

REQUEST FOR PROPOSAL (RFP)

Request for Proposal for Supply & Installation of 30.5 meter Tall Monumental National Flag High Mast in Gandhi Park in Dehradun city including Operation and maintenance for one year under “Smart City Mission” through e-Procurement.



DEHRADUN SMART CITY LIMITED (DSCL)

**777, Saatvik Tower, Rajender Nagar,
Kaulagarh Road, Dehradun, 248001, Uttarakhand, India
Ph: 0135-270894, Fax: 0135-2750817**

RFP No: 01/DSCL/19-20/MNF

Issued on: 12/11/2019

DISCLAIMER

The information contained in this Request for Proposal (RFP) document or subsequently provided to Bidders, whether verbally or in documentary form by or on behalf of Dehradun Smart City Limited or any of its employees or Transaction advisors, is provided to Bidders on the terms and conditions set out in this RFP document and any other terms and conditions subject to which such information is provided.

This RFP document is not an Agreement and is not an offer or invitation to any other party. The purpose of this RFP document is to provide the Bidders with information to assist the formulation of their Bid submission. This RFP document does not purport to contain all the information each Bidder may require. This RFP document may not be appropriate for all persons and it is not possible for DSCL and their employees or Transaction advisors to consider the investment objectives, financial situation and particular needs of each Bidder. Certain Bidders may have a better knowledge of the proposed Project than others. Each recipient must conduct its own analysis of the information contained in this RFP document or to correct any inaccuracies therein that may appear in this RFP document and is advised to carry out its own investigation into the proposed Project, the legislative and regulatory regimes which applies thereto and by and all matters pertinent to the proposed Project and to seek its own professional advice on the legal, financial, regulatory and taxation consequences of entering into any agreement or arrangement relating to the proposed Project.

DSCL and their employees and Transaction advisors make no representation or warranty and shall incur no liability under the Law of Contract, Tort, the Principles of Restitution or unjust enrichment or otherwise for any loss, expense or damage, accuracy, reliability or completeness of the RFP document, which may arise from or be incurred or suffered in connection with anything contained in this RFP, any matter deemed to form part of this RFP document, the award of the Project, the information and any other information supplied by or on behalf DSCL or their employees, any consultants or otherwise arising in any way from the selection process for the Project.

DSCL may in its absolute discretion, but without being under any obligation to do so, can amend or supplement the information/clauses/articles in this RFP document. The information that DSCL is in a position to furnish is limited to this RFP only. The information contained in the RFP must be kept confidential. Mere submission of a responsive Bid/ Bid does not ensure selection of the Bidder as Contractor.

NOTICE INVITING TENDER-IMPORTANT DATES

Sl. No.	Activity	Duration
1.	Bid Ref No.	01/DSCL/19-20/MNF
2.	Availability of Bid Documents	The Bid documents for this work shall be available from website http://uktenders.gov.in from 12/11/2019 at 1000 Hours to 02/12/2019 up to 1000 Hours.
3.	Pre-Bid Meeting	18/11/2019 at 1100 Hours. Bidder shall have to email their queries to agmproc-dscl@uk.gov.in on or before the pre-bid meeting date. Venue of Pre Bid Conference – Dehradun Smart City Limited, 777, Saatvik Tower, Rajender Nagar, Kaulagarh Road, Dehradun, 248001, Uttarakhand, India, Ph: 0135-2750894, Fax: 0135-2750817
4.	Contact Person	Mr. Surya Kotnala, Asst. General Manager (Procurement & Contract Management), Mob: +91 7060033338
5.	Last date for downloading of Bid document from the E-procurement portal http://uktenders.gov.in	02/12/2019 up to 1000 Hours. The scan copy of the RFP document fees (Non-Refundable), Bid Security (EMD) and Affidavit shall be uploaded on the e-procurement website.
6.	Last date and time for Bid submission/ uploading of Bid in E-procurement	02/12/2019 up to 1030 Hours
7.	Submission of original documents i.e. RFP document fees (Non-Refundable), Bid Security (EMD) and Affidavit	02/12/2019 up to 1200 Hours Address for submission of original documents: Dehradun Smart City Limited, 777, Saatvik Tower, Rajender Nagar, Kaulagarh Road, Dehradun, 248001, Uttarakhand, India, Ph: 0135-2750894, Fax: 0135-2750817
8.	Time and date of opening of Technical Bids	The Technical Bids will be opened on line by the Authorized Officers on 02/12/2019 at 1230 Hours in DSCL office.
9.	Date and time of opening of Financial Bids	Shall be informed later to technically qualified Bidders
10.	Joint Venture/ Consortium	NOT ALLOWED

NOTICE INVITING TENDER -IMPORTANT DATA

Bid Ref No.	01/DSCL/19-20/MNF	
Organization Name	Dehradun Smart City Limited (DSCL)	
Name of Work	Request for Proposal for Supply & Installation of 30.5 meter Tall Monumental National Flag High Mast in Gandhi Park in Dehradun city including Operation and maintenance for one year under “Smart City Mission” through e-Procurement .	
Bid Type	National Competitive Bidding(NCB) Item Rate Mode	
Bid Currency	Indian National Rupees (INR) Only	
Payment Details	Bid validity period	90 days from the last date of Bid submission
	Project Duration	Implementation period –03 (three) Months from the date of contract signing. Defect liability Period & Operation & Maintenance Period – 01 Years after the successful implementation period.
	RFP Document Fees (Non-refundable)	INR 1180/- (Indian Rupees One Thousand One Hundred Eighty Only) including GST in the form of Demand Draft drawn in favor of “Chief Executive Officer, Dehradun Smart City Limited, payable at Dehradun”
	Bid Security (EMD)	INR 35,000/- (Indian Rupees Thirty Five Lakhs Only) in the form of FDR/TDR payable at Dehradun or an unconditional Bank Guarantee issued in favor of “Chief Executive Officer, Dehradun Smart City Limited’.
	Bid Security (EMD) Validity	45 days beyond the date of validity of bids i.e. 90+45 days from the last date of submission of bid.
	Joint Venture/ Consortium	NOT ALLOWED
Addendum/Corrigendum	Any Addendum/Corrigendum will be published on website http:// uktenders.gov.in only.	

SECTION-I
INSTRUCTIONS TO BIDDERS

Section I -Instructions to Bidders (ITB)

	<u>General</u>
1. Scope of Bid	<p>1.1 The Employer as defined in the BDS invite bids for the Supply of Goods and Related Services as described in these documents and referred to as “the Works”. The name and identification number of the Works and Related Services is provided in the BDS. The bidders may submit bid of the works detailed given in Scope of works section 2.</p> <p>1.2 The successful Bidder will be expected to complete the Works by the Intended Completion Date specified in the Part I General Conditions of Contract.</p> <p>1.3 Throughout these documents,</p> <p>(a)The terms “bid” and “tender” and their derivatives (bidder/ tenderer, bid/ tender, bidding/ tendering, etc.) are synonymous.</p> <p>(b)The term “in writing” means communicated in written form (e.g. by mail, e-mail, and fax, including if specified in the BDS, distributed or received through the electronic-procurement system used by the Employer) with proof of receipt;</p> <p>(c)if the context so requires, “singular” means “plural” and vice versa; and</p> <p>(d)“Day” means calendar day.</p>
2. Source of Funds	2.1 The funds shall be made available by the Government of India & Government of Uttarakhand
3. Eligible Bidders	<p>3.1 (a) A Bidder may be a firm that is a private entity, associated with Flag Foundation of India.</p> <p>(b) Joint Venture is not allowed.</p> <p>3.2 A Bidder shall have the nationality of India.</p> <p>3.3 Government of Uttarakhand considers a conflict of interest to be a situation in which a party has interests that could improperly influence that party’s performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations, and that such conflict of interest may contribute to or constitute a prohibited practice. DSCL will take appropriate actions, which include not financing the contract, if it determines that a conflict of interest has flawed the integrity of any procurement process. Consequently all Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process if, including but not limited to:</p>



	<p>(a) they have controlling shareholders in common; or</p> <p>(b) they receive or have received any direct or indirect subsidy from any of them; or</p> <p>(c) they have the same legal representative for purposes of this bid; or</p> <p>(d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or</p> <p>(e) influence the decisions of the Employer regarding this bidding process; or</p> <p>(f) A Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bid in which the party is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one bid; or</p> <p>(g) A Bidder participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; or</p> <p>(h) A Bidder was affiliated with a firm or entity that has been hired (or is proposed to be hired) by the Employer as Engineer for the contract.</p> <p>3.4 A firm shall not be eligible to participate in any procurement activities under a Government-financed project while under sanction imposed by Uttarakhand Government/DSCL. A bid from a sanctioned firm will be rejected.</p> <p>3.5 Government-owned enterprises shall be eligible only if they can establish that they are legally and financially autonomous and operate under commercial law, and that they are not a dependent agency of the Employer.</p> <p>3.6 Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.</p> <p>3.7 In case a prequalification process has been conducted prior to the bidding process, this bidding is open only to pre-qualified Bidders..</p> <p>3.8 Bidder should be registered in any State/Central Govt. organization.</p>
	<p><u>Bidding Documents</u></p>
	<p><u>Contents of Bidding Document</u></p>

<p>4. Sections of Bidding Document</p>	<p>4.1 The set of bidding documents comprises the documents listed below and should be read in conjunction with any addenda issued in accordance with Clause 6 of ITB.</p> <p>PART 1</p> <ol style="list-style-type: none"> 1. Section I Instructions to Bidders (ITB) 2. Section II - Bid Data Sheet (BDS) 3. Section III - Evaluation and Qualification Criteria 4. Section IV - Bidding Forms 5. Section V – Scope of Work & Technical Specifications 6. Section VI General Conditions of Contract (GCC) 7. Section VII Particular Conditions of Contract (PCC) 8. Section VIII - Contract Forms <p>PART II</p> <ol style="list-style-type: none"> 1. Section IX Bill of Quantities (Price-Bid BOQ) <p>4.2 Bidding document will be available online on the website http://uktenders.gov.in. The bidder is expected to examine carefully all instructions, conditions of contract, Bid forms, terms and specifications, bill of quantities, Contract forms and drawings in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk. Pursuant to clause 26.2 hereof, bids, which are not substantially responsive to the requirements of the Bid Documents, shall be rejected.</p>
<p>5. Clarification of Bidding Documents, Pre-bid Meeting & site visit</p>	<p>5.1 Prospective bidder requiring any clarification of the bidding document may notify the employer in writing by email on agmproc-dscl@uk.gov.in. The Employer will respond to any request for clarification received on or before the date of the pre-bid meeting. Copies of the employer's response will be uploaded in the e-procurement portal only including a description of the enquiry, but without identifying its source.</p> <p>5.2 The Bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself, on its own risk and responsibility, all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.</p> <p>5.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in</p>

	<p>respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.</p> <p>5.4 If a pre-bid meeting is to be held, the bidder or his authorized representative is invited to attend it. Its date, time and address are given in the notice inviting tender. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.</p> <p>5.5 The bidder is requested to submit any questions in writing on or before the pre bid meeting date in the format provided.</p> <p>5.6 Minutes of the meeting, including the text of the questions raised (without identifying the source of the enquiry) and the responses given will be transmitted online (or otherwise). Any modifications of the bidding documents listed in Clause 4.1 of ITB, which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively online through the issue of an Addendum pursuant to Clause 6 of ITB and not through the minutes of the pre-bid meeting.</p> <p>5.7 Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.</p>
<p>6. Amendment of Bidding Documents</p>	<p>6.1 Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda online.</p> <p>6.2 Any addendum thus issued shall be part of the bidding documents.</p> <p>6.3 To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer shall extend, as necessary, the deadline for submission of bids, in accordance with Clause 20.2 of ITB.</p>
	<p><u>Preparation of Bids</u></p>
<p>7. Language of Bids</p>	<p>7.1 All documents relating to the Bid shall be in the language specified in the BDS.</p>

<p>8. Documents Comprising the Bid</p>	<p>8.1 The Bid shall comprise two envelopes submitted simultaneously online on the e-Government Procurement System (e-GPS) in accordance with ITB 20.1. One called the Technical Bid containing the documents listed in ITB 8.2 and the other the Price Bid containing the documents listed in ITB 8.3.</p> <p>8.2 The Technical Bid shall comprise the following:</p> <ul style="list-style-type: none"> (a) Letter of Technical Bid; (b) Bid Security, in accordance with ITB 12; (c) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 13.1; (d) documentary evidence in accordance with ITB 18.1 establishing the Bidder's qualifications to perform the contract; (e) Technical Proposal in accordance with ITB 15.1; (f) Any other document required in the BDS. <p>8.3 The Price Bid shall comprise the following:</p> <ul style="list-style-type: none"> (a) Letter of Price Bid; Completed Price Schedules, in accordance with ITB 9 and 10, or as stipulated in the BDS. (b) Any other document required in the BDS. <p>8.4 In addition to the requirements under ITB 8.2, bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all partners. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the agreement.</p>
<p>9. Bid Prices</p>	<p>9.1 The Contract shall be for the whole Works, as described in Clause 1.1 of ITB, based on the priced Bill of Quantities submitted by the Bidder.</p> <p>9.2 The Price bid made by the contractor should exclude the GST and all other taxes and duties. For GST, refer GCC clause 41.1. Therefore, all the duties, taxes, royalties and other levies payable by the Contractor under the Contract, or for any other cause, shall be excluded in the rates, prices, and total Bid price submitted by the Bidder.</p> <p>9.3 The rates and prices quoted by the Bidder shall be fixed for the entire duration of the Contract and shall not be subjected to adjustment.</p> <p>9.4 Provisional sum of 2 % of the awarded value of work shall be provided for the work of shifting of poles, cables, Telephone lines or other works approved by DSCL .The payment shall be paid to</p>

	contractor on production of original bills and as per actual work done.
10. Currencies of Bid	10.1 The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees only.
11. Bid Validity	<p>11.1 “Bids shall remain valid for a period specified in the BDS after the deadline date for bid submission specified in Clause 19.1 of ITB.”</p> <p>11.2 In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders’ responses shall be made in writing or by email. A bidder may refuse the request without</p> <p>11.3 Forfeiting his Bid Security/ Earnest Money. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his earnest money for a period of the extension, and in compliance with Clause 12 of ITB in all respects.</p>
12. Earnest Money	<p>12.1 The Bidder shall furnish, as part of the Bid, Earnest Money, in the amount specified in the BDS.</p> <p>12.2 The Earnest Money Deposit (EMD) shall, at the Bidder’s option, be in the form of Fixed Deposit Receipt, Bank Guarantee of a scheduled commercial bank, issued in favor of the name given in the BDS& shall be valid for six months or more after the last date of receipt of bids. Earnest money will be deposited, physically, with officer calling tender, before last date of submission of tender. A scanned copy of earnest money document will be submitted along with the tender</p> <p>12.3 Any bid not accompanied by an acceptable Earnest Money, shall be rejected by the Employer as non-responsive.</p> <p>12.4 The Earnest Money of unsuccessful bidders will be returned within 60 days of the end of the Bid validity period specified in Clause 11.1 of ITB.</p> <p>12.5 The Earnest Money of the successful Bidder will be discharged when the Bidder has signed the Agreement and furnished the required Performance Security.</p>

	<p>12.6 The Earnest Money may be forfeited:</p> <p>If the Bidder withdraws the Bid after bid opening (technical bid) during the period of Bid validity;</p> <p>(a) In the case of a successful Bidder, if the Bidder fails within the specified time limit to</p> <p>(b) Sign the Agreement; and/or</p> <p>(c) Furnish the required Performance Security.</p>
13. Format and Signing of Bid	<p>13.1 Bidders shall submit their Bid electronically. Procedures for submission, sealing and marking are outlined in the ITB16.</p> <p>13.2 The Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the BDS and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature.</p>
14. Cost of Bidding	<p>14.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the <i>Employer</i> shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.</p>
15. Documents Comprising the Bid	<p>15.1 The Bidder shall furnish, as part of the Technical Bid, a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section 4 (Bidding Forms), in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time.</p>
	<u>Bid Submission</u>
16. Process of e-Bid Submission	<p>16.1 Instruction for Online Bid Submission</p> <p>I. Instructions to the Bidders to submit the bids online through the procurement portal for Procurement at http://uktenders.gov.in.</p> <p>II. Possession of valid Digital Signature Certificate (DSC) and enrollment/registration of the contractors/bidders on the e-Procurement/e-tender portal are prerequisite for e- tendering.</p> <p>III. Bidder should read each and every rules/regulations for uploading the bid on the e-procurement portal.</p> <p>16.2 Submission of Original Documents: The bidders are required to separately submit (i) original demand drafts towards the cost of bid document and registration on e-procurement website (if not previously registered) (as per RFP); and (ii) original bid security in</p>

	approved form; and (iii) original affidavit regarding correctness of information furnished with bid document, in the office specified in the BDS , before the opening of the technical part of the Bid, either by registered/speed post/courier or by hand, failing which the bids will be declared non-responsive and will not be opened. Hard copy of rest of the bid or any other document is not to be submitted.
17. Alternative Bids	17.1 Unless otherwise specified in the BDS , alternative Bids shall not be considered.
18. Documents Establishing the Eligibility and Qualifications of the Bidder	18.1 To establish its qualifications to perform the Contract in accordance with Section 3 (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding information sheets included in Section 4 (Bidding Forms).
19. Deadline for Submission of Bids	<p>19.1 Bids must be uploaded online no later than the date and time specified In the BDS.</p> <p>19.2 The <i>Employer</i> may, at its discretion, extend the deadline for the submission of Bids by amending the bidding document in accordance with ITB 6, In which case all rights and obligations of the <i>Employer</i> and Bidders previously subject to the dead line shall thereafter be subject to the dead line as extended.</p>
20. Late Bids	20.1 The electronic bidding system would not allow any late submission of bids after due date & time as per server time.
21. Withdrawal, Substitution, and Modification of Bids	21.1 A Bidder may withdraw, substitute, or modify its Bid – Technical or Price prior to deadline for submission of Bids.
	<u>Bid Opening</u>
22. Opening of Technical Bids	<p>22.1 The Employer will open the bids received, on line in the presence of the bidders/bidders' representatives who choose to attend at the time, date and place specified in the BDS. In the event of the specified date for the submission of bids being declared a holiday for the Employer, the Bids will be opened at the appointed time online on the next working day.</p> <p>22.2 The technical bid shall be opened online.</p> <p>22.3 The Employer will prepare minutes of the Bid opening, including the information disclosed to those present in accordance with Clause 22.1 of ITB.</p> <p>22.4 Evaluation of the technical bids with respect to bid security, qualification information and other information furnished in Part I of the bid in pursuant to Clause 4.1 of ITB, shall be taken up and at the</p>

end of evaluation of technical bid a list will be drawn up of the responsive bids whose financial bids are eligible for consideration.

22.5 The Employer will notify Bidders in writing who have been rejected on the grounds of their Technical Bid being substantially non-responsive to the requirements of the Bidding Document.

22.6 At the time of the opening of the 'Financial Bid', the names of the bidders whose bids were found responsive in accordance with clause 22(iv) of ITB will be announced. The financial bids of only these bidders will be opened. The responsive bidders' names, the Bid prices, the total amount of each bid, and such other details as the Employer may consider appropriate will be announced by the Employer at the time of bid opening. Any Bid price, which is not read out and recorded, will not be taken into account in Bid Evaluation.

