CHANDIGARH ADMINISTRATION
ENGINEERING DEPARTMENT
E-TENDER NOTICE

The Executive Engineer, C.P. Division No.4, U.T. ,Chandigarh invites online the Percentage rate tenders on behalf of the President of India from Enlisted Contractor of Chandigarh Administration and CPWD enlisted contractors/agencies to participate in their respective categories upto their tendering limit & eligible reputed contractors/agencies enlisted in appropriate class with the PWD of States's / UT's for Civil (Building) works fulfilling the eligibility criteria mentioned below which shall be uploaded and received on https://etenders.chd.nic.in.

Sr. No	NIT No.	Name of Work and location	Estimated cost put to tender	Earnest money	Time of completion	Last date & time of EMD physically submission	Date & Time Opening of tender
1.	No.2847428 dt.02.06.2026	Construction of New Govt. Building in Govt. Model Senior Secondary School, Village Maloya, Chandigarh (Composite Work)	Rs.9,14,56,214/-	Rs.18,29,124/-	18 Months	17.06.2026 At 11:00 A.M.	17.06.2026 At 02.00 P.M.

Two Bid System : - Works for which technical specification is finalized & defined clearly in NIT, tenders shall be required to submit the bids in two envelopes.

A) Bid -1 : Shall contain UTR No./Transaction Slip of online deposited EMD, Affidavit, Enlistment and other doc.

B) Bid -2: Shall contain Financial Bid on the prescribed form on line.

1.1 The work is estimated to Cost **Rs. 9,14,56,214/- (Rupees Nine Crore Fourteen Lacs Fifty Six Thousand Two hundred & Fourteen Only).** This estimated cost mentioned hereunder is merely indicative and is for the general guidance/ knowledge of the applicants only. The breakup of said estimated cost of composite work is as under:

(a) Civil Component	: Rs. 7,83,27,501/-
(b) PH Services	: Rs. 64,96,900/-
(c) Electrical Installation	: Rs. 66,31,813/-
Total	**: Rs. 9,14,56,214/-**

1.2 **ELIGIBILITY CRITERIA:**

a) i) Non-Chandigarh Administration registered contractors shall have to fulfill the criteria as given below:

ii) CPWD enlisted contractors/agencies to participate in their respective categories upto their tendering limit directly without qualifying the eligibility criteria of the similar works subject to the qualifying of the bid capacity and other financial aspects as a part of the DNIT.

The Bidders/Agency should have satisfactorily completed the works as mentioned below during the last seven years ending last day of the month previous to the one in which tenders are invited.(Joint Venture will not beeccepted).

Three similar works each costing not less than 40% i.e. 3,65,82,486/-

(or)

Two similar works each costing not less than 60% i.e. 5,48,73,728/-

(or)

One similar work costing not less than 80% i.e. 7,31,64,971/-

Similar works shall means building work including Civil, PH, Electrical Works on composite basis.The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to the previous day of last day in which tender is invited.

b) Bidders are required to submit TDS certificate in Form 16-A in case of similar works are executed for a private body, which shall form basis for establishing the completion cost of similar work executed by the bidder.

	c)	Average annual financial turnover on construction works should be at least **30%** of the Estimated cost put to tender during the immediate last three consecutive financial years ending 31st March 2025. The value of annual turnover figures shall be brought to current value by enhancing the actual turnover figures at simple rate of 7% Per annum. (Scanned copy of Certificate from CA to be uploaded). Year in which no turnover is shown would also be considered for working out the average.
	d)	The Bidder should not have incurred any loss (profit after tax should be positive) in more than two years during available last five consecutive financial year. Balance sheets of financial years ending 31stMarch 2025 i.e. 2020-21,2021-22, 2022-23, 2023-24, 2024-25 duly certified and audited by the Chartered Accountant. The balance sheet in case of private/public limited company means its standalone financial statement and consolidated financial statement both.
	e)	Banker's Certificate from a Commercial Bank or Net worth Certificate: Banker's Certificate of the amount equal to 40% of the Estimated Cost put to tender (ECPT), OR Networth certificate of minimum 10% of the estimated cost put to tender issued by certified Chartered Accountant with UDIN. .i.e. upto March 2025.
	f)	Evaluation of Performance: The bidder should qualify the criteria for the evaluation of the performance of contractors as per proforma attached with the bid document.
	g)	The bidder's performance for qualifying works completed in the last seven years should be certified by an officer not below the rank of Executive Engineer or equivalent.
	h)	In case, the eligible work has been executed by a Joint Venture through one or more individual firm(s), then cost of completed work shall be distributed among the individual firm(s) in proportion to their share in Joint Venture and that will be considered as work experience for individual firm(s) for pre-qualification in bidding.
	i)	The Civil Contractors/agencies enlisted with Chandigarh Administration and CPWD should also have enlisted in PH and Electrical works if the civil contractors have not enlisted for PH and Electrical works then documentation for eligibility criteria for composite work/ individual work of the PH/electrical works as per 1.2 should also be submitted. The main contractor, if not eligible as per eligibility criteria for minor/works individually, has to associate agencies not enlisted with Chandigarh Administration for minor components (s) fulfilling the eligibility criteria as defined at below and has to submit detail of such agencies along with MOU signed with the respective eligible contractors/agencies with the post qualification documents along with the tender and also has to upload all these documents while submitting the bid through e-tendering, otherwise his tender will not be considered and stand rejected out rightly. Further, main civil contractors/agencies, if do not fulfill the eligibility criteria individually, they will have to associate agencies (s) for minor components (s) as per eligibility criteria for minor component is given below. The contractor/agencies of minor components such as Public Health / Electrical works having satisfactorily completed similar works during last 7 years ending last day of month previous to the submission of tender are eligible for association of tender who have fulfilled the eligibility criteria for minor components given as under-

S No	Minor Components	3 similar works each of value not less than **40%**i.e.	**(OR)** 2 Similar works each of value not less than **60%**i.e.	**(OR)** 1 Similar works each of value not less than **80% i.e.**
	1	2	3	4
1	**Public Health**			
	Public Health Services Sanitary Installation.	**Rs. 25,98,760/-**	**Rs. 38,98,140/-**	**Rs. 51,97,520/-**
2	**ELECTRICAL**			
	Electrical Installation	**Rs. 26,52,725/-**	**Rs. 39,79,088/-**	**Rs. 53,05,450/-**

Similar work means satisfactory completion of minor component works (building works) i.e. Sanitary installation internal & external works for public Health wing (Building) and Providing Electrical installation work for electrical wing (building) by taking each components separately, where ever applicable.

The Public Health / Electrical Contractor to be associated with the main civil contractor should furnish the affidavit as per clause 1.2.1.

	1.2.1	**The bidder should furnish the Affidavit:- (Mandatory/Compulsory Notary attested) (Affidavit from the contractual agencies firms prepared on or after the date of inviting the tenders).** A.) That I/We hereby declare the I/we have not been blacklisted/ debarred/suspended by any Govt./Semi Govt./Board/Corporation/Private firms as on last date of receipt of tender. B.) That I/we undertake and confirm that eligible similar works(s) has/have not been executed through another contractor on back to back basis. Further, it is undertaken that if such a violation comes to the notice of Engineering Department, Chandigarh Administration, then I/we shall be debarred from tendering in Engineering Department, CHANDIGARH ADMINISTRATION in future forever. Also, if such a violation comes to the notice of Engineering Department, Chandigarh Administration, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money/Performance Guarantee deposited by me/us. C.) That the deponent further undertakes that he/she/Director(s)/partner(s) of the proprietor/firm/company/agency have never been convicted of any criminal offence. D.) That I/we also undertake that the particulars given by me are true and correct to the best of my knowledge and belief and nothing has been concealed thereof. I am aware that in case of any discrepancy/false statement if found, it will lead to rejection of my bid/tender and the Engineering Department, Chandigarh Administration,will debar/blacklist the proprietorship/firm/company/agency as per the policy of blacklisting issued by Chandigarh Administration vide notification dated 27.02.2009.		
	1.2.2	**Non Chandigarh Administration contractors/agencies** shall have to fulfill the criteria of Bid Capacity as Performa supported with Annexure		
		i)	The bidding capacity of the contractor should be equal to or more that the estimated cost of the work put to tender. The bidding capacity shall be worked out by the following information: Bidding Capacity = {[AXNX1.5] – B} A=maximum turnover in construction works executed in any one year during the last seven years taking into account the completed as well as works in progress. The value of completed works shall be brought to current costing level by enhancing at a simple rate of 7% per annum N = Number of years prescribed for completion of work for which bids have been invited. The value of N shall be taken as 1 (one), where the completion period is less than one year. B= Value of existing commitments and ongoing works to be completed during the period of completion of work for which bids have been invited.	
		ii)	Bidder should have annual financial turnover of construction works during the last seven consecutive financial years ending 31st March 2025 i.e. (2018-19, 2019-20, 2020-21, 2021-22, 2022-23, 2023-24, 2024-25). The balance sheet should be duly audited by the Charted Accountant. The value of maximum turnover in construction works executed in any year during the last seven years taking into account the completed as well as works in progress. The value of completed works shall be brought to current costing level by enhancing at a simple rate of 7% per annum	
		iii)	Bidders should have to submit Details of existing commitments and ongoing works.(on the format prescribed in Form C-3)	
	Note	**All the documents shall be duly attested & counter signed by the agencies**		
2	**Earnest Money**: Applicant has to deposit Earnest Money online of **Rs.18,29,124/-**deposit in the SBI account of **Executive Engineer, C.P. Division No.4, Chandigarh**. The following procedure shall be followed for deposit of Earnest Money. (i) The EMD should be deposited online in the SBI account of **Executive Engineer, C.P. Division No.4, Chandigarh**. (ii) The bidder should upload online EMD UTR No./Transaction slip in the online bid. (iii) Only Bid documents submitted by intending bidders shall be opened only of those bidders, whose online EMD deposited in the account of **Executive Engineer, C.P. Division No.4, Chandigarh** (SBI Account) (iv) The bid submitted shall be invalid if the bidder does not deposit the online EMD.			
3	The department reserves the right to reject any or all the prospective applications without assigning any reason and/or to restrict the list of qualified contractors to any number as deemed suitable by it, if too many bids satisfying the laid down criteria have been received.			
4	**The bid submitted shall become invalid if:** The bidder does not upload all documents (including GST registration) as stipulated in the bid document including the copy of Online EMD UTR No./Transaction slip.			
5	Agreement shall be drawn with the successful tenderer on the prescribed CPWD Form No.7 as per "General conditions of the contract of CPWD works-2023" (which is available as a Govt. of India Publication) and the Amendment/changes in clauses of the General conditions of the contract for CPWD works-2023 attached in Sector-III. Tenderer shall quote his rates as per various terms and conditions of the said form, which will form part of the agreement.			
	As per General Conditions of Contract for Central P.W.D Works		**To be read as**	
	Chandigarh Administration		C.P Division No.4,	
	President of India		President of India	
	Govt. of India			
	Director General		Chief Engineer U.T. Chandigarh.	
	Additional Director General		Chief Engineer U.T. Chandigarh	

	Department	Engineering Department, Chandigarh
6	The time allowed for carrying out the work will be **18 Months** from the date of start as defined in Schedule 'F' of Financial Bid in Part-III of this document or from the first day of handing over of the site, whichever is later in accordance with the phasing, if any, indicated in the Tender Document. In case of non-handing over of any part of site, the extension in time limit for the proportional delay shall be allowed as per the agreement. **(The site for the work is available)**	
7	Bid document consisting of plans, specifications, the schedule of quantities of the various classes of work to be done and the set of terms and conditions of the contract to be complied with by the Contractor whose bid may be accepted and other necessary documents can be seen in the office of the **Executive Engineer, C.P. Division No.4**, Chandigarh between 10.00 AM & 4.00 PM from any working day except on Saturdays, Sundays and Public Holidays.	
8	Bid document excluding 'General Condition of Contract for Central PWD Works' (available in market for sale) for this work, can be downloaded from e-tendering website of UT Administration http://etenders.chd.nic.in . Bid document shall not be available on said website after the stipulated date & time for downloading.	
9	Downloading and submission of Tender including Financial Bid will be done by **e- Procurement process** through the web site of Chandigarh Administration to be indicated in the **Press Notice**. However, for general information, the **Tender Document** can also be seen & downloaded from the Government of India Portal for tenders i.e. http://etenders.chd.nic.in. The agency shall upload Scanned copy of documents (duly **attested and counter signed** by agency) related to online Earnest Money Deposit and 'Eligibility Documents'.	
10	A) PG Shall be 5% of the Estimated Cost put to Tender (ECPT) or Contract amount whichever is higher, or as prescribed from time to time, to be submitted in the form as prescribed in GCC. Performance Guarantee shall remain valid for a minimum period of six months beyond the date of completion of all contractual obligations as per GCC (In case of contracts where supplementary agreement is drawn, the fresh PG shall be obtained from the contractor @ 5% of the amount of the supplementary agreement or as prescribed from time to time. B) A bid will be treated as abnormally low if the quoted bid amount is lesser than 80% of the estimated cost put to tender. C) Requirement of Additional Performance Guarantee (APG): In case of abnormally low bids as defined above, the bidder shall be required to submit Additional Performance Guarantee (APG) in addition to Standard Performance Guarantee (PG). The amount of Additional Performance Guarantee (APG) shall be equivalent to the difference between the 80% amount of ECPT and quoted amount. (e.g. if ECPT is A and quoted amount is 0.7A then the amount of APG shall be 0.8A-0.7A). The Additional Performance Guarantee (APG) shall be in the prescribed format of Performance Guarantee and has to be submitted within the time frame prescribed for submission of Performance Guarantee. The other terms and conditions of release etc. of APG shall be same as that of PG. The contractor whose tender is accepted will be required to furnish performance guarantee of an amount within the period specified in Schedule F. This guarantee shall be in the form of Govt. securities, or fixed deposit receipts or guarantee bounds of any scheduled bank or State Bank of India in accordance with the prescribed format. In case the contractors fail to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.	
11	Copies of drawings and documents pertaining to the works will be open for inspection by the Tenderers at the office of the concerned EE of C.P DIVISION NO.4, Tenderers are also advised to carefully inspect and examine the site and its surroundings and satisfy themselves, before submitting their tenders, as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not. **Engineering Department, Chandigarh Administration** will not accept any liability arising later on consequent to any misunderstanding or otherwise on the part of the tenderer. The tenderer shall be responsible for arranging and maintaining, at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for execution of the work unless otherwise specifically provided for in the contract document. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. if any are issued to him by the **Engineering Department, Chandigarh Administration** and local conditions and other factors having a bearing on the execution of the work.	
12	The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without assigning any reason. **All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer, the same shall be summarily rejected.**	
13	Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable for rejection.	

14	The competent authority on behalf of the President of India reserves with himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.	
15	The contractor shall not be permitted to tender for works in the Circle (responsible for award and execution of contracts) in which his near relative is posted in any capacity. 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 officer/ official in the Chandigarh Administration. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department as well as for future works.	
16	No employee of Engineering Department, Chandigarh Administration is allowed to work as a contractor for a period of two years after his retirement from Govt. Service, without the previous permission of the Chandigarh Administration in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Engineering Department, Chandigarh Administration. As aforesaid before submission of the tender or engagement in the contractor's services.	
17	The bid for the works shall remain open for acceptance for a period 75 (Seventy five) days from the date of opening of technical bid. Further:- 1). i) If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department within 7 days after last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 50% of earnest money absolutely irrespective of letter of acceptance for the work is issued or not. ii) If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department after expiry of 7 days after last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 100% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not. 2) If contractor fails to furnish the prescribed performance guarantee within the prescribed period, the earnest money is absolutely forfeited to the President automatically without any notice. (3) In case of forfeiture of earnest money as prescribed in Para (1) and (2) above, the bidder shall not be allowed to participate in the re-tendering process of the work.	
18	This **'Bid Document'** shall form a part of the contract document. The successful tenderer /Bidder/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:	
	a)	The Press Notice, Notice Inviting Tender, all the documents including additional conditions, specifications and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
	b)	General Conditions of contract for Central PWD works 2023, tender form of CPWD 7 as amended from time to time.
19	For Composite Tenders:	
	19.1.1	The Executive Engineer-in-charge of the major component of the work will call tenders for composite work. The earnest money will be fixed with respect to the combined estimated cost put to tender for the composite tender.
	19.1.2	the tender document will include following components: Part A: CPWD Form 6, CPWD Form 7including Schedule A to F for major components of the work, standard General Conditions of Contract for CPWD 2023 or latest addition as applicable with all amendments/modifications. Part B: General/specific conditions, specifications and schedule of quantities applicable to major component of the work. Part C:- Schedule A to F for minor component of the work, (SE/EE in charge of major component shall also be competent authority under clause 2 and clause 5 as mentioned in schedule A to F for major components) General/specific conditions, specifications and schedule of quantities applicable to minor components) of the work.
	19.1.3	The tenderer must associate himself with agencies of the appropriate class eligible to tender for the minor components individually
	19.1.4	The eligible tenderers for major component will quote rates for various items of minor components of work also. It will be obligatory on the part of the tenderer to sign the tender document for all the components (The schedule of quantities, conditions and special conditions etc.)
	19.1.5	After acceptance of the bid by competent authority, the EE in charge of major component of the work shall issue letter of award on behalf of the President of India. After the work is awarded, the main contractor will have to enter into one agreement with EE in charge of major component and has also to sign two or more copies of agreement depending upon number of EE's in charge of minor components. One such signed set of agreement shall be handed over to EE in - charge of minor component. EE of major component will operate part A and part B of the agreement. EE in - charge of minor components) shall operate Part B and C along with Part A of the agreement.
	19.1.6	Entire work under the scope of composite tender including major and all minor components shall be executed under one agreement.
	19.1.7	Security deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of works. The online Earnest Money will become part of the security deposit of the major component of work. It is further clarified that during the

		payments of running bills to the agency, respective Divisions of major component & minor component would deduct the stipulated security from the running bills for their component of work done and would maintain books of account in their divisions for management of security deposit as per the condition laid down in the Bid Document till final bill.
	19.1.8	The main contractor has to associate agencys) for minor components) conforming to the eligibility criteria as defined in the tender document and has to submit detail of such agency(s) to Engineer in Charge of minor components) within the prescribed time. Name of the agencys) to be associated shall be approved by the Engineer-in-Charge of minor components).
	19.1.9	In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in-Charge of minor component. The new agency/agencies shall have also to satisfy the laid down eligibility criteria. In case Engineer-in-Charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.
	19.1.10	The main Contractor has to entire in to agreement with the contractor(s) associated by him for execution of minor component(s). Copy of such agreement shall be submitted to EEs in charge of minor component as well as to EEs in charge of. Major component. In case of change of associated contractor, the main contractor has to enter into agreement with the new contractor associated by him.
	19.1.11	Running payment for the major component shall be made by EE of major discipline to the main contractor. Running payment for minor components shall be made by the EE-in charge of the discipline of minor components directly to the main contractor.
	19.1.12	The Composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite work shall be recorded by Engineer-In-Charge of major component after record of completion certificate of all other components.
	19.1.13	Final bill of whole work shall be finalized and paid by the EE of major component. Engineers) in charge of the minor components will prepare and pass the final bill for their component of work and pass on the same to the EE of major component for including in the final bill for composite contract.
20.	In case any discrepancy is noticed between the documents as uploaded at the time of submission of the bid online and hard copies as submitted physically in the office of Executive Engineer, then the bid submitted shall become invalid and the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said online earnest money as aforesaid. Further the tenderer shall not be allowed to participate in the re-tendering process of the work.	
21.	Any incorrectness / deviation if noticed in the documents submitted by the agency, the same shall be viewed seriously and apart from cancellation of the work / tender, forfeiture of EMD, Criminal action will be initiated including suspension of business.	
22.	All digging agencies must have to register in CBUD mobile app of Government of India. It is required to intimate through "call before u dig" app before commencing any excavation on public land/roads in UT Chandigarh.	
23.	The tenderer is liable to be blacklisted and the EMD forfeited if he has been found to have misled or has furnished false information in the forms / statements / certificates submitted by him as proof in support of qualification requirements or record of performance such as abandoning of work not properly completed in earlier contracts, inordinate delays in completion of the works etc. etc.	
24.	In the event the tenderer whose tender is accepted and the award letter issued after the receipt of Performance Guarantee in the prescribed form and time, does not start the work or fails to sign the contract agreement within 10 days of issue of allotment letter, the Government shall without prejudice to any other right or remedy be at liberty to forfeit the whole of the Earnest Money and Performance Guarantee and shall be absolutely at the disposal of the U.T. Secretariat, Chandigarh .	
25.	All disputes concerning in any way with this work are subject to Chandigarh jurisdiction only.	
26.	Before the last date for submission of Tenders, the Tender Inviting Officer may modify any of the Contents of the Tender Notice, Tender documents by issuing amendment / Addendum.	
27.	Any addendum/amendments issued by the Tender Inviting Officer shall be part of the Tender Document.	
28.	To give prospective Tenderer reasonable time to take an addendum into account in preparing their bids, the Tender Inviting Officer may extend, if necessary, the last date for submission of tenders.	
29.	The Executive Engineer will evaluate whether each Tenderer is satisfying the eligibility criteria prescribed in the tender document and declares them as a qualified Tenderer and selected for next stage of opening of Price Bid.	
30.	If the technical bid of a Bidder is not satisfying any of the eligibility criteria it will be rejected by the Executive Engineer.	
31.	If any alteration is made by the Bidder in the Bid documents, the conditions of the contract, the drawings, specifications or statements / formats or quantities the tender will be rejected.	
32.	The Bidder shall be scrutinized in accordance with the conditions stipulated in the Tender document. In case of any discrepancy of non-adherence Conditions the Tender accepting authority shall communicate the same which will be binding both on the tender Opening authority and the tenderer. In case of any ambiguity, the decision taken by the Tender Accepting Authority on tenders shall be final.	
33.	The Executive Engineer will evaluate and compare the price bids of all the qualified Tenderer.	
34.	The Bidder is advised to attach any additional information, which he thinks to be necessary in regard to his capabilities. No further information will be entertained after submission of application unless it is called	

	for by the C.P Div.4 Chandigarh. The C.P Div.4 Chandigarh reserves the right to call for additional information & clarification of information submitted by the Tenderer.
35.	The cost incurred by the Bidder in preparing this application, in providing clarifications or attending discussions/ conferences in connection with this document shall be borne by the Tenderer and Engineering Department, Chandigarh Administration in no case will be responsible or liable for these costs, regardless of the conduct or out come of the process.
36.	While execution of the work, if found that the contractor had produced false/fake certificates of experience he will be black listed and the contract will be terminated.
37.	The department reserves the right to reject any prospective application without assigning any reason.
38.	It is mandatory to upload scanned copies of all the documents including GST registration if these documents are not uploaded, then bid will become invalid and shall summarily be rejected.
39.	Only one common %age above or below the rates/amount mentioned in the DNIT shall be quoted by the bidder for all items. Any other extra item of DSR if required to be executed shall be paid on prevailing DSR rates and adjusted by applying Chandigarh cost index +% (Plus / Minus percentage) quoted by the agency in the tender. Similarly, any other N.S. extra items if required to be executed shall be paid on the justified analysis of rates prepared based on prevailing labour rates approved by the Assistant Labour Commissioner and approved material rates and shall be adjusted by applying the quoted +%age (Plus / Minus percentage) by the agency in the tender.
40.	GST/any other statutory taxes made as applicable by the Govt. from time to time shall be applicable and any increase / decrease in the applicable taxes shall be adjusted with respect to the taxes as applicable at the time of last date of the bid opening. The contractor shall quote his rates considering all such taxes and hence their quoted rates should be inclusive of all taxes components. G.S.T T.D.S @2% (1% CGST and 1 % UTGST) will be deducted from all the contractual payment as per Ministry of Finance, Dept. of Revenue, Govt. of India New Delhi Circular No.F.No.S.31011/11/2018-ST-I-DoR dt.14.09.2018.

Executive Engineer,
C.P. Division No.4,
Chandigarh.
Ph. No. 0172-2740496
Email: cp4-chd@nic.in

Endst. No.CP4/2026/ 8353 Dated: 03/06/26

Copy is forwarded to the following for information and necessary action.

1. The Chief Engineer, U.T., Chandigarh.
2. The Superintending Engineer, Const. Circle-I, Chandigarh.
3. The Executive Engineer, C.P. Divn. No.1/2(R)/3/5/6, Chandigarh.
4. The Sub Divisional Engineer, C-5, C-19, Sectt., D/W, Sub. Divn. Chandigarh.
5. D.A.O - I/ H.D.M./ Supdt., O/o C.P. Division No. 4 Chandigarh.
6. Notice Board.

Executive Engineer,
C.P. Division No.4,
Chandigarh.

BIDDING DOCUMENT

FOR

CONSTRUCTION OF NEW GOVT. BUILDING IN GOVT. MODEL SR. SEC. SCHOOL, VILLAGE MALOYA, CHANDIGARH (COMPOSITE WORK)

Date of release/publishing of tender _____

Last Date of
Submission of Document:_____upto _____PM

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C.P DIVISION NO.4, U.T., CHANDIGARH
NOTICE INVITING TENDER

1. The Executive Engineer, C.P. Division No.4, U.T. ,Chandigarh invites online the Percentage rate tenders on behalf of the President of India from Enlisted Contractor of Chandigarh Administration and CPWD enlisted contractors/agencies to participate in their respective categories upto their tendering limit & eligible reputed contractors/agencies enlisted in appropriate class with the PWD of States's / UT's for Civil (Building) works fulfilling the eligibility criteria mentioned below which shall be uploaded and received on https://etenders.chd.nic.in.

1.1	The work is estimated to Cost **Rs. 9,14,56,214/- (Rupees Nine Crore Fourteen Lacs Fifty Six Thousand Two hundred & Fourteen[illegible], Only).** This estimated cost mentioned hereunder is merely indicative and is for the general guidance/ knowledge of the applicants only. The breakup of said estimated cost of composite work is as under: (a) Civil Component : Rs. ~~7,14,07,571~~/- 7,83,27,501/— (b) PH Services : Rs. 64,96,900/- (c) Electrical Installation : Rs. 66,31,813/- **Total : Rs. 9,14,56,214/-**
1.2	**ELIGIBILITY CRITERIA:**
a)	i) Non-Chandigarh Administration registered contractors shall have to fulfill the criteria as given below: ii) CPWD enlisted contractors/agencies to participate in their respective categories upto their tendering limit directly without qualifying the eligibility criteria of the similar works subject to the qualifying of the bid capacity and other financial aspects as a part of the DNIT.
	The Bidders/Agency should have satisfactorily completed the works as mentioned below during the last seven years ending last day of the month previous to the one in which tenders are invited.(Joint Venture will not beeccepted). Three similar works each costing not less than 40% i.e. 3,65,82,486/- (or) Two similar works each costing not less than 60% i.e. 5,48,73,728/- (or) One similar work costing not less than 80% i.e. 7,31,64,971/- **Similar works shall means building work including Civil, PH, Electrical Works** on composite basis.The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to the previous day of last day in which tender is invited.
b)	Bidders are required to submit TDS certificate in Form 16-A in case of similar works are executed for a private body, which shall form basis for establishing the completion cost of similar work executed by the bidder.
c)	Average annual financial turnover on construction works should be at least **30%** of the Estimated cost put to tender during the immediate last three consecutive financial years ending 31st March 2025. The value of annual turnover figures shall be brought to current value by enhancing the actual turnover figures at simple rate of 7% Per annum. (Scanned copy of Certificate from CA to be uploaded). Year in which no turnover is shown would also be considered for working out the average.
d)	The Bidder should not have incurred any loss (profit after tax should be positive) in more than two years during available last five consecutive financial year. Balance sheets of financial years ending 31stMarch 2025 i.e. 2020-21,2021-22, 2022-23, 2023-24, 2024-25 duly certified and audited by the Chartered Accountant. The balance sheet in case of private/public limited company means its standalone financial statement and consolidated financial statement both.

	e)	Banker's Certificate from a Commercial Bank or Net worth Certificate: Banker's Certificate of the amount equal to 40% of the Estimated Cost put to tender (ECPT), OR Networth certificate of minimum 10% of the estimated cost put to tender issued by certified Chartered Accountant with UDIN. .i.e. upto March 2025.
	f)	Evaluation of Performance: The bidder should qualify the criteria for the evaluation of the performance of contractors as per proforma attached with the bid document.
	g)	The bidder's performance for qualifying works completed in the last seven years should be certified by an officer not below the rank of Executive Engineer or equivalent.
	h)	In case, the eligible work has been executed by a Joint Venture through one or more individual firm(s), then cost of completed work shall be distributed among the individual firm(s) in proportion to their share in Joint Venture and that will be considered as work experience for individual firm(s) for pre-qualification in bidding.
	i)	The Civil Contractors/agencies enlisted with Chandigarh Administration and CPWD should also have enlisted in PH and Electrical works if the civil contractors have not enlisted for PH and Electrical works then documentation for eligibility criteria for composite work/ individual work of the PH/electrical works as per 1.2 should also be submitted. The main contractor, if not eligible as per eligibility criteria for minor/works individually, has to associate agencies not enlisted with Chandigarh Administration for minor components (s) fulfilling the eligibility criteria as defined at below and has to submit detail of such agencies along with MOU signed with the respective eligible contractors/agencies with the post qualification documents along with the tender and also has to upload all these documents while submitting the bid through e-tendering, otherwise his tender will not be considered and stand rejected out rightly. Further, main civil contractors/agencies, if do not fulfill the eligibility criteria individually, they will have to associate agencies (s) for minor components (s) as per eligibility criteria for minor component is given below. The contractor/agencies of minor components such as Public Health / Electrical works having satisfactorily completed similar works during last 7 years ending last day of month previous to the submission of tender are eligible for association of tender who have fulfilled the eligibility criteria for minor components given as under-

S No	Minor Components	3 similar works each of value not less than **40%**i.e.	**(OR)** 2 Similar works each of value not less than **60%**i.e.	**(OR)** 1 Similar works each of value not less than **80% i.e.**
	1	2	3	4
1	**Public Health**			
	Public Health Services Sanitary Installation.	**Rs. 25,98,760/-**	**Rs. 38,98,140/-**	**Rs. 51,97,520/-**
2	**ELECTRICAL**			
	Electrical Installation	**Rs. 26,52,725/-**	**Rs. 39,79,088/-**	**Rs. 53,05,450/-**

Similar work means satisfactory completion of minor component works (building works) i.e. Sanitary installation internal & external works for public Health wing (Building) and Providing Electrical installation work for electrical wing (building) by taking each components separately, where ever applicable.
The Public Health / Electrical Contractor to be associated with the main civil contractor should furnish the affidavit as per clause 1.2.1.

	1.2.1	**The bidder should furnish the Affidavit:- (Mandatory/Compulsory Notary attested) (Affidavit from the contractual agencies firms prepared on or after the date of inviting the tenders).** A.) That I/We hereby declare the I/we have not been blacklisted/ debarred/suspended by any Govt./Semi Govt./Board/Corporation/Private firms as on last date of receipt of tender. B.) That I/we undertake and confirm that eligible similar works(s) has/have not been executed through another contractor on back to back basis. Further, it is undertaken that if such a violation comes to the notice of Engineering Department, Chandigarh Administration, then I/we shall be debarred from tendering in Engineering Department, CHANDIGARH ADMINISTRATION in future forever. Also, if such a violation comes to the notice of Engineering Department, Chandigarh Administration, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money/Performance Guarantee deposited by me/us. C.) That the deponent further undertakes that he/she/Director(s)/partner(s) of the proprietor/firm/company/agency have never been convicted of any criminal offence. D.) That I/we also undertake that the particulars given by me are true and correct to the best of my knowledge and belief and nothing has been concealed thereof. I am aware that in case of any discrepancy/false statement if found, it will lead to rejection of my bid/tender and the Engineering Department, Chandigarh Administration,will debar/blacklist the proprietorship/firm/company/agency as per the policy of blacklisting issued by Chandigarh Administration vide notification dated 27.02.2009.	
	1.2.2	**Non Chandigarh Administration contractors/agencies** shall have to fulfill the criteria of Bid Capacity as Performa supported with Annexure	
		i)	The bidding capacity of the contractor should be equal to or more that the estimated cost of the work put to tender. The bidding capacity shall be worked out by the following information: Bidding Capacity = {[AXNX1.5] – B} A=maximum turnover in construction works executed in any one year during the last seven years taking into account the completed as well as works in progress. The value of completed works shall be brought to current costing level by enhancing at a simple rate of 7% per annum N = Number of years prescribed for completion of work for which bids have been invited. The value of N shall be taken as 1 (one), where the completion period is less than one year. B= Value of existing commitments and ongoing works to be completed during the period of completion of work for which bids have been invited.
		ii)	Bidder should have annual financial turnover of construction works during the last seven consecutive financial years ending 31stMarch 2025 i.e. (2018-19, 2019-20, 2020-21, 2021-22, 2022-23, 2023-24, 2024-25). The balance sheet should be duly audited by the Charted Accountant. The value of maximum turnover in construction works executed in any year during the last seven years taking into account the completed as well as works in progress. The value of completed works shall be brought to current costing level by enhancing at a simple rate of 7% per annum
		iii)	Bidders should have to submit Details of existing commitments and ongoing works.(on the format prescribed in Form C-3)
	Note	**All the documents shall be duly attested & counter signed by the agencies**	
2	**Earnest Money**: Applicant has to deposit Earnest Money online of **Rs.18,29,124/-**deposit in the SBI account of **Executive Engineer, C.P. Division No.4, Chandigarh**. The following procedure shall be followed for deposit of Earnest Money. (i) The EMD should be deposited online in the SBI account of **Executive Engineer, C.P. Division No.4, Chandigarh**. (ii) The bidder should upload online EMD UTR No./Transaction slip in the online bid. (iii) Only Bid documents submitted by intending bidders shall be opened only of those bidders, whose online EMD deposited in the account of **Executive Engineer, C.P. Division No.4, Chandigarh** (SBI Account) (iv) The bid submitted shall be invalid if the bidder does not deposit the online EMD.		
3	The department reserves the right to reject any or all the prospective applications without assigning any reason and/or to restrict the list of qualified contractors to any number as deemed suitable by it, if too many bids satisfying the laid down criteria have been received.		
4	**The bid submitted shall become invalid if:** The bidder does not upload all documents		

	(including GST registration) as stipulated in the bid document including the copy of Online EMD UTR No./Transaction slip.	
5	Agreement shall be drawn with the successful tenderer on the prescribed CPWD Form No.7 as per "General conditions of the contract of CPWD works-2023" (which is available as a Govt. of India Publication) and the Amendment/changes in clauses of the General conditions of the contract for CPWD works-2023 attached in Sector-III. Tenderer shall quote his rates as per various terms and conditions of the said form, which will form part of the agreement.	
	As per General Conditions of Contract for Central P.W.D Works	**To be read as**
	Chandigarh Administration	C.P Division No. ~~2 (R),~~ 4
	President of India	President of India
	Govt. of India	
	Director General	Chief Engineer U.T. Chandigarh.
	Additional Director General	Chief Engineer U.T. Chandigarh
	Department	Engineering Department, Chandigarh
6	The time allowed for carrying out the work will be **18 Months** from the date of start as defined in Schedule 'F' of Financial Bid in Part-III of this document or from the first day of handing over of the site, whichever is later in accordance with the phasing, if any, indicated in the Tender Document. In case of non-handing over of any part of site, the extension in time limit for the proportional delay shall be allowed as per the agreement. **(The site for the work is available)**	
7	Bid document consisting of plans, specifications, the schedule of quantities of the various classes of work to be done and the set of terms and conditions of the contract to be complied with by the Contractor whose bid may be accepted and other necessary documents can be seen in the office of the **Executive Engineer, C.P. Division No.4,** Chandigarh between 10.00 AM & 4.00 PM from any working day except on Saturdays, Sundays and Public Holidays.	
8	Bid document excluding 'General Condition of Contract for Central PWD Works' (available in market for sale) for this work, can be downloaded from e-tendering website of UT Administration http://etenders.chd.nic.in . Bid document shall not be available on said website after the stipulated date & time for downloading.	
9	Downloading and submission of Tender including Financial Bid will be done by **e-Procurement process** through the web site of Chandigarh Administration to be indicated in the **Press Notice**. However, for general information, the **Tender Document** can also be seen & downloaded from the Government of India Portal for tenders i.e. http://etenders.chd.nic.in. The agency shall upload Scanned copy of documents (duly **attested and counter signed** by agency) related to online Earnest Money Deposit and 'Eligibility Documents'.	
10	A) PG Shall be 5% of the Estimated Cost put to Tender (ECPT) or Contract amount whichever is higher, or as prescribed from time to time, to be submitted in the form as prescribed in GCC. Performance Guarantee shall remain valid for a minimum period of six months beyond the date of completion of all contractual obligations as per GCC (In case of contracts where supplementary agreement is drawn, the fresh PG shall be obtained from the contractor @ 5% of the amount of the supplementary agreement or as prescribed from time to time. B) A bid will be treated as abnormally low if the quoted bid amount is lesser than 80% of the estimated cost put to tender. C) Requirement of Additional Performance Guarantee (APG): In case of abnormally low bids as defined above, the bidder shall be required to submit Additional Performance Guarantee (APG) in addition to Standard Performance Guarantee (PG). The amount of Additional Performance Guarantee (APG) shall be equivalent to the difference between the 80% amount of ECPT and quoted amount. (e.g. if ECPT is A and quoted amount is 0.7A then the amount of APG shall be 0.8A-0.7A). The Additional Performance Guarantee (APG) shall be in the prescribed format of Performance Guarantee and has to be submitted within the time frame prescribed for submission of Performance Guarantee. The other terms and conditions of release etc. of APG shall be same as that of PG. The contractor whose tender is accepted will be required to furnish performance guarantee of an amount within the period specified in Schedule F. This guarantee shall be in the form of Govt. securities, or fixed deposit receipts or guarantee bounds of any scheduled bank or State Bank of India in accordance with the prescribed format. In case the contractors fail to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited	

	automatically without any notice to the contractor.
11	Copies of drawings and documents pertaining to the works will be open for inspection by the Tenderers at the office of the concerned EE of C.P DIVISION NO.4, Tenderers are also advised to carefully inspect and examine the site and its surroundings and satisfy themselves, before submitting their tenders, as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not. **Engineering Department, Chandigarh Administration** will not accept any liability arising later on consequent to any misunderstanding or otherwise on the part of the tenderer. The tenderer shall be responsible for arranging and maintaining, at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for execution of the work unless otherwise specifically provided for in the contract document. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. if any are issued to him by the **Engineering Department, Chandigarh Administration** and local conditions and other factors having a bearing on the execution of the work.
12	The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without assigning any reason. **All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer, the same shall be summarily rejected.**
13	Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable for rejection.
14	The competent authority on behalf of the President of India reserves with himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
15	The contractor shall not be permitted to tender for works in the Circle (responsible for award and execution of contracts) in which his near relative is posted in any capacity. 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 officer/ official in the Chandigarh Administration. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department as well as for future works.
16	No employee of Engineering Department, Chandigarh Administration is allowed to work as a contractor for a period of two years after his retirement from Govt. Service, without the previous permission of the Chandigarh Administration in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Engineering Department, Chandigarh Administration. As aforesaid before submission of the tender or engagement in the contractor's services.
17	The bid for the works shall remain open for acceptance for a period 75 (Seventy five) days from the date of opening of technical bid. Further:- 1). i) If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department within 7 days after last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 50% of earnest money absolutely irrespective of letter of acceptance for the work is issued or not. ii) If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department after expiry of 7 days after last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 100% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not. 2) If contractor fails to furnish the prescribed performance guarantee within the prescribed period, the earnest money is absolutely forfeited to the President automatically without any notice. (3) In case of forfeiture of earnest money as prescribed in Para (1) and (2) above, the bidder shall not be allowed to participate in the re-tendering process of the work.
18	This **'Bid Document'** shall form a part of the contract document. The successful tenderer /Bidder/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:
	a) The Press Notice, Notice Inviting Tender, all the documents including additional

		conditions, specifications and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
	b)	General Conditions of contract for Central PWD works 2023, tender form of CPWD 7 as amended from time to time.
19	For Composite Tenders:	
	19.1.1	The Executive Engineer-in-charge of the major component of the work will call tenders for composite work. The earnest money will be fixed with respect to the combined estimated cost put to tender for the composite tender.
	19.1.2	the tender document will include following components: Part A: CPWD Form 6, CPWD Form 7including Schedule A to F for major components of the work, standard General Conditions of Contract for CPWD 2023 or latest addition as applicable with all amendments/modifications. Part B: General/specific conditions, specifications and schedule of quantities applicable to major component of the work. Part C:- Schedule A to F for minor component of the work, (SE/EE in charge of major component shall also be competent authority under clause 2 and clause 5 as mentioned in schedule A to F for major components) General/specific conditions, specifications and schedule of quantities applicable to minor components) of the work.
	19.1.3	The tenderer must associate himself with agencies of the appropriate class eligible to tender for the minor components individually
	19.1.4	The eligible tenderers for major component will quote rates for various items of minor components of work also. It will be obligatory on the part of the tenderer to sign the tender document for all the components (The schedule of quantities, conditions and special conditions etc.)
	19.1.5	After acceptance of the bid by competent authority, the EE in charge of major component of the work shall issue letter of award on behalf of the President of India. After the work is awarded, the main contractor will have to enter into one agreement with EE in charge of major component and has also to sign two or more copies of agreement depending upon number of EE's in charge of minor components. One such signed set of agreement shall be handed over to EE in - charge of minor component. EE of major component will operate part A and part B of the agreement. EE in - charge of minor components) shall operate Part B and C along with Part A of the agreement.
	19.1.6	Entire work under the scope of composite tender including major and all minor components shall be executed under one agreement.
	19.1.7	Security deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of works. The online Earnest Money will become part of the security deposit of the major component of work. It is further clarified that during the payments of running bills to the agency, respective Divisions of major component & minor component would deduct the stipulated security from the running bills for their component of work done and would maintain books of account in their divisions for management of security deposit as per the condition laid down in the Bid Document till final bill.
	19.1.8	The main contractor has to associate agencys) for minor components) conforming to the eligibility criteria as defined in the tender document and has to submit detail of such agency(s) to Engineer in Charge of minor components) within the prescribed time. Name of the agencys) to be associated shall be approved by the Engineer-in-Charge of minor components).
	19.1.9	In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in-Charge of minor component. The new agency/agencies shall have also to satisfy the laid down eligibility criteria. In case Engineer-in-Charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.
	19.1.10	The main Contractor has to entire in to agreement with the contractor(s) associated by him for execution of minor component(s). Copy of such agreement shall be submitted to EEs in charge of minor component as well as to EEs in charge of. Major component. In case of change of associated contractor, the main contractor has to enter into agreement with the new contractor associated by him.
	19.1.11	Running payment for the major component shall be made by EE of major discipline to the main contractor. Running payment for minor components shall be made by the EE-in charge of the discipline of minor components directly to the main contractor.
	19.1.12	The Composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite work shall be recorded

		by Engineer-In-Charge of major component after record of completion certificate of all other components.
	19.1.13	Final bill of whole work shall be finalized and paid by the EE of major component. Engineers) in charge of the minor components will prepare and pass the final bill for their component of work and pass on the same to the EE of major component for including in the final bill for composite contract.
20.	In case any discrepancy is noticed between the documents as uploaded at the time of submission of the bid online and hard copies as submitted physically in the office of Executive Engineer, then the bid submitted shall become invalid and the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said online earnest money as aforesaid. Further the tenderer shall not be allowed to participate in the re-tendering process of the work.	
21.	Any incorrectness / deviation if noticed in the documents submitted by the agency, the same shall be viewed seriously and apart from cancellation of the work / tender, forfeiture of EMD, Criminal action will be initiated including suspension of business.	
22.	All digging agencies must have to register in CBUD mobile app of Government of India. It is required to intimate through "call before u dig" app before commencing any excavation on public land/roads in UT Chandigarh.	
23.	The tenderer is liable to be blacklisted and the EMD forfeited if he has been found to have misled or has furnished false information in the forms / statements / certificates submitted by him as proof in support of qualification requirements or record of performance such as abandoning of work not properly completed in earlier contracts, inordinate delays in completion of the works etc. etc.	
24.	In the event the tenderer whose tender is accepted and the award letter issued after the receipt of Performance Guarantee in the prescribed form and time, does not start the work or fails to sign the contract agreement within 10 days of issue of allotment letter, the Government shall without prejudice to any other right or remedy be at liberty to forfeit the whole of the Earnest Money and Performance Guarantee and shall be absolutely at the disposal of the U.T. Secretariat, Chandigarh .	
25.	All disputes concerning in any way with this work are subject to Chandigarh jurisdiction only.	
26.	Before the last date for submission of Tenders, the Tender Inviting Officer may modify any of the Contents of the Tender Notice, Tender documents by issuing amendment / Addendum.	
27.	Any addendum/amendments issued by the Tender Inviting Officer shall be part of the Tender Document.	
28.	To give prospective Tenderer reasonable time to take an addendum into account in preparing their bids, the Tender Inviting Officer may extend, if necessary, the last date for submission of tenders.	
29.	The Executive Engineer will evaluate whether each Tenderer is satisfying the eligibility criteria prescribed in the tender document and declares them as a qualified Tenderer and selected for next stage of opening of Price Bid.	
30.	If the technical bid of a Bidder is not satisfying any of the eligibility criteria it will be rejected by the Executive Engineer.	
31.	If any alteration is made by the Bidder in the Bid documents, the conditions of the contract, the drawings, specifications or statements / formats or quantities the tender will be rejected.	
32.	The Bidder shall be scrutinized in accordance with the conditions stipulated in the Tender document. In case of any discrepancy of non-adherence Conditions the Tender accepting authority shall communicate the same which will be binding both on the tender Opening authority and the tenderer. In case of any ambiguity, the decision taken by the Tender Accepting Authority on tenders shall be final.	
33.	The Executive Engineer will evaluate and compare the price bids of all the qualified Tenderer.	
34.	The Bidder is advised to attach any additional information, which he thinks to be necessary in regard to his capabilities. No further information will be entertained after submission of application unless it is called for by the C.P Div.4 Chandigarh. The C.P Div.4 Chandigarh reserves the right to call for additional information & clarification of information submitted by the Tenderer.	
35.	The cost incurred by the Bidder in preparing this application, in providing clarifications or attending discussions/ conferences in connection with this document shall be borne by the Tenderer and Engineering Department, Chandigarh Administration in no case will be responsible or liable for these costs, regardless of the conduct or out come of the process.	
36.	While execution of the work, if found that the contractor had produced false/fake certificates of experience he will be black listed and the contract will be terminated.	
37.	The department reserves the right to reject any prospective application without assigning any reason.	
38.	It is mandatory to upload scanned copies of all the documents including GST registration if	

	these documents are not uploaded, then bid will become invalid and shall summarily be rejected.
39.	Only one common %age above or below the rates/amount mentioned in the DNIT shall be quoted by the bidder for all items. Any other extra item of DSR if required to be executed shall be paid on prevailing DSR rates and adjusted by applying Chandigarh cost index +% (Plus / Minus percentage) quoted by the agency in the tender. Similarly, any other N.S. extra items if required to be executed shall be paid on the justified analysis of rates prepared based on prevailing labour rates approved by the Assistant Labour Commissioner and approved material rates and shall be adjusted by applying the quoted +%age (Plus / Minus percentage) by the agency in the tender.
40.	GST/any other statutory taxes made as applicable by the Govt. from time to time shall be applicable and any increase / decrease in the applicable taxes shall be adjusted with respect to the taxes as applicable at the time of last date of the bid opening. The contractor shall quote his rates considering all such taxes and hence their quoted rates should be inclusive of all taxes components. G.S.T T.D.S @2% (1% CGST and 1 % UTGST) will be deducted from all the contractual payment as per Ministry of Finance, Dept. of Revenue,Govt. of India New Delhi Circular No.F.No.S.31011/11/2018-ST-I-DoR dt.14.09.2018.

