

Bidding Document
for
Procurement of
Works for Improvement & Up-gradation of
8 Road Intersections (Phase – II), in
Varanasi

Issued on: 24th March, 2018

RFP No. 09/VISCL/SMART JUNCTIONS/MAR-18

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SECTION 1

- **LIST OF IMPORTANT DATES**
- **PRESS NOTICE**
- **NOTICE INVITING TENDERS**

SECTION I

List of Important Dates of Bids for Improvement & Up-gradation of 8 Road Intersections (Phase – II),
in Varanasi

1.	Name of Work:	Improvement & Up-gradation of 8 Road Intersections (Phase – II), in Varanasi
2.	Completion Period for construction:	3 months
3.	Date of Issue of Notice Inviting Bid:	22/03/2018
4.	Period and Site for downloading of Bidding Documents:	From 24/03/2018 at 15:00 Hrs. to 16/04/2018 till 17:00 Hrs. website – http://etender.up.nic.in
5.	Date, Time and Place of Pre-bid Meeting:	03/04/2018 at 15:00 Hrs. in the Conference Hall, Ground Floor, Nagar Nigam, Sigra, Varanasi
6.	Deadline for Receiving Bids:	Date: 16/04/2018 Time: 17:00 Hrs.
7.	Time and Date for opening Technical Bid/Bids:	Date: 18/04/2018 Time: 15:00 Hrs.
8.	Date of opening of Financial Bid	To be notified later
9.	Place of opening bids	Conference hall, Ground Floor -Nagar Nigam Sigra, Varanasi
10.	Last Date of Bid Validity	120 days from the last date of submission of bid
11.	Officer Inviting Bids	Chief Executive Officer, Varanasi Smart City Limited

Press Notice

Varanasi Smart City Limited (VSCL)
O/o Municipal Corporation Varanasi (MCV)


Ref. No. 22/VSC-L-MC/17-18.....

Dated: 22/03/2018

1. The Chief Executive Officer (CEO), Varanasi Smart Cities Limited (VSCL) invites the percentage rate bids for Improvement and Up-gradation of 8 Road Intersection (Phase – II), in Varanasi including 5 years O & M from the eligible and approved Contractors registered with UP PWD or any other Central or State Government Organization, class A and B as the case may be. The Bidders are requested to submit bids for any or all of the works. Bidders are advised to note the minimum qualification criteria specified in Clause 4 of the Instructions to Bidders to qualify for the award of the contract.
2. Time allowed for completion of each work is 3 Months, including rainy season.
3. The bids shall remain valid for acceptance for a period of 120 (one hundred and twenty) days from the last date of submission of bids. Bids once submitted cannot be withdrawn.
4. The Bidding document may be downloaded from the website <http://etender.up.nic.in> from 24/03/2018 from 15.00 Hrs. to 16/04/2018 till 17.00 Hrs. for a non-refundable fee of Rs. 15,000.00 (Rupees fifteen thousand only) for tender cost per set per work as indicated, in the form of Demand Draft/Bankers Cheque drawn on any Scheduled bank in favor of “Chief Executive Officer, Varanasi Smart Cities Limited” payable at Varanasi.
5. Bids must be uploaded on the website of <http://etender.up.nic.in> on or before 17.00 Hrs. on 16/04/2018 and the technical bids will be opened on 18/04/2018 at 15.00 Hrs., in the Conference Hall, Ground Floor, Municipal Corporation, Sagra, Varanasi in the presence of the bidders who wish to attend. If the office happens to be closed on the date of receipt or opening of the bids as specified, the bids will be received and opened on the next working day, respectively, at the same time and venue, and validity of bid will be considered from the original date. The date and time of opening of the financial bid shall be notified by a notice displayed in the office of the CEO, VSCL and by individual notice to the eligible and qualified bidders. The Financial bids shall be opened in the office of the CEO, VSCL, in the presence of the bidders who wish to attend.
6. A pre-bid meeting will be held on 03/04/2018 at 15.00 Hrs. in the Conference Hall, Ground Floor, Municipal Corporation, Sagra, Varanasi to clarify the issues and to answer questions on any matter that may be raised at that stage as stated in Clause 9.2 of ‘Instructions to Bidders’ of the bidding document.

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

7. Bids must be **accompanied with security of the amount specified for the work** in the table. Bid security will have to be in any one of the forms as specified in the bidding document and shall be valid for 45 days beyond the validity of the bid.
8. A bidder shall not be permitted to bid for works in the Circle responsible for award and execution of contracts in which his or his spouse's near relatives (defined as first blood relations, and their spouses) is posted as Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive).
9. No Engineer of gazetted rank or other Gazetted officer employed in Engineering or Administrative duties in an Engineering Department of the State / Central Government is allowed to work as a Contractor for a period of two years after his retirement from Government service, without Government permission. This contract is liable to be cancelled if either the Contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government as aforesaid before submission of the tender or engagement in the Contractor's service.
10. Any bidder who is having criminal record is not allowed to participate in the bidding process.
11. Any bidder who is registered with the state Bar Council is not allowed to participate in the bidding process.
12. Each bidder is required to furnish an affidavit on a non-judicial stamp paper of Rs. 100/- giving all information on prescribed proforma required for evaluation of the bidding capacity of the bidder.


 
CEO/Municipal Commissioner
VSCL/MCV

O/o Municipal Corporation, Varanasi

NOTICE INVITING TENDER (e-tender)

VARANASI SMART CITY LTD. (VSCL)

O/o Municipal Corporation, Varanasi

NIT No.: 10/VSCL/TENDER/2017-18

Dated: 22/03/2018

1. The Chief Executive Officer (CEO) Varanasi Smart City Ltd. (VSCL) invites sealed tender for the following works:-

Sl. No.	Name of the Projects	Tender Fee non-refundable (Rs.)	Earnest Money Deposit (Rs.)
(i)	Improvement and Up-gradation of 8 Road Intersection (Phase – II), in Varanasi (including 5 years O&M) RFP No. 09/VSCL/SMART JUNCTIONS/MAR-18	15,000/-	20.00 Lacs.
(ii)	Urban Revitalization of Roads and Junction Improvement Project in ABD area (Phase-I), Varanasi RFP No. 10/VSCL/SMART R&J/MAR-18	25,000/-	75.00 Lacs.

2. The tender documents can be downloaded from the e-tendering website [-http://etender.up.nic.in](http://etender.up.nic.in) from 24/03/2018 from 15:00 Hrs. to 16/04/2018 till 17:00 Hrs.
3. Bidders are requested to submit the Tender fee receipt in the office of Chief Executive Officer, Varanasi Smart City Ltd. (VSCL) in the form of DD/Bankers Cheque issued in favor of “Chief Executive Officer, Varanasi Smart City Limited” payable at Varanasi.
4. Bidders are requested to submit the Earnest Money Deposit (EMD) receipt in the office of Chief Executive Officer, Varanasi Smart City Ltd. (VSCL), in the form as prescribed in the tender document issued in favor of “Chief Executive Officer, Varanasi Smart City Limited” payable at Varanasi.
5. The last date for pre-bid queries is 31/03/2018 till 17:00 Hrs. through e-mail on ceovscl@gmail.com and Pre-bid meeting will be held on 03/04/2018 at 15:00 Hrs. in the Conference Hall, Ground Floor, Municipal Corporation, Sigra, Varanasi.
6. The deadline of bid-submission is 17:00 Hrs. on 16/04/2018 and technical bid opening is on 18/04/2018 at 15:00 Hrs.
7. For more details contact Chief Executive Officer, VSCL address- CEO, VSCL Municipal Corporation Varanasi. Contact no. 0542-2221702 and through mail at ceovscl@gmail.com


CEO/Municipal Commissioner
VSCL/MCV

O/o Municipal Corporation, Varanasi

Section 2: Instructions to Bidders

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Instruction to Bidders (ITB)

A. General

1. Scope of Bid

- 1.1. The Employer as defined in the Appendix to ITB invites bids for the improvement and up-gradation of 8 Road Intersections (Phase – II), (Including 5 years of O & M) as described in these documents and referred to as “the works”. The name and identification number of the works is provided in the Appendix to ITB. The bidders may submit bids for any or all of the works detailed in the table given in the Notice Inviting Tender.
- 1.2. The successful Bidder will be expected to complete the Works by the **Intended Completion Date specified in the Part I General Conditions of Contract.**
- 1.3. Throughout these documents, the terms “bid” and “tender” and their derivatives (bidder/ tenderer, bid/ tender, bidding/tendering, etc.) are synonymous.

2. Source of Funds

- 2.1. The Varanasi Smart Cities Ltd. as defined in the Appendix to ITB has decided to undertake the works of construction of roads
- 2.2. The Government of the State has decided to provide funds for the improvement and 8 Road Intersections (Phase – II).

3. Eligible Bidders

- 3.1. This Invitation for Bids is open to all bidders as defined in the Appendix to ITB.
- 3.2. Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices by the Central Government, the State Government or any public undertaking, autonomous body, authority by whatever name called under the Central or the State Government.
- 3.3. Any bidders having criminal record is not allowed to participate in the bidding process. Any person who is having criminal cases against him or involved in the organized crime or gangster activities or Mafia or Goonda or Anti-social activity are strictly prohibited to participate in the bidding process. If it is established that any bidder has criminal record, his bid shall be automatically cancelled.
- 3.4. The bidder has to produced character certificate, Solvency certificate, self-decoration affidavit (on the prescribed proforma which is attached with the bid document) etc., issued by the competent authority in original with bid document.

- 3.5. Any bidder who is an Advocate and Registered with any State Bar Council Shall not be allowed to participate in the bidding. If it is established that the contractor is registered with the state bar council, his bid shall be automatically cancelled.

4. Qualification of the Bidder

- 4.1. All bidders shall provide in Section 3, Forms of Bid and Qualification information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.
- 4.2. All bidders shall include the following information and documents with their bids in Section 3, Qualification Information unless otherwise stated in the Appendix to ITB:
- a) Copies of original documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the Bid to commit the Bidder;
 - b) Total monetary value of civil construction works performed for each of the last five years;
 - c) Experience in works of a similar nature i.e. Civil work related to Road /Street/ Junction / Corridor Improvement Work on Urban Roads completed and size for each of the last five years, and details of works in progress or contractually committed with certificates from the concerned officer of the rank of Executive Engineer or equivalent;
 - d) Evidence of ownership of major items of construction equipment named in Clause 4.4 b (b) (i) of ITB or evidence of arrangement of possessing them on hire/lease/buying as defined therein.
 - e) Details of the technical personnel proposed to be employed for the Contract having the qualifications defined in Clause 4.4 b (b) (ii) of ITB for the construction.
 - f) Reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past three years;
 - g) an undertaking that the bidder will be able to invest a minimum of cash up to the percentage (defined in the Appendix to ITB) of the contract price of works, during the implementation of the works;
 - h) Evidence of access to line(s) of credit and availability of other financial resources/ facilities (10 percent of the contract value) certified by banker (the certificate being not more than 3 months old.)
 - i) Authority to seek references from the Bidder's bankers;
 - j) Information regarding any litigation or arbitration during the last five years in which the Bidder is involved, the parties concerned, the disputed amount, and the matter;
 - k) Proposal for subcontracting the components of the works for construction/ Upgradation aggregating not more than 25% of the contract price: - and
 - l) The proposed methodology and program of construction, backed with equipment and material planning and deployment, duly supported with broad calculations and Quality Management Plan proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications and within the stipulated period of completion.

4.3. Bids from joint venture are allowed.

- a) In the case of a joint venture, all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution. The maximum number of members in a JV are 3 (Three) and the share of the lead member in the JV should be a minimum of 50%.

4.4. A To qualify for award of the Contract, each bidder should have in the last five years:

- a) Achieved in any one year a minimum financial turnover (in all cases of civil engineering construction works only) volume of construction work of at least the amount equal to the estimated cost of works (In case of JV shall be fulfilled by the Lead member). The estimated cost of work is INR 13.80 crores. The turnover will be indexed at the rate of 8 percent for a year.
- b) Satisfactorily completed, as prime Contractor, at least one similar work equal in value to one-third of the estimated cost of work for which the bid is invited, or such higher amount as may be specified in the Appendix to ITB. (In case of JV shall be jointly fulfilled by the JV Members)

4.4. B (a) Each bidder must produce:

- i. The current income-tax clearance certificate;
 - ii. An affidavit that the information furnished with the bid documents is correct in all respects; and
 - iii. Such other certificates as defined in the Appendix to ITB. Failure to produce the certificates shall make the bid non-responsive.
- (b) Each bidder must demonstrate:
- i. Availability for construction work, of the owned, key equipment stated in the Appendix to ITB including equipment required for establishing field laboratory to perform mandatory tests, and those stated in the Appendix to ITB;
 - ii. Availability for construction work of technical personnel as stated in the Appendix to ITB.
 - iii. Liquid assets and /or credit facilities, net of other contractual commitments and exclusive of any advance payments which may be made under the Contract, of not less than the amount specified in the Appendix to ITB;
- (c) The bidder must not have in his employment:
- i. The near relations (defined as first blood relations, and their spouses, of the bidder or the bidder's spouse) of persons listed in the Appendix to ITB.
 - ii. Without Government permission, any person who retired as gazetted officer within the last two years of the rank and from the departments listed in the Appendix to ITB.
- (d) Bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint

Venture Agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed Agreement.

4.4. C To qualify for a package of contracts made up of this and other contracts for which bids are invited in the Notice Inviting Tender, the bidder must demonstrate having experience and resources sufficient to meet the aggregate of the qualifying criteria for the individual contracts.

4.5. Sub-contractors experience and resources shall not be taken into account in determining the bidders compliance with the qualifying criteria except to the extent stated in 4.4 above

4.6. Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity for construction work is equal to or more than the total bid value. The available bid capacity will be calculated as under:

$$\text{Assessed Available Bid capacity} = (A * N * M - B)$$

Where,

A = Maximum value of civil engineering works executed in any one year during the last five years (updated to the price level of the last year at the rate of 8 percent a year) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the works for which bids are invited (period up to 6 months to be taken as half-year and more than 6 months as one year).

M = M is taken 2.5

B = Value, at the current price level, of existing commitments and on-going works to be completed during the period of completion of the works for which bids are invited.

Note:

- i. The statements showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Engineer in charge, not below the rank of an Executive Engineer or equivalent.
- ii. In the case of JV, the value of civil engineering works executed by its members **shall not** be aggregated to determine the value of a works. Instead, each contract performed by each member shall be evaluated separately satisfy the maximum value of a single contract as required in 4.6 above.

4.7. Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

- a) Made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and/or
- b) Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.
- c) Participated in the previous bidding for the same work and had quoted unreasonably high or low bid prices and could not furnish rational justification for it to the Employer.

5. One Bid per Bidder

5.1. Each Bidder shall submit only one Bid for one work. A Bidder who submits more than one Bid will cause the proposals with the Bidder's participation to be disqualified.

6. Cost of Bidding

6.1. The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will, in no case, be responsible or liable for those costs.

7. Site Visit

7.1. The Bidder, at his own cost, responsibility and risk, is encouraged to visit, examine and familiarize himself with the Site of Works and its surroundings including source of earth, water, road aggregates etc. and obtain all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense. He may contact the person whose contact details are given in the Appendix to ITB.

Bidding Documents

8. Content of Bidding Documents

8.1. The set of bidding documents comprises the documents listed below and addenda issued in accordance with Clause 10 of ITB.

1. Notice Inviting Tender
2. Instructions to Bidders
3. Qualification Information
4. Conditions of Contract (Part I General Conditions of Contract, and Contract Data; Part II Special Conditions of Contract)
5. Drawings
6. Bill of Quantities
7. Form of Bid
8. Form of Acceptance,
9. Form of Agreement,
10. Issue of Notice to Proceed with the Work, form of Unconditional Bank Guarantee.

8.2. One set of the bidding documents will be issued to the bidder against the payment.

8.3. The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, bill of quantities, forms and drawings in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk. Pursuant to clause 25 hereof,

bids, which are not substantially responsive to the requirements of the Bid Documents, shall be rejected.

9. Clarification of Bidding Documents and Pre-bid Meeting

- 9.1. A prospective bidder requiring any clarification of the bidding document may notify the employer in writing or by cable (“cable” includes Telex and facsimile) at the employer address indicated in the Notice inviting tenders. The Employer will respond to any request for clarification received earlier than 10 Days prior to the dead line for submission of bid. Copies of the employer’s response will be forwarded to all purchasers of the bidding documents, including a description of the enquiry, but without identifying its source
- 9.2. If a pre-bid meeting is to be held, the bidder or his authorized representative is invited to attend it. Its date, time and address are given in the Appendix to ITB.
- a) The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
 - b) The bidder is requested to submit any questions in writing or by cable so as to reach the Employer not later than one week before the meeting.
 - c) Minutes of the meeting, including the text of the questions raised (without identifying the source of the enquiry) and the responses given will be transmitted without delay to all purchasers of the bidding documents. Any modifications of the bidding documents listed in Clause 8.1 of ITB, which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 10 of ITB and not through the minutes of the pre-bid meeting.
 - d) Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

10. Amendment of Bidding Documents

- 10.1. Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda.
- 10.2. Any addendum thus issued shall be part of the bidding documents and shall be communicated in writing by registered post or by cable to all purchasers of the bidding documents. Prospective bidders shall acknowledge receipt of each addendum by cable to the Employer.
- 10.3. To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer shall extend, as necessary, the deadline for submission of bids, in accordance with Clause 20.2 of ITB.

B. Preparation of Bids

11. Language of Bid

11.1. All documents relating to the Bid shall be in the language specified in the Appendix to ITB.

12. Documents Comprising the Bid

12.1. The Bid submitted by the Bidder shall be in two separate parts:

Part I This shall be named Technical Bid and shall comprise of:

- I. The demand draft for the cost of the bidding documents placed in a separate cover, marked “cost of bidding document”;
- II. Earnest Money in a separate cover marked ‘Earnest Money’;
- III. Authorized Address and contact details of the bidder having the following information:
Address of communication: Telephone No.(s): Office: Mobile No.: Facsimile (Fax) No. : Electronic Mail Identification (E-mail ID):
- IV. Qualification information, supporting documents, affidavit and undertaking as specified in Clause 4 of ITB.
- V. Undertaking that the bid shall remain valid for the period specified in clause 15.1 of ITB.
- VI. Any other information/documents required to be completed and submitted by bidders, as specified in the Appendix to ITB, and
- VII. An affidavit affirming that information he has furnished in the bidding document is correct to the best of his knowledge and belief.

Part II. It shall be named Financial Bid and shall comprise of: (i)

- i. Form of Bid as specified in Section 6;
- ii. Priced bill of quantities for items specified in Section 7;

12.2. Each part shall be separately sealed and marked in accordance with Sealing and Marking instructions in clause 19 of ITB.

12.3. The following documents, which are not submitted with the bid, will be deemed to be part of the bid.

SECTION PARTICULARS

1.	Notice inviting Tender
2.	Instruction to the bidders
3.	Conditions of Contract
4.	Contract Data
5.	Drawings

13. Bid Prices

- 13.1. The Contract shall be for the whole Works (Including 5 years O & M), as described in Clause 1. 1 of ITB, based on the priced Bill of Quantities submitted by the Bidder.
- 13.2. The Bidder shall adopt the Percentage Rate Method as specified in the Appendix to ITB; only the same option is allowed to all the Bidders. Percentage Rate Method requires the bidder to quote a percentage above / below/ at par of the schedule of rates specified in the Appendix to ITB.
- 13.3. All duties, taxes, royalties and other levies payable by the Contractor under the Contract, or for any other cause, **excluding GST**, shall be included in the rates, prices, and total Bid price submitted by the Bidder. For clarity on GST, please refer Clause no. 41, under Section: 4 of this tender document.
- 13.4. The rates and prices quoted by the Bidder shall be fixed for the duration of the Contract and shall not be subject to adjustment.

14. Currencies of Bid

- 14.1. The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees.

15. Bid Validity

- 15.1. Bids shall remain valid for a period of one hundred and twenty days after the deadline date for bid submission specified in Clause 20 of ITB. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.
- 15.2. In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable. A bidder may refuse the request without forfeiting his Earnest Money. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his earnest money for a period of the extension, and in compliance with Clause 16 of ITB in all respects.

16. Earnest Money

- 16.1. The Bidder shall furnish, as part of the Bid, Earnest Money, in the amount specified in the Appendix to ITB.
- 16.2. The Earnest Money shall, at the Bidder's option, be in the form of Fixed Deposit Receipt of a scheduled commercial bank, Post office saving Bank issued in favour of the name given in the

Appendix to ITB. The Fixed Deposit Receipt shall be valid for **six months or more** after the last date of receipt of bids. Other forms of Earnest Money acceptable to the Employer are stated in the Appendix to ITB.

- 16.3. Any bid not accompanied by an acceptable Earnest Money, unless exempted in terms given in the Appendix to ITB, shall be rejected by the Employer as non-responsive.
- 16.4. The Earnest Money of unsuccessful bidders will be returned within 28 days of the end of the Bid validity period specified in Clause 15.1 of ITB.
- 16.5. The Earnest Money of the successful Bidder will be discharged when the Bidder has signed the Agreement and furnished the required Performance Security.
- 16.6. The Earnest Money may be forfeited:
- a) if the Bidder withdraws the Bid after bid opening (technical bid) during the period of Bid validity;
 - b) in the case of a successful Bidder, if the Bidder fails within the specified time limit to
 - i. sign the Agreement; and/or
 - ii. Furnish the required Performance Security.

17. Alternative Proposals by Bidders

- 17.1. Bidders shall submit offers that comply with the requirements of the bidding documents, including the Bill of Quantities and the basic technical design as indicated in the drawings and specifications. Alternative proposals will be rejected as non-responsive.

18. Format and Signing of Bid

- 18.1. The Bidder shall submit one set of the bid comprising of the documents as described in Clause 12 of ITB.
- 18.2. The Bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder, pursuant to Clause 4.2(a) of ITB. All pages of the Bid shall be signed by the person or persons signing the Bid.
- 18.3. The Bid shall contain no overwriting, alterations or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the Bidder, in which case such corrections shall be made by scoring out the cancelled portion, writing the correction and initialing and dating it by the person or persons signing the Bid.

C. Submission of Bids

19. Sealing and Marking of Bids

Note: Following conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.

- 19.1. For participation in e-tendering module of VSCL, it is mandatory for prospective bidders to get registration on website www.etender.up.nic.in. Therefore, it is advised to all prospective bidders to get registration by making on line registration fees payment at the earliest.
- 19.2. **Tender documents can be downloaded from website www.etender.up.nic.in. However, the tender document of those bidders shall be acceptable who have made online payment for the tender documents as per ITB plus both service & gateway charges, without which bids will not be accepted.**
- 19.3. Service and gateway charges shall be borne by the bidders.
- 19.1. As per the directions of the Controller of Certifying Authorities, Ministry of Communication and Information Technology, Government of India, a Class III Digital Certificate shall be required to bid for all tenders solicited electronically. If the bidder does not have such a certificate, it may be obtained from any of the registering authorities or certification authorities mentioned on http://cca.gov.in/cca/?q=licensed_ca.html. **Kindly note that it may take at least three-five business days for the issue of a digital certificate.** Bidders are advised to plan their time accordingly. NNV shall bear no responsibility for accepting bids which are delayed due to non-issuance or delay in issuance of such digital certificate.
- 19.2. If bidder is bidding first time for e-tendering, then it is obligatory on the part of bidder to fulfill all formalities such as registration, obtaining Digital Signature Certificate etc. well in advance.
- 19.3. Bidders are requested to visit our e-tendering website regularly for any clarifications and/or due date extension or corrigendum.
- 19.4. NNV shall not be responsible in any way for delay / difficulties / inaccessibility of the downloading facility from the website for any reason whatsoever.
- 19.5. For any type of clarifications bidders/contractors can visit www.etender.up.nic.in . If clarification is not provided it will be deemed that the provisions of RFP shall prevail.

Part -1 be kept in one sealed envelope in physical form (as well as both the Envelops must be submitted Online, the second envelope (Part-II), refers to financial proposal which has to be submitted online only). This envelope should be properly super scribed that this envelope contains documents as per clause 12.1. This envelope should be submitted physically till date of submission and opening against each bid (as per Key Schedule). Bids received within specified time (e-tender as well as physical submission) shall be

opened only on the date/time specified in presence of the bidders or their authorized representatives, whosoever may be present.