22.7 The Employer shall prepare the minutes of the opening of the Financial Bids.

22.8 Process to be Confidential

22.9 Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any attempt by a Bidder to influence the Employer's processing of bids or award decisions may result in the rejection of his Bid

22.10 Clarification of Bids and Contacting the Employer

22.11 No Bidder shall contact the Employer on any matter relating to its bid from the time of the bid opening to the time the contract is awarded.

22.12 Any attempt by the bidder to influence the Employer's bid evaluation, bid comparison or contract award decision may result in the rejection of his bid.

22.13 Examination of Bids and Determination of Responsiveness

22.14 During the detailed evaluation of "Technical Bids", the Employer will determine whether each Bid (a) meets the eligibility criteria defined in Clauses 3 and 4; (b) has been properly signed; (c) is

	<p>accompanied by the required securities; and (d) is substantially responsive to the requirements of the bidding documents. During the detailed evaluation of the “Financial Bids”, the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications and drawings.</p> <p>22.15 A substantially responsive “Financial Bid” is one that conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the bidding documents, the Employer’s rights or the Bidder’s obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive bids.</p> <p>22.16 If a “Financial Bid” is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.</p>
	<u>Evaluation and Comparison of Bid</u>
23. Confidentiality	<p>23.1 Information relating to the examination, evaluation, comparison, and post qualification of Bid and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders.</p> <p>23.2 Any attempt by a Bidder to influence the Employer in the evaluation of the Bid or Contract award decisions may result in the rejection of its Bid.</p> <p>23.3 Notwithstanding ITB 23.2, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it may do so in writing.</p>
24. Clarification of Bids	<p>24.1 To assist in the examination, evaluation, and comparison of the Technical and Price Bid, the Employer may, at its discretion, ask any Bidder for a clarification of its bid or submission in original, of any document submitted in the electronic bid. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer’s request for clarification and the response shall be in writing. No change in the substance of the Technical Bid or prices in the Price Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Price Bid, in</p>

	<p>accordance with ITB 27.</p> <p>24.2 If a Bidder does not provide clarifications of its Bid by the date and time set In the <i>Employer's</i> request for clarification, its Bid may be rejected.</p>
25. Deviations, Reservations, and Omissions	<p>25.1 During the evaluation of Bids, the following definitions apply:</p> <p>(a) “Deviation” is a departure from the requirements specified In the bidding document;</p> <p>(b) “Reservation” is the setting of limiting conditions or with holding from complete acceptance of the requirements specified In the bidding document; and “Omission” is the failure to submit part or all of the Information or documentation required In the bidding document.</p>
26. Preliminary Examination of Technical Bid	<p>26.1 The Employer shall examine the Technical Bid to confirm that all documents and technical documentation requested in ITB Sub-Clause 8.2 have been provided, and to determine the completeness of each document submitted.</p> <p>26.2 The Employer shall confirm that the following documents and information have been provided in the Technical Bid. If any of these documents or information is missing, the offer shall be rejected.</p> <p>(a) Letter of Technical Bid;</p> <p>(b) Written confirmation of authorization to commit the Bidder;</p> <p>(c) Bid Security, if applicable; and</p> <p>(d) Technical Proposal in accordance with ITB15.</p>
27. Correction of errors	<p>27.1 The e-procurement system automatically calculates the total amount from unit rates and quantities and the system also automatically populates the amount in words from the amount In figures and therefore there is no scope of discrepancy and need for arithmetic correction</p>
28. Evaluation of Price Bid	<p>28.1 The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.</p> <p>28.2 To evaluate the Price Bid, the Employer shall consider the following:</p> <p>28.3 the bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities for admeasurement contracts, or Schedule of Prices for lump sum contracts, but including Day work items, where priced competitively;</p> <p>28.4 price adjustment for correction of arithmetic errors in accordance with ITB 27.1;</p> <p>28.5 price adjustment due to discounts offered in accordance with ITB</p>

	<p>17.4;</p> <p>28.6 adjustment for nonconformities in accordance with ITB 30.3;</p> <p>28.7 application of all the evaluation factors indicated in Section 3 (Evaluation and Qualification Criteria);</p> <p>28.8 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.</p>
29. Employer's Right to accept any Bid and to Reject any or all Bids	29.1 Employer reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Employer's action.
	<u>Award of Contract</u>
30. Award Criteria	30.1 The Employer shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid for aggregate Engineer construction and operation & maintenance and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily
31. Notification of Award	<p>31.1 Prior to the expiration of the period of bid validity, the Employer shall notify the successful Bidder, in writing, via the Letter of Acceptance/Award included in the Contract Forms, that its bid has been accepted.</p> <p>31.2 Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.</p> <p>30.3 At the same time, the Employer shall also notify all other Bidders of the results of the bidding, and shall publish in an English language newspaper or well-known and freely accessible website the results identifying the bid and contract numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices as read out at Bid Opening; (iii) name and evaluated prices of each Bid that was evaluated; (iv) name of bidders whose Bid were rejected and the reasons for their rejection; and (v) name of the winning Bidder, and the Price it offered, as well as the duration and summary scope of the contract awarded. After publication of the award, unsuccessful bidders may request in writing to the Employer for a debriefing seeking explanations on the grounds on which their Bid were not selected. The Employer shall promptly respond in writing to any</p>

	<p>unsuccessful Bidder who, after publication of contract award, requests a debriefing.</p>
32. Signing of Contract	<p>32.1 Promptly after notification, the Employer shall send the successful Bidder the Contract Agreement.</p> <p>32.2 Within twenty-eight (28) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer.</p>
33. Performance Security	<p>33.1 Within 21 (twenty one) days after receipt of the Letter of Acceptance/Award, the successful Bidder shall deliver to the Employer a Performance Security of five (5%) of the Contract Price including GST, valid up to the completion of the DLP Period.</p> <p>33.2 The performance security shall be either in the form of an unconditional Bank Guarantee or fixed deposit Receipts (FDR), in favor of Chief Executive Officer, Dehradun Smart City Limited Payable at Dehradun, Uttarakhand, from a Scheduled Commercial Bank.</p> <p>33.3 Failure of the successful Bidder to comply with the requirements of Clause 32.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Earnest Money. He will also be debarred from participating in future bids under Dehradun Smart City Limited.</p>
34. Advances:	<p>34.1 The employer will provide mobilization advances and advance against security of equipment as provided in Part I General Condition of Contract. If specified in the tender document.</p>
35. Corrupt or Fraudulent Practices	<p>35.1 The Employer requires the bidders/Contractors to strictly observe the laws against fraud and corruption in force in India, namely, Prevention of Corruption Act, 1988.</p>

SECTION II
BID DATA SHEET (BDS)

Section II – Bid Data Sheet (BDS)

ITB Reference	A. General
ITB 1.1	<p>The number of the Invitation for Bids is: 01/DSCL/19-20/NCB/MNF</p> <p>The Employer is: Chief Executive Officer, Dehradun Smart City Limited</p> <p>The name of the RFP is: Request for Proposal for Supply & Installation of 30.5 meter Tall Monumental National Flag High Mast in Gandhi Park in Dehradun city including Operation and maintenance for one year under “Smart City Mission” through e-Procurement.</p>
	Contents of Bidding Document
ITB 5.1	<p>For clarification purpose only, the Employer address is: Dehradun Smart City Limited, 777, Saatvik Tower , Rajender Nagar, Kaulagarh Road, Dehradun-248001, Uttarakhand, Email : agmproc-dscl@uk.gov.in</p>
ITB 6.1	<p>Any addendum/clarification shall be uploaded on the portal http://uktenders.gov.in only</p>
	Preparation of Bids
ITB 7.1	<p>The language of the bid is : English</p>
ITB 8.2	<p>The Bidder should also refer to the checklist enclosed in the RFP for submission of the documents.</p>
ITB 9.2	<p>The rates quoted by the Contractor shall be exclusive of GST which will be paid /adjusted by the client at the time of payment of the bills of the Contractor and shall be deemed to be Inclusive of other taxes that the Contractor will have to pay for the performance of this Contract. The Employer will perform such duties In regard to the deduction of such taxes at source [TDS] as per applicable law.</p>
ITB 11.1	<p>The Bid validity period shall be 90 days.</p>
ITB 12.1	<p>The bidder shall furnish a Bid Security/EMD for an amount of INR 35.00 (Thirty Five Thousand Only) valid till 45 days beyond the validity of Bids i.e. (90+45 days).</p>
ITB 12.2	<p>The Bid Security/EMD shall be in the form of FDR/TDR payable at Dehradun or an Unconditional Bank Guarantee issued in favor of Chief Executive Officer, Dehradun Smart City Limited.</p>
ITB 13.2	<p>The written confirmation of authorization to sign on behalf of the Bidder shall consist of Legally Enforceable Power of Attorney.</p>
	Bid Submission
ITB 16.2	<p>The date and time for submission of original documents like RFP Document Fees(Non-Refundable), Bid Security/EMD and Affidavit for Correctness of Bid is:</p> <p>Date: 02/12/2019 Time: Up to 1200 Hours</p>

	Place: Dehradun Smart City Limited, 777, Saatvik Tower , Rajender Nagar, Kaulagarh Road, Dehradun-248001, Uttarakhand
ITB 17.1	Alternative Bids shall not be permitted.
ITB 19.1	The deadline for uploading the Bids is: Date: 02/12/2019 Time: Up to 1030 Hours Place: Dehradun Smart City Limited, 777, Saatvik Tower , Rajender Nagar, Kaulagarh Road, Dehradun-248001, Uttarakhand
	Bid Opening
ITB 22.1	The online Bid opening of Technical Parts of Bids shall take place at: Dehradun Smart City Limited, 777, Saatvik Tower, Rajender Nagar, Kaulagarh Road, Dehradun-248001, Uttarakhand. Date: 02/12/2019 Time: 1230 Hours

SECTION III

EVALUATION AND QUALIFICATION

CRITERIA

Section III - Evaluation and Qualification Criteria

1.0 EVALUATION

The bidder shall fulfill the following qualifying requirements:-

1.1 Adequacy of Technical Proposal

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section 5 (Scope of Work). Non-compliance with equipment and personnel requirements described in Section 5 (Scope of Work) shall not be grounds for bid rejection and such non-compliance will be subject to clarification and rectification prior to contract award.

2.0 Qualification Criteria

The Technical Bids will be evaluated based on the following criteria

Sr. No	Criteria	Requirement	Submission Requirement
1	Net Worth	As a minimum and the bidder's net worth calculated as the difference between total assets and total liabilities should be minimum INR 4.00 Lakhs. Submission of audited balance sheet for the last financial year 2018-19 in order to demonstrate the current soundness of the bidder's financial position and its prospective long term profitability.	Form FIN-1
2	Annual Supply/Construction Turnover	The Bidder shall have minimum annual turnover in any of the last five financial years for a value of INR 69.50 Lakhs Only.	Form Fin 2
3	Specific Construction Experience in Similar works	Bidder should have successfully completed as a prime contractor, JV member, management contractor or sub-contractor at least one work during the last seven years and experience certificate should be attached with this RFP <ul style="list-style-type: none"> • One similar work of contract value INR 13.90 Lakhs OR <ul style="list-style-type: none"> • Two similar works of contract value INR 8.68 Lakhs. OR	Form EXP 2(a) with attachments

RFP for 30.5 meter Tall Monumental National Flag



		<ul style="list-style-type: none">• Three similar works of contract value INR 6.95 Lakhs <p>Note: For Electrical works, the bidder should Possess a valid Electrical license of any central/ state Govt. department/ PSU. Successful bidder will have to obtain electrical license of Uttarakhand State before signing the contract agreement.</p>	
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SECTION IV

BIDDING FORMS

Note: Each filled form should contain the Project Name and RFP Ref No.



Letter of Technical Bid

Ref No. _____ **Date of Bid submission:** _____

RFP No.: _____

To: The Chief Executive Officer,
Dehradun Smart City Limited,
777, Saatvik Tower, Rajender Nagar,
Kaulagarh Road, Dehradun-248001, Uttarakhand

We, the undersigned, declare that:

We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB-8);

We offer to execute works in conformity with the Bidding Documents the following Work/s:

Our bid shall be valid for a period of 180 days from the bid submission due date in accordance with the bidding documents, and it shall remain binding up on us and may be accepted at any time before the expiration of that period;

If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;

We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB 3.3;

We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB3.3,

Our firm, its affiliates or subsidiaries, including any Subcontractors or Suppliers for any part of the contract, has not been declared ineligible by Government of Uttarakhand (GoUK)/ Government of India (GoI) or any of its undertakings/ Other Departments any State Government, any public sector unit or any Local Body.

We are not a government owned entity / We are a government owned entity but meet the requirements of ITB 3.5;*

We understand that this bid, together with your written acceptance thereof included in your letter of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed.

We agree to permit Dehradun Smart City Limited or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by Dehradun Smart City Limited or Government of India.

Name.....

RFP for 30.5 meter Tall Monumental National Flag



In the capacity of.....

Signed.....

Duly authorized to sign the Bid for and on behalf of.....

Date.....

Organization

[Insert Site Organization Information]



Construction Schedule

[Insert Construction Schedule]

Bidder's Qualification

To establish its qualifications to perform the contract in accordance with Section III (Evaluation and Qualification Criteria) the Bidder shall provide the Information requested in the corresponding Information Sheets Included here under



Form ELI-1: Bidder's Information

Bidder's legal name	
Bidder's country of constitution	
Bidder's year of constitution	
Bidder's legal address in country of constitution	
Bidder's authorized representative (name, address, telephone numbers, fax numbers, e-mail address)	
Attached are copies of the following original documents. 1. Articles of incorporation or constitution of the legal entity named above. 2. In case of a government-owned entity, any additional documents not covered under 1 above required to comply with ITB 3.5.	

Form FIN – 1: Financial Situation and Performance

Information from Balance Sheet			
	2018-19	2017-18	2016-17
Total Assets (TA)			
Total Liabilities (TL)			
Net Worth (NW)			
Current Assets (CA)			
Current Liabilities (CL)			
Working Capital (WC)			
Total Revenue (TR)			
Profits Before Taxes (PBT)			
Profits After Taxes (PAT)			
Cash Flow from Operating Activities			

Note: The figures filled by the bidder in the above format should also be certified by the Chartered Accountant.

Attached are copies of financial statements for the last three years required above; and complying with the requirements (Last three years legible audited financial statements (Balance sheets and Profit and Loss Accounts) including enclosures/annexures/schedules/attachments/appendix). Audit report is also attached.



Form FIN - 2: Average Annual Turnover

Annual turnover data	
Year	Amount in INR
2018-19	
2017-18	
2016-17	
2015-16	
2014-15	
Average Annual Turnover *	

Annual construction turnover calculated as total certified payments received for work In progress or completed, for last five FY (2014-15, 2015-16, 2016-17, 2017-18, 2018-19) of the Bidder and should be certified by a Chartered Accountant.

RFP for 30.5 meter Tall Monumental National Flag



Form EXP – 2 : Specific Construction Experience

[The following table shall be filled in for contracts performed by the Applicant]

Similar Contract No.	Information			
Contract Identification				
Award date				
Completion date				
Role of contractor	Prime Contractor	Member In JV	Management Contractor	Sub-contractor
Total Contract Amount			Rs *	
If member In a JV or subcontractor, specify participation In total Contract amount			*	
Employer's Name:				
Address:				
Telephone/fax number				
E-mail:				

Note:

Attached are completion certificates from the competent authority not less than the rank of Executive Engineer of any State /Central government department or corporation.



Form of Bid Security (EMD, Bank Guarantee)

.....Bank’s Name, and Address of Issuing Branch or Office.....

Beneficiary: Name and Address of Employer.....

Date:.....
.....

Bid Security No.:

We have been informed that name of the Bidder (hereinafter called "the Bidder") has submitted to you its bid dated (Hereinafter called "the Bid") for the execution of.....name of contract.....under Invitation for Bid No.....("the IFB").

Furthermore, we understand that, according to your conditions, Bid must be supported by a bid guarantee.

At the request of the Bidder, we name of Bank hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of amount in figures. (.....amount in words) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or

does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter “the ITB”);or

Having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Agreement, or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITB.

This guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; and (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy your notification to the Bidder of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of the Bidder’s bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

..... Bank’s seal and authorized signature(s)

Note: All italicized text is for use in preparing this form and shall be deleted from the final document



Letter of Technical Bid

Ref No. _____

Date of Bid submission: _____

RFP No.: _____

To: The Chief Executive Officer,
Dehradun Smart City Limited,
777, Saatvik Tower, Rajender Nagar,
Kaulagarh Road, Dehradun-248001, Uttarakhand

We, the undersigned, declare that:

We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB-6) ;

We offer to execute works in conformity with the Bidding Documents.

The discounts offered and the methodology for their application are:

Our Bid shall be valid for a period of 90 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

If our Bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;

We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and

We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

We agree to permit DSCL or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by DSCL or Government of India.

If awarded the contract, the person named below shall act as Contractor's Representative.

Name.....

In the capacity of.....

Signed.....

Duly authorized to sign the Bid for and on behalf of.....

Date.....

Format for Declaration by the bidder for not being Blacklisted / Debarred

(To be submitted on the Letterhead of the bidder)

Date: dd/mm/yyyy

To: The Chief Executive Officer,
Dehradun Smart City Limited,
777, Saatvik Tower, Rajender Nagar,
Kaulagarh Road, Dehradun-248001, Uttarakhand

Subject: Request for Proposal for _____

RFP Reference No:

Dear Sir/ Ma'am,

I, authorized representative of _____, hereby solemnly confirm that the _____ ("Successful bidder") is not debarred/ black -listed by Central Government/ any State Government/ Public Sector Undertaking in India or similar agencies globally for unsatisfactory past performance, corrupt, fraudulent or any other unethical business practices or for any other reason as on last date of submission of the bid.

In the event of any deviation from the factual information/ declaration, DEHRADUN SMART CITY LIMITED reserves the right to reject the bid or terminate the Contract without any compensation to the Company.

Thanking you,
Yours faithfully,

Signature of Authorized Signatory (with official seal)

Date:

Name:

Designation:

Address:

Telephone & Fax: E-mail address:



Format of sending pre-bid queries at agmproc-dscl@uk.gov.in

RFP Reference No:

Bidder's Request For Clarification				
Name and complete official address of Organization submitting query/request for clarification			Telephone, Fax and E-mail of the organization Tel: _____ Fax: _____ Email: _____	
S. No.	Clause No.	Page No.	Content Of RFP Requiring Clarification	Change Requested/ Clarification required
1				
2				

Signature:

Name of the Authorized signatory:

Company seal:

Date and Stamped

Note: Bidder(s) are requested to send the queries in PDF with Sign and Company Seal and also in MS Excel/word for making consolidation process easy.



Format for Power of Attorney

(On a non-judicial stamp paper of appropriate value duly attested by notary public)

Know all men by these presents, we (name and address of the registered office of the Sole Applicant) do hereby constitute, appoint and authorize Mr./Ms _____ R/o _____ who is presently employed with us and holding the position of _____, to do in our name and on our behalf, all such acts, deeds and things, necessary in connection with or incidental to the bid for Request for Proposal for _____ including signing and submission of all documents and providing information/ responses to DEHRADUN SMART CITY LIMITED and representing us in all matters in connection with our bid for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For (Signature)

(Name, Title and Address)

Accept

..... (Signature)

(Name, Title and Address of the Attorney)

Notes:

To be executed by the Applicant.

