling Grill: 1 / 3 middle area made of 8 Round iron bars and flats, Top cover: made out of 20 gauge galvanised sheet side rail: Ball bearing min. 2 no. balls. measurement will be given 6&quot; extra in width 18&quot; extra in height from clear opening of channel all including one coat of red oxide primer on grill complete with other fittings and accessories as side plate, locking arrangement, spring shaft etc. complete.</td>
<td>SQM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Pressed Steel Door</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Providing and installing in position of 38mm Single Leaf HMPS - Hollow Metal Pressed Steel Door Shutters with off white colour powder coated of shaktimet equivalent make with following features: * Material: Cold-rolled steel sheet, inside honeycomb * Thickness of Door leaf: 38mm * Thickness of Door surface steel: 0.5mm * Thickness of Door frame: 1.2mm * Opening direction: Inward/outward * Lock handle position: On left/on right * Door Closer * Stainless steel hinge * Vision panel with 6mm toughened glass of approx size - 300mm x 600mm * Dimension: as per drawings</td>
<td>SQM</td>
</tr>
</tbody>
</table>
### uPVC Doors
Providing and fixing uPVC doors (with door frame) manufactured from a composite of 1.5mm PVC Fire Resistant (BS476 Part 7-spread of flame Class 1) vacuum formed skins permanently bonded to a Flame Retardant High Density Expanded Polystyrene (EPS) core. (Euroclass E tested to BS EN ISO 11925-2:2002) using the best materials available of approved make and manufacture.

Door to have following characteristics:
- To have welded corners
- To be weather sealed
- To have high thermal and acoustic insulation
- To have self-drainage properties
- To have concealed locking wedges
- To be reinforced with galvanized steel
- To provide noise reduction up to 45dB
- To have tropical mix compound to provide UV resistance and high impact resistance
- To have fire resistant polymers to confirm self extinguishing and non spontaneous ignition characteristics.

| 4 | 239.58 |

### Wooden Door
Providing and fixing doors of hard wood.

* Stiles and rails shall be constructed of first class hard wood.
* Cope and stick joinery of stiles and rails using ½" x 4” dowels.
* Joints to have a minimum of 1 dowel.
* Panels shall be manufactured using a double panel construction of solid wood.
* Flat panels shall have a minimum thickness of 5/8”
* Raised panels shall have a minimum thickness of 11/2”.
* Panel raise shall be constructed of solid deodar wood and rim banded with mitered corners including ISI marked black enamelled M.S butt hinges with necessary screws. (Godrej/equivalent)

| 8 |                |

| a | 53 mm thick shutters | SQM | 1.00 |
| b | 30 mm thick shutter   | SQM | 1.00 |

### Mortice Lock
Providing and fixing bright finished brushed steel 100mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (Dorset Ozone or equivalent approved quality).