- 19.6. The prospective bidders will upload scanned self-certified copies of requisite documents as required in e-tendering process.
- 19.7. Those physically submitted documents will be acceptable and considered, if, same are uploaded on the website along with the financial proposal. Cognizance of other physically submitted documents (if any) shall not be taken.
- 19.8. The physically submitted envelope of documents will be opened first. The tenders received without pre-requisite earnest money deposit (EMD), tender document fee shall be rejected. The tender documents fees shall not be refunded.
- 19.9. No Proposal will be accepted without valid EMD and Tender Document fee paid Online.
- 19.10. Any mismatch, if found in the documents submitted in physical form and that uploaded online, the documents submitted ONLINE shall be considered final and no justification regarding this shall be entertained.

Part-II (Financial Proposal): - Bidder must submit the financial bid document as per the format given in RFP/available Online and uploaded as per instructions therein. Physical submission of Financial Proposal will not be considered and the proposal will be liable for rejection. The financial proposal of technically qualified bidder shall be opened online at the notified date. The bidder can view the financial proposal/price bid opening date by logging into web-site.

- 19.11. VSCL reserves the right to accept or reject any or all tenders without assigning any reason what so ever.
- 19.12. In case, due date for Physical submission & opening of tender happens to be a holiday, the due date shall be shifted to the next working day for which no prior intimation will be given.
- 19.13. Any change/modifications/alteration in the RFP by the Bidder shall not be allowed and such tender shall be liable for rejection.
- 19.14. For amendment, if any, please visit www.etender.up.nic.in web site regularly. In case of any bid amendment and clarification, the responsibility lies with the bidders to note the same from web site of VSCL. VSCL shall have no responsibility for any delay/omission on part of the bidder.

20. Deadline for Submission of Bids

- 20.1. Complete Bids (including Technical and Financial) must be received by the Employer at the address specified in the Appendix to ITB not later than the date and time indicated in the

Appendix to ITB. In the event of the specified date for the submission of bids being declared a holiday for the Employer, the Bids will be received up to the specified time on the next working day.

- 20.2. The Employer may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 10.3 of ITB, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

21. Late Bids

- 21.1. Any Bid received by the Employer after the deadline prescribed in Clause 20 of ITB will be returned unopened to the Bidder.

D. Bid Opening and Evaluation

22. Bid Opening

- 22.1. The Employer will open the bids received (except those received late) in the presence of the bidders/bidders' representatives who choose to attend at the time, date and place specified in the Appendix to ITB. In the event of the specified date for the submission of bids being declared a holiday for the Employer, the Bids will be opened at the appointed time and location on the next working day.
- 22.2. The envelope containing the technical bid shall be opened. The inner envelope marked "cost of bidding document downloaded from the Internet" will be opened first and if the cost of the bidding documents is not there, or incomplete, the remaining bid documents will not be opened, and bid will be rejected.
- 22.3. In all other cases, the amount of Earnest Money, forms and validity shall be announced. Thereafter, the bidders' names and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening.
- 22.4. The Employer will prepare minutes of the Bid opening, including the information disclosed to those present in accordance with Clause 22.3 of ITB.
- 22.5. Evaluation of the technical bids with respect to bid security, qualification information and other information furnished in Part I of the bid in pursuant to Clause 12.1 of ITB, shall be taken up, and a list will be drawn up of the responsive bids whose financial bids are eligible for consideration.
- 22.6. The Employer shall inform, by telegram or facsimile, the bidders, whose technical bids are found responsive, date, time and place of opening as stated in the Appendix ITB. In the event of the specified date being declared a holiday for the Employer, the bids will be opened at the appointed time and location on the next working day through they or their representative, may attend the meeting of opening of financial bids.
- 22.7. At the time of the opening of the 'Financial Bid', the names of the bidders whose bids were found responsive in accordance with clause 22.5 of ITB will be announced. The financial bids of only these bidders will be opened. The remaining bids will be returned unopened to the bidders. The responsive bidders' names, the Bid prices, the total amount of each bid, and such other details as the Employer may consider appropriate will be announced by the Employer at the time of bid opening. Any Bid price, which is not read out and recorded, will not be taken into account in Bid Evaluation.

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

23. Process to be Confidential

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

24. Clarification of Bids and Contacting the Employer

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

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

25. Examination of Bids and Determination of Responsiveness

25.1. During the detailed evaluation of "Technical Bids", the Employer will determine whether each Bid

- a) meets the eligibility criteria defined in Clauses 3 and 4;
- b) has been properly signed;
- c) is accompanied by the required securities; and
- d) is substantially responsive to the requirements of the bidding documents. During the detailed evaluation of the "Financial Bids", the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications and drawings.

25.2. A substantially responsive "Financial Bid" is one that conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one

- a) which affects in any substantial way the scope, quality, or performance of the Works;
- b) which limits in any substantial way, inconsistent with the bidding documents, the Employer's rights or the Bidder's obligations under the Contract; or
- c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

25.3. If a "Financial Bid" is not substantially responsive, it will be rejected by the Employer, and

may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

26. Correction of Errors

- 26.1. Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:
- a) Where there is a discrepancy between the rates in figures and in words, the rate in words will govern; and
 - b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.
- 26.2. The amount stated in the Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, the Bid will be rejected, and the Earnest money shall be forfeited in accordance with Clause 16.6 of ITB

27. Evaluation and Comparison of Bids

- 27.1. The Employer will evaluate and compare only the bids determined to be substantially responsive in accordance with Clause 25 of ITB.
- 27.2. In evaluating the bids, the Employer will determine for each Bid the evaluated Bid price by adjusting the Bid price by making correction, if any, for errors pursuant to Clause 26 of ITB.
- 27.3. If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of work to be performed under the contract, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the performance security set forth in Clause 32 of ITB be increased at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract. The amount of the increased performance security shall be decided at the sole discretion of the Employer, which shall be final, binding and conclusive on the bidder.
- 27.4. If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of routine maintenance of works to be performed for five years under the contract, the Employer may require the Bidder to produce detailed price analyses for routine maintenance. After its evaluation, the Employer may require that the amount of the set forth in Clause 32 be increased at the expense of the successful Bidder to a level sufficient to protect

the Employer against financial loss in the event of default of the successful Bidder under the Contract. The amount of the increased performance security shall be decided at the sole discretion of the Employer, which shall be final, binding and conclusive on the bidder.

28. Price Preference

28.1. There will be no price preference to any bidder.

E. Award of Contract

29. Award Criteria

- 29.1. Subject to Clause 31 of ITB, the Employer will award the Contract to the Bidder whose Bid has been determined:
- a) To be substantially responsive to the bidding documents and who has offered the lowest evaluated Bid price, provided that such Bidder has been determined to be (i) eligible in accordance with the provisions of Clause 3 of ITB, and (ii) qualified in accordance with the provisions of Clause 4 of ITB; and
 - b) To be within the available bid capacity adjusted to account for his bid price which is evaluated the lowest in any of the packages opened earlier than the one under consideration.

30. Employer's Right to Accept any Bid and to Reject any or all Bids

- 30.1. Notwithstanding Clause 29 above, the Employer reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Employer's action.

31. Notification of Award and Signing of Agreement

- 31.1. The bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the Part I General Conditions of Contract called the "Letter of Acceptance") will state the sum that the Employer will pay to the Contractor in consideration of the execution, completion by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").
- 31.2. The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause 32.
- 31.3. The Agreement will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the Employer and the successful Bidder after the performance security is furnished.
- 31.4. Upon the furnishing by the successful Bidder of the Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

32. Performance Security

- 32.1. Within 10 (ten) days after receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Employer a **Performance Security of five percent of the Contract Price**, for the period of one years and the time for completion of works plus additional security for unbalanced Bids in accordance with Clauses 27.3 and 27.4 of ITB and Clause 46 Part I General Conditions of Contract and sign the contract.
- 32.2. The performance security shall be either in the form of a Bank Guarantee or fixed deposit Receipts, in favour of CEO, VSCL payable at Varanasi, U.P., from a Scheduled Commercial Bank.
- 32.3. Failure of the successful Bidder to comply with the requirements of Clause 32.1 shall constitutes sufficient grounds for cancellation of the award and forfeiture of the Earnest Money. He will also be debarred from participating future bids under U.P. P.W.D. for one year.

33. Advances

- 33.1. The employer will provide mobilization advances and advance against security of equipment as provided in Part I General Condition of Contract.

34. Corrupt or Fraudulent Practices

- 34.1. The Employer requires the bidders/Contractors to strictly observe the laws against fraud and corruption in force in India, namely, Prevention of Corruption Act, 1988.

Appendix to Invitation To Bidders (ITB)

<i>Instructions to Bidders Clause Reference</i>																															
(1.1)	The Employer is Varanasi Smart Cities Limited (VSCL) Represented by Chief Executive Officer (CEO)																														
(1.1)	The work is Improvement and Up-gradation of 8 Road Intersections (Phase-II), in Varanasi (including 5 years O&M)																														
(2.1)	The State is Uttar Pradesh																														
(3.1)	The eligible bidders are: Contractors registered with – UP PWD in class ‘A’ or ‘B’ as the case may be and/or any State or Central Govt. Organization.																														
(4.2) (g)	The percentage is Ten																														
(4.4 a) (b)	One Third of the estimated cost of works																														
(4.4 b) (a) (iii)	Other certificates required with the bid are: As per ITB																														
(4.4 b) (b) (i)	<p>The key equipment’s for junction improvement works and field testing laboratory are:</p> <p>FOR JUNCTION IMPROVEMENT WORKS</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Equipment Type and Characteristics</th> <th>Minimum Number required</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Thermoplastic paint laying machine along with all operational appurtenances</td> <td>2</td> </tr> <tr> <td>2</td> <td>Power Drill (As per requirement)</td> <td>2</td> </tr> <tr> <td>3</td> <td>Tractor Trolley</td> <td>2</td> </tr> <tr> <td>4</td> <td>Batch type Hot Mix Plant with electronic controls</td> <td>1</td> </tr> <tr> <td>5</td> <td>Paver Finisher with Electronic Sensor</td> <td>1</td> </tr> <tr> <td>6</td> <td>Tippers</td> <td>4</td> </tr> <tr> <td>7</td> <td>Vibratory/Smooth/PT Roller</td> <td>2</td> </tr> <tr> <td>8</td> <td>Wet Mix Plant having suitable capacity</td> <td>1</td> </tr> <tr> <td>9</td> <td>Bitumen Sprayer</td> <td>2</td> </tr> </tbody> </table>	S. No.	Equipment Type and Characteristics	Minimum Number required	1	Thermoplastic paint laying machine along with all operational appurtenances	2	2	Power Drill (As per requirement)	2	3	Tractor Trolley	2	4	Batch type Hot Mix Plant with electronic controls	1	5	Paver Finisher with Electronic Sensor	1	6	Tippers	4	7	Vibratory/Smooth/PT Roller	2	8	Wet Mix Plant having suitable capacity	1	9	Bitumen Sprayer	2
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9	Bitumen Sprayer	2																													
	<p>FOR FIELD TESTING LABORATORY</p> <p><i>All equipment should be provided at site lab and central lab as per SP-20- 2002 I.MORTH / UP P.W.D.</i></p>																														
(4.4 b) (b) (ii)	The Number of Technical personnel, Qualifications and Experience will be																														

	as follows:																								
	<table border="1"> <thead> <tr> <th>S.No.</th> <th>Position</th> <th>Total Experience (years)</th> <th>In Similar Works Experience (years)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Project Manager (B.E./B. Tech in Civil Engg. or equivalent)</td> <td>12</td> <td>6</td> </tr> <tr> <td>2</td> <td>Architect/Urban planner</td> <td>10</td> <td>5</td> </tr> <tr> <td>3</td> <td>Road Safety Expert (certificate of relevant work experience to be produced)</td> <td>8</td> <td>4</td> </tr> <tr> <td>4</td> <td>Site Engineer (Diploma in Civil Engineering)</td> <td>8</td> <td>4</td> </tr> <tr> <td>5</td> <td>Surveyor (ITI/Diploma)</td> <td>8</td> <td>4</td> </tr> </tbody> </table> <p>To ensure employment of Technical Personnel, the contractor would require giving the proof of payment of their salaries/ Wages by Cheque/ Demand Draft.</p>	S.No.	Position	Total Experience (years)	In Similar Works Experience (years)	1	Project Manager (B.E./B. Tech in Civil Engg. or equivalent)	12	6	2	Architect/Urban planner	10	5	3	Road Safety Expert (certificate of relevant work experience to be produced)	8	4	4	Site Engineer (Diploma in Civil Engineering)	8	4	5	Surveyor (ITI/Diploma)	8	4
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(4.4 b) (b) (iii)	The minimum amount of liquid assets and/or credit facilities net of other contractual commitments of the successful Bidder shall be 10% of the contract value.																								
(4.4 b) (c) (i)	The bidder must produce an affidavit stating that the near relations of the following departmental officers are not in his employment: J.E.'s, A.E.'s, E.E.'s, S.E.'s, and other staff of equivalent rank																								
(4.4 b) (c) (ii)	The bidder must produce an affidavit stating the names of retired gazetted officer (if any) in his employment who retired within the last two years with the following ranks from the departments listed below: Municipal Corporations, U.P.P.W.D., R.E.S. and. U.P. Irrigation. (Assistant Engineer, Executive Engineer, Superintending Engineer, Chief Engineer, Director cum Chief Engineer, Engineer-in- Chief) In case there is no such person in his employment, his affidavit should clearly state this fact.																								
(4.6)	M = 2.5																								
(7.1)	The contact person is: Designation: CEO, Varanasi Smart City Limited																								

	<p>Add: Nagar Nigam Varanasi Near Sigra Stadium, Sigra, Varanasi Ph. No.: 0542-2221711</p>
(9.2.1)	<p>Place, Time and Date for pre-bid meeting are:</p> <p>Place: Office of CEO Varanasi Smart City Limited Near Sigra Stadium, Sigra, Varanasi, Uttar Pradesh</p> <p>Time 15.00 Hrs.</p> <p>Date: 03/04/2018</p>
(11.1)	Language of the bid is: English
(12.1) Part I (v)	The other documents required are: NONE
(13.2)	Bids may be submitted only in Percentage Rate Method
(13.2)	Schedule of Rate applicable for Percentage Rate Method is: As mentioned in the bill of quantities for percentage rate bids
(16.1)	The amount of Earnest Money shall be INR 20 lakh
(16.2)	<p>Fixed Deposit Receipt must be drawn in favour of:</p> <p>“Chief Executive Officer, Varanasi Smart Cities Limited” payable at Varanasi</p>
(16.2)	<p>Other acceptable forms of Bid Security pledged in favour of :</p> <p>“Chief Executive Officer, Varanasi Smart Cities Limited” payable at Varanasi</p>
(16.3)	Exemption from Earnest Money is granted to: NONE
(20.1)	<p>The Employer's address for the purpose of Bid submission is:</p> <p>Office of CEO, Varanasi Smart City Limited, VNN Near Sigra Stadium, Sigra Varanasi – 221010 Uttar Pradesh, India</p>

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

(20.1)	Deadlines for submission of bids shall be: Date : 16/04/2018 Time : 17:00 Hrs.(IST)
(22.1) & (22.6)	The date, time and place for opening of the Technical Bids are: The bid opening shall take place at: Conference Hall, Ground Floor, Varanasi Nagar Nigam Street Address : Near Sigra Stadium, Sigra City : Varanasi State : Uttar Pradesh ZIP Code : 221010 Country : INDIA Date : 18/04/2018 Time : 15:00 Hrs. (IST) In the event of the specified date of Bid opening being declared a holiday for the Client, the Bids will be opened at the same appointed time and location on the next working day.
(32.1)	The amount and validity period of the performance guarantee is: Amount: 5% of the contract price Validity Period: - As per ITB (i) Performance security shall be valid as per clause 32. (ii) Additional Performance Security for unbalanced Bid shall be valid for 45 days plus intended completion period.

Signature of Employer / Authorized Signatory

Date:

Section 3 Qualification Information

(Following information shall be furnished by the contractor on a non-judicial stamp paper of Rs. 100/- only.)

Notes on Form of Qualification Information

The information to be filled in by bidders in the following pages will be used for post –qualification as provided for in Clause 4of the Instructions to Bidders. This information will not be incorporated in the Contract. Attach additional pages as necessary.

2. Individual Bidder/ In case of Joint Venture (JV) for each member organization

1.1	Constitution or legal status of Bidder Place of registration: Principal place of business: Power of attorney of signatory of Bid	[attach copy] [attach]
1.2	Total annual volume of civil engineering construction work executed and payments received in the last five years preceding the year in which bids are invited. (Attach certificate from Chartered Accountant)	(Rs. In lakh)

1.3 1	Work performed as prime Contractor (in the same name and style) on construction works of a similar nature and volume over the last five years. Attach certificate from the Engineer-in-charge
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Project Name	Name of Employer	Description of Work	Value of Contract	Contract No.	Date of Issue of Work Order	Stipulated Date of Completion	Actual Date of Completion	Remarks explaining Reasons for delay, if any

1.3 2 Information on Bid Capacity (works for which bids have been submitted and works which are yet to be completed) as on the date of this bid.

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

(A) Existing Commitments and on-going construction works:

Description of Work	Place & State	Contract No. & Date	Name & Address of Employer	Value of Contract (Rs. In lakhs)	Stipulated period of completion	Value of works remaining to be completed (Rs. In lakh)	Anticipated date of completion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

* Enclose certificate(s) from Engineer(s)-in-charge for value of work remaining to be completed.

(B) Works for which bids already submitted:

Description of Work	Place & State	Name & Address of Employer	Estimated value of works (Rs. In lakhs)	Stipulated period of completion	Date when decision is expected	Remarks, if any
(1)	(2)	(3)	(4)	(5)	(6)	(7)

1.4 Availability of Major items of Contractor's Equipment proposed for carrying out the Works. List all information requested below. Refer also to Clause 4.2(d) and Clause 4.4 b (b) of the Instructions to Bidders.

Item of Equipment	Description, make, and age (Years), and capacity	Condition (new, good, poor) and number available	Owned, leased (from whom?), or to be purchased

1.5 Qualification of technical personal proposed for the Contract. Refer also to clause 4.2(e) of the Instructions to Bidders and Clause 9.1 of Part-1 general Conditions of Contract.

Position	Name	Qualification	Years of Experience		
			Road Works	Building Works	Other

1.6 Proposed sub-contractors and firms involved for construction. Refer to clause 7 of Part I General Conditions of Contract.

Sections of the Works	Value of Subcontract	Sub-Contractor (name and address)	Experience in similar works

Note: The capability of the sub-Contractor will also be assessed (on the same lines as for the main Contractor) before according approval to him.

1.7 Financial reports for the last five years: balance sheets, profit and loss statements, auditors' reports, etc. List below and attach copies.

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

1.8 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of support documents. (Sample format attached).

1.9 Name, address, and telephone, telex, and facsimile numbers of banks that may provide references if contacted by the Employer.

1.10 Information on current litigation in which the bidder is involved

Name of the Other Party (s)	Cause of Dispute	Litigation where (Court/Arbitration)	Amount Involved

1.11 Proposed Programme (work method and schedule). Descriptions, drawings, and charts as necessary, to comply with the requirements of the bidding documents.

SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF CREDIT FACILITIES

BANK CERTIFICATE

This is to certify that M/S ----- is a reputed company with a good financial standing.

If the contract for the work, namely, _____ is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. _____ to meet their working capital requirements for executing the above contract.

Signature of Senior Bank Manager _____

Name of the senior Bank Manager _____

Address of the Bank -----

Stamp of the Bank

Note: Certificate should be on the letter head of the bank.

Section 4

Part I General Conditions of Contract

A. General

1. Definitions

- 1.1. Terms, which are defined in the Contract Data, are not also defined in the Conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.
 - i. Bill of Quantities means the priced and completed Bill of Quantities forming part of the Bid.
 - ii. Compensation Events are those defined in Clause 40 hereunder.
 - iii. The Completion Date is the date of completion of the Works as certified by the Engineer, in accordance with Clause 48.1.
 - iv. The Contract is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in Clause 2.3.
 - v. The Contract Data defines the documents and other information, which comprise the Contract.
 - vi. The Contractor is a person or corporate body or a Joint Venture who's Bid to carry out the Works, including routine maintenance, has been accepted by the Employer.
 - vii. The Contractor's Bid is the completed bidding document submitted by the Contractor to the Employer.
 - viii. The Contract Price is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.
 - ix. Days are calendar days; months are calendar months.
 - x. A Defect is any part of the Works not completed in accordance with the Contract.
 - xi. The Defects Liability Certificate is the certificate issued by Engineer, after the Defect Liability Period has ended and upon correction of Defects by the Contractor.
 - xii. The Defects Liability Period is one year calculated from the Completion Date.
 - xiii. Drawings include calculations and other information provided or approved by the Engineer for the execution of the Contract.

- xiv. The Employer is the party as defined in the Contract Data, who employs the Contractor to carry out the Works, including routine maintenance. The Employer may delegate any or all functions to a person or body nominated by him for specified functions.
- xv. The Engineer is the person named in the Contract Data (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Engineer) who is responsible for supervising the execution of the Works and administering the Contract.
- xvi. Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.
- xvii. The Initial Contract Price is the Contract Price listed in the Employer's Letter of Acceptance.
- xviii. The Intended Completion Date is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the engineer by issuing an extension of time.
- xix. Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- xx. The Site is the area defined as such in the Contract Data.
- xxi. Site Investigation Reports are those that were included in the bidding documents and are reports about the surface and subsurface conditions at the Site.
- xxii. Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer.
- xxiii. The Start Date is given in the Contract Data. It is the date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- xxiv. A Sub-Contractor is a person or corporate body who has a Contract with the Contractor to carry out a part of the construction work in the Contract, which includes work on the Site.
- xxv. Temporary Works are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- xxvi. A Variation is an instruction given by the Engineer, which varies the Works.
- xxvii. The Works, as defined in the Contract Data, are what the Contract requires the Contractor to construct, install, maintain, and turn over to the Employer. Routine maintenance is defined separately.
- xxviii. Plant is any integral part of the Works that shall have a mechanical, electrical, electronic, chemical, or biological function.

2. Interpretation

- 2.1. In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about these Conditions of Contract.
- 2.2. If sectional completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3. The documents forming the Contract shall be interpreted in the following order of priority:
 1. Agreement,
 2. Notice to Proceed with the Work,
 3. Letter of Acceptance,
 4. Contractor's Bid,
 5. Contract Data,
 6. Special Conditions of Contract Part II,
 7. General Conditions of Contract Part I,
 8. Drawings,
 9. Bill of Quantities, and
 10. Any other document listed in the Contract Data.

3. Language and Law

- 3.1. The language of the Contract and the law governing the Contract are stated in the Contract Data.

4. Engineer's Decisions

- 4.1. Except where otherwise specifically stated, the Engineer will decide contractual matters between the Employer and the Contractor in the role representing the Employer. However, if the Engineer is required under the rules and regulations and orders of the Employer to obtain approval of some other authorities for specific actions, he will so obtain the approval.
- 4.2. Except as expressly stated in the Contract, the Engineer shall not have any authority to relieve the Contractor of any of his obligations under the contract.

5. Delegation

- 5.1. The Engineer, with the approval of the Employer, may delegate any of his duties and responsibilities to other people, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

6. Communications

- 6.1. All Certificate, notices or instructions to be given to the contractor by Employer / Engineer shall be sent on the address or contact details given by the contractor in Section 6- Form of Bid. The address and contact details for communication with the Employer/ Engineer shall be as per the details given Contract Data to GCC. Communications between parties that are referred to in the conditions shall be in writing. The Notice sent by Facsimile (fax) or other electronic means shall be effective on confirmation of the transmission. The Notice sent by Registered post or Speed post shall be effective on delivery or at the expiry of the normal delivery period as undertaken by the postal service.

7. Subcontracting

- 7.1. The contractor may subcontract part of the construction work with the approval of the Employer in writing, upto 25% of the contract price but will not assign the Contract. Subcontracting shall not alter the contractor's obligations.
- 7.2. Beyond what has been stated in clauses 7.1, if the contractor proposes sub-contracting any part of the work during execution of the works, because of some unforeseen circumstances to enable him to complete the work as per terms of the contract, the Employer will consider the following before according approval:
- a) The Contractor shall not sub-contract the whole of the works.
 - b) The Contractor shall not sub-contract any part of the work without prior consent of the Employer. Any such consent shall not relieve the contractor from any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any his sub-contractor, his agents or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents and workmen.
- 7.3. The Engineer should satisfy himself before recommending to the Employer whether a. The circumstances warrant such sub-contracting: and b. The sub-contractor so proposed for the work possess the experience, qualification and equipment necessary for the job proposed to be entrusted to him in proportion o the Quantum of works to be sub-contracted.