The mode of execution of Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a resolution/ Power of attorney in favour of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the bidder.



FORMAT FOR AFFIDAVIT FOR CORRECTNESS OF BID

(To be given by the Bidder on non-judicial Stamp Paper of Rs. 100/-)

I..... S/o, Resident of the,
..... (Insert designation) of the (Insert name of the Bidder), do solemnly affirm and state as under:

1. That I am the authorized signatory of(insert name of company) (hereinafter referred to as “Bidder”) and I am duly authorized by the Board of Directors of the Bidder to swear and depose this Affidavit on behalf of the bidder.
2. That I have submitted information with respect to our eligibility for the “.....”(hereinafter referred to as “Project”) and I further state that all the said information submitted by us is accurate, true and correct and is based on our records available with us.
3. That I hereby affirm to furnish any information, which may be requested by Authority to verify our credentials/information provided by us under this Bid and as may be deemed necessary by Authority.
4. That if any point of time till the completion of all the contractual obligations, in case Authority requests any further/additional information regarding our financial and/or technical capabilities, or any other relevant information, I shall promptly and immediately make available such information accurately and correctly to the satisfaction of Authority.
5. That I fully acknowledge and understand that furnishing of any false or misleading information by us in Bid shall entitle us to be disqualified from the tendering process for the said Project. The costs and risks for such disqualification shall be entirely borne by us.
6. That, we fully acknowledge and understand that in case any false or misleading information, as furnished by us in our Bid, is found at a later stage after the signing of the Contract Agreement amongst Authority and (Insert name of organization), it shall entitle DSCL to terminate the said signed Contract Agreement between the Parties. The costs and risks for such termination shall be entirely borne by us.
7. That all the terms and conditions of the Tender Document have been duly complied with.

VERIFICATION:

I, the above named deponent, do verify that the contents of points 1 to 7 of this affidavit are true and correct to my knowledge. No part of it is false and nothing material has been concealed.

Verified at, on this day of....., 2019.

Checklist for Technical & Financial Bid

S. No.	Particulars	Yes/No	If Yes, Page No.
1	RFP Document Fees		
2	Bid Security/EMD		
3	Affidavit of Correctness of Bid		
4	Power of Attorney		
5	Undertaking to the effect that the company has not been black-listed(duly notarized)		
6	Copy of PAN CARD issued by income tax department with copy of income tax returns for the last three FY		
7	Copy of GST Registration Certificate		
8	Copy of Incorporation Certificate		
9	Letter of Technical Bid		
10	Site Organization		
11	Construction Schedule		
12	Form ELI-1: Bidders Information		
13	Form FIN-2: Average Annual Turnover		
14	Form EXP-2: Specific Construction Experience		
15	Audited Financial Statements for the last five (5) FY including profit and loss statements with Annexure and Auditor's report.		
16	Any other relevant document		

SECTION 5

Scope of Work & Technical Specifications

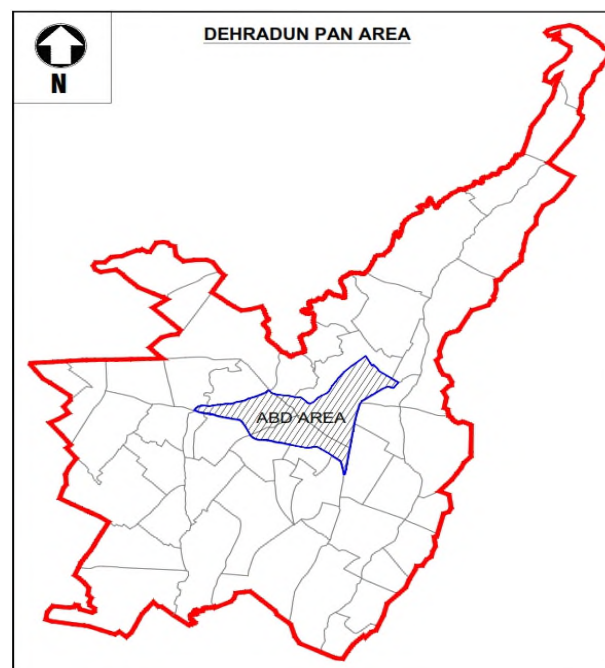
This Section contains the Specification, the Drawings, and supplementary information that describe the Works to be procured. The specifications of the Equipments mentioned in the documents shall govern; and the equipment supplied, installed by the Contractor shall comply with stipulated specifications. The make/ manufacturer of the equipment if mentioned inadvertently in the bidding document shall have no effect.

5. Objective of the Package

Government of India launched the Smart Cities Mission to enable the holistic development of Indian cities. This initiative under the Ministry of Urban Development (MoUD) aims to drive economic growth and improve the quality of life of people by enabling local development and harnessing technology as a means to create smart outcomes for citizens. According to MoUD, the core elements of a Smart City include: adequate water and electricity supply, suitable sanitation and solid waste management, efficient public transportation, affordable housing, robust IT connectivity and digitalization, e-governance with citizen participation, sustainable environment, and safety and security of citizens with health and education for all. These objectives are proposed to be attained through a judicious mix of retrofitting, redevelopment and Greenfield development.

In the approach of the Smart Cities Mission, the objective is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions. The focus is on sustainable and inclusive development and the idea is to look at compact areas, create a replicable model which will act like a light house to other aspiring cities.

Dehradun the capital city of Uttarakhand was included in the Smart City Program – given it's importance as a State Capital and also a gateway to all tourist facilities – both adventure and religious in the state. After due public consultation, core old city area of Dehradun was selected for implementing various projects that would have smart elements - improving the life of citizens living in the area in particular and the whole city in general.



The ABD area has been defined in the Smart City Proposal demarcating 875 acres of the iconic old city area and nearby important areas. The sub-projects have been identified and broadly defined in the smart city proposal, which gives a clear glimpse of the projects stated under various heads of the smart city vision covering major aspects for the urgent change and development in the city. A city map of Dehradun also marking the ABD area is shown in Figure 1.1. Supply & Installation of 30.5 meter Tall Monumental National Flag High Mast in Gandhi Park in Dehradun city including Operation and maintenance for one year is one among the proposals included in the Mission.

DETAILED SPECIFICATION

All the work shall be carried out in strict accordance with the detailed specifications part. 1 section (A) Building Revised PWD Uttarakhand or relevant portions of IS codes or latest CPWD Specifications unless otherwise specified below or ordered by the Engineer In charge from time to time.

1. MATERIALS:

All materials to be used in the work shall be new and the qualities and standards as specified in LS Codes or Uttarakhand PWD, Specification or the CPWD specification. Delivery shall be made sufficiently in advance to enable samples to be tested if required. Rejected materials will have to be removed from the site by the contractor from the site.

1.1 CEMENT:

It shall be ordinary Portland cement of any approved manufacturer unless specified otherwise and shall conform with the standard laid down in IS 269-1967. It shall be stored in a rain proof and damp proof shed on dry platforms in such a manner as to prevent deterioration or contamination. Cement supply has set or partially set shall not be used. Storage at work site shall be at the contractor's demand and Risk.

1.2 LIME:

Lime burnt from lime stone shall be used. It shall be free from ashes or other extraneous materials. It shall be free from lumps when brought to site work, and not in powder form. It shall be stored in rain proof sheds. Lime which has been damaged by rains, moisture, or air slaking shall not be

used. All damaged and rejected lime shall be removed from the site of work forthwith.

Sarna and Katni -limes shall be preferred for mortar required for concrete and brick masonry whereas Dehradun lime shall be preferred for white washing. It shall conform to IS:271-1964.

SLAKING OF LIME: Limes shall be slaked by one of the following methods.

- i. Platform slaking: Lime before slaking shall be quite fresh and in the form of lumps. Slaking shall be carried out on masonry platform by sprinkling of water gradually, till lime is slaked and reduced to powder form. During the process of sprinkling of water, the heap of lime shall be turned over and over again, and no more water shall be used than that required for lime and retain its powdered form. Slaked lime shall be screened through a sieve of 75 measures to an inch (3 measures to a cm.) and the residue which does not pass through the sieve, shall be rejected. Slaked lime shall then be run into putty (as described below) before use in mortar.
- ii. Tank slaking (preparation lime putty):- Sufficiently large slaking vessel or tank shall be made. This shall be partly filled with water and sufficient quick lime added gradually to fill up the vessel to about half the depth of water. Lime shall be added to water and not water to lime. Stirring and hoeing shall start at once and lime shall not be allowed to get exposed above water. The mix shall be stirred all through the slaking process at least 5 minutes after the boiling has stopped, and as the mix thickened more water shall be added. The lime in state of suspension shall then be allowed to pass through a sieve of 8 meshes to an inch (3 meshes to a cm.) and flow into another tank at a lower level,

where it shall be kept standing for at least 3 days before use. The lower tank shall be made of dry brick masonry with joints filled with "sand. Water, shall get partly evaporated and absorbed in ground: and, surplus water atop shall be removed leaving lime putty in the form of paste. Lime putty so formed shall be kept wet, till it is completely used It can be stored without getting, spoilt for a-fortnight, provided it is protected from drying out,

- iii. It slaked lime (in power form) is run into putty, it shall be kept standing in the lower tank for at least 30 hours, before use.
- 1.3 **FINE SAND (Jamuna sand):** This shall be natural river sand clean, sharp and free from deleterious matters. It shall not contain more than 4% of silt as determined in laboratory by sedimentation test with pipettes apparatus. Fineness modulus of sand shall not be less than 1.25 blinding of coarse sand shall have to be done to obtain the desired fineness modulus of fine sand for which nothing extra shall be paid.
- 1.4 **COARSE SAND (Badarpur):-** This shall be natural pit sand, clean, sharp and strong granular and composed of hard siliceous materials. It shall be free from harmful impurities such as mica, shale or similar laminated materials, salts alkalis and organic matter. It shall be obtained from badarpur, Sona, Anangpur or any other quarry approved by Engineer In charge.
- 1.5 **COARSE AGGREGATE (STONE BALLAST):** This shall be broken from red granite or quartzite stone obtained from Gurkul quarry or any other approved quarry. It shall be free from soft friable, thin elongated or elongated or laminated pieces and shall be roughly cubical in shape. It shall be clear and free from dirt and any other foreign matter.
- 1.6 **BRICK:** First class bricks shall be moulded from good brick. These shall be of uniform deep red cherry or copper colour, thoroughly burnt without being verified, regular in shape and size and shall have sharp and square sides and edges and parallel faces to ensure conformity in the thickness of the courses of brick work. The bricks shall be free from cracks, chips, flaws stones or lumps of any kind. These shall not show appreciable signs of efflorescence's with dry or subsequent to soaking in water.

The brick shall be sound, hard homogeneous in texture and emit a clear ringing sound on being struck. These shall have a minimum crushing strength of 1300 lbs/sq.in (105kg/sq.cm.) a minimum crushing strength of lbs/sq. In (kg./sq.m.).

All bricks which absorb water more than one sixth of their own, dry weight after being soaked for an hour by immersion in water shall be rejected.

The size of brick shall be 9 inch x 1-3/8"x2 3/4- (22.9cm. x 11.2 x 7.0 cm) unless otherwise specified. A tolerance upto 1/8 inch (3mm) in each direction shall be permitted. The brick shall be provided with frogs.

- 1.7 **BRICK BALLAST -** Ballast for foundation and floor concrete shall be made of over burnt brick bates broken to 40 mm. gauge and for no of terracing it shall be made of 1st class brick bates and broken to 25mm. gauge No. under burnt bricks or Jhama (over burnt/porous brick) shall in any circumstances be used. The ballast shall be free from surkhi, leaves, straw and other foreign matter before it is stacked for use.

- 1.8 **SURKHI** : Surkhi shall be made from well burnt slightly under burnt (but not from over burnt) brick bats. It shall be clear and free from admixture foreign matter and shall conform to IS: 1344 it shall be ground to pass through a sieve of 3 meshes to a cm. 8 meshes to an inch) with at least 50% of it passing through a sieve of 6 meshes to a centimeter (15 meshes to an inch). Further soluble salt content shall not exceed 2% by weight.
- 1.9 **FLY ASH**: The fly ash should conform to the requirement of IS: 3812 (Part I) 1966 specification for fly ash part-1 for form use as pozzolana. It should be clean dry and free from any contamination of bottom ash-from thermal power plant India Prasth Estate New Delhi along shall be used.
- 1.10 **WATER**; Water shall be clean and reasonable free from detritus matter, such as soils, acids, alkalis salts and vegetable of growth and shall be potable.
- 1.11 **TESTING OF WORKS AND MATERIALS**: The contractor shall if required by the Engineer In charge arrange the testing of materials, cubes etc. or portions of the work at his own cost in order to prove their the soundness and strength and sufficiency. If after any such test and or in the opinion of the Engineer in charge the work or portions of the works as his own cost in order to prove their soundness and strength and sufficiency. If after any such test and or in work is found to be defective or unsound the contractor shall pull down and re-execute the same at his own cost. Defective material shall be removed from the site immediately. The rate and frequency of testing as decided 'by the executive engineer/ assistant engineer in charge of the authority shall be final and binding on the contractor.

SITE CLEARANCE: Before actual layout, the site if the structure shall be cleared off all. Undulation, Jungle and gross including heap of surplus earth etc. on completion of the building the ground shall be cleared and dressed on all sides of the building at least up to 30 meter from the nearest edge of building. No extra payment shall be made for this work which shall be deemed to be included in the rates for the work as a whole.

2. EARTH WORK FOR EXCAVATION IN FOUNDATIONS:

EXCAVATION: The foundation trenches shall be dug out to the exact width of the footing as shown in the drawing or as directed by the Engineer-In-Charge. The sides of trenches shall be kept vertical and bottom horizontal both transversely and longitudinally the bed of the trenches shall be made level & firm by watering and ramming. Any sort of defective spots that are found shall be filled with concrete of the same proportion as the foundation concrete or as may be directed by the Engineer-In-Charge.

If the excavation is done to dimensions greater than those shown on the drawings or those required by the Engineer-in-Charge the excess depth shall be made good, at the cost of the contractor, with concrete or as may be directed by the Engineer-In charge. The trenches shall be inspected & passed by the Engineer-In charge before concrete is placed.

Excavated materials shall not be placed within 1.5 meters of the edge of trench of half the depth of trench whichever is more.

- 2.3 **EARTH FILLING IN FOUNDATION**: After construction of foundation, the spaces around the foundation shall be cleared of the debris, brief bates etc. and filled with earth free from rubbish. organic or other foreign matters in layers not exceeding 15 cm. well watered, rammed and consolidated before the subsequent one 'is laid. No payment

for refilling shall be made for the earth that will be available from the excavation of the foundation.

2.4 **2.4 EARTH FILLING IN PLINTH:** The plinth shall be similarly filled with selected earth from the excavation or other approved earth from other places if required in 15 cm layers. Each layer shall be well watered, rammed and consolidated before proceeding with the next one. Payment for earth filling shall be made only for the earth over and above the one used from excavation of foundations.

2.5 **3.4 JAMUNA SAND FILLING IN PLINTH:** Sand shall be clean and free from dust Organic and other foreign matter and shall be filled in a manner similar to earth filling in. plinth. The surface of the consolidated sand shall be dressed to required level and slope. Concreting of floor shall not be started till the Engineer-In-Charge has inspected and approved the filling.

3. MORTARS:

3.1 LIME MORTARS:

3.1.1 Lime mortar shall be prepared by mixing and grinding lime putty and surkhi or fly ash in specified proportions:

3.1.2 MIXING AND GRINDING: Lime putty sand and surkhi or fly ash shall be mixed on water tight masonry platforms or in troughs. This shall then be sprinkled with necessary quantity of water and ground in masonry lined mortar mill. The ingredients in specified proportions shall be measured in boxes of suitable size.

The mill shall be constructed of first Class bricks in lime mortar with downward. The outer edge of the mill shall be raised by the track followed by the driving animal. The track itself shall be sloped outward and kept well consolidated and watered. No dust or mud shall be allowed to fall into mortar being ground.

The mortar shall be ground for less than 180 revolutions. It shall be raked up continuously during the process. Water shall be added as required during grinding, care being taken not to add more water than which shall bring the mortar to the consistency of stiff paste.

3.1.3 GENERAL: All mortar shall be used as soon as possible after grinding. As a rule mortar shall be used on the day it is made. Lime surkhi or lime fly ash sand mortar remaining unused for over 36 hours shall be rejected and removed from the site of work. The mortar shall be kept damp and shall on no account be allowed to dry.

3.2 CEMENT MORTAR:

3.2.1 Cement mortar shall be prepared by cement and sand in specified proportion.

3.2.2 PROPORTIONING: The unit of measurement for cement shall be a bag of cement weighing 50 kg and this shall be taken as 0.35 cum. (1.8ft.) sand in specified proportion shall be measured in boxes or suitable sizes. It shall be measured on the basis of its dry volume. In case of damp sand, its quantity shall be increased suitably to allow for bulkage.

3.2.3 MIXING: The mixing of mortar shall be done in mechanical mixer or by hand mixing as specified.

- a. Mixing in mechanical mixer: Cement and sand in specified proportions shall be mixed dry through in a mixer. Water shall then be added gradually and wet mixing continued for at least one minute. Care shall be taken not to add more water than that which shall bring the mortar to the consistency of a stiff paste.

Only the quantity of mortar which can be used within 30 minutes of its mixing shall be prepared at a time.

- b. **HAND MIXING:** The measured quantity of sand shall be levelled on clean masonry platform and cement bags emptied on top. The cement and sand shall be thoroughly mixed, dry by being turned over and over, backwards and forwards, several times till the mixture is of a uniform colour. The quantity of dry mix which can be used within 30 minutes shall then be mixed in masonry thoroughly with just 7 sufficient quantity of water to bring the mortar to the consistency of a stir paste.

3.2.4 GENERAL: Mortar shall be used as soon as possible after mixing and before it has begun to set, and in any case within 30 minutes after the water is added to the dry mixture. Mortar unused for more than 30 minutes shall be rejected and removed from the site of work.

4 CONCRETE WORK IN FOUNDATION:

4.1 FOUNDATION LIME CONCRETE:

4.1.1 Lime Concrete: This shall be prepared by mixing graded brick ballast of gauge specified with wet ground lime surkhi Mortar of specified mix. The proportioning of wet mortar and ballast shall by volume.

4.1.2 Mixing: Mixing shall only be done in mechanical mixer as ordered by the engineer in charge. Mixing by hand shall not be allowed at all.

4.1.2.1 In case of machine mixing, measured quantify of aggregate, and wet ground mortar shall be poured in the drum of the mixture while is revolving. The water shall be added slowly up to the required quantity and the wet mixing shall be continued for at least one minute, till a uniform mix of required consistency is obtained.

4.1.3 LAYING: Lime concrete shall be laid (and not thrown) in layers while it is quite fresh. Each layer shall be thoroughly rammed and consolidated before the succeeding' is placed. Consolidated thickness of each layer shall exceed 15 cm. Joint where necessary shall be staggered in different layers. Concrete shall be consolidated thoroughly on the same day before the work is stopped. Ramming on the following day shall not be done.