| 9 | 4.00 |

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*Stiles and rails shall be constructed first class hard wood.
*Cope and stick joinery of stiles and rails using ½" x 4" dowels.
*Joints to have a minimum of 1 dowel.
*Panels shall be manufactured using a double panel construction of solid wood.
*Flat panels shall have a minimum thickness of 5/8”
*Raised panels shall have a minimum thickness of 11/2”.
*Panel raise shall be constructed of solid deodar wood and rim banded with mitered corners including ISI marked black enamelled M.S butt hinges with necessary screws. (Godrej/equivalent)
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Quantity</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Lockable Sliding Door Bolt</td>
<td>EACH</td>
<td>82.00</td>
<td>82.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing and fixing lockable aldrops capable of smooth sliding action. MS powder coated sliding door bolt (aldrop) shall be made from rolled steel. The hasp shall be of MS and screwed to the bolt in a workmen like manner. Alternatively the hasp and bolt should be in one piece. Bolts shall be finished to shape and threaded with worth standard and provided with round brass washers and nuts of square or hexagonal shape. All components should be smooth and powder coated. The leading dimensions of aldrop shall be as the length of the bolt and specified diameter: 350mm x 20mm.</td>
<td></td>
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</tr>
<tr>
<td>11</td>
<td>Hydraulic Door Closer</td>
<td>EACH</td>
<td>82.00</td>
<td>82.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing and fixing IS 3564 marked aluminium extruded section body tubular type universal hydraulic door closer with double speed adjustment with necessary accessories and screws etc. complete.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>12</td>
<td>Tower Bolt</td>
<td>EACH</td>
<td>82.00</td>
<td>82.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing and fixing Brushed steel hardwares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing and fixing tower bolt (barrel type) with necessary screws etc. complete. 100 x 10 mm size.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Tower Bolt</td>
<td>EACH</td>
<td>82.00</td>
<td>82.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing and fixing Brushed steel hardwares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing and fixing tower bolt (barrel type) with necessary screws etc. complete. 150 x 10 mm size.</td>
<td></td>
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</tr>
<tr>
<td>14</td>
<td>Tower Bolt</td>
<td>EACH</td>
<td>82.00</td>
<td>82.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing and fixing Brushed steel hardwares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing and fixing tower bolt (barrel type) with necessary screws etc. complete. 200 x 10 mm size.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Pull Handle</td>
<td>EACH</td>
<td>164.00</td>
<td>164.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing and fixing Brushed steel hardwares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing and fixing Pull Handle (D type) with necessary screws etc. complete. 150 mm size.</td>
<td></td>
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</tr>
<tr>
<td>16</td>
<td>Solid Laminated Flush Door with Teak wood door frame of size 80mm x 100mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing &amp; fixing of 35mm thick (total built up 38mm) ISI marked Phenol Bonded single leaf flush door as per design of approved make. Job consists of: covering with 1.5 mm thick laminate of approved make and colour on both the sides of shutter as per design. Grooves to be filled with epoxy based grout matching with the colour of laminate.</td>
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</tr>
</tbody>
</table>
The shutter shall be finished with 6 mm thick teak wood lipping pattu all around the shutter and finished with melamine polish matching the lamination on the teak wood lipping pattu;

Rates to include necessary hardware like, 150mm SS Tower bolt 2 No, door closer of 100 Kg capacity (Dorset make), SS Door stopper, 4 No. of 100mm SS hinges etc. complete as per instructions of EIC