8. Other Contractors

- 8.1. The contractor shall co-operate and share the site with other contractors. Public authorities utilities, and the employer between the dates given in the schedule of other contractors, as refereed to in the contract data. The contractor shall also provide facilities and services for them as described in the schedule. The employer may modify the schedule of other contractor, and shall notify the contractor of any such modification.
- 8.2. The contractor should take up the work in convenient reaches as decided by the Engineer to ensure there is least hindrance to the smooth flow of traffic including movement of vehicles and equipment of other contractors till the completion of the works.

9. Personnel

- 9.1. The Contractor shall employ for the construction work and routine maintenance the technical personnel named in the Contract Data or other technical persons approved by the Engineer. The Engineer will approve any proposed replacement of technical personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel stated in the Contract Data.
- 9.2. If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the Works in the Contract.
- 9.3. The Contractor shall not employ any retired Gazetted officer who has worked in the Engineering Department of the State Government and has either not completed two years after the date of retirement or has not obtained State Government's permission to employment with the Contractor.

10. Employer's and Contractor's Risks

- 10.1. The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks that this Contract states are Contractor's risks.

11. Employer's Risks

- 11.1. The Employer is responsible for the excepted risks which are (a) in so far as they directly affect the execution of the Works in the Employer's country, the risks of war, invasion, act of foreign enemies, rebellion, revolution, insurrection or military or usurped power, civil war, riot commotion or disorder (unless restricted to the Contractor's employees), natural calamities and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Contractor's design.

12. Contractor's Risks

- 12.1. All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks, referred to in clause 11.1, are the responsibility of the Contractor.

13. Insurance

- 13.1. The Contractor at his cost shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the date of completion, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor's risks:

- a) loss of or damage to the Works, Plant and Materials;
- b) loss of or damage to Equipment;

- c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- d) Personal injury or death.

13.2. Insurance policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the completion date/ Start Date. All such insurance shall provide for compensation to be payable in Indian Rupees to rectify the loss or damage incurred.

13.3.

- a) The Contractor at his cost shall also provide, in the joint names of the Employer and the Contractor, insurance cover from the date of completion to the end of defect liability period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor's risks:
 - a. Personal injury or death.
 - b) Insurance policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the completion date/ start date. All such insurance shall provide for compensation to be payable in Indian Rupees.

13.4. Alterations to the terms of insurance shall not be made without the approval of the Engineer.

13.5. Both parties shall comply with any conditions of the insurance policies.

14. Site Investigation Reports

14.1. The Contractor, in preparing the Bid, may rely on any Site Investigation Reports referred to in the Contract Data, supplemented by any other information available to him, before submitting the bid.

15. Queries about the Contract Data

15.1. The Engineer will clarify queries on the Contract Data.

16. Contractor to Construct the Works

16.1. The Contractor shall construct, and install and maintain the Works in accordance with the Specifications and Drawings.

16.2. The contractor shall construct the works with intermediate technology, i.e., by manual means with medium input of machinery required to ensure the quality of works as per specifications. The contractor shall deploy the equipment and machinery as given in Contract Data.

16.3. Contractor will conduct O&M for the works under scope at rates agreed at the time of bidding . However, regarding any future interventions by any other agencies working in the subject area, VSCL will assist the contractor to recover the resurfacing/repairing costs incurred due to additional interventions (as referred in query) from the respective department.

17. The Works to Be Completed by the Intended Completion Date

17.1. The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

18. Approval by the Engineer

18.1. The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Engineer, who is to approve them.

18.2. The Contractor shall be responsible for design of Temporary Works.

18.3. The Engineer's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

18.4. The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

18.5. All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Engineer before their use.

19. Safety

19.1. The Contractor shall be responsible for the safety of all activities on the Site.

20. Discoveries

20.1. Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

21. Possession of the Site

21.1. The Employer shall handover complete or part possession of the site to the Contractor 7 days in advance of construction program. At the start of the work, the employer shall handover the possession of at-least 75% of the site.

22. Access to the Site

22.1. The Contractor shall allow access to the Site and to any place where work in connection with the Contract is being carried out, or is intended to be carried out to the engineer and any person/persons/agency authorized by:

- a) The Engineer
- b) The Employer
- c) The Ministry of Housing and Urban Affairs, Government of India.
- d) National Rural Roads Development Agency, New Delhi.

23. Instructions

23.1. The Contractor shall carry out all instructions of the Engineer, which comply with the applicable laws where the Site is located.

24. Dispute Redressal System

24.1. If any dispute or difference of any kind what-so-ever shall arise in connection with or arising out of this Contract or the execution of Works or maintenance of the Works there under, whether before its commencement or during the progress of Works or after the termination, abandonment or breach of the Contract, it shall, in the first instance, be referred for settlement to the competent authority, described along with their powers in the Contract Data, above the rank of the Engineer, The competent authority shall, within a period of forty-five days after being requested in writing by the Contractor to do so, convey his decision to the Contractor. Such decision in respect of every matter so referred shall, subject to review as hereinafter provided, be final and binding upon the Contractor. In case the Works is already in progress, the Contractor shall proceed with the execution of the Works, including maintenance thereof, pending receipt of the decision of the competent authority as aforesaid, with all due diligence.

24.2. Either party will have the right of appeal, against the decision of the competent authority, to the arbitration if the amount appealed exceeds rupees one lakh.

25. Procedure for Resolution of Disputes

25.1. The Competent Authority mentioned in clause 24.1 shall give a decision in writing within 45 days of receipt of a notification of a dispute.

25.2. Either party may refer a decision of the Competent Authority to Arbitration within 28 days of the Competent Authority's written decision. Arbitration shall be under the Arbitration and Conciliation Act 1996. If neither party refers the dispute to Arbitration within the above 28 days, the Competent Authority's decision will be final and binding.

25.3. The Arbitration shall be conducted in accordance with the following procedure, :-

- a) In case of a decision of the Competent Authority in a dispute or difference arising between the Employer and a Contractor relating to any matter arising out of or connected with this Agreement, the matter will be referred to an Arbitral Tribunal. The Arbitral Tribunal shall consist of three Arbitrators, one each to be appointed by the Employer and the contractor. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the parties and

shall act as presiding Arbitrator. In case of failure of the two Arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the Arbitrator appointed subsequently, the presiding Arbitrator shall be appointed by the Chairman of the Executive Committee of the Indian Roads Congress.

- b) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) above within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the Institution of Engineer - Local Chapter shall appoint the arbitrator.

A certified copy of the order of the Institution of Engineer - Local Chapter, making such an appointment shall be furnished to each of the parties.

- c) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the Arbitral Tribunal. However, the expenses incurred by each party in connection with the preparation, presentation etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.
- d) Arbitration proceedings shall be held at Varanasi (U.P.), India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.

25.4. Performance under the contract shall continue even after reference to the arbitration and payments due to the contractor by the Employer shall not be withheld, unless they are the subject matter of the arbitration proceedings.

B. Time Control

26. Programme

26.1. Within the time stated in the Contract Data, the Contractor shall submit to the Engineer for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works, along with monthly cash flow forecasts for the construction of works.

26.2. The Contractor shall submit the list of equipment and machinery being brought to site, the list of key personnel being deployed, the list of machinery/ equipment being placed in field laboratory and the location of field laboratory along with the Program. The Engineer shall cause these details to be verified at each appropriate stage of the program.

26.3. An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities.

26.4. The Contractor shall submit to the Engineer for approval an updated Program at intervals of 60 Days no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Program within this period, the Engineer may withhold the amount stated in the

Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted.

26.5. The Engineer's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Engineer again at any time. A revised Program shall show the effect of Variations and Compensation Events.

27. Extension of the Intended Completion Date

27.1. The Engineer shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining Works, which would cause the Contractor to incur additional cost.

27.2. The Engineer shall decide whether and by how much time to extend the Intended Completion Date within 21 days of the Contractor asking the Engineer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

28. Delays Ordered by the Engineer

28.1. The Superintending Engineer may instruct the Contractor to delay the start or progress of any activity within the Works. Delay/delays totaling more than 30 days will require prior written approval of the Employer.

29. Management Meetings

29.1. The Engineer may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the plans for the Works.

29.2. The Engineer shall record the business of management meetings and provide copies of the record to those attending the meeting. The responsibility of the parties for actions to be taken shall be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all those who attended the meeting.

C. Quality Control

30. Identifying Defects

30.1. The Engineer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect.

31. Tests

- 31.1. For Carrying out mandatory tests as prescribed in the specification. The Contractor shall establish field laboratory at the location decided by Engineer. The field laboratory will have minimum equipment as specified in the Contract Data. The contractor shall be solely responsible for: a. Carrying out the mandatory tests prescribed in the Specifications, and b. For the correctness of the test results, whether performed in his laboratory or elsewhere.
- 31.2. If the Engineer instructs the Contractor to carry out a test not specified in the Specifications to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples.

32. Correction of Defects noticed during the Defect Liability Period for one year

- 32.1. The Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion of work. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 32.2. Every time notice of Defect/Defects is given, the Contractor shall correct the notified Defect/Defects within the duration of time specified by the Engineer's notice.
- 32.3. The request for inspection (RFI) system will be followed for execution of work.

33. Uncorrected Defects

- 33.1. If the Contractor has not corrected a Defect pertaining to the Defect Liability Period under clause 32.1 and of these Conditions of Contract, to the satisfaction of the Engineer, within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect corrected, and the Contractor will pay this amount, on correction of the Defect.

D. Cost Control

34. Bill of Quantities

- 34.1. The Bill of Quantities shall contain items for the construction, installation, testing, and commissioning, maintaining works, and lump sum figures for yearly routine maintenance for each of the five years separately, to be done by the Contractor.

34.2. The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item for the construction of roads. The payment to the Contractor is performance based for routine maintenance of roads.

35. Variations

35.1. The Engineer shall, having regard to the scope of the Works and the sanctioned estimated cost, have power to order, in writing, Variations within the scope of the Works he considers necessary or advisable during the progress of the Works. Such Variations shall form part of the Contract and the Contractor shall carry them out and include them in updated Programs produced by the Contractor. Oral orders of the Engineer for Variations, unless followed by written confirmation, shall not be taken into account.

36. Payments for Variations

36.1. If rates for variation items are specified in Bill of Quantity, the contractor shall carry out such work at the same rate. This shall apply for variation only up to the limit prescribed in the contract data. If the variation exceeds this limit, the rates shall be derived under the provision of clause 36.3 for quantities (higher or lower) exceeding the deviation limit.

36.2. If the rates for Variation are not specified in the Bill of Quantities, the Engineer shall derive the rate from similar items in the Bill of Quantities.

36.3. If the rate for Variation item cannot be determined in the manner specified in Clause 36.1 or 36.2, the Contractor shall, within 14 days of the issue of order of variation work, inform the Engineer the rate which he proposes to claim, supported by analysis of the rates. The Engineer shall assess the quotation and determine the rate based on prevailing market rates within one month of the submission of the claim by the Contractor. As far as possible, the rate analysis shall be based on the standard data book and the current schedule of rates of the district public works division. The decision of the Engineer on the rate so determined shall be final and binding on the Contractor.

37. Cash Flow Forecasts

37.1. When the Program is updated, the Contractor shall provide the Engineer with an updated cash flow forecast.

38. Payment Certificates

38.1. The payment to the contractor will be as follows for construction work:

- a) The Contractor shall submit to the Engineer fortnightly/ monthly statements of the value of the work executed less the cumulative amount certified previously supported with detailed measurement of the items of work executed in measurement books authorized by UP. P.W.D.

- b) The Engineer shall check the Contractor's fortnightly/monthly statement within 14 days and certify the amount to be paid to the Contractor.
- c) The value of work executed shall be determined, based on measurements by the Engineer.
- d) The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.
- e) The value of work executed shall also include the valuation of Variations and Compensation Events.
- f) The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
- g) The Payment of final bill shall be governed by the provisions of clause 50 of GCC.

39. Payments

- 39.1. Payments shall be adjusted for deductions for advance payments security deposit, other recoveries in terms of the Contract and taxes at source, as applicable under the law. The Engineer shall pay the Contractor the amounts he had certified within 15 days of the date of each certificate.
- 39.2. The Employer may appoint another authority, as specified in the Contract Data (or any other competent person appointed by the Employer and notified to the contractor) to make payment certified by the Engineer.
- 39.3. Items of the Works for which no rate or price has been entered in the Bill of Quantities, will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

40. Compensation Events

40.1. The following shall be Compensation Events unless they are caused by the Contractor:

- a) The Engineer orders a delay or delays exceeding a total of 30 days.
- b) The effects on the Contractor of any of the Employer's Risks.

40.2. If a Compensation Event would prevent the Works being completed before the Intended Completion Date, the Intended Completion Date shall be extended. The Engineer shall decide whether and by how much the Intended Completion Date shall be extended.

41. Tax

In reference to the circular no. 962/नौ-9-2017-81ज/17 of dated 17.10.2017 and circular no. 89/ नौ-9-2018-81ज/2017 dated: 16/02/2018 from Government of Uttar Pradesh, the GST amount to be reimbursed to the contractor separately and other than actual invoice amount. And hence, contractor will submit

invoice by showing the actual amount and GST amount separately. The actual amount to be paid will be as per the rule state in RFP and the GST amount to be reimbursed as per.

42. Currencies

All payments will be made in Indian Rupees.

43. Security Deposit/ Retention and Release of Performance Security and Security Deposit/ Retention

43.1.The Employer shall retain security deposit of 5% of the amount from each payment due to the Contractor until completion of the whole of the construction Work. No. security deposit/ retention shall be retained from the payments for Routine maintenance of Works.

43.2.On the completion of the whole of the construction Work half the total amount retained as Security Deposit is repaid to the contractor and half when the defect liability period has passed and the Engineer has certified that all defects notified by the Engineer to the contractor before the end of his period have been corrected.

43.3.The additional performance security for unbalanced bids as detailed in Clause 51 of Conditions of Contract is repaid to the contractor when the construction work is complete.

43.4.The performance security equal to the five percent of the contract price in Clause 51 of Conditions of contract is repaid to the contractor when the period of one year fixed or defect liability period is over and the Engineer has certified that the contractor has satisfactorily carried out the Works.

43.5.If the contractor so desires then the Security Deposit can be converted into any interest bearing security of schedule commercial bank in the name of the Employer or National Saving Certificates duly pledged in favour of the Employer for Defect Liability Period.

44. Liquidated Damages

44.1.The Contractor shall pay liquidated damages to the Employer at the rate per week or part thereof stated in the Contract Data for the period that the Completion Date is later than the Intended Completion Date. Liquidated damages at the same rate shall be withheld if the Contractor fails to achieve the milestones prescribed in the Contract Data. However, in case the Contractor achieves the next milestone the amount of the liquidated damages already withheld shall be restored to the Contractor by adjustment in the next payment certificate. The total amount of liquidated damages shall not exceed the amount defined in the Contract Data. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's other liabilities.

44.2.If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate.

45. Advance Payment

45.1.The Employer will make the following advance payment to the contractor against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a Commercial bank acceptable to the Employer in amounts equal to the advance payment:

- a) Mobilization advance up to 5 percent of the contract price.
- b) Equipment advance up to ninety percent of the cost of the new equipment brought to the site, subjects to a maximum of 10 percent of the contract price.

The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest will not be charged on advance payment.

45.2.The Contractor is to use the advance payment only to pay for Equipment, plant and mobilization expenses required specifically for execution of works. The Contractor shall demonstrate the advance payment has been used in this way by supplying copies of invoices or other documents to the Engineer.

45.3.The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor for the construction work, following the schedule of completed percentage of the work on payment basis. No account shall be taken of the advance payment or the repayment in assessing valuation of work done. Variations, price adjustments, Compensation events or liquidated damages.

46. Securities

46.1.The Performance Security equal to five percent of the contract price and additional security for unbalanced bids shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in the form given in the Contract Data and by a scheduled commercial bank. The Performance Security shall be valid until a date 45 days from the date of expiry of Defect Liability Period and the additional security for unbalanced bids shall be valid until a date 45 days from the date of issue of the certificate of completion.

47. Cost of Repairs

47.1.Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at his cost if the loss or damage arises from the Contractor's acts or omissions.

47.2. Contractor will conduct O&M for the works under scope at rates agreed at the time of bidding. However, regarding any future interventions by any other agencies working in the subject area, VSCL will assist the contractor to recover the resurfacing/repairing

costs incurred due to additional interventions (as referred in query) from the respective department.

E. Finishing the Contract

48. Completion of Construction and Maintenance

48.1. The contractor shall request the Engineer to issue a certificate of completion of the construction of the works, and the Engineer will do so upon deciding that the works is completed.

49. Taking Over

49.1. The Employer shall take over the works within seven days of the Engineer issuing a certificate of completion of works.

50. Final Account

50.1. The contractor shall supply the Engineer with a detailed account of the total amount that the Contractor considers payable for works under the contract within 21 days of issue of certificate of completion of construction of works. The Engineer shall issue a defect liability certificate and certify any payment that is due to the correct and complete. If the account is not correct or complete, the engineer shall issue within 42 days a schedule that states the scope of the corrections or additions that are necessary. If the account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the contractor and issue a payment certificate within 28 days of receiving the Contractor's revised account. The payment of final bill for construction of works will be made within 14 days thereafter.

50.2. In case the account is not received within 21 days of issue of Certificate of Completion as provided in clause 50. I above, the engineer shall proceed to finalise the account and issue a payment certificate within 28 days. The payment of final bill for construction of works will be made within 14 days thereafter.

51. Operating and Maintenance Manuals

51.1. If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.

51.2. If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract Data, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

52. Termination

52.1. The Employer may terminate the Contract if the Contractor causes a fundamental breach of the Contract.

52.2. Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- a) The Contractor stops work for 28 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Engineer;
- b) The Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation;
- c) The Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
- d) The Contractor does not maintain a Security, which is required;
- e) The Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in clause 44.1;
- f) The Contractor fails to provide insurance cover as required under clause 13;
- g) If the Contractor, in the judgement of the Employer, has engaged in the corrupt or fraudulent practice in competing for or in executing the Contract. For the purpose of this clause, "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in Contract execution. "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 Employer and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid process at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
- h) If the Contractor has not completed at least thirty percent of the value of construction Work required to be completed after half of the completion period has elapsed;
- i) If the Contractor fails to set up a field laboratory with the prescribed equipment, within the period specified in the Contract Data; and
- j) Any other fundamental breaches as specified in the Contract Data.
- k) If the Contractor fails to deploy machinery and equipment or personnel as specified in the contract Data at the appropriate time.

52.3. Notwithstanding the above, the Employer may terminate the Contract for convenience.

52.4. If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

53. Payment upon Termination

53.1. If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done and Materials ordered less liquidated damages, if any less advance payments received up to the date of the issue of the

certificate and less the percentage to apply to the value of the work not completed, as indicated in the Contract Data. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be recovered from the security deposit, and performance security. If any amount is still left un-recovered it will be a debt payable to the Employer.

53.2.If the Contract is terminated at the Employer's convenience, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the Contract, and less taxes due to be deducted at source as per applicable law.

54. Property

54.1.All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer for use for completing balance construction work if the Contract is terminated because of the Contractor's default, till the Works is completed after which it will be transferred to the Contractor and credit, if any, given for its use.

55. Releases from Performance

55.1. If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of the Employer or the Contractor, the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

F. Other Conditions of Contract

56. Labour

56.1. The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

56.2.The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.

57. COMPLIANCE WITH LABOUR REGULATIONS

57.1.During continuance of the Contract, the Contractor and his sub-Contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law

(including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given in Appendix to Part I General Condition of Contract. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

- 57.2. The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

58. Drawings and Photographs of the Works

58.1. The contractor shall do photography/video photography of the site firstly before the start of the work, secondly mid-way in the execution of different stages of work and lastly after the completion of the work. No separate payment will be made to the contractor for this.

58.2. The Contractor shall not disclose details of Drawings furnished to him and works on which he is engaged without the prior approval of the Engineer in writing. No photograph of the works or any part thereof or plant employed thereon, except those permitted under clause 58.1, shall be taken or permitted by the Contractor to be taken by any of his employees or any employees of his sub-Contractors without the prior approval of the Engineer in writing. No photographs/ Video photography shall be published or otherwise circulated without the approval of the Engineer in writing.

59. The Apprentices Act 1961

59.1. The Contractor shall duly comply with the provisions of the Apprentices Act 1961 (III of 1961), the rules made there under and the orders that may be issued from time to time under the said Act and the said Rules and on his failure or neglect to do so he shall be subject to all liabilities and penalties provided by the said Act and said Rules.

60. Criminals are prohibited from bidding

60.1. Any bidders having criminal record is not allowed to participate in the bidding process. Any person who is having criminal cases against him or involved in the organised crime or gangster activities or Mafia or Goonda or Anti-social activity are strictly prohibited to participate in the bidding process. If it is established that any bidder has criminal record, his bid shall be automatically cancelled.

60.2. The bidder has to produce character certificate, Solvency certificate, self-declaration affidavit (on the prescribed proforma, which is attached with the bid document) etc., issued by the competent authority in original with bid document.

60.3. Any bidder who is an Advocate and Registered with any State Bar Council shall not be allowed to participate in the bidding. If it is established that the contractor is registered with the state bar council, his bid shall be automatically cancelled.

Contract Data to General Conditions of Contract

Except where otherwise indicated, the Employer prior to issuance of the bidding documents should fill in all Contract Data. Schedules and reports to be provided by the Employer should be annexed.

Clause Reference

Items marked "N/A" do not apply in this Contract.

1. The Employer is:

CEO, Varanasi Smart City Limited, Varanasi [Cl.1.1]

Near Sagra Stadium, Sagra-
Varanasi
Uttar Pradesh - 2210101
INDIA

Telephone : 0542-2221711

Facsimile number : 0542-2221702

Electronic mail : nagarnigamvns@gmail.com; info@nnvns.org

2. The Intended Completion Date for the whole of the Works is three (3) months [Cl.1.1 (iii)] after start of work.

3. The Site is located: within Distt. Varanasi per list of Junctions attached. [Cl.1.1]

4. The Start Date shall be Issue of notice to proceed with the work

5. The Works consist of Improvement and Up-gradation of 8 Road Intersections (Phase – II), in Varanasi including 5 years of O&M.

6. The following documents also form part of the Contract: As detailed in General Condition Clause 2 (2.3).

- (a). Typical Drawing of Junctions
- (b). Typical drawing of Cross Sections
- (c). Bill of Quantities

The contractor shall submit the working/ shop drawings along with work program as applicable.

- 7. (a) The law which applies to the Contract is the law of Union of India. [Cl.3.1]
- (b) The language of the Contract documents is English. [Cl.3.1]

8. The Schedule of Other Contractors is attached. [Cl. 8.1]

9. (A). The Technical Personnel for construction work are: [Cl 9.1]

No.	Position	Total Work Similar Experience (years)	In Similar Works Experience (years)
1	Project Manager (B.E./B. Tech in Civil Engg. or equivalent)	12	6
2	Architect/Urban planner	10	5
3	Road Safety Expert (certificate of relevant work experience to be produced)	8	4
4	Site Engineer (Diploma in Civil Engineering)	8	4
5	Surveyor (ITI/Diploma)	8	4

(B). For routine Maintenance:

Technical Personnel	Number		Experience in Road/ Junction Works
	Contract works upto Rs. 2 crore	Contract works above Rs. 2 crore	
Degree Holder in Civil Engineering	1	1	At least 2 years
Diploma Holder in Civil Engineering	1	2	At least 2 years

10. Amount and deductible for insurance are:

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

S.No.		Minimum Cover for Insurance	Maximum Deductibles for Insurance
1.	Work & Plant & Materials	Equal to Contract Amount	0.4% of Contract Amount
2.	Loss or Damage to Equipment	10% of Contract Amount	0.4% of Contract Amount
3.	Other Property (unlimited occurrences)	5% of Contract Amount	0.4% of Contract Amount
Personal Injury or death insurance:			
4.	a) For other people (unlimited occurrences)	₹ 25 lacs	-
5.	b) For contractor's employees	In accordance with the statutory requirements applicable to India	

11. Site Data are:

- Map of Location of Intersections.
- Drawing of each intersection with the proposed improvements.

12. The key equipment/machinery for construction of works shall be:

S. No.	Equipment Type and Characteristics	Minimum Number required
1	Thermoplastic paint laying machine along with all operational appurtenances	2
2	Power Drill (As per requirement)	2
3	Tractor Trolley	2
4	Batch type Hot Mix Plant with electronic controls	1
5	Paver Finisher with Electronic Sensor	1
6	Tippers	4
7	Vibratory/Smooth/PT Roller	2
8	Wet Mix Plant having suitable capacity	1
9	Bitumen Sprayer	2

** The equipment should not be more than five years old*

13. Competent authorities are:

[Cl. 24.1]

Chief Executive Officer, Varanasi Smart City Limited, Nagar Nigam Varanasi

14. (a) The Contractor shall submit for approval a Program for the Works within Fifteen days (15) from the date of the Letter of Acceptance.