4.1.4 CURING: After the concrete has begun to harden i.e. about 24 hours after its laying, the curing shall be done by keeping the concrete damp with moist gunny bags, sand or other material approved by the Engineer in charge, for a minimum period of 7 days till then masonry and flooring over the foundation or base concrete shall not be 'started.

Ramming on the following day shall not be done.

5 BRICK WORK:

5.1 Material: Brick work shall be laid with the specified mortar of workable consistency as per detailed specifications given under the 'Mortars'.

5.2 Soaking of bricks: Brick required for masonry in cement mortar shall be thoroughly in clean water for at least one hour immediately before use. The soaked bricks shall be kept on wooden plank on brick platform to avoid earth being seamed on them.

5.3 LAYING:

5.3.1 Brick work shall be laid in English bond unless otherwise specified. Half or cut bricks shall not be used except where necessary to complete the Bond. Closers in such cases shall be cut to the required size and used near the ends of walls.

5.3.2 In brick work; selected bricks shall be used for the work. The bricks shall be laid by carrying method. A layer of mortar shall be spread on full width for suitable length on lower course. Each brick work shall first be laid so as to project over the one below, both at the end at the side, then passed into the mortar and shaved into final position so as to embed the brick and to fill its inside faces fully with mortar.

5.3.3 The walls shall be laid up truly plumb. All courses shall be horizontal and vertical joints shall be truly vertical. Vertical joints in alternate course shall come directly one over the other. The thickness of brick course shall be kept uniform.

5.3.4 Both the faces of walls of thickness greater than 23cm (9") shall be kept in proper plane. All the connected brick work shall be carried up nearly at one level and no portion of the work shall be left more than one meter below the rest of the work. Where be carried up nearly at one level and on portion of the work shall be left more than one meter below the rest of the work. Where this is not possible, the work shall be raked back according to Bond (and not left toothed) at an angle not exceeding 45. All iron fixtures, outlet of water, holdfasts of doors and windows etc. Which are required to be built in walls. Shall be embedded in cement mortar or in cement, concrete as specified in their correct position as the work proceed.

5.4 JOINTS: Brick shall be so laid that all joints are quite full mortar. The thickness of joints shall not exceed 6mm. In brick work, the face joints shall be raked to a minimum depth of 13mm by raking tool daily during the progress of work when the mortar is still green so as to provide proper key for the plaster or pointing to be done. Where plastering or pointing is not required to be done, the joints shall be struck flush and finished head at the time of laying. The face of brick work shall be cleaned daily all mortar droppings removed.

5.5 CURING: Green-work shall be protected from rain by suitable covering. Masonry work in cement mortar shall be kept wet constantly on all the faces for a minimum period of 7 days. The top necessary work shall be left flooded, at the close of the day.

5.6 MODE OF MEASUREMENT: Brick work of more than one brick thickness, half brick thickness and less shall be measured in cubic meter. The length and height of wall shall be measured as actual site but the width shall be paid as below:

- | | | |
|----|--------------------------|----------|
| a) | Walls with brick on edge | 7.5 cm. |
| b) | Half brick thick wall | 11.5 cm. |
| c) | One brick thick wall | 23.0 cm. |

d)	1 ½" brick thick wall	35.0 cm.
e)	2 brick thick wall	46.0 cm.
f)	2 ½" brick thick wall	58.0 cm.
g)	3 brick thick wall	69.0 cm.

5.7 The contractor's rate for bricks work shall include cost of all scaffolding curing and providing necessary set back projection, cutting, tooting, string course holes for cables slopes at roof level using cut Wicks etc. as per direction of Engineer In Charge.

6 DAMP PROOF COURSE

6.1 CEMENT CONCRETE LAYER: This shall consists of cement concrete of specified proportion and thickness. Edges of damp proof course shall be straight even, and vertical, side shuttering shall consist of wooden forms and shall be strong and properly fixed so that it does bit get disturbed during compaction and mortar does not leak through. The concrete work shall be of workable consistency and shall be tamped thoroughly to make dense mass. When the sides are removed the surface should & come out without any honey comb.

6.2 WATER PROOFING MATERIAL: Water proofing material such as accoproopuddsa water lock etc. shall be added to the concrete mix if specified in accordance with the manufacturer's specification or as directed by the Engineer-in-charge.

6.3 7.3 Curing damp proof course shall be cured for at least 7 days after which it shall be allowed to dry.

7 DOOR AND WINDOW FRAMES:

7.1 WOOD WORK IN CHAUKHATS: the work shall be of best available Indian Sal wood, free from knots one racks or other defects, well-seasoned and of uniform colour. The side of wood work which has come in contact with wall shall be given 2 coats of hot coal tar before fixing for which no extra payment shall be made section will be adopted as per direction of Engineer-in-charge.

7.2 STEEL FRAMES:

7.2.1 MILD STEEL: Mild steel frames for doors and windows in 'T' section. Standard quality steel 'T' section shall be used which shall conform to relevant IS: specifications. It shall be free from cracks. Surface fluws rough and imperfect edges, rust and scaling and all other harmful defects. The steel section shall be straight and out to correct length. No pieces shall be welded or otherwise jointed to make up required length of a member. The built up door frame shall be true and free from twist kinks, buckles and open joints. Welding shall be done by electric process. Electric arc method shall be adopted, where public electricity is not available, generator shall be arranged. Gas welding shall be restored to using oxideytlence flame with specific prior approval of Engineer in charge. Before placing the door frame in position it shall be given a coat or red load paint of approved quality. All the holdfasts of doors and window shall be embedded in 15cm x ID cm 1:2:6 (1 cement, 3 coarse sand and 6 Parts 3/4" stone gfrit) as ordered by the Engineer in charge.

7.2.2 PRESSED STEEL FRAMES FOR DOORS: The profile of pressed steel frame for doors shall confirm to IS: 425111951/1967. The work shall be carried out as per direction of the Engineer in charge.

8 REINFORCED CEMENT CONCRETE WORK:

8.1 MATERIAL:

8.1.1 WATER, CEMENT FLASH SAND AND BALLAST: Same as under para 1 under sub-head Materials.

8.1.2 STEEL REINFORCEMENT: Mild steel round bars or ribbed for steel shall be supplied by the trust where so stipulated in the contract. Where contractor has to arrange for these, tested steel shall be used unless otherwise, specified. It shall be sound and capable of being doubled over when cold. It shall be free from cracks, surface flaws, laminations, rust, add earing earth or any other material that may impair hand between concrete and steel cleaning. It desired shall be done by the contractor free of cost steel shall conform to IS:432 (part-I) 1786-1966

8.2 GENERAL: Reinforced cement concrete work may be cast in situ or precast as may be directed by the Engineer-in charge according to the nature of work.

8.3 FORM WORK:

8.3.1 GENERAL: Shuttering shall be either of wooden plating of 3 cm minimum thickness or of steel plates. The shuttering shall be supported on battens and beams and props of vertical bellies properly cross braced together so as to make the form work rigid. In place of balli props, brick pillars of adequate section built in mud Mortar may be use. The form work shall be sufficiently strong and shall have camber so that it assumes correct shape after deposition of the concrete and shall be able to resist forces caused by vibrations of live load of men working over it and, other incidental loads associated with it. The shuttering shall have smooth and even surface and its joints shall not permit leakage of cement grout.

If at any stage of work during or after placing concrete in the structure, the form works sags or bulges out beyond the required shape of the structure, the concrete shall be removed and work redone with fresh concrete and adequately rigid form work without any extra payment. Details of shuttering and centering shall be subjected to the approval of the engineer in Charge. The completed form work shall be inspected and approved by the Engineer, before the reinforcement are placed position.

8.3.2 PROPING OR CENTERING: The props shall consist of brick masonry pillars; laid in mud--mortar bellies, shall & have 10 cm minimum diameter and shall be placed at 1 to 2.5 meters spacing.

8.3.3 SHUTTERING: The timber used in shuttering shall not be so dry as to absorb water from concrete and swell and bulge so green or want to shrink after erection. Kail wood or such other kind of timber which is not affected appreciably by its contact with water shall be used. The timber shall be accurately sawn and planed, on the sides and the surface in contact with, concrete. Wooden form work with sheet metal lining or steel plates shall also be permitted

- 8.3.4 SURFACE TREATMENT FOR SHUTTERING:** The surface of timber shuttering that would come in contact with concrete shall be well wetted and coated with soap solution applied before the concrete is done. Alternatively, a coat of raw linseed oil or form oil of approved manufacturer may be applied in place of sap solution. In case of steel shuttering, either soap or raw linseed oil shall be applied after thoroughly cleaning the surface.
- 8.3.5 CAMBER:** Shuttering for beams and slabs shall have camber of ½" per 10 ft. {1 to 24) or as directed by the Engineer In charge. For cantilevers, the camber at free end shall be 1/48th of the projected length or as directed by the Engineer-In-Charge.
- 8.3.6 ASSEMBLAGE OF FORMS AND THEIR STICKING:** The forms shall be so assembled as to facilitate easing and removal of their various parts in proper sequence without jarring the concrete. In a slab and 'T' Beam construction, sides shall be stripped first, then the underside of slab and lastly that of beam.
- 8.3.7** From shall be carefully in order to prevent the load being suddenly transferred to concrete. The period that shall elapse after the concrete has been laid before easing and removal of centering and shuttering is uttering is undertake shall be as follows:

Part of structure

Period after which to be removed centering

1. Slides of foundations, columns, beam 8 days
2. Undersides of slabs up to 5 nib's (15') span 10 days
3. Undersides of slabs above 5 mtrs span and 5cm Undersides of beams upto 7 meters 14 days
4. Undersides of beams over 7 meters span and upto t u meters span 21 days

In Case of Cantilever slabs and beams.' the centering shall remain till structures tin-contracting or anchoring' sown been erected end have attained sufficient strength work damaged through premature of care less removal of form shall be reconstructed without any extra payment.

8.4 REINFORCEMENT

BENDING AND OVERLAPPING': Bats' shall be bent cold correctly and accurately to the size and shape as shown on the drawing or as directed by the Engineer -in charge. Only bars of full length shall- be used, but where this cannot be done; over lapping of bars shall be done as directed by eh Engineer in charge.

- 8.4.1 PLACING IN POSITION:** Reinforcement bars shall be placed in position as shown in the drawing. Bars shale be thoroughly cleaned of rust, scales, grease, oil and any other foreign matter before placing them in position. The bars crossing one another shall be tied together it every linter. Section with two strands of annealed steed wire 18 to 20 SWG twisted tight to make the steel work rigid so that reinforcement does not get displaced proper cover shall be given in the bars.

9 CONCRETING

9.1 CONCRETE: Concrete mix shall be 1:2:4 (1 cement: 2 coarse sand and 4 hard stone ballast of 2 cm and down gauge) unless otherwise Specified. Concrete shall be mixed by mechanical mixers only. Hand mixing of concrete for RCC work shall not 'be allowed.

9.2 CONSISTENCY: For reinforcement cement concrete work, concrete which will flow sluggishly into the forms and around the reinforcement without any segregation of coarse aggregate from the mortar, shall be used. The following slumps shall be adopted for different types of work.

Sl. No.	Type of work	When vibrators are used	Slumps when vibrators are not used
1	Mass concrete in RCC foundation footings	1 to 2.5 cm.	8 cm
2	Beams, slabs and column simply reinforced	2.5 to 4cm	10 to 12 cm
3	Thin RCC section or section with congested steel	4 to 5 cm	12.5 to 15 cm

9.3 PLACING OF CONCRETE: After centering, shuttering and reinforcement is placed and passed by the Engineer in charge concrete shall be deposited and not dropped in its final position. A coat of thick cement slurry shall be given on the top of shuttering and reinforcement as the contracting proceeds for which no extra payment shall be made. In case of concreting of slab and beam, wooden plank supported directly on the centering by means of wooden block or lugs shall be provided to wave)/ the concrete to the concrete to the place Of deposition without disturbing the reinforcement in any way. Labour shall not be allowed to walk over the reinforcement.

It is necessary that the time between mixing and placing concrete shall not exceed 20 minutes so that the initial setting process is not interforced with.

9.4 COMPACTION: Concrete shall be compacted into a dense mass immediately after placing by means of mechanical vibrator only RCC slab concrete shall be compacted with pan vibrator and

9.5 MEASUREMENT: The gross, dimension of RCC slabs, beams and chhajas etc. inclusive of bearing on wells .and exclusive of the thickness of plaster (if any) shall be measured for the purpose of payment.

In slab and 'T' beam construction, the slab shall be taken as running continuously through and beam as the portion below or above the slab. Chhaja shall be measured the item of RCC slab. Lintels over doors and windows opening upto 2 meter clear span shall be paid in the item of lintal, beyond which it shall be measured in the item of light beams.

9.6 TESTING: Concrete cubes.15 cm x 15 cm x 15 cm (6"x6"x6") shall be prepared at the time of leaving of RCC slab, beams etc. as often as considered necessary by the Engineer in charge and their strength shall be tested after 7 days or 28 days or as per IS: 458L1964. In case required strength is not found, the decision of Executive Engineer-in-charge about, reduction of rates or rejection of concrete as the case may be shall be final and binding on the contractor. The testing charges shall be born by the contractor and the result of the test shall be binding on the contractor. The contractor shall redder all assistance for the preparation of cubes safe custody 'of the same proper changing and carriage to the laboratory where the test is to be performed.

Rate: The rate of P.C.C. shall include cost of material, labour centering, shuttering, laying finishing, testing etc.

10 PRECAST CEMENT JALI: It shall be of cement concrete to 1:2:4 (1 cement 2 coarse sand and 4 hard stone grit 0.3cm gauge) reinforce with 16 gauge (1.6mm) mild steel wire unless otherwise specified.

The jail shall be set in position true to plumb using 1:2 cement and coarse sand mortar before the jambs, sills and soffits of the opening are plastered. It shall than be properly grouted. The jail shall be measured for its gross superficial area. Rate is inclusive of material and labour involved in all the operations above.

11 STEEL WORK (ROUND BARS) IN REINFORCEMENT: Entire quantity required for reinforcement in RCC work shall be arranged by the Trust and shall be issued to the contract at rate specified in 'Schedule C and cost recovered from Bills. Mild steel bars reinforcement shall be in required form as shown in the drawing or as directed by the Engineer in charge. The bars shall be cold bant. The hooks and authorised overlaps shall be measured. Cost of binding wire will not be paid. Reinforcement shall be measured in length and their weight from standard tables.

12 RISSED TOR STEEL IN REINFORCEMENT:

Same as specification as for Mild steel round bars above.

13 MILD STEEL FAN CLAMPS: Fan clamps to be fixed during the laying of RCC slabs shall be of approved design made of 16 mm dia M.S. Barbent to shape with its ends hooked. Loop should be truly vertical and at the correct depth from the inner side of the slab or beam. The hooked arm and the loop shall be tied, to the reinforcement either directly or through cut pieces of M.S. Bars with GI. Wire.

14 PAINTING OF ROOF SLAB WITH HO BITUMEN:

14.1 PREPARING THE SURFACE: The surface shall be painted when it is thoroughly dry. The surface to be painted shall be clean with wire brushes and cotton or gunny cloth.

All loose materials and scale shall be removed and the surface shall be further cleaned with a piece of cloth lightly soaked in Kerosine oil.

- 14.2 PAINTING WITH BITUMEN:** The contractor shall bring the bitumen to site in its original packing and shall open and use it in the presence of Engineer Incharge or his representative. The surface prepared and treated shall be painted uniformly with mazphall of grade 80/100, after heating it to a temperature of not less than 350 F (177C) and not more than 375F (191C).

Care shall be taken that no blank patches are left. The spreading of bitumen to be spread per sq. meter of roof surface shall be 1.71 Kg. (35 Lbs. per % sq.ft.)

- 14.3 SPREADING OF SNAD:** - Immediately after painting dry, clean, sharp and coarse sand at the rate of 0.6 cum. per 100 sqm. (20 ft.) Surface when the bitumen is still hot.

- 15 TAR FELATING (WATER PROOFING TREATMENT):-** Water proofing treatment will be laid in accordance to IS: Code 1346-1966 in four courses which are as follows:

- i. Initial layer of hot partially blown bitumen 30/40 grade or equivalent applied on clean surface at the rate of 1.2 Kg. as per sq.m minimum.
- ii. Hessiar base self-finished felt type 3 grade I applied over painted surface.
- iii. Hot partially blown bitumen 30/40 grade or equivalent applied on tar felt surface @ 1.2Kg per sq.m. Minimum.
- iv. 4th and final layer of stone grit of 6 mm and down size for gravell spread at specified volume of material per unit area. The work shall be carried out as per direction of the Engineer In Charge.

- 16 MUD PHUSKA TERRACING WITH TITLE BRICK PAVING:**

- 16.1 MUD PHUSKA:-** for mud phuska, selected soil which should be good quality brick earth free stones, kankar grass roots etc. shall be collected & stacked at site. The soil shall not be collected form a locality infested with white ants. Just before laying on the roof the soil shall be made damp by adding water. It shall be turned over with phawas so as to break clods and pulverise the same. Quantity of water to be added to the soil shall be carefully regulated so that the soil shall have optimum moisture content at the time of laying and compaction on the roof. The soil shall be laid on roof to requisite thick ness and slope. Well compacted with wooden rammers and thapias, to obtain an even surface to correct slope. Average thickness of soil after shall be as specified in the item.

- 16.2 MUD PLASTER:** After laying the mud phuska, the surface shall be given a coat of mud plaster 25min thick and the plaster shall be allowed to dry and crack.

The dry soil be reduced to fine powder and mixed with water in a pit adding chopped straw (Bhusa) in proportion of 65' Kg. per cubic meter of soil. The chhoppings used shall not be longer than 2 cm. The mixture shall be allowed to mature for a period of not less than 7 days. During this period, it shall be worked out at interval with feet & spades (Phawaras) as to get plugged into a homogeneous

mase, free from lumps and clods. The mud mortar shall be pushed again very thoroughly just before use.

- 16.3 GObRI LEAPING:** After the mud plaster has dried, the surface should be given a coat of gobri leaping so as to completely fill any cracks that may have formed in the mud plaster. Mortar for gobri leaping shall be prepared by mixing equal quantities fresh gobri and finally slued clay and adding sufficient water to form a thin paste. The quantity of gobri used in gobri leaping shall not be less than 0.03 cum per 100 sqm of plaster.
- 16.4 LAYING OF TITLE BRICKS:** After the gobri leaping has dried flat tile bricks, conforming to the specification for the title brick shall be laid using the minimum amount of plain mud mortar (without Bhusa) as bedding so as to obtain correct slope and even surface of tile floor care shall be exercise to sea that mud mortar does not rise into the vertical joints of tiles more than X2 mm. the tiles shall be laid closed to each other, the thickness of joints shall not be less than 6 mm and more than 12mm. in width. After the tiles are well set and bedding mortar had dried joints of the tiles shall he grouted with the cement mortar of mix k3 (1 cement 3 Jamuna sand of FM 1.25) such that all the joints are completely filled with mortar neatly.
- 16.5 CURING:** As soon as cement grout obtain initial set, the surface of the tile brick floor shall be covered with wet gunny bags or wet sand to prevent quick drying. After about 6-12 hours the tile brick floor shall be cured by frequent sprinkling of water on the surface for a period of 7 days.
- 16.6 MEASUREMENT:** The measurement shall be taken for the finished work (mud phuska terracing of stipulated thickness mud plaster, gobri leaping and flat tile paving and grouting over the tiled surface).
- 17 BRICK DRIP COURSE:** Brick drip course shall be laid above the junction of the roof with the wall to shield the cracks which may develop at these junction.