Executive Engineer,
C.P. Division No.4,
Chandigarh

Executive Engineer,
P.H. Division No. 7,
Chandigarh

Executive Engineer,
Electrical Division No. 3
Chandigarh

SECTION – I

BRIEF PARTICULARS OF THE WORK

1. Salient features of the work for which Bids are invited are as under:

Name of work	CONSTRUCTION OF NEW GOVT. BUILDING IN GOVT. MODEL SR. SEC. SCHOOL, VILLAGE MALOYA, CHANDIGARH (COMPOSITE WORK)	
Estimated Cost	Civil Component	: Rs. 7~~,14,07,571/-~~ 7,83,27,501/-
	PH Services	: Rs. 64,96,900/-
	Electrical Installation	: Rs. 66,31,813/-
Total	**Rs. 9,14,56,214/-**	
Earnest Money	Rs. 18,29,124/-	
Completion Time	18 months	

2. The work is located at Village:- Maloya, Chandigarh.
3. General features and major components of the work are as under:
   a. Building works include civil, public health and electrical work on composite basis.
   b. Design mix concrete shall be used in the work, wherever required.
4. Work shall be executed according to General Conditions of Contract for Central PWD works with latest amendments as available separately at printer's oulets/in the market.
5. The work in General shall be carried out as per Chandigarh Administration with respect to the provisions contained in DSR, IRC/IS codes/CPWD Manual/CPWD Specifications latest edition and as mentioned in this Bid Document etc.

CPWD FORM NO. 7

CHANDIGARH ADMINISTRATION

ENGINEERING DEPARTMENT

STATE: **UT** **CIRCLE: Const Circle II Chandigarh**

BRANCH: **Chandigarh** **DIVISION: Sectt. Sub Division,**

ZONE: **Chandigarh**

PERCENTAGE RATE TENDER & CONTRACT FOR WORKS

(A) Tender for the work of: -

Name of Work: **Construction of New Govt. Building in Govt. Model Sr. Sec. School, Village Maloya, Chandigarh (Composite Work)**

to be submitted by ._____**p.m.** on _____ **Executive Engineer, C.P. Division.No.4, Chandigarh.**

to be opened in presence of tenderers who may be present at **2.00 p.m.** on _____ in the office of **Executive Engineer, C.P. Division No.4, Chandigarh.**

i) Issued to:- .....-
.....

Signature of officer issuing the documents.....-.....

ii) Designation:-**Executive Engineer, C.P. Division No.4, Chandigarh.**

iii) Date of issue:- .....-.....

TENDER

I/We have read and examined the Notice Inviting Tender, Schedule A, B, C, D, E & F, Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, Clauses of Contract, Special Conditions, Schedule of Rate and other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the President of India within the time specified in Schedule 'F', viz. Schedule of Quantities and in accordance in all respects with the Specifications, Designs, Drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of Contract and with such materials as are provided for, by and in respects in accordance with, such conditions so far as applicable.

To Filled in by the Executive Engineer.

CPWD FORM No.7

We agree to keep the tender open for Seventy-Five Days from the last day of receipt of technical bid and not to make any modifications in its terms and conditions.

A sum of Rs. 18,29,124/- is hereby forwarded has been deposited online in SBI/account of Executive Engineer, C.P. Division No.4, Chandigarh and Performance Guarantee including additional performance guarantee/Guarantee Bond/Fixed Deposit Receipts (FDR) of Scheduled Bank or State Bank of India as Performance Guarantee. If I/we fail to furnish the prescribed Performance security within prescribed period, I/we agree that the said President of India or his successor in office shall be suspended for one year and shall not be eligible to bid in Chandigarh Admn./Engg. Deptt. for tenders from date of issue of suspension order. I/we agree that President of India or his successors in office shall, without prejudice to any other right or remedy available in law, be at liberty to forfeit the said the Performance Guarantee absolutely to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto maximum of the percentage mentioned in Schedule 'F' and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2, 12.3 and 12.5 of the tender form. **Further, I/We agree that in case of forfeiture of Earnest money or both Earnest Money & Performance Guarantee as aforesaid, I/We shall be declared for participation in retendering process of work.**

I/We hereby declare that I/we shall treat the tender documents, drawings and other records connected with the work as Secret / Confidential documents and shall not communicate information / derived there from to any person other than a person to whom I/we am/are may authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated .....

Witness: - .....

Address: - .....

Occupation: - .....

Signature of Contractor .....

Postal Address: - .....

Telephone No.

Fax:-

E-Mail:-

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the President of India for a sum of Rs.....
The letters referred to below shall form part of this contract agreement.

For & on behalf of the
President of India.

Signature .....

i) .....
ii) .....
iii) .....
iv) .....

Executive Engineer,
C.P. Division No.4
Chandigarh.

PROFORMA OF SCHEDULES

SCHEDULE 'A'	
Schedule of quantities	As per Section - VII
SCHEDULE 'D'	
Extra schedule for specific requirements /documents for the work, if any.	As per tender documents
SCHEDULE 'E'	
Reference to General Conditions of contract	**CPWD General Conditions of Contract 2023 for Construction Works, Chandigarh Engineering Department, U.T., Chandigarh** Form 7 as amended/modified upto last date of Submission of bid.
Name of work	**Construction of New Govt. Building in Govt. Model Sr. Sec. School, Village Maloya, Chandigarh (Composite Work)**
Estimated Cost of Work	**Rs.9,14,56,214/-**
Earnest Money	**Rs. 18,29,124/-**
Performance Bank Guarantee	D) PG Shall be 5% of the Estimated Cost put to Tender (ECPT) or Contract amount whichever is higher, or as prescribed from time to time, to be submitted in the form as prescribed in GCC. Performance Guarantee shall remain valid for a minimum period of six months beyond the date of completion of all contractual obligations as per GCC (In case of contracts where supplementary agreement is drawn, the fresh PG shall be obtained from the contractor @ 5% of the amount of the supplementary agreement or as prescribed from time to time. E) A bid will be treated as abnormally low if the quoted bid amount is lesser than 80% of the estimated cost put to tender. F) Requirement of Additional Performance Guarantee (APG): In case of abnormally low bids as defined above, the bidder shall be required to submit Additional Performance Guarantee (APG) in addition to Standard Performance Guarantee (PG). The amount of Additional Performance Guarantee (APG) shall be equivalent to the difference between the 80% amount of ECPT and quoted amount. (e.g. if ECPT is A and quoted amount is 0.7A then the amount of APG shall be 0.8A-0.7A). The Additional Performance Guarantee (APG) shall be in the prescribed format of Performance Guarantee and has to be submitted within the time frame prescribed for submission of Performance Guarantee. The other terms and conditions of release etc. of APG shall be same as that of PG.
Security Deposit	**2.5% of tendered value.**
SCHEDULE 'F' **GENERAL RULES &DIRECTIONS: -**	
Officer inviting tender: -	Executive Engineer, C. P. Division No. 4 U.T. Chandigarh.
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	As given under clause 12 of schedule 'F'.
DEFINITIONS	

2(v)Engineer-in-Charge	Executive Engineer, C. P. Division No. 4 U.T. Chandigarh.
2(viii) Acceptance of tender (Works)	As per delegated financial powers to officers: a) Executive Engineer upto Rs. 0.50 Crore b) S.E. for tender amount above Rs. 0.50 Crorebut up to Rs. 1.00 Crore c) Chief Engineer above Rs. 1.00Crore but up to 3.00 Crore d) Chief Engineer (with recommendation of TEC) – Full power
2(x) Percentage on cost of materials and labour to cover all overheads and profits	15%
2(xi) Standard Schedule of Rates	DSR-2023 with up-to-date correction Slips + Non schedule items as per analysis of rates based on market rates of material and labour.
2(xii) Department	Engineering Department U.T. Chandigarh.
9(ii) Standard CPWD Contract Form GCC 2023, CPWD Form 7	**CPWD, General Conditions of Contract 2023 for Construction Works**, CPWD Form 7 as amended /modified upto last date of Submission of bid.
Clause 1	
(i) Time allowed for submission of performance guarantee, programme chart (time and progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of issue of letter of acceptance.	7 Days
(ii) Maximum allowable extension with late fee at 0.1% per day of performance guarantee amount beyond the period provided in (i) above	7 (Seven) days on written request of contractor stating the reason for delay in submission of performance guarantee to the satisfaction of Engineer-in-Charge.
Clause 2	
Authority for fixing compensation under clause 2	Executive Engineer, C. P. Division No. 4 U.T. Chandigarh.
Clause 2A	
Whether Clause 2A shall be applicable	Not Applicable
Clause 5	
Number of days from the date of issue of letter of acceptance for reckoning date of start Mile stone(s) as per table given below	7 Days

Table of Mile stone(s)

Sl. No.	Gross work done of total work allotted	Time Allotted (From date of start)	Amount to be withheld in case of non-achievement of each milestone
1.	10%	54 Days	0.71% of Tendered Amount
2.	25%	135 Days	0.71% of Tendered Amount
3.	40%	216 Days	0.71% of Tendered Amount
4.	55%	297 Days	0.71% of Tendered Amount
5.	70%	378 Days	0.71% of Tendered Amount
6.	85%	459 Days	0.71% of Tendered Amount
7.	Completion of work i/c testing etc. complete	540 Days	0.71% of Tendered Amount

Note: The withhold milestone will only be released when subsequent milestone is achieved within the specified time.

Time allowed for execution of work	**18 Months**
Authority to decide:	
(i) 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 milestones		Superintending Engineer 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		Superintending Engineer in charge or Superintending Engineer in charge of Major component in case of composite contracts, as the case may be.	
Schedule of handing over of site			
Part	**Portion of Site**	**Description**	**Time period for handing over reckoned from date of issue of letter of intent**
Part A	Portion without any hindrance	Full site is hindrance Free	10 Days
Part B	Portions with encumbrances	--	Not Applicable
Part C	Portions dependent on work of other agencies	--	Not Applicable
Clause 6			
Computerized Measure Book (CMB)/ Electronics Measurement Book (EMB)			
Mode of measurement		As per instruction issued regarding measurement by Competent Authority.	
Clause 7			
Gross work to be done together with net payment/adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment.		**Rs. 1,30,65,173/-** or reasonable part thereof to facilitate progress of work.	
Clause 7A			
Whether Clause 7A shall be applicable		As per the provisions contained in the CPWD General Conditions of Contract 2023 for Construction Works with up-to-date correction slips upto last date of receipt of tender.	
Clause 8			
Competent Authorities to inspect and issue part/final completion certificate.		As per the provisions contained in the CPWD General Conditions of Contract 2023 for Construction Works with up-to-date correction slips upto last date of receipt of tender.	
Clause 8A			
Authority to decide compensation on account if contractor fails to submit completion plans		Executive Engineer, C. P. Division No.4 U.T. Chandigarh.	
Clause 10 A			
List of testing equipment to be provided by the contractor at site lab.		All measurement and testing equipment during the progress of work and final testing & commissioning shall be provided by the contractor.	
Clause 10 B (ii)			
Whether Clause 10 B (ii) shall be applicable		Not Applicable	
Clause 10 C			
Component of labour expressed as percent of value of work		Not Applicable	
Clause 10 CC			
Clause 10 CC		Not Applicable	
Clause 11			
Specifications to be followed for execution of work		CPWD Specifications 2019, Volume-I and II with correction slips up to last date of submission of tender and manufacturer's specification.	
Clause 12			
Authority to decide deviation upto 1.5 times of the tender amount		As per the provisions contained in the CPWD General Conditions of Contract 2023 for Construction Works &CPWD Manual 2024 with up-to-date correction slips upto last date of receipt of tender	

Clause 12.2 & 12.3	
Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building work	Any quantity increased / decreased shall be carried out by the agency at contractual rates.
Clause 12.4 (i)	
Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work.	Any quantity increased / decreased shall be carried out by the agency at contractual rates.
Clause 12.4 (ii)	
Deviation limit for items mentioned in earth work subhead of DSR or related items.	Any quantity increased / decreased shall be carried out by the agency at contractual rates.
Clause 16	
Competent authority for deciding reduced rates.	As per the provisions contained in the CPWD General Conditions of Contract 2023 for Construction Works with up-to-date correction slips up to last date of receipt of tender.
Clause 18	
List of machinery, tools & plants to be deployed by the contractor at site	All machinery, tools & plantsrequired for satisfactory completion of work at site and as directed by Engineer-in-Charge shall be provided by the contractor.
Clause 19C **Clause 19C** **Clause 19C** **Clause 19C** — Authority to decide penaltyfor each default	Executive Engineer, C. P. Division No.4 U.T. Chandigarh.
Clause 25	
(i) Conciliator	Superintending Engineer
(ii) Arbitration Appointing Authority	Chief Engineer
(iii) Place of Arbitration	U.T. Chandigarh
Clause 32	
Requirement of technical representative(s) and recovery rate	

Sr. No.	**Minimum Qualification of Technical Representative**	**Discipline**	**Designation (Principal Technical/ Technical Representative**	**Minimum Experience**	**Number**	**Rate at which recovery shall be made from contractor in the event of non-deployment.**	
						Figures	**Words**
1.	Graduate Engineer	Civil	Principal Technical Representative	5 Years	1 No.	Rs.15000/ - per month	Rs. Fifteen thousand only per month.
2.	Diploma Engineer Holder	Civil	Technical representative.	5 Years	1 no.	Rs.10000/ - per month	Rs. Ten Thousand only per month.

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers. Diploma holder with minimum 10 years relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.

Clause 38	
Schedule/statement for determining theoretical quantity of cement & bitumen	Delhi Schedule of Rates with up-to-date correction slips.
(ii) Variations permissible on theoretical quantities:	
a) Cement for works with estimated cost put to tender not more than Rs. 25lacs.	3% plus / minus
b) For works with estimated cost put to tender more than Rs.25 lacs.	2% plus / minus
c) Bitumen all works	2.5% plus & only nil on minus side
d) Steel reinforcement and structural steel sections for each diameter, section and category	2% plus / minus
e) All other materials.	Nil

List of Documents to be scanned and uploaded by the Bidders

1. Online EMD UTR No./Transaction slip.
2. Enlistment Order of the Contractorupto their tendering limit.
3. Affidavit as per clause 1.2.1 (as per prescribed Performa).
4. Undertaking on structural stability and soundness as per prescribed format Form 'F'.
5. If the main agency is not enlisted for P.H. and Electrical works, then the Memorandum of Understanding (M.O.U.) between the main agency and the associated P.H./Electrical agency must be uploaded, as per the prescribed proforma.
6. Affidavit submitted by the Associated P.H./Electrical agency as per clause 1.2.1 (as per prescribed Proforma).
7. Copy of enlistment in appropriated class in Chandigarh Administration & CPWD by the Associated agencies.
8. If the associated P.H./Electrical agency is not enlisted with the Chandigarh Administration or CPWD, then a copy of the enlistment in the appropriate class with the PWD of the concerned State/UT, along with Certificates of Work Experience as per the performance report of completed works referred to in Form 'C'.

And following documents also uploaded by the non-Chandigarh Administration enlisted contractors/bidders:-

9. Copy of GST Registration Certificate
10. Copy of PAN Card
11. Letter of Transmittal.
12. Integrity Pact/Agreement
13. Financial Information as per Form A
14. Banker Certificate – Form B or Net Worth Certificate – Form B-1
15. List of Completed Works – Form C
16. Project Under Execution – Form C-1
17. Calculation of Bid Capacity – Form C-3
18. Performance report of works – Form D
19. Structure and Organization - Form E

Any other documents as specified in the NIT

LETTER OF TRANSMITTAL

From:

To
Executive Engineer,
C.P. Division No. 4,
Chandigarh.

Subject: Construction of New Govt. Building in Govt. Model Sr. Sec. School, Village Maloya, Chandigarh (Composite Work)"

Sir/Madam,

Having examined the details given in Press Notice and Bid document for the above work, I/ we hereby submit the documents related with the Eligibility Criteria & other relevant information and Financial Bid.

1. I/ we hereby certify that all the statements made and information supplied in the enclosed Forms A to F and accompanying statement are true and correct.
2. I/ we have furnished all information and details necessary for post-qualification eligibility and have no further pertinent information to supply.
3. I/ We submit the requisite certified banker certificate and authorize the Executive Engineer, C.P. Division No.4, Chandigarh to approach the Bank issuing the net worth certificate to confirm the correctness thereof. I/ We also authorize Executive Engineer, C.P. Division No. 4, Chandigarh to approach individuals. employers, firms and corporation to verify our competence and general reputation.
4. I/ We submit the requisite certificates in support of our suitability, technical knowhow and capability for having successfully completed the following eligible similar works: -

Name of Work	Certificate form

Certificate:

It is certified that the information given in the enclosed eligibility bid are correct. It is also certified that I/we shall be liable to be debarred, disqualified/cancellation of enlistment in case any information furnished by me/us found to be incorrect.

Enclosures:
Seal of bidder
Date of submission

SIGNATURE(S) OF BIDDER(S)

ANNEXURE-IV-A

To,

The Bidder.....,
.....,
.....

Sub: NIT No. ..... for the work of **Construction of New Govt. Building in Govt. Model Sr. Sec. School, Village Maloya, Chandigarh (Composite Work)**

Dear Sir,

It is hereby declared that Engineering Department U.T., Chandigarh is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the President of India

Yours faithfully

Executive Engineer,
C. P. Division No. 4
U.T., Chandigarh

To,

Executive Engineer,
C.P. Division No.4
Chandigarh

Sub:- Construction of New Govt. Building in Govt. Model Sr. Sec. School, Village Maloya, Chandigarh (Composite Work)"

Dear Sir,

I/We acknowledge that Engineering Department, ChandigarhAdministration, is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by Engineering Department, Chandigarh Administration I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, Engineering Department, Chandigarh Administration shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid is accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

ANNEXURE-IV-B

INTEGRITY PACT

(Integrity Pact is applicable for all works of estimated cost put to tender equal to or more than the threshold value given in Schedule-F)

This Integrity Pact /Agreement is made at ..... on this ..... day of ..... 20.....

BETWEEN

President of India represented by the Executive Engineer, C.P. Division No.4, Sector-9 Chandigarh, (Hereinafter referred to as the principal, which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assignees)

AND

.....

(Name and Address of the bidder)

(Hereinafter referred to as the Bidder/Contractor and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assignees)

Preamble

WHEREAS the Principal has floated the Tender (NIT No. .....) (hereinafter referred to as **Tender**) and intends to award, under laid down organizational procedure, contract for Construction of New Govt. Building in Govt. Model Sr. Sec. School, Village Maloya, Chandigarh (Composite Work)
hereinafter referred to as the "**Contract**".

AND WHEREAS the Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "**Integrity Pact**" or "**Pact**"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

In order to achieve these goals, the Principal will appoint Independent External Monitors (IEMs) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned hereunder

NOW, THEREFORE, in consideration of mutual covenants contained in this pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal

1) The principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:
   (a) No employee of the principal, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
   (b) ThePrincipal will, during the Tender process, treat all Bidder(s) with equity and reason. The principal will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
   (c) The Principal/Owner shall endeavor to exclude from the Tender process any person whose conduct in the past has been of biased nature.
2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or

if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of **fraud or corruption or Coercion or Collusion** of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.

2) The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during theContract execution:

a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the Contract.

b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.

c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contract(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly, Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

f) Bidder(s) /Contractor(s) who have signed the Integrity Pact shall not approach the courts while representing the matter to IEMs and shall wait for their decision in the matter.

3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice, willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.

5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (which shall include the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the principal.
2) **Forfeiture of Earnest Money Deposit /Performance Guarantee/Security Deposit**: If the Principal has disqualified the Bidder(s) from the Tender processprior to the award of the Contractor terminated/determined the Contractor has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.
3) **Criminal Liability:** If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
2) If the Bidder makes incorrect statement on this subject, he can bed is qualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal.
3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in
conformity with this Integrity Pact.
The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/sub-vendors.
2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, alongwith the Tender or violate its provisions at any stage of the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, ENGINEERING DEPARTMENT, CHANDIGARH ADMINISTRATION

Article 7- Other Provisions

1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Head quarters of the Division of the Principal/Owner, who has floated the Tender.
2) Changes and supplements need to be made in writing. Sideagreements have not been made.
3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed bya representative duly authorized by Engineering Department, U.T., Chandigarh resolution.
4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.
5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this **Integrity Agreement/Pact or interpretation thereof shall not be subject to arbitration.**

Article 8- Independent External Monitor (IEM)

a. The Principal appoints competent and credible independent external monitor for his pact after approval by central vigilance commission (Names and address of IEMs are as mentioned in Schedule – F). The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Agreement.
b. The Monitor is not subject to instructions by the representatives of the parties and performs his/her functions neutrally and independently. The Monitor would have access to all contract documents, whenever required. It will be obligatory for him / her to treat the information and documents of the Bidders / Contractors as confidential.
c. The bidder(s) / Contractor(s) accepts that the IEM has the right to access without restriction to all project documentation of the Principal including that provided by the Contractor. The contractor will also grant the IEM upon his/ her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same is applicable to sub contractors.
d. The IEM is under contractual obligation to teak the information and documents of the bidder (s) / Contractor(s) /Sub-contractor(s) with confidentiality. The IEM has also signed Non-Disclosure of Confidential Information and BSENCE OF Conflict of Interest. In case if Any conflict of interest arising at a later date, the IEM shall information the Engineer-in-charge and recuse himself/ from that case.
e. As soon as the IEM notices, or believes to notice a violation of this agreement, he / she will so inform the Management of the Principal and request the management to discontinue or take corrective action, or to take other relevant actin. The IEM can in this regard submit non-binding recommendations. Beyond this, the IEM has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
f. The IEM will submit a written report to the SDG/ADG concerned within 8 to 10 weeks from the date of reference or intimation to him by the Principal and should the occasion arise, submit proposals for correcting problematic situations.
g. If the IEM has reported to the ADG/SDG concerned, substantiated suspicion of an offence under relevant IPC/PC Act, and the ADG/SDG concerned has, within a reasonable time, not taken visible action to proceed against such offence or reported it to the Chief Vigilance officer, the IEM may also transmit this information directly to the Central Vigilance Commissioner.
h. The principal will provide to the IEM sufficient information about all meetings among the parties related to the project provided such meetings could have impact on contractual relations between the Principal and the contractor. The parties will offer to the IEM the option to participate in such meetings.
i. The word IEM or monitor would include both singular and plural.

Article 9- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same

shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....
(For and on behalf of Principal/Owner)

.....
(For and on behalf of Bidder/Contractor)

WITNESSES:

1. .....
(signature, name and address)
2. .....
(signature, name and address)

Place:

Dated :

ANNEXURE-I

SPECIMEN PROFORMA FOR THE AFFIDAVIT TO BE SUBMITTED BY THE APPLICANT ALONGWITH OTHER POST-QUALIFICATION DOCUMENTS.

(On Judicial Stamp paper dully attested by 1st class Magistrate or Notary Public)

I,_____S/o Sh. _____authorized representative of _____with its office at _____ solemnly affirm and declare as under on behalf of the firm: -

To become eligible for e-tendering, the tenderer shall have to furnish an affidavit as under:

a) That I/We hereby declare that I/we have not been blacklisted/ debarred/ suspended by any Govt./ Semi Govt./ Board/ Corporation/ Private firms as on last date of receipt of tender

b) **That I/we undertake and confirm that eligible similar works has/have not been executed through another contractor on back-to-back basis. Further it is undertaken that if such a violation comes to the notice of Engineering Department Chandigarh Administration, then I/we shall be debarred from tendering in ENGINEERING DEPARTMENT, CHANDIGARH ADMINISTRATION in future forever. Also, if such a violation comes to the notice of Engineering Department, Chandigarh Administration, the Engineer-in-charge shall be free to forfeit the entire amount of Earnest Money/ Performance Guarantee deposited by me/us.**

c) That the deponent further undertakes that he/she/Director(s)/partner(s) of the Proprietor/ firm/company/agency have never been convicted of any criminal offence.

d) That I/we also undertake that the particulars given by me are true and correct to the best of my knowledge and belief and nothing has been concealed thereof. I am aware that in case of any discrepancy/ false statement is found, it will lead to rejection of my bid/tender and the Engineering Department will debar/blacklist the Proprietorship/firm/company/agency as per policy of blacklisting issued by Chandigarh administration vide notification dated 27.02.2009.

Place: _____ Authorized Signatory of

Dated: _____ firm/Deponent

VERIFICATION:

I the above named signatory/deponent do hereby solemnly affirm & declare that the contents of this affidavit are true to the best of my knowledge & nothing has been concealed therein.

Place: _____ Authorized Signatory of

Dated: _____ firm/Deponent

Note:- <u>Affidavit from the contractual agencies prepared on or after the date of inviting the tenders.</u>

FORM 'A'

FINANCIAL INFORMATION

I. Financial Analysis – Details to be furnished duly supported by figures in balance sheet / profit & loss account for the last seven years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached)

	YEARS						
	2018-19	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**
(i) Gross Annual turnover on Construction works.							
(ii) Profit / Loss							

II.	Financial arrangements for carrying out the proposed work.	
III.	Networth Certificate from Bankers of the bidder in the prescribed **Form "B".** **OR** Banker certificate from a commercial Bank in the prescribed Form 'B-1"	

(Scanned copy of Certificate from CA with unique Document Identification Number (UDIN) to be uploaded)

SIGNATURE OF BIDDERS (S)

Signature of Chartered Accountant with Seal

FORM 'B'

FORMAT FOR NETWORTH CERTIFICATE FROM CHARTERED ACCOUNTANT

"It is to certify that as per the audited balance sheet and profit & Loss account during the financial year ....., the Networth of M/s ..... (Name & Registered address of individual/ firm/ company), as on ..... (the relevant date) is Rs..... After considering all liabilities. It is further certified that the Net worth of the company has not eroded by more than 30% in the last three years ending on March 2025. Unique Documents Identification Number (UDIN)..... .

(Signature of Chartered Accountant)

(Name of Chartered Accountant).

Membership No. of ICAI.

Date of Seal.

OR

FORM "B"
BANKERS' CERTIFICATE FROM A Commercial Bank
(OM No. DG/SOP 2022/07 dated 09.11.2022)

This is to certify that to the best of our knowledge and information that M/s./Sh..... having marginally noted address, ...as a customer of our bank are/ is respectable and can be treated as good for any engagement upto a limit of Rs.....(Rupees.....). This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

(Signature) For the Bank

NOTE

1. Bankers Certificates should be on letter head of the Bank, addressed to tendering authority.
2. In case of Partnership firm, certificate should include names of all partners as recorded with the Bank.

FORM'C'

DETAILS OF ELIGIBLE SIMILAR NATURE OF WORK COMPLETED DURING THE LAST SEVEN YEARS ENDING PREVIOUS DAY OF LAST DAY OF SUBMISSION OF TENDERS

S. No.	Name of work / project and location	Owner or sponsoring organization	Cost of work in crores of rupees	Date of comments cement as per contract	Stipulated date of completion	Actual date of completi on	Litigation / arbitration cases pending / in progress with details*	Name and address/ telephon e number of officer to whom reference may be made	Whether the work was done back to back basis Yes / No
1	2	3	4	5	6	7	8	9	10

***Indicate gross amount claimed and amount awarded by the Arbitrator.**
For details attached separate sheet.

SIGNATURE OF BIDDER(S)

FORM'C-1'

PROJECT UNDER EXECUTION

S. No.	Name of work / project and location	Owner or sponsoring organization	Cost of work in crores of rupees	Date of comments cement as per contract	Stipulated date of completion	Upto date percentage progress of work	Slow progress if any and reason thereof	Name and address/ telephone number of officer to whom reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10

SIGNATURE OF BIDDER(S)

Contractor Witness Executive Engineer

FORM 'C'-3
Calculation of bidding capacity
Details of existing commitments and ongoing works.

S. No.	Name of work/ project and location	Owner or sponsoring organization	Contract value in crores of rupees	Date of commencement as per contract	Stipulated date of completion	Upto date percentage progress of work	Remaining work in percentage (100- column 7)	Existing commitment Column 4 x Column 8 /100	Name and address/ telephone number of officer to whom reference may be made	Remarks
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**

Total (B) =
Maximum turnover in last seven years = Rs.....
Updated value of turnover (A) = Rs.....
No. of years (N) = ...
Bidding Capacity= {[AxNxM]-B} =
Certificate:
I certify that all the awarded and ongoing works have been included in the above list.

(Signature of Bidder(s))

FORM- E

STRUCTURE & ORGANISATION

1.	Name & Address of the bidder	
2.	Telephone No. /Telex No. /Fax No.	
3.	Legal status of the bidder(attach copies of original document defining the legal status).	
a)	An Individual	
b)	A proprietary firm	
c)	A firm in partnership	
d)	A limited company or Corporation	
4.	Particulars of registration with various Government Bodies (attach attested photo-copy).	
	Organization/Place of registration	**Registration No. & Date**
5.	Names and Titles of Directors & Officers with designation to be concerned with this work.	
6.	Designation of individuals authorized to act for the organization.	
7.	Has the bidder, or any constituent partner in case of partnership firm, limited company/joint venture, ever been convicted by the Court of Law" If so, give details.	
8.	In which field of Civil Engineering construction the applicant has specialization and interest?	
9.	Any other information considered necessary but not included above.	

Signature of the Bidders

FORM "F"

UNDERTAKING ON STRUCTURAL STABILITY AND SOUNDNESS OF ALREADY COMPLETED BUILDINGS AND INFRASTRUCTURE PROJECTS.

I/we undertake and confirm that any building / infrastructure constructed by our firm/partnership firm/ company has not suffered any failure, making it unfit for intended use, either due to structural design and defects or due to use of sub-standard materials or execution of sub• standard work, poor workmanship or any other reason during the last 25 (twenty five) years.

I/we, further, undertake that if such information comes to the notice of Chandigarh Administration, then Engineer-in-Charge shall be free to terminate the bid/agreement and to forfeit the entire amount of earnest money deposit, performance guarantee and security deposits.

I/we, also undertake that in addition to above, the Engineer-in-Charge shall be free to debar us forever from tendering in Chandigarh Administration. The decision of Engineer-in-Charge or any higher authority shall be final and binding.

Signature of notary with seal

Signature of bidder or an authorized person of thefirm with stamp.

Note: Affidavit to be furnished on a 'non-judicial' stamp paper of Rs.200/-(scanned copy of the notarized affidavit to be uploaded at the time of submission of bid).

Annexure 'A-4'

(To be executed On Judicial Stamp paper worth Rs.100/- between Contractor, Manufacturer & Engineer-in-charge of the work)

GUARANTEE BOND

This agreement made this ____day of _____ between M/s._____ & M/s_____(hereinafter called the Guarantors which expression shall include where the context so admits the representative successors or his/its assignees of the one part) and the Engineer-in-charge on behalf of President of India having its principal office at Sector 9, Chandigarh (hereinafter called the Engineering Department, U.T., Chandigarh which expression shall unless repugnant to the context or meaning thereof including its successor and assignees of the other part).

Whereas this agreement is supplementary to the contract (hereinafter called the Contract) dated .....made between the Guarantor of the one part and Engineering Department, U.T., Chandigarh of the other part, whereby the Contractor, inter alia, undertook to ensure defect free working of Modular Switches & Sockets conforming to the prescribed specifications. Wherein, the material in question have been used in between Block No. ____ Unit No. _____ at _____ (Location) during the period between _____ to _____ at the site of work.

And whereas the Guarantor agreed to give a guarantee to the effect that the Modular Switches & Sockets of all types and ratings shall be guaranteed for a period of one year after the expiry of defect liability period of 3 months.

During this period of guarantee the Guarantor shall replace all defective Modular Switches & Sockets at his risk and cost to the satisfaction of the Engineer-in-charge, and shall commence the works of such rectification within seven days from date of issuing notice from 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/manufacturer at the Guarantor's cost and risk, and in the later case the decision of the Engineer-in-charge as to the cost recoverable from the Guarantor shall be final and binding.

That if the Guarantor fails to provide replacement of defective Modular Switches & Sockets or commits breaches hereunder then the Guarantor will indemnify principal and his successors against all loss, damage, cost, expense or otherwise which may be incurred by him by reason of any default on the part of the Guarantor in performance and observance of this supplemental agreement. As to the amount of loss and/or damage and/or cost incurred by the Engineering Department, U.T., Chandigarh, the decision of the Engineer-in-charge will be final and binding on the parties. In case of failure to replace the defective material, in addition to the recovery, stated here, the Guarantors and the Contractor shall be blacklisted.

In witness whereof these presents have been executed by the Obligor.....and by ..... for and on behalf of the President of India, month and year first above written.

Signed, sealed and delivered by OBLIGOR in the presence of

1.

2. (Contractor) 2. (Manufacturer)

Signed for and on behalf of the President of India by concerned EE, Divn. (Elect.) in the presence of.

1.

2.

SPECIAL CONDITIONS

1.0 General

1.1 Except for the items, for which Particular Specifications are given or where it is specifically mentioned otherwise in the description of the items in the schedule of quantities, the work shall generally be carried out in accordance with the "Chandigarh Administration Specifications" (Refer Para 1.7.5 of Schedule F at **Page No. - --** and as per instructions of Engineer-in-Charge. Wherever CPWD Specifications are silent, the latest IS Codes / Specifications shall be followed and the rates should be all inclusive.

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

1.3 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 guidelines only).

1.4 The work should be planned in a systematic manner so that chase cuttings in the walls, ceilings and floors is 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 co-ordination of various disciplines viz. sanitary & water supply, horticulture & electrical etc.

1.5 All the hidden items such as water supply lines, drainage pipes, conduits, sewers etc. are to be properly tested before covering.

1.6 Samples including brand / quality of materials and fittings to be used in the work 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.

1.7 Equipment like concrete pump excavators/Transit mixer etc. shall be allowed to be moved away from the site when, in written opinion of Engineer-in-Charge, the same are no longer required at site of work.

1.8 The contractor, his agents / representative, workman etc. shall strictly observe orders pertaining to fire precautions prevailing in the area.

1.9 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 parameters at site. However, no claim on the alleged inadequacy or incorrectness of the soil data supplied by the department shall be entertained.

1.10 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.

1.11 Contractor shall take all precautionary measures to avoid any damage to adjoining property. All necessary arrangement shall be made at his own cost.

1.12 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.

1.13 The contractor 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, compound wall, services etc are to be constructed.

1.14 The contractor shall provide at his own cost suitable weighing, surveying and leveling and measuring arrangements as may be necessary at site for checking. All such equipment'sshall be got calibrated in advance from laboratory, approved by the Engineer-in-Charge. Nothing extra shall be payable on this account.

1.15 Contractor shall provide permanent benchmarks, flag tops 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.

1.16 Water tanks, taps, sanitary, water supply and drainage pipes, fittings and accessories should conform to byelaws and municipal body / corporation where Chandigarh Administration Specifications are not applicable. The contractor should get the materials (fixtures/fittings) tested by the Municipal Body / Corporation authorities wherever required at his own cost.

1.17 The work shall be carried out in accordance with the Architectural drawings and Structural drawings, 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, nomenclature of items, specifications etc. and satisfy himself that the information available there from is complete and unambiguous. The figures & the written dimensions of the drawing shall supersede the measurement by scale. The discrepancy, if any, shall be brought to the notice of the Engineer-in-Charge for immediate decision before execution of the work. The contractor alone shall be responsible for any loss or damage occurring by the commencement of work on the basis of any erroneous and/ or incomplete information and no claim, whatsoever shall be entertained on this account.

1.18 The Architectural drawings other than those indicated in nomenclature of items are only indicative of the nature of the work and materials/fittings involved unless and otherwise specifically mentioned.

1.19 The contractor should submit the shop drawing 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.

1.20 Other agencies may also simultaneously execute and install the works 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 available as specified elsewhere in the contract) and the contractor shall fix the same at the time of casting of concrete, stone work and brick work, if required, and nothing extra shall be payable on this account.

1.21 The contractor shall conduct his 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 off 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.

1.22 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.

1.23 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.

1.24 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/shifting of such services is required to facilitate the work, the same shall be done by the contractor at no extra cost.

