PART- B

(MAJORCOMPONENT)

(CIVIL WORK)

GENERAL CONDITIONS

1. Except for the items, for which Particular Specifications are given or where it is specifically mentioned otherwise in the description of the items, the work shall generally be carried out in accordance with the "CPWD Specifications - 2019 (Vol. I & II) for civil works with up to date correction slips.

2. In the case of discrepancy between the Schedule of Quantities, the Specifications and/ or the Drawings, the following is order of preference shall be observed:-

   (i) Description of Schedule of Quantities.
   (ii) Scope of Work
   (iii) Particular Specification and General Conditions mentioned in this tender.
   (iv) Drawings.
   (v) CPWD Specifications.
   (vi) Indian Standard Specifications of B.I.S.

   "In the event of any variation/ discrepancy in the drawings, specifications and tender documents etc. the decision of the Engineer-in-charge shall be final binding and conclusive on the contractor and in the case the contractor have any doubt and the same should be got clarified immediately from the Engineer-incharge and no claim of the contractor shall be entertained thereafter. Moreover, the agency is not allowed to take benefit out of any clerical/ grammatical mistake in the standard clauses/Schedule of Quantities/Specifications etc. being used in the agreement".

   A reference made to any Indian Standard Specifications in these documents, shall imply to the latest version of that standard, including such revisions / amendments as issued by the Bureau of Indian Standards up to last date of receipt of tenders. The Contractor shall keep at his own cost all such publications of relevant Indian Standard applicable to the work at site.

~~3. Scope:~~

~~3.1 The works to be governed by this contract shall cover delivery and transportation up to destination, safe custody at site, insurance, erection, testing and commissioning of the entire works.~~

~~3.2 The works to be undertaken by the contractor shall inter alia include the following: i. Preparation of detailed SHOP drawings and AS BUILT drawings wherever applicable. ii. Obtaining of Statutory permissions wherever applicable and required. iii. Pre-commissioning tests as per relevant standard specifications, code of practice, Acts and Rules wherever required. iv. Warranty obligation for the equipment and/or fittings/fixtures supplied by the contractor.~~

~~3.3 Contractor shall provide all the shop drawings or layout drawings for all the coordinated services before starting any work or placing any order for any of the services etc. These shop drawings/layout drawings shall be got approved from Engineer-in-charge before implementation and this shall be binding on the contractor. The contractor shall submit material submittals along with material sample for approval of Engineer-in-charge prior to delivery of material at site.~~

~~3.4 All the hidden items such as water supply lines, drainage pipes, conduits, sewers etc. are to be properly tested as per the design conditions before covering and their measurements in computerized measurement book duly test checked shall be deposited with Engineer-in-charge or his authorized representative, prior to hiding these items.~~

~~3.5 Deployment of Technical staff & skilled labour:~~

3.5.1 The quality of work is of paramount importance. Contractor shall have to engage well experienced skilled labour and deploy modern T&P and other equipments to execute the work to provide the desired quality. The Contractor shall depute Site Engineer & skilled workers as required for the work. He shall submit organization chart along with details of Engineers and supervisory staff. It shall be ensured that all decision making powers shall be available to the representatives of the contractor at site itself to avoid any likely delays on this account. The contractor shall also furnish list of persons for specialized works to be executed for various items of work. The Contractor shall identify and deploy key persons having qualifications and experience in the similar and other major works, as per the field of their expertise. If during the course of execution of work, the Engineer-in-Charge is of the opinion that the deployed staff is not sufficient or not well experienced; the Contractor shall deploy more staff or better-experienced staff at the site to complete the work with quality and in the stipulated time limit. The Project Manager of the contractor having a minimum of Twenty (20) years of experience in a similar nature of work along with all technical staff as mentioned in clause 32 of the GCC, shall always be available at the site during the execution of work

3.6 Removal of Machinery, Tools & Equipment:

3.6.1 Removal of machinery, tools & equipment shall be allowed to be moved away from the site only when, in written opinion of Engineer-in-Charge, the same are no longer required at site of work.

~~4. The proposed building work is a prestigious project and quality of work is of paramount importance. Contractor shall have to engage well experienced skilled labour and deploy modern T&P and other equipment to execute the work. Many items like stone masonry & stone cladding work, stone flooring, flooring work, wood work, precast RCC coffers, polysulphide/ silicone sealant & other specialized works will specifically require engagement of skilled workers having experience particularly in execution of such items.~~

~~5. The tenderer shall acquaint himself with the proposed site of work, its approach roads, working space available etc. before quoting his rates and no claim on this account shall be entertained by the department.~~

~~6. The contractor(s) shall get himself acquainted with nature and extent of the work and satisfy himself about the availability of materials from kiln or approved quarries for collection and conveyance of materials required for construction.~~

~~7. The contractor(s) shall study the soil investigation report for the site, available in the office of the Engineer in charge and satisfy himself about complete characteristics of soil and other parametersat site. However, no claim on the alleged inadequacy or incorrectness of the soil data supplied by the department shall be entertained.~~

~~8. The tenderer shall see the approaches to the site. In case any approach from main road is required at site or existing approach is to be improved and maintained for cartage of materials by the contractor, the same shall be provided, improved and maintained by the contractor at his own cost. No payment shall be made on this account.~~

9. The building work shall be carried out in the manner complying in all respects with the requirements of the relevant bylaws and regulations of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer-in-charge and nothing extra shall be paid on this account.

10. The contractor(s) shall inform/issue notices to the Municipality, police and other authorities that may be required as per law and obtain all requisite permission/ licenses for temporary obstructions, enclosures etc. Contractor(s) shall pay all fee, taxes and charges which may be leviable on account of these operations in executing the contract. He shall make good any damage to the property whether public or private and shall supply and maintain lights either for illumination or for cautioning the public at night.

11. For construction works which are likely to generate malba / rubbish, the contractor shall reuse it at site as directed by the Engineer-in-charge or hand over to recycling agents or dispose of at his own cost to the notified/specified Municipal dumping ground. No deduction on this account shall be made from the agency as well as no extra payment will be made to agency if it is disposed at pre-defined location within the campus / Municipal dumping ground.

12. The works shall be carried out in accordance with the Architectural drawings and structural drawings, if needed & to be issued from time to time by the Engineer-in-Charge. Before commencement of any item of work, the contractor shall correlate all the relevant architectural and structural drawings issued for the work and satisfy himself that the information available thereof is complete and unambiguous. The discrepancy, if any shall be brought to the notice of the Engineer-in-Charge before execution of the work. The contractor alone shall be responsible for any loss or damage executing by the commencement of work on the basis of any erroneous and or incomplete information.

13. The Architectural drawings given in the tender other than those indicated in nomenclature of items are only indicative of the nature of the work and materials/fixings involved unless and otherwise specifically mentioned. However, the work shall be executed in accordance with the drawings duly approved by the Engineer-in-Charge.

14. Other agencies will also simultaneously execute and install the works of sub-station / generating sets, air-conditioning, lifts, etc. for the work and the contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings trenches etc. as may be required for such related works (for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be supplied free of cost by the department unless otherwise specifically mentioned) and the contractor shall fix the same at time of casting of concrete, stone work and brick work, if required, and nothing extra shall be payable on this account.

15. The contractor shall conduct work so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose of the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of others.

16. Some restrictions may be imposed by the security agencies /client on the working and on movement of labour, materials etc in the campus/site and may require to issue identity cards to all persons authorized by contractor to do work / visit the work site. The contractor shall be bound to follow all such restrictions / instructions and no claim whatsoever shall on this account will be entertained. The loss of time on this account, if any, shall have to be made up by generating additional resources etc.

17. The rates quoted by the contractor are deemed to be inclusive of site clearance, setting out work, profile, establishment of reference bench mark, spot levels, construction of all safety and protection devices, barriers, earth embankments, preparatory works, all testing of materials, working during monsoon, working at all depths, height and locations etc. unless specified in the schedule of quantities.

18. Royalty at the prevailing rates wherever payable shall have to be paid by the contractor on the boulders, metal, shingle, sand and bajri etc. Or any other material collected by him for the work direct to revenue authorities and nothing extra shall be paid by the department for the same.

19. Permission for the Excavation of the Basementand/or any Mining Approval along with carriage and disposal of surplus excavated earth shall be obtained by the contractor at his own expenses from Local Administration / Revenue Authority. Department / Client Department shall only forward the case to the concerned Authority. Moreover, all the fee including royalty for surplus excavated earth is to be

paid by the contractor to the concerned department. Nothing extra shall be paid on account of this to the contractor.

20. No payment shall be made for any damage caused by rain, snowfall, flood or any other natural calamity, whatsoever during the execution of the work. The contractor shall be fully responsible for any damage to the govt. property and work for which the payment has been advanced to him under the contract and he shall make good the same at his risk and cost. The contractor shall be fully responsible for safety and security of his material, T&P, Machinery brought to the site by him.

21. The contractor shall deploy resources e.g. manpower, labour, T&P, Plant & Equipment etc. as per actual requirement of work. No damages/compensation shall be payable on account of idle manpower, labour, T&P, Plant and Equipment and loss of profit etc. for whatsoever reason.

22. The rates for all items of work shall, unless clearly specified otherwise, include cost of all labour, material, tools and plants and other inputs involved in the execution of the item.

23. The contractor (s) shall quote all-inclusive rates against the items in the schedule of quantities and nothing extra shall be payable for any of the conditions and specifications mentioned. In the tender documents unless specifically specified otherwise.

24. Unless otherwise specified in the schedule of quantities the rates for all items shall be considered as inclusive of pumping/baling out water, if necessary, for which no extra payment shall be made. Those conditions shall be considered to include water from any source such as inflow of flood, surface and sub-soil water etc. and shall apply to the execution in any season.

25. The work shall be executed and measured as per metric dimensions given in the Schedule of quantities, drawings etc. (FPS units wherever indicated are for guidance only).

26. Unless otherwise specified in the schedule of quantities, the rates tendered by the contractor shall be inclusive of all costs & taxes and shall apply to all leads and lifts and nothing extra shall be payable on this account.

27. The foundation trenches shall be kept free from water while works below ground level are in progress.

28. No foreign exchange shall be made available by the Department for importing (purchase) of equipment, plants, machinery, materials of any kind or any other items required to be carried out during execution of the work. No delay and no claim of any kind shall be entertained from the Contractor, on account of variation in the foreign exchange rate.

29. All ancillary and incidental facilities required for execution of work like labour camp, stores, fabrication yard, offices for Contractor, watch and ward, temporary ramp required to be made for working at the basement level, temporary structure for plants and machineries, temporary barricading or fencing around the working sites, water storage tanks, installation and consumption charges of temporary electricity, telephone, water etc. required for execution of the work, protection works, testing facilities / laboratory at site of work, facilities for all field tests and for taking samples etc. during execution or any other activity which is necessary (for execution of work and as directed by Engineer-in-Charge), shall be deemed to be included in rates quoted by the Contractor, for various items in the schedule of quantities. Nothing extra shall be payable on these accounts. Before start of the work, the Contractor shall submit to the Engineer-in-Charge, a site / construction yard layout, specifying areas for construction, site office, positioning of machinery, material yard, cement & other storage, fabrication yard, site laboratory, water tank etc.

30. For completing the work in time, the Contractor might be required to work in two or more shifts (including night shifts). Normally contractors shall not be allowed to execute the RCC, electrical and finishing work at night. Work at night shall, however, be allowed if the site conditions/circumstances

so demand. No claim whatsoever shall be entertained on this account, not with-standing the fact that the contractor may have to pay extra amounts for any reason, to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour and other statutory bodies regulations and the agreement entered upon by the contractor with them.

31. The contractor shall maintain in perfect condition, all portions executed till completion of the entire work allotted to him. Where however phased delivery of work is contemplated these provisions shall apply separately to each phase.

32. All material shall only be brought at site as per program finalized with the Engineer-in-Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.

33. The contractor(s) shall take instructions from the Engineer-in-Charge regarding collection and stacking of materials at any place. No excavated earth or building rubbish shall be stacked on areas where other buildings, roads, services and compound walls are to be constructed. The stacking shall take place as per stacking plan however, if any change is required, the same shall be done with the approval of Engineer-in-Charge.

34. The Contractor shall bear all incidental charges for cartage, storage and safe custody of materials issued by department/arranged by the contractor.

35. The terms machine batched, machine mixed and machine vibrated concrete used elsewhere in agreement shall mean the concrete produced in concrete batching and mixing plant and if necessary transported by transit concrete mixers, placed in position by the concrete pumps, tower crane and vibrated by surface vibrator /needle vibrator / plate vibrator, as the case may be to achieve required strength and durability.

36. The cost of flooring is inclusive of providing sunken flooring in bath-rooms, kitchen, balcony etc. and nothing extra on this account shall be payable.

37. Any legal or financial implications resulting out of carriage of earth from outside or disposal of earth shall be sole responsibility of the contractor. Nothing extra shall be paid on this account.

38. No chase cutting/dismantling of plaster/RCC/CC shall be allowed, so contractor has to execute the electrical work accordingly. The work should be planned in a systematic manner so that chase cuttings in the walls, ceilings and floors are minimized. Wherever absolutely essential, the chase shall be cut using chase cutting machines. Chases will not be allowed to be cut using hammer / chisel. The electrical boxes should be fixed in walls simultaneously while raising the brick work. The contractor shall ensure proper coordination of various disciplines viz. sanitary & water supply, electrical, fire-fighting and any other services.

39. The work of water supply, internal sanitary installations and drainage etc. shall be carried out as per the bylaws of the Municipal Corporation or any other local body and the contractor shall produce necessary completion certificates from such authority after completion of work.

40. In case of local Municipal regulations / restrictions by client /non-availability space at site if huts for labour are not allowed to be erected at the site of work, the contractor shall be required to provide such accommodation at suitable place at his own cost and nothing extra shall be paid on this account.

41. Any cement slurry added over base surface for continuation of concerting for better bond is deemed to have been built in the items and nothing extra shall be payable and no extra cement considered in consumption on this account. Agency has to manage the floor level during casting considering the

varying thickness of different flooring materials to be used at any floor level. Nothing extra shall be paid for extra mortar for matching the floor level.

42. Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar service encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. In case the same are to be removed and diverted. The same shall be payable to the contractor. The contractor shall work out the cost and the same shall be approved by Engineer-in-Charge. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.

43. The contractor shall be responsible for the watch and ward / guard of the buildings safety, fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the department. No extra payment shall be made on this account.

~~44. **SETTING OUT**~~

~~44.1. Contractor shall provide permanent bench marks and other reference points for the proper execution of work and these shall be preserved till the end of work. All such reference points shall be in relation to the levels and locations, given in the Architectural and plumbing drawings.~~

~~44.2. The contractor shall establish, maintain and assume responsibility for grades, lines, levels and bench marks. He shall report any errors or inconsistencies regarding grades, lines, levels, dimensions to the Engineer in Charge before commencing work. Commencement of work shall be regarded as the contractor's acceptance of such grades, lines, levels and dimensions and no claim shall be entertained at a later date for any errors found.~~

~~44.3. If at any time, any error in this 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 Engineer in Charge.~~

~~44.4. Though the site levels may be indicated in the drawings the contractor shall ascertain himself and confirm the site levels with respect to GTS bench mark from the concerned authorities.~~

~~44.5. The approval by the Engineer in Charge of the setting out by the contractor shall not relieve the contractor of any of his responsibilities.~~

~~44.6. The contractor shall be entirely and exclusively responsible for the horizontal, vertical and other alignment, the level and correctness of every part of the work and shall rectify effectively any errors or imperfections therein. Such rectifications shall be carried out by the contractor at his own cost to the instructions and satisfaction of the Engineer in Charge.~~

45. **PROGRAMME CHART**

45.1. The Contractor shall prepare an integrated programme chart in MS Project, Primavera software for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the programme within the stipulated period or earlier and submit the same for approval to the Engineer-in-Charge within ten days of award of the contract. Non-submission of such programme shall attract the recoveries as mentioned in the Schedule-F of the tender document.

45.2. The programme chart should include the following:

(a) Descriptive note explaining sequence of the various activities.

(b) Network (PERT/CPM/BAR CHART) in MS Project/Primavera Software

(c) Programme for procurement of materials by the contractor.
(d) Programme of procurement of machinery / equipment having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor.

45.3. In addition to above, the contractor shall submit shuttering schedule adequate to complete structure work within laid down physical milestone etc. and to achieve the progress of work as per programme, he must bring sufficient shuttering material required for cement concrete and R.C.C. works etc.

45.4. If at any time, it appears to the Engineer-in-Charge that the actual progress of work does not conform to the approved programme referred above, the contractor shall produce a revised programme showing the modifications to the approved programme to ensure completion of the work. The modified schedule of programme shall be approved by the Engineer-in-Charge. Non-submission of such revised programme shall attract the recoveries as mentioned in the Schedule-F of the tender document.For Periodic inspections of the local body and on completion of works, the Contractor shall procureapprovals and local body completion certificates.

45.5. The submission for approval by the Engineer-in-Charge of such programme or the furnishing of such particulars shall not relieve the contractor of any of the duties or responsibilities under the contract. This is without prejudice to the right of Engineer-in-Charge to take action against the contractor as per terms and conditions of the agreement.

~~46. **PROGRESS REPORT**~~

~~The contractor shall submit to the Engineer-in-charge on the 7th day of each month, 2 hard copies and one on soft copy (CD) of monthly progress report of the work. Such progress report will include the project progress, summary, work progress (planned vs actual), CPM chart, status of financial progress and achievement of milestone, manpower deployment status, inventory of materials and photographs of important activities. For delay in submission of the report, compensation @ Rs.2000/- (Rupees Two Thousand only) per day of delay subject to maximum of Rs.20, 000/- for each report will be recovered from the amount payable to the contractor.~~

MINIMUM QUALITY ASSURANCE PLAN

A quality Assurance Plan will be submitted by the contractor both in respect of incorporating details as given below for the approval of Engineer-in-Charge.

1. Number of required tests and frequency of testing as indicated in the mentioned in clause-11 under schedule "F" & provisions of BIS Code and Standard Practices shall be followed as per directions of the Engineer-in-Charge.

2. Machinery and other Tool & Plants required to be deployed at site by the contractor. Time schedule by which each machinery & Tool & Plants is to be brought at site shall be indicated.

3. A field laboratory to be setup by the contractor at site of work as per direction of the Engineer-in-Charge. All the testing equipment required shall be arranged by the contractor and shall be clearly mentioned.

4. The work shall be executed as per Specifications mentioned in clause-11 under schedule "F" with up-to-date correction slips. If CPWD specification is not available for particular item, then the relevant BIS code or manufacturers specification shall be followed.

5. A proper shuttering schedule showing quantity of shuttering to be brought at site either in one lot or at different stages of work to be submitted by the contractor to the Engineer-in-Charge.

6. Maintenance of Register of Tests:-

(i) All the registers of tests carried out at Construction Site or in outside laboratories shall be maintained by the contractor which shall be issued to the contractor by Engineer-in-Charge. In the same manner as being issued to CPWD field staff.
(ii) All samples of materials including Cement Concrete Cubes shall be taken jointly with contractor by JE and out of this at least 50% samples shall be taken in presence of AE-in-charge. If there is no JE, all samples of materials including Cement Concrete Cubes shall be taken by AE jointly with contractor. All the necessary assistance shall be provided by the contractor. Cost of sample materials is to be borne by the contractor and he shall be responsible for safe custody of samples to be tested at site.
(iii) All the test in field lab setup at Construction Site shall be carried out by the Engineering Staff deployed by the contractor which shall be 100% witnessed by JE and 50% of tests shall be witnessed by AE-in-charge. At least 10% of the tests are to be witnessed by the Executive Engineer.
(iv) All the entries in the registers will be made by the designated Engineering Staff of the contractor and same should be regularly reviewed by JE/AE/EE.
(v) Contractor shall be responsible for safe custody of all the test registers.

7. Contractor will submit a copy of all test registers, material at Site Register and other registers along with each alternate Running Account Bill and Final Bill.

8. Maintenance of Material at Site (MAS) Register:-

(i) All the MAS Register including Cement and Steel Registers shall be maintained by Contractor which shall be issued to the contractor by Engineer-in-Charge.
(ii) Each of the entry of receipt of material at site shall be 100% test checked by JE or by AE if there is no JE.
(iii) Each MAS Register shall be checked by JE at least twice a week and at least once a week by AE. If there is no JE than MAS Registers will be checked by AE af least twice a week.
(iv) Cement Register shall be reviewed by EE at least once in a month.

9. It will be deemed that work so measured, checked and paid is of the required quality and standard, both in respect of ingredients as well as the intended functions it is supposed to perform. In other words, the work would not only meet the required specifications but also the workmanship as per sound engineering practices.

10. Minimum QA plan may vary work to work basis depending upon nature and volume of work.

47. SAFETY PRECAUTIONS

47.1. Contractor shall within two weeks of award of work, submit to the Engineer-in-Charge for his approval, list of measures for maintaining safety of manpower deployed for construction.

47.2 **Temporary barricading: The contractor shall make the barricading with MS profile sheet of minimum 3mtr. heightallround of site before commencement of work as per direction**

Engineer-in-charge. The contractor should visit the side & see thoroughly the required length of barricading. The cost of barricading should be included while quoting the rate in tender and nothing extra shall be paid to the contractor for barricading. The barricading shall be property of contractor and he shouldtakes away the barricading from site after actual completion of work.

47.3 Contractor shall take all precautionary measures to avoid any damage to adjoining property. All necessary arrangement shall be made at his own cost. The contractor shall take all precautions to prevent his workmen and employees from removing and damaging any Flora (plant/vegetation) from the campus/site.

47.4 The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night, speed limit boards, red flags, red lights and providing barriers. He shall be responsible for all damages and accidents caused to work due to negligence on his part. No hindrances shall be caused to traffic, during the execution of the work. In case of any accident of the labourers/ contractual staff, the entire responsibility will rest on the contractor and any compensation under such circumstances, if becomes payable, shall be entirely borne by the contractor.

47.5 The contractor, his authorized representative, workmen etc. shall strictly observe orders pertaining to fire precautions prevailing in the area.

47.6 The Contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupants of the adjacent properties and to the public in general. The Contractor shall take all care, as not to damage any other adjacent property or other services running adjacent to the plot. If any damage is done, the same shall be made good by the Contractor at his own cost and to the entire satisfaction of the Engineer-in-Charge. The Contractor shall use such methodology and equipments for execution of the work, so as to cause minimum environmental pollution of any kind during construction, to have minimum construction time and minimum inconvenience to road users and to the occupants of the buildings on the adjacent plot and public in general, etc. He shall make good at his own cost and to the entire satisfaction of the Engineer in Charge any damage to roads, paths, cross drainage works or public or private property whatsoever caused, due to the execution of the work or by traffic brought thereon, by the Contractor. Further, the Contractor shall take all precautions to prevent any pollution of streams and waterways. All waste or superfluous materials shall be carted away by the Contractor, entirely to the satisfaction of the Engineer-in-Charge. Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants / users of adjoining buildings. No claim what so ever on account of site constraints mentioned above or any other site constraints not specifically stated here, shall be entertained from the Contractor. Therefore, the Contractors are advised to visit site and get firsthand information of site constraints. Accordingly, they should quote their tenders. Nothing extra shall be payable on this account.

47.7 It shall be ensured by the contractor that no electric live wire is left exposed or unattended to avoid any accidents in this regard.

47.8 Any trenching and digging for laying sewer lines/water lines/cables etc. shall be commenced by the contractor only when all men, machinery's and materials have been arranged and closing of the trench(s) thereafter shall be ensured within the least possible time.

47.9 For facia work, outer finishing and other RCC works etc. double steel scaffolding having two sets of vertical supports with steel staircase for inspection of works by engineer in charge shall be used. The supports shall be sound and strong, tied together with horizontalpiece over which scaffolding planks shall be fixed.

48.QUALITY ASSURANCE

48.1 The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material/work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-Charge.

48.2 The contractor shall ensure quality control measures on different aspects of construction includingmaterials, workmanship and correctconstruction methodologies and as per IGBC guidelines to be adopted. He shall have to submit quality assurance programme within two weeks of the award of work. The quality assurance programme should include method statement for various items of work to be executed along with check lists to enforce quality control.

48.3 The contractor shall depute Quality Manager exclusively for enforcement of quality control. Such Quality Manager should be a qualified engineer with minimum Eight years of similar experience. For other staff to be deployed for quality assurance, the contractor may refer to clause 32(i) under schedule "F" attached.

48.4 Wherever work is specified to be done through specialized agencies, their names shall be got approved well in advance from Engineer in charge. Failure to do so shall not justify delay in execution of work. It is suggested that immediately after award of work, contractor should negotiate with concerned specialist agencies and send their names for approval to Engineer in charge.

48.5 All materials obtained from Govt. Stores or otherwise shall be got checked by the Engineer-in-Charge or his any authorized supervisory staff on receipt of the same at site before use.

48.6 The contractor shall provide at his own cost suitable weighing and measuring arrangements at site for checking the weight / dimensions as may be necessary for execution of work. The sealed samples are to be handed over to the testing labby contractor in the presence of Junior Engineer/Assistant Engineer-in-Charge of work.

48.7 Samples of various materials required for testing shall be provided free of charges by the contractor. Testing charges, if any, unless otherwise provided shall be born by the contractor. All other expenditure required to be incurred for taking the samples; conveyance, packing etc. shall also be born by the contractor himself.

48.8 The contractor or his authorized representative shall associate in collection, preparation, forwarding and testing of such samples. In case, he or his authorized representative is not present or does not associate him, the results or such tests and consequences thereon shall be binding on the contractor.

48.9 For certain items, if frequency of tests not mentioned in the CPWD Specifications and then relevant IS code shall be followed and tests shall be carried out as per the frequency specified therein.

48.10 If any load testing or special testing is to be done for any sample whose strength is doubtful, the cost of the same shall also be borne by the contractor.

48.11 Samples of all materials and fittings to be used in the work in respect of brand manufacturer and quality shall be got approved from the Engineer-in-Charge, well in advance of actual execution and shall be preserved till the completion of the work. If a particular brand of material is specified in the item of work in Schedule of Quantity, the same shall be used after getting the same approved from Engineer-in-Charge. Wherever brand / quality of material is not specified in the item of work, the contractor shall submit the samples as per approved list of brand names given in the tender document / additional specifications for approval of Engineer-in-charge. For all other items, materials and fittings of ISI Marked shall be used with the approval of Engineer-in-Charge. Wherever ISI Marked material / fittings are not available, the contractor shall submit samples of materials / fittings manufactured by firms of repute conforming to relevant specifications or IS codes and use the same only after getting the approval from NIT approving authority.

48.12 To avoid delay, contractor should submit samples as stated above well in advance so as to give timely orders for procurement. If any material, even though approved by Engineer-in-Charge is found defective or not conforming to specifications shall be replaced / removed by the contractor at his own risk & cost.

48.13 The contractor shall get the source of all other materials, not specified elsewhere in the document, approved from the Engineer-in-Charge. The contractor shall stick to the approved source unless it is absolutely unavoidable. Any change shall be done with the prior approval of the Engineer-in-Charge for which tests etc. shall be done by the contractor at his own cost. Similarly, the contractor shall submit brand/ make of various materials not specified in the agreement, to be used for the approval of the Engineer-in-Charge along with samples and once approved, he shall stick to it.

48.14 The contractor shall get the water tested with regard to its suitability and conforming to the relevant IS Code. The contractor shall obtain written approval from the Engineer-in-Charge before he proceeds by using the same for execution of work. The water testing charges shall be borne by the contractor. If tube well water is not suitable, the contractor shall arrange Municipal water or from any other source at his own cost and nothing extra shall be paid on this account. The water shall be got tested at frequency specified in latest CPWD Specifications / BIS Code.

48.15 The Stone aggregate/stone, sand shall be brought from any quarries subjected to the said materials conform CPWD specifications.

48.16 The gradation of fine sand to be used in plaster work shall be strictly as per CPWD Specifications 2019, conforming to IS:1542-1977. The plastered surface shall be fairly smooth without any undulation of any kind for applying paint/white wash.

48.17 The contractor shall submit shop drawings of staging and shuttering arrangement, aluminum work and other works as desired by Engineer-in-charge for his approval before execution. The contractor shall also submit bar bending schedule for approval of Engineer-in-charge before execution.

48.18 The contractor shall invariably prepare the samples of finishing items i.e. flooring of different types, external & internal finishing i/c collar scheme of paint, tiles in dado, flooring in platforms & staircase, water supply & sanitary fittings and any other item as per direction of Engineer-in-charge. The contractor shall proceed with further finishing items only after getting the samples of these items approved in writing from Engineer-in-charge. Toilets and in case of construction of residential quarters, one sample quarter complete in all shape for each category,

shall be prepared by the contractor and got approved from Engineer-in-charge in writing. The contractor shall be allowed to proceed with further quarters only after getting the sample quarters approved in writing from Engineer-in-charge No extra claim whatsoever beyond the payments due at agreement rates will be entertained from the contractor on this account.