[Cl.26.1]

(b) The period between Program updates is Thirty (30) days. [Cl. 26.3]

(c) The amount to be withheld for late submission of an updated Program is ₹ 5,000/- per day [Cl. 26.3]

15. *No increase in rates of any items specified in Bill Of Quantities is allowed due to variation in quantities* [Cl 36.1]

16. The authorized person to make payments is Chief Engineer, Nagar Nigam Varanasi, Sagra, Varanasi [Cl.39.2]

17.(a) Milestones to be achieved during the contract period

- 1/8th of the value of entire contract work up to 1/4th of the period allowed for completion of construction
- 3/8th of the value of entire contract work up to 1/2 of the period allowed for completion of construction
- 3/4th of the value of entire contract work up to 3/4th of the period allowed for completion of construction

18.(b) Amount of liquidated damages for delay in completion works

For whole of work 1 percent of the Initial Contract Price, rounded off to the nearest thousand, per week.

(c) Maximum limit of liquidated damages for delay in completion work.

10 percent of the Initial delay in completion of work. Contract Price rounded off to the nearest thousand. [Cl.44.1]

19. The standard form of Performance Security acceptable to the Employer Shall be an unconditional Bank Guarantee of the type as presented in the Bidding Documents.

[Cl. 46.1]

20.(a) The Schedule of Operating and Maintenance Manuals N.A. [Cl.51.1]

(b) The date by which “as-built” drawings (in scale as directed) in 2 sets are required is within 28 days of issue of certificate of completion of whole or section of the work, as the case may be (Including L-Section and Cross Section of the road) .

[Cl.51.1]

21. The amount to be withheld for failing to supply “as-built” drawings by the date required is Rs. One Lac.

[Cl.51.2]

22. The percentage to apply to the value of the work not completed representing the Employer's additional cost for completing the Works shall be 20 %.

[Cl.53.1]

Appendix to Part I General Condition of Contract

SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK.

Workmen Compensation Act 1923: - The Act provides for compensation in case of injury by accident arising out of and during the course of employment.

Payment of Gratuity Act 1972: - Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed the prescribed minimum years (say, five years) of service or more or on death the rate of prescribed minimum days' (say, 15 days) wages for every completed year of service. The Act is applicable to all establishments employing the prescribed minimum number (say, 10) or more employees.

Employees P.F. and Miscellaneous Provision Act 1952: The Act Provides for monthly contributions by the Employer plus workers at the rate prescribed (say, 10% or 8.33%). The benefits payable under the Act are:

- i. Pension or family pension on retirement or death as the case may be.
- ii. Deposit linked insurance on the death in harness of the worker.
- iii. Payment of P.F. accumulation on retirement/death etc.

Maternity Benefit Act 1951: - The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.

Contract Labour (Regulation & Abolition) Act 1970: - The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ prescribed minimum (say 20) or more contract labour.

Minimum Wages Act 1948: - The Employer is to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Constructions of buildings, roads, runways are scheduled employment.

g) Payment of Wages Act 1936: - It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.

h) Equal Remuneration Act 1979: - The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against female employees in the matters of transfers, training and promotions etc.

Payment of Bonus Act 1965: - The Act is applicable to all establishments employing prescribed minimum (say, 20) or more workmen. The Act provides for payments of annual bonus within the prescribed range of percentage of wages to employees drawing up to the prescribed amount of wages, calculated in the prescribed manner. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. States may have different number of employment size.

Industrial Disputes Act 1947: - The Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

Industrial Employment (Standing Orders) Act 1946: - It is applicable to all establishments employing prescribed minimum (say, 100, or 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get these certified by the designated Authority.

Trade Unions Act 1926: - The Act lays down the procedure for registration of trade unions of workmen and Employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.

Child Labour (Prohibition & Regulation) Act 1986: - The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulations of employment of children in all other occupations and processes. Employment of child labour is prohibited in building and construction industry.

Child Labour (Prohibition & Regulation) Act 1986: - The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulations of employment of children in all other occupations and processes. Employment of child labour is prohibited in building and construction industry.

Inter-State Migrant Workmen's (Regulation of Employment & Conditions of Service) Act 1979: - The Act is applicable to an establishment which employs prescribed minimum (say, five) or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as Housing, Medical-Aid, Travelling expenses from home up to the establishment and back etc.

The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: - All the establishments who carry on any building or other construction work and employs the prescribed minimum (say, 10) or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as

canteens, first-aid facilities, ambulance, housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

Factories Act 1948: - The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing the prescribed minimum (say, 10) persons or more with aid of power or another prescribed minimum (say, 20) or more persons without the aid of power engaged in manufacturing process.

Arbitration and Conciliation Act, 1996: - The Act lays down the procedure for appointment of Arbitrator, Arbitration and conciliation, Jurisdiction of Arbitral Tribunals, Recourse against Arbitral award appeals.

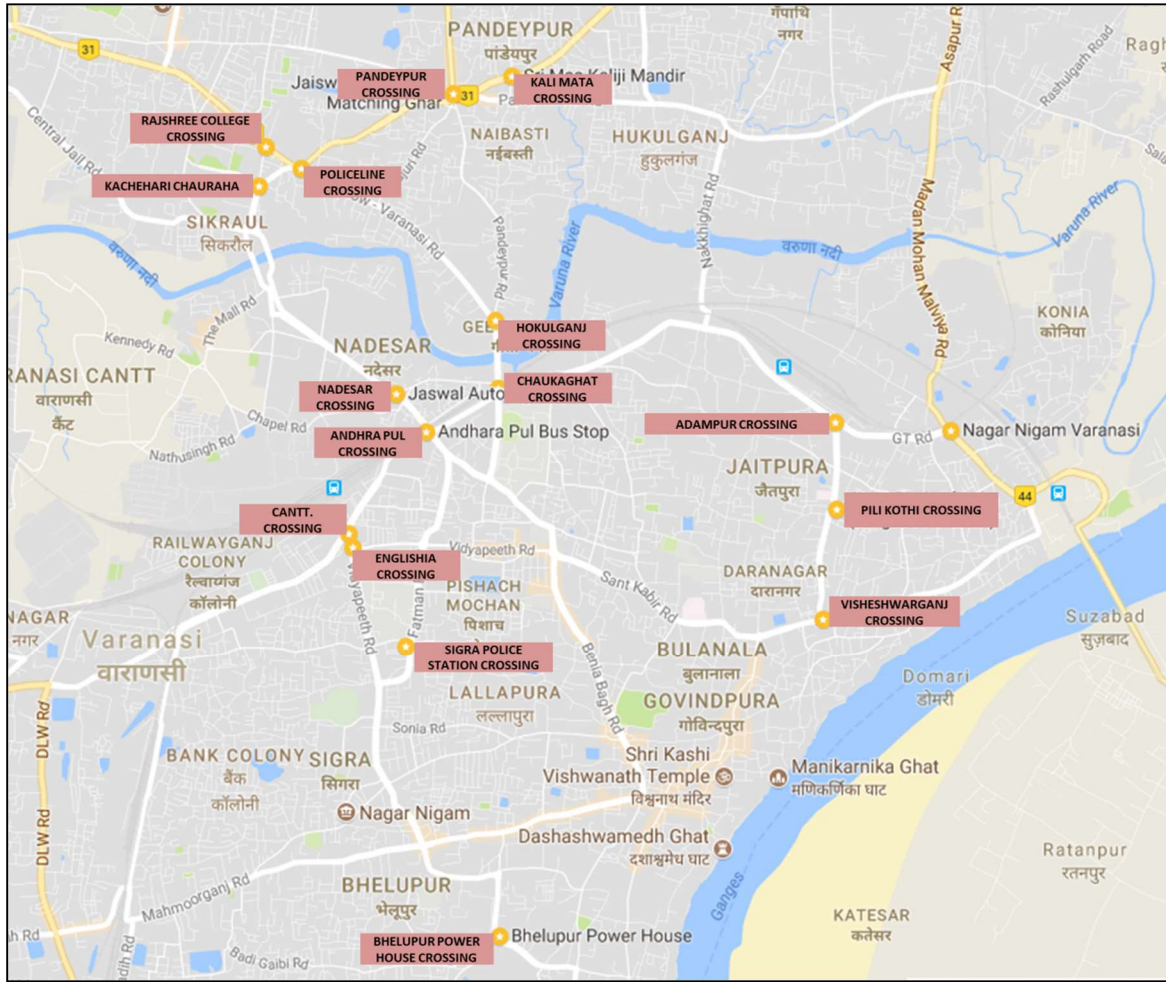
Section 4
Conditions of Contract
Part – II Special Conditions of Contract

1. Contractor shall procure Bitumen and Modified Bitumen from Indian Oil Corporation, Hindustan Petroleum and shall produce the original C.R.C. issued by the company at the time of claiming the payment for bitumen or Modified Bitumen along with the bill.

Section 5

Drawings

Location Map:-



List of Drawings:-

S.No.	Junction Name
1.	Kali Mata Chauraha
2.	Sigra Thana Crossing
3.	Bhelupur Powerhouse Crossing
4.	Rajshree (LT College) Crossing
5.	Visheshwarganj Crossing
6.	Hokulganj Crossing
7.	Golgadda Crossing
8.	Pilikothi Crossing

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

S.No.	Drawing Name
1.	Design of median curb
2.	Lane marking
3.	Table top Crossing

Drawings to be followed for actual execution of work should bear the stamp “Good for construction”.

(b) Any revision of working drawings should be indicated by pre-fixing R1, R2..... etc. after original reference number. Reasons for each revision should be clearly noted in the drawing.

Complete set of drawings should be issued along with other tender documents so as to form part of the agreement.

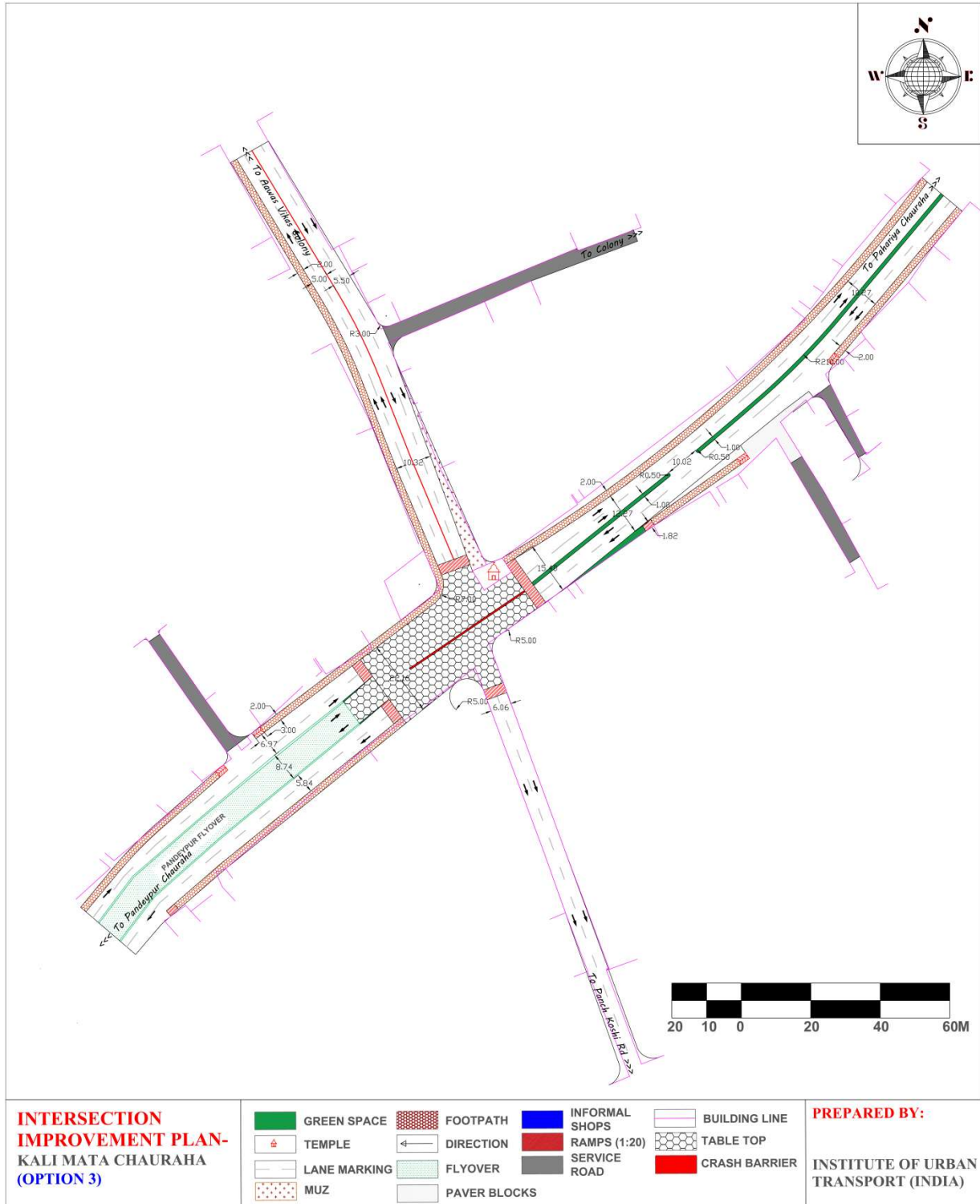
(c) Drawings are not available with the bidding documents downloaded from the website and may be obtained from the office of the concerned PIU as indicated in the NIFT

Note:

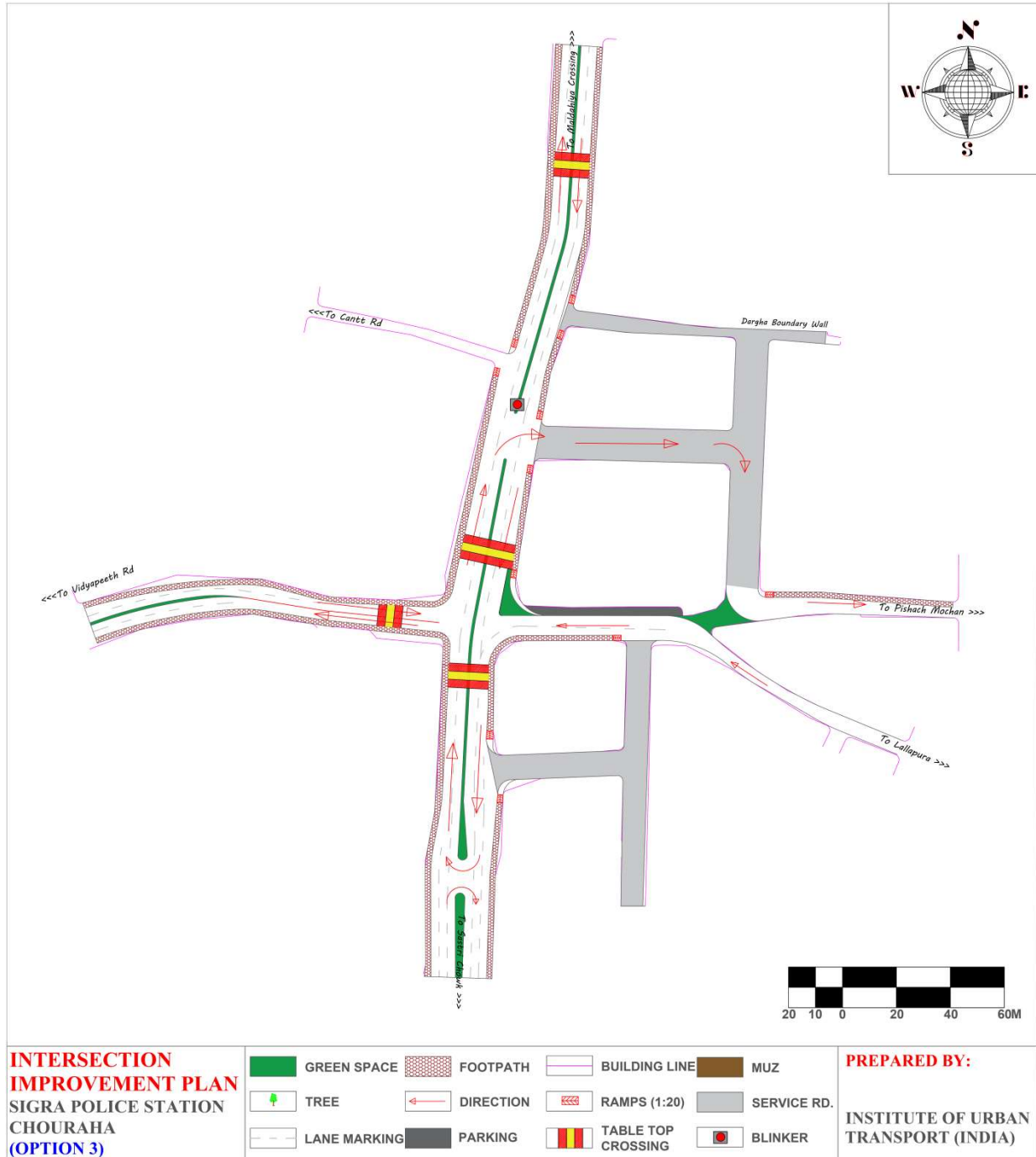
Based on the reconnaissance survey, data analysis, stakeholder consultations and expert analysis all the six intersections have been redesigned keeping in view the site conditions are as follows:

1. Upgradation of existing intersection to best suitable
2. Minimum or no damage to the trees and green planter
3. Improvisation of existing islands with a smooth entry and exit
4. Smoothing of turning radius wherever necessary
5. Provision of signals and signage's wherever required.
6. Improvisation of existing pedestrian crossing facilitating with pedestrian refuge
7. Providing free left turns based on space availability and traffic flow

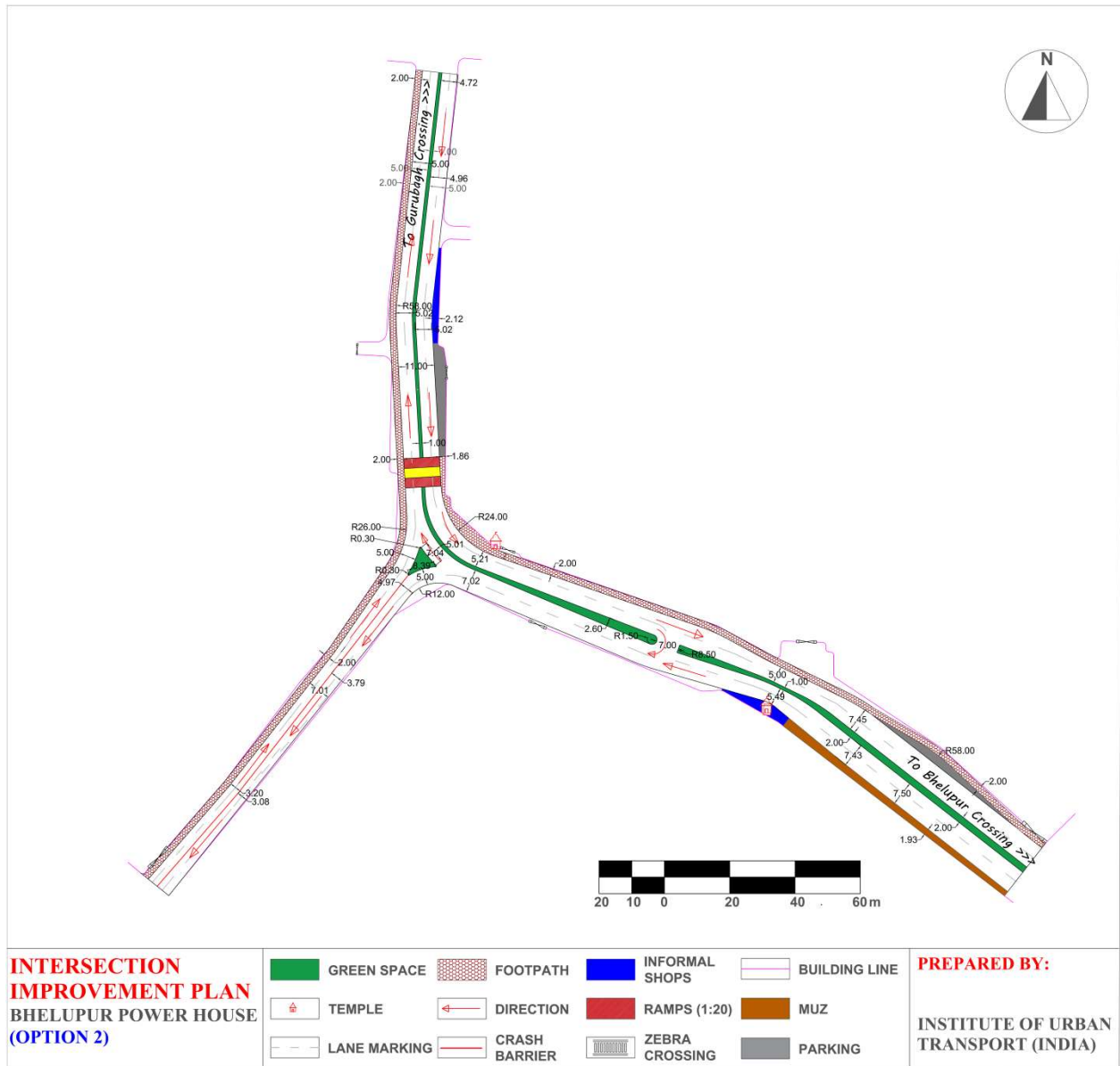
Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi



Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi



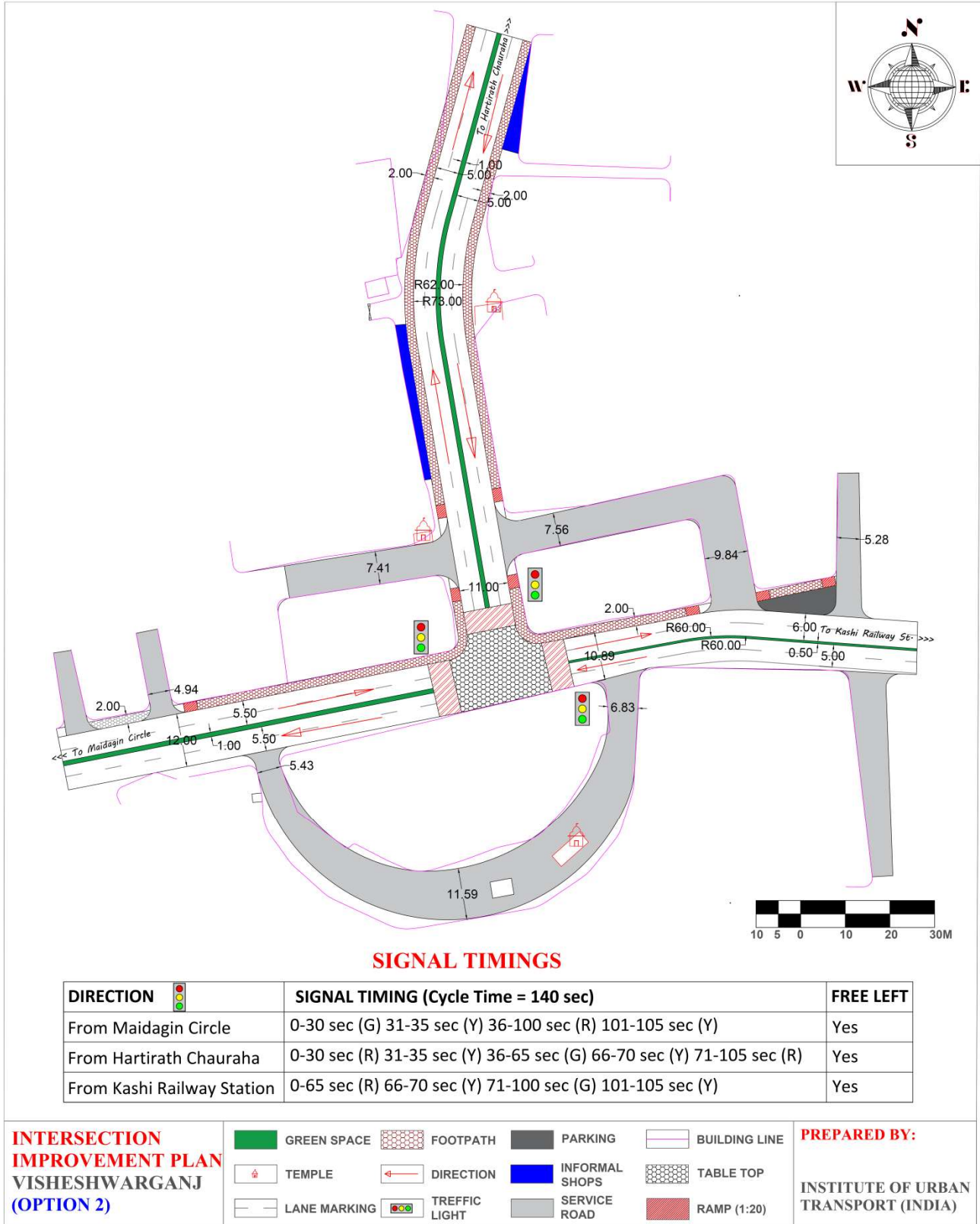
Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi