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.

1.25 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 department. No extra payment shall be made on this account.

1.26 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.

1.27 For construction works which are likely to generate malba / rubbish to the tune of more than a tempo / truck load, contractor shall dispose of malba, rubbish & other unserviceable materials and wastes at his own cost to the notified specified dumping ground and under no circumstances these shall be stacked / dumped even temporarily, outside the construction premises.

1.28 The excavated surplus earth shall be disposed off by the contractor as per directions of Engineer-in-Charge.

1.29 The contractor shall provide the Design and Drawings of Temporary works such as staging/shuttering and got them approved from any IIT before commencement of work at no extra cost.

1.29 BATCH MIX CONCRETE

1.29.1 The contractor shall establish a laboratory at site of batch mix plant to test the coarse aggregate, fine aggregate, water, sand, cement etc. Contractor is also required to depute technical personnel specifically for running of Batch Mix Plant and for quality control of mix produced.

1.29.2 All incidental expenditure on security, construction of cement godown, access roads, arrangement of water, electricity etc. to be incurred or anticipated by the agency for arranging, installing and operation of Batch Mix Plant shall be deemed to have been included in his quoted rates and no claim whatsoever will be tenable on this account.

1.30 With each Running Bill, the details of test carried out shall be submitted by the contractor as per proforma.

1.31 On completion of work, the contractor shall submit at his own cost four prints of "as built" drawings to the Engineer-in-Charge. These drawings shall have the following information.

a) Run off of all piping and their diameters including soil, waste pipes and vertical stacks.

b) Ground and invert level of all drainage pipes together with locations of all manholes and connections, upto out fall.

c) Run off of all water supply lines with diameters, location of control valves, access panels etc.

In case the contractor fails to supply "as built drawing" aforesaid within 30 days of the date of completion, then the recovery @ Rs.10, 000/- each for such set of drawings shall be made from the contractor's final bill.

1.32 In the item of providing and fixing precast reinforced cement concrete in shelves the cost of cutting chases and making good the same shall be inclusive in the item ad nothing extra shall be paid on this account.

1.33 In the item of finishing walls with water proofing cement paint, only the plain/flat area shall be measured for payment and nothing extra shall be paid on account of pointed wall surface.

1.34 The contractor is required to maintain the road in good condition upto 12 months after completion of the road work.

1.35 Pre-mix carpeting shall be done by the contractor after getting approval from the Engineer-in-Charge in writing.

1.36 The excavated surplus earth of the building shall be disposed of by the contractor for all leads and lifts free of cost within campus. Dumping site/premises shall be approved from Engineer-in-charge. The contractor will not be permitted to take the surplus earth outside the campus.

1.37 Nothing extra shall be paid for making drip of any shape and size.

1.38 Nothing extra shall be paid for making any kind of groove/cut in item of plastering.

1.39 The layout of sanitary and electrical installation can be changed at any stage if required by the concerned Executive Engineer and no claim in this correction will be entertained. However, the payment shall be made as per the actual work done.

1.40 In case of composite tender, the firm shall submit a copy of electrical contractor's license duly endorsed by the Chief Electrical Inspector U.T. at the time of allotment of the work.

1.41 In case of composite tender, the firm will supply a copy of plumber's license at the time of the

allotment of work.

1.42 In case department, does not specify the source of earth, the earth for filling is to be supplied by the contractor by the contractor/agency. The rate to be quoted should include all leads and lifts whatsoever. The contractor/agency will arrange earth from its own source.

1.43 The work during its progress and subsequently at any stage can also be inspected by the Chief Vigilance Officer/Chief Technical Examiner on behalf of Engineer in charge and agency shall responsible for compliance of the observations raised by the Chief Vigilance Officer/Chief Technical Examiner including any recoveries proposed thereof.

1.44 **All disputes concerning with this work/tender are subject to the Chandigarh jurisdiction.**

2.0 Unless otherwise specified in the schedule of quantities, the rates for respective items shall be all inclusive and apply to the following: -

(i) All lifts & all heights, floors including terrace, leads and depths.

(ii) Alllabour, material, tools and plants and other inputs involved in the execution of the item.

(iii) Any of the conditions and specifications mentioned in the tender documents.

(iv) Pumping / bailing out surface water / rain water / sub soil water, if necessary for any reason.

(v) Providing sunk flooring in bath-rooms, kitchen, etc.

(vi) Any legal or financial implications resulting out of disposal of earth, if any.

(vii) Payment of Royalty at the prevailing rates, if any, on the boulders, metal, shingle, sand and bajri etc. or any other material collected by him for the work direct to revenue authorities.

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

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

(x) All incidental charges for cartage, storage and safe custody of materials brought to site.

3.0. **TESTING OF MATERIAL: -**

3.1 Samples of materials required for testing shall be provided free of charge by the contractor. The cost of tests shall be borne by the contractor / department in the manner indicated below: -

a) By the contractor, if the results show that the material does not conform to relevant specifications.

b) By the department, if the results show that the material conforms to relevant specifications.

All other expenditure required to be incurred for taking samples; conveyance, packing etc. shall be borne by the contractor himself.

3.2 However, if any ultrasonic pulse velocity/load testing or special testing is to be done for concrete whose strength is doubtful, the cost of the same shall be borne by the contractor.

3.3 In case there is any discrepancy in frequency of testing as given in list of mandatory tests and that in individual sub-heads of work as per CPWD Specifications higher of the two frequencies of testing shall be followed and nothing extra shall be payable on this account.

3.4 <u>FIELD LABORATORY</u>

The contractor has to establish field laboratory at site including all necessary equipment's and skilled manpower for the **Field Tests** his own cost to have proper quality control.

For performing the above tests, the **Field-Testing Equipment's and Instruments** are to be arranged and maintained by the contractor.

3.5. 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 & contractor shall be bound to replace / remove such sub-standard / defective work immediately.

3.6 The list of Laboratory/ Field equipment referred above are to be arranged and maintained by the contractor at the site of work. In case the equipment required for any test is not available at site, the department shall get the test conducted from the third party. However in that event, besides providing free materials of sample, the cost of taking of sample, packing, transportation, testing charges etc. shall be borne by the contractor irrespective of the results.

4.0 SECRECY

4.1 The contractor shall take all steps necessary that all persons employed on any work in connection with the contract have notice that the Indian Official Secrets Act 1923 applies to them & will continue so to apply even after the execution of such works under the contract.

4.2 The contract in confidential and must be strictly confirmed to the contractor's own use (except so far as confidential disclosure to sub-contractors or suppliers as necessary) and to the purpose of the contract.

4.3 All documents, copies thereof & extracts there from furnished to the contractor shall be returned to the Engineer-in-Charge on the completion of the work / works or the earlier determination of the contract.

5.0 LABOUR AND SECURITY

5.1 Contractor should provide his plan for labour huts as per his requirement and get it approved from the Engineer-in-Charge. The contractor will be provided space for labour huts etc. inside the campus but the space requirement and location, as assessed by Engineer-in-Charge shall be final and binding.

5.2 Contractor has to follow the security requirement of the campus and obtain necessary entry passes for the labour and vehicles and follow security checks at entry / exit gates, restriction on movement of vehicle, restricted timings of working etc. The Department however shall assist the contractor in obtaining such passes for movement of vehicles and labour. No claim whatsoever shall be entertained on account of delay in entry of vehicles and labour including restrictions in working hours, if there is any.

5.3 The contractor shall employ only Indian Nationals after verifying their antecedents and loyalty. The contractor shall, on demand submit list of his agents, employees and work people concerned & shall satisfy as to the bonafides of such people.

5.4 The contractor & his work people shall observe all relevant rules regarding security promulgated in which work is to be carried out by the Controlling Administrative Authority of the campus/area (hereinafter referred to as "Administrator").

5.5 The contractor, his representative, workman shall be allowed to enter through specified gates & timing as laid down by the controlling authority. They shall be issued an identity card or an individual pass in accordance with the standing rules & regulations & they should possess the same while working. The contractor shall be responsible for the conduct & actions of his workman, agents / representatives.

5.6 Normally contractor shall be allowed to carryout work between 7 AM to 6 PM. However, he may also be allowed to carryout the work beyond 6 PM&upto 7 AM if the site conditions / circumstances so demand with prior written permission from the "Administrator". However, if the work is carried out in more than one shift or at night, no claim on this account shall be entertained.

5.7 Normally contractor's material / vehicles etc shall be allowed to move in / go-out between 7 AM to 7 PM only & no movement of material / vehicles out of site of work shall be allowed during night hours unless specific permission is obtained from the "Administrator".

5.8 In case if a separate entry has been allowed, the contractor has to make all arrangement for making a separate entry gate and barricading of the working area to segregate/separate the same from other areas. All these have to be done by the contractor at his own cost including safeguarding any untoward incident in the restricted area due to separate entry gate and

barricading arranged by the contractor. No extra amount on this account shall be payable by the department.

6.0 TRANSPORTATION AND OFFICE INFRASTRUCTURE:

6.1 In order to complete the work within the scheduled time if the contractor shall be required to do the work in more than one shift and accepted by the department the contractor will provide vehicular facilities to the CPWD site staff to reach the site and their residence at his own cost for their services required beyond the normal office hours. In case the contractor fails to provide the facilities Engineer-in-Charge shall be at liberty to make the arrangement themselves and deduct the respective cost from the contractor's bills.

6.2 For Quality Control Measures, Preparation of Bills and Monitoring the Quality, the contractor shall provide (min. one number) Computer having MS-Windows XP, A-3 Coloured Inkjet & A-4 Laserjet Printers, Scanners, UPS etc. with required number of data entry operator in the site office of Engineer-in-Charge.

7.0 **PROGRAM CHART: -**

7.1 The Contractor shall prepare an integrated program chart 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 program within the stipulated period or earlier and submit the same for approval of the Engineer-in-Charge within **5 days** of the issue of letter of acceptance for the contract.

7.2 The work has to be completed in stages as indicated in the **Milestones under Schedule 'F'** and the program should be prepared in such a manner to achieve these Milestones as indicated therein or earlier.

7.3 The program chart should include the following: -

a) Descriptive note explaining sequence of various activities.

b) Network (PERT / CPM / BAR CHART) which will indicate resources in financial terms, manpower and specialized equipment for every important stage.

c) Program for procurement of materials by the contractor.

d) Program of procurement of machinery / equipments having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor.

7.4 If at any time, it appears to the Engineer-in-Charge that the actual progress of work does not conform to the approved program referred above, the contractor shall produce a revised program showing the modifications to the approved program by additional inputs to ensure completion of the work within the stipulated time.

7.5 The submission of revised program or approval by the Engineer-in-Charge of such program or the furnishing of such particulars shall not relieve the contractor of any of his 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.

Notwithstanding the fact that the contractor will have to pay to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour regulations and the agreement entered upon and/or extra amounts for any other reason.

8.0 PROGRESS AND MONITORING OF WORK:

Contractor shall give the Engineer-in-Charge on the 10th day of each month, progress report of the work done during the previous month. Such progress report will include the project progress summary, work progress (planned v/s. actual), PERT chart, milestone status, financial progress status, manpower deployment status, important materials consumed, materials at site at the beginning of the month, materials consumed during the month and the balance quantities at the end of month and progress of the work stating the reasons for shortfall, if any including the steps and measures to be taken for making good the shortfall in the succeeding period. Non submission of aforesaid progress report shall make contractor liable for action under breach of contract conditions.

9.0 **SAMPLE OF MATERIALS:-**

9.1 All materials and fittings 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. 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 **List of Preferred Makes** for approval of Engineer-in-Charge. For all other items, ISI Marked materials and fittings 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 for the approval of Engineer-in-Charge.

9.2 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.

9.3. BIS marked materials except otherwise specified shall also be subjected to quality test besides testing of other materials as per the specifications described for the item/material. Wherever BIS marked materials are brought to the site of work, the contractor shall, furnish manufacturer's test certificate or test certificate from approved testing laboratory to establish that the material procured by the contractor for incorporation in the work satisfies the provisions of specifications relevant to the material and / or the work done.

BIS marked items (except cement & steel for which separate provisions have been made in para 10.0) required on the work shall be got tested, for only important tests, which govern the quality of the product, as decided by the Engineer-in-Charge. The frequency of such tests (except the mandatory test) shall be 5% of the frequency as specified in BIS. For mandatory test, frequency shall be as specified in the CPWD/Chandigarh Administration Specifications

9.4 For certain items, if frequency of tests is neither mentioned in the CPWD Specifications & BIS, then tests shall be carried out as per decision of Engineer-in-Charge.

10.0 **CEMENT & STEEL REINFORCEMENT (IF NOT STIPULATED TO BE SUPPLIED BY THE DEPARTMENT).**

10.1 Contractor has to produce manufacturers test certificate for each lot of Cement & Steel Reinforcement procured at site.

10.2 **CEMENT:-**

10.2.1 The contractor shall procure 43 Grade Ordinary Portland Cement and/or Portland Pozzolona Cement (Fly Ash based), required in the work from reputed manufacturers of cement as per the approved make in 50 kg. bags bearing manufacturer's name and ISI marking, along with manufacturers test certificate for each lot. Portland Pozzolona Cement is however not to be used for RCC works.

10.2.2 Samples of cement arranged by the contractor shall be taken by the Engineer-in-Charge and got tested in accordance with provisions of relevant BIS Codes. The cement for such testing purpose shall be supplied by the contractor free of charge. In case test results indicate that the cement arranged by the contractor does not conform to the relevant BIS Codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer-in-Charge to do so. The cost of tests shall be borne by the contractor/department in the manner indicated below:

i) By the contractor, if the results show that the cement does not conform to relevant BIS Codes.

ii) By the department, if the results show that the cement conforms to relevant BIS Codes.

10.2.3 OPC/ PPC shall be brought at site in bulk supply of approximately 30 tonnes or as decided by the Engineer-in-Charge.

10.2.4 OPC/ PPC bags shall be stored in separate godowns. Separate godowns for tested cement and fresh cement (under testing) to be constructed by the contractor at his own cost as per sketches given in C.P.W.D Specifications having weather-proof roofs and walls. The size of the cement godown is indicated in the sketches for guidance. The actual size of godown shall be as per site requirements and nothing extra shall be paid for the same. Each godown shall be provided with a single door with two locks. The keys of one lock shall remain with Engineer-in-Charge of the work and that of other lock with the authorized agent of the contractor at the site of work so that the cement is issued from godown according to the daily requirement with the knowledge of both parties. The account of daily receipt and issue of cement shall be maintained in a register in the prescribed proforma and signed daily by the contractor or his authorized agent and Engineer-in-Charge or his authorized representative in token of its correctness. The day to day receipt and issue accounts of different grade/brand of cement shall be maintained separately in the standard proforma by the contractor or his authorized representative which shall be duly signed by the authorized representative of the Engineer-in-Charge before issue to the work on day to day basis.

The capacity of each cement go-down shall be 1000 bags of cement or more as decided by the Engineer-in-Charge and shall be constructed by the contractor at site of work and at the site of batching plant for which no extra payment shall be made. The contractor shall be responsible for the watch and ward and safety of the cement go-downs. The contractor shall facilitate the inspection of the cement go-downs by the Engineer-in-Charge at any time.

10.2.5 The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in Clause-42 of the contract and shall be governed by the conditions laid therein.

10.2.6 If the quantity of cement actually used in the work is found to be more than the theoretical quantity of cement including authorized variation, nothing extra shall be payable to the contractor on this account. In the event of it being discovered that after the completion of the work, the quantity of cement used is less than the quantity ascertained as herein before provided (allowing variation on the minus side as stipulated in Clause - 42), the cost of quantity of cement not so used shall be recovered from the contractor as specified in schedule. Decision of the Engineer-in-Charge in regard to theoretical quantity of cement which should have been actually used as per the schedule and recovered at the rate specified, shall be final and binding on the contractor.

For non-scheduled items, the decision of the Superintending Engineer regarding theoretical quantity of the cement, which should have been actually used, shall be final and binding on the contractor.

10.2.7 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.

10.2.8 In case the contractor brings surplus quantity of cement the same shall be removed from the site after completion of work by the contractor at his own cost after approval of the Engineer-in-Charge.

10.2.9 Cement, which is not used within 90 days from its date of manufacture, shall be retested at approved laboratory. Until the results of such tests are found satisfactory, it shall not be used on the work.

10.3 **STEEL REINFORCEMENT: -**

10.3.1 The contractor shall procure Thermo Mechanical Treated (TMT) Steel Reinforcement bars of Fe500 grade from primary producers of steel like SAIL, Rashtriyalspat Nigam Ltd. IISCO, TISCO as approved by Ministry of Steel. The documents in support of the purchase of steel shall be produced by the contractor along with the particulars of the manufacturer/supplier of steel for every lot of steel.

Mechanical Properties

Parameter	**Minimum Value**
Yield Strength	500.0 N/ sq.mm.

Tensile Strength, Min	8 percent more than the actual 0.2 percent proof stress/ yield stress but not less than 545 N/ sq.mm.
Elongation Percentage, Min. on gauge length 5.65√A, where A is the cross-sectional area of the test piece	12.0

Chemical Properties

Chemical Constituents	Maximum % as per BIS 1786: 2008 for Fe 500 grade of steel
Carbon	0.30
Sulphur	0.055
Phosphours	0.055
Sulphur + Phosphorus	0.105

Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes or specification of products. In case the test results indicate that the steel arranged by the contractor does not conform to the laid down specifications, the same shall stand rejected and shall be removed from the site of work by the contractor at his OWN cost within a week's time from written orders from the Engineer-in Charge to do so. Unless OTHERWISE specified elsewhere in the contract document, the testing (nominal mass, tensile strength, bend test, rebound test etc.) shall be done as per frequency of samples not less than as given below: -

SIZE OF BAR	FOR CONSIGNMENT BELOW 100 TONNES	FOR CONSIGNMENT OVER 100 TONNES
Under 10 mm dia	One sample for each 25 tonnes or part thereof.	One sample for each 40 tonnes or part thereof
10 mm to 16 mm dia	One sample for each 35 tonnes or part thereof.	One sample for each 45 tonnes or part thereof
Over 16 mm dia	One sample for each 45 tonnes or part thereof	One sample for each 50 tonnes or part thereof

10.3.3 The steel reinforcement shall be brought in bulk supply of 20 tonnes or more or as decided by the Engineer-in-Charge alongwith manufacturer test certificate for each lot.

10.3.4 The steel reinforcement shall be stored by the contractor at site of work about 30cm. to 45 cm. above ground. A coat of cement wash shall be given to steel bars when stored at site for long duration so as to prevent corrosion. Nothing extra shall be paid on these accounts. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.

10.3.5 The contractor shall supply free of charge the steel required for testing. The cost of tests shall be borne by the contractor/Department in the manner indicated below.

i) By the contractor, if the results show that the steel does not conform to relevant BIS codes.

ii) By the Department, if the results show that the steel conforms to relevant BIS Codes.

10.3.6 The Actual issue and consumption of steel on work shall be regulated and proper account maintained as per provision of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in Clause 42 of the contract and shall be governed by conditions laid therein.

10.3.7 The actual issue of steel shall be actual weight of total quantity of Steel received at the site less actual weight of balance quantity of steel lying unutilized at the work site.

10.3.8 Steel brought to site and steel remaining unused shall not be removed from site without the written permission of the Engineer-in-Charge.

10.3.9 In case the contractor bring surplus quantity of steel, 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-in-Charge.

10.3.10 Reinforcement including authorised spacer bars and lappages 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 centimetre. Wastage and unauthorized overlaps shall not be measured.

10.3.11 The standard sectional weights referred to as in Table IV in para 5.3.3 in CPWD Specifications will be considered for conversion of length of various sizes of M.S. Bars, T or Steel Bars and T.M.T. bars into Standard Weight.

10.3.12 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.

10.3.13 a) If the Derived Weight as in sub-para (10.3.12) above is less than the Standard Weight as in Sub-para (10.3.11) above then the Derived Actual Weight shall be taken for payment provided, it is within the following tolerances, 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 coil*
a) Upto and including 10	±7	-8	±8
b) Over 10 upto and Including 16	±5	-6	±6
c) Over 16	±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 (10.3.11) 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.

11.0 **ENGAGING SPECIALISED AGENCIES FOR WORKS**: -

11.1 The Contractor shall engage specialized agency unless otherwise approved by any Government Department having adequate technical capability and experience of having executed at least one work of similar items of 80% or more magnitude or two works of similar items of minimum 60% magnitude or three works of similar items of minimum 40% magnitude individually for executing the following items of the work and/or any other items of work where specialized firm is required to be engaged as per contract conditions. For determining the required magnitude, the value of the work executed may be suitably enhanced with the prevailing approved cost index.

i) Anti Termite treatment work.
ii) Factory made Wooden Shutters of all types except Flush Doors.
iii) Water proofing treatment work of all types.
iv) Tubewell installations
v) Overhead Tank.
vi) Aluminium Work
vii) Internal Electrical Installation
viii) Pile foundation

11.2 The Specialized agency for the work shall be got approved from the Engineer-in-Charge well before actual commencement of the item of work. The contractor shall submit the list of Specialized agencies except for Internal Electrical Installation, proposed to be engaged by him along with necessary performance certificates, within 30 days from the date of issue of acceptance letter to substantiate technical capability and experience of the agency for prior approval of the Engineer-in-Charge.

11.3 In case the Contractor intends changing the above agency for the work during the operation of the Contract, he shall obtain prior approval of the Engineer-in-Charge. The new agency also shall have to satisfy the conditions prescribed in **Para 11.3.1** above. In case the Engineer-in-Charge is not satisfied with the performance of the agency during the currency of the contract, he shall have the option to direct the contractor to change the agency executing these works, which shall be binding upon him.

11.4 For the specialized item of Polypropylene Pipes the contractor shall engage such vendors as approved by the manufacturer. Provisions mentioned under Sr. No. 11.1 above not applicable for Polypropylene Pipes.

11.5 The conditions of approval of specialized agency shall be final and binding on the contractor and he shall comply with such conditions of approval.

12.0 SAMPLE QUARTER/ ROOM: -

The contractor shall construct a sample quarter/ room complete in all respects including all Civil and Electrical details/ fixtures, as contained in "Table of Mile Stone(s)" **(Page No. 69)**. The sample quarter/ room shall be inspected and approved by the Engineer-in-Charge. Slight changes with regard to the fixtures/ fittings/ details/ dimensions etc. may occur as per the actual requirement or in order to enhance the functionality of the product or the unit. Thus, the procurement for all the internal fittings/fixtures/ fabricated material and other material etc. shall be done by the contractor only after the approval of the sample quarter/room.

13.0 Defect liability:

13.1 The contractor's liability during the defect liability period from the final date of completion as per clause 17 shall be limited to rectification of defects including replacement as follows which in the opinion of Engineer-in-Charge are not man made.

Sl. No.	Description	Defect Liability
(i)	Anti termite treatment.	(a) Termites found if any till guarantee period to be rectified through post ATT.
(ii)	Concrete	(a) Rectification of structural / superficial / non-structural cracks. (b) Rectification of dampness / seepage in roof slab / junctions & sunken portion. (c) Rectification of cracks in beam, shade, column.
(iii)	Brick work	(a) Rectification of cracks in panel wall / portion. (b) Cracks / settlement of dwarf walls. (c) Rectification of efflorescence.
(iv)	Joinery	(a) Replacement of warped joinery. (b) Cracks in panels, rails / styles etc.
(v)	Builders Hardware	(a) Repairs / Replacement of loosened / pre-mature failure of fittings. (b) Tightening / Replacement of sag in mosquito proofing.
(vi)	Steel & Iron work	(a) Rectification / Replacement of defective part of rolling shutter. (b) Redoing of defective portion in fabrication / welding including painting. (c) Steel windows, grills, gates etc. – defects to be rectified.
(vii)	Roof treatment	(a) Rectification of leakage / seepage of roof slab including covering at junction till guarantee period.
(viii)	Plastering	(a) Rectification of structural / superficial cracks if any. (b) Rectification of protruding / peeling off plaster if any. (c) Rectification of efflorescence
(ix)	Flooring	(a) Rectification of sinking portion of plinth protection including saucer drain. (b) Settlement of foundation & floors.
(x)	Plumbing / Sanitary fittings	(a) Making good of leakage through soil / waste pipe joints. (b) Replacement of looking mirror if found wavy. (c) Rectification of leakage of over head tanks. (d) Leakage / seepage of sunken floor, blockage of taps / pipes, non-functioning of cistern.
(xi)	Finishes	(a) Making good of defective / dissimilar patches of painting to match with remaining surfaces.
(xii)	Internal Water Supply	(a) Repairs / Replacement of defective taps / fittings. (b) Repair to leakage of GI water pipe lines including joints. (c) Removal of blockage of GI pipe lines.
(xiv)	Sewage	(a) Rectification of slope / system if found defective during use. (b) Rectification of major blockage in Sewer lines. (c) Cracks & settlement of sewage lines.
(xv)	Drains	(a) Repair to Drains. (b) Settlement of Drains
(xvi)	External Water Supply	(a) Repairs to installations & fittings.
(xvii)	General	(a) All manufacturing defects of structures / fixtures / fittings /

Sl. No.	Description	Defect Liability
		equipments other than listed above.

15.0 OVER HEAD TANK

15.1 The contractor shall not remove the staging/scaffolding assembled for the tank till the complete casting and successful testing of the tank. The staging/scaffolding shall be removed only after the permission of the Engineer-in-Charge.

15.2 After the completion of the work, the ground shall be dressed to 100 ft. radius from the centre of the tank.

15.3 The contractor shall make his own arrangement for electricity required for operations of vibrators, mixers, pump for dewatering, welding, testing and for general use etc.

15.4 The tank shall be cleaned and disinfected before handing over to the department.

15.5 The RCC staircase shall be constructed simultaneously along with the progress of the over head tank.

15.6 All the RCC surfaces shall be exposed finished unless or otherwise specified. No cement plaster will be allowed on RCC exposed surface except in the case where the Engineer-in-Charge permits to apply the same for which the extra payment shall be made.

15.7 SUBMISSION OF DRAWINGS AND DESIGNS

15.7.1 The successful tenderer shall be required to submit 3 sets of complete detailed drawings of the tank and staging within 15 days from the date of start of the work. These drawings shall be submitted to the local administration if necessary for their concurrence. The department shall extended full cooperation for getting these drawings approved by local administration but it shall be contractor's responsibility to get these drawings approved within one and half month from the date of start of work. This period will be treated as a part of the stipulated period for the completion. In case, modifications in the architectural features of the tank or staging are required for obtaining the approval of the local administration, the same shall have to be done by the contractor at his own cost and noting extra shall be paid for the same.

15.7.2 After the approval of drawings by local administration, the contractor shall submit within a month detailed structural design and drawings along with detailed structural design calculations in 3 sets to Engineer-in-Charge for approval. All details as given in this tender document shall be taken into due consideration by the contractor for preparation and submission of designs. The drawings and design calculations shall be very clear and give all necessary details so that there may not be any ambiguity. These designs shall be checked by the department. In case changes in design and drawings are required for ensuring structural stability of the structure and water tightness of the tank, these shall be made accordingly by the contractor for which nothing extra shall be paid to him. In case of dispute or difference of opinion, the decision of the Superintending Engineer shall be final and binding on both the parties. Approval to drawings may be given either in parts or in full by the department. Not with standing such approval by Engineer-in-Charge, the contractor shall remain fully responsible for safety, soundness and water tightness of the tank. Defects or omissions in the design and/or construction shall be made good by the contractor, without payment of any extra cost, whenever they are noticed by such remedial measures as the Engineer-in-Charge may decide to bring the work upto the required standards and specifications.

15.7.3 Only drawings approved by the local administration (where necessary) and the Engineer-in-Charge shall from the basis of the contract and shall be adopted for the execution of the work.

15.7.4 The tenderer shall submit 3 sets of completion plans after completion of the work.

Air Pollution Control:

16.1 The contractor shall not store/dump construction material or debris on metalled road.

16.2 The contractor shall get prior approval from engineer-in-charge for the area where the construction material or debris can be stored beyond the metalled road. This area shall not because any obstructions to the free flow of traffic / inconvenience to the pedestrians. It should be ensured by the contractor that no accident occur on account of such permissible storage.

16.3 The contractor shall take appropriate protection measures like raising wind breakers of appropriate height on all sides of the plot/area using CGI sheets or plastic and / or other similar material to ensure that no construction material dust fly out side the plot area.

16.4 The contractor shall ensure that all the trucks or vehicles of any kind which are used for construction purposes / or are carrying construction material like cement, sand and other allied material are fully covered. The contractor shall take every necessary precautions that the vehicles are properly cleaned and dust free to ensure that enroute there destination, the dust sand or any other particles are not released in air / contaminate air.

16.5 The contractor shall provide mask to every worker working on the construction site and involved in loading, unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.

16.6 The contractor shall provide all medical help, investigation and treatment to the workers involved in the construction of building and carry of construction material and debris relatable to dust emission.

16.7 The contractor shall ensure that C & D waste is transported to the C & D waste side only and due record shall be maintained by the contractor.

16.8 The contractor shallcompulsory use of wet jet in grinding and stone cutting.

16.9 The contactor shall comply all the preventive and protective environmental steps as stated in the MOEF guidelines 2010.

16.10 The contractor shall carry out on Road Inspection for black smoke generating machinery, the contractor shall use cleaner fuel.

16.11 The contractor shall ensure that all DG sets comply emission norms notified by MOEF.

16.12 The contractor shall used vehicles having pollution under control certificate. The emission can be reduced by large extent by reducing the speed of a vehicles to 20 Kmph. Speed bumps shall be used to ensure speed reduction. In case where speed reduction cannot effectively reduce fugitive dust, the contractor shall divert traffic to near by paved areas.

16.13 The contractor shall ensure that construction material is covered by tarpaulin. The contractor shall take all other precautions to ensure that not dust particles are permitted to pollute air quality as a result of such storage.

16.14 The paving of the path for plying of vehicles carrying construction material is more permanent solution to dust control and suitable for longer duration projects. The NIT approving authority shall Carry out cost benefit ratio analysis of the same.

17. Supplementary special condition:

17.1 The stone aggregate for R.C.C. / C.C. items shall be double screened and washed and shall comply with the grading requirement as specified in IS-383 (latest edition) for stone aggregate besides meeting other requirement as specified theirin. If the contractor / agency to use crushed aggregate nothing extra shall be paid on this account.

17.2 The contractor agency shall make hisown arrangement of water for construction purposes. Incase, the contractual agency takes temporary water connection from M.C., Chandigarh, the recovery of water charges @ 1.5% shall be made as per Notification issued by the Secretary Local Govt. Chandigarh Administration vide notification No. 6/1/195-FII(8)2011/4088, dated 24.05.2011 conveyed vide E.E. M.C. P.H. Division No. 2 vide memo no. 1533-62, dated 02.06.2011.

17.3 LabourCessshall be deducted from the C.C. running & final bills and that amount will be deposited to the Chandigarh Building and Other Constructions Workers Welfare Funds.

17.4 The contractor shall have to obtain labour license from the Assistant Labour Commissioner, Chandigarh after getting his established registered under the Building and other Construction Act 1996 notified vide Chandigarh Administration No. 353-383 dt. 15.1.2010 issued by the Registering Officer, under the Building and other construction workers Act and Assistant Labour Commissioner, U.T. Chandigarh U.T.

17.5 The bidder shall have to give undertaking regarding constitution of the firm /business i.e. whether proprietorship firm/Partnership firm/ Limited Company/Public Limited Company at the time of submission of tender and any change in the same at any stage shall be immediately intimated in writing to the Engineer-in-charge. In case of partnership/Limited/Public Limited companies, the Article of Memorandum of Association shall be submitted by the bidder.

17.6 **The purchase tax, turnover tax or any other tax applicable including GST in respect of this contract shall be payable by the contractor and Government will not entertain any claim whatsoever in respect of the same. The agency will have to quote rates including of all taxes.**

17.7 The department will assist in arranging electric and water connection at the site of work. However the Security / Consumption / installation charger shall be borne by the contractor.

17.8 In case of failure or default in the performance or responsibilities or breach of terms and conditions of DNIT or agreement, action as per **"Policy on blacklisting, 2009"** issued vide Finance Department Chandigarh Administration Notification No. 1927-F&PO(3)-2009/1170 dt. 27.2.2009 shall be taken.

17.9 All design mix concrete shall be done using fully automatic batching plant conforming to IS 4925 of minimum 6 cum per hour capacity. The automatic batching pant shall be charged by devices when actuated by a single starter switch, will automatically start the weighing operation of each material (i.estone aggregate, sand, cement, water admixture etc.) and stop automatically when designated weight of each material has been reached and also it should have rated capacity (in terms of concrete in single batch). It shall have control panel for operation of the batching plant complete with printing facility.

17.10 The contractor shall be free to use ready mix concrete (RMC) in place of batch mix concrete at his own cost. The contractor shall ensure that transit mixtures shall transport the concrete to site. All the precautions shall be taken during the transportation and handing of concrete to achieve the desired strengthen, durability, etc. as envisaged in the Mix Design.

17.11 RMC may be procured from the list of preferred / approved make.

17.12 All deviation beyond permissible limit shall be paid with financial approval of the competent authority at the already approved contractual rates for the respective items.

18. Special conditions:-

18.1 The Work shall be carried out as per CPWD specification latest edition amended uptodate.

18.2 Any error or omission in nomenclature, rates or unit can be corrected at any stage according to DSR 2023 amended upto date.

18.3 Quantities given above are tentative. These can be increases or decreased as per working instruction of the Engineer-in-Charge. The agency is bound to execute the work accordingly.

18.4 If any price rise in market no claim shall be entertained in respect of the same.

18.5 For proper curing of construction work, the contractor shall have to make arrangement for sufficient quantity of water at site including pumping set with pipes etc. Required for lifting of water and nothing extra shall be paid on this account.

18.6 The recovery of old dismantled re-useable material shall be made as per contractor as per actual quantity received at site.

18.7 All term and condition of the agreement, at work shall be strictly followed.

18.8 The recovery of old dismantled/ re-useable material if available shall be made from contractor as per actual quantity received at site on prevailing market rates as under:-

a) Bricks Rs.5.50/- cum (No extra charges will be given for the cleaning of bricks).

b) Brick Tiles Rs.7.50/- sqm (No extra charges will be given for the cleaning of bricks Tiles).

c) Brick Bats Rs.650/- cum (No extra charges will be given for the cleaning of Tile Bricks).

d) Brick Tile Bats Rs.650/- cum (No extra charges will be given for the cleaning of brick Tile Bats).

PARTICULAR SPECIFICATIONS

1.0 EARTH WORK:-

1.1 Anti Termite Treatment: -

1.2.1 The work shall be executed by specialized agency to be approved by the Engineer in Charge.

1.2.2 The Chemical shall strictly conform to Specifications & shall be as per BIS covered by ISI marking. Chemical has to be of approved quality out of preferred make. 100% materialhas to be procured of approved make before start of work. The chemical shall be used only after due testing & if found conforming to the Specifications. Proper account has to be kept for day to day use of Chemical.

1.2.3 Ten years Guarantee bond in prescribed Performa attached shall be submitted by the contractor which shall also be signed by both the specialized agency and the contractor to meet their liability / liabilities under the guarantee bond. However, the sole responsibility about efficiency of anti termite treatment shall rest with the building contractor. Ten per cent of the cost of anti termite work shall be retained as Security Deposit and the amount so deducted would be released after ten years from the date of completion of the entire work under the agreement, if the performance of the treatment/work done is found satisfactory. If any defect/shortcoming is noticed during the guarantee period, the contractor shall rectify it within 15 days of receipt of intimation of such defects/shortcomings. In the event of failure to attend to the complaint within the specified period, the same will be got done from another agency at the risk and cost of contractor.

2.0 R.C.C. WORK:-

2.1 Design Mix Concrete

2.1.1 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 on the principles given in IS: 456, 10262 & SP 23. The Conditions & Specifications stated herein shall have precedence over all conditions & specifications stated in relevant I.S. Codes / C.P.W.D. Specifications. The concrete mix shall be designed for the specified target mean compressive strength in order to ensure that work test result 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 the requirements specified.

(a) The contractor has to submit design mix without use of admixtures.

(b) Admixture may be added (by maintaining the minimum cement content as given under para- 2.1.3) in case of specific technical requirement so as to meet the workability / slump requirement or for any other reason but nothing extra is to be paid to contractor on account of adding admixtures.

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

(a) **Coarse Aggregate:-** As per CPWD Specifications

(b) **Fine Aggregate:-** As per CPWD Specifications

(c) **Water:-** It shall conform to requirements laid down in IS:456-2000 / Para 5.4 or CPWD Specifications

(d) **Cement:-** OPC of grade 43 shall be used for design mix concrete and shall conform to IS-8112, or IS-12330. However, if the contractor uses higher grade of cement nothing extra shall be paid.

(e) **Admixture / Plasticizer** – The admixture shall conform to IS: 9103. Whenever required, the admixture of approved quality & approved make only shall be used to attain the required workability. Nothing extra on account of use of Admixture / Plasticizer shall be payable.

2.1.3 **Grade of Concrete: -** The compressive strength of various grades of concrete with various parameters shall be as follows: -

GRADE DESIGNATION	COMPRESSIVE STRENGTH ON 15 Cm CUBES min. 7 DAYS (N/mm^2)	SPECIFIED CHARACTERISTIC COMPRESSIVE STRENGTH AT 28 DAYS (N/mm^2)	MINIMUM CEMENT CONTENT (Kg. Per Cub. Mtr.)	MAXIMUM WATER CEMENT RATIO	SLUMP
(i) M-20	As per Design	20	300	0.50	25-75
(ii) M-25	As per Design	25	330	0.50	25-75
(iii) M-30	As per Design	30	350	0.45	25-75
(iv) M-35	As per Design	35	370	0.45	25-75

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 15 cm - Cube at 28 days expressed in N/mm^2.

ii) Extra cement up to 10% of the minimum specified cement content. In design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content. The contractor shall have discretion to either re-design the mix or bear the cost of extra cement.

iii) The minimum / maximum cement content for design mix concrete shall be maintained as per the quantity mentioned above. In cases where the quantity of cement required is higher than the minimum specified above to achieve desired strength based on an approved mix design, nothing extra shall become payable to the contractor.

2.1.4 The Contractor shall engage one of the following approved laboratories / test house for designing the concrete mix in accordance with relevant IS Code and to conduct laboratory tests to ensure the target strength & workability criteria for a given grade of concrete: -

i) Technical Teacher Training Institute, Sector 26, Chandigarh.

ii) Punjab Engineering College, Chandigarh.

iii) NIT, Jalandhar. (Formerly known as REC, Jalandhar.)

iv) Any IIT

v) Chandigarh Engineering College, Sector 26, Chandigarh.
vi) NIT, Kurukshetra.

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 by the department.
In the event if all the **above** laboratories are unable to carry out the requisite design / testing, the contractor may have it done from any other laboratory with prior approval of the **Superintending Engineer**.

2.1.5 The contractor shall submit the report on design mix from any of above approved laboratories for approval of Engineer in Charge within 30 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.

2.1.6 In case of change of source or characteristic properties of the ingredients used in the concrete mix during the work, the contractor as per the directions of the Engineer-in-charge shall submit a revised laboratory mix design report conducted at laboratory established at site.

2.1.7 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 whenever required & as directed by Engineer-In-Charge.

2.1.8 The mix design for a specified grade of concrete shall be done for a target mean compressive strength Tck = Fck + 1.65s

Where Fck = Characteristic compressive strength at 28 days.
s = Standard deviation which depends on degree of quality control.

The standard deviation for different grades of concrete shall be as follows: -

GRADE OF CONCRETE	STANDARD DEVIATION
M-20	4.0
M-25	4.0
M-30	5.0
M-35	5.0

2.1.9 **TRIAL BATCHES**

(a) The designed mix proportions shall be checked for target mean compressive strength by means of trial batches.

(b) Minimum three sets of separate preliminary tests shall be carried out for each trial batch of concrete mix. Each test shall comprise of six specimens and only one test-set of six specimens shall be made on any particular day.

(c) 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.

(d) The workability 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 workability.

(e) With the modified Water Content, the mix proportions shall be recalculated by keeping with water cement ratio unchanged. The mix proportion, as modified, shall form the Trial Mix No.2 and tested for the specified strength and workability.

(f) 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 by $\pm$ 10 percent of the specified value and tested for their design characteristics.

(g) 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 at 28 days.

2.1.10 APPROVAL OF DESIGN MIX

The design mix shall be considered satisfactory and approved if at least three preliminary test-sets individually satisfy the following strength and workability criteria:

(a) The average strength of each test-set is not less than the specified target mean compressive strength (Tck).

(b) The strength of any specimen cube is not less than 0.85 Tck.

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

2.2 BATCHING & MIXING:-

(a) All design mix concrete shall be done using fully automatic batching plant conforming to IS: 4925 of minimum 6 cum per hour capacity. The automatic batching plant shall be charged by devices when actuated by a single starter switch, will automatically start the weighing operation of each material (i.e. stone aggregate, sand, cement, water, admixture etc.) and stop automatically when designated weight of each material has been reached and also it should have rated capacity (in terms of concrete in a single batch). It shall have control panel for operation of the batching plant complete with printing facility.

(b) The contractor shall be free to use Ready Mix Concrete (RMC) in place of Batch mix concrete at his own cost. The contractor shall ensure that transit mixtures shall transport the concrete to site. All the precautions shall be taken during the transportation and handling of concrete to achieve the desired strength, durability, etc. as envisaged in the Mix Design. Contractor has to get the approval from Engineer-In-Charge regarding source of RMC by giving the details of (such plants having minimum turn over of Rs. 1 crore /per month or 4000 Cum production from last one year upto preceding months of the tender and also the minimum production capacity of the plant should be 60 cum per hour) indicating name of owner / company, its location, technical establishment, past experience and text of Memorandum of Understanding (proposed to be entered between purchaser and supplier). The Engineer-in-Charge, after satisfying himself about quality / capability of the company shall give approval in writing (subject to drawing of MOU). The MOU shall be drawn with RMC plant owner / company and submitted to Engineer-in-Charge within a week of such approval. The contractor will not be allowed to purchase RMC without completion of above formalities for use in the project. Notwithstanding the approval granted by Engineer-in-Charge in aforesaid manner, the contractor shall be fully responsible for quality of concrete including input control, production, transportation and placement etc. The Engineer-in-Charge will reserve the right to deploy his supervisor at plant site to inspect at any such stage and reject the material / concrete etc if he is not satisfied about quality of material / product.