48.19 The construction joints shall the provided in predetermined locations only as decided by Engineer in charge. The cost of shuttering, cement slurry and any bonding agent for these construction joints shall be included in item of Concrete work / RCC work and nothing extra shall be payable on this account to the contractor.

48.20 Water tanks, taps, sanitary, water supply and drainages pipes, fittings and accessories should conform to the specifications provided in bidding documents. The contractor(s) should engage approved, licensed plumbers for the work and get the materials (fixtures/fittings) tested, by the municipal Body/Corporation authorities, wherever required, at his own cost. The Contractor(s) shall submit for the approval to the Engineer-in-Charge the name of the plumbing agency proposed to be engaged by him.

48.21 All the hidden items such as water supply lines, drainage pipes, conduits, sewers etc. are to be properly tested as per the design conditions submitted before covering.

48.22 The contractor shall give a performance test of the entire installation(s) as per standing specifications before the work is finally accepted by making his own arrangements for water supply, electricity etc. and nothing extra whatsoever shall be payable for the same.

48.23 Door/window frames/shutters and other factory-made materials shall be procured from reputed and approved manufacturers or their authorized dealers. Decision of Engineer-in-charge in this regard shall be final and binding.

48.24 The contractor shall render all help and assistance in documenting the total sequence of this project by way of photography, slides, audio-video recording etc. nothing extra shall be payable to the contractor on this account.

49 Scaffolding &Staging:

49.1 Wherever required for the execution of work, all the scaffolding shall be provided and suitably fixed, by the contractor. The scaffolding shall be provided strictly with steel double scaffolding system, suitably braced for stability, with all the accessories, gangways, etc. with adjustable suitable working platforms to access the areas with ease for working and inspection. Single scaffolding system is strictly prohibited and shall invite necessary action. It shall be designed to take all incidental loads. It should cater to the safety features for workmen. Nothing extra shall be payable on this account. It shall be ensured that no damage is caused to any structure due to the scaffolding.

49 The contractor should submit the shop drawings of staging and shuttering for approval of Engineer-in-Charge before actually commencing the execution of work under the item. Nothing extra shall be payable on this account.

50 Procurement of materials:

50.1 All material shall only be brought at site as per program finalized with the Engineer-in-Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.

50.2 The contractor shall procure the required materials in advance so that there is sufficient time for testing of the materials and approval of the same before use in the work.

51 Protection of Existing Services & buildings and Materials:

51.1 Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services. In case temporary supporting of such services is required to facilitate the work, the same shall be done by the contractor at no extra cost.

51.2 In case the existing services are to be shifted permanently, then before dismantling the existing services, alternate/diversion of service lines has to be laid by the contractor so that there is no interruption in use of existing services. The contractor has to plan the alternate suitable route for diversion/shifting of service lines and get the same approved from the Engineer-in-Charge before starting shifting of services. Nothing extra shall be paid except the payment of dismantling and laying of new service lines as per conditions of contract.

51.3 All fossils, coins, articles of value of antiquity, structures and other remains or things of geological or archaeological interest discovered on project location during excavation/construction shall be the property of the Government, and shall be dealt with as per provisions of the relevant legislation. The contractor will take reasonable precaution to prevent his workmen or any other persons from removing and damaging any such article or thing. He will, immediately upon discovery thereof and before removal acquaint the Engineer-in-charge of such discovery and carry out the official instructions of Engineer-in-charge for dealing with the same, till then all work shall be carried out in a way so as not to disturb/ damage such article or thing.

51.4 The contractor shall be responsible for the watch and ward / guard of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the client department. No extra payment shall be made on this account.

51.5 The contractor shall be fully responsible for the safe custody of materials brought by him/ issued to him even though the materials may be under double lock key system.

52 Rates and other conditions for payment:

The rates quoted by the Contractor are deemed to be inclusive of the following:

52.1 Site clearance, setting out work, profile, establishment of reference bench mark(s), taking spot levels, construction of all safety and protection devices, barriers, barricading, signage, laboursafety, welfare & training measures, preparatory works, working during monsoon, working at all depths, height, lead, lift and location etc. until / unless specified otherwise, implementation of green building norms to achieve desired IGBC Ratings (Equivalent to GRIHA 3 Star Rating) etc. and any other incidental works required to complete this work. Nothing extra shall be payable on this account. Payment for centering & shuttering, however, if required to be done for floor heights greater than 3.50m shall be admissible at rates arrived in accordance with clause 12 of the agreement if not already specified.

52.2 For works below ground level the contractor shall keep that area free from water. If dewatering or bailing out of water is required the contractor shall do it and nothing extra shall be paid except otherwise provided in the items of schedule of quantities.

52.3 Any legal or financial implications resulting out of disposal of earth shall be sole responsibility of the contractor. Nothing extra over the schedule shall be paid on this account.

52.4 All labour, material, tools and plants and other inputs involved in the execution of the item.

52.5 Providing sunk flooring in bath-rooms, kitchen, etc.

52.6 Performance test of the entire installation(s) before the work is finally accepted.

52.7 Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been built in the items.

52.8 The rates quoted by the tenderer, shall be inclusive of all taxes including GST and levies applicable in respect of this contract shall be payable by the contractor and Government will not entertain any claim whatsoever in respect of the same.

52.9 For completing the work in time, the Contractor might be required to work in two or more shifts (including night shifts). No claim whatsoever shall be entertained on this account, not with-standing the fact that the Contractor may have to pay extra amounts for any reason, to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour and other statutory bodies regulations and the agreement entered upon by the Contractor with them. 55.10 The Contractor shall keep himself fully informed of all acts and laws of the Central & State Governments, all orders, decrees of statutory bodies, tribunals having any jurisdiction or authority, which in any manner may affect those engaged or employed and anything related to carrying out the work. All the rules & regulations and bye-laws laid down by Collector / MC etc. and any other statutory bodies shall be adhered to, by the contractor, during the execution of work. The Contractor shall also adhere to all traffic restrictions notified by the local authorities. It is clarified that the extra sewerage charges (one time charges for commencement of work) required to be paid to the Municipal Corporation / other statutory bodies shall be paid by the department and need not be considered by the contractor. The water charges (for municipal water connection as well as tanker water) shall be borne by the contractor. Also, if the contractor obtains water connection for the drinking purposes from the municipal authorities or any other statutory body, the consequent sewerage charges shall be borne by the contractor. All statutory taxes, levies, charges (including GST, water and sewerage charges, charges for temporary service connections and / or any other charges) payable to such authorities for carrying out the work, shall be borne by the Contractor. The Contractor shall arrange to give all notices as required by any statutory / regulatory authority and obtain all requisite licenses wherever required and shall pay to such authority all the fees that are required to be paid for the execution of work. He shall protect and indemnify the Department and its officials & employees against any claim and /or liability arising out of violations of any such laws, ordinances, orders, decrees, by himself or by his employees or his authorized representatives. Nothing extra shall be payable on these accounts. The fee payable to statutory authorities for obtaining the various permanent service connections and Occupancy Certificate for the building shall be borne by the Department

53 Testing of Materials:

(i) Laboratory at site: The contractor shall establish a testing lab at site and provide testing equipment and materials for the field tests mentioned in the list of mandatory tests given in CPWD Specifications 2019 and other relevant specifications mentioned. Nothing extra shall be payable to him on this account. All the testing equipment must be calibrated as per relevant code(s). Contractor shall always keep calibration certificates and produce before Engineer-in-charge for record purpose whenever asked.The representatives of the department shall be at liberty to inspect the testing facilities at site and conduct testing at random in consultation with Engineer in charge. The contractor shall provide all necessary facilities for the purpose. The laboratory shall be equipped, inter alia, with the following equipment:

a) Balances:

i) 7 kg to 10 kg capacity, semiself-indicating type – Accuracy 10 gm.
ii) 500 gm capacity, semiself-indicating type Accuracy 1 gm.
iii) Pan Balance- 5 kg Capacity- Accuracy 10 gm.

b)-Ovens- Electrically operated, thermostatically controlled up to 1100C- Sensitivity 10C.

c) Sieves: as per IS: 460

i) IS Sieves – 450 mm internal dia of sizes 100 mm, 80 mm, 63 mm, 50 mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm, complete with lid and pan.
ii) IS Sieves – 200 mm internal dia (brass frame) consisting of 2.36 mm, 1.18 mm, 500 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan.

d) Sieve shaker capable of 200 mm and 300 mm dia sieves, manually operated with timing switch assembly.

e) Equipment for slump test- slump cone, steel plate, taping rod, steel scale, scoop.

f) Equipment for concrete testing

i)	Concrete cube moulds 15x15x15cm	: 18 Nos.
ii)	Pruning Rods 2Kg weight length 40cm and ramming face 25mm	: 1 No.
iii)	Extra Bottom plates for 15cm cube mould	: 6 Nos.
iv)	Standard Vibration table for cubes	: 1 No
v)	Dial gauges 25 mm travel- 0.01 mm/division Least count-	: 1 No.
vi)	Automatic Compression testing machine of 100 tonne capacity.	: 1 No.
vii)	Ultrasonic Pulse Velocity Test Equipment (For concrete)-	: 1 No.

g) Any other testing equipment as desired by Engineer-in-charge

Not less than 90% tests for material be performed at site lab with above stated equipment's, however at least 10% testing of materials shall be got done from external laboratories. However, for the tests to be carried out by the external laboratories, the contractor shall supply free of chargeall the materials required for testing, including transportation. **If the tests which were to be Conducted in the site laboratory are conducted in other laboratories for any the reasons the cost of such tests shall be borne by the contractor.**

(ii)Other Laboratories:

- All test which can be performed in the site/ field lab except that at least 10% testing of materials shall be got done from external laboratories. If contractor does not establish his own field Lab, 100% testing as required shall be got done from lab stated below NIT/IIT. **For the tests to be carried out by the external laboratories, the contractor shall supply free of charge all the materials required for testing, including transportation.**

- **All expenditure to be incurred for testing of samples e.g. packaging, sealing, transportation, loading, unloading, documentation etc. i/c testing charges shall be borne by the contractor.**

(iii) Outside Testing of the material will be done in following institute/laboratory

a. IIT
b. NIT
c. Govt. Engineering College
d. Any other Govt. Institute/NABL Lab as approved by CE/ADG.

h) The contractor or his authorised representative shall associate in collection, preparation, transportation, submission/ forwarding and testing of such samples as per the frequency of test stipulated in the contract specifications or as considered necessary by the Engineer-inCharge. In case he or his authorised representative is not present or does not associate himself, the Engineer-in-Charge shall do the needful for getting the samples collected and tested; the result of such tests and consequences thereof shall be binding on the contractor. All expenditure required for collection, preparation, transportation, forwarding and testingthe samples to the laboratory will also be recovered from the contractor.

i) For frequency& procedure of testing of material / ingredients:CPWD specification 2019 (Vol-I & II), relevant MoRTH Specification, IS code, BIS Code, Standard Practices or manufacturer specifications etc. shall be followed.

j) Sampling of Materials: Sample of construction materials, fittings and other articles required for execution of work shall be got approved from the Engineer-in-Charge. Articles manufactured by companies of repute and approved by the Engineer-in-Charge shall only be used. Articles bearing BIS/ IS certification mark shall be used in case the above are not available, the quality of samples brought by the contractor shall be judged by standards laid down in the relevant BIS/ IS specifications. All materials and articles brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-Charge which shall be preserved till the completion of the work. The contractor shall ensure quality construction in a planned and time bound manner. Any substandard material/work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-Charge. BIS/ ISI marked Products /materials except otherwise specified shall be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/materials. Wherever BIS marked Products are brought to the site of work, the contractor shall if required, by the Engineer-in-Charge furnish manufacturers test certificate or test certificate from approved testing laboratory to establish that the material produced by the contractor for incorporation in the work satisfies the provisions of BIS/ IS codes relevant to the material and/or the work done. The contractor shall be fully responsible for the safe custody of the materials issued to him even if the materials are in double lock and key system.

54 **Maintenance of Site Registers:**

(i) All the Site Registers including Tests registers for tests to be carried out at construction site or in outside laboratories shall be maintained by the contractor which shall be issued to the contractor by Engineer-in-Charge in the same manner as being issued to CPWD field staff.

(ii) The various registers to be issued to the contractor are:

- Materials at site account register.
- Site order Book
- Cement register.
- Master test registers.
- Cube test register.
- Paint register.
- Inspection register.
- Drawing register.
- Hindrance register and other required, bitumen, road roller etc.

(iii) All the entries in the registers will be made by the designated engineering staff of the contractor and same should be regularly reviewed by JE/AE/EE.

(iv) All the registers of tests carried out at construction site or in outside laboratories shall be maintained by the contractor which shall be issued to the contractor by Engineer-in-Charge in the same manner as being issued to CPWD field staff.

(v) All samples of materials including cement concrete cubes shall be taken jointly with contractor by JE and out of this at least 50% samples shall be taken in presence of AE in charge. If there is no JE, all samples of materials including cement concrete cubes shall be taken by AE jointly with contractor. All the necessary assistance shall be provided by the contractor. Cost of sampling & testing are to be borne by the contractor and he shall be responsible for safe custody of samples to be tested at site/ outside laboratory.

(vi) All the tests in field lab at construction site shall be carried out by the Engineering staff deployed by the contractor and shall be 100% witnessed by JE and 50% of tests shall be witnessed by AE –in-Charge. At least 10% of the tests are to be witnessed by the Executive Engineer. Minimum 10% of all samples should be tested in outside approved laboratory/ Govt. Engineering colleges.

(vii) Submission of copy of all test registers, material at site register along with each alternate running account bill and final bill shall be mandatory. These registers should be duly checked by AE (P) in division office.

55 Ultrasonic Pulse Velocity Method of Test for RCC

(i) The under lying principle of assessing the quality of concrete is that comparatively higher velocities are obtained when the quality of concrete in terms of density, homogeneity and uniformly is good. The consistency of the concrete as regards its general quality gets established. In case of poorer quality lower velocities are obtained. If there are cracks, voids or flaws inside the concrete which come in the way of transmission of pulse, lower velocities are obtained.

(ii) **Velocity criterion for Concrete Quality Grading:** The quality of concrete in terms of uniformity, incidence or absence of internal flaws, cracks and segregation etc. indicative of the level of workmanship employed, can thus be assessed using the guidance given in table below, which have been evolved for characterizing the quality concrete in structure in term of the ultrasonic pulse velocity.

S. No.	Pulse Velocity by Cross Probing (Km/Sec.)	Concrete Quality Grading
1	Above 4.5	Excellent
2	4.5 to 3.5	Good
3	3.5 to 3.0	Medium
4	Below 3.0	Doubtful

Note: In Case of "doubtful" quality it may be necessary to carry further tests

(iii) Pulse velocity method of test of concrete is to be conducted for CPWD works as a routine test. The acceptance criteria as per the above table will be applicable which is as per IS 13311 (part 1): 1992. From the above "Good" and "Excellent" grading are acceptable and below these grading the concrete will not be acceptable.

(iv) 5% of the total number of RCC members in each category i.e. beam, column, slab and footing may be tested by UPV test method for establishing quality of concrete. It is suggested that test be conducted on RCC beam near joint with column, on RCC column

~~near joint with beam, on RCC footings and rafts. On RCC rafts a suitable grid can be worked out for determining number of tests. In addition, doubtful areas such as honeycombed locations, locations, where continuous seepage is observed, construction joints and visible loose pockets will also be tested.~~

~~(v) The test results are to be examined in view of the above acceptance criteria "Good" and "Excellent" and wherever concrete is found with less than required quality as per acceptance criteria, repairs to concrete will be made. Honeycombed areas and loose pockets will be repaired by grouting using Portland Cement Mortar/Polymer Modifies Cement Mortar /Epoxy Mortaretc. after chipping loose concrete in appropriate manner. In areas where concrete is found below acceptance criteria and defects are not apparently visible on surface, injecting approved grout in appropriate proportion using epoxy grout /acrylic Polymer modified cements slurry made with shrinkage compensating cement / plain cement slurry etc. will be resorted to for repairs. (refer relevant chapters from CPWD Hand Book on Repairs and Rehabilitation of RCC Buildings). Repair to concrete will be done till satisfactory results are obtained as per the acceptance criteria by retesting of the repaired area. If satisfactory results are not obtained dismantling and relaying of concrete will be done.~~

56 **Removal of Rejected / Sub-standard Materials:**

The following procedure should be followed in case of removal of rejected/sub-standard materials from the site of work.

a) Whenever any material brought by the contractor to the site of work is rejected, entry thereof should invariably be made in the site order book under the signature of the AE/AEE giving approximate quantity of such materials.

b) As soon as the material is removed, a certificate to that effect may be recorded by the AE/AEE against the original entry, giving the date of removal a mode of removal i.e. whether by truck, carts or by manual labour. If removal is by truck, the registration number of the truck should be recorded.

c) When it is not possible for the AE/AEE to be present at the site of work at the time of actual removal of the rejected/sub-standard materials from the site the required certificate should be recorded by the Junior Engineer and the AE/AEE should countersign the certificate recorded by the Junior Engineer.

57 The contractor shall submit 'Method Statement' for the approval soon after the award of work. 'Method Statement' is a statement by which the construction procedures for important activities of construction are stated, checked and approved. Method Statement shall have description of the item with elaborate procedures in steps to implement the same. The specification of the materials involved their testing and acceptance criteria, equipments to be used, precautions to be taken, mode of measurements etc.

58 Barriar Free Construction:

In order to achieve barrier free norms for diffrentlyabeled person, all norms to be followed for diffrentlyabeled toilet provisions and other norms for easy movement of those person.

SPECIAL CONDITIONS FOR CEMENT & STEEL

- The contractor shall, at his own expense procure and provide all materials including cement and steel required for the work.
- The contractor shall procure all the materials in advance so that there is sufficient time to testing and approving of the materials and clearance of the same before use in work.
- All materials brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use.
- The contractor shall also employ necessary watch and ward establishment for the safe custody of materials at his own cost.
- Contractor has to produce manufacturers test certificate and challan for each lot of cement & steel procured at site.
- **CONDITIONS FOR CEMENT:-**

The contractor shall procure 43 grade ordinary Portland Cement (OPC) conforming to IS: 8112 /Portland Pozzolona Cement (PPC) conforming to IS:1489 (Part-1) as required in the work from reputed manufacturers of cement as mentioned in **"List showing preferred brands / Manufacturers /Makes**" or from any other reputed cement manufacture having a production capacity not less than 1 million Ton per annum as approved by **Chief Engineer, CPWD, Raipur** or his successor. The cement of approved make as aforesaid in 50 kg bags bearing manufacturer's name and ISI marking, along with manufacturers test certificate for each lot shall be procured by the contractor. Portland Pozzolona Cement is to be used for RCC works only subject to fulfillment of conditions of circular No. CDO/SE(RR)/ Fly ash (MAN) 02 dated 09.04.09. However, if the contractor uses higher grade of cement or uses OPC only nothing extra shall be paid. The use of PPC shall be regulated as per the conditions stipulated in the circular dated 09.04.2009.

a) IS:456-2000Codeof Practice for Plain and Reinforced Concrete (as amended upto date) shall be followed in regard to Concrete Mix Portion and its production as under:

(i) The concrete mix design shall be done as "Design Mix Concrete" as prescribed in clause-9 of IS456 code with latest amendments.

(ii) Concrete shall be manufactured in accordance with clause 10 of above mentioned IS:456 with latest amendments covering quality assurance measures both technical and organizational, which shall also necessarily require a qualified Concrete Technologist to be available during manufacture of concrete for certification of quality of concrete.

b) The mechanical properties such as modulus of elastic city, tensile strength, creep and shrinkage of fly ash mixed concrete or concrete using fly ash blended cements (PPCs) are not likely to be significantly different and their values are to be taken same as those used for concrete made with OPC.

c) To control higher rate of carbonation in early ages of concrete both in fly ash admixed as well as PPC based concrete, water/binder ratio shall be kept as low as possible, which shall be closely monitored during concrete production.

If necessitated due to low water/binder ratio, required work ability shall be

achieved by use of chloride free chemical admixtures conforming to IS:9103. The compatibility of chemical admixtures and super plasticizers with each set OPC, fly ash and/or PPC received from different sources shall be ensured by trails.

d) In environment subjected to aggressive chloride or sulphate attack in particular, use of fly ash admixed or PPC based concrete is recommended. In case, where structural concrete is exposed to excessive magnesium sulphate, fly ash substitution/content shall be limited to 18% by weight. Special type of cement with low C_3A content may also be alternatively used. Durability criteria like minimum binder content and maximum water/binder ratio also need to be given due consideration is such environment.

e) Wet curing period shall be enhanced to a minimum of 10 days or its equivalent. In hot & arid regions, the minimum curing period shall be 14 days or its equivalent.

f) Subject to General Guidelines detailed out as above, PPC manufactured conforming to IS:1489 (Part-I) shall be treated at par with OPC for manufacture of Design Mix Concrete for structural use in RCC.

g) Till the time, BIS makes it mandatory to print the % age of fly ash on each bag of cement, the certificate from the PPC manufacturer indicating the same shall be insisted upon before allowing use of such cements in works.

h) While using PPC for structural concrete work, no further admixing of fly ash shall be permitted.

i) The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer-in-charge.

j) The cement godown of the capacity to store a minimum of 2000 bags of cement shall be constructed by thecontractoratthesite ofwork for which no extra payment shall be made. Double lock provision shall be made to the door of the cement godown. The keys of one lock shall remain with the Engineer-in-charge or hisauthorizedrepresentative and the keys of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-charge at any time.

k) The cement shall be got tested at a frequency of one test for 100 MT or part thereof, by Engineer-in-charge and shall be used on work only after test results have been received. The contractor shall supply free of charge the cement required for testing. The cost of test shall be borne by the contractor.

l) The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in clause 38 of the contract and shall be governed by conditions therein.

m) Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-charge.

n) Damaged cement shall be removed from site immediately by the contractor

on receipt of notice in writing from the Engineer-in-charge. If he does not do so within three days of receipt of such notice, the Engineer-in-charge shall get it removed at the cost of the contractor.

o) Cement should be kept in godowns under double locks and keys and its consumption account in variably maintained, whether the cement is supplied departmentally or arranged by the contractor. A register should b e maintained at the site for this purpose. This register should contain the columns as shown in Annexure-30.(SOP for CPWD Works Manual 2024).

The pages of the register should be machine numbered and each page initialed by the EE. The cement godown and the register are required to be checked by the AE/EE in-charge of the work as per following schedule.

i) At least weekly or fortnightly, respectively in case of works at the Headquarters of AE/EE.

ii) Whenever they visit the site of work in case of works located outside the Sub-Divisional/Divisional Head Quarters.

iii) In case contractor is permitted to use Portland Pozzolona cement (PPC) then:-

~~a. The base price of cement OPC (43 Grade) shall be reduced by Rs. 500.00 per M.T.~~

b. The recovery @ Rs. 25 (Rupees Twenty Five) per bag of 50Kg shall be made in each running account and final bill for using cement (PPC) instead of cement (OPC) 43 grade.

- **SPECIAL CONDITIONS FOR TMT STEEL/Low Alloy Steel:-**

The Contractor shall procure IS marked TMT reinforcement bars of various grades of Bar Set I conforming to the criteria mentioned in OM No. CSQ / SE (TAS) / EE(TAD) / Steel /2021/50-H dated 17.02.2021 & in the OM No. CSQ/SE(TAS)/Steel/2024/262-H dated 14/08/2024 issued by CPWD Directorate and this tender document only from Reputed Steel manufacturers such as SAIL, Tata Steel Ltd, RINL, Jindal Steel & Power Ltd and JSW Steel Ltd.

a) For reinforced cement concrete or pre-stressed concrete works, the reinforcement bars shall consist of the following grades conforming to IS 1786: 2008 (Indian Standard specification for high strength deformed steel bars and wires for concrete reinforcement): Fe 500D or more grade.

b) The contract shall obtain manufacturer's certificate stating the process of manufacturer, chemical composition and test sheet giving result of each mechanical test applicable to the material purchased and submit it to the Engineer-in-Charge. Each test certificate shall indicate the number of the cast to which it applies corresponding to the number or identification mark to be found on the material.

c. The steel reinforcement bars shall be brought to the site in bulk supply of ten tones or more as decided by the Engineer-in-charge.

d. The steel reinforcement shall be **stored by the contractor at site of work in such a way as to prevent distortion and corrosion** and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking. All reinforcement bars should be made corrosion resistant by applying suitable coating so as to be fit for use in coastal region. Nothing extra shall be paid on this account.

e. For checking nominal mass, tensile strength, bend test, re-bend test etc. specimen of sufficient length shall be cut from each size of the bar at random at frequency not less than that specified below:

Size of bar	For consignment 100tonnes below	For consignment above 100tonnes
Under 10 mm dia bars	One sample for each25 Tones or part thereof.	One sample for each 40 Tones or part thereof.
10mm to 16mm Dia bars	One sample for each 45 tonnes or part thereof.	One sample for each 50 Tones or part thereof.
Over 16 mm dia bars	One sample for each 50tonnes or part thereof.	One sample for each 75 Tones or part thereof.

f. The contractor shall supply free of charge the steel required for testing including transportation to testing laboratories. The cost of tests shall be borne by the contractor.

g. The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as procedure prescribed in **clause 38** of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations leading to under designing of the structural. The work shall be summarily rejected, otherwise recovery at the rate so prescribed shall be made after ensuring structural soundness and stability. In case of excess consumption no adjustment need to be made.

h. The steel brought to site and the steel remaining unused shall not be removed from site without the written permission of the Engineer-in-charge.

i. The contractor shall submit original vouchers from the manufacturer for the total quantity of steel supplied under each consignment to be used in the work. All consignment received at the work site shall be inspected by the Site staff along with the relevant documents before acceptance. The contractor shall obtain Original Vouchers and Test Certificates and furnish the same to the Engineer-in-Charge in respect of all the lots of steel brought by him from approved supplier to the site of work. The original vouchers and test certificates shall be defaced by the Site staff and kept on recording the site office.

j. Reinforcement including authorized spacer bars and laps shall be measured in length of different diameters as actually (not more than as specified in the drawings) used in the work nearest to a centimeter. Wastage and unauthorized overlaps shall not be measured.

k. The standard sectional weights referred to as in Table 5.4 in para 5.3.4 in CPWD Specifications will be considered for conversion of length of various sizes of M.S. Bars, Steel Bars and T.M.T. bars in to Standard Weight.

l. Records of actual Sectional weights shall also be kept dia-wise and lot-wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The decision of the Engineer-in-Charge shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as Derived Actual Weight. However for the stipulated issue of steel reinforcement up to and including 10mm diameter bars, the actual weight of steel issued shall be modified to take into account the variation between the actual and the standard coefficients and the contractors' accounts will be debited by the cost of modified quantity.

m. **(a)** If the Derived Weight as in sub-para above is less than the Standard Weight as in Sub-para above then the Derived Actual Weight shall be taken for payment provided, if it is within the following tolerances specified in IS 1786-2008, otherwise whole lot will be rejected.

Tolerances on Nominal Mass

Nominal Size in mm	Tolerance on Nominal mass Percent		
	Batch	Individual Sample*	Individual sample for oil**
a)Upto and including10	±7	-8	±8
b)Over10 upto and Including 16	±5	-6	±6
c)Over16	±3	-4	±4

***** For individual sample plus tolerance is not specified.
******For coils batch tolerance is not specified.

(b) If the Derived Actual Weight is found more than the Standard Weight, the Standard Weight as per in sub-para above shall be taken for payment. In such case nothing extra shall be paid for the difference between the Derived Actual Weight and the Standard Weight. The standard weight of TMT bars in CPWD specification will be considered for CRS bars standard weight.

1. The following procedure should be followed in case of removal of rejected/sub-standard materials from the site of work.

i) Whenever any material brought by the contractor to the site of work is rejected, entry thereof should invariably be made in the site order book under the signature of the AE/AEE giving approximate quantity of such materials.

ii) As soon as the material is removed, a certificate to that effect may be recorded by the AE/AEE against the original entry, giving the date of removal a mode of removal i.e. whether by truck, carts or by manual labour. If removal is by truck, the registration number of the truck should be recorded.

iii) When it is not possible for the AE/AEE to be present at the site of work at the time of actual removal of the rejected/sub-standard materials from the site the required certificate should be recorded by the Junior Engineer and the AE/AEE should countersign the certificate recorded by the Junior Engineer.

*** Jurisdiction of Courts:-**

The Court of the place from where the letter of award of work has been issued shall have the jurisdiction to decide any dispute arising out of or in respect of the contract. In the case of Arbitration, if arise, the seat of Arbitration shall be considered Raipur.

8. (i) **CPWD does not have funds of its own and it carries out the works of client departments from their funds (deposit, budgetary, authorization). The CPWD is making payments to the contractors after getting budget / authorization / deposit from various Ministries / Client Departments. The payment to the contractor can be done only on availability of funds for that work from client department and in case of delay**

in getting funds from Ministry / Client Department, CPWD will not be responsible for delay in payment and no any extra compensation on this account shall be granted apart from specified elsewhere in this document. The contractor has to quote his tender accordingly considering this aspect.