<table>
<thead>
<tr>
<th></th>
<th>EXPANSION JOINTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Expansion Joint</td>
<td>66.00</td>
</tr>
<tr>
<td></td>
<td>Providing &amp; fixing Horizontal &amp; Vertical Internal expansion joints in RCC framed structure at all level with 50 mm Mechanical Expansion Joint made up of Aluminum extruded sections with a detail arrangement below enabling fastening by stainless steel clips spaced at regular intervals as recommended by the manufacturer, including all the necessary accessories, as per the manufacturer's specifications and drawings, Etc. complete as per instruction of EIC. The fixing of the expansion joints shall be carried out either by the main contractor under the supervision of their supplier or by the supplier directly.</td>
<td>RNM</td>
</tr>
<tr>
<td></td>
<td>a) 90 mm wide flat.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Supply and applying of polyurethane sealant (Sikallex Pro 3WF / Sikaflex Pro 2HP) in expansion joints of 50mm/20mm sizes at all locations and elevations. Job includes providing and fixing of masking tape on either sides of the groove and over the Backing rod, placing of sealant, peeling off the masking tapes stuck on either sides of the expansion groove, cleaning etc job complete as per the vendor's specification, drawings and directions of Sika representative and EIC. Sikaflex Pro 3WF / Sikaflex Pro 2HP (50mm x 25 mm, for 50 mm joint)</td>
<td>RNM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>66.00</td>
</tr>
<tr>
<td>3</td>
<td>Providing and filling expansion joints by using non-staining, non-deteriorating, Alkali resistant, a High performance, non absorbent, Crosslinked closed cell polymer based expansion joint filler boards of Supreme make or approved equivalent make, having minimum density of 100 +/- 10 Kg/cm³ (ASTM D 3575), &amp; Compression strength of at 25% deflection Min 0.80 Kg/Cm² (ASTM D 3575) , Non Staining with less than 1% water Absorption for 48 Hours (ASTM D 3575) &amp; compression recovery of 93% minimum as per specifications when tested as per ASTM D-3575,</td>
<td>RNM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>66.00</td>
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</tbody>
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<table>
<thead>
<tr>
<th></th>
<th>ROOFING WORKS</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Same as above - For 50 mm thick joint</td>
<td>RNM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>66.00</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Unit</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1</td>
<td><strong>Galvalume Sheetings</strong>&lt;br&gt;Providing &amp; Fixing Colored powder coated Galvalume standing seam sheets roofing (thickness of sheet in mm: 0.55 TCT) curved as per sections/architectural drawings including Eave gutters, downspouts, Gable trims, corner flashing, drip trim, foam closures (inside and outside) and all necessary flashings 0.5mm prepainted (Color to be established during detail engineering stage).and fixing with polymer coated bolts, and nuts, GI plain and bitumen washers or with self drilling fastener and EPDM washers and necessary waterproofing sealants etc. complete as directed by Engineer in Charge.</td>
<td>SQM</td>
</tr>
<tr>
<td>2</td>
<td>Providing and fixing J Ridge/valley 600mm wide, side made up of same specifications as item No N-1</td>
<td>RNM</td>
</tr>
<tr>
<td>3</td>
<td>Providing and fixing Box gutters size 300 x 300 mm as per drawing and instructions of EIC side made up of same specifications as item No N-1</td>
<td>RNM</td>
</tr>
<tr>
<td>4</td>
<td>Providing &amp; Fixing of Sky Lights with 8mm thick reinforced double layer Poly Carbonate sheets including all necessary fittings complete as directed by Engineer in Charge.</td>
<td>SQM</td>
</tr>
<tr>
<td>5</td>
<td><strong>G.S. Sheetings</strong>&lt;br&gt;Providing and fixing pre powder-coated corrugated G.S. sheet roofing (Kroll or equivalent) fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead and including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (upto a pitch of 60 degrees) excluding the cost of purlins, rafters and trusses. (0.50mm thick)</td>
<td>SQM</td>
</tr>
<tr>
<td>6</td>
<td><strong>Ridges / Hips / Valleys</strong>&lt;br&gt;Providing and fixing ridges or hips / valleys of width 60cm over all width plain G.I sheet fixed with nails G.I limpet washers complete 0.50 mm thick <strong>powder coated.</strong></td>
<td>RNM</td>
</tr>
<tr>
<td>7</td>
<td><strong>Eaves Boarding</strong>&lt;br&gt;Providing and fixing 2mm thick 250mm wide eaves boarding of mild steel including hoisting, fixing and welded complete. Including providing and applying priming coat of red oxide as per specifications with two coats synthetic enamel paint of approved shade as per instructions of EIC.</td>
<td>RNM</td>
</tr>
</tbody>
</table>

*Note: All materials and workmanship are as per specifications and instructions of Engineer in Charge.*