(c) All measuring equipment shall be maintained in a clean and serviceable condition and their accuracy shall be checked at least once a month.

(d) Only single sized good quality stone aggregate shall be brought to site of work from the approved source. The grading of the stone aggregate shall be controlled by blending the aggregate of different sizes in the required proportions at site of work

The aggregate of different sizes shall be stock-piled separately, preferably a day before use.

The grading of coarse and fine aggregates shall be checked as frequently as possible and as directed by the Engineer-In-Charge to ensure that the specified grading and quality of aggregate is maintained.

(e) It is important to maintain the Water Cement Ratio constant at its specified or approved value by making adjustment for the moisture contents of both fine and coarse aggregates.

The moisture contents in the aggregate shall be determined as frequently as possible in keeping with the weather conditions and as per the provisions of IS: 2386 (Part-III).

2.3 OTHER OPERATIONS: -

All other operations in concreting work like mixing, slump, laying, placing of concrete, compaction, curing etc. not mentioned in this particular specifications for Design Mix of Concrete shall be as per CPWD Specifications.

2.4 SAMPLING:-

(a) Samples from fresh concrete shall be taken as per IS 1199-1959 and the test cubes shall be made, cured and tested in accordance with IS: 516-1959.

(b) Each test sample shall comprise of six test cubes (specimen), three of which shall be tested at 7 days and remaining for tests at 28 days.

(c) FREQUENCY OF SAMPLING: -

(i) A random sampling procedure shall be adopted to ensure that the sampling is spread over the entire period of concreting and cover all mixing units. The concrete work shall be notionally divided into lots as under for the purpose of sampling conditions.

-- Footings, rafts etc.
-- Columns and walls at all levels.
-- Beams at all levels.
-- Slabs at all levels.

(ii) At least one test sample shall be taken for each lot of concrete work.

(iii) Each grade of concrete shall form different lot for testing.

(iv) The minimum frequency of sampling of concrete of each grade shall be in accordance with the following:-

QUANTITY OF CONCRETE IN THE WORK, CUBIC METRE PER DAY	NUMBER OF SAMPLES
1-5	1
6-15	2
16-30	3
31-50	4
51 & above	4 Plus one additional sample for each additional 15 cubic metre or part thereof.

NOTE: - At least one sample shall be taken from each shift.

(v) The concrete work shall be assessed on day to day basis & samples shall be taken as specified.

(vi) Work strength test shall be conducted in accordance with IS: 516 on random sampling.

2.4.1 TEST RESULTS OF SAMPLES: -

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 other laboratory as directed by the Engineer-in-Charge.

2.4.2STANDARD 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 it meets the requirement as laid down in CPWD Specification.

vii) Concrete of each grade shall be assessed separately.

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

2.5 MEASUREMENT –

(i) As per CPWD Specifications.

(ii) In respect of all projected slabs at all levels including cantilever, canopy, the payment for the RCC work shall be made under the item RCC slabs. The payment for shuttering at the edges shall be made under item of centering and shuttering for RCC slabs.

Nothing extra shall be paid for the side shuttering at the edge of these projected balconies / projected verandah slabs.

2.6 TOLERANCES - As per CPWD Specifications.

2.7 RATES: -

(i) The rate includes the cost of materials, labour and T&P, including mixing, placing, transportation involved in all the operations described above except for the cost of centring, shuttering & reinforcement which will be paid for separately.

(ii) 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 or 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 shall be regulated in accordance with CPWD Specifications.

2.8 R C C WORK (ORDINARY)

2.8.1 The work shall be done in accordance with CPWD Specifications.

2.8.2 Water Cement ratio for Ordinary RCC work shall not be more than 0.5. Contractor shall use concrete mixture of proper design having arrangement for measuring water for mixing of concrete.

2.9 FORM WORK

2.9.1 The work shall be done in general as per CPWD Specifications.

2.9.2 Only M.S. centring / 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 to be approved by the **Engineer-in-Charge**.

2.9.3 Nothing extra shall be paid for the centring and shuttering, circular in shape whenever the formwork is having a mean radius exceeding 6m in plan.

2.9.4 Nothing extra shall be paid for grid beams and the corresponding slabs having clear span more than 1.20 meters.

2.9.5 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 centring, shuttering and casting for which nothing extra shall be paid to the Contractor.

As per general engineering practice, level of floors in toilet / bath, balconies, shall be kept 12 to 20mm or as required, lower than general floors shuttering should be adjusted accordingly. Nothing extra is payable on this account.

2.9.6 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 are required to complete the shuttering panels.

Dented, broken, cracked, twisted or rusted shuttering plates shall not be allowed to be used on the work.

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 de-bonding compound shall be applied on the surface of the shuttering plates in the requisite quantity before assembly of steel reinforcement.

2.10 **REINFORCEMENT:-**

2.10.1 The reinforcement shall be done as per CPWD Specifications.

2.10.2 The rate of 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 Specifications.

2.10.3 The contractor shall provide approved type of support for maintaining the bars in position and ensuring required spacing and correct cover of concrete to reinforcement as called for in the drawings, spacer blocks of required shape and size. Chairs and spacer bars shall be used in order to ensure accurate positioning of reinforcement. **Spacer blocks shall be cast well in advance with approved proprietary pre-packed free flowing mortars (Conbextra as manufactured by M/S Fosroc Chemicals India Ltd. or approved equivalent)** of high early strength and same colour as surrounding concrete, Pre-cast cement mortar/concrete blocks/blocks of polymer shall not be used as spacer blocks unless specially approved by the Engineer-in-charge, rate of RCC items is inclusive of cost of such cover blocks.

2.11 PRE-CAST RCC WORK

2.11.1 The work shall be done in accordance with CPWD Specifications.

2.11.2 Pre-cast reinforced concrete units shall be of grade or mix as specified. Provision shall be made in the mould to accommodate fixing devices such as hooks etc. and forming of notches and holes. Each unit

shall be cast in one operation. A sample of the unit shall be got approved from Engineer-in-charge before taking up the work.

2.11.3 Pre-cast units shall be clearly marked to indicate the top of member and its location.

2.11.4 Pre-cast units shall be stored, transported and placed in position in such a manner that these are not damaged.

2.11.5 The compaction of the concrete shall be done by vibrating, table or external vibrator, as approved by Engineer-in-charge. The rate quoted for the item shall include the element for framework and mechanical vibration.

2.11.6 Rate for item includes cost of all materials. labour, and all operations involved. Cost of M.S. frames, lugs including their welding, lifting hooks is also included.

3.0 **BRICK WORK:-**

3.1 The brickwork shall be carried out with good quality well burnt FPS bricks of class designation 75 as per CPWD Specifications.

3.2 The rate shall also include for leaving chases / notches for dowels / cramps for all kinds of cladding to come over brick work.

3.3 Brick work provided around shaft or lift walls or around slab cutouts shall be measured in the brick for corresponding floor level. Nothing extra shall be paid on this account.

3.4 M.S. Strip provided at every third course of half brick masonry shall be in single piece. If required, welding joint can be used without overlaps. Nothing extra shall be paid for welding and overlaps.

4.0 STONE / MARBLE WORK :-

4.1 General: -The execution of stones work shall be in general as per CPWD Specifications.

4.2 SAMPLES FOR STONE WORK:-

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.

5.0 WOOD WORK:-

5.1 The wood work in general shall be carried out as per CPWD Specifications.

5.2 The sample of timber to be used shall be deposited by the contractor with Engineer-in-charge before commencement of work.

5.3 Glazing for toilets shall be of translucent type.

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

5.5 Timber shall be of specified species, good quality and well seasoned. It shall have uniform colour, reasonably straight grains and shall be free from knots, cracks, shakes and sapwood. It shall be close grained. The contractor shall deposit the samples of species of timber to be used with the Engineer-in-Charge for testing before commencement of the work.

5.6 Wood work shall not be painted, oiled or otherwise treated before it has been approved by the Engineer-in-charge. All portion of timber including architrave abutting against masonry, concrete, stone or embedded in ground shall be painted with approved wood preservative or with boiling coaltar.

5.7 The contractor(s) shall produce cash voucher and certificates from approved Kiln Seasoning Plants about the timber used on the work having been kiln seasoned and chemically treated by them, falling which it would not be so accepted as kiln seasoned and/or chemically treated.

5.8 Transparent sheet glass conforming to IS: 2835 – 1977 shall be used. Thickness being governed as under unless otherwise specified in the item in wood work/steel work:

Area of Glazing	Thickness
(a) For glazing area up to 0.50 sqm	4.0 mm
(b) For glazing area more than 0.50 sqm	5.5 mm

5.9 Factory made panelled / wire gauge door shutters

5.10 The work shall be executed through specialized agencies to be approved by the Engineer in Charge.

5.11 The shutters should be fabricated in factories & fabrication should conform to CPWD Specifications Para 9.6.6 & IS 1003 Part-I.

5.12 The contractor shall propose well in advance to Engineer-in-Charge, the names and address of the factory where from the contractor intends to get the shutters manufactured along with the credential of the firm. The contractor shall place the order for manufacturing of shutters only after obtaining approval of the Engineer in Charge whose decision in this case shall be final & binding. In case the firm is not found suitable he shall propose another factory. The factory may also be inspected by a group of officers before granting approval; shutters shall however he accepted only if these meet the specified test.

5.13 Contractor will arrange stage wise inspection of the shutters at factory by the Engineer-in-Charge or his authorized representative. The contractor will have no claim if the shutters brought at site in part or full lot are rejected by the Engineer-in-Charge due to bad workmanship / quality. Such defective shutters will not be measured and paid. The contractor shall remove the same from the site of work with in 7 days after the written instruction in this regard are issued by the Engineer-in-Charge.

5.14 The shutters should be brought at site without primer / painting.

5.15 Inspection of shutters shall be carried out for dimensions & tolerances, size & type general construction & workmanship, finish & glazing at the following frequency: -

Lot Size	**Sample Size**	**Permissible number of defectiveness**
Upto 25	2	0
26 to 50	5	0
51 to 100	8	0
101 to 150	13	1
151 to 300	20	2

301 to 500	32	3
501 to 1000	50	5
1001 & above	80	7

Criteria for conformity

Any sample shutter failing in any one or more of the requirements inspected for as above shall be considered as defective. A lot shall be considered as having satisfied the requirements of the standard if the number of defective shutters in the sample does not exceed the corresponding permissible number of **defectiveness** given above.

5.16 Testing – The shutters shall be tested for species, seasoning & treatment, defects in the timber, panel material, construction & workmanship in the approved Govt. Laboratory at the following frequency: -

Lot Size	Sample Size
Upto 50	1
51 to 100	2
101 to 150	3
301 to 500	4
500 to 1000	6
1001 & above in multiple of 1000	10

If shutters are found defective in any one of the criterion, double the shutter shall be tested & if found permissible, can be accepted. If shutter is found defective in more than one criterion, the whole lot shall be rejected.

6.0 **STEEL WORK:-**

6.1 The work shall be carried out as per CPWD Specifications.

6.2 **Pressed Steel Frame / T Iron Frames**: - The work shall be done as per CPWD Specifications. The frames shall be fabricated in approved workshops. The angle and flat iron frames for cupboard shall also be fabricated from the above approved workshops.

6.3 **Steel windows / ventilators**: The work shall be done strictly as per CPWD Specifications. Flash butt-welded steel windows / ventilators only shall be provided and shall be procured from the approved manufacturers. The corners should be welded to form a solid fused welded joint conforming to the requirement given below.

a) Weld shall be made all along the place of meeting the member.

b) Weld should be properly grounded.

c) Complete cross section of the corner shall form a solid joint with no cavities, free from cracks, under cutting, overlaps, gross porosity and entrapped slag.

All sub dividing and glazing bars shall be tenoned & riveted into the frames i.e. all centre mullion section F4B and glazing section T2, T6 shall not be directly welded to the frames. For this a slot has to be cut in the frames, the F4B / T2 / T6 section inserted into it & head be hydraulically tenoned & riveted by TennonRivetting Machine.

The thickness of projecting type hinges shall not be less than 3.15 mm. For fixing of hinges to outer frame, slot shall be cut, hinges inserted & welded at the back. For non projected type hinges if allowed, the wall thickness shall not be less than 3 mm & total width not less than 40 mm. For fixing, the slot shall be cut in the fixed frames, hinge flap inserted & welded from the back.

The fixing lug shall be as per IS 1038 with adjustable slot & fixed to window frames by screws & nuts.
The fixing of unit shall be done as per IS 1081.

6.4 **M.S. Sheet Door** – M.S Sheet shall be in one piece i.e. no joint in M.S. Sheet shall be permitted.

7.0 FLOORING:-

7.1 All work in general shall be carried out as per CPWD Specifications.

7.2 Whenever flooring is to be done in patterns of tiles and stones, the contractor shall get samples of each pattern laid and approved by the Engineer-in-charge before final laying of such flooring. Nothing extra shall be payable on this account.

7.3 Different stones / tiles used in pattern flooring shall be measured separately as defined in the nomenclature of the item and nothing extra for laying pattern flooring shall be paid over and above the quoted rate. No additional wastage, if any, shall be accounted for any extra payment.

7.4 Samples of flooring stones (Kota/ Marble/ Granite etc.) shall be deposited well in advance with the Engineer-in-Charge for approval. Approved samples should be kept at site with the Engineer-in-Charge and the same shall not be removed except with the written permission of Engineer-in-Charge. No payment whatsoever shall be made for these samples.

7.5 The Marble/ Kota/ Granite or any other stone shall be fully supported by the details establishing the quarry and its location.

7.6 Full width Marble/ Kota/ Granite stone over kitchen platform shall be provided which shall not be less than 900mm long except to adjust for closing pieces. The marble / stone flooring in treads and risers of staircase shall not be less than 1500mm long except to adjust the closing pieces. Nothing extra shall be paid on these accounts

7.7 **Precast Terrazo Tile Flooring**

The tiles shall be procured from the manufacturer.

The tiles of 250 x 250 x 22 mm size shall be used & sample of tiles shall be got approved from the Engineer-in-Charge.

7.8 **Ceramic Tiles Flooring**

The tiles shall be procured from the approved manufacture of the approved shade &colour.

The tile shall be conforming to IS-13755 & IS-13753 for floor and wall tiles respectively.

Tiles for dado shall be 200mm x 300mm (minimum size) GROUP-III as approved.

Tiles for flooring shall be 300mm x 300mm (minimum size) GROUP-V Tiles as approved.

Test shall be conducted to satisfy the quality of material as per CPWD Specifications

7.9 The rate of items of flooring is inclusive of providing sunken flooring in bathrooms, kitchen etc. and nothing extra on this account is admissible. The proper gradient shall be given to flooring for toilets, verandah, kitchen, courtyard, etc. as per the directions of Engineer-in-charge.

8.0 WATER PROOFING FOR SUNKEN FLOORS:-

8.1 The work shall be got executed from the specialized agency as approved by the Engineer in Charge.

8.2 Total quantity of the water proofing compound required shall be arranged only after obtaining the prior approval of the make by Engineer-in-charge in writing. Materials shall be kept under double lock and key and proper account of the water proofing compound used in the work shall be maintained. It shall be ensured that the consumption of the compound is as per specified requirements.

8.3 The finished surface after water proofing treatment shall have adequate smooth slope as per the direction of the Engineer-in-charge.

8.4 Before commencement of treatment on any surface, it shall be ensured that the outlet drain pipes / spouts have been fixed and the spout openings have been chased and rounded off properly for easy flow of water.

8.5 **GUARANTEE BOND:-**

Ten years Guarantee bond in prescribed Performa shall be submitted by the contractor which shall also be signed by both the specialized agency and the contractor to meet their liability / liabilities under the guarantee bond. However, the sole responsibility about efficiency of water proofing treatment shall rest with the building contractor. **(Ten per cent) of the cost of water-proofing work shall be retained as Security Deposit and the amount so deducted would be released after ten years from the date of completion of the entire work under the agreement, if the performance of the treatment is found satisfactory.** If any defect is noticed during the guarantee period, the contractor shall rectify it within 15 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.

9.0. **FINISHING:-**

9.1 The work shall be done in accordance with CPWD Specifications.

9.2 All painting material of approved brand and manufacturer shall be 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 containers shall not be removed from the site till the completion of the work without permission of the Engineer-in-charge.

10.0 **SANITARY INSTALLATIONS/WATER SUPPLY/DRAINAGE:-**

10.1 The contractor shall submit schematic drawing of water supply and sanitary installation showing details of layout, including internal water supply and drainage details, showing the detail of water supply lines including fittings diameter wise and fixtures connecting to soil waste through traps and connection of W.C. to main shaft pipe for drainage including its ventilation system for approval of Engineer-in-Charge.

10.2 For the work of water supply and sanitary installations, the contractor shall engage the approved licensed plumbers and submit the name of proposed plumbing agencies with their credentials for approval of the Engineer-in-Charge.

10.3 The work in general shall be carried out as per CPWD Specifications.

10.4 The tendered rates shall include the cost of cutting holes in walls, floors, RCC slabs etc. wherever required and making good the same for which nothing extra shall be paid.

10.5 The Centrifugally spun cast iron pipe IS: 3989-1984 wherever necessary shall be fixed to RCC columns, beams etc. with rawl plugs of approved quality and nothing extra shall be paid for on this account.

10.6 The pig lead to be used in the jointing should be as per CPWD specifications.

10.6(a) The Centrifugally spun cast iron pipe IS: 3989-1984 wherever necessary shall be fixed to RCC columns, beams etc. with rawl plugs of approved quality and nothing extra shall be paid for on this account.

10.6.(b) Nothing extra for providing and fixing CP brass caps/ extension pieces wherever required for CP brass fittings shall be paid beyond the rates payable for corresponding CP brass fittings.

10.7 The pig lead to be used in jointing should be as per C.P.W.D. Specifications.

10.8 Nothing extra for providing & fixing CP Brass caps /extension pieces wherever required for CP Brass fittings shall be paid beyond the rates payable for corresponding CP Brass fittings

10.9.1 The entire responsibility for the quality of work will however rest with the building contractor only and he shall submit a Guarantee Bond as per Performa at **Page No.56.** 10% (ten percent) of the cost of these items would be retained as security deposit and the amount so deducted

would be released after ten years from the date of completion of the entire work under the agreement, if the performance of the items is found satisfactory. If any defect is noticed during the guarantee period, the contractor should rectify it within seven days and if not attended to the same will be got done from another agency at the risk and cost of contractor. However, this security deposit can be released in full if bank guarantee of equivalent amount is produced and deposited with the department.

11.0 SPECIFICATIONS FOR SOLID POLY VINYL CHLORIDE (PVC) DOOR SHUTTERS: -

11.1.0 SCOPE:

11.1.1 This specification lays down requirement regarding types, sizes, material, construction, workmanship, finish, performance evaluation, sampling and testing of solid Poly Vinyl Chloride (PVC) Panelled door shutters for use in residential buildings, non-residential buildings such as offices, schools, hospitals, etc.

11.1.2 This specification does not cover large size door shutters for industrial and special buildings such as workshops, garages, godowns etc.

11.1.3 PVC door shutters shall be used in internal locations only.

11.2.0 REFERENCES:

11.2.1 The Indian Standards and other Standards listed in Annexure-I are necessary adjunets to this standard. The products bearing BIS certification i.e. ISI Mark with code number shall have precedence over those not bearing ISI Mark.

11.3.0 TERMINOLOGY:

11.3.1 For the purpose of this specification, the definitions given below in addition to those given in IS 707-1976 shall apply:

11.3.1.1

(i) Blistering: Air or solvent entrapped during moulding.

(ii) Colour blots: Colour blots occurring on account of uneven distribution of pigment.

(iii) Crazing: Fine hair cracks on the surface.

(iv) Defective Impregnation: Imperfect impregnation of PVC resin with other additives.

(v) Colour Fading: Fading of colour on exposure to sunlight.

(vi) Impurities: Presence of matter other than those specified.

(vii) Pin holes: Pores of size less than 1mm appearing on the surface.

(viii) Small Pores: Pores of size more than 1mm but less than 2mm appearing on the surface.

(ix) Wrinkling: A slight ridge or furrow on surface.

(x) Aggregate Defects: Presence of defects such as pin holes, impurities and traces of mending 5 or more in aggregate for defects at localized place.

11.4.0 HANDLING:

11.4.1 Handling and direction of closing of shutters shall be designated in accordance with IS: 4043:1969.

11.5.0 MATERIAL:

11.5.1 Poly Vinyl Chloride Resin (suspension grade) is the basic raw material of PVC compound. PVC resin in mixed with chemicals like calcium separate, hydrocarbon Wax, Titanium dioxide, calcium carbonate Acrylic base etc. Further additives like UV stabilizers, impact modifiers, pigments, epoxy plasticizer, lubricants, acrylic processing aid etc. are also added. The purpose of adding the chemicals and additives is to impart strength, surface finish, colour and resistance to fading by light rays. These chemicals are mixed in the desired proportion and

shall be used in the formulation of PVC material and for free and smooth extrusion of PVC cellular sheets.

11.6.0 **PROCESS**:

11.6.1 **MIXING:** The PVC material so formulated with the addition of chemicals, fillers & additives shall be mixed dry powder form in a high speed hot mixer at a temperature of 110^0 C to 125^0 C. The heated dry blend is then to be cooled at room temperature. However, the temperature has to be determined keeping in view the climatic conditions and the process requirements.

11.6.2 **EXTRUSION:** The cooled dry blend is off loaded into the hopper of the extruder, and then is fed to the screw & barrel of the extruder, where it is melted and kneaded at varying temperatures upto 205^0 C by rotating screws. The thick paste of PVC material is then passed through a hot die to make the sheet of required thickness.

11.6.3 **POLISHING:** The basic shape of the sheet so acquired is then polished with the help of a three-roll calendar. At the same time the sheet is cooled by circulating water in the rolls of the calendar and there after on a roller table by atmospheric air.

11.6.4 **CUTTING:** The final finished product coming out of the haul-off is cut as per the required size.

11.7.0 **RANGE OF PVC PANELLED DOOR SHUTTERS:**

11.7.1 For the purpose of this specification, solid paneled door shutter of thickness 30/32mm has been considered to meet the requirements of various users. The different components required for the door shutters are given in table No. 1 in annexure.

11.8.0 **CONSTRUCTION/FABRICATION:**

11.8.1 **GENERAL:**

11.8.1.1 The door shutters shall be manufactured under controlled conditions in factories having adequate facilities for working with PVC cellular sheet including moulding, cutting and jointing, fabrication etc.

11.8.1.2 While manufacturing door shutters, only components indicated in Table No. 1 shall be used for the shutter.

11.8.1.3 PVC door shutter shall be made out of the extruded PVC cellular sheets for styles, top rail, middle and bottom rail and panelling as given in Table No. 1

11.8.1.4 All the members of the door shutter shall be straight, smooth and well planned at right angles to each other. Any warp or bow shall not be more than 1.50mm.

11.8.2 **FABRICATION OF SHUTTER:**

11.8.2.1 **Steel frame**: Mild Steel square tube of specified size shall be cut to required size and welded at the corners to form steel door frames. It should be painted with red oxide anticorrosive paint.

11.8.2.2 **PVC Styles**: Styles made of PVC Cellular sheet shall be cut to required length and width, which shall be then "V" grooved in parallel to the required thickness of the doors. The "V" grooves are heated by hot air under controlled temperature and moulded to form "C" sections.

11.8.2.3 **PVC Rails**: Top Rail, Bottom Rail and Lock Rail are made of PVC Cellular sheets by cutting the sheets to the required size.

11.8.2.4 **PVC Panel**: Panel made of PVC cellular sheet of 5mm thickness shall be cut to required size in length and width.

11.8.2.5 The PVC Panel shall be inserted in between the MS Frame, then the PVC Styles and Rails shall be bonded on the length and width sides of frames. The gap between the Panel and the "C" section of styles and rails shall be filled up with PVC beading and bonded. Lock rail at the centre shall be bonded on the either sides of PVC. The gap between the top and bottom surface is filled by PVC sheet strips called gap inserts to completely seal the door.

11.8.3 **FIXING OF THE SHUTTER:**

11.8.3.1 The PVC door shutter as fabricated above should be fixed to the door frame of M.S. T-iron with necessary butt hinges of required size as per para 11.8.3.2 of this specification by

using No. 10-12mm long counter sunk fully threaded parallel shank steel screws. In case the PVC shutter is to be fixed to wooden frame/PVC frame, the screws to be used in the butt hinge shall be No. 10-40mm counter sunk fully threaded parallel shank steel screws. For fixing butt hinges to PVC shutter, use No. 10-40mm long counter sunk fully threaded parallel shank steel screws. All the screws should be screwed in by screwdriver and in no case these shall be hammered.

11.8.3.2 Each door shutter shall be fixed to the frame with 4 hinges of required size unless otherwise specified by the purchaser. The top and bottom hinges shall be fixed at location 200mm below top and 200mm above bottom of shutter. The remaining two hinges shall be places at one-third distance between top and bottom hinges.

11.8.3.3 For cup board shutters, side hung of height upto 1.20metre, each leaf shall be hung on piano hinges and for shutter of height more than 1.2 metre, each leaf shall be hung on three M.S. butt hinges of required size at quarter points. On shutter side the screws to be used in butt hinges shall be No. 10x25mm long counter sunk fully threaded parallel shank steel screws. On door frame side screws to be used in the butt hinges shall be No. 10-12mm counter sunk fully threaded parallel shank steel screws in case T-iron frame is used. And in case of wooden door frames, screws shall be No. 10-25mm long counter sunk fully threaded parallel shank steel screws.

11.8.3.4 All screws shall be counter sunk fully threaded parallel shank steel screws only, unless otherwise specified. All the screws shall be screwed in with screw driver only and in no circumstances screws shall be hammered in.

11.8.4 **FITTINGS AND ACCESSORIES:**

11.8.4.1 Door stoppers aluminum /brass: These shall be fixed to the door shutter as required by the purchaser as per size and shape approved by him. Cleats and blocks of wood should not be used in any circumstances.

Fittings other than hinges like pull bolt lock, mortice lock, latch floor door stoppers etc. confirming to clause 9.21 of CPWD specification 1996 Vol. III shall be provided as per the schedule of fitting decided by the purchaser.

11.8.4.2 Mortice lock or latches: Shutter shall be shop prepared for taking mortice locks or latches as may be ordered. Shop preparing the door with morticed holes for lock fixing shall be done when desired by the purchaser.

11.9.0 DIMENSIONS, SIZES AND TOLERANCES:

TABLE 1 : - Dimension of door Shutters

S. No	Type of Shutter	Sizes (mm)	Thickness	PVC Sheet Section Used							
				Styles		Beading		Rails		Panel Thick Ness	M.S. Sq. Tube
				T	W	T	W	T	W		
1.	Panel door shutter DS1(A)	730W – 2060 H	30mm	5	50	5	25	5	t=75 l=75 b=75	5	19x19
2.	Panel door shutter DS2(A)	830W – 2060 H	30mm	5	75	5	50	5	t=100 l=100 b=100	5	19x19
3.	Panel door shutter DS3(A)	930W – 2060 H	30mm	5	75	5	50	5	t=100 l=100 b=100	5	19x19
4.	Panel door shutter DS1(B)	700W – 2045 H	30mm	5	50	5	25	5	t=75 l=75 b=75	5	19x19
5.	Panel door shutter	800W – 2045 H	30mm	5	75	5	50	5	t=100 l=100 b=10	5	20x20

	DS2(B)								0		
6.	Panel door shutter DS3(B)	900W – 2045 H	30mm	5	75	5	50	5	t=100 l=100 b=10 0	5	19x19

Note:

T = Thickness
W = Width
t = top rail
l = lock rail
b = bottom rail

11.9.1 PVC foam sheet shall not exceed the tolerances given below:

Sheet thickness (mm)	Tolerance (mm)
1	+ 0.15
2	+ 0.20
3	+ 0.25
4	+ 0.30
5	+ 0.35
6	+ 0.40
8	+ 0.50
10	+ 0.60
13	+ 0.75
19	+ 1.05

Note: - Generally the PVC sheet used for the panel door shutter is of 5 mm thickness.

Tolerance

(i) On weight of PVC section + 10 percent.

(ii) On weight of galvanized M.S. square tubes, M.S. rods + 5 percent (M.S. square/rectangular tubes to conform IS: 4923-1986).

(iii) On width and height of shutter + 3mm.

(iv) The tolerance in the thickness of door shutter shall be + 1mm. The thickness of door shutter shall be uniform through out with a permissible variation of not more than 0.8mm when measured between any two points.

Sizes and Types of Door Shutters

Sizes and types of door shutters shall generally conform to the modular sizes specified in Table-2.

S. No.	Designation	Size: A		Size: B	Height (mm)
		Width (mm)	Height (mm)	Width (mm)	
1	DS 1	730	2060	700	2045
2	DS 2	830	2060	800	2045
3	DS 3	930	2060	900	2045

Note 1 D = Door, S = Single Shutter

Note 2 The designation indicates the size of door opening, the first number referring to width in modules of 10cm and the last number the height in modules of 10cm above finished floor level.

Note 3 Standard sizes of pressed steel and T-iron door frames are covered in CPWD Specification 96 Vol. III.

Note 4 Manufactures may supply non-modular size by mutual agreement, if so specifically ordered by the purchaser.

Note 5(i) Shutters used with frames of T-iron or pressed steel conforming to CPWD Specifications Vol. III, 1996 shall be of size A.

(ii) Shutters used with frames of timber or precast reinforced concrete conforming to IS: 4021-1983 and IS: 6523-1983 respectively shall be of size B.

Sizes of the Cup Board shutters shall be as required by the purchaser.

11.10.0 **WORKMANSHIP AND FINISH**

11.10.1 The surface of the shutters shall be free from any visible defects such as small pores, crazing, blistering, wrinkling, impurities, defective impregnation and colour blots.

11.10.2 Panels of the door shutters shall be flat and shall have smooth and level surface.

11.10.3 All the four edge of the door shutter shall be square. The shutter shall be free from Twist or Wrap in its plane.

11.10.4 The colour of the door shall be as mutually agreed between the purchaser and the manufacturer, which would be selected by the purchaser from the available range of colours being manufactured before placing order.

11.10.5 Scattered pin holes duly repaired and finished by applying resin and not noticeable shall be accepted.

11.10.6 No painting, primer is to be applied on the PVC door shutter.

11.11.0 TEST

11.11.1 TEST ON SHUTTERS

11.11.1.1 The tests as per Table – 3 shall be carried out by the manufacturer on door shutters. The method of carrying out the tests shall be as per IS: 4020-1994. Acceptability criteria shall be as mentioned against each test.

TABLE NO. 3 TEST ON DOOR SHUTTER

S.No.	Test	Acceptable criteria
1.	Dimensions and defects of squareness Test	As per IS: 4020-1994
2.	General Flatness Test	--do--
3.	Local Planeness Test*	--do--
4.	Impact Indentation Test	--do--
5.	Edge loading Test	--do--
6.	Buckling Test	--do--
7.	Misuse Test	--do--
8.	Slamming Test	--do--
9.	Shock Resistance Test	--do--
10.	Screw Holding Power Test	--do--

* Local planeness test shall be carried out on the rails, styles and panels separately.

11.11.2 Test on Material

11.11.2.1 Test as per Table – 4 shall be conducted on PVC sheet cut form the door shutter. The method of carrying out the test shall be as per reference code mentioned against each test. Acceptance Criteria shall be as given against each test.

TABLE – 4 TEST ON PVC MATERIALS

S.No.	Test	Test Method as per	Acceptable Value
1.	Density (at 27^0 C)	DIN 53479	Not less than 0.50 gm/cc
2.	Tensile strength at yield	DIN 53455	10 Mpa
3.	Elongation at Break	DIN 53455	Not less than 30%
4.	Impact Strength (IZOD) (Charpyunotched)	DIN 53453	Not less than 15 kg/m^3
5.	Hardness	DIN 53456	Not less than 25 N/mm^2
6.	Compressive strength at 10% strain	ASTMD – 695	Not less than 8.83 kg/ cm^2
7.	Flexural stress	DIN 53452	Not less than 20 Mpa
8.	Thermal Conductivity	DIN 52612	0.059 W/mk
9.	Water absorption after 96 hrs.	DIN 53495	Below 1 %
10.	Fire Rating	BS 476	Bl

11.12.0 **LIST OF REFERRED INDIAN & OTHER STANDARDS**

IS No.	TITLE
IS: 707-1976	Glossary of terms applicable to timber technology and utilization.
IS: 4020-1994	Door shutters – Methods of tests
IS:4043-1969	Recommendations for symbolic designation of direction closing and faces of doors, windows and shutters
IS: 10428-1983	Glossary of terms applicable to doors.
ISI	Specifications for testing of PVC materials 3360 (Pt-3/Sec.1) Density 3360 (Pt-5/Sec.3) Tensile Strength

	3360 (Pt-5/Sec.3)	Elongation at break
	3360 (Pt-5/Sec.4)	Impact Strength
	3360 (Pt-5/Sec.12)	Hardness
	3360 (Pt-5/Sec.8)	Compressive Strength
	3360 (Pt-5/Sec.7)	Flexural Strength
	3360 (Pt-8/Sec.1)	Water Absorption Fire Retardancy

11.13.0 SAMPLING AND CRITERIA FOR CONFORMITY

11.13.1 Lot in any consignment, all shutters of the same grade and type and manufactured under similar conditions of production shall be grouped together to form a lot.

11.13.2 The number of shutters to be selected at random from a lot shall depend upon its size and shall be in accordance with table (given below).
Column 2 & 3 pertain to tests for Dimensions and defects of squareness test, general flatness test and local planeness test.

Column 4 & 5 pertain to all other tests as per Para 11.11.1 & 11.11.2.

TABLE – SAMPLE SIZE AND CRITERIA FOR CONFORMITY

Lot Size	Sample Size	Permissible No. of Defects	Sample size	Permissible No. of Defects
1	2	3	4	5
26 to 50	5	0	1	0
51 to 100	8	0	1	0
101 to 150	13	1	2	0
151 to 300	20	2	3	0
301 to 500	32	3	5	0
501 to 1000	50	5	10	1
1001 and above	80	7	15	2

Note: For lot size 25 or less, number of samples to be taken for testing shall be as agreed to between the purchaser and the seller/ manufacturer.

11.14.0 PVC RIGID PANEL DOOR SHUTTER

11.14.1 **SPECIFICATIONS:** - Providing and fixing of factory made 30mm thick PVC rigid foam PANEL DOOR SHUTTER made from M S tubular frame of 19 gauge of size 19 x 19mm for styles and 15 x15mm for top and bottom tails and covered with 5mm thick heat moulded PVC 'C' channel having width of 50mm to form styles and PVC sheet of width 75mm to form lock rail, bottom rail and top rail on either side. The inner panel should be inserted with 5mm thick PVC sheet sealed with solvent cement adhesive to the styles and rails with 5mm x 25mm PVC sheet beading on either side.

11.14.2 **WIREMESH** : - To make wiremesh door instead of panel insert of 5mm PVC sheet, wiremesh of suitable gauge can be inserted & and sealed to the styles and rails using PVC beading.

11.14.3 **LOUVERS : -** The door shutters can be provided with louvers for the clear opening of 450x300mm at the bottom including one additional horizontal rail of size 50mm x 30mm and two vertical styles of size 50x30mm to accommodate the 5mm thick, 40mm wide PVC sheet louvers (eight Nos.) along with side 25mmx5mm size PVC sheet lapping with slant slots of 5mm width for fixing the louvers in position with PVC cement solvent adhesive and then providing 10mmx5mm size PVC sheet beading on two vertical sides with self tapping sheet metal screws etc. complete.

Note: Width of styles and rails will vary with the size of door; Recommended size of styles and rails is given in the table.

TABLE OF STYLES AND RAILS

Door width	Styles Size	Rails Size
600mm to 750mm	50mm	75mm
750mm to 900mm	75mm	100mm
900mm and above	100mm	125mm

12.0 Aluminium doors, windows, ventilators etc. glazing specifications

12.1 **Extent and Intent:** - The work shall be carried out through an approved Special Agency, who shall furnish all material, labour, accessories, equipment, tool and plants and incidentals required for providing and installing anodized aluminum doors, windows, claddings, louvers and other items as called for on the drawings. The drawings and specifications cover the major requirements only. The supplying of additional fastenings, accessories, fixtures and other items not mentioned specifically herein, but which are necessary to make a complete installation shall be a part of this contract.

12.2 **General:**- Aluminium doors, windows etc. shall be of sizes, section details as shown on the Architectural drawings. The details shown on the drawings indicate generally the sizes of the component parts and general standards. These may be varied slightly to suit the standard adopted by the manufacturers. Before proceeding with any manufacturing, the contractor shall prepare and submit complete manufacturing and installation drawings for approval of the Engineer-in-Charge and no work shall be performed until the approval of these drawings is obtained.

12.3 **Shop Drawings:** - The contractor shall submit the shop drawings of doors, windows, louvers, cladding and other aluminum work, based on the architectural drawings to the Engineer-in-Charge for his approval. The shop drawing shall show full size sections of doors, windows etc. thickness of metal (i.e. wall thickness) details of construction, sub frame/rough ground profile, anchoring details hardware as well as connection of windows, doors and other metal work to adjacent work. Samples of all joints and methods of fastening and joining shall be submitted to the Engineer-in-Charge for approval well in advance of commencing the work.

12.4. **Samples:** - Samples of doors, windows louvers etc. shall be fabricated, assembled and submitted to Engineer-in-Charge for his approval. They shall be of sizes, types etc. as decided by Engineer-in-Charge. All samples shall be provided at the cost of the contractor.

12.5. **Sections:** - Aluminium doors and windows shall be fabricated from extruded sections of profiles as detailed on drawings. The sections shall be extruded by the manufacturers approved by the Engineer-in-Charge. The aluminum extruded sections shall conform to BIS designation IIE/IIV 9 WP alloy, with chemical composition technical properties, as per IS: 733 and IS: 1285. The permissible tolerance of the extruded sections shall be such as not to impair the proper and smooth function/ operations and appearance of doors and windows.

12.6 **Fabrication:** - Doors, windows etc. shall be fabricated to sizes at factory and shall be of section, sizes, combinations and details as shown on the drawings. All doors, windows etc. shall have mechanical joints. The joints shall be designed to withstand a wind load of 150 Kg. Per Sqm. The design shall also incur that the maximum deflection of any member shall not exceed 1/175 of the span of the member. All members shall be accurately machined and fitted to form hairline joints prior to assembly. The joints accessories such as cleats, brackets etc. shall be of such material as not to cause any bimetallic action. The design of the joints and accessories shall be such that the accessories are fully concealed. The fabrication of doors, windows, etc. shall be done in suitable sections to facilitate easy transportation, handling and installation. Adequate provision shall be made in the door and window members for anchoring to support and fixing of hardware and other fixture as approved by the Architect.

12.7 **Anodizing:** - All aluminium sections shall be anodized as per IS: 7088 and to required colour as specified in the item as per IS: 1868 grading as specified in item schedule after cutting the member to requisite sizes before the final assembly. Anodizing confirming to specified grade with minimum average thickness of 15 microns when measured as per IS: 612. The anodic coating shall be properly sealed by steams or in boiling water are cold sealing process as per IS:1868/IS: 6057. Polythene tape protection shall be applied on the anodised section before they are brought to site. All care shall be taken to ensure surface protection during transportation, storage at site and installation. The tape protection shall be removed on installation. The sample will be tested in the approved laboratory and cost of samples; cost of testing etc. shall be borne by the contractor.

12.8 **Protection of finish:** - All aluminum members shall be wrapped with approved self-adhesive non-staining. PVC tapes.

12.9 **Handing and Stacking:** -

12.9.1 Fabricated materials shall be carried in an approved manner to protect the material against any damage during transportation. The loading and unloading shall be carried out with utmost care. On receipt of material at site, it shall be carefully examined to detect any damaged pieces. Arrangements shall be made for expeditious replacement of damaged pieces/ parts. Materials found to be acceptable on inspections shall be repacked in crates and stored safely.

12.9.2 In the case of composite windows and doors, the different units are to be assembled first. The assembled composite units should be checked for line, level and plumb before final fixing is done. Units may be serial numbered and identified as out how to be assembled in their final locations if situation so warrants.

12.9.3 The contractor shall be responsible for assembling composite, bedding and filling the grove with polysulphide sealant inside and outside, at transoms and mullions placing the doors, windows etc. in their respective openings. After the doors/ windows have been fixed in their correct assigned position, the open hollow sections abutting masonry concrete shall be fitted with approved polysulphide sealant densely packed and finished neat.

12.9.4 The contractor shall be responsible for doors, windows, etc. being set straight, plumb, level and for their satisfactory operation after fixing is complete.

12.10 **Installation**: -

12.10.1 Just prior to installation the doors, windows, etc. shall be uncreated and stacked on edge on level bearers and supported evenly. The frame shall be fixed into position true to line and level using adequate number of expansion machine bolts, anchor fasteners, of approved size and manufacture and in an approved manner. The holes in concrete/masonry members for housing anchor bolts shall be drilled with an electric drill.

12.10.2 The door/ windows assembled as shown on drawings shall be placed in correct final position on the opening and marks made on concrete members at jambs, sills and heads against the holes provided in frames for anchoring. The frame shall then be removed from the opening and laid aside. Neat holes with parallel sides of appropriate size shall then be drilled in the concrete members with an electric drill at the marking to house the expansion blots. The expansion bolts shall then be inserted in the holes, struck with a light hammer till the nut is forced into the anchor shell. The frame shall then be placed in final position in the opening and anchored to the support thought cadmium plated machine screws of required size and anchored to the support through cadmium plated machine screws of required size threaded to expansion bolts. The frame shall be set in the opening by using wooden wedges at supports and be plumbed in position. The wedges shall invariably be placed at the meeting at points of glazing bars and frame.