(ii) In case of delay in release of payment of R.A. bill's by the Deptt. Due to non-availability of funds or other reasons, contractor has to pay all labour / workers engaged on the work shall be paid on time without any delay, delay in payment to the contractor shall be governed by Clause 7 of GCC, CPWD, 2023.

PARTICULAR SPECIFICATIONS

1.0 EARTH WORK:-

1.1 The work shall be done in accordance with CPWD Specifications - 2019- Vol.I& Vol. II and National Building Code 2016 with upto date correction slips.

1.2 Excavation shall be undertaken to the width of the Basement/Retaining wall footing including necessary margins for construction operation as per drawing or directed otherwise. Where the nature of soil or the depth of the trench and season of the year, do not permit vertical sides, the contractor at his own expense shall put up the necessary shoring, strutting and planking or cut slopes with or without steps, to a safer angle or both with due regard to the safety of personnel and works and to the satisfaction of the Engineer –in - charge, Measurement of plan area of excavation for payment shall be permitted only. Nothing extra shall be paid for making steps and slopes etc. as required.

1.3 The contractor shall make at his own cost all necessary arrangements for maintaining water level, in the area where works are under execution low enough so as not to cause any harm to the works or problems in carrying out with the execution and the rates for all items of work shall be considered as inclusive of pumping out or bailing out water, if required, for which no extra payment shall be made. This will include water coming from any source, such as rains, accumulated rainwater, floods, leakages from sewer and water mains, sub soil water table being high or due to any other cause whatsoever. The contractor shall make necessary provision of pumping, dredging, and bailing out water coming from all above sources and excavation and other works shall be kept free of water by providing suitable system approved by the Engineer-in-charge.

1.4 Sub-soil water table at work site is reported to be about 10m below the general ground level. The water level may vary due to rainy season or due to dewatering etc. In order to avoid possibility of basement floor of building being getting uplifted/damaged due to water pressure, thecontractor shall make arrangement for lowering the ground water table below the proposed foundation level as approved by Engineer-in-charge. Sub soil water table shall be maintained at least 50 cm below the P.C.C. level during laying of P.C.C., waterproofing treatment, laying of basement raft and beams including filling of earth/sand under the basement floor. The water table shall not be allowed to rise above base of raft level until completion of outer retaining walls including waterproofing of vertical surface of walls and back filling along the walls up to ground level and until the structure attains such height to counter balance the uplift pressure. However, the contractor should inspect the site and make his own assessment about sub-soil water level likely to be encountered at the time of execution and quote his rates accordingly. Rate of all items are inclusive of pumping out or bailing out water, if required. Nothing extra on this account whatsoever shall be paid to him unless otherwise specified. The sequence of construction shall be got approved by the Engineer-in-charge.

1.5 All the major excavation shall be carried out by mechanical excavator. No extra payment shall be made for that.

1.6 Top 30 cm excavated soil to be preserve for horticulture purpose.

- Disposal of Surplus earth: All excavated material including excavated earth declared as surplus and not useful, shall be removed from the site by the contractor within the scope of agreement. The removal of surplus Material shall only be undertaken by the

contractor when instructions in this regards are obtained from Engineer in charge. Dumping shall be at designated place identified by the contractor. Contractor shall also obtain necessary permissions / approvals / authorization from the competent authority of local body / traffic / police as the case may be for removal of excavated earth/materials. No payment/fees on this account shall be entertained by the department

1.7 The rate sare inclusive for all depths & nothing extra shall be paid for additional lift etc.

2.0 CONCRETE WORK:-

2.1 Plain Cement Concrete / Lean Concrete in required thickness as per design shall be laid below the raft and all type foundation works, below kerb stone, under floors or wherever required as per CPWD Specifications Volume - I & II with correction slips up to the last date of submission of tender documents.

- Wet curing period shall be enhanced to a minimum of 10 days or its equivalent. In hot and arid regions, the minimum curing period shall be 14 days or its equivalent.

- While using PPC for structural concrete work, no further admixing of fly ash shall be permitted.

2.2 For non-scheduled items, the decision of the concerned Chief Engineer or Superintending Engineer (stipulated in station-wise respective Schedule-F) regarding theoretical quantity of the cement which should have been actually used shall be final and binding on the contractor.

2.3 Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-Charge.

2.4 In case the contractor brings surplus quantity of cement the same after completion of the work will be removed from the site by the contractor at his own cost after approval of the Engineer-inCharge.

3.0 R.C.C. / C.C WORK (DESIGN MIX CONCRETE):-

3.1 The RCC work shall be done with Design Mix Concrete. Wherever letter M has been indicated, the same shall imply for the Design Mix Concrete. The Design Mix Concrete will be designated based onthe principles given in IS: 456, 10262 & SP 23. The condition and specifications stated herein shall have precedence overall conditions and specifications stated in relevant I.S codes/CPWD specifications. The concrete mix shall be designed for specified target mean compressive strength in order to ensure that the work test results do not fall below the acceptance criteria specified for the concrete mix. The Contractor shall design mixes for each class of concrete indicating that the concrete ingredients and proportions will result in concrete mix meeting requirements specified. The mix shall be designed with quantities of admixture / plasticizer proposed to achieve required workability & strength. The specifications mentioned here in below shall be followed for Design Mix Concrete.

3.2 The sources of coarse aggregate, fine aggregate & water to be used in concrete work shall be identified by the contractor & he will satisfy himself regarding their conforming to the relevant specification & their availability before getting the same approved by the Engineer-in-Charge.

3.3 **Coarse Aggregate: -** As per CPWD Specifications - 2019 - Vol.I& Vol. II with upto date correction slips.

3.4 **Fine Aggregate:**- As per CPWD Specifications-2019-Vol.I &Vol.II with upto date correction slips.

3.5 **Water:**-It shall confirm to requirements laid down in IS:456-2000/ CPWD Specifications -2019-Vol.I &Vol.II with upto date correction slips.

- The contractor shall make its own arrangements for storing of water. Care shall be taken to ensure that water is not contaminated anyway.
- For RMC concrete, quality of water shall be got tested at concrete producing plant at every 3 months intervals from the reputed approved laboratory/any Government institutions as mentioned or as approved by Engineer in charge.

3.6 **Cement:** - Cement arranged by the contractor will be conforming to IS 456: 2000 as mentioned in the additional condition for cement attached with tender documents. However, if higher grade of cement is used by the contractor nothing extra shall be paid on this account.

3.7 **Admixtures / Plasticizers:** - The admixture shall confirm to IS: 9103, wherein required, the admixture of approved quality and approved make only shall be used to attain the required workability. Nothing extra shall be paid for use of admixtures.

3.8 **Grade of Concrete:** - The compressive strength of various grades of concrete shall be given as below:-

GRADE DESIGNATION	COMPRESSIVE STRENGTHON 15cm CUBES min. 7DAYS(N/mm2)	SPECIFIED CHARACTERISTIC COMPRESSIVE STRENGTH AT 28 DAYS AT (N/m m2)	Minimum Cement to be used in kg Per cum
(i)M-20	As Per Design	20	300
(ii)M-25	As Per Design	25	330
(iii)M-30	As Per Design	30	340
(iv)M-35	As Per Design	35	350
(v) M -40	As Per Design	40	360
(vi) M-50	As Per Design	50	410

NOTE:-

i) In the designation of a Concrete mix letter M refers to the mix and the number of the specified characteristic compressive strength of 15cm – Cube at 28 days expressed in N/mm2.

ii). Water cement ratio & slump shall be as per IS:456:2000

3.9 The contractor shall engage one of the following approved laboratories/ test house at their own expenses for designing the concrete mix in accordance with relevant IS Codes and to conduct laboratory test to ensure the target strength and workability criteria for a given grade of concrete.

i) IITs
ii) NITs
iii) Govt. Engineering Colleges.
iv) Any other Govt. Institute/NBAL accrediateLaboratory as approved by **ADG/CE Raipur.**

3.10 The various ingredients for mix design / laboratory tests shall be sent to the lab /test houses through the Engineer-in-Charge and the samples of such aggregates sent shall be preserved at site.

3.11 The contractor shall submit the report on design mix from any of above approved laboratories for approval of Engineer-in-Charge within30 days from the date of issue of letter of acceptance of the tender. No concreting shall be done until the design mix is approved. In case of white Portland cement and the likely use of admixtures in concrete with ordinary Portland/white Portland cement, the contractor shall design and test the concrete mix by using trial mixes with white cement and/ or admixtures also, for which nothing extra shall be payable.

3.12 In case of change of source or characteristic properties of the ingredients used in the concrete mix during the work, a revised laboratory mix design report conducted at laboratory established at site shall be submitted by the contractor as per the direction of the Engineer-in-Charge.

- In case design mix report is showing more cement than the minimum cement specified in the table above, no extra payment on account of more cement used shall be made to the agency. The contractor may put in his efforts to improve the quality of other ingredients such as coarse and fine aggregate so as to contain cement near to minimum specified. The work shall be executed as per approved design mix report and results received based on trial mixes.

3.13 **Trial Batches**

3.13.1 The designed mix proportion shall be checked for target mean compressive strength by means of trial batches.

3.13.2 The quantities of materials for each trial mix shall be sufficient for at least six Specimens (cubes) and the concrete required for carrying out workability tests.

3.13.3 The work ability of trial mix No.1 shall be measured and mix shall be carefully observed for freedom from segregation, bleeding and its finishing characteristics. The water content, if required, shall be adjusted corresponding to the required changes in the work ability.

3.13.4 With the modified water content, the mix pro-portions shall be recalculated by keeping with water cement ratio unchanged. The mix proportions, as modified, shall form the Trial Mix No. 2and tested for the specified strength and workability.

3.13.5 In addition, trial mix No. 3 and 4 shall be designed by keeping water contents same as that determined for trial mix 2 but varying the water cement ratio + 10 percent of the specified value and tested for their design characteristics.

3.13.6 All cost of mix designing and testing connected therewith including charges payable to the laboratory shall be borne by the Contractor including redesigning of the concrete mix wherever required and directed by Engineer-in-Charge.

3.14 **Approval of Design Mix:-**

The mix design for a specified grade of concrete shall be done for a target mean compressive strength

$t_{ck}=f_{ck}+1.65s$

Where f_{ck}= Characteristic compressive strength at 28 days.

s =Standard deviation which depends on degree of quality control.

The degree of quality control for this work is “good” for which the standard deviation(s) obtained for different grades of concrete shall be as follows:-

GRADE OF CONCRETE	STANDARDDEVIATION(S)
M-10	3.5
M-15	3.5
M-20	4.0
M-25	4.0
M-30	5.0
M-35	5.0
M-40	5.0

Minimum three sets of separate preliminary test shall be carried out for each trial batch of concrete mix. Each test shall comprise six specimens and only one test set of six specimens shall be made on any particular day. Out of the six specimen of each set, three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength to be attained at 28 days. While the design mix shall be approved only on the basis of test strength of 28 days. The design mix shall be considered satisfactory and approval if at least three preliminary test-sets individually satisfy the following strength and work ability criteria.

(a) The average strength of each test sets is not less than the specified target mean compressive strength (Tck), (fck + 0.825 S) or (fck – 3) N/sqmm.

(b) The strength of any specimen cube is notlessthan0.85tck.

(c) The concrete mix is required degree of workability and acceptance concrete finish.

3.15 **Charges for Design Mix:**

All cost of mix designing and testing connected therewith including charges payable to the laboratory shall be borne by the Contractor.

3.16 **Work Strength Test:-Test Specimen:-**

Work strength test shall be conducted in accordance with IS: 516 on random sampling. Each test shall be conducted on six specimen, three of which shall be testedat7 days and remaining three at 28 days.

Test Results ofSamples:-

The test results of the sample shall be the average of the strength of three specimens. The individual variation shall not be more than + 15% percent of the average. If variation is more, the test results shall be treated as invalid. 90% of the total tests shall be done at the laboratory established at site by the contractor and remaining 10% in any laboratory mentioned in para 3.9 above.

Frequency of Tests:-

The minimum frequency of sampling of concrete of each grade shall be one sample for every25 cum or part thereof.

QUANTITY OF CONCRETE IN THE WORK (CUBIC METRE PER DAY).	NUMBER OF SAMPLES
1-10	1
11-30	2
31-60	3
61-100	4
101 & above	4 Plus one additional sample for each additional 50 cubic metre of part thereof

NOTE:-At least one sample shall be taken from each shift. As per IS 456:2000 clause 15.2.2.

Standard of Acceptance:-

i) In case the test results of all the samples are above the characteristic compressive strength, the concrete shall be accepted.

ii) In case the test result of one or more samples fails to meet the requirement

(i) above, it shall be accepted if both the following conditions are met:-

a) Any individual test result is not less than (f_{ck} -S)N/mm2.

b) The mean of test results from any group of four consecutive. samples is more than (fck +S)N/mm2.

Note:-S-Standard Deviation

iii) Concrete of each grade shall be assessed separately.

iv) Concrete is liable to be rejected, if it is porous or honeycombed, its placing has been interrupted without providing a proper construction joint, the reinforcement has been displaced beyond the tolerances specified, or construction tolerances have not been met.

3.17 For cast-in-situ (if required), the contractor has to arrange at site centering and shuttering for 5000 sqm. before two months from stipulated date of start of work. Only M.S. centering / shuttering and scaffolding material unless & otherwise specified shall be used for all R.C.C. work to give an even finish of concrete surface. However, marine-ply shuttering in exceptional cases as per site requirement may be used on specific request from contractor as approved by the Engineer-in-Charge.

3.18 Nothing extra shall be paid for the centering and shuttering, circular in shape whenever the form work is having a mean radius exceeding 6m in plan.

3.19 In order to keep the floor finish as per architectural drawings and to provide required thickness of the flooring as per specifications, the level of top surface of R.C.C. shall be accordingly adjusted at the time of its centering, shuttering and casting for which nothing extra shall be paid to the Contractor.

3.20 As per general engineering practice, level of floors in toilet / bath, balconies, corridors shall be kept 15 mm lower than corridor/ adjacent rooms/ general floors and shuttering should be adjusted accordingly and slabs should be laid with slope towards the drainage point. Nothing extra is payable on this account.

3.21 ~~Production of Concrete~~

~~All concrete shall be produced at site through Semi-automatic batching plant with automatic water dozer having digital load cell weighing mechanism with manual gate control RM 1050 with printing facility of 8 to 10 cum /per hour capacity.~~

The batching and mixing plants shall be dedicated plants for this project. Contractor shall make his own arrangements for the necessary infrastructure for installation of batching plant and other machineries.

~~Automatic batcher shall be charged by devices which when actuated by a single starter switch will automatically start the weighing operation of each material and stop automatically when the designated weight of each material is fed in the mixer. The batching plant shall have automatic arrangement for dispensing the admixture and shall be capable of discharging water in more than one stage.~~

~~A batching plant essentially shall consist of the following components:~~

- ~~Separate storage bins for different sizes of aggregates, silo for cement and flyash; water storage tank.~~
- ~~Batching equipment~~
- ~~Mixers~~
- ~~Control Panels~~
- ~~Mechanical material feeding and elevating arrangements~~

The compartments of storage bins for aggregates shall be approximately of equal size. The cement compartment shall be centrally located in the batching plant. It shall be water tight and provided with necessary air vent, aeration fittings for proper flow of cement & emergency cut off gate. The aggregate and sand shall be charged by power operated centrally revolving chute. The entire plant from mixer floor upward shall be enclosed and insulated. The batch bins shall be constructed so as to be self cleansing during draw-down. The batch bins shall in general conform to the requirements of IS:4925.

The batching equipment shall be capable of determining and controlling the prescribed amounts of various constituent materials for concrete accurately i.e. water, cement, sand, individual size of coarse aggregates etc. The accuracy of measuring devices shall fall within the following limits.

Measurement of Cement:	+ 2% of the quantity of cement in each batch
Measurement of Water:	+ 3% of the quantity of water in each batch
Measurement of Aggregate:	+ 3% of the quantity of aggregate in each batch
Measurement of Admixture:	+ 3% of the quantity of admixture in each batch

The batching and mixing plant shall have the provision of adjusting the plus/minus quantity of various ingredients in the next batch so that there is no variation in quantity of ingredients from design mix in a lot consisting of 5 to 6 batches.

The mixer in the batching plant shall be so arranged that mixing action in the mixer can be observed from the operator's station. The mixer shall be equipped with a mechanically or electrically operated timing, signaling and metering device which will indicate and assure completion of the required mixing period. The mixer shall have all other components as specified in IS:4925.

However, if due to any reason, contractor wishes to supplement the concrete from Ready Mix Concrete (RMC) supplier, he is permitted to procure the same from the source approved by the Engineer-in-charge at his own cost. In such a situation nothing extra shall be paid to the ccc shall be paid to the contractor.

The contractor may take some time to install his own batching plants at the arranged site and till the batching plants are installed, the contractor is permitted to procure concrete from approved Ready Mix Concrete (RMC) supplier for a period 2 months from date of start of work or the period as agreed by Engineer-in-Charge. Similarly, when the work is nearing completion and daily requirement of concrete is very less, if agreed by the Engineer-in-Charge, the contractor may be permitted to procure the concrete from approved Ready Mix Concrete (RMC) supplier and nothing extra shall be paid to the contractor on this account.

3.22 **Land for Temporary Use**

The land for labour camps and batching plant shall be arranged by the contractor. The lease/rent

charges shall be borne by the contractor. The Engineer-in-Charge shall extend necessary help and issue necessary recommendations etc. to the concerned department for temporary allotment of land during construction period. The land belongs user department and the same shall be made available to the contractor on specific request on as is where basis is. The contractor shall have to vacate and after completion of work in same condition as was at the time of allotment. However, there is no obligation on the part of CPWD/user department to arrange the land for labour camps. In case available land in the campus is not sufficient for setting up construction yards and for setting up labour camps, the same shall be arranged by the contractor at their own cost.

3.23 Transportation, Placing and Compaction of Concrete

a. Mixed concrete from the RMC / Batching plant shall be transported to the point of placement by transit mixers and placed in position through concrete pumps and/or steel closed bottom buckets capable of carrying minimum
0.6 cum concrete. In case the concrete is proposed to be transported by transit mixer, the mixing speed shall not be less than 4 rev/min. of the drum nor greater than a speed resulting in a peripheral velocity of thedrum70m/minutes at its largest diameter. The agitating speed of the agitator shall be not less than2 rev/min nor more than 6 rev/min of the drum. The number of revolution of the mixing drum or blades at mixing speed shall be between 70 to 100 revolutions fora uniform mix, after all ingredients, have been charged in to the drum. Unless tempering water is added, all rotation after100 revolutions shall be at agitating speed of 2 to 6 rev/min and the number of such rotations shall not exceed 250. The general construction of transit mixer and other requirement shall conform to IS:5892.

b. In case concrete is to be transported by pumping, the conduit shall be primed by pumping a batch of mortar through the line to lubricate it. Once the pumping is started, it shall not be interrupted (if at all possible) as concrete standing idle in the line is liable to cause a plug. The operator shall ensure that some concrete is always there in the pump receiving hopper during operation. The lines shall always be maintained clean and shall be free of dents at all stages. Special precaution shall be taken that surrounding temperature during concreting shall not exceed 30 degree centigrade.

c. Except where otherwise agreed to by the Engineer-in-Charge, concrete shall be deposited in horizontal layers to a compacted depth of not more than 450mm. Unless agreed to by the Engineer-in-Charge, concrete shall not be dropped into place from a height exceeding1.5m.In order to avoid such situations chutes, tremiepipe or closed bottom buckets shall be used. These shall be kept clean and used in such away as to avoid segregation. Slope of the chute shall be so adjusted that concrete flows without the use of excessive quantity of water. The delivery end of chute shall be as close as possible to the point of deposit. The chute shall be thoroughly flushed with water before and after each working period and the water used for this purpose shall be discharged out side the form work. The concrete shall be compacted by using immersion type vibrators. When the concrete is being continuously deposited to a uniform depth along a member, vibrator shall not be operated within one meter of free end of the advancing concrete. Every effort shall be made to keep the surface of the previously placed layer of concrete alive so that the succeeding layer can beam alga mated with it by the vibration process. In case the concrete in under lying layer has hardened to such an extent that it cannot be penetrated by the vibrator but is still fresh(that is, just after initial set),un-imposed bond shall be achieved between the top and underlying layer by first scarifying the lower layer before the new concrete is placed by systematically and thoroughly vibrating the new concrete. The points of insertion of vibrator in the concrete shall be so spaced that the range of action overlap to some extent and the freshly filled concrete is sufficiently consolidated at all locations. The spacing between the dipping positions of vibrator shall be maintained

uniformly throughout the surface of concrete so that concrete is uniformly vibrated. The vibrating head shall be regularly and uniformly inserted in the concrete so that it penetrates of its own accord and shall be withdrawn slowly whilst running so as to allow redistribution of concrete in its way and allow the concrete to flow back in to the hole behind the vibrator. The vibrator head shall be kept in one position till the concrete within its influence is completely consolidated. Vibration shall be continued until the coarse aggregate particle have blended in to the surface but have not disappeared. The contractor shall keep at least one additional vibrator in service able condition to be used in the event of breakdowns and maintenance problems.

d. The vibrator head shall not be brought more than 200mm near to the formwork as this may cause formation of water stag nations. The formwork shall be strong and great care shall be exercised in its assembly. It shall be designed to takeup increased pressure of concrete and pressure variations caused in the neighborhood of vibrating head, which may result in excessive local stress on the formwork. The joints of the formwork shall be made and maintained tight and close enough to prevent the squeezing out slurry or sucking in of air during vibration. The formwork to receive concrete shall be cleaned and made free from standing water, dust, etc. The contractor shall keep provision for screed and shutter vibrators at site.

e. No concrete shall be placed in any part of the structure until the approval of Engineer-in-Charge has been obtained. If concreting is not started within 24 hours of the approval being given, it shall have to be obtained again from the Engineer-in-Charge. Concreting shall be done continuously over the area between construction joints. Fresh concrete shall not be placed against concrete which has been in position for more than 30 minutes unless a proper construction joint is formed. When concreting has to be resumed on a surface which has hardened, it shall be roughened, swept, clean, thoroughly wetted and covered with a 13mm thick layer of mortar composed of cement and sand in the same ratio as in the concrete mix itself. The 13 mm layer of mortar shall be freshly mixed and placed immediately before placing of new concrete.

f. Where concrete is not fully hardened, all latency shall be removed by scrubbing the wet surface with wire or bristle brushes. Care shall be taken to avoid dislodgement of particles of coarse aggregate. The surface shall then be thoroughly wetted, all free water removed and then coated with neat cement grout. Particular attention shall be given to corners and closes pots.

3.24 In case of rejection of concrete on account of unacceptable compressive strength, governed by para "Standard of Acceptance" as above, the work for which samples have failed shall be redone at the cost of contractor. However, the Engineer-in- Charge may order for additional tests (like cutting cores, ultrasonic pulse velocity test, load test on structure on part of structure, etc) to be carried out at the cost of contractor to ascertain if the portion of structure wherein concrete represented by the sample has been used, can be retained on the basis of results of individual or combination of these tests. The Contractor shall take remedial measures necessary to retain the structure as approved by the Engineer-in-Charge without any extra cost. However, for payment, the basis of rate payable to contractor shall be governed by the 28 days cube test results and reduced rates.

4.0 Shuttering / Form Work:-

4.1 The work shall be done in accordance with CPWD Specifications - 2019- Vol.I& Vol. II with up to date correction slips.

4.2 Film coated marine plywood shuttering/ Steel shuttering as approved by the Engineer-in-Charge shall be used by the contractor. Minimum size of shuttering plates shall be 600mm x 900mm

except for the case when closing pieces required completing the shuttering panels. Dented, broken, cracked, twisted or rusted shuttering plates shall not be allowed to be used on the work.

4.3 The shuttering plates shall be cleaned properly with electrically driven sanders to remove any cement slurry or cement mortar or rust. Proper shuttering oil or deboning compound shall be applied on the surface of the shutter plates in the requisite quantity before assembly of steel reinforcement.

4.4 The joint filler shall be resilient closed cell expanded polyethene and non- tainting as manufactured by Supreme Industries Ltd.

4.5 Providing joint filler of required thickness in position tosubstrate using either double sided foam adhesive tape or neoprene synthetic rubber adhesive. When forming expansion joint with the Board in in-situ concrete, joint sealing slots can be readily formed in the following matter-

a) Before installing, simply cut off a strip of the required depth. Then install the filler flush with the finished surface.
b) Prior to sealing, the top strip can then be pulled easily from the joint to provide an uncontaminated sealing slot ready for preparation and sealing.

5. Plywood and steel plates used in the formwork for obtaining exposed surfaces shall be got approved from Engineer-in-Charge on each use. However no forms will be allowed for reuse if it is doubtful to produce desired texture of exposed concrete.

5.1 Class of Surface Finish:-

5.1.1 For Beams &Slabs : The finish shall be uniform, dense and smooth. no grout, no grain pattern, no crazing and no major blemishes shall be permitted. Abrupt irregularities not exceeding 3mm and gradual irregularities less than 5mm in 2m length only shall be permitted.

5.1.2 For Columns/Wall/Fins : The finish shall be uniform and smooth leveling the surface of the compacted concrete shall be done with a screed board with power floating the surface and over that steel trowelling the surface under firm pressure characteristics of finish shall be brush marks < 3mm gradual irregularities less than 10mm in 2m.

5.1.3 Tolerance in Finished Concrete:- The formwork shall be so made as to produce a finished concrete true to shape, lines, level, plumb and dimensions as shown in the drawings subject to the following tolerance unless otherwise specified in this specification or drawings.

5.2 Wall/Column/Fins:

5.2.1 Variation from the plumb ± 6mm Upto 3m height
5.2.2 Variation from the plumb of ± 6mm Upto 6m height conspicuous liner
5.2.3 Variation in the size of (+)15mm wall openings (-) 6mm
5.2.4 Variation in parapet wall thickness (a) Upto 30cm thickness ± 6mm

5.3 Slab, Beam & Girder Forms:

5.3.1 Variation from the level or from the specified grid for beam soffit before removal of shores,
(a) In any 3m ± 6mm
(b) In any 6m ± 10mm

5.4 All the tolerances mentioned above shall apply to concrete dimensions only, and not to positioning of vertical steel or dowels. The tolerances given above are specified for local aberration in the

finished concrete surface and should not be taken as tolerance for the entire structure taken as whole for the setting and alignment of formwork. Any error, within the above tolerance limits, or any other if noticed in any of the structure after part or portion stripping of forms, shall be corrected in the subsequent work to bring back the structure to its true line, level and alignment.

5.5 Ultrasonic pulse velocity method test for RCC as per technical circular No. 18 issued vide CE(CSQ) letter No. G-2/SE(QA)/CSQ/69 dated 12.02.2013 shall be carried out as a routine test to assess the homogeneity and uniformity of concrete. The fulfilling criteria and other conditions shall be as detailed, as per the method stated in the aforesaid circular.

5.6 All items of work shall be considered as inclusive of pumping out or bailing out water, if required, for which no extra payment shall be made. This will include water coming from any source, such as rains, accumulated rain water, floods, leakages from sewer and water mains, subsoil water table being high or due to any other cause whatsoever. The contractor shall make necessary provision of pumping, dredging and bailing out water coming from all above sources and excavation and other works shall be kept free of water by providing suitable system approved by the Engineer-in-Charge

6.0 **Reinforcement:-**

6.1 The reinforcement shall be done as per CPWD Specifications - 2019 - Vol.I& Vol. II with upto date correction slips.

6.2 The item of reinforcement of RCC work includes all operations including straightening, cutting, bending, welding, binding with annealed steel or welding and placing in position at all the floors with all leads and lift complete as per CPWD Specification - 2019 - Vol. I & Vol. II with upto date correction slips.

6.3 To avoid displacement of bars in any directionand to ensure proper cover, only factory made round type/rectangular cover blocks shall be used by the contractor. Nothing extra shall be payable on this account.

7.0 **Brick Work:-**

Unless otherwise specified bricks of Fly Ash cement/ Fly ash lime & Gypsum of class designation 75 kg/sqcm and AAC blocks of class designation 35 kg/sqcm as per relevant IS codes shall be used in all items of brick work. The work shall also include for leaving chases/ notches for dowels/ cramps for all kinds of cladding to come over brickwork.

8.0 **Stone/Marble Work:-**

8.1 The execution of stones work shall be in general as per CPWD Specifications - 2019–Vol.I&Vol.II with upto date correction slips.

8.2 All holes, rebates, recesses etc. for providing fixing and inserts shall be predrilled and precut and worked using precision machine tools. Nothing extra on this account shall be payable.

8.3 Samples of each item of stone work either individually or in combination shall be prepared for approval of Engineer-in-Charge before commencement of work.