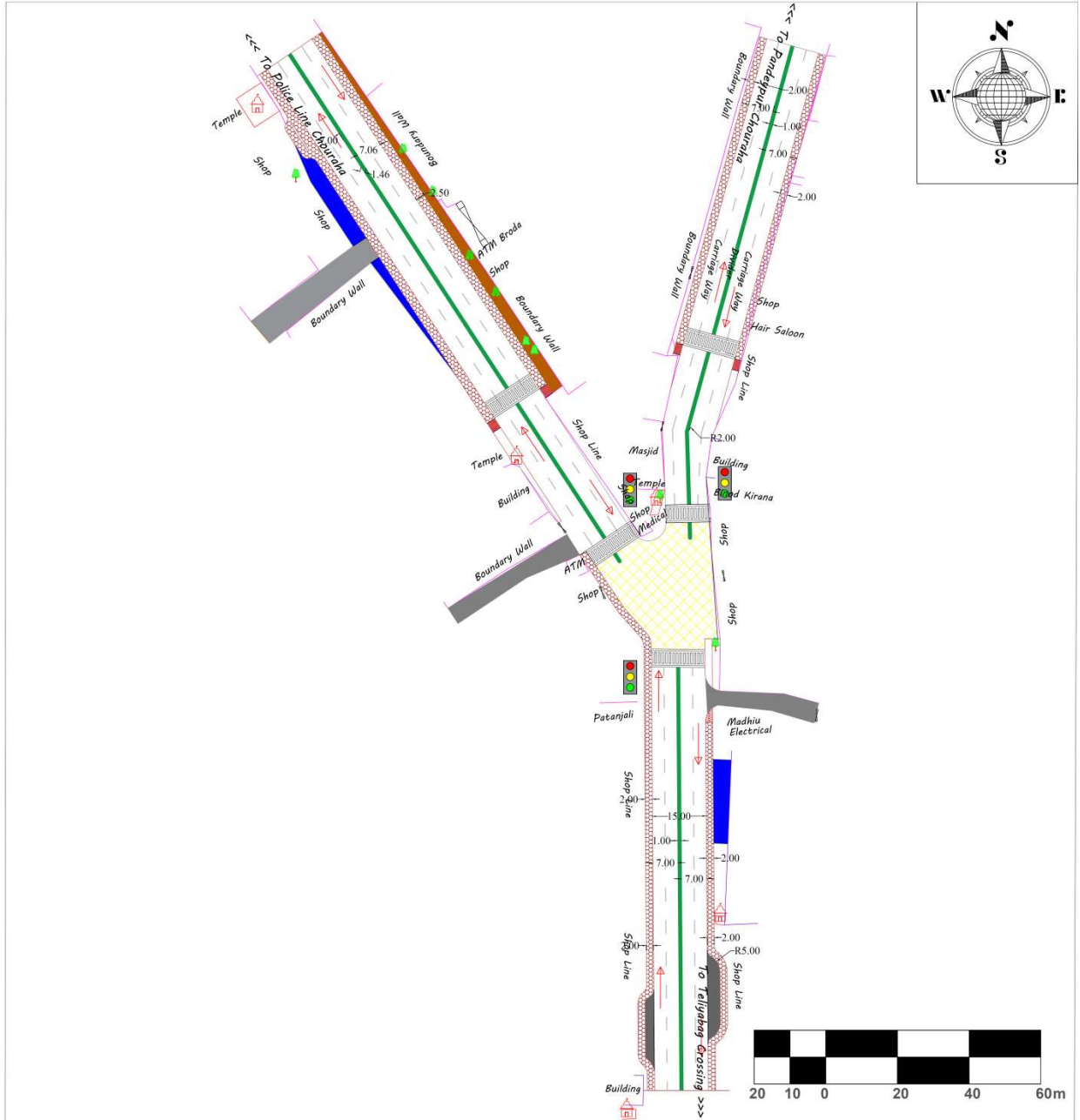
Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
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in Varanasi

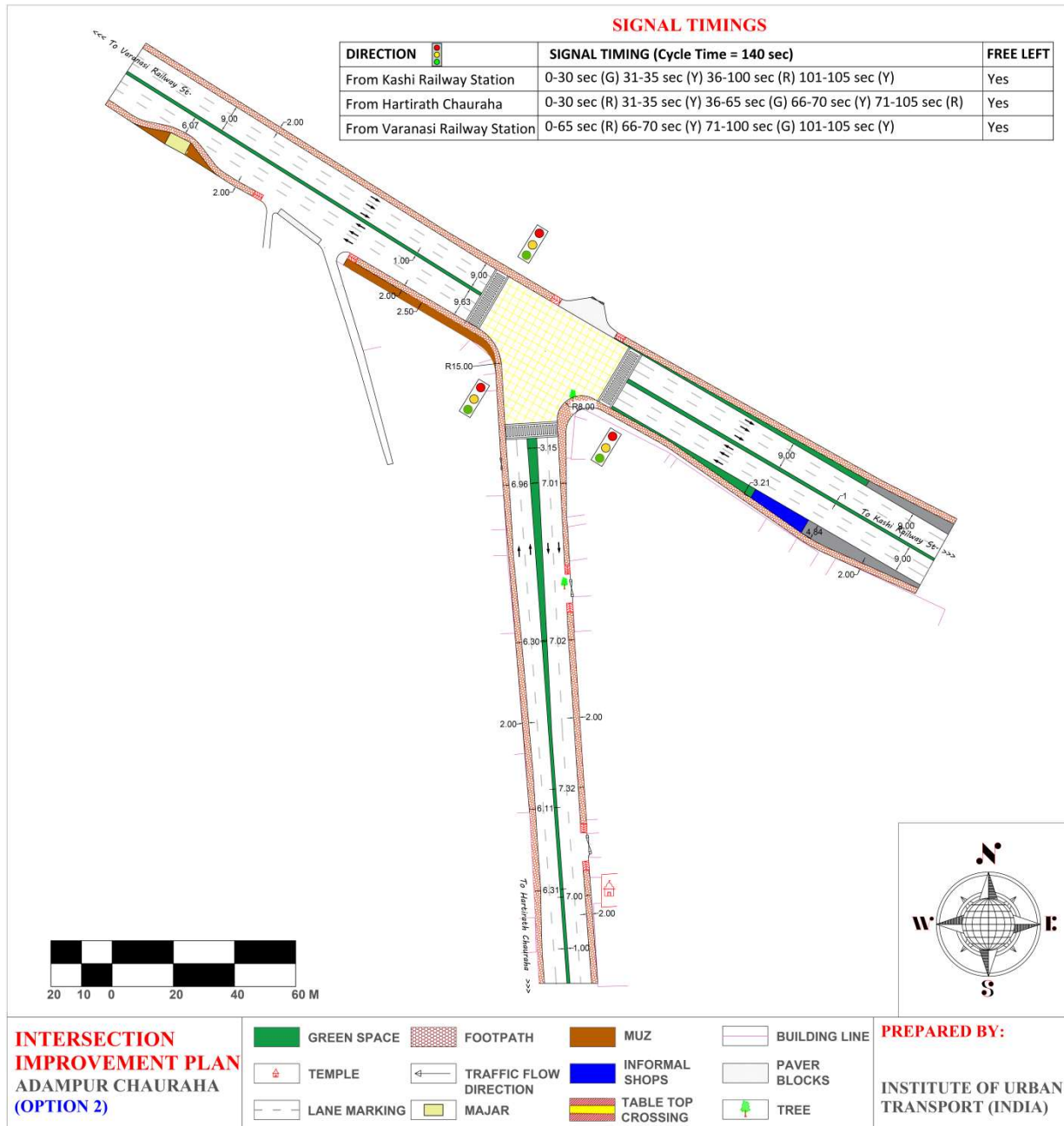


SIGNAL TIMINGS

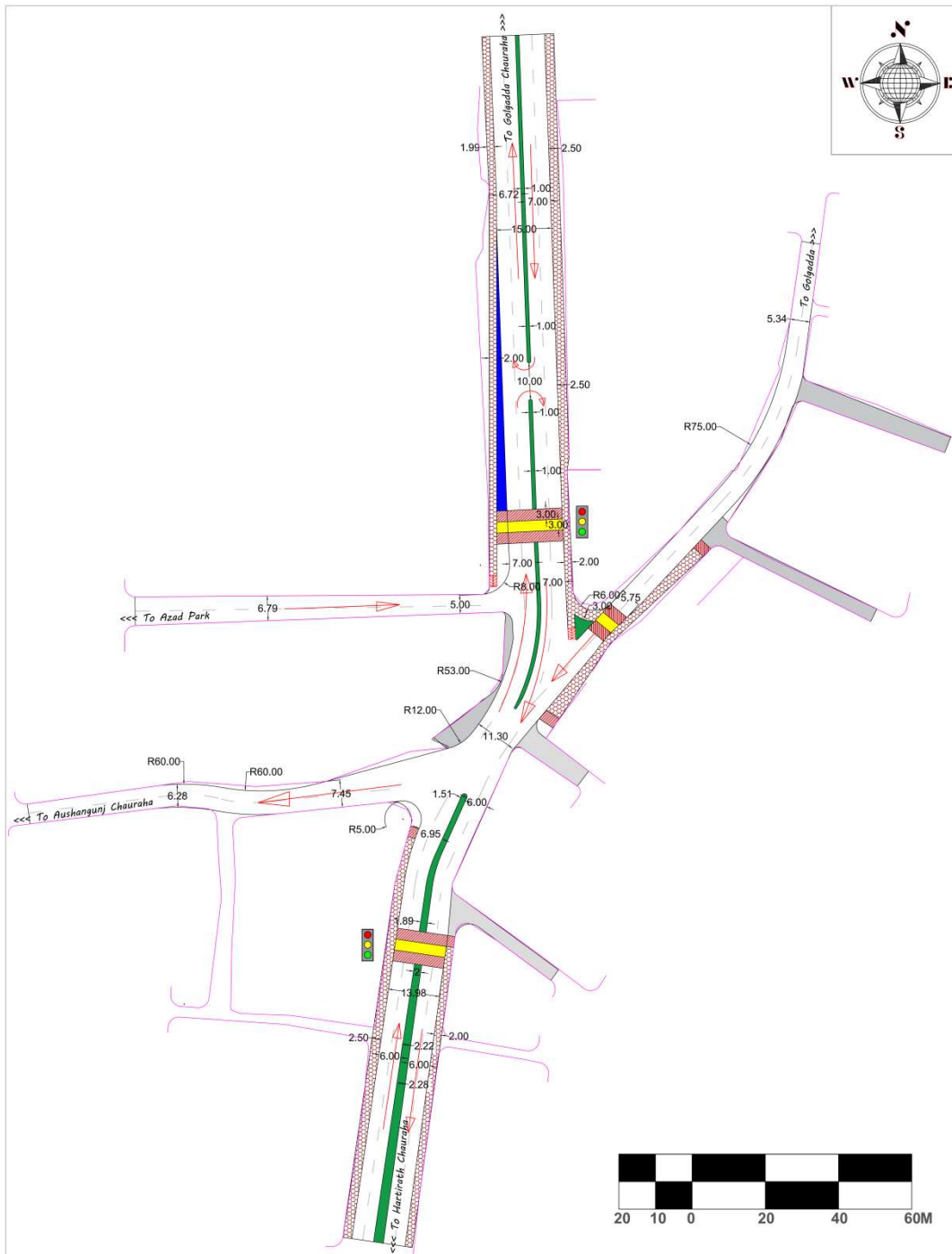
DIRECTION	SIGNAL TIMING (Cycle Time = 140 sec)	FREE LEFT
From Teliyabagh Crossing	0-30 sec (G) 31-35 sec (Y) 36-100 sec (R) 101-105 sec (Y)	Yes
From Police Line Chauraha	0-30 sec (R) 31-35 sec (Y) 36-65 sec (G) 66-70 sec (Y) 71-105 sec (R)	Yes
From Pandeypur Chauraha	0-65 sec (R) 66-70 sec (Y) 71-100 sec (G) 101-105 sec (Y)	Yes

<p>INTERSECTION IMPROVEMENT PLAN HUKULGANJ CHOWK OPTION 1</p>	GREEN SPACE	FOOTPATH	INFORMAL SHOPS	<p>PREPARED BY: INSTITUTE OF URBAN TRANSPORT (INDIA)</p>
	TEMPLE	DIRECTION	RAMPS (1:20)	
LANE MARKING	TREE	SERVICE ROAD		
MUZ	ZEBRA CROSSING			
ENTRY GATE	BUILDING LINE			

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi



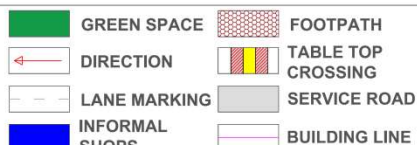
Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi



SIGNAL TIMINGS (PILIKOTHI CHAURAHA)

DIRECTION	SIGNAL TIMING (Cycle Time = 70 sec)	
To Hartirath Chauraha	0-30 sec (G) 31-35 sec (Y) 36-65 sec (R) 66-70 sec (Y)	FREE STRAIGHT MOVEMENT
To Golgadda Chauraha	0-30 sec (R) 31-35 sec (Y) 36-65 sec (G) 66-70 sec (Y)	FREE LEFT MOVEMENT

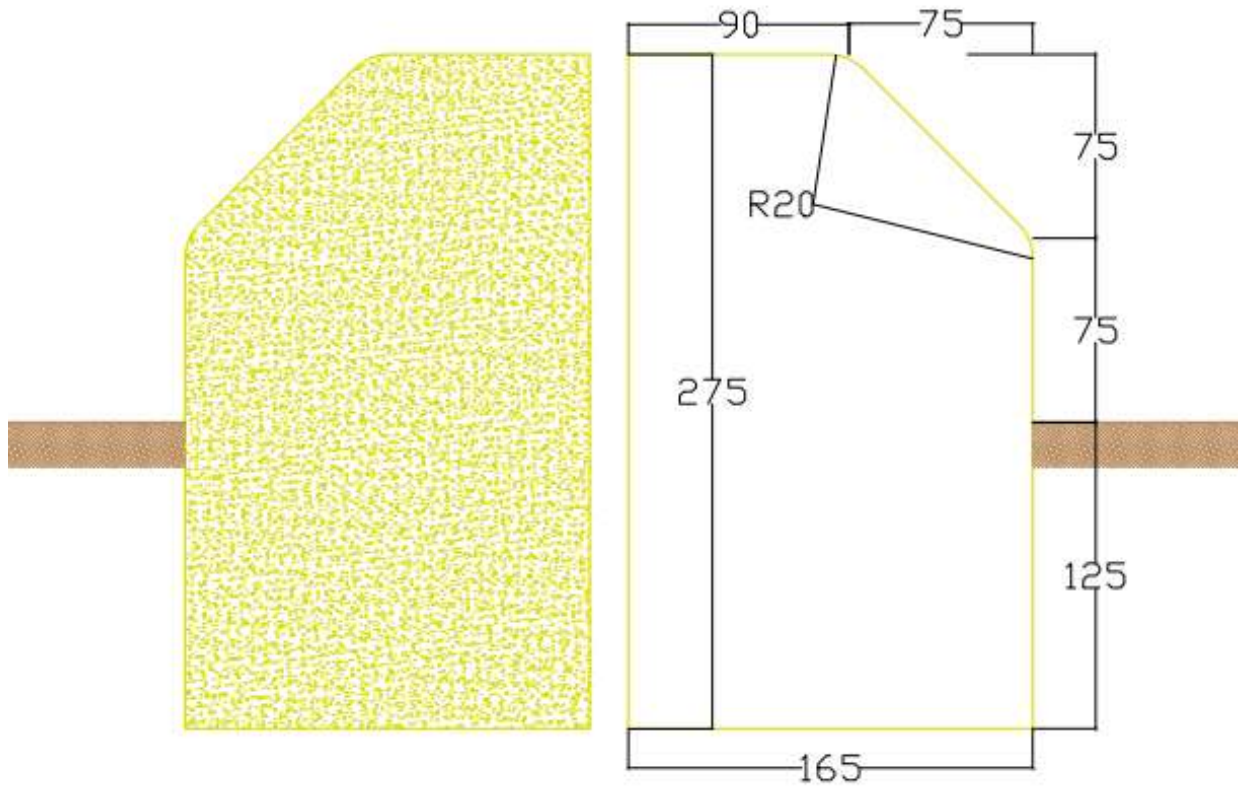
**INTERSECTION
IMPROVEMENT PLAN
PILIKOTHI CHAURAHA
(OPTION 1)**



PREPARED BY:

INSTITUTE OF URBAN
TRANSPORT (INDIA)

Design of Median Curb



Lane Markings

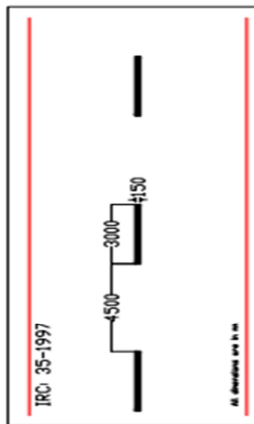
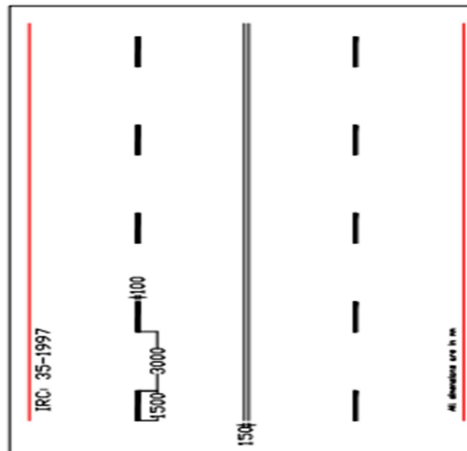
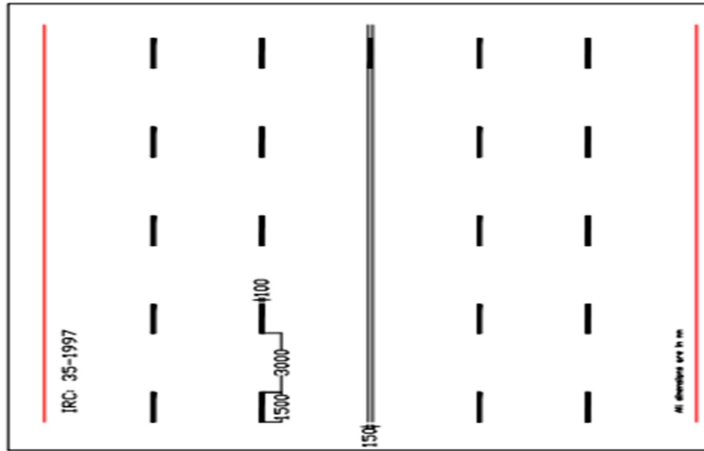
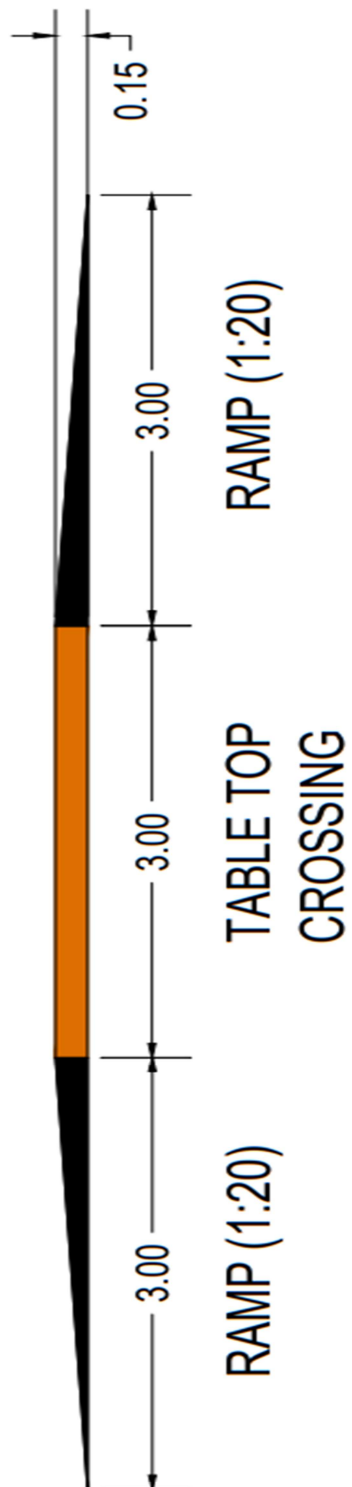


Table Top Crossing



Section 6

Form of Bid

[Date] _____

To CEO, Varanasi Smart City Limited (VSCL), Varanasi

Address: Nagar Nigam Varanasi, Near Sigra Stadium, Sigra, Varanasi

Description of the Works: Improvement and Up-gradation of 8 Road Intersections (Phase – II), in Varanasi including 5 years of O&M.

I/ We offer to execute the works described above and remedy any defects therein in conformity with the Conditions of Contract, specifications, drawings, Bill of Quantities and Addenda for:

For percentage rate..... percentage below/ percentage above/ at par with the rate entered in the schedule of rates, as referred to in clause 13 of ITB.

We undertake to commence the works on receiving the Notice to Proceed with work in accordance with the contract documents.

This Bid and your written acceptance of it shall constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any Bid you receive.

We hereby confirm that this Bid complies with the Bid validity and Earnest money required by the bidding documents and specified in the Appendix to ITB.

Authorized Signature:

Name and Title of Signatory:

Name of Bidder:

Authorized Address of communication:

Telephone No(s):

(Office): _____

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

Mobile No. : _____

Facsimile (FAX)

No.: _____

Electronic Mail Identification (E-Mail ID):

Section 7

Bill of Quantities Preamble

The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, Conditions of Contract, Specifications and Drawings.

For the construction of works, the quantities given in the Bill of Quantities are estimated, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices tendered in the Bill of Quantities in the case of item rate tenders.

The rates and prices tendered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the Contract, include all constructional plant, labor, supervision, materials, erection, maintenance, insurance, profit, taxes and duties (excluding GST), together with all general risks, liabilities and obligations set out in the Contract.

Arithmetic errors will be corrected by the Employer pursuant to Clause 27 of the Instructions to Bidders.