The upper corner of projecting brick shall be chamfered or rounded off with 7.5 cm. radius A transverse drip of toroating about 1.3 cm. (1/2") deep shall be out on the under side of the projecting bricks. Special moulded bricks shall be used for the brick course. Where MOULDED BRICKS ARE NOT available brick cut to shape shall be permitted.

The work shall be carried out as per direction of Engineer Incharge.

- 18 KHURRAS:** Khurras shall be 45x45 cm. (1.5" x 1.5") size unless otherwise specified and shall be formed of cement concrete 1:2:4 mix (I cement 2 coarse sand 4 stone ballast) of (2 cm.) nominal gauge. The concrete shall be laid to an average thickness of 5 cm. with its edged not less than 20 mm. lower than the level of the adjoining, roof surface. Concrete shall be laid to a size greater than the stipulated size of the Khurra in such a way that the adjoining terracing of tile bricks shall over lap the concrete, on the three edges by not less than 7.5 cm. (3") the concrete will slope informally from the edges to the outlet, the slope being as much as possible and in no case less than 13 mm. the concrete shall be continue at

the same slope through the width of the wall into the outlet opening to ensure a water tight joint.

The Khurras and the sides of the outlet shall be redere with 12 mm. coat of cement plaster 1:3 mix (1 cement 3 coarse sand).

This shall be done when the concrete is still *green*, and shall be finished with a floating coat of neat cement. The sides of khurras and the sides of outlet shall be well rounded. The size of finished outlet opening shall be 10 cm, width by 20 cm, high on as ordered by the Engineer Incharge.

In case where rain water is to be diposed off through rain water pipe from gratings be provided at the outlet as a safe guard against clicking. Khurras shall be measured in numbers.

- 19 A.C. RAIN WATER DOWN PIPE:** The pipe shall conform to IS: 1626-1960 or as revised from time to time and shall be approved manufacture. These shall be strength ture, smooth the regular in thickness. They shall be sound homogeneous and free cracks and other flaws.

Piper shall be secured to face of flail below all joints by standard holder-bat clamps of approved manufacture.

The spigot of the tipper pipe shall be properly fitted into the socket of the lower pipe such that there. is a uniform annular space for filling with joining materials which shall be of spun yarn soaked bitumens properly pressed with caulking tools upto 1/3 depth and the remaining 213 depth shall be filled in with staff cement mortar 1:2 (1 cement, 2 coarse sand) and shall be finished smooth at top at an angle, of 45 sloping up. It shall be cured for 7 days.

The finish pipe line shall be truly vertical or to line and slopes and directed and shall be at the uniform distance of 40mm from the finished face of the wall.

- 20 STEEL GLAZED WINDOW AND VENTILATOR:** Steel windows and ventilators shall be quality as approved by Engineer in charge

The windows and ventilator frai0eishall be of standard rolled 'MAN' or 'MAHABIR' sections or equivalent as approved by Engineer Incharge per drawing including steel lugs (Mullion, Transom and glass work). The window and ventilators shall be manufactured Mechanical devised and fixtures as required by IS: 1038-196S. The glazing shall be Hindustan Pilkington of the thickness of glass shall be as mentioned of quantities. The type over all sizes, openings position of steel windows and ventilations shall be specified as per various details given in IS: 1038-1968 Unless otherwise specified.

The work shall be carried out, as per directions of the E/I

- 21 M.S. GRILL:** Shall be fabricated with M.S. Sections strictly as per approved design. All joints shall be proper fit and work shall be true and even.
- 22 WOODEN FLUSH DOOR SHUTTERS:** The flush door shutters of 30 trim: thickness shall be of exterior grade, commercially type of solid core of block board construction/particle Board constructions as specified. The frame shall be effirst

Class hard wood. The core shall be covered on each on each face with cross boards and face vanours and lipped on all the edges.

The flush doors shall be obtained from firms of repute sych as 'Stiaply' of any other firm is approved by the Engineer incharge.

The specification in general shall conform to IS: 2202 (part -1) 1966 and 1003 (Part41)-I966

- 23 DEODAR 'WOOD DOOR AND WINDOW SHUTTERS:** Timber shall be of 1st class quality well-seasoned and shall have uniform colour, reasonably straight grains. It shall he free from des, knots, crooks and stakes and sap wood.

The doors shutter of specified thickness shall be made in accordance with the detailed drawing.

The shutters shall be obtained from (Kashmir Government Mills Srinagar or other approved manufacture.

The work in general shall conform to IS:'1003 (Part-1) 1966 and 103 (Part —II) 1966

24 FITTINGS FROM TIMER DOORS:

- 24.1 GENERAL** Fittings shall be of iron brass, aluminum or as specified. These shall be of make as approved by the Executive Engineer/Engineer incharge
The schedule of fittings required for doors areas indicated in the table, Fittings shall begot approved by the Engineer In charge before fixing.

Screws used for fittings shall be of same metal and finish as the fittings unless otherwise required by the Engineer Incharge.

SCHEDULE OF TIFFIGNS INDOORS AND WOODEN WINDOWS.

	Item	Hinges 10 cm	Handle 8 cm	Aldrop 10 cm	Tower- Bolt 25 cm	30 cm	23 cm	Door- Stopper 15 cm	
1	Single leaf door	3 no	-	2"	1	-	1	1	1
2	Double leaf Door	6 no	-	2"	1	-	1	1	1
3	Windows Single leaf	-	-	1"	2	-	1	1	1
4	Windows Double leaf		-	4"	2	-	1	1	2

Notes: Doors to be provided in front rooms court yards and verandah shall be provided with one extra Aldrop over the schedule given above.

25 PLASTERING:

25.1 CEMENT PLASTERING 12M1V1 OR 15-MM

- 25.1.1 Preparation of surface:** The joint shall be traked out properly and the surface cleaned washed and kept wet before plastering is commenced. Efflorescence if any, shall be removed by wetting brushing and scraping.

- 25.1.2 MORTAR:** The mortar of the specified mix, using the type of sand as prescribed in the item shall be used.

25.1.3 APPLICATION or PLASTER: Ceiling plaster if any, shall be completed before commencement of wall plaster. Plastering shall be started from the top and worked down to the floors. All putlog holes shall be properly filled in advance of the plastering. To ensure even thickness and true surface plaster about 15x 15cm shall be first applicable horizontally and vertically at not more than 2 meter interval over the entire surface to serve as gauges. The mortar shall then be laid on the wall between the gauges with trowel. The mortar shall be applied in a uniform surface slightly more than the specified thickness. This shall be brought to a true surface by working wooden straight edge reaching across the edges. Finally the surface shall be finished true with trowel or wooden float. All tones, angles and junction shall be finished as per direction of the Engineer Incharge.

The plastering shall be completed within half an hour of adding water to dry mortar.

In suspending work at the end of the day, the plaster shall be left, cut clean to line both horizontally and vertically, where recommencing the plaster, the edge of the old work shall be scraped, wetted with cement slurry before plaster is applied to the adjacent area to enable the two to properly join together.

No portion of the surface shall be left quiet initially to be patched up later on.

25.1.4 FINISH: The plaster shall be finished to a true and plumb surface and to the proper degree of smoothness as required the work shall be tested frequently as the work proceeds with a true straight edge not less than 25m long with plumb bobs. All horizontal lines and surfaces shall be tested with a level and all jobs and corners with a plumb bob as the work proceeds.

25.1.5 CURING: Curing shall be commenced after 24 hours and shall continue for a period of at least 7 days.

25.1.6 THICKNESS: the thickness of the plaster shall be 12mm or 15mm as described in the item.

25.2 CEMENT PLASTER 12mm, 15mm and 20mm single coat work with a floating coat of neat cement

25.2.1 Specification for this item of work shall be same for item 25.1 (cement plaster 12mm or 15 mm) of the specified thickness and mix except for the additional floating coat which shall be carried out as below:

When the plaster has been brought to a true surface with the wooden straight edge it shall be uniformly treated over its entire area with a paste of neat cement and rubbed smooth so that the whole surface is covered with neat cement. The quantity of cement applied for floating coat shall be less than 1kg per sqm. Smooth finish shall be completed with trowel immediately and in no case later than half an hour of adding water to the plaster mix. The rest of the specification shall be same as for item 25.1.

26 CEMENT CONCRETE FLOOR:

26.1 CEMENT CONCRETE: Cement concrete of ratio 12:4 (1 cement 2 coarse sand, 4 hard stone grit 2cm. nominal gauge) shall be used.

Concrete shall be mixed by mechanical mixer except when the Engineer Incharge permits otherwise. In case of hand mixing 10% extra cement shall have to be added for which nothing extra shall be paid.

26.2 SUB-GRADE: Flooring shall be laid on lime concrete sub grade where so provided with the slope required for the flooring. Floors in verandah, kitchen, bath, w.c. etc shall invariably be provided with suitable slopes to drain off washings. Lime concrete

sub grade shall be allowed to set for 7 days and cement flooring shall be laid in the next 3 days. If the cement concrete flooring is to be laid directly on the RCC slab, the surface RCC slab shall be ended with brushes while the concrete is green. This shall be done carefully without disturbing the concrete. Before laying floor, the laitance shall be removed; the surface of slab backed and a coat of cement slurry 2.75 kg per sq.m. shall be slab and at our applied, so as to get a good bond between RCC.

26.3 LAYING:

26.3.1 PANELS: Flooring of specified thickness shall be laid in the pattern as directed by the Engineer in charge. The border shall have mitered joints at the corners of the room and intermediate joints shall be in straight line with the panel joints. The panels shall be of uniform size not exceeding 3.5 sq.mt. in area and 2.5 meter in any direction for a floor having thickness less of 40mm. and have for floor having thickness less than 40mm. the panel size shall not exceed 1.5 sq mt. And 2.5 meter in any direct on. Laying of panels sh0 be as per direction of Engineer In-Charge.

26.3.2 SHUTTERING: The panels shall be bounded by wooden battens or flat iron having the same depth as the concrete floor. These shall be fixed in position, with their top at proper; level giving slope where required. The surface of the batten or flats to come in concrete with concrete shall be smeared with soap solution (or non staining oiler raw linseed oil) before concreting. The flooring shall but against the masonry of the wall which shall not be plastered.

At places where glass strips are required to be provided, these shall be as per pattern of panel with their top flushing with the proposed finished level. The glass strips shall be laid with cement mortar pads on both sides a day in advance and shall be protected adequately from any damage. Any strip damaged or disturbed, shall be relaid and got checked by the Engineer Incharge before the flooring is commenced. The mortar pads used for holding the strip shall be removed in succession at the time of laying of floor and replaced by cement concrete mix.

26.3.3 CONCRETING: All the cement required for the floor of the area in one room shall be mixed dry in one lot on a dry floor to make uniform in colour.

Cement concrete shall be placed in position and leveled up with the help of straight edge and trowel. It shall then be beaten with a wooden 'Thappy' or masons trowel. The blows shall be fairly heavy in the beginning but as consolidation takes place, light rapid strokes shall be given. Beating shall cease as soon as the surface is found covered with cream of mortar. The surface shall be tested with straight edge and made true.

The battens or flats used for shuttering shall be removed with straight edge and made true laying of cement concrete. The ends thus exposed shall be repaired if damaged, with cement mortar 1:2 (1 cement and 2 coarse sand) and allowed to set for a minimum period of 24 hours. While lying concrete, care shall be taken to see that the edges of the previously laid panels are not damaged and fresh mortar is not splashed over them. The joints between the panels are not damaged and fresh mortar is not splashed over them. The joints between the panels-should come out as fine as straight lines.

26.3.4 FINISHING: The top finished layer in specified thickness consisting of cement and marble dust slurry in a specified proportion shall follow immediately, after cessation of beating. Light colour pigment shall also be added if specified in the description of the item as per the direction of the Engineer Incharge.

The cement, marble dust slurry shall be properly pressed twice by means of iron floats, once when the slurry applied and the second time when it starts setting.

The Junction of the floor with wall plaster, dado, or skirting shall be rounded off where so required upto 25 cm radius

The man engaged on finishing operations, shall be provide with raised wooden plate form to sit on as to prevent damage to the work.

26.3.5 SURRING POLISHING & FINISHING; The curing shall be done for at least 7 days. The work shall be carried out as per directions of the Engineer In-charge.

Note : If polishing and finishing of floor with French mason polish is required in *nifty, it shall be done as per direction of the Engineer Incharge.

26.4 CEMENT PLASTER IN RISERS OF STEPS SKIRTING AND DADO

26.4.1 GENERAL: A band of plaster at the bottom of wall not exceeding 30 cm. in height above the floor shall be classified as skirting the work shall be carried out simultaneously with the laying of floors its corners and junctions with the floor shall be rounded off neatly where so required upto 25 mm radii. It shall be projecting out uniformly from the wall plaster by a minimum of 6 mm if so required.

26.4.2 PREPARATION OF WALL SURFACE: The joints shall be raked to a depth of at least 1.5mm in masonry walls while the masonry is being laid. The surface shall be cleaned thoroughly washed' with water and kept wet before skirting or dada is commenced.

26.4.3 APPLICATION: Skirting with specified mortar and to specific thickness shall be commenced immediately after the surface is prepared. It shall be laid along with the border or adjacent panels of, flog?. The joints in skirting shall 'be kept true and straight in continuation of the line of joints in borders or adjacent panels. The skirting shall be finished smooth and true with top truly horizontal and joints truly vertical except where otherwise indicated.

26.4.4 FINISHING: The finishing of surface shall be done simultaneously with the borders or adjacent panels of floor in the manner specified under para 26.1.4 except that the cement to be applied in the form of slurry for smooth finishing shall be at the rate of 1 kg of cement per sqm of skirting.

26.4.5 CURING: It shall be continued for at least 7 days.

26.5 GRANOLITHIC (TERRAZO) MARBLE FLOORING LAID IN SITU.

26.5.1 UNDER LAYER: It shall be as specified in the item.

26.5.2 TOP LAYER:

26.5.3 MORTAR: The mix for terrazzo topping shall consist of cement with or without pigment, marble powder, marble aggregate the proportion as specified.

Before starting the work the contractor shall get the sample of marble approved by the Engineer Incharge. The cement to be used shall be ordinary grey cement, white cement, pozzolanic cement or cement with admixtures of colouring matter of approved quality in the ratio specified in the description of the item or in the ratio to set the required shade as ordered by the Engineer Incharge. Colouring matter where specified shall be mixed dry thoroughly with the cement and marble powder and then marble chips added and mixed as specified. The full quantity of dry mixture of mortar required for a room shall be prepared in a top lot in order to ensure a uniform colour. This mixture shall be stored in a dry place and well covered and protected from moisture. The dry mortar shall be mixed with water in the usual way as and when

required. The mixed mortar shall be homogeneous and stiff and contain just sufficient water to make it workable.

26.5.4 LAYING: The marble topping shall be laid while the under layer is still plastic which is normally achieved between 18th. 24 hour after the underlayer has been laid. A cement slurry shall be brushed on the surface immediately before top laying is commenced. The surface of level by a straight edge and steel flats in such a manner that the maximum amount of marble chips come tie and are spread uniformly over the surface and on part of the surface is left without chips

26.5.5 POLISHING CURING AND FINISHING: Polishing shall be done by machine. After 36 hours of laying the top layer, the surface shall be watered and ground evenly with machine fitted with special rapid cutting grit brock of coarse grade (N.60) till the marble chips are evenly spresed and the floor is smooth. After the first grinding, the surface shall be thoroughly washed to remove grinding mud and covered with grout of cement and colouring matter in the same mix proportion as the topping in order to fill any pin holes that appears. The surface shall be allowed to cure for 5 to 7 days and then around with machine fitted with fine grade grit block (No.1 20). The surface is cleaned and repaired as prefore and allowed to cure again for 3 to 5 days. Finally the third grinding shall be done with machine fitted with finest grout grit block (No.320) to get over and smooth surface without pinholes. The finished surface show the marble chips evenly exposed.

When use of machine for polishing ,is not feasible rubbing and polishing shall be done by hand in the same manner as specified for machine polishing accept that carborandum stone at coarse grade (No.60) shall be used for the first rubbing, stone of medium grade (no.60) for second rubbing and stone of gine grit No.120 for final rubbing respectively.

After the final polishing, exalic acid shall be dusted over surface at 2/3 lbs, per% sft. (33g. per sqrn) sprinkled with water and rubbed hard with narndah block (pad of woolen rags). The following day the floor shall be wiped with a moist rag and dried with soft cloth and finished smooth with French mansion polish.

26.6 GRANDLITHIC (TORRAZO) STIRTING OR DADO LAID IN SITU

26.6.1 UNDER COAT: The specifications as in par 26.3.2 shall hold good as for as applicable and shall include cutting to like and fair finish to top edges of terrozo, polishing shall be done only with hand.

26.6.2 POLISHING CURING AND FINISHING: Spoliations as In par 26.3.4 shall hold good.

26.7 GRANDLITHIC (TERRAZO) TILE FLOORING:

26.7.1 TERRAZO TILES. Terrazo tiles generally conform in all respects to standards laid down in IS:1237-1959 or revised.

The size of the tiles to be used shall be as required by the Engineer Incharge. The tiles shall be manufactured under hydraulic pressure of not less than 140 Kg.per sq.cm. and shall be given the first grinding with machine before delivery to site.

The proportion of cement to aggregate tin the backing of the tiles shall not be cleaner than 1:3 by weight. Similarly the proportion of cement to marble chips aggregate in the wearing layer of the tiles and the proortion pigment to be used there in shall not exceed 10% of wt. of cement used in mix. The finished thickness of the upper layer shall not be less than 5mm for size of marble chips from the

same test upto 6mm for size of marble chips ranging from the smallest upto 20mm.

26.7.2 LAYING: Sub grade concrete of the RCC slab on which the tiles are to be laid shall be cleaned wetted and mopped. The bedding of for the tiles shall be with cement mortar 1:3e (1 cement, 3 coarse sand) of average thickness 25mm. or as ordered by the Engineer Incharge. Over the cement mortar bedding tiles shall be fixed in level and slopes as required after spreading neat. Grey cement slurry of honey like consistency on the cement mortar. The joints between tiles shall be kept as possible and not exceeding 1.5mm and in straight line or to suit the required pattern.

The surface of the flooring during laying shall be checked with a straight edge at least 2mm long so as to obtain a true surface with the required slope.

Tiles which are fixed in the floor adjoining the wall shall enter not less than 12mm under the plaster, skirting or dado. The junction between wall plaster and tile work-shall be finished neatly and without waviness.