8.4 Sequence of execution for cladding work shall be suggested by the contractor for approval of Engineer-in-Charge.

9.0 **Scaffolding:-**

Double steel scaffolding having two sets of vertical supports shall be provided. The supports shall be sound and strong, tied together with horizontal pieces over which scaffolding planks shall be fixed.

10.0 **Granite/ Marble Or Like Works**

10.1 The granite/ marble or like stonework shall, in general, be carried out as per the CPWD Specifications. The specifications for dressing, laying, curing, finishing, measurements, rate etc. for the granite/ marble or like stone flooring shall be same as that of works for the Marble flooring, skirting and risers of steps under Flooring Sub Head of the CPWD Specifications. The wall lining / veneer work with granite/ marble or like stone shall be as per the CPWD Specifications for Marble work Sub Head.

10.2 The decision of the Engineer-in-Charge as regards the approval of the samples for the various types of the granite/ marble or like stones shall be final and binding on the Contractor. No claim of any kind whatsoever shall be entertained from the Contractor on this account. The Contractor shall then procure and get the mock up prepared at site of work for approval of quality of workmanship and the granite/ marble or like stone as specified. The mock up shall be prepared in lift lobby, toilet etc. on one of the floors. The size of the stones shall be as per the architectural drawings. If the quality of the workmanship and the material is as per the required standards, the mock up shall be allowed as part of the work and measured for payment and shall not be dismantled. Otherwise, it shall be dismantled by the contractor as directed by the Engineer-in-Charge and taken away from the site of the work at his own cost. Nothing extra shall be payable on this account.

10.3 The granite/ marble or like stone slabs shall be cut to required sizes and shapes, as per the architectural drawings, to negotiate the curved steps in segmented manner. The risers shall also be cut to required sizes and shapes and the edges chamfered at the joints, all as per the architectural drawings. However, the Contractor shall prepare the detailed shop drawings for the same and commence work only after the approval by the Engineer-in-Charge. The rate shall also include any consequent wastage, incidental charges involved in this work. Nothing extra shall be payable on this account. **For the purpose of payment, the actual area of each type of granite/ marble or like stone as laid shall be measured.**

10.4 For the steps (risers and treads) in the linear profile, the granite/ marble or like stone shall be provided in single pieces as per the architectural drawings, unless otherwise specifically permitted by the Engineer-in-Charge. Wherever grooves are required to be provided the same is to be done as per architectural drawings and as directed by the Engineer-in-charge. Wherever required, the joints shall be provided as per the architectural drawings. **Nothing extra shall be payable on these accounts.**

10.5 The granite/ marble or like stone slabs used for providing and fixing in the sills, soffits and jambs of doors, windows, ventilators and similar locations shall be in single piece unless otherwise directed by the Engineer-in-Charge. Wherever stone slab other than in single piece is allowed to be fixed, the joints shall be provided as per the architectural drawings and as per the directions of the Engineer-in-Charge. Depending on the number of joints, as far as possible, the stone slabs shall be procured and fixed in slabs of equal lengths as per the architectural drawings and as directed by Engineer-in-Charge.

10.6 While fixing the granite in soffits and jambs of doors etc. rebates shall be made by overlapping the stones at the required places for fixing shutters for doors, windows and ventilators etc. as shown in the architectural drawings and as per the directions of the Engineer-in-Charge. Epoxy based adhesives shall be used for fixing the granite/ marble or like stones to each other, or wherever required. For the payment purpose only running length of inner granite of door frame should be consider all lipping/overlap and face veneering is inclusive of the rate. However, any extra mortar thickness required due to the overlap arrangement shall be deemed to have been included in the rate of this item. Nothing extra shall be payable on this account. The stone shall have uniform thickness and shall be provided in sizes as per the architectural drawings. The stone slab

shall have uniformly leveled surface after fixing. All the joints shall be finished smoothly in a workmanlike manner. Stone slab to be fixed such as it should be flush with wall plaster, for this if any chisel to be make it shall be deemed to have been included in the rate of this item.

10.7 The granite/ marble or like stone work shall be adequately protected by a layer of Plaster of Paris, which shall be maintained throughout and removed just before handing over of the works for which nothing extra shall be payable

11.0 **Wood Work:-**

11.1 The wood work in general shall be carried out as per CPWD Specifications – 2019 Vol.I& II with upto date correction slips.

11.2 All fittings and fixtures shall be got approved from the Engineer-in Charge before procurement well in advance and the approved samples shall be kept at site till completion of the work for which nothing extra shall be paid.

11.3 The shape and size of beading shall be as per drawings. The joints of beading shall be mitred.

12.0 Steel Work:-

12.1 WorkshallbecarriedoutasperCPWDSpecifications-2019-Vol.I&Vol.IIwithuptodatecorrectionslips.

13.0 **Flooring**

13.1 All work in general shall be carried out as per CPWD Specifications- 2019 - Vol.I& Vol. II with upto date correction slips.

13.2 Whenever flooring is to be done in patterns tiles/ stone, the contractor shall get samples of each pattern laid and approved by the Engineer-in-Charge before final laying of such flooring for which nothing extra shall be paid.

13.3 Different stones/ tiles used in pattern flooring as per the approved architectural drawings and nothing extra for laying pattern flooring shall be paid. No additional wastage if any shall be accounted for any extra payment.

13.4 The proper gradient shall be given to flooring for toilets, varrandah, kitchen, court yard, etc. as per the directions of Engineer-in-Charge. For this there may be extra thickness of mortarbelow the tiles/stone slabs. These gradients should be ensured in the shuttering itself. Nothing extra shall be paid for this as this is included in awarded cost/tendered cost.

13.5 **Ceramic Tiles/Vitrified Tiles Work/ Granite stone flooring**

13.5.1 Work shall be carried out as per CPWD Specifications- 2019 Vol I & II with up to date correction slips and as per manufactures specifications.

13.5.2 Rates shall be inclusive of all operations including labour, material, wastage, T&P, scaffolding etc. complete. Nothing extra shall be payable on any account.

13.5.3 One piece Granite stone for treads / risers in staircase shall be used including rounding of nose and nothing extra shall be paid on this account.

13.5.4 POP protection layer shall be laid on all finished floors for protection from damage during execution of other items of work in that area which shall be removed and cleaned just before handing over of the premisesfor which nothing extra shall be paid.

13.5.5 The testing of tiles shall be carried out at prescribed frequency and methodology as per IS 13630.

13.5.6 The testing of granite slabs shall be carried out at frequency of one test for each lot.

13.6 **StainlessSteelRailing/Handrails:**

13.6.1 The contractor shall supply all materials, labour, tools, ladders, scaffolding and other equipments necessary for the completion and protection of all stainless steel work

13.6.2 All stainless steel pipes and plates shall conform to AISI 304 grade and the relevant clauses associated with this grade of steel to be followed.

13.6.3 Surface finish of all the stainless steel materials will be in 240 grit satin finish / matt finish.

13.6.4 Fixing shall be done by stainless steel expansion bolts of approved size and make as per Engineer-in-charge and welding to be done by using organ welding rods and the surface being duly finished and cleaned by K2 passivation, which is nitric acid plus floric acid solution treatment by which the chances of corrosion will be eliminated and any burn out makes on the metal will also be eliminated.

13.6.5 All stainless steel material will have to be coated by a solution of Inox to avoid finger in prints and avoidance of settlement of environment / atmospheric dust.

14.0 **Roofing, Water Proofing & Insulation**

14.1 Work shall be executedas per CPWDSpecifications,2019VolI&IIwithuptodatecorrectionslips.

14.1 **Water Proofing of terrace/ Sunken Portion Area/ water storage tank.**

~~**A. On Basement :**~~

~~I. Over PCC Surface : 1.5mm thick, pre-applied, Pre-bond, fully bonded HDPE weldable membrane over P.C.C. conforming to BS 8102 & IS 16471:2017 and HDPE Membrane should confirm to EN 13251:2016 for 25 years of service Life requirements of UG waterproofing structures using Dr fixit prebond W Weldable membrane, Myk Arment or equivalent.~~

~~II. For Unconfined Retaining Wall Waterproofing:- 1.5 mm thick SBS modified self adhesive waterproofing membrane topped with HDPE valeron film, of approved make having tensile strength of 4MPa (EN 12311, Part-1) and with minimum elongation of 300% (as per ASTM D 882) using Dr fixit Samshild XL1500, MYK Arment - AquaArm SBS 3000X or equivalent.~~

B. On Terrace :

I. Grouting all the joints with non-shrink cement polymer based grout using CONBEXTRAGP2 of M/s Fosroc or equivalent, Bore packing of pipes, sleeves, etc applying a coat of styrene-butadiene based polymer coating of NITOBOND SBR of M/s Fosroc or equivalent.

II. Providing and applying at the junction of slab and vertical offsets with cement mortar 1:4 admixed with NITOBOND SBRof M/s Fosroc or equivalent at required dosage as recommended by manufacturer.

III. Providing and applying NITOPROOF600Std of M/s Fosroc or equivalent single component polyurethane of medium viscosity grade (approximately 600 poise), spray applied, to give a tough elastomeric waterproof membrane of minimum DFT of 1.30mm,propertiesconformingto ASTM standards.

IV. Laying protective and slope making float finished concrete screed of average 120 mm thick using M20 grade concrete, mixed with CONPLASTX4211C of M/s Fosroc or equivalent integral based water proofing admixture, with minimum thickness of 50mm at the rain water outlet, in proper slope of 1.5%, including making golas at the junctions of horizontal and vertical surfaces, finished

with 12 mm thick cement plastering in CM 1:4 mixed with CONPLASTX4211C of M/s Fosroc or equivalent integral based waterproofing admixture including floating coat of neat cement slurry mixed with CONPLASTX4211C of M/s Fosroc or equivalent, making cutting grooves and filling with polysulphide etc. all complete as per manufacturer's specification sand directions of Engineer-in-charge.

~~**C. In water storage tank:**~~

~~I. Grouting all the joints with non-shrink cement polymer based grout using CONBEXTRAGP2 of M/s Fosroc or equivalent, Bore packing of pipes, sleeves, etc., applying a coat of styrene-butadiene based polymer coating of NITOBOND SBRof M/s Fosroc or equivalent.~~

~~II. Providing and applying at the junction of slab and vertical offsets with cement mortar 1:4 admixed with NITOBONDSBR of M/s Fosroc or equivalent at required dosage as recommended by manufacturer.~~

~~III. Providing and applying on internal & external surfaces of walls and on top of bottom slab, NITO PROOF 600 Std of M/s Fosroc or equivalent single component polyurethane of medium viscosity grade (approximately 600 poise), spray applied, to give a tough elastomeric waterproof membrane of minimumDFTof1.30mm, properties conforming to ASTM standards.~~

~~IV. Laying protective and slope making float finished concrete screed of using M20 grade concrete, mixed with CONPLASTX4211C of M/s Fosroc or equivalent integral based water proofing admixture, in proper slope including making golas at the junctions of horizontal and vertical surfaces, finished with 12mm thick cement plastering in CM 1:4 mixed with CONPLASTX4211C of M/s Fosroc or equivalent integral based waterproofing admixture including floating coat of neat cement slurry mixed with CONPLASTX4211Cof M/s Fosroc or equivalent on top of bottom slab all complete as per manufacturer's specifications and directions of Engineer in charge~~

~~V. NITO PROOF 600 PF coating on internal and external surfaces of walls shall be protectedwith 12mm thick cement plaster of 1:4 cement mortar(1 cement:4 coarse sand) finishedwitha floating coatofneat cement punning.~~

D. Guarantee Bond

I. Ten years guarantee bond in prescribed proforma attached at annexure-II herewith shall be submitted by the contractor which shall also be signed by both the specialised agency and the contractor to meet their liability/ liabilities under the guarantee bond. However, the sole responsibility about efficiency of waterproofing treatment shall rest with the main contractor.

II. 10% (Ten percent) of the cost of waterproofing work shall be retained as security deposit and the amount so withheld would be released after 10 years from the date of completion of the entire work under the agreement, if the performance of the work done is found satisfactory. If any defect is noticed during the guarantee period, it shall be rectified by the contractor within seven days of receipt of intimation of defects in the work. If the defects pointed out are not attended to within the specified period, the same will be got done from another agency at the risk and cost of contractor.

III. However, the security deposit deducted may be released in full against bank guarantee of equivalent amount in favour of authority intimated by Engineer-in-Charge, if so decided by the Engineer-in- Charge.

IV. The security deposit against this item of work shall be in addition to the security deposit mentioned elsewhere in contract form.

15.0 Finishing

15.1 The work shall be carried out as per CPWD Specifications-2019Vol.-I & Vol. II with upto date correction slips.

15.2 For plastering work cement plaster is to be used.

15.3 Painting material shall brought to the site of work in the original sealed containers. The material brought to the site of work shall be sufficient for at least 30 days of work. The material shall be kept under the joint custody of contractor and representative of the Engineer-in-Charge. The empty contains shall not be removed from the site till the completion of the work without permission of the Engineer-in-Charge.

15.4 Paint register shall be maintained as per CPWD proforma for periodical verification byCPWD.

16.0 Water Supply, Sanitary Installations and Drainage

i) Hubless Centrifugally cast (spun) iron S & S pipes, G.I. pipes and CPVC pipes wherever necessary shall be fixed to R.C.C. columns, beams etc. with rawl plugs and nothing extra shall be paid for this.

ii) The contractor shall be responsible for the protection of the sanitary and water supply fittings and other fittings and fixtures against pilferage and breakage during the period of installation and thereafter until the building is handed over.

iii) The contractor shall furnish all labour, materials and equipment, transportation and incidentalnecessaryforsupply, installation, testing and commissioning of the completePlumbing / Sanitary system as described in the Specifications and as shownon the drawings. This also includes any material, equipment, appliances and incidentalworknotspecificallymentionedhereinornotedonthe Drawings/Documents as being furnished or installed, but which are necessary and customary to be performed under this contract.

ThePlumbing/SanitarySystemshallcompriseoffollowing:-

a) SanitaryFixtures and Fittings.
b) Internal and ExternalWaterSupply.
c) Internaland External Drainage.
d) Approval fromLocal Authorities.
e) Balancing, testing & commissioning.
f) Testreportsandcompletiondrawings.

iv) The work shall be inconformity withtheBye-laws, Regulations and Standards 0f the local authorities concerned.

xi) **Shop drawings shall be submitted for approval four weeks in advance of planned delivery and installation of any material to allow the Engineer In-Charge ample time for scrutiny. No claims for extension of time shall be entertained because of any delay in the work due to his failure to produce shop drawings at the right time, in accordance with the approved programme.**

xii) These shop drawings shall contain all information required to complete the work. These Drawings shall contain details of construction, size, arrangement, operating clearances,

performance characteristics and capacity of all items of equipment, also the details of all related items of work by other contractors. Each shop drawing shall contain tabulation of all measurable items of equipment/materials/works andprogressive cumulative totals from other related drawings to arrive at a variation-in-quantity statement at the completion of all shop drawings. Minimum 4 sets of drawings shall be submitted after final approval along with CD. When he makes any amendments in the above drawings, the contractor shall supply two fresh sets of drawings with the amendments duly incorporated along with check prints, for approval. The contractor shall submit further four sets of shop drawings to the Engineer In- Charge for the exclusive use by the Engineer In-Charge and all other agencies. No material or equipment may be delivered or installed at the job site until the contractor has in his possession, the approved shop drawing for the particular material/equipment/installation.

xiii) Samples of all materials like valves, pipes and fittings etc. shall be submitted to the Engineer In-Charge prior to procurement for approval and retention by Engineer In-Charge and shall be kept in their site office for reference and verification till the completion of the Project. Wherever directed a mockup or sample installation shall be carried out for approval before proceeding for further installation without any extra cost.

xiv) Approval of shop drawings shall not be considered as a guarantee of measurements or of building dimensions. Where drawings are approved, said approval does not mean that the drawings supersede the contract requirements, nor does it in any way relieve the contractor of the responsibility or requirement to furnish material and perform work as required by the contract.

xv) All materials and equipment shall conform to the relevant Indian Standards and shall be of the approved make and design. Makes shall be in conformity with list of approved manufacturers as per approved list and samples.

xvi) Balancing of all water systems and all tests as called for the CPWD Specifications shall be carried out by the contractor through a specialist group, in accordance with the Specifications and Standards. The installation shall be tested and shall be commissioned only after approval by the Engineer In-Charge. All tests shall be carried out in the presence of the representatives of the Engineer In-Charge and without additional cost to the department.

xvii) **The contractor shall submit completion plans for water supply, internal sanitary installations and building drainage work within 15 days of the date of completion. These drawings shall be submitted in the form of two sets of CD's and four portfolios (300x450mm) each containing complete set of drawings on approved scale indicating the work as installed. These drawings shall clearly indicate complete plant room layouts, piping layouts and sequencing of automatic controls, location of all concealed piping, valves, controls and other services. In case the contractor fails to submit the completion plans as aforesaid, security deposit shall not be released and these shall be got prepared a this risk and cost.**

xviii). "The pig lead to be used in joints of 150mm,100mm, 75mm, 50mmdia of sand cast iron, centrifugally cast(Spun) iron pipes shall be as per relevant CPWD Specifications". However, in case of 150mm dia pipes less use of pig lead by more than the required quantity and the permissible variation thereof, a recovery for such quantity shall be made from the contractor at market rate to be determined by Engineer in Charge whose decision in the matter will be final.

xix) The contractor shall bear all incidental charges for cartage, storage and safe custody of materials and shall construct suitable godowns, yards at the site of work for storing materials so as to be safe against damage by sun, rain, fire or theft etc., athisowncost and also employ necessary watch and ward establishment for the purpose at his own cost.

xx) All fixtures and fittings shall be provided with all such accessories as are required to complete the item in working condition whether specifically mentioned or not in the Schedule of Quantities, specifications, else wherein this tender document & drawings. The quoted rates shall be deemed to be all inclusive for a complete item fit for use including all materials, labour T&P, specials, equipment, testing & commissioning etc. Accessories shall include proper fixing arrangement, brackets, nuts, bolts, screws and required connection pieces. Nothing extra whatsoever shall be payable on this account.

xxi) Fixing screws shall be half round head chromium plated brass screws with C.P. washers where necessary or otherwise as provided in the item.

xxii) Porcelain sanitary ware shall be glazed vitreous china of first quality free from warps; cracks and glazing defects and shall conform to relevant BIS codes. Collar of sanitary ware, shall be specified or as selected by the Engineer-in-Charge. Nothing extra shall be payable on this account.

xxiii) Horizontal pipes running along ceiling shall be fixed on structural adjustable clamps of approved design. Horizontal pipes shall be laid to uniform slope and the clamps adjusted to the proper levels so that the pipes fully rest on them and are properly secured.

xxiv) Contractor shall provide all nuts, bolts, welding material and paint the Clamps with one coat of red oxide and two or more coats of black enamel paint.

xxv) Slotted angle/channel supports on walls shall be provided wherever shown on drawings. Angles/channels shall be of sizes shown on drawings or specified in schedule of quantities. Angles/channels shall be fixed to brick walls with bolts embedded in cement concrete blocks and to RCC walls with suitable anchor fasteners. The spacing of support bolts horizontally shall not exceed 1m.

xxvi) Wherever M.S. clamps are required to be anchored directly to brick walls, concrete slabs, beams or columns, nothing extra shall be payable for clamping arrangement and making good with cement concrete 1:2:4mix(1cement:2 coarsesand:4stoneaggregate 20 mm nominal size)or as directed by the Engineer-in-Charge.

xxvii) The ground collar shall be applied throughout the entire length of pipe. Collar bands shall be superimposed on the ground collar and shall be applied near valves, junctions, joints, service appliances, bulkheads, valves, etc. for clear identification of fluid being carried and to avoid confusion. The relative proportional widths of the first collar band to the subsequent bands shall be 4:1.The minimum width of the narrowest color band shall be 25mm.

GENERAL

i) **a) Rates for all items quoted shall be inclusive of all work and items given in the above mentioned specifications and Schedule of Quantities and applicable for**

the work under floors, in shafts or at ceiling level at all heights and depths. All rates are inclusive of cutting holes and chases in RCC and masonry work and making good the same.

b) All rates are inclusive of pretesting and on site testing of the installations, materials and commissioning.

ii) **Cleaning and Disinfection of Pipelines:-**

On completion of hydraulic tests and before a pipe is disinfected, it shall be proved to be free from obstruction, debris and sediment by scouring or by any other process which the Engineer-in-charge may prescribe. Upon satisfactory completion of testing and cleaning, the pipelines shall be disinfected as order. Chlorine solution shall be applied at the charging point as the pipeline is being filed and dosing shall be continued until the pipeline is full and at least 50 parts of chlorine per million parts of water have been made available and distributed evenly. If ordinary bleaching power is used, proportions will 150 gms of power to 1000 litre of water. If a proprietary brand is used, the proportion shall be as specified by the manufacturer. The treated water shall be left in pipeline for a period as directed but not exceeding 24 hours chlorine residual tests shall be taken at various points along the pipeline. The disinfection process shall be repeated until the sample of water taken from the pipeline are declared fit for human consumption by are cognized laboratory.

18.0 ~~uPVC Windows & Ventilators~~

- ~~All open able and fixed window system shall have minimum 3 hollow chambers from front to back. The sliding system frames shall have minimum3 chambers from front to back. The Sliding system Sashes shall have minimum2 chambers from front to back. The outer profile shall not be less than 56 mm. All sections of the frame and sash shall be reinforced in accordance with the system supplier's recommendations using galvanized mild steel in a single continuous length.~~

- ~~The profile shall be a hollow 3 chamber (across depth) profile with a outer wall thickness not less than 2.2 mm. The profile shall be of first grade/quality uniform and free from foreign bodies, cracks or marks.~~

~~**Fabrication of Window:** The fabrication of uPVC windows shall be made from the approved fabricator whose name incorporated in the list of approved makes or as approved by NIT approval authority~~

~~i) The window units shall be designed with all corner joints, transom joints and mullion joints being mitred and fusion welded.~~

~~ii) All excess material is to be neatly trimmed and neatly feature grooved/raised finish at corners, transom joints and mullion joints.~~

~~iii) There will be no mechanical joining of the profile.~~

~~iv) No polishing flush of any joints will be permitted.~~

~~v) The window units shall be designed so that the route of drainage is prevented from passing through the reinforcement chamber.~~

~~vi) The finished product shall be free from all sharp edges, burrs and the like that may be hazardous to the user.~~

vii) The dimensional tolerances on the finished outer frame height and width shall be +3mm. Frame assemblies shall be such that they can be installed square within a maximum difference in the diagonals of 4mm. Minimum overlap of sash on frame shall be 8mm.

viii) In all window units, adequate drainage should be provided to permit the escape of water from platforms or horizontal members beneath each sealed unit. The drainage slots shall not penetrate into t h e reinforcement chambers. Rain water Stop to be provided wherever necessary to provide barrier to excess rain water.

Reinforcement

i) Reinforcement shall be made from GI tube of not less than 1.5mm thickness as per strength requirement unless otherwise approved by Engineer in Charge.

ii) Steel reinforcement shall conform to IS 277:2003 or equivalent. Base material of steel shall conformtoIS513:2008– Drawing Grade.

iii) The reinforcement shall be installed in accordance with the recommended actions. The reinforcement shall conform to the wind load requirements of IS875: Part3. The reinforcement shall be in one continuous length and should beinstalledminimum5mm and maximum 10mm from the face of the profile to be welded.

iv) The reinforcement shall be secured to the profile so that it does not move or rattle and it maintains the structural integrity of the frame and satisfactory thermal separation. Reinforcement is to be fixed at a maximum of 100mmfrom the ends and then at a maximum of 300mm centers.

Glazing and Weather Seals
GLAZING

i) Window shall be such that glazing or re-glazing on site is possible without the need to remove the outer frames from the structure of the building.

ii) All glazing is to be packed in accordance with the system supplier's recommendations to prevent any kind of damage during handling.

WEATHERSEALS

- The weather seals shall be EPDM/Siliconeseals.ASTM D412 andASTM D2240arestandard specifying test methods for Tensile strength and Hardness of the gasket whereas the required value shall be specified

Ultimate tensile strength min >7.5N/mm2

Theweathersealsaretobefittedincontinuouslengthsandgrooves.Thejointsintheventweather seal are to be positioned at the bottom and in the outer frames at the top.

Security and Safety
Fasteners shall be designed so that they cannot be released from the outside by the insertion of a thin blade.
No opening light shall be openable or removable from the outside, when it is fastened in the closed position, except by use of special tools or breaking part of the window.

Installation of Frame

i) Before installation the Installation Team is to make sure that the opening has been prepared and any repair work has been carried out. Allow a 5mm gap between the frame and the opening. The new window shall be set in the prepared opening. Allow for suitable packing blocks.

ii) The window shall be fixed in to the aperture, by drilling and fixing through the outer frame, to the existing structure using 'Fischer' fixings, F8S type bolts.

iii) The fixings shall be no less than150mmfrom corners or transoms/mullions and at no more than 600mm centers.

iv) When the frame is securely fixed in position then fit glass and glazing beads. Allow for any necessary glazing blocks and glass lock devices.

v) Check windows for correct operation before proceeding with making good.

vi) No fixings are to penetrate the drainage channels.

vii) The windows shall be first treated with Polyurethane Foam (PU Foam) to enhance insulation against heat and Noise. The gap between masonry and the frame is to be filled with Neutral Cure Silicon (exposed to sun surface) and/or Acrylic Sealant (only for the internal surface).The windows shall be first treated with Polyurethane Foam(PU Foam) to enhance insulation against heat and Noise.

viii) The silicone joints should be covered with Architraves/trims as per direction of Engineer in-charge.

Making Good

i) Making good to the external surface of the window frame and finish with a compatible approved low modular silicone sealant to BS5889. All trims and quadrants are to be approved by the Engineer in Charge prior to fixing.

ii) Allow for making good any disturbed plaster, brickwork and decorations internally and externally including color wash to brickwork.

iii) Clean off excess material and check fittings and gearing.

iv) Leave installation clean and in good working order.

GENERAL ITEMS

i) This specification is to be read in conjunction with any other relevant documents and drawings.

ii) Sizes are not to be scaled from any drawings or sketches but should be measured on site prior to manufacture.

Window Accessories

i) Window should be designed and reinforced such that it can with stand the wind load requirements by providing suitable strengthening accessories.

ii) The window shall meet the requirements of water tightness.

iii) Trims Shall be used to cover the window to masonry joints.

Window Hardware

iv) All slider door/windows are to be provided with multi point locking arrangement with/without key

locking facility as per the requirement. The hardware shall be provided as per preferred list attached. The slider locking mechanism handles are of projected/flush type.

i) The casement windows are to be provided with multi point locking mechanism of shall be provided as per preferred list attached.

ii) Measurement Area of window shall be measured for payment correct to a centimeter from outer edge of the window frames.

Rate includes all the materials, glazing, window hardware, labour and fixing etc. all complete.

List of Specialised Items

I. Structural Glazing work
II. u-PVC windows work
III. Water proofing treatment work

17. Tang Bars:

i) The reinforcement shall be made from mild steel strip to form a double comb structure.
ii) Length of Tang bar 1830mm (6'-0" Appx.)
iii) Width of Tang Bar 230mm.
iv) The comb strip shall be twisted in to cylindrical shape, forming fangs in all directions.
v) The flanges shall overlap and interlock each other and shall be distributed in walls, roof and floor in a way that they defect incoming drill giving resistance to burglary attempts made on the vault room.
vi) The Tang bars shall be laid horizontally on one, two or three rows.

18. Groove Cutting

It is recommended that all joints (except the expansion joint) be sawn. The sawing of joints should be a two phase operation. In the initial phase, the sawing is done to the required depth (one-fourth to one-third depth) with a 3 mm blade soon after concrete sets and is capable of taking the load of cutting machine. The cut is intended to induce the full depth crack at the intended location. Since the text phase of sawing may be taken up after a lapse of time, the joint should be filled with a temporary seal such as jute rope. This seal will keep the incompressible like stone pieces and dirt out of the joint and reduce the potential spalling. The second phase of saw cut is then made prior to the installation of the sealant. This saw-cut widens the groove to the finally desired size and provides a reservoir for the sealant material. When the second saw-cut is made, the temporary seal is pushed into the bottom of the widened groove so as to prevent all extraneous material from entering the joint including slurry generated during sawing process. Depth/width gauges shall be used to control the dimension of the groove. If rough arrises develop when grooves are made, they shall be ground to provide a chamfer of 3mm width. If the groove is at an angle upto 10 degrees from the perpendicular to the surface, the overhanging edge of the sealing groove shall be sawn or ground perpendicular. If spalling occurs or the angle of the former is greater than 10 degrees, the joint sealing groove shall be sawn wider and sawn wider and perpendicular to the surface to encompass the defects upto a maximum width, including any chamfer, of 35mm for transverse joints and 20 mm for longitudinal joints. If the spalling cannot be eliminated then the arrises shall be repaired by an approved thin bonded arris repair material using epoxy mortar. All groves shall be cleaned of any dirt or loose material by air blasting with filtered, oil-free compressed air. If need arises, the cleaning may be done by pressurized water jets. Depending upon the requirement of the sealant manufacture, the sides of the grooves may be sand blaster to increase the bondage between the sealant and the concrete. Based on the recommendation of manufacturer, the joint grooves shall be primed before applying sealant. At the time of priming and sealing, the groove shall be clean and dry.