12.11 **PVC/ Neoprene gaskets:** - The contractor shall provide and install PVC/ Neoprene gaskets of approved size and profile at all locations as shown and as called for to render the doors, windows etc. absolutely air tight and weather tight. The contractor shall produce samples of the gaskets for approval and shall procure the same after approval only.

12.12 **Fittings:** - Hinges, stays, handles, tower bolts, locks and other fittings shall be of quality and manufacturer as approved by the Engineer-in-Charge.

12.13 **Manufacturer's Attendance:** - The manufacturer immediately prior to the commencement of glazing shall adjust and set all windows and doors and accept responsibility for the satisfactory working of the opening frames.

12.14 **Mastic Cement:** - The gaps between frames and supports and also any gaps in the door and windows sections shall be raked out as directed and filled with mastic cement of approved colourand make to ensure complete water tightness. The mastic cement shall be of such colour and composition that it would not stain the masonry/concrete work, shall receive paint without bleeding, will not sag or run and shall not set hard or dry out under any conditions of weather. The sample of mastic cement to be used for this purpose shall be got approved from the architect before its actual use.

12.15 **Details of Test:** -

12.15.1 The various tests on aluminum sections shall be conduced in accordance with the relevant IS codes.

12.15.2 The minimum number of tests for anodizing and corrosion resistance shall be as given below: -

S.No.	Details	Section 1.01 No. of Tests
1.	Doors, windows and ventilators	One test for every 1000 kg or part thereof.

12.15.3 The samples of major member of each unit of doors/ windows shall be selected at random by Engineer-in-Charge as such that all the aluminum section shall be got tested.

12.16 **Acceptance Criteria:** - The aluminum work shall carry two years guarantee after completion of work against unsound material, workmanship and defective anodizing/ powder coating as per guarantee bond. Two years guarantee in prescribed Performa must be given by the specified firm, which shall be counter signed by the contractor, in token of his overall responsibility. 10% (ten percent) of the cost of these items would be retained as security deposit and the amount so deducted would be released after two years from the date of completion of the entire work under the agreement, if the performance of the items is found satisfactory. If any defect is noticed during the guarantee period, the contractor should rectify it within seven days and if not attended to the same will be got done from another agency at the risk and cost of contractor. However, this security deposit can be released in full if bank guarantee of equivalent amount is produced and deposited with the department.

12.17 **Rates:** -

12.17.1 The rates of the item shall include the cost of materials,labour required in all the above operations.

12.17.2 The rates include the cost of hinges/ pivots and rest of the fittings shall be paid separately.

FORM OF BANK GUARANTEE FOR EARNEST MONEY DEPOSIT/ PERFORMANCE GUARANTEE/ SECURITY DEPOSITE/ MOBILIZATION ADVANCE

BANK GUARANTEE BOND

1. Whereas the Executive Engineer..... (name of division)....., Chandigarh Administration on behalf of the President of the India (hereinafter called "The Government") has invited bids under ..... (NIT Number)... dated ..... for ..... (name of work)..... The Government has further agreed to accept irrevocable bank Guarantee for Rs. ..... (Rupees ..... only) valid upto ..... Dated..... as **Performance Guarantee/Security Deposit//Mobilization Advance** from ..... (name and address of contractor)..... (hereinafter called "the contractor") for compliance of his obligations in accordance with the terms and conditions of the said NIT.

2. We, ...(indicate the name of the bank)..... (herein after referred to as "the bank"), hereby undertake to pay to the Government as Amount not exceeding Rs. ..... (Rupees ..... only) on demand by the government within 10 days of the demand.

3. We ....(indicate the name of the Bank)..... do hereby undertake to pay the amounts due and payable under this Guarantee without any demure, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (Rupees .....only).

4. We, ...(indicate the name of the Bank).....further undertake to pay to the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

5. We ....(indicate the name of the Bank)..... further agree with the Government that the government shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor(s) form time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor(s) or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. We, ...(indicate the name of the Bank)....., further agree that the Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the Contractor and notwithstanding any security to other guarantee the Government may have in relation to the Contractor's liabilities.

7. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).

8. We,.....(indicate the name of the Bank).....lastly undertake not to revoke this guarantee except with the previous consent of the Government in writing.

9. This Bank guarantee shall be valid upto.....unless extended on demand by Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs.....(Rupees .....only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Date.....

Witness:

1. Signature.....
   Name and Address

2. Signature .....
   Name and address

Authorized Signatory
Name
Designation
Staff Code No.
Bank Seal

*Date to be worked out on the basis of validity period of 90 days where only financial bids are invited and 180 days for two/three bid system from the date of submission of tender.

GUARANTEE BOND TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER-PROOFING WORKS (All Water - Proofing Items).

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

WHEREAS THIS agreement is supplementary to a contract (Hereinafter called the Contract) dated ..... and made between the GUARANTOR OF THE ONE PART AND the Government of the other part whereby the contractor inter alia undertook to render the building and structures in the said contract recited 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 ten years from the date of completion of work.

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 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 shall be final and binding on Guarantor.

During this period of guarantee, the guarantor shall make good all defects and in case of any defect being found render the building water proof 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 water proofing or commits breach thereunder, 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 WITNESS 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. .....

GUARANTEE BOND TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF SANITARY INSTALLATIONS / WATER SUPPLY / DRAINAGE WORK.

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

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

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, and finishing for two 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 and guaranteed against faulty material and workmanship, defective galvanizing for two 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 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 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 defects or commits breach thereunder, 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 WITNESS 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 ON BEHALF OF THE PRESIDENT OF INDIA BY..... in the presence of :-

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

GUARANTEE BOND TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF STONE WORK/ TILE WORK.

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

WHEREAS THIS agreement is supplementary to a contract (Hereinafter called the Contract) dated ..... and made between the GUARANTOR OF THE ONE PART AND the Government of the other part whereby the contractor inter alia undertook to render the work in the said contract recited 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 five 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 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 make good all the defects, commits breach thereunder, 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 WITNESS 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. .....

GUARANTEE BOND TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF ANTI TERMITE WORKS.

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

WHEREAS THIS agreement is supplementary to a contract (Hereinafter called the Contract) dated ..... and made between the GUARANTOR OF THE ONE PART AND the Government of the other part whereby the contractor inter alia undertook to render the building and structures in the said contract recited completely termite proof.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the affect that the said structure will remain termite proof, for ten years from the date after the maintenance period prescribed in the contract expires.

NOW THE GUARANTOR hereby guarantee that work executed by him will render the structures completely termite proof and the minimum life of such termite proofing treatment shall be 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 shall be final and binding on Guarantor.

During this period of guarantee, the guarantor shall make good all defects and for that matter, shall replace at his risk & cost such wooden members as may be damaged by termites and in case of any other defect being found, he shall render the building termite proof at his cost to the satisfaction of the Engineer-In-Charge and shall commence the works of such rectification within seven days from date of issuing notice from 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 and in the latter case the decision of the Engineer-in-charge as to the cost recoverable from the Guarantor shall be final and binding.

That if the guarantor fails to execute the anti termite treatment or commits breach hereunder, 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 WITNESS 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. .....

LIST OF FIELD TESTS

i) Particle size and shape
ii) Slump test
iii) Flakiness & Elongation Index tests
iv) Compressive strength (concrete or bricks) test
v) Rebound Hammer test
vi) Bulking of sand
vii) Silt content of sand
viii) Temperature measuring with thermometer with brass protected end 0-200° C
ix) Bituminous Content
x) Density
xi) Physical test of Cement.

FIELD TESTING EQUIPMENT AND INSTRUMENTS

A. **Testing Equipment at Field Laboratories**

i) Balances
a) 7kg to 10 kg. Capacity, Semi-self indicating type-Accuracy 10 gm
b) 500 gm. Capacity, Semi-self-indicating type Accuracy 1 gm
c) Pan Balance – 5 Kg. Capacity, accuracy 10 gm.

ii) Sieves: as per IS 460-1962.
a) I.S. Sieves – 450 mm internal dia of sizes 100 mm, 80 mm, 63 mm, 50mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm complete with lid and pan.
b) IS Sieves – 200 mm internal dia(brass frame) consisting of 2.36 mm, 1.18 mm, 600 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan.

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

iv) Equipment for slump test – Slump Cone, Steel Plate, tamping rod, steel scale, scoop.

v) 100 tonnes compression testing machine, electrical-cum manually operated.

vi) Graduated measuring cylinders 200 ml capacity

vii) Enamel trays (for efflorescence test for bricks and other tests)
a. 300 mm X 250 mm X 40 mm
b. Circular plates of 250 mm dia
c. 600 mm X 450 mm X 500 mm
d. 450 mm X 300 mm X 40 mm.

viii) ISI marked 150 X 150 X 150 mm concrete cube moulds as per site requirement.

ix) Graduated cylinder 1000 ml. Capacity.

B. **Field Testing Instruments**

i) Steel tapes – 3 m
ii) Vernier Calipers
iii) Micrometer Screw 25 mm gauge
iv) A good quality plumb bob
v) Spirit level minimum 30 cms long with 3 bubbles for horizontal vertical
vi) Wire gauge (circular type) disc.
vii) Foot rule
viii) Long nylon thread
ix) Rebound hammer for testing concrete
x) Ultrasonic Pulse velocity meter
xi) Magnifying glass
xii) Screw driver 30 cms long
xiii) Ball pin hammer, 100 gms
xiv) Plastic bags for taking samples
xv) Digital Distance meter
xvi) Levelling machine
xvii) Theodolite

C. **ESSENTIAL T&P/MACHINERY FOR THIS WORK TO BE ARRANGED/INSTALLED AT SITE OF WORK BY THE CONTRACTOR**

1. _____ 2. _____ 3. _____

PROFORMA FOR TESTS CARRIED OUT

NAME OF THE WORK : DIVISION/

AGREEMENT NO. &DATE : SUB-DIVISION

Sl. No.	Item	Quantities as per agreement	Frequency as per specification	No. of tests required	R.A. bill No.	Uptodate quantity	No. of tests required	No. of tests actually done	Remarks
1	2	3	4	5	6	7	8	9	10

Signature of Contractor

Executive Engineer

Annexure 'A-1'

(To be executed On Judicial Stamp paper worth Rs.100/- between Contractor, Manufacturer & Engineer-in-charge of the work)

GUARANTEE BOND

This agreement made this __ day of___ of 2020 between M/s.____ & M/s_____ (hereinafter called the Guarantors which expression shall include where the context so admits the representative successors or his/its assignees of the one part) and the Engineer-in-charge on behalf of President of India, having its principal office at Deluxe Building, Sector 9-D, Chandigarh (hereinafter called the Engineering Department, U.T., Chandigarh which expression shall unless repugnant to the context or meaning thereof including its successor and assignees of the other part).

Whereas this agreement is supplementary to the contract (here in after called the Sub Contract) dated-------- made between the Guarantors of the one part and Engineering Department, U.T., Chandigarh of the other part, whereby the contractor & manufacturer, inter alia, under took to render the buildings and structures **in the said contract recited completely water and leak proof** i.e. _____ (item) ___ Sqm, conforming to the prescribed specifications. Where in, the material in question has been supplied at_____ (Name of work) during the period _____.

And whereas the Guarantors agreed to give a guarantee to the effect that the said material will remain defect free for the next five years to be reckoned from the date of completion of the work under the contract Agreement No._____ _dated __

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

Provided that the guarantor will not be responsible for leakage caused by earthquake or structural defects or misuse of roof or alteration and for such purpose:

a) Misuse of roof shall mean any operation which will damage proofing treatment, like chopping of firewood and things of the same nature which might cause damage to the roof.;
b) Alteration shall mean construction of an additional storey or a part of the roof or construction adjoining to existing roof whereby proofing treatment is removed in parts;
c) The decision of the Engineer-in-charge with regard to cause of leakage 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 water proof to the satisfaction of the 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 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 Guarantors fails to execute the water proofing or commits breach thereunder then the Guarantors will indemnify the principal and his successors against all loss, damage, cost, expense or otherwise which may be incurred by him by reason of any default on the part of the Guarantor in performance and observance of this supplementary agreement. As to the amount of loss and/or damage and/or cost incurred by the Engineering Department, U.T., Chandigarh, the decision of the Engineer-in-charge will be final and binding on the parties. In case of failure to replace the defective material, in addition to the recovery, stated here, the Guarantors and the Contractor shall be black listed.

IN WITNESS WHEREOF these presents have been executed by the Obligor _____ 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 OBLIGOR in the presence of

1.
2.

Signed for and on behalf of the president of India by E.E.C.P. Divn. No.4 in the presence of.

1.
2.

Executive Engineer

Annexure 'A-2'

(To be executed On Judicial Stamp paper worth Rs.100/- between Contractor, Manufacturer & Engineer-in-charge of the work)

GUARANTEE BOND

This agreement made this __ day of___ of ____ between M/s.____ & M/s_____ (hereinafter called the Guarantors which expression shall include where the context so admits the representative successors or his/its assignees of the one part) and the Engineer-in-charge on behalf of President of India having its principal office at Deluxe Building, Sector 9, Chandigarh (hereinafter called the Engineering Department, U.T., Chandigarh which expression shall unless repugnant to the context or meaning thereof including its successor and assignees of the other part).

Whereas this agreement is supplementary to the contract (here in after called the Sub Contract) dated_____ made between the Guarantors of the one part and Engineering Department, U.T., Chandigarh of the other part, whereby the contractor & manufacturer, inter alia, under took to render the buildings and structures and supply of PH fixtures and fittings i.e. ____(item) ___Nos, ____(item) ___Nos, ____(item) ___Nos, conforming to the prescribed specifications. Where in, the material in question has been supplied at_____ (Name of work) during the period _____.

And whereas the Guarantors agreed to give a guarantee to the effect that the said material will remain defect free for the next five years to be reckoned from the date of completion of the work under the contract Agreement No.____ _dated __

During this period of guarantee, the Guarantors shall make good all manufacturing defects and for that matter, shall replace at his risk and cost such defective material(s) as observed to the satisfaction of the Engineer-in charge, and shall commence the works of such rectification within seven days from date of issuing notice from 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/manufacturer at the Guarantor's cost and risk, and in the later case the decision of the Engineer in-charge as to the cost recoverable from the Guarantors shall be final and binding.

That if the Guarantors fails to replaces the defective material(s) or commits breaches hereunder then the Guarantors will indemnify principal and his successors against all loss, damage, cost, expense or otherwise which may be incurred by him by reason of any default on the part of the Guarantor in performance and observance of this supplemental agreement. As to the amount of loss and/or damage and/or cost incurred by the Engineering Department, U.T., Chandigarh, the decision of the Engineer-in-charge will be final and binding on the parties. In case of failure to replaces the defective material, in addition to the recovery, stated here, the Guarantors and the Contractor shall be black listed.

In witness whereof these presents have been executed by the Obligor M/s_____(contractor), M/s ____(Manufacturer) and by Concerned Executive Engineer, P.H. Divn. for and on behalf of the President of India on the day, month and year first above written.

(Signature of Manufacturer) (Signature of Contractor)

Signed, sealed and delivered by OBLIGOR in the presence of

1. (witness)
2. (witness)

(Signature of Executive Engineer)
Signed for and on behalf of The President of India by concerned EE, P.H., Divn. in the presence of.

1. (witness)
2. (witness)

Executive Engineer

Annexure 'A-3'

(To be executed On Judicial Stamp paper worth Rs.100/- between Contractor, Manufacturer & Engineer-in-charge of the work)

GUARANTEE BOND

This agreement made this ____day of _____ between M/s._____ & M/s_____(hereinafter called the Guarantors which expression shall include where the context so admits the representative successors or his/its assignees of the one part) and the President of India having its principal office at , sector 9, Chandigarh (hereinafter called the Engineering Department, U.T., Chandigarh which expression shall unless repugnant to the context or meaning thereof including its successor and assignees of the other part).

Whereas this agreement is supplementary to the contract (hereinafter called the Contract) dated .....made between the Guarantor of the one part and Engineering Department, U.T., Chandigarh of the other part, whereby the Contractor, inter alia, undertook to ensure defect free working of Miniature Circuit Breakers (MCBs) conforming to the prescribed specifications. Wherein, the material in question have been used in between Block No. ____ Unit No. _____ at _____ (Location) during the period between _____ to _____ at the site of work.

And whereas the Guarantor agreed to give a guarantee to the effect that the Miniature Circuit Breakers of all types and ratings shall be guaranteed for a period of one year after the expiry of defect liability period of 3 months.

During this period of guarantee the Guarantor shall replace all defective MCBs at his risk and cost to the satisfaction of the Engineer-in-charge, and shall commence the works of such rectification within seven days from date of issuing notice from 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/manufacturer at the Guarantor's cost and risk, and in the later case the decision of the Engineer-in-charge as to the cost recoverable from the Guarantor shall be final and binding.

That if the Guarantor fails to provide replacement of defective MCBs or commits breaches hereunder then the Guarantor will indemnify principal and his successors against all loss, damage, cost, expense or otherwise which may be
incurred by him by reason of any default on the part of the Guarantor in performance and observance of this supplemental agreement. As to the amount of loss and/or damage and/or cost incurred by the Engineering Department, U.T., Chandigarh, the decision of the Engineer-in-charge will be final and binding on the parties. In case of failure to replace the defective material, in addition to the recovery, stated here, the Guarantors and the Contractor shall be blacklisted.

In witness whereof these presents have been executed by the Obligor.....and by ..... for and on behalf of the President of India, month and year first above written.

Signed, sealed and delivered by OBLIGOR in the presence of
1.
2. (Contractor) 2. (Manufacturer)
Signed for and on behalf of the President of India by concerned EE, Divn. (Elect.) in the presence of.
1.
2.

MEMORANDUM OF UNDERSTANDING [M.O.U] BETWEEN

1] M/S [Name of the firm with full address]
Enlistment Status
Valid Upto:
[Henceforth called the main contractor]

And

2] M/S [Name of the firm with full address]
Enlistment Status
Valid Upto:
[Henceforth, called Associated Electrical Contractor or Electrical Contractor or Public Health Contractor]

For the execution of Electrical Work or Public Health Contractor:----------. for Electrical Component or Public Health component only] as per schedule, specifications, terms and conditions of the tender.

We state that M.O.U between us will be treated as an agreement and has legality as per Indian Contract Act [amended upto date] and the department [CPWD] can enforce all the terms and conditions of the agreement for execution of the above work. Both of us shall be responsible for the execution of work as per the agreement to the extent this MOU allows. Both the parties shall be paid consequent to the execution as per agreement to the extent this MOU permits. In case of any dispute, either of us will go for mediation/arbitration by the Superintending Engineer[E] or Superintending Engineer, Public Health. His decision shall be final and binding on both of us.

We have agreed as under:

1] The electrical contractor or Public Health Contractor will execute all electrical or Public Health works in the wholesome manner as per terms and conditions of the agreement. Payment to the associated electrical contractor shall be governed vide para 19.1.11 & 19.1.12 of CPWD-6 & clause 7 of GCC – 2012.

2] The electrical contractor or Public Health Contractor shall be liable for disciplinary action if he failed to discharge the action[s] and other legal action as per agreement besides forfeiture of the security deposit.

3] All the machinery and equipment, tools and tackles required for execution of the electrical works, as per agreement, shall be the responsibility of the electrical contractor.

4] The site staff required for the electrical or Public Health work shall be arranged by the electrical contractor or Public Health Contractor as per terms and conditions of the agreement.

5] Site order book maintained for the said work shall be signed by the main contractor as well as by the Engineer of the Associated Contractor and by Associated Contractor himself.

6] All the correspondence regarding execution of the electrical or Public Health work shall be done by the Department with the Associated Contractor with a copy to the main contractor. In case of non-compliance of the provisions of agreement, the main contractor, as well as the associated contractor shall be responsible. The action under clauses 2 and 3 shall be initiated and taken against the main contractor.

SIGNATURE OF MAIN CONTRACTOR

SIGNATURE OF ASSOCIATED ELECTRICALCONTRACTOR/PUBLIC HEALTH CONTRACTOR.

Date:
Place

Date
Place:

COUNTERSIGNED

EXECUTIVE ENGINEER (E)/ PUBLIC HEALTH
ELECT/ PUBLIC HEALTH DIVISION,
CHANDIGARH.

Executive Engineer

ADDITIONAL CONDITIONS OF CONTRACT SPECIFIC TO GREEN BUILDING PRACTICES

1.0 The contractor shall strictly adhere to the following conditions as part of his contractual obligations:

1.1 SITE

1.1.1 The contractor shall ensure that adequate measures are taken for the prevention of erosion of the topsoil during the construction phase.

1.1.2 The Contractor should follow the construction plan as proposed by the Architect /Engineer in Charge to minimize the site disturbance such as soil pollution due to spilling

1.1.3 No excavated earth shall be removed from the campus unless suggested otherwise by Engineer in Charge. All subsoil shall be reused in backfilling/landscape, etc. as per the instructions of the Engineer in Charge. The surplus excavated earth shall be disposed of by the contractor at his own cost for reuse. Royalty on the soil is to be deposited with the State Govt. Deptt.

1.1.4 The contractor shall not change the natural gradient of the ground unless specifically instructed by the Engineer in Charge. This shall cover all natural features like water bodies, drainage gullies, slopes, mounds, depressions, etc. Existing drainage patterns through or into any preservation area shall not be modified unless specifically directed by the Engineer-in-charge.

1.1.5 The contractor shall not carry out any work which results in the blockage of natural drainage.

1.1.6 The contractor shall ensure that existing grades of soil shall be maintained around existing vegetation and lowering or raising the levels around the vegetation is not allowed unless specifically directed by the Engineer-in-charge.

1.1.8 Overloading of trucks is unlawful and creates the erosion and sedimentation problems, especially when loose materials like stone dust, excavated earth, sand etc. are moved. Proper covering must take pLacse. No overloading shall be permitted.

1.2 CONSTRUCTION PHASE AND WORKER FACILITIES

1.2.1 The contractor shall specify and limit construction activity in pre- planned/designated areas and shall start construction work after securing the approval for the same from the Engineer in Charge. This shall include areas of construction, storage of materials, and material and personnel movement.

1.2.2 Preserve and Protect Landscape during Construction

(a) The contractor shall ensure that construction activities should be restricted to the areas outside of the canopy of the tree, or, from a safe distance from the tree/plant by means of barricading. Trees will not be used for support; their trunks shall not be damaged by cutting and carving or by nailing posters, advertisements or other material. Lighting of fires or carrying out heat or gas emitting construction activity within the ground, covered by canopy of the tree is not to be permitted.

(b) The contractor shall take steps to protect trees or saplings identified for preservation within the construction site using tree guards of approved specification.

(c) Contractor should limit all construction activity within the specified area as per the Construction Management Plan (CMP) approved by Engineer in Charge.

(d) The contractor shall ensure that maintenance activities during construction period shall be performed as needed to ensure that the vegetation remains healthy.

1.2.3 The contractor shall provide potable water for all workers.

1.2.4 The contractor shall provide the minimum level of sanitation and safety facilities for the workers at site. The contractor shall ensure cleanliness of work place with regard to the disposal of waste and effluent; provide clean drinking water and latrines and urinals as per applicable standard. Adequate toilet facilities shall be provided for the workman within easy access of their place of work. Toilet facilities shall be provided from the start of building operations, connection to a sewer shall be made as soon as practicable. Every toilet shall be so constructed that the occupant is sheltered from view and protected from the weather and falling objects. Toilet facilities shall be maintained in a sanitary condition. A sufficient quantity ofdisinfectant shall be provided. Natural or artificial illumination shall be provided.

1.2.5 The contractor shall ensure that air pollution due to dust/generators is kept to a minimum, preventing any adverse effects on the workers and other people in and around the site. The contractor shall ensure that the speed of vehicles within the site is limited to 10 km/hr.
Spills of dirt or dusty materials will be cleaned up promptly so the spilled material does not become a source of fugitive dust and also to prevent of seepage of pollutant laden water into the ground aquifers.

1.2.6 The contractor shall ensure that no construction leachate (e.g. cement slurry etc.), is allowed to percolate into the ground.

1.2.7 Staging (dividing a construction area into two or more areas to minimize the area of soil that will be exposed at any given time) should be done to separate undisturbed land from land disturbed by construction activity and material storage.

1.2.8 The contractor shall comply with the safety procedures, norms and guidelines (as applicable).

1.2.9 The contractor shall ensure the following activities for construction workers safety, among other measures:

- Guarding all parts of dangerous machinery.

- Precautionary signs for working on machinery
- Maintaining hoists and lifts, lifting machines, chains, ropes, and other lifting tackles in good condition.
- Durable and reusable formwork systems to repLacse timber formwork and ensure that formwork where used is properly maintained.

1.2.10 The storage of material shall be as per standard good practices to the satisfaction of the Engineer in Charge. Watch and ward of the Contractor's materials shall be his own responsibility.

1.2.11 The contractor shall provide for adequate number of garbage bins around the construction site and the workers facilities and will be responsible for the proper utilization of these bins for any solid waste generated during the construction

1.2.12 Where possible, the contractor shall select materials / vendors, harvested and manufactured regionally, within a 800-km radius of the project site.

1.2.13 The contractor shall ensure that a flush out of all internal spaces is conducted prior to handover. This shall comprise an opening of all doors and windows for 14 days to vent out any toxic fumes due to paints, varnishes, polishes, etc.

1.2.14 Contractor shall make efforts to reduce the quantity of indoor air contaminants that are odorous or potentially irritating harmful to the comfort and well-being of installer and building occupants. Contractor shall ensure that the VOC (Volatile Organic Compounds) content of paints, coatings and primers are low.

1.2.15 Water Use during Construction

Contractor should spray curing water on concrete structure and shall not allow free flow of water. Concrete structures should be kept covered with thick cloth/gunny bags and water should be sprayed on them. Contractor shall do water poundings on all sunken slabs using cement and sand mortar.

1.2.16 The contractor shall provide O & M Manuals wherever applicable.

1.2.17 MATERIALS & FIXTURES FOR THE PROJECT

(i) Contractor will produce wherever feasible certificate regarding distance of the source of the relevant material.

(ii) Unless otherwise stated cement used at site for mortar, plaster, building blocks, etc. shall be PPC (Portland Pozzolana Cement). The PPC must meet the requirements of IS 1489 (Part I) as regards to fly ash content in cement.

(iii) The contractor shall ensure that all paints, polishes, adhesives and sealants used both internally and externally, on any surface, shall be Low VOC products. The contractor shall get prior approval from the Engineer in Charge before the application of any such material.

(iv) The contractor shall ensure that all composite wood products/agro-fiber products used for cabinetwork, etc do not contain any added urea formaldehyde resin.

1.2.18 RESOURCES CONSUMED DURING CONSTRUCTION

(a) The contractor shall ensure that the water and electricity is not wasted during construction. The Engineer in Charge can bring to the attention any such wastage and the contractor will have to ensure that such bad practices are corrected.

(b) The contractor shall ensure that all run-off water from the site, during construction is collected and reused to the maximum.

1.2.19 EQUIPMENT

(a) To ensure energy efficiency during and post construction all pumps, motors and engines used during construction or installed, shall be subject to approval and as per the specifications of the Engineer in Charge.

(b) Generally the lighting installed by the contractor around the site and at the labour quarters during construction shall be CFL bulbs of the appropriate illumination levels.

ADDITIONAL SPECIAL CONDITIONS FOR THE WORK

1 The conditional tenders or tenders without earnest money shallliable to be rejected at any stage.

2 The department will assist in arranging electric and water connection at the site of work. However, the Security / Consumption / installation charges shall be borne by the contractor.

3 The recovery of water charges @ **1.5%** shall be made as per Notification issued by the Secretary Local Govt. Chandigarh Administration vide notification No. 6/1/195-FII(8)2011/4088, dated 24.05.2011 conveyed vide E.E. M.C. P.H. Division No. 2 vide memo no. 1533-62, dated 02.06.2011.

In Case water for construction at site is not available from the Municipal Corporation/ChandigarhAdministration, the contractor will arrange the water from his own source byhiring Water Tankers/Installation of Tubewell with the prior approval from the competent authority and have to pay water charges for Tubewell as per latest water byelaws notified by the M.C., Chandigarh with latest amendments. In such case there will be no deduction of water charges @ 1.5% from the contractor.

4. The contractor shall have to engage a competent and independent quality control consultant/ agency from the list mentioned at para 2.1.4 (Sr. No.I to VII) to be approved by the Engineer in Charge of work and any other consultant/agency with the approval of Superintending Engineer to exercise control over the construction operation in the field so as to produced quality works. The contractor shall supply to the Engineer in charge a copy of this agreement and the fee for quality control should be upto**0.25%** of the contract value. The payment of the quality control consultant shall be made by the Engineer in charge as per agreement supplied by the contractor. The payment shall be recoverable from the contractor. The consultant shall supply a copy of all reports, tests and checks to the Engineer in charge regularly. The contractor shall also attach copy of those reports, tests and checks with his bill without which no payment shall be made. In case the contractor fails to employee for the whole or part of the period of execution on quality control consultant, the Engineer in charge may order employment of consultant and the cost of work shall be made from the bill of the contractor @ **0.25%** of the contract value even if the actual expenditure incurred on private consultant or departmental quality control is less. In addition to this the contractual agency shall also have to engage a very renowned structural designer/consultant based in around city with prior approval of Superintending Engineer to check/vett the design/reinforcement being laid at site during construction and to provide guidance during the construction, whenever required at site and recovery @ **0.25**% of the contract value shall be made from the contractual agency, even if actual expenditure on engagement of structural consultant is less than **0.25%** of the contract value. The payment on account of engagement of consultant shall be paid directly to the consultant by Engineer in charge as per agreement supplied by the contractual agency. The provision in this condition shall not reduce anyway, the overall responsibility of the contractual agency regarding quality and execution of work at site and agency shall be remain liable for any defects in its execution at site.

5 The contractor shall have to obtain labour license from the Assistant Labour Commissioner, Chandigarh after getting his establishment registered under the Building and other Construction Act 1996 notified vide Chandigarh Administration No. 353-383 dt. 15.1.2010 issued by the Registering Officer, under the Building and other construction workers Act and Assistant Labour Commissioner, U.T. Chandigarh.

6 The labourCess as applicable during the course of execution of work as deducted from the C.C. running & final bills shall be deposited to the Chandigarh Building and Other constructions Workers Welfare Funds

7 The bidder shall have to give an undertaking regarding constitution of the firm /business i.e. whether proprietorship firm/Partnership firm/ Limited Company/Public Limited Company at the time of submission of tender and any change in the same at any stage shall be immediately intimated in writing to the Engineer-in-charge.In case of partnership/Limited/ Public Limited companies, theArticle of Memorandum of Association shall be submitted

by the bidder.

8 The successful bidder shall be required to submit a Performance Guarantee amount within 7 days of issue of letter of intent. This period can be further extended by Engineer-in-Charge up to a maximumperiod of 7 days on thewritten request of the contractorand with late fee as defined in Schedule F.

9 In case of failure or default in the performance or responsibilities or breach of terms and conditions of DNIT or agreement, action as per **"Policy on blacklisting, 2009"** issued vide Finance Department Chandigarh Administration Notification No. 1927-F&PO(3)-2009/1170 dt. 27.2.2009 shall be taken.

10 All design mix concrete shall be done using fully automatic batching plant conforming to IS 4925 of minimum 6 cum per hour capacity. The automatic batching plant shall be charged by devices when actuated by a single starter switch, will automatically start the weighing operation of each material (i.e stone aggregate, sand, cement, water admixture etc.) and stop automatically when designated weight of each material has been reached and also it should have rated capacity (in terms of concrete in single batch). It shall have control panel for operation of the batching plant complete with printing facility.

11 The contractor shall be free to use ready mix concrete (RMC) in place of batch mix concrete at hisown cost. The contractor shall ensure that transit mixtures shall transport the concrete to site. All the precautions shall be taken during the transportation and handling of concrete to achieve the desired strength, durability etc.as envisaged in the Mix Design.

12 The source of RMC shall be got approved from the Engineer-in-charge.

13 Only one common %age above or below the rates/ amount mentioned in the DNIT shall be quoted by the bidder for all items. Any other extra item of DSR if required to be executed shall be paid on prevailing DSR rates and adjusted by applying Chandigarh cost index ±% (Plus/ minus percentage) %age quoted by the agency in the tender. Similarly, any other N.S. extra item if required to be executed shall be paid on the justified analysis of rates prepared based on prevailing labour rates approved by the Assistant Labour Commissioner and approved material rates and shall be adjusted by applying the quoted + % (Plus/ minus percentage) %age by the agency in the tender.

14. The agency shall also make the compliance of all the provision of Minimum wages Act.1948. Contract labour (Regulation and abolition (Act) 1970 and rules framed and other laws effecting contract labourthat may be brought into force from time to time.

15 The quantities prescribed in DNIT are tentative, which can be increased or decreased as per working architectural/structural drawings or as per instruction of the Engineer-in-charge. The agency is bound to execute the work accordingly.

16 Any error or omission in nomenclature, rate or unit can be corrected at any stage according to DSR 2023 amended up to date.

17 Nothing extra shall be paid for making drip of any size shall or any molding.

18 The work shall be carried out as per C.P.W.D specifications latest edition, emended up to date.

19 On the acceptance of the tender, the name of the accredited representative (s) of the contractor who would be responsible for taking instructions from the Engineer-in-charge shall be communicatedin writing to the Engineer-in-charge.

20. If there is any variation in the thickness of board as per availability in the market and the same is got executed at site as per the instructions of Engineer-in-charge, the difference of cost shall be adjusted accordingly.

21 Any error in description, quantity or Rate on Schedule of quantities or any omission there of shall not vitiatethe contract of release the contractor from the execution of the whole or any part of the workscomprised therein to drawings and specifications or from any of his obligations.

22 Any material left at site one month after completion of work shall become the property of the department and no payment shall be made to the contractor for the material

23 No payment will be made to the contractor for damaged caused by flood, rain, local disturbance, war, epidemic or either natural calamity during execution of work and no such claim on this account.

24 The samples of the material would be tested at regular intervals in the Laboratory as per directions of the Engineer-in-charge, the cost for which shall be borne by the agency.

25 The defect liability shall be for a minimum period of one year of the contractual agency without any technical effect.

26 The contractors shall make his/their own arrangement for storing and protection of their tools and material including erection and removal of temporary shed at his/their own cost.

27 The contractor (s) whose tenders is accepted shall within 5 days from the date of information to this effect to him/them execute the agreement with department incorporating there in detail terms and conditions of the contract. In case of contractor (s) fail/fails to execute the agreement within the stipulated period of ten days, the amount of earnest money deposited by him/them with the tender shall be forfeit without any notice.

28 No interest shall be payable by the department on the amount of earnest money deposited by the contractor

29 Terms, conditions and specifications shall be followed as given in the DNIT.

30. Department reserves the right to reject/accept any or all the tenderers without assigning any reason.

31 If any of the agencies/agency withdraw or amend his/their offer within a period of ninety days, he/they are liable to be blacklisted.

32 For proper curing of construction work, the contractor shall have to make arrangement for sufficient quantity of water at site including pumping set with pipes etc. required for lifting of water and nothing extra shall be paid on this account.

33. The recovery of old dismantled/ re-useable material if available shall be made from contractor as per actual quantity received at site on prevailing market rates as under:-

a) Bricks Rs.5.50/- cum (No extra charges will be given for the cleaning of bricks).

b) Brick Tiles Rs.7.50/- sqm (No extra charges will be given for the cleaning of bricks Tiles).

c) Brick Bats Rs.650/- cum (No extra charges will be given for the cleaning of Tile Bricks).

d) Brick Tile Bats Rs.650/- cum (No extra charges will be given for the cleaning of brick Tile Bats).

34. GST as applicable shall be borne by the contractor himself. The contractor shall quote his rates considering all such taxes and hence their quoted rates should be inclusive of all tax components.

35. It will be obligatory on part of the Contractor/Bidder to tender for and sign the tender documents for all the component parts. The department reserves right to accept tender in full or in part without assigning any reasons.

DNIT FOR CONSTRUCTION OF NEW GOVT. BUILDING IN GOVT.MODEL SENIOR SECODARY SCHOOL, VILLAGE MALOYA CHANDIGARH.