After the tiles have been laid, surplus cement grout that may have come out of the joint shall be cleaned off

26.7.3 CURING POLISHING AND FINISHING: The day after the tiles and laid all joints shall be cleaned of the grey cement with a wire, brush or towed to a depth of 5mm and all dust and loose mortar removed and cleaned. Joints shall than be grouted with grey or white cement mixed with or Without pigment to match the shade of the topping of the wearing layer of the tiles. The same cement slurry shall then be applied to the entire surface of the tiles in a thin coat with a view to protect the surface from abrasive damage and fill the pinholes that may exist on the surface.

The floor shall then be kept wet for a minimum 07 days. The Surface shall thereafter be ground evenly and polished as specified in para 26.3.4.

26.8 MOSAICTILES IN RISERS OF STEP, SKIRTING AND DADO:

26.8.1 Terrazo or Mosaic tiles: These shall have the same specification as in para 26.5.1 as far as applicable.

26.8.2 LAYING: 12mm thick plaster of 1 cement 3 coarse sand mortar shall than be applied and allowed to harden. The plaster shall be roughened with wire brushes or by scratching diagonal lines 2 mm. deep at approx 7.5 cm both ways. The back of tiles shall be buttered with a coat of grey cement slurry and edges with grey or white cement slurry without pigment to match the shade of the tiles, and set in the bedding mortar. These shall be camped and corrected plaster planes and lines. The tiles shall have joints as thin as possible. Top of skirting or dado shall be truly horizontal and joints truly vertical except where otherwise indicated.

26.8.3 CURING POLISHING AND FINISHING: The specifications as in para 26.3.4

26.9 WHITE GLAZED 'TILE WORK:

26.9.1 WHITE GLAZED TILE FLOORING: The tiles shall be have approve Indian manufactures. They shall be flat and true to shade they shall be free from cracks, crazing spots chipped edges and corners. The glazing shall be of uniform, shade.

The tiles shall be of nominal size such as 15x16cm and 10x10cm. The size of the tiles to be used shall be as required by Engineer In charge.

The thickness of the tiles shall be 10mm unless otherwise specifically mentioned in the item.

26.9.2 PREPARATION OF SURFACE AND LAYING: Sub grade concrete or the RCC slab on which the tiles are to be laid shall be cleaned wetted and mopped. The bedding for tiles shall be with 12mm. thick cement mortar 1:3 (1 cement,3 coarse sand) or as specified.

Mortar shall be spread, tamped and corrected to proper levels and allowed to harden sufficiently to offer a fairly rigid cushion, for the tiles to be set and to enable the wason to place wooden planks across and squat. On it.

Over this mortar bedding, neat grey cement slurry of honey like consistency shall be spread at the rate 0113 Kg cement per sqm sand tiles shall thereafter be bedded in level and slopes required. The joints shall be kept as thin impossible and in straight line. The surface shall be checked frequently with a straight edge about 2m. long so as obtain a true surface with the required slope.

Tiles which, are fixed in the floor adjoining the wall shall enter not less than 10mm under the plaster, skirting or dado.

After tiles have laid, surplus cement gout shall be cleaned Off,

26.9.3 POINTING AND FINISHING: The Joints shall be cleaned of the grey cement grout with wire brushes to a depth of 5 mm. and all dust and loose mortar removed joints shall then be flush pointed with white cement. The floor shall then be kept wet for 7 days.

After curing the surface, shall be washed clean.

The finished floor shall not sound hollow when tapped with a wooded mallet

26.10 WHITE GLAZED TILES IN RISER OF STEPS SKIRTING AND DADO:

26.10.1 WHITE GLAZED: The specification of white glazed tiles shall be same as in nitre 26.7.1.

26.10.2 PREPARATION OF SURFACE: This shall be same as in Para under cement 'plaster in riser of steps, skirting and dado.

26.10.3 LAYING: 12mrn thick plaster in 1 cement and 3 coarse sand mortar shall be applied and allowed to harden. The plaster shall be roughened with wire brushes or by scratching diagonal lines 1.5mm deep at 7.5 cm centre both ways.

The back .of the tiles shall be buttered with a coat of grey, cement slurry and edges with white cement slurry and set' in the bedding mortar. The tiles shall be set in the required pattern keeping thin joints,

26.10.4 CURING A'ND FINISHING: The joints shall be cleaned and flush pointed with white cement the surface shall be kept wet for 7 days.

After curing the surface shall be washed and finished clean.

The finished work shall not sound hollow when tapped with wooden mallot.

27 WHITE WASHING:

27.1 PREPARATION OF SURFACE: Before new work is white washed, the surface shall be thoroughly brushed free from mortar dropping and foreign matter.

27.2 PREPARATION OF LIME WASH: The wash shall be prepared from fresh stone white lime (Dehradun quality). The lime shall be thoroughly slaked on the spot, mixed and stirred with sufficient water to make a thin cream. This shall be allowed to stand for 3 period of 24 hours and then shall be screened through a clean coarse cloth. Four kg. of gum per cum of Cream, 40z of gum per eft. Of cream) dissolved in hot water shall be added. The approximate quantity :of water to be added in making the cream.will be five litres per kg.`of Hine.

27.3 WHITEWASHING: The white wash shall be applied with Moonj Brushes to the specified number of coats. *The* operation for each coat shall consist of a streke of the brush giving front top to down ward another from bottom upward and similarly one stroke horizontally from the right and another from the left before it dries. Each coat shall be inspected and approved by the Engineer-in-charge before the subsequent coat is applied. No portion of the surface shall be left out initially to be patched the later on. The finished dry surface shall not show any sign of cracking and pooling nor shall it come off readiely on the hand when rubbed.

27.4 PROTECTIVE MEASURES: Doors, window, floors skirtings dado, artioles, furnitures and Such other parts of the building not to be white washed shall be protected from being slashed upon. Splashing and droppings if anyobal I be removed by the_contractor at his osvn cost and the surface cleaned. Damage if any, to the fittings and fixtures shall be recoverable from the contractor.

28 COLOUR WASHING: In the case of colour washing, mineral colours not of by lime shall be added to white wash. No colour wash to the required kint or shade will be`gotapproved from the. Engineer-in-charge. The colour shall be of even tiles over the whole surface. If it istlotchy or otherwise badly applied, it shall be redened by the contractor.

For new work-the priming coat shall be of white washed with lime. Two or moreneats as specified shall then be applied on the entire surface till it presents smooth and uniform finish.

The finished dry surface shall not be provicle7and shall not readiely of on the hand when rubbed.

28.1 GENERAL: The specifications for white washing shall apply to this Work also; the difference being that the specified colour wash solution shall be obtained by adding the necessary pigment: to the white wash.

29 DRY DISTEMPERING

29.1 MATERIALS: Dry distemper of approved brand and manufacture shall be used. The shade shall be got approved from the Engineer in charge before application of the distemper. The dry distemper shall be stirred slowly in clean warm water using 0.6 litre per kg. of distemper or as specified by the marker. It shall be allowed to stand for at least 30 minute (of it practicable overnight) before use. The mixture shall be well stirred before and during use to maintain an even consistency.

Distemper shall not be mixed in large quantity than is required for one day's work.

29.2 PREPARATION OF SURFACE: Before new work is distempered, the surface shall be thoroughly brushed from mortar droppings and other foreign matter with sand papered and smoothed.

New plaster surface shall be allowed to dry for at least two months before applying distemper. Fittings in plaster shall be made good with plaster of pans mixed with dry distemper of the colour to be used. The surface shall than be rubbed down again with a fine sand paper and made smooth. A coat of distemper shall be applied over the patches.

The surface shall be allowed to dry thoroughly before the regular coat of distemper is applied.

29.3 PRIMIGN COAT: Priming coat of whitening shall be applied over the prepared surface in new work as per direction of the Engineer in charge. No white washing coat shall be used as a priming coat for distemper. The treated surface be allowed to dry before distemper coat is given.

29.4 APPLICATION: The application of each coat shall be as follows. The entire surface shall be coated with the mixture uniformly with proper distemper brushes (ordinary white wash brushed shall not be allowed) if horizontal strokes followed immediately by vertical one which tot tether shall constitute one coat.

The subsequent coats shall be spoiled only after the previous coat has dired one approved by the Engineer in charge.

The finished surface shall be even and uniform and shall show no brush marks. Enough distemper shall be milted to finish on room at a time

The application of a coat of each room shall be finished in one operation and not work shall be started in any room which cannot be complete on the tame days.

After each, days work, the brushes shall be washed in hot water and hung down to dry. Ole brush as which are dirty shall not be used.

30 WATER PROOF CEMENT PAINTS:

30.1 MATERIALS: The water proof cement paint shall be approved brand and manufacture.

30.2 Preparation of Surface: For new work, the new surface shall be thoroughly cleaned of all mortar dropping, dirt, dust, algai, grease and other foreign matter by brushing and washing. The surface shall be thoroughly wetted with clean water before the water proof cement pain is applied.

30.3 PREPARATION OF MIX: Water proofing cement point shall be mixed in such quantities as can be used within an hour of its mixing as otherwise then mixture will set and thicken water proof cement paint shall be mixed with water in two stage. The first stage shall comprise of two parts of water proof cement paint and one part of water stirred thoroughly and allowed to sand for five minutes. Card shall be taken to add the water proof cement paint gradually to the water and not vis-versa. The second stage shall comprise of adding further one part of water to the mix and stirred thoroughly to obtain a liquid or workable and ----- . In all case the manufacturers instruction shall be followed, meticulously to obtain a liquid or workable and in all case the manufacturers instruction shall be followed, meticulously. The lids of cement paint drums shall be kept tightly closed where not is use to avoid air settings.

30.4 APPLICATION: The solution shall be applied on the clean and wetted surface with brushes on spraying machine. The solution shall be kept well stirred during the period of application. It shall be applied on the surface which is on the shady side of the buildings that direct heat of the sun on the surface is avoided. The complete surface will be watered after the days work.

The second coat shall be applied after the first coat has set for at least 24 hours and got approved by the Engineer-in-charge. Before application, of the second or subsequent coats, the surface of the previous coat shall not be wetted.

31 PAINTING:

31.1 MATERIAL : Paints, varnishes etc., of approved brand and' manufacturer shall be used. Ready made paint as received from the manufacturer without any admixture shall be used.

If for any reason thinning is necessary in case of ready mixed paint, the brand of thinner is commended by manufacturer as instructed by the Engineer in-charge shall be used.

Approved paint shall be brought to the site of the work by the contractor in their original container in sealed condition. The manhole work or at least a fortnight's work.

31.2 COMMENCING WORK: Painting shall not be started until the ER had inspected the item of work to be painted, satisfied himself above their proper quality and given his approval to commence the work painting except the priming coat, shall generally be taken in hand after all other building work is practically finished. The rooms should be thoroughly swept out the entire building cleaned upto least one day in advance of the paint work being started.

31.3 PREPARATION SURFACE: The surface shall be thoroughly cleaned and dusted. All rust, dirt, scaled, smoke and grease shall be removed. The prepared surface shall have the approval of the Engineer-in-charge after inspection, before painting is commenced.

31.4 APPLICATION: Before pouring into small containers for use the paint shall be stirred thoroughly in its containers. When applying also, the paint shall be continuously stirred, in the smaller containers so that its consistency is kept uniform.

The painting shall be laid on evenly and smoothly by means of crossing and laying off, the latter in the direction of the grain of wood. The crossing and laying off consist of covering the area with paint, brushing the surface hard for the first time and then brushing alternately in opposite directions. two or three time and then finally brushing lightly in a direction at right angle to the same. In this process, no brush mark shall be left after the laying off is finished. The full process of crossing and laying shall constitute one coat.

Each coat shall be allowed to dry out thoroughly and got approved by the Engineer-in-charge. see before the next coat is applied. This should be facilitated through ventilation.

Each coat except the last coat shall be lightly rubbed down by sand papers and cleaned off dust before the next coat is laid.

No, hair mark from the Brush or clogging of paint puddles, in the corners of panels , angles of mouldings etc. shall be left on the work,

In painting doors and windows, the putty round the glass panes must also be painted; but care must be taken to see that no paint stains etc., are left on the glass Tops of shutters and surfaces in similar hidden locations shall not be left out in painting. In painting steel works special care shall be taken while painting over bolts, nuts, rivets etc.

- 31.5 BRUSHES AND CONTAINERS:** After work, the brushes shall be completely cleaned of paint and linseed oil by rinsing with turpentine. A brush in which paints has dried UP is rained and shall on account be used for painting work.
- 32 CASTING OF BRICK ROOF PANELS:** The panels shall be casted on a pucca platform in wooden frame made of correct size. Mortar used shall be 1:3 cement and coarse sand mortar. Two No.6min. dia bars shall be put in the panels longitudinally so as to form a shape of hooks on both sides for lifting purposes. The casting of such panels shall involve the use of 17 No. of 1" class bricks having all frogs on one side as per direction of Engineer-in-charge. The brick panel shall be lifted from the platform only after 48 hour after proper curing and that shall be collected t other plan where proper curing shall be done for the next ten days. The brick panel shall be casted over sheet of poly-thin over pucca platform so as to avoid any sticking to the platform. The sheet can he repeatedly used for casting purposes. Broken or distanted or disturbed rick panels shall not be allowed to bemused on repairing.
- 33 PARTLY CASTING OF RCC, BEAM (JOIST):** The beams shall be partially tasted in size of 10cmx13cm for the; required length in 1:3:4 cement coarse sand and stone ballast. The beam shall only be casted in approved steel or wooden frames and proper curing shall be done for the next 12 days. The casting shall be done on pucca platform with poly-thin sheet under neath.
- 34 HOSTING OF BEAM AND PLACING OF BRICK ROOF FRAMES:** The beams shall beproperly placed in position of the taking up the brick Panels and proper nos. of proper shall he put below beam so as to avoid any sagging or deflection during operation. The brick roof Panels shall be put on RCC beams with bearing of 1:3 cement coarse sand green mortar so as to give sound baring of to the roof Panels. The joints in between the brick Panels shall also be filled in with 1:3 cement coarse sand mortar. The frogs of all the brick Panels shall be upwards. All the cracked broken, dismantled or disturbed RCC beam and brick Panels shall not be allowed to be sued on repairing.
- 35 CONCERTIGN OVER ROOF PANELS:** 2.5 cat thick 1:2:4 cement concrete (1 cement: 2 coarse sand: 4 Zeera of 10mm gauge) shall be laid on the already laid Panelsled roof, as per direction of Engineer —incharge. All necessary temperature reinforcement over portion of beam shall be laid as per actual requirement. The remaining web of the beam shall also be filled in with the above concrete in continuation with the concreting over roof Panels as per direction of Engineer-in-charge.
- 36 CASING OF BRICK WALLS PANELS:** The gannets shall be casted on a- pucca platform in wooden frame made of exact size. The casting of panel shall involve the use of 18 Nos. 1" class bricks and 1:4 cement and sand mortar (fineness modulus 1.25) and 4 Nos. of M.S. hooks made out of 6nun M.S. Bars. The bricks shall be put in the wooden frame with all frogs upwards and brick on edge on the short side of the Panels. The hooks shall be placed in position and• as per direction of Engineer-incharge. The 1:4-cement mortar shall be filled in between the joints. The brick Panels shall be lifted from the platform only after 48 hours proper curing and then shall be collected at a place as per direction of Engineer-in-charge where proper curing shall be done for next ten days. These panels shall be casted over sheet of polythin over pucca platform so as to avoid any sticking to the platform, sheet can repeatedly used for casting purpose. Broken or dismantled or disturbed brick panels shall not be allowed to be sued on repairing.

- 37 HOISTING OF WALLPANELS AND CONCERTIGN OF COBOUMNS:** After complete curing the wall Panels shall be placed over the plinth so as to form a portion of height of wall. The bottom of the wall panel shall be placed with green mortar of 1:4 (F.M.1.25). the panel shall be so placed that it comes under exact plus and there will be a gap of 5 cm. between two panels and the hooks of each panel shall face each etc. the gap of 5 cm between wall panels shall thereafter be filled with 1:2:4 concrete so as to form a column of 3cm x 11 cm. Before concreting 6 mm. dia bars shall be put in column portions wooden plank shall be used as a side shuttering on 5 cm. side of column which shall be removed after wards and can be repeatedly used. When one row of wall panels is completed another row of panels shall be placed above the previous row of panels in plump s as to form the wall. The panels shall be placed accordingly so as to form the full height, of the wall (five height of wall panels shall comprise full height of wall). The work shall be done as per direction of Engineer—in-Charge.

Section VI - General Conditions of Contract

The Conditions of Contract, read in conjunction with Special Conditions of Contract and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties.

The form of Conditions of Contract that follows has been developed for smaller measurements contracts for construction on the basis of the practice of the Government of India, and considerable experience in different States in India in the drafting and management of contracts, bearing in mind a trend in the construction industry towards simpler, more straightforward language.

GENERAL CONDITIONS OF CONTRACT

i. General

In this Agreement, unless it be repugnant to the context herein or the subject otherwise requires, these words and expressions defined below shall have the meanings assigned to them:

<p>1. Definitions</p>	<p>(a) The Accepted Contract Amount shall mean and include the amount accepted in the Letter of Acceptance/Award for the execution and completion of the works and remedying any defects in accordance with the terms of the Agreement.</p> <p>(b) “Applicable Laws” shall mean and include all laws which are applicable to the Project and/or to the Contractor extending to the State of Uttarakhand, having been enacted or brought into force by Government of India or Government of Uttarakhand including, notifications, orders, instruments, regulations and rules made thereunder and judgments, decrees, injunctions, writs and orders of any Court or Tribunal or Authority or Forum, as for the time being in force during the subsistence of this RFP.</p> <p>(c) Bill of Quantities shall mean and include the priced and completed Bill of Quantities forming part of the Bid.</p> <p>(d) Compensation Events shall mean and include those defined in the Clause 42 of the GCC.</p> <p>(e) The Competent Authority shall mean and include the DSCL or its Chief Executive Officer or the Additional Chief Executive Officer or anybody or committee or entity constituted or any person or entity or body or committee delegated with specified limited power for specific limited purpose by the Chief Executive Officer of the employer.</p> <p>(f) The Completion Date shall mean and include the date of completion of the works as certified and declared by the DSCL or 6 months for construction work period from the date of signing of contract, whichever is later, in addition to and 5 years for operation and maintenance after the expiry of such construction work period.</p> <p>(g) The Contract shall mean this Contract Agreement, between the Employer and the Contractor to execute, complete and maintain the works and the documents listed in sub-clause 2.3 of the GCC.</p> <p>(h) The Contractor shall mean the party whose bid to carry out the works has been accepted by the Employer and the men, agents, servants, directors, managers, consultants, sub-consultants, officers, staffs of the party whose bid has been accepted by the employer.</p>
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- (i) The **Contractor's Bid** shall mean and include the completed bidding documents submitted by the Contractor to the Employer.
- (j) The **Contract Price** shall mean and include the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.
- (k) **Days** are calendar days; **months** are calendar months.
- (l) **Defect** shall mean and include any part of the works not completed or not performed or not done in accordance with the contract.
- (m) The **Defects Liability Certificate** shall mean and include the certificate issued by Employer, after the Defect Liability Period has ended and upon correction of defects by the Contractor after the expiry of the Completion date.
- (n) The **Defects Liability Period** shall mean and include the date on which the Defects Liability Certificate.
- (o) **Drawings** shall mean and include the drawings of the works but not limited to the Contract, and any additional and modified drawings issued by or on behalf of the Employer in accordance with the Contract or instruction of the Competent Authority in writing or the Engineer-In-Charge and shall be deemed to include the figures, calculations, other information, facts, images, representations, graphical or otherwise provided or approved for the execution of the Contract.
- (p) **"DSCL"** shall mean Dehradun Smart City Limited.
- (q) The **Employer** shall mean Dehradun Smart City Limited or DSCL and any of its officer, men, agents, servants, directors, managers, consultant and sub consultant as has been referred throughout this document.
- (r) **Engineer** shall mean the person appointed by the Employer and responsible for supervising the execution of the Works and administering the Contract and all acts incidental as well as consequential for the proper execution of the work for which he is appointed by the employer in accordance with the terms and conditions of such appointment and who shall be treated as the Engineer-In-Charge (E in C) for the purposes of this project.
- (s) **Equipment** shall mean Contractor's machinery and vehicles brought temporarily to the Site work.