19. The Contractor shall submit 'Method statement' for the approval soon after the award of work. 'Method statement' is a statement by which the construction procedures for important activities of construction are stated, checked and approved. Method statement shall have description of the item with elaborate procedures in steps to implement the same. The specification of the materials involved their testing and acceptance criteria, equipments to be used, precautions to be taken, mode of measurements etc.

19.0 Sunken Floor Slab, it's Treatment etc.

19.1 Brick bat aggregate shall be from well burnt bricks. The proprietary water proofing compound and the quantity to be used as per para 14.1.

19.2 The surface shall be thoroughly cleaned with wire brushes. All loose scales shall be removed and dusted off. The surface bottom as well sides shall be treated with cement slurry admixed with proprietary water proofing compound to penetrate into crevices and fill up all the pores in the surface.

19.3 After the slurry coat is laid, layer of well burnt brick bats of about 40mm size shall be laid in cement mortar of mix as specified by the specialist firm but not leaner than 1:5 (1cement: 5 coarse sand) admixed with proprietary water proofing compound, the mortar being filled to half the depth of the brick bat layer. The bricks bat layer shall be rounded off at junctions with the beam/wall etc. and tapered towards top to a height of 150 mm along beams/wall etc. Curing of this layer shall be done for three days.

19.4 After curing, the surface shall be applied with a coat of neat cement slurry admixed with proprietary water proofing compound.

19.5 Joints of brick bat shall be filled fully with cement mortar of mix as specified by the specialist firm but not leaner than 1:4 (1cement: 4 coarse sand) admixed with proprietary water proofing compound and top finished with average 20mm thick layer of same mortar. This layer of mortar shall be continued to the sides of beam/wall etc. The height upto which this treatment is to be extended on the sides shall be as directed by the Engineer in Charge. The surface shall be finished smooth with cement slurry admixed with proprietary water proofing compound.

19.6 While the water proofing treatment is done, it shall be ensured that the outlet pipes are properly fixed and the gaps between the wall and pipes are properly filled with brick/stone aggregate and cement mortar admixed with proprietary water proofing compound and grouted with cement slurry admixed with proprietary water proofing compound.

19.7 Water proof treatment shall be cured for a minimum period of two weeks.

19.8 Measurements for the floor treatment shall be taken on the plan area of floor treated. Nothing extra shall be paid for rounding off at junctions and taking the treatment along the sides of beams and walls for about 150 mm.

19.9 Rate The rate shall include the cost of all labour and materials involved in all the operations described above. Base treatment and side treatment will be paid separately under respective items.

19.10 Cut Brick (Marukona)

- "Where cut brick (Marukona) as required C.P.W.D. Specifications 2019 Vol. I on account of available quality of bricks the same shall be replaced by cement concrete 1:2:4 and no extra payment for the provisions of C.C. 1:2:4 nor would the quantity of C.C 1:2:4 thus provided be deducted from measurements of brick work."

Note:For the above works, specialized agencies shall have to be associated by the agency, in case

~~**they does not possess the requisite eligibility and experience as per NIT conditions to carry out these work**~~

20 **Specifications for moorum.**

- The contractor has to bring moorum required for filling under floors, from sources, approved by the Engineer-in-charge. The filling material shall be moorum obtained from pits of weathered disintegrated rocks free from organic matters and should preferably contain siliceous material and natural mixture of clay of calcarious origin. The size of moorum shall not be more than 20 mm.
- The moorum brought to site shall be directly used for filling and no claim for double handling shall be entertained. Filling shall be done in regular horizontal layers, each not exceeding 20 cm. in depth. The moorum shall be free from all roots, grass and rubbish and all lumps and clods, if any, shall be broken. Each layer shall be consolidated by breaking clods, watering and ramming with steel rammers. The top surface of finally finished area shall be dressed.
- Before filling is started in the area (under floors) contractor shall remove rank vegetation, grass, brushwood, shrubs and building rubbish etc. and nothing extra shall be paid for on this account.

21 **Field testing of water for Construction works.**

- As per OM No.-G-50/Misc./CSQ/SE(TLQA)/179 Date - 06.11.2025. To cross-check laboratory findings, to regularly monitor water quality and build confidence in the actual quality of water, field testing of water samples (Various Parameters such as acidity, alkalinity, sulphate, chloride, TDS, pH etc.) from each source may be carried out periodically at site.

LIST OF APPROVED MAKES (CIVIL)

Note :

1. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature or in the particular specifications or in the list of approved materials attached in the tender, shall be used in the work.
2. The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material/ Brand/ Make.
3. Whenever the specified brand of material is not available then, the NIT Approving Authority may approve any material equivalent to that specified subject to proof being offered by the Contractor for its equivalence and its non-availability to his satisfaction.
4. If any brand which have been approved by the ADG(RBH)/CE(Raipur) till the date of last date of submission of respective tender shall be deemed as approved brand even if it has not been mentioned in approved brand or make in the NIT.

S.No.	Material	Approved brand
	(1) Cement	
1.	Cement (OPC/PPC) As per IS: 8112 for OPC & IS: 1489 for PPC	A.C.C., Ultratech, Gujrat Ambuja Cement and Cement Corporation of India, Emami/Birla Gold Cement, Nuvoco/Infracem by NU Vista Ltd/JK Lakshmi/ Shree Cement.
2.	Cement (PSC) confirming to IS 455-2015	Birla Gold Cement/NU Vista/JK cement
3.	Admixtures & Epoxy As per IS: 9103	FOSROC/ Aquomix/ BAL-ENDURA/ ROFF/ Dr.Fixit /CICO/ SIKA/BASF/Asian Paints/Berger/Kryton.
	(2) Reinforcement	
4.	Reinforcement steel	Tata/Sail/RINL/Jindal steel & power ltd/JSW
	(3) Concrete Work	
5.	Super plasticizer as per IS: 9103	MC Baucheme/ Sika/ Fosroc/Cimik by Snowcem/ STP Ltd./Berger/Asian
6.	Post tension slab as per IS: 1343	Ultracon technology limited/Tech-9/CRUX
	(4) Brick Work	
7.	AAC Block adhesive as per IS: 2185-P-III	Ecorex/Ultratech/Ardex Endura/Ferrous Crete/ Berger/Asian
8.	AAC block	Ecorex, E-Nova (ISI marked)/Dinesh AAC (ISI Mark) Aerocon Buildwell
	(5) Wood & PVC Work	
9.	Annealed Float Glass As per IS: 14900	Saint Gobain/ Modi Guard/ Hindustan Pilkington/TATA
10.	Float as Per IS: 14900/Clear/Frosted/Toughened as per IS 2553-1(1890) /Refractive Glass	Modi Float/ Saint Gobain/ Asahi/AIS/ Modiguard/Mr. Glass/GOLD PLUS.
11.	Curtain Carrier	Vista levlor/Carlos/Home Deco

12.	Mechanical / chemical anchor, Rebar chemical, SS stone cladding Clamps, Dash fastner.	M/s Dev Ashish/HILTI/Fischer/ Bosch/Wurth/ Trixel.
13.	Door closer as per IS: 3564/ floor springs as per IS: 6315	Dorma/ Haffle/ Falcon/Godrej/Dorset/Kich/ Sandhu/ Hardwyn/ Becker FS/Saint Gobain
14.	Drapery Rod	Vista Levlor/Carlos/Home Deco.
15.	Flush Doors / Shutters as per IS: 2202 P-I	Anchor/ Century/JAYNA/ Greenply /Kitply/ Selected Products Company/Jain Doors pvt.Ltd.(Woodify)/ Duro/AIRDOOR by AIROLAM/ MERINO/Swastik Panels/A1/Shubham.
16.	FRP Shutters/frame As per IS : 14856	Fibre Glass Engineers Raipur/ Aashoo Model or equivalent/JAYNA/ Selected Products Company/ Jain Doors pvt.Ltd.(Woodify).
17.	Laminate/High Pressure Laminates	Marino/ Greenlam/ Decolam/ Century/ Formica/ Kitlam/Action TESA/Sunmica/AIROLAM/VIRGO
18.	Marine Plywood / BWP PlyAs per IS : 710 & IS : 12406.	Kitply/Duro/Century/Greenlam/AIROPLY by AIROLAM
19.	Plywood (Decorative/Non Decorative) As per IS : 303, IS 1328, IS 10701.	Archid/ Kitply/ Green ply/ Century/JAYNA/Green Ply/Merino/Duro/Durian/AIROPLY by AIROLAM /Kanchan Ply
20.	Shuttering ply wood As per IS: 4990	Kanchan Ply/ Century/ Merino
21.	HDF Moulded Panel Door	Kanchan Ply/ Century/ Merino
22.	Pre-laminated Particle Board IS :12823 : 2024 (Gr-I/ Type-II)	Kitlam/ Tesa/ Archidply/Eco brand/ Century/ Bhutan board/Action Tesa/Greenlam/Merino
23.	PVC Door Shutter and frames	Rajshri/Sintex/Polyline/Duroplast/Jain wood Industries/Vikas Plastic Ply / Plasto Green.
24.	Veneer	Archid/ SUN/ Durian/ Ventura/ NLDK/ Merino/Duro
25.	Teak wood/hard wood wire mesh & panel doors	A-1 Teak product Indore/Jayna/ Jain Doors pvt.Ltd.(Woodify).
26.	Block Boards as per IS: 1659.	JAYNA/Century/Greenply/Archid/Kitply/Kanchan Ply.
27.	Wooden Shutter with frame	Jayna/Jain wood industry/A-1 teak
28.	uPVC Windows/Doors As per IS:17953.	Duroplast/ Fenesta/ Komerling/ Wintech/Aluplast/ Vikas Plastic Ply/NCL-VEKA fabricated by Classic Engineers & Fabricators, Raipur/ Allure windoors/ Okotech/ Venster fabricated by Dolphin uPVC system/IKONISH/ Yashpoly/ Astrapia/ Simta Astrix/MARG/Rajshri/Encraft
29.	G.I. /Stainless steel/Wire-mesh/Netting	Selected Products Company/Jayna/ Oswal
30.	Fabrication of aluminium& UPVC doors, windows, Facades including ACP and glazing work	KANHA ALU AND FAB PVT. LTD., Raipur/ Evergreen/ Skyler World/Dolphin uPVC System.
31.	Processing and fabrication of glass (toughened, DGU and lamination	Wadhwa Glass Works (P) Ltd., Raipur/Shivshakti/SK tuff

32.	Fire rated doors As per IS 3614:2021, IS: 35476 (Part 20622)	Signum fire protection/Shakti Metdoor/ NAVAIR /Sukri/ Promat International/Supreme fire Door/ASES (Agni Suraksha)/Bhawani fire protection
33.	Fire door hardware	Becker Firesolutions/Tata Pravesh/Navair
34.	Stainless steel door & windows fittings As per IS : 204 P-II, IS: 208.	Jindal/Dorma/Kich/Dorset/Godrej/Ozone/Classic Steel windows/ Becker FS
35.	Extruded Polystyrene Insulation Board and Insulation System	Dow Corning/ Supreme/ Taxes/ Analco/STP Ltd./ Berger ETICS
36.	UPVC Doors and window hardware	Rotto/Dorset/Kinlong
37.	WPC door frames, Shutters, Panel & Sheets	Vikas Plastic Ply/Rajshri/VEKA/ Yashpoly/Vardhman Composite India (bvw) /Plasto Green.
38.	Stainless Steel butt hinges as per IS: 12817	Prayag/Beeta/Sarthi
39.	Heat Strengthened glass	Mr. Glass/Swastik/Zenith/Saint Gobain
40.	Heat Soaked glass	Mr. Glass/Swastik/Zenith/ Saint Gobain
41.	Insulated glass	Mr. Glass/Swastik/Zenith/ Saint Gobain
42.	Laminated and safety glass	Mr. Glass/Swastik/Zenith/ Saint Gobain
43.	RCC doors Frames	Bothra Duro Frame/Purshottam Industries /Mahalakshmi
44.	Decorative thermosetting synthetic resin bonded laminated sheet as per IS 2046:1895 (High pressure compact laminates)	MERINO/VIRGO/Infotech
	(6) Steel Work	
45.	Galvanized/Stainless Steel Anchor Fasteners	Shakti/ Arrow/ Hilti/ Fischer
46.	Modular SS Railing System	Metallica India / Stark steel Fabricator / D-line International Denmark / Mobel Hardware.
47.	M.S .Pipe (Railing)	Jindal / Prakash Surya/ Tata/ RINL// Apollo/HIRA Fabrication/ Shivam Overseas (ISKCO)/ Sambhv Steel/ FORTUNE
48.	Stainless Steel	Jindal Stainless Steel/ Salem Steel/TATA
49.	Stainless Steel Screws	Kundan/Arrow/Navair.
50.	Structural steel As per IS: 1239: Part-I, IS: 1161, IS:4923, IS 3601.	TATA/ SAIL/ RINL/TISCO/JSW Steel ltd./Jindal steel & Power ltd./APL APOLLO /HIRA Fabrication/ Shivam Overseas (ISKCO)/ Sambhv Steel/ FORTUNE
51.	Pre-Painted/powder coated CRC windows	M/s classic engineers and fabricators/ M/s JK Enterprises Jaipur/ Nclalltek&seccolor ltd. Hydrabad/ ultimate safety metals/Elixir
52.	Stainless steel railing Accessories	Jindal/Dorma/Kich/GEZE/Godrej/Hardwyn
53.	Tubular profile steel door/windows	Classic steel windows/Sehgal door/Tata Parivesh
54.	Pressed steel door frames As per IS:4351.	Classic steel windows/Jai Ambey/Super Industries.

	(7) Flooring	
55.	Acid/Alkali Resistant Tile	Somany/ Kajariya/ Bell
56.	Ceramic Tiles As per IS: 15622	Kajaria/ Somany/ Orient Bell/ Johnson/ Varmora/ AGL/ OASIS/Marbito/Cengres/ Sunheart/ MOTTO/ NITCO.
57.	Ceramic Tiles (Germ Free)	CARE & CRAFT by Johnson.
58.	Cement Concrete Chequrred/designer tiles	Raj-Tiles/ Concreto+ by Sai Sales / Rigid Tiles/Advance/Ultra /Asian
59.	Glass Mosaic Tile	Bissazza/ Saon/Kajaria
60.	Hardener	Hard crete of Snowcem India/ MC Deritop F.H./Berger
61.	Terrazzo tiles /Mosaic Tiles	Raj-Tiles/ Bharat/ Rigid Tiles/NIC/A-1/GTC
62.	Vitrified /Porcelain Tile As per IS: 15622	Marbogranit/ Euro/ Somany/ diamond of Naveen /Granamite of Bell /OASIS/ceramic/ Granito/ Kajaria/ M/s Restile//Rak/ Porselano by Johnson/ AGL/Marbito/ Cengres/ Sunhearrt/ Orient Bell/ Varmora/ MOTTO/ NITCO.
63.	Vitrified Double Charged Tiles	Marbonite by Johnson/Kajaria/Somany/ Orient Bell/ MOTTO/ NITCO.
64.	Full Body, Matt Finish Vitrified Tiles	Endura Sandex by Johnson /Kajaria/Somany/ Orient Bell/ MOTTO/ NITCO.
65.	Vitrified Industrial Tiles	Endura by Johnson/Kajaria/Somany/ Orient Bell
66.	Vitrified Step Tiles	Stepping Stone of Endura by Johnson or equivalent.
67.	TAC Tiles	Endura by Johnson/Rac/Raj Tile
68.	Vitrified Tiles (Germ Free)	Porselano by Johnson / Rac/Kajaria
69.	Pavement Tiles	Endura by Johnson/Kajaria/Somany/ Orient Bell/Goyal Concrete pipe
70.	Antistatic Tiles	Endura by Johnson/ Rac/Raj Tile
71.	White Cement	JK White/ Birla White/Ambuja Cement
72.	Tile Adhesive IS: 15477	Dynova, Ferrous Crete / Ardex/ Endure (Gold Star)/ Pidilite (Fevimatex)/ Weabr (Saint Gobain)/Asian Paints/STP Ltd./Berger/Kryton/ Nuvoco(MBM)/ Polyglaze.
73.	Heat Resistant Tiles	Swastik/Thermatek/Somany
74.	Floor Hardener	Ironite/Ferrok/Hardonate/Shalifloor NM of STP Ltd./ Berger/Asian
75.	Epoxy flooring & coating	Shalifloor SL TC 4E of STP Ltd./Berger/Dr. Fixit/Asian
76.	Polyurethane flooring& coating	Shalifloor PU, of STP Ltd./Dr. Fixit/Asian
77.	Antistatic Vinyl flooring	Shalifloor SL AS PU &Shalifloor SL AS 3E of STP Ltd./Asian/Tarkett (IQ Optima)/Gerflor/Forbo
	(8) Roofing	

78.	False Ceiling system	Boral Gypsum / India Gypsum/ Laffarge/ St. Gobain(Gyproc)/ Armstrong/Hunter Douglas/ Aerolite/ Gridsquare/ Interarch/ Credence Industries/Hi-Steel/Anakon/ Bollard.
79.	Metal False Ceiling	Nittobo / Armstrong / Trac / Durlum / Luxalon by Hunter douglas /Aerolite/ Credence Industries/Anakon/Hi-steel/ Bollard.
80.	Mineral Fiber/Calcium silicate Ceiling	Armstrong / Nitobo / Daiken / Hunter Douglas/Aerolite/ Credence Industries/Anakon/ Bollard.
81.	Glass reinforced Gypsum (GRG) false ceiling	'Diamond' manufactured by Diamond International Inex pvt. Ltd/Gyproc by Saint Gobain/Knauf AMF
82.	Glass fiber acoustic ceiling & wall panels.	Credence Industries/Armstrong/Anakon
83.	Wood wool acoustic wall panel and ceiling tiles	Credence Industries/Armstrong/Anakon
84.	Acoustical Wall paneling	Hush/ Credence Industries/Armstrong/Bollard.
85.	Panels	ARIO- XTERIOR BY AIROLAM/Century/Marino
86.	Corrugated GI Sheets	Tata, Essar , Sail JSW, Bhusan
87.	Collar coated profile sheets	Tata (Ezydeck)/Lloyd Superdeck/JSW/Jindal
88.	Non asbestos high impact polypropylene reinforced Cement sheet	Everest/ Bison(NCL)/HIL(Birla Aerocon).
89.	Polycarbonate sheet	GE Plastic/Lexan/MG Polyplast
90.	Float Glass Profile Sheet TATA (transparent)	Tata, Modiguard, Saint Gobain
91.	FRP Chhajjas	Selected Products Company/Jayna/Creative Engineering
92.	FRP Porta cabin	Selected Products Company/Jayna/ Creative Engineering.
93.	Modular Expansion Joint	Herculus/Sanfield India Ltd./ Vexcolt
94.	Glass Wool	Dow Corning/ U.P. Twinga/Isover
95.	SWR PVC Rain Water Pipe & Fitting	Vectus/Prayag/Finolex/ Classic of Kisan/ Kasta/ Supreme/AKG/Prayag/DRAIN MASTER by ASTRAL/ULTRAFIT, SILENTFIT by Prince Pipes.
96.	uPVC-SWR Pipes as per IS: 13592 and uPVC injection moulded fittings as per IS: 14735	KRISHNA plast pipes/KSR by Kisan irrigation/ Finolex /AKG/ Supreme / ULTRAFIT, SILENTFIT by Prince Pipes./ Ashirvad/ Astral/Prayag/Drain Master by Astral/SFMC/ PARAS/ Kothari.
	(9) Finishing	
97.	Premium Acrylic Emulsion Paint: Interior	Asian (Royale)/ ICI (Velvet)/ Berger (Luxol Silk)/ Nerolac Impression/Snowcem paints/Kamdhenu
98.	Plastic emulsion plaint	Asian paint: (Apcolite Heavy Duty Premium Emulsion paint)/ Nerolac :Impressio/Berger:Easy clean/ICI-Dulax:Velvet touch /Snowcem/Berger/Kamdhenu

99.	Epoxy Primer & Paints	Berger/ Pidilite/ CICO/ BASF/ SIKA/Asian/ Nerolac/ ICI Kansai Akzo Nobel/STP Ltd.
100.	Melamine Polish	Melamine Gold of Asian Paint/Wudfinofpidilite/Timbertone of ICI Dullex/ Beegel/Berger.
101.	Oil Bound Distemper/Dry Distemper	Asian (Professional Acrylic Distemper)/Maxilite of ICI / Bisan of Berger/Nerolac (Beauty Acrylic Distemper)/ Snowcem Paints /Kamdhenu.
102.	Acrylic Distemper 1st quality (washable/ Readymix/ Low VOC)	Asian Paints (Tractor Aqua Lock Paint)/ Berger: commando or equivalent paints of Nerolac or ICI-Dulux./Snowcem/Kamdhenu.
103.	Polyester Powder Coating	Nerolac/ Berger/ J&N
104.	Primer (Cement Primer) /Interior /Exterior /Metal /Wood	Decoprime WT of Asian/ white primer of ICI/BP white of Berger/ Nerolac/Snowcem/Kamdhenu.
105.	Synthetic Enamel Paints	Gloss Synthetic Enamel of ICI(Dulux)/Asian (Apcolite Premium gloss)/Berger (Luxol Hi Gloss)/ Synthetic Hi Gloss of Nerolac/Snowcem Paints/Berger/Kamdhenu.
106.	Textured Exterior wall paint	Spectrum/ Ultratech / Asian paint/Berger/ Nerolac/ Luxture/ Snowcem/Kamdhenu.
107.	Steel/Wood primer / paint	ICI eluxe, nerolac, berger, Asian, Snowcem/Kamdhenu.
108.	Wall Putty (White Cement based) As per IS:17545.	Birla wall care/JK white/Berger/Asian paints/ ferrous Crete/ Snowcem Paints, Nerolac/Berger/ Nuvoco(MBM) /Kamdhenu.
109.	Gypsum plaster	Ferrous crete/ Gyproc (Elite-90)/ Ultratech/Asian
110.	Acrylic Smooth Exterior Paint	Asian Paint : (Apex/ Professional Premium Exterior Emulsion/ Nerolac: XL/Berger: Weather coat/ICI-Dulux: Weather Shield/ Snowcem/Kamdhenu.
111.	Premium Acrylic Smooth Exterior Paint with Silicon Additive	Asian paint: Apex Ultima/Nerolac: XL Total/Berger: Weather coat all guard/ICI dulux: Weather Shield max/ Snowcem Snowcryl/Kamdhenu.
112.	Fire Retardant Paint	Asian paints/Akzo Nobel Coatings India ltd./ PROMAT/Jotun/Berger /Kamdhenu.
113.	Ready Mix Plaster	Ultratech/Ferrous Crete/Saint Gobain
114.	Water proof exterior paint	Shalicryl 215 of STP Ltd./Berger/Asian
115.	Synthetic Plaster Texture Paint	SnowcemPaints./Asian Paint/Berger
	(10) Road Work	
116.	Cement Concrete Paver Block &Kerb stone As per IS: 15658.	ISTAKA, Rigid Tiles/ Raj-Tiles/Concreto+ by Sai Sales./Goyal Concrete pipe
117.	Bitumen 85/25	HPCI, IOCL, BPCL
118.	Bitumen VG-30, VG-10 etc.	As per particular specification of item from IOCL, BPCL, HPCL.
119.	Road safety Products	Shakti/Vectus/Aquatech
120.	Coal tar sealer for roads	Shaliseal RSTC of STP Ltd./Shalimar/ Jemkon Pvt. Ltd.

	(11) Sanitary installation	
121.	P.T.M.T. Taps/Valves and Accessories As per IS:9763	Prayag/ PRAKASH /SURYA/Supreme/ KINGSTON/ Shakti/ Varmora
122.	Plastic Bib cock and other fittings IS : 9763	Prayag/Swastik/Polo/ Varmora.
123.	Centrifugally As per IS: 3989 /Hubless Cast Iron Pipe & Fittings as per IS: 15905	Neco/ RIF/ Kapilansh/ BIC/SKF/Electrosteel/RPMF
124.	CP Bottle Trap	Parryware / Hindware/ Jaquar/Plato Brand/Prayag
125.	CP Brass Bibcock/ Pillarcock/ Stopcock/ Angle Valve/ Concealed Stop Cock & CP fittings (Normal Range) As per IS: 8931:1893	Marc (oriental series)/ Parko/ Jaquar (Continental series)/SPRING COLLECTION OF PRIMA /GEM/ ESS/ Plumber/L&K Metro/Vardhman/'Coral' series of parryware/'JOY' & 'VINTAGE' series of KEROVIT by Kajaria /Shakti/Prayag/ Player/ KINGSTON/ Varmora/ Asian (bathsense/ESS ESS).
126.	CP Waste Coupling	Mark/ Parko/Plato Brand/Prayag
127.	PVC Flushing cistern (single/Dual Flush) as per IS: 7231	Sleek Dual flush PVC cistern of Hindware / 'Slimline'ofParryware/Shakti/ Prayag/Bathsense by Asian Paints
128.	PVC Concealed Cistern & Push Plates	Parryware/Hindware/ Jaquar/TECE by Asian Paints/Prayag
129.	Fiber Glass Shelf	Kamal/ Bath King/Prayag
130.	Flush Valve	Aquel/ Marc/ Parryware/ Jaquar.
131.	Jet Assembly for EWC	Parryware/ Jaquar/ Grohe/ Kohler
132.	Low Level PVC Cistern Single flush	Sleek model Cistern of PVC of Hindware/Slimline model of Parryware/ JINDAL/ Shakti/Prayag
133.	Plastic Connection Pipe	Parryware/Kamal/ Delux/Prayag
134.	Solid Plastic Seat Cover for EWC As per IS: 2548-2	EWC standard seat cover white of Parryware/ Hindware/'KEROVIT' by Kajaria/Prayag
135.	Vitreous China Floor Mounted European W.C. without cistern As per IS: 2556:Part-II.	Parryware / Hindware /KEROVIT' by Kajaria/ CERA/Jaguar/ ESSCO by Jaquar/Somany/ Bathsense by Asian/Prayag
136.	Water closet (Orissa Pan/Indian type) & fittings, accessories as per IS : 2556 Part-3	Parryware / Hindware /'KEROVIT' by Kajaria/ESSCO by Jaquar/ Somany/ Varmora/ Asian (bathsense/ESS ESS) /Prayag.
137.	Virtuosos China Wash Basin Oval As per IS: 2556: Part-IV.	Hindware / Parryware /KEROVIT' by Kajaria/ CERA Jaguar/ ESSCO by Jaquar/Somany/ Bathsense by Asian/Prayag.
138.	Vitreous China Floor moulded European W.C. with Cistern Complete As per IS: 2556:Part-II.	Parryware / Hindware /KEROVIT' by Kajaria/ CERA/Jaguar/ ESSCO by Jaquar/Somany/ Bathsense by Asian/Prayag
139.	Vitreous China Half stall Urinal and Partition Plates As per IS: 2556:Part-VI.	Model No. 6002 Urinal flat back large of Hindware or magnum of Parryware/ ESSCO by Jaquar/Somany/Prayag

