BIHAR URBAN INFRASTRUCTURE DEVELOPMENT CORPORATION LTD.

(A Govt. of Bihar Undertaking)



Request for Proposal (RFP) Document For Selection and Engagement of

"Design Consultant for Planning, Design & Preparing DPR & Bid Document for Comprehensive Storm Water Drainage System for Patna Nagar Nigam, Khagaul, Danapur, Phulwarisharif and adjoining area".

Quality cum Cost Based Selection (QCBS) Method

No: BUIDCo/Yo-1490/19-105 dated 30.12.2019

December - 2019

BIHAR URBAN INFRASTURCTURE DEVELOPMENT CORPORATION LTD.

#West Boring Canal road (Rajapul), Patna -800 001 Tel: 0612 2558412 Web:-http://www.buidco.in, Email: mdbuidco@gmail.com

Tender Title: - Selection and Engagement of "Design Consultant for Planning, Design & Preparing DPR and Bid Document for Comprehensive Storm Water Drainage system for Patna Nagar Nigam, Khagaul, Danapur, Phulwarisharif and adjoining area"...

NIT No: - BUIDCo/Yo-1490/19-105 Date: 30.12.2019

Contract Period : 16 Months.

Date of Issue : 02.01.2020

Pre – Proposal meeting : 07.01.2020

Closing date : 21.01.2020

SECTION 1: LETTER OF INVITATION

Section 1 - Letter of invitation

Ref No: BUIDCo/Yo- 1490 /19/105 Date: 30.12.2019

From:

Chief Engineer (DPM), BUIDCo

Bihar Urban Infrastructure Development Corporation #West Boring Canal road (Rajapul), Patna -800 001

To: All Prospective Bidders

- 1. Managing Director, BUIDCo, invites proposals to provide consulting services for
- Selection and Engagement of "Design Consultant for Planning, Design & Preparing DPR & Bid Document for Comprehensive Storm Water Drainage system for Patna Nagar Nigam, Khagaul, Danapur, Phulwarisharif and adjoining area "
- 3. The background information and Terms of Reference for the consulting services are provided in Section 5 of the Request for Proposal (RFP)
- 4. This RFP is available to all prospective consultants.
- 5. A firm will be selected under **Quality cum Cost Based Selection (QCBS) Method** and procedures described in this RFP.
- 6. Consultant should provide Email-id, Address and Telephone (mobile) number of Experience Issuing authority submitted Experience Certificate in bid document for their verification otherwise treated as non- responsive.
- 7. The RFP includes the following documents:
 - Section 1 Letter of Invitation
 - Section 2 Instructions to Consultants (including Data Sheet)
 - Section 3 Technical Proposal Standard Forms
 - Section 4 Financial Proposal Standard Forms
 - Section 5 Terms of Reference
 - Section 6 Draft Contract Document
- 6. A Pre-proposal meeting will be held on the date 07.01.2020 at 1 PM at Conference Hall, UD &HD Vikas Bhavan, Patna as notified in the Notice Inviting Proposal uploaded on the www.eproc.bihar.gov.in website wherein all issues/clarifications sought by bidders will be discussed and finalized. The deadline for receipt of proposals shall be on the date will be 21.01.2020 as mentioned in the Notice Inviting Proposal.
- 7. Proposal shall be submitted through e-procurement mode only www.eproc.bihar.gov.in. The bidder shall download the RFP document from the site website: www.eproc.bihar.gov.in and upload the scanned copy of required documents together with filled up documents on the website: www.eproc.bihar.gov.in. Complete Bids (including Technical and Financial) must be uploaded at www.eproc.bihar.gov.in not later than the date indicated in Bid Data Sheet.
- 8. BUIDCo reserves the right to accept or reject any or all proposals, and to annul the selection process and reject all proposals at any time prior to the award of contract, without thereby incurring any liability or any obligation in any form to the affected firms on any grounds.

Yours sincerely,

Chief Engineer (DPM), BUIDCo

SECTION 2: INSTRUCTION TO CONSULTANTS

Section 2- INSTRUCTIONS TO CONSULTANTS

Definitions

- (a) "BUIDCo" means Bihar Urban Infrastructure Development Corporation Ltd.
- (b) "Employer" means BUIDCo.
- (c) "Client" means BUIDCo (the agency with which the selected Consultant signs the Contract for the Services).
- (d) "Consultant" means any private or public entity that will provide the Services to the Client under the Contract.
- (e) "Contract" means the Contract signed by the Parties and all the attached documents listed in its Clause 1; that is the General Conditions (GC), the Special Conditions (SC) by which the GC may be amended or supplemented, and the Appendices.
- (f) "CQS" means Consultant's Qualification Selection.
- (g) "Data Sheet" means such part of the Instructions to Consultants used to reflect specific country and assignment conditions.
- (h) "Day" means calendar day.
- (i) "Government" means the Government of Bihar.
- (j) "Instructions to Consultants" (Section 2 of the RFP) means the document which provides shortlisted Consultants with all information needed to prepare their Proposals.
- (k) "AMRUT" means Atal Mission for Rejuvenation and Urban Transformation with assistance from Govt. of India.
- (I) "Joint Venture" means a Consultant which comprises maximum two Partners each of whom will be jointly and severally liable to the Client for all the Consultant's obligations under the Contract.
- (m) "Partner" means any of the entities that make up the Joint Venture; and Partners means all those entities.
- (n) "Personnel" means qualified persons provided by the Consultant and assigned to perform the Services or any part thereof.
- (o) "Proposal" means a technical proposal or a financial proposal, or both.
- (p) "RFP" means this Request for Proposal.
- (q) "Services" means the work to be performed pursuant to the Contract.
- (r) "Standard Electronic Means" includes facsimile and email transmissions.
- (s) "Terms of Reference" (TOR) means the document included in the RFP as Section 5 which explains the objectives, scope of work, activities, tasks to be performed, respective responsibilities of the Client and the Consultant, and expected results and deliverables of the assignment.
- (t) "ULB" means Urban Local Body as relevant to the concerned town.
- (u) "UIDSSMT" means Urban Infrastructure Development Scheme for Small and Medium Towns with assistance from Govt. of India.

1. INTRODUCTION

General

- 1.1 Bihar Urban Infrastructure Development Corporation Ltd. (BUIDCo), Patna, Bihar, India will select a consulting firm /organization (the Consultant) in accordance with the method of selection specified in the Data Sheet. The Consultants are invited to submit a technical and a financial proposal (the Proposal) as specified in this RFP Document and the Data Sheet for this Assignment. The Assignment shall be implemented in accordance with the terms and Conditions specified in the Data Sheet and other sections of the RFP Document.
- 1.2 Consultants should familiarize themselves with local conditions and take them into account in preparing their Proposals. To obtain first-hand information on the assignment and local conditions, Consultants are encouraged to visit the project site.
- 1.3 The Client will provide the inputs specified in the Data Sheet, and will assist the Consultants in obtaining licenses and permits needed to carry out the services, and make available relevant project data and reports, if available.
- 1.4 Consultants shall bear all costs associated with the preparation and submission of their Proposals. Costs might include site visit; collection of information; and, if selected, attendance at contract negotiations etc.
- 1.5 BUIDCo is not bound to accept any Proposal and reserves the right to annul the selection process at any time prior to contract award, without thereby incurring any liability to the Consultants.
- 1.6 In preparing their Proposals, Consultants are expected to examine in detail the documents comprising the RFP. Material deficiencies in providing the information requested may result in rejection of a Proposal.

Conflict of Interest

- 1.7 BUIDCo requires that Consultants provide professional, objective, and impartial advice and at all times hold the Client's interests paramount, avoid conflicts with other assignments or their own corporate interests and act without any consideration for future work. Consultants shall not be recruited for any assignment that would be in conflict with their prior or current obligations to other clients, or that may place them in a position of not being able to carry out the assignment in the best interest of BUIDCo. Without limitation on the generality of the foregoing, Consultants, and any of their associates shall be considered to have a conflict of interest and shall not be selected under any of the circumstances set forth below:
 - (i) If a Consultant combines the function of consulting with those of contracting and/or supply of equipment; or
 - (ii) If a Consultant is associated with or affiliated to a contractor or manufacturer; or
 - (iii) If a Consultant is owned by a contractor or a manufacturing firm with departments or design offices offering services as Consultants. The Consultant should include relevant information on such relationships along with a statement in the Technical Proposal cover letter to the effect that the Consultant will limit its role to that of a Consultant and disqualify itself and its associates from work, in any other capacity or any future project within the next five years, that may emerge from this assignment (including bidding or any part of the future project). The contract with the Consultant selected to undertake this assignment will contain an appropriate provision to such effect; or
 - (iv) If there is a conflict among consulting assignments, the Consultant (including its personnel) and any subsidiaries or entities controlled by such Consultant

shall not be recruited for the relevant assignment. The duties of the Consultant depend on the circumstances of each case. While continuity of consulting services may be appropriate in particular situations if no conflict exist, a Consultant cannot be recruited to carry out an assignment that, by its nature, will result in conflict with another assignment of such Consultant. For example, a Consultant engaged to prepare engineering design for an infrastructure project shall not be recruited to prepare an independent environmental assessment for the same project; similarly, a Consultant assisting a client in privatization of public assets shall not purchase, nor advise purchasers of, such assets or a Consultant hired to prepare terms of reference for an assignment shall not be recruited for the assignment in question.

Fraud and Corruption

- 1.8 BUIDCo requires that consultants observe the highest standard of ethics during the procurement and execution of such contracts. In such pursuance of this policy, BUIDCo:
 - a. defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and/or those close to them, or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; and
 - (ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the borrower, and includes collusive practices among bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels and to deprive the borrower of the benefits of free and open competition).
 - (iii) will reject a Proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract; and
 - (iv) will declare a firm ineligible, either indefinitely or for a stated period of time for awarding any BUIDCo contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, any BUIDCo contract.

Eligible Bidders:

- **1.9** Bidder shall not be under a declaration of ineligibility for delay, failure or corrupt and fraudulent practices by BUIDCo or state Govt. or Central Govt. or Public Undertaking or any Autonomous Body.
 - (a) Consultant(s) should have been incorporated and being operational in India for at least 5 years as on 31st March, 2019.
 - (b) The consultant should have experience in the Storm water/Waste water sector for at least 10 years.
 - (b) The bidder must have achieved in any one year a minimum annual turnover of at least Rs. 50 Crore during last three years. The turnover will be indexed at the rate of 8% for a year.
 - (C) The consultant should have completed one project having similar topography of project area covering at least project area of 100. Sq. KM within last seven years.
 - (d) They should have completed minimum three Storm water drainage projects within last 10 years.

(D) Consultant should provide Email-id, Address and Telephone (mobile) number of Experience Issuing authority submitted Experience Certificate in bid document for their verification otherwise treated as non- responsive.

Criteria for Joint Venture participation in the bids.

1.10

- (1) Bids submitted by a joint venture (JV) should not be more than a total of Two firms as partners shall comply with the following requirements:
- (1.1) There shall be a Joint Venture Agreement (Refer Annexure- 1 (JV) specific for the contract package between the constituent firms, indicating clearly, amongst other thing, the proposed distribution of responsibilities both financial as well as technical for execution of the work amongst theme. For the purpose of this clause, the most experienced lead partner will be the defined. A copy of the Joint Venture agreement in accordance with requirements mentioned in Annexure-1(JV) shall be necessarily submitted with the bid.
- (1.1.1) Alternatively, a letter of intent to execute a JV in the event of successful bid shall be signed by all partners of JV and submitted with the bid together with a copy of the proposed agreement. Pursuant to the foregoing, the JV shall include among other thing, the joint venture's objective, the proposed management structure, the contribution of each partner to joint venture operation, the commitment of the partners to joint and several liability for due performance, recourse/sanctions within the joint venture in the event of default or withdrawal of any partner and arrangements for providing the required indemnities.
- (1.1.2) The JV so formed shall also have to be registered with the concerned department after issue of LOA but before the agreement.
- (1.2) The bid, and in the case of the successful bidder, the form of agreement, etc, Shall be signed and/or executed in such a manner as may be required for making it legally binding on all partners (including operative parts of the ensuring contract in respect of Agreement of Arbitration, etc). On award of work, the Form of Agreement and Contract Documents shall be signed by both partners of the Joint Venture to conclude Contract Agreement.
- (1.3) Lead partner shall be nominated as being partner-in-charge; and this authorization shall be evidenced by submitting a power of attorney signed by the legally authorized signatories of all the partners.
- (1.4) The partner-in-charge shall be authorized to incur liabilities and to receive instruction for and on behalf of the partners to the Joint Venture, whether jointly or severally and entire execution of the Contract (including payment) shall be carried out exclusively through the partner-in-charge. A copy of the said authorization shall be furnished with the bid.
- (1.5) All the partners of the Joint Venture shall be liable jointly and severally for the execution of the contract in accordance with contract terms, and a relevant statement to this effect shall be included in the authorization mentioned under sub clause (1.3) above as well as in the Form of tender and the Form of Agreement (in case of a successful bidder).
- (1.6) In the event of default, all the partners of the Joint Venture will retain the full and undivided responsibility for the performance of their obligations under the contract and/or for satisfactory completion of the work.
- (1.7) the bid submitted shall include all the relevant information as required under the provisions of ITB and furnished separately for each partner. The requirement of Key plants & equipments construction equipments as per Annexure I of testing equipment for establishing filed laboratory key personal to be employed on contract works as per Annexure II shall be counted altogether for the partners it shall be less than the requirement.

- (1.8) The bank guarantee/other suitable instrument in shape of bid security shall be issued in the name of JV and pledged in favour of employer.
- (2) Each partner of the JV must produce:
- (2.1) the permanent account number (PAN) of Income Tax.
- (2.2) an affidavit though 1st class Executive Magistrate that the information furnished with the bid documents is correct in all respect; and
- (2.3) such other certificates as defined in the Appendix to ITB. Failure to produce the certificates shall make the bid non-responsive.
- (3) Each bidder must demonstrate:-
- (3.1) Availability of proposed personnel during the assignment.,
- (3.5) the bidder must not have in his employment.
- (3.5.1) the near relations (defined as first blood relations, and their spouses, of the bidder or the bidder's spouse) of persons. The bidder must produce an affidavit stating that the near relations of the following departmental officers are not in his employment: JE/AE/EE/SE/CE/E-in-C & Divisional Accountant of any works department of Bihar State.
- (3.5.2) Without Government permission, any person who retired as gazette officer within the last two years of the rank and from the departments. The bidder must produce an affidavit stating the names of retired gazette officer (if any) in his employment who retired within the last two years with the following Ranke from the departments listed below.

JE/AE/EE/SE/CE/E-in-C & Divisional Accountant of any works department of Bihar State.

In case there is no such person in his employment, his affidavit should clearly state this fact.

- (4) If bidder is joint venture, the partners would be limited to two. Joint venture firm shall jointly and severally responsible for completion of the project. Joint venture must fulfill the minimum qualification requirement.
- (5) the lead partner shall meet not less than 50% (fifty percent) of qualification criteria.
- (6) other partner shall also meet not less than 50 % (Fifty) of all the qualifying criteria.

Proposal Validity

1.11 The Data Sheet indicates how long the Consultants' Proposals must remain valid after the submission date. During this period, the Consultants shall maintain the availability of experts nominated in the Proposal. The Client will make its best effort to complete negotiations within this period. In case of need, the Client may request Consultants to extend the validity period of their Proposals. Consultants have the right to refuse to extend the validity period of their Proposals.

Cost of RFP Document

1.12 The cost of RFP Document of amount indicated in Data Sheet in favour of "Managing Director, Bihar Urban Infrastructure Development Corporation Limited" payable at Patna shall be in the form of Account Payee Demand Draft from any scheduled commercial bank or nationalized bank. A proposal without the cost of RFP document shall be rejected, as nonresponsive.

Bid Security

- 1.13 Bid Security (Earnest Money Deposit)
 - a. The Bid Security of amount indicated in Data Sheet in favour of "Managing Director, Bihar Urban Infrastructure Development Corporation Limited" payable at Patna shall be in the form of Account Payee Demand Draft or Bank Guarantee

from any of the scheduled commercial bank or nationalized bank having its branch in Patna. In case of Demand Draft it shall be payable at Patna and in case of Bank Guarantee it should be in an acceptable form provided in <u>Appendix III to Data Sheet</u>. The bid security is to remain valid for a period of forty-five days beyond the final bid validity period. The Employer shall reject any bid not accompanied by appropriate bid security, as non-responsive.

- b. The bid security of the successful Bidder shall be returned as promptly as possible once he has signed the Contract and furnished the required performance security.
- c. Bid securities of the unsuccessful bidders shall be returned to them at the earliest after expiry of the final bid validity and latest on or before the 30th day after the award of the contract to successful bidder.
- d. The bid security may be forfeited:
 - (a) if a Bidder withdraws its bid during the period of bid validity.
 - (b) if the Successful Bidder fails to:
 - (i) Sign the Contract within required time frame;
 - (ii) Furnish a performance security.
- e. Common single Bid Security and RFP Document Fee shall be submitted irrespective of the number of packages for which Bid is submitted.