- (t) **“Force Majeure”** or **“Force Majeure Event”** shall mean acts, events, conditions and/or occurrences as specified in the GCC 61.
- (u) **“In writing”** or **“written”** shall mean hand-written, type-written, printed or electronically made, resulting in a permanent record;
- (v) The **Initial Contract Price** shall mean the Contract Price listed In the Employer’s Letter of Acceptance/Award.
- (w) The **Intended Completion Date** shall mean the date on which it is agreed by the parties that the Contractor shall complete the works as per **PCC** including date approved by the Engineer-in charge by issuing an extension of time or an acceleration order in writing.
- (x) **Materials** shall mean all supplies, including consumables, used by the Contractor for incorporation in the work.
- (y) The **Particular Condition of Contract** shall mean the documents and other information, which comprise the Contract, specifying.
- (z) **Plant** shall mean any integral part of the work that shall have equipment’s, mechanical, electrical, chemical, function, tools, machineries and shall include site area, land area where such things are lying and operating.
- (aa) **PMC shall mean** the project management consultant appointed by Employer for the job as the agreement between the employer and the PMC. The objective of PMC is specified in GCC63.
- (bb) **“RFP” shall mean** Request for Proposal document issued by DSCL, including all **“Tender Documents”** and **“Bidding Documents”**.
- (cc) The **Site** shall mean the area defined as such in the PCC.
- (dd) **Site Investigation Reports** shall mean those that were included in the bidding document and are factual and Interpretative reports about the surface and subsurface conditions at the Site.
- (ee) **Specification** shall mean the specification of the works included in the Contract and any modification or addition made or approved by the Engineer-in charge the Competent Authority, as the case may be.
- (ff) The **Start Date** shall mean date given in the PCC which shall be latest date by when the Contractor shall commence execution of the works.

(gg) **Subcontractor** shall mean a person or corporate body who has a Contract with the Contractor to carry out a part of the work In the Contract, which Includes work on the Site.

(hh) **“Tax”** shall mean all tax, duty, and levy, charge whatsoever charged, imposed or levied under Applicable Laws. Payable/ leviabale in respect of the said Project.

(ii) **Temporary Works** shall mean works designed, constructed, installed, and removed by the Contractor that are needed for construction or Installation of the works.

(jj) **“Tender/ Bid”** shall means the Contractor’s quoted Technical and/or Financial Proposal and detailed Proposal for the Project, including the Contractor’s Proposal, submitted to the Employer and as accepted by the ultimately Employer.

(kk) **“Termination Date”** shall mean the date on which this Contract Agreement terminates by efflux of time or by issuance of a Termination Notice.

(ll) **“Termination Notice”** shall mean the communication received issued in accordance with this Contract Agreement by a Party to the other Party for terminating this Contract Agreement.

(mm) **“Termination Payment”** shall mean the amount payable by the Employer to the Contractor upon the termination of this Contract Agreement.

(nn) **“Third Party”** shall mean any Person, real or judicial, or entity other than the Parties to this Contract Agreement.

(oo) **“Transfer Date”** shall mean the day immediately following the last day of the Contract Period, including any extensions thereto or earlier termination thereof in accordance with the terms of the Concession Agreement.

(pp) **“Variation”** shall mean a modification, improvement or change in the works, services, and facilities etc to be carried out by the Contractor, such that the cost of implementing the modification, improvement or change can be recovered through a 30-day adjustment of the Contract Period.

(qq) **“Works”** shall mean the Construction of Smart Road including Construction of Multi utility duct, Laying of Water Supply lines, Sewer

	<p>lines, Drains, & other related works including Operation and maintenance for 5 years and all the appurtenances thereof, including any other permanent, temporary or urgent works required to be done for proper execution of this Agreement.</p> <p>(rr) “ Parties: DSCL/Employer and Contractor hereinafter individually shall be referred to as a ‘Party’ and collectively as ‘Parties’ ”</p>
2. Interpretation	<p>2.1 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer shall provide Instructions clarifying queries about these GCC.</p> <p>2.2 If sectional completion is specified In the PCC, references In the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).</p> <p>2.3 The documents forming the Contract shall be Interpreted In the following order of priority:</p> <ul style="list-style-type: none"> (a) Contract Agreement, (b) Letter of Award, (c) Contractor’s Bid & Original Price Bid BOQ, (d) General Conditions of Contract, (e) Particular Conditions of Contract, (f) Specifications, (g) Drawings, (h) Any other document listed In the PCC as forming part of the Contract.
3. Language and Law	3.1 The language of the Contract and the law governing the Contract are stated In the PCC .
4. Engineer’s Decisions	4.1 Except where otherwise specifically stated, the Engineer shall decide contractual matters between the Employer and the Contractor In the role representing the Employer.
5. Delegation	5.1 Unless otherwise specified In the PCC , the Engineer may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may revoke any delegation after notifying the Contractor.
6. Communications	6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered
7. Subcontr	7.1 The contractor may subcontract part of the construction work with the

<p>acting</p>	<p>approval of the Employer in writing, upto 25% of the contract price but will not assign the Contract. Subcontracting shall not alter the contractor’s obligations.</p> <p>7.2 Beyond what has been stated in clauses 7.1, if the contractor proposes sub-contracting any part of the work during execution of the works, because of some unforeseen circumstances to enable him to complete the work as per terms of the contract, the Employer will consider the following before according approval:</p> <p>i.The Contractor shall not sub-contract the whole of the works.</p> <p>ii.The Contractor shall not sub-contract any part of the work without prior Consent of the Employer. Any such consent shall not relieve the contractor from any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any his sub-contractor, his agents or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents and workmen.</p> <p>7.3 The Engineer should satisfy himself before recommending to the Employer whether</p> <p>a.The circumstances warrant such sub-contracting: and</p> <p>b. The sub-contractor so proposed for the work possess the experience, qualification and equipment necessary for the job proposed to be entrusted to him in proportion the Quantum of works to be sub- contracted.</p>
<p>8. Other Contractors</p>	<p>8.1 The contractor shall co-operate and share the site with other contractors. Public authority’s utilities and the employer between the dates given in the schedule of other contractors, as referred to in the PCC. The contractor shall also provide facilities and services for them as described in the schedule. The employer may modify the schedule of other contractor, and shall notify the contractor of any such modification.</p>

9. Personnel	<p>9.1 The Contractor shall employ for the construction work and routine maintenance the technical personnel named in the Section 3 or other technical persons approved by the Engineer. The Engineer will approve any proposed replacement of technical personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel stated in the Section 3 .</p> <p>9.2 If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the Works in the Contract.</p> <p>9.3 The Contractor shall not employ any retired Gazetted officer who has worked in the Engineering Department of the State Government and has either not completed two years after the date of retirement or has not obtained State Government's permission to employment with the Contractor</p>
10. Employer's and Contractor's Risks	<p>10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.</p>
11. Employer's Risks	<p>11.1 The Employer is responsible for the excepted risks which are (a) in so far as they directly affect the execution of the Works in the Employer's country, the risks of war, invasion, act of foreign enemies, rebellion, revolution, insurrection or military or usurped power, civil war, riot commotion or disorder (unless restricted to the Contractor's employees), natural calamities and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Contractor's design.</p>
12. Contractor's Risks	<p>12.1 All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks, referred to in clause 11.1, are the responsibility of the Contractor.</p>
13. Insurance	<p>13.1 The Contractor shall provide, In the joint names of the Employer and the Contractor, Insurance cover from the Start Date to the end of the complete contractual obligations including the O&M Period. In the amounts and deductibles stated In the PCC for the following events which are due to the Contractor's risks:</p> <ul style="list-style-type: none"> (a) loss of or damage to the Works, Plant, and Materials [which are Incorporated In works]; (b) loss of or damage to Construction Equipment; (c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) In connection with the Contract; and (d) Personal Injury or death.

	<p>13.2 Policies and certificates for Insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date. All such Insurance shall provide for compensation to be payable In Indian Rupees required to rectify the loss or damage Incurred.</p> <p>13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may affect the Insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.</p> <p>13.4 Alterations to the terms of an Insurance shall not be made without the approval of the Engineer.</p> <p>13.5 Both parties shall comply with any conditions of the Insurance policies.</p>
14.Site Data	14.1 The Contractor shall be deemed to have examined any Site Data referred to In the PCC , supplemented by any Information available to the Contractor.
15.Queries about the PCC	15.1 The Engineer will clarify queries on the PCC
16. Contractor to Construct the Works	<p>16.1 The Contractor shall construct and Install the Works In accordance with the Specifications and Drawings and as per Instructions of Engineer.</p> <p>16.2 The contractor shall construct the works with intermediate technology, i.e., by manual means with medium input of machinery required to ensure the quality of works as per specifications. The contractor shall deploy the equipment and machinery as given in Section 3.</p>
17. The Works to Be Completed by the intended Completion Date	17.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works In accordance with the Program submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.
18.Approval by the Engineer	<p>18.1 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Engineer, for his approval.</p> <p>18.2 The Contractor shall be responsible for design of Temporary Works.</p> <p>18.3 The Engineer's approval shall not alter the Contractor's responsibility for design of the Temporary Works.</p> <p>18.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.</p> <p>18.5 All Drawings prepared by the Contractor for the execution of the</p>

	temporary or permanent Works, are subject to prior approval by the Engineer before this use.
19.Safety	19.1 The Contractor shall be responsible for the safety of all activities on the Site specified in the Annexure -1 Clause C5.
20.Discoveries	20.1 Anything of historical or other Interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Engineer of such discoveries and carry out the Engineer's Instructions for dealing with them.
21.Possession of the Site	21.1 The Employer shall handover complete or part possession of the site to the Contractor 7 days in advance of construction program. At the start of the work, the employer shall handover the possession of at-least 50% of the site.
22 Access to the Site	22.1 The Contractor shall allow the Engineer and any person authorized by the Engineer access to the Site and to any place where work In connection with the Contract is being carried out or is intended to be carried out.
23 Instructions, Inspections and Audits	23.1 The Contractor shall carry out all Instructions of the Engineer which comply with the applicable laws where the Site is located. 23.2 The Contractor shall keep, and shall make all reasonable efforts to cause its Subcontractors and sub-consultants to keep, accurate and systematic accounts and records In respect of the Works In such form and details as will clearly identify relevant time changes and costs.
24 Appointment of the Arbitrator	The Arbitrator shall be appointed as per the mutual agreement of both the parties.
25 Procedure for Disputes	If any dispute arises out of this Contract with regard to the interpretation, meaning and breach of the terms of the contract or in the work of operation, the matter shall be tried to be resolved amicably by the parties and in case of failure, the same shall be referred to the Sole Arbitrator to be appointed mutually by the parties, whose decision shall be final and binding on the parties. All arbitration proceedings shall be as per Arbitration and Conciliation Act 1996 with its amendments from time to time. The Seat of Arbitration shall be at Dehradun and the Courts at Dehradun alone shall have jurisdiction to entertain any matter arising out of this agreement/contract.”

<p>25.1.1 Program</p>	<p><u>B. Time Control</u></p> <p>26.1 Within the time stated in the PCC, the Contractor shall submit to the Employer for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works and will submit the detailed drawings of the all of work and same shall be reviewed and approved by Engineer of DSCL or through other agency approved by DSCL.</p> <p>26.2 The Contractor shall submit the list of equipment and machinery being brought to site, the list of key personnel being deployed, the list of machinery/equipment being placed in field laboratory and the location of field laboratory along with the Program. The Engineer-In charge shall cause these details to be verified at each appropriate stage of the program.</p> <p>26.3 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.</p> <p>26.4 The Contractor shall submit to the Employer for approval an updated Program at intervals no longer than the period stated in the PCC. If the Contractor does not submit an updated Program within this period, the Employer may withhold the amount stated in the PCC from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Engineer.</p> <p>26.5 The Employer's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Employer again at any time. A revised Program shall show the effect of Variations and Compensation Events.</p>
<p>25.1.2 Extension of the Intended Completion Date</p>	<p>27.1 The Employer shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.</p> <p>27.2 The Employer shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Employer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the</p>

	new Intended Completion Date.
28 Delays Ordered by the Engineer	28.1 Engineer may instruct the Contractor to delay the start or progress of any activity within the Works.
29 Manage ment Meetings	<p>29.1 The Engineer may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the plans for the Works.</p> <p>29.2 The Engineer shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.</p>
30 Early Warning	<p>30.1 The Contractor shall warn the Engineer at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, Increase the Contract Price, or delay the execution of the Works. The Engineer may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.</p> <p>30.2 The Contractor shall cooperate with the Engineer In making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone Involved In the work and In carrying out any resulting Instruction of the Engineer.</p>
	Quality Control
31 .Identifying Defects	31.1 The Engineer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect.
32 . Tests	<p>32.1 The Contractor shall provide all apparatus, assistance, documents and other Information, electricity, equipment, fuel, consumables, Instruments, labour, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests efficiently.</p> <p>32.2 If the Engineer Instructs the Contractor to carry out a test not specified In the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.</p>
33 . Identifying Defects and Correction of	33.1The Engineer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer may instruct the

Defects	<p>Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect.</p> <p>33.2 The contractor shall permit the Employer's Technical auditor to check the contractor's work and notify the Engineer and Contractor of any defects that are found. Such a check shall not affect the Contractor's or the Engineer's responsibility as defined In the Contract Agreement.</p> <p>33.3 The Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined In the PCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.</p> <p>33.4 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Engineer's notice.</p>
34 . Uncorrected Defects	34.1 If the Contractor has not corrected a Defect within the time specified In the Engineer's notice, the Engineer shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.
	Cost Control
35 Contract Price	<p>35.1 In the case of an item rate contract, the Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.</p> <p>35.2 In the case of a lump sum contract, the Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for Materials on Site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.</p>
36 Changes In the Contract Price	<p>36.1 If the quantity of the work to be executed differs from the quantity in the Bill of Quantities for the particular item, it should be brought to the notice of the Engineer by the Contractor before the execution of work. After verification, the Engineer will approve or seek the approval of the Employer for such variations in quantities of the contract.</p> <p>36.2 If requested by the Engineer, the Contractor shall provide the Engineer with a detailed cost breakdown of any rate in the Bill of Quantities.</p>

37 Variations	37.1 The Engineer shall, having regard to the scope of the Works and the sanctioned estimated cost, have power to order, in writing, Variations within the scope of the Works he considers necessary or advisable during the progress of the Works. Such Variations shall form part of the Contract and the Contractor shall carry them out and include them in updated Programs produced by the Contractor. Oral orders of the Engineer for Variations, unless followed by written confirmation, shall not be taken into account.
38 Payments for Variations	<p>38.1 If the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Engineer, the quantity of work is above the limit stated in Sub Cl. 36.1, the rate in the bill of Quantities shall be used to calculate the value of the Variation in accordance with Sub Cl. 36.1.</p> <p>38.2 If the work in the Variation doesn't correspond to any item description in the Bill of Quantities (i.e. Extra Item), the Contractor shall immediately bring it to the notice of Engineer before the execution of work and shall provide the Engineer, upon asking to do so by him in writing, with a quotation (with detailed breakup of unit rates) for carrying out the Variation.</p> <p>38.3 The Engineer shall assess the quotation in accordance with the prevailing Schedule of Rates or DSR if the item is not available in SOR or prevailing market rate if the item is not available in both, the SOR and the DSR. The quotation shall be given within seven days of the request or within any longer period as stated by the Employer and before the Variation is ordered.</p> <p>38.4 If the Contractor's quotation is unreasonable (or if the contractor fails to provide the Engineer with a quotation within a reasonable time specified by the Employer in accordance with Sub Cl. 38.3), the Employer may order the Variation and make a change to the Contract Price which shall be based on the prevailing Schedule of Rates or DSR or market rates in according in the sub clause 38.3. The contract price of such extra item shall be equal to the rate worked out as per this sub-clause if the overall cost of contract is above or equal to the estimated cost and shall be less by the same percentage to which the overall cost of the contract is less than estimated cost as the case may be. Decision of Employer shall be final in this regard.</p>
39 Cash Flow Forecasts	39.1 When the Program, is updated, the Contractor shall provide the Engineer with an updated cash flow forecast.
40 Payment Certificates	40.1 The Contractor shall submit to the Engineer monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

	<p>40.2 The Engineer shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.</p> <p>40.3 The value of work executed shall be determined by the Engineer. The value of work executed shall comprise:</p> <p>40.4 In the case of a lump sum contract, the value of work executed shall comprise the value of completed activities in the Activity Schedule.</p> <p>40.5 The value of work executed shall include the valuation of Variations and Compensation Events.</p> <p>40.6 The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information</p>
41 Payments	<p>41.1 Payments shall be adjusted for deductions for advance payments security deposit, other recoveries in terms of the Contract and taxes at source, as applicable under the law. The Engineer shall pay the Contractor the amounts he had certified within 30 days of the date of each certificate</p> <p>41.2 The Employer may appoint another authority, as specified in the PCC (or any other competent person appointed by the Employer and notified to the contractor) to make payment certified by the Engineer.</p> <p>41.3 Items of the Works for which no rate or price has been entered in shall not be paid for by the Employer and shall be deemed covered by other rates and prices In the Contract.</p> <p>41.4 Payment for Operation and Maintenance period shall be paid in quarterly installment for every year of the rate quoted by bidder in price bid.</p>
42 Compensation Events	<p>42.1 The following shall be Compensation Events unless they are caused by the Contractor</p> <p>42.1.1 The Engineer orders a delay or delays exceeding a total of 30days.</p> <p>42.1.2 The effects on the Contractor of any of the Employer's Risks.</p> <p>42.2 If a Compensation Event would prevent the Works being completed before the Intended Completion Date, the Intended Completion date shall be extended. The Employer shall decide whether and by how much the Intended Completion Date shall be extended.</p>
43 Tax	<p>43.1 The Engineer shall adjust the Contract Price if taxes, duties, and other</p>

	levies are changed between the deadline for the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected In the Contract Price.
44 Currencies	44.1 All payments shall be made In Indian Rupees.
45 Price Adjustment	45.1 Not applicable
46 Security Deposit/ Retention and Release of Performance Security and Security Deposit/ Retention.	<p>46.1 The Employer shall retain security deposit of 5% of the amount from each payment due to the Contractor until completion of the whole of the construction Work. No. security deposit/ retention shall be retained from the payments for Routine maintenance of works.</p> <p>46.2 The total amount retained as Security Deposit is repaid to the contractor when the operation and maintenance has passed and the Engineer has certified that all defects notified by the Engineer to the contractor before the end of his period have been corrected. The retention amount may be released on submission of equivalent amount of FDR/TDR/BG valid till the completion of the O&M period</p> <p>46.3 The performance security equal to the five percent of the contract price of contract is repaid to the contractor when the period (Construction and operation and maintenance period) is over and the Engineer has certified that the contractor has satisfactorily carried out the Works.</p> <p>46.4 If the contractor so desires then the Security Deposit can be converted into any interest bearing security of schedule commercial bank in the name of the Employer or National Saving Certificates duly pledged in favor of the Employer for Defect Liability Period including Operation and Maintenance.</p>
47 Liquidated Damages	<p>47.1 The Contractor shall pay liquidated damages to the Employer at the rate per week or part thereof stated in the PCC for the period that the Completion Date is later than the Intended Completion Date. Liquidated damages at the same rate shall be withheld if the Contractor fails to achieve the milestones prescribed in the PCC. However, in case the Contractor achieves the next milestone the amount of the liquidated damages already withheld shall be restored to the Contractor by adjustment in the next payment certificate. The total amount of liquidated damages shall not exceed the amount defined in the PCC. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's other liabilities.</p> <p>47.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate.</p>