140.	Stainless steel Sink with or without Draining board. As per IS:13983.	Nirali/ Hindware/ Frankee/ Cobra/AMC/ Selected Products Company/ Parryware/ Neelkanth/ Nirali/ Prayag/KINGSTON/Plato Brand/ Varmora/Prayag
141.	Vitreous China laboratory Sink	Hindware / Parryware /KEROVIT' by Kajaria/ CERA/Jaguar/ ESSCO by Jaquar/Somany/Prayag
142.	Vitreous China Low Level Cistern for European W.C.	Hindware / Parryware /KEROVIT' by Kajaria/ CERA/Jaguar/ ESSCO by Jaquar/Somany/Prayag
143.	Vitreous China Pedestal for Wash Basin	Pedstal of Parryware / Hindware or equivalent/ CERA/Jaguar/ ESSCO by Jaquar/Somany/Prayag
144.	Vitreous China Wall Mounted W.C. with vitreous Cistern	Parryware / Hindware /KEROVIT' by Kajaria/ CERA/Jaguar/ ESSCO by Jaquar/Somany/Prayag
145.	Vitreous China Wall Mounted W.C. without Cistern.	Parryware / Hindware /KEROVIT' by Kajaria/ CERA/Jaguar/ ESSCO by Jaquar/Somany/Prayag
146.	Vitreous China Wash Basin Rectangular without Pedestal	Hindware / Parryware /KEROVIT' by Kajaria/ CERA/Jaguar/ ESSCO by Jaquar.\/Prayag/Somany/Prayag
147.	Waste Pipe	Kamal with brass checknut/Viking/Prince/Prayag
148.	CPVC Pipes as per IS: 15778 and fittings IS: 15576.	AKG/Ashirvad/PRIME FLOW OF KRISHI POLYMERS /Supreme/KSR by Kisan irrigation/Flowguard plus by finolex/ Prince /Prayag/Vectus/CPVC PRO by Astral/SFMC/Flow Guard Plus by Prince Pipes/TEXMO/ PARAS by BothraAgro/ Kothari/Prayag.
149.	CPVC pipes for fire protection system as per IS: 16088 Automatic sprinkler fire extinguishing system	Blazemaster of Ashirvad/Supreme/Astral
150.	uPVC Pipes as per IS: 4985 and fittings IS: 7834, IS: 10124.	KRISHNA plast pipes/AKG/ KSR by Kisan irrigation /Supreme /Astral/ Prince/ Ashirvad/ Prayag/ Aquasafe by Astral/SFMC/ULTRAFIT, SILENTFIT by Prince Pipes/TEXMO/ PARAS/ Fusion/ Kothari.
151.	PVC fittings as per IS: 10124 and IS: 7834	KSR brand/ Astral/Ashirvad/Prince
152.	Brass bib cocks/stop cock	Marc/Parko/Jaquar/SPRING COLLECTION OF PRIMA as per IS : 781/ Plato Brand.
153.	Brass ball cocks (Float valve) as per IS:1703	Marc/Parko/Jaquar /SPRING COLLECTION OF PRIMA Prayag/Plato Brand
154.	C.P. Brass fittings (Superior Range)	Jaquar/Grohe/Roca/ Asian (Royal)
155.	C.P. Brass Faucets, Showers, Accessories & Essential	ESS ESS, Bathsense& Premium Range: Royale by Asian Paints/Parryware /Jaquar/Kingston/Plato Brand/Prayag.
156.	Sanitary ware fittings & Accessories (Superior range)	Kohler/Roca/Hindware/Parryware/Bathsense by Asian Paints
157.	Towel Ring/Towel Rod/Towel Rack	Kamal/ Marc/Parreyware/Prayag
158.	Mirror glass	Atul/Modi Guard/Golden Fish/GOLD PLUS
159.	CI Nahani Traps/Floor Tap/Bend/ Foot Steps (KFAI)	Kwality Foundry Industries, Raipur/Kapilansh/Nico

	(12) Water Supply	
160.	GI fitting	Tata/ Jindal/ Zenith
161.	GI Pipe	Tata/ Zenith/ Jindal (HISAR)/SAIL/HIRA/Sambhv Steel/ FORTUNE
162.	Gun Metal Gate Valve	Zoloto/ Leader/ SAINT
163.	PE-AL-PE Composite pipes for hot & cold water	Jindal / KiTEC/Vectus.
164.	Water meter	SPRING COLLECTION OF PRIMA as per IS: 779/Kranti/Zoloto
165.	HDPE Pipes as per IS:4984 and fittings	KRISHNA plast pipes/KSR by Kisan irrigation /Supreme /Reliance /Jain/Vectus/Astral/ CG Plast/Ashirvad/TEXMO/ Kothari.
166.	Polyethylene water storage tanks as per IS: 12701	Sintex, water well, Siltank, Polywell/Plasto/ 'SILTANK' by Supreme/ Vectus/ CG Plast/STOREFIT by Prince Pipes/Aquasafe/Prayag
167.	UPVC Agriculture/Pressure pipes as per IS: 4985 and fittings	AKG Extrusion Pvt Ltd./Astral/Ashirvad/ Kothari.
168.	UPVC underground drainage & sewerage pipes SN 4/ SN 8/Structured wall type as per IS: 16098	KSR by Kisan irrigation/Finolex/AKG/ Supreme/Foam Core by Astral./Ashirvad/DRAINFIT by Prince Pipes/TEXMO/ Kothari.
169.	PPR-C pipes as per IS: 15801	KSR brand/Supreme/Vectus/SFMC/KPT/GREENFIT by Prince Pipes/Prayag
170.	CPVC pipe for firefighting Sprinkler system	FIREPRO by ASTRAL/Supreme/Ashirvad.
	(13) Drainage	
171.	PVC septic tanks	'Safegard' by Supreme/Sintex/Plasto
172.	PVC underground water tanks	'Amrutam' by Supreme/Sintex/Plasto
173.	PVC readymade toilet blocks	'Cleanage' by Supreme/Sintex/Plasto
174.	PVC/FRP chambers, Manholes & Covers	Supreme/ Drain Hulk by Astral/Prince
175.	D.I. Pipes & fittings	Electrosteel/Jindal/Tata Ductura/Kapilansh/ Kesorom
176.	C.I. manhole covers, frames & CI Gratings	Neco/Raj iron Foundary Agra/BIC/SKF/ Kapilansh/RPMF/Kwality Foundry Industries/Plato Brand
177.	SFRC/RCC manhole cover & Grating As per IS: 2592:2003	K.K./Concreto+ by Sai Sales/Goyal Concrete pipe
178.	Double wall corrugated polyethylene (DWC PE) Pipes IS : 16098 part II.	Nobale by Noble Polytec/REX by Astral/CORFIT by Prince Pipes.
179.	M.S./Steel Tubes, ERW Pipes, Hollow steel sections (Black, Galvanized, square, rectangular, hollow) for water and sewage. As per IS: 3589	Goel Pipes/APL Apollo/HIRA/Shivam Overseas (ISKCO)/ Sambhv Steel/ FORTUNE

	(14) Aluminium Work	
180.	EPDM Gasket	Anand Lescuyer/Hanu/Raven
181.	Silicon Sealant	G.E./ DOW Corning/Waker/BASF/Pidilite/ROFF
182.	Aluminium doors & window fittings (Heavy duty)	Jyoti , Argent, Everest/Kilong/Alualpha/ classic/ Ebco
183.	Rigid Phenolic foam for cold and hot insulation as per IS: 13204	Phenotherm manufactured by Bakelite Hylam ltd/Polybond/Supreme
184.	Aluminium Composite Panel as per IS: 17682.	Alpolic/ Aluco Bond/ Reynobond/ Euro bond/ Al-strong/ Aludewr/Viva/Alstone/VIRGO
	(15) Water Proofing Work	
185.	Poly Sulphide Sealant	PIDISEALbyM/s Pidilite Industry/RDL941-TECHSEAL ChokseyChemicals/BASF/SIKA/Fosroc/ STP Ltd./Asian Paints/Berger/ MYK Arment.
186.	Polymer Modified Cementitious grout	Bal Endura/ PidiliteKero Koal/ Ultratech/ Ardex/Ferrous Crete/Asian Paints/ STP Ltd./Berger/Kryton/ MYK Arment.
187.	Cool Roof Tiles	Endura by Johnson / Rac/Kajaria
188.	Water Proofing Compound (Liquid)	Pidiproof Ltd./CICO/ Super plast by M/s Structural water proofing/ Impermo/FOSROC/Dr. Fixit (Pidilite Industries) /BASF/ ROFF/SIKA/Ardex Endura (Bal Endura)/Asian Paints/STP ltd./Berger/NEO SEAL Adhesive Pvt. Ltd./ MYK Arment.
189.	White cement based polymer modified self curringmortor	Ultratech/Dr. Fixit/Sika/Fosroc/Berger/Kryton/Asian
190.	Integral water proofing compound with cement (for mortar & concrete) as per IS: 2645	FOSROC/ Conplast 421/Dr. fixit: LW+/ Sika :sikacim/Asian Paints: Smart care vitalia& equivalent product of BASF/CICO/Ardex Endura/STP Ltd/Snowcem /Berger/Kryton/ NEO SEAL Adhesive Pvt. Ltd. / MYK Arment.
191.	Water proofing for bathroom/toilet/balcony & other wet areas.	Fosroc: Brush Bond/CICO:Tapecrete/Dr. fixti :Pidilite 2k/Sika: Nito Bond/Asian Paints: Damp Block 2k & Equivalent Product of BASF/Ardex endure/ Snowcem/ STP Ltd. /Berger/Kryton/ NEO SEAL Adhesive Pvt. Ltd./ MYK Arment.
192.	Crystalline water proofing compound.	Fosroc: Fosroc crystalline/Dr. Fixit: Dr. fixit crystalline/Sika: Sika Crystalline/Asian Paints: Crystalline Quart & Equivalent Product of BASF/CICO/Ardex Endura/Berger/Kryton/ MYK Arment.
193.	Water proofing membrane (APP, SBS, PVC, HDPE, EPDM, PU based)	Asian Paints/ Dr. Fixit/STP Ltd./Berger/ MYK Arment.
194.	Water proofing Universal/multipurpose polymers	Asian Paints/STP Ltd./Dr. Fixit./Berger/Kryton Buildmat/ MYK Arment.

195.	Water proofing sealants	Asian Paints/STP Ltd./Dr. Fixit. /Berger/Kryton Buildmat/ MYK Arment.
196.	Water proofing micro concrete/repair mortor	Asian Paints/ STP Ltd./Berger/Kryton Buildmat
197.	Waterproofing Polyurathene Coating/LEC System/Polyurathene Foam	Dr. Fixit/STP Ltd./Asian/Berger/Kryton Buildmat/ MYK Arment.
198.	Swellable type water stop tape/bar	Kryton Buildmat/Supreme/ KINGSTON.
	(16) Rain water Harvesting & Tubewell	
199.	uPVC Screen and casing pipes for bore well/tube well as per IS : 12818 and column pipes for submersible pumps	KRISHNA plast pipes/KSR by Kisan irrigation/Supreme/Astral/Ashirvad/SAFEFIT by Prince Pipes.
	(17) Structure Glazing and Aluminium Composite Panel	
200.	Aluminium Extrusions/ Sections/Profiles	Hindalco/ Indalco/ Jindal/Indian Aluminium Co./ Ultra/Divya Shree/
201.	Structural Silicon Sealant	Dow Corning/ Wacker/ GE/ Du-pont
	(18) Miscellaneous	
202.	Protective coating, Adhesive & Insulation	Shali Urethane PC of STP Ltd./Berger/Kryton Buildmat/Asian
203.	Anti corrosive & Anti carbonation coating	STP Ltd./Asian/Trident
204.	Curing compound	STP Ltd./Berger/Asian
205.	Cover blocks/spacers	Bothra Duro Frame/Concreto+ by Sai Sales/Astron
206.	Rest Room cubicle made with compact laminates	MERINO/VIRGO/Infotech
207.	Vault room accessories - safes, lockers, tang bars, security door, emergency door, vault ventilator, exhaust Fan, mobile compactors, filing cabinets, strong room doors as per BIS.	Godrej &Boycee/ Gunnebo-Steelage/Guardwel
208.	Motorised Rolling Shutter (Automated)	Avians Innovations/Gandhi Automations/Toshi

PROFORMASOF GUARANTEEBONDS

ANNEXURE-I

GUARANTEE TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OFSTONEWORK/TILEWORK.

The agreement made this.....day of.....Two Thousand .....between .....S/o ..... (hereinafter called the GUARANTOR on the one part)
and the President of India(hereinafter called the Government on the other part)

WHEREAS THIS agreement is supplementary to a contract (Hereinafter called the Contract) dated.....and made between the GUARANTOR ON THE ONE PARTAND the Government on the other part whereby the contractor inter alias undertook to render the work in the said contract structurally stable , workmanship, finishing and use of sound materials.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the affect that the said work will remain structurally stable and guaranteed against faulty workmanship, finishing and materials.

NOW THE GUARANTOR hereby guarantee that work executed by him will remain structurally stable after the expiry of maintenance period prescribed in the contract for the minimum life of ten years to be reckoned from the date after the expiry of maintenance period prescribed in the contract.

The decision of the Engineer-in-Charge with regard to nature and cause of defect During this final period of guarantee, the guarantor shall make good all defects to the satisfaction of the Engineer-in-Charge calling up on him to rectify the defects failing which the work shall be got done by the Department by some other contractor at the Guarantor's cost and risk. The decision of the Engineer-in-Charge as to the cost payable by the Guarantor shall be final and binding.

That if the guarantor fails to make good all the defects, commits breach there under, then the guarantor will indemnify the principal and his successor against all loss, damage, cost expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and/or damage and or cost incurred by the Government, the decision of the Engineer-in- Charge will be final and binding on both the parties.

IN WITHNESS WHERE OF these presents have been executedby the obligator .....and.....by..... for and on behalf of the President of India on the day, month and year first above written.

SIGNED, sealed and delivered by OBLIGATOR in the presence of :-

1. ..... 2. .....

SIGNEDFORANDBEHALFOFTHEPRESIDENTOFINDIABY.....in the presence of :-

1. ..... 2. .....

ANNEXURE-II

GUARANTE TO BE EXECUTED BY THE CONTRACTOR
FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER-PROOFING WORKS.

The agreement made this.....day of.....Two Thousand ..... between .....S/o.....(hereinafter called the GUARANTOR on the one part) and the PRESIDENTOF INDIA(hereinafter called the Government on the other part)

WHEREAS THIS agreement is supplementary to a contract (Hereinafter called the Contract)dated.....and made between the GUARANTOR ON THE ONE PARTAND the Government on the other part where by the contractor inter alia undertook to render the building and structures in the said contract completely water and leak-proof.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the affect that the said work will remain water and leak proof, for 10 years from the date of giving waterproofing treatment.

NOW THE GUARANTOR hereby guarantee that work executed by him will render the structures completely leak proof and the minimum life of such water proofing treatment shall be 10 years to be reckoned from the date after the expiry of maintenance period prescribed in the contract.

The decision of the Engineer-in-Charge with regard to nature and cause of defect shall be final. During this period of guarantee, the guarantor shall make good all defects and in case of any defect being found render the building waterproof to the satisfaction of the Engineer-in- Charge calling upon him to rectify the defects failing which the work shall be got done by the Department by some other contractor at the Guarantor's cost and risk. The decision of the Engineer-in-Charge as to the cost payable by the Guarantor shall be final and binding.

That if the guarantor fails to execute the waterproofing or commits breach there under, then the guarantor will indemnify the principal and his successor against all loss, damage, cost expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and/or damage and or cost incurred by the Government, the decision of the Engineer-in- Charge will be final and binding on both the parties.

IN WITHNESS WHEREOF these presents have been executed by the obligator .....and.....by.....for and on behalf of the PRESIDENT OF INDIA on the day, month and year first above written.

SIGNED, sealed and delivered by OBLIGATOR in the presence of :-

1. .....
2. .....

SIGNED FOR AND BEHALF OF THE PRESIDENT OF INDIA BY.....in the presence of :-

1. .....

2. .....

ANNEXURE-III
GUARANTEETOBE EXECUTEDBY
THECONTRACTORFORREMOVAL OF DEFECTS AFTER COMPLETION
IN RESPECT OF SANITARY INSTALLATIONS / WATER SUPPLY / DRAINAGE WORK /u-PVC WINDOWS WORK/ STRUCTURAL GLAZING/ ACP CLADDING/ DRY STONECLADDINGAND ALUMINIUM WORK

The agreement made this.....day of.....Two Thousand……..... between .....S/o.....(hereinafter called the GUARANTOR on The one part) and the PRESIDENT OF INDIA (hereinafter called the Government on the other part)

WHEREAS THIS agreement is supplementary to a contract (Hereinafter called the Contract)dated..... and made between the GUARANTOR ON THE ONEPART AND the Government on the other part, whereby the contractor inter alia, undertook to render the work in the said contract structurally stable, leak proof and sound material, workmanship, anodizing, collaring, sealing etc.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the affect that the said work will remain structurally stable, leak proof and guaranteed against faulty material and workmanship, defective anodizing/Powder coat collaring and finishing for……. Years from the date of completion of work.

NOW THE GUARANTOR hereby guarantee that work executed by him will be free from any leakage, seepage, cracks in pipes, materials used and guaranteed against faulty material and workmanship, defective galvanizing for ten years to be reckoned from the date after the expiry of maintenance period prescribed in the contract.

The decision of the Engineer-in-Charge with regard to nature and cause of defect final shall be final during this period of guarantee, the guarantor shall make good all defects and in case of any defect to satisfaction of Engineer-in-Charge at his cost and shall commence the work for such rectification within seven days from the date of issue of the notice from the Engineer-in-Charge calling upon him to rectify the defects failing which the work shall begot done by the Department by some other contractor at the guarantor's cost and risk. The decision of the Engineer-in-Charge as to the cost payable by the Guarantor shall be final and binding.

That if the guarantor fails to make good all defects or commits breach there under, then the guarantor will indemnify the principal and his successor against all loss, damage, cost expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and/or damage and or cost incurred by the Government, the decision of the Engineer-in-Charge will be final and binding on both the parties.

IN WITHNESS WHEREOF these presents have been executed by the obligator.....and ....by..... for and on behalf of the PRESIDENTOF INDIA on the day, month and year first above written.

SIGNED, sealed and delivered by OBLIGATOR in the presence of :-

1. .....
2. .....

SIGNED FOR AND ON BEHALF OF THE PRESIDENT OF INDIA BY.....in the presence of:-

1. .....

2. .....

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Maintenance 2023/02

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi Dated: 08.12.2023

Subject: Modifications in Conditions of Contract, Clause 5 and schedule F in clause 5 of GCC 2023 Maintenance Works

The following amendments are made in the GCC 2023 for Maintenance works.

Existing Provision	Modified Provision
CONDITIONS OF CONTRACT **Definitions** 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:- (i) to (xvii) (xviii) No provision	**CONDITIONS OF CONTRACT** **Definitions** 2. No change:- (i) to (xvii) No Change **(xviii) Concurrent delay: Concurrent delays are those delays occurring in the work concurrently in any combination or combination of all delay fall under different sub clauses 5.2, 5.3 and 5.5.**
Clause 5 Time and Extension for Delay The time allowed for execution of the Works as specified in the Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the work shall commence from such time period as mentioned in schedule 'F' or from the date of handing over of the site, notified by the Engineer-in-Charge, whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, the performance guarantee shall be forfeited by the Engineer in Charge and shall be absolutely at the disposal of the Government without prejudice to any other right or remedyavailable in law.	**Clause 5 Time and Extension for Delay** The time allowed for execution of the Works as specified in the Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the work shall commence from such time period as mentioned in schedule 'F' or from the date of handing over of the site, notified by the Engineer-in-Charge, whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid **and such default continues even after time period specified in the notice in writing by the Engineer-in-Charge then** the performance guarantee shall be forfeited by the Engineer-in-Charge and shall be absolutely at the disposal of the Government without prejudice to

8/12/2023
R.K. JAIN
(EE (Contact)

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	any other right or remedy available in law. **The contract shall stand determined when such decision of forfeiture of the performance guarantee is issued to the contractor.**
5.1 As soon as possible but within 7 (seven) working days of award of work and in consideration of	5.1 **The contractor** as soon as possible but within 7 (seven) days of **issue of letter of** award of work **shall submit a time and progress chart to the Engineer-in-Charge. Such chart shall be made in due** consideration of
a. Schedule of handing over of site asspecified in the Schedule 'F' b. Schedule of issue of designs as specified in the Schedule 'F',	a. Schedule of handing over of site as specified in the Schedule 'F' b. Schedule of issue of design(s) **and drawing(s)** as specified in the Schedule 'F',
i. the Contractor shall submit a Time and Progress Chart for each mile stone. The Engineer-in-Charge may within 7 (seven) working days thereafter, if required modify, and communicate the program approved to the contractor failing which the program submitted by the contractor shall be deemed to be approved by the Engineer-in- Charge. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the Contract documents.	i. The Contractor shall submit a Time and Progress Chart for each milestone. The Engineer-in-Charge may within 7 (seven) days **of receipt of such chart, make modifications thereafter,** if **any,** and communicate the approved **chart** to the contractor, failing which the **chart** submitted by the contractor shall be deemed to be approved by the Engineer-in- Charge. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the Contract documents.
ii. In case of non-submission of construction programme by the contractor, the program approved by the Engineer-in-Charge shall be deemed to be final.	ii. In case of non-submission of **time and progress chart** by the contractor, the **chart prepared by the** Engineer-in- Charge shall be deemed to be final.

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(EE (Contact)

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iii. The approval by the Engineer-in-Charge of such programme shall not relieve the contractor of any of the obligations under the contract.	iii. The approval by the Engineer-in-Charge of such programme shall not relieve the contractor of any of the obligations under the contract.
iv. The contractor shall submit the Time and Progress Chart and progress report using the mutually agreed software or in other format decided by Engineer-in-Charge for the work done during previous month to the Engineer-in-charge on or before 5th day of each month failing which a recovery as per Schedule F to be decided by the NIT approving authority shall be made on per week or part basis in case of delay in submission of the monthly progress report	**iv.** The contractor shall submit the Time and Progress Chart **containing upto date progress of work** using the mutually agreed software or in **the** format decided by Engineer-in-Charge. **Such chart shall be submitted by the contractor on or before 5th day of each month failing which a recovery as mentioned in Schedule 'F' shall be made at the earliest from running account bill without any notice in this regard.**
v. **No provision**	**v. While recording the hindrances in the progress of the work, due consideration should be given to the cause of hindrance. The hindrances shall be segregated in following categories :** **a) delays due to reasons beyond the control of both parties (sub-clause 5.2)** **b) delays attributable to the Department and concurrent delays (sub-clause 5.3).** c) **delays solely attributable to the contractor (sub-clause 5.5)**
5.2 If the work(s) be delayed by:- i. force majeure, or ii. abnormally bad weather, or iii. serious loss or damage by fire, or iv. civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or v. delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in	**5.2 Delays due to reasons beyond the control of both parties:** If the work(s) delayed by:- i. force majeure, or ii. abnormally bad weather, or iii. serious loss or damage by fire, or iv. civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or v. delay on the part of other contractors or tradesmen engaged by Engineer-in- Charge in

21/8/2023
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executing work not forming part of the Contract, or vi. any other cause like above which, in the reasoned opinion of the Engineer-in-Charge is beyond the Contractor's control	executing work not forming part of the Contract, or vi. any other cause like above which, in the reasoned opinion of the Engineer-in-Charge is beyond the Contractor's control.
Then upon the happening of any such event causing delay, the contractor shall immediately give notice thereof in writing to the Engineer-in-Charge but shall nevertheless use constantly his best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.	Then upon the happening of any such event causing delay, the contractor shall **within 03 (three) days** give **online** notice thereof **through ERP Portal** to the Engineer-in-Charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the work(s). **The contractor shall have no claim on account of any hindrance in case notice(s) are not given by the contractor through ERP portal.** **The Engineer-in-Charge, on receipt of such notice(s) after considering the factual ground situation, shall either acknowledge or reject the notice(s)** **In case of rejection, the reason(s) for rejection shall be communicated by Engineer-in-Charge to the agency.** **The decision of Engineer-in-Charge with regard to nature of event causing delay, its start date and end date, as has been finalized during acknowledgement of notice, shall be final and binding.** **The end date of such events shall be recorded by Engineer-in-Charge either during acknowledgment of notice or subsequent to acknowledgement if end date of hindrance is after the date of acknowledgement of notice.** **In absence of notice by the contractor, Engineer-in-Charge or his representative(s) may record the events causing delay within 05 (five)**

08/12/2025
R.K. JAIN
(EE (Contact)

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	days of occurrence of hindrance on ERP portal provided further that not recording of events causing delay by the Engineer-in-Charge does not ipso facto entitle the contractor for any hindrance.
The contractor shall have no claim of damages for extension of time granted or rescheduling of milestone/s for events listed in sub clause 5.2.	**No change.**
5.3 In case the work is hindered in the opinion of the contractor, by the Department or for any reason / event, for which the Department is responsible, the authority as indicated in Schedule 'F' shall, if justified, give a fair and reasonable extension of time and reschedule the mile stones for completion of work.	**5.3 Delays attributable to the department** In case the work is hindered, in the opinion of the contractor, by the Department or for any reason / event, for which the Department is responsible, **then upon the happening of such event causing delay, the Contractor shall within 3 (three) days give online notice there of through ERP Portal to the Engineer-in-Charge but shall nevertheless use constantly his best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the work.** **The contractor shall not be entitled for any hindrance in case notice(s) are not given by the contractor through ERP portal.** **The Engineer-in-Charge, on receipt of such notice(s) after considering the factual ground situation, shall either acknowledge or reject the notice(s).** **In case of rejection, the reason(s) for rejection shall be communicated by Engineer-in-Charge to the agency.** **The decision of Engineer-in-Charge with regard to nature of event causing delay, its start date and end date, as has been finalized during acknowledgement of notice, shall be final and binding.**

21/11/2023
R.K. JAIN
(EE (Contact)

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CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

	The end date of such events shall be recorded by Engineer-in-Charge either during acknowledgment of notice or subsequent to acknowledgement if end date of hindrance is after the date of acknowledgement of notice. **In absence of notice by the contractor, Engineer-in-Charge or his representative(s) may record the events causing delay within 05 (five) days of occurrence of hindrance on ERP portal provided further that not recording of events causing delay by the Engineer-in-Charge does not ipso facto entitle the contractor for any hindrance.**
Such extension of time or rescheduling of milestone/s shall be without prejudice to any other right or remedy of the parties in contract or in law, provided further that for concurrent delays under this sub clause and sub clause 5.2 to the extent the delay is covered under sub clause 5.2 the contractor shall be entitled to only extension of time and no damages.	Such extension of time or rescheduling of milestone**(s)** shall be without prejudice to any other right or remedy of the parties in contract or in law, provided further that for concurrent delay(s) under this sub clause and sub clause 5.2 to the extent the delay is covered under sub clause 5.2**,** the contractor shall be entitled to only extension of time and **shall have** no **claim of** damages.
5.4 Request for rescheduling of Mile stones or extension of time, to be eligible forconsideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed forms i.e. Form of application by the contractor for seeking rescheduling of milestones or Form of application by the contractor for seeking extension of time (Appendix - XVI) respectively to the authority as indicated in Schedule 'F'. The Contractor shall indicate in such a request the period by which rescheduling of milestone/s or extension of time is desired.	5.4 **Rescheduling of milestone(s) and 'extended date of completion'** The request for rescheduling of Milestone**(**s**) and** extension of time, shall be made by the Contractor **through ERP Portal once in a month on the basis of hindrances accepted by Engineer-in-Charge under sub-clause 5.2 and sub-clause 5.3.** The Contractor shall indicate in such a request **number of days** by which rescheduling of milestone**(s) and/**or extension of time is desired.
With every request for rescheduling of milestones, or if at any time the actual progress of work falls behind the approved programme by more than 10% of the stipulated period of completion of contract, the contractor shall produce a revised programme without causing any delay in execution	**Deleted**

08/10/2025
R.K. JAIN
(EE (Contract)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

of the work. A recovery as specified in Schedule 'F' shall be made on per day basis in case of delay in submission of the revised programme.	
No provision	**The authority as indicated in Schedule 'F', after examining the request, shall give a fair and reasonable extension of time for completion of work and simultaneously reschedule the milestone(s), if required so. The authority shall consider all the hindrances accepted as per sub-clauses 5.2, 5.3 and 5.5.** **The authority shall decide rescheduling of milestone(s) and extension of time within 21 (Twenty One) days of the request submitted by the contractor through ERP portal. In event of no request by the contractor for rescheduling of milestone(s) and extension of time, the authority as indicated in Schedule F, after affording opportunity to the contractor, may give fair and reasonable extension of time based on hindrances accepted by Engineer-in-Charge and reschedule the milestone(s) once in a month. Such justified extension of time shall determine the 'extended date' of completion of work.**
5.4.1 In any such case the authority as indicated in Schedule 'F' may give a fair and reasonable extension of time for completion of work or reschedule the mile stones.	5.4.1 **Provided that the end date of any event causing delay shall not fall beyond the date of request for extension of time or rescheduling of milestone(s) by the contractor. In case end date of event falls beyond the date of submission of said request, then period for extension up to date of application shall be considered in the said request for events eligible for consideration and remaining period shall be applied in subsequent request of extension of time or rescheduling of milestone(s).**
E-in-C shall finalize/ reschedule a particular mile stone before taking an	**Engineer-in-Charge** shall finalize/ reschedule a particular mile stone

R.K. JAIN
(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____
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action against subsequent mile stone. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in Schedule 'F' in writing, within 21 days of the date of receipt of such request from the Contractor in prescribed form. In event of non-application by the contractor for extension of time E-in-C after affording opportunity to the contractor, may give, supported with a programme (as specified under 5.4 above), a fair and reasonable extension within a reasonable period of occurrence of the event.	before taking an action against subsequent mile stone. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in Schedule 'F' in writing, within 21 **(twenty one)** days of the date of receipt of such request from the Contractor **on ERP Portal.**
5.5 In case the work is delayed by any reasons, in the opinion of the Engineer- in-Charge, by the contractor for reasons beyond the events mentioned in clause 5.2 or clause 5.3 or clause 5.4 and beyond the justified extended date, without prejudice to right to take action under Clause 3, the Engineer-in-Charge may grant extension of time required for completion of work without rescheduling of milestones. The contractor shall be liable for levy of compensation for delay for such extension of time.	5.5 **Delays attributable solely to the contractor** **In case the work is delayed by reasons solely attributable to the contractor, then Engineer-in-Charge or his representative(s) may record the event causing delay within 05 (five) days of occurrence of delay in the ERP portal. Contractor shall take the notice of the same for necessary action. He may submit his version, if any within 05 (Five) days. Engineer-in-Charge, considering the version of the contractor, will take decision on such recording of the event and the decision of the Engineer-in-Charge shall be final and binding.** **The contractor shall be liable for levy of compensation for such delays (i.e. for the period beyond the justified extended date of completion as determined in sub clause 5.4 and this default of contractor shall be dealt in conjunction with clause 2 of the contract.** **In case the work is delayed, due to hindrances attributable solely to the contractor, beyond the justified extended date (as stated in sub clause 5.4), the authority indicated in Schedule 'F', without prejudice to provisions to take action under Clause 3, may grant extension of**

R.K. JAIN
(EE (Contact)

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	time required for completion of work without rescheduling of milestone(s) and extend the date of completion.
PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect.& Hort. Works in case of Composite Tenders) **SCHEDULE 'F'** **Clause 5** **Authority to decide:**	**PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect. & Hort. Works in case of Composite Tenders)** **SCHEDULE 'F'** **Clause 5**
i. Extension of time ..... (Engineer in Charge or Engineer in Charge of Major Component in case of Composite Contracts, as the case may be)	i. **Authority to convey the decision of shifting of milestone and** extension of time ..... (Engineer-in-Charge or Engineer-in-Charge of Major Component in case of Composite Contracts, as the case may be)
ii. Rescheduling of mile stones ..... (Superintending Engineer/ PM/CPM in Charge or Superintending Engineer/ PM/CPM in Charge of Major Component in case of Composite Contracts, as the case may be)	**ii. Authority to decide rescheduling of milestone and** extension of time ..... (SE/**SE&PD/ CE/ CE&ED).**
iii. Shifting of date of start in case of delay in handing over of site ..... (Superintending Engineer/ PM/CPM in Charge or Superintending Engineer in Charge of Major Component in case of Composite Contracts, as the case may be)	iii. Shifting of date of start in case of delay in handing over of site ..... (SE/**SE&PD/CE/ CE&ED).**

This OM is applicable for all NITs uploaded after date of issue of this OM.