2. CLARIFICATIONS AND AMENDMENTS TO RFP DOCUMENTS

- 2.1 Consultants may request a clarification of any of the RFP documents on or before the date indicated in *Data Sheet*. Any request for clarification must be sent in writing to the address indicated in the *Data Sheet*. The Client will respond in writing and will send written copies of the response, including an explanation of the query but without identifying the source of inquiry, to all Consultants. Should the Client deem it necessary to amend the RFP as a result of a clarification, it shall do so following the procedure under Sub-Clause 2.2.
- 2.2 At any time before the submission of Proposals, the Client may, whether at its own initiative, or in response to a clarification requested by a firm, amend the RFP by issuing an addendum. The addendum shall be sent to all Consultants and will be binding on them. To give Consultants reasonable time in which to take an amendment into account in their Proposals, the Client may at its discretion, if the amendment is substantial, extend the deadline for the RFP submission.

3. PREPARATION OF THE PROPOSAL

- 3.1 Consultant's Proposal (the Proposal) will consist of following components
 - (a) Cost of RFP document
 - (b) Bid Security
 - (c) the Technical Proposal including details of claim of eligibility criterion laid down in Notice inviting Proposal, and
 - (d) the Financial Proposal
- 3.2 Cost of RFP document and Bid Security shall be placed in Envelope I. If the Cost of RFP Document and Bid Security is found proper then only technical and financial proposals will be entertained.
- 3.3 The Proposal, as well as all related correspondence exchanged by the Consultants and the Client, shall be in English. All reports prepared by the contracted Consultant shall also be in English.
- 3.4 The Proposal should include a cover letter signed by person(s) with full authorization to make legally binding contractual (including financial) commitments on behalf of the

firm. The Technical Proposal should clearly demonstrate the Consultant's understanding of the assignment requirements and capability and approach for carrying out the tasks set forth in the TOR through the nominated experts.

4. THE TECHNICAL PROPOSAL

General

4.1 The Technical Proposal shall not include any information related to financial proposal and any Technical Proposals containing information related to financial proposal shall be declared non-responsive.

Technical Proposal

4.2 The following table summarizes the content and maximum number of pages permitted for each type of Proposal. If the maximum number of pages is exceeded, a penalty will be applied during evaluation of the Proposal. A page is considered to be one printed side of A4 size paper. Technical Proposal not in compliance will result in the Proposal being deemed non-responsive.

Content	Content Limit	Form
Profile and General	Consultant should accommodate CV in 10 (ten) pages	Form TECH-2A
Experience of Applicant	to Twelve (12) pages Maximum introducing the firm	
	and Associate firm(s) background and general	
	experience. Copy of registration certificate and	
	relevant work orders for the storm water drainage	
	projects should be attached.	
Relevant Experience of	Project Data Sheet illustrating firm and associate(s)	Form TECH-2B
Applicant	firm's relevant experience specifically grouped into	
	type of experience required.	
	No promotional material should be included.	
	Project data sheet should be supported by completion	
	Certificate. Where work has not been completed it will	
	be supported by work order/letter of award.	
General approach and	No limit, but to be concise and to the point	Form TECH-4 &
methodology, work plan,		TECH-8
model DPR etc		
Comments on Terms of	No limit, but to be concise and to the point.	Form TECH-3.
Reference		
List of Proposed Expert	Brief details of CVs of Proposed Team Maximum of	Form TECH-5
Team Experts' CVs	Twelve (12) pages for each expert's CV. Proof of its	Form TECH-6
	experience: Signature of expert or its authorized	
	representative must be present.	
Personnel schedule	Schedule of deployment of experts and support staff	Form TECH-7
	as proposed in approach and methodology and	
	provisions of RFP document.	
Financial Statement of	Financial details of company supported by audited	Form TECH-9
Applicant.	financial statement.	
	Proof: verified by Chartered Accountant	

Technical Proposal Content

- 4.2 The Technical Proposal shall contain information indicated in the following paragraphs from (i) to (xi) using the Standard Technical Proposal Forms (Form TECH-1 to Form TECH-8). Such information must be provided by the Consultant and each Associate (in case association or joint venture is allowed).
- (i) A brief description of the organization and outline of recent experience of the

consultant and each associate on assignments of a similar nature is required in prescribed form. For each assignment, the outline should indicate *inter-alia*, the assignment, contract amount and the consultant's involvement. Information should be provided only for those assignments for which the consultant was legally contracted by the client as a corporate entity or as one of the major participating consulting firms within an association (joint venture). In case the assignment was carried out in joint venture then the JV agreement is to be submitted. Assignments completed by individual experts working privately or through other consulting firms cannot be claimed as the experience of the Consultant, or that of the Consultant's Associate(s), but can be claimed by the individuals themselves in their CVs. Consultants should be prepared to substantiate the claimed experience if so requested by the Client.

- (ii) A concise, complete, and logical description of how the Consultant's team will carry out the services to meet all requirements of the TOR.
- (iii) A Model DPR, Design which shall describe the quality and ability of the consultants to take up the project.
- (iv) A work plan showing in graphical format (bar chart) the timing of major activities, anticipated coordination meetings, and deliverables such as reports required under the TOR.
- (v) An organization chart indicating relationships amongst the Consultant and any Associate(s), the Client, and other parties or stakeholders, if any, involved in the assignment.
- (v) Comments, if any, on the TOR to improve performance in carrying out the assignment. Innovativeness will be appreciated, including workable suggestions that could improve the quality/effectiveness of the assignment. In this regard, unless the Consultant clearly states otherwise, it will be assumed by the Client that work required to implement any such improvements, are included in the inputs shown on the Consultant's Staffing Schedule.
- (vi) The Technical Proposal shall not include information related to financial proposal. Technical Proposals containing information related to financial proposal shall be declared non-responsive.

Personnel

- (vii) The name, age, background employment record, and professional experience of each nominated expert, with particular reference to the type of experience required for the services should be presented in the prescribed CV format.
- (viii) Only one CV will be submitted for each position.
- (ix) Higher rating will be given to nominated experts from the consulting firm who are regular full-time employees. The Client defines a regular full-time employee to be a person who has been employed continuously by the Consultant for more than twelve (12) months prior to the date of submission of the Proposal.
- (x) Authorized signatory may sign at the time of bid submission. However, CV signed by the concerned member shall be produced by the successful bidder prior to signing the agreement and the availability of the member for the project shall be ensured subject to the conditions specified. It is mandatory to have contact details (phone number, email id, contact address) and letter of authorization of the expert in case the CV is signed by authorized representative. A zero rating will be given to a nominated expert if the expert:
 - (a) has not signed the CV by himself or by authorized signatory of applicant firm; or

(b) Is a current employee of BUIDCo.

5. FINANCIAL PROPOSAL

- 5.1 All information provided in Consultants' Financial Proposal will be treated as confidential.
- 5.2 The Financial Proposal is to be submitted in the requisite forms enclosed.
- 5.3 No proposed schedule of payments should be included in Consultants' Financial Proposals.
- 5.4 Consultants shall quote the rates in Indian National Rupees only.
- 5.5 Form FIN-2 is an acknowledgement that, in preparation and submission of the Technical and Financial Proposals, Consultants have:
 - (i) Not taken any action which is or constitutes a corrupt or fraudulent practice; and
 - (ii) Agreed to allow the Client, at their option, to inspect and audit all accounts, documents, and records relating to the Consultant's Proposal and to the performance of the ensuring Consultant's Contract.
- 5.6 The rates to be quoted shall be in the format given in Data Sheet and it shall include all costs / expenses and statutory taxes excluding GST. The Client shall pay GST as applicable on prevailing rates.
- 5.7 Financial Offers shall be submitted.

6. SUBMISSION, RECEIPT AND OPENING OF PROPOSALS (Only on E-Proc Bihar)

- 6.1 The bidder shall download the bid document from the site website: www.eproc.bihar.gov.in and upload the scanned copy of required documents together with filled up documents on the website.: www.eproc.bihar.gov.in Complete Bids (including Technical and Financial) must be uploaded at www.eproc.bihar.gov.in not later than the date indicated in bid data sheet.
- 6.2 The original Proposal (Cost of RFP Document, Bid Security), Technical and Financial Proposals) shall contain no interlineations or overwriting, except as necessary to correct errors made by Consultants themselves. Any such corrections, interlineations or overwriting must be initialed by the person(s) who signed the Proposal.
- An authorized representative of the Consultant shall initial all pages of the proposal. The entire uploaded document shall be signed with recent date by the Consultant or a person authorized by the Consultants. The representative's authorization must be confirmed by a written power of attorney in stamp paper of value Rs. 1000/- and shall be attested by a Notary accompanying the proposals.
- 6.4 For each proposal, the consultant shall prepare the **number of copies** as indicated in the Data Sheet.
- 6.5 The Technical Proposal shall be marked "ORIGINAL" as appropriate and placed in separate envelopes. All required copies of the Technical Proposal as specified in the Data Sheet will be made from the original. If there are discrepancies between the original and the copies of the Technical Proposal, the original governs.
- The original and all copies of the Technical Proposal to be sent to the Client shall be placed in a sealed envelope clearly marked "TECHNICAL PROPOSAL." Similarly, the original Financial Proposal shall be placed in a sealed envelope clearly marked "FINANCIAL PROPOSAL" and with a warning "DO NOT OPEN WITH THE TECHNICAL PROPOSAL." The envelopes (Envelope 1 –Cost of RFP Document, Bid Security, Envelope 2 –Technical and Envelope 3 –Financial Proposals shall be placed into an outer envelope and sealed. All the envelopes shall bear the submission address, Contract number and title of the Project, and other information indicated in the Data

Sheet. If the Financial Proposal is not submitted by the Consultant in a separate sealed envelope and duly marked as indicated above, this will constitute ground for declaring both Technical and Financial Proposals non-responsive.

7. PROPOSAL EVALUATION

General

- 7.1 From the time the Proposals are opened to the time the contract is awarded, if any consultant wishes to contact the client on any matter related to its proposal, it should do so in writing at the address indicated in the *Data sheet*. Any effort by a Consultant to influence the Client in examination, evaluation, ranking of Proposals or recommendation or award of contract may result in rejection of the Consultant's Proposal.
- 7.2 A two stage procedure will be adopted in evaluating the proposals:
 - (a) A technical evaluation which will be carried out prior to opening of financial proposals
 - (b) A financial evaluation
- 7.3 The Envelope-1 shall be opened first. If the RPF Document Cost and Bid Security are not found to be in order then the proposal shall be treated as non-responsive and shall not be evaluated further.
- 7.4 Notwithstanding the foregoing BUIDCo reserves their rights to exercise in assessing the past experience of Consultant with BUIDCo's projects currently being implemented and such consultants whose performance had not been satisfactory, will not be considered for evaluation/award.

Evaluation of Technical Proposals

- 7.5 The eligibility criteria will be first evaluated as defined in Notice of RFP for each bidder. Detailed technical evaluation will be taken up in respect of only those bidders, who meet with the prescribed eligibility criteria.
- 7.6 The Client's 'Technical Committee' (TC) will be responsible for evaluation and ranking of Proposals received.
- 7.7 The TC evaluates and ranks the Technical Proposals on the basis of Proposal's responsiveness to the TOR using the evaluation criteria and points system specified in the Data Sheet. Each Technical Proposal will receive a technical score (St). A Proposal shall be rejected if it does not achieve the minimum technical mark of 75 from the maximum of 100 points. The Price bids of only those consultants/Firm who qualify technically (Minimum qualifying marks ie 75 will be opened.
- 7.8 A Technical Proposal may not be considered for evaluation in any of the following cases:
 - the Consultant that submitted the Proposal belongs to one of the cases described in Sub-Clause 1.6 to and failed to make a proper statement to that effect in the cover letter; or
 - (ii) the Technical Proposal was submitted in the wrong format; or
 - (iii) the Technical Proposal included details of costs of the services; or
 - (iv) the Technical Proposal reached the Client after the submission closing time and date specified in the *Data Sheet*.
 - (v) The valid proof of the Technical qualification criteria (such as works order, Completion certificate obtained from the employer , finance statement without the Charted Accountant's signature etc) was not submitted along with the Technical Proposal.
- 7.9 After the technical evaluation is completed, the Client shall notify Consultants whose

Proposals did not meet the minimum qualifying technical mark or Consultants whose Technical Proposals were considered non-responsive to the RFP requirements, indicating that their Financial Proposals will be returned unopened after completion of the selection process. The Client shall simultaneously notify, in writing Consultants whose Technical Proposals received a mark of 75 or higher, indicating the date, time, and location for opening of Financial Proposals. (Consultants' attendance at the opening of Financial Proposals is optional).

7.10 Before completion of the evaluation of Technical Proposal, the Client may at its sole discretion invite all or any of the eligible Consultants to make a presentation on their Technical Proposal to facilitate the understanding and evaluation of Technical Proposal. The scope of such presentation shall be limited to information already provided in the Technical Proposal.

8. OPENING AND EVALUATION OF FINANCIAL PROPOSALS

Opening of Financial Proposals

- 8.1 At the opening of Financial Proposals, Consultant representatives who choose to attend will sign an Attendance Sheet.
 - (i) The Price bids of only those consultants/Firm who qualify technically (Minimum qualifying marks ie 75) will be opened through eproc bihar website.
 - (ii) The Client's representative will open each Financial Proposal through Eproc bihar website- www.eproc.bihar.gov.in. The lowest bidder will be assigned for 100 marks as Financial qualification mark.
- 9. Then Quality cum cost based selection method shall be followed as described in the Data sheet and the Firms which secure First rank shall be called for negotiation.

10. CONTRACT NEGOTIATIONS AND AWARD OF CONTRACT

- 10.1 The Consultant who is invited for contract negotiations will, as a pre-requisite for attendance at the negotiations, confirm availability of all experts named in its proposal except in the cases of absence on account of death or medical incapacity. Failure in satisfying such requirements may result in the Client proceeding to initiate the negotiation process with the next to higher rank bidder. Representatives conducting negotiations on behalf of the Consultant must have written authority to negotiate and conclude the Contract
- Technical Negotiations: This will include a discussion of the Technical Proposal, the proposed technical approach and methodology, work plan and schedule, Model DPR, Design and cost Estimate etc and organization and personnel, and any suggestions made by the Consultant to improve the TOR. The Client and the Consultants will finalize the TOR, personnel schedule, work schedule, logistics, and reporting. These documents will then be incorporated in the Contract as "Description of Services." Special attention will be paid to clearly defining the inputs and facilities required from the Client to ensure satisfactory implementation of the assignment. The Client shall prepare minutes of negotiations which will be signed by the Client and the Consultant.
- 10.3 **Financial Negotiations:** The Client may request the Bidder for financial negotiations also. The Bidder shall offer his negotiated rates.
- 10.4 Negotiations will conclude with a review of the draft Contract. To complete

negotiations the Client and the Consultant will initial the agreed Contract. If negotiations fail, the Client will invite the second lowest Consultant to negotiate a Contract.

- 10.5 After completing negotiations the Client shall award the Contract to the selected Consultant and notify the other Consultants who could have been invited to negotiate a Contract that they were unsuccessful. After Contract signature the Client shall return the unopened Financial Proposals to the consultants whose Technical Proposals have not secured the minimum qualifying mark, or were found to be technically non-responsive
- 10.6 The selected Consultant is expected to commence the Assignment on the date and at the location specified in the Data Sheet.

11. DURATION OF ASSIGNMENT

The duration of assignment for satisfactory performance of the services the contract will be the period defined in Data Sheet.

12. PERFORMANCE SECURITY

The consultant will furnish within 10 days of the issue of Letter of Acceptance (LOA), an Account Payee Demand Draft/Unconditional Bank Guarantee (in prescribed format) in favour of "BUIDCo" payable/en-cashable at Patna, from any nationalized or scheduled commercial Bank in India having its office at Patna for an amount equivalent to 5% (five percent) of the total contract value towards Performance Security valid for a period of six (6) months beyond the stipulated date of completion of services. The Bank Guarantee will be released after six month and rectification of errors, if any, found during appraisal/approval of DPRs by competent authorities/Funding agency or after six(6) month of contract completion date, whichever is later.

Section 2: Data Sheet Instruction to Consultants

Paragraph Reference

1.1 Name of the Client:

Bihar Urban Infrastructure Development Corporation Ltd. (BUIDCo)

Client's Representative:

Managing Director, BUIDCo

Method of selection: Quality cum Cost based Selection (QCBS) Method

1.2 Financial Proposal to be submitted together with Technical Proposal:
Yes

Name of the assignment is:

Selection & Engagement of "Design Consultant for Planning, Design & Preparing DPRs and Bid Dcouments for Comprehensive Storm Water Drainage system for Patna Nagar Nigam, Khagaul, Danapur , Phulwarisharif and adjoining area "

Tender No is: BUIDCO/Yo-1490/19-105 Date:- 30.12.2019

1.3 There shall be a pre-proposal meeting as under Schedule: **07.01.2020 at 1.00 PM**

Venue of pre-proposal meeting:

Conference Hall, UD&HD , Vikas Bhavan, New Secretariat, Patna Tel: 0612-2558412 Email:-mdbuidco@gmail.com, pdhqbuidco@gmail.com Website: http://www.buidco.in

- 1.4 The Client will provide the following inputs and facilities:
 - a. List of existing 39 DPS along with existing pumping capacity and their present status.
 - b. List of existing drains and map showing their alignment.
 - c. GIS Map having 45 layers, details regarding layers available are shown an annexed.
- 1.5 Proposals must remain valid for 120 days from the submission date.
- 1.6 Cost of RFP Document:

All inclusive Rs 15000/- (Rupee Fifteen Thousand) for technical proposal for storm water Drainage system.