Approximate Amount:	₹ 7,83,27,501.00
Earnest Money:	₹ 15,66,550.00
Time Limit:	1.5 Year

ABSTRACT OF COST

Sr. No.	DSR No.	Desscription	Unit	qty	Rate	Amount	Amount In Words
1	2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.					
	2.6.1	All kinds of soil.	cum	850.34	172.71	146862.82	Rupees One Lakh FourtySix Thousand Eight Hundred SixtyTwo Paise EightyTwo Only
2	2.8	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.					
	2.8.1	All kinds of soil.	cum	133.05	253.27	33696.55	Rupees ThirtyThree Thousand Six Hundred NinetySix Paise FiftyFive Only
3	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sidesof foundations etc. in layers not exceeding 20cm in depth, consolidatingeach deposited layer by ramming and watering, lead up to 50 and for all lift.	cum	25.33	190.71	4830.24	Rupees Four Thousand Eight Hundred Thirty Paise TwentyFour Only
4	2.27	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	cum	86.76	2066.41	179279.15	Rupees One Lakh SeventyNine Thousand Two Hundred SeventyNine Paise Fifteen Only
5	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :					
	4.1.8	1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mmnominal size derived from natural sources)	cum	93.48	6628.08	619594.75	Rupees Six Lakh Nineteen Thousand Five Hundred NinetyFour Paise SeventyFive Only
6	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :					
	4.1.10	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	237.06	6342.60	1503584.21	Rupees Fifteen Lakh Three Thousand Five Hundred EightyFour Paise TwentyOne Only
7	4.13	Providing & applying a coat of residual petrolium bitumen of grade of VG-10 of approved quality using 1.70kg per square meter on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil	sqm	137.85	142.20	19601.69	Rupees Nineteen Thousand Six Hundred One Paise SixtyNine Only
8	4.17	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources) over 75 mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including	sqm	117.45	729.07	85627.74	Rupees EightyFive Thousand Six Hundred TwentySeven Paise SeventyFour Only

9	5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	cum	**1.73**	11194.85	**19417.55**	**Rupees Nineteen Thousand Four Hundred Seventeen Paise FiftyFive Only**
10	5.8	Reinforced cement concrete work in vertical and horizontal fins individuallyor forming box louvers, facias and eaves boards above plinth level up tofloor five level, excluding the cost of centering, shuttering, finishing andreinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derivedfrom natural sources : 3 graded stone aggregate 20 mm nominal sizederived from natural sources).	cum	**14.25**	11145.08	**158828.88**	**Rupees One Lakh FiftyEight Thousand Eight Hundred TwentyEight Paise EightyEight Only**
11	5.9	Centering and shuttering including strutting, propping etc. and removal of form for					
a	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	sqm	**105.22**	381.56	**40146.12**	**Rupees Fourty Thousand One Hundred FourtySix Paise Twelve Only**
b	5.9.2	Walls (any thickness) including attached pilasters,butterssess,plinth and string courses etc.	sqm	**355.94**	819.75	**291780.93**	**Rupees Two Lakh NinetyOne Thousand Seven Hundred Eighty Paise NinetyThree Only**
c	5.9.3	Suspended floors, roofs, landings, balconies and access platform	sqm	**2710.57**	902.21	**2445503.58**	**Rupees TwentyFour Lakh FourtyFive Thousand Five Hundred Three Paise FiftyEight Only**
d	5.9.4	Shelves (Cast in situ)	sqm	**20.10**	902.21	**18135.12**	**Rupees Eighteen Thousand One Hundred ThirtyFive Paise Twelve Only**
e	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantiolevers	sqm	**2872.27**	716.52	**2058037.66**	**Rupees Twenty Lakh FiftyEight Thousand ThirtySeven Paise SixtySix Only**
f	5.9.6	Columns, pillars, Piers, Abutment, Posts and Struts	sqm	**1494.19**	935.34	**1397573.62**	**Rupees Thirteen Lakh NinetySeven Thousand Five Hundred SeventyThree Paise SixtyTwo Only**
g	5.9.7	Stairs,(excluding landings) except spiral-staircase	sqm	**65.77**	744.30	**48954.99**	**Rupees FourtyEight Thousand Nine Hundred FiftyFour Paise NinetyNine Only**
h	5.9.13	Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards	sqm	**375.90**	1261.69	**474267.36**	**Rupees Four Lakh SeventyFour Thousand Two Hundred SixtySeven Paise ThirtySix Only**
i	5.9.16	Edges of slabs and breaks in floors and walls					
	5.9.16.1	under 20 cm wide	mtr	**36.88**	202.92	**7483.85**	**Rupees Seven Thousand Four Hundred EightyThree Paise EightyFive Only**
12	5.11	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc., including cost of de-shuttering and decentering at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof (Plan area to be measured).					
	5.11.1	Suspended floors, roofs, landings, beams and balconies (Plan area to be measured)	sqm	**50.48**	373.92	**18875.48**	**Rupees Eighteen Thousand Eight Hundred SeventyFive Paise FourtyEight Only**

13	5.22.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.Thermo-Mechanically Treated bars of grade Fe-500D or more.	kg	**40072.27**	104.94	**4205184.38**	**Rupees FourtyTwo Lakh Five Thousand One Hundred EightyFour Paise ThirtyEight Only**
14	5.22A	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.					
	5.22A.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	kg	**173201.39**	104.94	**18175753.40**	**Rupees One Crore EightyOne Lakh SeventyFive Thousand Seven Hundred FiftyThree Paise Fourty Only**
15	5.33	Providing and laying in position ready mixed or site batched design mixcement concrete for reinforced cement concrete work; using coarseaggregate and fine aggregate derived from natural sources, PortlandPozzolana / Ordinary Portland /Portland Slag cement, admixtures inrecommended proportions as per IS: 9103 to accelerate I retard settingof concrete, to improve durability and workability without impairingstrength; including pumping of concrete to site of laying, curing, carriagefor all leads; but excluding the cost of centering, shuttering, finishing andreinforcement as per direction of the engineer-in-charge, for the followinggrades of concrete.: Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement. All works upto plinth level					
A	a	5.33.1.1 Concrete of M25 grade with minimum cement content of 330 kg /cum					
			cum	**553.27**	9248.12	**5116663.73**	**Rupees FiftyOne Lakh Sixteen Thousand Six Hundred SixtyThree Paise SeventyThree Only**
B	5.33.2.1	All works above plinth level upto floor V level5.33.2.1 Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	**1176.33**	9594.17	**11285890.69**	**Rupees One Crore Twelve Lakh EightyFive Thousand Eight Hundred Ninety Paise SixtyNine Only**
16	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein	qntl	**570.77**	713.70	**407355.54**	**Rupees Four Lakh Seven Thousand Three Hundred FiftyFive Paise FiftyFour Only**
17	5.44	Providing and fixing of expansion joint system related with floor location as per drawings and direction of Engineer-In-Charge. The joints system will be of extruded aluminum base members, self aligning / self centering arrangement and support plates etc. as per ASTM B221-02. The system shall be such that it provides floor to floor /floor to wall expansion control system for various vertical locations in load application areas that accommodates multi directional seismic movement without stress to it's components. System shall consist of metal profiles with a universal aluminum base member designed to accommodate various project conditions and finish floor treatments. The cover plate shall be designed of width and thickness required to satisfy projects movement and loading requirements and secured to base members by utilizing manufacturer's pre-engineered self-centering arrangement that freely rotates / moves in all directions. The Self - centering arrangement shall exhibit circular sphere ends that lock and slide inside the corresponding aluminum extrusion cavity to allow freedom of movement and flexure in all directions including vertical displacement. Provision of Moisture Barrier Membrane in the Joint System to have watertight joint is mandatory requirement all as per the manufactures design and					
	5.44.2	Floor joint of 150mm gap	mtr	**45.34**	7601.42	**344663.95**	**Rupees Three Lakh FourtyFour Thousand Six Hundred SixtyThree Paise NinetyFive Only**

18	5.45	Providing and fixing of expansion joint system related with wall joint (internal/external) location as per drawings and direction of Engineer-In- Charge. The joints shall be of extruded aluminum base members, self aligning / centering arrangement and support plates as per ASTM B221- 02. The material shall be such that it provides an Expansion Joints System suitable for vertical wall to wall/ wall to corner application, both new and existing construction in office Buildings & complexes with no slipping down tendency amongst the components of the Joint System. The Joint System shall utilize light weight aluminum profiles exhibiting minimal exposed aluminum surfaces mechanically snap locking the multicellular to facilitate movement. (Material shall conform to ASTM 6063					
	5.45.1	Wall Joint of 100 mm gap	mtr	**55.28**	5162.40	**285382.76**	**Rupees Two Lakh EightyFive Thousand Three Hundred EightyTwo Paise SeventySix Only**
19	6.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:					
	6.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	**54.69**	6939.68	**379533.29**	**Rupees Three Lakh SeventyNine Thousand Five Hundred ThirtyThree Paise TwentyNine Only**
20	NS	Brick work with common burnt clay selected F.P.S. (non modular) bricks of class designation 10 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12 mm deep complete in cement mortar 1:4 (1 cement : 4 coarse sand)	cum	**309.78**	10191.98	**3157257.21**	**Rupees ThirtyOne Lakh FiftySeven Thousand Two Hundred FiftySeven Paise TwentyOne Only**
21	6.12	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in :					
	6.12.2	cement mortar 1:4 (1 cement : 4 coarse sand)	sqm	**17.48**	880.61	**15396.39**	**Rupees Fifteen Thousand Three Hundred NinetySix Paise ThirtyNine Only**
23	6.47	Providing and laying Autoclaved Aerated concrete(AAC) blocks masonry with 150 mm to 300 mm thick with Grade-1 AAC blocks of density 551 to 650 kg/cum conforming to IS:2185 (Part 3) in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made for seperately	cum	**222.64**	8108.64	**1805310.41**	**Rupees Eighteen Lakh Five Thousand Three Hundred Ten Paise FourtyOne Only**
22	6.23	Honey-comb brick work 10 / 11.4 cm thick with common burnt clay bricks of class designation 7.5 in super structure above plinth level upto floor V level with cement mortar 1:4 (1 cement : 4 coarse sand).	sqm	**55.31**	692.29	**38291.12**	**Rupees ThirtyEight Thousand Two Hundred NinetyOne Paise Twelve Only**
24	6.38	Providing and laying Autoclaved Aerated concrete(AAC) blocks masonry 100 mm/ 125 mm thick with Grade-1 AAC blocks of density 551 to 650 kg/cum conforming to IS:2185 (Part 3) in super structure above plinth level up to floor V level in cement mortar 1:4 (1 cement : 4 coarse sand). The rate includes providing and placing in position 2 Nos 6 mm dia M.S.bars at every third course of masonry work.	cum	**27.97**	9920.17	**277495.45**	**Rupees Two Lakh SeventySeven Thousand Four Hundred NinetyFive Paise FourtyFive Only**
25	8.2.2.2	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.Granite stone slab of colour black, Cherry/Ruby red 8.2.2.2 Area of slab over 0.50 sqm	sqm	**18.95**	4997.62	**94694.32**	**Rupees NinetyFour Thousand Six Hundred NinetyFour Paise ThirtyTwo Only**

26	8.5	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/ stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	each	**14.00**	952.28	**13331.92**	**Rupees Thirteen Thousand Three Hundred ThirtyOne Paise NinetyTwo Only**
27	9.21	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:					
	9.21.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	sqm	**234.60**	2328.05	**546170.85**	**Rupees Five Lakh FourtySix Thousand One Hundred Seventy Paise EightyFive Only**
	9.21.3	25 mm thick (for cupboard) including ISI marked nickel plated bright finished M.S. piano hinges with necessary screws	sqm	**72.46**	2037.17	**147617.41**	**Rupees One Lakh FourtySeven Thousand Six Hundred Seventeen Paise FourtyOne Only**
28	9.23	Extra for providing lipping with 2nd class teak wood battens 25mm minimum depth on all edges of flush door shutters (over all area of door shutter to be measured	sqm	**72.46**	449.87	**32598.48**	**Rupees ThirtyTwo Thousand Five Hundred NinetyEight Paise FourtyEight Only**
29	9.24.1	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured 9.24.1 Rectangular or square	sqm	**34.00**	193.77	**6588.18**	**Rupees Six Thousand Five Hundred EightyEight Paise Eighteen Only**
30	9.26	Extra for cutting rebate in flush door shutters (Total area of the shutter to be measured	sqm	**95.94**	103.82	**9960.75**	**Rupees Nine Thousand Nine Hundred Sixty Paise SeventyFive Only**
31	9.4	Providing and fixing wooden moulded beading to door and window frames with iron screws,plug and priming coat on unexposed surface etc. complete:					
	9.40.1.1	2nd class teak wood 50x12mm	mtr	**1247.47**	215.13	**268368.22**	**Rupees Two Lakh SixtyEight Thousand Three Hundred SixtyEight Paise TwentyTwo Only**
32	9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete					
	9.48.1	Fixed to steel windows by welding	kg	**8601.73**	213.18	**1833716.80**	**Rupees Eighteen Lakh ThirtyThree Thousand Seven Hundred Sixteen Paise Eighty Only**
33	9.118.2	30 mm thick factory made Polyvinyl Chloride (PVC) doorshutter made of styles and rails of a uPVC hollow sectionof size 60x30 mm and wall thickness 2 mm (± 0.2 mm), withinbuilt decorative moulding edging on one side. The stylesand rails mitred and joint at the corners by means of M.S.galvanised/ plastic brackets of size 75x220 mm having wallthickness 1.0 mm and stainless steel screws. The styles ofthe shutter reinforced by inserting galvanised M.S. tube ofsize 25x20 mm and 1 mm (± 0.1 mm) wall thickness. Thelock rail made up of 'H' section, a uPVC hollow sectionof size 100x30 mm and 2 mm (± 0.2 mm) wall thicknessfixed to the shutter styles by means of plastic/ galvanisedM.S. 'U' cleats. The shutter frame filled with a uPVC multi¬chambered single panel of size not less than 620 mm,having over all thickness of 20 mm and 1 mm (± 0.1 mm)wall thickness . The panels filled vertically and tie bar attwo places by inserting horizontally 6 mm galvanised M.S.rod and fastened with nuts and washers, complete as permanufacturer's specification and direction of Engineer-in-charge	SQM	**25.71**	3165.95	**81396.57**	**Rupees EightyOne Thousand Three Hundred NinetySix Paise FiftySeven Only**

34	9.119	Providing and fixing factory made P.V.C. door frame of size 50x47 mmwith a wall thickness of 5 mm, made out of extruded 5 mm rigid PVCfoam sheet, mitred at corners and joined with 2 Nos of 150 mm longbrackets of 15x15 mm M.S. square tube, the vertical door frame profilesto be reinforced with 19x19 mm M.S. square tube of 19 gauge, EPDMrubber gasket weather seal to be provided through out the frame. Thedoor frame to be fixed to the wall using M.S. screws of 65/100 mm size,complete as per manufacturer's specification and direction of Engineer¬in-Charge.	RMT	**78.33**	479.40	**37551.40**	**Rupees ThirtySeven Thousand Five Hundred FiftyOne Paise Fourty Only**
35	10.14	Providing and fixing pressed steel door frames conforming to IS: 4351, manufactured from commercial mild steel sheet of 1.60 mm thickness,including hinges, jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25 mm, or base ties of 1.60 mm, pressed mild steel welded or rigidly fixed together by mechanical means, including M.S. pressed butt hinges 2.5 mm thick with mortar guards, lock strikeplate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineerin- charge					
		Profile C 10.14.1.2 Fixing with adjustable lugs with split end tail to each jamb	mtr	**909.50**	595.23	**541361.69**	**Rupees Five Lakh FourtyOne Thousand Three Hundred SixtyOne Paise SixtyNine Only**
36	10.26	Providing and fixing hand rail of approved size by welding etc.to steel ladder railing,balcony railing,staircase railing and similar works,including applying priming coat of approved steel primer.					
	10.26.1	M.S. tube	kg	**1506.87**	191.49	**288550.54**	**Rupees Two Lakh EightyEight Thousand Five Hundred Fifty Paise FiftyFour Only**
37	10.30.2.5.5	Providing & fixing glass panes with putty and glazing clips in steel doors, windows, clerestory windows, all complete with :					
		10.30.2 5.5 mm thick glass panes	sqm	**183.73**	1352.62	**248512.10**	**Rupees Two Lakh FourtyEight Thousand Five Hundred Twelve Paise Ten Only**
38	11.2	Chequerred precast cement concrete tiles 22 mm thick in footpath & couryard,jointed with neat cement slurry mixed with pigment to match the shade of tiles, including rubbing and cleaning etc. complete,on 20mm thick bed of cement mortar 1:4 (1cement:4 coarse sand					
	11.20.1	Light shade pigment using white cement	sqm	**317.72**	1364.15	**433415.01**	**Rupees Four Lakh ThirtyThree Thousand Four Hundred Fifteen Paise One Only**
39	8.31	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	sqm	**1047.56**	1233.72	**1292394.46**	**Rupees Twelve Lakh NinetyTwo Thousand Three Hundred NinetyFour Paise FourtySix Only**
40	11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) : 11.26.1 25 mm thick					
	11.26.1	25mm thick	sqm	**2824.40**	1930.68	**5453010.18**	**Rupees FiftyFour Lakh FiftyThree Thousand Ten Paise Eighteen Only**

41	11.27	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete	sqm	**131.59**	2291.12	**301490.75**	**Rupees Three Lakh One Thousand Four Hundred Ninety Paise SeventyFive Only**
42	11.31	Extra for pre finished nosing in treads of steps of Kota stone/ sand stoneslab	mtr	**142.65**	186.23	**26565.04**	**Rupees TwentySix Thousand Five Hundred SixtyFive Paise Four Only**
43	12.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10 mm and down gauge), including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :					
	12.21.1	In 75x75 mm deep chase	mtr	**263.05**	296.91	**78100.82**	**Rupees SeventyEight Thousand One Hundred Paise EightyTwo Only**
44	12.22	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete	each	**16.00**	290.20	**4643.20**	**Rupees Four Thousand Six Hundred FourtyThree Paise Twenty Only**
45	12.55	Providing and fixing Heat Resistant Terrace Tiles (300 mm x 300 mm x 20 mm) with SRI (solar refractive index) > 78, solar reflection > 0.70 and initial emittance > 0.75 on waterproof and sloped surface of terrace, laid on 20 mm thick cement sand mortar in the ratio of 1:4 (1 cement : 4 coarse sand) and grouting the joints with mix of white cement & marble powder in ratio of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150 mm height along the parapet walls in the same manner	sqm	**1018.10**	1657.94	**1687947.82**	**Rupees Sixteen Lakh EightySeven Thousand Nine Hundred FourtySeven Paise EightyTwo Only**
46	12.38.2	Providing and fixing M.S. holder bat clamps of approved design to C.I. or S.C.I. rain water pipes embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and cost of cutting holes and making good the walls etc. :					
		150 mm diameter	each	**128.00**	384.92	**49269.76**	**Rupees FourtyNine Thousand Two Hundred SixtyNine Paise SeventySix Only**
47	12.39	Providing lead caulked joints to sand cast iron rain water pipes and fittings					
	12.39.2	150mm dia pipe	each	**64.00**	776.45	**49692.80**	**Rupees FourtyNine Thousand Six Hundred NinetyTwo Paise Eighty Only**
48	13.1	12 mm cement plaster of mix :					
	13.1.1	13.1.1 1:4 (1 cement: 4 fine sand)	sqm	**5667.51**	337.68	**1913804.27**	**Rupees Nineteen Lakh Thirteen Thousand Eight Hundred Four Paise TwentySeven Only**
49	13.2	15 mm cement plaster on the rough side of single or half brick wall of mix :					
	13.2.2	13.2.2 1:6 (1 cement: 6 fine sand)	sqm	**250.47**	372.66	**93338.94**	**Rupees NinetyThree Thousand Three Hundred ThirtyEight Paise NinetyFour Only**
50	13.16	6 mm cement plaster of mix :					
	13.16.1	1:3 (1 cement : 3 fine sand)	sqm	**193.14**	292.34	**56463.37**	**Rupees FiftySix Thousand Four Hundred SixtyThree Paise ThirtySeven Only**
51	13.3	Pointing on brick work or brick flooring with cement mortar 1:3 (1 cement : 3 fine sand):					
	13.3.1	Flush/ Ruled/ Struck or weathered pointing	sqm	**412.01**	250.40	**103167.30**	**Rupees One Lakh Three Thousand One Hundred SixtySeven Paise Thirty Only**

52	13.8@	Providing and applying white cement based putty of average thickness 1.00 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	sqm	**6111.12**	151.84	**927912.17**	**Rupees Nine Lakh TwentySeven Thousand Nine Hundred Twelve Paise Seventeen Only**
53	13.41.	Distempering with 1st quality acrylic distemper (ready mixed) having VOCcontent less than 50 gram/litre, of approved manufacturer and of requiredshade and colour all complete to achieve even shade and colour :					
	13.41.1	Two coatsNew work (two or more coats) over and including waterthinnable priming coat with cement primer having VOC contentless than 50 gram/litre	sqm	**6111.12**	180.64	**1103912.37**	**Rupees Eleven Lakh Three Thousand Nine Hundred Twelve Paise ThirtySeven Only**
54	13.46	Finishing walls with Acrylic Smooth exterior paint of required shade :					
	13.46.1	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm)	sqm	**412.01**	156.26	**64380.68**	**Rupees SixtyFour Thousand Three Hundred Eighty Paise SixtyEight Only**
55	13.50.3	Applying priming coats With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works	sqm	**425.24**	65.58	**27887.24**	**Rupees TwentySeven Thousand Eight Hundred EightySeven Paise TwentyFour Only**
56	13.62	Painting with synthetic enamel paint of approved brand of manufacture of required colour to give an even shade					
	13.62.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	sqm	**425.24**	220.14	**93612.33**	**Rupees NinetyThree Thousand Six Hundred Twelve Paise ThirtyThree Only**
57	4.5.1	Providing and fixing up to floor five level precast cement concrete string or lacing courses, copings, bed plates, anchor blocks, plain windowsills, shelves, louvers, steps, stair cases, etc., including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), cost of required Centering complete. 4.5.1 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	**4.68**	9832.26	**46059.21**	**Rupees FourtySix Thousand FiftyNine Paise TwentyOne Only**
58	N.S	Providing and fixing on wall face 150mm dia H.C.I rain water pipe confirming to IS:1729 Type A, including filling the joints with spun yarn and cement mortar 1:2 compete in all respect and as directed by Emgineer-in-charge	mtr	**148.74**	1935.00	**287816.54**	**Rupees Two Lakh EightySeven Thousand Eight Hundred Sixteen Paise FiftyFour Only**
59	9.96.2	Providing and fixing aluminium sliding door bolts, ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete :250x16 mm	each	**104.00**	253.56	**26370.24**	**Rupees TwentySix Thousand Three Hundred Seventy Paise TwentyFour Only**
60	9.97	Providing and fixing aluminium tower bolts, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :					
		As per Anexure B (Joinery)					
	a	9.97.1 300x10 mm Anexure B (Joinery)	each	**104.00**	126.59	**13165.36**	**Rupees Thirteen Thousand One Hundred SixtyFive Paise ThirtySix Only**
	b	9.97.2 250x10 mm as Anexure B (Joinery)	each	**104.00**	112.04	**11652.16**	**Rupees Eleven Thousand Six Hundred FiftyTwo Paise Sixteen Only**
	c	9.97.4 150x10 mm as Anexure B (Joinery)	each	**180.00**	80.32	**14457.60**	**Rupees Fourteen Thousand Four Hundred FiftySeven Paise Sixty Only**
61	9.101.2	Providing and fixing aluminium hanging floor door stopper, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade, with necessary screws etc. complete. 9.101.2 Twin rubber stopper	each	**104.00**	70.40	**7321.60**	**Rupees Seven Thousand Three Hundred TwentyOne Paise Sixty Only**

62	9.100.1	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :9.100.1 125 mm	each	**388.00**	64.46	**25010.48**	**Rupees TwentyFive Thousand Ten Paise FourtyEight Only**
63	NS	Providing 5.5mm brick daliy facing with brick size 22.86 cm x 5.55 cm x 6.83 cm thick of class 10 to be obtained after cutting from full brick size of 22.86 cm x 11.11 cm x 6.83 cm laid in cement sand mortar 1:3 on RCC beams, Lintels and fascias etc. complete fixed in position complete in all respect to the entire satisfaction of the engineer in incharge	sqm	**363.31**	871.17	**316507.66**	**Rupees Three Lakh Sixteen Thousand Five Hundred Seven Paise SixtySix Only**
64	22.7.1	Providing and laying integral cement based water proofing treatmentincluding preparation of surface as required for treatment of roofs,balconies, terraces etc consisting of following operations:(a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cementadmixed with water proofing compound conforming to IS. 2645 andapproved by Engineer-in-charge over the RCC slab including adjoiningwalls upto 300 mm height including cleaning the surface before treatment.(b) Laying brick bats with mortar using broken bricks/brick bats 25 mmto 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarsesand) admixed with water proofing compound conforming to IS : 2645and approved by Engineer-in-charge over 20 mm thick layer of cementmortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofingcompound conforming to IS : 2645 and approved by Engineer-in-chargeto required slope and treating similarly the adjoining walls upto 300 mmheight including rounding of junctions of walls and slabs.(c) After two days of proper curing applying a second coat of cement slurryusing 2.75 kg/ sqm of cement admixed with water proofing compoundconforming to IS : 2645 and approved by Engineer-in-charge.(d) Finishing the surface with 20 mm thick jointless cement mortar of mix1:4	sqm	**1018.10**	1639.12	**1668787.19**	**Rupees Sixteen Lakh SixtyEight Thousand Seven Hundred EightySeven Paise Nineteen Only**
65	NS	Providing and fixing 65 mm thick high density rubber moulded precast cement concrete grass paver block grey/ colored/ polished/ designer (manufactured by vibro hydraulic pressure process) consisting of design mix of cement, sand and fine aggregate having designation M35 ISI marked including the cost of good quality color and hardening agents. The paver should be compiled with tensile strength and breaking load as per BIS 6717-1993 and shall be tested against resistance to bear as per IS 1237-1980 (specification for cement concrete floor tiles). The paver should be laid over layer of 25mm average thick sand to the required slope and requirement complete in all respects and to the entire satisfaction of Engineer in charge.	sqm	**1885.13**	951.40	**1793509.64**	**Rupees Seventeen Lakh NinetyThree Thousand Five Hundred Nine Paise SixtyFour Only**
66	NS	Providing and laying spreading and compacting granular sub base material 150mm thick in 2 layers of mm each compacted of natual sand, morrum, gravel crushed stone or combination thereof as per MORT&H specification, conforming to clause 401 coarse graded grading - I as per table 400.2 of MORT&H specification, including spreading on the prepared sub grade with the help of tractor with planner of adequate capacity maintaining the required slope and grade during operation. rolling with road roller 8-10 tone with the grade and cross fall (camber) to be checked and anv high spot or depressing which becomes apparent, corrected by removing or adding fresh material, including cost of tools and plants, carriage of material from stacks, templates, barrier. lighting arrangement at night, chowkidar and maintenance of diversion etc complete in all respect as per MORT&H specification, density of GSB as laid 2 gms/cc & to the entire satisfaction of Engineer-in-charge. NS	CUM	**287.31**	1976.90	**567979.48**	**Rupees Five Lakh SixtySeven Thousand Nine Hundred SeventyNine Paise FourtyEight Only**

67	11.44	Crazy ceramic tile flooring, with under layer 12 mm thick cement mortar 1:4 (1 cement: 4 coarse sand), with joints not exceeding 5 mm, including filling the gaps with ordinary cement mixture & mixing with synthetic polyester fibre, triangular in shape having specific gravity of 1.34 to 1.40, cross section size ranging from 10 to 40 micron & length upto 6 mm , mixing fibre @125 grams per 50 kg of cement in cement mortar, including providing and mixing water proofing material in mortar @1 kg per 50 kg of cement, all complete as per direction of Engineer-in-charge.	sqm	**270.63**	928.39	**251252.57**	**Rupees Two Lakh FiftyOne Thousand Two Hundred FiftyTwo Paise FiftySeven Only**
68	N.S	Providing and fixing M.S tubler window shutter consisting of style to and bottam rail of 60x30mm of 18 gauge M.S. Shutter having a rebate of 12mm.the shutter tobe made by cutting mitered joints electrically flash welded and grinding smooth, the rate include the cost of 2 nos bright finished of black enameled mild steel butt hinges 100x58x1.90mm.The rate further include one coat ofready mixed red oxide,zinc chrome primer of pproved brand and manufacrure and fixing the shutter to the existing frame complete in all respect and to the entire satisfaction of engineer in charge(rate further includes making hole in frame and providing clip for fixing glass panes					
	a	Qty same as Anexure A Wire gauge shutter	sqm	**64.28**	2119.99	**136262.75**	**Rupees One Lakh ThirtySix Thousand Two Hundred SixtyTwo Paise SeventyFive Only**
	b	Qty same as Anexure A Glazed window shutter	sqm	**64.28**	2857.41	**183660.56**	**Rupees One Lakh EightyThree Thousand Six Hundred Sixty Paise FiftySix Only**
						₹ 7,83,27,501.44	**Rupees Seven Crore EightyThree Lakh TwentySeven Thousand Five Hundred One Paise FourtyFour Only**
		Conditions:-			**SAYS Rs.**	**₹ 7,83,27,501.00**	**Rupees Seven Crore EightyThree Lakh TwentySeven Thousand Five Hundred One Only**
	1	The dismantling of 1 nos. building single storey building of area 88' x 26.5 is to be carried as per CPWD specification keeping in view the safety and security of the public, staff/ students and adjoining buildings in the Government Model Senior Secondary School, Maloya Village , Chandigarh by providing suitable arrangement i.e. barricading, signage, etc in and around site to be dismantled the site should be cleared by removing the usable, unusable material and malba/ rubbish immediately after the process of dismantling work including clearance of foundation/refilling the excavated earth making the ground in smooth level complete in all respect. All the usable building material including Civil, Public Health, Electrical Services should be property of the contractor and the malba/rubbish should also be disposed away from the complex to the approved disposal site, the dismantling work will be executed complete as per the direction and to the entire satisfaction of engineer-in- charge. The credit of the dimantled material is included in this item. (Job Work) (Recovery amount on account of dismantled material = **Rs.2,50,000/-**					
Certified that items taken in the estimate are as per actual site requirements							

SDE

EECP4

Superintending Engineer
Construction Circle
U.T. CHANDIGARH

COMPOSITE STATEMENT

Name of Work:- **DNIT FOR THE WORK OF CONSTRUCTION OF NEW GOVT. BUILDING IN GOVT. MODEL SR. SEC. SCHOOL, VILLAGE MALOYA, CHANDIGARH (COMPOSITE WORK)**

Total Amount: Rs.9,14,56,214/-
E.M.D: Rs. ~~16,82,846~~/- 18,29,124/-
Time Limit: 18 (Months)

1.	Civil Component	7,83,27,501 ~~7,14,07,571~~/-
2.	Public Health Services	64,96,900/-
3.	Electrical Installation	66,31,813/-
	Total	**9,14,56,214/-**

Recommended for approval please.

Executive Engineer
C.P. Divn. No.4
Chandigarh

Executive Engineer
Project P.H Divn. No.7
Chandigarh

Executive Engineer
Elect. Divn. No.3
Chandigarh

Superintending Engineer
Construction Circle-1
Chandigarh

Superintending Engineer
Public Health Circle
Chandigarh

Superintending Engineer
Electrical Circle
Chandigarh

As recommended by S.E. C/C-I, Elect
the D.N.I.T. is approved
subject to the corrections made
in green ink. The responsibility
regarding rates, units
of work, specifications etc.
lies with the concerned

Chief Engineer
Union Territory
Chandigarh

Contractor

NIT FOR CONSTRUCTION OF NEW GOVT. BUILDING IN GOVT. MODEL SENIOR SECONDARY CHOOL AT VILLAGE- MALOYA, CHANDIGARH.

App. amount Rs.66,31,813/-

Sr. No	DESCRIPTION	QTY.	RATE	UNIT	AMOUNT	RKS
	DSR ITEM NO 1.10 Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.					
1.	Group C	471 Nos.	1704/-	Each	802584.00	DSR
2.	**DSR ITEM NO.1.17** Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/recessed steel/PVC conduit as required.					
	3 x 1.5 sq.mm	3350 Mtr.	104/-	PM	348400.00	DSR
	3 x 2.5 sq.mm	1320 Mtr.	148/-	PM	195360.00	DSR
	3 x 4 sq.mm	720 Mtr.	222/-	PM	159840.00	DSR
	DSR 1.14 Wiring for circuit/ submain wiring along with earth wire with the following sizes of FRLS/HFFR PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.					
	4 X 10 sq. mm + 2 X 6 sq. mm earth wire	80 Mtr.	1078/-	PM	86240.00	DSR
	DSR Item No.1.21 Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required for the provision of telephone & Networking also.					
	25 mm	4850 Mtr	168/-	P.M.	814800.00	DSR
	32 mm	60 Mtr.	209/-	P.M.	12540.00	DSR
	40 mm	60 Mtr.	257/-	P.M.	15420.00	DSR
4.	**DSR ITEM NO 1.31.** Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 A modular socket outlet and 5/6 A modular switch, connections etc. as required.	68 Nos.	545/-	Each	37060.00	DSR
5.	**DSR ITEM NO 1.32** Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.	68 Nos.	659/-	Each	44812.00	DSR
6.	**DSR ITEM NO 2.4** Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)					
	4 way (4 + 12), Double door	2 Nos.	4377/-	Each	8754.00	DSR
7.	**DSR ITEM NO 2.10** Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C"					

	curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
i.	Single pole	240 Nos.	285/-	Each	68400.00	DSR
ii.	Triple pole and neutral	2 Nos.	1301/-	Each	2602.00	DSR
8.	**DSR item No. 5.1** Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	12 Nos.	5958/-	Each	71496.00	DSR
9.	**DSR item No. 5.12** Providing and laying earth connection from earth electrode with 6 SWG dia G.I. Wire in 15 mm dia G.I. pipe from earth electrode including connection with G.I. thimble excavation and re-filling as required.	160 Mtr.	313/-	PM	50080.00	DSR
10.	**DSR ITEM NO 5.15** Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	160 Mtr.	287/-	PM	45920.00	DSR
11	DSR 2.16 Supplying and fixing DP sheet steel enclosure on surface/ recess along with 25/32 A 240 V "C" curve DP MCB complete with connections, testing and commissioning etc. as required.	2 Nos.	1258/-	Each	2516.00	DSR
12.	Supply & erection of Exhaust Fan (heavy duty motor with copper wound metallic body) following size complete with motor, metallic blades, double ball bearing with minimum power consumption, rigid frame with rubber mounting for silent operation, epoxy powder coating along with metallic louver to be installed in the existing opening including cost of making the hole to suit the size of above fan making good the damage, Carriage Charges connection, testing, commissioning etc. as required to complete the job to the entire satisfaction of EIC. The Exhaust fan should be Havells/Orient and Bajaj make only.					
i.	Size 15 inches (380mm) Sweep, 900 RPM Heavy Duty Exhaust fan (Single Phase) with louver of Havells make (Turbo Force SP)/ Crompton make (EXHD380-6-1)/ Bajaj make (Supreme Plus)/ Orient make (Industrial Heavy Duty)/ Usha Make (Turbo HEDF) make only.	26 Nos.	5600/-	Each	145600.00	MR
13.	Supply and Erection of 14 GMS Sheet suitable size for erection of Exhaust fan. The hole should be suitable required size for exhaust fan shall be 19 ut from the centre of sheet duly fixed on existing MS glazing. The exhaust fan frame shall be painted on both side with superior quality paint after one coat of primer. The job includes the cost of 02 Nos. MS Strip of 25x6mm for proper holding the exhaust fan and other petty material required to complete the job to the entire satisfaction of EIC.					
	Suitable for 12"/15"/18 Exhaust fan	185 sq.ft.	209/-	P.sq ft	38665.00	MR
14.	DSR **ITEM NO 8.10** LED Batten light (System umen efficacy ≥120 <135 lm/Watt) Supplying, installation, Testing & Commissioning of LED surface mounted Batten light of following body material and					

	construction as per IS : 10322 with driver (Replaceable) as per the requirement with Driver efficiency >85% Operating voltage AC 140-270 Volt, freq 50/60 hz, Operating temp range -15 deg to 40 deg centigrade, internal surge protection of 2.5 KV with Short &Open circuit protection ,THD < 10% , P. F.≥0.95, IP20, CRI >80 , Flicker free (flicker should be below 5 %), life time (LED, Driver & electrical circuitry), of minimum 50000 Burning Hours with , 70% of initial Lumen maintained till life ends,CCT 3000°K / 4000°K / 5700°K /6000°K /6500°K (As per ANSI Bin), SDCM (Standard Deviation Color Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. Complete in all respect i/c connections with 1.5 sq mm FRLS, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥120 <135 lm/Watt output . LM79 & LM80 Test report from NABL lab for all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C). Powder Coated CRCA Sheet Body (Thickness > 0.50 mm)					
i.	40 watt	71 Nos.	721/-	Each	51191.00	DSR 8.10.8
15.	DSR **Item no. 10.18** Providing and fixing circular/ Hexagonal GI box for ceiling fan clamp, of internal dia 140 mm, 73 mm height, top lid of 1.5 mm thick GI sheet with its top surface hacked for proper bonding, top lid shall be screwed into the GI box by means of 3.3 mm dia round headed screws, one lock at the corners, clamp shall be made of 12 mm dia M.S. bar bent to shape as per standard drawing.	157 Nos.	220.65	Each	34642.00	DSR Civil
16.	**DSR ITEM NO 2.2** Providing and fixing following rating and breaking capacity and pole MCCB with thermo magnetic release and terminal spreaders in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.					
i.	100 A, 16 KA,TPMCCB	6 Nos.	4003/-	Each	24018.00	DSR
ii.	100 A,30KA,FPMCCB	12 Nos.	8127/-	Each	97524.00	DSR
iii.	200 A, 36KA,FPMCCB	4 Nos.	15956/-	Each	63824.00	DSR
iv.	400 A , 50KA,FPMCCB	1 No.	44663/-	Each	44663.00	DSR
17.	**DSR Item No 9.1** Brush Less Direct Current (BLDC) Motor Supply, Installation, Testing and Commissioning of ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. metal (Aluminum alloy) blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety					

	rope, copper winding, steel/Al body Power Factor not less than 0.9,Service Value (CM/M/W) minimum as below, 350 RPM (tolerance as per IS :374-2019), THD (Total Harmonic Distortion) less than 10%, remote (preferably mobile app based) for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 degree C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC Ceiling Fan compliant to IS 374:2019 fan Supply, earthing etc. complete as req.					
f)	1400mm, service value ≥ 6.0 CM/Min/Watt, air delivery 245 CM/Min (Minimum).	157 Nos.	2913/-	Each	457341.00	DSR 9.1.14
18.	DSR item no. **15.16** Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc. direct in ground (75 cm below ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc., complete as required.					
I.	63 mm dia (OD-63 mm & ID-51 mm nominal)	650 mtr.	289/-	PM	187850.00	DSR
II.	120 mm dia (OD-200 mm & ID-175 mm nominal)	510 mtr.	417/-	PM	212670.00	DSR
19.	Supply and fixing of 12 modules (200 mm x 150 mm) G.I box suitable for accommodate the following accessories along with modular base and cover plate for modular switches in recess/surface etc as required for Computer Point with 4 Nos. 5/6 Amps modular switch and 4 Nos. 3 pin 5/6 Amps modular socket outlet. The job includes the cost of making interconnections with suitable copper wire, painting of box with approved paint and other petty material required to complete the job to the entire satisfaction of Engineer-in-Charge at site. Makes for Modular Accessories and GI box:- Schneider (Zencelo) / Legrand (Arteor) / ABB (Cheiron) / L&T (Englaze) / Norisys (Square Series) / MK (Elements) / Crabtree (Murano) only.	45 Nos.	1500/-	Each	67500.00	MR
20.	DSR 8.1 LED Down lighter (SMD Type) (System lumen efficacy ≥ 105 -120lm/Watt) Supplying, installation, Testing & Commissioning of LED Recessed / surface Down lighter (Round/ square/ Rectangular) SMD type of following body material with PMMA and prismatic diffuser and construction as per IS : 10322 with driver as per the requirement with Driver efficiency >85%, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range -5 deg to 40 deg centigrade, internal surge protection of 2.5 KV with Short & Open circuit protection ,THD < 10% , P. F.≥0.95, IP20, CRI >80 , UGR (Unified Glare Rating) < 19, Flicker free (flicker should be below 5%), life time (LED,Driver & electrical circuitary), of					

	minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K / 6500°K (As per ANSI Bin), SDCM (Standard Deviation Color Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be confirming to relevant BIS standards and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing Complete in all respect i/c external connections with 1.5 sq mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥105 and ≤120 lm/Watt output. LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted.. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C) Powder coated die cast /Extruded aluminium Body including trim					
i.	22 watt	87 Nos.	942/-	Each	81954.00	DSR
21.	**DSR item No 8.8** LED Panel light 2x2 ft., (System lumen efficacy ≥135 lm/Watt) Supplying, installation, Testing & Commissioning of Panel light2x2 ft., of following body material and construction as per IS : 10322 with driver as per the requirement with Driver efficiency >85%, Operating voltage AC 140-270 Volt, freq 50/60 hz, Operating temp range -5 deg to 40 deg centigrade, internal surge protection of 2.5 KV with Short & Open circuit protection,THD < 10% , P. F.≥0.95, IP20, CRI >80, UGR (Unified Glare Rating) < 19, Flicker free, (flicker should be below 5 %), life time (LED,Driver & electrical circuitary), of minimum 50000 Burning Hours with , 70% of initial Lumen maintained till life ends ,CCT 3000°K / 4000°K / 5700°K /6500°K (As per ANSI Bin), SDCM(Standard Deviation Color Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. complete in all respect i/c external connections with 1.5 sq mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥135 lm/Watt output . LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C). Powder coated die cast /Extruded					

	aluminium Body (Thickness > 1.20 mm)					
i.	40 Watt	125 Nos.	4246/-	Each	530750.00	DSR
22.	**DSR item No. 6.1** .Providing and fixing of lightning conductor finial made of 25 mm dia 300 mm long, G.I. tube, having single prong at top, with 85 mm dia 6 mm thick G.I. base plate including holes etc. complete as required.	8 Nos.	609/-	Each	4872.00	DSR
23.	DSR 8.16 LED Flood Light, powder coated pressure die cast aluminum (System lumen efficacy ≥120 and <135 lm/Watt) Supplying, installation, Testing & Commissioning of Flood Light, powder coated pressure die cast aluminum body with built in or separate driver as per the requirement with Driver efficiency >85%, Input voltage: Input voltage: 140-270 Volt AC, freq 50/60 hz, Operating temp range -15 deg 1.16 DELHI SCHEDULE OF RATES (E&M) Volume-II 2025 14 to 50 deg centigrade, internal surge protection of 5 KV L,N,E as per IEC 61000-4-5, Driver efficiency >85%,THD < 10% as per IEC 61000-3-2 , P. F.≥0.95, IP-66,IK-10, CRI >80 , under voltage and over voltage protection, EMI-EMC as per CISPR-15, lenses for beam angle 30 deg-120deg as per the application and the project requirement deg, suitable tilt able fitting, life time (LED, Driver & electrical circuitry) of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends as per LM80 extrapolation IES TM-21-11 report , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , SDCM(Standard Deviation Color Matching) <5, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard complete in all respect i/c connections with 1.5 sq mm FRLS, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥120 and <135 lm/Watt output. LM79 & LM80 Test report from NABL lab for all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminum housing such that LED junction temperature shall not rise above 90°C).					
i.	150 Watt.	83 Nos.	3457/-	Each	286931.00	DSR 8.16.4
24.	S/E of Thermo Plastic cable Jn. Box IP55 of size 130 x 180 x 77 mm deep approximate with 4 nos. thermal block suitable for 1 no. incoming and 3 nos. outgoing cables. The terminal block shall be made of Hansel make KF-1010 G with terminal link or its equivalent make Wago/ Elmex/ Siemens only and cable junction box of make Hansel/ Legrand or its equivalent to IP55. The job includes all labour and petty material to required complete the job to the entire satisfaction of the Engineer in Charge of work.	31 Nos.	1485/-	Each	46035.00	MR