**Head Draftsman**

**Executive Engineer**
<table>
<thead>
<tr>
<th>Soffits</th>
<th>Providing and fixing 2mm thick 600mm to 900mm wide soffits of mild steel excluding frame work complete. Including providing and applying priming coat of red oxide as per specifications with two coats synthetic enamel paint of approved shade as per instructions of EIC.</th>
<th>RNM</th>
<th>154.49</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polystyrene Insulation</td>
<td>Thermal Insulation with Expanded polystyrene fixed with suitable adhesive to the walls as per the directions of the Engineer-in-charge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>With Type N - Normal 50 mm thick</td>
<td>SQM</td>
<td>420.71</td>
</tr>
<tr>
<td>b</td>
<td>With Type SE - Self Extinguishing type 50 mm thick</td>
<td>SQM</td>
<td>11.00</td>
</tr>
<tr>
<td>Fibre Glass Wool Insulation</td>
<td>Providing fixing thermal insulation of ceiling with Resin Bonded Fibre glass wool conforming to IS : 8183, density 24kg / m3, 50mm thick, wrapped in non inflammable non woven fabric, fixed to ceiling with metallic cleats (50x50x3 mm) @ 60 cm and wire mesh of 12.5 mm x 24 gauge wire mesh, for top most ceiling of building.</td>
<td>SQM</td>
<td>750.75</td>
</tr>
<tr>
<td>FINISHING WORKS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 MM THICK PLASTER IN 1:4 CM</td>
<td>Providing and applying average 15 mm thick cement plaster in single coat incement sand mortar 1:4 to all internal surfaces at all levels including surface preparation, staging, scaffolding and providing &amp; fixing 20 Gauge 150mm wide chicken wire mesh at all concrete &amp; brickwork joints and roughening the surfaces as directed.</td>
<td>SQM</td>
<td>1,816.77</td>
</tr>
<tr>
<td>12 MM THICK PLASTER IN 1:4 CM</td>
<td>Providing and applying average 12 mm thick cement plaster in single coat incement sand mortar 1:4 to all internal surfaces at all levels including surface preparation, staging, scaffolding and providing &amp; fixing 20 Gauge 150mm wide chicken wire mesh at all concrete &amp; brickwork joints and roughening the surfaces as directed.</td>
<td>SQM</td>
<td>1,768.34</td>
</tr>
<tr>
<td>6 MM THICK PLASTER IN 1:3 CM</td>
<td>Providing and applying average 6 mm thick cement plaster in single coat incement sand mortar 1:3 to all ceiling surfaces at all levels including surface preparation, staging, scaffolding and providing &amp; fixing 20 Gauge 150mm wide chicken wire mesh at all concrete &amp; brickwork joints and roughening the surface as directed.</td>
<td>SQM</td>
<td>1,505.46</td>
</tr>
</tbody>
</table>