- 1.7 The Bid Security amount is as under in format prescribed at Appendix-III to Data Sheet: INR 10, 00,000.00 (Rs. Ten Lac only) for Storm water Drainage / Sewerage system
- 1.8 Clarifications may be requested in writing on **or before 07.01.2020.** The address for requesting clarifications is:

The Managing Director

Bihar Urban Infrastructure Development Corporation #West Boring Canal Road (Rajapul) ,

Patna -800 001 Tel: 0612-2558412

Email: mdbuidco@gmail.com Website:http://www.buidco.in/

1.9 Under this contract the Consultant's payments are Output and Deliverables Based.

The Consultant shall quote Consultancy Charges for satisfactory performance of the Services under the contract in terms of Lump sum Fee for the total work with cost break up for each Item mentioned in Form FIN-2, FIN-3 and FIN-4 of Financial Proposals to facilitate stage wise payments.

It is expected that consultant has quoted its fee considering all requirements for satisfactory performance of the services included in TOR. If the consultant has not considered any component for performance of the services, no extra payment shall be made on this account.

- 1.10 Amounts payable by the Client to the Consultant under the contract shall be subjected to deduction of local taxes, if any. The Client will pay GST, on prevailing rates as applicable on the consultancy charges.
- 1.11 Proposals are to be submitted in 1 sets i.e. one original. Proposals must be submitted no later than the following date and time:

Technical Proposals shall be evaluated on the basis of following preidentified Procedure for Detailed evaluation of technical qualifications (With reference to point no. 7.5 to 7.10 of Data Sheet):

The detailed technical evaluation of Proposals satisfying minimum eligibility conditions as above shall be done. The Criteria, sub-criteria and point system for detailed evaluation shall be as follows:

No	Description of Technical criteria	Maximum Marks
i)	Specific experience of the consultant firm relevant to the assignment /job	55 marks
	Sub criteria	
Α	Experience of the consultant in Water/Waste water/Storm water Sector	10 Marks
В	Average Annual Turnover of similar nature of work	15 marks
С	Number of Storm water projects consulted within last seven years	10 marks
D	Work experience of similar nature of work	20 marks
ii)	Proposed methodology and work plan in response to the terms of reference.	15 marks
	Sub-criteria	
	a) Quality of Model DPR, Design Cost Estimate submitted with the Bid	7.5 marks
	a) Technical approach & methodology, work plan & staffing, Innovative solutions & Presentation	7.5 marks
iii)	Key professional staff: Qualification & competency for the assignment / job.	30 marks
	Total	100 marks

Qualifications and competency of each of the key professional as per (iii) above will be evaluated separately. The marks for key professionals will be further divided as under:

S.No	Position	Maximum Marks
1	Team Leader	4
2	Deputy Team Leader cum Hydrological Expert	4
3	Drainage Expert – 4 Nos	12
4	Structural Engineer	4
5	Urban Design cum Planner	3
6	Procurement Expert	3
	Total marks	30

For all the above positions following sub-criteria shall be followed for item No 1 to 6 except item No3,5,6

S. No	Criteria	Maximum Marks
a)	Educational qualifications(Bachelor Degree – 0.40 marks, Post graduate – 0.40 marks, Doctorate or	1
	Post graduate in other discipline– 0.20)	
b)	Total Experience as per ToR	1
	For specified length of service as per ToR = 0.50 marks	
	For additional length of service = 0.10 per two years and maximum 0.50 marks	
c)	Experience in the specific Field as per ToR	1.50
0)	For specified length of service as per ToR = 1 marks For additional length of service = 0.10 per two years and maximum 0.50 marks	
d)	Working with the Consultant Organization for one year or More	0.50
	Total	4.00

For all the above positions following sub-criteria shall be followed for item No 3,5 and 6

S.No	Criteria	Maximum Marks
a)	Educational qualifications (Bachelor Degree – 0.40 marks, Post graduate – 0.40 marks, Doctorate or Post graduate in other discipline– 0.20 marks.)	1
b)	Total Experience as per ToR Up to specified length of service as per ToR = 0.25 marks	0.50
	For additional length of service = 0.05 per two years and maximum 0.25 marks	
c)	Experience in the specific Field as per ToR Up to specified length of service as per ToR = 0.50 marks For additional length of service = 0.10 per two years and maximum 0.50 marks	1
d)	Working with the Consultant Organization for one year or More	0.50
	Total	3.0

Note:

- If any key experts get less than 70 % marks then he need to be replaced at the time of negotiation.
- Other experts should meet the minimum qualification criteria as per the ToR, otherwise the expert needs to be replaced at the time of negotiation.
- 1.12 The members of the Technical Committee (BUIDCo) will carry out the evaluation of proposals on the basis of their responsiveness to the Terms of Reference, applying the evaluation criteria. Each responsive proposal will be given a technical score.
 - **(b)** Narrative Evaluation Criteria for Technical Bid and Detailed Marking Scheme is given below

TECHNICAL BID EVALUATION CRITERIA

S. No.	Criteria	Points
I	Firms General Experience & Experience in Similar assignments	55
IA	Experience of the consultancy Firm	
	a) Experience of the Firm in Consultancy for Storm Water/Waste Water sector alone Minimum 10 years =5 marks	5
	b) For additional every three years one marks and maximum 5 marks	5
	Total Marks of 1 A	10
ΙB	Average Annual Turnover from Consultancy assignments	
	a)The consultant having an average annual turnover of Rs. 50 Cr. In last 3 financial years preceding the date of submission of bid. (The firm having less than Rs 50 crore annual average turnovers in last three financial years will not be eligible for Technical Qualification.)	10
	b) For every additional 5 crore, above 50 crore, 0.50 marks up to Rs. 100 crore will be added (For more than Rs.100 crore no additional marks shall be given)	5
	Total Marks of 1 B	15
I C	Number of Similar nature work Experience irrespective of size handled	
	Number of Storm Water Drainage works consulted by the Firm in last 10 years (For Minimum 3 Nos – 3 marks (The consultant who don't have completed for 3 storm water projects in last ten years shall not be eligible)	3
	b) For each additional 1 No of project -1 marks will be added above three projects and maximum of 7 marks	7

S. No.	Criteria	Points
	Total Marks of 1 C	10
I D	Similar nature work Experience	
	a) Completed Design, DPR, Estimation and Bid document preparation for one	10 marks
	Storm Water Drainage assignments having similar topography of project area	
	covering area of 100. Sq. KM in a single assignment in last seven years (The	
	firm don't have experience in 100 sq.km for storm water drainage Projects, will not be eligible in Technical qualification criteria.)	
	b)for every additional 10 Sq. km – 1 marks will be added above 100 sq.km	10 marks
	and maximum is 10 marks) for last seven years	
	Total Marks of 1 D	20
II	Approach & Methodology for proposed assignment	
II A	Quality of Model Design, DPR , Estimate submitted	7.5
II B	Understanding of ToR, Technical Approach and Methodology , innovative	7.5
	solutions and work plan	
	Total Marks of II	15
III	Qualification and Experience Key Professionals	
III A	Team Leader	4
III B	Deputy Team Leader cum Hydrology Expert	4
III C	Drainage Expert – 4 Nos	4*3 =12
III D	Structural Engineer	4
III E	Urban Designer	3
III F	Procurement Expert	3
	Total Marks of III	30

- 1.13 Expected date for opening of Financial Proposals will be notified later.
- 1.14 Expected date for contract negotiations: to be notified.
- 1.15 Expected date for commencement of consulting services: one week after issuing Letter of Award.
- 1.16 The duration of the assignment shall be **16 months** and all activities are to be completed in this period.
- 1.17 Consultant shall ensure that their Team Leader/Deputy Team Leader must meet BUIDCo office fortnightly and also when required for meeting/discussion in BUIDCo office. Additionally there field level staff shall be available in project towns during the survey work and investigation works and their details of presence with their contact details shall be made available in BUIDCo so that, if need be, they may be called to BUIDCo office whenever required. Field level staff may leave the project sites only after BUIDCo being satisfied with the survey details submitted.

Appendix-I to Data Sheet

Method of Selection

Quality (70%) cum Cost (30%) Based Selection QCBS - 70:30

The technical quality of the proposal will be given weightage of 70%, the method of evaluation of technical qualification will follow the procedure given in para 7..5 to 7.10 (page No 17) above. The price bids of only those consultants who qualify technically (Minimum Qualifying Marks: 75%) will be opened. The proposal with the lowest cost may be given a financial score of 100 and the other proposal given financial score that are inversely proportionate to their prices. The financial proposal shall be allocated weightage of 30%.

For working out the combined score, the employer will use the following formula:

Total points = T (w) x T (s) + F (w) x F(s), where F(s) = $\{(LEC / EC)^*100\}$

T (w) stands for weightage of the technical score i.e 70%

T (s) stands for technical score obtained in the Technical Evaluation

F (w) stands for weightage of the financial proposal i.e 30%

EC stands for Evaluated Cost of the financial proposal

LEC stands for Lowest Evaluated Cost of the financial proposal.

F(s) stands for financial score of the financial proposal

The proposals will be ranked in terms of total points scored. The proposal with the highest total points (H-1) will be considered for award of contract and will be called for negotiations, if required.

Appendix-III to Data Sheet

Bid Security Form (Bank Guarantee)

(Bank's Name and Address of Issuing Branch or Office)

Benefic	ary: (name and daaress of Employer)
Date: _	
Bid Secu	ırity No.:
Wherea	s M/s (insert the name of the Consultant)
(here in the wor proposa Inviting	after called the "Consultant") has submitted its technical & financial proposals for k of (insert the name of work for which I is submitted) (here in after called the "Proposal") against the Employer's Notice Tenders (NIT) Notice Inviting Proposal/ Invitation for Bid (IFB) No (Insert NIT/NIP/IFB number as per publication in news paper or
website	
	nore, we understand that, according to your conditions, proposals must be ed by a Bid Security.
name oj in total :	equest of the Consultant, we (insert fithe bank) hereby irrevocably undertake to pay you any sum or sums not exceeding amount of (insert bid security amount in figures)
first der	(amount in words) upon receipt by us of your nand in writing accompanied by a written statement stating that the Consultant is in of its obligation(s) under the RFP conditions, because the Consultant:
(a)	has withdrawn its Proposal during the period of Proposal validity specified by the Consultant in the Technical Proposal Form; or
(b)	does not accept the correction of errors in accordance with the Instructions to Consultants (hereinafter "the ITC") of the RFP Document; or
(c)	having been notified of the acceptance of its Proposal by the Employer during the period of proposal validity, (i) fails or refuses to execute the Contract Agreement, or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITC.
This	guarantee will valid up to 12 months beyond last date of receipt of tender.
	sequently, any demand for payment under this guarantee must be received by us ne office on or before that date.
	Bank's seal and authorized signature(s)

SECTION 3: TECHNICAL FORMS

FORM TECH-1: TECHNICAL PROPOSAL SUBMISSION FORM

To:

Managing Director

Bihar Urban Infrastructure Development Corporation Ltd.

#West Boring Canal road (Rajapur pul), Patna -800 001

Tel: 0612-2558412 Web: <u>www.buidco.in</u>

Email: mdbuidco@gmail.com

Dear Sir/Madam:

We, the undersigned, offer to provide the consulting services for [Insert title of assignment] in accordance with your Request for Proposal dated [Insert Date] and our Proposal. We are hereby submitting our Proposal for (Name of work), which includes this Technical Proposal, and a Financial Proposal sealed under a separate envelope.

We are submitting our Proposal in individual capacity without entering in association with/ as a Joint Venture. We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.

Or (strike-off whichever is not applicable)

We are submitting our Proposal in association with/as a joint Venture: (insert a list with full name and address of each joint venture partner or sub Consultant)Attached is the following documentation: letter(s) of association or joint venture Agreement and joint venture power of attorney for lead or managing Partner)

We declare that we have not been debarred or blacklisted by any Government or Government Agency of Government of India or Government of Bihar.

If negotiations are held during the period of validity of the Proposal, i.e., before the date indicated in the Data Sheet, we undertake to negotiate on the basis of the proposed personnel. Our Proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

We undertake, if our Proposal is accepted, to initiate the consulting services related to the assignment not later than the date indicated in the Data Sheet (*Please indicate date*).

We understand you are not bound to accept any Proposal you receive.

We remain,	
Yours sincerely,	
Authorized Signature [<i>In full and initials</i>]: Name and Title of Signatory: Name of Firm: Address:	

FORMTECH-2: CONSULTANT'S ORGANIZATION AND EXPERIENCE

FORMTECH-2A: Consultant's Organization

[Provide here a brief (maximum five pages) description of the background and organization of the Consultant in case of JV , details of each member has to be provided)

Name of the:	
Address of the registered office of the	
Consultant:	
Year of Establishment:	
Contact Person with Contact Details:	
Annual Turnover*in last three years(in Lakhs)	
FY 2018-19	
FY 2017-18	
FY 2016-17	
Average Annual Turnover for above three	
Financial Years:	
*Audited Statements to be enclosed	
Net worth of Agency(Positive/Negative):	
Experience in Similar Assignment:	
Number of years:	
Total assignments:	
Assignment completed in last 10 years:	
Similar Assignments in last 10 years:	
Any Award or Felicitation received by your	
Agency:	
Any Other Relevant Details:	

Necessary work order copy, completion certificate, registration certificate and Charted Account's certificate for financial statement of the consultancy firm etc shall be furnished along with this for proof.

FORM TECH-2B: Consultant's Experience [For Full Technical Proposals Only]

[The following information should be provided in the format below for each reference assignment for which your firm **including 50% subsidiary**, either individually as a corporate entity or as one of the major companies within a consortium, was legally contracted by the Employer. Consultant should specifically state the service population covered size of Storm water Drainage / Sewerage system and length to facilitate the technical evaluation of the Proposals in case of JV or association, relevant experience of each member has to be provided).

Assignment name:	Approx. value of the contract (in current'):
Country:	Duration of assignment (months):
Location within country:	
Name of Client:	Total Number of person-months of the assignment:
Address:	Approx. value of the services provided by your firm under the contract (in `)
Start date (month/year): Completion date	Number of professional person-months provided
(month/year):	by the joint venture partners or the Sub-
	Consultants:
Name of joint venture partner or sub-	
Consultants, if any for the assignment:	
Name of senior regular full time employees of the	
firm involved and functions performed (indicate	
most significant profiles such as Project	
Director/Coordinator, Team Leader):	

Narrative description of Project:

Narrative description of project should specifically provide the details of:

- a) Project Cost
- b) Service population covered for Storm water Drainage System Projects.
- c) Total Length and area covered by the Storm water Drainage.
- d) Sewerage system Projects.

Description of actual services* provided in the assignment:

*(Copy of Completion Certificate from Employer regarding experience should be furnished)

Firm's Name: __ Signature of Authorized Representative:

Form TECH-3: Comments and Suggestions on the Terms of Reference

FORM TECH-3A: On the Terms of Reference [For Full Technical Proposals Only]

[Present and justify here any modifications or improvement to the Terms of Reference you are proposing to improve performance in carrying out the assignment (such as deleting some activity you consider unnecessary, or adding others, or proposing a different phasing of the activities). Such suggestions should be concise and to the point, and incorporated in your Proposal.]

- 1.
- 2.
- 3.
- 4.
- 5.

Form TECH-4: Description of Approach, Methodology and Work Plan for Performing the Assignment [As per the details mentioned in the NARRATIVE EVALUATION CRITERIA]

Model DPR, Design & Estimate, Technical Approach and Methodology, Work Plan, and Organization and Personnel,

- a) <u>Model DPR, Design and Estimate.</u> In this chapter, a model DPR and design of proposal with the cost estimate has to be submitted to unable the client to access the capacity and capability of the consultant.
- b) <u>Technical Approach and Methodology.</u> In this chapter you should explain your understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output. You should highlight the problems being addressed and their importance, and explain the technical approach you would adopt to address them. You should also explain the methodologies you propose to adopt and highlight the compatibility of those methodologies with the proposed approach.
- c) Work Plan. In this chapter you should propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the Client), and delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate them into a feasible working plan. A list of the final documents, including reports, drawings, and tables to be delivered as final output, should be included here. The work plan should be consistent with the Work Schedule of Form TECH-8.
- d) <u>Organization and Personnel.</u> In this chapter you should propose the structure and composition of your team. You should list the main disciplines of the assignment, the key expert responsible, and proposed technical and support personnel. The manpower requirement given in the TOR is an indicative minimum requirement. The consultant should assess the specific and realistic manpower with reference to specific project package and it should be consistent with the Work Schedule of Form TECH-8.