<p>48 Advance Payment</p>	<p>The Employer will make the interest bearing advance payment to the Contractor within 60 days of contract signing as follows:</p> <p>48.1 Mobilization advance payment up to a maximum of 10% of initial contract price shall be paid to the contractor after submission of an unconditional and irrevocable bank guarantee in a form given by the employer and from any scheduled commercial banks or nationalized banks acceptable to the Employer for an amount equal to the advance payment (to be drawn before the end of 20% of the contract period).</p> <p>48.2 Materials advance shall be paid only for non-perishable items as 75% of the total value of materials brought at site. At any one time materials of not more than 20% value of total BOQ items will be brought at site .After the consumption of the materials brought at site , next lot of materials will be brought.</p> <p>48.3 The Contractor is to use the advance payment only to pay for Nonperishable Materials and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or there documents to the Engineer. The recovery of mobilization advance shall start from bill after the work done exceeds 10% of the initial contract price or three months from the date of payment of advance which ever period concludes earlier and shall be made at the rate of 15% of the work done in each IPC (Interim payment certificate) The recovery of advance shall be completed when 90% of the work has been completed or prior to the expiry of original time for completion whichever is earlier. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or</p>

	Liquidated Damages.
49 Securities	49.1 The Performance Security equal to ten percent of the contract price and additional security for unbalanced bids shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in the form given in the PCC and by a scheduled commercial bank. The Performance Security shall be valid until a date 45 days from the date of expiry of Defect Liability Period including Operation and Maintenance and the additional security for unbalanced bids shall be valid until a date 45 days from the date of issue of the certificate of completion.
50 Cost of Repairs	50.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at his cost if the loss or damage arises from the Contractor's acts or omissions..
	Finishing the contract
51 Completion of Construction and Operation and Maintenance	51.1 The contractor shall request the Engineer to issue a certificate of completion of the construction of the works, and the Engineer will do so upon deciding that the construction works is completed and after successful completion of operation and maintenance period of one year certificate of operation and maintenance will be issued. In case the flag is damaged, then the contractor shall immediately replace the same with spare flag.
52 Taking Over	<p>52.1 Effective from the Transfer Date or the termination date, whichever is later, the Contractor shall, transfer and assign to the Employer or its nominated agency, as the case may be, free and clear from any charges, liens and encumbrances created by the Contractor of all the Contractor's right, title and interest in and to the Works/ movable and immovable assets. The Contractor shall also deliver to the Employer or its nominated agency on transfer date or the termination date, whichever is later such project reports, manuals, plans, design drawings, reports, accounts operation and maintenance manual and other information as may reasonably be required by the Employer or its nominated agency to continue the operation of the Project either directly or by its nominated agency. The personnel of the Contractor may continue to be the employees of the Contractor subject to their written consent and the transfer of all the movable & immovable assets shall not in any manner affect their status as employees of the Contractor and they shall have no claim to any type of employment or compensation from the Employer or its nominated agency, which arises prior to such transfer.</p> <p>52.2 On completion of the transfer by the Contractor to the Employer, the Employer shall issue an "Operation and Maintenance Agreement Completion Certificate" to the Contractor. The Operation and Maintenance Agreement Completion Certificate will have the effect of constituting evidence of transfer of all rights, titles and interests in the Project by the Contractor, and their vesting in the Employer.</p>

53 Final Account	<p>53.1 The contractor shall supply the Engineer with a detailed account of the total amount that the Contractor considers payable for construction works under the contract within 21 days of issue of certificate of completion of construction of works. The Engineer shall issue a defect liability including Operation and Maintenance certificate and certify any payment that is due to the correct and complete. If the account is not correct or complete, the Engineer shall issue within 42 days a schedule that states the scope of the corrections or additions that are necessary. If the account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the contractor and issue a payment certificate within 28 days of receiving the Contractor's revised account. The payment of final bill for construction of works will be made within 14 days thereafter.</p> <p>53.2 In case the account is not received within 21 days of issue of Certificate of Completion as provided in clause 50. I above, the Engineer shall proceed to finalize the account and issue a payment certificate within 28 days. The payment of final bill for construction of works will be made within 14 days thereafter.</p>
54 Operating and Maintenance Manuals	<p>54.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the PCC.</p> <p>54.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the PCC, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the PCC from payments due to the Contractor.</p>
55 Termination	<p>55.1 The Employer may terminate the Contract if the Contractor causes a fundamental breach of the Contract.</p> <p>55.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:</p> <ul style="list-style-type: none"> I. The Contractor stops work for 28 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Engineer; II. The Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation; III. The Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer; IV. The Contractor does not maintain a Security, which is required; V. The Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in clause 44.1; VI. Any other fundamental breaches as specified in the PCC.

	<p>VII. If the Contractor fails to deploy machinery and equipment or personnel as specified in the PCC at the appropriate time.</p> <p>55.3 Notwithstanding the above, the Employer may terminate the Contract for convenience</p> <p>55.4 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.</p>
<p>56 Payment upon Termination</p>	<p>56.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done and Materials ordered less liquidated damages, if any less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the PCC. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be recovered from the security deposit, and performance security. If any amount is still left unrecovered it will be a debt payable to the Employer.</p> <p>56.2 If the Contract is terminated at the Employer’s convenience, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor’s personnel employed solely on the Works, and the Contractor’s costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the Contract, and less taxes due to be deducted at source as per applicable law.</p>
<p>57 Property.</p>	<p>57.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer for use for completing balance construction work if the Contract is terminated because of the Contractor’s default, till the Works is completed after which it will be transferred to the Contractor and credit, if any, given for its use.</p>
<p>58 Releases from Performance</p>	<p>58.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of the Employer or the Contractor, the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.</p>

<p>59 Labor Laws and Regulations</p>	<p>59.1 The Contractor shall comply with all relevant labor laws and regulations applicable to the Contractor’s personnel.</p> <p>59.2 The Contractor shall provide equal wages and benefits to men and women for work of equal value or type.</p> <p>59.3 The Contractor shall not employ any child to perform work, including work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child’s education, or to be harmful to the child’s health or physical, mental, spiritual, moral, or social development. “Child” means a child below the statutory minimum age of 18 Years.</p> <p>59.4 The Contractor shall not employ “forced and compulsory labor” in any form. “Forced or compulsory labor consists of all works or service, not voluntary performed that is extracted from an individual under threat or force or penalty.</p> <p>59.5 The Contractor shall also comply the Labour law as given in Annexure 1</p>
<p>60 Environmental Laws and Regulations</p>	<p>60.1 The Contractor shall comply with all applicable national, provincial, and local environmental laws and regulations. The contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation. During continuance of the contract, the contractor shall abide at all times by all existing enactments on environmental protection and rules made there under, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority.</p> <p>60.2 The Contractor shall comply the Environment Management Plan as given in Annexure 2.</p>
<p>61 Force Majeure</p>	<p>61.1 The contractor shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that it’s delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.</p> <p>61.2 For purposes of this Clause, “Force Majeure” means an event or situation beyond the control of the Contractor that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Contractor. Such events may include, but not be limited</p>

	<p>to, acts of the Employer in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.</p> <p>61.3 If a Force Majeure situation arises, the Contractor shall promptly notify the Employer in writing of such condition and the cause thereof. Unless otherwise directed by the Employer in writing, the Contractor shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.</p>
<p>62 Role and Responsibility for Social Issue</p>	<p>62.1 The Contractor shall comply the Social issue given in Annexure 3.</p>
<p>63 Objective of PMC</p>	<p>63.1 The objective of this PMC is to assist the DSCL in implementation of the Project till the successful completion and handing over of all works to the DSCL and comprehensively supervise the works and activities carried out by the Bidder(s) as “Engineer’s Representative” under the respective contract(s) in a manner that would ensure:</p> <p>63.2 Total compliance of technical specifications and various other requirements contained in the respective contracts by the Bidder(s);</p> <p>63.3 High standards of quality assurance system in the Consultancy as well as the works and activities of the Bidder(s);</p> <p>63.4 Comprehensive and documented reporting to the DSCL of Consultant’s own activities, progress of the Project(s) and compliances/ non-compliances by the Bidder(s);</p> <p>63.5 Proper verification of measurements and bills submitted by the Bidder(s) so that payments made by the DSCL against these bills truly reflect the actual work done at site complying with the requirements of the respective contract(s);</p>

PARTICULAR CONDITIONS OF CONTRACT

A. General	
GCC 1.1 (q)	The Employer is Dehradun Smart City Limited, Dehradun, <i>Uttarakhand</i> .
GCC 1.1 (f)	Completion period for Supply & Installation of 30.5 meter Tall Monumental National Flag High Mast in Gandhi Park in Dehradun city including Operation and maintenance for one year under “Smart City Mission” through e-Procurement is 03 (Three) months from the date of contract signing.
GCC 1.1 (r)	Engineer-in charge is AGM (Civil), Dehradun Smart City Limited.
GCC 1.1 (aa)	The Project Management Consultant is technical consultant appointed by the Employer shall proof-check all GFC drawings/design submitted by the successful bidder and approve the drawings for execution of works.
GCC 1.1 (cc)	The Site is located at, Dehradun, ABD area, Uttarakhand is defined In drawings.
GCC 1.1 (ff)	The intended Start Date shall be <i>the date of the contract signing</i> .
GCC 1.1 (qq)	The Works consist Supply & Installation of 30.5 meter Tall Monumental National Flag High Mast in Gandhi Park in Dehradun city including Operation and maintenance for one year
GCC 3.1	The language of the contract is <i>English</i> . The law that applies to the Contract is the laws of Republic of India.
GCC 5.1	The Engineer <i>may</i> delegate any of his duties and responsibilities.
GCC 14.1	Site Data are as per Scope of work and Technical Specifications etc.
GCC 21.1	The site will be physically handed over by the Employer to the Contractor on or before date of start as per contract agreement and both the employer as well as the Contractor will issue a joint signed letter mentioning the handing over and taken over of the site.
B. Time Control	
GCC 26.1	The Contractor shall submit for approval a Program for the Works within 15 days from the date of the Letter of Acceptance and the Program shall be a part of the contract.
GCC 26.4	The period between Program updates is 10 days. The amount to be withheld for late submission of an updated Program is INR 1, 00,000/-.
C. Quality Control	
GCC 33.3	The Defects Liability Period is: one year
D. Cost Control	
GCC 41.2	Employer may appoint another authority, will be Project Management Consultant
GCC 46.1	The proportion of payments retained (Retention Money) shall be 5% from each monthly bill subject to the maximum of 5% of final contract price.
GCC 47.1	The liquidated damages for the whole of the Works are <i>[0.5% of the final Contract Price]</i> per week. The maximum amount of liquidated damages for the whole of the Works is <i>10%</i> of the final Contract Price. or milestone 1 0.50% of the Contract Price per week

	<p>For milestone 2 0.50 % of the contract price per week For milestone 3 0.50% of the contract price per week Milestone Physical target* of Period from the date of start of work works to be completed</p> <p>Milestone 1 20% 1/3rd of Intended completion period ** Milestone 2 50% 2/3rd of Intended completion period** Milestone 3 100% Full Intended completion period**</p> <p>*Physical progress shall be assessed as per the latest MPR duly verified by Engineer.</p> <p>** Intended completion period shall be Twelve months from the Start Date.</p>
GCC 48.1	An advance of 10 % of contract value (if requested by the contractor) shall be given to the contractor on submission of an unconditional and irrevocable bank guarantee in a form given by the employer and from any scheduled commercial banks or nationalized banks acceptable to the Employer for an amount equal to the advance payment. The advance payment shall be adjusted from the monthly invoices uniformly.
GCC 49.1	<p>Within 21 (twenty one) days after receipt of the Letter of Acceptance/Award, the successful Bidder shall deliver to the Employer a Performance Security of Five (5%) of the Contract Price including of GST, valid up to the completion of the DLP period.</p> <p>The performance security shall be either in the form of an unconditional Bank Guarantee or fixed deposit Receipts (FDR)/ Time Deposit Receipts (TDR), in favor of Chief Executive Officer, Dehradun Smart City Limited Payable at Dehradun, Uttarakhand, from a Nationalized or Scheduled Commercial Bank.</p> <p>Failure of the successful Bidder to comply with the requirements of this Clause shall constitute sufficient grounds for cancellation of the award and forfeiture of the Earnest Money. He will also be debarred from participating in future bids under Dehradun Smart City Limited.</p>
	Finishing the contract
GCC 54.1	The date by which “as built” drawings (and maintenance manuals) are required - within 56 days of issue of completion certificate
GCC 54.2	The amount to be withheld for failing to produce “as built” drawings by the date required in GCC 54.1 is 10 lakh (INR)
GCC 58.1	The percentage to apply to the value of the work not completed, representing the Employer’s additional cost for completing the Works, is 20%.

SECTION VIII

Bill of Quantities (BOQ)

Bill of Quantities (BOQ)

"The Price Bid BOQ is documented separately and can be downloaded from e-procurement portal <http://uktenders.gov.in> along with the RFP document. The price bid BOQ in EXCEL FORMAT which is available on <http://uktenders.gov.in> website should be completely filled and should be uploaded as a part of the bid without which the bid shall be treated as NON-RESPONSIVE." The bidder has to quote the prices ***EXCLUSIVE OF GST***.

SECTION IX - CONTRACT FORMS

This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.



Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made the Day of,, between [name of the Employer]. (Hereinafter “the Employer”), of the one part, and [name of the Contractor].(hereinafter “the Contractor”), of the other part:

WHEREAS the Employer desires that the Works known as [name of the Contract]. should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them In the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - (i) This Contract Agreement
 - (ii) The Letter of Award
 - (iii) The Contractor’s Bid Including completed schedules and priced bill of quantities,
 - (iv) The addenda Nos. _____ (if any)
 - (v) The Particular Conditions
 - (vi) The General Conditions of Contract, Including appendix;
 - (vii) The Specification
 - (viii) The drawings(
 - (ix) Construction Program, Methodology, Quality Assurance Program and Environmental and Social Management Plan
 - (x) Any other document listed In the PCC as forming part of the Contract.
3. In consideration of the payments to be made by the Employer to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein In conformity In all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor In consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and In the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed In accordance with the laws of India.on the day, month and year specified above.

Signed by:
for and on behalf of the Employer
In the presence of:
Witness, Name, Signature, Address, Date

Signed by:
for and on behalf the Contractor
In the presence of:
Witness, Name, Signature, Address, Date



Performance Bank Guarantee

[Guarantor letterhead or SWIFT identifier code]

Performance Guarantee No..... [Insert guarantee reference number]

Date..... [Insert date of issue of the guarantee]

To:

Chief Executive Officer
Dehradun Smart City Limited
777, Saatvik Tower Kaulagarh Road,
Rajendra Nagar, Dehradun, Uttarakhand

In consideration of CEO, Dehradun Smart City limited (hereinafter as the "Employer", which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) awarding to (Name of the contractor) having its registered office at (hereinafter referred as the "Contractor", which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators and assigns), vide letter no. (LOA No.) dated valued at INR (Amount in figures and words) (herein after referred to as the "Contract value") the work for (Name of the work). The Contractor having agreed to furnish a Bank Guarantee amounting (Amount in figures and words) to the Employer for Performance Security of the said Agreement.

We, the (Name of the Bank), at a company constituted under the companies Act 1956 and deemed to be a banking company under the Banking Regulation Act 1949 having one of its branch office at (Branch Office Address) and having its Registered Office at (Registered Office Address) (herein after referred to as 'The Bank') at the request of the employer do hereby pay to the employer an amount not exceeding (Performance Bank Guarantee Value in figures and words) against any loss or damage caused to or suffered or would be caused to or suffered by the Employer by reason of any breach by the said Contractor of any of the terms or conditions contained in the said Agreement.

We, (Bank Name) hereby affirm that we are the Guarantor and responsible to Employer, on behalf of the Contractor, up to a total of (Performance Bank Guarantee Value in figures and words), such sum being payable in the types of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand to "the bank" or any other branch of (Name of Bank) without cavil or argument, any sum or sums within the limits of (Performance Bank Guarantee Value in figures and words) as aforesaid without needing to prove or to show grounds or reasons for demand for the sum specified therein however, such demand shall be made within the claim expiry date i.e. .

We, _____ (*Name of Bank*) undertake to pay to the employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor in any suit or proceeding pending before any court or tribunal relating thereto, our liability under this present being absolute irrevocable 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 shall have no claim against us for making such payment.

We, further agree that no change or addition to or other modification of the terms of the Contract or related Services to be supplied there under or of any of the Contract documents which may be made between employer and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

We, the _____ (*Name of Bank*) further agree with the Employer that the employer shall have the fullest liberty without our consent and without affecting 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 consultant from time to time or to postpone for any time or from time to time any of the powers exercisable by the employer against the said Contractor 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 or for any forbearance, act or omission on the part of the employer or any indulgence by the employer to the said Contractor or any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have the effect of so relieving us.

This guarantee will not be discharged due to the change in the constitution of the bank or the Contractor.

We, _____ (*Name of Bank*) lastly undertake not to revoke this guarantee during its currency except with the previous consent of employer in writing.

This guarantee shall be valid until _____ MONTHS (i.e.) 60 days following the Completion date of the Contract i.e. till _____ including any warranty/Operation and Maintenance obligations, and any demand for payment under it must be received by us at this office on or before that date.

NOTWITHSTANDING ANYTHING CONTAINED HEREIN ABOVE:

- (a) The Bank's liability under this guarantee shall not exceed the Guaranteed Amount i.e., _____ (*Performance Bank Guarantee Value in figures and words*)
- (b) This guarantee shall be valid up to the Expiry Date i.e. _____ and
- (c) The Bank is liable to pay the Guaranteed Amount or any part thereof under this Bank Guarantee only and only if a demand is made in writing on the Bank at any branch on or before the Claim Expiry Date i.e. _____, else all rights of the beneficiary under this Guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there under.

RFP for 30.5 meter Tall Monumental National Flag



Signature and seal of the guarantor _____

Name of Bank -

Address -

Date -

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.