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*Head Draftsman*

*Executive Engineer*
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Rate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>APEX PAINT Providing and applying Acrylic based (APEX) paint of approved make and colour over the external surfaces at all levels inclusive of surface preparation by scraping the surface and applying with acrylic ready made putty of approved brand as per manufacturer's recommendations, filling cracks with approved crack fill material such as Sunfilla or equivalent, applying sealer or primer coat as recommended by manufacturer and applying two finishing coats, cleaning the floorsurface after completion of work, etc. complete as directed.</td>
<td>SQM</td>
<td>1,816.77</td>
</tr>
<tr>
<td>5</td>
<td>TEXTURE PAINT a) Providing and application of Frienze coarse fine trowel finish texture paint of approved brand and make having a thickness of 1.25mm on smooth plastered surface including preparation of base with required number of coats of wall care putty and base coat of approved shade and pattern up to floor level (all carriages, lifts and scaffolding included) b) Extra for sprinkling with mechanically operated spray gun.</td>
<td>SQM</td>
<td>100.00</td>
</tr>
<tr>
<td>6</td>
<td>ACRYLC EMULSION PAINT Painting, two or more coats with Dulux paint of Spectrum / Nerolac or Equivalent make and approved shade on internal walls and ceilings as required to give an even shade including preparing the surface, applying primer coats, etc. complete all to the satisfaction of EIC.</td>
<td>SQM</td>
<td>3,273.80</td>
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<td>7</td>
<td>SYNTHETIC ENAMEL PAINT Providing and applying three coats of Synthetic Enamel paint of Asian/ICI/ Berger/ equivalent make to all surfaces, in approved colour over a coat of primer including preparation of surface by thorough cleaning, sandpapering and as per manufacturer specification to give smooth and even surface, necessary scaffolding, etc., complete and as directed by Engineer-in-charge.</td>
<td>SQM</td>
<td>200.00</td>
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<td>8</td>
<td>ANTI FUNGUS PAINT Painting, two or more coats with Anti Fungal Paint of approved make and shade on internal walls and ceilings as required to give an even shade including preparing the surface, applying primer coats, etc. complete all to the satisfaction of the architect.</td>
<td>SQM</td>
<td>40.00</td>
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| 9 | **EPOXY PAINT**  
Painting with 150 micron Epoxy Paint of approved make and shade on different areas of MS, walls as required to give an even shade including preparing the surface, applying primer coats, etc. complete all to the satisfaction of the Engineer in charge. | SQM | 20.00 |
|---|---|---|---|
| 10 | **POP PUNNING**  
Providing and applying POP punning to walls of avg. 2mm thickness to line level and plumb including surface preparation; required punning to be undertaken and completed in workman-like manner, to ensure desired finishing standards, as directed by EIC. | SQM | 1,768 |
| 11 | **POP DECORATIVE MOULDING**  
Providing and fixing POP decorative moulding / cornice as per the drawing complete of 50 x 50 mm size including surface preparation; required punning to be undertaken and completed in workman-like manner, to ensure desired finishing standards, as directed by EIC. | RNM | 884.00 |
| 10 | **PVC WATER STOPS**  
Providing and placing in position suitable PVC water stops conforming to IS:12200 of Deep-Jyoti or equivalent for construction joints / expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. all complete:  
a) Serrated with central bulb (225 mm wide, 8-11 mm thick) | RNM | 100.00 |
| 11 | **RUNGS**  
Supplying and fixing poly-propylene rungs of 20 mm square bar of size 263 x 165 mm for access way including anchorage in walls to a minimum depth of 100 mm with C.C 1:2:4 etc. complete and as directed (Duct & Over Head Tank) | EACH | 20.00 |
| 12 | **SLEEVES**  
Providing & fixing sleeves (upto 400mm length) in underground tank making of pipes with MS plate including one site of flange of:  
- a) 32mm dia  
- b) 50mm dia  
- c) 80mm dia  
- d) 100mm dia  
- e) 150mm dia | EACH | 2.00 |
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<tr>
<td>f</td>
<td>200mm dia</td>
<td>EACH</td>
</tr>
<tr>
<td>g</td>
<td>80mm dia vent pipe</td>
<td>EACH</td>
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<tr>
<td>13</td>
<td>PVC SLEEVES</td>
<td>EACH</td>
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<td></td>
<td>Providing &amp; fixing PVC sleeves (upto 400mm length) in Brick / block work of having capacity of pipe of 3kg/sqcm for using of cavity wall.</td>
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<td>P</td>
<td>MISCELLANEOUS WORKS</td>
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<td></td>
<td>Rain Water Pipes</td>
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<td></td>
<td>Providing and fixing on wall face unplasticised rigid PVC rain water pipes conforming to IS 13592 type a including jointing with seal ring conforming to IS 5382 leaving 10mm gap for thermal expansion (i) single socketed pipes including unplasticised PVC moulded fittings/ accessories i.e. couplers, single tee with door, single tee with out door, Bend 87.5 deg, Shoe (plain) ... etc. for unplasticised rigid PVC rain water pipes conforming to IS 13592 type A including jointing with seal ring conforming to IS 5382 leaving 10mm gap for thermal expansion all accessories etc. complete as per drawings, specifications and as directed by EIC</td>
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<tr>
<td>a</td>
<td>For 110mm diameter</td>
<td>RNM</td>
</tr>
<tr>
<td>b</td>
<td>For 150mm diameter</td>
<td>RNM</td>
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<tr>
<td>c</td>
<td>For 200mm diameter</td>
<td>RNM</td>
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<td>2</td>
<td>Fabrication and erection of MS [mild steel] Inserts: Providing, fabricating, cutting &amp; erection of shop coated MS inserts of any thickness with all fixtures &amp; accessories, rehandling and erecting in walkways, platforms, stair treads, any other place as directed etc. at all levels and locations bolted, screwed and/or welded including if necessary cutting to required size and shape making holes, notches, openings of required size and shape making the edges smooth, fixing, welding and preparing the surfaces for painting, surface cleaning (both faces), wire brushing, removal of mill scales, dust rust, oil or grease and surface preparation, shop primer etc. all complete as per specification as specified &amp; as per drawings &amp; as directed by EIC.</td>
<td>MT</td>
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Head Draftsman

Executive Engineer
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<th>Providing Drilling, cleaning and inserting reinforcement (horizontally / vertically) with HILTI HY 150 or approved equivalent in concrete including injecting chemical and allowing for curing all as per manufacturer’s specification including scaffolding etc. complete.</th>
<th>EACH</th>
<th>20.00</th>
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<tr>
<td>3</td>
<td>upto 100mm dia upto 100 mm depth. Using owners supply water &amp; Electricity.</td>
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EACH 20.00

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EACH 2.00

EACH 2.00

EACH 1.00