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FORMTECH-5: TEAM COMPOSITION, TASK ASSIGNMENTS AND SUMMARY OF CV INCORMATION

Team Leader and Key Professionals

Surname, Fi Name	rstArea of Expertise	Position Assigned	Task Assigned	Degree (Year/ Institution)	Relevant Projects	project	CV signature expert/by other)

Support staff										
S No	Surname,Name	Position	Task Assignment							

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FORMTECH-6: CURRICULUM VITAE (CV) FOR PROPOSED EXPERTS

[Summary of CV: Furnish a summary of the above CV. The information in the summary shall be precise and accurate. The information in the summary will have bearing on the evaluation of the CV]

- 1. Proposed Position [only one candidate shall be nominated for each position]:
- 2. Name of Firm [Insert name of firm proposing the expert]:
- 3. Name of Expert [Insert full name]:
- 4. Date of Birth: Citizenship:
- 5. Education[Indicate college/university and other specialized education of expert, giving names of Institutions, degrees obtained, and date of obtainment]:
- 6. Membership of Professional Associations:
- 7. Other Training [Indicate significant training since degrees under 5 Education were Obtained]:
- 8 Publication: [List of details of major technical reports/papers published in recognized national and international journals]
- 9. Languages [For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing]:
- 10. Employment Record [Starting with present position, list in reversed order, every employment held. List all positions held by staff member since graduation, giving dates, names of employing organization, title of positions held and location of assignments. For experience period of specific assignment must be clearly mentioned, also give Employer references, where appropriate.]:

From [Year]: To [Year]: Employer: Positions held:

11A. Detailed
Tasks Assigned
(List all tasks to
be performed
under this
assignment)

11B. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned[Among the assignments in which the expert has been involved, indicate the following information for those assignments that best illustrate the expert's capability to handle the tasks listed under point 11.]

Name of assignment or project:

Year: Location: Client:

Main project features:

Positions held: Activities performed:

12. Certification:

I, the undersigned, certify to the best of my knowledge and belief that:

- (i) This CV correctly describes my qualifications and my experience.
- (ii) I am not employed by the Executing /Implementing Agency
- (iii) I am/I am not in regular full-time employment with the Consultant/Sub-Consultant.]
- (iv) In the absence of medical incapacity, I will undertake this assignment for the duration and in terms of the inputs specified for me in the Personnel Schedule in Form TECH-6 provided team mobilization takes place within the validity of this proposal or any agreed extension thereof.
- (v) I am willing to work on the project and I will be available for entire duration of the project assignment and I will not engage myself in any other assignment during the currency of this assignment on the project
- (vi) I, the undersigned, certify that to the best of my knowledge and belief, this bio-data correctly describes Myself my qualification and my experience

I am committed to undertake the assignment within the validity of proposal.

I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Date: [Day/Month/Year]

[Signature of expert or authorized representative of the firm] Full name of authorized representative:

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¹ This CV can be signed by a senior representative of the Consultant provided that if the Consultant's proposal is ranked first, a copy of the CV signed by the expert and/or specialist must be submitted to the Client prior to the commencement of contract negotiations.

Bidder.

FORMTECH-7:PERSONNEL

N*	Name of Expert/Position	Professional Expert input(in the form of a bar chart) ²							Total person-weeks input								
		1	2	3	4	5	6	7	8	9	10	11	12	n	Home	Field ³	Total
Exp	ert																
1		Home															
		Field															
2																	
3																	
n																	
											Sub	total					
Sup	port Staff																
1		Home															
		Field															
2																	
n																	
	1			1	1				1	ı	Sub	total		ı			
											Tota	al					

Months are counted from the start of the assignment. For each expert indicate separately the input for home and field Field work means work carried out at a place other than the expert's home office; i.e. normal place of business.



Full time input Part time input

FORMTECH-8:WORKPLAN/SCHEDULE								
N*	Activity ¹	Months	32					
		1	2	3	4	5	6	
1								
2								
3								
4								
5								

Indicate all main activities of the assignment, including delivery of reports/ deliverables as per Terms of Reference & Scope of works (e.g.: inception, interim, and final reports), and other benchmarks such as Client approvals. For phased assignments indicate activities, delivery of reports, and benchmarks for scheme.

² Duration of activities shall be indicated in the form of a bar chart.

FORM TECH-9 FINANCIAL STRENGTH OF THE CONSULTANT

FORMAT FOR FINANCIAL STRENGTH OF THE CONSULTANT (INCLUDING ITS 50% SUBSIDIARIES) (Separate details of each member should be provided in case of JV)

(Rs. In Cr.)

Year	Capital	Reserves	Net Worth	Profit/Loss	Turnover	Advisory/Consultancy Services Turnover
2018-19						
2017-18						
2016-17						

(Signature of Authorized Signatory)

This is to certify that the above information has been examined by us on the basis of relevant documents, books of accounts & other relevant information and the information submitted above is as per record.

Signature, address, Seal & Membership No. of Chartered Accountant

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Section 4: Financial Proposal - Standard Forms

Financial Proposal Standard Forms shall be used for the preparation of the Financial Proposal according to the instructions provided under Para5 of Section 2. Forms FIN-1, FIN-2, FIN-3, FIN-4 are to be used whatever is the selection method indicated in Para 4 of the Letter of Invitation and Data Sheet.

FORM FIN-1: FINANCIAL PROPOSAL SUBMISSION FORM
[Location, Date]
То:
Managing Director
Bihar Urban Infrastructure Development Corporation
#West Boring Canal Raod (Rajapur pul), Patna -800 001
Tel:
Dear Sir /Madam:
We, the undersigned, offer to provide the consulting services for [<i>Insert name of Assignment</i>] in accordance with your RFP dated [<i>Insert Date</i>] and our Technical Proposal. Our attached Financial Proposal is for the sum of [<i>Insert amount(s) in words and figures in Indian Rupee</i>] ² . This amount is exclusive of the GST.
Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal, i.e. before the date indicated in Clause Reference 1.10 of the Data Sheet.
No fees, gratuities, rebates, gifts, commissions or other payments have been given or received in connection with this Proposal.
We understand you are not bound to accept any Proposal you receive.
We remain,
Yours sincerely,
Authorized Signature [In full and initials]:
Name and Title of Signatory:
Name of Firm: Address:
2 Separate Financial Offer must be submitted. Amounts must coincide with the ones indicated I in Form $\ensuremath{FIN-2}$

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FORM FIN-2: GRAND SUMMARY OF COST

Project Title: Selection and Engagement of "Design Consultant for Planning, Design & Preparing DPR and Bid Document for Comprehensive Storm Water Drainage system for Patna Nagar Nigam, Khagaul, Danapur, Phulwarisharif and adjoining area"...

Sl	Tor Patna Nagar Nigam, Knagaui, Danapur, Phuiwarisharif ai		y Fee (in INR)
no	Description of Services	In Figures	In Words
(A)	Consultancy fee for providing services for Preparation of Detailed Project Report for [Insert Name of Work]; As per Terms of Reference (ToR) complete to the satisfaction of Client. Note:-the price should be quoted work wise.		
	1. Preparation of DPR & Bid document for immediate improvement to the existing storm water drainage system in Patna Town and making presentation, obtaining approval of Design, DPR & Bid document from the Third party assigned by the Client and the Experts of BUIDCo.		
	2. Cost of Bid process from invitation of Bid, Pre Bid meeting, Replying to the queries, preparing addendums etc Technical Evaluation, Financial Evaluation, preparation of LoA and preparation of agreement for award of work for the Immediate Improvement plan		
	3. Preparation of DPR & Bid document for short term measures to enhance the capacity of the existing storm water drainage system in other area and making presentation, obtaining approval of Design, DPR & Bid document from the Third party assigned by the Client and the Experts of BUIDCo.		
	4. Cost of Bid process from invitation of Bid, Pre Bid meeting, Replying to the queries, preparing addendums etc Technical Evaluation, Financial Evaluation, preparation of LoA and preparation of agreement for award of work for the Short Term Plan		
	5. Collection of Rain fall data, catchment area data, Conducting topographical survey, preparation of field maps, identification of under-ground utilities etc and finalizing the demand calculation in the system for preparing DPR for Long term measures in two phases		
	6. Preparation of DPR and Bid document for Mid term plan for augmenting the existing water ponds and lakes, creation of new ponds and lakes, Rain gardens, Rain water harvesting structures and awareness program etc and making presentation, obtaining approval of Design, DPR & Bid document from the Third party assigned by the Client and the Experts of BUIDCo.		
	7. Cost of Bid process from invitation of Bid, Pre Bid meeting, Replying to the queries, preparing addendums etc Technical Evaluation, Financial Evaluation, preparation of LoA and preparation of agreement for award of work for Mid Term		

Sl	Description of Compage	Consultanc	y Fee (in INR)
no	Description of Services	In Figures	In Words
	Plan		
	8. Preparation of DPR and Bid document for Phase 1 of for		
	Long term Plan covering all the area and making presentation,		
	obtaining approval of Design, DPR & Bid document from the		
	Third party assigned by the Client and the Experts of BUIDCo.		
	9. Cost of Bid process from invitation of Bid, Pre Bid meeting,		
	Replying to the queries, preparing addendums etc Technical		
	Evaluation, Financial Evaluation, preparation of LoA and		
	preparation of agreement for award of work for Phase 1 of		
	Long Term Plan		
	10. Preparation of DPR and Bid document for Phase 2 of for		
	Long term Plan covering all the area and making presentation,		
	obtaining approval of Design, DPR & Bid document from the		
	Third party assigned by the Client and the Experts of BUIDCo.		
	11. Cost of Bid process, from invitation of Bid, Pre Bid meeting, Replying to the queries, preparing addendums etc Technical		
	Evaluation, Financial Evaluation, preparation of LoA and		
	preparation of agreement for award of work for Phase 2 of		
	Long Term Plan		
	Sub total		
(B)	Add GST as per prevailing rates		
	Total Consultancy fee including GST [A]+[B]		
(c)	Total Collisuitaticy fee illiciduling GST [AJT[D]		

7	V	o	t	o	•
1	•	v	ı	c	•

While quoting financial offers, applicants are requested to see Clause 5.4 of Data Sheet to Instruction to Consultants under Section 2. During Evaluation of Financial proposals, the quoted Consultancy fee excluding GST shall be considered. The client shall pay the Consultant, the GST, on prevailing rates as applicable on the consultancy charge.

Authorized Signature [In full and initials]:	
Name and Title of Signatory:	
Name of Firm with Company Seal:	

FIN-3: SUMMARY OF COST

Project Title Selection and Engagement of "Design Consultant for Planning, Design & Preparing DPR and Bid Document for Comprehensive Storm Water Drainage system for Patna Nagar Nigam, Khagaul, Danapur, Phulwarisharif and adjoining area"..

The Summary of Cost shall be tabulated as immediate improvement Plan, Short term

The Summary of Cost shall be tabulated as immediate improvement Plan, Short term Plan, Mid Term Plan, Long Term Plan and Bid process activity separately.

S No	Description	Consultancy Fee in (INR) as per ITC Clause 5		
	2 corrigion	In Figures	In Words	
A1	Remuneration for Professional Staff			
A2	Remuneration for Sub-Professional Staff			
A3	Reports and Document Printing			
A4	Investigation Expenses			
A5	Any Other (Lump sum)			
A6	Rental Charges of office Equipment & Furniture			
	Total Costs			
Note:				

1. The break-up of cost as given in format FIN-3 and FIN-4 is to facilitate assessment of reasonableness of costs and conducting negotiation in accordance with Clause 9 of Section 2.

Authorized Signature [In full and initi	ials]:
N	
Name and Title of Signatory: Name of Firm with Company Seal:	

FORM FIN-4: BREAKDOWN OF COSTS

Project Title: Selection and Engagement of "Design Consultant for Planning, Design & Preparing DPR and Bid Document for Comprehensive Storm Water Drainage system for Patna Nagar Nigam, Khagaul, Danapur, Phulwarisharif and adjoining area"...

Breakdown cost shall be given for Immediate Improvement Plan, Short Term Plan, Mid Term Plan and Long Term plan separately.

A1 Remuneration for professional staff

SI.	Position	Name	Rate (Rs)	Staff Month	Amount (Rs)
	TOTAL				

A2 Remuneration for sub-professional staff

SI.	Position	Name	Rate (Rs)	Staff Month	Amount (Rs)
	TOTAL				

A3 Reports and Miscellaneous.

SI.	Description	Quantity	Rate Per Copy (Rs)	Amount (Rs)
1	Transportation			
2	Duty Travel to Site			
3	Office Rent			

	Office Supplies, Utilities	
4	and Communication	
	Reports and Document	
5	Printing	
6	nvestigation Expenses	
	Rental Charges for	
	Office Equipment and	
7	Furniture	

SECTION 5: TERMS OF REFERENCE

Section 5: Terms of Reference (TOR)

1. INTRODUCTION

Patna is the capital city of Bihar State situated 15 km along the confluence of the River Ganges. It is an entirely land–locked state and lies mid-way between the humid West Bengal in the east and the sub humid Uttar Pradesh in the west which provides it with a transitional position in respect of climate, economy and culture. Patna is located on the south bank of the river Ganga and it is an important administrative and educational center. Since the city of Patna is also a gateway to the Buddhist and Jain pilgrimage centers of Vaishali, Rajgir, Nalanda, Bodhgaya and Pawapuri, it attracts many tourists, apart from business class people. This shows that Patna not only plays an important part economically, culturally, politically but it also provide access spiritually.

The city has a very long river line surrounded on three sides by rivers — Ganga, Sone, and Punpun. The river Gandak flows into the Rriver Ganga making it a unique place having four large rivers in its vicinity to the north of Patna. The bridge over the river Ganges named Mahatma Gandhi Setu is 5575m long connecting Patna in the south to Hajipur in the north of Bihar. There is no existing drainage master plan for Patna City. Recently due to heavy rainfall and inadequate drainage infrastructure, many locations of Patna were water-logged for 3 to 4 days.

Keeping the above perspective in view, Bihar Urban Infrastructure Development Corporation limited (BUIDCO) invites proposals from shortlisted consulting firms to undertake a drainage master plan and preparation of DPR. This master plan will include an assessment of the current storm water drainage system, identification of storm water drainage deficiencies, recommendations for improvements required to satisfy current and future needs of drainage infrastructure in Patna by 2050.

2. OBJECTIVE OF THE ASSIGNMENT

The prime objective of this consultancy is to provide holistic solution to make Patna free from water-logging in future. Consultant shall have to prepare Drainage Master Plan (DMP) for Patna Nagar Nigam, Khagaul, Danapur, Phulwarisharif for an area of 130.03 sq.km based on CPHEEO guidelines. This plan is to provide areas of hydraulic and structural deficiencies, upgrading options and a prioritized phased improvement program (such as Immediate Improvement Plan short term, midterm and long-term solution based on Scientific Data, Scientific analysis, Contour Mapping, gravity flow and hydraulic data).

The Investigations shall be carried out simultaneously for all above Plans from the commencement of consultancy services. The Consultant shall submit weekly periodic Progress Report for all the above Plans.

Since this is time bound program, the consultant shall engage all the manpower, experts required for preparing the above four plans from the start date itself. The Important Key Experts mentioned below shall be worked in Patna as full time basis. However the consultant

may be allowed to take Home office inputs for other Experts and supporting staffs. No Home office input shall be allowed for the following Experts. During design phase home office input shall be allowed for the Expert who design the system, with prior approval of the Employer.

- 1. Team Leader
- 2. Deputy Team Leader cum Hydrology Expert
- 3. Survey Expert
- 4. Drainage Expert 4 Nos
- 5. Social and Environmental Expert

The finalized report (Drainage Master Plan) shall address to the following goals;

i. <u>IMMEDIATE IMPROVEMENT PLAN FOR COLLECTION AND DISPOSAL SYSTEM FOR PATNA CITY</u>

- a. The exiting storm water drain system and its pumping stations are to be inspected and analyzed for taking remedial steps to achieve 100% of designed capacity.
- b. Immediate system required for addressing the Flood during rain to avoid flooding in the low level area of Patna City.
- c. Suitable measure for cleaning the existing storm water drainage system
- d. Repairing the damaged portion of the drains, connecting missing links
- e. Time frame for take up the work within 3 months
- f. Some of the main low level area are listed below
 - 1) Drainage solution of Science City and its adjoining network.
 - 2) Drainage Solution of Musallahpur Bazar Samiti (Bakari Bazar) and its adjoining area.
- 3) Remodeling of 09 (Nine) Major Drain namely (1) Kurjee Drain (2) Boring canal Drain (3) Anandpuri Drain (4) Mandiri Drain (5) Bakarganj Drain (6) Saidpur /Rampur Drain (7) Yogipur Drain (8) Serpentine Drain (9) S.K. Puri Drain.

ii. SHORT TERM PLAN

Short term goal will be to make an inventory of the existing storm water drainage system (all drains, Nalas, Ponds, DPS, etc.), make existing situation analysis and missing links, propose up-gradation (cleanup of the drains, repair of the damage portion of the drains, improvement of DPSs, in Dhanpur, Khagaul, Phulwarisharif and adjoining area . which can be executed within a 6(Six) months time frame.