25.	S/E of M.S. bracket ('F' shape) made from 40mmx40mmx 5mm thick angle iron to be installed on existing parapet / wall with the help of suitable size of nuts & bolts etc. for erection of LED flood light fitting. The job includes cost of painting of bracket with superior quality of paint after applying the primer and all other petty material etc. as required to complete the job.	31 No.	735/-	Each	22785.00	MR
26.	Fabrication & erection of steel shutters for electrical niches as per following specifications: FRAME: The shutter of suitable dimensions for electrical nitch shall be made out of 16 G.M.S. sheet. The shutter frame shall be 1-1/2"x1-1/2"x1-1/2" channel frame 4 Nos. 'L' type holdfasts for fixing the same on the wall. The size of the shutter frame should be suitable for 2 Nos. door angels/ single panel depending upon the size of nitches. DOOR PANEL: The door panel shall have support in U-Shape formation made from 16 G.M.S. sheet with 4"x3/4"M.S. channel duly spot welded to give additional strength. The door panel shall be fixed with frame with the help of concealed M.S. hinges of suitable size having good strength. The door panel shall be provided with a bolting arrangement either of Godrej type or such type so as to interlock the door panel with frame. The handle shall be of superior quality and nickel plated to facilitate its opening. The door panel must have as arrangement to provide a pad lock. FINISHING: The frame & the door panel should be given anti-rust, anti-grease and phosphate treatment with 3 in 1 paste and then spray painted with two coats of paint of superior quality. The shutter should be carthed properly with the existing earth with No.8SWG wire after erasing the paint from the body of the shutter. The rate includes cost of all labour and material reqd. to complete the job to the satisfaction of the EIC.	5.5 Sq.Mtr	2665/-	P.S. M	14657.00	MR
27	S/E of floor mounting M.S. angle iron board covered with 14 GMS sheet fixed in to the Nitch or in ground for mounting switchgear. The board should have suitable legs made out of angle iron 50 mm x 50 mm x 6 mm thick and 2' long with supporting member grouted in the ground/floor with cement sand mixture etc. as required as per site requirement. The switches / BDB's / ELCB shall be provided with required no. of supporting member of M.S. flat 25mmx5mm to bring all the switchgear in one level including bonding the board switchgear etc. to the existing earth. The board shall be fabricated out of 40mm x 40mm x 5mm angle iron frame and shall be covered with a 14 GMS sheet duly welded for erection of switchgear items on it. The board shall be painted with two coat of approved shade of superior quality paint after one coat of primer. The rate includes carriage from factory to site, erection charges in the	5 Sq.Mtr	3790/-	P.S. M.	18950.00	MR

	niche and other petty material required at site of work.						
28.	Supply and Laying of following XLPE insulated and PVC sheathed, armored, aluminum conductor cable of 1.1KV grade as per IS 7098 (Part-I) 1988 (amended up to date) of the following sizes to be laid in existing trench/ DWC/RCC/HUME pipe as required at site. The job include the cost of making connections with suitable size of Al. Lugs/ thimbles, testing, commissioning etc. as required to the entire satisfaction of Engineer In Charge. The cable should be of Polycab / Havells / Finolex / RR Kabel/ KEI/ RPG/ Universal/ Grandlay make only.						
i.	10 sq. mm. 4 Core PVC Armored Aluminum conductor cable.	680 Mtr.	341/-	P.mtr.	231880.00	MR
	150 sq. mm. 3.5 Core PVC Armored Aluminum conductor cable.	225 Mtr.	1685/-	P.mtr.	379125.00	MR
	95 sq. mm. 3.5 Core PVC Armored Aluminum conductor cable.	185 Mtr.	1142/-	P.mtr.	211270.00	MR
29.	S/E of Bakelite sheet 3 mm thick white color to be fixed on the existing switch boards including screws, washer etc. after making holes. The job includes all labor and petty material to complete the job to the entire satisfaction of the E.I.C. of work.	600 sq.inch.	1.50	Each	900.00	MR
30.	S/E of sheet metal 3 phase bus-bur chamber on existing surface with required no. of bus-bar strips of suitable 1.6 mm thick with detachable cover fitted with dust excluding gasket and secured with sufficient no. of cadmium plated iron screws and of given overall dimensions and to be fixed with GI bolts and nuts/rag bolts and nuts etc. complete with all accessories including connections with suitable size tin coated copper thimbles, bonding to the existing earth & painting etc as desired by the EIC.						
i.	Sheet metal bus-bar chamber 200 amp 415 V capacity with 4 copper strip 3 feet long	2 No	7000/-	Each	14000.00	MR
31.	Supply and Erection of 40-45 Watt LED Post Top Lantern fittings made of cast alum. Housing with inbuilt Heat sinks. AUV stabilized PC /PMMA diffuser is provided for Glare Free Lighting with high visual comfort to complete with Electronic LED Driver Power supply & related accessories with the following specifications to be installed on existing pole. The make & model of the fitting should be of Bajaj Make BGCP 45 Watt LED WW/ Wipro LP06-351-XXX-57XX 35W LED/ Surya SLE PT 40 W RIGEL / Mayfair MF PTL LED 651 45W/ Panasonic PPTM 02408/ Kesslec Doha 40W CW/ Twinkle LuxMax-PT-151-S-(40) or its equivalent to Phillips/ Lighting Technologies/ Havells/ Crompton make only.						
A.	**Technical Specification**						
i)	Ingress Protection Level Of fitting	IP65 or better					

ii)	Total system lumens output	4000 Lumens (minimum) or better					
iii)	Luminaire efficacy	Minimum 100lm/w					
iv	Body of fitting	Pressure Die cast aluminum with poly methyacrylate (PMM) diffuser					
v)	Operating Voltage	100V to 270V, AC Supply or better					
vi	Input Frequency	50Hz+1Hz					
vii)	Power factor	Minimum 0.95					
viii)	Working/ Operating Temperature	-40^{0}C to + 105^{0}C or better					
ix)	Color Temperature	4000^{0}K±10%					
8.	**Electronic Driver**						
i)	Driver Current	Design based as per LM80 report.					
ii)	Type of driver	Constant current output silicon filled potted driver.					
iii)	THD	Less than 10%					
iv)	Operating Voltage	140V to 270V, AC supply or better					
v)	Surge protection	4KV (Internal) 10KV (External)					
vi)	Efficiency	≥85%					
viii)	Make of Driver	Should of same Make of luminaries					
vii)	Protection	Over voltage, Short circuit, Open, under voltage circuit etc.					
ix)	Guarantee of LE fitting Including LED driver	2 Year against manufacturing defect					
x)	Fixture	Should comply with LM 79 test from NABL Lab.					
xi)	LED Type/ Make/ Model	Power CREE/ OSRAM/ NICHIA/ Philips LUMILED with life more than 50000burning hours At 70% lumen Complying with LM80 Test report from the original manufacturer	2 nos.	11235/-	Each	22470.00	MR
32.	Supply and Erection of Steel Tabular Pole IS-410-SP-27 Swaged and Welded in Three Steps, 9 Meter Long, Weight 108 Kg.						

	conforming to IS 2713 (Part I & II 1980) amended upto date with the following specifications:					
i.	The Pole shall have a Sectional Length of 5.0-2.0-2.0 Mtr.					
ii.	The outside diameter and section thickness shall be 114.30 x 5.40 mm (Bottom), 88.9 x 4.85 mm (Middle) and 76.10 x 3.25 mm (Top).					
iii.	The Circular Base Plate-10G more than over all dia of bottom of the pole duly welded shall be provided.					
iv.	The pole shall be erected 1.50Mtr. below ground level in 10" (250mm) internal dia ready made RCC Muff/Pipe of 1.5 Mtr. in length. The gap between the pole and the muff shall be filled with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size). The job includes the cost of cutting of road/pucca floor for erection of pole.					
v.	The cost includes carriage, all labour and material including installation of Pole to the entire satisfaction of the Engineer-in-Charge	13 Nos.	12400	Each	161200.00	MR
33.	Supplying, Installation, Testing and Commissioning of 5 Meter height MS decorative type steel tubular pole suitable for installation of street light fixture, duly primed and painted. The pole shall be painted with MRF Poly urethane paint of approved colour. The bottom and middle embellishment are cast in iron and upper ring are cast in aluminium, fixed to the column by grub screw. The column shall be provided with inbuilt loop box, earth stud with 4way 25 Amp heavy duty connector, 1 No. SP MCB and shall have matching flush door, fabricated & painted complete with S/F 16mm dia. 600mm long hot dip galvanized L type Anchor bolts, plastering the same with fine sand and having horizontal top surface without any slope including two coats of trump exterior paint complete as required to complete the job to the entire satisfaction of engineer in charge.					
	The pole shall be divided in two sections:					
	Top:- Dia. 75mm. Length 4000mm					
	(3.2mm thick) or better.					
	Bottom:-dia 114mm. Length 1000 mm (4.0mmthick) or better.					
	Base Plate:-300mm x 300mm x 12mm thick duly welded to column					
	Make of Decorative Pole: - KLite/ Keselec/ Bajaj/ Homedec/ Mayfair/ Twinkle only.	2 Nos.	14550/-	Each	29100.00	MR
34.	DSR item No 7.4 Supplying ,installation, testing and commissioning of Astronomical time switch of following configuration to be mounted in feeder pillars / Lighting DBs for automatic switching On & OFF of street lights at sun set & sun rise or twilight(Auto					

	ON, Auto OFF, Auto modes) with manual override facility with 12/24 hour display format with suitable battery and indication for relay status i/c programming at site complete as required.					
i.	1 output per phase and suitable for single phase supply	2 Nos.	4673/-	Each	9346.00	DSR
35.	Supply and erection of Contactor T AC3 70 AMP RATING AND 100 AMPS RATING FOR AC1 unit suitable for 3 phase switching on/off. The job includes cost of 1 no. 3 phase MNX 70 CS97076 with built in SURGE SUPPRESSOR for coil of 220 Volt 50/60 Hz Rating L&T MNX/ Siemens 3TF/ ABB AX series. The contactor shall be installed on existing bakelite sheet with help nut and bolt. The job includes making incoming and outgoing connection with suitable copper wire and other petty material require to complete the job to the entire satisfaction of Engineer- in- charge.	2 nos.	8415/-	Each	16830.00	DSR
36.	Fabrication, Supplying, Installation, Testing and Commissioning of outdoor type double door Electric Control Panel of cubical construction conforming to IEC 61439 (Part I & Part II), floor mounted type, fabricated out of 2 mm thick CRCA sheet, compartmentalized with hinged lockable doors, dust and vermin proof, powder coated of approved shade, having suitable capacity TPN Aluminum bus bars, DMC/ SMC bus bar supports, base frame of MS channel 100mm x 50mm x 6mm size, having switchgears and accessories , internal wiring with 2.5 sq.mm PVC insulated single core cable, common copper earth bar of size 25 x 5 mm over the entire width of panel and 2 nos. earth studs, cable entry from the top & bottom, cable gland plates, numbering, labeling etc. complete in all respect, suitable for operation on 415 V, 3 phase, 50 Hz. AC supply with protection class IP 54 as required. The job includes the cost of MCCB, accessories, interconnection with solid connection, carriage and installation of cubical panel at site to the entire satisfaction of Engineer in charge. The outdoor type double door Electric Control Panel should have provision of following switchgear and accessories:- (Note:- (Note: All MCCBs shall be with ROM, Spreader terminals)					
A.	**INCOMING**					
i.	400 Amps. 50KA, four Pole, Thermal magnetic release , MCCB (Ics = Icu at 415 V) with adjustable O/L and adjustable S/C protection :- 1 No.					
B.	**BUS BAR**					
i	TPN Aluminum bus bars (having 100% Neutral) of minimum of 400 Amps. Capacity with heat shrinkable colored sleeves and i/c DMC/SMC bus bar supports at required intervals complete for cross section, size supports & their spacing etc. for withstanding fault level of 51 MVA for 1 Sec. The current density of aluminum bus shall be 1 Amp/sq. mm.- 1 Set.					

C.	**OUTGOING**					
i.	200 Amps. four Pole, Thermal magnetic release , MCCB (Ics = Icu at 415 V) with adjustable O/L and adjustable S/C protection:- 200 amp. -2 Nos					
	100 amp. four pole Thermal magnetic release , MCCB (Ics = Icu at 415 V) with adjustable O/L and adjustable S/C protection:- 100 amp. -6 Nos	1.95 sq.mtr. No.	67280/-	Each	131196.00	MR
37.	Supply and Erection of Cement Collar and Jn. Box at the base of the pole with the detailed specification as given below.:					
A.	Jn. Box Construction:					
i.	Supply & fixing of OEM made Junction box IP-66/67 made out of Polycarbonate with Glass fiber reinforced of size 205x255x112 (mm) (minimum) with 5 Nos. OEM made connectors/ terminal blocks. The Jn. Box and connectors/ terminal blocks should be supplied by OEM. The terminal blocks/ connectors should be of Hensel / Wago / Elmax / Siemens make only and junction box shall be of Hensel make KF 2525 G or its equivalent Clipsal / Legrand / Schneider / ABB make only. The Junction box shall be fire retardant and self extinguishing. The gasket material shall be polyurethane and the gasket shall be internally embedded. The job includes all labour and petty material required to complete the job to the entire satisfaction of the Engineer in Charge of work.					
B.	Cement collar:					
i.	The box shall be enclosed in a cement collar made from cement concrete 1:2:4 with outside dia 16"/18".					
ii.	The collar shall be embedded in the ground upto 6" shall stand 9" above ground shall have high equal to Junction box and 6" top over the box.					
iii.	The collar shall be provided with medium class 2 Nos. PVC Pipes of 50 mm dia. & 45 cm long to facilitate the entry of cables in the Jn. Box.					
iv.	The collar shall be plastered, properly finished and painted with 2 coats of showcem of superior quality to complete the job including new thimbles & making connections.					
v.	The job includes all labour to break the old existing collar & junction box including disposal of waste material from site and petty material required to complete the job to the entire satisfaction of the E.I.C. of the work. The dismantled junction box shall be property of the firm. The recovery shall be made from the firms.	15 Nos.	5950/-	Each	89250.00	MR
38.	Supply and erection of sheet metal cubical pedestal of suitable dimensions made from 40 mm X 40 mm X 5 mm thick M.S angle iron frame, covered with 2 mm thick M.S. sheet duly welded on five sides and front side hinged complete with locking arrangement with 4 Nos. switchgear supporting members each of M.S. flat 50 mm X 6 mm thick of suitable length duly welded. The cubical pedestal shall have 4					

	Nos. legs of 40 mm X 40 mm X 5 mm each 60 cm long M.S. angle iron each long including painting, bonding to the existing earth etc. the same shall be erected in the 1:2:4 cement concrete plat-form of suitable dimensions 15cm high form ground level and 45 mm thick. The cubical pedestal shall be 15 cm from the top of cement concrete platform.					
i.	Cubical size 900 mm X 600 mm X 350 mm	2 Nos.	10400/-	Each	20800.00	MR
39	Supplying and erection of MCCB BDB of following ways surface/ recess mounting, vertical type, MCCB 415 V, BDB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCCBs 4 pole with MCBs and incomer as required to complete the job. The job includes cost of all labour and other petty material required to complete the job to the entire satisfaction of Engineer in charge of the work. The make should be of Lauritz Knudsen/ Hager/ ABB/ Legrand only.					
	8 way (4 + 24), Double door	6 Nos.	19200/-	Each	115200.00	MR
	TOTAL				6631813/-	

Sub Divisional Engineer,
Electrical Sub Division No.7,
Chandigarh.

Executive Engineer,
Electrical Division No. 5,
U.T., Chandigarh

Superintending Engineer,
Electrical Circle,
U.T., Chandigarh

GENERAL AND COMMERCIAL CONDITIONS FOR THE WORK

1) The work shall be generally carried out in accordance with tender/bid specifications and the following specifications /rules.
   a) CPWD General Specifications for Electrical work Part I Internal 2013, as amended upto date.
   b) CPWD General Specifications for Electrical work Part II External - 1994, as amended upto date.
   c) Commercial and Additional conditions for this work and as per directions of Engineer-in-charge.
   d) The Indian Electricity Act, 2003, as amended upto date.
   e) Indian Electricity Rules 1956 amended upto date.
2) This specification covers manufacture, testing as may be necessary before dispatch, delivery at site, all preparatory work, assembly and installation, commissioning putting into operation of equipments consisting of Earthing etc. and final testing of all Electrical installation etc.
3) The firm will have to follow fair wage clause.
4) Sub-standard work will not be accepted.
5) No claim on account of fluctuation in prices due to any reason shall be considered.
6) The quantity can be increased or decreased as per actual requirement at site.
7) The contractor has to employ qualified Engineer for the supervision of work at site.
8) Any error or omission in nomenclature & technical specifications or unit can be corrected at any stage as required during the execution of work at site.
9) The department has reserved the right to waive off or to issue any amendments to the technical specifications, approved makes, terms & conditions and provision of the work order/purchase order as and when required at site during execution or work.
10) For Sub-main Wiring, Colour Code for different phases and Neutral (R.Y.B. black) to be maintained. While circuit wiring, wiring for fan point, wiring for light point shall be done with different colours for easy identification. Wiring for neutral shall be done with black colour and all connections to fans & fittings wherever visible shall be made with white PVC insulated copper wire or wherever cover sleeve may be provided. At Switch board, Switch shall be fixed in a logical manner w.r.t. fittings layout. All DB's i/c incoming & outgoing MCB's shall be suitably numbered for location/circuits.
11) All fittings and fans should be properly earthed through the protective conductor. Provision of earth bars in main boards, earth terminal block in DB's & earth studs in all metal boxes shall be made, connection to this stud shall be crimped.
12) The size at switch box for providing Switches/Sockets shall be properly settled to take care of all necessary switches/screws/fan regulators.
13) Material to be used in the work shall be ISI marked as applicable. The material in required quantity to be used in the work shall be got approved from the Engineer-in charge before its use at site. The Engineer-in-charge shall reserve the right to instruct the contractor to remove the material which, in his opinion, is not as per specifications.
14) The work shall be carried out in engineering like manner. The bad workmanship will not be accepted and defects shall be rectified at contractor's cost of the satisfaction of the Engineer-in-Charge. The programmer of electrical works are to be coordinated in accordance with the building work and no claim for idle labour will stipulated in the tender, electrical work shall have to be completed alongwith completion of civil work.
15) The contractor or his representative is bound to sign the site order book as and when required by the Engineer-in-Charge and to comply with the remarks therein.
16) Copper wire shall be FRLS PVC insulated multi-stranded conductor. Termination of multi-stranded conductors shall be done using crimping type thimbles at both the ends. Nothing extra shall be paid for the same.
17) Samples of all materials like conduits, accessories, switches, wires, control cables etc shall be submitted to the Engineers-in-charge/site representative prior to procurement. These shall be submitted in two sets for approval and retention by Engineers-in-charge/site representative and shall be kept in their site office for reference and verification till the completion of the Project.
18) The contractor shall be bound to execute any extra DSR/MR items if required at site at the same percentage rates as quoted by the firm if, the rate quoted by the firm are below the DNIT amount.
19) The Contractor/Agency shall make arrangement of water for construction purpose. In case the contractual agency takes temporary water connection from the MCC then recovery of

water charges shall be made as per notification regarding the Chandigarh water supply bylaws, 2011 @1.5percent shall be charge of the cost of the construction of the Building instead of at 1% of the contractors/ Agencies for water used for contraction / Renovation / Repair/ Additional/ Alteration for Building of part thereof.

20) The unit rate of each item of equipment/accessory listed in the schedule of requirement should be inclusive of supply delivery erection testing and commissioning charges. The rates shall be on firm prices base. The price should be inclusive of all duties & taxes.

i. The Department Reserves the right to order the final quantity for the units rates quoted on the tender by the tenderer shall consider as valid.

ii. The tenderer shall acquaint with the work and working conditions at site and locality. No claim shall be entertained on this issue after the offer has been submitted.

iii. The unit rate of the equipment and accessories listed in schedule of requirement shall include the followings. The tenderer must quote for each item contained in the schedule of requirement.

a) Cost of material/equipment.
b) All charges for containers and packing.
c) All charges necessary to effect free delivery of material/equipment and other T&P items at their work site including loading of equipment at site.
d) All charges such as freights, insurance, customs, excise clearing charges etc.
e) GST or any other tax on equipment/T&P's covered in scope of work. Nothing shall be paid extra.
f) Erection charges in respect of all items required to complete the entire work under each item.

21) Completeness of tender: -All hardware items such as screws, thimbles, G.I. wires etc. which are essentially required for completing an item as per specifications will be deemed to be included in the item even when the same have not been specifically mentioned. All hardware materials such as nuts/bolts/screws/ washers etc. to be used in the work shall be bezinc/cadmium plated iron.

22) Conduit layout shall be prepared by contractor. Minimum number of junctions to be kept, & if required junctions to be kept underneath the fitting locations in corridor/rooms so that junctions are not visible after fittings are fixed/in position. Drop of conduit shall be well planned w.r.t. location of fitting/D.B. and criss crossing to be avoided.

23) Storage and custody of materials: - The Contractor should make his own arrangement for storage of materials and erection equipments and no separate storage accommodation shall be provided by the department. Watch and ward of the stores and their safe custody shall be the responsibility of the contractor till the final taking over of the installation by the department.

24) Defect Liability Period: -All equipments except LED fittings & Fans shall be guaranteed for a period of one year from the date of taking over the installation by the department, against unsatisfactory performance and/or break down due to defective design, workmanship or material. However LED fittings alongwith Electronics Drivers & Ceiling fans shall be guaranteed for the period of 2 Years from the date of taking over the installation by the department. The guarantee is directly from the original manufacturer. The contractor shall submit the guarantee certificate from the OEM to the department agreed by not below the Rank of Regional Manager, Director or Proprietor of the firm. The guarantee of replaced/rectified item shall remain for balance period from the date of rectification/replacement. The equipments or components, or any part thereof, so found defective during guarantee period shall be forthwith repaired or replaced free of cost, to the satisfaction of the Engineer-in- Charge. In case it is felt by the department that undue delay is being caused by the contractor in doing this, the same will be got done by the department at the risk and cost of the contractor. The decision of the Engineer-in-charge in this regard shall be final. The tenderer shall guarantee among other things, the following:

a) Quality, strength and performance of the materials used as per manufacturers standards.
b) Safe mechanical and electrical stress on all parts under all specified conditions of operation.
c) Satisfactory operation during the maintenance period.

25) Care of the building: - Care shall be taken by the contractor while handling and installing the various equipments and components of the work to avoid damage to the building. He shall be responsible for repairing all damages and restoring the same to their original

finish at his cost. He shall also remove at his cost all unwanted and waste materials arising out of the installation from the site of work.

26) Power supply: - The contractor shall make his own arrangements for electrical power supply for the construction activities during the agreement period. No extra payment for the same will be made.

27) Acceptable makes of various equipments:-The acceptable makes of various equipments/components/accessories have been indicated in the List of Acceptable Makes of equipments/ materials". The tenderer shall work out the cost of the offer on this basis. Alternate makes are not acceptable and tender with any other make (s) shall be rejected.

28) Approval of Drawings Makes and Models of Equipment/Materials for All E&M Components

a) The agency shall submit drawings and details such as makes and models of the equipment's/materials offered by him along with specifications for all E&M components to the Engineer-in-charge of the work, before ordering the equipment/materials for approval of the department.

b) The Engineer-in-charge shall scrutinize the proposal and approve the makes and models which are acceptable as per the schedule, specifications, conditions of the agreement and inform the agency for procurement.

c) After approval of the equipment/materials by the department the agency shall procure the equipment/materials from the OEM/authorized distributor/dealer as the case may be.

29) Compliance with Regulations and Indian Standards:- All works shall be carried out in accordance with relevant regulation, both statutory and those specified by the Indian Standards related to the works covered by this specification. In particular, the equipment and installation will comply with the following:

a. Factories Act.
b. Indian Electricity Rules.
c. B.I.S. & other standards as applicable.
d. Workmen's compensation Act.
e. Statutory norms prescribed by local bodies like Chandigarh Electricity Department, CPCB Norm as amended upto date etc.

Nothing in this specification shall be construed to relieve the successful tenderer of his responsibility for the design, manufacture and installation of the equipment with all accessories in accordance with currently applicable statutory regulations and safety codes. Successful tenderer shall arrange for compliance with statutory provisions of safety regulations and departmental requirements of safety codes in respect of labour employed on the work by the tenderer. Failure to provide such safety requirement would make the tenderer liable for penalty of Rs 5000/- (Rs Five Thousand only) for each default. In addition, the department will be at liberty to make arrangement for the safety requirements at the cost of tenderer and recover the cost thereof from him.

After completion of the installation, the same shall be offered for inspection by the representatives of the (CED) Chandigarh Electricity Department. The contractor will extend all help including test facilities to the representatives of CED. The observations of CED will be attended by the contractor. The installation will be commissioned only after getting clearance from CED.

30) Extent of work

i. The work shall comprise of entire labour including supervision and all materials necessary to make a complete installation and such tests and adjustments and commissioning, as may be required by the department. The term complete installation shall not only mean major items of the plant and equipments covered by specifications but all incidental sundry components necessary for complete execution and satisfactory performance of installation with all layout charts whether or not those have been mentioned in details in the tender document in connection with this contract as this is a turnkey job.

ii. The cables and other items shall be brought at site after taking correct measurements.

iii. In addition to supply, installation, testing and commissioning, of all E&M equipment, following works shall be deemed to be included within the scope of work to be executed by the tenderer as this is a turnkey job.

a) Minor building works necessary for installation of equipments, foundation, making of opening in walls or in floors and restoring them to their original condition finish and necessary grouting etc. as required.

b) All necessary supports may be arranged.
c) Testing of CTs for metering & protection purpose & relay calibration & setting.
d) Getting inspection done & obtaining approval for energizing the installation.

31) Inspection and Testing:- All the major equipments/material shall be offered for initial inspection at manufacturer's works. The contractor will intimate the date of testing of equipments at the manufacturer's works before dispatch. The successful tenderer shall give advance notice of minimum two weeks regarding the dates proposed for such tests to the department's representative to facilitate his presence during testing. The Engineer-in-charge may witness such testing. The cost of the Engineer's visit to the factory will be borne by the Department.

a) Copies of all documents of routine and type test certificates of the equipment, carried out at the Manufacturer's premises shall be furnished to the Engineer-in-charge and consignee.
b) After completion of the work in all respects the contractor shall offer the installation for testing and operation.

32) In case of negligence on the part of supplier/contractor to execute the order contract with the negligence and to comply with any reasonable orders given in written by the Purchaser, and/on contravention if any provisions of the work order / contract the department may give 21 days' notice in writing to the supplier / contractor to make good the failure or negligent or contravention and if the supplier / contractor fails to comply with the notice within time considered to be reasonable by the purchaser, he will have the right to main risk purchase / work order for full or part of the quantities at the risk and cost of the supplier and or cancel the contract and claim due compensation / damages from the tenderer. Further in case of such default by the Supplier/Contractor the purchaser may also suspend business dealings with the supplier/contractor apart from claiming reasonable compensation/damages for failure of security etc.

33) Indemnity: - The successful tenderer shall at all times indemnify the department, consequent on this works contract. The successful tenderer shall be liable, in accordance with the Indian law and regulations for any accident occurring due to any cause and the contractor shall be responsible for any accident or damage incurred or claims arising there from during the period of erection, construction and putting into operation the equipments and ancillary equipment under the supervision of the successful tenderer in so far as the latter is responsible. The successful tenderer shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful tenderer on account of the above.

34) Erection tools: -No tools and tackles either for unloading or for shifting the equipments for erection purposes would be made available by the department. The successful tenderer shall make his own arrangement for all these facilities.

35) Verification of correctness of equipment at destination: -Contractor shall preserve the copies of invoices, test certificates, gate passes etc. to prove the genuineness of material/purchases. The contractor shall have to produce all the relevant records to certify that the genuine equipments from the manufacturers has been supplied and erected.

36) Painting:- This shall include cost of painting of the entire installation. The major equipments like LT panel, bus duct, cable trays etc. shall be factory final finish painted. The agency shall be required to do only touching to the damages caused to the painting during transportation, handling & installation at site, if there is no major damage to the painting. However hangers, supports etc. of bus trunking & cable tray etc. shall be painted with required shade including painting with two coats of anticorrosive primer paint at site.

37) Security deposit: -A sum @2.5% of gross amount of the bill shall be deducted from each running bill and final bill paid to the contractor. The security deposit shall be released on the expiry of guarantee period& free AMC period stipulated in the contract.

38) Penalty/Damages for delay in delivery: -If the supplier fails to deliver the material / equipment within the stipulated delivery period of the purchase order / contract, the same is liable to be rejected and if accepted, the tenderer shall be liable to pay as penalty, charges as per the CPWD manual instructions, but not exceeding maximum limit of 10% of the cost of complete unit of undelivered equipment / work so delayed or part thereof.

39) Force majeure:-During the pendency of the contract/purchase order, if the performance in whole/part by wither part or any obligation the tenderer is prevented/ delayed by cases arising out of wither party of any obligation the tenderer prevented /delayed by cases arising out of any war hostilities commotion acts of the public enemy sabotage fire, floods, explosion, epidemic or non- availability of Government controlled raw material under

orders instructions of central, Civil Militant authorities on any other causes beyond their reasonable control neither of the two parties shame made liable for loss or damages orders instruction of Central, Civil Military authorities on another causes beyond their reasonable control neither of the two parties shall be made liable for loss or damages due to delay of failure to perform the contract, during the currency of Force Majeure conditions provided that happening is notified in writing with documentary proof.

40) One Number LED fitting of each type i.e. LED panel light 2'x2' Luminaries taken from lot of fitting shall be got tested for photometric test, electrical parameters, THD, Surge Protection, IP Rating from the 3rd party NABL Govt. approved lab before installation at site. The cost in respect of testing LED fittings shall be borne by the department. If the fitting fails the test, the firm has to install the other approved make of the fitting and the cost for the testing of other make fitting from the lab shall be borne by the firm.

41) Comprehensive insurance cover for men, machinery and all parts shall be arranged by the firm for entire period of contract. The contractor shall make his own arrangement to receive and store the material. The settlement of claims with insurance company, transport authorities etc. for any loss / damage occurring during transit and storage at work site shall entirely be the responsibility of the contractor / tenderer. In case, the contractor fails to provide such any insurance cover, the department may get the material insured at the cost recoverable from the tendering firm / contractor.

42) All the legal proceedings in connection with this purchase order/contract shall be subject to the territorial of Local Civil Court at Chandigarh.

43) The firm will submit the test report for LM 79 & IEC standards for safety, performance and Efficacy of LED fittings form Govt./NABL/UL accredited lab & LM-80- report from the chip manufacturer of LED.

44) Association of specialized Firms for E&M Works:- The main contractor will associate other Specialized Agency(s)/Firm(s) with himself for execution of specialized works of E&M sub heads who fulfill the eligibility criteria as mentioned below:-

Sr. No.	Specialized work(s) / item of work(s)	Eligibility Criteria of Associated Agencies
	Minor works (E&M)	
1)	Electrical Installation Work Estimated Cost Put to Tender Rs.66,31,813/-	Agency should have satisfactorily completed the similar works as mentioned below during the last seven years ending last day of month previous to the one in which tenders are invited: 1. Three similar nature works each of value not less than 40% of estimated cost put to tender. OR 2. Two similar nature works each of value not less than 60% of estimated cost put to tender. OR 3. One similar nature work of value not less than 80% of estimated cost put to tender. Similar works shall mean "Providing, Installation, Testing & commissioning of Electrical Installation Works. Further Agency should have valid Appropriate Class LT Electrical License.

The value of executed similar works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to previous day of last day of submission of bids.

i. The main contractor has to submit details of such agency to be associated to the Engineer-in-charge of E&M Work within 30 days from date of start of work for approval. The associated agency shall be approved by Engineer-in-charge of E&M Work. In case the main contractor intends to change associated agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in-charge of E&M Work. The new agency/agencies shall also have to satisfy the eligibility criteria as above. In case Engineer-in-charge is not satisfied with the performance of any agency, he can direct the main contractor to change the agency executing such items of work and this shall be binding on the contractor.

ii. In support of the eligibility conditions of the proposed associated electrical contractor, copy of their registration documents, Electrical Contractor's License, GST documents, affidavit of blacklisting as per approved format and eligibility

documents duly attested by the applicants (Main Contractor) shall be submitted to the Engineer-in-charge of E&M Work for approval.

iii. The main contractor has to enter into an agreement with contractor(s) associated by him for execution of E&M sub heads. Copy of such agreement shall be submitted to Engineer-in-charge of E&M Work.

iv. The main contractor shall be responsible and liable for proper and complete execution of the E&M work and ensure coordination and completion of both Civil and E&M work.

v. The associate or sub-contractor shall attend the inspection of the work by the Engineer-in-Charge of E&M works as and when required.

vi. The agencies executing the Electrical Works shall have Appropriate Class valid Electrical License for LT/HT as applicable.

Note:-

The main contractor is also be eligible to carry out himself/herself of these works without associating specialized agency provided:

a. He fulfills the prescribed eligibility criteria respectively for these work(s).

OR

a. He directly procures the equipments of approved make(s) from OEM and gets it installed from authorized agency/service provider of the OEM or specialized agency fulfills the eligible criteria mentioned in the NIT.

The main contractor and the associated specialized agency(s) shall give required affidavit to confirm their association and for compliance of specifications, guarantee etc.

45) Maintenance

a) Sufficient trained and experienced staff shall be made available to meet any exigency of work during the guarantee period of 12 months from the handing over of the installation.

b) The maintenance, routine as well as preventive, for 12 months from the date of taking over the installation as per manufacturer's recommendation shall be carried out on monthly basis. The work shall cover all routine and breakdown maintenance.

c) Experienced and Trained Engineer should also be made available as & when required during the guarantee period.

46) Completion drawings:-Upon completion of the work and before issuance of certificate of virtual completion the contractor shall submit to the Engineers-in-charge/ site representative four set of layout drawings in progressive manner for individual systems drawn at approved scale indicating the complete wiring system as installed. Drawing shall be prepared on AUTO-CAD. Along with the hard copies. These drawings must provide:

a) Run and size of conduits, inspection, junction and pull boxes.

b) Number and size of conductors in each conduit with phase identification.

c) Location and rating of sockets and switches controlling the lighting and power outlets.

d) Location and details of distribution boards/panels, mains, switches along with phase balancing details.

e) A complete wiring diagram as installed and single line diagrams showing all connections in the complete electrical system.

f) Location of all earthing stations, route and size of all earthing conductors' manholes.

g) Layout and particulars of all LT cables.

In addition to above, four (4) sets of the followings shall also be supplied to the Engineer-in-charge for Major Equipments.

a) Operation Manuals,

b) Technical Literature for the various components of equipment,

c) Controls and Accessories installed,

d) Services Manual

47) The approved makes for the work is as under:-

Sr.No.	Description	Approved Makes for the work
1)	Piano Type Accessories	Anchor (Penta PC) / Goldmedal (Essenza) Vanilla Switches / Havells (Reo Flair) makes only
2)	PVC conduit (ISI mark):-	Polyplast / Diplast / Precision / Anchor only.
3)	Steel Conduit (ISI mark) :-	AKG / BEC / NIC only

4)	Call Bell:-	Goldmedal / Anchor / Havells / Cona / L&T make only
5)	3 Pin, 5 A Ceiling Rose	Goldmedal / Havells / Anchor / L&T make only
6)	Bakelite sheet (ISI Mark):-	Super Hylam / Formica / Greenlam only.
7)	Modular Accessories & G.I. Box	Schneider (Zencelo) / Legrand (Arteor) / ABB (Ivie) / Norisys (Square Series) / MK (Elements) / North-West (Platia) (Crabtree (Murano) / L&T (Englaze) makes only.
8)	FRLS PVC insulated copper conductor single core cable (ISI Marked):-	Havells / Polycab / RR Kabel / KEI / Finolex / Lapp make only.
9)	MCB SPN DB / TPN DB / VTPN DB (Distribution Board) Double Door Etc.	Hager (Novello^{+}) / Legrand (Ekinox) / Schneider (Acti-9) / Siemens (Betagard)/ ABB (Elegance) / L&T (Exora) only.
10)	MCB SP / MCB SP&N / MCB TPN / RCCB Etc.	Hager (H3) / L&T (Exora) / Siemens (Betagard) / ABB (SB200M) / Schnieder (Acti-9) / Legrand (DX3) only.
11)	BEE 5 Star Rated, Ceiling Fan with Brush Less Direct Current (BLDC) Motor	Havells / Orient / Crompton / Bajaj / Usha / Atomberg only.
12)	GI Pipe Medium Class (ISI marked)	Jindal / Hindustan / SAIL / Tata / Zenith only.
13)	End termination with brass compression gland and aluminium lugs	Jainson / Asian / Commet / Cosmos / Barco / Dowells / Raychem / Gripwell / ABB only.
14)	Intelligent multifunction meter	Conzerv / Schneider / L&T / Siemens / Neptune / Enercon / ABB only
15)	Indicating Lamp (LED Type)	Siemens / Teknic / L&T / BCH / ABB / Schneider only
16)	DWC HDPE pipe ISI marked	Telerex / Dura-Line / Tirupati / Gemini / Astral / Utkarsh / Supreme only.
17)	Connector/Terminal Block	Elmax / Connectwell / Essen / Wago only.
18)	Astronomical Time Switch complete	L&T / Siemens / ABB / Schneider/ Legrand / Hager only.
19)	MCCB with Thermo Magnetic Release (Ics = 100% of Icu) and terminal spreaders	L&T (D Sine) / Schneider (Compact NSX) / Siemens (3VA) / ABB (T-max) / Legrand (DPX3) only
20)	LED fittings	Philips/ Wipro/ Bajaj/ Havells/ Surya/Jaquar/ Trilux/ LT/Crompton/Panasonic
21)	All other items not covered above	As per approval of the Engineer-in-charge.

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LIST OF PREFERRED MAKES

A. FOR CIVIL/SANITARY WORKS

Sr. No.	Material	Preferred make
1	(i) Ordinary Portland/ Portland Pozzolona Cement (Grey) (43 Grade)	ACC, L&T, Gujarat Ambuja, Birla, J.K. Lakshmi, Ultrateck, Binani
	(ii) White Cement	Birla White/ J.K. White
2	Steel/ Reinforcement Steels	SAIL, TISCO, RINL, Jindal Panther, IISCO
3	Veneered particle Board	Novapan, Kitply, Anchore, National, Archidply, Greenply Century ISI Maekrd
4	Laminated Particle Board	Novapan, Kitply, National Archidply (1st Quality)
5	Flush door shutters	Kutty Flushdoor, Kitply Industries (Swastik), Jawala, Samrat Laminate Pvt. Ltd. (Samrat), CNC Commercial Ltd. (Shivalik), SR Jindal Ply Wood Industries (Prima), GEE Door (Century) Kandran
6	Steel Windows/ Pressed Steel frames	San Harvic, Steelman Industries, PD Industries, Metal windows, Chandani Industries, Ganapati Udyog (Rajpura), Singla steel processor (Barwala)
7	Water proofing compound	Forsoc, Cico, Pidilite, Sika, Asian
8	M.S. Pipe (ISI Marked)	Tata, Jindal (Hisar), Parkash steel Tubes, Bhushan Industries (1st Quality Premium)
9	PVC/PPR pipe and fittings (ISI Marked)	Supreme, Finolex, Prince, Diplast, Kissan, AKG, SFMC, Vectus, Ashirwad
10	Acrylic Distemper	Asian paints, Nerolac, ICI Dulex, Berger.
11	Synthetic Enamel Paint	ICI (Dulux Gloss), Nerolac, Asian Paints Premium Apcolite Gloss, Berger.
12	Steel Primer	ICI, Nerolac, Asian Paints, Dulex, Berger, ICI India
13	Wood Primer	ICI, Nerolac, Berger, Asian Paints, ICI India ltd.
14	Ceramic glazed /Rectified Tiles	Kajaria, NITCO, RAK, Johnson
15	Dash/ Anchoring Fasteners	HILTI / Fischer
16	Nuts/Bolts and Screws	GKW, Atul, kundan, Priya
17	Stainless Steel Sink (made out of Salem Steel only)	AMC, NIRALI, Diamond, Jayana, Neel Kanth, Jal, CERA
18	Stainless steel pipe 304 Grade	Jindal, Vega, J. Steel (ISI Marked)
19	Stainless steel OWC, EWC, washbasin	Jayana, Nirali, Neel Kanth
20	Brass Ball valve with plastic float ISI	Viking, KPR, ZOLOTO (ISI Marked), KARTAR, SANT or ISI marked
21	Admixture	Fosroc, Sika, CICO, Asian, Pidilite
22	Vitreous Chinaware items including seat cover	Cera, Parryware, Hindware, Jaquar, JAL, Kerovit

Scanned with OKEN Scanner

23	PVC Flushing Cistern	Hindware, Cera, Prayag, Parrywave, Kerovit, JAL, Jaquar
24	C.P. Fitting (ISI marked)	Jainko, Cera, Jal, ESSCO, Marc, Hindware, Excel, Kerovit, Player, ESSEL
25	C.P. Fitting	Jaquar, Mark, Hindware, Cera, Ess Ess, Jal, Kerovit, Player, ESSEL
26	Centrifugally Spun Cast Iron pipes and fittings (ISI Marked)	BIC, NECO, NIF, SKF, NIC, Adhunik, RPMF (Raj Pattern)
27	G.I. pipes (ISI Marked)	Jindal (Hissar), Tata,
28	G.I. Fittings (ISI Marked)	SVW, AVR, NVR, UNIK
29	Gun metal valves (ISI marked/Ball Valves)	Leader, Zoloto, Sant, Kartar or ISI marked
30	Stoneware pipes and gully traps	S.W. pipes ISI Marked
31	Mirror Glass	Atul, Modi Guard, Saintgobain or ISI marked
32	Vitrified tiles	Kajaria NITCO, RAK, Johnson
33	Grouting compound	Endura, Pidilite
34	Pumps/Mono block pump/submersible motors	Kirloskar, Worthington, Crompton, Seetax, KSB, Lubi, Grundfos
35	Cable (Submersible) (ISI Marked)	Finolex, BCH, L&T, Havells
36	Pressure Gauge	Fiebig, H. Guru or ISI marked
37	C.I. valve (ISI marked)	Zoloto, Leader, Kartar, Bir, SIR
38	Electrical switch gear and accessories	Havells, Vag standard, L&T, Siemens, Schneider, BCH
39	PTMT fitting (ISI marked)	Parvag, Ashirwad, POLYTUF
40	PVC tanks (ISI Marked)	Sintex, Diplast, Ashirwad, Orient, Frontline Supers, S P L
41	PVC connections	Viking, JAL or equivalent
42	D.I. pipe fitting	AVK, VAG, SIR, Jindal (Saw), Electrosteel, Jai Balaji, Tata or ISI marked
43	D.I. pipe (ISI marked)	Jindal (Saw), Electrosteel, Jai Balaji, Tata, or ISI marked
44	CPVC pipe (ISI marked)	Ajay, Astral, Aashirwad, Vectus, Himalyan
45	HRL Panel	Marino, Greenlam, Century,
46	Geyser	Jaquar, Racold, Bajaj, A.O.Smith, Havells
47	Water Purifier	Kent, Usha, Pure-it, Blue Star, Eureka-forbes
48	Water Cooler	Blue Star, Voltas, Climatrol
49	Voltage Stabilizer	V-guard, Deol, Luminous, Microtech
50	Manhole SFRC cover (ISI marked)	Venus, OCR, Gento-crete, Crystal
51	CP waste/Grating	Jayna, Viking, ESSCO, CERA, Jaquar, Kerovit
52	PVC pipe for T/well (ISI marked)	Durable, Super, Supreme, Diplast, Finolex, Prince, Aashirvad, Kissan
53	HDPE Pipe	Himalyan Pipe, Supreme, Diplast, Finolex, Aashirvad, Kissan

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54	UPVC Pipes & Fittings	Durable, Super, Supreme, Diplast, Finolex, Prince, Aashirvad, Kissan
55	Concealed Cistern	Jaquar, Jal, Kerovit, Cera, Hindware
56	Rain water harvesting	
	(i) PVC casing Pipe	Finolex, Supreme, Ashirvad, Diplast Prime, Durable
	(ii) PVC Medium Well Screen	Finolex, Supreme, Ashirvad, Diplast Prime, Durable
57	Glass Mosaic Tiles	ITALIA, OPIO QR Eqmlent.
58	Aluminium Sections	Hindalco, Jindel, Indian Aluminium CO.
59	Grouting Compound / Epoxy	Enaura, pidilite.
60	Glass panes (Float Glass & Tempered Glass)	Modi Float, Saint Gobain, Ashahi
70	Admixtures (Super Plaster)	BASF, Sika, CICO, FOSVOC
71	Steel for Frames	Essar Steel/ Jindal / SAILIISPAT / Tata
72	Roof and wall cladding coils	Zino alum of Blue Scope / Everest / Jindal Steel or equivalent.
73	Pavers	NTC, golden, Uni stone, Sham tiles.
74	False Ceiling	Armstrong, Anutone, Gyproc, Boral, Anakon, Saint Goban.
75	Clay tile Brick Cladding	Poineer, Jindal, BBK, NITCO
76	Heat Resistant tile	Johnson, RAK, Kajaria, Orient, NITCO
77	Tile Adhesive	Pidilite, Dura build, asian paint, Dunlop.
78	RMC	ACC, Ultertech.
79	Acoustic wall wooden paneling	Armstrong, Anutone, Anakon.
80	Wooden flooring	Anutone, Pergo.
81	Hard wood maple flooring	Action (USA), robbin (USA).
82	Wire mesh	Sterling Enterprises, Trimurty welded mesgh.
83	Exposy mortar	Fosroc, Dura build, sika
84	Hydraulic door closer & Floor spring	Hardwyn, Godrej, Doorset.
85	Gaskat	Honu, Anand
86	UPVC Window / Door	Rehau, Veka, Fenesta, Oriel India
87	Wall putty	Birla, JK, Berger, Asian Paint.
88	UPVC pipe	Supreme, Prince, Finolex, Finesta, Encraft, Lesso
89	AAC Blocks	Finecrete, RS Green Infra, Megicrete ACC Block
90	Glass panels (Float Glass)	Modi float, Saint Gobain, Asahi, Gold Plus.