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

Summary of Cost Estimates:

S.No.	Item	Cost (INR)
1	Junction improvement for Kali Mata Chauraha, Varanasi	2,66,78,793
2	Junction improvement for Sigra Thana Junction, Varanasi	1,43,31,687
3	Junction improvement for Bhelupur Powerhouse Crossing, Varanasi	1,17,00,496
4	Junction improvement for Rajshree (LT College) Crossing, Varanasi	1,35,01,496
5	Junction improvement for Visheshwarganj Crossing, Varanasi	1,34,24,360
6	Junction improvement for Golgadda Crossing, Varanasi	2,64,17,847
7	Junction improvement for Pilikothi Crossing, Varanasi	1,90,29,616
8	Junction improvement for Hokulganj Crossing, Varanasi	1,15,55,654
	Total	Rs. 13,66,39,949
	1% for Labour Cess on total	Rs. 13,66,399
	Grand Total	Rs. 13,80,06,348

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The details cost breakup is as under:

ABSTRACT OF COST - 1						
JUNCTION IMPROVEMENT FOR KALI MATA CHAURAHA JUNCTION, VARANASI						
Item No.	Ref. of Analysis	Description	Unit	Rate	Approx. Quantities	Amounts (Rs.)
1.01	SOR PWD, Varanasi (Ref. of Analysis-292) & PWD Spec. No. 17.2.2	Dismantling of brick work or stone work in lime or cement mortar and including stacking of materials as directed by Engineer-in-charge within a distance of 60 meters (200 feet).	sqm	310	183.00	56730
1.02	SOR PWD, Varanasi (Ref. of Analysis-2.14 (iia))	Dismantling of existing flexible pavements and disposing of dismantled materials upto a lead of 100 m, stacking serviceable and unserviceable materials separately as per Technical Specification Clause 202. ii) By Mechanical Means, a) Bituminous Courses	Cum	220	49	10780
2.01	SOR PWD, Varanasi (Ref. of Analysis-2.2 (i))	In area of non-thorny jungle Clearing and grubbing road land including uprooting wild vegetation, grass bushes, shrubs, saplings and trees of girth up to 300mm,removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, up to a lead of 1000m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per Technical Specification Clause 201.(i) In area of non-thorny jungle	Hec	28250	0.8	22600

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2.02	SOR PWD, Varanasi (Ref. of Analysis- (MORT&H 301 (3.11))	Removal of unserviceable soil including excavation , loading and disposal up to outside municipal limit lead but excluding replacement by suitable soil which shall be paid separately as per clause 305	Cum	120	2954	354480
3.02	SOR PWD, Varanasi (Ref. of Analysis- (MORT&H 305 (3.16))	Construction of embankment with approved material obtained from borrow pits with all lifts and leads, up to 1 km transporting to site, spreading, grading to required slop and compacting to meet requirement of 95% of proctor density.	cum	160	1477	236320
3.03	SOR PWD, Varanasi (Ref. of Analysis- (MORD 401 - 4.7)	Construction of Granular Sub Base by providing well graded material, specification in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401. (Excluding Cost of Materials	cum	2005.3	591	1185132.3
3.04	As per Market Rate	Earthwork with agricultural soil for filling the top 300 mm depth of the median / island area duly completed as per Technical Specification Clause 305 with all leads and lifts	cum	75	4730	354750
4.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 405 - 4.7)	Providing, laying, spreading and compacting stone aggregates of specific size to water bound macadam specification including spreading in uniform thickness , hand packing , rolling with three wheel 80-100 kn static roller in				

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		stages to proper grade and camber , applying and brooming stone screening /binding material to fill up the interstices of coarse aggregate , watering and compacting to the required density Grading 1 as per Technical Specification clause 404 (Excluding cost of Material) By Manual Means.				
a)		Widening Area	cum	2666	739	1970174
5.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 502 (ii) -5.1)	Providing and applying prime coat with bituminous emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.7 Kg/ sqm using mechanical means as per Technical specification clause 502. (Excluding cost of Material)	sqm	26.5	2954	78281
5.02	SOR PWD, Varanasi (Ref. of Analysis- (MORD 503 (iii) -5.2)	Providing and applying tack coat with bitumen VG 10 using emulsion distributor at the rate of 0.35 kg per sqm on the prepared granular surface treated with primer & cleaned with hydraulic broom as per technical specification clause 503. (Excluding cost of Material)				
a		3.0-4.0 kg per 10 sqm on primed surface and on dry, hungry bituminous surface	sqm	13.4	2954	39583.6
b		3.0 to 4.0 kg per 10 sqm on normal bituminous surface	sqm	13.4	3279	43938.6
5.03	DSR : 16.54.1 (as per 2016)	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of	cum	7247.7	328	2377245.6

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		specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.				
5.04	DSR : 16.57 (as per 2016)	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.	cum	7863.85	132	1038028.2
6.01	DSR : 16.69 (as per 2016)	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm) including making drainage opening wherever	Cum	5012.65	327	1639136.55

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		required complete etc. as per direction 1043 SUB HEAD : 16-ROAD WORK of Engineer-in-charge (length of finished kerb edging shall be measured for payment).(Precast C.C. kerb stone shall be approved by Engineer-in-charge).				
6.02	DSR : 16.67 (as per 2016)	Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos on each side, including setting in position in footpath to the required level and line over a bed of 20 mm average thick cement mortar 1:5 (1 cement : 5 coarse sand), having joint thickness not more than 5mm except on curve, including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-charge.	sqm	654.3	15764	10314385.2
7.01	SOR PWD, Varanasi (Ref. of Analysis-MORT&H : 8.13.803	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflection glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes	sqm	550	734	403700
7.02	SOR PWD, Varanasi (Ref. of Analysis-MORT&H : 8.6.801	Providing and erecting direction and place identification retro-reflectorized sign as per IRC 67 2012 made of high intensity grade sheeting vide clause 801.3 fixed	nos	5000	26	130000

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		over aluminium sheeting 2mm thick with area exceeding 0.9 sqm. supported on a mild steel angle iron post 75mmx75mmx6mm, 2 Nos firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45mmx45mmx60mm below ground level as per approved drawing complete (90 cmx90 cm) as per approved drawing)				
7.03	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and SI no: 8	Supply and fixing of indication board made of 2mm thick aluminium sheet area not exceeding 0-9 sqm. Supported single angle iron 75x75x5 mm IRC 67 2012 high intensity grade.	nos	5500	4	22000
7.05	DSR : 16.54.1 (as per 2016)	Installation of advance direction sign in overhead cantilever signboard (Providing and erecting advance direction micro prismatic retro- reflectorized sign Type-VII sheeting as per IRC :67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick with back frame and post of 350 dia. MS Pipe				
		Sign board size of (5500x2500)	sqm	4722.2	68.75	324651.25
7.06	As per Market Rate	Bi-directional retro reflective Studs (100X75mm rectangular) at Pedestrian crossing, stop line, island barriers and footpath & Hazardous location	nos	750	1756	1317000
7.07	SOR PWD, Varanasi (Ref. of Analysis-	Supplying and fixing of site solar road stud powerful mode extra bright aluminium die-cast matt	nos	3413	394	1344722

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	Traffic Sign Page : 83 and SI no: 12	finish conforming to IS 617:1994 designation 4250 apadde solar road studs manufactured by TATA BP solar India or equivalent having high intensity 3x2 nos. flashing throughout the night with backup of at least 4 in sunlight days , amber or red color all weather resistant with superior polycarbonate solar call & side reflectors.				
7.08	DSR : 16.65 (as per 2016)	Providing and fixing post delineators made of ABS round body fitted with 2 nos 100 mm dia high reflective reflectors and mounted on MS pipe of 65 mm dia duly powder coated anti-rust and anti-theft steel to be installed as per direction of Engineer-in-charge.	nos	554.5	34	18853
8.01	As per Market Rate	Road Traffic Signals electrically operated (Since it is a readymade item commercially produced and erected by specialized firm in the electrical and electronic field, rate may be taken based on market enquiry from firms specialized in this field and ISI certified for the approved design and drawing.)	nos	550000	0	0
9.01	DSR : 16.91 (as per 2016)	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required color & pattern over 50mm thick compacted bed of sand,	Sqm	638.95	0	0

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		compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. Complete all as per direction of Engineer-in-Charge.				
10.01	As per Market Rate	Providing Bus Shelter as per design and specification of IRC standards as per the direction of engineer-in charge	Nos	125000	1	125000
11.01	As per Rate Analysis Varanasi	Providing and erecting street light mounted on a steel circular hollow pole of standard specifications for street lighting, 9 m high spaced 40 m apart, 1.8 m overhang if fixed in the median and on one side if fixed on the footpath, fitted with sodium vapor lamp and fixed firmly in concrete foundation. Unit = Each				
a)		Staggered - Single Overhang	Nos	34587	7	242109
b)		Central - Double Overhang	Nos	55806	20	1116120
c)		High Mast Light	Nos	350000	1	350000
12.01	As per Market Rate	Providing and fixing Pedestrian railing dully painted in two coats with synthetic enamel paint and grouted on existing kerbs complete as per approved drawings	sqm	63	96	6048

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13.01	As per Market Rate	Construction of raised pedestrian (Table Top) crossing of design and specification of IRC standards with direction and approval of engineer-in charge	Cum	5500	80.55	443025
14.01	Estimate received from concerned department	Shifting of Utilities along with accessories				
		(1) Lamp Post	nos	25000	3	75000
		(2) Electric Poles	nos	50000	6	300000
		(3) Transformer	nos	150000	4	600000
		(4) Telephone Junction Box	nos	8000	1	8000
		(5) Telephone Post	nos	7500	4	30000
		(6) Trees	nos	7500	2	15000
		(7) Hand Pump	nos	18000	1	18000
		(8) Signal Pole	nos	12500	0	0
		(9) Sign Board	nos	4000	2	8000
		(10) OFC	nos	60000	1	60000
Total Cost :						2,66,78,793

ABSTRACT OF COST - 1						
JUNCTION IMPROVEMENT FOR SIGRA THANA JUNCTION, VARANASI						
Item No.	Ref. of Analysis	Description	Unit	Rate	Approx. Quantities	Amounts (Rs.)
1.01	SOR PWD, Varanasi (Ref. of Analysis-292) & PWD Spec. No. 17.2.2	Dismantling of brick work or stone work in lime or cement mortar and including stacking of materials as directed by Engineer-in-charge within a distance of 60 meters (200 feet).	sqm	310	465.00	144150
1.02	SOR PWD, Varanasi (Ref. of Analysis-2.14 (iia))	Dismantling of existing flexible pavements and disposing of dismantled materials upto a lead of 100 m, stacking serviceable and unserviceable materials separately as per Technical Specification Clause 202. ii) By Mechanical Means, a) Bituminous Courses	Cum	220	49	10780
2.01	SOR PWD, Varanasi (Ref. of Analysis-2.2 (i))	In area of non-thorny jungle Clearing and grubbing road land including uprooting wild vegetation, grass bushes, shrubs, saplings and trees of girth upto 300mm,removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, upto a lead of 1000m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per Technical Specification Clause 201.(i) In area of non-thorny jungle	Hec	28250	1	28250
2.02	SOR PWD, Varanasi (Ref.	Removal of unserviceable soil including excavation , loading and	Cum	120	1713	205560

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	of Analysis- (MORT&H 301 (3.11))	disposal upto outside municipal limit lead but excluding replacement by suitable soil which shall be paid separately as per clause 305				
3.02	SOR PWD, Varanasi (Ref. of Analysis- (MORT&H 305 (3.16))	Construction of embankment with approved material obtained from borrow pits with all lifts and leads, upto 1 km transporting to site, spreading, grading to required slop and compacting to meet requirement of 95% of proctor density.	cum	160	857	137120
3.03	SOR PWD, Varanasi (Ref. of Analysis- (MORD 401 - 4.7)	Construction of Granular Sub Base by providing well graded material, specification in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401. (Excluding Cost of Materials	cum	2005.3	343	687817.9
3.04	As per Market Rate	Earthwork with agricultural soil for filling the top 300 mm depth of the median / island area duly completed as per Technical Specification Clause 305 with all leads and lifts.	cum	75	760	57000
4.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 405 - 4.7)	Providing, laying, spreading and compacting stone aggregates of specific size to water bound macadam specification including spreading in uniform thickness , hand packing , rolling with three wheel 80-100 kN static roller in stages to proper grade and camber , applying and brooming				

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		stone screening /binding material to fill up the interstices of coarse aggregate , watering and compacting to the required density Grading 1 as per Technical Specification clause 404 (Excluding cost of Material) By Manual Means.				
a)		Widening Area	cum	2666	429	1143714
5.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 502 (ii) -5.1)	Providing and applying prime coat with bituminous emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.7 Kg/ sqm using mechanical means as per Technical specification clause 502 (Excluding cost of Material)	sqm	26.5	1713	45394.5
5.02	SOR PWD, Varanasi (Ref. of Analysis- (MORD 503 (iii) -5.2)	Providing and applying tack coat with bitumen VG 10 using emulsion distributor at the rate of 0.35 kg per sqm on the prepared granular surface treated with primer & cleaned with hydraulic broom as per technical specification clause 503..(Excluding cost of Material)				
a		3.0-4.0 kg per 10 sqm on primed surface and on dry, hungry bituminous surface	sqm	13.4	1713	22954.2
b		3.0 to 4.0 kg per 10 sqm on normal bituminous surface	sqm	13.4	1713	22954.2
5.03	DSR : 16.54.1 (as per 2016)	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler,	cum	7247.7	172	1246604.4

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		transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.				
5.04	DSR : 16.57 (as per 2016)	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.	cum	7863.85	69	542605.65
6.01	DSR : 16.69 (as per 2016)	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm) including making drainage opening wherever required complete etc. as per direction 1043 SUB HEAD : 16-	Cum	5012.65	105	526328.25

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		ROAD WORK of Engineer-in-charge (length of finished kerb edging shall be measured for payment).(Precast C.C. kerb stone shall be approved by Engineer-in-charge).				
6.02	DSR : 16.67 (as per 2016)	Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos on each side, including setting in position in footpath to the required level and line over a bed of 20 mm average thick cement mortar 1:5 (1 cement : 5 coarse sand), having joint thickness not more than 5mm except on curve, including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-charge.	sqm	654.3	2533	1657341.9
7.01	SOR PWD, Varanasi (Ref. of Analysis- MORT&H : 8.13.803	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflection glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes	sqm	550	760	418000
7.02	SOR PWD, Varanasi (Ref. of Analysis- MORT&H : 8.6.801	Providing and erecting direction and place identification retro-reflectorized sign as per IRC 67 2012 made of high intensity grade sheeting vide clause 801.3 fixed over aluminium sheeting 2mm thick with area exceeding 0.9 sqm.	nos	5000	30	150000

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		supported on a mild steel angle iron post 75mmx75mmx6mm, 2 Nos firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45mmx45mmx60mm below ground level as per approved drawing complete (90 cmx90 cm) as per approved drawing)				
7.03	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and Sl no: 8	Supply and fixing of indication board made of 2mm thick aluminium sheet area not exceeding 0-9 sqm. Supported single angle iron 75x75x5 mm IRC 67 2012 high intensity grade.	nos	5500	4	22000
7.05	DSR : 16.54.1 (as per 2016)	Installation of advance direction sign in overhead cantilever signboard (Providing and erecting advance direction micro prismatic retro- reflectorized sign Type-VII sheeting as per IRC :67, 2012 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick with back frame and post of 350 dia MS Pipe				
		Sign board size of (5500x2500)	sqm	4722.2	110	519442
7.06	As per Market Rate	Bi-directional retro reflective Studs (100X75mm rectangular) at Pedestrian crossing, stop line, island barriers and footpath & Hazardous location	nos	750	745	558750
7.07	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and	Supplying and fixing of site solar road stud powerful mode extra bright aluminium die-cast matt finish conforming to IS 617:1994 designation 4250 apadde solar	nos	3413	386	1317418

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	Sl no: 12	road studs manufactured by TATA BP solar India or equivalent having high intensity 3x2 nos. flashing throughout the night with backup of at least 4 in sunlight days, amber or red color all weather resistant with superior polycarbonate solar call & side reflectors.				
7.08	DSR : 16.65 (as per 2016)	Providing and fixing post delineators made of ABS round body fitted with 2 nos 100 mm dia high reflective reflectors and mounted on MS pipe of 65 mm dia duly powder coated anti-rust and anti-theft steel to be installed as per direction of Engineer-in-charge.	nos	554.5	48	26616
8.01	As per Market Rate	Road Traffic Signals electrically operated (Since it is a readymade item commercially produced and erected by specialized firm in the electrical and electronic field, rate may be taken based on market enquiry from firms specialized in this field and ISI certified for the approved design and drawing.)	nos	550000	0	0
9.01	DSR : 16.91 (as per 2016)	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required color & pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking	Sqm	638.95	0	0

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		paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.				
10.01	As per Market Rate	Providing Bus Shelter as per design and specification of IRC standards as per the direction of engineer-in charge	Nos	125000	1	125000
11.01	As per Rate Analysis Varanasi	Providing and erecting street light mounted on a steel circular hollow pole of standard specifications for street lighting, 9 m high spaced 40 m apart, 1.8 m overhang if fixed in the median and on one side if fixed on the footpath, fitted with sodium vapor lamp and fixed firmly in concrete foundation. Unit = Each				
a)		Staggered - Single Overhang	Nos	34587	9	311283
b)		Central - Double Overhang	Nos	55806	28	1562568
c)		High Mast Light	Nos	350000	1	350000
12.01	As per Market Rate	Providing and fixing Pedestrian railing dully painted in two coats with synthetic enamel paint and grouted on existing kerbs complete as per approved drawings	sqm	63	270	17010
13.01	As per Market Rate	Construction of raised pedestrian (Table Top) crossing of design and specification of IRC standards with direction and approval of	Cum	5500	80.55	443025

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		engineer-in charge				
14.01	Estimate received from concerned department	Shifting of Utilities along with accessories				
		(1) Lamp Post	nos	25000	0	0
		(2) Electric Poles	nos	50000	26	1300000
		(3) Transformer	nos	150000	4	600000
		(4) Telephone Junction Box	nos	8000	0	0
		(5) Telephone Post	nos	7500	9	67500
		(6) Trees	nos	7500	7	52500
		(7) Hand Pump	nos	18000	0	0
		(8) Signal Pole	nos	12500	0	0
		(9) Sign Board	nos	4000	3	12000
		(10) OFC	nos	60000	0	0
Total Cost :						1,43,31,687

ABSTRACT OF COST - 1						
JUNCTION IMPROVEMENT FOR BHELUPUR POWERHOUSE JUNCTION, VARANASI						
Item No.	Ref. of Analysis	Description	Unit	Rate	Approx. Quantities	Amounts (Rs.)
1.01	SOR PWD, Varanasi (Ref. of Analysis-292) & PWD Spec. No. 17.2.2	Dismantling of brick work or stone work in lime or cement mortar and including stacking of materials as directed by Engineer-in-charge within a distance of 60 meters (200 feet).	sqm	310	370.00	114700
1.02	SOR PWD, Varanasi (Ref. of Analysis-2.14 (iia))	Dismantling of existing flexible pavements and disposing of dismantled materials up to a lead of 100 m, stacking serviceable and unserviceable materials separately as per Technical Specification Clause 202. ii) By Mechanical Means, a) Bituminous Courses	Cum	220	137	30140
2.01	SOR PWD, Varanasi (Ref. of Analysis-2.2 (i))	In area of non-thorny jungle Clearing and grubbing road land including uprooting wild vegetation, grass bushes, shrubs, saplings and trees of girth upto 300mm,removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned upto a lead of 1000m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per Technical Specification Clause 201.(i) In area of non-thorny jungle	Hec	28250	0.9	25425

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2.02	SOR PWD, Varanasi (Ref. of Analysis- (MORT&H 301 (3.11))	Removal of unserviceable soil including excavation , loading and disposal upto outside municipal limit lead but excluding replacement by suitable soil which shall be paid separately as per clause 305	Cum	120	754	90480
3.02	SOR PWD, Varanasi (Ref. of Analysis- (MORT&H 305 (3.16))	Construction of embankment with approved material obtained from borrow pits with all lifts and leads upto 1 km transporting to site, spreading, grading to required slop and compacting to meet requirement of 95% of proctor density.	cum	160	377	60320
3.03	SOR PWD, Varanasi (Ref. of Analysis- (MORD 401 - 4.7)	Construction of Granular Sub Base by providing well graded material, specification in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401. (Excluding Cost of Materials	cum	2005.3	151	302800.3
3.04	As per Market Rate	Earthwork with agricultural soil for filling the top 300 mm depth of the median / island area duly completed as per Technical Specification Clause 305 with all leads and lifts	cum	75	535	40125

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in Varanasi

4.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 405 - 4.7)	Providing, laying, spreading and compacting stone aggregates of specific size to water bound macadam specification including spreading in uniform thickness , hand packing , rolling with three wheel 80-100 kn static roller in stages to proper grade and camber , applying and brooming stone screening /binding material to fill up the interstices of coarse aggregate , watering and compacting to the required density Grading 1 as per Technical Specification clause 404 (Excluding cost of Material) By Manual Means.				
a)		Widening Area	cum	2666	189	503874
5.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 502 (ii) -5.1)	Providing and applying prime coat with bituminous emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.7 Kg/ sqm using mechanical means as per Technical specification clause 502. (Excluding cost of Material)	sqm	26.5	754	19981
5.02	SOR PWD, Varanasi (Ref. of Analysis- (MORD 503 (iii) -5.2)	Providing and applying tack coat with bitumen VG 10 using emulsion distributor at the rate of 0.35 kg per sqm on the prepared granular surface treated with primer & cleaned with hydraulic broom as per technical specification clause 503..(Excluding cost of Material)				
a		3.0-4.0 kg per 10 sqm on primed surface and on dry, hungry	sqm	13.4	754	10103.6

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

		bituminous surface				
b		3.0 to 4.0 kg per 10 sqm on normal bituminous surface	sqm	13.4	1665	22311
5.03	DSR : 16.54.1 (as per 2016)	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.	cum	7247.7	167	1210365.9
5.04	DSR : 16.57 (as per 2016)	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.	cum	7863.85	67	526877.95

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in Varanasi

6.01	DSR : 16.69 (as per 2016)	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm) including making drainage opening wherever required complete etc. as per direction 1043 SUB HEAD : 16-ROAD WORK of Engineer-in-charge (length of finished kerb edging shall be measured for payment).(Precast C.C. kerb stone shall be approved by Engineer-in-charge).	Cum	5012.65	74	370936.1
6.02	DSR : 16.67 (as per 2016)	Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos on each side, including setting in position in footpath to the required level and line over a bed of 20 mm average thick cement mortar 1:5 (1 cement : 5 coarse sand), having joint thickness not more than 5mm except on curve, including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-charge.	sqm	654.3	1783	1166616.9
7.01	SOR PWD, Varanasi (Ref. of Analysis-	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflection	sqm	550	772	424600

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in Varanasi

	MORT&H : 8.13.803	glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes				
7.02	SOR PWD, Varanasi (Ref. of Analysis- MORT&H : 8.6.801	Providing and erecting direction and place identification retro-reflectORIZED sign as per IRC 67 2012 made of high intensity grade sheeting vide clause 801.3 fixed over aluminium sheeting 2mm thick with area exceeding 0.9 sqm. supported on a mild steel angle iron post 75mmx75mmx6mm, 2 Nos firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45mmx45mmx60mm below ground level as per approved drawing complete (90 cmx90 cm) as per approved drawing)	nos	5000	26	130000
7.03	SOR PWD, Varanasi (Ref. of Analysis- Traffic Sign Page : 83 and SI no: 8	Supply and fixing of indication board made of 2mm thick aluminium sheet area not exceeding 0-9 sqm. Supported single angle iron 75x75x5 mm IRC 67 2012 high intensity grade.	nos	5500	4	22000
7.05	DSR : 16.54.1 (as per 2016)	Installation of advance direction sign in overhead cantilever signboard (Providing and erecting advance direction micro prismatic retro- reflectORIZED sign Type-VII sheeting as per IRC :67, 2012 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick with back				

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

		frame and post of 350 dia MS Pipe				
		Sign board size of (5500x2500)	sqm	4722.2	68.75	324651.25
7.06	As per Market Rate	Bi-directional retro reflective Studs (100X75mm rectangular) at Pedestrian crossing, stop line, island barriers and footpath & Hazardous location	nos	750	615	461250
7.07	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and Sl no: 12	Supplying and fixing of site solar road stud powerful mode extra bright aluminium die-cast matt finish conforming to IS 617:1994 designation 4250 apadde solar road studs manufactured by TATA BP solar India or equivalent having high intensity 3x2 nos. flashing throughout the night with backup of at least 4 in sunlight days , amber or red color all weather resistant with superior polycarbonate solar call & side reflectors.	nos	3413	386	1317418
7.08	DSR : 16.65 (as per 2016)	Providing and fixing post delineators made of ABS round body fitted with 2 nos 100 mm dia high reflective reflectors and mounted on MS pipe of 65 mm dia duly powder coated anti-rust and anti-theft steel to be installed as per direction of Engineer-in-charge.	nos	554.5	52	28834

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

8.01	As per Market Rate	Road Traffic Signals electrically operated (Since it is a readymade item commercially produced and erected by specialized firm in the electrical and electronic field, rate may be taken based on market enquiry from firms specialized in this field and ISI certified for the approved design and drawing.)	nos	550000	0	0
9.01	DSR : 16.91 (as per 2016)	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required color & pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.	Sqm	638.95	142	90730.9
10.01	As per Market Rate	Providing Bus Shelter as per design and specification of IRC standards as per the direction of engineer-in charge	Nos	125000	1	125000

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

11.01	As per Rate Analysis Varanasi	Providing and erecting street light mounted on a steel circular hollow pole of standard specifications for street lighting, 9 m high spaced 40 m apart, 1.8 m overhang if fixed in the median and on one side if fixed on the footpath, fitted with sodium vapor lamp and fixed firmly in concrete foundation. Unit = Each				
a)		Staggered - Single Overhang	Nos	34587	9	311283
b)		Central - Double Overhang	Nos	55806	28	1562568
c)		High Mast Light	Nos	350000	1	350000
12.01	As per Market Rate	Providing and fixing Pedestrian railing dully painted in two coats with synthetic enamel paint and grouted on existing kerbs complete as per approved drawings	sqm	63	183	11529
13.01	As per Market Rate	Construction of raised pedestrian (Table Top) crossing of design and specification of IRC standards with direction and approval of engineer-in charge	Cum	5500	88.65	487575
14.01	Estimate received from concerned department	Shifting of Utilities along with accessories				
		(1) Lamp Post	nos	25000	0	0
		(2) Electric Poles	nos	50000	13	650000
		(3) Transformer	nos	150000	0	0
		(4) Telephone Junction Box	nos	8000	1	8000