The entire investigations, surveys are to be carried out. Detailed design calculation along with the cost Estimates, drawings and Detailed Project Report (DPR) have to be prepared. The Employers requirement, Technical specification and other specifications are to be prepared along with the Bid Document for item rate contract or any other method specified by BUIDCo authorities. Initial Environmental Report and

Environmental Monitoring Report, Resettlement Report are to be prepared.

iii. MID TERM PLAN

The Medium term goat will be to implement sustainable storm water drainage systems like rain water harvesting, , increase in flood storage capacity of Ponds, construction of detention ponds, rain gardens and addressing issues like alleviation of flood risk prone area. The time frame for taking up the Mid Term goal will be six months.

The entire investigations, surveys are to be carried out. Detailed design calculation along with the cost Estimates, drawings and Detailed Project Report (DPR) have to be prepared. The Employers requirement, Technical specification and other specifications are to be prepared along with the Bid Document for item rate contract or any other method specified by BUIDCo authorities. Initial Environmental Report and Environmental Monitoring Report, Resettlement Report are to be prepared.

iv. LONG TERM PLAN

Medium term goal will be to implement an improved storm water drainage Master Plan for Patna City, Danapur Khagaul, Phulwarisharif and adjoining area as an integrated system & implementation of city- wide storm water drainage SCADA. based on the outcome of the Detailed Project Report which will take into account re-design /remodeling of the entire drainage system including new drains,out fall drains, increase in flood storage capacity of Ponds, construction of additional DPSs, etc. The time horizon taking up the Long -term goal will be one year.

The Long Term Plan implementation may require phasing of works, which may be by two phasing. The consultant shall prepare DPR, Bid document etc for each phase of work as decided by the client.

The entire investigations, surveys are to be carried out. Detailed design calculation along with the cost Estimates, drawings and Detailed Project Report (DPR) have to be prepared. The Employers requirement, Technical specification and other specifications are to be prepared along with the Bid Document for item rate contract or any other method specified by BUIDCo authorities. Initial Environmental Report and Environmental Monitoring Report, Resettlement Report are to be prepared.

v. Bid Process:

The consultant shall be responsible for Bidding process, Invitation of Bid, pre bid meeting, answering queries raised by the bidders, evaluation of Technical Bids, Evaluation of Financial Bids, Bid negotiations, preparation LoA, Preparation agreement for all the floated Tenders. This activity for Phase 1 and Phase 2 of Long Term Process may take some time after approval of DPR by Government of Bihar. The Bid process shall be expected to be completed within 4 months from date of completion of Bid Submission.

3. SCOPE OF WORK

The Consultant will provide the following services and deliverables:

3.1. Field Data Collection:

Before the start of field survey, sufficient desk work should be carried out using the existing details and that should be corroborated by field visits and discussions with BUIDCO and municipal officials. This iterative process should be followed to prepare a comprehensive workable plan. The data/information to be collected and the elements to be surveyed for preparation of the project plan are given below:

3.1.1 Physical Characteristics

- a) Topographical details including the slope of catchment / contributing area and outfall point
- b) Identify a list of open spaces
- c) Details of Bridges, culverts, railway crossings, etc.
- d) Areas of the urban forest, wetlands, marshy lands, flood plains, water bodies, etc.
- e) Data on inflows from contiguous upper regions
- f) Soil characteristics including its permeability
- g) Groundwater table and its seasonal variations
- h) Location and capacity of existing water retention structures
- i) Details of wastewater treatment plants along with their capacities
- j) Treated wastewater available for recycle and reuse out of decentralized wastewater plants in the city/housing complexes
- k) Potential of use of storm water in the project area or adjoining area
- l) Identification of storm drainage related problems within urban areas that may warrant further detailed investigations and planning such as:
 - Littering, garbage, domestic wastes, plastic waste, etc.
 - Solid waste / C & D waste points nearer to the drainage system
 - Nearby dump site status
 - Natural pollution, such as leaves, etc.
 - Chemical pollution, such as detergents, oil or fertilizers

3.1.2. Rainfall Characteristics

- a. Hourly Rainfall data for the last 30 years or more depending upon the availability from digitized / Automatic Rain gauge station needs to be obtained / collected from IMD in the specified format
- b. Rainfall data collection comprising of annual average daily and monthly rainfall and no of rainy days
- c. Data on historical flood events

3.1.3. Waterway Characteristics

- a. The capacity of water receiving body and its HFL and other relevant details
- b.Physical condition and characteristics of the existing (size, slope, and material) storm water conveyance system.
- c. Existing natural, as well as, engineered drainage channels.
- d.Details of existing water bodies/Ponds
- e. Location of existing and prospective rainwater harvesting structures.

- f. Water quality & quantity in existing storm water conveyance systems / natural drains and in receiving water bodies under wet and dry conditions.
- g. Back water influence on the nallas / water bodies from the rivers.

3.1.4. Collection of Topographical Survey details/Maps:

Following documents/maps are needed to be collected for proper planning:

- a. Survey of India topographical maps (1:50,000) of the catchment/planning area for comprehension of topography, watercourses and other physical features like major roads, railway lines, location and levels on benchmarks, etc.
- b. Details of benchmarks established by Survey of India in the planning area or its neighborhood.
- c. Past / most recent high-resolution satellite image of the planning area
- d. Local planning area maps and scheme maps of various scales prepared by various agencies such as Department of Town and Country Planning, Water & Sewerage Boards, Municipal Corporations, etc. for comprehension of watercourses, irrigation canals, storm water drains, tanks, ponds, etc.
- e. Reconnaissance survey for verification of the above And their study/evaluation, if any.
- f. Location of underground electric cables, telephone lines, water supply, and sewer lines, etc.
- g. Watershed maps including topographic features, watershed boundaries, existing drainage patterns, and ground cover.

3.2. Surveys

3.2.1. Topographical Surveys

After analyzing the collected data including the existing survey maps and existing drainage details, broad alignment for drainage network should be firmed up and the survey should be commenced to collect the requisite data/field details for the preparation of alignment of drains/maps with suitable ground levels.

For carrying out the survey, the latest survey instruments like Total Station Survey should be used. Based on the survey, the coordinates and levels of various important locations/benchmarks should be collected. Further, field survey for the project should include overall infrastructure mapping, strip survey and site survey. During the topographical survey, traversing should be done along the center line of the corridor. Longitudinal cross-sections should be taken at intervals as required for clarity. Also, the final data should be converted in ESRI Shapefile format with its defining projection and survey collected attributes in the requisite database format.

The layout plan should be prepared and integrated on the GIS base with a selected computer model. Layers and attributes to be shown on the map should be flexible to control and give appropriate information for different requirements. The Consultant should prepare GIS maps of storm water drainage system and upload in public domain (Respective ULB website). This would help in regular monitoring of the drainage system to ensure that there is no encroachment. This will also facilitate ease in operation & maintenance.

Based on the above survey, following plans should be prepared:

- I. Topographical maps (1:1000 scale) bringing out existing storm water drainage system, the crossing of main watercourses eg. rivers, irrigation canals, nallas, drains, tanks, ponds, roads, railway lines, built-up areas, open fields, and playgrounds, flood-prone areas, etc.
- II. Demarcation of the urban catchment in zones and subzones to plan layout of Primary, Secondary & Tertiary drains.
- III. Alignment of watercourses showing locations of temporary/ permanent structures within 15 m on either side of the bank location of electric cables, telephone lines, water supply, and sewer lines in the vicinity of the drains.
- IV. Storm water drains with a longitudinal section at 30-50 m interval and cross-section at every 5 m interval (for the main drains) within the drain and 2 5 m outside the drain.
- V. Mapping of storm water drainage layout on GIS platform.
- VI. Water harvesting structures, Water detention tanks, Pumping points, water usage points, parks, disposal point should also be shown on the map.
- VII. Details in and around the drain for recharge should also be identified particularly at the places along the stretch of the drain where soil strata/log is changing indicating type of soil, Permeability,
- VIII. Ground Water Table, Rock strata.
- IX. Identification of vulnerable silting / landslide points, Low lying points, vulnerable stretches.
- X. The above details collected shall be used for planning of drainage system including its integration with existing drains and rehabilitation of other existing drains.
- XI. The approximate length of the survey is about 4000 Km.

3.2.2. GPR Survey

The Consultant will carry out underground utility survey using GPR instrument and other equipment. GPR survey shall be carried strictly as per standard procedure. Location of GPR survey will be all along the major roads and minor roads in the project area. GPR survey shall be carried out up to 4m depth. Objects, type of materials and alignment will be identified and shown on a CAD drawing. **The GPR survey should be carried out for the entire length of major drains which is expected to be approximately 600 Km.**

3.3. Existing Situation Analysis and Up-gradation Proposal for immediate improvement Pla

The Consultant shall carry out existing situation analysis and accordingly provide necessary upgradation proposals as indicated below:

- I. Identification of areas prone to flooding, main storm water drainage and sullage issues, location of main drains and outfalls, pollution and other environmental issues.
- II. Identification of issues in drainage system including physical constraints to Storm Water Drainage i.e. encroachments into Storm Water Drainage channels, solid waste dumping, natural and human made obstructions, including pipe culverts and low-level causeways, road and rail over bridges, flyovers, canals, permanent ways etc.
- III. Pumping stations: Condition & functionality of facilities.
- IV. Canal maintenance: Operation and maintenance requirements, technical and organizational options.
- V. Institutional issues: Management of drainage networks, administration, inspection, maintenance and repair practices.
- VI. The impacts of growth and interventions on the Storm Water Drainage System shall be assessed along with possible future land use for assessment of the Storm Water Drainage regime, design parameters, particularly infiltration factors and drain sizes.

3.4. Planning:

The objective of investigation and planning is to provide detailed information about the type and topography of each land/catchment and its sub catchment area. Consultant should consider the following aspects while planning & investigating for development of a drainage system and prime objective of this consultancy is to provide holistic solution to make Patna free from water- logging in future:

- i. Identification and marking of drainage catchment areas.
- ii. Identification and marking of probable drainage zones, the direction of gradients and selection of disposal points.
- iii. Preparation of topographical layout of collection and conveyance.
- iv. Storm water drainage plan should be separate from the sewerage system for all stages of planning and designing.
- v. Identification of locations for pumping stations.
- vi. Strategy for rainwater storage and its recharge to groundwater and disposal of excess storm water
- vii. Identification of stretches of drains / vulnerable points susceptible to the dumping of solid waste / C & D waste/encroachment/ choking point.
- viii. Strategy for prevention of solid waste and C & D waste into storm waterways.
- ix. Strategy for arresting pollutants with urban runoff from entering into water

bodies.

- x. Conserving the aesthetics, public safety and other social concerns of recreational open space and landscape to preserve the ecological nature of waterways.
- xi. Identification of existing storm water drains / drainage corridors including age-old drainage conduits for rehabilitation.
- xii. Non-structural and structural measures should be studied, and components designed accordingly to provide relief during the occurrence of disasters due to flooding.
- xiii. Frame a Road Map for Urban Storm Water Best Management Practices (BMP).
- xiv. Preparation of a strategy for protection of urban areas from flooding. This need to include any excess runoff likely to come to the city area from upper reaches. To attenuate flooding, the water storage ponds should be rejuvenated within city and also created outside the city, if feasible.
- xv. Strategy for sustainable operation & maintenance of storm water systems.
- xvi. A holistic approach to local area planning including aspects of sustainability, consistency, and responsiveness to community values.

3.5. Design Standard:

The Consultant shall follow drainage design standards.

- I. Planning shall be done for the horizon of next 30 years (aiming at year 2050)
- II. The designs shall be in compliance with the relevant Indian Standards (as amended up to date, with all correction slips) and CPHEEO Manual. Wherever such standards are not available, appropriate standards shall be followed after discussions with BUIDCO.
- III. The Consultant shall carry out the rainfall analysis and hydrological studies.
- IV. The Consultant shall recommend the criteria to be used for design of drainage improvements (e.g. design storm interval, method of runoff computation, minimum pipe size, etc.). The consultant shall formulate a set of functional criteria for the system and provide justification for the design parameters adopted and assumptions, if any.
- V. Estimate both existing future dry-weather and wet weather flows in the various drainage catchments. Care shall be exercised to ensure that drain sizes are not too large while using the Rational Method. Flood return periods also shall be considered to ensure economic drain sizes and execution. The drain / pipe sizes shall be checked considering the road widths and their flood disposal capacities in case of large storms at longer return periods of storm.

3.6. Drainage Master Plan Which includes all the Immediate Improvement Plan, Short Term, Mid Term and Long Term Goals

The Consultant shall prepare Storm Water drainage master Plan with the following guidelines:

I. Rehabilitation measures on the existing system shall be given due consideration based on feasibility before proposing any new investments.

- II. Development of a drainage model with suitable software for analysis of system capacity needs for existing and future development.
- III. Identify areas of non-existing storm water drains as deficiencies and water-logging areas and prioritize them in order of importance to the overall City drain network.
- IV. Proposed development measures shall be provided to enable Patna Municipal Corporation to achieve the required level in delivering services to the Tax Payers to the desired level in the immediate/short, medium and long term.
- V. The outputs and recommendations of the study shall be integrated with the state level initiatives, if any.
- VI. Prepare plans with the existing drainage system and its condition, duly taking into consideration the storm water contribution from adjoining and upstream areas (including the areas outside Corporation boundary).
- VII. Division of the town into various zones/sub-zones based on relevant requirements to draw up hierarchy of the Drainage System and their locations for designing the most cost-effective and viable system.
- VIII. Necessary hydraulic calculations shall be made for the present, prospective and ultimate demands and shall be enclosed. The design procedure shall be carried out after due concurrence of the population projections and hydraulic calculations from the Corporation.
- IX. The report shall contain the Consultant's recommendation for a City-wide capital improvement program. The Consultant shall prioritize the work to be performed, based upon the severity of the capacity deficiency, importance of the component in the total storm drain system, cost effectiveness, and other applicable criteria.
- X. Implementation planning including prioritization of work for short term, medium term and long-term goal shall be included.

3.7 Cost Analysis including O&M Cost:

Based on the surveys, designs, and EMPs evolved by the consultants, within the framework and the requirements of the project, the consultants have to prepare detailed item and quantity schedules and work out the cost estimates for immediate improvement plan, short term, mid term and Long term Plans.

Consultant shall prepare structural designs of storm water handling structures, major drains, to withstand the hydraulic / other forces. Consultant will suggest suitable materials for construction with cost benefit analysis. Consultant Study the extent of road crossings required for different types of roads maintained by different agencies. Consultant will suggest the most effective way in making the road crossings for traffic prone areas. The cost of road cuts shall be included in the cost estimates.

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Prepare detailed cost estimates based on item rate basis using the latest schedule of rates / market rates as appropriate. Estimate necessary road restoration charges wherever needed. Assist the Corporation/ULB's in getting administrative / technical sanction for the scheme from competent authorities. There should not be any lump sum items in the bill of quantities. For items not covered under schedule of rates, market rates to be assessed with proper quotations from the reputed firms. Prepare suitable procurement plan, tender documents based on priority, project implementation schedule for execution and contract packaging plans including phasing.

Project cost estimates shall be prepared including capital, operation and maintenance costs and shall carry out project financial analysis and economic analysis.

Present practices of operation and maintenance including type of tools and equipment available shall be analyzed and necessary alternate options including infrastructure required for effective O&M shall be suggested including institutional arrangements for strengthening the O&M system. The O&M period shall be kept as 5 years.

3.8 Environmental and Social Impact Analysis:

The Consultant shall carry out following environmental and social impact analysis:

- a. Water (Storm & Wastewater) Quality monitoring Identify current and forecast future water quality requirements.
- b. Environmental Analysis conduct strategic environmental assessment for the storm water drainage master plan.
- c. Social Issues Conducting public consultations with key stakeholders for the development of the integrated storm water drainage master plan through conducting workshops, seminars, and reports.