This is issued with the approval of DG CPWD.

08.12.2023

(वी. पी.साहू)

अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2023/ Maintenance e-file 9161772

के.लो.नि.वि. तथा लो.नि.वि. दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु (के.लो.नि.वि.वेबसाईट के माध्यम से)।

08.12.2023

R.K. JAIN

(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____

CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Maintenance 2023/03

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI Dated: 18.12.2023

Subject: Modifications in Conditions of Contract, Clause 12 and Schedule E and F of GCC 2023 for Maintenance Works

The following amendments are made in the GCC 2023 Maintenance Works:

Existing provision	Modified provision
CONDITIONS OF CONTRACT **Definitions** 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:- (i) to (x)(a)	**CONDITIONS OF CONTRACT** **Definitions** 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:- (i) to (x) (a) **No change**
(x) (b) Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender documents or the standard Schedule of Rates of the government mentioned in Schedule 'F' hereunder, with the amendments thereto issued upto the date of receipt of the tender.	(x) (b) Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender documents or the standard Schedule of Rates of the government mentioned in Schedule 'F' hereunder, with the amendments thereto issued **previous day of the last date of submission of the tender.**
(xi) to (xv)	**(xi) to (xv) No change**
(xvi) No provision	**(xvi) Extra items** are those items which are not available in the contract. a. **Non Schedule Extra Items** are those items which are not available in the Standard Schedule of Rates specified in Schedule F. b. **Scheduled Extra Items** are those items which are available in the Standard Schedule of Rates specified in Schedule F.
(xvii) No provision	**(xvii) Completion cost: The completion cost includes gross amount of work done, amount of extra item(s) and deviation(s) and escalation amount admissible as per agreement etc.**

18/12/2023

R.K. JAIN

(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____

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(xviii) No provision	**(xviii) Maintenance work:** Maintenance work(s) are those work(s) which includes upgradation, aesthetic improvement, special repair, addition/ alteration, annual repair, comprehensive maintenance work etc.
Clause 12 Deviations/ Variations Extent and Pricing The Engineer-in-Charge shall have power (i) to make alteration in, omissions from, additions to or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for other reasons and the contractor shall be bound to carry out the works in accordance with any instruction given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.	**Clause 12 Deviations/ Variations Extent and Pricing** **No change**
The completion cost of any agreement for maintenance works including works of upgradation, aesthetic, special repair, addition/ alteration should not exceed two times the contract amount. Deviation upto 1.25 times of contract amount shall be approved by Engineer-in-Charge with recorded reasons. Deviation beyond 1.25 times upto 1.50 times of contract amount shall be approved by SE/CE (as applicable) with recorded reasons. In exceptional case, ADG/SDG (as applicable) shall have power to approve the deviation beyond 1.50 times upto 2.0	**The completion cost shall, in no case, exceed 1.5 times the contract amount.** **Contractor will devise a system to keep a watch on quantum of work taken up vis-a-vis balance items required to complete defined scope of work and will give the alerts to Engineer-in-Charge before taking up extra item(s), deviation(s) so that completion cost does not exceed above limit. Work executed beyond above limit will neither be recorded nor be paid.**

R.K. JAIN 2023
(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____
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times of contract amount with recorded reasons and take suitable corrective action.	**Engineer-in-Charge will verify and confirm the alerts before assigning deviation(s) and / or extra item(s) to the contractor. If additional work(s) is required to complete defined scope of work beyond above limit then Engineer-in Charge may take up such work(s) separately. The contractor will not have any claim(s) whatsoever on this account.**
12.1 The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the contractor, as follows : (i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus (ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge	12.1 The time for completion of the works shall, in the event of any deviation**(s) and extra item(s)** resulting in additional cost over the **contract amount will** be extended, if requested by the contractor, as follows : (i) In the proportion **to** the additional cost of work, bears to the original **contract amount** plus (ii) 25% of the time calculated in (i) above.
12.2 Deviation, Extra Items and Pricing **Extra items are those which are not available in the contract.** For percentage rate tenders, the extra item(s) which are available in the standard schedule of rates specified in Schedule F, shall be paid as per the said schedule rate plus cost index (considered in the estimated cost put to tender) plus/minus percentage above/ below quoted on estimated cost put to tender. For item rate tenders, the extra item(s) which are available in the standard schedule of rates specified in Schedule F, shall be paid as per the said schedule rate plus cost index (considered in the	**12.2 Deviation, Extra Items and Pricing** **Deleted** **Deleted**

R.K. JAIN 4653
(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

estimated cost put to tender) plus/minus percentage above/ below worked out on the basis of overall contract amount and estimated cost of the work put to tender.	
In the case of extra item(s) which are not available in the standard schedule of rates specified in Schedule F, the contractor may within fifteen days of the receipt of order or occurrence of the item(s), submit claim for market rate(s), supported with proper analysis of rate and manufacturer's specification for the work, invoices, vouchers, etc. (as applicable),	**(a) Non Schedule Extra Item(s)** - The contractor, **shall** within fifteen days of the receipt of order **to execute extra item(s)** or occurrence of the item(s), submit **analysis of rate of extra item(s) based on the rate(s) of material(s) available in basic rate of Standard Schedule of Rate mentioned in schedule F and rate(s) of the material(s) based on tax paid bills which are not available in standard Schedule of Rate mentioned in schedule F. For this purpose, the basic rate of material(s) available in Schedule of Rate(s) mentioned in Schedule F will be enhanced or reduced by the applicable cost index, as the case may be.** **The rate(s) of the material(s) which are not available in Standard Schedule of Rates, mentioned in Schedule F, shall be based on, tax paid bill(s) for the material(s) as defined in** manufacturer's specification. **Material rate(s) from Standard Schedules of Rate(s) shall be given priority in the analysis of rate(s).** **The rate of extra item will be** **i. Analyzed rate(s) as above multiplied by (Contract amount divided by estimated cost put to tender), if tendered amount is below the estimated amount put to tender.** **ii. Analyzed rate, if the Contract amount is above the estimated amount put to tender.**
failing which the rate(s) approved later by the Engineer-in-Charge shall be final and binding.	Failing which the rate(s) approved later by the Engineer-in-Charge shall be final and binding.

R.K. JAIN
(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

Where the contractor submits claim for market rate(s) in the manner prescribed above, the Engineer-in-Charge shall, within 45 days of the receipt of the claims, after giving consideration to the analysis of rates and other documents submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.	Where the contractor submits **analysis of rate(s) of extra item(s)** in the manner prescribed above, the Engineer-in-Charge shall, within **60** days of the receipt of the **analysis of rate**, after giving consideration to the analysis of rates and other documents submitted by the contractor, determine the rate(s) **of extra item(s).** The contractor shall be paid in accordance with the rate(s) so determined. **However provisional rate(s) on the basis of invoice will be allowed by the Engineer-in-Charge. Invoice shall be accepted only for material(s) not available in the Standard Schedule of Rates mentioned in Schedule F.** **The contractor while submitting the tax paid bill of purchased material(s) shall ensure that rate(s) of the materials are reasonable and lowest available in the market. If Engineer-in-Charge feels rates in tax paid bill(s) submitted by contractor are not reasonable then he can modify the rate(s) after giving a notice to the contractor. Engineer-in-Charge is the final authority to decide applicable rate(s) of material(s).**
(b) No Provision	**(b) Scheduled Extra Items** **i. For percentage rate tender, the extra item(s) shall be paid as per the Standard Schedule of Rates, mentioned in Schedule F, enhanced or reduced by the applicable cost index and further enhanced or reduced by percentage above/ below quoted by the contractor on estimated cost put to tender.** **ii. For item rate tender, the extra item(s) shall be paid as per the said schedule rate enhanced or reduced by the applicable cost index and multiplied by (Contract amount divided by estimated cost put to tender).**

18/4/2023
R.K. JAIN
(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

The rate(s) of extra items so determined by the Engineer-in-Charge shall be final and binding on the contractor, and shall not be arbitrable.	The rate(s) of extra item(s) so determined by the Engineer-in-Charge shall be final and binding on the contractor.
12.3 Deviation, Deviated Quantities, Pricing **All the deviated quantities shall be paid at agreement rates**	**12.3 No change**
12.4 The case of any operation incidental to or necessarily has to be in contemplation of tenderer while quoting filing tender, or necessary for proper execution of the item included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not, specifically indicated in the description of the item and the relevant specifications, shall be deemed to be included in the rates quoted by the tenderer or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.	**12.4 No Change**
12.5 No provision	**12.5 Cost index** **Latest available Cost index at the time of beginning of execution of extra item(s) shall be used in sub-clauses 12.2 (a) and 12.2 (b) for calculation of rate(s) of extra item(s).**
12.6 No provision	**12.6 Labour rates** **Labour rates will be based on latest available circulars issued by Central Govt. or State Govt. whichever are higher as well as applicable for the work.**
PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect.& Hort. Works in case of Composite Tenders) **SCHEDULE 'E'** Reference to General Conditions of Contract	**PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect.& Hort. Works in case of Composite Tenders)** **SCHEDULE 'E'** Reference to General Conditions of Contract : **(GCC EPC Projects 2022/ GCC Maintenance Works 2023/ GCC Construction Works 2023)**

R.K. JAIN
(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

	Applicable GCC is ..... as modified & corrected upto previous day of the last date of submission of the tender. **(NIT approving authority to mention one GCC in the space provided above)**
SCHEDULE 'F' GENERAL RULES & DIRECTIONS: Officer inviting tender ..... Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3. See below	**SCHEDULE 'F'** GENERAL RULES & DIRECTIONS: **No Change** **Deleted**
9 (ii) Standard CPWD contract Form GCC 2020, CPWD Form 7/ 8 as modified & corrected upto	9(ii) Standard CPWD contract Form **General Conditions of Contract Maintenance Works 2023,** CPWD Form 7/ 8 as modified & corrected upto **previous day of the last date of submission of the tender.**
Clause 12 12.2 Deviation Limit beyond which clauses 12.2 shall apply for building work	**Clause 12** **Deleted**

This issues with the approval of DG CPWD.

18.12.2023
(वी. पी.साहू)
अधीक्षण अभियंता(सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2023/Maintenance e-file 9163323

केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु। (केलोनिवि वेबसाईट के माध्यम से)

18/12/2023
R.K. JAIN
(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Maintenance 2023/04

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 08.02.2024**

Subject: Modifications in Conditions of Contract and Clause 19 of GCC 2023 for Maintenance Works

The following amendments are made in the GCC 2023 for Maintenance Works:

Existing provision	Modified provision
CONDITIONS OF CONTRACT **Definitions** 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-	**CONDITIONS OF CONTRACT** **Definitions** 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-
(i) to (xix)	**(i) to (xix) No change**
(xx) No provision	**(xx) Adolescent Person: A person who has completed his/her fourteenth year of age but has not completed his eighteenth year.**
(xxi) No provision	**(xxi) Hazardous works: Hazardous process/works are the works as defined in the clause (cb) of the Factory Act, 1948.**
Clause 19 Labour Laws to be complied by the Contractor	**Clause 19 Labour Laws to be complied by the Contractor**
The contractor shall comply with the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971.	**No change**
The contractor shall also obtain a valid licence under the said Act before the commencement of the work, and continue to have a valid licence until its completion.	**No change**
The contractor shall also comply with provisions of the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.	**No change**

CORRECTION__**NIL**____ INSERTION **NIL** _____

CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

The contractor shall also abide by the provisions of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986. The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996. Any failure to fulfil these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.	The contractor shall also abide by the provisions of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986, **amended by Amendment Act No. 35 of 2016 and thereafter time to time.** **No change** **No change**
Clause 19A No labour below the age of eighteen years shall be employed on the work.	Clause 19A No **person** below the age of **fourteen** years shall be employed on the work. **However Adolescent Persons can be employed on non-hazardous works/process.**
C.P.W.D. Contractor's Labour Regulations **2. DEFINITIONS** i. (c) Who is an out worker, that is to say, person to whom any article or materials are ..... premises under the control and management of the principal employer. No person below the age of 18 years shall be employed to act as a workman.	**C.P.W.D. Contractor's Labour Regulations** **2. DEFINITIONS** i. (c) No change. No person below the age of **fourteen** years shall be employed **on the work. However Adolescent Persons can be employed on non-hazardous works/process.**

This issues with the approval of DG CPWD.

08.02.2024
(वी. पी.साहू)
अधीक्षण अभियंता(सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2024/Maintenance e-file 9169019
केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

AE(C-1)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

Central Public Works Department
Office Memorandum
No. DG/CON/Maintenance 2023/05

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD 01.03.2024

NIRMAN BHAWAN, NEW DELHI Dated: ~~20.02.2024~~

Subject: Modifications in Conditions of Contract, Clause 19 and 20 of GCC 2023 for Maintenance Works

The following amendments are made in the GCC 2023 for Maintenance Works:

Existing provision	Modified provision
CONDITIONS OF CONTRACT **Definitions** 9. **Signing of Contract:-** The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of:- (i) to (iii) No Provision	**CONDITIONS OF CONTRACT** **Definitions** 9. **Signing of Contract:-** The successful tenderer, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of:- (i) to (iii) No change **In the event of successful tenderer being a firm/company, then the agreement shall be signed by all the partners or directors thereof individually. In the event of the absence of any partner/director, it shall be signed on his behalf by a person holding a power of attorney (duly notarized by notary public or board resolution in case of company) authorizing him to do so.**
Clause 19 B Payment of Wages (i) The contractor shall pay to labour employed by him either directly or through subcontractors, wages not less than fair wages as defined in the C.P.W.D. Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.	**Clause 19 B Payment of Wages** **(i)** The contractor shall pay to labour employed by him either directly or through subcontractors, wages not less than fair wages as defined in the C.P.W.D. Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971 **and Gazette Notification 19.01.2017, S.O 188 (E) extra ordinary part 2 – sec. 3 (ii) amended time to time.**

R.K. JAIN
(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

	Thus higher of the wages either notified by Govt. of India, Ministry of Labour and/or that notified by the local administration of the State Govt. both relevant to the place of work and the period of reckoning shall be paid by the contractor to the labourer .
(v) The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, or the modifications thereof or any other laws relating thereto and the rules made there under from time to time.	**(v)** The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, **Gazette Notification 19.01.2017, S.O 188 (E) extra ordinary part 2 – sec. 3 (ii) and** the modifications thereof or any other laws relating thereto and the rules made there under from time to time.
Clause 20 Minimum Wages Act to be Complied With The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force from time to time.	**Clause 20 Minimum Wages Act to be Complied With** The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, **Gazette Notification 19.01.2017, S.O 188 (E) extra ordinary part 2 – sec. 3 (ii)** amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force from time to time.

This issues with the approval of DG CPWD.

Sahu 01.03.2024
(V.P. Sahu)
Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023 e-file no. 9163323

To all the concerned officers of CPWD/PWD for information and necessary action please. (Through CPWD Website)

29/02/2024
R.K. JAIN
(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

Central Public Works Department
Office Memorandum
No. DG/CON/Maintenance 2023/06
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI Dated: 01.03.2024

Subject: Modifications in Clause 7 of GCC 2023 for Maintenance Works

The following amendments are made in the GCC 2023 for Maintenance Works:

Existing provision	Modified provision
Clause 7 Payment on intermediate certificate to be regarded as Advances No payment shall be made for work, estimated to cost Rs. Five lac or less till after the whole of the work shall have been completed and certificate of completion given. ..... calendar month of the measurements recorded upto previous month as per clause 6.	**Clause 7 Payment on intermediate certificate to be regarded as Advances** No change.
The contractor shall not be entitled to be paid any such interim payment if the gross work done together with net payment/ adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Schedule 'F', in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved.	The contractor shall not be paid any such interim payment if the gross work done together with net payment/ adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Schedule 'F', in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved.
No provision	**However, to expedite the progress of work, Engineer-in-Charge, on the request of contractor, may make interim payment(s) even before the net payment limit specified in schedule 'F' is achieved. In such case(s) no interest / compensation shall be recoverable from contractor.** **Such payment by Engineer-in-Charge shall not be construed as waiver of limit specified in schedule 'F' for subsequent interim payment(s).**

This issues with the approval of DG CPWD.

Sahu 01.03.2024
(V.P. Sahu)
Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023/Maintenance e-file no. 9135972
To all the concerned officers of CPWD/PWD for information and necessary action please. (Through CPWD Website)

R.K. JAIN 01/03/2024
(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

Central Public Works Department
Office Memorandum
No. DG/CON/Maintenance 2023/07
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI Dated: 05.03.2024

Subject: Modifications in Clause 19 of GCC 2023 for Maintenance Works

The following amendments are made in the GCC 2023 for Maintenance Works.

Existing provision	Modified provision
Clause 19 Labour Laws to be complied by the Contractor	**Clause 19 Labour Laws to be complied by the Contractor**
The contractor shall comply with the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971.	**No change**
The contractor shall also obtain a valid licence under the said Act before the commencement of the work, and continue to have a valid licence until its completion.	**No change**
The contractor shall also comply with provisions of the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.	**No change**
The contractor shall also abide by the provisions of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986, amended by Amendment Act No. 35 of 2016 and thereafter time to time.	**No change.**
The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.	**No change**

05/03/2024
R.K. JAIN
(EE (Contact)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

Central Public Works Department
Office Memorandum
No. DG/CON/Maintenance 2023/08
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD
NIRMAN BHAWAN, NEW DELHI **Dated:** 03-06-2024

Subject: Modifications in Clause 36 of GCC 2023 for Maintenance Works

The following amendment is made in the Clause 36 of GCC 2023 for Maintenance Works:

Existing provision	Modified provision
Clause 36 If relative working in CPWD then the contractor not allowed to tender The contractor shall not be *permitted* to tender for works in the CPWD circle *(Division in case of contractors of Horticulture/Nursery categories)* responsible for award and execution of contracts in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of the *Superintending Engineer* and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working *with him in any capacity* or are subsequently employed by him and who are near relatives to any *Gazetted* Officer in the *C.P.W.D. or in the Ministry of Housing and Urban Affairs.* Any breach of this condition by the contractor would render him liable to be *removed from the approved list of contractors of this Department. If however the contractor is registered in any other department, he shall be debarred from tendering in CPWD for any breach of this condition.*	**Clause 36 If relative working in CPWD then the contractor is not allowed to participate in the tendering process** The contractor **(enlisted or non-enlisted in CPWD)** shall not be **allowed** to **participate in the** tender for work(s) in the CPWD **Zone/**circle **/Division/Sub-Division** responsible for award and**/or** execution of contract**(s)** in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of the **Chief Engineer** and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working or are subsequently employed by him and who are near relatives to any Officer **working** in the **CPWD**. Any breach of this condition by the contractor would render him liable to be **debarred for a period upto two years from tendering in CPWD as decided by the accepting authority mentioned in Schedule F and his decision will be excepted from clause 25.**
NOTE: By the term "near relatives" is meant wife, husband, parents and grandparents, children and grandchildren, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.	No change.

This issues with the approval of DG, CPWD.

03.06.2024
(V.P. Sahu)
Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023/ Maintenance **e-file 9135972**

All CPWD and PWD officers for information and necessary action. (Through CPWD website)

17/07/2024
R.K. JAIN
EE (Contract)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

Central Public Works Department
Office Memorandum
No. DG/CON/Maintenance 2023/09
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD
NIRMAN BHAWAN, NEW DELHI Dated: 03-06-2024

Subject: Additions in 'General Rules and Directions' of GCC 2023 for Maintenance Works

The following additions are made in GCC 2023 for Maintenance Works under 'General Rules and Directions':

Existing provision	Modified provision
General Rules and Directions Sl. No. 1 to 16	**General Rules and Directions** No Change
No Provision	**17. <u>Price Preference to SC/ST individual contractor for item rate/percentage rate tender</u>:** **Price preference in quoted item rate/percentage rate tender shall be applicable to the individual enlisted/non-enlisted SC/ST contractor as under:-** **i. For work(s) upto and equal to an estimated cost of Rs.2.70 lakh a price preference upto 5% (with reference to the lowest valid tender) may be allowed in favor of individual SC/ST enlisted/non-enlisted contractor. No earnest money is required in such case(s).** **ii. For work(s) beyond an estimated cost of Rs. 2.70 lakh and upto and equal to estimated cost of Rs. 6.20 lakh, the price preference upto 5% (with reference to the lowest valid tender) may be allowed in favour of individual enlisted SC/ST contractor. However, earnest money at a reduced rate of ½% may be accepted in such cases.** **iii. The price pretence upto 5% (with reference to the lowest valid price bid) may be allowed in favour of individual SC/ST contractor. The above concession shall be allowed only after proper verification of the individual contractor's claim of belonging to SC/ST community.**
Schedule F **No Provision**	**Schedule F** **Price Preference to SC/ST individual contractor is valid upto ..... (date)**

This issues with the approval of DG CPWD.

03.06.2024
(V.P. Sahu)
Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023/Maintenance e-file 9163323

All CPWD and PWD officers for information and necessary action.(Through CPWD website)

R.K. JAIN 10/5/2024
EE (Contract)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/Maintenance 2023/10

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 09.10.2024**

Subject: Modifications in Clause 10A of GCC 2023 for Maintenance Works.

The following amendment is made in the Clause 10A of GCC 2023 for Maintenance Works:

Existing provision	Modified provision
Clause 10A Materials to be provided by the contractor The contractor shall ..... as specified in Schedule F.	**Clause 10A Materials to be provided by the contractor** **(i)** No Change
No Provision	**(ii) Maintenance of Material at Site (MAS) Register** **(a) MAS register of the key materials including Cement, Steel Bitumen, Paint, Primer, Distemper, Varnishes, Tile Adhesive, Admixture, Anti termite chemical Water proofing compound material and other items as required by Engineer-in-Charge, and shall be maintained as per proforma in Appendix-XX of GCC. All the entries in the MAS registers are made by the designated staff of the contractor and same is reviewed weekly by the authorized representative and fortnightly by the Engineer-in-Charge. However, contractor is responsible for maintenance and safe custody of MAS registers.**
(b) No provision	**(b)The self-attested copies of tax paid bill of all the materials entered in the MAS register shall be submitted by the contractor at the time of review by representative of Engineer-in-Charge. In case of any doubt, genuineness of the tax paid bills; it can be verified by the representative of the Engineer-in-Charge or the Engineer-in-Charge, however, onus of genuineness of tax paid bills rest with the contractor.**

09.10.24
R K SINGH
EE(Manual)

1/2

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

Appendix-XX

REGISTER OF MATERIAL AT SITE (MAS)

1. **Division/Sub-division** .....
2. **Name of Work** .....
3. **Name of Article/Item** .....
4. **Estimated Requirements** .....

S. No.	Date of Receipts (Details of Challans/ Bills, Specific location wherePlants and Materials received/ Vehicle No.	Received from/ Issued to	Quantity Received	Date of issue	Specific location where Plants& Materials Displayed / Delivered / issued	Quantity Issued	Balance Quantity	Signature of authorized representative of contractor	Signature of authorized representative of Engineer-in-Charge/ AE/EE/	Remarks
1	2	3	4	5	6	7	8		9	10

This issues with the approval of DG, CPWD.

(दिनेश कुमार उज्जैनिया)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/ Maintenance/2024
e-file 9184028 (DFA/9301389)

केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

09.10.24
R K SINGH
EE(Manual)

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/Mainteance-2023/11

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi Dated: 29.10.2024

Subject: Modifications in Conditions of Contract, Clause 10A of GCC Maintenance Works 2023.

Following amendments are made in the GCC Maintenance Works 2023 :-

Existing Provision	Modified Provision
Clause 10A: Materials to be provided by the Contractor (i) The contractor shall, ... thereof and in case of default, the Engineer-in-Charge may cause the same to be supplied and all costs which may attend such removal and substitution shall be borne by the Contractor.	**No Change**
The contractor shall at his own expense, provide a material testing lab at the site for conducting routine field tests. The lab shall be equipped at least with the testing equipment as specified in schedule F.	**Field Laboratory:** The contractor shall at his own expense, setup a material testing lab equipped with the testing equipment as specified in schedule F at site for conducting routine field test.
No Provision	**External Laboratory: Letter for submitting sample(s) for testing of material shall be sent through e-mail to the Lab by authorized representative of Engineer-in-Charge or Engineer-in-Charge of the work along with name(s) of test(s) to be done on the material.** **The contractor shall collect the sample(s) from the site and submit it to the lab; make necessary payment for the testing charges. He will inform on the same day through email to**

29.10.24
R K SINGH
EE(Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

No Provision	**authorized representative of Engineer-in-Charge and Engineer-in-Charge regarding submission of sample (s) and payment made to the lab. If he either fails to collect or submit the sample(s) to the lab within 03 days or in time as prescribed in the specifications, whichever is earlier, the Engineer-in-Charge shall collect and submit the sample(s) and make necessary payment for testing charges to the lab. In such case, Engineer-in-Charge shall make recovery on account of collection and submission of sample(s) to the lab and paid testing charges etc. from the next R/A bill / Final bill of the contractor. This action of Engineer-in-Charge shall be final and binding.** **If the contractor fails three times in collection and/or submitting sample(s) and/or fails to make payment for testing charges, the contractor shall be debarred from tendering in CPWD for a period of two years.**
Sl. no. (ii) (a) and (b)	**No change**

This OM is applicable for all NITs uploaded after date of issue of this OM.

This is issued with the approval of DG CPWD.

29/10/24

(दिनेश कुमार उज्जैनिया)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2024/Maintenance e-file- 9184436 (DFA/9303295)

केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु। (केलोनिवि वेबसाईट के माध्यम से)

29.10.24
R K SINGH
EE(Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/Maintenance 2023/12
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 03.01.2025**

Subject: Modifications in General Rules and Directions of GCC 2023 for Maintenance Works.