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

		(5) Telephone Post	nos	7500	0	0
		(6) Trees	nos	7500	0	0
		(7) Hand Pump	nos	18000	0	0
		(8) Signal Pole	nos	12500	0	0
		(9) Sign Board	nos	4000	0	0
		(10) OFC	nos	60000	15	900000
Total						1,17,00,496
Abbreviations						
cum		Cubic Metres				
sqm		Square Metres				
rm		Running Metre				
no		Numbers				
MT		Metric Tonnes				
LS		Lump Sum				

ABSTRACT OF COST - 1						
JUNCTION IMPROVEMENT FOR RAJSHREE (LT COLLEGE) CROSSING JUNCTION, VARANASI						
Item No.	Ref. of Analysis	Description	Unit	Rate	Approx. Quantities	Amounts (Rs.)
1.01	SOR PWD, Varanasi (Ref. of Analysis-292) & PWD Spec. No. 17.2.2	Dismantling of brick work or stone work in lime or cement mortar and including stacking of materials as directed by Engineer-in-charge within a distance of 60 meters (200 feet).	sqm	310	210.00	65100
1.02	SOR PWD, Varanasi (Ref. of Analysis-2.14 (iia))	Dismantling of existing flexible pavements and disposing of dismantled materials upto a lead of 100 m, stacking serviceable and unserviceable materials separately as per Technical Specification Clause 202. ii) By Mechanical Means, a) Bituminous Courses	Cum	220	35	7700
2.01	SOR PWD, Varanasi (Ref. of Analysis-2.2 (i))	In area of non-thorny jungle Clearing and grubbing road land including uprooting wild vegetation, grass bushes, shrubs, saplings and trees of girth upto 300mm,removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned upto a lead of 1000m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per Technical Specification Clause 201.(i) In area of non-thorny jungle	Hec	28250	0.8	22600
2.02	SOR PWD, Varanasi (Ref.	Removal of unserviceable soil including excavation , loading and	Cum	120	1585	190200

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

	of Analysis- (MORT&H 301 (3.11))	disposal upto outside municipal limit lead but excluding replacement by suitable soil which shall be paid separately as per clause 305				
3.02	SOR PWD, Varanasi (Ref. of Analysis- (MORT&H 305 (3.16))	Construction of embankment with approved material obtained from borrow pits with all lifts and leads, upto 1 km transporting to site, spreading, grading to required slop and compacting to meet requirement of 95% of proctor density.	cum	160	793	126880
3.03	SOR PWD, Varanasi (Ref. of Analysis- (MORD 401 - 4.7)	Construction of Granular Sub Base by providing well graded material, specification in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401. (Excluding Cost of Materials	cum	2005.3	317	635680.1
3.04	As per Market Rate	Earthwork with agricultural soil for filling the top 300 mm depth of the median / island area duly completed as per Technical Specification Clause 305 with all leads and lifts	cum	75	708	53100
4.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 405 - 4.7)	Providing, laying, spreading and compacting stone aggregates of specific size to water bound macadam specification including spreading in uniform thickness , hand packing , rolling with three wheel 80-100 kn static roller in stages to proper grade and camber , applying and brooming				

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

		stone screening /binding material to fill up the interstices of coarse aggregate , watering and compacting to the required density Grading 1 as per Technical Specification clause 404 (Excluding cost of Material) By Manual Means.				
a)		Widening Area	cum	2666	397	1058402
5.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 502 (ii) -5.1)	Providing and applying prime coat with bituminous emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.7 Kg/ sqm using mechanical means as per Technical specification clause 502.(Excluding cost of Material)	sqm	26.5	1585	42002.5
5.02	SOR PWD, Varanasi (Ref. of Analysis- (MORD 503 (iii) -5.2)	Providing and applying tack coat with bitumen VG 10 using emulsion distributor at the rate of 0.35 kg per sqm on the prepared granular surface treated with primer & cleaned with hydraulic broom as per technical specification clause 503..(Excluding cost of Material)				
a		3.0-4.0 kg per 10 sqm on primed surface and on dry, hungry bituminous surface	sqm	13.4	1585	21239
b		3.0 to 4.0 kg per 10 sqm on normal bituminous surface	sqm	13.4	1814	24307.6
5.03	DSR : 16.54.1 (as per 2016)	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler,	cum	7247.7	182	1319081.4

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

		transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.				
5.04	DSR : 16.57 (as per 2016)	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.	cum	7863.85	73	574061.05
6.01	DSR : 16.69 (as per 2016)	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm) including making drainage opening wherever required complete etc. as per direction 1043 SUB HEAD : 16-	Cum	5012.65	78	390986.7

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

		ROAD WORK of Engineer-in-charge (length of finished kerb edging shall be measured for payment).(Precast C.C. kerb stone shall be approved by Engineer-in-charge).				
6.02	DSR : 16.67 (as per 2016)	Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos on each side, including setting in position in footpath to the required level and line over a bed of 20 mm average thick cement mortar 1:5 (1 cement : 5 coarse sand), having joint thickness not more than 5mm except on curve, including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-charge.	sqm	654.3	1868	1222232.4
7.01	SOR PWD, Varanasi (Ref. of Analysis- MORT&H : 8.13.803	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflection glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes	sqm	550	772	424600
7.02	SOR PWD, Varanasi (Ref. of Analysis- MORT&H : 8.6.801	Providing and erecting direction and place identification retro-reflectorized sign as per IRC 67 2012 made of high intensity grade sheeting vide clause 801.3 fixed over aluminium sheeting 2mm thick with area exceeding 0.9 sqm.	nos	5000	26	130000

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

		supported on a mild steel angle iron post 75mmx75mmx6mm, 2 Nos firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45mmx45mmx60mm below ground level as per approved drawing complete (90 cmx90 cm) as per approved drawing)				
7.03	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and Sl no: 8	Supply and fixing of indication board made of 2mm thick aluminium sheet area not exceeding 0-9 sqm. Supported single angle iron 75x75x5 mm IRC 67 2012 high intensity grade.	Nos.	5500	4	22000
7.05	DSR : 16.54.1 (as per 2016)	Installation of advance direction sign in overhead cantilever signboard (Providing and erecting advance direction micro prismatic retro- reflectorized sign Type-VII sheeting as per IRC :67, 2012 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick with back frame and post of 350 dia MS Pipe				
		Sign board size of (5500x2500)	sqm	4722.2	68.75	324651.25
7.06	As per Market Rate	Bi-directional retro reflective Studs (100X75mm rectangular) at Pedestrian crossing, stop line, island barriers and footpath & Hazardous location	Nos.	750	631	473250
7.07	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and	Supplying and fixing of site solar road stud powerful mode extra bright aluminium die-cast matt finish conforming to IS 617:1994 designation 4250 apadde solar	Nos.	3413	386	1317418

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

	SI no: 12	road studs manufactured by TATA BP solar India or equivalent having high intensity 3x2 nos. flashing throughout the night with backup of at least 4 in sunlight days, amber or red color all weather resistant with superior polycarbonate solar call & side reflectors.				
7.08	DSR : 16.65 (as per 2016)	Providing and fixing post delineators made of ABS round body fitted with 2 nos. 100 mm dia. high reflective reflectors and mounted on MS pipe of 65 mm dia duly powder coated anti-rust and anti-theft steel to be installed as per direction of Engineer-in-charge.	Nos.	554.5	52	28834
8.01	As per Market Rate	Road Traffic Signals electrically operated (Since it is a readymade item commercially produced and erected by specialized firm in the electrical and electronic field, rate may be taken based on market enquiry from firms specialized in this field and ISI certified for the approved design and drawing.)	Nos.	550000	0	0

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

9.01	DSR : 16.91 (as per 2016)	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.	Sqm	638.95	2510	1603764.5
10.01	As per Market Rate	Providing Bus Shelter as per design and specification of IRC standards as per the direction of engineer-in charge	Nos	125000	1	125000
11.01	As per Rate Analysis Varanasi	Providing and erecting street light mounted on a steel circular hollow pole of standard specifications for street lighting, 9 m high spaced 40 m apart, 1.8 m overhang if fixed in the median and on one side if fixed on the footpath, fitted with sodium vapor lamp and fixed firmly in concrete foundation. Unit = Each				
a)		Staggered - Single Overhang	Nos	34587	9	311283
b)		Central - Double Overhang	Nos	55806	28	1562568

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

c)		High Mast Light	Nos	350000	1	350000
12.01	As per Market Rate	Providing and fixing Pedestrian railing dully painted in two coats with synthetic enamel paint and grouted on existing kerbs complete as per approved drawings	sqm	63	183	11529
13.01	As per Market Rate	Construction of raised pedestrian (Table Top) crossing of design and specification of IRC standards with direction and approval of engineer-in charge	Cum	5500	80.55	443025
14.01	Estimate received from concerned department	Shifting of Utilities along with accessories				
		(1) Lamp Post	nos	25000	5	125000
		(2) Electric Poles	nos	50000	6	300000
		(3) Transformer	nos	150000	1	150000
		(4) Telephone Junction Box	nos	8000	0	0
		(5) Telephone Post	nos	7500	4	30000
		(6) Trees	nos	7500	2	15000
		(7) Hand Pump	nos	18000	0	0
		(8) Signal Pole	nos	12500	0	0
		(9) Sign Board	nos	4000	0	0
		(10) OFC	nos	60000	0	0
Total Cost :						1,35,01,496
Abbreviations						
cum		Cubic Metres				
sqm		Square Metres				

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

rm		Running Metre				
no		Numbers				
MT		Metric Tonnes				
LS		Lump Sum				

ABSTRACT OF COST - 1						
JUNCTION IMPROVEMENT FOR VISWESHWARGANJ CROSSING, VARANASI						
Item No.	Ref. of Analysis	Description	Unit	Rate	Approx. Quantities	Amounts (Rs.)
1.01	SOR PWD, Varanasi (Ref. of Analysis-292) & PWD Spec. No. 17.2.2	Dismantling of brick work or stone work in lime or cement mortar and including stacking of materials as directed by Engineer-in-charge within a distance of 60 meters (200 feet).	sqm	310	217.00	67270
1.02	SOR PWD, Varanasi (Ref. of Analysis-2.14 (iia))	Dismantling of existing flexible pavements and disposing of dismantled materials upto a lead of 100 m, stacking serviceable and unserviceable materials separately as per Technical Specification Clause 202. ii) By Mechanical Means, a) Bituminous Courses	Cum	220	25	5500
2.01	SOR PWD, Varanasi (Ref. of Analysis-2.2 (i))	In area of non-thorny jungle Clearing and grubbing road land including uprooting wild vegetation, grass bushes, shrubs, saplings and trees of girth upto 300mm,removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, upto a lead of 1000m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per Technical Specification Clause 201.(i) In area of non-thorny jungle	Hec	28250	0.7	19775

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in Varanasi

2.02	SOR PWD, Varanasi (Ref. of Analysis- (MORT&H 301 (3.11))	Removal of unserviceable soil including excavation , loading and disposal upto outside municipal limit lead but excluding replacement by suitable soil which shall be paid separately as per clause 305	Cum	120	2045	245400
3.02	SOR PWD, Varanasi (Ref. of Analysis- (MORT&H 305 (3.16))	Construction of embankment with approved material obtained from borrow pits with all lifts and leads upto 1 km transporting to site, spreading, grading to required slop and compacting to meet requirement of 95% of proctor density.	cum	160	1023	163680
3.03	SOR PWD, Varanasi (Ref. of Analysis- (MORD 401 - 4.7)	Construction of Granular Sub Base by providing well graded material, specification in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401. (Excluding Cost of Materials	cum	2005.3	409	820167.7
3.04	As per Market Rate	Earthwork with agricultural soil for filling the top 300 mm depth of the median / island area duly completed as per Technical Specification Clause 305 with all leads and lifts	cum	75	304	22800
4.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 405 - 4.7)	Providing, laying, spreading and compacting stone aggregates of specific size to water bound macadam specification including spreading in uniform thickness , hand packing , rolling with three wheel 80-100 kn static roller in				

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

		stages to proper grade and camber , applying and brooming stone screening /binding material to fill up the interstices of coarse aggregate , watering and compacting to the required density Grading 1 as per Technical Specification clause 404 (Excluding cost of Material) By Manual Means.				
a)		Widening Area	cum	2666	512	1364992
5.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 502 (ii) -5.1)	Providing and applying prime coat with bituminous emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.7 Kg/ sqm using mechanical means as per Technical specification clause 502. (Excluding cost of Material)	sqm	26.5	2045	54192.5
5.02	SOR PWD, Varanasi (Ref. of Analysis- (MORD 503 (iii) -5.2)	Providing and applying tack coat with bitumen VG 10 using emulsion distributor at the rate of 0.35 kg per sqm on the prepared granular surface treated with primer & cleaned with hydraulic broom as per technical specification clause 503..(Excluding cost of Material)				
a		3.0-4.0 kg per 10 sqm on primed surface and on dry, hungry bituminous surface	sqm	13.4	2045	27403
b		3.0 to 4.0 kg per 10 sqm on normal bituminous surface	sqm	13.4	2206	29560.4

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in Varanasi

5.03	DSR : 16.54.1 (as per 2016)	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.	cum	7247.7	221	1601741.7
5.04	DSR : 16.57 (as per 2016)	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.	cum	7863.85	89	699882.65
6.01	DSR : 16.69 (as per 2016)	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except	Cum	5012.65	42	210531.3

Bidding Document for Procurement of Works for Improvement & Up-gradation of 8 Road Intersections (Phase- II),
in Varanasi

		at sharp curve shall not to more than 5mm) including making drainage opening wherever required complete etc. as per direction 1043 SUB HEAD : 16-ROAD WORK of Engineer-in-charge (length of finished kerb edging shall be measured for payment).(Precast C.C. kerb stone shall be approved by Engineer-in-charge).				
6.02	DSR : 16.67 (as per 2016)	Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos on each side, including setting in position in footpath to the required level and line over a bed of 20 mm average thick cement mortar 1:5 (1 cement : 5 coarse sand), having joint thickness not more than 5mm except on curve, including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-charge.	sqm	654.3	1013	662805.9
7.01	SOR PWD, Varanasi (Ref. of Analysis- MORT&H : 8.13.803	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflection glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes	sqm	550	772	424600

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in Varanasi

7.02	SOR PWD, Varanasi (Ref. of Analysis-MORT&H : 8.6.801	Providing and erecting direction and place identification retro-reflectorized sign as per IRC 67 2012 made of high intensity grade sheeting vide clause 801.3 fixed over aluminium sheeting 2mm thick with area exceeding 0.9 sqm. supported on a mild steel angle iron post 75mmx75mmx6mm, 2 Nos firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45mmx45mmx60mm below ground level as per approved drawing complete (90 cmx90 cm) as per approved drawing)	Nos.	5000	26	130000
7.03	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and Sl no: 8	Supply and fixing of indication board made of 2mm thick aluminium sheet area not exceeding 0-9 sqm. Supported single angle iron 75x75x5 mm IRC 67 2012 high intensity grade.	Nos.	5500	4	22000
7.05	DSR : 16.54.1 (as per 2016)	Installation of advance direction sign in overhead cantilever signboard (Providing and erecting advance direction micro prismatic retro- reflectorized sign Type-VII sheeting as per IRC :67, 2012 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick with back frame and post of 350 dia. MS Pipe				
		Sign board size of (5500x2500)	sqm	4722.2	68.75	324651.25
7.06	As per Market Rate	Bi-directional retro reflective Studs (100X75mm rectangular) at Pedestrian crossing, stop line,	Nos.	750	461	345750

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in Varanasi

		island barriers and footpath & Hazardous location				
7.07	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and Sl no: 12	Supplying and fixing of site solar road stud powerful mode extra bright aluminium die-cast matt finish conforming to IS 617:1994 designation 4250 apadde solar road studs manufactured by TATA BP solar India or equivalent having high intensity 3x2 nos. flashing throughout the night with backup of at least 4 in sunlight days , amber or red color all weather resistant with superior polycarbonate solar call & side reflectors.	Nos.	3413	386	1317418
7.08	DSR : 16.65 (as per 2016)	Providing and fixing post delineators made of ABS round body fitted with 2 nos. 100 mm dia. high reflective reflectors and mounted on MS pipe of 65 mm dia. duly powder coated anti-rust and anti-theft steel to be installed as per direction of Engineer-in-charge.	Nos.	554.5	52	28834
8.01	As per Market Rate	Road Traffic Signals electrically operated (Since it is a readymade item commercially produced and erected by specialized firm in the electrical and electronic field, rate may be taken based on market enquiry from firms specialized in this field and ISI certified for the approved design and drawing.)	Nos.	550000	0	0

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9.01	DSR : 16.91 (as per 2016)	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc., of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required color & pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.	Sqm	638.95	0	0
10.01	As per Market Rate	Providing Bus Shelter as per design and specification of IRC standards as per the direction of engineer-in charge	Nos	125000	1	125000
11.01	As per Rate Analysis Varanasi	Providing and erecting street light mounted on a steel circular hollow pole of standard specifications for street lighting, 9 m high spaced 40 m apart, 1.8 m overhang if fixed in the median and on one side if fixed on the footpath, fitted with sodium vapor lamp and fixed firmly in concrete foundation. Unit = Each				
a)		Staggered - Single Overhang	Nos	34587	9	311283
b)		Central - Double Overhang	Nos	55806	28	1562568

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in Varanasi

c)		High Mast Light	Nos	350000	1	350000
12.01	As per Market Rate	Providing and fixing Pedestrian railing dully painted in two coats with synthetic enamel paint and grouted on existing kerbs complete as per approved drawings	sqm	63	183	11529
13.01	As per Market Rate	Construction of raised pedestrian (Table Top) crossing of design and specification of IRC standards with direction and approval of engineer-in charge	Cum	5500	80.55	443025
14.01	Estimate received from concerned department	Shifting of Utilities along with accessories				
		(1) Lamp Post	nos	25000	0	0
		(2) Electric Poles	nos	50000	26	1300000
		(3) Transformer	nos	150000	4	600000
		(4) Telephone Junction Box	nos	8000	0	0
		(5) Telephone Post	nos	7500	9	67500
		(6) Trees	nos	7500	7	52500
		(7) Hand Pump	nos	18000	0	0
		(8) Signal Pole	nos	12500	0	0
		(9) Sign Board	nos	4000	3	12000
		(10) OFC	nos	60000	0	0
Total Cost :						1,34,24,360
Abbreviations						
cum		Cubic Metres				

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in Varanasi

sqm		Square Metres				
rm		Running Metre				
no		Numbers				
MT		Metric Tonnes				
LS		Lump Sum				

ABSTRACT OF COST - 1						
JUNCTION IMPROVEMENT FOR HOKULGANJ CHOWK, VARANASI						
Item No.	Ref. of Analysis	Description	Unit	Rate	Approx. Quantities	Amounts (Rs.)
1.01	SOR PWD, Varanasi (Ref. of Analysis-292) & PWD Spec. No. 17.2.2	Dismantling of brick work or stone work in lime or cement mortar and including stacking of materials as directed by Engineer-in-charge within a distance of 60 meters (200 feet).	sqm	310	473.00	146630
1.02	SOR PWD, Varanasi (Ref. of Analysis-2.14 (iia))	Dismantling of existing flexible pavements and disposing of dismantled materials upto a lead of 100 m, stacking serviceable and unserviceable materials separately as per Technical Specification Clause 202. ii) By Mechanical Means, a) Bituminous Courses	Cum	220	62	13640
2.01	SOR PWD, Varanasi (Ref. of Analysis-2.2 (i))	In area of non-thorny jungle Clearing and grubbing road land including uprooting wild vegetation, grass bushes, shrubs, saplings and trees of girth upto 300mm,removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, up to a lead of 1000m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per Technical Specification Clause 201.(i) In area of non-thorny jungle	Hec	28250	1.1	31075
2.02	SOR PWD, Varanasi (Ref.	Removal of unserviceable soil including excavation , loading and	Cum	120	1124	134880

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in Varanasi

	of Analysis- (MORT&H 301 (3.11))	disposal upto outside municipal limit lead but excluding replacement by suitable soil which shall be paid separately as per clause 305				
3.02	SOR PWD, Varanasi (Ref. of Analysis- (MORT&H 305 (3.16))	Construction of embankment with approved material obtained from borrow pits with all lifts and leads, upto 1 km transporting to site, spreading, grading to required slop and compacting to meet requirement of 95% of proctor density.	cum	160	562	89920
3.03	SOR PWD, Varanasi (Ref. of Analysis- (MORD 401 - 4.7)	Construction of Granular Sub Base by providing well graded material, specification in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401. (Excluding Cost of Materials	cum	2005.3	225	451192.5
3.04	As per Market Rate	Earthwork with agricultural soil for filling the top 300 mm depth of the median / island area duly completed as per Technical Specification Clause 305 with all leads and lifts	cum	75	689	51675
4.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 405 - 4.7)	Providing, laying, spreading and compacting stone aggregates of specific size to water bound macadam specification including spreading in uniform thickness , hand packing , rolling with three wheel 80-100 kn static roller in stages to proper grade and camber , applying and brooming				

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in Varanasi

		stone screening /binding material to fill up the interstices of coarse aggregate , watering and compacting to the required density Grading 1 as per Technical Specification clause 404 (Excluding cost of Material) By Manual Means.				
a)		Widening Area	cum	2666	281	749146
5.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 502 (ii) -5.1)	Providing and applying prime coat with bituminous emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.7 Kg/ sqm using mechanical means as per Technical specification clause 502. (Excluding cost of Material)	sqm	26.5	1124	29786
5.02	SOR PWD, Varanasi (Ref. of Analysis- (MORD 503 (iii) -5.2)	Providing and applying tack coat with bitumen VG 10 using emulsion distributor at the rate of 0.35 kg per sqm on the prepared granular surface treated with primer & cleaned with hydraulic broom as per technical specification clause 503..(Excluding cost of Material)				
a		3.0-4.0 kg per 10 sqm on primed surface and on dry, hungry bituminous surface	sqm	13.4	1124	15061.6
b		3.0 to 4.0 kg per 10 sqm on normal bituminous surface	sqm	13.4	1536	20582.4
5.03	DSR : 16.54.1 (as per 2016)	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler,	cum	7247.7	154	1116145.8

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in Varanasi

		transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.				
5.04	DSR : 16.57 (as per 2016)	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.	cum	7863.85	62	487558.7
6.01	DSR : 16.69 (as per 2016)	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm) including making drainage opening wherever required complete etc. as per direction 1043 SUB HEAD : 16-	Cum	5012.65	82	411037.3

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in Varanasi

		ROAD WORK of Engineer-in-charge (length of finished kerb edging shall be measured for payment).(Precast C.C. kerb stone shall be approved by Engineer-in-charge).				
6.02	DSR : 16.67 (as per 2016)	Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos on each side, including setting in position in footpath to the required level and line over a bed of 20 mm average thick cement mortar 1:5 (1 cement : 5 coarse sand), having joint thickness not more than 5mm except on curve, including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-charge.	sqm	654.3	2294	1500964.2
7.01	SOR PWD, Varanasi (Ref. of Analysis-MORT&H : 8.13.803	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflection glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes	sqm	550	695	382250

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in Varanasi

7.02	SOR PWD, Varanasi (Ref. of Analysis-MORT&H : 8.6.801	Providing and erecting direction and place identification retro-reflectorized sign as per IRC 67 2012 made of high intensity grade sheeting vide clause 801.3 fixed over aluminium sheeting 2mm thick with area exceeding 0.9 sqm. supported on a mild steel angle iron post 75mmx75mmx6mm, 2 Nos firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45mmx45mmx60mm below ground level as per approved drawing complete (90 cmx90 cm) as per approved drawing)	nos	5000	26	130000
7.03	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and Sl no: 8	Supply and fixing of indication board made of 2mm thick aluminium sheet area not exceeding 0-9 sqm. Supported single angle iron 75x75x5 mm IRC 67 2012 high intensity grade.	nos	5500	4	22000
7.05	DSR : 16.54.1 (as per 2016)	Installation of advance direction sign in overhead cantilever signboard (Providing and erecting advance direction micro prismatic retro- reflectorized sign Type-VII sheeting as per IRC :67, 2012 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick with back frame and post of 350 dia MS Pipe				
		Sign board size of (5500x2500)	sqm	4722.2	110	519442
7.06	As per Market Rate	Bi-directional retro reflective Studs (100X75mm rectangular) at Pedestrian crossing, stop line, island barriers and footpath &	nos	750	525	393750