3.9 Preparation of Bidding Documents

- 1. The Consultant shall prepare Bid documents as per the rules and regulations and in the prescribed format prescribed by BUIDCO. The consultant will prepare the bidding documents as per the following heads:
 - a. Instruction to Bidders containing General Information,
 - b. Data
 - c. Eligibility criteria
 - d. BOQ
 - e. Employer's Requirement, Technical specification, Construction drawings
 - f. Eligible country

- g. General conditions of the contract
- h. Particular conditions of the contract
- i. Schedules and forms

4. DELIVERABLES

In this assignment, Consultant shall work out on the following Four major tasks and provide deliverables accordingly:

A. Immediate Improvement Plan for Patna Town

Existing Storm water drainage system of Patna Town shall be thoroughly studied & inventory made by referring to the following storm water drainage infrastructures

- 1. Existing Road side and closed drains
- 2. Storm water Drainage pumping stations (DPS)
- 3. All primary, secondary and tertiary drains
- 4. Awareness program in each ward to keep the drains clean, not throwing garbage, solid waste, demolished materials etc and reporting to local ward office.
- 5. Siltation in the sumps, drains and cleaning interval and manpower requirement etc
- 6. Repairing the damaged drains, linking missing drains, re-modifying the existing drains to proper slope etc

B. Short Term Plan for Danapur, Khagaul, Phulwarisharif and adjoining area

- 1. Existing Road side and closed drains
- 2. Storm water Drainage pumping stations (DPS)
- 3. All primary, secondary and tertiary drains
- 4. Awareness program in each ward to keep the drains clean, not throwing garbage, solid waste, demolished materials etc and reporting to local ward office.
- 5. Siltation in the sumps, drains and cleaning interval and manpower requirement etc
- 6. Repairing the damaged drains, linking missing drains, re-modifying the existing drains to proper slope etc

C. Mid Term Plan

- 1. Alleviation of flood risk prone area
- 2. De-silting of nallas and paleo channels.
- 3. Introducing Rain water Harvesting system in the important locations in the flood brone area
- 4. Identification of Ponds which receives the rain water and improving them to increase the capacity by de-silting and strengthening them.
- 5. Construction of detention Ponds in appropriate locations
- 6. Creation of Rain gardens

A. STORM WATER DRAINAGE MASTER PLAN

Existing drainage & sanitation conditions of the Patna City, Khagaul and Danapur, Phulwarisharif urban agglomerations shall be thoroughly studied & inventory made by referring to the following drainage infrastructures:

- a. Roadside open drains and closed drains
- b. Nallas and paleo channels

- c. Surrounding streams and rivers
- d. Drainage Pumping Stations (DPS)
- e. Outfall locations
- f. Ponds & Low-lying areas
- g. Town sewer network
- h. Transportation network

Land use changes like highly priced localities, Government complex areas, slum areas, commercial areas, etc. which have come up in last 10 years shall be evaluated to understand risk factors with likely urban flooding.

Geomorphology (Landform), topography (Topo-contours of 0.5m or less), soils, land use and urban settlements shall be taken in to consideration in designing Storm Water Drainage Master (SWDM) Plan.

All these spatial layers along with attribute information like storm rainfall events, high flood levels in Neighborhood Rivers, incidence of urban flooding in the past, etc. shall be inputs in to GIS.

- a. Patna Town, Khagaul and Danapur, Phulwarisharif urban agglomerations shall be taken as contiguous units for planning.
- b. SWD Master Plan shall be prepared for 2050 horizon year with 2020 as base year.
- c. For SWD, rate of urban growth (imperviousness) in Patna-Danapur-Khagaul, Phulwarisharif shall be key factor.
- d. Present drainage system is designed long back. This shall be evaluated for adequacy / quick drainage. Recent recommendation of design rainfall storm event of 1 in 5-year return period for SWD design for mega-cities in India shall be adopted.
- e. Suitable sub-catchments/ runoff zones for the drain networks shall be demarcated.
- f. A hierarchy of 3 drains system Tertiary Drains (in localities), Secondary Drains (along roadside) and Primary Drains (major nallas) flowing sequentially to ultimate disposal point (River Ganga, Sone, Punpun) shall be considered.
- g. Recommendations for suitable Sustainable Drainage Systems (SuDS) shall be provided.
- h. Storm water Drainage Master Plan shall provide standard nomenclatures, layers of spatial information & attributes (in the form of Tables & Graphics).
- i. Similar exercises followed / implemented in India / globally shall be consulted & incorporated in the Master Plan.
- j. Consultation with all stakeholders (Civic bodies, Buidco officials, academicians, responsible citizens, etc.) shall be carried out for SWD Design & SWD Master Plan.

B. STORM WATER DRAINAGE SYSTEM DPR

In the preparation of DPR for the storm water drainage system, following works should be carried out:

- a. Provide 100% coverage of all roads with storm water drains
- b. Re-modelling of all major Nallas to increase flood discharge carrying capacity
- c. Re-modelling of all existing ponds and low-lying areas.
- d. Flushing all covered drains of solid and plastic wastes to increase flood discharge carrying capacity
- e. Increase / modernize existing DPS capacity for quick / instant drainage

- f. Install SCADA for surveillance and monitoring of drainage (water levels in major Nallas, major ponds and rivers at outfall sluice locations) and operations of all control structures (DPS, sluice gates)
- g. Implementation plan

5. DATA/MAPS AVAILABLE WITH CLIENT

Following data and maps are available with the Client for consultation / use in this consultancy assignment:

- 1. Topographical contour map for Patna Nagar Nigam, Khagaul and Danapur, Phulwarisharif etc.
- 2. List of existing 39 DPS along with existing pumping capacity and their present status.
- 3. List of existing drains and map showing their alignment.
- 4. GIS Map having 45 layers, details regarding layers available are shown in annexed.

Note: The consultant is expected to assess the data provided and shall duly consider their usage and propose the financial quote accordingly.

6. INDICATIVE DELIVERABLES WITH TIMELINE

All reports, documents and drawings obtained by the Consultant are to be submitted to the client under this assignment. The analysis of data and the design proposals shall be based on the data derived from the primary surveys and investigations carried out during the period of assignment. The sources of data and model relationships used in the reports shall be indicated with complete details for easy reference.

Consultant shall provide following deliverables as per the timeline shown:

S. No.	Stage Report	No. of copies	Time Schedule
1.	Inception Report	4 Copies	T + 1 Weeks
2.	- Draft DPR & Draft Bid Document for Immediate improvement plan	4 Copies	T + 4 Weeks
3.	Final DPR and Bid Document for immediate Improvement Plan	4 Copies	T+ 6 Weeks
4.	Bid Process for Immediate Improvement Plan		T+ 12 Weeks
5.	Draft DPR & Draft Bid Document for Short Term plan	4 Copies	T+ 8 Weeks
6.	Final DPR & Draft Bid Document for Short Term plan	4 Copies	T+ 10 weeks
7.	Bid Process for Short Term Plan		T+ 16 Weeks
8.	Draft DPR & Draft Bid Document for Mid Term plan	4 Copies	T+ 15 Weeks
9.	Final DPR & Draft Bid Document for Mid Term plan	4 Copies	T+ 17 weeks
10.	Bid Process for Short Term Plan		T+ 23 Weeks
11.	Survey, Investigation & Design Report	4 Copies	T + 20 Weeks
12.	Draft DPR and Bid Document for Storm water Drainage for Phase 1 of Long Term plan	4 Copies	T + 36 Weeks

S. No.	Stage Report	No. of copies	Time Schedule
13	Final DPR and Bid Document for Storm water	4 Copies	T + 40 Weeks
	Drainage for Phase 1 of Long Term plan		
14.	Bid Process for Phase 1 of Long Term Plan		T+ 52 Weeks
15.	Draft DPR and Bid Document for Storm water	4 Copies	T + 48 Weeks
	Drainage for Phase 2 of Long Term plan		
16.	Final DPR and Bid Document for Storm water	4 Copies	T + 52 Weeks
	Drainage for Phase 2 of Long Term plan		
17.	Bid Process for Phase 2 of Long Term Plan		T+ 68 Weeks

7. SCHEDULE OF PAYMENT:

Following schedule of payments is prescribed with completion and submission of each deliverable and same accepted by the Client:

Immediate Improvement Plan, Short Term Plan, Mid Term Plan and Long Term Plan

Payment schedule

- 1. On completion of all the Surveys and Reports for surveys 75% shall be paid.
- 2. Remaining 25% for survey works shall be paid on submission of Final DPR of Phase 2 of Long Term Plan.
- 3. After submission of Draft DPR and Daft Bid Document of Immediate Plan 75 % of quoted rate shall be paid.
- 4. After submission of Final DPR and Bid Document of Immediate Plan 25% of quoted rate
- 5. After completion of Technical Evaluation for Immediate Improvement plan 50% of the guoted rate shall be paid for Bid Process.
- 6. After completion of Agreement for award of work for Immediate Improvement plan 50% of the quoted rate shall be paid for Bid Process.
- 7. After submission of Draft DPR and Daft Bid Document of Short Term Plan 75 % of quoted rate shall be paid.
- 8. After submission of Final DPR and Bid Document of Short Term Plan 25% of quoted rate shall be paid.
- 9. After completion of Technical Evaluation for Bid process for Short Term Plan, 50% of the guoted rate shall be paid for Bid process.
- 10. After completion of Agreement for award of work for short Term Plan 50% of the quoted rate shall be paid for Bid Process.
- 11. After submission of Draft DPR and Daft Bid Document of Mid Term Plan 75 % of quoted rate shall be paid.
- 12. After submission of Final DPR and Bid Document of Mid Term Plan 25% of quoted rate shall be paid.
- 13. After completion of Technical Evaluation for Bid process for Mid Term Plan, 50% of the quoted rate shall be paid for Bid process.
- 14. After completion of Agreement for award of work for Mid Term Plan 50% of the quoted rate shall be paid for Bid Process.
- 15. After submission of Draft DPR and Daft Bid Document of Phase 1 of Long Term Plan 75 % of quoted rate shall be paid.
- 16. After submission of Final DPR and Bid Document of phase 1 of Long Term Plan 25% of quoted rate shall be paid.
- 17. After completion of Technical Evaluation for Bid process for Phase 1 of Long Term Plan, 50% of the quoted rate shall be paid for Bid process.
- 18. After completion of Agreement for award of work for Phase 1 of Long Term Plan 50% of the quoted rate shall be paid for Bid Process
- 19. After submission of Draft DPR and Daft Bid Document of Phase 2 of Long Term Plan 75 % of quoted rate shall be paid.
- 20. After submission of Final DPR and Bid Document of phase 2 of Long Term Plan 25% of quoted rate shall be paid.
- 21. After completion of Technical Evaluation for Bid process for Phase 2 of Long Term Plan, 50% of the quoted rate shall be paid for Bid process.
- 22. After completion of Agreement for award of work for Phase 2 of Long Term Plan 50% of the quoted rate shall be paid for Bid Process

8. TEAM COMPOSITION

The Consultant shall provide an Expert team of Professionals to work dedicatedly on the assignment, as per requirements. The person-months inputs of the various professionals are indicative and could be amended based on specific requirement and reasonable justification.

S. No.	KEY EXPERT	Tentative Minimum Inputs (months)
1	Team Leader	16
2	Deputy Team leader cum Hydrologist	16
3	Drainage Expert – 4 Nos	16 x4 = 64
4	Structural Engineer	12
5	Urban Planner	6
6	GIS Expert	6
7	Survey Expert	6
8	Social Cum Environment Expert	6
9	Electro-Mechanical Expert	6
10	Instrumentation / SCADA Expert	6
11	Procurement Specialist	12

The consultant should assess and propose the supporting staff.

9 QUALIFICATION REQUIREMENTS FOR THE KEY EXPERTS

Qualifications and Experiences of Key Persons to be deployed in the assignment are given below:

9 QUALIFICATION REQUIREMENTS FOR THE KEY EXPERTS

Qualifications and Experiences of Key Persons to be deployed in the assignment are given below:

i) Team Leader

Qualification & Experience: The Team leader (TL) shall be a Civil Engineering graduate with Master's degree in Public Health/ Environmental / Hydraulic Engineering with 15-years of experience in the Water Supply and Sewerage/ Drainage projects. Specific Experience in planning and designing of integrated urban storm water drainage/sewerage Projects shall be 15 years

Preference: Experience in Planning, detailed designing and implementation of Storm Water Drainage system of major City / Town of similar nature. Experience in the External aided projects shall be preferred.

(ii) Deputy Team Leader cum Hydrologist

Qualification & Experience: Hydrologist shall be a postgraduate in Public Health Engineering/hydrology/water resources engineering with 10-years of experience. He should have experience for 7 years in the Water Supply and Sewerage/ Drainage projects. Experience in the External aided projects shall be preferred.

(iii) Drainage Expert

Qualification & Experience: Drainage Expert shall be a graduate in civil engineering with 7 years of experience in Water Supply and Sewerage/ Drainage projects. Specific Experience hydraulic design of storm water Drainage & Sewerage system in a major City / Town for 5 years.

Preference: Post Graduate in Public Health / Environmental Engineering with related experience in designing and implementation of Storm Water Drainage system/sewerage projects.

(iv) Structural Engineer

Qualification & Experience: A graduate in Structural Engineering with 7 years of experience in design structural components of Water Supply and Sewerage/ Drainage projects. Specific Experience in storm water drainage structures / water retaining structures for 5 years

Preference: Post Graduate in Structural Engineering.

(vi) Urban Planner

Qualification & Experience: A postgraduate in Urban Planning with 10 years of experience in Urban Landscape / Low Impact Development studies and Specific Experience in Town planning, creation of Ponds, Lakes, Rain water harvesting structures for 5 years.

Preference: Experience in the External aided projects shall be preferred.

(vii) GIS Expert

Qualification & Experience: A graduate in Civil Engineering or allied subject with 10 years of experience in the field of survey and specific experience in preparation of GIS data and GIS Modelling for 7 years.

(vii) Survey Expert

Qualification & Experience: A graduate in Civil Engineering or allied subject with 10 years of experience in modern survey using Total Stations/DGPS/GPRS Survey and preparation drawings and documents.

(viii) Electro-mechanical Expert

Qualification & Experience: A graduate in Electrical/Mechanical Engineering with 10 years of experience in design of electromechanical systems such as pumps and motors for Drainage / Sewerage / Water supply and specific experience in Storm water Drainage system related Electrical & Mechanical installations etc for 7 years.

(ix) Instrumentation / SCADA Expert

Qualification & Experience: A graduate in Electrical/Electronics/Instrumentation Engineering with 7 years of experience in design of SCADA system and integration with existing electro-mechanical devices.

(x) Procurement Specialist

Qualification & Experience: A graduate Civil Engineer with at least 7 years of experience in Government procedures with regards to procurement on the basis of Item rate, EPC / turnkey etc. preferably procurement s under externally aided projects. Specific Experience for cost estimation of different nature sub projects, including waste water and general civil works, knowledge of preparation of BOQ of percentage rate/ item rate/ EPC / turnkey bid documents etc for 7 years

Preference: Experience in the External aided projects shall be preferred.

(IX) Social and Environmental Specialist

Qualification & Experience: A graduate in Sociology with at least 7 years in social aspects of infrastructure projects and public awareness programs and community participation workshops under infrastructure projects.

Preference: Experience in the External aided projects shall be preferred.

10. DUTIES AND RESPONSIBILITY OF THE KEY EXPERTS:

i) Team Leader

The Team Leader will be fully responsible for the overall management and administration of the project components and for the overall quality of all related outputs, design of all storm water drainage system components, training etc. The Teal leader will attend all the meetings of the Chief Engineer, Managing Director Buidco, UDHD Department and other Bihar Government officials. Responsible for all the periodical reports, presentation of Project Reports, Estimates and Bid Documents etc

(ii) Deputy Team Leader cum Hydrologist

Deputy Team Leader will hold the responsibility of Team Leader in absence of the Team leader and will perform all the responsibility of Team Leader. He will be responsible for all the design related issues for storm water drainage system. He will assist in resolving specific technical issues, finalization of project, will evolve the monitoring system and will be responsible for effective preparation of all the Plans for storm water drainage system.

(iii) Drainage Expert 1:

The drainage Expert shall be responsible for collection of all data for preparing storm water drainage system and also responsible for the design of storm water drainage system. In the absence of Deputy Team Leader, he will look after all the works allotted to Deputy Team Leader until, the Deputy team Leader resumes duty. He wills co-ordinate all the Experts, surveyor for effective preparation of DPR, Estimate and Bid Documents.

The Drainage Expert No 1 shall be responsible for Immediate Improvement Plan and on completion he shall be responsible for Phase 1 of Long Term Plan.

(iv) Drainage Expert 2:

The drainage Expert shall be responsible for collection of all data for preparing storm water drainage system and also responsible for the design of storm water drainage system. In the absence of Deputy Team Leader, he will look after all the works allotted to Deputy Team Leader until, the Deputy team Leader resumes duty. He wills co-ordinate all the Experts, surveyor for effective preparation of DPR, Estimate and Bid Documents.

The Drainage Expert No 2 shall be responsible for Short Term Plan and on completion he shall be responsible for Phase 1 of Long Term Plan.

(v) Drainage Expert 3:

The drainage Expert shall be responsible for collection of all data for preparing storm water drainage system and also responsible for the design of storm water drainage system. In the absence of Deputy Team Leader, he will look after all the works allotted to Deputy Team Leader until, the Deputy team Leader resumes duty. He wills co-ordinate all the Experts, surveyor for effective preparation of DPR, Estimate and Bid Documents.

Document for Comprehensive Storm Water Drainage System for Patna Nagar Nigam, Khagaul, Danapur, Phulwarisharif and adjoining area".

Selection and Engagement of "Design Consultant for Planning, Design & Preparing DPR & Bid

The Drainage Expert No 3 shall be responsible for Mid Term Plan and on completion he shall be responsible for Phase 2 of Long Term Plan

(vi) Drainage Expert 4:

The drainage Expert shall be responsible for collection of all data for preparing storm water drainage system and also responsible for the design of storm water drainage system. In the absence of Deputy Team Leader, he will look after all the works allotted to Deputy Team Leader until, the Deputy team Leader resumes duty. He will co-ordinate all the Experts, surveyor for effective preparation of DPR, Estimate and Bid Documents.