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B. FOR AIR CONDITIONING WORK

Sr. No.	Equipment / Material	Preferred/ Approved Makes
1	Water cooled Screw Chiller with VFD/ Without VFD	Carrier / York /Trane / Daikin/ Blue Star/ Kirloskar/ Voltas/ Dunham Bush
2	Air-cooled Ductable Units	Blue Star/ Carrier/ Daikin/ LG / Mitsubishi Electrical/ Voltas
3	Split AC/ Window AC/ Cassette A.C.	(i) Carrier/ Voltas/ Bluestar (ii) Hitachi/ Daikin/Mitsubishi (iii) Toshiba
4	Voltage Stabilizer	V-Guard/ Deol/ Microtech, Luminous
5	Copper Pipes	Maxflow/ Mandev/ Rajco tubes/ Total Line
6	VRV Units with outdoor & indoor units	Samsung / Daikin / Mitsubishi Electric / LG / Carrier / Blue Star / Voltas/ Dunham Bush
7	Primary Pump and Condenser Pump (all capacities)	XYLEM / Grundfoss / Armstrong/ITT/ Kirloskar
8	Secondary CHW Pump with variable Speed Pumping System Including Adjustable frequency Drive, Secondary pumps and pump controller.	XYLEM / Grundfoss / Armstrong ITT/ Kirloskar
9	Hot water Generator	Rapid Cool / Khokkar/ Emrald
10	Air Handling Unit all types	Zeco / Edgetech / Systemair/ Crystal/ Waves
11	Variable Frequency Drive for AHUs	Danfoss / Siemens/ Johnson
12	Cooling Coil for AHU's	Zeco / Edgetech / Systemair/ Crystal/ Waves
13	Fan Coil Unit	Zeco / Edgetech / Systemair/ Crystal/ Waves
14	Centrifugal fans for AHU/ Fresh Air / Exhaust Fan	Kruger / Nicotra / comefree
15	Axial Flow Fan	Systemair / Kanalflakt / Kruger/ Comefri/ Nicotra
16	Propeller fan	Alstom/ khaitan/ Crompton
17	In-Line fan	Systemair / Kanalflakt / Kruger
18	GI pipe ISI Marked	Jindal Hissar /TATA/ SAIL
19	MS Pipe (up to 200 mm Dia) 'C' Class Heavy Duty ISI Marked	Jindal Hissar /TATA/ SAIL
20	MS Pipe (Above 200 mm Dia factory Rolled) 'C' Class Heavy Duty ISI Marked	Jindal Hissar /TATA/ SAIL
21	Welding Rods	Advani/ Esab/ Ador
22	Flexible Pipe Connection	Resistoflex/ Kanwal/ Dunlop
23	Butterfly Valves	Audco/ Advance / Kirloskar/ Castle/ Honeywell/Leader / Zoloto, Kartar

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Sr. No.	Equipment / Material	Preferred/ Approved Makes
52	Miniature Circuit Breaker (MCB)	Siemens Schneider Electric (MG) / GE Power Controls/Legrand / Siemens
53	Overload relays with built in Single Phase Preventer	Schneider Electric (Telemechanique) / Larsen & Toubro /Siemens/GE Power Control
54	Current Transformer (Epoxy Cast Resin)	Automatic Electric / Indcoil / pragati / Kappa
55	Protection Relay (numeric type)	Alstom /Asea Brown Bovari / Siemens / L&T
56	Switch Fuse Unit, HRC Fuse	Larsen & Toubro / GE Power Controls / Siemens
57	Rotary Switch/ Time Delay relay	Larsen & Toubro / GE Power Controls / Siemens
58	Timer	Schneider Electric (Telemechanique) / Larsen & Toubro / GE Power Control / Siemens
59	Selector Switch, Toggle switch	Larsen & Toubro / Kaycee/GE/CS
60	Change Over Switch	Larsen & Toubro / siemens /HPL/GE Power control
61	Ammeter and Voltmeter	Rishabh (L& T) / Automatic Electric / Conzerve
62	Indicating Lamps LED type , Push Button	Larsen & Toubro / GE Power Controls / Siemens /Vaishno Electricals / CS
63	Grilles/ Diffusers	Caryaire / Systemair / Pine aire / Precise / Airflow
64	Fire Dampers UL listed	Ruskin / Systemair/ Caryaire / Pine aire / Airflow
65	Fire Damper motors	Belimo /Siemens
66	G.I. Sheet Metal Duct ISI Marked	SAIL/ Tata/ Jindal
67	Factory fabricated G.I. Sheet Metal Duct	Zeco / Ecoduct / Rolastar with sheet make of SAIL / TATA/ Dustech/ Ductotab
68	Hessian (Fire treated)	Novair/ Pyroguard/ Jindal
69	VCD / Gravity louvers / Exhaust& fresh air louvers	Caryaire / Systemair / Pine aire / Airflow
70	Nitrile Rubber Insulation/ Duct Insulation/ Pipe Insulation Class o'	Armacell/ Aflex/ Kflex/ BASF
71	TF Thermocole	Boardsell / Indus Packagers
72	M S Conduits	BEC /AKG
73	Water Level Switch	Vekstar / Warren / Jumo
74	Cooling Tower	Mihir/ Golf/ Paharpur/ Delta
75	Electrical Cable ISI Marked/ Control Cables, Flexible Wires	Havells/ Eckar/ Finolex/ Polycab/ L&T/ KEI / Skylane
76	Electrical Panel (CPRI Approved)	ABB/ Siemens/ L&T/ Unitech Power System/ Vindavan Electricals/ KEPL/ UPS Information/ Dhiman Switch Gear/ International Switch Gears

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Sr. No.	Equipment / Material	Preferred/ Approved Makes
77	Fiber Glass	U.P. Twiga/ Owen Corring
78	PVC Pipes	Super, Supreme, Diplast, Finolex, Prince
79	Veneered Particle Board	Novapan, Kitply, Anchor, Archidply, Green
80	Commercial Board	Green, Novapan, Kitply, Archidply (ISI Markded)
81	False Ceiling with frame	Armstrong, Anutone, Gyproc, Boral, Saint Govin/ India Gypsum
82	Tar Felt/ CPRX Compound	Eco Fresh – Pidilite, SR505, AC Duct King
83	Building Management System with all accessories	Trane, Johnson, Simens, Honeywell

C. FOR FIRE FIGHTING WORK

Sr. No.	Equipment / Material	Preferred/ Approved Makes
1	Fire Fighting Equipments (ISI Marked)	Safex, Minimax, Honeywell, Safeguard, ATASEE

Note:-

1) Makes of those items which are not part of current tender may be ignored.
2) The firm shall install the equipments as per the make approved in BOQ. If the make not available in BOQ then the same will be provided as per make list attached in the DNIT after approval of competent authority. Out of the approved make list, the choice of make rests only with the EIC/Client Department.
3) In case make of any item is not mentioned in the BOQ and list of approved makes specified in the tender document, the EIC shall decide make for the same and his decision shall be final and binding.
4) ISI mark makes will be preferred.

Executive Engineer, Project P.H. Divn No.1,Chd

Executive Engineer, C.P. Divn No.1,Chd

Executive Engineer, C.P. Divn No.2,Chd

Executive Engineer, Project P.H. Divn No.3,Chd

Executive Engineer, C.P. Divn No.4,Chd

Executive Engineer, C.P. Divn No.3,Chd

Executive Engineer, Project P.H. Divn No.7,Chd

Executive Engineer, C.P. Divn No.5,Chd

Executive Engineer, C.P. Divn No.6,Chd

Executive Engineer, Project P.H. Divn No.8,Chd

Superintending Engineer, Project P.H. Circle/Const. Circle-1, Chandigarh

Superintending Engineer Construction Circle-II, Chandigarh

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SECTION-VII

SCHEDULE OF QUANTITIES (CIVIL COMPONEN

DNIT for the construction of New Govt. building in Govt. Model Senior Secondary School, Maloya, Chandigarh (IBM Scheme No. W1/2024/23930). (PHS, Fire Fighting System and Rain Water Harvesting).

Contract No: Civil Works

App. Amount Rs. 64,96,900/- **Earnest Money: Rs.1,29,938/-** **Time Limit : 04 months**

					Excess (+) 0.00 %	
					Less (-) 0.00 %	
S. No	DSR/NSR	Description	Qty.	Unit	DNIT Rates in figure and words	Amount
		PUBLIC HEALTH SERVICES				
1	2.8	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
	2.8.1	All kinds of soil.	94.38	Cum	253.27 Rupees Two Hundred Fifty Three And Twenty Seven Paise Only	23903.62
2	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m				
	2.10.1	All kinds of soil.				
	2.10.1.1	Pipes, cables etc. not exceeding 80 mm dia.	35	Mtr.	209.78 Rupees Two Hundred Nine And Seventy Eight Paise Only	7342.30
	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	287.98	Mtr.	342.64 Rupees Three Hundred Forty Two And Sixty Four Paise Only	98673.47
3	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level				
	4.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	30.59	Cum	7665.78 Rupees Seven Thousand Six Hundred Sixty Five And Seventy Eight Paise Only	234496.21
	4.1.11	1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size)	6.44	Cum	6022.53 Rupees Six Thousand Twenty Two And Fifty Three Paise Only	38785.09

4	5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering,	6.77	Cum	11194.85	Rupees Eleven Thousand One Hundred Ninety Four And Eighty Five Paise Only	75789.13
		finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).					
5	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :					
	5.9.3	Suspended floors, roofs, landings, balconies and access platform	17.13	Sqm.	902.21	Rupees Nine Hundred Two And Twenty One Paise Only	15454.86
6	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.					
	5.22.3	Cold twisted bars	744.33	Kg.	104.94	Rupees One Hundred Four And Ninety Four Paise Only	78110.31
7	6.1	Brick work with F.P.S. bricks of class designation 7.5 in foundation and plinth in:					
	6.1.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	23.59	Cum	7171.64	Rupees Seven Thousand One Hundred Seventy One And Sixty Four Paise Only	169178.99
8	6.4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :					
	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	2	Cum	8860.09	Rupees Eight Thousand Eight Hundred Sixty And Nine Paise Only	17720.18
9	13.7	12 mm cement plaster finished with a floating coat of neat cement of mix :					
	13.7.1	1:3 (1 cement: 3 fine sand)	71.69	Sqm.	427.39	Rupees Four Hundred Twenty Seven And Thirty Nine Paise Only	30639.59
10	16.83	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	46.45	Sqm.	128.19	Rupees One Hundred Twenty Eight And Nineteen Paise Only	5954.43

11	16.84	Laying old cement cocrete interlocking paver blocks of any design/ shape laid in required line, level, curvature, colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineerin-charge. (Old CC paver blocks shall be supplied by the department free of cost)	46.45	Sqm.	392.07	Rupees Three Hundred Ninety Two And Seven Paise Only	18211.65
12	17.3	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40 mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :					
	17.3.1	W.C. pan with ISI marked white solid plastic seat and lid .	28	Each	7790.42	Rupees Seven Thousand Seven Hundred Ninety And Forty Two Paise Only	218131.76
13	17.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require					
	17.7.2	White Vitreous China Wash Basin size 630 X 450 mm with a single 15 mm C.P. brass pillar tap	11	Each	2166.24	Rupees Two Thousand One Hundred Sixty Six And Twenty Four Paise Only	23828.64
14	17.13	Providing and fixing white vitreous china water closet squatting pan (Indian type) :					
	17.13.2	Orissa pattern W.C. pan of size 580x440 mm	16	Each	3083.49	Rupees Three Thousand Eighty Three And Forty Nine Paise Only	49335.84
15	17.16A	Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to Eureopean type W.C. of quality and make as approved by Engineer - in - charge.	28	Each	339.72	Rupees Three Hundred Thirty Nine And Seventy Two Paise Only	9512.16
16	17.19	Providing and fixing controlled flush, low level cistern made of vitreous china with all fittings complete.					
	17.19.1	10 litre (full flush) capacity-white	16	Each	2183.17	Rupees Two Thousand One Hundred Eighty Three And Seventeen Paise Only	34930.72
17	17.28	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.					
	17.28.1.1	32 mm dia	78	Each	101.09	Rupees One Hundred One And Nine Paise Only	7885.02
18	17.35	Providing and fixing soil, waste and vent pipes :					
	17.35.1	100 mm dia					

	17.35.1.2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	220	Mtr.	1148.87	Rupees One Thousand One Hundred Forty Eight And Eighty Seven Paise Only	252751.40
	17.35.2	75mm diameter :					
	17.35.2.2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	55	Mtr.	1153.98	Rupees One Thousand One Hundred Fifty Three And Ninety Eight Paise Only	63468.90
19	17.39	Providing and fixing plain bend of required degree					
	17.39.1	100 mm dia					
	17.39.1.2	Sand cast iron S&S as per IS : 3989	20	Each	554.66	Rupees Five Hundred Fifty Four And Sixty Six Paise Only	11093.20
	17.39.2	75 mm dia					
	17.39.2.2	Sand cast iron S&S as per IS - 3989	8	Each	379.96	Rupees Three Hundred Seventy Nine And Ninety Six Paise Only	3039.68
20	17.40	Providing and fixing heel rest sanitary bend					
	17.40.1	100 mm dia					
	17.40.1.2	Sand cast iron S&S as per IS - 3989	41	Each	533.89	Rupees Five Hundred Thirty Three And Eighty Nine Paise Only	21889.49
21	17.43	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.					
	17.43.1	100x100x100 mm					
	17.43.1.2	Sand cast iron S&S as per IS - 3989	23	Each	900.71	Rupees Nine Hundred And Seventy One Paise Only	20716.33
	17.43.2	75x75x75 mm					
	17.43.2.2	Sand cast iron S&S as per IS - 3989	8	Each	647.09	Rupees Six Hundred Forty Seven And Nine Paise Only	5176.72
22	17.55	Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :					
	17.55.1	100 mm					
	17.55.1.2	Sand cast iron S&S as per IS - 3989	14	Each	665.39	Rupees Six Hundred Sixty Five And Thirty Nine Paise Only	9315.46
23	17.56	Providing and fixing terminal guard:					
	17.56.1	100 mm					
	17.56.1.2	Sand cast iron S&S as per IS - 3989	12	Each	492.34	Rupees Four Hundred Ninety Two And Thirty Four Paise Only	5908.08
24	17.57	Providing and fixing collar :					
	17.57.1	100 mm					

	17.57.1.2	Sand cast iron S&S as per IS - 3989	30	Each	499.29	Rupees Four Hundred Ninety Nine And Twenty Nine Paise Only	14978.70
	17.57.2	75 mm					
	17.57.2.2	Sand cast iron S&S as per IS - 3989	13	Each	352.27	Rupees Three Hundred Fifty Two And Twenty Seven Paise Only	4579.51
25	17.59	Providing and fixing M.S. stays and clamps for sand cast iron/ centrifugally cast (spun) iron pipes of diameter :					
	17.59.1	100 mm dia.	26	Each	135.93	Rupees One Hundred Thirty Five And Ninety Three Paise Only	3534.18
26	17.60	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, incl. cost of cutting and making good the walls and floors.					
	17.60.2	100 mm inlet and 75 mm outlet					
	17.60.2.2	Sand Cast Iron S&S as per IS- 1729	87	Each	1516.27	Rupees One Thousand Five Hundred Sixteen And Twenty Seven Paise Only	131915.49
27	17.75	Provivding and fixing of PTMT 15 mm urinal spreader size 95x69x100mm with 1/2" BSP thread and shapes, weighhing not less than 60gms	39	Each	104.31	Rupees One Hundred Four And Thirty One Paise Only	4068.09
28	17.76	Providing and fixing PTMT urinal cock of approved quality and colour.					
	17.76.1	15 mm nominal bore, 80 mm long, 42 mm high and 30 mm wide with BSP female threads weighing not less than 48 gms.	39	Each	170.66	Rupees One Hundred Seventy And Sixty Six Paise Only	6655.74
29	18.10	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Internal work - Exposed on wall					
	18.10.1	15 mm dia nominal bore	12	Mtr.	356.51	Rupees Three Hundred Fifty Six And Fifty One Paise Only	4278.12
	18.10.3	25 mm dia nominal bore	210	Mtr.	536.80	Rupees Five Hundred Thirty Six And Eighty Paise Only	112728.00
30	18.11	Providing and fixing G.I. Pipes complete with G.I. fittings and clamps, i/c making good the walls etc. concealed pipe, including painting with anti corrosive bitumastic paint, cutting chases and making good the wall :					
	18.11.1	15 mm dia nominal bore	105	Mtr.	564.78	Rupees Five Hundred Sixty Four And Seventy Eight Paise Only	59301.90
	18.11.2	20 mm dia nominal bore	220	Mtr.	618.05	Rupees Six Hundred Eighteen And Five Paise Only	135971.00

31	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :					
	18.17.1	25 mm nominal bore	12	Each	605.6	Rupees Six Hundred Five And Sixty Paise Only	7267.20
	18.17.1A	20 mm nominal bore	8	Each	525.37	Rupees Five Hundred Twenty Five And Thirty Seven Paise Only	4202.96
32	18.21	Providing and fixing uplasticised PVC connection pipe with brass unions :					
	18.21.1	30 cm length					
	18.21.1.1	15 mm nominal bore	103	Each	82.71	Rupees Eighty Two And Seventy One Paise Only	8519.13
33	18.46	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work) :					
	18.46.2	20 mm nominal bore	11	Each	337.44	Rupees Three Hundred Thirty Seven And Forty Four Paise Only	3711.84
	18.46.3	25 mm nominal bore	14	Each	427.39	Rupees Four Hundred Twenty Seven And Thirty Nine Paise Only	5983.46
34	18.48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, ISI : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	20000	Ltrs.	10.7	Rupees Ten And Seventy Paise Only	214000.00
35	18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931					
	18.49.1	15 mm nominal bore.	1	Each	493.12	Rupees Four Hundred Ninety Three And Twelve Paise Only	493.12
36	18.53	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931					
	18.53.1	15 mm nominal bore.	4	Each	558.79	Rupees Five Hundred Fifty Eight And Seventy Nine Paise Only	2235.16
37	18.54	Providing and fixing PTMT bib cock of approved quality and colour.					
	18.54.1	15mm nominal bore, 86 mm long. Weighing not less than 88 gms.	93	Each	122.21	Rupees One Hundred Twenty Two And Twenty One Paise Only	11365.53
38	18.62	Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./ H.P.H.D. plastic ball.					

	18.62.2	20 mm nominal bore, 120 mm long. Weighing not less than 198 gms.	6	Each	250.64	Rupees Two Hundred Fifty And Sixty Four Paise Only	1503.84
39	18.63	Providing and fixing PTMT angle stop cock 15 mm nominal bore. Weighing not less than 85 gms.	90	Each	152.66	Rupees One Hundred Fifty Two And Sixty Six Paise Only	13739.40
40	18.76	Cutting holes up to 30x30 cm in walls including making good the same:					
	18.76.1	With common burnt clay F.P.S. (non modular) bricks	58	Each	405.55	Rupees Four Hundred Five And Fifty Five Paise Only	23521.90
41	18.77	Cutting holes up to 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete so as to make it leak proof.	19	Each	439.8	Rupees Four Hundred Thirty Nine And Eighty Paise Only	8356.20
42	19.1	Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :					
	19.1.2	150 mm diameter	91.44	Mtr.	677.01	Rupees Six Hundred Seventy Seven And One Paise Only	61905.79
	19.1.3	200 mm diameter	161.54	Mtr.	944.15	Rupees Nine Hundred Forty Four And Fifteen Paise Only	152517.99
43	19.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :					
	19.2.2	150 mm diameter S.W. pipe	76.2	Mtr.	1147.99	Rupees One Thousand One Hundred Forty Seven And Ninety Nine Paise Only	87476.84
	19.2.3	200 mm diameter S.W. pipe	155.45	Mtr.	1338.31	Rupees One Thousand Three Hundred Thirty Eight And Thirty One Paise Only	208040.29
44	19.4	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:					
	19.4.1	100x100 mm size P type					
	19.4.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	10	Each	2634.54	Rupees Two Thousand Six Hundred Thirty Four And Fifty Four Paise Only	26345.40
45	19.19	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality					
	19.19.3	HD-20					

	19.19.3.1	Circular shape 560 mm internal diameter	13	Each	1630.46	Rupees One Thousand Six Hundred Thirty And Forty Six Paise Only	21195.98
46	19.21	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :					
	19.21.1	For pipes 100 to 250 mm diameter	2	Each	788.57	Rupees Seven Hundred Eighty Eight And Fifty Seven Paise Only	1577.14
47	19.30	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 fine sand : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design:					
	19.30.3	Inside dimensions 600x 850 mm and 45 cm deep for pipe line with three or more inlets :					
	19.30.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	11	Each	9335.3	Rupees Nine Thousand Three Hundred Thirty Five And Thirty Paise Only	102688.30
48	Elect. DSR2.10	Supplying and fixing 5A to 32 A rating, 240/415 V, 10 KA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required					
	2.10.2	Single Pole and neutral	1	each	643	Rupees Six Hundred Forty Three Only	643.00
49	NSR	Providing & fixing looking glass of size 22"x16" with bevelled edge all side of approved make	30	Each	708	Rupees Seven Hundred Eight Only	21240.00

50	NSR	Providing and fixing white vitreous china flat back half stall urinal of size 420 x 395 x 635 mm with fittings, standard size C.P. brass flush pipe, spreaders and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass, including painting of fittings and cutting and making good the walls and floors wherever required : Make as approved by EIC.	39	Each	6108	Rupees Six Thousand One Hundred Eight Only	238212.00
51	NSR	Providing and fixing HCI P-Trap.100 mm	16	Each	952	Rupees Nine Hundred Fifty Two Only	15232.00
52	NSR	Providing and fixing of C.P. soap dish of make Viking, jainko, Cera or equivalent complete in all respects	17	Each	621	Rupees Six Hundred Twenty One Only	10557.00
53	NSR	Providing and fixing chinaware urinal partition complete in all respect.	35	Each	3127	Rupees Three Thousand One Hundred Twenty Seven Only	109445.00
54	NSR	Providing and fixing of C.P/SS long 32mm bend	16	Each	376	Rupees Three Hundred Seventy Six Only	6016.00
55	17.58	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter :					
	17.58.1	100 mm	105	Each	605.69	Rupees Six Hundred Five And Sixty Nine Paise Only	63597.45
	17.58.2	75 mm dia	40	Each	512.04	Rupees Five Hundred Twelve And Four Paise Only	20481.60
56	NSR	Providing & fixing Stainless steel grab rail of size 32 mm dia for disable toilets complete in all respect	9	Mtr.	1238	Rupees One Thousand Two Hundred Thirty Eight Only	11142.00
57	NSR	Providing PVC pipe of 6kg/cm2 pressure various size complete in all respect					
		Size 90 mm 1/d	30	Mtr.	394	Rupees Three Hundred Ninety Four Only	11820.00
58	NSR	Providing and fixing of Cool star self contained drinking water cooler suitable for operation on 230volts+10% 50cycle single phase AC Supply storage Type 400 ltr. capacity and cooling capacity 150 ltrs / complete in all respect .EIC of approved make .	6	Each	124888	Rupees One Twenty Four Thousand Eight Hundred Eighty Eight Only	749328.00
59	NSR	Providing and fixing Water filter -cum -Purifier including installation charges 3Ltrs/ Minute make Aquaguard/Waves	6	Each	16138	Rupees Sixteen Thousand One Hundred Thirty Eight Only	96828.00
60	NSR	Providing and fixing of automatic line voltage Stablizer of 5 KVA complete in all respect to the entire satisfaction of the EIC .approved Make	6	No	4527	Rupees Four Thousand Five Hundred Twenty Seven Only	27162.00
61	NSR	Providing, Installing, Testing, Commissioing of mono block pumping 2 HP set single phase and following para metre including starter piping connections & other allied works complete in all respect of make kirlosker/ABB/Crompton graves. Head 30 Mtr complete in all respect	1	each	21000	Rupees Twenty One Thousand Only	21000.00
62	NSR	Providing and installation of sub copper cable 3x2.5 mm2 complete in all respect make as approved make list	40	Mtr	333	Rupees Three Hundred Thirty Three Only	13320.00

		FIRE FIGHTING SYSTEM					
63	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :					
	4.1.3	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	0.21	cum	7665.78	Rupees Seven Thousand Six Hundred Sixty Five And Seventy Eight Paise Only	1609.81
64	18.18	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete					
	18.18.3	25 mm nominal bore	2	nos	451.52	Rupees Four Hundred Fifty One And Fifty Two Paise Only	903.04
65	18.76	Cutting holes up to 30x30 cm in walls including making good the same.					
	18.76.1	With common burnt clay F.P.S. (non modular) bricks	10	Each	405.55	Rupees Four Hundred Five And Fifty Five Paise Only	4055.50
66	18.77	Cutting holes up to 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete so as to make it leak proof.	10	Each	439.8	Rupees Four Hundred Thirty Nine And Eighty Paise Only	4398.00
67	Elect. DSR 27.7	Providing, laying, testing & commissioning of 'C' class heavy duty MS pipe conforming to IS 1239/Class -II of IS: 3589 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required :					
	27.7.7	100mm dia.	150	Mtr.	3077	Rupees Three Thousand Seventy Seven Only	461550.00
68	Elect. DSR 27.9	Supplying and fixing single headed internal hydrant valve with instantaneous Gunmetal/Stainless Steel coupling of 63 mm dia with cast iron wheel ISI marked conforming to IS 5290 (Type -A) with blank Gunmetal/Stainless Steel cap and chain as required					
	27.9.2	Single headed Stainless steel	15	Each	6632	Rupees Six Thousand Six Hundred Thirty Two Only	99480.00
69	Elect. DSR 27.11	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required :					
	27.11.5	100 mm dia	15	Each	7271	Rupees Seven Thousand Two Hundred Seventy One Only	109065.00

70	Elect. DSR 27.14	Providing, installation, testing and commissioning of non-return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required :					
	27.14.5	100 mm dia	2	Each	11853	Rupees Eleven Thousand Eight Hundred Fifty Three Only	23706.00
71	Elect. DSR 27.16	Supplying and fixing 63 mm dia, 15 m long RRL hose pipe with 63 mm dia male and female couplings duly bound with GI wire, rivets etc. conforming to IS 636 (type-A) as required :					
	27.16.2	Stainless Steel (Grade 304)	24	Each	4667	Rupees Four Thousand Six Hundred Sixty Seven Only	112008.00
72	Elect. DSR 27.17	Supplying and fixing first-aid Hose Reel with MS construction spray painted in post office red, conforming to IS 884 complete with the following as required. (a) 20 mm nominal internal dia water hose thermoplastic (Textile reinforced) type -2 as per IS:12585 (b) 20 mm nominal internal dia gun metal globe valve & nozzle. (c) Drum and brackets for fixing the equipmets on wall. (d) Connections from riser with 25 mm dia stop gun metal valve & M.S. Pipe and socket.					
	27.17.1	30 m	30	Each	9440	Rupees Nine Thousand Four Hundred Forty Only	283200.00
73	Elect DSR 27.18	Supplying & fixing 63 mm dia gun metal short branch pipe with 20 mm nominal internal diameter size nozzle conforming to IS 903 suitable for instantaneous connection to interconnect hose pipe coupling as required:					
	27.18.2	Stainless Steel (Grade 304)	15	Each	3402	Rupees Three Thousand Four Hundred Two Only	51030.00
74	Elect. DSR 27.19	Supplying and fixing of fire brigade connection of cast iron body with gun metal male instantaneous inlet couplings complete with cap and chain as reqd. for suitable dia MS pipe connection conforming to IS 904 as required:					
	27.19.1	2 way-100 mm dia M.S. Pipe	1	Each	7262	Rupees Seven Thousand Two Hundred Sixty Two Only	7262.00
75	NSR	**HOSE CABINET FOR 15 MTR. LONG HOSE REEL PIPE & BRANCH PIPE ETC.**					
		Providing and fixing of HOSE CABINET of Size: **(600mm x 600mm x 450mm)** made of 16 gauge MS sheet with 4mmthick glazed glass door i/c necessary locking arrangement suitable to accommodate 15 mtr. long hose reel pipe & branch pipe mounted on wall or raised bric platform & duly painted with Post office red externally and white internally with synthetic enamel paint complete in all respect as required.	16	Each	4674	Rupees Four Thousand Six Hundred Seventy Four Only	74784.00

76	NSR	**4kg, ABC FIRE EXTINGUISHER**					
		Providing and Fixing of ABC (Power type) **ABC FIRE EXTINGUISHER/ 4 kg** HP Mild Steel Cylinders ISI marked approved fitted with pressure indicating gauge capacity complete with discharge horn and mounting it on the wall with a suitable MS bracket (including S/F bracket) minor civil works etc. complete as required.	24	Each	2142	Rupees Two Thousand One Hundred Forty Two Only	51408.00
77	NSR	Supplying and installing of 3 nos set of fire buckets of 24 gauge galvanized steel sheet, standard 9 liter capacity and of round bottom shape, painted white inside and red outside and black on the bottom, inscribed with letters "Fire " in black and gold.	8	Each	3255	Rupees Three Thousand Two Hundred Fifty Five Only	26040.00
78	NSR	Providing and fixing Carbon-di-oxide fire extinguishers consisting of welded M.S cylindrical body, squeeze lever discharge valve fitted with internal discharge tube, 30cms long high pressure discharge hose, discharge nozzle, suspension bracket, confirming to IS : 15683 finished externally with red enamel paint and fixed to wall with brackets with rawl plug/dash fasteners complete with internal charge. Capacity 4.5 kg. ISI Marked.	24	Each	7150	Rupees Seven Thousand One Hundred Fifty Only	171600.00
79	NSR	Supplying and laying of XLPE insulated, PVC sheathed aluminium conductor 1.1 KV grade armoured I.S.I marked cable of makes given in the list of approved makes of following sizes laid on surface including cable terminations, galvanised cable tray of thickness as specified, brass compression Glands, aluminium lugs suitably clamped as specified and as required.					
	a	3 core x 0.75 sqmm	30	Metre	70	Rupees Seventy Only	2100.00
	b	3 core x 4 sqmm	45	Metre	237	Rupees Two Hundred Thirty Seven Only	10665.00
	c	3 core x 25 sqmm	10	Metre	436	Rupees Four Hundred Thirty Six Only	4360.00
80	NSR	Writing work with a help of white & red paint at various places and on PVC tanks for tank capacity including cost of brushes, thiner etc. complete in all respect.	1	job	4653	Rupees Four Thousand Six Hundred Fifty Three Only	4653.00
81	NSR	Providing and fixing water level guage on fire PVC tanks complete in all respect.	1	Each	4375	Rupees Four Thousand Three Hundred Seventy Five Only	4375.00
		RAIN WATER HARVESTING SYSTEM					
82	2.8	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (no exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.					

	2.8.1	All kinds of soil.	30.11	Cum	253.27	Rupees Two Hundred Fifty Three And Twenty Seven Paise Only	7625.96
83	2.10	Excavating trenches by mechanical / manual of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, for all depth, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m					
	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	167.64	mtr	342.64	Rupees Three Hundred Forty Two And Sixty Four Paise Only	57440.17
84	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :					
	4.1.3	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	1.62	Cum	7665.78	Rupees Seven Thousand Six Hundred Sixty Five And Seventy Eight Paise Only	12418.56
	4.1.10	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	4	Cum	6342.6	Rupees Six Thousand Three Hundred Forty Two And Sixty Paise Only	25370.40
85	5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	1.44	Cum	11194.85	Rupees Eleven Thousand One Hundred Ninety Four And Eighty Five Paise Only	16120.58
86	5.9	Centering and shuttering including strutting, propping etc. and removal of form for:					
	5.9.3	Suspended floors, roofs, landings, balconies and access plateform.	8.78	sqm	902.21	Rupees Nine Hundred Two And Twenty One Paise Only	7921.40
87	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.					
	5.22.3	Cold twisted bars	144.03	kg	104.94	Rupees One Hundred Four And Ninety Four Paise Only	15114.51
88	6.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:					
	6.1.1	cement mortar 1:4 (1 cement : 4 coarse sand)	16.47	Cum	7171.64	Rupees Seven Thousand One Hundred Seventy One And Sixty Four Paise Only	118116.91

89	13.7	12mm cement plaster finished with a floating coat of neat cement of mix:					
	13.7.1	1:3 (1 cement : 3 fine sand)	38.46	sqm	427.39	Rupees Four Hundred Twenty Seven And Thirty Nine Paise Only	16437.42
90	16.83	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	34.84	sqm	128.19	Rupees One Hundred Twenty Eight And Nineteen Paise Only	4466.14
91	16.84	Laying old cement cocrete interlocking paver blocks of any design/ shape laid in required line, level, curvature, colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineerin-charge. (Old CC paver blocks shall be supplied by the department free of cost)	34.84	sqm	392.07	Rupees Three Hundred Ninety Two And Seven Paise Only	13659.72
92	19.6	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :					
		250 mm dia	140.21	mtr	875.51	Rupees Eight Hundred Seventy Five And Fifty One Paise Only	122755.26
		300 mm dia	39.02	mtr	967.45	Rupees Nine Hundred Sixty Seven And Forty Five Paise Only	37749.90
93	19.19	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality					
	19.19.2	M D - 10					
	19.19.2.1	Square shape 450 mm internal dimension	32	nos	1349.11	Rupees One Thousand Three Hundred Forty Nine And Eleven Paise Only	43171.52
	19.19.3	HD-20					
	19.19.3.1	Circular shape 560 mm internal diameter	13	nos	1630.46	Rupees One Thousand Six Hundred Thirty And Forty Six Paise Only	21195.98
94	19.21	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :					

	19.21.1	For pipes 100 to 250 mm diameter	1	each	788.57	Rupees Seven Hundred Eighty Eight And Fifty Seven Paise Only	788.57
	19.21.2	For pipes 250 to 300 mm diameter	1	each	897.5	Rupees Eight Hundred Ninety Seven And Fifty Paise Only	897.50
95	NSR	Providing & fixing of PVC pipe i/d tee & joints of pipes of 6kg/cm2 pressure various size complete in all respect					
	a	Size 6"	30.48	mtr	816	Rupees Eight Hundred Sixteen Only	24871.68
96	NSR	Providing and fixing RCC Road Gully gratings & frame size 21" x 27" fixed in C.C. 1:2:4	20	each	1530	Rupees One Thousand Five Hundred Thirty Only	30600.00
						Say Rs.	**6496900**
		DNIT Amount in Words	**Rupees Sixty Four Lakh Ninety Six Thousand Nine Hundred And One Paise**				

Certified that the rates taken in the DNIT are justified and also the design of the scheme as covered in the scope of the work is technically in order and also economical and hence DNIT recommended for approval.

It is certified that the rates taken for NSR items in the above said DNIT does not exist in any DSR.

Executive Engineer,
Project P.H. Divn. No. 7,
Chandigarh.

Sub Divisional Engineer,
W/S Sub Division No.14,
Chandigarh.

The responsibility of quantities, specification, design, scope of work and rate etc lies with EE

Superintending Engineer,
Project Public Health Circle,
U.T. CHANDIGARH

19/5

CONDITIONS

1. All items will be supported by the rate as per Delhi Schedule of Rates, 2023 whereas the same will be applicable to the items taken in the schedule of items of work in the DNIT.

2. No objection will be entertained from the contractor in case of any mistake in description, rate or units occurs in any of the items in the schedule, while preparing this schedule on account of typing or comparison or over-sighting. If there will be any such mistake the same shall be rectified at any time as per Delhi Schedule of Rates alongwith the amendments received from time to time by the Engineer-in-charge or as per AOR of approved DNIT.

3. If any, non schedule item will be carried out by the contractor on the order of the Engineer-in-charge, that will be paid as approved by the competent authority of the Department.

4. The item of work can be decreased or increased by the Engineer-in-charge at any time keeping in view the scope of work at site. No objection will be entertained from the contractor on this account.

5. The conditional tenders are liable to be rejected & no objection will be entertained in this regards.

6. The contractor will rectify the defects, free of cost, for three months after the dates of completion and handing over or commissioning, whichever is later.

7. The Executive Engineer reserves the right to add or delete any of the items of the DNIT and no claim from the contractor will be entertained on this account.

8. In case the contractor failed to submit the completion plan on completion of work, he shall be liable to pay a sum of equivalent to 1.0% of the value of the work.

9. That the contractor shall comply with the provision of the Contract Labour (Regulation and Abolition) Act, 1970 and the rules made there under as extended by the Contract Labour (Regulation and Abolition) Rules, 1974.

10. The water charges @1.5% of the work done shall be recovered from the contractor as per M.C. water bye law.

11. No Mobilization advance shall be paid to the contractor as per instructions vide Home Secretary, U.T. Chandigarh No. 62845 dated 13.7.2004 and Technical Examiner Govt. of India, C.V.C. No. 4CC-1-CTE-2 dated 8.6.2004.

12. Labour Cess or GST which is applicable from time to time will be deducted from the bills of contractor as applicable to U.T. Chandigarh.

13. The undersigned reserve the right to reject any or all the tenders without assigning any reason.

14. The Contractor should provide proper fencing/ parapet for all digging works with minimum height to avoid any accident at his own cost.

15. The Contractor will obtain Registration Certificate under the Building and other construction worker's Act and Rules made there under from Registering Officer/ Officer and Assistant Labour Commissioner UT Chandigarh to comply with all the provision of ACT and Rules made there under mentioned.

16. The approved makes of items referred as per departmental approved make list attached.

17. The successful tenderer, hereafter referred to as the contractor, shall deposit an amount equal to 5% of the tendered and accepted value of the work (without limit) as performance guarantee strictly as per latest CPWD GCC.

18. The guarantee of the equipment will be for one year after satisfactory commissioning & handing over of system.

19. The make other than the makes mentioned in the DNIT shall be accepted only after the approval of EIC.

20. The equipments shall be fixed in good working condition at site of work as per direction of EIC.

21. The payment shall be released on work done basis of after successful testing the same.

22. The quantity given against each item can be increased or decrease by the EIC at any time. No objection from the contractor will be entertained on this account.

23. The firm will be fully responsible for any damage at any stage due to opening and fitting of the equipment at the site.

24. The dispute, if any, will be settled under the jurisdiction of Chandigarh.

25. **Conditions of payments:-**

(a) 75% of cost of equipment or 75% of quoted rate or due amount as per contract (lowest of all) against supply of material at site in good condition accompanied by relevant test certificates and documents after deducting towards any recovery as per contract.

(b) 10% of quoted rate or due amount (lowest of all) as per contract against satisfactory installation of equipment at site after deducting towards any recovery as per contract and the payment already made.

(c) 12.5% of quoted rate or due amount (lowest of all) as per contract upon successful testing and commissioning after deducting towards any recovery as per contract and the payment already made.

(d) 2.5% of quoted rate or due amount (lowest of all) as per contract upon successful handling over of the system after the completion of defect liability period i.e 12 months after the date of commissioning of the plant and after deducting towards any recovery as per contract and the payment already made.

26. The firm will use / install the mentioned makes of all the items as per approved DNIT.

27. The supplier will furnish along with delivery of material at site, excise gate pass for excisable items/authorized dealer certificate/invoice confirming genuineness of items & test report or certificate to from the manufacturer of the item.

28. The specification mentioned in the DNIT and technical specification the stringent conditions/ specification as per Direction of EIC will final and binding on contract.

29. That the work at site is executed as per requirement/provision in the DNIT and payment made for actual work done at site.

30. That the work is got executed strictly as per CPWD DSR specifications.

31. It should further be ensured that there should be no access on the approved DNIT amount. If any deviation, Extra items are required at site to complete the work. Principal approval be obtained from competent authority before execution.

32. The safety measure code may also be followed up strictly and ensure to provide the safety equipment to the labourer during the course of execution of work.

33. The contractor will ensure the enrolment of children of labourer working of their site of work in nearby school as per instructions of C.E.U.T. Chandigarh U.O No. W1/2014/4045-46 dated 11.03.2014.

34. The contractor should be registered with GST, which is mandatory.

35. Only one common %age above or below the rates/ amount mentioned in the DNIT shall be quoted by the bidder for all items. Any other extra item of DSR if required to be executed shall be paid on prevailing DSR rates and adjusted by applying Chandigarh cost index + % (plus/minus percentage) %age quoted by the agency in the tender. Similarly, any other N.S. extra item if required to be executed shall be paid on the justified analysis of rates prepared based on prevailing labour rates approved by the Assistant Labour Commissioner and approved material rates and shall be adjusted by applying the quoted + % (plus/minus percentage) % age by the agency in the tender.

Executive Engineer,
Project P.H.Divn.No.7,
Chandigarh.

Sub Divisional Engineer
W/S Sub Division No.14
Chandigarh.

Signature Not Verified
Digitally signed by SARBAN SINGH
Date: 2026.06.03 12:08:29 IST
Location: Chandigarh