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in Varanasi

		Hazardous location				
7.07	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and Sl no: 12	Supplying and fixing of site solar road stud powerful mode extra bright aluminium die-cast matt finish conforming to IS 617:1994 designation 4250 apadde solar road studs manufactured by TATA BP solar India or equivalent having high intensity 3x2 nos. flashing throughout the night with backup of at least 4 in sunlight days , amber or red color all weather resistant with superior polycarbonate solar call & side reflectors.	nos	3413	386	1317418
7.08	DSR : 16.65 (as per 2016)	Providing and fixing post delineators made of ABS round body fitted with 2 nos 100 mm dia high reflective reflectors and mounted on MS pipe of 65 mm dia duly powder coated anti-rust and anti-theft steel to be installed as per direction of Engineer-in-charge.	Nos.	554.5	26	14417
8.01	As per Market Rate	Road Traffic Signals electrically operated (Since it is a readymade item commercially produced and erected by specialized firm in the electrical and electronic field, rate may be taken based on market enquiry from firms specialized in this field and ISI certified for the approved design and drawing.)	Nos.	550000	0	0

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in Varanasi

9.01	DSR : 16.91 (as per 2016)	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required color & pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.	Sqm	638.95	174	111177.3
10.01	As per Market Rate	Providing Bus Shelter as per design and specification of IRC standards as per the direction of engineer-in charge	Nos	125000	1	125000
11.01	As per Rate Analysis Varanasi	Providing and erecting street light mounted on a steel circular hollow pole of standard specifications for street lighting, 9 m high spaced 40 m apart, 1.8 m overhang if fixed in the median and on one side if fixed on the footpath, fitted with sodium vapor lamp and fixed firmly in concrete foundation. Unit = Each				
a)		Staggered - Single Overhang	Nos	34587	9	311283
b)		Central - Double Overhang	Nos	55806	28	1562568

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in Varanasi

c)		High Mast Light	Nos	350000	1	350000
12.01	As per Market Rate	Providing and fixing Pedestrian railing dully painted in two coats with synthetic enamel paint and grouted on existing kerbs complete as per approved drawings	sqm	63	183	11529
13.01	As per Market Rate	Construction of raised pedestrian (Table Top) crossing of design and specification of IRC standards with direction and approval of engineer-in charge	Cum	5500	80.55	443025
14.01	Estimate received from concerned department	Shifting of Utilities along with accessories				
		(1) Lamp Post	Nos.	25000	1	25000
		(2) Electric Poles	Nos.	50000	8	400000
		(3) Transformer	Nos.	150000	1	150000
		(4) Telephone Junction Box	Nos.	8000	0	0
		(5) Telephone Post	Nos.	7500	1	7500
		(6) Trees	Nos.	7500	4	30000
		(7) Hand Pump	Nos.	18000	0	0
		(8) Signal Pole	Nos.	12500	0	0
		(9) Sign Board	Nos.	4000	0	0
		(10) OFC	Nos.	60000	0	0
						1,15,55,654

ABSTRACT OF COST - 1						
JUNCTION IMPROVEMENT FOR GOLAGADDA JUNCTION, VARANASI						
Item No.	Ref. of Analysis	Description	Unit	Rate	Approx. Quantities	Amounts (Rs.)
1.01	SOR PWD, Varanasi (Ref. of Analysis-292) & PWD Spec. No. 17.2.2	Dismantling of brick work or stone work in lime or cement mortar and including stacking of materials as directed by Engineer-in-charge within a distance of 60 meters (200 feet).	sqm	310	474.00	146940
1.02	SOR PWD, Varanasi (Ref. of Analysis-2.14 (iia))	Dismantling of existing flexible pavements and disposing of dismantled materials up to a lead of 100 m, stacking serviceable and unserviceable materials separately as per Technical Specification Clause 202. ii) By Mechanical Means, a) Bituminous Courses	Cum	220	20	4400
2.01	SOR PWD, Varanasi (Ref. of Analysis-2.2 (i))	In area of non-thorny jungle Clearing and grubbing road land including uprooting wild vegetation, grass bushes, shrubs, saplings and trees of girth upto 300mm,removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, up to a lead of 1000m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per Technical Specification Clause 201.(i) In area of non-thorny jungle	Hec.	28250	1.9	53675
2.02	SOR PWD, Varanasi (Ref.	Removal of unserviceable soil including excavation , loading and	Cum	120	2530	303600

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	of Analysis- (MORT&H 301 (3.11))	disposal up to outside municipal limit lead but excluding replacement by suitable soil which shall be paid separately as per clause 305				
3.02	SOR PWD, Varanasi (Ref. of Analysis- (MORT&H 305 (3.16))	Construction of embankment with approved material obtained from borrow pits with all lifts and leads upto 1 km transporting to site, spreading, grading to required slop and compacting to meet requirement of 95% of proctor density.	cum	160	0.00	0
3.03	SOR PWD, Varanasi (Ref. of Analysis- (MORD 401 - 4.7)	Construction of Granular Sub Base by providing well graded material, specification in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401. (Excluding Cost of Materials	cum	2005.3	1265.00	2536704.5
3.04	As per Market Rate	Earthwork with agricultural soil for filling the top 300 mm depth of the median / island area duly completed as per Technical Specification Clause 305 with all leads and lifts	cum	75	699	52425
4.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 405 - 4.7)	Providing, laying, spreading and compacting stone aggregates of specific size to water bound macadam specification including spreading in uniform thickness , hand packing , rolling with three wheel 80-100 kn static roller in stages to proper grade and camber , applying and brooming				

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in Varanasi

		stone screening /binding material to fill up the interstices of coarse aggregate , watering and compacting to the required density Grading 1 as per Technical Specification clause 404 (Excluding cost of Material) By Manual Means.				
a)		Widening Area	cum	2666	633	1687578
5.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 502 (ii) -5.1)	Providing and applying prime coat with bituminous emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.7 Kg/ sqm using mechanical means as per Technical specification clause 502.(Excluding cost of Material)	sqm	26.5	2530	67045
5.02	SOR PWD, Varanasi (Ref. of Analysis- (MORD 503 (iii) -5.2)	Providing and applying tack coat with bitumen VG 10 using emulsion distributor at the rate of 0.35 kg per sqm on the prepared granular surface treated with primer & cleaned with hydraulic broom as per technical specification clause 503..(Excluding cost of Material)				
a		3.0-4.0 kg per 10 sqm on primed surface and on dry, hungry bituminous surface	sqm	13.4	2530	33902
b		3.0 to 4.0 kg per 10 sqm on normal bituminous surface	sqm	13.4	2660	35644
5.03	DSR : 16.54.1 (as per 2016)	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler,	cum	7247.7	266	1927888.2

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		transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.				
5.04	DSR : 16.57 (as per 2016)	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.	cum	7863.85	107	841431.95
6.01	DSR : 16.69 (as per 2016)	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm) including making drainage opening wherever required complete etc. as per direction 1043 SUB HEAD : 16-	Cum	5012.65	151	756910.15

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		ROAD WORK of Engineer-in-charge (length of finished kerb edging shall be measured for payment).(Precast C.C. kerb stone shall be approved by Engineer-in-charge).				
6.02	DSR : 16.67 (as per 2016)	Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos on each side, including setting in position in footpath to the required level and line over a bed of 20 mm average thick cement mortar 1:5 (1 cement : 5 coarse sand), having joint thickness not more than 5mm except on curve, including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-charge.	sqm	654.3	2330	1524519
7.01	SOR PWD, Varanasi (Ref. of Analysis- MORT&H : 8.13.803	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflection glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes	sqm	550	590	324500
7.02	SOR PWD, Varanasi (Ref. of Analysis- MORT&H : 8.6.801	Providing and erecting direction and place identification retro-reflectorized sign as per IRC 67 2012 made of high intensity grade sheeting vide clause 801.3 fixed over aluminium sheeting 2mm thick with area exceeding 0.9 sqm.	nos	5000	27	135000

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		supported on a mild steel angle iron post 75mmx75mmx6mm, 2 Nos firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45mmx45mmx60mm below ground level as per approved drawing complete (90 cmx90 cm) as per approved drawing)				
7.03	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and Sl no: 8	Supply and fixing of indication board made of 2mm thick aluminium sheet area not exceeding 0-9 sqm. supported single angle iron 75x75x5 mm IRC 67 2012 high intensity grade.	Nos.	5500	4	22000
7.05	DSR : 16.54.1 (as per 2016)	Installation of advance direction sign in overhead cantilever signboard (Providing and erecting advance direction micro prismatic retro- reflectorized sign Type-VII sheeting as per IRC :67, 2012 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick with back frame and post of 350 dia MS Pipe				
		Sign board size of (5500x2500)	sqm	4722.2	41.25	194790.75
7.06	As per Market Rate	Bi-directional retro reflective Studs (100X75mm rectangular) at Pedestrian crossing, stopline, island barriers and footpath & Hazardous location	Nos.	750	1.5	1125
7.07	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and	Supplying and fixing of site solar road stud powerful mode extra bright aluminium die-cast matt finish conforming to IS 617:1994 designation 4250 apadde solar	Nos.	3413	645	2201385

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in Varanasi

	Sl no: 12	road studs manufactured by TATA BP solar India or equivalent having high intensity 3x2 nos. flashing throughout the night with backup of at least 4 in sunlight days, amber or red color all weather resistant with superior polycarbonate solar call & side reflectors.				
7.08	DSR : 16.65 (as per 2016)	Providing and fixing post delineators made of ABS round body fitted with 2 nos 100 mm dia high reflective reflectors and mounted on MS pipe of 65 mm dia duly powder coated anti-rust and anti-theft steel to be installed as per direction of Engineer-in-charge.	Nos.	554.5	334	185203
8.01	As per Market Rate	Road Traffic Signals electrically operated (Since it is a readymade item commercially produced and erected by specialized firm in the electrical and electronic field, rate may be taken based on market enquiry from firms specialized in this field and ISI certified for the approved design and drawing.)	Nos.	550000	19	10450000
9.01	DSR : 16.91 (as per 2016)	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking	Sqm	638.95	0	0

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		paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.				
10.01	As per Market Rate	Providing Bus Shelter as per design and specification of IRC standards as per the direction of engineer-in charge	Nos	125000	0	0
11.01	As per Rate Analysis Varanasi	Providing and erecting street light mounted on a steel circular hollow pole of standard specifications for street lighting, 9 m high spaced 40 m apart, 1.8 m overhang if fixed in the median and on one side if fixed on the footpath, fitted with sodium vapor lamp and fixed firmly in concrete foundation. Unit = Each				
a)		Staggered - Single Overhang	Nos	34587	1	34587
b)		Central - Double Overhang	Nos	55806	28	1562568
c)		High Mast Light	Nos	350000	1	350000
12.01	As per Market Rate	Providing and fixing Pedestrian railing dully painted in two coats with synthetic enamel paint and grouted on existing kerbs complete as per approved drawings	sqm	63	0	0
13.01	As per Market Rate	Construction of raised pedestrian (Table Top) crossing of design and specification of IRC standards with direction and approval of	Cum	5500	80.55	443025

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		engineer-in charge				
14.01	Estimate received from concerned department	Shifting of Utilities alongwith accessories				
		(1) Lamp Post	nos	25000	2	
		(2) Electric Poles	nos	50000	6	300000
		(3) Transformer	nos	150000	0	0
		(4) Telephone Junction Box	nos	8000	9	72000
		(5) Telephone Post	nos	7500	1	7500
		(6) Trees	nos	7500	5	37500
		(7) Hand Pump	nos	18000	0	0
		(8) Signal Pole	nos	12500	0	0
		(9) Sign Board	nos	4000	1	4000
		(10) OFC	nos	60000	2	120000
Total Cost :						2,64,17,847
Abbreviations						
cum		Cubic Metres				
sqm		Square Metres				
rm		Running Metre				
no		Numbers				
MT		Metric Tonnes				

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ABSTRACT OF COST - 1						
JUNCTION IMPROVEMENT FOR PILIKOTHI JUNCTION, VARANASI						
Item No.	Ref. of Analysis	Description	Unit	Rate	Approx. Quantities	Amounts (Rs.)
1.01	SOR PWD, Varanasi (Ref. of Analysis-292) & PWD Spec. No. 17.2.2	Dismantling of brick work or stone work in lime or cement mortar and including stacking of materials as directed by Engineer-in-charge within a distance of 60 meters (200 feet).	sqm	310	640.00	198400
1.02	SOR PWD, Varanasi (Ref. of Analysis-2.14 (iia))	Dismantling of existing flexible pavements and disposing of dismantled materials upto a lead of 100 m, stacking serviceable and unserviceable materials separately as per Technical Specification Clause 202. ii) By Mechanical Means, a) Bituminous Courses	Cum	220	11	2420
2.01	SOR PWD, Varanasi (Ref. of Analysis-2.2 (i))	In area of non-thorny jungle Clearing and grubbing road land including uprooting wild vegetation, grass bushes, shrubs, saplings and trees of girth up to 300mm,removal of stumps of such trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, upto a lead of 1000m including removal and disposal of top organic soil not exceeding 150 mm in thickness as per Technical Specification Clause 201.(i) In area of non-thorny jungle	Hec	28250	0.5	14125

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2.02	SOR PWD, Varanasi (Ref. of Analysis- (MORT&H 301 (3.11))	Removal of unserviceable soil including excavation , loading and disposal upto outside municipal limit lead but excluding replacement by suitable soil which shall be paid separately as per clause 305	Cum	120	2279	273480
3.02	SOR PWD, Varanasi (Ref. of Analysis- (MORT&H 305 (3.16))	Construction of embankment with approved material obtained from borrow pits with all lifts and leads upto 1 km transporting to site, spreading, grading to required slop and compacting to meet requirement of 95% of proctor density.	cum	160	1140	182400
3.03	SOR PWD, Varanasi (Ref. of Analysis- (MORD 401 - 4.7)	Construction of Granular Sub Base by providing well graded material, specification in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401. (Excluding Cost of Materials	cum	2005.3	456	914416.8
3.04	As per Market Rate	Earthwork with agricultural soil for filling the top 300 mm depth of the median / island area duly completed as per Technical Specification Clause 305 with all leads and lifts	cum	75	532	39900

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4.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 405 - 4.7)	Providing, laying, spreading and compacting stone aggregates of specific size to water bound macadam specification including spreading in uniform thickness , hand packing , rolling with three wheel 80-100 kn static roller in stages to proper grade and camber , applying and brooming stone screening /binding material to fill up the interstices of coarse aggregate , watering and compacting to the required density Grading 1 as per Technical Specification clause 404 (Excluding cost of Material) By Manual Means.				
a)		Widening Area	cum	2666	570	1519620
5.01	SOR PWD, Varanasi (Ref. of Analysis- (MORD 502 (ii) -5.1)	Providing and applying prime coat with bituminous emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.7 Kg/ sqm using mechanical means as per Technical specification clause 502. (Excluding cost of Material)	sqm	26.5	2279	60393.5
5.02	SOR PWD, Varanasi (Ref. of Analysis- (MORD 503 (iii) -5.2)	Providing and applying tack coat with bitumen VG 10 using emulsion distributor at the rate of 0.35 kg per sqm on the prepared granular surface treated with primer & cleaned with hydraulic broom as per technical specification clause 503. (Excluding cost of Material)				
a		3.0-4.0 kg per 10 sqm on primed surface and on dry, hungry	sqm	13.4	2279	30538.6

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		bituminous surface				
b		3.0 to 4.0 kg per 10 sqm on normal bituminous surface	sqm	13.4	2346	31436.4
5.03	DSR : 16.54.1 (as per 2016)	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.	cum	7247.7	235	1703209.5
5.04	DSR : 16.57 (as per 2016)	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.	cum	7863.85	94	739201.9

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6.01	DSR : 16.69 (as per 2016)	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm) including making drainage opening wherever required complete etc. as per direction 1043 SUB HEAD : 16-ROAD WORK of Engineer-in-charge (length of finished kerb edging shall be measured for payment).(Precast C.C. kerb stone shall be approved by Engineer-in-charge).	Cum	5012.65	91	456151.15
6.02	DSR : 16.67 (as per 2016)	Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos on each side, including setting in position in footpath to the required level and line over a bed of 20 mm average thick cement mortar 1:5 (1 cement : 5 coarse sand), having joint thickness not more than 5mm except on curve, including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-charge.	sqm	654.3	1773	1160073.9

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7.01	SOR PWD, Varanasi (Ref. of Analysis-MORT&H : 8.13.803	Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflection glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes	sqm	550	751	413050
7.02	SOR PWD, Varanasi (Ref. of Analysis-MORT&H : 8.6.801	Providing and erecting direction and place identification retro-reflectorized sign as per IRC 67 2012 made of high intensity grade sheeting vide clause 801.3 fixed over aluminium sheeting 2mm thick with area exceeding 0.9 sqm. supported on a mild steel angle iron post 75mmx75mmx6mm, 2 Nos firmly fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45mmx45mmx60mm below ground level as per approved drawing complete (90 cmx90 cm) as per approved drawing)	nos	5000	29	145000
7.03	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and Sl no: 8	Supply and fixing of indication board made of 2mm thick aluminium sheet area not exceeding 0-9 sqm. supported single angle iron 75x75x5 mm IRC 67 2012 high intensity grade.	nos	5500	4	22000
7.05	DSR : 16.54.1 (as per 2016)	Installation of advance direction sign in overhead cantilever signboard (Providing and erecting advance direction micro prismatic retro- reflectorized sign Type-VII sheeting as per IRC :67, 2012 made of encapsulated lens type				

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		reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick with back frame and post of 350 dia MS Pipe				
		Sign board size of (5500x2500)	sqm	4722.2	68.75	324651.25
7.06	As per Market Rate	Bi-directional retro reflective Studs (100X75mm rectangular) at Pedestrian crossing, stop line, island barriers and footpath & Hazardous location	Nos.	750	698.2	523650
7.07	SOR PWD, Varanasi (Ref. of Analysis-Traffic Sign Page : 83 and SI no: 12	Supplying and fixing of site solar road stud powerful mode extra bright aluminium die-cast matt finish conforming to IS 617:1994 designation 4250 apadde solar road studs manufactured by TATA BP solar India or equivalent having high intensity 3x2 nos. flashing throughout the night with backup of at least 4 in sunlight days , amber or red color all weather resistant with superior polycarbonate solar call & side reflectors.	Nos.	3413	334	1139942
7.08	DSR : 16.65 (as per 2016)	Providing and fixing post delineators made of ABS round body fitted with 2 nos 100 mm dia high reflective reflectors and mounted on MS pipe of 65 mm dia duly powder coated anti-rust and anti-theft steel to be installed as per direction of Engineer-in-charge.	Nos.	554.5	72	39924

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in Varanasi

8.01	As per Market Rate	Road Traffic Signals electrically operated (Since it is a readymade item commercially produced and erected by specialized firm in the electrical and electronic field, rate may be taken based on market enquiry from firms specialized in this field and ISI certified for the approved design and drawing.)	nos	550000	8	4400000
9.01	DSR : 16.91 (as per 2016)	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.	Sqm	638.95	0	0
10.01	As per Market Rate	Providing Bus Shelter as per design and specification of IRC standards as per the direction of engineer-in charge	Nos	125000	1	125000

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in Varanasi

11.01	As per Rate Analysis Varanasi	Providing and erecting street light mounted on a steel circular hollow pole of standard specifications for street lighting, 9 m high spaced 40 m apart, 1.8 m overhang if fixed in the median and on one side if fixed on the footpath, fitted with sodium vapor lamp and fixed firmly in concrete foundation. Unit = Each				
a)		Staggered - Single Overhang	Nos	34587	9	311283
b)		Central - Double Overhang	Nos	55806	28	1562568
c)		High Mast Light	Nos	350000	1	350000
12.01	As per Market Rate	Providing and fixing Pedestrian railing dully painted in two coats with synthetic enamel paint and grouted on existing kerbs complete as per approved drawings	sqm	63	12	756
13.01	As per Market Rate	Construction of raised pedestrian (Table Top) crossing of design and specification of IRC standards with direction and approval of engineer-in charge	Cum	5500	80.55	443025
14.01	Estimate received from concerned department	Shifting of Utilities along with accessories				
		(1) Lamp Post	nos	25000	1	25000
		(2) Electric Poles	nos	50000	23	1150000
		(3) Transformer	nos	150000	4	600000
		(4) Telephone Junction Box	nos	8000	1	8000
		(5) Telephone Post	nos	7500	7	52500
		(6) Trees	nos	7500	1	7500

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		(7) Hand Pump	nos	18000	0	0
		(8) Signal Pole	nos	12500	0	0
		(9) Sign Board	nos	4000	0	0
		(10) OFC	nos	60000	1	60000
						1,90,29,616
Abbreviations						
cum		Cubic Metres				
sqm		Square Metres				
rm		Running Metre				
no		Numbers				
MT		Metric Tonnes				
LS		Lump Sum				

Section 8 Letter of Acceptance

To,
M/s.....
.....
.....

This is to notify you that on behalf of the Employer, the Chief Executive Officer, Varanasi Smart City Limited has accepted your Bid dated for execution of the District-..... for the Contract Price of Rs.....
(Rs.....only) is hereby accepted by our Agency.

You are hereby requested to furnish Performance Security, in the form detailed in Cl.32 of ITB for an amount of Rs..... (Rs.....) within 10 days of the receipt of this letter of acceptance valid up to 45 days from the date of expiry of Defects Liability Period (i.e. up to) and sign the contract, failing which action as stated in Cl. 32.3 of ITB will be taken.

Yours faithfully,

Chief Executive Officer
Varanasi Smart City Limited

No. & Dated as above

Issue of Notice to proceed with the work

LETTER
DATED.....

NO.....

To,
.....
.....
.....

Dear Sir,

Pursuant to your furnishing the requisite performance security as stipulated in ITB Clause 32.1 and signing of the contract for the construction offor Distt., you are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours's faithfully

Chief Executive Officer
Varanasi Smart City Limited

Standard Form: Agreement

Agreement

This agreement, made the day of of 2017 between Chief Executive Officer , Varanasi Smart City Limited (hereinafter called “the Employer”) of the one part, and

.....
.....
.....

[Name and address of Contractor/JV] (Hereinafter called “the Contractor” of the other part).

Whereas the Employer is desirous that the Contractor execute the Work of District- Varanasi (hereinafter called “the Works”) and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein at a cost of Rupees.....

(Rs.....only)

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:
 - i) Letter of Acceptance;
 - ii) Notice to proceed with the works;
 - iii) Contractor’s Bid;
 - iv) Contract Data;
 - v) Special Conditions of contract and General Conditions of Contract;
 - vi) Specifications;
 - vii) Drawings;
 - viii) Bill of Quantities; and
 - ix) Any other document listed in the Contract Data as forming part of the contract.

BANK GUARANTEE FOR ADVANCE PAYMENT

(Bank Guarantee)

To,
Chief Executive Officer,
Varanasi Smart City Limited
Sigra, Varanasi, Uttar Pradesh

Gentlemen:

In accordance with the provisions of the General Conditions of contract, clause 45 (“Advance Payment”) of the above-mentioned Contract, _____ [name and address of Contractor, which in the case of a joint venture shall be the name of the joint venture (whether legally constituted or prospective) or the names of all members thereof] (hereinafter called “the Contractor”) shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ [amount of guarantee]¹ _____ [in words].

We, the _____ [bank or financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ [name of Employer] on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding _____ [amount of guarantee]¹ _____ .

We further agree that no change or addition to or other modification of the terms of the Contract or of Works to be performed thereunder or of any of the Contractor documents which may be release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ [name of Employer] receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and seal: _____
Name of Bank/Financial Institution: _____
Address: _____
Date: _____

¹ An amount shall be inserted by the bank or financial institution representing the amount of the Advance Payment, and denominated in Indian Rupees.

PERFORMANCE BANK GUARANTEE

To,
Chief Executive Officer,
Varanasi Smart City Limited
Sigra, Varanasi, Uttar Pradesh

WHEREAS _____ [Name and Address of Contractor, which in the case of a joint venture shall be the name of the joint venture (whether legally constituted or prospective) or the names of all members thereof] (Hereinafter called “the Contractor”) has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ [Name of Contract and brief description of Works] herein after called “The Contract”.

AND WHEREAS it has been stipulated by you in the said contract that the contractor shall furnish you with a bank guarantee by a Nationalized Bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of _____ [amount of guarantee] _____ [in words], such sum being payable in the types and proportions of currencies in which the Contract price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for a demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in anyway release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This Guarantee shall be valid until a date 45 days after the expiry of defect liability period of 5 years after intended completion date.

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____