The Drainage Expert shall be responsible for Phase 1 & 2 of Long Term Plan.

(vii) Structural Engineer

Structural Engineer will be responsible for preparing all the structural designs and drawings of the project components for all the Immediate Improvement Plan, Short Term Plan, Mod Term Plan and phase 1 &2 of Long Term Plan.

(viii) Urban Planner

The Urban Planner will be responsible for selection of ponds and alignment of drainage system, rain fall catchment area of the town, selection of pumping stations, rain gardens etc for all the Immediate Improvement Plan, Short Term Plan, Mod Term Plan and phase 1 &2 of Long Term Plan.

(ix) GIS Expert

GIS Expert will be responsible for preparing the GIS maps of the proposed alignment of the storm water system, pumping stations and Town Map, etc for all the Immediate Improvement Plan, Short Term Plan, Mod Term Plan and phase 1 & 2 of Long Term Plan.

(x) Survey Expert

Survey Expert will be responsible for all the Topographical survey, GRP survey of the Patna Town, Danapur, Khagaul, Phulwarisharif and adjoin area for all the Immediate Improvement Plan, Short Term Plan, Mod Term Plan and phase 1 & 2 of Long Term Plan.

(xi) Electro-mechanical Expert

Electro Mechanical Expert will be responsible for Design and prepare requirements and specifications, drawings of Electrical and Mechanical Equipment and shall prepare the estimate for Electrical and Mechanical equipment. Responsible for evaluation of Bids in respect of Electrical and Mechanical equipment proposed by the Bidders for all the Immediate Improvement Plan, Short Term Plan, Mod Term Plan and phase 1 &2 of Long Term Plan.

(xii) Instrumentation / SCADA Expert

The Instrumentation and SCADA Expert will be responsible for all design, estimation and preparation of requirements and specifications of the instrumentation and SCADA

components of the project for all the Immediate Improvement Plan, Short Term Plan, Mod Term Plan and phase 1 &2 of Long Term Plan..

(xiii) Procurement Specialist

The procurement specialist will be responsible for all the estimation, preparation of all the Bid conditions, Bid documents, Pre Proposal meetings, Technical Bid Evaluation, Negotiation, Price Bid evaluation and preparation of LoA & Agreement etc for all the Immediate Improvement Plan, Short Term Plan, Mod Term Plan and phase 1 &2 of Long Term Plan.

(xiv) Social and Environmental Specialist

Social and Environmental specialist will be responsible for preparation Initial Examination Environmental Reports, Social issues and conducting community awareness programs, review recent and current community based development program being taken up the in the city. He will be responsible for preparing the Resettlement Program for all the Immediate Improvement Plan, Short Term Plan, Mod Term Plan and phase 1 &2 of Long Term Plan.

SECTION 6: STANDARD CONTRACT

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Appendix A: Terms of reference containing, inter-alia, the Description of the Services and Reporting Requirements

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Appendix F: Minutes of Financial/ Contract Negotiations with the Consultant.

Appendix G: Copy of letter of invitation.

Appendix H: Copy of letter of acceptance.

Appendix I: Format for Bank Guarantee for Performance Security.

Appendix J: Minutes of the Pre-bid meeting.

Section 1: FORM OF CONTRACT

CONTRACT FOR: [Please insert name of project]

CONTRACT NUMBER: [Please insert project number]

THIS CONTRACT is made

BETWEEN: [BUIDCo(hereinafter referred to as "the Client")

AND : [Please insert name of Consultant"] (hereinafter referred to as "the Consultant")

[Please insert nodal officer and communication address of the consultant]

WHEREAS:

A. the Employer has requested the Consultants to provide certain consulting services as defined in the General Conditions attached to this Contract (hereinafter called the "Services");and

B. the Consultants, having represented to the Employer that they have the required professional skills, personnel and technical resources, have agreed to provide the Services on the terms and conditions set forth in this Contract.

NOW THEREFORE the parties hereto hereby agree as follows:

1. Documents

This Contract shall be comprised of the following documents:

Section 1 Form of Contract
Section 2 General Conditions
Section 3 Special Conditions
Section 4 Terms of Reference
Section 5 Schedule of Prices

Section 6 Minutes of Contract Negotiation Meeting

Appendices:

Appendix A: Terms of reference containing, inter-alia, the Description of the Services and Reporting Requirements

Appendix B: Consultants' Key Personnel and Sub Professional Personnel, Task assignment, work programme, manning schedule, qualification requirements of key personnel, schedule for submission of various report.

Appendix C: Minutes of Financial/ Contract Negotiations with the Consultant, If any.

Appendix D: Copy of letter of invitation Appendix E: Copy of letter of acceptance

Appendix F: Copy of Bank Guarantee for Performance Security Appendix-G: Minutes of the pre-bid meeting, Addendum if any

This Contract constitutes the entire agreement between the Parties in respect of the Consultants obligations and supersedes all previous communications between the Parties, other than as expressly provided for in Section 3 and/or Section 4.

- 2. The mutual rights and obligations of the Employer and the Consultants shall be as set forth in the Contract; in particular
 - (a) The Consultants shall carry out the Services in accordance with the provisions of the Contract; and
 - (b) Employer shall make payments to the Consultants in accordance with the provisions of the Contract.

Commencement and Duration of the Services The Consultant shall start the Services on [please insert date] ("the Start Date") and shall complete them by ____[please insert date] ("the End Date") unless this Contract is terminated earlier in accordance with its terms and conditions. 3. **Financial Limit** Payments under this Contract shall not, in any circumstances, exceed [please insert total amount in numbers and words] exclusive of any government tax, if applicable ("the Financial Limit"). 4. Time of the Essence Time shall be of the essence as regards the performance by the Consultant of its obligations under this Contract. IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written. For and on behalf of Client For and on behalf of Consultant Signature Signature Name: Name: Date: Date: Witness on behalf of Client Witness on behalf of Consultant

1.

2.

1.

2.

Section 2: GENERAL CONDITIONS OF CONTRACT

DEFINITIONS AND INTERPRETATION

1.1 Definitions

Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

- (a) "Applicable Law" means the laws and any other instruments having the force of law.
- (b) "Contract" means the Contract signed by the Parties, to which these General Conditions of Contract are attached, together with all the documents listed in Clause 1 of such signed Contract;
- (c) "Effective Date" means the date on which this Contract comes into force and effect pursuant to Clause GC

2.1;

- (d) "GCC" means these General Conditions of Contract;
- (e) "Government" means the Government of Bihar;
- (f) "currency" means the Indian National Rupee;
- (i) "Personnel" means persons hired by the Consultants as approved by EMPLOYER as employees and assigned to the performance of the Services or any part thereof; "foreign Personnel" means such persons who at the time of being so hired had their domicile outside India; and "local Personnel" means such persons who at the time of being so hired had their domicile inside India;
- (j) "Party" means the Employer or the Consultants, as the case may be, and Parties means both of them;
- (k) "Services" means the work to be performed by the Consultants pursuant to this Contract for the purposes of the Project;
- (m) "Sub-consultant" means any entity to which the Consultants subcontract any part of the Services in accordance with the provisions of Clause GC 3.7; and
- (n)"Third Party" means any person or entity other than the Government, the Employer, the Consultants or a Sub-consultant.
- (o) "SC" means the Special Conditions of Contract by which these General Conditions of Contract may be amended or supplemented

1.2 Relation between the Parties

Nothing contained herein shall be construed as establishing a relation of master and servant or of agent and principal as between the Employer and the Consultants. The Consultants, subject to this Contract, have complete charge of Personnel performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder

1.3 Law Governing the contract:

The law of Government of Bihar and Government of India is applicable.

1.4 Language

This Contract has been executed in English, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

1.5 Heading

The headings shall not limit, alter or affect the meaning of this Contract.

1.6 Notices

1.6.2 Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram or facsimile to such Party at the address as specified in the SC. Notice will be deemed to be effective as specified in the SC.

A party may change its address for notice hereunder by giving the other Party notice of such change at the address mentioned as under

Employer: Consultant:

Managing Director

Bihar Urban Infrastructure Development Corporation #West Boring Canal road, Rajapul Patna -800 001

Tel: 0612-2506208 Email: mdbuidco@gmail.com

Website:http://www.buidco.in/

1.7 Location

The Services shall be performed at such locations as are specified in TOR

1.8 Deleted

1.9 Authorized Representatives

Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Employer or the Consultants may be taken or executed by the authorized representative.

1.10 Taxes and Duties

The Consultants shall pay all such taxes, duties, fees and other impositions as may be levied under the Applicable Law including GST. GST will be paid as per applicable rate.

2. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF CONTRACT

2.1 Effectiveness of Contract

This Contract shall come into force and effect on the date of the Employer's notice to the Consultants instructing the Consultants to begin carrying out the Services.

2.2 Termination of Contract for Failure to Become Effective

If this Contract has not become effective within such time period after the date of the Contract signed by the Parties as shall be specified in the SC, either Party may, by not less than two (2) months written notice to the other Party, declare this Contract to be null and void, and in the event of such a declaration by either Party, neither Party shall have any claim against the other Party with respect hereto.

2.3 Commencement of Services

The Consultants shall begin carrying out the Services at the end of such time period after the Effective Date as mentioned by the Employer in the Notice to begin services.

2.4 Expiration of Contract

Unless terminated earlier pursuant to Clause GC 2.9 hereof, this Contract shall expire when services have been completed and all payments have been made at the end of such time period after the Effective Date.

2.5 Entire Agreement

This Contract contains all covenants, stipulations and provisions agreed by the Parties. No agent or representative of either Party has authority to make, and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein

2.6 Modification

Modification of the terms and conditions of this Contract, including any modification of the scope of the Services, may only be made by written agreement between the Parties. Pursuant to Clause GC 7.2 hereof, however, each party shall give due consideration to any proposals for modification made by the other Party.

2.7 Force Majeure

2.7.1 **Definition**

- (a) For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party, and which makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by government agencies.
- (b) Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a
 - Party or such Party's Sub consultants or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected to both (A) take into account at the time of the conclusion of this Contract and (B) avoid or overcome in the carrying out of its obligations hereunder.
- (c) Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

2.7.2 No Breach of Contract

The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Contract.

2.7.3 Measures to be Taken

- (a) A party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfill its obligations hereunder with a minimum of delay.
- (b) A party affected by an event of Force Maguire shall notify the other Party of such event as soon as possible, and in any event not later than fourteen (14) days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give notice of the restoration of normal conditions as soon as possible
- (c) The Parties shall take all reasonable measures to minimize the event of Force Majeure consequences of any

2.7.4 Extension of Time

Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

2.7.5 Payments related to force majeure

Both the parties will have to bear their own cost during the force majeure.

2.7.6 Consultation

Not later than thirty (30) days after the Consultants, as the result of an event of Force Majeure, have become unable to perform a material portion of the Services, the Parties shall consult with each other with a view to agreeing on appropriate measures to be taken in the circumstances.

2.8 Suspension

The Employer may, by written notice of suspension to the Consultants, suspend all payments to the Consultants hereunder if the Consultants fail to perform any of their obligations under this Contract, including the carrying out of the Services, provided that such notice of suspension (i) shall specify the nature of the failure, and (ii) shall request the Consultants to remedy such failure within a period not exceeding thirty (30) days after receipt by the Consultants of such notice of suspension.

2.9 **Termination**

2.9.1 By the Employer

The Employer may, by not less than thirty (30) days' written notice of termination to the Consultants (except in the event listed in paragraph (f) below, for which there shall be a written notice of not less than sixty (60) days), such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (f) of this Clause 2.9.1, terminate this Contract:

- (a) if the Consultants fail to remedy a failure in the performance of their obligations hereunder, as specified in a notice of suspension pursuant to Clause 2.8 hereinabove, within thirty (30) days of receipt of such notice of suspension or within such further period as the Employer may have subsequently approved in writing;
- (b) if the Consultants become insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary;
- (c) if the Consultants fail to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 8 hereof;
- (d) if the Consultants submit to the Employer a statement which has a material effect on the rights, obligations or interests of the Employer and which the Consultants know to be false;
- (e) if, as the result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days; or
- (f) if the Employer, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.

2.9.2 By the Consultants

The Consultants may, by not less than thirty (30) day's written notice to the Employer, such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause 2.9.2, terminate this Contract:

- (a) if the Employer fails to pay any money due to the Consultants pursuant to this Contract and not subject to dispute pursuant to Clause 8 hereof within forty-five (45) days after receiving written notice from the Consultants that such payment is overdue;
- (b) if the Employer is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Consultants may have subsequently approved in writing) following the receipt by the Employer of the Consultants' notice specifying such breach;
- if, as the result of Force Majeure, the Consultant are unable to perform a material portion of the Services for a period of not less than sixty (60) days; or
- (d) if the Employer fails to comply with any final decision reached as a result of arbitration pursuant to Clause 8 hereof

2.9.3 Cessation of Rights and Obligations

Upon termination of this Contract pursuant to Clauses 2.2 or 2.9 hereof, or upon expiration of this Contract pursuant to Clause 2.4 hereof, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in Clause 3.3 hereof, (iii) the Consultant's obligation to permit inspection, copying and auditing of their accounts and records set forth in Clause 3.6 (ii) hereof, and (iv) any right which a Party may have under the Applicable Law

2.9.4 Cessation of Services

Upon termination of this Contract by notice of either Party to the other pursuant to Clauses 2.9.1 or 2.9.2 hereof, the Consultants shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultants and equipment and materials furnished by the Employer, the Consultants shall proceed as provided, respectively, by Clauses 3.9 or 3.10 hereof.

2.9.5 Payment upon Termination

Upon termination of this Contract pursuant to Clauses 2.9.1 or 2.9.2 hereof, the Employer shall make the following payments to the Consultants (after offsetting against these payments any amount that may be due from the Consultant to the Employer):

- i) remuneration pursuant to Clause 6 hereof for Services satisfactorily performed prior to the effective date of termination
- ii) reimbursable expenditures pursuant to Clause 6 hereof for expenditures actually incurred prior to the effective date of termination; and

2.9.6 Disputes about Events of Termination

If either Party disputes whether an event specified in paragraphs (a) through (e) of Clause 2.9.1 or in Clause 2.9.2 hereof has occurred, such Party may, within forty-five (45) days after receipt of notice of termination from the other Party, refer the matter to arbitration pursuant to Clause 9.2 hereof, and this Contract shall not be terminated on account of such event except in accordance with the terms of any resulting arbitral award.

3. **OBLIGATIONS OF THE CONSULTANTS**

3.1 General

3.1.1 Standard of Performance

The Consultants shall perform the Services and carry out their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced

technology and safe and effective equipment, machinery, materials and methods. The Consultants shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Employer, and shall at all times support and safeguard the Employer's legitimate interests in any dealings with Sub-consultants or Third Parties.

3.1.2 Law Governing Services

The Consultants shall perform the Services in accordance with the Applicable Law and shall take all practicable steps to ensure that any Sub-consultants, as well as the Personnel and agents of the Consultants and any Sub consultants, comply with the Applicable Law.

3.2 Conflict of Interests

3.2.1 Consultants not to Benefit from Commissions, Discounts, etc.

The remuneration of the Consultants pursuant to Clause 6 hereof shall constitute the Consultants' sole remuneration in connection with this Contract or the Services and the Consultants shall not accept for their own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or to the Services or in the Discharge of their obligations hereunder, and the Consultants shall use their best efforts to ensure that any Sub-consultants, as well as the Personnel and agents of either of them, similarly shall not receive any such additional remuneration.

3.2.2 Consultants and Affiliates not to be otherwise interested in Project

The Consultants agree that, during the term of this Contract and after its termination, the Consultants and any entity affiliated with the Consultants, as well as any Sub-consultant and any entity affiliated with such Sub-consultant, shall be disqualified from providing goods, works or services (other than the Services and any continuation thereof) for any project resulting from or closely related to the Services.

Prohibition of Conflicting Activities

Neither the Consultants nor their Sub consultants nor the Personnel of either of them shall engage, either directly or indirectly, in any of the following activities:

- (a) during the term of this Contract, any business or professional activities which would conflict with the activities assigned to them under this Contract; or
- (b) after the termination of this Contract, such other activities as may be specified by Employer

3.3 Confidentiality

The Consultants, their Sub-consultants and the Personnel of either of them shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract or the Employer's business or operations without the prior written consent of the Employer.

3.4 Liability of the Consultants

The Consultants' liability under this Contract shall be as provided by the Applicable Law.

3.5 Insurance to be taken out by the Consultants

The Consultants (i) shall take out and maintain, and shall cause any Sub consultants to take out and maintain, at their (or the Sub consultants', as the case may be) own cost but on terms and conditions approved by the Employer, insurance against the risks, and for the coverage's, as necessary and (ii) at the Employer's request, shall provide evidence to the Employer showing that such insurance has been taken out and maintained and that the current premiums there for have been paid.

3.6 Accounting, Inspection and Auditing

The Consultants (i) shall keep accurate and systematic accounts and records in respect of the Services hereunder, in accordance with internationally accepted accounting principles and in such form and detail as will clearly identify all relevant time charges and cost, and the bases thereof (including the bases of the Consultants' costs and charges), and (ii) shall permit the Employer or its designated representative periodically, and up to one year from the expiration or termination of this Contact, to inspect the same and make copies thereof as well as to have them audited by auditors appointed by the Employer.