The following amendments are made in the General Rules and Directions of GCC 2023 for Maintenance Works:

Existing provision	Modified provision
Applicable for Item Rate Tender only (CPWD - 8) 4 The rates ..... rupee one.	**Applicable for Item Rate Tender only (CPWD - 8)** 4 No change
In case the lowest tendered amount (worked out on the basis of quoted rate of Individual items) of two or more contractors is same, then such lowest contractors may be asked to submit sealed revised offer quoting rate of each item of the schedule of quantity for all sub sections/sub heads as the case may be, but the revised quoted rate of each item of schedule of quantity for all sub sections/sub heads should not be higher than their respective original rate quoted already at the time of submission of tender. The lowest tender shall be decided on the basis of revised offer.	In case the lowest tendered amount (worked out on the basis of quoted rate of Individual items) of two or more contractors is same, then such lowest contractors may be asked to submit **revised price bid online using e-tender website,** quoting rate of each item of the schedule of quantity for all sub sections/sub heads as the case may be, **on the revised template which has been sent to them by the Tender Inviting Authority (TIA)**, but the revised quoted rate of each item of schedule of quantity for all sub sections/sub heads should not be higher than their respective original rate quoted already at the time of submission of tender. The lowest tender shall be decided on the basis of revised offer.
If the revised ..... their tenders. In case of any ..... be forfeited. In case all ..... lowest contractors. Contractor ..... of the work.	No change
Applicable for Percentage Rate Tender only [CPWD- 7] 4B In case the lowest tendered amount (estimated cost + amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioning	**Applicable for Percentage Rate Tender only [CPWD- 7]** 4B In case the lowest tendered amount (estimated cost ± amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit **revised price bid online quoting** percentage above/

03.01.25
R K SINGH
EE(Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

percentage above/ below on estimated cost of tender including all sub sections/sub heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers. In case of any ..... be forfeited. If the revised ..... their tenders. In case all ..... process of the work.	below on estimated cost of tender including all sub sections/sub heads as the case may be **on the revised template which has been sent to them by the Tender Inviting Authority (TIA)**, but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers. No change

This issues with the approval of DG, CPWD.

31/1/25

(दिनेश कुमार उज्जैनिया)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/ Maintenance/2024
e-file 9185053 (DFA/9307326)

केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

03.01.25
R K SINGH
EE(Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/Maintenance 2023/13
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD
NIRMAN BHAWAN, NEW DELHI **Dated: 31.01.2025**

Subject: Modifications in Clause 7A of GCC 2023 for Maintenance Works

The following amendments are made in the Clause 7A of GCC 2023 for Maintenance Works:

Existing provision	Modified provision
Clause 7A No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-Charge.	**Clause 7A** **(a)** No Running Account Bill/**Final Bill** shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-Charge. **(b) The following documents shall also be part of the bill submitted by the contractor (these documents shall be owned by the contractor) before making payment:-** **1. Details of person employed with date of their employment up to previous month.** **2. Documents of payment made to the employees directly into their bank accounts up to previous month.** **3. Documents of attendance through biometric attendance or other mode up to previous month.** **4. Documents of deposition of EPF and ESI deductions in the employee's accounts up to previous month.** **5. Any penalty imposed on the agency for delay in disbursing payment and deposition of EPF and ESI deductions in the employee's accounts up to previous month.** **6. Any other document(s) required as per statutory requirements and/or as directed by Engineer-in-Charge.** **(c) In case, any of the documents submitted by the contractor is found false/forged at a later date, action for debarment of contractor will be taken by the SE/CE concerned.**

This issues with the approval of DG, CPWD.

31/1/25
(दिनेश कुमार उज्जैनिया)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2023/Maintenance e-file 9184028 (DFA/9313089)
केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

31.1.25
R K SINGH
EE(Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

Central Public Works Department
Office Memorandum
No. DG/CON/Maintenance 2023/14
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD
NIRMAN BHAWAN, NEW DELHI **Dated: 10.02.2025**

Subject: Modifications in Clauses 7, 8, 9 and Schedule F of clause 8 of GCC 2023 for Maintenance Works.

The following amendments are made in the Clauses 7, 8, 9 and Schedule F of clause 8 of GCC 2023 for Maintenance Works:

Existing provision	Modified provision
Clause 7 Existing provisions No provision	**Clause 7** No change **In case of correction / rejection / short documents, it will be mandatory for Engineer-in- Charge to give recorded reasons for correction / rejection / submission of additional documents within seven days after submission of running bill by the contractor.**
Clause 8 Completion Certificate Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates, shall be issued. But no final certificate ..... sum actually realized by the sale thereof.	**Clause 8 Completion Certificate** Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-Charge and **the Engineer-in-Charge within seven days of receipt of intimation of completion from contractor will inspect the work and satisfy himself about completion of work, then intimate to the concerned authorities as mentioned in Schedule F for issuance of completion certificate. The concerned authorities will inspect the work and issue completion certificate** within thirty days of the receipt of such **intimation. The Engineer-in-Charge** shall furnish **to** the contractor a final certificate of completion as the case may be, indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates. **No change.**

10.2.25
R K SINGH
EE(Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

Clause 9 Payment of Final Bill	Clause 9 Payment of Final Bill
The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-Charge whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer-in-Charge, will, as far as possible be made within the period of three months the period being reckoned from the date of receipt of the bill by the Engineer-in-Charge or his authorized Asstt. Engineer, complete with account of materials issued by the Department and dismantled materials.	i. The final bill shall be submitted by the contractor **to the Engineer-in-Charge** in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final **completion** certificate furnished by the Engineer-in-Charge whichever is earlier. **At the time of submission of the final bill, receipt will be given by the O/o Engineer-in-Charge.** ii. **In case of correction / rejection / short documents, it will be mandatory for Engineer-in- Charge to give recorded reasons for correction / rejection / submission of additional documents within fifteen days after submission of final measurement and/or final bill by the contractor.** iii. **Final bill will be accepted with all pre-requisite documents such as sanctioned copies of extra items and deviation in quantities, escalation statements, recovery statement, theoretical statement, completion certificate, final extension of time case, mandatory tests statement, dismantled materials account and other documents as mentioned in clause-7 A etc.** iv. **An undertaking along the final bill will be submitted by the contractor that "I / we hereby under take that all the measurements/claims payable under this contract have been included in the final bill and will not submit any other bill/claims in future under this agreement thereafter".** v. No further claims shall be entertained from the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer in

10.2.25
R K SINGH
EE(Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

If the final bill is submitted by the contractor within the period specified above and delay in payment of final bills is made by the department after prescribed time limit, a simple interest @ 5 % (five percent) per annum shall be paid to the contractor from the date of expiry of prescribed time limit, provided the final bill submitted by the contractor is found to be in order.	charge, will, be made within the period of three months. The period **of three months will be** reckoned from the date of receipt of the bill **in complete shape after necessary corrections / additional documents,** by the Engineer-in-Charge. vi. **In case of foreclosure / determination of contract, if the contractor fails to submit the EOT case, final measurement /bills within 30 days of foreclosure/ determination, the final bill will be prepared and decided by the department. The final bill shall only be paid after withholding amount equivalent to maximum compensation to be levied on the contractor.** vii. If the final bill, **in complete shape,** is submitted by the contractor within the period specified above and delay in payment of final bills is made by the department after prescribed time limit, a simple interest @5% (five percent) per annum **may** be paid to the contractor from the date of expiry of prescribed time limit, provided the final bill submitted by the contractor **contains all the documents as mentioned in para – (iii) & (iv) above.**
Schedule F **Clause 8** No Provision	**Schedule F** **Clause 8** **Competent Authorities to inspect and issue completion certificate .....** **(To be filled by NIT approving authority).**

This issues with the approval of DG, CPWD.

10/2/25

(दिनेश कुमार उज्जैनिया)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2025/Maintenance
e-file 9190123 (DFA/9315616)
केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

10.2.25
R K SINGH
EE(Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/ Maintenance 2023/15
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 03.03.2025**

Subject: Modifications in Clause 14 of GCC 2023 for Maintenance Works.

The following amendments are made in the Clause 14 of GCC 2023 for Maintenance Works:

Existing provision	Modified provision
Clause 14 Carrying out part work at risk & cost of contractor If contractor: (iii) The Engineer- in-Charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to Government, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to : (a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or (b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.	**Clause 14 Carrying out part work at risk & cost of contractor** If contractor: (iii) The Engineer- in-Charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to Government, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to : (a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or (b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor. **The contractor, from whom a part work / part incomplete work of any item(s), has been taken out of his hands, shall not be allowed to participate in the tendering/quotation process of part work / part incomplete work of any item(s).**

This issues with the approval of DG, CPWD.

03.03.25
(आर. के. सिंह)
कार्यपालक अभियन्ता (एम.)

Issued from file No. CSQ/CM/17(1)/2023/ Maintenance e-file-9184028 (DFA/9319526)
केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

R K SINGH
EE(Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/ Maintenance 2023/16
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 16.06.2025**

Subject: Modifications in Clause 25.2(b) and 25.6 of GCC 2023 for Maintenance Works.

The following amendments are made in the Clause 25.2(b) and 25.6 of GCC 2023 for Maintenance Works:

Existing provision	Modified provision
Clause 25.2 **(b) Qualification of Arbitrators**: It is a term of this contract that each member of the Arbitral Tribunal shall be Graduate Engineer with experience in execution of public works engineering contracts, and he should have worked earlier at a level not lower than the Chief Engineer (equivalent to level of Joint Secretary to the Government of India). The aforesaid educational qualification and work experience shall be mandatory for appointment as Arbitrator. The age of Arbitrator at the time of appointment shall not exceed 75 years. An Arbitrator may be appointed notwithstanding the total number of active arbitration cases with him.	**Clause 25.2** **(b) Qualification of Arbitrators**: It is a term of this contract that each member of the Arbitral Tribunal shall be Graduate Engineer **(in Civil or Electrical or Mechanical Engineering)** with experience in execution of public works engineering contracts and he should have worked earlier at a level not lower than the SAG **(Level 14 of 7th CPC)** of the Government of India). The aforesaid educational qualification and work experience shall be mandatory for appointment as Arbitrator. The age of Arbitrator at the time of appointment shall not exceed **70 years**.
Clause 25.6 **Fee payable to Arbitrator(s):** The fee payable to the arbitral tribunal shall be as per CPWD OM No.2/2006/SE(TLC)/ CSQ/137 dated 19.11.2019 (or latest amendment), and shall be shared equally by both the parties.	**Clause 25.6** **Fee payable to Arbitrator(s) for arbitration cases, shall be as per the fee given in the fourth schedule of the Arbitration & Conciliation Act, 1996** (or latest amendment), and shall be shared equally by both the parties.

This issues with the approval of DG, CPWD.

चन्द्रपाल 16/06/2025
(चन्द्र पाल)
अधीक्षण अभियंता (सी. एंड एम.)

Issued from file No. CSQ/CM/17(1)/2025 / Maintenance e-file 9135700 (TLC File)
केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

16.06.25
R K SINGH
EE(Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Maintenance-2023/17

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi Dated: 06.11.2025

Subject: Modification of Clause 19L of GCC-2023 for Maintenance Works.

The clause 19L in GCC-2023 for Maintenance Works is being modified:

Existing Provision	Modified Provision
Clause 19 L Contribution of EPF and ESI The ESI and EPF contributions on the part of employer in respect of this contract shall be paid by the contractor. These contributions on the part of the employer paid by the contractor shall be reimbursed by the Engineer-in-charge to the contractor on actual basis. The verification of deployment labour will be done through biometric attendance system or any other suitable method by the Engineer in Charge. The applicable and eligible amount of EPF & ESI shall be reimbursed preferably within 7 days but not later than 30 days of submission of documentary proof of payment provided same are in order	**Clause 19 L Contribution of EPF and ESI** **It will be mandatory for all the agencies to register with ESI and EPFO departments within 30 days of the award of the work unless exempted by the provisions of ESI and / or EPFO and as amended time to time.** The ESI and EPF contributions on the part of employer in respect of this contract shall be paid by the contractor. These contributions on the part of the employer paid by the contractor shall be reimbursed by the Engineer-in-charge to the contractor on actual basis. The verification of deploy**ed** labour will be done through biometric attendance system or any other suitable method by the Engineer in Charge. **The agency shall submit an affidavit on a stamp paper of Rs. 100 that the employees were engaged fully and exclusively on the work for which the claim is being made.** The applicable and eligible amount of EPF & ESI shall be reimbursed preferably within 7 days but not later than 30 days of submission of documentary proof of payment provided same are in order

This is issued with the approval of DG CPWD.

06.11.2025

(चन्द्र पाल, अधी. अभि. (सी. एण्ड एम.)
Chander Pal, SE (C&M)

अधीक्षण अभियंता (सी.एण्ड एम.)

Issued from file No. CSQ/CM/17(1)/2024/ Maintenance **e-file 9195855 (DFA/9350595)**

के.लो.नि.वि. तथा लो.नि.वि. दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु (के.लो.नि.वि.वेबसाईट के माध्यम से)।

6/11/25

D.P. Jindal
EE (Contract)

CORRECTION__**NIL**____ INSERTION **NIL** _____

CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/ Maintenance 2023/18
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

VIDYUT BHAWAN, NEW DELHI **Dated: 27.02.2026**

Subject: Modifications in General Rules & Directions, Clause 1 and Schedule E of GCC 2023 Maintenance Works

The following modifications are made in the General Rules & Directions, Clause 1 and Schedule E of GCC 2023 Maintenance Works.

Existing provision	Modified provision
General Rules & Directions 11 (i) The Contractor whose tender is accepted, will be required to furnish performance guarantee at specified percentage of the tendered amount as mentioned in Schedule 'E' and within the period specified in Schedule F.	**General Rules & Directions** 11 (i) The Contractor whose tender is accepted, will be required to furnish performance guarantee as mentioned in Schedule 'E' and within the period specified in Schedule F. .....
Clause 1 **Performance Guarantee** (i) The contractor shall submit an irrevocable Performance Guarantee at specified percentage of the tendered amount as mentioned in Schedule 'E', in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of letter of acceptance.	**Clause 1** **Performance Guarantee** (i) The contractor shall submit an irrevocable Performance Guarantee as mentioned in Schedule 'E', in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of letter of acceptance. .....
Sl. No. (ii) to (v)	No change
SCHEDULE 'E' Reference to General Conditions of contract Sl. No. (i)	**SCHEDULE 'E'** Reference to General Conditions of contract No change

27/2/26
EE(C)
D.P. Jindal
EE (Contract)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

(ii) Performance Guarantee : 5% of tendered value.	(ii) Performance Guarantee : **(a) 5% of tendered value or Estimated Cost Put to Tender (ECPT) (whichever is higher).** **(b) Where the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the Performance Guarantee, in addition to the requirement under (a) above, shall be increased by an amount equal to the difference between eighty percent (80%) of the ECPT and the tendered amount.**
Sl. No. (iii)	No change

This issues with the approval of DG, CPWD.

Placed 27.02.2026

(चन्द्रपाल अहलावत)
अधीक्षण अभियंता (सी.एंड एम.)
Chander Pal, SE (C&M)

Issued from file No. CSQ/CM/17(1)/2026/ Maintenance e-file 9212995 (DFA/ 9365660)

केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

27/2/26
EE(C)
D.P. Jindal
EE (Contract)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/Maintenance 2023/19
ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Vidyut Bhawan, New Delhi Dated: 25.03.2026

Subject: Modifications in Clause 6 and Schedule 'F' of GCC 2023 Maintenance Works

The following modifications are made in the Clause 6 and Schedule 'F' of GCC 2023 for maintenance works, for annual repair and maintenance works, special repair works, comprehensive maintenance works and upgradation works amounting upto Rs. 10 crores in Delhi only.

Existing provision	Modified provision
Clause 6: Computerized Measurement Book (CMB)/ Electronic Measurement Book (EMB) through CPWD ERP portal	**Clause 6: Computerized Measurement Book (CMB)/ Electronic Measurement Book (EMB) through CPWD ERP portal**
Engineer-in-Charge ..... with the contract.	Engineer-in-Charge ..... with the contract.
All measurements and levels of work done during the period covering latter half of the preceding calendar month and first half of the calendar month shall be recorded by the contractor and compiled in the shape of the Computerized Measurement Book (CMB) / Electronic Measurement Book (EMB) through CPWD ERP portal / Computerized Level Book (CLB) respectively having pages of A-4 size as per the format of the department so that a complete record is obtained of all the items of works executed under the contract during the said period. The proforma Computerised Measurement and level books (along with soft copy) shall be submitted in triplicate through letter of transmittal to the Engineer-in-charge giving details of number of CMBs / CLBs and their number of pages by 20th day of every calendar month.	All measurements and levels of work done during the period covering latter half of the preceding calendar month and first half of the calendar month shall be recorded **either** by contractor **or jointly by department and contractor as specified in Schedule F** and compiled in the shape of the Computerized Measurement Book (CMB) / Electronic Measurement Book (EMB) through CPWD ERP portal / Computerized Level Book (CLB) respectively having pages of A-4 size as per the format of the department so that a complete record is obtained of all the items of works executed under the contract during the said period. The proforma Computerised Measurement and level books (along with soft copy) shall be submitted in triplicate through letter of transmittal to the Engineer-in-charge giving details of number of CMBs / CLBs and their number of pages by 20th day of every calendar month..
In case of EMB, ... calendar month.	**No change.**

25/3/26
D.P. Jindal
EE (Contract)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

All such monthly ..... his/her authorized representative.	**No change.**
In case of CMB/CLB, ... corrected and authorized proforma CMB / CLB.	**No change.**
In case of EMB, ... record of measurements available on ERP Portal.	**No change.**
Once the Engineer-in-charge ..... number of the CMB / CLB /EMB to the Contractor.	**No change.**
If the contractor fails ..... Clause 25 of this GCC.	**No change.**
Resources deployed ..... shall be sent to the contractor for his record.	**No change.**
The contractor ..... the Engineer-in-Charge or his/her representative.	**No change.**
Except where any ..... is available then a mutually agreed method shall be followed.	**No change.**
The contractor shall ..... the same was executed.	**No change.**
Engineer-in-Charge or ..... to such checking of measurements or levels.	**No change.**
It is also a term of ..... defects liability period.	**No change.**
PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect.& Hort. Works in case of Composite Tenders) Clause 6 : Computerised Measure Book (CMB) / Electronic Measurement Book (EMB)	**PROFORMA OF SCHEDULES** **(Separate Performa for Civil, Elect.& Hort. Works in case of Composite Tenders)** **Clause6: Computerised Measurement Book (CMB) / Electronic Measurement Book (EMB)**

25/3/21
D.P. Jindal
EE (Contract)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

Mode of measurement : CMB / EMB Note:- One option to be kept by NIT approving authority	**(a)** Mode of measurement: CMB/ EMB **(b) Measurement to be recorded either by contractor or jointly by department and contractor.** **Note:-Only** one option to be kept by NIT approving authority **in (a) and (b)**

This issues with the approval of DG, CPWD.

25.03.202

(चन्द्र पाल)
अधीक्षण अभियंता (सी.एंड एम.)
चन्द्र पाल, अधी. अभि. (सी. एण्ड एम.)
Chander Pal, SE (C&M)

Issued from file No. CSQ/CM/17(1)/2023/Maintenance
e-file 9195855 (DFA/ 9355745)

केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

25/3/26

D.P. Jindal
EE (Contract)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Maintenance 2023/20

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Vidyut Bhawan, New Delhi Dated: 18.08.2026

Sub: Modification in Clause 19K: Deployment of Skilled/Semi-Skilled Tradesmen for GCC 2023 Maintenance Works.

Following modification is made in Clause 19K: Deployment of Skilled/Semi-Skilled Tradesmen for GCC 2023 Maintenance Works.

Existing Provision	Modified Provision
Clause 19 K **Employment of skilled/ semi-skilled workers** The contractor shall, at all stages of work, deploy skilled/semi-skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute/Industrial Training Institute/ National Institute of construction Management and Research (NICMAR)/ National Academy of Construction, CIDC or any similar reputed and recognized Institute managed/ certified by State/Central Government. The number of such qualified tradesmen shall not be less than 20% of total skilled/semi-skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, its scheduling and the list of qualified tradesmen along with requisite certificate from recognized Institute to Engineer in charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineer-in- Charge. Failure on the part of contractor to obtain approval of Engineer-in Charge or failure	**Clause 19 K** **Deployment of skilled/semi-skilled workers** The Contractor shall, at all stages of work, deploy skilled and semi-skilled tradesmen who are **duly** qualified and **hold** certificates in **their respective** trades, from **the** CPWD Training Institute, **or from awarding bodies recognized under the aegis of National Council for Vocational Education and Training (NCVET), Ministry of Skill Development and Entrepreneurship (MSDE)**, or any institute recognized/certified by the State or Central Government **for this purpose**. The number of such qualified tradesmen shall not be less than 20% of the total skilled/semi-skilled workers required in each trade at any stage of work. The Contractor shall submit, **for approval of the Engineer-in-Charge, the** number of man-days required for each trade, **the** proposed scheduling, and the list of qualified tradesmen along with requisite certificates issued by any of the above recognized institutes. **To make up any shortfall below the prescribed minimum limit of 20% of skilled/semi-skilled tradesman, the Contractor shall arrange skilling of**

L. S. Meena
AE (C-II) 18-8-2026

Ajay Kumar 18/8/2026
EE (Contract)

CORRECTION__**NIL**____ INSERTION **NIL** _____

CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

©_

to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate specified in schedule 'F' per such tradesman per day. Decision of Engineer in Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding. Provided always, that the provisions of this clause, shall not be applicable for works with estimated cost put to tender being less than Rs. 5 crores. For work costing more than Rs. 10 Crores, and upto Rs. 50 Crores, the contractor shall arrange on site training as per National Skill Development Corporation (NSDC) norms for at least 20% of the unskilled workers engaged in the project in co-ordination with the CPWD Regional Training Institute & National Skill Development Corporation (NSDC) for certification at the level of skilled/semi-skilled tradesmen. For work costing more than Rs. 50 Crores, the contractor shall arrange on site training as per National Skill Development Corporation (NSDC) norms for at least 30% of the unskilled worker engaged in the project in coordination with the CPWD Regional Training Institute & National Skill Development Corporation (NSDC) for certification at the level of skilled/semi-skilled tradesmen. The cost of such training as stated above shall be born by the Government. The necessary space and workers shall be provided by the contractor and no claim what so ever shall be entertained.	**workers at site under the Recognition of Prior Learning (RPL) program, conducted by awarding bodies recognized under NCVET or any institute recognized/certified by the State or Central Government for this purpose. The cost of such recognition/training, including the infrastructure required at site, shall be borne by the Contractor. The tradesmen undergoing training shall be paid their wages by the contractor for period during the training, and no reimbursement in this respect shall be made by the Government.** This provision shall not be applicable for works with **an** estimated cost put to tender **of** less than ₹5 Crore **in case of construction works and less than ₹50 Lakh in case of maintenance works**. **In the event, the contractor fails to provide the mandatory training to the tradesmen, a penalty of ₹1,000 per day per tradesman falling short of the required 20% target shall be imposed on the Contractor. Decision of Engineer in Charge shall be final and binding in this regard.**

This issues with the approval of DG CPWD.

Pdaccepted 18.08.26

(चन्द्र पाल)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2026/ Maintenance e-file 9196031 (DFA/ 9388060)

के.लो.नि.वि. तथा लो.नि.वि. दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु (के.लो.नि.वि.वेबसाईट के माध्यम से)।

Ajaykumar 18/8/2026
EE (Contract)

Laxman Singh 18-8-2026
L. S. Meena
AE (C-II)

CORRECTION__NIL____ INSERTION NIL _____
CUTTING __NIL____OVERWRITING __NIL_____ AE

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/ SOP-2026/03

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

Vidyut BHAWAN, NEW DELHI **Dated: 27.08.2026**

Sub: Modification / addition in SOP No. 5/33 and Annexure-71 for CPWD Works Manual 2026.

Following modification/ addition are made in SOP No. 5/33 and Annexure-71 for CPWD Works Manual 2026:

Existing Provision	Modified Provision
SOP No. 5/33: Operation of Contract Clauses (Refer Para 5.23)	**SOP No. 5/33: Operation of Contract Clauses (Refer Para 5.23)**
6. Clause 7 of Forms no. CPWD 7 and 8	**6. Clause 7 of Forms no. CPWD 7 and 8**
Sl. No. (i) to (iii)	**No change**
(iv) No Provision	**(iv) A mandatory checklist (Annexure-71) must be prepared by the Junior Engineer (JE)/ Assistant Engineer (AE) during the preparation or processing of every Running Account (RA) as well as final bill. This checklist is required to be:** **a. Prepared by the Junior Engineer/ Assistant Engineer.** **b. Checked and cleared by the Division Office prior to the release of any payment.**

Annexure-71
(Refer SOP No. 5/33)
Checklist for R/A/ final Bill

Name of work			
Agreement No.			
Name of agency			
Estimated cost		Tendered cost	
% above / below EC			
Date of Start		Date of Completion (Stipulated)	
		Date of Completion (extended)	
Date of Submission of bill			

K.G. Bansal
SE (Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

	Checklist items	To be filled by JE/AE	
		Yes/No	Remarks
Clearance Obtained by Agency-			
1	Whether Local body approval obtained and submitted to Engineer-in-Charge.		
2	Whether Fire NOC obtained and submitted to Engineer-in-Charge.		
3	Whether environment clearance obtained and submitted to Engineer-in-Charge.		
Approvals Required			
4	Approval of Specialized / Associate agency/ Agencies Obtained & MoU/ Tripartie agreement (If applicable) approved?		
5	Whether the BIM consultant engaged as per requirement of the agreement?		
Clause - 5			
6	Whether the date of start shifted in case of delay in handing over of site.		
7	Whether the program/ revised program chart submitted, if yes then. (Ref no. of Program submission to EE)		
8	Whether **recovery done** for non-submission of program chart/ revised program chart by the agency		
9	Whether milestoned achieved? If not, applied for rescheduling of milestone/ EOT? (Ref. no. of letter submitted or granted EOT/Milestone shifted)		
10	Whether the corresponding amount **withheld** for not achieving milestone?		
Clause- 12			
11	Number of **extra items** sanctioned till date with amount, by the competent authority?		
12	Number of **deviation** items sanctioned till date with amount, by the competent authority?		
13	Nos. Extra Items/ Statements pending till date with No., Amount & Submission reference.		
14	Nos. of Deviated items/statements pending till date with No., Amount & Submission reference.		
Clause - 36			
15	Whether required Technical representative as per agreement deployed? Submitted documents of technical representative and approval status. (Submission/ approval Reference).		
16	Whether any action/Recovery made for not engaging the Technical representative as per requirement of the agreement.		
Quality /QA			
17	Whether Quality Assurance plan submitted/ approved (Reference of submission).		

K.G. Bansal
EE (Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

18	Whether Job mixes of concrete / Bitumen Mix carried out and approval obtained?		
19	Whether all mandatory test done during the execution. (Reference of submission of mandatory Test Statement)		
20	Whether the QA/TPQA observation conveyed to Agency and compliance status (with Reference)		
21	How many QA paras outstanding and action thereof?		
22	Whether water test done as per CPWD specification? (Date of last water test report)		
23	Whether batch number & make of materials mentioned in MAS register?		
24	Whether duly authenticated copies of purchase vouchers have been furnished to the concerned JE/AE?		
25	Whether Guarantee/ Warranty of items submitted?		
26	Whether Test report of final installation submitted as per Electrical Specifications in respect of all **electrical item.**		
Labour			
27	Whether Labour License, registration with EPFO, ESIC and BOCW Welfare Board submitted to Engineer-in-Charge (Ref of Submission).		
28	Documents of deposition of EPF and ESI deductions in the employee's accounts up to previous month.		
29	Whether safety gazettes provided to the labour.		
30	Whether crèche, ration, lavatory facilities provided?		
31	Whether FLR submitted along with bills.		
32	Whether skilled labour deployed as per contract requirements / recovery made in case of non-deployment of skilled labour?		
Miscellaneous			
33	Whether work is executed with Architectural & Structural drawings approved by the department?		
34	Whether construction water arranged by contractor? or any recovery proposed		
35	Whether electricity arranged by contractor? or any recovery proposed		
36	Proof of payment of Royalty is attached.		
37	Whether bill amount ≥ minimum amount for payment mentioned in contract.		

K.G. Bansal 27/3/26
EE (Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE

38	Whether test checked by AE/EE or not ? And Test check statement submitted?	By AE By EE	
39	Whether recovery of advances paid (Mobilization /T&P advance/ secured advance etc.) made in this bill ?		
40	Whether any notice under clause 2, clause 3, clause 14 or clause 16 issued? Or an action proposed……		
41	Whether Completion drawings in triplicate has been provided in hard copy (Along with final bill).		
42	Whether bill submitted monthly? If not, reason?		
43	Provisional rate sanctioned by the Competent Authority.		
44	Whether all Bank Guarantees and Insurance Policies submitted is valid as on date?		
45	Whether Bill signed by contractor / power of attorney holder?		
46	Labour Cess/ GST/ Income Tax recovered in the bill.		
47	PAN No. ……/GST No. …… of contractor.		
48	Mandatory inspections of the officers carried out, if applicable.		
49	Any other item / recovery mentioned in the contract.		
	(Dated signature with named stamp)		
			JE /AE
	AE (P)		
	AAO		
	EE		

This is issued with the approval of DG CPWD.

((चन्द्र पाल) 27.08.2026
अधीक्षण अभियंता (सी.एंड एम.)
Chander Pal, SE (C&M)

Issued from file No. CSQ/CM/16(1)/2026 e-file – 9205325 (DFA/ 9389010)
केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

K.G. Bansal 27/8/26
EE (Manual)

CORRECTION__**NIL**____ INSERTION **NIL** _____
CUTTING __**NIL**____OVERWRITING __**NIL**_____ AE