3.7 Consultants' Actions requiring Employer's prior Approval

The Consultants shall obtain the Employer's prior approval in writing before taking any of the following actions:

- (a) appointing such members of the Personnel as are listed in Appendix B;
- (b) entering into a subcontract for the performance of any part of the Services, it being understood (i)that the selection of the Sub-consultant and the terms and conditions of the subcontract shall have been approved in writing by the Employer prior to the execution of the subcontract, and (ii) that the Consultants shall remain fully liable for the performance of the Services by the Sub-consultant and its Personnel pursuant to this Contract;

3.8 Reporting Obligations

The Consultants shall submit to the Employer the reports and documents specified in **Appendix A/E** hereto, in the form, in the numbers and within the time periods set forth in the said Appendix.

3.9 Documents prepared by the Consultants to be the Property of the Employer

All plans, drawings, specifications, designs, reports and other documents prepared by the Consultants in performing the Services shall become and remain the property of the Employer, and the Consultants shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Employer, together with a detailed inventory thereof. The Consultants may retain a copy of such documents.

3.10 Equipment and Materials furnished by the Employer

If the Equipment and materials made available to the Consultants by the Employer, or purchased by the Consultants with funds provided by the Employer, shall be the property of the Employer and shall be marked accordingly. Upon termination or expiration of this Contract, the Consultants shall make available to the Employer an inventory of such equipment and materials and shall dispose of such equipment and materials in accordance with the Employer's instructions. While in possession of such equipment and materials, the Consultants, unless otherwise instructed by the Employer in writing, shall insure them in an amount equal to their full replacement value.

4. CONSULTANTS' PERSONNEL

4.1 General

The Consultants shall employ and provide such qualified and experienced Personnel as are required to carry out the Services.

4.2 **Description of Personnel**

- (a) The titles, agreed job descriptions, minimum qualification and estimated periods of minimum engagement of the key professionals is to be adhered.
- (b) If required to comply with the provisions of Clause 3.1.1 of this Contract, adjustments with respect to the estimated periods of engagement of Key personnel is to be

increased. The consultant will have to take into account the requirement of personnel and other relevant infrastructure required for timely completion of the project. Based on assessment of required professional, equipments and other infrastructure the consultant should quote the rates

(c) If additional work is required beyond the scope of the Services specified in TOR, the remuneration shall be fixed on mutually agreed terms.

4.3 Approval of Personnel

In respect of Key Personnel, which the Consultants propose to use in the carrying out of the Services, the Consultants shall submit to the Employer for review and approval a copy of their biographical data. If the Employer does not object in writing (stating the reasons for the objection) within twenty-one (21) calendar days from the date of receipt of such biographical data, such Key Personnel shall be deemed to have been approved by the Employer.

4.4 Working Hours, Overtime, Leave, etc.

Working hours and holidays for Key Professional shall be as per labour laws.

4.5 Removal and/or Replacement of Personnel

- (a) Once approved by the Employer no changes shall be made in the Key Personnels. If, for any reason beyond the reasonable control of the Consultants, it becomes necessary to replace any of the key Personnel, the Consultants shall forthwith provide as a replacement a person of equivalent or better qualifications.
- (b) If the Employer (i) finds that any of the key Personnel has committed serious misconduct or has been charged with having committed a criminal action, or (ii) has reasonable cause to be dissatisfied with the performance of any of the key Personnel, then the Consultants shall, at the Employer's written request specifying the grounds therefore, forthwith provide as a replacement of the person with qualifications and experience acceptable to the Employer. Any such replacement shall be at risk & cost of the consultant.

4.6 **Team Leader.**

The Consultants shall ensure that at all times during the Consultants' performance of the Services a Team Leader, acceptable to the Employer, shall be in charge of the performance of such Services.

5. OBLIGATION OF THE EMPLOYER

5.1 Assistance and Exemptions

The Employer shall use its best efforts to ensure that the EMPLOYER shall:

- assist the Consultants, Sub consultants and Personnel in arranging work permits and such other documents as shall be necessary to enable the Consultants, Sub consultants or Personnel to perform the Services;
- (b) assist for the Personnel and, if appropriate, their eligible dependents to be provided promptly with all supporting papers for necessary entry and exit visas, residence permits, exchange permits and any other documents required for their stay in India;
- (c) facilitate clearance through customs of any property required for the Services;
- (d) issue to officials, agents and representatives of the agency all such instructions as may be necessary or appropriate for the prompt and effective implementation of the Services;

5.2 Access to Land

The Employer warrants that the Consultants shall have, free of charge, unimpeded access to all land in respect of which access is required for the performance of the Services. The Employer will be responsible for any damage to such land or any property thereon resulting from such access and will indemnify the Consultants and each of the Personnel in respect of liability for any such damage, unless such damage is caused by the default or negligence of the Consultants or any Sub consultants or the Personnel of either of them.

5.3 Change in the Applicable Law

The consultant shall bear all financial implication, if, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties.

5.4 Services, Facilities and Property of the Employer

The Employer shall make available to the Consultants and the Personnel, for the purposes of the Services and free of any charge, the services and facilities as mentioned in clause 5.1 and 5.2.

5.5 Payment

In consideration of the Services performed by the Consultants under this Contract, the Employer shall make to the Consultants such payments and in such manner as is provided by Clause 6 of this Contract.

6. PAYMENT TO THE CONSULTANTS

- 6.1 The payment shall be made as per Clause 12 mentioned in TOR.
- The payment shall be made through A/c payee cheque, payable at Patna, in Indian Rupees.

6.3 Mode of Billing and Payment

Billing and payments in respect of the Services shall be made as follows:-

- (a) The Employer shall cause to be paid to the Consultants an advance and as otherwise set forth below. The advance payment will be due after provision by the Consultants to the Employer of a bank guarantee of any nationalized bank acceptable of value of 10% of total contract value. Such bank guarantee (i) to remain effective until the advance payment has been fully set off and ii) in such form as the Employer shall have approved in writing.
- (b) Payment Schedule: The Consultant will be paid stage-wise as a percentage of the contract value as per the schedule given in Terms of Reference
- (c) No payment shall become eligible for the next stage till the consultant completes to the satisfaction of the Employer the work pertaining to the preceding stage.
- (d) The Employer shall cause the payment of the Consultants in Para 6.4 (b) above as given in schedule of payment within thirty (30) days after the receipt by the Employer of bills.
- (e) The final payment under this Clause shall be made only after the final report and a final statement, identified as such, shall have been submitted by the Consultants and approved as satisfactory by the Employer. The Services shall be deemed completed and finally accepted by the Employer and the final report and final statement shall be deemed approved by the Employer as satisfactory ninety (90) calendar days after receipt of the final report and final statement by the Employer unless the Employer, within such ninety (90) day period, gives written notice to the Consultants specifying in detail deficiencies in the Services, the final report or final statement. The Consultants shall thereupon promptly make any necessary corrections, and upon completion of such corrections, the foregoing process shall be repeated. Any amount which the Employer has paid or caused to be paid in accordance with this Clause in excess of the amounts actually payable in accordance

with the provisions of this Contract shall be reimbursed by the Consultants to the Employer within thirty (30) days after receipt by the Consultants of notice thereof. Any such claim by the Employer for reimbursement must be made within twelve (12) calendar months after receipt by the Employer of a final report and a final statement approved by the Employer in accordance with the above.

7. Responsibility for Accuracy of Project Documents

7.1 General

- 7.1.1 The Consultant shall be responsible for accuracy of the data collected, by him directly or procured from other agencies/authorities, the designs, drawings, estimates and all other details prepared by him as part of these services. He shall indemnify the Authority against any inaccuracy in the work which might surface during implementation of the project. The Consultant will also be responsible for correcting, at his own cost and risk, the drawings including any re survey / investigations and correcting layout etc. if required during the execution of the Services
- 7.1.2 The Consultant shall be fully responsible for the accuracy of design and drawings. All the designs and drawings for structures including all their components shall be fully checked by a Senior Engineer after completion of the designs. All structural drawings for shall be duly signed by the (a) Designer, (b) Senior Checking Engineer, and (c) Senior Structure Expert. The designs and drawings not signed by the three persons mentioned above shall not be accepted. The Consultant shall indemnify the Employer against any inaccuracy / deficiency in the designs and drawings of the structures noticed during the construction and even thereafter and the Employer shall bear no responsibility for the accuracy of the designs and drawings submitted by the Consultants.
- 7.1.3 The survey control points established by the Consultant shall be protected by the Consultants till the completion of the Consultancy Services.

7.2. Retention Money

An amount equivalent to 10% of the contract value shall be retained at the end of the contract in the form of performance BG for accuracy of design and quantities submitted and the same will be released after the completion of civil contract works or after 24 months whichever is earlier.

7.3. Penalty

In case of delay in completion of services, a penalty equal to 0.02% of the contract price per day for delay up to first 90 days and 0.05% of the contract price per day for subsequent delay subject to a maximum 10% of the contract value will be imposed and shall be recovered from payments due/performance security. However in case of delay due to reasons beyond the control of the consultant, suitable extension of time will be granted.

7.4. ACTION FOR DEFICIENCY IN SERVICES

7.4.1 Consultants liability towards the Employer

Consultant shall be liable to indemnify the Employer for any direct loss or damage accrued or likely to accrue due to deficiency in service rendered by him up to 25% of the consulting fee.

7.4.2 Warning / Debarring

In addition to the penalty as mentioned in Clause 7.3, warning may be issued to the erring consultants for minor deficiencies. In the case of major deficiencies in the Detailed Project Report involving time and cost overrun and adverse effect on reputation of EMPLOYER, other penal action including debarring for certain period may also be initiated as per policy of EMPLOYER.

8. FAIRNESS AND GOOD FAITH

8.1 Good Faith

The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.

8.2 Operation of the Contract

The Parties recognize that it is impractical in this Contract to provide for every contingency which may arise during the life of the Contract, and the Parties hereby agree that it is their intention that this Contract shall operate fairly as between them, and without detriment to the interest of either of them, and that, if during the term of this Contract either Party believes that this Contract is operating unfairly, the Parties will use their best efforts to agree on such action as may be necessary to remove the cause or causes of such unfairness, but no failure to agree on any action pursuant to this Clause shall give rise to a dispute subject to arbitration in accordance with Clause 9 hereof.

9. SETTLEMENT OF DISPUTES

9.1 Amicable Settlement

The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or the interpretation thereof.

9.2 Dispute Settlement

In case the dispute is not resolved amicably, the matter shall be settled by the arbitrator under the Bihar Public Works Contract Disputes Arbitration Tribunal Act, 2008 and its decision would be final and binding on both the parties. The Bihar Public Works Contract Disputes Arbitration Tribunal Act, 2008 and the rules made there under and any statutory modification or re-enactments thereof, shall apply to the arbitration proceedings. The venue of the arbitration shall be Patna, Bihar. Pending the submission of and/or decision on a dispute, difference or claim or until the arbitral award is published; the Consultant shall continue to perform all its obligations under Agreement without prejudice of final adjustment in accordance with such award.

10. LEGAL JURISDICTION

Any legal dispute arising out of the Consultancy Agreement shall be settled at the Court of Law located at Patna.

11. GOVERNING LAW

This Agreement shall be governed by and constructed in accordance with the laws of India. Neither Client nor the Consultant shall have the right to transfer or assign their responsibilities resulting from this Agreement

12. AMENDMENTS AND MODIFICATIONS

This Agreement constitutes the entire understanding between both the parties relating to the Consultancy and it shall not be amended or modified except as agreed in writing by both the Parties

13. Price Adjustment

No Price Adjustment shall be allowed.

Section 3: SPECIAL CONDITIONS OF CONTRACT

Number of GC Clause								
A.	A. Amendments of, and Supplements to, Clauses in the General Conditions							
1.6.1	The addresses are:							
For the	Client:	Managing Director						
		Bihar Urban Infrastructure Development Corporation						
		#West Boring Canal Road, Rajapul, Patna -800 001 Tel: 0612-2558412 Web- www.buidco.in Email:- mdbuidco@gmail.com						
	For the Consultant:							
	Attention:							
1.6.2	Notice will be deemed to	be effective as follows:						

- (a) in the case of personal delivery or registered mail or courier, on delivery;
- (b) In the case of telegrams, 24 hours following confirmed transmission; and
- (c) In the case of facsimiles, 24 hours following confirmed transmission.
- **1.6.2.2** The time period shall be "One month" or such other time period as the parties may agree in writing.

ANNEXURE-1(JV)

Format for Joint Venture Agreement

If the application is made by a joint venture of one or two, the evidence of clear mandate (i.e., in the form of respective Board Resolution duly authenticated by competent authority) by such two firms willing to form joint venture among themselves for the specified projects should accompany duly recognizing their respective authorized signatories signing for and on behalf of the respective firms for the purpose of forming the Joint Venture. A certified copy of power of attorney to the authorized representatives, signed by legally authorized signatories of the all the firms of the joint venture shall accompany the application. The JV Agreement shall need to be submitted consisting but not limited to the following provision:-

- a. Name, style and project (s) specific JV with head office address.
- b. Extent (or Equity) of participation of each party in the JV.
- c. Commitment of each party to furnish the Bond money (i.e., Bid security, performance security etc.) in proportion to his participation in the JV.
- d. Responsibility of each partner of JV (in terms of physical and Financial involvement)
- e. Provision for cure in case of non-performance of responsibility by any party of the JV.
- f. Provision that NEITHER party of the JV shall be allowed to sign, pledge, sell or otherwise dispose all or part of its respective interests in JV to any party including existing partner (s) of the JV. The Employer derives right for any consequent action (including blacklisting) against any or all JV partners in case of any breach in this regard.
- g. Management Structure of JV with details.
- h. Lead partner to be identified who shall be empowered by the JV to incur liabilities on behalf of JV.
- i. Parties/firms committing themselves to the Employer for jointly and severally responsible for the intended works.
- j. The power of Attorney shall be duly notarized.
- k. Any relevant detail.

APPENDIX-I

FORM OF PERFORMANCE SECURITY

Ref: Bank Guarantee: Date:
To, Managing Director Bihar Urban Infrastructure Development Corporation #West Boring Canal Road, Rajapul, Patna -800 001
Dear Sir/Madam,
In consideration of "Managing Director, Bihar Urban Infrastructure Development Corporation" (hereinafter referred as the "Employer", which expression shall, unless repugnant to the context of meaning thereof include it successors, administrators and assigns) having awarded to M/s.
we (Name of the Bank) having its Head Office at (hereinafte referred to as the Bank), which expression shall, unless repugnant to the context or meaning thereof include its successors, administrators executors and assigns) do hereby guarantee and undertake to pay the Employer immediately on demand any or, all amount payable by the Consultant to the extens of as aforesaid at any time upto without any demur reservation, contest, recourse or protest and/or without any reference to the consultant. Any such demand made by the Employer on the Bank shall be conclusive and binding notwithstanding any difference between the Employer and the Consultant or any dispute pending before any Court Tribunal, Arbitrator or any other authority. We agree that the Guarantee herein contained shall be irrevocable and shall continue to be enforceable till the Employer discharges this guarantee.
The Employer shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee, from time to time to vary it or to extend the time for performance of the contract by the Consultant. The Employer shall have the fullest liberty without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Employer and to exercise the same at any time in any manner, and either to enforce or to forebear to enforce any covenants, contained or implied, in the Contract between the Employer and the Consultant any other course or remedy or security available to the Employer. The bank shall not be relieved of its obligations under these presents by any exercise by the Employer or its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Employer or any other indulgence shown by the Employer or by any other matter or thing whatsoever which under law would but for this provision have the effect of relieving the Bank.

BUIDCo. Page - 86 Bidder.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee

against the Bank as a principal debtor, in the first instance without proceeding against the Consultant and notwithstanding any security or other guarantee that the Employer may have in relation to the

Consultant's liabiliti	es.							
Notwithstanding any	thing contained herein a	above our liability und	er this guarant	ee is limited to				
and it shall	and it shall remain in force upto and including @ and shall be							
extended from time t	o time for such period (no	t exceeding one year),	as may be desir					
	on whose behalf this gua	rantee has been give	n.					
Dated this	day of	2019 at						
WITNESS								
(signature)		(signature)						
	(Na	ame)						
(Official Address) De	signation (with Bank star	mp) Attorney as per P	ower of					
Attorney No								
Dated								
Strike out whichever	is not applicable.							
	twenty four months afte extendable if requested		ncement of se	rvices. However				
Note 1: The stamp p "Bank Guarantee".	apers of appropriate valu	ue shall be purchased	in the name of	bank that issues the				
Note 2: The Bank G	uarantee will be accepte	d which is issued by	any Scheduled	Commercial Bank				

in India having its office at Patna

Section 4: TERMS OF REFERENCE

[As per RFP]

Section 5: SCHEDULE OF PRICES

[As per RFP]

Section 6: MINUTES OF CONTRACT NEGOTIATIONS

APPENDICES